Consistent Management and Leadership Practices and the Kashiwagi Solution Model (KSM)

by

Harry Reynolds

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Graduate Supervisory Committee:

Dean Kashiwagi, Chair
Kenneth Sullivan
William Badger

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ABSTRACT

Current information on successful leadership and management practices is contradictory and inconsistent, which makes difficult to understand what successful business practices are and what are not. The purpose of this study is to identify a simple process that quickly and logically identifies consistent and inconsistent leadership and management criteria. The hypothesis proposed is that Information Measurement Theory (IMT) along with the Kashiwagi Solution Model (KSM) is a methodology than can differentiate between accurate and inaccurate principles the initial part of the study about authors in these areas show how information is conflictive, and also served to establish an initial baseline of recommended practices aligned with IMT. The one author that excels in comparison to the rest suits the "Initial Baseline Matrix from Deming" which composes the first model. The second model is denominated the "Full Extended KSM-Matrix" composed of all the LS characteristics found among all authors and IMT. Both models were tested-out for accuracy. The second part of the study was directed to evaluate the perception of individuals on these principles. Two different groups were evaluated, one group of people that had prior training and knowledge of IMT; another group of people without any knowledge of IMT. The results of the survey showed more confusion in the group of people without knowledge to IMT and improved consistency and less variation in the group of people with knowledge in IMT. The third part of the study, the analysis of case studies of success and failure, identified principles as contributors, and categorized them into LS/type "A" characteristics and RS/type "C" characteristics, by applying the KSM. The results validated the initial proposal and led to the conclusion that practices that fall into the LS side of the KSM will lead to success, while practices that fall into the RS of the KSM will lead to failure. The comparison and testing of both models indicated a dominant support of the IMT concepts as contributors to success; while the KSM model has a higher accuracy of prediction.

DEDICATION

This thesis is dedicated to my beautiful family...

To my wife Mixe, whose constant sacrifice and support have made possible for me to accomplish great things; to my daughter Brittany-Marie and my son Jean-Luc, for bringing joy to my life; and to my father Daniel and my mother Leila, for their love and encouragement in life.

ACKNOWLEDGMENTS

I am greatly thankful to my chair, Dr Dean Kashiwagi, whose empowerment, guidance and support throughout my years at ASU enabled me to clearly understand the concepts of leadership and management, which have helped me tremendously in my professional life.

I would like to thank Dr. William Badger for sharing and infusing me with his great leadership skills and Dr. Kenneth Sullivan for his support and guidance in understanding in a simple way complicated subjects.

Lastly, I would like to thank my family members, especially my wife Mixe, my daughter Brittany-Marie and my son Jean-Luc for supporting and encouraging me to pursue this degree. Without my wife's sacrifice, I would not have been able to finish this degree.

Harry Reynolds

TABLE OF CONTENTS

CHAPTER Page

LIST OF TABLES

Table Page

LIST OF FIGURES

Chapter 1

INTRODUCTION

a) Introduction and Problem Statement

There seems to be a difference in opinions in regard to what consistent business practices are and what are not. Even though there is agreement in some areas, there is still significant variation on what experts express about certain business practices. These contradictions create confusion in identifying which business concepts are consistent and lead to better results, and therefore make it difficult to implement. This suggests there is a need for a simple and logical process to identify and categorize current business practices into consistent and not consistent. A proposal is presented here, which is to design or identify an existing process that quickly, easily and logically identifies consistent and non-consistent business practices. The premise that is being proposed is to identify whether a standard of consistent leadership and management practices can be identified and implemented. This research proposes that by using a dominant success such as Deming, and extending his concepts using the deductive logic of Information Measurement Theory (IMT) and the Kashiwagi Solution Model (KSM), consistent and non-consistent practices can be identified. The literature review section of this research introduces the reader to the concepts behind IMT and KSM, which should be understood in order to fully comprehend the methodology of this study.

An interesting analysis about conflicting leadership models is presented by Jacob Kashiwagi (2007) when he quotes Bernard Bass (1990) in this regard: “there are almost as many different definitions of leadership as there are persons who have attempted to define the concept;” and Kashiwagi (2007) adds “leadership has been approached from many different perspectives and fields, and each expert testifies that his/her theory is correct. However, results show that many claims do not have conclusive evidence supporting them. No one knows which principles are correct.” In this study, Kashiwagi

presents a summary of 38 leadership experts and 27 leadership theories and recalls the differences among them; which in turn echo this conflict just mentioned.

A discussion of conflicting leadership characteristics found by Kashiwagi (2007) is included in the present study, as well as a summary of the leadership concepts mentioned above, extended with the KSM, is presented in Appendix A, along with comparisons from other authors in the area.

Regarding leadership authors, the conflicted characteristics found by Kashiwagi (2007) were: dependency vs. empowerment; having bad traits vs. having good traits; being passionate vs. not being passionate; listening vs. coaching; and having charisma vs. not having charisma. Kashiwagi (2007) also made an analysis of leadership theories, where he found some conflicts as well such as: being a leader for innate traits vs. learnable traits; using rewards and punishments vs. putting attention to sensitive needs; being a leader due to personality vs. due to the environment; and the importance of the treatment of the follower vs. no treatment of the follower. Finally, Kashiwagi (2007) presented an extract of a research study from Bernard Bass (1991) that shows other conflicted leadership traits: introversion vs. extroversion; emotional control vs. no emotional control; more intelligence vs. less intelligence; and dominance vs. no dominance.

This study from Kashiwagi (2007) points out the contradiction and inconsistency on leadership and business concepts mentioned in this introduction. For the purpose of validating one more time, and presenting the conflicts that exist in this area, which would show the value of this research, and with the intention of identifying, one or more than one, consistent author(s) in the area, the author here performed a comparison of thirty-two (32) books in the areas of leadership and management, selected from a repertoire of books studied in the leadership and management courses in the Graduate Program of the Del E. Webb School of Construction (DEWSC), Ira A. Fulton Schools of Engineering from the Arizona State University (ASU).

The detailed data and comparison of these additional leadership and management books is presented in Appendix B. The top six conflicts found show how some authors differ in the importance of having a good alignment of resources vs. not having it; thinking in terms of the benefit of “us” vs. thinking in terms of “me and them”; treating everyone different vs. treating everyone the same way; being able to control his/her own life vs. feeling controlled, not having control or releasing it, vs. having or establishing control; and finally no influence vs. the importance or existence of influence. The research scope of this study will present a more detailed analysis of the data found in the comparison of these leadership and management publications, as well as an analysis of the authors. What it is being proposed here is the need for a simple and logical process to identify and categorize current best business practices into consistent and not consistent, and making sure they are implementable. This is being done under the assumption that the term “consistency” will lead to efficiency which in turn will lead to success; in other words, consistent business practices will increase the chances of success, inconsistent business practices will increase the chances of failure.

In order to find a simple and logical process to identify this, the process to be used in this analysis has to be identified first. The Kashiwagi Solution Model (KSM – LS/type A and RS/type C characteristics), based on Information Measurement Theory (IMT), is the one process selected to perform this analysis. The selection of this method, KSM, for the analysis of the business practices and the respective correlation to IMT, is justified by the success of the Performance Information Procurement System (PIPS) which is also based on IMT. PIPS is a procurement system that bases its selection methodology on performance information, and “encourages hiring the best available performer identified (Kashiwagi, 2004).”

As a starting point a baseline of consistent practices will have to be defined; these practices will then have to be validated. In order to define this baseline of consistent business practices a consistent author to IMT will be searched. In order to identify an

author that is more consistent than others whose concepts will define the initial baseline of consistent business practices, will have to backtrack to the authors' recommended practices and to compare the consistency of their ideas to the IMT.

Once these business practices are identified, the KSM will be applied to them as an extender with the purpose of identifying the respective type "A"/LS characteristics and type "C"/RS characteristics. Then, the "extended baseline matrix" of consistent business practices will be tested out by finding case studies that support or do not support the model outcome. After conducting an analysis of this final model outcome, showing the distribution of consistent business practices that lead to "success", and the distribution of inconsistent business practices that lead to "failure", conclusions and recommendations will be drawn.

The research also encompasses an effort for trying to find a correlation between people's perception of consistent leadership and management practices, extended by the KSM into type "A"/LS characteristics and type "C"/LS characteristics, and the performance of those individuals. The purpose of this effort will be to identify whether dominant information can be collected in relation to performance of individuals and its relationship to IMT.

b) Research Hypothesis

The Information Measurement Theory (IMT) along with the Kashiwagi Solution Model (KSM) is a methodology that can differentiate between accurate and inaccurate leadership principles.

c) Research Objectives/Goals

I. Can IMT/KSM identify which authors are consistent?

II. Can IMT/KSM identify differences in people's consistency of terms?

III. Can IMT/KSM explain successes and failures?

d) Research Methodology Summary

The method of analysis will be the KSM (LS/RS) which is based on IMT and its selection is justified by the success of PIPS which is also based on IMT, explained later in the literature review section, as well as by its simplicity and ease of understanding.

The research is divided in three main areas: 1) the analysis of renowned authors in the areas of leadership and management, with the objective of identifying the most consistent author(s) to IMT and identify conflict; 2) the comparison of perception of individuals regarding consistent leadership principles for people trained in IMT and people not trained in IMT; and 3) the analysis of case studies in the same areas, with the purpose of establishing patterns for consistency and inconsistency and with the intention of verifying the accuracy of prediction of the proposed baseline models in this study.

The first part of the research scope will categorize the recommended practices from the different authors into the LS and RS of the KSM. This will reveal the most consistent author to IMT and his/her recommended practices will form the initial baseline matrix of LS characteristics, to look for and validate in the case studies analysis, the last part of the research scope.

The second part will evaluate perception of consistent business practices of two different groups of individuals, one trained in IMT concepts and another one not trained in IMT. This scope will search for the presence of conflict or not in their understanding of successful/consistent practices and their alignment to IMT. It will also try to find a relationship between these individuals performance and their alignment to IMT, by having the supervisors/leaders of these individuals answer performance surveys on their people.

The “baseline matrix” defined by the most consistent author to IMT identified in the first part of the research, along with the “fully-extended baseline KSM-matrix” including all practices recommended by the other authors, are to be tested out by finding case studies that support or do not support the models’ outcome. The criteria for selection of case studies will be to choose those that show a mean of measurement, and will include both

case studies of success/consistency and case studies of failure/inconsistency. The recommended practices found in the case studies, will be plotted out by using the KSM as an extender as well, LS or RS, next to the initial baseline matrices. These results will identify accuracy of each model, and will define the more accurate and less accurate leadership and management practices, leading to “success” and “failure”, respectively. Finally, the study will summarize these results, showing the distribution of consistent business practices that lead to success and the distribution of inconsistent business practices that lead to failure.

e) Research Scope

The research scope of this study is divided in three main areas:

I. the comparison of different authors in the fields of leadership and management and their recommended practices, with the purpose of identifying the most consistent author in regard to IMT and establishing whether or not there is conflict in regard consistent leadership practices;

II. to compare perception about consistent leadership principles between two different groups of individuals, one trained in IMT and another one not-trained in IMT; and to identify whether there is a relationship to performance after the categorization of the individuals regarding their alignment to IMT concepts;

III. the search and analysis of case studies of success/consistency and failure/inconsistency for identification of LS/RS characteristics of the KSM, with the objective of trying to prove or reject the hypothesis proposed here that says KSM can quickly identify consistent business concepts that increase the chances of consistency/success; and finally based on these results trying to suggest patterns for success and/or failure.

For the first part of the research scope, a selection of books in the field of leadership and management will be studied. These books will be chosen from the repertoire of literature utilized in the leadership and management courses from the Del E. Webb School of Construction (DEWSC) at Arizona State University (ASU). The analysis will back-track to the authors recommended business and leadership practices, and they will be plotted in the LS and RS of the KSM; this will identify which author is more consistent to IMT. Once this is achieved the initial baseline matrix of LS characteristics will be defined.

The second part will consist of testing the perception on leadership principles on two small groups of individuals, one group of people trained in IMT and another one of people not-trained in IMT. This will comprise a survey on a selected group of people that have had IMT training, and then a survey on the other group which will consist of all project managers and general managers for a company with operations nationwide in the US. A performance evaluation on these individuals will be requested to the General Managers, with the purpose to identifying any potential correlation between the project managers' performance and their perception of leadership principles in regard to IMT.

The third part of the research scope is to test out the initial baseline matrix of leadership principles, by looking at case studies from different sources and the practices used, that discuss consistent and/or successful, and inconsistent and/or unsuccessful business/leadership/management practices. These case studies were selected from a wide variety of industries and out of electronic scholar libraries and different business and scholar journals. As previously mentioned in the Introduction, the criteria for selection of case studies is to select those that show dominant information or at least a mean of measurement, and not just words without data supporting them. The case studies are analyzed by applying the KSM, and identifying whether the suggested practices fall into the LS or RS of the KSM. An extended baseline matrix, using KSM as an extender and encompassing all other IMT concepts found, will also be tested out, with the intent of comparing accuracy of prediction for each model.

Finally, the data is analyzed to try to identify patterns that draw consistency and inconsistency in the results.

f) Summary of Report

Current information on successful leadership and management practices is contradictory and inconsistent, which makes it difficult to understand due to the confusion about what successful business practices are and what are not.

The purpose of this study is to identify a simple process that quickly and logically identifies consistent and inconsistent leadership and management criteria. The hypothesis proposed is that Information Measurement Theory (IMT) along with the Kashiwagi Solution Model (KSM) is a methodology than can differentiate between accurate and inaccurate leadership and management principles.

The initial part of the study about authors in these areas shows how information is conflictive and also served to establish an initial baseline of recommended practices aligned with IMT. Deming was the one author that excelled in comparison to the rest – Deming's LS characteristics became the "Initial Baseline Matrix from Deming" which composed the first model. The second model was denominated the "Full Extended KSM-Matrix" composed of all the LS characteristics found among all authors and IMT. Both models were tested-out for accuracy.

The second part of the study was dedicated to evaluate the perception that individuals had in relation to these principles. Two different groups were evaluated, one group of people that had prior training and knowledge of IMT; another group of people without any knowledge of IMT. The results of the survey showed more confusion present in the group of people without knowledge to IMT and improved consistency and less variation on the group of people who were familiar with IMT.

The third part of the study, the analysis of case studies of success and failure, identified principles as contributors and categorized them into LS/type "A" characteristics and RS/type "C" characteristics, by applying the KSM. The results validated the initial

proposal and led to conclude that practices that fall into the LS side of the KSM will lead to success, and that other practices that fall into the RS of the KSM will lead to failure. The comparison and testing of both models indicated dominant support of the IMT concepts as a contributor to success; and the second model, the KSM, as having a higher accuracy of prediction.

Chapter 2

LITERATURE REVIEW

As explained in the introduction, the theoretical model that will be utilized through this research is the Kashiwagi Solution Model, known as KSM. The KSM is actually based on a concept called Information Measurement Theory, known as IMT. In order to provide the reader with the appropriate background for the understanding of this study, a brief explanation of both, IMT and KSM, will be provided in this section.

The selection of IMT and KSM as the tools to be used in this study is justified by the success of the Performance Information Procurement System (PIPS), which is a selection system for procuring services based on the IMT concepts. PIPS was also developed by Dr. Dean Kashiwagi in the Performance Based Studies Research Group (PBSRG) from the Del E. Webb School of Construction at Arizona State University.

a) Information Measurement Theory (IMT)

Information Measurement Theory (IMT) was developed by Dr. Dean Kashiwagi during his research efforts of the past twenty years. IMT was first published in 1991 at Arizona State University as "the structure for optimizing the effectiveness of information by creating easy to understand information environments (Kashiwagi, 2004)." A good and simple definition for IMT appears in the Best Value Procurement book from Dr. Dean Kashiwagi (2004). Using the same words of the author, IMT can be defined as follows. "Information Measurement Theory (IMT) applies the theoretical constraint identified by 'information theory (discovered by Claude Shannon in 1948)' to the process of understanding information. IMT identifies that an individual who lacks processing speed creates the perception that there is a lack of information, when in actuality all of the information always exists. In addition, the author suggests that, when an individual is constrained by a slow processing speed, he or she is unable to see readily available information, and is forced to use his or her database of past experience, or incomplete information, to form expectations of future outcomes. The use of an individual's personal

experience to draw conclusions is the application of the person's subjective bias, or more commonly known as decision-making. IMT identifies bias as the major obstacle to perfectly understanding reality (Kashiwagi, 2004)."

The five main purposes for IMT, as its author proposes them, are (Kashiwagi, 2004):

- "Minimize subjective decision-making."
- "Minimize the amount of data required to accurately transfer information."
- "Identify the relationship between information usage, processing speed, and performance."
- "Identify a structure that minimizes the requirement for management."
- "Optimize processes by identifying and removing entities which add no value or bring risk."

In that same publication, Dr. Kashiwagi defines three important concepts inside IMT, which become later the basis of the Kashiwagi Solution Model (KSM). These concepts are listed below, using the same words of the author (Kashiwagi, 2004):

- "Laws of Physics: they predict the future outcome of an event, in any state and at any time; the number of laws of physics never changes, but rather stays constant over time and the only new thing that happens is that more of these existing physical laws are discovered."
- "Description of an Event: IMT defines an event as "anything that happens that takes time." An event has initial conditions, changing conditions throughout the occurrence, and final conditions. The number of laws stays consistent throughout the event."
- "Perception of Information: every individual/organization is different and therefore, to predict the future action of an individual or an organization becomes a difficult task. Each person exists in an environment that contains 'all' information, even though the person cannot perceive all of that information. To

change, individuals must perceive information that was not perceived before, process the information, and if they understand the information, apply it."

Dr Kashiwagi illustrates this last concept, the perception of information in different individuals, with the following Figure 1 (Kashiwagi, 2004). The explanation of this representation in shown as follows, again, using the same words of the author.

"This figure shows three different individuals (labeled Type A, B, and C), which represent people who utilize different amounts of information. The Type A person uses a high level of information, Type B uses an intermediate amount of information, and the Type C individual uses very little information. The 'Type A' person (or entity) is labeled as one who has a high level of perception and processing speed. According to the Rate of Change model, the 'Type A' person will perceive more information, process it faster, apply a greater number of correct principles, and change faster than the 'Type C' entity. This is represented by a steeper curve (change rate over time) (Kashiwagi, 2004)."

"To avoid extensive statistical sampling, IMT focuses on the two extremes, where deductive logic can be applied instead of the more costly inductive logic. Therefore, IMT concepts are identified from the comparison of characteristics of a Type 'A' individual (that perceives a relatively large amount of information), and characteristics of a Type 'C' individual (that perceives a relatively small amount of information) (Kashiwagi, 2004)."

Based on these concepts, "IMT states that laws define all events, and all event outcomes are predictable. Events happen one way, but may be perceived as happening in various ways by individuals with different processing speeds. Randomness exists due to a person's inability to perceive all information; it is a methodology of understanding what is going on, by analyzing large samples of data in the absence of all information. When an individual obtains all information, they will be able to perfectly predict a person's actions or an event (Kashiwagi, 2004)." However, the author does realize that "all information is never perceived for an individual or an event (Kashiwagi, 2004)." This is the foundation of the Kashiwagi Solution Model (KSM), which is discussed next.

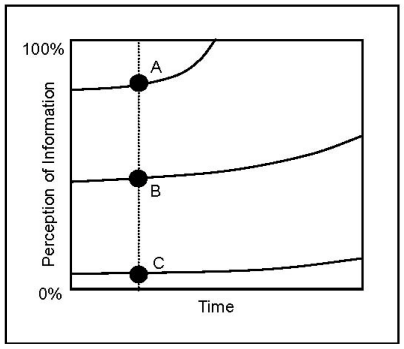

Figure 1. Perception of Information

b) Kashiwagi Solution Model (KSM)

The Kashiwagi Solution Model (KSM) uses the principles of Information Measurement Theory (IMT), principles discussed briefly in the previous section. KSM purpose is to show the relationship between different factors by comparing the extremes.

Dr. Dean Kashiwagi (2004), developer of this model, explains that "KSM consists of two main components: the left side (LS) triangle and the right side (RS) triangle as shown in Figure 2 (Kashiwagi 2004)." "Each side represents opposite sides of a factor. For example, if the left side (LS) factor was "Unemotional", the right side (RS) factor would be "Emotional". The horizontal width of the shape identifies the amount of the factor. Combining the two triangles forms a two-way KSM for a related factor (Kashiwagi 2004)."

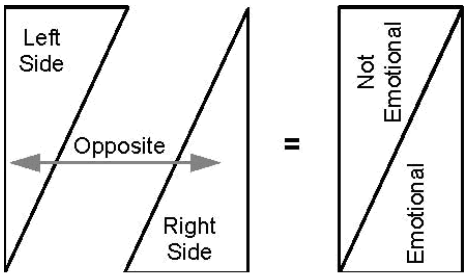

Figure 2. A two-way KSM

Dr. Kashiwagi (2004) defines the three main objectives of KSM as follows:

- "Determining if a characteristic belongs to the left side or right side."
- "Evaluating whether one entity has more information than another entity."
- "Identifying the relationship between different factors and the level of information."

As its author suggests, “KSM cannot accurately identify the amount of differential between two very similar entities. Its primary concern is which side a characteristic belongs to. The slope of the lines separating the sides is not critical to the above three objectives and, trying to identify it would require extensive statistical to be collected and analyzed, which would make it cost prohibitive (Kashiwagi, 2004).”

In contrast, Dr. Kashiwagi (2004) mentions: “KSMs effectively identify relationships between different factors, and minimize subjectivity by referencing common knowledge or documented findings to ascertain the location of the characteristics.”

By comparing the previous two Figures, 1 and 2, a new chart that Dr. Kashiwagi calls the “Rate of Change Chart” gets developed and it is shown in Figure 3 (Kashiwagi, 2004). This figures illustrates, as its author mentions it, “that at a particular point in time (t), the type ‘A’ person has more information that the type ‘C’ person. As mentioned previously, the slope of the dividing line is unimportant, meaning, KSM does not quantify how much more information the type ‘A’ person has over the type ‘C’ person but, merely that type ‘A’ person has more information that type ‘C’ (Kashiwagi, 2004).”

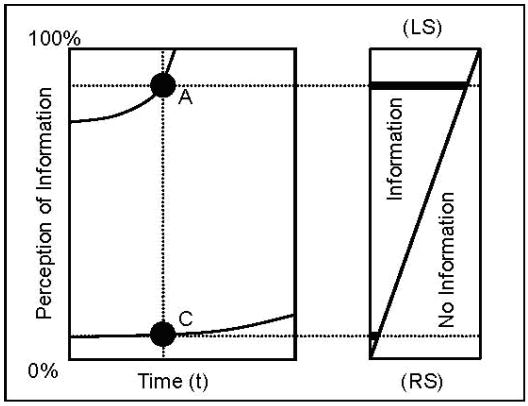

Figure 3. Rate of Change and KSM

Dr. Kashiwagi (2004) mentions the following quote: “people who have more information about the constraints of an event are able to predict the future outcome of that event much more accurately, and will act in accordance with the constraints. These people are successful because they are efficient. Efficient people make fewer decisions and, they

expend the minimum amount of resources to meet the accurate expectations (Kashiwagi, 2004)."

Dr. Kashiwagi (2004) also explains that "decisions are those made by an individual who does not have enough information to identify or predict the future outcome. When a person makes a decision, he or she perceives that there are multiple possible final conditions to the initial conditions of the current event due to a lack of information. The person then makes a subjective decision, filling in the lack of information with their limited experience. When the actual final conditions do not match their expectations, they are displeased or surprised at what happened."

The relationship between KSM and efficiency is presented by Dr. Kashiwagi (2004) and, to illustrate this comparison, Dr. Kashiwagi puts this graphically by using KSM, refer to Figure 4 (Kashiwagi, 2004), and mentions that a type "C" person:

- "Uses less information (RS)."
- "Makes more decisions (RS)."
- "Is less efficient (RS)."

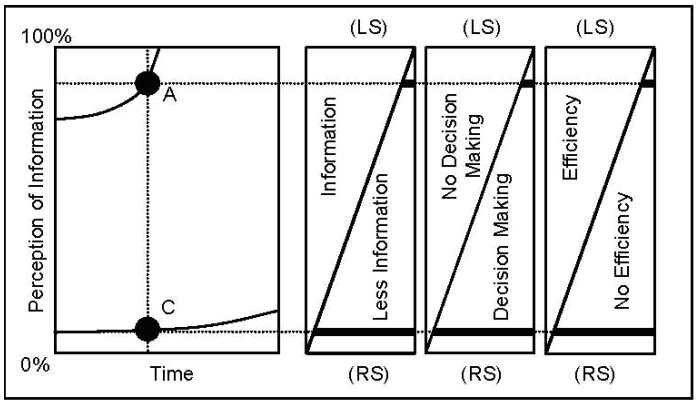

Figure 4. Information, Decision Making and Efficiency

By looking at this diagram shown in Figure 4 above, Kashiwagi (2004) mentions that "the KSM rule establishes that the type 'C' person's dominant characteristics are found on the right-hand side and the individual's less dominant characteristics are located on the left-hand side. All of the left-hand characteristics relate to the amount of information

perceived, processed, and applied. All of the right-hand characteristics correlate to people or entities possessing less information."

"Therefore, KSMs can identify if an individual or entity's characteristics are more like a type 'A' or type 'C' individual or entity. Since all factors are relative and related, each KSM can be associated with the amount of information the individual uses as well as with other related characteristics (Kashiwagi, 2004)."

The final conclusion that Dr. Kashiwagi (2004) describes is: "the use of the KSMs confirms the IMT theories. In addition, KSMs provide a simplistic method of identifying which characteristics have a positive correlation to the use of information. Coupled with the Rate of Change chart, the KSMs also propose that by increasing the amount of information required, entities can be identified which are more efficient and bring less risk. KSMs can allow an individual to understand different characteristics in relationship with information, which can assist an organization in becoming less bureaucratic, more efficient, and minimize false expectations."

c) Performance Information Procurement System (PIPS) and its success

As previously mentioned, the selection of IMT and the KSM, is justified by the success PIPS, the Performance Information Procurement System also developed by Dr Dean Kashiwagi, has had.

The Performance Information Procurement System (PIPS) was developed as a dissertation topic in 1991, and introduced by Dean Kashiwagi to the United States Air Force in 1992. It was later on that year brought to Del E. Webb School of Construction at Arizona State University. The original application was introduced in construction services but it has further extended to other fields of any type of procurement services and goods. The PIPS technology and concepts were different from the current concepts and delivery of construction procedures in the following ways (Kashiwagi, 2006; Kashiwagi, 2001; Kashiwagi, 2002; Kashiwagi, 1996):

1. “Proposed that price based processes were inaccurate, inefficient, and invalid unless connected to a level of performance (on time, on budget, and meeting client’s expectations).”
2. “Proposed that management, control, direction, and decision making by client’s representatives was incapable of delivering a consistent and high level of performance.”
3. “Proposed that performance information was more critical than technical information in selecting the best value vendor and delivering performance.”
4. “Proposed that price based systems created an adversarial environment, which forced management activity and transaction costs to rise, resulting in a decrease in industry performance and capability to provide services.”
5. “Highly prescriptive and detailed specifications were not an efficient way to deliver performance.”
6. “Higher performance contractors and experts lowered costs and increased value and quality.”
7. “Risk was being introduced by the client through decision making instead of risk being something not identified ahead of time and minimized by the contractor.”
8. “The client/buyer and their representatives and their processes were the major source of risk and the source of nonperformance.”
9. “Risk and control should be transferred to a best value contractor, and the contractor should administer the contract and do quality control, and the client’s representative should do quality assurance, or ensure that the contractor was doing quality control.”

PIPS has had a significant amount of successes, some of them summarized here below (Kashiwagi, 2009; www.pbsrg.com):

1. “Overall industry funding (PBSRG has used no university and minimal government research funding until 2008) of $8M through 2008, driven in large measure by a secondary researcher, assistant professor Sullivan, and running a research manpower cost of $600K per year in soft funding or non-university funded slots.”
2. “975+ total numbers of projects procured where PBSRG has controlled the entire delivery process, continually testing the theoretical hypothesis, $4.6B dollars in projects procured from which $528M are in construction, in a total of 41 different industries. PBSRG is the only research group that has run hundreds of repeated tests to do hypothesis testing.”
3. “Delivered nine (9) Arizona State University non-construction services for over $2B using PIPS, which brought ASU a value added investment of $50M (capital/cash). It is the only construction management research group given full guidance/control of their own university and a major US university (largest U.S. university based on student count of nearly 70,000 students) procurement/contracting and contract administration system and allowed to dictate the contract management of the projects using PIPS research concepts.“
4. “Also tested technology at the University of Minnesota, University of New Mexico, Boise State University, and University of Hawaii, and the University of Idaho. “
5. “98% performance meeting client’s expectations.”
6. “Minimized up to 90% of construction management risk activity (State of Hawaii results and University of Minnesota results).”
7. “Maximized contractor profit by as much as 5% (State of Hawaii results and University of Minnesota results).”

8. “Documented twice in the Engineering News Record (ENR) in 2006 and 2008 in full length articles.”
9. “Identified by the International Council for Research and Innovations in Building and Construction (CIB) as the coordinator for the Task Group 61 in 2005 based on the innovative research and worldwide leadership in the use of performance information, and awarded a Working Commission (WC) (W117) and a CIB journal in 2008 on the implementation of performance information in the built environment industry.”
10. “Tech Pono award in the State of Hawaii (1999) for technology innovation, Corenet Global Innovation of the Year award (2005) for testing results at Harvard University, Construction Owners of America Association (COAA) gold award for the City of Peoria PIPS implementation in 2007.”
11. “Assisted the International Facility Management Association Phoenix Chapter to receive 2005 chapter of the year award, and Project Management Institute Phoenix Chapter to receive 2008 Chapter of the year award based on PIPS/IMT education/research collaboration.“
12. “Fulbright grant in 2008/2009 for education and transfer of the PBSRG research program to the University of Botswana.”
13. “Arizona State University licensed contracting/procurement technology (State of Hawaii, University of Hawaii, Hawaii Department of Transportation, University of Minnesota, State of Oklahoma, US Army Medical Command, Heijmans, Dutch Infrastructure agency, State of Idaho, Scenter, Delft University).”
14. “One of few university based research professors tasked to be on IPMA PM Forum’s International Academic & Editorial Advisory Council (2009).“
15. “Requested by the WP Cary School of Business, one of the top rated business schools in the US, to consider packaging a best value option

undergraduate education concentration for the school of business (2009). This is a fifteen year developed technology that is licensed, is being moved from the construction area to one of the most prestigious business curriculums. “

16. “Only university research group requested to make radical changes to Corps of Engineers contract/procurement processes, run tests, and measure the effect of the new university licensed technology.”
17. “Only U.S. university research based construction program requested by a Dutch agency delivering construction to license and use the developed technology to attempt to solve the problems caused by collusion, over-management, and poor construction performance.”

d) Previous research in similar areas

There is evidence that there are high rates of failure in different industries. Foreman (2002) describes how in the first half of year 2001 shares of telecommunication companies lost approximate $1.7 trillion dollars of their original $2.7 trillion dollars value. Richardson et all (1994) mention the record levels the United Kingdom experienced during the first half of the 1990’s and illustrates this by citing “one in 38 active British businesses went into liquidation in the third quarter of 1992. In 1991 a total of 21,287 business failed compared with 15,051 in 1990 (a jump of 45%).” McKague (1997) comments a study performed by KPMG on failed Canadian Information Technology (IT) projects, which found that thirty-percent of IT projects fail. Perry (2001) indicates that in the late 1990’s “business failure rates averaged about 70,000 firms annually and the related liabilities averaging about $40 billion annually in the United States of America.” Available information on consistent leadership principles seems to be conflicting in a vast number of cases, which in turns makes it difficult to apply. There is so much confusion about what consistent leadership and business practices are and what are not (refer to Appendix A for an example of these conflicts).

There are many sources that publish articles about successful and consistent leadership and business practices by studying cases of success/consistency. Other sources that study failure/inconsistency try to illustrate the reasons behind failure, some using financial indicators and some using non-financial reasons. But it seems there is currently no simple and logical process for identification of correct leadership and management principles and business practices.

While studies like “Good to Great” from Collins (2001) try to describe how companies can transform from average to great, by looking at common traits among companies that made substantial performance improvement, it fails to take into account cases of failure which could turn the results into misleading. Denrell (2005) advises how dangerous could be to have a selection bias in terms of benchmarking by saying: “anyone who tries to make generalizations about business success by studying existing companies or managers falls into the classic statistical trap of selection bias – that is, of relying on samples that are not representative of the whole population they’re studying. So if business researchers study only successful companies, any relationships they infer between management practice and success will be necessarily misleading.” Denrell (2005) adds: “the theoretically correct way to discover what makes a business successful is to look at both thriving and floundering companies. Then business researchers will correctly identify the qualities that separate the successes from the failures.”

Other authors have ventured in the same path of trying to predict a formula for success, such as Rotella et al (2003) who proposes the “4+2” formula based on observations of companies they considered as “winners” arguing they “followed successful practices in four primary areas (strategy, execution, culture and structure) and in two secondary areas (talent/leadership/innovation and mergers/partnerships). Robb and Fairlie (2008) investigated the performance of Asian-owned businesses in the US and compare it to White-owned businesses in the US to determine two main reasons for the first being more successful than the second as higher levels of human capital and having

substantial start-up capital. These studies and others do not include an analysis of cases of failure, which increases the likelihood of falling into what Denrell (2005) considers as a "trap".

There is also inability to document successful implementation in a simple way. The literature research revealed numerous intents of establishing business failure prediction models, but they are based on financial indicators, which reflect "financial symptoms" and not necessarily the "root causes" of business failure – examples of these prediction models based on financial indicators are presented by Beaver (1967), Altman (1968), Hillegeist (2002), Foreman (2002), Mcleaya (2000) and others. Ooghe and De Prijcker (2007) mentioned some of the studies, which base "bankruptcy prediction on financial symptoms, such as Beynon and Peel (2001); Dimitras et al. (1999); and Ooghe et al. (1995)," and add: "these studies ignore the influence of underlying nonfinancial factors." In contrast to this, "a series of authors have questioned the usefulness of ratio-business prediction models (Lussier, 1995)." Lussier (1995) mentions a few studies about bankruptcy prediction based on financial indicators, such as "El-Zayaty (1986) who found ratio models to be poor predictors of bankruptcy: in his research of 132 businesses predicted to fail, only five were discontinued over a five-year period. Lussier (1995) also suggests, by citing Storey et al. (1987), "that qualitative data can provide at least as good predictions as traditional financial ratios, which are based on quantitative and qualitative managerial factors that may contribute to success or failure."

A few studies have tried to breach into this area of business failure prediction using non-financial data; Lussier (1995); Cooper et al. (1990, 1991); Reynolds (1987); and Reynolds and Miller (1989). The initial studies in this area such as Cooper et al (1991) surveyed existing firms, some of which failed within in a few years of the survey; they later compared initial survey responses of the failed companies with responses of non-failed companies and analyze differences – " 'planning' was the only consistently significant variable" found as determinant in these studies. Lussier (1995) in contrast,

uses a similar tool with logistic regression analysis, but surveyed companies after failure occurred, and used as a his survey baseline 15 major variables pre-identified in journal articles as contributors to success and failure. Lussier (1995) found four of his initial 15 tested-out variables, to be a significant contributor to differentiation between success and failure and they are: “planning, professional advisors, education and staffing.” Lussier (1995) points out a very important factor, mentioned in this same study, which is: “why are there inconsistencies within the literature and discrepancies between the literature and this study? Almost each of the major variables identified in the literature as factors contributing to success or failure have been rejected by one or more other existing studies.” He then adds: “capital and management experience constitute two major areas of discrepancy between the literature and this study. Fourteen of the twenty articles support these variables as distinguishing factors between success and failure. However, these two variables were not significant in this study.” Lussier (1995) recommends that further research is required in order to be able to find responses to these unanswered questions.

Chapter 3

RESEARCH METHODOLOGY

Part of the requirements of this study, is that the method or process of analysis need to be logical and simple. The application of KSM and IMT, a model and a theory that are based on simplicity, will be the tools that will make this requirement possible. In order to be able to gain full understanding of the potential benefits from this study it is necessary to understand the principles of IMT and how the KSM works, which primary concepts have been discussed in the previous literature research section.

The methodology of this study is going to be based on analyzing different case studies with the KSM, to identify the processes followed in that operation and to propose the consistent business practices applied in there. The methodology will also document the results obtained by applying those consistent practices found. In parallel to this, the application of the KSM and IMT to these cases studies will outline in a simplistic way, the logic behind these consistent business practices. The final results will be plotted out using the KSM, with the purpose of obtaining a clear sequence of operations that would lead to a successful outcome, and another one that would lead to failure.

A matrix with consistent business practices will first be proposed, by analyzing renowned authors in the area and plotting their recommended practices into both sides of the KSM and identifying the most consistent author to IMT. This matrix will be the baseline of the practices to look for into the second phase of the research, which is the case studies analysis. Authors in the fields of management and leadership will be compared in terms on consistency to IMT. This analysis will back-track to the authors' recommended business practices, and after applying the KSM as an extender on these practices the most consistent author will be identified. The recommended business practices by this author/expert will compose the initial "base-line matrix" that define the starting point of processes to look for and validate in the case studies.

The process to be found in this research is to be tested out, by finding case studies that support or do not support model outcome. The case studies that will be analyzed in this study come from a wide variety of areas and industries, ranging among market research, sales, medical and pharmaceutical, manufacturing, global and local economies, finance and management accounting and others. The purpose of this wide variety of data is to evaluate the robustness of the identified or proposed process and to make it capable of working under different characteristics and environments.

The second test will be to evaluate and compare this initial baseline model with a Full Extended matrix, using the KSM, including all other recommended business practices from all other authors in line with IMT, in terms of the coverage and prediction rate of the results.

A parallel analysis to the case studies will be to evaluate the people's perception of consistent leadership practices, by analyzing two different groups of individuals. One group of people being composed of individuals trained in IMT and another group of individuals not-trained in IMT. This analysis will try to find any connection between the categorization of these individuals and their performance, but most important it will try to identify differences among the two groups regarding understanding of consistent business practices and the presence or not of conflict in their perception.

The data will be collected by researching articles and case studies that talk about consistent and/or successful, and inconsistent and/or unsuccessful business practices. They will be collected by looking at sources such as electronic libraries like ABI/Inform, EI Compendex, Google Scholar and Web of Science, and business journals like Harvard Business Review, The Economist, and others. The criteria for selection of case studies will be to use only those that show a mean of measurement of the success and/or failure, and not just words without conclusive evidence to support it. The practice or practices that are cited in the case study will be transferred into a type "A"/LS or a type "C"/RS

characteristics of the KSM, with the purpose of plotting them out in the base-line matrix defined in the first part of the study.

It is important that both, case studies of success/consistency and failure/inconsistent are taken into account, and not only one or another, in order to avoid selection bias. Denrell (2005) explains how misleading and dangerous could be to draw conclusions about attributes or principles found in successful firms only, leaving aside cases of failure. Denrell (2005) says that "anyone who tries to make generalizations about business success by studying existing companies or managers falls into the classic statistical trap of selection bias—that is, of relying on samples that are not representative of the whole population they're studying. So if business researchers study only successful companies, any relationships they infer between management practice and success will be necessarily misleading."

After plotting the results of the case studies in the base-line matrix, the data obtained will be analyzed, showing the distribution of consistent business practices that lead to consistency/success, and the distribution of inconsistent business practices that lead to inconsistency/failure. A pattern for success and failure will then be proposed with these final results. A final set of recommendations will be presented after analyzing these patterns.

Chapter 4

DATA COLLECTION AND CHARACTERISTICS

a) Data Collection

For the first part of the research scope, the analysis of authors in the area of leadership and management, a selection of thirty-two (32) books was made from the collection of books studied in those areas at the Del E. Webb School of Construction (DEWSC), Ira A. Fulton Schools of Engineering, from Arizona State University (ASU). This repertoire includes publications from notorious authors in the area of business management, leadership, books from studies of successful companies and business leaders, and others.

These publications were analyzed by looking at and extracting some of the most relevant points the authors were discussing as "good" practices; the KSM tool was then applied on these practices with the purpose of classifying them as LS or RS characteristics. This created the first set of data for this part of the research scope.

The second part consisted of testing the perception on leadership principles on two small groups of individuals, one group of people trained in IMT and another one of people not-trained in IMT. This encompass a survey effort on a selected first group of people that had IMT training, in which a sample group of nine individuals previously trained in the IMT theory through courses and work at the Performance Based Research Group (PBSRG) from the DEWSC at ASU.

The second group, of people not trained in IMT, consisted on the selection of a group of project managers that had not prior knowledge of IMT. A group was selected including all project managers and general managers for a construction company with operations nationwide in the United States of America. A performance evaluation on these project managers was also requested to the General Managers, with the purpose to identifying any potential relationship between the project managers' performance and their perception of leadership principles in regard to IMT.

The third part of the research scope, the case studies for testing and validation of the initial baseline matrix of recommended LS characteristics was done by searching case studies at different electronic libraries such as ABI/Inform, EI Compendex, Web of Science, Google Scholar, Lexis/Nexis, Economist Intelligence Unit (EIU) and others. This initial search utilized keywords such as consistent and successful leadership and business practices; inconsistent and unsuccessful leadership and business practices, as well as similar concepts to "successful" such as good, best, great, winning, thriving, and others; and similar concepts to "failure" such as causes/reasons for bankruptcy, failure, insolvency, liquidation, loan default, credit risk, corporate distress and financial distress. The criteria for selection of case studies were to select those that show a mean of measurement of that success/consistency, or failure/inconsistency; dominant information to some extent.

The KSM was also applied to the selected case studies, with the purpose of categorizing the recommended/found practices into LS and RS characteristics. All this information resulted into the final data set to be used in the closing research analysis.

b) Raw data characteristics

The 32 books selection for the first part of the research encompasses authors in the areas of leadership and management. The books repertoire was selected by utilizing the books studied in the Leadership Class of the Graduate Program of the Construction Management Program at the Del E. Webb School of Construction from Ira A. Fulton Schools of Engineering at Arizona State University.

One of the characteristics found in the raw data of the authors in leadership and management, was that most of the authors discuss in their publications only a few, less than ten, of the recommended successful or consistent practice(s)/principle(s). A smaller group of authors goes beyond this and discussed quite a few more practices, between ten and twenty.

After all this data is translated, or extended by the KSM, into LS and RS characteristics, most of the authors fall below the 10 LS characteristics, with only 12 of them in the ten to twenty range. Only one author, W. Edwards Deming, exceeded this media and presents thirty-six (36) different LS characteristics.

The selection of the two groups of individuals for the comparison of perceptions regarding leadership and management principles was made as described next:

- Group of people trained in IMT: a group of nine (9) individuals that had been introduced to and had exposure to the IMT theory concepts was chosen, by contacting the Performance Based Research Group and asking them for a selection of individuals.
- Group of people non-trained in IMT: a construction company with operations across the United States of America was selected; the project managers and general managers for all branches were surveyed. This group included a total of 37 individuals; 32 Project Managers and 5 General Managers.

Related to the data from the third scope of research, the case studies of success/consistency, it was noticed that a significant amount of the search results indicated a common source of origin, the libraries of Harvard Business Review. Regarding cases studies of failure/inconsistency, the results came from in wide variety of sources, being studies of bankruptcy a significant commonality.

Another interesting characteristic of the case studies of success/consistency data, is that most of them focus on discussing a single practice or concept, instead of a wide set of practices. This means that the case studies describe one or only a few principles/practices of the entity being studied. The studies of failure/inconsistency consisted on trying to identify what set of principles/practices led in conjunction to failure. The condition applied to the case studies, of having a “mean of measurement/supportive data to the suggested practice/principle”, reduced significantly the quantity of available

case studies to be analyzed; in other words, a considerable count of case studies do not use dominant information to support the recommended practice or concept.

Finally, it was found that there are more case studies available that discuss success, rather than the ones that discuss failure. The results from case studies of failure, which a vast majority were based on analyzing bankruptcy, became quite repetitive regarding the findings of the practices/principles followed – the more cases found the more of the same characteristics found.

Chapter 5

DATA ANALYSIS

a) Data analysis techniques

As previously mentioned in the research methodology, the main analysis technique used in this research effort, is the KSM based on IMT. The ease of understanding and the highly logical approach from this technique makes it very useful for this investigative research objective.

All sets of data, the first, second and third part of research scopes, were analyzed by using simple statistical tools such as count of LS/RS characteristics; quantity of appearances found for each of the LS/RS characteristics; comparisons of opposite extremes, LS and RS, of the characteristics found and others. The analysis performed on the three scopes of research is listed as follows.

1) Authors/Books on Leadership/Management principles:
    i. Comparison of opposite extremes, LS and RS, of the characteristics found.
    ii. Count of books/authors with LS characteristics only.
    iii. Count of books/authors with RS characteristics present.
    iv. Count of LS/RS characteristics per book/author.
    v. Total count of LS/RS characteristics found.
    vi. Quantity of appearances of each of the LS/RS characteristics found.
    vii. Identification of how much data gets captured in the top-1, top-2, top-3, and subsequent groups, for both LS and RS characteristics.
    viii. Identification of the most relevant LS and RS characteristics by looking at the amount of data they would encompass.

ix. Identification of the author(s) with more LS characteristics – the most consistent author(s) to IMT.

2) People's perception on Leaderships/Management principles:
    i. Develop a survey based on a baseline matrix of LS characteristics.
    ii. Normalize survey responses, which had a 1-10 scale as a rate of agreement for certain statements, so that the closer to ten (10) the closer to LS-IMT concepts.
    iii. Identify highest individual score (closes to LS-IMT concepts) on both groups.
    iv. Identify lowest individual score (closes to RS concepts) on both groups.
    v. Compare averages of the two groups, people trained in IMT and people not trained in IMT.
    vi. Compare standard deviations of the two groups, people trained in IMT and people not trained in IMT.
    vii. Identify concepts with highest (LS's) and lowest scores (RS's) on both groups.
    viii. Compare areas of confusion, regarding Leadership/Management concepts, of the surveyed individuals with those of the books/authors.
    ix. Develop a performance rating to be asked to the leaders/supervisors on the surveyed individuals that worked for them.
    x. Compare results of performance rating with alignment to LS-IMT concepts.

3) Case studies of "success/consistency" and "failure/inconsistency":

i. Identification of case studies that “used some data” to support the identified concepts.
ii. Identification of case studies that used “dominant information” to support the identified concepts.
iii. Count of LS/RS characteristics found.
iv. Quantity of appearances of each of the LS/RS characteristics found.
v. Identification of how much data gets captured in the top-1, top-2, top-3, and subsequent groups, for both LS and RS characteristics.
vi. Identification of the most relevant LS and RS characteristics by looking at the amount of data they would encompass.
vii. Comparison of the results between the characteristics suggested by the authors/books and the characteristics found in the case studies.
viii. Test-out accuracy of prediction of the “base-line matrix” of the proposed LS characteristics in this study.
ix. Test-out accuracy of prediction of the “complete KSM-matrix” of all LS characteristics found initially in this study, which is composed of the “base-line matrix” plus “all others”.
x. Compare accuracy of prediction for both models; the “base-line matrix” and the “complete KSM-matrix”.

b) Authors in Leadership and Management

Kashiwagi (2007) presents a comparison of different leadership theories, as well as a comparison of different authors in the field. These comparisons, whose results are shown in Appendix A, bring up to light and suggest there is confusion and contradiction in this area.

Conflict was found among five different authors on the following characteristics that must be present on a leader (Kashiwagi, 2007):

1) “Dependency vs. empowerment.”
2) “‘Having bad’ traits vs. having ‘good traits’.”
3) “Being passionate vs. not being passionate.”
4) “Listening vs. coaching.”
5) “Having charisma vs. not having charisma.”

Besides authors in leadership, Kashiwagi (2007) also found conflict in four leadership theories, in regard leadership traits:

1) “Leadership traits being innate vs. being learnable.”
2) “Using rewards and punishments vs. sensitive needs.”
3) “Leadership traits due to personality vs. due to the environment.”
4) “Behavior based on treatment of the follower vs. not based on the treatment of the follower.”

Finally, the same study from Kashiwagi (2007) shows a summary of results from a previous study from Bernard Bass in 1991, that also points out contradiction in the characteristics needed in leaders:

1) “Introversion vs. extroversion.”
2) “Emotional control vs. not emotional control.”
3) “More intelligence vs. less intelligence.”
4) “Dominance vs. no dominance.”

Table 1 summarizes these conflicts found by Kashiwagi (2007). The detailed explanation for each of these opposing concepts is presented in Appendix A.

Table 1

Leadership conflicts (Kashiwagi, 2007)

CONFLICTS FOUND IN LEADERSHIP (Kashiwagi, Jacob 2007)		
AREA	**Proposal**	**Opposite Proposal**
Characteristics that must be present on a leader:	Dependency	Empowerment
	"Having bad" traits	Having "good traits"
	Being passionate	Not being passionate
	Listening	Coaching
	Having charisma	Not having charisma
Leadership theories:	Leadership traits being innate	Being learnable
	Using rewards and punishments	Using sensitive needs
	Leadership traits due to personality	Due to the environment
	Behavior based on treatment of the follower	Not based on the treatment of the follower
Characteristics needed in leaders (Bass,Bernard 1991):	Introversion	Extroversion
	Emotional control	Not emotional control
	More intelligence	Less intelligence
	Dominance	No dominance

This previous study evokes that current information on leadership is disjointed and contradictory in some cases. Furthermore, an extension of this previous study, now in the area of management principles as well, is presented by the author of this study in Appendix B. This analysis also suggests there is much confusion about what consistent business practices are and what are not, in similar manner to the leadership characteristics.

A selection of leadership and management publications utilized in the courses of the same area at the Del E. Webb School of Construction (DEWSC), Ira A. Fulton Schools of Engineering from Arizona State University (ASU), brings up to light this confusion and contradictions (more details presented in Appendix B and Appendix C).

From the total of thirty-two (32) publications analyzed in this Appendix B, a subtotal of sixty-eight (68) different type "A"/LS characteristics (LS=left side of the KSM) were found with a total of 464 appearances. Differing from this finding, a subtotal of twenty-seven (27) different type "C"/RS characteristics (RS=right side of the KSM) were found with a total of eighty-six (86) appearances. Trying to identify the top LS and RS characteristics, a line can be drawn where seventy-five percent (75%) of the data gets captured. This line brings up the top twenty-five (top 25) LS characteristics with a total of 353

appearances; and the top fourteen (top 14) RS characteristics with a total of sixty-seven (67) appearances. Table 2 and Table 3 next, show the top twenty-five (top 25) LS characteristics and the top fourteen (top 14) RS characteristics found in the analysis of the considered authors, respectively (Appendix B presents **all** LS/RS characteristics).

Table 2

Top twenty-five (top-25) LS characteristics on the authors (75% of data captured)

Ranking	Top twenty-five (top-25) LS characteristics - recommended as "GOOD"	Quantity of appearances	Accrued per-cent of data captured
#1	Alignment (*)	49	11%
#2	Think of us (*)	25	16%
#3	Teamwork (*)	21	20%
#4	Look inside	21	25%
#5	Change	19	29%
#6	Understands others	18	33%
#7	Accountability (*)	17	37%
#8	Pre-planning/look ahead (*)	16	40%
#9	Measurement (*)	15	43%
#10	Education/Learning	13	46%
#11	Trial and error	11	48%
#12	Treat everyone different (*)	11	51%
#13	Leadership	11	53%
#14	Controls his/her own life (*)	11	56%
#15	Use of information	10	58%
#16	Performance information (*)	10	60%
#17	Continuous improvement	10	62%
#18	Training	9	64%
#19	Serve others	9	66%
#20	Listening (*)	9	68%
#21	Win-win/think of the whole supply chain	8	70%
#22	Self-improvement	8	71%
#23	Open to alternatives	8	73%
#24	No emotions	7	75%
#25	No control (*)	7	76%
#37	No influence (*)	4	77%

(*) NOTE: this "color shaded" characteristic was found in conflict with the opposite on the top-14 RS

Table 3

Top fourteen (top-14) RS characteristics on the authors (75% of data captured)

Ranking	Top fourteen (top-14) RS characteristics - recommended as "GOOD"	Quantity of appearances	Accrued per-cent of data captured
#1	Influence (*)	22	26%
#2	Trust (*)	6	33%
#3	Control (*)	6	40%
#4	Relationships (*)	4	44%
#5	Misalignment/firing (*)	4	49%
#6	Work harder (no smarter) (*)	3	52%
#7	Treat everyone the same (*)	3	56%
#8	Think of me and them (*)	3	59%
#9	Spokespeople (instead of thinkers)/speech/fame (*)	3	63%
#10	Feeling controlled by others (*)	3	66%
#11	Decisions/encourage decisions	3	70%
#12	By formal position/title (instead of by performance) (*)	3	73%
#13	Talent is not inherited (...NOT all human behavior is genetic...)	2	76%
#14	Reactive/being "active" (*)	2	78%

(*) NOTE: this "color shaded" characteristic was found in conflict with the opposite on the top-25 LS

Since the comparison of the RS characteristics against the LS characteristics, from Table 3 and Table 2, respectively, only encompass seventy-five percent (75%) of the data, RS characteristics No. 11 and No. 13 from Table 3 do not appear to be in conflict; however, these two RS characteristics are in conflict with the opposite LS characteristics taking into account one-hundred percent (100%) of the data found.

The discrepancy on leadership and management concepts can be distinguished one more time by looking at these results. The direct opposite characteristics, LS vs. RS respectively, that can be found in this comparison are presented next (table 4 expands on these conflicts):

1) The importance of alignment vs. not having it (misalignment).
2) Thinking in terms of “us” vs. thinking in terms of “me & them.”
3) Treating everyone different vs. treating everyone the same.
4) Controlling his/her own life vs. feeling controlled.
5) Not using control/releasing it vs. having control/establishing it.
6) Influence vs. influence.

These clashing results illustrate the importance of establishing or identifying a simple process for categorizing consistent and inconsistent business leadership and management principles. This is where the hypothesis here presented gets into play, proposing that consistent leadership (management) practices, along with the Kashiwagi Solution Model (KSM) model as an extender, can quickly identify consistent business concepts that increase the chances of success.

As a starting point for the second part of this analysis, a baseline of consistent business leadership and management concepts needs to be defined, being those concepts in line with the LS of the KSM. The next section discusses this research effort.

Table 4

Conflicts found in the 32 books of Leadership/Management books

Conflicts in leadership and management books (32 books)				
Conflict	**LS Characteristics**	**Opposite RS Characteristics found**	**Examples**	**Book**
			LS/RS CHARACTERISTICS	
1A	**Alignment**		Finding the right fit / focus on strengths / Value differences in people / etc	First, break all the rules /// The 7 Habits of Highly Effective People
1B		**Misalignment**	Promote firing people / remove people for the cause / good leaders in the middle make good leaders at the top / etc	The Lessons of Experience: How Successful Executives Develop on the Job / Taking Charge "A Practical Guide For Leaders / The 360° Leader
2A	**Think of "us"**		A leader is a person who serves / takes care of their people / customers are people-perceived, appreciated / etc	Leadership is an Art / Taking Charge "A Practical Guide For Leaders / A Passion For Excellence
2B		**Think of "me and them"**	Remove people for the cause / "If you must shoot. Do not shoot to wound. Finish the person off as a rival!" / good bosses are all about them	Taking Charge "A Practical Guide For Leaders / Executive Warfare / Executive Warfare
3A	**Treat everyone different**		Don't treat People as you would like to be treated / excitement of mutual learning create a momentum toward more insight, learning and growth / Institute training on the job understanding people's needs / etc	First, break all the rules / The 7 Habits of Highly Effective People / Out of the Crisis
3B		**Treat everyone the same**	"You cannot ask those who work for you to do something you're unwilling to do yourself." / Leading successfully at one level is a qualifier for leading at the next level / Good leaders in the middle make better leaders at the top.	Leadership (Gulliani) / The 360° Leader
4A	**Control his/her own life**		You must believe you are the master of your own destiny / The Choice Is Within Us / The first person you lead is you" / "You can seize only what you can see" / The number one threat to companies performance is not from outside, it is from with in.	The Feiner Points of Leadership / The Winning Attitude / Leadership 101 (Maxwell) / Building Profit through Building People
4B		**Feeling controlled**	Attitude, Risk, and "Luck" / "Random strangers to you are not always strangers to the people who hold your career in their hands." / "Any time you see a turtle on a fence post you know he had some help. Your view from the fence post is made possible by others."	Executive Warfare /// Developing the Leaders Around You
5A	**No control**		Define the right outcome - not by controlling people / Inspire Others & Manage yourself / Freedom of Choice / Be interested in finding the best way, not in having your own way	First, break all the rules / The 8th Habit / WOODEN ON LEADERSHIP
5B		**Control**	Change the internal environment; Change in the external environment / The Push technique consists of declaring, proposing, and asserting a point of view / Recognize, Review, Repress, Readjust, Re-enter.	Leaders: Strategies for Taking Charge / The Feiner Points of Leadership / The Winning Attitude
6A	**No influence**		No manager can make an employee productive / The best managers never try to fix weaknesses; instead they focus on strengths and talent / Freedom of Choice	First, break all the rules / The 8th Habit
6B		**Influence**	Make people like you / Influence people through conversation / High performance leaders believe they will change the world and they infuse subordinates with this belief / Developing Your Influence from Anywhere in the Organization	How to Win Friends and Influence People / The Feiner Points of Leadership / The 360° Leader

c) Identification of the type “A”/LS characteristics (LS=left side of the KSM) that conform the initial baseline of consistent business concepts

Using the same data found in Appendix B, about the leadership and management publications and the principles they propose, an analysis on the different authors from these publications was made with the purpose of identifying the most consistent author to IMT.

Out of a total of thirty-two (32) books from twenty-six (26) different authors, twenty-two (22) of those books from eighteen (18) different authors contained RS characteristics on them. This means only ten (10) books from eight (8) different authors contained LS characteristics only.

The authors that have more LS characteristics in their books discuss between ten (10) and twenty (20) different LS characteristics. However, one author excels in this regard; W. Edwards Deming on his book “Out of the Crisis” (Deming, 2000) discusses thirty-six (36) different LS characteristics.

The authors that presented RS characteristics in their books discussed between one (1) and eight (8) different RS characteristics, being eight (8) the maximum count of RS characteristics found on any specific author. Twenty-two (22) out of the thirty-two (32) books presented some RS characteristics in their proposed principles.

Deming (2000) is the one author of all the ones studied that have the majority of LS characteristics from the top twenty-five (top-25) LS characteristics found in Appendix B, and has no RS characteristics present. Twenty (20) out of his thirty-six (36) LS characteristics were found in that top twenty-five (top-25). With all the LS characteristics from Deming (2000), seventy-two percent (72%) of the all data found between all authors gets captured.

Looking at these results it can be concluded that Deming (2000), with his fourteen points of management, is the most consistent author to IMT among all the ones studied. Therefore, Deming’s LS characteristics represent a very good start for defining the initial

baseline matrix that will be utilized in the rest of the study. This initial baseline of LS characteristics is presented below in Table 5. Appendix C shows in detail how the KSM was an applied as an extender on Deming's fourteen points of management.

Table 5

Initial baseline matrix of LS characteristics – from Deming (2000)

Deming's 36 LS characteristics	
1	Accountability (*)
2	Alignment (*)
3	Change (*)
4	Continuous improvement (*)
5	Education/Learning (*)
6	Eliminate information barriers
7	Leadership (*)
8	Look at 30k ft
9	Look inside (*)
10	Measurement (*)
11	Minimize total cost
12	No assumptions
13	No control (*)
14	No decisions
15	No emotions (*)
16	No incentives
17	No inspections
18	No price tag only (no low bid)
19	No quotas
20	No silos
21	No standards
22	No traditions
23	Performance information (*)
24	Pre-planning/look ahead (*)
25	Productivity
26	Quality
27	Self-improvement (*)
28	Serve others (*)
29	Simple
30	Specialization
31	Teamwork (*)
32	Think of us (*)
33	Training (*)
34	Treat everyone different (*)
35	Use of information (*)
36	Win-win/think of the whole supply chain (*)
(*) NOTE: this "color shaded" characteristic is part of the top-25 LS characteristics from the 32 authors/books research	

d) Review of Deming's Out of Crisis Book

Even though presenting a summary of the book from Deming (2000), Out of the Crisis, does not add direct value to this research, the author here believes that it is important to present a short review of the concepts Deming discusses, with the purposes of showing how the KSM gets applied as an extender for finding LS characteristics.

Deming's background: a consultant for forty years with practice worldwide; best known for his work in Japan, which commenced in 1950, and created a revolution in quality and economic production; Japanese manufacturers created in his honor the annual Deming Prize; in 1960, the Emperor of Japan decorated him with the Second Order Medal of the Sacred Treasure; the President of the United States awarded to him on June 25, 1987 the National Medal of Technology; recipient of the Shewhart Medal for 1955, from the American Society for Quality Control; recipient of the Taylor Key award, American Management Association, 1983; member of a dozen professional and scientific societies; PhD. in mathematical physics from Yale University in 1928; a number of universities, around eighteen, have awarded him the degrees LL.D. and Sc.D., honoris causa; author of several books and 170 papers; his books include OUT OF THE CRISIS (Center for Advanced Engineering Study, Massachusetts Institute of Technology, 1986) and THE NEW ECONOMICS (same publisher, 1993). His major accomplishments are considered as: responsible for creating Six Sigma concepts, Lean and Statistical Control Model (The W. Edwards Deming Institute, Biography, 2008).

Deming's purpose was defined as: "to avoid the failure of management to plan for the future, to foresee problems about waste of resources all of which raise the manufacturer's cost and price, resulting in the loss of the market; performance of management should be measured; loss of market resulting in unemployment; the causes usually cited for failure: cost of start up, overruns on cost, depreciation of excess inventory and competition – they are pure and simple bad management; management cannot learn by experience alone; the first step is to learn how to change; only

transformation of the American style of management and governmental relations can halt the decline; an attempt to improve productivity and not just measure it; all industries subject to the same principles of management (Deming, 2000)."

"Chain Reaction; Quality – Productivity – Lower Cost – Capture the Market (Deming, 2000)": Deming illustrates how, in a stable system of trouble in a manufacturing plant; improvement of quality is the responsibility of management. He explains that productivity increases as quality improves because there is less rework and not so much waste, and how low quality means high cost; how new machinery and gadgets are not the answer, and how "measure of productivity" by itself do not lead to improvement in productivity.

The fourteen (14) "Principles of Transformation of Western Management (Deming, 2000)": the objective of these is to measure the performance of management, and to see how management is doing. The condensation of the 14 points for management is presented as follows:

1) "Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs. "
2) "Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change. "
3) "Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place. "
4) "End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust."
5) "Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs."

6) “Institute training on the job.”
7) "Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.”
8) “Drive out fear, so that everyone may work effectively for the company.”
9) “Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.”
10) “Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.”
11) “Quotas…
    i. Eliminate work standards (quotas) on the factory floor. Substitute leadership.
    ii. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.”
12) “Barriers…
    i. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.
    ii. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means,

inter alia, abolishment of the annual or merit rating and of management by objective."

13) "Institute a vigorous program of education and self-improvement."
14) "Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job (Deming, 2000)."

Deming also explains "the diseases and obstacles which stand in the way of transformation (Deming, 2000)", and they are:

1) "Lack of constancy of purpose."
2) "Emphasis on short-term profits."
3) "Evaluation of performance, merit rating, or annual review."
4) "Mobility of management: job hoping."
5) "Management by use only of visible figures, with no consideration of figures that are unknown."
6) "Excessive medical cost."
7) "Excessive costs of liability, swelled by lawyers that work on contingency fees (Deming, 2000)."

Deming also presents a set of questions, which can help provide management some basis to assist their understanding of responsibilities.

The relationship between Quality and Consumer is explained in depth, which indicates the producer is in far better position than the consumer to invent new design and new service.

Deming dedicates a full chapter that focus of extending the fourteen points and the diseases of management to service organizations, by explaining the similarity to the manufacturing process and giving examples.

Deming introduces "New Principles of Training & Leadership (Deming, 2000)" with a very insightful definition shown as follows: "the aim of leadership should be to improve the performance of man and machine, to improve quality, to increase output, and

simultaneously to bring pride of workmanship to people. It is not merely to find and record failures of men, but to remove the causes of failure: to help people do a better job with less effort (Deming, 2000)". He then expands the roles of leadership by explaining how the leader needs to point out mistakes and explain to workers how to improve; the importance of training on new people and the continuity of training for all others; and finally how the leader can beneficiate from the use of statistical control tools to have a better understanding of the event.

The last part of the book talks about operational definitions; about the effects of standards and regulations; about causes for improvement once the system becomes stable; and provide many examples that help clarify the application of all these recommendations.

In the close-out of the book Deming provides guidance for organizations to make optimum use of knowledge, and for continual development of people and processes. He finalizes translating to real live examples, how some simple applications of his principles could contribute to better living.

Using the KSM as an extender, the fourteen (14) points of management presented by Deming (2000) and their categorization into KSM-LS are presented next, with full details in Appendix C.

As previously mentioned, Table 5 summarizes the LS characteristics found on Deming's book, which become the initial base-line matrix of LS characteristics to look for and validate in the next part of the research with the case studies.

e) Comparison of individuals on the perception of Leadership/Management Principles – people trained in IMT vs. people not trained in IMT

In order to test and find out any differences on the perception of Leadership and Management concepts, two different groups of people were selected to be part of a survey – a group of people trained in IMT and another group of people not-trained in IMT.

The purpose of the survey was to evaluate the level of agreement of the individuals, based on what they think, on certain leadership/management practices presented.

The first group of people, trained in IMT, which has previously had training and working exposure to the IMT concepts, was selected by contacting the Performance Based Research Studies Group (PBSRG) from ASU, for suggestion of these individuals – a total of nine (9) individuals was selected.

For the second group of people, not-trained in IMT, the project managers of a construction company were selected. The selected construction company was one that had operations nationwide in the United States. This group was composed of 37 individuals; 31 project managers and 6 general managers distributed in five (5) different branches across the US.

The initial baseline of the survey questionnaire was based on the 36 LS characteristics from Deming (Table 5), converted to Questions. Appendix D presents the survey questionnaire. The questions were built by assessing the rate of accord of each individual to a specific statement related to either a LS of the KSM/IMT concept or to a RS of the KSM/IMT concept. The survey would ask: “Drawing on your personal opinion, please rate the importance of each of the following statements on a scale from 1 to 10; 1 being strongly disagree, 5 is don’t know, and 10 is strongly agree. There is no right or wrong answer, just your opinion.” The responses to each of the questions were later normalized, so that the closer the score to ten (10) the closest to the LS of the KSM/IMT, and the closer the score to one (1) the closest to the RS of the KSM/IMT.

A “test run” was made on this initial Survey, by asking a group of project managers to respond to it and to give feedback about the same questionnaire after responding to it. The results and feedback led to modify the original questionnaire by reducing the quantity of questions and to simplify the questions as well, due to repetitiveness of some of the concepts surveyed and because it was taking too much time to respond it. The reshaped

survey throw a set of 15 main questions, presented in Table 6 next – the evolvement and modification of the survey questionnaire is presented in Appendix D.

The preliminary results show some confusion and repetitiveness in some of the questions, as expressed by the surveyed individuals in their responses. In order to remove this confusion of the results, seven (7) out of the final 15 main questions were later eliminated, resulting in eight (8) final questions which results were going to be analyzed. The eliminated questions are also highlighted in Table 6 and the final questions summarized in Table 8.

Table 6

15 main Questions of the Survey

No	LS Characteristic from Deming	Question
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties
2	Leadership/No Control	Increased management, direction, and control results in effective operations.
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation.
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid
6	No decisions	Minimizing "decision making" is a good strategy (*).
7	Use of information	When information is scarce, people tend to make more decisions (*).
8	No incentives	Incentive pay is a sign of good leadership.
9	No inspections	More inspection will increase effectiveness and will improve operational performance (*).
10	No price tag only (no low bid)	Contractors should be selected based solely on Performance (and not price) (*).
11	No quotas	Management by objectives and quotas is shortsighted and results in low performance (*).
12	No standards	Clear and concise standards/specifications increase performance (*).
13	Performance information	Managers should rate the performance of those who work for them.
14	Look inside	Capable managers also identify and minimize the risk that they do not control.
15	Simple	Complex and integrated information systems with access for everyone leads to continual improvement (*).
		(*) Eliminated Question

Table 7 and Table 8 next, show the relationship between the Survey and the first research scope on the authors of Leadership and Management (L\M). The surveyed concepts in the final survey are identified in the following tables, by comparing the questions asked and the leadership and management concepts found, extended by the KSM, on both summaries: a) the top-25 LS characteristics and b) the list of questions. Seven out of the eight final concepts evaluated in the questions of the survey are part of the top-25 LS characteristics of the authors in L/M. All questions were part of the selected Deming's baseline matrix.

Table 7

Relationship between the Survey and the top-25 LS characteristics of the Authors in L/M

Ranking	Top twenty-five (top-25) LS characteristics - recommended as "GOOD"	Quantity of appearances	Accrued per-cent of data captured
#1	Alignment (*)	49	11%
#2	Think of us (*)	25	16%
#3	Teamwork (*)	21	20%
#4	Look inside	21	25%
#5	Change	19	29%
#6	Understands others	18	33%
#7	Accountability (*)	17	37%
#8	Pre-planning/look ahead (*)	16	40%
#9	Measurement (*)	15	43%
#10	Education/Learning	13	46%
#11	Trial and error	11	48%
#12	Treat everyone different (*)	11	51%
#13	Leadership	11	53%
#14	Controls his/her own life (*)	11	56%
#15	Use of information (+)	10	58%
#16	Performance information (*)	10	60%
#17	Continuous improvement	10	62%
#18	Training	9	64%
#19	Serve others	9	66%
#20	Listening (*)	9	68%
#21	Win-win/think of the whole supply chain	8	70%
#22	Self-improvement	8	71%
#23	Open to alternatives	8	73%
#24	No emotions	7	75%
#25	No control (*)	7	76%
#37	No influence (*)	4	77%
(*) NOTE: this "color shaded" characteristic was included in the Questions of the Survey			
(+) NOTE: this "color shaded" characteristic was included in the Questions of the Survey, but the questions was later eliminated.			

Table 8

Final eight (8) questions of the Survey and their relationship to the top-25 LS characteristics of the Authors in L/M

No	LS Characteristic from Deming	Question
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).
8	No incentives	Incentive pay is a sign of good leadership.
13	Performance information	Managers should rate the performance of those who work for them (*).
14	Look inside	Capable managers also identify and minimize the risk that they do not control (*).
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research

An additional section of this research scope, the survey, was to create a performance evaluation on the project managers (PMs), and to have their supervisors, the general managers (GMs), give a rating on their project managers. The purpose of this evaluation was to identify any possible relationship between individuals performance and the categorization that could be made after looking at the individuals survey responses; the closer or farther from the LS of the KSM/IMT each individual is. The rating would be on perceived abilities of the PMs, by selecting not a rating but a ranking of the individuals that would allow for differentiation among them. Table 9 presents the performance

evaluation questionnaire sent out to the general managers of the group of people not trained in IMT.

Table 9

PMs Performance Evaluations

No	PMs Ranking from General Managers	Ranking of PM (1=best; 2=2nd to best; 3=3rd to best; etc)	Weight given to each question
1	Professionalism and ability to manage	1,2,3...	17%
2	Leadership and promotion of teamwork	1,2,3...	17%
3	Risk management, performance documentation/tracking and improvement	1,2,3...	17%
4	Ability to maintain project schedule	1,2,3...	17%
5	Ability to maintain and improve Project Quality	1,2,3...	17%
6	Overall customer satisfaction	1,2,3...	17%
A	Weighed Average	1,2,3...	100%

Due to the "bureaucracy" of big part of the organization, the results of the performance evaluation on their project managers were not received. However, one (1) single performance evaluation on the individuals, the PMs, was received for one of the branches only. Even though the results of this small sample cannot be determinative, the analysis is presented in the "Results Section" later on.

f) Analysis of case studies for validation – testing the "initial baseline matrix" and the "complete/full extended KSM-matrix" of LS characteristics

With the testing and validation of the LS/RS characteristics initially found, is where the third and final part of the research scope takes place – the search for case studies of both, success/consistency and failure/inconsistency, and their respective identification of LS/RS characteristics of the KSM/IMT.

The initial baseline matrix of LS characteristics is defined by the thirty-six (36) LS characteristics found on Deming's book (2000). This initial matrix will be tested out by finding cases studies that either, sustain or do not sustain the proposed model.

It is important to notice that the remaining LS characteristics found after taking into account all authors studied in the first part of the research scope, are not going to be discarded. A second analysis will be to propose a full extended matrix, using the KSM of IMT, including all other recommended business practices from all other authors in line with IMT, and to test out this "Full Extended KSM-matrix" with the findings of the case studies.

A comparison will then be made on both models, in terms of the coverage and prediction rate of the results for each one – the Initial Baseline Matrix from Deming and the Full Extended "KSM" Matrix.

As the research methodology mentioned it, the criterion for the selection of the case studies was to utilize those that use a "mean of measurement" of the consistency and inconsistency of the results, after applying the recommended or not recommended concept/practice; in other words the use of dominant information in the defense of the case study.

The search for case studies was divided in two sections:

1) Case studies of "success/consistency."
2) Case studies of "failure/inconsistency."

Once a case study was found that matched the selection criteria, the process for identification of LS/RS characteristics on the case studies was, to apply the KSM of IMT to the concept(s)/practice(s) discussed and/or recommended and to identify the respective LS or RS characteristic. Appendix E illustrates in detail how this process gets done and it shows a brief outline of the selected case studies.

The initial research was performed in electronic libraries like ABI/Inform, Lexis/Nexis, Web of Science, EI Compendex, Google Scholar, Economist Intelligence Unit (EIU) and others. The findings and results with case studies that show better supportive data on the cases pointed out to the Harvard Business Review (HBR) as a major source.

- Case studies of “success/consistency”

From over 170 case studies reviewed at first, only forty (40) articles show some kind of data and/or means of measurement to support the study in question, and not even the forty (40) cases found included “dominant” information. Even though the articles analyzed did explain the consistent business practices followed, just a few of them, seventeen (17), showed dominant data to back it up (refer to articles in Appendix E). From this research scope, the case studies of “success/consistency”, it can be drawn that out of 170 case studies examined only forty (40), which equated to twenty-four percent (24%) used some sort of data to support the concepts there discussed. From these forty (40) case studies selected, only seventeen (17), equating to forty-three percent (43%), or ten percent (10%) overall, used dominant information to some extent as background data.

From the total of forty (40) case studies of “success/consistency” analyzed and presented in Appendix E, a subtotal of twenty-nine (29) different type “A”/LS characteristics (LS=left side of the KSM) were found with a total of ninety-two (92) appearances. From these twenty-nine (29) LS characteristics, seventeen (17) were included in the Initial Baseline Matrix from Deming (Table 5); the additional twelve (12) LS characteristics were not included in this table, but they were part of the comprehensive and Full Extended “KSM” Matrix. Important to notice is that NO **RS** characteristics were found in the case studies about consistent/successful business/leadership/management practices.

Trying to identify the top LS characteristics that led to consistency/success, a line can also be drawn at the same seventy-five percent (75%) previously used – the top eleven (top-11) LS characteristics with a total of sixty-nine (69) appearances can then be identified. Table 10 shows the LS characteristics found after analyzing the case studies of consistency/success and Table 11 shows illustrative examples of the top eleven (top-11) LS characteristics found. The **(*)** on Table 10 indicates the LS characteristic that were captured in the Baseline Matrix from Deming (Table 5). Figure 5 presents a chart

showing the distribution of the LS characteristics found in the case studies of success/consistency.

Table 10

LS characteristics found that lead to consistent/successful results

Ranking	LS characteristics Recommended as "GOOD"	Quantity of appearances	Accrued percent of data captured
#1 (*)	Use of information	15	16%
#2 (*)	Performance information	9	26%
#3 (*)	Change	7	34%
#4 (*)	No assumptions	7	41%
#5 (*)	No control	6	48%
#6 (*)	No decisions	6	54%
#7	Fast processing speed (type A)	6	61%
#8 (*)	Alignment	4	65%
#9 (*)	No traditions	4	70%
#10 (*)	Continuous improvement	3	73%
#11 (*)	Look at 30k ft	2	75%
#12 (*)	Pre-planning/look ahead	2	77%
#13	No expectations	2	79%
#14	Adaptable	2	82%
#15	Trial and error	2	84%
#16	Simple	2	86%
#17 (*)	Measurement	1	87%
#18 (*)	No emotions	1	88%
#19 (*)	Quality	1	89%
#20 (*)	Teamwork	1	90%
#21 (*)	Think of us	1	91%
#22 (*)	Win-win/think of the whole supply chain	1	92%
#23	Accept criticism	1	93%
#24	Agile (instead of inactive)	1	95%
#25	Logic	1	96%
#26	Creativity	1	97%
#27	Efficiency	1	98%
#28	Thinkers (instead of spokespeople)	1	99%
#29	Listening	1	100%
NOTEs: (*) LS characteristic found in Deming's baseline Matrix.			
75% of the data gets captured with these "color shaded" characteristics.			

Table 11

Top 11-LS characteristics that lead to consistent/successful results (75% of data captured)

Ranking	LS characteristics Recommended as "GOOD"	Explanation/examples
#1	Use of information	Found critical in the prediction of the outcome/preventing assumptions and therefore, the definition of the successful path to follow/actions to be taken
#2	Performance information	Use/analysis of performance information found as good tool for predicting the outcome/finding ways of improvement/avoiding failure
#3	Change	Being able to change makes the company/entity/person able to adapt to the changing conditions for the environment and leads towards improvement/new strategies/innovation
#4	No assumptions	The lack/no use of information will lead to making assumptions, which could be incorrect - assuming same strategies for different environments/ignoring important factors
#5	No control	Trying to control has no positive effect on the desired goal/objective to achieve - holds/prevents resources from achieving the max/prevents growth/prevents adaptability/prevent commitment
#6	No decisions	The lack/no use of information which leads to make assumptions, forces to make decisions which are imprecise - due to blindness=>bad initiatives/strategies based on mere decision/intuition vs. analytical measures
#7	Fast processing speed (type A)	Having a fast processing speed is one of the characteristics found on successful leaders, following the type "A" and type "C" categorization - able to process more information and faster/filter unnecessary info/use most important info
#8	Alignment	By having information the proper alignment can be made, and alignment of resources was found critical in achieving good outcomes - identify resources, align them to maximize skills/use performance info to align
#9	No traditions	Following traditions prevents to change, making it more difficult to adapt and generates reactive measures - minimize adaptability/limits innovation
#10	Continuous improvement	Continuous improvement is one of the characteristics that come along with change and allows better solutions to be found, which increases competitiveness - innovation/enhancement/quality achievement
#11	Look at 30k ft	Found as a characteristics that provides a better comprehension of the event which would allow for better results - increasing ability to "look ahead/pre-plan"/increasing ability to look inside organization/individual structure/prevents "blindness"

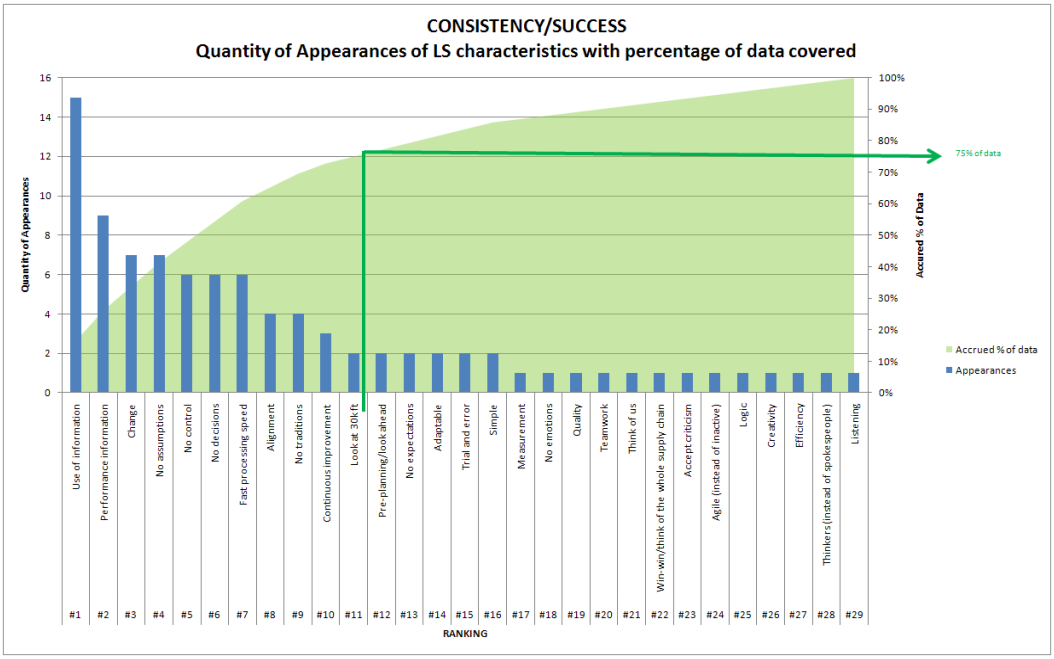

Figure 5 – Distribution of LS characteristics found that led to success/consistency

- Case studies of “failure/inconsistency”

From over 190 case studies analyzed that discussed failure/inconsistency, only thirty (30) case studies show some data or a mean of measurement to support the concepts. Only twenty-five (25) case studies presented dominant information to some extend to back up the concepts and principles in there presented (refer to articles in Appendix E). After the relevant 30 case studies found, all additional cases that discussed failure/inconsistency were very repetitive of the same LS/RS characteristics found – because of this no further review took place in this area.

The 30 case studies with back up data/supportive measures that discussed failure/inconsistency represent sixteen-percent (16%) of all case studies reviewed, and the 25 cases studies with dominant information embody eighty three-percent (83%) of the 30 cases analyzed in detail, thirteen-percent (13%) overall the 190 cases. It is important to mention that NO **LS** characteristics were found in any of these case studies, as a cause of failure/inconsistency.

From the total of thirty (30) case studies of “failure/inconsistency” analyzed and presented in Appendix E, a subtotal of twenty-six (26) different type “C”/RS characteristics (RS=right side of the KSM) were found with a total of one-hundred-one (101) appearances. From these twenty-six (26) RS characteristics, twenty (20) were included in the Initial Baseline Matrix from Deming as not recommended (Table 5); the additional six (6) RS characteristics were not included in this table, but they were part of the comprehensive and Full Extended “KSM” Matrix as not recommended. Important to notice is that NO **LS** characteristics were found in the case studies about inconsistency/failure in business/leadership/management practices.

Trying to identify the top RS characteristics that led to inconsistency/failure, a line can also be drawn at the same seventy-five percent (75%) previously used – the top eleven (top-11) RS characteristics with a total of seventy-eight (78) appearances can then be identified. Table 12 shows the RS characteristics found after analyzing the case studies

of inconsistency/failure and Table 13 shows illustrative examples of the top eleven (top-11) RS characteristics found. The **(*)** on Table 12 indicates the RS characteristic that were captured in the Baseline Matrix from Deming as not recommended (Table 5). Figure 6 presents a chart showing the distribution of the RS characteristics found in the case studies of failure/inconsistency.

Table 12

RS characteristics that lead to inconsistent/failing results

Ranking	RS characteristics Recommended as "BAD"	Quantity of appearances	Accrued percent of data captured
#1 (*)	Misalignment	17	17%
#2 (*)	Lack of planning	14	31%
#3 (*)	Lack of measurement	12	43%
#4 (*)	Lack of change	6	49%
#5 (*)	Technical	5	53%
#6 (*)	Assumptions	5	58%
#7 (*)	Decisions	5	63%
#8 (*)	Ignore performance information	4	67%
#9 (*)	Think of me and them (instead of us)	4	71%
#10 (*)	Reactive	3	74%
#11 (*)	Silos	3	77%
#12 (*)	No leadership	3	80%
#13 (*)	Complex	2	82%
#14	By formal position/title (instead of by performance)	2	84%
#15 (*)	Control	2	86%
#16 (*)	Price-tag/low-bid	2	88%
#17	Bureaucratic	2	90%
#18 (*)	No training/education	2	92%
#19	Lack of trial and error/testing	1	93%
#20	Expectations	1	94%
#21 (*)	No information	1	95%
#22 (*)	Inefficient	1	96%
#23	Relationships	1	97%
#24 (*)	No accountability	1	98%
#25 (*)	No listening	1	99%
#26	Dependency (instead of empowerment)	1	100%
NOTE: (*) RS characteristic discouraged by Deming's baseline Matrix.			
75% of the data gets captured with these "color shaded" characteristics.			

Table 13

Top 11-RS characteristics that lead to inconsistent/failing results (75% of data captured)

Ranking	RS characteristics Recommended as "BAD"	Explanation/examples
#1	**Misalignment**	Lack or poor alignment/selection of resources of management, not aligned appropriately per their skills, leading to mistakes in formulation of strategic plans and business execution - not having adequate resources before business venture/project
#2	**Lack of planning**	Lack or poor planning strategies without the proper research leading to failure - ignorance of limitations in the venture/project / reactions due to unforeseen consequences/new strategies without implementation plans/failure to follow plan/unclear directions/directives
#3	**Lack of measurement**	Lack of financial and performance indicators that prevent the business managers to know the real condition of the company, monitor actual performance and provide feedback - incomplete solutions/overlooking necessary changes/not understanding constrains
#4	**Lack of change**	Not being able/not wanting to change and adapt to environmental changes (market) that made it impossible for the company to react when needed, causing reactive measures to be late and costly - increase reactiveness instead of proactiveness/lose competitiveness/failure to diminish "bad/old" habits
#5	**Technical**	Technology/technical measures are not the solution to the problems and very complex systems make it more difficulty to understand and implement a solution - increases difficult of understanding/lack of clarity/failure to ignore relevant information
#6	**Assumptions**	Ignoring information and making assumptions that one solution/strategy would work the same at all situations led to failure - wrongfully assuming same strategies for different environments/ignoring important factors/new initiatives without research-back up/
#7	**Decisions**	Launching an initiative without having the necessary information to plan/guide the effort/research, led to make decisions which contributed to failure - sudden-impulsive decisions without understanding environment/decisions w/expectation instead of information/decisions driven companies based on "titles/positions" and not information
#8	**Ignore performance information**	Disregarding history on performance results prevents removal of performance barriers/roadblocks and hence, failing - leading to "impulsive" decisions/overseeing risks/ignoring causes of failure/overseeing performance indicators by focusing on company growth only
#9	**Think of me and them (instead of us)**	Managers/people that care only for their own benefit instead of the benefit of the company and development of the employees, causing leadership and hindrance issues - personal-own benefit only/lack of integrity/leading to ignorance of problems inside the entity-organization/failure to develop-promote-realign resources
#10	**Reactive**	Reactionary behavior due to/and/leading to poor planning practices - where "reactionary behaviors" prevent-limit planning/being consumed in vicious cycle "reactiveness-lack of planning"
#11	**Silos**	The operation into silos causes confusion and reduces full visibility and integration of the process(es) and prevents collaboration - reduces flexibility/decreasing ability to look inside organization-individual structure/promoting "blindness"/ignorance of relevant information/avoiding-preventing "team-work"

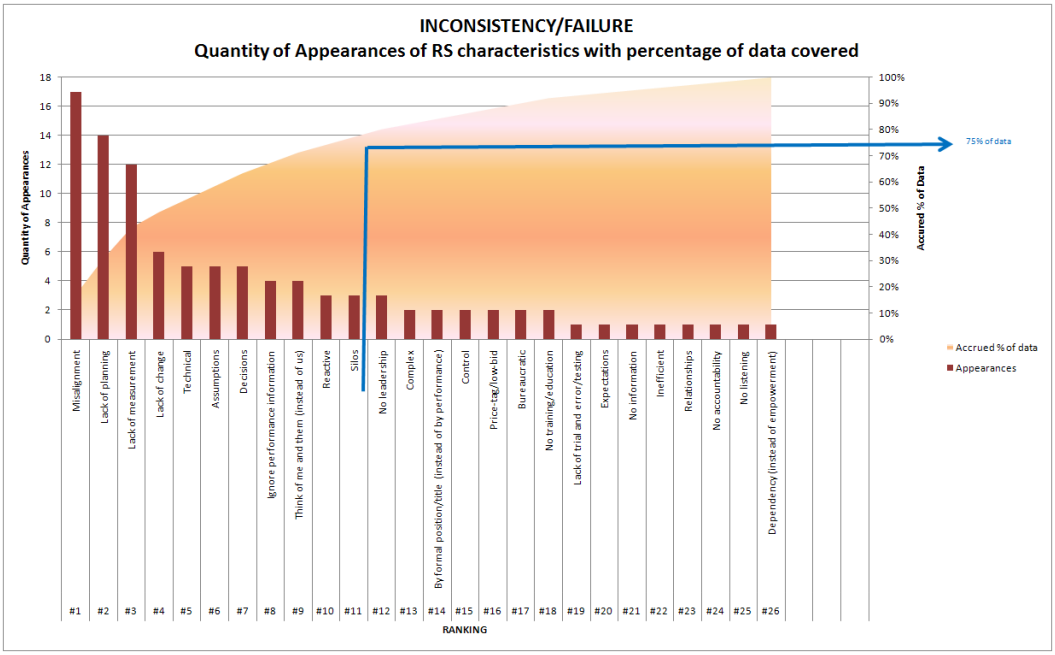

Figure 6 – Distribution of RS characteristics that led to failure/inconsistency

- Testing accuracy of both models – the Initial Baseline Matrix from Deming and the Full Extended "KSM" Matrix

Both proposed models, the Initial Baseline Matrix from Deming and the Full Extended "KSM" Matrix were tested for accuracy on the predictions of the case studies – applying them to both, the case studies for "success/consistency" and "failure/inconsistency". The test was made by counting the LS characteristics found in the results of the case studies that could be predicted/encompassed by each model, and determining the respective percentage of data "predicted". Results are shown next in Table 14 and Table 15, for both case studies of "success" and case studies of "failure", respectively.

Table 14

Accuracy of "Success" Prediction of both proposed models – Deming's & IMT/KSM's

Ranking	LS characteristics Recommended as "GOOD"	Quantity of appearances	In Deming's baseline matrix	In Extended KSM Matrix
#1	Use of information	15	**Deming**	KSM
#2	Performance information	9	**Deming**	KSM
#3	Change	7	**Deming**	KSM
#4	No assumptions	7	**Deming**	KSM
#5	No control	6	**Deming**	KSM
#6	No decisions	6	**Deming**	KSM
#7	Fast processing speed (type A)	6	NO	KSM
#8	Alignment	4	**Deming**	KSM
#9	No traditions	4	**Deming**	KSM
#10	Continuous improvement	3	**Deming**	KSM
#11	Look at 30k ft	2	**Deming**	KSM
#12	Pre-planning/look ahead	2	**Deming**	KSM
#13	No expectations	2	NO	(*) KSM
#14	Adaptable	2	NO	KSM
#15	Trial and error	2	NO	KSM
#16	Simple	2	NO	KSM
#17	Measurement	1	**Deming**	KSM
#18	No emotions	1	**Deming**	KSM
#19	Quality	1	**Deming**	KSM
#20	Teamwork	1	**Deming**	KSM
#21	Think of us	1	**Deming**	KSM
#22	Win-win/think of the whole supply chain	1	**Deming**	KSM
#23	Accept criticism	1	NO	KSM
#24	Agile (instead of inactive)	1	NO	KSM
#25	Logic	1	NO	KSM
#26	Creativity	1	NO	KSM
#27	Efficiency	1	NO	KSM
#28	Thinkers (instead of spokespeople)	1	NO	(*) KSM
#29	Listening	1	NO	KSM
MODEL PREDICTION ACCURACY			**77%**	**100%**

NOTE: (**Deming**) LS characteristic found in Deming's baseline Matrix.

NOTE: (**KSM**) LS characteristic found in Fully Extended KSM Matrix.

NOTE: (*) LS characteristic not found in 32-Authors', but it is a LS characteristic per IMT/KSM.

NOTE: 75% of the data gets captured with these "color shaded" characteristics - top-11.

Table 15

Accuracy of "Failure" Prediction of both proposed models – Deming's & IMT/KSM's

Ranking	RS characteristics Recommended as "BAD"	Quantity of appearances	In Deming's baseline matr	In Extended KSM Matrix
#1	Misalignment	17	**Deming**	KSM
#2	Lack of planning	14	**Deming**	KSM
#3	Lack of measurement	12	**Deming**	KSM
#4	Lack of change	6	**Deming**	KSM
#5	Technical	5	**Deming**	KSM
#6	Assumptions	5	**Deming**	KSM
#7	Decisions	5	**Deming**	KSM
#8	Ignore performance information	4	**Deming**	KSM
#9	Think of me and them (instead of us)	4	**Deming**	KSM
#10	Reactive	3	**Deming**	KSM
#11	Silos	3	**Deming**	KSM
#12	No leadership	3	**Deming**	KSM
#13	Complex	2	**Deming**	KSM
#14	By formal position/title (instead of by performance)	2	NO	KSM
#15	Control	2	**Deming**	KSM
#16	Price-tag/low-bid	2	**Deming**	KSM
#17	Bureaucratic	2	NO	(*) KSM
#18	No training/education	2	**Deming**	KSM
#19	Lack of trial and error/testing	1	NO	KSM
#20	Expectations	1	NO	(*) KSM
#21	No information	1	**Deming**	KSM
#22	Inefficient	1	**Deming**	KSM
#23	Relationships	1	NO	(*) KSM
#24	No accountability	1	**Deming**	KSM
#25	No listening	1	**Deming**	KSM
#26	Dependency (instead of empowerment)	1	NO	KSM
MODEL PREDICTION ACCURACY			**92%**	**100%**

NOTE: (**Deming**) LS characteristic found in Deming's baseline Matrix.

NOTE: (**KSM**) LS characteristic found in Fully Extended KSM Matrix.

NOTE: (*) LS characteristic not found in 32-Authors', but it is a LS characteristic per IMT/KSM.

NOTE: 75% of the data gets captured with these "color shaded" characteristics - top-11.

Chapter 6

RESULTS

a) Discussion of the results

1) Publications on Leadership and Management principles.

The results suggest there is conflict in regard what consistent business practices are and what are not. The results of the first part of the research scope, about the different authors in the areas of leadership and management reveals the presence of this confusion.

Kashiwagi (2007) presents a comparison of conflicting leadership wisdoms, traits and theories in that area. Table 16 shows a summary of this conflict found by Kashiwagi (2007), with more information found in Appendix A.

Table 16

Conflicts in leadership (Kashiwagi, 2007)

Leadership Conflicts					
Traits		**Theories**		**Characteristics needed**	
Dependency	Empowerment	Being innate	Being learnable	Introversion	Extroversion
Having "bad" traits	Having "good" traits	Using rewards	Using sensitive needs	Emotional control	Not emotional control
Being passionate	Not being passionate	Due to personality	Due to the environment	More intelligence	Less intelligence
Listening	Coaching	Based on the treatment of the follower	Not based on the treatment of the follower	Dominance	No dominance
Having charisma	Not having charisma	-			

The explanation in full detail on the conflicts found by Kashiwagi (2007), about what each author and theory meant, is presented in Appendix A.

The analysis of authors in the areas of leadership and management performed in this study shows how current information on recommended business and leadership practices is incoherent and ambiguous. After applying the KSM as an extender on the characteristics presented by the different authors in their publications, it was found that out of the thirty-two (32) books studied, twenty-two (22) books contained RS characteristics, the thirty-two (32) books contained some LS characteristics and only ten (10) books contained purely LS characteristics.

The analysis of these thirty-two (32) books found 67 different type “A”/LS characteristics (LS=left side of the KSM) with a total of 464 appearances; and 27 different type “C”/RS characteristics (RS=right side of the KSM) with a total of 86 appearances. The last two tables of Appendix B, Table B.2 and Table B.3, show these results.

After grouping the LS and RS characteristics found and drawing a line at seventy-five percent (75%) of data being captured, the top twenty-five (top 25) LS and the top fourteen (top 14) RS can be identified, with 353 and 67 appearances each, respectively. Table 2 and Table 3 presented previously summarize these findings. A comparison of these LS and RS characteristics brings up to light more conflict - the sums of 68 LS characteristics and 27 RS characteristics found overall evoke there is conflict in regard what consistent leadership and management practices are.

According to the authors studied and the respective results found, there is a clear dominance of LS characteristics that support the outcome of “success/consistency”; 464 findings of LS characteristics in the recommended principles versus 86 findings of RS characteristics in the recommended principles.

Eighty-one percent (81% = 22 out of 27) of the RS characteristics recommended by certain authors as “path to success” are in direct conflict with the opposite LS characteristics found and recommended by other authors. As an analogy and using only the representative line of seventy-five percent (75%) of data, eighty-five percent (85% = 12 out of 14) of the top-14 RS characteristics recommended as “path to success” are in direct conflict with the opposite LS characteristics among the to-25 LS’s found and recommended by others.

Table 17 presents an outline of some of the findings in this first part of the research and Table 18 presents the characteristics with more conflict in the top of the lists of LS/RS characteristics found. The **(*)** on table 17 indicates that data represents seventy-five (75%) of all data captured.

Table 17

Summary of clashing information found in the analysis of leadership and management books

Conflicts in leadership and management books	
Findings with LS Characteristics	**Findings with RS Characteristics**
10 books with **pure LS** characteristics	**22** books with **RS** characteristics
67 LS characteristics found	**27 RS** characteristics found
464 appearances of those 68 **LS**	**86** appearances of those 27 **RS**
Top 25-LS characteristics (*)	**Top-14 RS** characteristics (*)
353 appearances of those **top-25 LS**(*)	**67** appearances of those **top-14 RS**(*)

(*) Note: Top-25 LS & Top-14 RS characteristics on the authors capture 75% of data.

Table 18

Characteristics in conflict in leadership and management books

Conflicts in leadership and management books	
LS Characteristics (*)	**Opposite RS Characteristics found (*)**
Alignment	Misalignment
Think of “us”	Think of “me and them”
Treat everyone different	Treat everyone the same
Control his/her own life	Feeling controlled
No control	Control
No influence	Influence

Some illustrative examples of what the authors discussed in their leadership and management books is shown next, with the purpose of introducing the reader on how the LS and RS characteristics presented in Table 18 were found.

Books such as “First, break all the rules” and “The 7 Habits of Highly Effective People” propone these factors of success: “finding the right fit”, “focus on strengths” and “appreciating the value of differences in people”; which after applying the KSM result in the LS characteristic of Alignment. The conflict was found in books such as “The Lessons of Experience: How Successful Executives Develop on the Job; “Taking Charge: A Practical Guide For Leaders” and “The 360°Leader ” that recommended these practices: “promote firing people”, “remove people for the cause” and “good leaders in the middle make good leaders at the top” – the application of the KSM results in the RS characteristic of Misalignment, because “firing” as the authors explained it was needed due to not doing a proper selection or allocation of resources at first, and because a leader in a middle position, where certain leadership skills might be needed, will not necessarily mean he/she will be a good manager at the top, where different leadership skills might be needed; i.e.: someone more technical vs. some one less technical.

The following books: “Leadership is an Art”, “Taking Charge: A Practical Guide For Leaders” and “A Passion For Excellence” suggested these concepts: “a leader is a person who serves”, “a leader takes care of their people” and “customers are people-perceived and appreciated”; which under the KSM bring Think of “us” as the LS characteristic. Disagreement came across in these books: “Taking Charge: A Practical Guide For Leaders” and “Executive Warfare” that recommended these principles: “remove people for the cause”, “if you must shoot, do not shoot to wound - finish the person off as a rival" and “good bosses are all about them” – the KSM appliance would result in: Think of “me and them” as a RS characteristic.

These other publications: “First, break all the rules”, “The 7 Habits of Highly Effective People” and “Out of the Crisis” propose these concepts: “don't treat people as you would like to be treated”, “excitement of mutual learning creates a momentum towards more insight, learning” and “growth and institute training on the job understanding people's needs”, which under the KSM result in the LS characteristic of Treat everyone different.

Divergence was uncovered on other books such as “Leadership (Gulliani)” and “The 360° Leader” that put forward these thoughts: “you cannot ask those who work for you to do something you’re unwilling to do yourself”, “leading successfully at one level is a qualifier for leading at the next level” and “good leaders in the middle make better leaders at the top” – the application of the KSM resulted in Treat everyone the same as the RS characteristic.

These other books: “The Feiner Points of Leadership”, “The Winning Attitude”, “Leadership 101 (Maxwell)” and “Building Profit through Building People” propose these concepts: “you must believe you are the master of your own destiny”, “the Choice is within us”, “the first person you lead is you”, “you can seize only what you can see” and “the number one threat to companies performance is not from outside, it is from within”; after the application of the KSM this is the LS characteristic: Control his/her own life. The clashing concepts were found in these publications: “Executive Warfare” and “Developing the Leaders Around You”, that recommended these practices: “is about attitude, risk, and luck", “random strangers to you are not always strangers to the people who hold your career in their hands” and "any time you see a turtle on a fence post you know he had some help – your view from the fence post is made possible by others" – the application of the KSM brings up to light this RS characteristic: Feeling controlled.

Publications such as “First, break all the rules”, “The 8th Habit” and “Wooden on Leadership” propose these principles: “define the right outcome - not by controlling people”, “inspire others and manage yourself”, “freedom of choice” and “be interested in finding the best way, not in having your own way”; under the KSM can be summarized in the LS characteristic of No control. An opposing view was found on these books: “Leaders: Strategies for Taking Charge”, “The Feiner Points of Leadership” and “The Winning Attitude” that recommended these practices: “change the internal environment and change in the external environment”; “the push technique consists of declaring,

proposing, and asserting a point of view" and "recognize, review, repress, readjust, re-enter"; which result, with the use of KSM, in the RS characteristic of Control.

The books cited next, "First, break all the rules" and "The 8th Habit propone these principles: "no manager can make an employee productive", "the best managers never try to fix weaknesses; instead they focus on strengths and talent" and "freedom of choice"; principles that get extended with the KSM as the LS characteristic of No influence. Conflict was found in these other books: "How to Win Friends and Influence People", "The Feiner Points of Leadership" and "The 360° Leader"; that recommended these practices: "make people like you", "influence people through conversation", "high performance leaders believe they will change the world and they infuse subordinates with this belief" and "developing your influence from anywhere in the organization – the application of the KSM throws this RS characteristic: Influence.

Table 17, besides pointing out there is some conflict, suggests an interesting finding – which is the high presence of LS characteristics as recommended practices for achieving good results. Table 4 presents a summary of the previous paragraphs which explained what the authors/books were referring to when these practices were cited in their publications. There are more than two times LS characteristics present than RS characteristics. A more impacting figure is that of the amount of appearances of LS characteristics compared to that of the RS characteristics, 464 LS appearances vs. 86 RS appearances; in which LS characteristics is more than five times that amount of the RS ones. These figures propose that there is definitely a higher relationship of consistent business practices related to the LS of the KSM, than to the RS of the KSM; in other words, results show dominance support of IMT for achieving good results.

An important result worth mentioning again, is the one author that excelled in comparison to the others, about the quantity of different LS characteristics mentioned in his publication. Most of the authors that had LS characteristics present in their publications had less than ten (10) different LS characteristics, twelve authors only discussed

between ten (10) and twenty (20), but only one, W. Edwards Deming in his book Out of The Crisis (Deming, 2000) had more, he had thirty-six (36) different LS characteristics present.

Twenty (20) out of the thirty-six (36) LS characteristics found on Deming are part of the top-25 LS characteristics from the authors. Deming's 36 LS characteristics cover seventy-two percent (72%) of the data found in the analysis of the "publications of leadership and management", and eighty percent (80%) of the top-25 LS characteristics found. No RS characteristics were found on Deming's principles.

These results put Deming as the most consistent author to IMT and hence, become the baseline for the next phases of this research study. The LS characteristics from Deming (2000) were selected to represent the Initial Baseline Matrix from Deming of LS characteristics to look for and validate in the final part of the research scope, the case studies, as presented previously in Table 5. In parallel to this initial effort, a second matrix was defined but this time, using the LS of the KSM of IMT as a baseline, with the purpose of using all other LS characteristics proposed by all the other authors in leadership and management - the Full Extended "KSM" Matrix. The results of the case studies will serve to validate and evaluate the accuracy of each model, under the premises of the IMT concepts which are to be tested as well.

2) People's perception on Leadership and Management principles

The thirty-six (36) LS characteristics from Deming which composed the "Initial Baseline Matrix," were converted to questions – these questions after the changes explained in Section 5 – Data Analysis of this research paper, made up the Survey. The initial 36 questions were tested out on a control group and were later condensed to fifteen (15) main questions – these last 15 questions were the ones that made it to the final Survey, which went to both "test groups"; the group of nine (9) individuals trained in IMT/PIPSs which consisted of project/research managers/assistants; and the group of (37) individuals not-trained in IMT/PIPS which consisted of thirty-one (31) Project Managers

six (6) General Managers from a construction company in the US. The preliminary analysis of the results of the Survey revealed there was some confusion in some of the questions – these "confusing questions" were later eliminated in the examination and further analysis took place, leaving a final set of eight (8) questions – these final eight (8) questions appear next in Table 19. Complete results of this survey appear in Appendix D.

Table 19

Final eight (8) questions of the Survey

No	LS Characteristic from Deming	Question
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).
6	No incentives	Incentive pay is a sign of good leadership.
7	Performance information	Managers should rate the performance of those who work for them (*).
8	Look inside	Capable managers also identify and minimize the risk that they do not control (*).
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research All questions were part of Deming's baseline matrix.

The intent of the Survey was to evaluate the perception that individuals had regarding Leadership and Management Practices; to see whether this perception was closer to the LS or to the RS of the KSM/IMT, and to identify differences among groups, if any. The survey asked the individual to rate his/her agreement to a statement on a rate it from one (1) to ten (10), where a score=10 would mean "agree", a score=5 would mean "don't know" and a score=1 would mean "disagree." Responses to the survey were later "normalized" so that the higher the response (=10) the closer to the LS of IMT and the

lower the response (=1) the closer to the RS of IMT. Results for both groups appear next in Table 20.

Table 20

Comparison of results of the Survey with "normalized" responses

Comparison of results - "normalized" responses (people trained in IMT vs. people not trained in IMT)		
QUESTION	PEOPLE TRAINED IN	PEOPLE NOT TRAINED IN IMT
Survey average score	9.4	6.5
Std. Deviation	0.6	2.7
Highest individual average score	10	8
Lowest individual average score	7.3	5.4
# of individuals that surveyed	9.0	37.0
# of individuals that responded Survey	9.0	27.0
Notes on scores: =10 closer to LS of KSM =5 don't know =1 closer to RS of KSM		

An effort to try to find a relation between the responses and the individuals' performance was made, for the group of people not-trained in IMT. This effort consisted on getting a "performance rating" on the surveyed individuals, the 31 Project Managers (PMs) in this case, by their supervisors, the six (6) General Managers (GMs) – Table 9 presented previously shows the "Performance Evaluation" submitted to the General Managers, about their Project Managers. Due to "bureaucracy" in the organization this was not fully possible. However, a performance evaluation on the project managers was received for one of the branches only, with the following results presented in Table 21 (complete results of this performance evaluation is presented in Appendix D).

Table 21

Summary of the results of the Performance Evaluation on the PMs by one GM

Surveys & relationship to performance (people not trained in IMT)		
Project	**Survey**	**Performance**
PM 1	**1st**	**1st**
PM 2	**2nd**	**3rd**
PM 3	**3rd**	**5th**
PM 4	**5th**	**2nd**
PM 5	**4th**	**4th**

Definition of rankings:
-Survey: 1st closer to score=10
-Performance ranking: 1st is the "best performer"

The analysis of all these results, summarized in Table 20 and Table 21 are discussed next.

- Group of people Trained in IMT

Out of the nine (9) individuals surveyed that had prior IMT training, all responded (100%). The average score for this group was quite high, a 9.4 – this result can be inferred as this first group having an understanding of leadership and management concepts that falls in line with IMT – this result was expected due to the presence of IMT training/knowledge this group had. The standard deviation of the responses out of this group was very small, a mere 0.6 – this small variability confirms there is no confusion in this group about what leadership and management principles are, in relationship to the IMT concepts.
Four (4) individuals reached the maximum score of 10 and the lowest individual score was a 7.3 – this end result confirms the alignment of the perception of leadership and management principles from this group and the LS of KSM/IMT concepts.

The concepts where no confusion was perceived at all, meaning highest score=10 was achieved, were:

- minimize information flow => LS = accountability
- minimize management, direction & control => LS = leadership/no control
- measure project deviations & sources => LS = continuous improvement/measurement
- NO incentive pay => LS = no incentives
- capable managers identify & minimize risk they don't control => LS = look inside/pre-planning/look ahead

The concept where more confusion was found, achieving the lowest question average score (=5.3) was:

- contractors should take the time/cost to measure the performance of their key individuals => LS = measurement

- Group of people NOT trained in IMT

From the initial group of 31 Project Managers and 6 General Managers from a construction company with operations nationwide in 5 main branches, who represented the sample of individuals not-trained in IMT, responses were received from 23 Project Managers (seventy-five percent-75%) and 4 General Managers (eighty percent-80%). The average score for this group was 6.5, very close to the score=5 (meaning "don't know"), indicates two things: first, there is confusion on leadership and management principles in reference to the IMT concepts; and second, the group is not fully in alignment with the IMT concepts or LS of the KSM. The responses from this group threw a standard deviation of 2.7, variability significantly higher than the one found in the group of people trained in IMT – once again, this end result confirms the presence of uncertainty in the perception of leadership and management.

The highest individual average score by any individual was an 8.0 and the lowest individual average score was a 5.4. The misalignment between IMT concepts and the perception of leadership and management from these individuals can be noticed by these results.

The concept where less confusion was perceived with a highest score of 9.1 was:

- Managers should rate the performance of those who work for them => LS = performance information.

The concept where more confusion was identified with the lowest question average score of 2.1 was:

- an efficient delivery process should minimize the amount of information passed between parties => LS = accountability

- Comparison of the two groups – people trained and people not-trained in IMT

Results show there is more confusion regarding perception of Leadership/Management (L/M) concepts on the people not-trained in IMT compared to the group of people trained in IMT. The first group had an average score of 6.5, closer to the "5=don't know" and a higher variation with a standard deviation of 2.7; while the second group had an average score of 9.4 closer to "10=IMT" and smaller variation with a standard deviation of 0.6.

The areas of confusion regarding Leadership and Management principles, found on the group of PMs (people not trained in IMT) are listed subsequently:

- Accountability (*) – minimize information flow
- Leadership/no control (*) - minimize Management & Control
- Minimize total cost (*) - best-value (best-performer) is more expensive than low-bid
- No incentive pay - incentive pay is a sign of good leadership

The three (3) concepts marked with an (*) in the above list, represent areas of conflict that were also present in the Authors/Books in Leadership/Management research "clashes" found in the first part of this paper. This leads to conclude areas of confusion

form the people not trained in IMT (3 out of 4 = seventy five percent-75%), in this case the Project Managers, match the same areas of confusion found of those of the authors/books of Leadership and Management Principles.

The average responses from general managers (GMs) of the branches of the construction company surveyed tend to be on the high side of the averages, but not significantly high, by comparing them to those of the individual project managers (PMs). Overall averages of GMs vs. PMs were 6.6 vs. 6.5, respectively; averages in a single branch were 6.9 vs. 6.2, GM vs. PMs, respectively. This result indicates there are less confusion and more alignment to IMT concepts in the General Managers than in Project Managers, regarding Leadership and Management Concepts.

Under the premise of the hypothesis proposed in this paper, and following the IMT concepts, the confusion found in this first group of individuals indicates that training is needed using IMT concepts.

- Performance and its relationship to the LS of the KSM/IMT concepts

Even though the performance evaluation on the project managers (PMs) was not received from all the general managers (GMs) at all branches, the partial results presented in Table 21 can be reviewed. In the only branch with these results this was found:

- one (1) General Manager (GM) with five (5) Project Managers (PMs);
- highest score on the survey (7.5) matched the highest rank of the PM (1st);
- the second highest score on the survey (6.6) was the third (3^{rd}) highest ranked PM;
- although the fourth highest score on the survey matched the fourth highest ranked PM; the third (3^{rd}), fourth (4^{th}) and fifth

(5^{th}) scores on the survey and the ranking were too close to differentiate among them.

Analysis of the performance results gathered on the small sample group of PMs evaluated, suggests performance is tied to IMT (LS characteristics of the KSM). Nonetheless, a wider compilation of results would be needed to make this finding conclusive.

3) Case studies of "success/consistency" and "failure/inconsistency"

The research completed in the electronic libraries of ABI/Inform, Lexis/Nexis, Web of Science, EI Compendex, Google Scholar, Economist Intelligence Unit (EIU) and others pointed out Harvard Business Review (HBR) as a major source. The scrutiny of case studies that presented "dominant information" was made by filtering in only those case studies that show a "mean of measurement and/or supportive data" of the consistency/success and inconsistency/failure of the results in there discussed.

- Case studies of "consistency/success"

In the case studies section that discussed "consistency/success" and the like-terms explained in the Methodology section, a total of 170 case studies were reviewed. Only 40 case studies out of those 170 (twenty four percent-24%) used some data to support the concepts, and only 17 case studies (ten percent overall-10%) presented "dominant information" in the discussion. An outline for all these case studies reviewed can be found in Appendix E.

Table 10 presented previously shows the characteristics found in these 40 case studies, in terms of the KSM, which are summarized next:

- 29 different type "A"/LS characteristics were found with 92 appearances.
- 17 of these type "A"/LS characteristics were found in the Initial Baseline Matrix from Deming.

- All 29 type “A”/LS characteristics were found in the Full Extended “KSM” Matrix.
- NO RS characteristics were found in the recommended consistent leadership and management practices.

These results indicate a tight relationship between the LS of the KSM/IMT concepts and the chances for achieving good results and reaching success/consistency.

Table 11 expands, with illustrative examples, on the meaning of the top-11 LS characteristics found, which represent seventy-five percent (75%) of the data found. The top-11 LS characteristics found as a driver for success/consistency are listed next – further review of these concepts takes place later in this Results section.

- Use of information.
- Performance information.
- Change.
- No assumptions.
- No control.
- No decisions.
- Fast processing speed (type A).
- Alignment.
- No traditions.
- Continuous improvement.
- Look at 30k ft.

- Case studies of “inconsistency/failure”

In the case studies that discussed “inconsistency/failure” and the like-terms explained in the Methodology section, a total of 190 case studies were assessed. Only 30 case studies out of those 190 (sixteen percent-16%) used some data to support the concepts, and only 25 case studies (thirteen percent overall-13%) presented “dominant” information to support the argument. After the first relevant 30 case studies were found, all additional

articles that matched the selection criteria were very repetitive of the same characteristics found, in terms of the KSM, and no further review took place. An outline of all these case studies reviewed can be found in Appendix F.

Table 12 presented earlier shows the characteristics found in these 30 case studies, in terms of the KSM, which are summarized as follows:

- 26 different type "C"/RS characteristics were found with 101 appearances.
- 20 of these type "C"/RS characteristics were found in the Initial Baseline Matrix from Deming mentioned as practices to be prevented.
- All 26 type "C"/RS characteristics were found in the Full Extended "KSM" Matrix mentioned as practices to be prevented.
- NO LS characteristics were found in the inconsistent leadership and management practices that led to "failure."

In similar manner to the findings on the case studies of "success/consistency" discussed prior, the results found in the case studies of "failure/inconsistency suggest there is a close connection between the RS of the KSM/IMT concepts and the chances for achieving bad results and reaching failure/inconsistency.

Table 13 illustrates with some examples, the significance of the top-11 RS characteristics found, which represent seventy-five percent (75%) of the data found. The top-11 RS characteristics found as a driver of failure/inconsistency are listed next – a more in depth review of these concepts takes place further in this section.

- Misalignment.
- Lack of planning.
- Lack of measurement.
- Lack of change.

- Technical.
- Assumptions.
- Decisions.
- Ignore performance information.
- Think of me and them (instead of us).
- Reactive.
- Silos.

- Comparison of results – Success vs. Failure and Case Studies vs. Authors

Comparative figures on the results of the research of the case studies, for both success/consistency and failure/inconsistency, are presented in Table 22 next. The top-11 characteristics found on these two areas are summarized head to head in Table 23.

Table 22

Comparison in figures about the characteristics found in the case studies

CASE STUDIES - COMPARISION OF FINDINGS	
Results for Success/Consistency	**Results for Failure/Inconsistency**
Total of 170 case studies reviewed	Total of 190 case studies reviewed
Only **40** case studies with supportive data **(24%)**	Only **30** case studies with supportive data **(16%)**
Only **17** case studies with dominant information **(10%)**	**25** case studies with dominant information **(13%)**
29 LS characteristics found	**26 RS** characteristics found
92 appearances of those LS characteristics	**101 appearances** of those RS characteristics
0 RS characteristics found	**0 LS** characteristics found
0 appearances of those RS characteristics	**0 appearances** of those LS characteristics
Top 11 LS characteristics **(*)**	**Top 11 RS** characteristics **(*)**
69 appearances of those top-11 LS **(*)**	**78 appearances** of those top-11 LS **(*)**

NOTE: (*) this top-XX characteristics capture 75% of the data collected.

Table 23

Comparison of the top-11 characteristics found in the case studies – Success vs. Failure

CASE STUDIES - COMPARISION OF GOOD-LSs & BAD-RSs	
Top-11 LS characteristic found (*) as "GOOD"	**Top-11 RS characteristic found (*) as "BAD"**
Use of information	Misalignment
Performance information	Lack of planning
Change	Lack of measurement
No assumptions	Lack of change
No control	Technical
No decisions	Assumptions
Fast processing speed (type A)	Decisions
Alignment	Ignore performance information
No traditions	Think of me and them (instead of us)
Continuous improvement	Reactive
Look at 30k ft	Silos
NOTE: (*) this top-XX characteristics capture 75% of the data collected.	

The most dominant LS characteristics leading to good results, with five or more instances found in this part of the research study, are:

- Use of information.
- Performance information.
- Change.
- No assumptions.
- No control/release control.
- No decisions.
- Fast processing speed (type A).

The most significant RS characteristics that led to failure, with five or more occurrences found in this part of the research study, are:

- Misalignment.
- Lack of planning/pre-planning.
- Lack of measurement.
- Lack of change.
- Technical/complex.
- Assumptions.
- Decisions.

According to these findings, the following LS characteristics could have prevented failure:

- Alignment.
- Pre-planning/look ahead.
- Measurement.
- Change/adaptability.
- Simple/non-technical.
- No assumptions.
- No decisions.

By comparing these “most relevant” results, a very interesting relationship shows up to light. The proper use and analysis of information, will help avoid making incorrect assumptions and take erroneous decisions – these two factors were found to be decisive and a root-cause of cases of failure/inconsistency. The use for performance information as part of a leadership and management practice was found critical in the cases that discussed success/consistency – an opposite practice, lack of measurement, proved to be a significant factor for achieving failure/inconsistency. Change, the ability to adapt to different situations as well as the having “change” as a driver in the leadership and management practices, is one of the most significant characteristics for achieving “success/consistency” – in contrast, the “lack of change” was presented as one of the

most important reasons for failing. Finally, the most essential factor for failing was "misalignment", where not doing a proper alignment of the resources and/or failing to do it at all in the early stages, was a typical root-cause of failure. Alignment, the opposite concept, was found as one of the causes of achieving good results; the LS characteristic of "fast processing speed (type A)", suggested in the case studies the importance of having this type of "talent" in the right positions.

After reviewing the most significant factors for achieving success and failure, in Table 10 and Table 12, respectively, the following two findings stand out:

- In order to achieve better results, to improve and succeed, the "use of information" is critical in the process.
- Not doing a proper alignment of resources in the early stages, failing to lay down a plan before any execution/project/venture and failing to measure the results of the plan represent a sure combination for "failure." The "opposite formula", applying these three characteristics, could represent a formula for "avoiding failure."

Even though the main purpose of the case studies was to validate the matrix of LS and RS characteristics found in the first part of this research, another interesting comparison can be made by looking for similarities in the findings between: a) the Authors in Leadership Management and b) Case Studies of success and failure; in regard to the characteristics found. Table 24 presents side to side, the LS characteristics found in both, Authors and Case Studies, indicating those characteristic where agreement was found among them.

Table 24

LS characteristics leading to "success/consistency" from both, Authors and Case Studies (with the top 75% of data found on each category)

Success - Comparison of LSs - Authors vs. Case Studies	
Case Studies / Top 11-LS characteristics	**Authors / Top 25-LS characteristics**
Use of information	Alignment
Performance information	Think of us
Change	Teamwork
No assumptions	Look inside
No control	Change
No decisions	Understands others
Fast processing speed (type A)	Accountability
Alignment	Pre-planning/look ahead
No traditions	Measurement
Continuous improvement	Education/Learning
	Trial and error
	Treat everyone different
	Leadership
	Controls his/her own life
	Use of information
	Performance information
	Continuous improvement
	Training
	Serve others
	Listening
	Win-win/think of the whole supply chain
	Self-improvement
	Open to alternatives
	No emotions
	No control

The Authors and results of Case Studies agree on the following LS characteristics as important in achieving "consistency/success":

- Use of information
- Performance information
- Change/adaptability
- No control/releasing control
- Alignment
- Continuous Improvement

The end results found in the case studies recommended only LS-characteristics only as the cause of "consistency/success"; and they also suggested RS-characteristics only as the cause of "inconsistency/failure." These two discoveries show dominant support of the LS of the KSM/IMT concepts, as a successful and consistent path to follow in the areas of leadership and management.

- Accuracy of both proposed models – the Initial Baseline Matrix from Deming and the Full Extended "KSM" Matrix

The results of the test for accuracy from both proposed models, the Initial Baseline Matrix from Deming and the Full Extended "KSM" Matrix, after testing them with the case studies of "success/consistency" and "failure/inconsistency", were presented previously in Table 14 and Table 15 – a summary of these test results appears next.

Support of the Initial Baseline Matrix from Deming model, using only the top-11 LS characteristics found in the case studies:

- Deming's concepts encompass 80% of LS characteristics suggested by the Authors as a path to "consistency/success"
- Deming's concepts comprise 90% of the top-11 LS characteristics found in Case Studies as "consistent/successful"
- Deming's concepts prevented from using ALL=100% of the top-11 RS characteristics found in Case Studies of "inconsistency/failure"

Support of the Initial Baseline Matrix from Deming model, using all the LS characteristics found in the case studies:

- 77% (71/92) of the LS characteristics from case studies of "success/consistency" found in Deming's matrix

- 92% (93/101) of the RS characteristics from cases studies of "failure/inconsistency" found as "not recommended/to be prevented" by Deming's matrix

These results show dominant support of Deming's concepts as a path to achieve "consistency/success". Now, by looking at the results obtained with the other model proposed in this study, the Full Extended "KSM" Matrix, better conclusions can be drawn. Support of the Full Extended "KSM" Matrix model, using all the LS characteristics found in the case studies:

- 100% (92/92) of the LS characteristics from case studies of "success/consistency" were found in IMT/KSM LS's
- 100% (101/101) of the RS characteristics from cases studies of "failure/inconsistency" were found as "not recommended/to be prevented" by IMT/KSM LS's

These results show a wider coverage which in turns reflects a more accurate model, which leads to the conclusion of having more dominant support of the LS of the KSM/IMT concepts as a path to "consistency/success." This second proposed matrix, the Full Extended "KSM" Matrix, brings up a model with better precision in the prediction of results.

Based on the analysis of the LS characteristics that led to "success/consistency", and the opposite RS characteristics that led to "failure/inconstancy", the author recommends the following as characteristics that could maximize the probability of achieving better results, and will also minimize the chances of "failing". More research is needed in this area with the purpose of finding a more conclusive matrix of recommended practices; however, the results suggest where successful/consistent and unsuccessful/inconsistent leadership and management practices would fall under, under the premises of the IMT concepts and the KSM methodology. The main purpose of this research study is to find a methodology that can help in the recognition of these accurate or inaccurate leadership and

management (L/M) principles. Table 25 next, presents the most relevant LS characteristics found in the case studies research, as a path to success and consistency. In contrast, Table 26 presents the most relevant RS characteristics found in the case studies as a predecessor of failure and inconsistency. Both of these tables are based on the limited number of case studies utilized in this paper.

Table 25

Most relevant LS characteristics found – more accurate L/M principles

Ranking	LS characteristics leading to "more" accurate Leadership and Management Practices
#1	Use of information
#2	Performance information
#3	Change
#4	No assumptions
#5	No control
#6	No decisions
#7	Fast processing speed (type A)
#8	Alignment
#9	No traditions
#10	Continuous improvement
#11	Look at 30k ft

Table 26

Most relevant RS characteristics found – less accurate L/M principles

Ranking	RS characteristics leading to "less" accurate Leadership and Management Practices
#1	Misalignment
#2	Lack of planning
#3	Lack of measurement
#4	Lack of change
#5	Technical
#6	Assumptions
#7	Decisions
#8	Ignore performance information
#9	Think of me and them (instead of us)
#10	Reactive
#11	Silos

- Discussion of the most relevant LS characteristics found, leading to more accurate Leadership and Management practices

The top eleven (top-11) LS characteristics from the group of LS characteristics found in the case studies of consistency and success are listed next, illustrating the meaning of each one by summarizing some of the findings (these findings are further exemplified after this listing):

1) Use of information: found as critical in the prediction of the outcome and in preventing from making assumptions and therefore, the definition of the successful path to follow and the actions to take for achieving desirable results.
2) Performance information: found as very good tool for predicting the outcome based on performance data; in finding ways of improvement and minimizing risk of failure.
3) Change: being able to change makes the entity or individual able to adapt to the changing conditions of the environment, and leads towards improvement by finding new strategies and means of innovation.
4) No assumptions: the lack and the non-use of information will lead to make assumptions and take decisions based on those assumptions, which could be incorrect. Assuming same strategies for different environments/ignoring by important factors.
5) No control: trying to control does not have effect in achieving the desired goal/objective. It prevents the resources from achieving utmost results, prevents growth, limits adaptability and averts commitment.
6) No decisions: the lack and non-use of information which leads to make assumptions, forces to make decisions which could be imprecise, therefore the risk of taking bad initiatives increases. Making decisions by

intuition instead of by analytical measures and a logical approach increased the chances of taking on flawed strategies.

7) Fast processing speed/type “A”: having a fast processing speed was one of the characteristics found or recommended on/for successful leaders; following the type “A”/LS of the KSM and type “C”/RS of the KSM categorization, because they are able to process more information and faster and therefore, are capable to filter unnecessary information and to utilize the most important information only.
8) Alignment: by understanding the resources and the environment proper alignment can be made. Alignment of resources was found critical in achieving good outcomes - identify resources, align them to maximize their skills and use performance information to re-align.
9) No traditions: following traditions prevents change and limits innovation, making it more difficult to “adapt” to changing conditions.
10) Continuous improvement: continuous improvement is one of the characteristics that line up with change – it allows better solutions to be found which increases competitiveness – this leads to innovation, enhancement and quality achievement.
11) Look at the 30,000 ft level: found as a characteristic that provides better comprehension of the event which would in turn allow for better results - increasing the ability to look ahead and pre-plan and increasing the capacity to “look inside” the entity/individual structure and improve.

In order to illustrate and exemplify these LS characteristics (top-11 listed above from Table 25) found in the case studies, which led to more accurate Leadership and Management practices (L/M), some of the most relevant information presented in those case studies is offered next.

I. Use of information versus decisions.

IMT proposes that if all information at the beginning of any event is available, the outcome can be predicted, and this happens because the laws in time do not change nor new laws arise; in the past, present and future all laws that govern the world do not change, they are simply discovered. Now, getting all information upfront for any event can be almost an impossible task so what has to be done is to obtain the most critical information of the initial conditions of that event with the purpose of having a more accurate prediction of the final conditions of that event – its outcome.

In a Harvard Business Review article from January 2006, Thomas Davenport the author, illustrates how information is being utilized nowadays as a powerful business tool; the article suggested that "some companies have built their very businesses on their ability to collect, analyze, and act on data (Davenport, 2006)." The article mentions that "over the years, groundbreaking systems from companies such as American Airlines (electronic reservations), Otis Elevator (predictive maintenance), and American Hospital Supply (online ordering) have dramatically boosted their creators' revenues and reputations. These applications amassed and applied data in ways that upended customer expectations and optimized operations to unprecedented degrees. They transformed technology from a supporting tool into a strategic weapon. Organizations such as Amazon, Harrah's, Capital One, and the Boston Red Sox have dominated their fields by deploying industrial-strength analytics across a wide variety of activities (Davenport, 2006)."

The author of this article also mentions "how organizations are competing on analytics, not just because they can but also because they should. Analytics competitors wring every last drop of value from those processes. They know what products their customers want, what prices those customers will pay, how many items each will buy in a lifetime, what triggers will make people buy more, know compensation costs and turnover rates, can calculate how much personnel contribute to or detract from the bottom line and how

salary levels relate to individuals' performance, know when inventories are running low, can also predict problems with demand and supply chains, to achieve low rates of inventory and high rates of perfect orders. And analytics competitors do all those things in a coordinated way, as part of an overarching strategy championed by top leadership and pushed down to decision makers at every level (Davenport, 2006)." Davenport (2006) finishes his article with the following quote: "as Gary Loveman, CEO of Harrah's, frequently puts it: Do we think this is true? Or do we know?"

The opposite side to this characteristic, in the KSM diagrams, is No Information, which leads to making decisions. The definition of "decision" used in this study is the hypothetical opposite to "predicting the outcome", or making an uninformed decision. As IMT and KSM put it, when a decision is made, most of the times, it will be made based on someone's previous experience, their thoughts and beliefs, which have bias; this causes to ignore critical factors in the process and create false expectations for not considering all this critical information. The case studies here reviewed found that by making a decision, the desired outcome was not met, bringing as a consequence unfavorable results. To outline and expand on this topic, three articles found in the Harvard Business Review related are briefed next.

The first article is named "Delusions of Success: How Optimism Undermines Executives' Decisions", the authors are Dan Lovallo and Daniel Kahneman and it was published in July 2003. The key quote from the authors is: "in planning major initiatives, executives routinely exaggerate the benefits and discount the costs, setting themselves up for failure (Lovallo & Kahneman, 2003)." They start the article by mentioning several examples of cases and projects that had expectations and were never reached, creating a great loss. They mentioned "most large capital investment projects come in late and over budget, never living up to expectations. More than 70% of new manufacturing plants in North America close within their first decade of operation. Approximately three-quarters of mergers and acquisitions never pay-off; the acquiring firm's shareholders lose more than

the acquired firm's shareholders gain. And efforts to enter new markets fare no better; the vast majority end up being abandoned within a few years. According to standard economic theory, the high failure rates are simple to explain: the frequency of poor outcomes is an unavoidable result of companies taking rational risks in uncertain situations (Lovallo & Kahneman, 2003)."

The analysis of this phenomenon suggests that "these failures are due to seeing it as a consequence of flawed decision making (Lovallo & Kahneman, 2003). When forecasting the outcomes of risky projects, executives all too easily fall victim to what psychologists call the 'planning fallacy'. Managers make decisions based on delusional optimism rather than on a rational weighting of gains, losses, and probabilities; overestimate benefits and underestimate costs; spin scenarios of success while overlooking the potential for mistakes and miscalculations. As a result, managers pursue initiatives that are unlikely to come in on budget or on time or to ever deliver the expected returns (Lovallo & Kahneman, 2003)."

The second article is named "Evidence-Based Management" and the authors are Jeffrey Pfeffer and Robert I. Sutton. The authors start the article by asking this question: "Why don't managers make use of the facts about what works out there when dealing with their work (Pfeffer & Sutton, 2007)?" An example in medicine is cited, "where David Sackett, the individual most associated with evidence-based medicine, gives a definition as 'the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients' (Pfeffer & Sutton, 2007)." They later mentioned "how woefully naive people are about how doctors have traditionally plied their trade. The research is out there, thousands of studies are conducted on medical practices and products every year and unfortunately, physicians don't use much of it. Recent studies show that only about 15% of their decisions are evidence based. For the most part instead, doctors rely on: obsolete knowledge gained in school, long-standing but never proven traditions, patterns gleaned from experience, the methods they believe in and are

most skilled in applying, and information from hordes of vendors with products and services to sell. And to compare this to companies, the same behavior holds true for managers looking to cure their organizational ills. Managers seeking the best evidence also face a more vexing problem than physicians: because companies vary so wildly in size, form, and age, compared with human beings, it is far more risky in business to presume that a proven "cure" developed in one place will be effective elsewhere (Pfeffer & Sutton, 2007)." The article mentions that "it makes sense, when managers act on better logic and evidence, their companies will trump the competition. That is why research is increasing, especially during the last five years, working to develop and surface the best evidence on how companies ought to be managed and teaching managers the right mind-set and methods for practicing evidence-based management (Pfeffer & Sutton, 2007)." Finally, the article mentions: "a common joke amongst medical specialists: If you want to have an operation, ask a surgeon if you need one. Similarly, if your business needs to drum up leads, your event planner is likely to recommend an event, and your direct marketers will probably suggest a mailing. The old saying 'to a hammer, everything looks like a nail' often explains what gets done (Pfeffer & Sutton, 2007)."

And the third article is named "Decisions without Blinders", the authors are Max H. Bazerman, and Dolly Chugh and it was published in January, 2006. The authors' key point is: "the 'bounded awareness' phenomenon causes people to ignore critical information when making decisions (Bazerman & Chugh, 2006)." They add: "learning to expand the limits of your awareness before you make an important choice will save you from asking 'How did I miss that?' after the fact (Bazerman & Chugh, 2006)." The example they show is: "by the time Merck withdrew Vioxx from the market in September 2004 out of concern that the pain relief drug was causing heart attacks and strokes, more than 100 million prescriptions for it had been filled in the United States alone. Vioxx may have been associated with as many as 25,000 heart attacks and strokes and more than

1,000 claims have been filed against the company. Evidence of the drug's hazards was publicly available as early as November 2000, when the New England Journal of Medicine reported that four times as many patients taking Vioxx experienced myocardial infarctions as did those taking naproxen. In 2001, Merck's own report to federal regulators showed that 14.6% of Vioxx patients suffered from cardiovascular troubles while taking the drug; 2.5% developed serious problems, including heart attacks. So why, if the drug's risks had been published in 2000 and 2001, did so many doctors choose to prescribe it? Social science research has shown that without realizing it, decision makers ignore certain critical information. Doctors face tremendous demands on their time and must make life-and-death decisions under highly ambiguous circumstances. In the case of Vioxx, doctors more often did not received positive feedback from patients taking the drug. Also, the Merck sales force took 'unethical' steps to make Vioxx appear safer than it was. Despite having access to information about the risks, doctors, even those who had read the New England Journal of Medicine article, may have been blinded to the actual extent of those risks. And why did Merck's senior executives allow the product to stay on the market for so long? Evidence points to intentional misrepresentation by the sales force (Bazerman & Chugh, 2006)." The authors finish saying: "it is important to note that bounded awareness differs from information overload, or having to make decisions with too much information and too little time. Even when spared a deluge of information and given sufficient time to make decisions, most individuals still fail to bring the right information into their conscious awareness at the right time (Bazerman & Chugh, 2006)."

II. Performance information.

On the case studies reviewed, the use of performance information contributed in two major achievements; first to give the end user the ability of selecting the best option and second, to the offeror the ability to assess where does he/she/it stand and to set a plan to improve and move forward. Cases were reviewed in which this was applied by people

trying to improve, entities trying to advance and even governments trying to identify best practices that could lead to a better economy. To illustrate this with examples, some of the key points found in the case studies will be presented.

Performance information is basically learning from history, where ignoring the information available may lead to an erroneous decisions. Tony Mayo in his September 2007 Harvard Business Review publication comments in this regard. The article mentions that "leaders have plenty of trouble learning from the lessons of history; maybe it is because business and political leaders are supposed to be looking forward (Mayo, 2007)." The author suggests that "a few looks back may have even helped them prevent the same mistakes that others have committed (Mayo, 2007)." He asks this question: "what prevents people in power from exercising the perceptive judgment that enabled them to reach the pinnacle of success (Mayo, 2007)?" He intends to respond to it by saying: "in some cases, it may be their ability to take big gambles and succeed that sets in a false sense of security and invulnerability. It may be that they fail to seek advice or actively discourage differences of opinion when they move up the organization (Mayo, 2007)." The articles finalizes by citing a quote from Pearl S. Buck, "knowledge of history as detailed as possible is essential if we want to comprehend the past and be prepared for the future (Mayo, 2007)."

Jeremy Hope and Robin Fraser in the Harvard Business Review (Hope & Fraser, 2003), published an article that talks about the use of performance information, and demonstrates how using "key performance indicators" will lead to achieve better results. The authors suggest that "budgeting, as most companies practice it, should be abolished." They justified this by saying "it is simply the next logical step following everything else you've already done, to eradicate command-and-control hierarchies in your company and enable it to adapt to changing market conditions. Abolishing budgets will free up even more of your employees' creativity, self-motivation, and willingness to share information, which are essential ingredients for any firm's agility (Hope & Fraser,

2003)." Two main ideas are presented to explain this proposal, "raising the bar" and "key measures."

Doing this change is like "raising the bar even higher; instead of demanding that managers and business units meet fixed targets, ask them to do something much tougher: measure themselves against how well their competitors will have done during the same period. Unable to discern whether they've succeeded until the period ends, they exert every ounce of energy and ingenuity to best the competition and, rather than taking short-term actions designed solely to save the credibility of forecasts, they focus on improving their long-term competitive position (Hope & Fraser, 2003)."

"When budgets are abandoned, you enable alternative measures to move to the foreground; measures such as key performance indicators (KPIs) like profits, cash flows, customer satisfaction, cost-to-income ratios, time to market and quality. Many companies that have rejected detailed budgets in favor of KPIs are also using rolling forecasts. Created every few months, these forecasts typically cover five to eight quarters. They're revised regularly, allowing companies to continuously adapt to shifting market conditions (Hope & Fraser, 2003)."

A successful example is presented and described by the authors: "the Swedish international bank 'Svenska Handelsbanken' replaced budgeting with new organizational structures and performance metrics. To promote a sense of ownership and accountability, it created 600 profit centers, making them responsible for reducing costs, satisfying customer needs, and boosting income. Regions and branches compete with one another, spurred by prominently displayed standings. Branch managers determine resource allocation, staffing levels, and salaries. Rolling forecasts signal cash-flow improvements or declines and trigger the actions required to ensure adequate liquidity (Hope & Fraser, 2003)." The successful results of this example are explained like this: "since the early 1970s, the company has outperformed its Scandinavian rivals on almost every measure, including return on equity, total shareholder return, and customer

satisfaction. It's also one of the world's most cost-efficient banks—achieving a cost-to-income ratio of 45% and, few of its loans go bad because frontline people have the authority to approve loans (Hope & Fraser, 2003)."

Robert S. Kaplan and David P. Norton (Kaplan & Norton, 2007) presented in the Harvard Business Review, how using "key performance indicators" will lead to achieve better results by predicting the future and how the use of measurement of performance is the key to getting the real fact information and to being more competitive. There's an Editor's Note that reminds "in 1992, Robert S. Kaplan and David P. Norton's concept of the balanced scorecard revolutionized conventional thinking about performance metrics; by going beyond traditional measures of financial performance, the concept has given a generation of managers a better understanding of how their companies are really doing. These non-financial metrics are so valuable mainly because they predict future financial performance rather than simply report what's already happened. This article, first published in 1996, describes how the balanced scorecard can help senior managers systematically link current actions with tomorrow's goals, focusing on that place where. In this case, the balanced scorecard supplemented traditional financial measures with criteria that measured performance from three additional perspectives: those of customers, internal business processes, and learning and growth (Kaplan & Norton, 2007)." The authors say: "as companies around the world transform themselves for competition that is based on information, their ability to exploit intangible assets has become far more decisive than their ability to invest in and manage physical assets (Kaplan & Norton, 2007)." By making use of this tool, the authors propose that a new process for managing strategy is created and, this new process is the equivalent to the "Cycle of Learning" concept, part of IMT. This strategy is composed of four processes which are explained in detail in the article.

As previously described in the Literature Review Section, a current organization that helps others improve, by applying the use of performance information is the Performance

Based Studies Research Group (PBSRG), part of the Del E Web School of Construction from Ira A. Fulton Schools of Engineering at Arizona State University. They have developed a structure that maximizes the use of performance information and it is utilized in the selection process of procurement services. They started doing this with construction services but quickly expanded to other non-construction services because the concept is valid everywhere.

III. Culture of change and continuous improvement.

In the majority of the case studies related to “change”, it was found that for many, due to either the environment in which they coexist or for other reasons, there is reluctance to change. It is thought that sticking out with what is known, or what it is thought as the “good” is the best option, and anything outside of it is “not necessarily good.” At the same time, the articles did show how much value adding a “culture of change” can bring to that person or entity.

Change is a characteristic found on a vast group of case studies, because it leads to continues improvement, to explore new and better ways of doing and it fosters adaptability. What is gained by having a culture of change can be summarized in operational innovations that will help achieve optimal results.

In a Harvard Business Review article the author Michael Hammer (Hammer, 2004) mentions: “creating new ways, not just better ways of working, has been central to some business’ greatest success stories.” He reveals some examples: “Wal-Mart’s cross-docking distribution system or Dell’s build-to-order model as examples (Hammer, 2004).” Hammer (2004) then finalizes stating that “operational innovations fuel extraordinary results” and he recommends several guidelines for “reinventing your own work processes.” A case he mentions is “Progressive Insurance, which completely reinvented claims processing, slashing the waiting time for vehicle repair estimates from ten days to nine hours and catapulting sales from $1.3 billion in 1991 to $9.5 billion in 2002.

Companies that bake operational innovation into their culture, as Progressive did, make competitors continually scramble to keep up" said Hammer (2004).

In that same journal, Harvard Business Review, author Ram Charan (Charan, 2006) talks about the impact of having a change in a company and it shows how constantly changing can lead to increasing good results. The article outline is presented next.

"When Robert Nardelli arrived at Home Depot in December 2000, the deck seemed stacked against the new CEO. He had no retailing experience and, in fact, had spent an entire career in industrial, not consumer, businesses. His previous job was running General Electric's power systems division. Nardelli also was taking over what seemed to be a wildly successful company, with a 20-year record of growth that had outpaced even Wal-Mart's but, with latent financial and operational problems that threatened its continued growth, and even its future, if they weren't quickly addressed. To top it off, Nardelli's exacting and tough-minded approach, set him on a collision course with the freewheeling yet famously close-knit culture fostered by his predecessors, Home Depot's legendary cofounders, Bernie Marcus and Arthur Blank. It was this culture that Nardelli had to reshape if he hoped to bring some big-company muscle to the entrepreneurial organization. Nardelli tackled the challenge partly through personal leadership, mixing encouragement with ultimatum and fostering desired cultural norms like accountability through his own behavior. He also adopted and adapted an array of specific tools designed to gradually change the company's culture. Nardelli signaled that changing the culture would be central to getting the company where it needed to go (Charan, 2006)."

"Over the past five years, Home Depot's performance has indeed been put on a stable footing. Although its share price is well below the peak it achieved shortly before Nardelli arrived, and the rate of revenue increase has cooled from the breakneck pace of the late 1990s, the company continues to enjoy robust and profitable growth. Revenue climbed to around $80 billion in 2005, and earnings per share have more than doubled since

2000. Just as important, a platform has been built to generate future growth (Charan, 2006)."

In another article from that same journal, authors Richard T. Pascale and Jerry Sternin, start with this key quote: "somewhere in your organization, groups of people are already doing things differently and better. To create lasting change find these areas of positive deviance and fan their flames (Pascale & Sternin, 2005)." They define a concept called "change management by bridging the gap between what is happening and what is possible (Pascale & Sternin, 2005)." The proposal is to change, "the traditional process of creating organization change of digging deep to uncover the root causes of problems, hiring experts or importing best-of-breed practices, and assigning a strong role to leaders as champions of change for a new one in which, one looks for indigenous sources of change within your organization (Pascale & Sternin, 2005)"; and where the key is "to engage the members of the community you want to change in the process of discovery, making them the evangelists of their own conversion experience (Pascale & Sternin, 2005)." A six-step positive deviance model is presented in this article as a way to implement this organization change.

Another interesting case that mentions change as a successful practice was found also in the Harvard Business Review (Harvard Management Update, 2007). It was demonstrated how constant change, even when business is in good shape, leads towards innovation and adaptability to changing conditions; how being flexible will make the business able to adapt to the environmental changing conditions and how "trial and error" is a characteristic that goes along with constant change.

The publication's purpose is "to define how to create a sense of urgency when business is good (Harvard Management Update, 2007)." The article starts illustrating with an example of a successful company and how this works. "GTECH, a leading gaming technology and services company, now part of Gruppo Lottomatica, Rome, in 2002 was in clover; the firm had captured seventy percent (70%) of its market, its stock price had

skyrocketed, and it had a loyal customer base. Richard Koppel, their Vice President of advanced technologies, knew trouble could lie ahead; he said 'our systems were old, inflexible, and highly proprietary. Unless the company overhauled its technology platform,' Koppel said, 'we wouldn't be able to innovate quickly or affordably enough to meet customers' needs.' He encountered stiff resistance from the people who would have to carry out the change and because the company was doing so well, they didn't see a reason for such a dramatic transformation (Harvard Management Update, 2007)."

This Harvard Management Update (2007) then suggests a series of steps explained in detail, on how to overcome and surpass this situation, which are: "communicate and educate constantly; set boundary conditions by dictating the business requirements that need to be met and letting employees decide how they will fulfill those requirements; acknowledge difficulties and admit your mistakes or trial and error; and adjust your leadership style (Harvard Management Update, 2007)." Finally the authors state" "you cannot implement a major change through command and control; you cannot make people learn something they don not want to learn (Harvard Management Update, 2007)."

Steven J. Spear (Spear, 2004) presents in a Harvard Business Review publication, how successful one could be by applying "trial and error" in the business culture. Spear (2004) mentions how "Toyota's vaunted production system (TPS), which uses simple real-time, experiments to continually improve operations; where they consistently achieve: unmatched quality, reliability, and productivity; unparalleled cost reduction; sales and market share growth; and market capitalization."

The technique of "total immersion training" was presented as a way of showing how "leadership trainees directly observe people and machines in action, watching for and addressing problems as they emerge. Through frequent, simple experiments, such as relocating a switch, adjusting computer coding, they test their hypotheses about which changes will create which consequences. And they receive coaching, not answers, from

their supervisors (Spear, 2004)." Several examples of these trial and error experiments were presented and it was noted, how they all led to continuous improvement.

The second publication was actually an interview to Katsuaki Watanabe, Toyota's president at the time, performed by Thomas A. Stewart and Anand P. Raman (Stewart & Raman, 2007) and published at the Harvard Business Review. It reveals some of the successful practices put in place by Toyota, leading to a position among the top for quality, reliability and durability. "For Watanabe, being number one means being the best in the world in terms of quality. If Toyota's quality continues to improve, he says, volume and revenues will follow. Watanabe aims to achieve his goals through a combination of 'kaizen' (continues improvement) and 'kakushin' (radical innovation). One of his visions for the future is a 'dream car', a vehicle that cleans the air, prevents accidents, promotes health, evokes excitement and can drive around the world on a single tank of gas (Stewart & Raman, 2007)."

Summarizing, the results suggests "change" in an organization contributes to solve problems and develop improved practices. Following the traditionally methods for implementing change may not lead to the desired results when needed. By looking at and analyzing with a wider perspective, entities can look deep into their current structures and quickly find solutions to obtain better results. A "culture of change" may lead, not only to achieve operational excellence by being able to implement continuous improvement, but also to accept change as inevitable in the market environments – staying flexible, looking for opportunities, seeing the cachet of change, venting, getting over it and moving and sharpening the skills.

IV. Losing control and gaining flexibility.

Results found in the case studies suggest how ineffective "trying to control" could be. The findings in these cases also propose that alignment is what needs to be used due to the non-effect of the control mechanism. Some of the case studies illustrated the positive outcomes that could be achieved by releasing control. Two of these examples were

found in publications from the Economist from February and September of 2007. These articles both talk about an extensive research made by the Organization for Economic Co-operation and Development (OECD) in the European Union.

In the Economic Focus section, the first article (Finance and economics: The art of the possible; economics focus, 2007) discusses mainly "control" and, the key quote is "a new study picks over the delicate political economy of freeing markets." This article is based on another publication, the third annual "Going for Growth" report, published on February 13, 2007 by the Organization for Economic Co-operation and Development (OECD), where they explain why reform meets resistance and how opposition might be overcome. "This report looks at structural reforms, policies that, for example, ease entry into goods markets; cut the costs of firing and hiring; or relax barriers to foreign ownership with the purpose of helping close the gap between the richest OECD countries and the rest – measured by Gross Domestic Product (GDP) per person (Finance and economics: The art of the possible; economics focus, 2007)."

Some of the relevant data found in this report mentions that "Europeans may be feeling rather pleased with themselves now, because the Euro zone's economy grew by 3.3% in the fourth quarter of 2006, compared with a year earlier, its fastest pace for more than six years. And this is due to the markets being freer than they were, several million jobs have been created and the Euro area's natural rate of unemployment seems to have fallen by around a percentage point since its last upturn (Finance and economics: The art of the possible; economics focus, 2007)."

"The OECD report's most disheartening conclusion is that reform must often wait for the sting of a crisis. This is borne out. By the experiences of Britain in the late 1970s, the Netherlands and New Zealand in the 1980s and by Italy in the early 1990s; where governments seem more likely to loosen their product and labor markets when GDP is more than 4% below potential (Finance and economics: The art of the possible; economics focus, 2007)." The article suggests that "policymakers may think this finding

is of little use: calling forth catastrophe is an odd way of promoting prosperity; however, it does serve as a useful warning… it would be better to carry it out during less painful interludes (Finance and economics: The art of the possible; economics focus, 2007)."

The case mentions another example: "monetary policy can also grease the wheels… cutting tariffs or opening industries to new entrants ought to in theory increase supply and reduce inflationary pressures (Finance and economics: The art of the possible; economics focus, 2007)."

The second article (The turning point - the global economy; the global economy, 2007), found in the Briefing section, shows the characteristics that come along with economic growth and stability. It makes an analysis of the economies from countries such as the United States and other "Organization for Economic Co-operation and Development (OECD)" European members.

One indicator is brought up, "since the mid-1980s America's unemployment rate has fluctuated far less than it did in earlier generations. Between 1961 and 1983, America's annual unemployment rate varied from 3.5% to 9.7%. Since 1984, it has stayed within the tighter bounds of 4% to 7.5%. A study published last year by Stephen Cecchetti, of Brandeis University, Alfonso Flores-Lagunes, of the University of Arizona, and Stefan Krause, of Emory University, found that 16 out of 25 OECD economies, including Britain, Germany, Spain and Australia, had also seen a marked improvement in economic stability (The turning point - the global economy; the global economy, 2007)." The article questions: "What lay behind that change? The skeptical view is that improved stability has no cause: it is mostly down to luck (The turning point - the global economy; the global economy, 2007)." The proposed response on this improved economic stability is explained: "economies were more hidebound then than now: job markets were less flexible and producers more stymied by regulation (The turning point - the global economy; the global economy.2007)." The key factors that respond to this increased ability are:

- The flexible economy: “more likely explanation is that economies have become far better at absorbing shocks, because they are more flexible; with structural shifts ranging from globalizations to the decline of manufacturing in the rich world. Academic literature mentions three structural shifts, improvements in managing stocks of goods, the financial innovation that expanded credit markets, and wiser monetary policy. The same study mentioned earlier, calculates that, on average, more than half the improvement in the stability of economic growth in the countries they studied is accounted by diminished inventory cycles because technological improvement and this is irreversible. This means the greater stability it provides is likely to be permanent (The turning point - the global economy; the global economy, 2007).”
- The economic shuffle: “credit was strictly rationed until a wave of deregulation and innovation during the 1980s and 1990s led to an expansion. That, in turn, gave a wider range of firms and consumers the means to plug temporary gaps in spending power. The use of techniques to assess the risk of default, together with the repackaging of loans into marketable securities suitable for savers, has broadened access to borrowed funds and broken the rigid link between income and spending; these are all valuable advances that smooth out the business cycle. In principle it is said that, controlling inflation helps steady the economy. High inflation tends to be volatile and research has shown that erratic inflation and large fluctuations in GDP growth tend to go hand in hand (The turning point - the global economy; the global economy, 2007).”
- The shock-absorber that shocked: the key quote mentioned is “although it is perverse to argue the golden age has not been tested, it would be foolish to rule out a shock (or combination of shocks) that might break the economy's

> resilience" and the author mentions "the seeming vulnerability of housing markets as an example (The turning point - the global economy; the global economy, 2007)." "This vulnerability makes think that one of the mechanisms which helped stabilize growth has suddenly become a threat to it; in which financial innovation is central to the Great Moderation, but its most recent creations allowed credit to be extended on too easy terms. As central banks try to mitigate these risks to growth, the danger is that they become complacent about inflation and, an example is cited on this potential danger (The turning point - the global economy; the global economy, 2007)."

The article finalizes with several conclusions. One that says in essence, "the markets are betting the Fed can save the day, by taking the necessary methods to prevent a recession based the previous business cycles behaviors" (The turning point - the global economy; the global economy, 2007)."

"The global economy has proved to be far more resilient than had often seemed likely and, it showed very few signs of trouble before the credit-market dislocations, mostly because growth outside the rich world has been strong. In July of 2007 the International Monetary Fund (IMF) revised down its projections for economic growth in America for this year, but still upgraded its global economic forecasts because of the strength of the emerging markets. These economies says the author, a source of a big shock only a decade ago, could now prove to be a stabilizing force for the world economy. Thanks to their cushioned foreign-exchange reserves, the fast-growing economies of Asia and the Middle East are now less dependent on capital markets to fuel their growth (The turning point - the global economy; the global economy, 2007)."

In these two examples just mentioned above, it can be seen that "freeing markets" will increase economic results in a region and they show how being resistant to change will not produce a desirable outcome. The research studies showed that "flexibility" can be successfully used as an indicator of economic growth and stability of a region and, finally,

the use performance information is reflected on how the FED is taking the necessary steps, based on previous performance information of the business cycles, to prevent an impact on the economy.

V. Alignment versus control.

A brief of an interesting article found in the Harvard Business Review, written by Richard M. Rosen and Fred Adair (Rosen & Adair, 2007), presented the following information. "A new research conducted jointly by the Leadership Consulting practice of the executive search firm Heidrick & Struggles and the University of Southern California's Center for Effective Organizations suggests that CEOs have a rosier view of senior management's performance than other top team members do. In a global survey of 124 CEOs and 579 other senior executives at large and midsize firms from a range of industries, 52% of the non-CEOs said that their teams were doing poorly in critical areas such as thinking innovatively, cross-marketing, leading change, overseeing talent development, and building a company culture. Just 28% of the chief executives reported problems in these areas. Rating their teams' overall effectiveness on a seven-point scale (seven being the best), the CEOs gave an average score of 5.39, whereas the other executives gave an average score of only 4.02. The authors say that it seems that CEOs are the executives who need a reality check and they explain some factors that could be affecting this. Some CEOs prefer to weigh their options in private or to act on their own after having group discussions or one-on-one meetings with team members, this seems to leave their teams out of a key part of the process: the final deliberation and consequently, the other executives understandably give themselves low marks for performance and for their ownership of team outcomes, by feeling powerless. The failure to move on an idea right away often indicates a team's lack of commitment to it. Since everyone has ostensibly signed off, the CEO assumes that the entire group is on board and that progress is imminent; meanwhile, silent dissenters let the idea wither through inaction. Where there is no conflict, there is no passion. Avoiding disagreement means avoiding the really tough

discussions, which almost inevitably require a higher level of engagement. In an always placid meeting room, a CEO may see consensus where a more objective observer would see conformity. In regards these three factors, the authors propose for CEOs to ask three questions to themselves: Does my team make decisions in meetings? If we do make decisions in meetings, are they implemented shortly thereafter? Do meetings allow for lively conflict? This would help them have a better sense of whether he and his team view their performance differently. If they do, management can get started on the hard work of true alignment; it will then become clear where performance really stands and what needs improvement (Rosen & Adair, 2007)."

In the case studies that mentioned "alignment", a communality found was what can be gained by realigning the resources within an organization; and to maximize the productivity and the positive and desired outcomes. As Martha Legace mentions in her May 2007 Harvard Business Review article, which is a Q/A interview, that shows "researchers of a recent study that measure the performance of knowledge workers, called 'stars' in this article, for a large sample across a large number of firms in an industry contained very good information about the quality of colleagues for each analyst and, had data over a long period of time for all these factors (Legace, 2007)." The key quote of the authors is "it is true that a star's past performance indicates future performance, but the quality of colleagues in his or her organization also has a significant impact on the ability to maintain the highest quality output (Legace, 2007)." The article outlines important implications for "star players as well as their managers" and these are listed next: "1) even though an individual's past performance can indicate future performance, the organization also significantly affects top performers' ability to maintain their performance; 2) some have pointed out that the main difference between knowledge workers and, say, manual workers, is that knowledge workers own the means of production but, analysts rely a lot on the quality of the colleagues that their organization provides to sustain top performance; 3) when considering a career move, it is very

important for stars to evaluate the level of support they are receiving from their colleagues in different parts of the organization and; 4) firms that already have a large stable of high-performing individuals might have built a competitive advantage; firms that lack this advantage fight an uphill battle (Legace, 2007)."

VI. Pre-planning/look ahead.

Following the principles of IMT and concepts of KSM mentioned before, the outcome of any event, by the knowing the initial conditions can be predicted. Now, what does this means related to a, call it organization in reference to any process, project, department, entity? Basically, if all information is known, or at least the most important information is known upfront, the likelihood of identifying the outcome increases; this can be interpreted as "the most significant efforts have to be done at the beginning." The communality found in the articles reviewed related to this topic, was the importance of "pre-planning/look ahead". To illustrate this principle, two articles from different authors, will be cited, that clearly show the importance of pre-planning.

In the first article, authors John L. Graham and Mark N. Lam (Graham & Lam, 2003) mentioned how critical a pre-planning session can be in a negotiation. Their main idea show is presented as follows: "preparing for a business trip to China; armed with a list of etiquette how-to's, stacks of business cards, and that conservative suit. These may get you through the door at your Chinese counterpart's company but they won't help you forge the long-term associations Chinese and Western businesses can now achieve (Graham & Lam, 2003)," the authors say. The authors suggest how to achieve this goal: it is needed to understand the broad context of Chinese culture and values and their impact on the Chinese negotiating style. "Deep cultural differences have created seemingly incompatible contrasts between Chinese and Westerners' approaches to negotiation. Often, Chinese businesspeople see Americans as aggressive, impersonal, and excitable. Westerners may see Chinese negotiators as inefficient, indirect, and even dishonest. The consequence is that business communications repeatedly break down.

How to achieve this? By understanding the Chinese negotiation style (Graham & Lam, 2003)."

The authors explained in detail what they mean on the pre-planning effort as follows: "cultural threads: agrarianism, culture that emphasizes cooperation, harmony, and obedience to familial hierarchy; morality, seeking "the way" between yin (passive) and yang (active) forces in which the best compromises result from the ritual back-and-forth of haggling; a pictographic language, Chinese thinking tends toward more holistic processing of information and emphasizes the big picture over details and; wariness of foreigners, millennia of external and internal strife have yielded a mistrust of strangers and cynicism about rules (Graham & Lam, 2003)."

"Negotiation elements: Guanxi (based on personal connections); Zhongjian ren (the intermediary with strangers is necessary); Shehui dengji (social status in negotiations, high-level to high-level); Renji hexie (interpersonal harmony through friendships and positive feelings); Zhengti guannian (holistic thinking emphasizing the whole package over details); Jiejian (thrift bargain intensely over price); Mianzi ("face" or social capital); Chiku nailao (endurance, relentlessness of hard work in which Chinese prepare diligently for negotiations and expect long bargaining sessions, be prepared) (Graham & Lam, 2003)."

Klein (2007) presents in his article at the Harvard Business Review a similar concept. Klein says that "many projects fail at a spectacular rate, this article mentions that one of the reasons is that too many people are reluctant to speak up about their reservations during the all-important planning phase. By making it safe for dissenters who are knowledgeable about the undertaking and worried about its weaknesses to speak up, you can improve a project's chances of success (Klein, 2007)."

"Research done by some fellows at Cornell University and University of Colorado, found that imagining that an event has already occurred increases the ability to correctly identify reasons for future outcomes by 30%. The process suggested by the authors to do this is

the pre-mortem, where a pre-mortem is the hypothetical opposite of a post-mortem. A pre-mortem in a business setting comes at the beginning of a project rather than the end, so that the project can be improved rather than autopsied. Several examples for successful projects using this method are mentioned, such as a project to make state-of-the-art computer algorithms available to military air-campaign planners and how doing this exercise made a team member who had been silent during the previous lengthy kickoff meetings volunteered that one of the algorithms wouldn't easily fit on certain laptop computers being used in the field, having the software take hours to run when users needed quick results, situation very impractical; turning this out into a powerful shortcut to be created and re-programmed before the project was kicked off and, ended the project went on to be highly successful (Klein, 2007)."

The article finalizes by showing a summary of the great results than can be achieved through this process, saying that "although many project teams engage in pre-launch risk analysis, the pre-mortem's prospective hindsight approach offers benefits that other methods don't; by helping teams to identify potential problems early on; reducing what the author calls the kind of "damn-the-torpedoes" attitude, often assumed by people who are over-invested in a project and, by describing weaknesses that no one else has mentioned, team members feel valued for their intelligence and experience, and others learn from them. The exercise also sensitizes the team to pick up early signs of trouble once the project gets under way (Klein, 2007)." The final quote the author makes in the article is: "in the end, a pre-mortem may be the best way to circumvent any need for a painful postmortem (Klein, 2007)."

In the results it was found as a common proposal, the pre-planning phase on any organization as the most critical phase. It is mentioned that one could be hardly successful with a lack of a business plan or set, or if one does not plan properly and deploy the resources and processes in the project. By pre-planning, pro-activeness will be present instead of re-activeness, and a minimization of the efforts during the project

itself can be achieved; facilitating to concentrate on more important things such as looking for opportunities for improvement, and avoid having reactive measures.

VII. Think of the whole supply chain ("win-win scenario").

A communality found in the case studies related to this topic, thinking of the whole supply chain, is the "false effect" perceived when a transaction is done without it, thinking in terms of benefits for the complete supply chain. This can be explained as follows: when doing business transaction it is always pursued what is best for the entity itself. Now, sometimes this pursuit of wellness goes further and, in order to maximize the benefits, perhaps by using leverage, the benefits from others get minimized or put at risk. For example, a participant of the supply chain is "squeezed down by force or leverage" or is mislead, with the purpose of maximizing the benefits from one party. On the surface, this could be perceived as a large benefit for the pushing entity but, doing so on the long run this night not be the case. When a situation like this is encountered, call it a perceived "win-lose", what is being achieved is to create instability in the supply chain (trade, industry or activity). This instability is consequence of the conflict of interest created by doing this. The recommendations found lead to, with the purpose of trying to maximize one's benefits on the long run, look for what is best for all participants of the supply chain. In other words, when a "win-win" situation takes place, where all participants are benefiting, the supply chain becomes stable by itself and, endurance of profitability and/or the desired positive outcome can be reached. There are many cases that illustrate this concept and a summary of some of the most relevant cases is shown next.

Hau L. Lee, in his Harvard Business Review publication (Lee, 2004) mentions "that traditionally, the holy grails of supply chain management were thought as high speed and low cost (Lee, 2004)" but, the author also mentions "putting some companies as examples such as Wal-Mart, Amazon, Dell Computer, those characteristics aren't good enough and a supply chain should also be: Agile, Adaptable and Aligned (Lee, 2004);" Triple-A, the tile of this article. Lee (2004) explains more of these other three

characteristics. “Agile: responding quickly to sudden changes in supply or demand, handling unexpected external disruptions smoothly and, recovering promptly from shocks. Adaptable, evolve over time with economic, political, demographic, technological changes. Align: align the interests of all participating firms in the supply chain with their own and with this, having each player maximizes its own interests which consequently optimize the chain’s performance as well (Lee, 2004)”.

Another good example of these supply chain characteristics is mentioned and explained by the author as follows. “Convenience-store chain Seven Eleven Japan (SEJ) builds supply chain agility by using real-time systems to detect changes in customer preferences and track sales and customer data at every store. Satellite connections link stores with distribution centers, suppliers, and logistics providers. SEJ reallocates inventory among stores and reconfigures store shelves three times daily to cater to different customer groups at different hours. SEJ’s adaptability is legendary. Within six hours after the 1995 Kobe earthquake, SEJ overcame highway gridlock by mobilizing helicopters and motorcycles to deliver 64,000 rice balls to its stores in the beleaguered city. SEJ fosters alignment by making partners’ incentives and disincentives clear. For example, when carriers fail to deliver on time, they pay a penalty. But SEJ also helps carriers save money by forgoing the typical time-consuming requirement that store managers verify all contents of each delivery truck (Lee, 2004).”

A second article from Wayne F. Cascio, published in the Harvard Business Review (Cascio, 2006), points out “how making assumptions that lower wages will in fact translate in lower cost, without knowing all information leads to an incorrect approach.” This article compares the two largest wholesale retailers of the country. “Consider Costco and Wal-Mart’s Sam’s Club, which compete fiercely on low-price merchandise. Costco being number one with 338 stores and 67,600 full-time employees with 50% of the market and. Sam’s Club being number two with 551 stores and 110,200 employees with about 40% of the market (Cascio, 2006).”

The study by the author shows that the average wage at Costco is $17 an hour and, "Wal-Mart does not break out the pay of its Sam's Club workers (Cascio, 2006)," but a full-time worker at Wal-Mart makes $10.11 an hour on average. "On the benefits side, 82% of Costco employees have health-insurance coverage, compared with less than half at Wal-Mart. Costco workers pay just 8% of their health premiums, whereas Wal-Mart workers pay 33% of theirs. 91% percent of Costco's employees are covered by retirement plans, with the company contributing an annual average of $1,330 per employee, while 64 percent of employees at Sam's Club are covered, with the company contributing an annual average of $747 per employee. These practices from Costco are clearly more expensive, but they have an offsetting cost-containment effect: turnover is unusually low, at 17% overall and just 6% after one year's employment. In contrast, turnover at Wal-Mart is 44% a year, close to the industry average. In skilled and semi-skilled jobs, the fully loaded cost of replacing a worker who leaves, excluding lost productivity, is typically 1.5 to 2.5 times the worker's annual salary (Cascio, 2006)."

A comparison between these two companies is made, assuming the total cost of replacing an hourly employee is only 60% of his or her annual salary. "The cost of replacing a Costco employee is $21,216 while for a Sam's Club employee is $12,617. At first glance, it may seem that the low-wage approach at Sam's Club would result in lower turnover costs but, the turnover rate is different. Wal-Mart's Sam's Club loses more than twice as many people as Costco does: 44% versus 17%. Hence, the total annual cost to Costco of employee churn is $244 million, whereas the total annual cost to Sam's Club is $612 million. That's $5,274 per Sam's Club employee, versus $3,628 per Costco employee (Cascio, 2006)."

Another interesting fact is that "while Sam's Club and Costco generated $37 billion and $43 billion, respectively, in U.S. sales last year; Costco did it with 38% fewer employees. Costco generated $21,805 in U.S. operating profit per hourly employee, compared with

$11,615 at Sam's Club. This makes Costco's stable and productive workforce offsets its higher costs (Cascio, 2006)."

"These figures challenge the common assumption that labor rates equal labor costs; a cost-leadership strategy need not be a race to the bottom" said Cascio (2006).

A third article that illustrates the concepts of thinking on the whole supply chain, discusses "how CEOs should really think and even plan their succession early (Eichinger, 2007);" it is shown in a publication from Business Week, by Bob Eichinger. "Studies and surveys report that companies aren't very prepared for CEO succession. Results show nearly 50% have no CEO succession plan. Average global tenure of CEOs is 7.6 years and they are retiring younger. Because of natural age gapping there are potential CEOs in very age and experience category, say 52, 48, 42, 36, 30, 24, and because of candidates' loss and turnover, you would need to have multiples candidates at each milestones, say two-52s, four 48s and so on. This is called vertical succession planning, identifying and developing talent early, deliberately, and systematically is a very long-term management strategy. Only some CEOs (study by PricewaterhouseCoopers only 22% a lot of thought, 59% some thought, 19% no thought at all) are planning their succession and this will lead towards a smoother transition with better results, by looking deeper into the organization to identify and prepare their full CEO supply chain of top talent (Eichinger, 2007)." This is a clear example of thinking team, or call it, thinking "us" instead of "me and then".

Basically, in a situation where a "win-win" approach is utilized, looking for all participants to be beneficiated on the trade or transaction will make the complete supply chain sustainable, which on the long run will transform in more and secure benefits. When the opposite approach is taken, meaning a perceived "win-lose" approach where only one or a few participants but not all beneficiate from the process, unsteadiness takes place and the business or industry could "broke" because there are conflicts of interest. A very interesting analysis of the Construction Industry has been made by Dr. Dean Kashiwagi

(2004) and his research group, PBSRG, through years of study and research – the phenomenon here explained was discovered.

- Discussion of the most relevant RS characteristics found, leading less accurate Leadership and Management practices

The top eleven (top-11) RS characteristics from the group of RS characteristics found in the case studies of inconsistency and failure are listed next, illustrating briefly the meaning of each one by summarizing some of the findings (these findings are further exemplified after this list):

1) Misalignment: lack of/or poor alignment on the selection of resources of management/leadership, and/or not aligned appropriately to their skills, was a contributing factor in leading to mistakes in formulation of strategic plans and business execution. The same for not having adequate resources before starting up a business venture/project.
2) Lack of planning: lack of/or poor planning strategies without the proper research leading to failure; due to ignorance of limitations in the venture/project, and with the presence of reactionary behaviors due to unforeseen consequences. New strategies without implementation plans, failure to follow the plan and having unclear directions and directives.
3) Lack of measurement: lack of financial and performance indicators that prevent the business managers to know the real condition of the entity; failing to monitor actual performance and to provide feedback, resulting in incomplete solutions and overlooking necessary changes by not understanding the constrains.
4) Lack of change: not being able or not wanting to change and adapt to environmental changes (such as market) made it impossible for the entity to act when it was needed; causing reactive measures to be late

and costly. In other words, increasing re-activeness instead of pro-activeness, ending up in losing competitiveness and failure to diminish "bad/old" habits.

5) Technical: technology/technical measures are not the solution to the root cause of the problems and very complex systems make it more difficult to understand and implement a solution; it increases difficulty of understanding and there is lack of clarity resulting in overlooking relevant information.
6) Assumptions: ignoring information led to making assumptions, such as thinking one solution/strategy would work the same way at all situations. This led to failure; wrongfully assuming same strategies for different environments, ignoring important factors and new initiatives without research/back-up due to assumptions.
7) Decisions: launching an initiative without having the necessary information to plan and guide the effort/research, led to making decisions which contributed to failure. Sudden and impulsive decisions without understanding the environment; decisions with expectations instead of information. And decisions-driven companies based on "titles/positions" and not on information.
8) Ignore performance information: disregarding history on performance results prevents removal of performance barriers and roadblocks and hence, failing. All this led to making "impulsive" decisions, overseeing risks, ignoring causes of failure and overseeing performance indicators by focusing on the company growth only.
9) Think of me and them (instead of us): leaders and managers that care only for their own benefit instead of the benefit of the whole entity and development of the employees, causing leadership and hindrance

issues. Focus on personal/own benefits primarily and lack of integrity, leading to ignorance of problems inside the entity/organization and failing to develop/promote/realign resources.

10) Reactive: reactionary behavior due to poor planning practices; where "reactionary behaviors" prevent and limit planning; being consumed in a vicious cycle of "re-activeness<=>lack of planning."
11) Silos: operating into silos causes confusion and reduces full visibility and integration of the process (es) and prevents collaboration; it reduces flexibility by decreasing the ability to look inside the entity/individual/structure; promoting "blindness"/ignorance of relevant information and hindering "team-work."

In order to illustrate and represent these RS characteristics (top-11 listed prior from Table 26) found in the case studies, which led to less accurate Leadership and Management practices (L/M), some of the most relevant information presented in those case studies is offered next.

I. Misalignment.

An article named “Seven Ways to Fail Big” found in the Harvard Business Review (HBR) on the September, 2008 issue, written Paul B. Carroll and Chunka Mui illustrates the importance of the alignment of resources. The article discusses that businesses fail and lose money for a variety of reasons. It is based on a study of 750 of the most significant business failures in the US (bankruptcies of companies with at least $500 million in assets in the last quarter before bankruptcy and write-offs and discontinued operations greater than $100 million) over a period of 25 years (1981-2005) and they suggest “nearly half the failures could have been avoided (Carrol and Mui, 2008).” In the majority of cases they attribute failure to “flawed strategies and not inept execution (Carrol and Mui, 2008),” as most of the literature places blame said the authors. One of the reasons for failure the authors found is described as “the synergy mirage: seeking synergies by

merging firms with complementary strengths (Carrol and Mui, 2008)," where a merger takes place and resources are not aligned appropriately per their skills.

A similar study is presented in the Small Business Economics Journal (Cressy, 2006). This article describes how a model was built to explain why most firms die in the first years of trading and the relationship to management human capital (MHC). The authors propose a theoretical mathematical model for this prediction based on managerial and financial capital, and measuring it with the management skills of the initial resources. Based on this model the authors propose that failure is by two main reasons, where one of them is "the role of managerial human capital which enabled the more talented entrepreneur to grow faster at lower cost measured by the increase in her firm's equity risk (Cressy, 2006)." This was described as the failure or the lack of identification of the proper resources before a business venture begins resulted in higher failure rates.

Argenti (1976) is one of the first authors who studied non-financial causes for business failure. He analyzes failure as a process, and according to him the three trajectories of failure are:

- "Typical failure path of a start-up company with inappropriate management in terms of skills or personality (Argenti, 1976)."
- "Young companies after a very precipitous growth and an even steeper decline. Their collapse is also caused by management deficiencies, but when operational and financial management are ignored during the growth phase (Argenti, 1976)."
- "Mature and inert companies that refrain adaptation of management structure and lose touch with their customers. The company goes bankrupt because they do not respond adequately to environmental changes (Argenti, 1976)."

The first two reasons are a direct result the lack of identification and misalignment of the proper resources before a business venture begins, resulting higher in failure rates.

II. Lack of planning - Reactive.

The journal “Management Decision” presents a paper form Bill Richardson, Sonny Nwankwo and Susan Richardson (1994) that studies generic failure types. The authors start the article by mentioning some relevant figures of failure in the United Kingdom, where in the first half of the 1990’s decade, “one in 38 active British businesses went into liquidation in the third quarter of 1992; and in 1991 a total of 21,287 business failed compared to 15,051 in 1990 – a jump of 45 per cent (Richardson et al, 1994).” The study, based on literature research, separated failure types into big organization and small organization contexts, and described the processes associated to these business failure types. The authors describe four main categories of business failure and one of them is described as “the failed start-up: where assumptions were made about new projects without major knowledge/research in that new area; and failure to perform appropriate planning (Richardson et al, 1994).” This reason for business failure is the reflection of lack of planning – venturing in new areas/projects without the proper research and planning, resulting in failure.

Another study with some astonishing figures that reflect the “bad” consequences of the “lack of planning” is presented by Anne McKague (1997) on the journal Computing Canada. The article is about a study by KPMG on failed Canadian IT projects, “the failures cost Canadian organizations more than $360 million. The primary reasons found for failure were poor planning, a weak business case for the project, and lack of involvement from top management (McKague, 1997).” The study surveyed 1,450 public and private sector organizations across Canada and analyzed 100 failed projects. The author mentions a recent study (1995) by the Standish Group in the Unites States, which shows how “31 per cent of software projects will be cancelled, and of those completed, 53 per cent would cost almost twice their previous estimates (McKague, 1997).” The enchantment by technology of senior management is pointed out, and how this

management does not know how to measure results accurately and how to plan for these projects – implementing a strategy without the proper plan in place.

Stephen C. Perry (2001) publishes a paper on the Journal of Small Business Management titled "The Relationship between Written Business Plans and the Failure of Small Businesses in the US". This paper studies the influence of planning on small (fewer than 500 employees) business failures in the United States; defining failure as a bankruptcy with losses to creditors. The sampling was failed and non-failed businesses listed in the Dun & Bradstreet credit reporting database. The author explains, by quoting Dennis (1993) and Perry (1993), how representative the selection of small (less than 500 employees) businesses is as follows:

- "99 per cent of the 21 million entities filing a tax return in the US are small business (Perry, 2001);"
- "Half of the small businesses have fewer than five (5) employees (Perry, 2001);"
- "90 percent of the small businesses have fewer than 20 employees (Perry, 2001);"
- "Business failure rates average 70,000 annually in the earlier years of this research (Perry, 2001);"
- "Respective liabilities averaging $40 billion annually (Perry, 2001)."

The author mentions a quote from Peter Drucker (1973) "planning what is our business, planning what it will be, and planning what it should be have to be integrated… Everything that is planned becomes immediate work and commitment." The main conclusion that the author reaches after concluding his research, is that "very little formal planning goes on in U.S. small businesses; however, non-failed firms do more planning that similar failed firms did prior to failure (Perry, 2001)."

III. Lack of measurement.

Andrew Zolli and Ann Marie Healy, present in an article at the Harvard Business Review (HBR), named “When Failure looks like Success”. The authors explain how “the global effort to bring clean water to Bangladesh appeared to be a huge success. But each time, the success contained the seeds of epic failure (Zolli and Healy, 2011).” They describe how Bangladesh, country of 90,000,000 people, was having in the 1970s 250,000 deaths annually from waterborne diseases; having in 1970 a mortality rate for under-5s of 24 percent.

Fix number one initiated by UNICEF in 1972 was to “install massive tube wells that allow pull of pure underground water to the surface (Zolli and Healy, 2011)”, going from zero wells in 1970 to 10 million wells in year 2000; this decreased the under-5 mortality rate to 15 percent by 1980 and to 9 percent by 2000. A disturbing discovery takes place in 1983, where doctors start noticing patients showing symptoms of arsenic poisoning. In 1983 the first case was found; by 1987 1200 cases were found; by 1993 40,000 cases were found. Contaminated water leads to tainted rice (rice constitutes 73% of peoples diet), showing a level arsenic of about 200 parts per million. Well-water contaminated with arsenic occurs naturally in the country’s rocks and soil.

Fix number two, in 1991 a multi-million dollar programs of screening of wells, education and public relationships takes place – solution is to paint wells in green when they are safe and paint them in red when they are unsafe. Unforeseen consequences then take place: villagers who live close to red wells are stigmatized; those affected with arsenic poisoning get discriminated in ways such as unemployment, young women face diminished marriage prospects making them turn to prostitution to survive. Some owners of contaminated red wells repaint them in green to avoid shame.

The authors in the research contribute the failure to two main reasons:

- "Designing for instead of with: the organizations behind the first initiative were international bureaucracies with an

incomplete understanding of the local population (Zolli and Healy, 2011)."

- "A lack of whole measurements: the organizations did not fully assess their projects impacts, focusing on number of wells built and ignoring other factors such as increase of other waterborne illnesses, and ignoring the social problems the 'wells painting' would entail (Zolli and Healy, 2011)."

In the Risk Management section of The Economist journal, from October 2nd, 1997, an article named "Beware of low-flying banks" explains how the lack of measurements constrains from having a better understanding of the risk management strategies. The articles suggests that "bankers are reluctant to report near-misses (Risk Management: Beware of low-flying banks, 1997)" – and puts Barclay Bank, Britain's second-biggest bank, as an example on how they have implemented a technique in which their "managers are encouraged to come clean, instead of owning up to mistakes they can file "process-improvement-opportunities (Risk Management: Beware of low-flying banks, 1997)."

The article says that "banks are in the business of managing risk and they have tried hard to quantify the risk involved in lending and trending (Risk Management: Beware of low-flying banks, 1997)." However, not that many banks measure operation risk. Only a "handful of banks is beginning to measure and model operational risk just as they do lending and trading risks (Risk Management: Beware of low-flying banks, 1997)." A couple of examples of bank failures are presented and how operational risk measurement could have helped in avoiding/minimizing the impact. The articles illustrates with examples of these new measurements, such as:

- "Bankers Trust has been collecting data on control breaches, systems failures, fraud and a host of other operational risks (Risk Management: Beware of low-flying banks, 1997)."

- "SBC Warburg Dillon is interested only in its own operational failures, but Bankers Trust collects data about operational failures in other banks and industries, and screens them for relevance to the bank's own operations (Risk Management: Beware of low-flying banks, 1997)."

The intent of the analysis of the data collected is to be able to build statistical models that identify severity and frequency of operation risks, and to sort-out these risks faces by their different business units. All this with the purpose of minimizing operations risks and let the banks operate safer.

IV. Lack of change.

Hubert Ooghe and Sofie De Prijcker from Ghent University of Belgium wrote a paper named "Failure processes and causes of company bankruptcy: a typology (2007), which studies the reasons for failure as bankruptcy. This paper is an effort for understanding the "relationship between the characteristics of a company, the underlying causes of failure and the financial effects (Ooghe and De Prijcker, 2007)," based on case study research of 12 Belgian companies of different industries, sizes and ages. The article points out how in bankruptcy literature there is a high number of bankruptcy prediction models, all based on financial symptoms. They mentioned Argenti (1976) who makes an analysis on causes of failure based non-financial parameters.

The authors later expand in their research effort, and define four types of failure processes that explain a company's failure – one of them is "lack of change"; not being able/not wanting to change and adapt to environmental changes (market) that made it impossible for the company to react when needed and describe as follows: "the failure process of an apathetic established company: companies which management is unaware of the gradual change in the environment, competitors do reach to these reaches, and then the company loses strategic advantage (Ooghe and De Prijcker, 2007)."

“Causes and consequences of managerial failure in rapidly changing organizations”, a paper published in the Business Horizons journal by Clinton O Longenecker, et al (2007), illustrates the consequences of failure when “change” is not present. The paper reunited three different experts from two US universities, whom call attention to how important is for organizations to understand the factors that cause managers to fail. To that extend, they “focus on data collected from 1040 managers from over 100 different U.S. manufacturing and service organizations experiencing large scale organizational change in order to help identify the primary causes of managerial failure (Longenecker, Clinton O. et al, 2007).” The end results of this article find the 15 main causes of managerial failure; the fifth most relevant cause of managerial failure is lack of change: “failing to adapt and break old habits quickly (Longenecker, Clinton O. et al, 2007).”

The journal Organization Science publishes a paper from Stewart Thornhill and Raphael Amit (2003), where the authors study the differences between the determinants for firm failure between firms that fail early in their life and firms that fail after being established. The research analyzes date from 339 Canadian corporate bankruptcies, utilizing scope of age, size, and population density mechanisms. The results show that firms have a higher exposure to failure in their earlier stages of life. The two causes identified by the authors for the two different firms’ age groups are:

- “Failure among young firms is attributed to deficiencies in general management skills (Thornhill and Amit, 2003).”
- “An evolving competitive environment is identified as a significant influence in the demise of older organizations (Thornhill and Amit, 2003),” which reflects the inability of the company to adapt to environmental changes.

This last result is proof that the “lack of change”; the inability to change and adapt to environmental changes made it difficult for companies to stay competitive.

V. Technical.

An example of how technical and complex solutions to the problems can make it more difficult to understand and implement the solution, is illustrated by Rigby et al (2002) in their Harvard Business Review (HBR) article designated “Avoid the Four Perils of CRM”. The authors mention when “Monster.com rolled out a customer relationship management (CRM) program in 1998, it was sure it had a new money-making strategy on its hands – they spent over $1 million in customized software and integrated all its computer systems in an attempt to boost the efficiency of its sales force. The new system proved to be frighteningly slow, with people in finding themselves unable to download customer information from the company’s databases. Monster.com was forced to rebuild the entire system and lost millions of dollars along the way, not to mention the goodwill of both customers and employees (Rigby et al, 2002).”

Some relevant figures the authors mentioned are: “55% of all CRM projects don’t produce results, according to Gartner Research. According to Bain’s 2001 survey of management tools, CRM ranked in the bottom three for satisfaction out of 25 popular tools. According to a survey in 201 of 451 senior executives, one in every five users reported that their CRM initiatives not only had failed to deliver profitable growth but also had damaged long-standing customer relationships (Rigby et al, 2002).”

Their research shows that “many executives stumble into one or more of four pitfalls while trying to implement CRM. Each of these pitfalls is a consequence of a single flawed assumption—that CRM is a software tool that will manage customer relationships for you (Rigby et al, 2002).”

Another example just like this first one is presented by Thomas H. Davenport on the HBR (1998), where problems arise after implementation of new technical solutions to a business need. The article mentions how “enterprise systems appear to be ‘a dream come true’. Commercial software packages that promise full integration of all processes

in a company, also known as ERP (Enterprise Resource Planning) systems (Davenport, 1998)."

The author questions whether "these systems are living up to companies' expectations (Davenport, 1998)," and discusses the "growing number of horror stories about failed or out-of control projects (Davenport, 1998)" which should make think twice. Part of the blame for such debacles "lies with the enormous technical challenges of rolling out enterprise systems (Davenport, 1998)," which are greatly complex pieces of software requiring large investments of money, time, and proficiency. The author contributes the main reason for failure as business problems, where companies fail to align the ERP with the business needs. "If a company rushes to install an enterprise system without first having a clear understanding of the business implications, the dream of integration can quickly turn into a nightmare (Davenport, 1998)."

An article already mentioned named "Seven Ways to Fail Big" found in the HBR (Carroll and Mui, 2008) illustrates the risk of implementing technical driven strategies without the proper logic planning have a high risk of failure. This article again, was based on a study of 750 of the most significant business failures in the US (bankruptcies of companies with at least $500 million in assets in the last quarter before bankruptcy and write-offs and discontinued operations greater than $100 million) over a period of 25 years (1981-2005) and they suggest "nearly half the failures could have been avoided (Carrol and Mui, 2008)." In the majority of cases they attribute failure to "flawed strategies and not inept execution (Carrol and Mui, 2008)", as most of the literature places blame said the authors. Another of the reasons for failure the authors found is described as "wrong technology bets: over-relying on the technology to create the next breakthrough offering (Carrol and Mui, 2008)."

VI. Assumptions.

The article from HBR, "Seven Ways to Fail Big" (Carroll and Mui, 2008), also exemplifies "assumptions" as one of the reasons for business failure; assuming a strategy in one

market would work exactly the same in another one. They describe this problem as "pseudo adjacencies: selling new products to existing customer, or existing products to new customers or through new channels; where companies may overestimate the transferability of their core capabilities (Carroll and Mui, 2008)."

Another case already discussed, which focused on identifying generic failure types and published in the journal "Management Decision" (Richardson et all, 1994), illustrate the failed consequences of "making assumptions". The figures of failure presented in this article are about in the United Kingdom, where in the first half of the 1990's decade, "one in 38 active British businesses went into liquidation in the third quarter of 1992; and in 1991 a total of 21,287 business failed compared to 15,051 in 1990 – a jump of 45 per cent (Richardson et al, 1994)." The authors explain four main categories of business failure and one of them is described as "the failed start-up: where assumptions were made about new projects without major knowledge/research in that new area; and failure to perform appropriate planning (Richardson et al, 1994)."

Albert V. Bruno and Joel K. Leidecker (1988) published a paper in the Business Horizons journal, names "Causes of New Venture Failure: 1960s vs. 1980s." The authors intend to make a comparison of studies that discuss reasons for business failure, in the period of twenty years, from 1960 to 1980. The article shows that reasons behind failure have not changes much in those twenty years. The authors summarize, in a comparative table, the findings of the various studies. After the analysis of all these studies, the authors mention: "failure can be better understood through analysis of both, the underlying causes and performance indicators that identify symptoms of eventual demise. The financial modeling approach is useful for predicting the likelihood of failure, but it does not identify the causes of that failure (Bruno and Leidecker, 1988)." They also tracked performance of 250 firms founded in the Silicon Valley in the 1960's and scrutinized findings on the research of failed companies. Based on this analysis they come out to a set of conclusions of their own which are listed next:

- “launching a new product without having the necessary information to design it and perform the appropriate market research about timing and distribution of the selling strategy;”
- “unclear business definition due to a failure to have a plan for the start-up of the business venture; which caused problems such as having an initial undercapitalization and assuming debt a instrument too early”
- “ineffective teams and personal problems; explained as not building and maintaining a qualified management team with the support of key employees and outside professionals and, inability to recognize their own strengths and weakness and act accordingly.”

The effect of “making assumptions”, by launching a new product without having the necessary information to design it and market research for timing and distribution, is one of the causes for failure as Bruno and Leidecker (1988) discovered.

VII. Ignoring Performance Information and Decisions.

One article already discussed in detail previously, found in the HBR and written by Zolli and Healy (2011), explains how “the global effort to bring clean water to Bangladesh appeared to be a huge success. But each time, the success contained the seeds of epic failure (Zolli and Healy, 2011).” They describe how Bangladesh, country of 90,000,000 people, was having in the 1970s 250,000 deaths annually from waterborne diseases; having in 1970 a mortality rate for under-5s of 24 percent. One of the two causes of the failure of this project is described as "designing for instead of with: the organizations behind the first initiative were international bureaucracies with an incomplete understanding of the local population (Zolli and Healy, 2011).” This is, according to the authors, the reflection of “decisions”; establishing a solution or making a decision without understanding the environment.

HBR presents the article “How to Sell Services More Profitably” from Werner Reinartz and Wolfgang Ulaga (2008). The article shows the results of the study of 20 industrial companies from different business markets, being every firm among the top three of their industry. Results show one group of companies with a high volume of sales and profit derived from their sales of services. Another group in contrast, had very low revenues and margin in the service market, where their investment in services was barely a “brake-even” result. A comparison between the strategies applied by both groups was made and the most significant results were presented.

The authors mention that “companies unsuccessful at developing service businesses have tried to transform themselves too quickly (Reinartz and Ulaga, 2008)” – they mention in this group the presence of poor planning and making decisions too quick. In the other hand, “the companies that had success in the services market had the commonality of identifying, slowly, the need for services and supplying those at first; by listening to customer needs and inserting new services as needed (Reinartz and Ulaga, 2008).” Making “decisions” is shown here as a cause of failure of the second groups of companies analyzed by Reinartz and Ulaga (2008).

Another case study, presented in the journal Perspective for Managers by Stewart Hamilton (2006), discusses the undesirable effect of “making decisions.” The case named “Sarbanes-Oxley Will Make Little Difference - Understanding the real reasons for corporate failure,” proposes as the main point to outlay that legislation will not be the solution to avoid failures such as Enron and the WorldCom collapses, and cites the piece of legislation named “Sarbanes-Oxley Act in early 2002 which does not, and cannot, address the underlying problems (Hamilton, 2006).”

This case study is based on research of recent corporate failures that included Metalgeselshaft, Rolls-Royce, Guinness and Barings Bank. Based on the analysis the main causal factors are listed by the author as follows:

- "Poor strategic decisions: decisions of new products or markets without the proper research to back it up (Hamilton, 2006)."
- "Over-expansion: companies what wanted quick growth that turned into acquisitions lacking plans for the merger (Hamilton, 2006)."
- "The dominant CEO: where like-minded executives and complacency makes the company avoid/ignore performance indicators and falls into the habit of CEO's decision (Hamilton, 2006)."
- "Weak internal controls: whereby blurred reporting lines leave holes in control systems and dispersed departments that do not work closely together (Hamilton, 2006)."

The article ends with this quote: "it is better to manage market expectations that to manage earnings to meet expectations (Hamilton, 2006)" and reemphasizes that "legislation isn't enough to prevent companies from pursuing flawed strategies (Hamilton, 2006)" because they do not address the root causes of failure.

VIII. Think of me and them (instead of us).

One case study, already discussed in detail prior, brings up to light the effect of "think of me and them (instead of us)". This case study published in the journal "Management Decision" (Richardson et all, 1994), illustrates the failed consequences of this state of mind. The figures of failure presented in this article are about in the United Kingdom, where in the first half of the 1990's decade, "one in 38 active British businesses went into liquidation in the third quarter of 1992; and in 1991 a total of 21,287 business failed compared to 15,051 in 1990 – a jump of 45 per cent (Richardson et al, 1994)." The authors explain four main categories of business failure and one of them is described as "the money-messing company: where managers that care more about themselves than

the company were found; and where “political” decisions within the same company were made, favoring one group or another one in the organization due to relationships (Richardson et al, 1994).”

One more article cited previously, is “Causes and consequences of managerial failure in rapidly changing organizations”, a paper published in the Business Horizons (Longenecker et al, 2007), illustrates the consequences of failure when the mindset of “think of me and them (instead of us)” is present. The paper reunited three different experts from two US universities, whom call attention to how important is for organizations to understand the factors that cause managers to fail. To that extend, they “focus on data collected from 1040 managers from over 100 different U.S. manufacturing and service organizations experiencing large scale organizational change in order to help identify the primary causes of managerial failure (Longenecker, Clinton O. et al, 2007).” The end results of this article find the 15 main causes of managerial failure; three of the most relevant causes of managerial failure were linked to this mindset and they were presented by the authors as: “lack of personal integrity and trustworthiness; ego, attitude and indifference problems and lack of leadership/no listening/fail to select, promote and develop talented people (Longenecker, Clinton O. et al, 2007).”

IX. Silos.

Clayton M. Christensen and Michael E. Raynor (2003) present a case study in HBR named “Why Hard-Nosed Executives Should Care about Management.” The authors start the article by making an analogy between medicine and business by using this example: “imagine going to your doctor because you’re not feeling well. Before you’ve had a chance to describe your symptoms, the doctor writes out a prescription and says – take two of these three times a day, and call me next week – But I haven’t told you what’s wrong – you say – How do I know this will help me? – Why wouldn’t it? – says the doctor – It worked for my last two patients (Christensen and Raynor, 2003).” Then, the example on how Lucent Technologies in the late 90s divided and reorganized the company’s three

main operating divisions into 11 smaller units, to make then run independently, was given. This caused the “organization to be slower and less flexible in responding to customer needs (Christensen and Raynor, 2003)”, by the silos created in this strategy. This case reflects the consequences of the operation into silos, which caused confusion and reduced full visibility and integration of the processes.

One more case previously discussed in detail, identifies the operation into “silos” as a cause of failure. The case named “Sarbanes-Oxley Will Make Little Difference - Understanding the real reasons for corporate failure (Hamilton, 2006),” proposes as the main point to outlay that legislation will not be the solution to avoid failures such as Enron and the WorldCom collapses, and cites the piece of legislation named “Sarbanes-Oxley Act in early 2002 which does not, and cannot, address the underlying problems (Hamilton, 2006).”

This case study is based on research of recent corporate failures that included Metalgeselshaft, Rolls-Royce, Guinness and Barings Bank. Based on the analysis the main causal factors are listed by the author as follows:

- “Poor strategic decisions: decisions of new products or markets without the proper research to back it up (Hamilton, 2006).”
- “Over-expansion: companies what wanted quick growth that turned into acquisitions lacking plans for the merger (Hamilton, 2006).”
- “The dominant CEO: where like-minded executives and complacency makes the company avoid/ignore performance indicators and falls into the habit of CEO’s decision (Hamilton, 2006).”

- "Weak internal controls: whereby blurred reporting lines leave holes in control systems and dispersed departments that do not work closely together (Hamilton, 2006)."

This last cause reflects how departments that operate in their own silos make it more difficult to work together and see the "big picture".

Finally, one case study that also found operation in "silos" as a cause for failure is presented in The Economist journal on November 25th 2004. As the title of the article describes it, the author says that "most software projects fail to meet their goals (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004)" and illustrates it by putting some examples.

- "On September 14, 2004 the radios and air-traffic control center Palmdale, California shutdown because the software running the system meant that computers had to be rebooted every month, and somebody forgot to do it – 'poor design' (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004)" says the author.
- "America's Internal Revenue Service (IRS) wrote off a failed $4 billion overhaul effort on the computer system (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004)."
- "An $844 million software project for Britain's Child Support Agency came in a year late and failed to deliver payments to a vast majority of the applicants (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004)."

A study from the Standish Group is mentioned, that says “30 per cent of all software projects are cancelled; about half come in over budget, 60 per cent are considered failures and 90 per cent come in late (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004).” Another study by America's National Institute of Standards (NIST) in 2002, found that “software mistakes cost the economy $59.5 billion annually (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004).”

The main cause according to the author is complexity and how it is managed; the article says “software projects have become more and more complicated, it has become impossible for even the most talented team of programmers to keep track of the millions of lines of ‘code’ required (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004).” The article describes the “three main trends that are shaping the future of software development (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004)” which are:

- “Awareness of the need to pay greater attention to the lifecycle of a piece of software, from the initial setting of requirements to ongoing implementation (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004).”
- “Automating the testing of software – cost of software failures could be eliminated simply by improved testing (Managing Complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools? 2004).”
- The emergence of open-source code software development.

In the explanation of these causes, the author mentioned the control of codes prevented collaboration and created operational “silos”.

b) Relation to previous work

In the Literature Review Section some studies were found that have touched, but not to a full extent, what this research effort has tried to achieve, which is to find a methodology to identify and differentiate “accurate” from “inaccurate” leadership and management (L/M) principles. No prior studies were found, with an analysis of the existing conflict among authors and recommendations of what successful leadership and management practices are and what are not.

There are many sources that present studies about successful/consistent leadership and management practices. Other sources that study failure/inconsistency try to illustrate the reasons behind failure; the vast majority of these studies make use of financial indicators to make predictions of “failure” and very few cite non-financial reasons for failure. As various authors cited across this study mentioned, the “financial indicators” are not a “cause of failure;” they actually represent “symptoms” of the failure. “The financial modeling approach is useful for predicting the likelihood of failure, but it does not identify the causes of that failure (Bruno and Leidecker, 1988).”

This study is trying to identify which are the root causes, of either “success/consistency” or “failure/inconsistency”, with the purpose of identifying in a simple and logical way, the more accurate and less accurate leadership and management principles.

The prior research of related studies to this one was explained in detail in section 2.D, Literature Review-Previous research in similar areas.

c) Implementation

The initial hypothesis here proposed was proven as correct: “IMT/KSM is a methodology that can differentiate between accurate and inaccurate leadership principles”.

Information Measurement Theory (IMT), along with the Kashiwagi Solution Model (KSM) as an extender, was found as the process for quickly, easily, and logically identifying consistent and non-consistent leadership and management criteria.

The individual research goals were also achieved, which were:

I. Can IMT/KSM identify which authors are consistent?

The recommendations found in the sources of leadership and management concepts can be analyzed with the KSM. Once these are identified, categorization into principles in alignment to IMT, and principles not in alignment to IMT can be made. The results of the case studies of this study suggested a dominant support of the IMT concepts as a path to "consistency/success".

II. Can IMT/KSM identify differences in people's consistency of terms?

Just like differentiation and prioritization of sources of leadership and management principles is possible with the KSM and the alignment to IMT and non-IMT concepts, survey and differentiation of different groups of people is possible as well. The results here suggested that people with knowledge and training in IMT were more consistent than other groups.

The results of the case studies, that show dominant support of IMT and consistent and successful results, propose that IMT/KSM concepts can be used to identify leadership based individuals who may be more successful in job performance.

III. Can IMT/KSM explain successes and failures?

The results of the case studies can be summarized as follows:

- LS characteristics only were found as principles leading to a "success/consistent" course;
- RS characteristics only were found as principles leading to a "failure/inconsistent" course.

These results provide, based on the data analyzed, an explanation of successes and failures in the areas of leadership and management.

d) Limitations

One limitation of this study is that case studies describe only one or just a few of the leadership and management practices an entity/individual followed; these practices represent only a simple “snap-shot” of what that entity/individual was doing at that time. This means is hard to infer that for simply following that concept the entity’s good health and sustainability can be ensured. If this accuracy would be wanted, much more information would be needed in order to ensure the likelihood of the results.

Even though a significant quantity of case studies was analyzed, this quantity is small compared to all the case studies available. This makes difficult to determine, quantitatively, what is the right combination of “LS characteristics needed” and the “RS characteristics that could remain”, which could lead to “success/consistency” and/or to avoid “failure/inconsistency”. In the current industries there is certainly presence of leadership and management principles that fall into both, LS & RS characteristics. However, the results do show the importance of having LS characteristics present for improving the likelihood of achieving “good/consistent” results, and the importance of avoiding RS characteristics to minimize the risk of “failure/inconsistency”.

The inability to get the full results of the performance evaluation on the surveyed individuals, in the second research effort of this study, hinders the ability to prove that good performance of individuals is “heavily” tied to IMT and the LS of the KSM.

Some recommendations for further research that can help minimize these limitations will be presented in the next section.

Chapter 7

CONCLUSION

a) Summary and Conclusions

An examination of the Information Measurement Theory can be made by reviewing some of the IMT Theorems:

- "all information exists at all times; information must be perceived;
- all information can consistently predict the future outcome of an event;
- all individuals posses a different level of perception;
- a person's ability to predict is relative to their understanding of the event;
- not perceiving information about the input does not change the output; however, if a person perceives more information, he or she could change the event (in which case the person would be a different individual and the event would be different);
- all events are predictable;
- trying to control has no effect on the event (Kashiwagi, 2004)."

Current information on successful/consistent leadership and management practices is disjointed, contradictory in some cases, and not consistent in others. This makes it difficult to apply because there is too much confusion about what successful business practices are and what are not.

Clashing information was found in the areas of leadership and management in relation to the principles discussed. The results found on leadership studies about theories and characteristics, like the one from Kashiwagi (2007), and the results of other studies like the one presented here on the 32 different books from different renowned authors in the areas of leadership and management demonstrated the presence of this conflict.

The purpose of this study is to identify a simple process that quickly and logically identifies successful/consistent and inconsistent/failing leadership and management criteria. The hypothesis proposed is that Information Measurement Theory (IMT) along

with the Kashiwagi Solution Model (KSM) is a methodology than can differentiate between accurate and inaccurate leadership and management principles. The KSM, based on IMT, was chosen as the proposed method due to its simplicity and logical way of application. The accuracy of the concepts of IMT and KSM has already been proven, by the success obtained in other areas of application such as the Performance Information Procurement System (PIPS).

The initial part of the research scope about the authors in the areas of leadership and management, besides showing how information in leadership and management is conflictive, served also the purpose of establishing an initial baseline of recommended practices that fall in line with IMT (the left-side (LS) of the KSM). In this initial study Deming (2000) was the one author that excelled in comparison to the rest due to his consistency to the IMT principles – Deming's LS characteristics became the "Initial Baseline Matrix from Deming" which composed the first model to be tested out. The second model was denominated the "Full Extended "KSM" Matrix", which was composed of "all" the LS characteristics found and not limited to the ones from Deming only. This second model was to be tested-out for accuracy as well.

The second part of the research scope was to evaluate the perception that individuals had about leadership and management principles. Two different groups were evaluated, one group of people that had prior training and knowledge of IMT and its principles; another group of people without any knowledge of IMT. The results of the survey showed more confusion in the group of people without knowledge of IMT; these results also showed an improved consistency and less variation on the group of people with knowledge and training in IMT. An effort for trying to identify a link between individuals' performance and alignment to IMT was made; the results were not conclusive due to unavailability of performance information on the individuals.

The third part of the research scope, the analysis of case studies of "success/consistency" and case studies of "failure/inconsistency", identified leadership

and management principles and/or practices as contributors to each, and categorized them into LS/type “A” characteristics and RS/type “C” characteristics by applying the KSM as an extender. The results in this section validated the initial proposal and led to conclude that practices that fall into the LS side of the KSM will lead to consistency/success, and that other practices that fall into the RS of the KSM will lead to inconsistency/failure.

Even though the sample of case studies was composed of a considerable quantity of papers, the number of case studies selected after filtering them out for “cases that show more dominant information” was small. A significant quantity of articles did not have sufficient data to support their references, and only a small number used dominant information. With the purpose of not falling into the “selection bias in terms of benchmarking”, both case studies of success and failure were analyzed, so that a better differentiation of the “qualities that separate the successes from the failures could be made.”

The comparison and testing of both models, the Initial Baseline Matrix from Deming and the Full Extended “KSM” Matrix, indicated that both models show dominant support of the IMT concepts as a contributor to “success/consistency.” Nevertheless, the results of the test/validation of the model, based on the findings from the case studies, indicated a higher accuracy of prediction for the Full Extended “KSM” Matrix, in comparison to the Initial Baseline Matrix from Deming – this was certain for the prediction of both, case studies of success and case studies of failure.

The final Full Extended “KSM” Matrix of LS characteristics that led to consistency was presented showing some weights of importance for the different LS characteristics there mentioned. Even though the most valuable finding in this research is that plotting in both sides of the KSM, LS and RS, makes the consistent/more accurate leadership and management practices easy to identify among them, the overall results of the study confirm LS characteristics have a higher likelihood of achieving “consistency/success.” A

more comprehensive analysis of case studies, or even a complete analysis of companies/entities operating standards, and the use of data mining techniques, could probably draw more accurate patterns for consistency and failure, as suggested in areas for future research.

The most dominant LS characteristics leading to consistent results found in the case studies were:

- Use of information
- Performance information
- Change
- No assumptions
- No control
- No decisions
- Fast processing speed (type A)
- Alignment
- No traditions
- Continuous improvement
- Look at 30k ft

The most significant RS characteristics that led to failure found in the case studies were:

- Misalignment
- Lack of planning
- Lack of measurement
- Lack of change
- Technical
- Assumptions
- Decisions
- Ignore performance information
- Think of “me and them” (instead of us)
- Reactive
- Silos

By looking at the opposite side of the KSM, the following LS characteristics could prevent failure, according to the results of the case studies:

- Alignment
- Pre-planning/look ahead
- Measurement
- Change/adaptability
- Simple/non-technical
- No assumptions
- No decisions
- Use of performance information
- Think of “us”
- Proactive
- No silos

The analysis of the findings from the case studies identified the most significant factors for achieving success and failure. Out of cases of success it was found that in order to

achieve better results, to improve and succeed, the "use of information" is critical in the process. In contrast, out of the cases of failure it was noticed that not doing a proper alignment of resources in the early stages, failing to lay down a plan before any execution/project/venture and failing to measure the results of the plan represent a sure combination for failure. The opposite formula, having these three principles present, could represent a formula for avoiding failure.

b) Validation of the solution

The results found indicate the initial goal of this research effort was met, in which IMT along with the KSM model (LS/RS) as an extender, can quickly identify more accurate from less accurate leadership and management concepts that increase or decrease the chances of "success/consistency." The end results of the case studies validated and demonstrated a dominant support of IMT as a consistent/successful path. All the leadership and management practices analyzed in the different case studies of this research, and the respective results obtained in their application, whether are results of consistency/success or inconsistency/failure, can be related to the IMT and the KSM. Furthermore, the KSM model, used as an extender gets proven as a simple and efficient method for categorizing consistent leadership and management criteria from inconsistent criteria.

Aside from this, the fact that many industries and entities with consistent results have followed the principles from Deming (2000), which recommended leadership and management practices fall all into the LS of the KSM, reinforces the results here found and suggests that consistency can be achieved by following practices in line with IMT. Accomplishments from Deming that made him to be considered as the responsible for Six Sigma, Lean and Statistical Control and others, evolving into current practices such as the Toyota Production System (TPS), strengthen this idea.

c) Significance/benefit of the research

The existing conflict regarding accurate leadership and management concepts is out there as the results from this study showed it. This implies there is need for clarification on these clashes and finding a simple method for doing so would be of significant help. The KSM method (from IMT), a very simple and logical process, was the tool that made possible this analysis. Some of the articles here studied did not explain the leadership and management practices followed in a simple way. But by plotting on both sides of the KSM model, LS and RS, the different characteristics can be easily identified and then categorized, and the likelihood of the outcome defined.

The results of the case studies, which show supportive data to back up the findings, helped out clarify the conflict that exists in the areas of leadership and management, in which different authors and experts have different and mixed up opinions, creating an unclear view of what consistent practices are and what are not and the logic behind. IMT concepts along with the KSM can also be used to identify leadership based individuals who may be more successful in job performance. Further research is needed in order to prove the tight relationship between performance of individuals and IMT; nonetheless, consistency in terms of leadership and management principles in an individual can be identified with the methodology proposed in this study.

The final matrix of LS characteristics that led to consistency, and the final matrix of RS characteristics that led to failure, clear the clashing views encountered in the opinions of the experts; opinions that in some case are used to educate and train others. These results illustrated the logic and relationship behind those practices and the results obtained, which is the logic behind IMT.

One of the suggestions from this study is to adopt simpler and logical methods for education, like the KSM, which could probably make it easier and less cumbersome to understand and to adopt better leadership and management practices, with the purpose of trying to attain more sustainable results for the specific entity/industry/individual.

Results show that if sources of education and information would use simpler and less technical methods to explain consistent leadership and management practices, it could be easier for everyone to understand these practices and to exercise them.

Another conclusion from this study is that by using the KSM and following the IMT principles, it would be possible to develop structures that minimize the use people's perception that would be capable to deliver high performance and achieve desirable results. This proposal has already been done and put in practice by the Performance Based Studies Research Group (PBSRG) from the Del E. Webb School of Construction, Ira A. Fulton Schools of Engineering at Arizona State University (ASU), with the Performance Information Procurement Systems (PIPS) based on the IMT principles, which has obtained very positive results during its years of existence.

d) Recommendations for future research – unresolved questions

As mentioned in the limitations of the study, the case studies only show an isolated observation of a small part of the entity being analyzed. Therefore, it is difficult to infer that the sole sustainability of that entity can be attained by following that practice in question.

A recommendation for further research can be done by doing the same exercise from the case studies analysis, but with a wider and more comprehensive repertoire of case studies. One additional criterion for the selection of case studies, besides having supportive date to back up the findings, could be for the case studies to be from entities where sustainability and consistent results have been achieved for a long period of time. After applying data mining techniques and statistical analysis to the results, the potential study would convey a more accurate definition of the pattern for consistency, and or inconsistency. These results could also probably show what combination of LS and/or RS characteristics are more likely to define outcomes of success and failure.

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APPENDICES

APPENDIX A

CONFLICTS IN LEADERSHIP AND MANAGEMENT

Table A.1

Conflicts in Leadership authors (Kashiwagi, 2007)

CONFLICTS IN LEADERSHIP AUTHORS (Kashiwagi, Jacob 2007)				
Conflict	**Author/Theory**	**Proposal**	**Conflicted characteristic**	**Opposite Conflicted characteristic**
AUTHORS				
1A	**Stephen Robbins Theory**	To become a leader one must make others dependant upon oneself	**Dependency**	
1B	**Tom Peters Theory**	To become a leader one must be able to empower others to increase their performance		**Empowerment**
2A	**Robert Greene Theory**	In order to remain in a leadership position, one must learn/acquire certain "bad" traits (deception, take credit, place blame, backstab, threaten, etc.)	**Bad traits**	
2B	**Colonel Donnithorne and Malone (West Point) Theory**	Leadership only entails "good" traits (loyalty, responsibility, courage, etc.)		**Good traits**
3A	**Edward Lorenzen, Goleman, Boyatzis, and McKee Theory**	Leadership is shown through passion, enthusiasm, and optimism	**Passionate**	
3B	**Marcus Buckingham Theory**	Leaders do not have to be passionate or charismatic, but they must be clear		**Not passionate**
4A	**Lyman Steil, Edward Bommelle, Bette Price and George Ritcheske Theory**	Leadership is about listening and thinking about others	**Listening**	
4B	**Charan, Drotter, and Noel Theory**	Leadership is about coaching. Teaching people how to improve skills, time application, and work values		**Coaching**
5A	**Conger and Kanungo Theory**	Charisma is vital to the success of a leader	**Charisma**	
5B	**Peter Drucker Theory**	There is no such thing as leadership qualities and personalities. Leadership has nothing to do with Charisma		**No charisma**

Table A.2

Conflicts in Leadership theories (Kashiwagi, 2007)

CONFLICTS IN LEADERSHIP THEORIES (Kashiwagi, Jacob 2007)				
Conflict	**Author/Theory**	**Proposal**	**Conflicted characteristic**	**Opposite Conflicted characteristic**
THEORIES				
6A	Great Man theory	Leaders are born	Innate traits	
6B	Behavior Theory	Leadership is based on learnable traits		Learnable traits
7A	Transactional Theory	Leader leads through rewards and punishments	Rewards & punishments	
7B	Transformational Theory	Leaders and followers gain a connection that is sensitive to each others' needs and both are motivated and encouraged		Sensitive needs
8A	Trait Theory	Personality	Personality	
8B	Situational Theory	Conditions and environment		Environment
9A	Humanistic Theory	Behavior is based on how the leader treats the follower	Treatment of the follower	
9B	Behavioral Theory	Behavior is dependant on the consequences given, not how the leader treats the follower		No treatment of the follower

Table A.3

Conflicts in "other studies" of Leadership (Kashiwagi, 2007)

CONFLICTS IN "OTHER STUDIES" OF LEADERSHIP (Kashiwagi, Jacob 2007)				
Conflict	**Author/Theory**	**Proposal**	**Conflicted characteristic**	**Opposite Conflicted characteristic**
OTHER STUDIES				
10A	Kashiwagi (2007) taken of Bernard Bass (1991)	Three studies supported leaders' being introverted	Introversion	
10B	Kashiwagi (2007) taken of Bernard Bass (1991)	Five studies supported leaders' being extroverted		Extroversion
11A	Kashiwagi (2007) taken of Bernard Bass (1991)	Eleven studies supported a leader's being more stable	Emotional control	
11B	Kashiwagi (2007) taken of Bernard Bass (1991)	Five studies supported a leader's being less stable and three studies supported a leader's being neutral		Not emotional control
12A	Kashiwagi (2007) taken of Bernard Bass (1991)	Eighteen studies supported that leaders are more intelligent than their followers	More intelligence (IQ)	
12B	Kashiwagi (2007) taken of Bernard Bass (1991)	Five studies negated that leaders were more intelligent than their followers		Less intelligence (IQ)
13A	Kashiwagi (2007) taken of Bernard Bass (1991)	Eleven studies found that leaders were domineering	Dominance	
14B	Kashiwagi (2007) taken of Bernard Bass (1991)	Four studies concluded that leaders were not domineering, and two studies were inconclusive		No dominance

APPENDIX B

LS & RS CHARACTERISTICS FROM ALL BOOKS

Table B.1

Proposed principles/practices and the respective LS & RS characteristics from all books (20 pages)

CONFLICTS IN LEADERSHIP & MANAGEMENT BOOKS/AUTHORS					
Book#	**Author**	**Book**	**Proposal**	**LS characteristic**	**RS characteristic**
1	**Blanchard, Ken**	**The Heart of a Leader**	The Key to Developing People is to catch them doing something right.	Alignment	
			No One of Us is as Smart as All of Us.	Teamwork	
			When You Stop Learning You Stop Leading	Education/Learning	
			Don't work harder work Smarter	Simple Pre-planning/look ahead	
			If You Don't Seek Perfection You Will Never Find Excellence.	Continuous improvement	
			The Only Job Security You Have Today is Your Commitment to Continuous Personal Improvement.	Continuous improvement Self-improvement	
			There's no Pillow as Soft as a Clear Conscience.	Ethics/Integrity Look inside	
			It's Surprising How Much You Can Accomplish When You Don't Care Who Gets the Credit.	Teamwork	
			Walk Your Talk.	Accountability Look inside	
2	**Maxwell, John C.**	**Failing Forward: Turning Mistakes into Stepping Stones for Success**	Realize there is one major difference between average people and achieving people.	Alignment	
			Learn a new definition of failure.	Trial and error	
			Remove the "you" from failure.	Look inside	
			Take action and reduce your fear.	No emotions	
			Change your response to failure by accepting responsibility.	Accountability	
			Don't let the failure from outside get inside you.	Trial and error	
			Say good-bye to yesterday.		Ignore performance information
			Change yourself, and your world changes.	Look inside	
			Get over yourself and start giving yourself.	Look inside	
			Find the benefit in every bad experience.	Trial and error	
			If at first you do succeed, try something harder.	Education/Learning	
			Learn from a bad experience and make it a good experience.	Trial and error	
			Work on the weakness that weakens you.	Look inside	
			Understand there is not		Ignore performance

			much difference between failure and success.		information
			Get up, get over it, get going.	Trial and error	
3	**Carnegie, Dale**	**How to Win Friends and Influence People**	Make people like you		Influence
			Win people to your way of thinking		Influence
			How to Change People Without Giving Offense or Arousing Resentment		Influence
4	**Markert, Tom**	**You Can't Win A Fight With Your Boss**	You can't win a fight with your boss - no matter if you're right or wrong		By formal position/title (instead of by performance)
			Know Your Boss: -"Give it to them the way they want it" -"Win your boss over every day on every encounter. If you don't, somebody else will."		Persuasion/lobbying (no testing/evaluation)
			Write well: nothing wrong with short and concise.	Simple	
			Find a mentor: when the time is right, become a mentor.		
			Take the best job: don't chase money; look for opportunity.	Differentiate	
			Choose your employer carefully: look for culture, work environment, opportunity.	Alignment	
			Ask for a performance review: "perceptions can kill your career"; open the door for feedback.	Measurement Performance information	
			Do it by the book: legality	Ethics/Integrity	
			Be motivated: money, fear		Emotions
			Put in the hours: "fact of life: the strong survive."		Work harder (no smarter)
5	**Blanchard, Ken et all**	**WHALE DONE! The Power of Positive Relationships**	What do you and the people around you have in common with a killer whale? Both whales and people perform at their best when you accentuate the positive.	Alignment	
			The relationship formula.		Persuasion/lobbying (no testing/evaluation)
			Build trust.		Trust
			Accentuate the positive.	Alignment	
			When mistakes occur, redirect the energy.	Trial and error	
			GOTCHA: catching people doing things wrong!	Alignment	
			WHALE DONE: catching people doing things right!	Alignment	
			"WHALE DONE" only work when you're sincere and honest.	Accountability	
6	**Sun, Tzu**	**The art of war**	To win without fighting is best.	Win-win/think of the whole supply chain	
			Balance between material and spiritual sides of humankind.	Adaptable	
			Strength through understanding the physics, politics, and psychology of conflict.	Pre-planning/look ahead Use of information	

7	**Donnithorne, Larry R.**	**The West Point Way of Leadership**	One is not born a leader-one is made by self-effort.		Talent is not inherited (...NOT all human behavior is genetic...)
			The first thing they do is break the plebe down to zero.	Alignment	
			Then they can build them up in their image.		Influence
			They are shown that life is not fair, but must accept what is handed to them.	Look inside	
8	**Buckingham, Marcus and Coffman, Curt**	**First, break all the rules**	Stage 1: what do I get?	Pre-planning/look ahead	
			Stage 2: what do I give?	Alignment	
			Stage 3: do I belong there?	Alignment	
			Stage 4: How can well all grow?	Think of "us" Win-win/think of the whole supply chain	
			Select for talent - do not by experience, brainpower, and willpower.	Alignment	
			Define the right outcome - not by controlling people.	No control	
			Focus on strength - not on fixing the weaknesses.	Alignment	
			Help employees find the right fit - not by promoting people to their level of incompetence.	Alignment Understands others	
			Conventional wisdom as don't: Treat People as you would like to be treated	Treat everyone different	
			Conventional wisdom as don't: Be anything you want to be, just work hard	Alignment	
			Conventional wisdom as don't: One rung leads to another (=>It's not all about promotion!)	Alignment	
			Conventional wisdom as don't: Average thinking (=>Don't look for average, but for the best!)	Treat everyone different	
			Conventional wisdom as don't: Talents can be created or transferred (=>Knowledge yes, but not talent!)	Talent is inherited (...all human behavior is genetic...)	
			New wisdoms: People leave their immediate managers, not the companies they work.	People attract people alike	
			New wisdoms: Manager is more influential than the company.		Influence
			New wisdoms: No manager can make an employee productive.	No influence	
			New wisdoms: The best managers never try to fix weaknesses; instead they focus on strengths and talent.	Understands others No influence	
			New wisdoms: Measuring employee satisfaction is vital.	Measurement Think of "us"	
			Great managers break all conventional rules of wisdom.	No traditions	

			Focus on strength and manage around weakness.	Alignment	
			Spend time with your best people; best way to reach excellence.	Alignment Teamwork	
			Identify reason for weakness and provide support, partner or an alternative role.	Serve othersEducation/LearningTrainingTeamwork	
			Excellent teams are built around individual excellence.	Leadership	
			Catch your peers doing something right.	Alignment Leadership	
			Casting is important.	Alignment	
			Create heroes in every role.	Alignment	
			People don't change that much	Understands others No influence	
			Don't waste time trying to put in what was left out. Try to draw out what was left in; that is hard enough.	Understands others No control No influence Alignment	
9	**Phillips, Donald T.**	**Lincoln on leadership**	People: Get out and circulate among the troops.	Use of information	
			People: Build strong alliances.	Alignment	
			People: Leaders persuade rather than coerce.		Influence
			Character: Honesty & integrity are the best policies.	Accountability Look inside	
			Character: Never act out of vengeance or spite.		Emotions Reactive
			Character: Handle unjust criticism with courage.	Accept criticism	
			Endeavor: Be decisive.		Decisions
			Endeavor: Lead by being led.	Listening	
			Endeavor: Set goals and be results-oriented.	Measurement	
			Communication: Master public speaking.		Influence Spokespeople (instead of Thinkers)
			Communication: Influence people through conversation.		Influence
			Communication: Preach a vision & continually reaffirm it.	Consistency	
10	**Bennis, Warren and Manus, Burt**	**Leaders: Strategies for Taking Charge**	Inspire Others & Manage yourself: No one likes a dictator; Empowerment is key; Outstanding planning.	No control Empowerment Pre-planning/look ahead Look inside	
			Attention Through Vision: Vision and Organizations; Synthesizing with people around you; Focusing on commitments; Attention to Detail; Providing direction.	Teamwork Accountability	Guidance Focus on details
			Communication: Three styles of human structure; Create a new vision; Develop commitment for new vision; Institutionalize the new vision.	Creativity Accountability Consistency	

			Developing Trust: Reactive; Change the internal environment; Change in the external environment; Establish new bonds; Quest for position; Lessons for leadership.		Trust Reactive Control By formal position/title (instead of by performance) Relationships
			Developing one's Self: Leaning the organization; Innovative learning; Leading the organization; Organization for innovative learning.	Self-improvement Look inside Creativity Education/Learning Training	
			Taking Charge: Education on Management; Dispelling any leadership myths; Heading into new times.	Change No traditions	Management Control
11	**McCall Jr., Morgan W.; Lombardo, Michael M. and Morrison, Ann M.**	**The Lessons of Experience: How Successful Executives Develop on the Job**	Progression and development of executives does not depend on their education or any other extraneous methods, but rather by the experiences that the executives had been through during the course of their career.	Experience	No education
			Long term mentoring was rare or non-existent among the senior executives studied.	No control	
			Success depended on the opposite: an exposure to a variety of bosses, good and bad, who possessed exceptional qualities of various kinds.	Trial and error Change	
			One of the most important managerial competencies is the ability to deal emotionally with tough situations, acting in crisis, being responsible for the acts of others, and occasionally firing people.	No emotions Accountability	Firing Misalignment
			According to CEO's interviewed, leadership is a skill that can be learned only through actual experience, preferably before the age of 30.	Experience	Talent is not inherited (...NOT all human behavior is genetic...)
			A survey identified indecisiveness, lack of initiative, and failure to take responsibility as important shortcomings in unsuccessful executives.	Fast processing speed No decisions Creativity Accountability	
			Event that molded their careers: Early work experience First supervisory experience Project/task force Line-to-Staff Switches Starting something from scratch Fix-it/turnaround jobs Leaps in scope.	Experience Alignment Logic Creativity Change	
12	**DePree, Max**	**Leadership is an Art**	The most important aspect of leadership is to recognize the potential of one's staff.	Understands others Alignment	
			A leader's job is to understand the diversity of people's gifts, talents, ideas, and skills.	Understands others	

			A leader is a person who serves (servant leader).	Think of "us" Win-win/think of the whole supply chain Serve others	
			Signs of outstanding leadership appear in the followers.	Open to alternatives	
			i.e.: Scanlon Plan - "method by which employees are motivated to improve the quality of their work."	Self-improvement Quality	
			Leaders need to recognize when another individual's skills and gifts could do the job better than they can.	Teamwork Delegate	
			Leaders must be able to gracefully step down and follow the other person's lead (transformational leader).	Teamwork Adaptable	
			Leaders need to allow space and freedom so employees can grow into their full potential.	Alignment	
13	**Smith, Perry M.**	**Taking Charge "A Practical Guide For Leaders**	Trust is Vital.		Trust
			A Leader must be a good teacher: pass knowledge, good communicator, organized, goal setter, inspires others, motivate and influence others.	Education/Learning Pre-planning/look ahead	Influence
			A leader should barely be a problem solver - he/she should facilitate but let subordinates solve most problems.	Empowerment Delegate	
			A leader must be a good communicator: communicate with impact, a good listener.	Approachable Pre-planning/look ahead Listening	Influence Spokespeople (instead of Thinkers)
			A leader must manage time well and use it effectively.	Simple Fast processing speed Pre-planning/look ahead	
			Leaders must trust their intuition.		Intuition
			Leaders must be able to remove people for the cause.		Think of "me and them" Misalignment
			Leaders must take care of their people.	Think of "us"	
			Leader must provide vision.	Pre-planning/look ahead	
			Leader must subordinate their ambitions and egos to the goals of the unit or the institution that they lead.	Think of "us"	
			Leaders must know how to run meetings.	Pre-planning/look ahead Listening	
			Leader must understand the decision making and implementation process.	Pre-planning/look ahead	Decisions
			Leaders must be visible & approachable.	Approachable Understands others Teamwork	
			Leaders should have a sense of humor.	Relaxed	
			Leaders must be decisive, but patiently decisive.	Listening Use of information	
			Leaders should be introspective.	Look inside	

			Leaders should be reliable.	Accountability Open to alternatives Consistency	
			Leaders should be open-minded.	Listening Open to alternatives Change	
			Leader should establish and maintain high standards of dignity.	Enjoyment/Job satisfaction	
			Leader should exude integrity.	Ethics/Integrity	
14	**Giuliani, Rudolph W.**	**Leadership**	"Thorough Preparation is never a waste of time."	Pre-planning/look ahead	
			Prepare Relentlessly - "I believe in creating a culture that values preparation, and in passing that ethic from the top down."	Pre-planning/look ahead	
			Everyone's Accountable, All of the Time - "Throughout my career, I've maintained that accountability- the idea that people who work for me are answerable to those we work for – is the cornerstone. And this principle starts with me."	Accountability	
			Weddings Discretionary, Funeral Mandatory - "But when the chips are down- when someone you care about is struggling for answers or burying a loved one – that's when the measure of a leader is taken."	Serve others	
			Loyalty: The Vital Virtue - "It's not enough for a leader to give and receive loyalty. For loyalty to mean something it has to be established throughout the organization."	Consistency	
			Loyalty: The Vital Virtue - "It pays to stick with someone in the face of public criticism."	Loyalty (moral conscience) Think of "us"	
			Be Your Own Man - "Being your own man-or woman, of course- means that you should never feel that you have to sacrifice your principles."	Controls his/her own life	
			Be Your Own Man - "You cannot ask those who work for you to do something you're unwilling to do yourself."		Treat everyone the same
15	**Feiner, Michael**	**The Feiner Points of Leadership**	Building a Cathedral: High performance leaders believe they will change the world and they infuse subordinates with this belief; They believe in the mission, in the vision, and in the organization; This enthusiasm is contagious to others in the company.	People attract people alike	Influence

			Feedback: Do not withhold feedback for fear of de-motivation; Enhances performance of the subordinate; Both positive and negative feedback; Should be given often; Specifics should be indicated; Feedback should be looked at as a gift to the subordinate; SARAH model and dealing with negative feedback.	Accept criticism Measurement Performance information	
			Nitty-Gritty: Leaders must clarify the rules of engagement; People buy into a process if they perceive it as fair; Teams roles and accountabilities must be defined; Leader should assume differences exist under the table; The team should collaborate in developing a work plan; Teams must be prepared to "re-plan the plan"; Give every team member a role in creating meeting agendas.	Win-win/think of the whole supply chain Think of "us" Teamwork Performance information Open to alternatives Alignment	
			Pull vs. Push: The Push technique consists of declaring, proposing, and asserting a point of view; Leader should be civil, respectful, and positive when utilizing this method; Peers and Subordinates points of view should be give consideration; The Pull method consists of involving, questioning, listening, and discussing to develop common ground; Team members will own a solution that they helped to craft.	Open to alternatives Listening Teamwork	Not open to alternatives Influence Control
			Cascading Sponsorship: Directives from up high get sucked into a black hole of resistance; High performance leaders win support, one organizational level at a time; You can't delegate sponsorship – people need to see the leader, intimately involved in the process; Cascading sponsorship is essential to implementation of change.	Accountability Change	Influence
			Nuts & Bolts: Leaders need more than a speech or form of correspondence to implement change successfully; It must be understood what it takes to make a successful change; Change is not an event, but a highly dynamic process; Leaders must be involved in	Change Accountability Performance information Open to alternatives	Influence

			the process, revisiting and revising; Planning for resistance is critical; Allow and encourage people to express their doubts.		
			Make Your Own Bed: Everyone has the ability to effectively improve the relationship with their boss; You must believe you are the master of your own destiny; This helps avoid adopting the attitude of a victim; One should address the problem instead of complaining.	Controls his/her own life Agile (instead of inactive)	Relationships
			Emperor's Wardrobe: We often ignore what our own senses are telling us and conform with the opinions of peers and bosses; You must preserve your self-esteem and integrity by knowing how to push back; Bosses are usually in the dark about what others think about their leadership or agenda; Early in the relationship, you must demonstrate intellectual integrity; Phrases to use: "I owe you the truth", "I may disagree but it's because I'm concerned about our success;" "Our Success" rather than "Your Success" signals commitment and sense of joint endeavor.	Ethics/Integrity Look inside Think of "us"	Intuition
			Career Covenant: The Covenant is an informal understanding of what you want your boss to give you; You need the benefit of your boss's coaching on your skill development; You have the right to receive performance feedback; You'll want career counsel and sponsorship on the kinds of opportunities and promotional tracks that are available; You'll need a heads up from time to time on how things work in the company culture if you are new.	Accept criticism Education/Learning Training	
			Healthy Conflict: Leaders must get their team members to express why they think a certain way instead of what they think on a certain issue; Individual team members should spend time alone and make a decision; This eliminates both intimidation and group think from other employees.	Use of information	DecisionsInfluence

16	**Covey, Stephen R.**	**The 7 Habits of Highly Effective People**	Dependence: the paradigm under which we are born, relying upon others to take care of us.	Controls his/her own life	
			Independence: the paradigm under which we can make our own decisions and take care of ourselves.	Controls his/her own life	
			Interdependence: the paradigm under which we cooperate to achieve something that cannot be achieved independently.	Teamwork Cooperation (accomplishing it, through understanding others)	
			Be Proactive - vision, initiative, commitments, resourcefulness for solutions, people driven by values that are independent of how people treat them.	Proactive Alignment	
			Begin with the End in Mind - Proactive powerful leadership must constantly monitor environmental change and provide the force necessary to organize resources in the right direction; No management success can compensate for the failure in leadership, which is hard since we are often caught in a management paradigm.	Measurement Change Leadership	
			Put First Things First - Principles of Personal Management, Form follows function; management follows leadership, delegating time is efficient; delegating to other people is effectiveness.	Controls his/her own life Delegate Efficiency	
			Think Win/Win - Mutually beneficial/satisfying, This habit involves principles of interpersonal leadership.	Win-win/think of the whole supply chain	
			Seek First to Understand, Then to be Understood - Principles of Empathetic Communication; Critical habit for Win/Win Solutions; The more you understand people, the more you will appreciate them; People typically seek first to be understood; Most people do not listen with the intent to understand; they listen with the intent to reply.	Listening Understands others	
			Synergize - Principles of Creative Cooperation, Unifies the greatest powers within people, Value the differences in people, Creative powers are maximized, Synergy with parties involved will gain more insight, and excitement of mutual learning create a momentum toward more insight, learning and growth.	Cooperation (accomplishing it, through understanding others) Alignment Treat everyone different Education/Learning	

			Sharpen the Saw - Principles of Balanced Self-Renewal - Preserving and enhancing the assets you have; Renewing the four dimensions of your nature: physical, mental, social & spiritual; Renewal is the principle/process that empowers us to move on an upward spiral of growth and change, of continuous improvement.	Look inside Self-improvement Change Continuous improvement	
17	**Covey, Stephen R.**	**The 8th Habit**	"Find Your Voice and Inspire Others to Find Theirs" - Growth from the inside out; Use and realization of potential; Rise above negativity; Become creative force; Find voice; Inspire others to find their voice.	Look inside Self-improvement Understands others Serve others Alignment	
			Freedom of Choice	No control No influence	
			People on different paths will experience intelligences in different ways.	Understands others	
			Great leaders in organizations communicate to their members, their worth and potential.	Alignment	
			If the members realize and act upon their worth and potential, they may be on the path to greatness.	Alignment	
			Gives the ability to look for the potential in yourself and others.	Look inside Alignment	
			Combination of Personal Greatness, Leadership Greatness, and Organizational Greatness.	Cooperation (accomplishing it, through understanding others)	
18	**Drucker, Peter F.**	**The Essential Drucker**	Employees - Respect for the workers	Understands others Think of "us"	
			Employees - Employees are assets not liabilities.	Think of "us"	
			Employees - Knowledge workers need to be trained the right way.	Alignment Training Education/Learning	
			Community - Businesses top goals should include giving back to the community.	Think of "us" Serve others	
			Community - Social responsibility.	Accountability Serve others	
			Community - A sick community does not help business.	Think of "us"	
			Community - Issue of impacts, minimize the undesired ones.	Think of "us"	
			Effectiveness - Gear efforts toward results, rather than work.	Work smarter (not harder) Measurement	
			Effectiveness - Know where your time goes.	Efficiency Pre-planning/look ahead Pre-planning/look ahead	

			Effectiveness - Set priorities and attack the items with most impact first.	Efficiency Pre-planning/look ahead Pre-planning/look ahead	
			Results - Work backward from the desired results.	Use of information	
			Results - If it not getting you closer to the result, why are you doing it?	Use of information Measurement	
			Results - It is a manager's duty to company and other employees to eliminate non-performing.	Use of information Measurement	Firing Misalignment
			"Effective leadership is not about making speeches or being liked; leadership is defined by results not attributes."	Measurement	
19	**Maxwell, John C.**	**The 360° Leader**	Developing Your Influence from Anywhere in the Organization		Influence
			A Leadership Team is more effective than just one leader.	Teamwork	
			Leaders are needed at every level of an organization.	Understands others	
			Leading successfully at one level is a qualifier for leading at the next level.		Treat everyone the same Assumptions Misalignment
			Good leaders in the middle make better leaders at the top.		Treat everyone the same Assumptions Misalignment
			360-Degree leaders possess qualities every organization needs (up - down - across).		Influence
20	**Maxwell, John C.**	**The Winning Attitude**	The attitude is an inward feeling expressed by behavior. It is the rudder that controls our ships.	Controls his/her own life	
			The Choice Is Within Us - Evaluate your present attitude; Think is you faith stronger than your fear; Write a statement of purpose; Determine if you have the desire to change; Live one day at a time; Change your thought patterns; Develop good habits; Continually choose the right attitude.	Controls his/her own life Look inside Self-improvement	
			Using Opportunities Around Us - Enlist the cooperation of a good friend; Associate with the right people; Select a model to follow; Learn from your mistakes; Expose yourself to successful experiences.	Cooperation (accomplishing it, through understanding others) Alignment Performance information	Influence
			Formula For Overcoming Failure - Recognize, Review, Repress, Readjust, Re-enter.	Performance information Change	Control
21	**Fox, Jeffery J.**	**How to Become a Great Boss**	A great boss stirs the people - Positive feedback, Pat on the back, Make them feel special.	Understands othersAlignment	

			Great boss listens, observes & decides - Carefully listen and summarize others points; Observe intently, never disregard; Helps to make better decisions.	Listening Use of information Cooperation (accomplishing it, through understanding others)	
			Hire A+ employees	Alignment	
			Have solid principles - Others may not always agree, but live by your principles, Honest, ethical and fair.	Controls his/her own life Accountability Ethics/Integrity Think of "us"	
			The Great Boss… Sets the example Is responsible/takes responsibility Heeds what they say and are careful how they say it – bosses words carry weight	Accountability	
			The Great Boss… Isn't a know it all Unafraid to say "I don't know" but then asks "what do you think?" Opens the door to communication and exploration Makes employees feel important Don't discount others input.	Open to alternatives Understands others Alignment Accept criticism Look inside	
22	**Peters, Tom & Austin, Nancy**	**A Passion For Excellence**	Common Sense: Simple scheme Listen Apply with integrity	Logic Simple Listening Ethics/Integrity	
			Customers: "Consumers are statistics. Customers are People". Perceived Appreciated Consistently delivered service Quality	Think of "us" Consistency Quality Understands others	
			Innovation: "The reasonable man adapts himself to the world: the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man", by George Bernard Shaw "Restrain oddballs" old way of thinking Oddballs are now future champions Champions are a must	Innovation Adaptable Change Open to alternatives	
			People, people, and people: "Now you hear this. Take good care of those people in that speech of yours. In this room are the finest 1,200 people in this country. They deserve the best you can give", by Dave Thomas The base of every business What do managers believe about people? Average person believes in their roles	Think of "us" Understands others	
			Leadership: Attention is all there is Consistency is key	Leadership Listening Consistency	

23	**Wooden, John & Jamison, Steve**	**WOODEN ON LEADERSHIP**	"If you don't have time to do it right, when will you have time to do it over?"	Quality	
			"Failure is not fatal, but failure to change might be."	Change Trial and error	
			Pyramid of Success: "Success is peace of mind which is a direct result of self satisfaction in knowing you made the effort to become the best to which you are capable".	Self-improvement Enjoyment/Job satisfaction	
			Industriousness: Cornerstone of the foundation Work Hard Worthwhile things come only through hard work	Honesty Enjoyment/Job satisfaction	Work harder (no smarter)
			Enthusiasm: You must truly enjoy what you are doing.	Enjoyment/Job satisfaction Alignment	
			Friendship: Mutual Esteem, Camaraderie, and Respect create great bonds of strength.	Understands others Teamwork	
			Loyalty: To yourself and to all those depending on you.	Think of "us"	
			Cooperation Be interested in finding the best way, not in having your own way	No control Teamwork Listening	
			Self-Control: Practice self-discipline and keep emotions under control.	Self-control Look inside No emotions	
			Alertness: Be observant and eager to learn and improve.	Use of information Continuous improvement Change	
			Initiative: Summon the courage to make a decision and take action.		Decisions
			Intentness: Concentrate on your objective with steely resolve.	Pre-planning/look ahead	
			Condition: Mental/Moral/Physical Moderation must be Practiced.	Consistency Self-control	
			Skill: Be able to execute all aspects of your job. Keep learning.	Alignment Education/Learning	
			Team-Spirit An eagerness to sacrifice personal interest for the welfare of all.	Think of "us"	
			Poise: Stay calm under fire. Avoid Pretense or Posturing. Just be yourself	No emotions Self-control	
			Confidence: Proper preparation creates the right kind of confidence.	Pre-planning/look ahead	
			Competitive Greatness: Be at your best when your best is needed. Love the hard battle.	Alignment Enjoyment/Job satisfaction	

			LESSONS OF LEADERSHIP: Good Values Attract Good People. Love Is The Most Powerful Four-Letter Word. Call Yourself A Teacher. Emotion Is Your Enemy. It Takes 10 hands To Make A Basket. Little Things Make Big Things Happen. Make Each Day Your Masterpiece. The Carrot Is Mightier Than A Stick. Make Greatness Attainable By All. Seek Significant Change. Don't Look At The Scoreboard. Adversity Is Your Asset.	People attract people alike Think of "us" No emotions Teamwork Understands others Change Look at 30k ft Trial and error	
24	**D'Alessandro, David F.**	**Executive Warfare**	The Best of the Best: "the rules are different at the top. It's not enough anymore to be smart, hard-working, and able to show results; At this level, everybody is smart, hard-working, and able to show results. Now it's a game for grown-ups. What really sets you apart is the relationships you build with people of influence."		Relationships
			Attitude, Risk, and Luck: "much of life and work is about finding the right instrument to play in the right orchestra."	Alignment	Feels controlled
			Good side of bosses: -It's all about them -Business Transaction -Trusted -Study, Study, Study		Think of "me and them" Trust Work harder (no smarter)
			"If you must shoot. Do not shoot to wound. Finish the person off as a rival!"		Think of "me and them"
			The People You Have To Motivate: "Build loyalty by helping each member of your team. Individually, get where they want to go."	Alignment	
			Outsiders With Influence: "Random strangers to you are not always strangers to the people who hold your career in their hands."		Influence Feels controlled
			Position: "Build a reputation as an expert in some area. Write articles. Give Speeches. Let reporters quote you."	Differentiate	By formal position/title (instead of by performance) Spokespeople (instead of Thinkers)
			Culture: "It's easy to create a culture of fear. What's really hard is creating a culture of openness where people give you their best efforts and their best ideas."	Open to alternatives Teamwork	

			New Bosses: “People want to own the stocks of companies that are run by leaders. Not by people who are afraid of analysts. Not by people who are temperamental and blow up at them, but by people able to show some composure when questioned.”	No emotions Accept criticism	
25	**Maxwell, John C.**	**Leadership 101: What Every Leader Needs to know**	Becoming Disciplined: The first person you lead is you” Challenge and eliminate tendencies to make excuses Remove rewards until the job is done.	Controls his/her own life No incentives	
			Trust: “Trust is the foundation of leadership” Violates peoples trust and you’re through as a leader 3 qualities a leader must have to build trust: Competence Connection Character.	Performance information	Trust Influence
			Vision: “You can seize only what you can see” Vision leads the leader Vision starts from within Vision draws on your history Vision meets other’s needs Vision helps you gather resources.	Controls his/her own life	
			Influence: “A true measure of a leader is influence – nothing more, nothing less” If you can influence people without leverage such as salary, benefits, and perks the greater the leader you our Successful voluntary organizations have greater leaders due to influence.		Influence
			Empowering others: 1- Evaluate them 2- Model for them 3- Give them permission to succeed 4- Transfer authority to them 5- Publicly show your confidence in them 6- Supply them with feedback 7- Release them to continue on their own.	Empowerment	
			Lasting Leadership: “A leaders lasting value is measured by succession” All great leaders find new jobs, retire, or pass-away so they must groom and train a great leader to be his/her successor Mentoring is a great way to groom new and young potential leaders of a company.	Think of "us"	

26	**Hammer, Michael & Champy, James**	**REENGINEERING THE CORPORATION A MANIFESTO FOR BUSINESS REVOLUTION**	REENGINEERING: "starting over."	Trial and error Change	
			REENGINEERING: "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed."	Trial and error Change	
			REENGINEERING leadership: articulates the vision inspires breakthrough performance must have authority demonstrates leadership signals symbols systems.	Leadership Performance information	
			REENGINEERING success: strong leadership customer focus superior process design & execution.	Leadership Serve others Listening Pre-planning/look ahead Performance information	
27	**Maxwell, John C. & Dornan, Jim**	**Becoming A Person of Influence**	Stages of Influence: Level 1: Model Level 2: Motivate Level 3: Mentor Level 4: Multiply		Influence Control
			A Person of Influence: Has Integrity With People Nurtures Other People Has Faith In People Listens To People Understands People Enlarges People Navigates for Other People Connects With People Empowers People Reproduces Other Influencers.	Empowerment Listening Understands others Think of "us"	Influence Dependency Relationships
28	**Covey, Stephen R.**	**Principle-Centered Leadership**	Principles: Objective and external -more accurate - better alignment, therefore, more useful -like a compass, pointing the way Values: Subjective and Internal -beliefs of cultural background -like maps; maps are not the territories the only describe the territory	Alignment	
			Personal and Interpersonal Effectiveness -Interpersonal: trust based on trustworthiness, looking for a "win-win" -Personal: trustworthiness, good character, completeness, wisdom:	Honesty Win-win/think of the whole supply chain Look inside Education/Learning Training	Trust

			+A) if competent => training and development; +B) if not competent => seek internal change		
			Managerial and Organizational Development -Organizational: alignment of resources -Managerial: empowerment instead of dependency	Alignment Empowerment	
29	**Maxwell, John C.**	**Developing the Leaders Around You**	Creating a Climate for Potential Leaders Identifying Potential Leaders Nurturing Them Equipping Them Developing Them Forming The Dream Team Coaching The Team	Alignment Education/Learning Training	
			"Men are developed the same way gold is mined. Several tons of dirt must be moved to get an ounce of gold. But you don't go into the mine looking for dirt. You look for Gold. The more positive qualities you look for the more you will find."	Treat everyone different	
			Birds flying example: "Each wing flap creates an uplift for the bird directly behind it. Results in a 71% greater flying range for the flock than if each bird flew on its own. When the lead goose gets tired he rotates back. The honking is encouragement to keep going. It's Science!"	Teamwork	
			"Leaders are like trees. There is no such thing as a full grown tree. Once a tree stops growing means that it is dead. As the developers of leaders we must keep our people growing."	Education/LearningTrainingContinuous improvement	
			"Any time you see a turtle on a fence post you know he had some help. Your view from the fence post is made possible by others."		Feels controlled Control
30	**Carrig, Ken & Wright, Patrick M.**	**Building Profit through Building People: making your workforce the strongest link in the value-profit chain**	The number one threat to companies performance is not from outside, it is from within.	Look inside Controls his/her own life	
			Leadership principles that kept the companies afloat.	Leadership	
			Five star Management Model: Strategic Planning Goal Setting Assessing the current state Interpreting and prioritizing Implementing programs for improvements.	Pre-planning/look ahead Use of information Continuous improvement	

			Ensure Leaders Offer Direction and Support Strengthen Front-line Supervisors Rewards and Recognition Inclusion for engagement and diversity Address employees' quality of life.	Alignment Teamwork Open to alternatives Think of "us"	Incentives
31	**Bowden, Bobby**	**The Bowden Way 50 Years of Leadership Wisdom**	Setting a Personal Example: Good character is a leader's greatest ally. Even if you're young, people will respect the moral principles you stand for.	People attract people alike Ethics/Integrity	
			Enthusiasm: Enthusiasm can accomplish what every other effort has failed to do. Complacency is a pervasive phenomenon and a real threat to success.	Enjoyment/Job satisfaction Alignment Change	
			Humility: Humility is Wisdom's prerequisite. If we are honest enough to admit our errors and learn from them, we have a chance to become wise.	Humility Honesty	
			Work Habits: One of the great lessons I've learned in 50 years of coaching is to delegate responsibilities to my staff. Success is often the biggest threat to continued success.	Delegate Continuous improvement	
32	**Deming, W. Edwards.**	**OUT OF THE CRISIS.**	Create constancy of purpose toward improvement - become competitive, stay in business, provide jobs…	Change Continuous improvement Pre-planning/look ahead Serve others Think of "us"	
			Adopt a new philosophy - management must awaken to the challenge, learn their responsibilities and take on leadership for change…	Change Leadership Accountability No control Simple	
			Cease dependence on inspection to achieve quality by building quality in the first phase…	No inspections Quality	
			End the practice of awarding business on the basis of price tag; instead, minimize total cost - single supplier for one item, long-term relationship…	No price tag only (no low bid) Look at 30k ft Minimize total cost Win-win/think of the whole supply chain Specialization Measurement Performance information No decisions Pre-planning/look ahead Alignment No traditions Accountability	

			Improve constantly production & service - improve quality & productivity, decrease cost…	Change Continuous improvement Quality Productivity	
			Institute training on the job…	Training Education/Learning Treat everyone different No silos	
			Institute leadership by helping people and machines to do a better a job…	Leadership Serve others Think of "us" Teamwork Alignment	
			Drive out fear so that everyone works effectively for the company…	No emotions Teamwork	
			Break-down barriers between departments - work as a team…	Eliminate information barriers Use of information Teamwork	
			Eliminate slogans & targets asking for zero defects; since causes of low quality and productivity belong to the system and lie beyond the power of the workforce…	Measurement No assumptions Accountability	
			Eliminate work standards (quotas) - substitute leadership…	No quotas No standards Leadership Treat everyone different No incentives	
			Eliminate management by objectives (numbers, numerical goals - substitute leadership…	No quotas No standards Leadership Treat everyone different Measurement	
			Remove barriers that rob the hourly worker his right to pride of workmanship - change supervisor's responsibility from sheer numbers to quality…	Think of "us" Measurement No quotas No standards Treat everyone different Look inside	
			Remove barriers that rob people in management their right to pride of workmanship - abolishment of annual merit rating & management by objective…	Think of "us" Measurement No quotas No standards Treat everyone different Look inside	
			Institute a vigorous program of education and self-improvement…	Training Education/Learning Treat everyone different Self-improvement	
			Put everyone in the company to work to accomplish the transformation…	Teamwork Treat everyone different Change Continuous improvement No traditions Win-win/think of the whole supply Chain Measurement	

Table B.2

Summary of LS characteristics found on all books – recommended as "good"

#	LS characteristic	Quantity of appearances	Accrued per-cent of data captured
1	**Alignment (*)**	49	11%
2	**Think of us (*)**	25	16%
3	**Teamwork (*)**	21	20%
4	**Look inside (*)**	21	25%
5	**Change (*)**	19	29%
6	Understands others	18	33%
7	**Accountability (*)**	17	37%
8	**Pre-planning/look ahead (*)**	16	40%
9	**Measurement (*)**	15	43%
10	**Education/Learning (*)**	13	46%
11	Trial and error	11	48%
12	**Treat everyone different (*)**	11	51%
13	**Leadership (*)**	11	53%
14	Controls his/her own life	11	56%
15	**Use of information (*)**	10	58%
16	**Performance information (*)**	10	60%
17	**Continuous improvement (*)**	10	62%
18	**Training (*)**	9	64%
19	**Serve others (*)**	9	66%
20	Listening	9	68%
21	**Win-win/think of the whole supply chain (*)**	8	70%
22	**Self-improvement (*)**	8	71%
23	Open to alternatives	8	73%
24	**No emotions (*)**	7	75%
25	**No control (*)**	7	76%
26	Ethics/Integrity	6	77%
27	Consistency	6	79%
28	**Quality (*)**	5	80%
29	Enjoyment/Job satisfaction	5	81%
30	Cooperation (accomplishing it, through understanding others)	5	82%
31	Accept criticism	5	83%
32	**Simple (*)**	4	84%
33	People attract people alike	4	85%
34	**No traditions (*)**	4	86%
35	**No standards (*)**	4	86%
36	**No quotas (*)**	4	87%
37	No influence	4	88%
38	Empowerment	4	89%
39	Creativity	4	90%
40	Self-control	3	91%
41	Honesty	3	91%
42	Experience	3	92%
43	Efficiency	3	92%
44	Delegate	3	93%
45	Adaptable	3	94%
46	**No incentives (*)**	2	94%
47	**No decisions (*)**	2	95%
48	**Look at 30k ft (*)**	2	95%
49	Logic	2	95%
50	Differentiate	2	96%
51	Approachable	2	96%
52	Work smarter (not harder)	1	97%
53	Talent is inherited (...all human behavior is genetic...)	1	97%
54	**Specialization (*)**	1	97%
55	**Productivity (*)**	1	97%
56	Proactive	1	97%
57	**No silos (*)**	1	98%
58	**No price tag only (no low bid) (*)**	1	98%
59	**No inspections (*)**	1	98%
60	**No assumptions (*)**	1	98%
61	**Minimize total cost (*)**	1	98%
62	Loyalty (moral conscience)	1	99%
63	Innovation	1	99%
64	Humility	1	99%
65	Fast processing speed	1	99%
66	**Eliminate information barriers (*)**	1	100%
67	Agile (instead of inactive)	1	100%

NOTE: (*) LS characteristic found on Deming's baseline matrix.

Table B.3

Summary of "RS" characteristics found on all books – recommended as "good"

#	RS characteristic	Quantity of appearances	Accrued per-cent of data captured
1	Influence	22	26%
2	Trust	6	33%
3	Control	6	40%
4	Relationships	4	44%
5	Misalignment	4	49%
6	Work harder (no smarter)	3	52%
7	Treat everyone the same	3	56%
8	Think of me and them	3	59%
9	Spokespeople (instead of Thinkers)	3	63%
10	Feels controlled	3	66%
11	Decisions	3	70%
12	By formal position/title (instead of by performance)	3	73%
13	Talent is not inherited (...NOT all human behavior is genetic...)	2	76%
14	Reactive	2	78%
15	Persuasion/lobbying (no testing/evaluation)	2	80%
16	Intuition	2	83%
17	Ignore performance information	2	85%
18	Firing	2	87%
19	Emotions	2	90%
20	Assumptions	2	92%
21	Not open to alternatives	1	93%
22	No education	1	94%
23	Management	1	95%
24	Incentives	1	97%
25	Guidance	1	98%
26	Focus on details	1	99%
27	Dependency	1	100%

APPENDIX C

DEMING'S LS CHARACTERISTICS

Table C.1

Deming's 14 points of management and the respective "LS" characteristics

Deming's 14-points of Management		
Point#	**14-points of Management**	**LS (type A) characteristic**
1	Create constancy of purpose toward improvement - become competitive, stay in business, provide jobs…	-change -continuous improvement -look ahead (pre-planning) -serve others -think of "us"
2	Adopt a new philosophy - management must awaken to the challenge, learn their responsibilities and take on leadership for change…	-change -leadership -accountability -no control -simple
3	Cease dependence on inspection to achieve quality by building quality in the first phase…	-no inspections -quality
4	End the practice of awarding business on the basis of price tag; instead, minimize total cost - single supplier for one item, long-term relationship…	-no price tag only (no low bid) -look at 30,000 ft level (minimize total cost) -think of the whole supply chain (win-win) -specialization -measurement -performance information -no decisions -look ahead (pre-planning) -alignment -no traditions -accountability
5	Improve constantly production & service - improve quality & productivity, decrease cost…	-change -continuous improvement -quality -productivity
6	Institute training on the job…	-training -education -treat everyone different -no silos
7	Institute leadership by helping people and machines to do a better a job…	-leadership -serve others -think of "us" -teamwork -alignment
8	Drive out fear so that everyone works effectively for the company…	-no emotions -teamwork
9	Break-down barriers between departments - work as a team…	-eliminate information barriers -use of information -teamwork
10	Eliminate slogans & targets asking for zero defects; since causes of low quality and productivity belong to the system and lie beyond the power of the workforce…	-measurement -no assumptions -accountability
11a	Eliminate work standards (quotas) - substitute leadership…	-no quotas -no standards -leadership -treat everyone different -no incentives
11b	Eliminate management by objectives (numbers, numerical goals - substitute leadership…	-no quotas -no standards -leadership -treat everyone different -measurement
12	Remove barriers that rob the hourly worker his right to pride of workmanship - change supervisor's responsibility from sheer numbers to quality…	-think of "us" -measurement -no quotas -no standards -treat everyone different -look "inside"
12	Remove barriers that rob people in management their right to pride of workmanship - abolishment of annual merit rating & management by objective…	-think of "us" -measurement -no quotas -no standards -treat everyone different -look "inside"
13	Institute a vigorous program of education and self-improvement…	-training -education -treat everyone different (self-improvement)
14	Put everyone in the company to work to accomplish the transformation…	-teamwork -treat everyone different -change -continuous improvement -no traditions -think of the whole supply chain -measurement

APPENDIX D

SURVEY ON INDIVIDUALS

Table D.1

Initial Survey Questionnaire with the 36 LS characteristics of the baseline matrix (Deming) – initial total of 36 questions (2 pages)

Deming's LS characteristics (baseline matrix) to Survey Questions		
#	**LS Characteristic**	**Question**
1	Accountability	Workers should regularly participate in operating decisions to make suggestions and take a relatively high degree of responsibility.
2	Alignment	It is the leader responsibility to coordinate the talent of the workers and to compensate someone's weakness with someone else's strength.
3	Change	Continuous change has to be part of the operations of any business and management should explain people why.
4	Continuous improvement	Continuous improvement of the systems of production should be a never-ending task.
5	Education/Learning	Companies must train workers in their jobs, increase in-service education and develop the concept of tutors.
6	Eliminate information barriers	People in the early stages of the production (sales, procurement) must learn about the problems encountered in production.
7	Leadership	Focus on outcome (management by numbers, work standards, meet specifications, zero defects, appraisal of performance) must be abolished, leadership put in place.
8	Look at 30k ft	In order to help the industry banks should focus on companies that seek long-term capital gain instead of short-term results.
9	Look inside	You may lose a good customer - you can't blame him - your prices are high because of waste of human effort (rework, inspection, etc).
10	Measurement	When business drifts to the lowest bidder without adequate measure of quality, low quality and high cost are the inevitable result.
11	Minimize total cost	End the practice of awarding business on the basis of price tag; instead, minimize total cost.
12	No assumptions	Eliminate slogans and targets asking for zero defects; since causes of low quality and productivity belong to the system and lie beyond the power of the workforce.
13	No control	Enterprises and individuals benefit from being subjected to fewer restrictive rules and from enjoying greater freedom.
14	No decisions	The aim of leadership is not merely to find and record failures of men and make decisions, but to remove the causes of failure.
15	No emotions	Drive out fear so that everyone works effectively for the company; not afraid to express ideas or ask questions.
16	No incentives	Work standards, rates, incentive pay, and piece work are manifestations on inability to understand and provide appropriate supervision.
17	No inspections	Cease dependence on inspection to achieve quality by building quality in the first phase.

18	No price tag only (no low bid)	Companies must avoid the generic lowest-price buying and deal with vendors that can furnish statistical evidence of control such as in quality.
19	No quotas	Management by objective and quotas nourishes short-term performance, annihilates long-term planning and demolishes teamwork.
20	No silos	Break-down barriers between departments - learn about the problems in the various departments.
21	No standards	Discard manuals with standards that qualify vendors and let suppliers compete to be the chosen one, not on the price tag but on qualifications.
22	No traditions	Managers should have courage to break with tradition, even to the point of exile among their peers.
23	Performance information	A run chart on different characteristics of performance will show management where re-training and special help are needed.
24	Pre-planning/look ahead	The stages of any process are not individual entities each running at maximum profit, but a sequence of events running toward optimum accommodation.
25	Productivity	Improve constantly and forever the system of production and service, to improve quality and productivity and decrease cost.
26	Quality	Improvement of quality could decrease the cost of the production process for the product or service.
27	Self-improvement	What an organization needs is not just good people; it needs people that are improving with education.
28	Serve others	Some executives incorrectly think they are in the business to make money, rather than products and service.
29	Simple	Fewer and simpler figures and better information about your processes and your capabilities would lead to improved uniformity and greater output.
30	Specialization	There are advantages on a single source and long-term relationship.
31	Teamwork	A leader, instead of being a judge, will be a colleague, counseling and leading his people on a day-to-day basis.
32	Think of us	Managers should encourage working toward the shared goals of the firm by helping to satisfy the human needs of job satisfaction and self-fulfillment.
33	Training	It is of the utmost importance to train new people, when they come to a job, to do the job well.
34	Treat everyone different	Management must hold a long interview with every employee, at least once a year, not for criticism, but for help and better understanding on everybody.
35	Use of information	The results of a change or test may enhance our degree of belief or prediction, planning.
36	Win-win/think of the whole supply chain	A long-term relationship between purchaser and supplier is necessary for best economy.

Table D.2

Modified Survey Questionnaire after elimination of redundant questions – new total of 15 Questions

No	LS Characteristic from Deming	Question
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties
2	Leadership/No Control	Increased management, direction, and control results in effective operations.
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation.
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid
6	No decisions	Minimizing “decision making” is a good strategy (*).
7	Use of information	When information is scarce, people tend to make more decisions (*).
8	No incentives	Incentive pay is a sign of good leadership.
9	No inspections	More inspection will increase effectiveness and will improve operational performance (*).
10	No price tag only (no low bid)	Contractors should be selected based solely on Performance (and not price) (*).
11	No quotas	Management by objectives and quotas is shortsighted and results in low performance (*).
12	No standards	Clear and concise standards/specifications increase performance (*).
13	Performance information	Managers should rate the performance of those who work for them.
14	Look inside	Capable managers also identify and minimize the risk that they do not control.
15	Simple	Complex and integrated information systems with access for everyone leads to continual improvement (*).
		NOTE: (*) Eliminated Question

Table D.3

Final Survey Questionnaire after elimination of confusing questions – final total of 8 questions

No	LS Characteristic from Deming	Question
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).
8	No incentives	Incentive pay is a sign of good leadership.
13	Performance information	Managers should rate the performance of those who work for them (*).
14	Look inside	Capable managers also identify and minimize the risk that they do not control (*).
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research

Table D.4

Performance evaluation on Project Managers

No	PMs Ranking from General Managers	Ranking of PM (1=best; 2=2nd to best; 3=3rd to best; etc)	Weight given to each question
1	Professionalism and ability to manage	1,2,3...	17%
2	Leadership and promotion of teamwork	1,2,3...	17%
3	Risk management, performance documentation/tracking and improvement	1,2,3...	17%
4	Ability to maintain project schedule	1,2,3...	17%
5	Ability to maintain and improve Project Quality	1,2,3...	17%
6	Overall customer satisfaction	1,2,3...	17%
A	Weighed Average	1,2,3...	100%

Table D.5

Part 1 – Survey Responses for people not-trained in IMT (PMs)

No	LS Characteristic from Deming	Question	Unit	CORRECT Response per IMT	REGION / BRANCH #1						REGION / BRANCH #2					
					PM 1	PM 2	PM 3	PM 4	PM 5	GM	PM 1	PM 2	PM 3	PM 4	PM 5	GM
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).	(1-10)	1	10	8	10	8	8	8	8	5	10	10	8	10
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).	(1-10)	1	10	8	10	8	8	7	9	3	9	5	8	10
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).	(1-10)	10	10	6	10	6	10	8	6	10	9	9	8	10
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).	(1-10)	10	10	10	10	6	7	9	7	10	8	8	8	10
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).	(1-10)	1	1	8	9	3	8	2	5	7	1	5	3	3
6	No incentives	Incentive pay is a sign of good leadership.	(1-10)	1	1	2	2	8	8	8	1	8	9	5	3	8
7	Performance information	Managers should rate the performance of those who work for them (*).	(1-10)	10	10	10	9	8	10	8	9	10	9	10	8	10
8	Look inside	Capable managers also identify and minimize the risk that they do not control (*).	(1-10)	10	8	9	9	10	10	9	9	9	8	5	8	10
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research All questions were part of Deming's baseline matrix.														

No	LS Characteristic from Deming	Normalized questions for 10=type "A"/LS	Unit	Normalized	REGION / BRANCH #1						REGION / BRANCH #2					
					PM 1	PM 2	PM 3	PM 4	PM 5	GM	PM 1	PM 2	PM 3	PM 4	PM 5	GM
1	Accountability	Minimize Information Flow	(1-10)	inv	1	3	1	3	3	3	3	6	1	1	3	1
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	1	3	1	3	3	4	2	8	2	6	3	1
3	Continuous improvement	Measure deviations & sources	(1-10)	10	10	6	10	6	10	8	6	10	9	9	8	10
4	Measurement	Measure performance of key individuals	(1-10)	10	10	10	10	6	7	9	7	10	8	8	8	10
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	10	3	2	8	3	9	6	4	10	6	8	8
6	No incentives	NO incentive pay	(1-10)	inv	10	9	9	3	3	3	10	3	2	6	8	3
7	Performance information	Managers should rate their people	(1-10)	10	10	10	9	8	10	8	9	10	9	10	8	10
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	8	9	9	10	10	9	9	9	8	5	8	10
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	7.5	6.6	6.4	5.9	6.1	6.6	6.5	7.5	6.1	6.4	6.8	6.6
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	1st	2nd	3rd	5th	4th	t-2nd	3rd	1st	5th	4th	2nd	t-3rd

No	LS Characteristic from Deming	Question	Unit	CORRECT Response per IMT	REGION / BRANCH #3							REGION / BRANCH #4								
					x	PM 1	PM 2	PM 3	PM 4	PM 5	GM	PM 1	PM 2	x	x	PM 3	x	PM 4	x	GM1	GM2
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).	(1-10)	1	NR	10	10	9	9	9	NR	7	10	NR	NR	8	NR	10	NR	8	10
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).	(1-10)	1	NR	5	8	8	9	10	NR	7	6	NR	NR	6	NR	8	NR	6	10
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).	(1-10)	10	NR	10	10	8	9	7	NR	7	8	NR	NR	7	NR	10	NR	9	8
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).	(1-10)	10	NR	10	10	7	9	8	NR	8	10	NR	NR	7	NR	9	NR	9	10
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).	(1-10)	1	NR	7	3	3	4	7	NR	1	10	NR	NR	5	NR	1	NR	5	1
6	No incentives	Incentive pay is a sign of good leadership.	(1-10)	1	NR	7	10	3	4	7	NR	1	5	NR	NR	9	NR	10	NR	8	10
7	Performance information	Managers should rate the performance of those who work for them (*).	(1-10)	10	NR	10	9	10	9	9	NR	8	10	NR	NR	7	NR	8	NR	10	10
8	Look inside	Capable managers also identify and minimize the risk that they do not control (*).	(1-10)	10	NR	6	9	7	9	8	NR	8	9	NR	NR	8	NR	2	NR	10	10
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research All questions were part of Deming's baseline matrix.																		

No	LS Characteristic from Deming	Normalized questions for 10=type "A"/LS	Unit	Normalized	REGION / BRANCH #3							REGION / BRANCH #4								
					x	PM 1	PM 2	PM 3	PM 4	PM 5	GM	PM 1	PM 2	x	x	PM 3	x	PM 4	x	GM1	GM2
1	Accountability	Minimize Information Flow	(1-10)	inv	NR	1	1	2	2	2	NR	4	1	NR	NR	3	NR	1	NR	3	1
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	NR	6	3	3	2	1	NR	4	5	NR	NR	5	NR	3	NR	5	1
3	Continuous improvement	Measure deviations & sources	(1-10)	10	NR	10	10	8	9	7	NR	7	8	NR	NR	7	NR	10	NR	9	8
4	Measurement	Measure performance of key individuals	(1-10)	10	NR	10	10	7	9	8	NR	8	10	NR	NR	7	NR	9	NR	9	10
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	NR	4	8	8	7	4	NR	10	1	NR	NR	6	NR	10	NR	6	10
6	No incentives	NO incentive pay	(1-10)	inv	NR	4	1	8	7	4	NR	10	6	NR	NR	2	NR	1	NR	3	1
7	Performance information	Managers should rate their people	(1-10)	10	NR	10	9	10	9	9	NR	8	10	NR	NR	7	NR	8	NR	10	10
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	NR	6	9	7	9	8	NR	8	9	NR	NR	8	NR	2	NR	10	10
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	NR	6.4	6.4	6.6	6.8	5.4	AR	7.4	6.3	NR	NR	5.6	NR	5.5	NR	6.9	6.4
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	NR	3rd	4th	2nd	1st	5th	AR	1st	2nd	NR	NR	3rd	NR	4th	NR	t-2nd	t-2nd

Table D.5

Part 2 – Survey Responses for people not-trained in IMT (PMs)

No	LS Characteristic from Deming	Question	Unit	CORRECT Response per IMT	REGION / BRANCH #5								STATISTICAL ANALYSIS			
					PM 1	PM 2	x	PM 3	PM 4	x	GM1	GM2				
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).	(1-10)	1	10	10	NR	8	8	NR	NR	NR				
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).	(1-10)	1	7	10	NR	3	8	NR	NR	NR				
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).	(1-10)	10	10	10	NR	6	9	NR	NR	NR				
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).	(1-10)	10	7	10	NR	10	8	NR	NR	NR				
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).	(1-10)	1	3	8	NR	1	6	NR	NR	NR				
6	No incentives	Incentive pay is a sign of good leadership.	(1-10)	1	5	7	NR	3	8	NR	NR	NR				
7	Performance information	Managers should rate the performance of those who work for them (*).	(1-10)	10	10	8	NR	9	8	NR	NR	NR				
8	Look inside	Capable managers also identify and minimize the risk that they do not control (*).	(1-10)	10	10	10	NR	10	8	NR	NR	NR				
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research All questions were part of Deming's baseline matrix.														

No	LS Characteristic from Deming	Normalized questions for 10=type "A"/LS	Unit	Normalized	REGION / BRANCH #5								AVERAGE	STANDARD DEVIATION	PMs AVERAGE	GMs AVERAGE
					PM 1	PM 2	x	PM 3	PM 4	x	GM1	GM2				
1	Accountability	Minimize Information Flow	(1-10)	inv	1	1	NR	3	3	NR	NR	NR	2.1	1.3	2.2	2.0
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	4	1	NR	8	3	NR	NR	NR	3.4	2.0	3.5	2.8
3	Continuous improvement	Measure deviations & sources	(1-10)	10	10	10	NR	6	9	NR	NR	NR	8.5	1.5	8.5	8.8
4	Measurement	Measure performance of key individuals	(1-10)	10	7	10	NR	10	8	NR	NR	NR	8.7	1.3	8.6	9.5
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	8	3	NR	10	5	NR	NR	NR	6.6	2.8	6.3	8.3
6	No incentives	NO incentive pay	(1-10)	inv	6	4	NR	8	3	NR	NR	NR	5.1	3.0	5.5	2.5
7	Performance information	Managers should rate their people	(1-10)	10	10	8	NR	9	8	NR	NR	NR	9.1	0.9	9.0	9.5
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	10	10	NR	10	8	NR	NR	NR	8.4	1.8	8.2	9.8
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	7.0	5.9	NR	8.0	5.9	NR	~~NR~~	~~NR~~	6.5	AVERAGE	6.5	6.6
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	2nd	3rd	NR	1st	4th	NR	~~NR~~	~~NR~~	2.7	STD. DEVIATION	2.6	3.5

No	LS Characteristic from Deming	Normalized questions for 10=type "A"/LS	Unit	Normalized	STATISTICAL ANALYSIS			
					AVERAGE	STANDARD DEVIATION	PMs AVERAGE	GMs AVERAGE
1	Accountability	Minimize Information Flow	(1-10)	inv	2.1	1.3	2.2	2.0
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	3.4	2.0	3.5	2.8
3	Continuous improvement	Measure deviations & sources	(1-10)	10	8.5	1.5	8.5	8.8
4	Measurement	Measure performance of key individuals	(1-10)	10	8.7	1.3	8.6	9.5
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	6.6	2.8	6.3	8.3
6	No incentives	NO incentive pay	(1-10)	inv	5.1	3.0	5.5	2.5
7	Performance information	Managers should rate their people	(1-10)	10	9.1	0.9	9.0	9.5
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	8.4	1.8	8.2	9.8
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	6.5	AVERAGE	6.5	6.6
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	2.7	STD. DEVIATION	2.6	3.5

Table D.6

Survey Responses for people trained in IMT

No	LS Characteristic from Deming	Question	Unit	CORRECT Response per IMT	GROUP OF PEOPLE TRAINED IN IMT								
					PM 1	PM 2	PM 3	PM 4	PM 5	PM 6	PM 7	PM 8	PM 9
1	Accountability	An efficient delivery process should maximize the amount of information passed between parties (*).	(1-10)	1	1	1	1	1	1	1	1	1	1
2	Leadership/No Control	Increased management, direction, and control results in effective operations (*).	(1-10)	1	1	1	1	1	1	1	1	1	1
3	Continuous improvement	Project performance can be increased by documenting project deviations and the sources of the deviation (*).	(1-10)	10	10	10	10	10	10	10	1	10	10
4	Measurement	Contractors should take the time/cost to measure the performance of their key individuals (*).	(1-10)	10	5	1	10	10	10	10	10	10	10
5	Minimize total cost	Awarding to the best-value (best-performer) is more expensive than low-bid (*).	(1-10)	1	1	5	1	1	1	1	1	1	1
6	No incentives	Incentive pay is a sign of good leadership.	(1-10)	1	1	1	3	1	1	5	1	1	1
7	Performance information	Managers should rate the performance of those who work for them (*).	(1-10)	10	10	1	7	10	10	10	10	10	10
8	Look inside	Capable managers also identify and minimize the risk that they do not control (*).	(1-10)	10	10	10	10	10	10	10	10	10	10
		(*) NOTE: this question was part of the top-25 LS characteristics from the Authors research All questions were part of Deming's baseline matrix.											

No	LS Characteristic from Deming	Normalized questions for 10=type "A"/LS	Unit	Normalized	GROUP OF PEOPLE TRAINED IN IMT								
					PM 1	PM 2	PM 3	PM 4	PM 5	PM 6	PM 7	PM 8	PM 9
1	Accountability	Minimize Information Flow	(1-10)	inv	10	10	10	10	10	10	10	10	10
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	10	10	10	10	10	10	10	10	10
3	Continuous improvement	Measure deviations & sources	(1-10)	10	10	10	10	10	10	10	1	10	10
4	Measurement	Measure performance of key individuals	(1-10)	10	5	1	10	10	10	10	10	10	10
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	10	6	10	10	10	10	10	10	10
6	No incentives	NO incentive pay	(1-10)	inv	10	10	8	10	10	6	10	10	10
7	Performance information	Managers should rate their people	(1-10)	10	10	1	7	10	10	10	10	10	10
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	10	10	10	10	10	10	10	10	10
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	9.4	7.3	9.4	10.0	10.0	9.5	8.9	10.0	10.0
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	3rd	5th	3rd	1st	1st	2nd	4th	1st	1st

No	LS Characteristic from Deming	Normalized questions for 10=type "A"/LS	Unit	Normalized	GROUP OF PEOPLE TRAINED IN IMT									STATISTICAL ANALYSIS	
					PM 1	PM 2	PM 3	PM 4	PM 5	PM 6	PM 7	PM 8	PM 9	AVERAGE	STANDARD DEVIATION
1	Accountability	Minimize Information Flow	(1-10)	inv	10	10	10	10	10	10	10	10	10	**10.0**	**0.0**
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	10	10	10	10	10	10	10	10	10	**10.0**	**0.0**
3	Continuous improvement	Measure deviations & sources	(1-10)	10	10	10	10	10	10	10	1	10	10	**9.0**	**3.0**
4	Measurement	Measure performance of key individuals	(1-10)	10	5	1	10	10	10	10	10	10	10	**8.4**	**3.2**
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	10	6	10	10	10	10	10	10	10	**9.6**	**1.3**
6	No incentives	NO incentive pay	(1-10)	inv	10	10	8	10	10	6	10	10	10	**9.3**	**1.4**
7	Performance information	Managers should rate their people	(1-10)	10	10	1	7	10	10	10	10	10	10	**8.7**	**3.0**
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	10	10	10	10	10	10	10	10	10	**10.0**	**0.0**
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	9.4	7.3	9.4	10.0	10.0	9.5	8.9	10.0	10.0	**9.4**	AVERAGE
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	3rd	5th	3rd	1st	1st	2nd	4th	1st	1st	**0.6**	STD. DEVIATION

Table D.7

Results of the Performance Evaluation on the PMs by the GM of one branch

					REGION / BRANCH #1					
No	**LS Characteristic from Deming**	**Normalized questions for 10=type "A"/LS**	Unit	Normalized	PM 1	PM 2	PM 3	PM 4	PM 5	GM
1	Accountability	Minimize Information Flow	(1-10)	inv	1	3	1	3	3	3
2	Leadership/No Control	Minimize Management & Control	(1-10)	inv	1	3	1	3	3	4
3	Continuous improvement	Measure deviations & sources	(1-10)	10	10	6	10	6	10	8
4	Measurement	Measure performance of key individuals	(1-10)	10	10	10	10	6	7	9
5	Minimize total cost	Best-value is less expensive than low-bid	(1-10)	inv	10	3	2	8	3	9
6	No incentives	NO incentive pay	(1-10)	inv	10	9	9	3	3	3
7	Performance information	Managers should rate their people	(1-10)	10	10	10	9	8	10	8
8	Look inside	Capable managers identify & minimize risk they DO NOT control	(1-10)	10	8	9	9	10	10	9
AV		Average - Responses to IMT Questions (normalized for 10=type A/LS)	(1-10)	Average	7.5	6.6	6.4	5.9	6.1	6.6
B		ITM's Prediction of Best Value (1-best, etc...)	(1st-...)	BEST VALUE	1st	2nd	3rd	5th	4th	t-2nd
No	**Rating paremeter**	General Managers Ranking of Best Performer *-PER CATEGORY-* (1-best, etc...)	(1st-...)	Weight						
1		Professionalism and ability to manage	1,2,3...	17%	3	2	5	1	4	
2		Leadership and promotion of teamwork	1,2,3...	17%	1	3	5	2	4	
3		Risk management, performance documentation/tracking and improvement	1,2,3...	17%	1	2	4	3	5	
4		Ability to maintain project schedule	1,2,3...	17%	1	4	5	2	3	
5		Ability to maintain and improve Project Quality	1,2,3...	17%	1	3	5	2	4	
6		Overall customer satisfaction	1,2,3...	17%	2	4	5	1	3	
AV		General Managers Ranking of Best Performer *-CALCULATED AVERAGE-* (1-best, etc...)	(1st-...)	Weighted Score (1-100%)	81%	36%	21%	64%	27%	N/A
B		CALCULATED [average of 6 questions] General Manager Ranking (1-best, etc...)	(1st-...)	BEST RANK	1st	3rd	5th	2nd	4th	N/A
Y/N		IMT has a correct performance assessment?	(Y/N)	Confirm	YES	???	???	???	YES	N/A

APPENDIX E

CASE STUDIES OF “SUCCESS/CONSISTENCY”

CASE STUDIES OF “SUCCESS/CONSISTENCY”

Data/Discussion

Outline of the 40 articles that discuss “success/consistency” and their relationship to IMT/KSM Principles.

Article#1: Do You Know Where Your Next CEO Is?

Studies and surveys report that companies aren’t very prepared for CEO succession. Results show nearly 50% have no CEO succession plan. Average global tenure of CEOs is 7.6 years and they are retiring younger. Because of natural age gapping there are potential CEOs in very age and experience category, say 52, 48, 42, 36, 30, 24, and because of candidates’ loss and turnover, you would need to have multiples candidates at each milestones, say two-52s, four 48s and so on. This is called vertical succession planning, identifying and developing talent early, deliberately, and systematically is a very long-term management strategy.

Only some CEOs (study by PricewaterhouseCoopers only 22% a lot of thought, 59% some thought, 19% no thought at all) are planning their succession and this will lead towards a smoother transition with better results, by looking deeper into the organization to identify and prepare their full CEO supply chain of top talent.

Relationship to IMT/KSM Principles

- LS: think of us; successful CEOs that plan succession that think of “us” are LS, type A person
- LS: look vertical at 30k ft; companies that plan ahead and look and prepare CEOs candidates ahead of time reach better results on succession

Article#2: Putting Your Company's Whole Brain to Work

The so called “left-brain” thinkers approach a problem in a logical systematical way while “right-brain” thinkers rely on more nonlinear, intuitive approaches.

Some people prefer to work together to solve a problem; others like to gather and process information by themselves.

Abstract thinkers need to learn about something before they experience it; for experiential people, it's just the opposite.

Managers who dislike conflict or who value only their own approach often fall victim to the comfortable clone syndrome, surrounding themselves with people who think alike and who share similar interests and training. Even managers who value intellectual diversity may not realize how difficult it can be for people with different styles to understand or respect each other. To achieve creative abrasion, you have to make the different approaches rub together in productive ways said the author. How: compile a cognitive profile of your team, do your own profile first; create "whole-brained" teams; employ strategies that exploit the team's full spectrum of approaches; actively manage the creative process.

Relationship to IMT/KSM Principles

- LS: logical approach
- LS: fast processing speed; type "A" gather and process information to approach and have a faster processing cycle because they don't need to learn about something before they face it, such as type C.
- Authors recommend aligning team for better results: get information, plan, align and change, all LS characteristics.

Article#3: The Upside of Change: Increased Sales

Change is good; the upside of change; seven strategies recommended by author to lead sales team to improve. Accept change as inevitable, stay flexible, sell yourself on the change before you talk to your customers, look for the opportunity, see the cachet of change, vent, get over it and move, sharper your sell skills.

Author mentions everything is changing around you; accept change, look for the opportunities to sell more, and then sell the benefits of the changes to your customers.

Relationship to IMT/KSM Principles

- LS: change; even though marketing is a more type C characteristic than performance, inside marketing there are still LS and RS characteristics and change is one that leads to improving skills.

Article#4: Competing on Analytics

Author suggests some companies have built their very businesses on their ability to collect, analyze, and act on data. Over the years, groundbreaking systems from companies such as American Airlines (electronic reservations), Otis Elevator (predictive maintenance), and American Hospital Supply (online ordering) have dramatically boosted their creators' revenues and reputations. These applications amassed and applied data in ways that upended customer expectations and optimized operations to unprecedented degrees. They transformed technology from a supporting tool into a strategic weapon. Organizations such as Amazon, Harrah's, Capital One, and the Boston Red Sox have dominated their fields by deploying industrial-strength analytics across a wide variety of activities.

Organizations are competing on analytics, not just because they can but also because they should. Analytics competitors wring every last drop of value from those processes. They know what products their customers want, what prices those customers will pay, how many items each will buy in a lifetime, what triggers will make people buy more, know compensation costs and turnover rates, can calculate how much personnel contribute to or detract from the bottom line and how salary levels relate to individuals' performance, know when inventories are running low, can also predict problems with demand and supply chains, to achieve low rates of inventory and high rates of perfect orders. And analytics competitors do all those things in a coordinated way, as part of an overarching strategy championed by top leadership and pushed down to decision makers at every level.

As Gary Loveman, CEO of Harrah's, frequently puts it, "Do we think this is true? Or do we know?"

Relationship to IMT/KSM Principles

- LS: information; get all information and predict the outcome, take advantage of it.

Article#5: Decisions Without Blinders

Authors' key point is: the "bounded awareness" phenomenon causes people to ignore critical information when making decisions. Learning to expand the limits of your awareness before you make an important choice will save you from asking "How did I miss that?" after the fact.

By the time Merck withdrew Vioxx from the market in September 2004 out of concern that the pain relief drug was causing heart attacks and strokes, more than 100 million prescriptions for it had been filled in the United States alone. Vioxx may have been associated with as many as 25,000 heart attacks and strokes and more than 1,000 claims have been filed against the company. Evidence of the drug's hazards was publicly available as early as November 2000, when the New England Journal of Medicine reported that four times as many patients taking Vioxx experienced myocardial infarctions as did those taking naproxen. In 2001, Merck's own report to federal regulators showed that 14.6% of Vioxx patients suffered from cardiovascular troubles while taking the drug; 2.5% developed serious problems, including heart attacks. So why, if the drug's risks had been published in 2000 and 2001, did so many doctors choose to prescribe it?

Social science research has shown that without realizing it, decision makers ignore certain critical information. Doctors face tremendous demands on their time and must make life-and-death decisions under highly ambiguous circumstances. In the case of Vioxx, doctors more often than not received positive feedback from patients taking the drug. Also, the Merck sales force took unethical steps to make Vioxx appear safer than it was. Despite having access to information about the risks, doctors, even those who had read the New England Journal of Medicine article, may have been blinded to the actual extent of those risks. And why did Merck's senior executives allow the product to stay

on the market for so long? Evidence points to intentional misrepresentation by the sales force.

The authors say it's important to note that bounded awareness differs from information overload, or having to make decisions with too much information and too little time. Even when spared a deluge of information and given sufficient time to make decisions, most individuals still fail to bring the right information into their conscious awareness at the right time.

Relationship to IMT/KSM Principles

- LS: no decisions; when doctors made decisions to prescribe Vioxx being blinded to the actual extent of those risks.
- LS: performance information (vs. marketing); Merck sales force tried to make Vioxx appear safer that it was even though performance information (New England Journal of Medicine article) showed it wasn't

Article#6: Deep Change: How Operational Innovation Can Transform Your Company

The author proposes that creating new ways, not just better ways, of working has been central to some of business's greatest success stories. He mentions Wal-Mart's cross-docking distribution system or Dell's build-to-order model as examples.

Operational innovations fuel extraordinary results, says the author and he recommends several guidelines to apply this and reinventing your own work processes. An example he mentions is Progressive Insurance, which completely reinvented claims processing, slashing the waiting time for vehicle repair estimates from ten days to nine hours and catapulting sales from $1.3 billion in 1991 to $9.5 billion in 2002. Companies that bake operational innovation into their culture, as Progressive did, make competitors continually scramble to keep up.

Relationship to IMT/KSM Principles

- LS: continuous improvement; continuous improvement leads to achieve extraordinary results which correlate to another RS characteristic, constantly changing.

Article#7: Delusions of Success: How Optimism Undermines Executives' Decisions

Key quote from the authors is: “in planning major initiatives, executives routinely exaggerate the benefits and discount the costs, setting themselves up for failure”.

The authors start the article by mentioning several examples of cases and projects that had expectations and were never reached, creating a great loss. They mentioned that most large capital investment projects come in late and over budget, never living up to expectations. More than 70% of new manufacturing plants in North America close within their first decade of operation. Approximately three-quarters of mergers and acquisitions never pay-off; the acquiring firm’s shareholders lose more than the acquired firm’s shareholders gain. And efforts to enter new markets fare no better; the vast majority end up being abandoned within a few years.

According to standard economic theory, the high failure rates are simple to explain: the frequency of poor outcomes is an unavoidable result of companies taking rational risks in uncertain situations.

The analysis of this phenomenon made by the authors, suggest that these failures are due to seeing it as a consequence of flawed decision making. When forecasting the outcomes of risky projects, executives all too easily fall victim to what psychologists call the “planning fallacy”. Managers make decisions based on delusional optimism rather than on a rational weighting of gains, losses, and probabilities; overestimate benefits and underestimate costs; spin scenarios of success while overlooking the potential for mistakes and miscalculations. As a result, managers pursue initiatives that are unlikely to come in on budget or on time or to ever deliver the expected returns.

Relationship to IMT/KSM Principles

- LS: no expectations; using a delusional optimism rather than a rational analysis lead to failure.
- LS: no decisions; making decisions is pursuing initiatives that are unlikely to deliver returns.

Article#8: Don't Trust Your Gut

Author's key quote is: Intuition plays an important role in decision making, but it can be dangerously unreliable in complicated situations. A new set of analytical tools can help you leverage your instinct without being sabotaged by its weaknesses.

A survey conducted in May 2002 by executive search firm Christian & Timbers reveals that fully 45% of corporate executives now rely more on instinct than on facts and figures in running their businesses. The trust in intuition is also dangerous; intuition has its place in decision making but, anyone who thinks that intuition is a substitute for reason is indulging in a risky delusion.

The author says that we remember the examples of hunches that pay off but conveniently forget all the ones that turn out badly. He mentions the following examples: FedEx's Fred Smith also launched ZapMail, a proprietary network for fax transmissions that bombed. Michael Eisner was responsible for the debacle of the EuroDisney opening, not to mention recent box-office turkeys The Country Bears and Treasure Planet. George Soros lost a fortune speculating in Russian securities in the late 1990s and then promptly lost another one betting on tech stocks in 2000. And as for AOL's Pittman, his instinctive belief that the company's future lay in advertising rather than subscriptions now appears to be less a brilliant insight than a brilliant mistake and one of the reasons he's no longer employed at AOL. The author brings up this quote: "the unhappy fact that we'd prefer not to admit to ourselves is this: for every example of a great gut decision, there's an equal and opposite example of a terrible one".

Relationship to IMT/KSM Principles

- LS: no decisions; making decisions based on intuition instead of analytical methods increases risk.

Article#9: Evidence-Based Management

Authors start the article by asking this question: Why don't managers make use of the facts about what works out there when dealing with their work?

An example in medicine is mentioned; where David Sackett, the individual most associated with evidence-based medicine, gives a definition as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients".

Authors say how we are woefully naive about how doctors have traditionally plied their trade. They mentioned the research is out there, thousands of studies are conducted on medical practices and products every year and unfortunately, physicians don't use much of it. Recent studies show that only about 15% of their decisions are evidence based. For the most part, instead doctors rely on: obsolete knowledge gained in school, long-standing but never proven traditions, patterns gleaned from experience, the methods they believe in and are most skilled in applying, and information from hordes of vendors with products and services to sell. And to compare this to companies, the same behavior holds true for managers looking to cure their organizational ills. Managers seeking the best evidence also face a more vexing problem than physicians do say the authors: "because companies vary so wildly in size, form, and age, compared with human beings, it is far more risky in business to presume that a proven "cure" developed in one place will be effective elsewhere".

The article mentions that it makes sense when managers act on better logic and evidence, their companies will trump the competition. That is why research is increasing, especially during the last five years, working to develop and surface the best evidence on how companies ought to be managed and teaching managers the right mind-set and methods for practicing evidence-based management.

The article mentions some jokes and sayings: cites a common joke amongst medical specialists: “If you want to have an operation, ask a surgeon if you need one”. Similarly, if your business needs to drum up leads, your event planner is likely to recommend an event, and your direct marketers will probably suggest a mailing. The old saying “To a hammer, everything looks like a nail” often explains what gets done.

Relationship to IMT/KSM Principles

- LS: information; not having or not accessing the available information leads to make decisions.
- LS: no decisions; making use of the information avoids decisions, leading to better results.

Article#10: Home Depot’s Blueprint for Culture Change

This article talks about the impact of having a change in a company and in words from the authors is summarized as follows.

When Robert Nardelli arrived at Home Depot in December 2000, the deck seemed stacked against the new CEO. He had no retailing experience and, in fact, had spent an entire career in industrial, not consumer, businesses. His previous job was running General Electric’s power systems division.

Nardelli also was taking over what seemed to be a wildly successful company, with a 20-year record of growth that had outpaced even Wal-Mart’s but, with latent financial and operational problems that threatened its continued growth, and even its future, if they weren’t quickly addressed.

To top it off, Nardelli’s exacting and tough-minded approach, set him on a collision course with the freewheeling yet famously close-knit culture fostered by his predecessors, Home Depot’s legendary cofounders, Bernie Marcus and Arthur Blank. It was this culture that Nardelli had to reshape if he hoped to bring some big-company muscle to the entrepreneurial organization.

Nardelli tackled the challenge partly through personal leadership, mixing encouragement with ultimatum and fostering desired cultural norms like accountability through his own behavior. He also adopted and adapted an array of specific tools designed to gradually change the company's culture. Nardelli signaled that changing the culture would be central to getting the company where it needed to go.

Over the past five years, Home Depot's performance has indeed been put on a stable footing. Although its share price is well below the peak it achieved shortly before Nardelli arrived, and the rate of revenue increase has cooled from the breakneck pace of the late 1990s, the company continues to enjoy robust and profitable growth. Revenue climbed to around $80 billion in 2005, and earnings per share have more than doubled since 2000. Just as important, a platform has been built to generate future growth.

Relationship to IMT/KSM Principles

- LS: change; this article shows how constantly changing can lead to increasing good results.
- LS: no traditions; the company's culture was one of tradition following the legendary cofounders thinking.

Article#11: How Can I Delegate More Effectively

The author suggests that to delegate, you must first "delegate more effectively, don't just delegate more frequently". He also suggests if we delegate an assignment to a person who lacks the motivation and ability to do the job, we do a disservice to both the person and our organization; we need to delegate only to people who are ready to handle the challenge.

In order to this the authors recommends to first identify who you have on your team or your direct reports, what they are capable of, then assign, align the team and get the results.

Relationship to IMT/KSM Principles

- LS: type "A" individuals; in all organization there are type A and type C individuals; you must know who you have on your team so you can align the resources properly.
- LS: alignment, once you have identified the resources available you must align them to maximize results.
- LS: efficiency; to delegate is a good practice as long as it's done efficiently.

Article#12: How Successful Leaders Think

In this article the key quote from the authors is: the secret to becoming a great leader? Don't act like one; instead, think like one.

The main idea says the author is that brilliant leaders excel at integrative thinking. They can hold two opposing ideas in their minds at once. Then, rather than settling for choice A or B, they forge an innovative "third way" that contains elements of both but improves on each. The reward says the author is that instead of making unattractive trade-offs, you generate a wealth of profitable solutions for your business.

The steps suggested by the author on what "integrative thinking" means are: 1) Identifying Key Factors, whereby they seek less obvious but potentially more relevant considerations; 2) Analyzing Causality, considering multidirectional relationships; 3) Envisioning the Decision's Overall Structure, where they see a problem as a whole, examining how its various aspects affect one another; and finally 4) Achieving Resolution, in which conventional thinkers make either-or choices/decisions while integrative thinkers refuse to accept conventional options.

Relationship to IMT/KSM Principles

- LS: no decisions; when people face with analyzing situations and a decision is made in regards the outcome it's just like ignoring the facts.
- LS: fast processing speed; type A gather and process information to approach and have a faster processing cycle because of their integrative way of thinking.

Article#13: Investigative Negotiation

The key quote of this article says it all, it's all about "information"; in the authors' words "the best way to get what you're after in a negotiation, sometimes the only way, is to approach the situation the way a detective approaches a crime scene.

The problem is that most negotiators wrongly assume that they understand the other side's motivations and, therefore, don't explore them further. An example case is presented of a negation case where initially, assumptions were being made and the deal was not going to happen and, after further investigations of the real situation and excluding assumptions, and approach taking the gathered information was taken and the deal took place.

Relationship to IMT/KSM Principles

- LS: information; get all information and plan accordingly, this will avoid erroneous assumptions that could lead to failure.

Article#14: Learning to Lead at Toyota

The article mentions how Toyota's vaunted production system (TPS), which uses simple real-time, experiments to continually improve operations; where they consistently achieve: unmatched quality, reliability, and productivity; unparalleled cost reduction; sales and market share growth; and market capitalization.

The technique of total immersion training is presented as a way of how leadership trainees directly observe people and machines in action, watching for and addressing problems as they emerge. Through frequent, simple experiments, such as relocating a switch, adjusting computer coding, they test their hypotheses about which changes will create which consequences. And they receive coaching, not answers, from their supervisors. Several examples of these trial and error experiments are presented and how they all lead to continuous improvement.

Relationship to IMT/KSM Principles

- LS: experiments with trial and error; having experiments with trial and error within the organization, will lead to find best ways of doing things, contributing to the continuous improvement process.
- LS: continuous improvement; continuous improvement leads to achieve extraordinary results.

Article#15: Lessons from Toyota's Long Drive: A Conversation with Katsuaki Watanabe

An interview with Toyota's president, Katsuaki Watanabe, reveals some of the successful practices put in place by Toyota, leading to a position among the top for quality, reliability and durability. For Watanabe, being number one means "being the best in the world in terms of quality". If Toyota's quality continues to improve, he says, volume and revenues will follow. Watanabe aims to achieve his goals through a combination of "kaizen" (continues improvement) and "kakushin" (radical innovation). One of his visions for the future is a "dream car": a vehicle that cleans the air, prevents accidents, promotes health, evokes excitement and can drive around the world on a single tank of gas.

Relationship to IMT/KSM Principles

- LS: continuous improvement; continuous improvement leads to achieve extraordinary results such as quality.
- LS: creativity; creativity leads to achieve better results/products/services through innovation.
- LS: quality; having quality as a core value within an entity leads to achieve very good results.

Article#16: Performing a Project Pre-mortem

Many projects fail at a spectacular rate, this article mentions that one of the reasons is that too many people are reluctant to speak up about their reservations during the all-important planning phase. By making it safe for dissenters who are knowledgeable about the undertaking and worried about its weaknesses to speak up, you can improve a project's chances of success.

Research done by some fellows at Cornell University and University of Colorado, found that imagining that an event has already occurred increases the ability to correctly identify reasons for future outcomes by 30%. The process suggested by the authors to do this is the pre-mortem, where a pre-mortem is the hypothetical opposite of a post-mortem. A pre-mortem in a business setting comes at the beginning of a project rather than the end, so that the project can be improved rather than autopsied. Several examples for successful projects using this method are mentioned, such as a project to make state-of-the-art computer algorithms available to military air-campaign planners and how doing this exercise made a team member who had been silent during the previous lengthy kickoff meetings volunteered that one of the algorithms wouldn't easily fit on certain laptop computers being used in the field, having the software take hours to run when users needed quick results, situation very impractical; turning this out into a powerful shortcut to be created and re-programmed before the project was kicked off and, ended the project went on to be highly successful.

The article finalizes by showing a summary of the great results than can be achieved through this process, saying that although many project teams engage in pre-launch risk analysis, the pre-mortem's prospective hindsight approach offers benefits that other methods don't; by helping teams to identify potential problems early on; reducing what the author calls the kind of "damn-the-torpedoes" attitude, often assumed by people who are over-invested in a project and, by describing weaknesses that no one else has mentioned, team members feel valued for their intelligence and experience, and others learn from them. The exercise also sensitizes the team to pick up early signs of trouble once the project gets under way. The final quote the author makes in the article is: "in the end, a pre-mortem may be the best way to circumvent any need for a painful postmortem".

Relationship to IMT/KSM Principles

- LS: look far ahead/pre-planning; looking far ahead on any project will maximize the information gathering and will help improve the results
- LS: information; having all necessary information before a project begins lines toward predicting the outcome and improving the results.
- In general, the article shows a system that maximizes the amount and relevancy of information that can be gathered before the execution of a project with the purpose of predicting the outcome

Article#17: The Triple-A Supply Chain

This article mentions that traditionally, the holy grails of supply chain management were thought as “high speed and low cost” but, the authors also mentions that, and putting some companies as examples such as Wal-Mart, Amazon, Dell Computer, those characteristics aren’t good enough and a supply chain should also be: Agile, Adaptable and Aligned; Triple-A, the tile of this article.

He explains more of these other three characteristics. Agile: responding quickly to sudden changes in supply or demand, handling unexpected external disruptions smoothly and, recovering promptly from shocks. Adaptable, evolve over time with economic, political, demographic, technological changes. Align: align the interests of all participating firms in the supply chain with their own and with this, having each player maximizes its own interests which consequently optimize the chain’s performance as well.

A good example of these supply chain characteristics is mentioned and explained by the author as follows. Convenience-store chain Seven Eleven Japan (SEJ) builds supply chain agility by using real-time systems to detect changes in customer preferences and track sales and customer data at every store. Satellite connections link stores with distribution centers, suppliers, and logistics providers. SEJ reallocates inventory among stores and reconfigures store shelves three times daily to cater to different customer

groups at different hours. SEJ's adaptability is legendary. Within six hours after the 1995 Kobe earthquake, SEJ overcame highway gridlock by mobilizing helicopters and motorcycles to deliver 64,000 rice balls to its stores in the beleaguered city. SEJ fosters alignment by making partners' incentives and disincentives clear. For example, when carriers fail to deliver on time, they pay a penalty. But SEJ also helps carriers save money by forgoing the typical time-consuming requirement that store managers verify all contents of each delivery truck.

Relationship to IMT/KSM Principles

- LS: no tradition, following the traditionally thought methods of having a "good" (speed and cost) supply chain may not give you the required competitive advantage in the industry you're in
- LS: agile; by agile you're able to respond to sudden changes.
- LS: adaptable; being adaptable makes you change effectively.
- LS; aligned; in this case alignment is used with the purposing of maximizing the interests of all participants of the supply chain.

Article#18: What You Don't Know About Making Decisions

This article shows that making a good decision, or predicting the outcome, is not based on a mere decision without taking into account all factors but on a process that does it. Their research shows, in words of the author, that the difference between leaders who make good decisions and those who make bad ones is striking. The former recognize that all decisions are processes, and they explicitly design and manage them as such. The latter persevere in the fantasy that decisions are events they alone control.

Two approaches are defined or categorized by the authors. Inquiry, a very open process designed to generate multiple alternatives, foster the exchange of ideas, and produce a well-tested solution; approach that doesn't come easily or naturally to most people the authors say. Instead, groups charged with making a decision tend to default to the second mode, what they call advocacy (Table E.1).

Table E.1

Two approaches to Decision Making (Garvin and Roberto, September 2007)

Two Approaches to Decision Making

	Advocacy	Inquiry
Concept of decision making	a contest	collaborative problem solving
Purpose of discussion	persuasion and lobbying	testing and evaluation
Participants' role	spokespeople	critical thinkers
Patterns of behavior	strive to persuade others defend your position downplay weaknesses	present balanced arguments remain open to alternatives accept constructive criticism
Minority views	discouraged or dismissed	cultivated and valued
Outcome	winners and losers	collective ownership

Relationship to IMT/KSM Principles

The two approaches to making decisions are explained by the authors with some opposite characteristics:

- LS: testing and evaluation (vs. persuasion and lobbying);
- LS: critical thinkers (vs. spokespeople);
- LS: open to alternatives;
- LS: accept constructive criticism (vs. downplay weaknesses);
- LS: cultivated and valued (vs. discourage or dismissed);
- LS: collective ownership/win-win (vs. winner and losers).

Article#19: Why Don't Leaders Learn From History?

The article mentions that leaders have plenty of trouble learning from the lessons of history, maybe it's because business and political leaders are supposed to be looking forward. The authors suggest that a few looks back may have even helped them prevent the same mistakes that others have committed.

The author asks this question: "what prevents people in power from exercising the perceptive judgment that enabled them to reach the pinnacle of success?" He intends to respond to it by saying: "in some cases, it may be their ability to take big gambles and

succeed that sets in a false sense of security and invulnerability. It may be that they fail to seek advice or actively discourage differences of opinion when they move up the organization".

The articles finalizes by showing a quote from Pearl S. Buck, "knowledge of history as detailed as possible is essential if we want to comprehend the past and be prepared for the future".

Relationship to IMT/KSM Principles

- LS: information; ignoring the information we have in front may lead to erroneous decisions.

Article#20: You Either Have It or You Don't

In this article the authors propose what are the most critical leadership skills and how they can be taught.

The most critical skill is mentioned as adaptability, the ability to change and be flexible through the different circumstances, to recognize it and to accommodate it.

Relationship or people skills are also brought to our attention, whereby people move up the organizational hierarchy because they've been really terrific at bringing their particular area of expertise to bear on business situations and then, when they accede to senior roles, they can stumble because they try to apply this same professional expertise to a problem that really requires savvy people skills.

Another skill pointed out is to know how to delegate avoiding the "hand-holding" behavior, resulting in an organization functioning much more effectively and efficiently.

Finally, they give a final quote which says to clarify our purpose by being able to measure the risk we are willing to take risks and on behalf of what; to assess our own resources and constraints and that with self-awareness, we can create a plan of action.

Relationship to IMT/KSM Principles

- LS: adaptability; meaning that in order to be successful the ability to change has to be present.
- LS: no technical; they present this in a way that trying to apply the technical skills is not suitable for all situations
- LS: no control; by being a “hand-holding” manager you’re trying to control others, minimizing yours and their productivity
- LS: information; the measurement of risks is pointed out in terms of getting the required information upfront to plan the further steps of action

Article#21: Your Company’s Secret Change Agents

The authors start with this key quote: “somewhere in your organization, groups of people are already doing things differently and better. To create lasting change, find these areas of positive deviance and fan their flames”. They define a concept called “change management” by bridging the gap between what is happening and what is possible.
The proposal is to change the traditional process of creating organization change of “digging deep to uncover the root causes of problems, hiring experts or importing best-of-breed practices, and assigning a strong role to leaders as champions of change” for a new one, in which “one looks for indigenous sources of change within your organization” and where the key is to engage the members of the community you want to change in the process of discovery, making them the evangelists of their own conversion experience.
A six-step positive deviance model is presented as a way to implement this organization change.

Relationship to IMT/KSM Principles

- LS: change; changes in an organization contribute to solve problems and develop successful practices.
- LS: look vertical at 30k ft; companies look deep into their current structures can quickly find solutions and hence obtain better results.

- LS: no tradition, following the traditionally methods for implementing change may not give you the desired results when needed

Article#22: The art of the possible

This article is mainly about controls and the key quote is “a new study picks over the delicate political economy of freeing markets”.

This article is based on another publication, the third annual “Going for Growth” report, published on February 13th by the “Organization for Economic Co-operation and Development (OECD)”, where they explain why reform meets resistance and how opposition might be overcome. This report looks at structural reforms, policies that, for example, ease entry into goods markets; cut the costs of firing and hiring; or relax barriers to foreign ownership with the purpose of helping close the gap between the richest OECD countries (measured by Gross Domestic Product -GDP per person) and the rest.

Relevant data from this report is presented, in which for example, the author mentions that Europeans may be feeling rather pleased with themselves now, because the Euro zone's economy grew by 3.3% in the fourth quarter of 2006, compared with a year earlier, its fastest pace for more than six years. And this is due to the markets being freer than they were, several million jobs have been created and the Euro area's natural rate of unemployment seems to have fallen by around a percentage point since its last upturn.

The OECD report's most disheartening conclusion says the author, is that “reform must often wait for the sting of a crisis”. This is borne out, it says, by the experiences of Britain in the late 1970s, the Netherlands and New Zealand in the 1980s and by Italy in the early 1990s; where governments seem more likely to loosen their product and labor markets when GDP is more than 4% below potential. The author suggests that policymakers may think this finding is of little use: “calling forth catastrophe is an odd way of promoting prosperity; however, it does serve as a useful warning”. The author mentions that it would be better to carry it out during less painful interludes.

The article mentions that monetary policy can also “grease the wheels”. An example is mentioned as when cutting tariffs or opening industries to new entrants ought in theory to increase supply and reduce inflationary pressures.

Relationship to IMT/KSM Principles

- LS: no control/liberal; the article shows that freeing markets will increase economic results in a region.
- LS: no change; it shows how being resistant to change will not produce a desirable outcome.

Article#23: The turning point

This article shows the characteristics that come along with economic growth and stability. It makes an analysis of the economies from countries such as USA and other “Organization for Economic Co-operation and Development (OECD)” European members.

One indicator is brought up, since the mid-1980s America's unemployment rate has fluctuated far less than it did in earlier generations. Between 1961 and 1983, America's annual unemployment rate varied from 3.5% to 9.7%. Since 1984, it has stayed within the tighter bounds of 4% to 7.5%. A study published last year by Stephen Cecchetti, of Brandeis University, Alfonso Flores-Lagunes, of the University of Arizona, and Stefan Krause, of Emory University, found that 16 out of 25 OECD economies, including Britain, Germany, Spain and Australia, had also seen a marked improvement in economic stability. The author asks: “What lay behind that change? The skeptical view is that improved stability has no cause: it is mostly down to luck”. The proposed response on this improved economic stability is by explaining that economies were more hidebound then than now: job markets were less flexible and producers more stymied by regulation. The key factors that respond to this increase ability are:

- “The flexible economy”: more likely explanation is that economies have become far better at absorbing shocks, because they are more flexible; with structural

shifts ranging from globalizations to the decline of manufacturing in the rich world. Academic literature mentions three structural shits, improvements in managing stocks of goods, the financial innovation that expanded credit markets, and wiser monetary policy. The same study mentioned earlier, calculates that, on average, more than half the improvement in the stability of economic growth in the countries they studied is accounted for by diminished inventory cycles because technological improvement and this is irreversible. This means the greater stability it provides is likely to be permanent.

- "The economic shuffle": credit was strictly rationed until a wave of deregulation and innovation during the 1980s and 1990s led to an expansion. That, in turn, gave a wider range of firms and consumers the means to plug temporary gaps in spending power. The use of techniques to assess the risk of default, together with the repackaging of loans into marketable securities suitable for savers, has broadened access to borrowed funds and broken the rigid link between income and spending; these are all valuable advances that smooth out the business cycle. In principle the author says, controlling inflation helps steady the economy. High inflation tends to be volatile and research has shown that erratic inflation and large fluctuations in GDP growth tend to go hand in hand (Figure E.1).

Figure E.1 - Volatility of GDP growth (Briefing: The Economist, 2007)

- "The shock-absorber that shocked": the author mentions this key quote "although it is perverse to argue the golden age has not been tested, it would be foolish to rule out a shock (or combination of shocks) that might break the economy's resilience" and he mentions the seeming vulnerability of housing markets as an example. This vulnerability makes think that one of the mechanisms which helped stabilize growth has suddenly become a threat to it; in which financial innovation is central to the Great Moderation, but its most recent creations allowed credit to be extended on too easy terms. As central banks try to mitigate these risks to growth, the danger is that they become complacent about inflation and, an example is cited on this potential danger.

The article finalizes with a several conclusions. One that says in essence, "the markets are betting the Fed can save the day", by taking the necessary methods to prevent a recession based the previous business cycles behaviors.

The global economy has proved to be far more resilient than had often seemed likely and, it showed very few signs of trouble before the

credit-market dislocations, mostly because growth outside the rich world has been strong. In July the "International Monetary Fund (IMF)" revised down its projections for economic growth in America for this year, but still upgraded its global economic forecasts because of the strength of the emerging markets. These economies says the author, a source of a big shock only a decade ago, could now prove to be a stabilizing force for the world economy. Thanks to their cushioned foreign-exchange reserves, the fast-growing economies of Asia and the Middle East are now less dependent on capital markets to fuel their growth.

Relationship to IMT/KSM Principles

- LS: flexible; research studies shown that a "flexibility" as an indicator of economic growth and stability.

- LS: use performance information: this is reflected on how the FED is taking the necessary steps, based on previous performance information of the business cycles, to prevent an impact on the economy.

Article#24: CEOs Misperceive Top Teams' Performance

A new research conducted jointly by the Leadership Consulting practice of the executive search firm Heidrick & Struggles and the University of Southern California's Center for Effective Organizations suggests that CEOs have a rosier view of senior management's performance than other top team members do. In a global survey of 124 CEOs and 579 other senior executives at large and midsize firms from a range of industries, 52% of the non-CEOs said that their teams were doing poorly in critical areas such as thinking innovatively, cross-marketing, leading change, overseeing talent development, and building a company culture. Just 28% of the chief executives reported problems in these areas. Rating their teams' overall effectiveness on a seven-point scale (seven being the best), the CEOs gave an average score of 5.39, whereas the other executives gave an average score of only 4.02.

The authors say that it seems that CEOs are the executives who need a reality check and they explain some factors that could be affecting this.

Some CEOs prefer to weigh their options in private or to act on their own after having group discussions or one-on-one meetings with team members, this seems to leave their teams out of a key part of the process: the final deliberation and consequently, the other executives understandably give themselves low marks for performance and for their ownership of team outcomes, by feeling powerless.

The failure to move on an idea right away often indicates a team's lack of commitment to it. Since everyone has ostensibly signed off, the CEO assumes that the entire group is on board and that progress is imminent; meanwhile, silent dissenters let the idea wither through inaction.

Where there is no conflict, there is no passion. Avoiding disagreement means avoiding the really tough discussions, which almost inevitably require a higher level of engagement. In an always placid meeting room, a CEO may see consensus where a more objective observer would see conformity.

In regards these three factors, the authors propose for CEOs to ask three questions to themselves: Does my team make decisions in meetings? If we do make decisions in meetings, are they implemented shortly thereafter? Do meetings allow for lively conflict? This would help them have a better sense of whether he and his team view their performance differently. If they do, management can get started on the hard work of true alignment; it will then become clear where performance really stands and what needs improvement (Figure E.2).

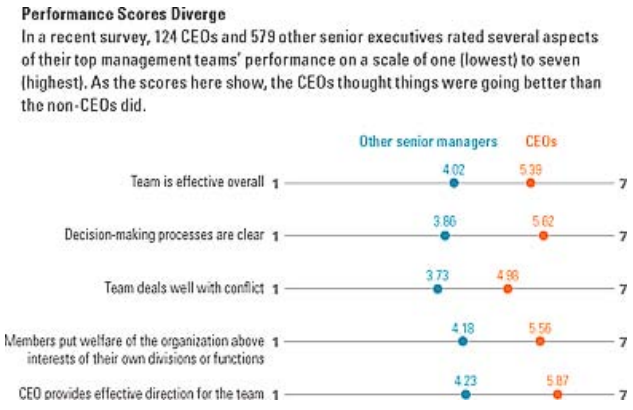

Figure E.2 - Performance Scores Diverge (Rosen and Adair, 2007)

Relationship to IMT/KSM Principles

- LS: no expectations; making assumptions about the performance of the team can lead to false expectations.
- LS: information; the authors suggests that a better assessment of the team can be made by getting more information.
- LS: alignment; finally, the authors say that having a better assessment of performance can lead to better alignment as well.

Article#25: Who Needs Budgets?

The authors suggest that budgeting, as most companies practice it, should be abolished. They justified this by saying it's simply the next logical step following everything else you've already done to eradicate command-and-control hierarchies in your company and enable it to adapt to changing market conditions. Abolishing budgets will free up even more of your employees' creativity, self-motivation, and willingness to share information, which are essential ingredients for any firm's agility. Two main ideas are presented to explain this proposal, raising the bar and key measures.

Doing this change is like "raising the bar even higher". Instead of demanding that managers and business units meet fixed targets, ask them to do something much tougher: measure them-selves against how well their competitors will have done during the same period. Unable to discern whether they've succeeded until the period ends, they exert every ounce of energy and ingenuity to beat the competition and, rather than taking short-term actions designed solely to save the credibility of forecasts, they focus on improving their long-term competitive position.

When budgets are abandoned, you enable alternative measures to move to the foreground; measures such as key performance indicators (KPIs) such as profits, cash flows, customer satisfaction, cost-to-income ratios, time to market and quality. Many companies that have rejected detailed budgets in favor of KPIs also use rolling forecasts say the authors. Created every few months, these forecasts typically cover five to eight quarters. They're revised regularly, allowing companies to continuously adapt to shifting market conditions.

A successful example is presented and described in words from the authors: "the Swedish international bank "Svenska Handelsbanken" replaced budgeting with new organizational structures and performance metrics. To promote a sense of ownership and accountability, it created 600 profit centers, making them responsible for reducing costs, satisfying customer needs, and boosting income. Regions and branches compete

with one another, spurred by prominently displayed standings. Branch managers determine resource allocation, staffing levels, and salaries. Rolling forecasts signal cash-flow improvements or declines and trigger the actions required to ensure adequate liquidity". The successful results of this example are explained like this: since the early 1970s, the company has outperformed its Scandinavian rivals on almost every measure, including return on equity, total shareholder return, and customer satisfaction. It's also one of the world's most cost-efficient banks—achieving a cost-to-income ratio of 45% and, few of its loans go bad because frontline people have the authority to approve loans.

Relationship to IMT/KSM Principles

- LS: no control; by eradicating the command-and-control hierarchies the ability to adapt to changing market conditions in a company increases.
- LS: use performance information; how using "key performance indicators" will lead to achieve better results.

Article#26: Manage Your Human Sigma

The authors start the article with this key quote: "companies routinely assess the quality of manufacturing processes but, what about the quality of employees' dealings with customers?" Unpleasant employee-customer encounters damage revenues and profits. It's mentioned that to elevate the quality of these shared experiences in every part of your company you can start by measuring employees' and customers' emotional engagement with your organization. Energized and committed employees engage customers and work more productively. One study in mentioned in which companies that applied these practices outperformed peers by 26% in gross margins and 85% in sales growth.

The steps suggested by the authors to perform this quality assessment are:

- Assess emotions such as for employees, monitor energy level and strength of commitment and for customers, assess confidence, pride and passion.
- Measure encounters locally, which is to measure the employee-customer encounters at the work-group level.

- Centralize responsibility for measurement, which is to bring these data together for analysis on one platform.
- Develop local managers, to encourage managers to use training, performance reviews, and coaching to foster employees' learning and correct performance shortfalls.

Relationship to IMT/KSM Principles

- LS: no quality; the authors present how the measurement of quality should not only be partial but total.

LS: use performance information; the information should be assessed and measured with the purpose of developing improving processes.

Article#27: The Chinese Negotiation

The main idea is presented by the authors as follows: "preparing for a business trip to China armed with a list of etiquette how-to's, stacks of business cards, and that conservative suit. These may get you through the door at your Chinese counterpart's company but they won't help you forge the long-term associations Chinese and Western businesses can now achieve". For how to achieve this goal the authors say that you need to understand the broad context of Chinese culture and values and their impact on the Chinese negotiating style. Deep cultural differences have created seemingly incompatible contrasts between Chinese and Westerners' approaches to negotiation. Often, Chinese businesspeople see Americans as aggressive, impersonal, and excitable. Westerners may see Chinese negotiators as inefficient, indirect, and even dishonest. The consequence is that business communications repeatedly break down. How to achieve this? By the understanding the Chinese negotiation style. A few cultural threads and some negotiations elements are explained in detail in the article.

Cultural threads: agrarianism, culture that emphasizes cooperation, harmony, and obedience to familial hierarchy; morality, seeking "the way" between yin (passive) and yang (active) forces in which the best compromises result from the ritual back-and-forth

of haggling; a pictographic language, Chinese thinking tends toward more holistic processing of information and emphasizes the big picture over details and; wariness of foreigners, millennia of external and internal strife have yielded a mistrust of strangers and cynicism about rules.

Negotiation elements: Guanxi (based on personal connections); Zhongjian ren (the intermediary with strangers is necessary); Shehui dengji (social status in negotiations, high-level to high-level); Renji hexie (interpersonal harmony through friendships and positive feelings); Zhengti guannian (holistic thinking emphasizing the whole package over details); Jiejian (thrift bargain intensely over price); Mianzi ("face" or social capital); Chiku nailao (endurance, relentlessness of hard work in which Chinese prepare diligently for negotiations and expect long bargaining sessions, be prepared).

Relationship to IMT/KSM Principles

- LS: no assumptions; making assumptions that negotiating with Chinese is the same as what we're used to it will not take you through.
- LS: information; in order to be successful on negotiations with Chinese we have to get all cultural information in order to understand their way of doing this and plan our strategy accordingly.

Article#28: The High Cost of Low Wages

This article compares the two largest wholesale retailers of the country. Consider Costco and Wal-Mart's Sam's Club, which compete fiercely on low-price merchandise. Costco being number one with 338 stores and 67,600 full-time employees with 50% of the market and. Sam's Club being number two with 551 stores and 110,200 employees with about 40% of the market.

The study by the author shows that the average wage at Costco is $17 an hour and, Wal-Mart does not break out the pay of its Sam's Club workers, but a full-time worker at Wal-Mart makes $10.11 an hour on average. On the benefits side, 82% of Costco employees have health-insurance coverage, compared with less than half at Wal-Mart. Costco

workers pay just 8% of their health premiums, whereas Wal-Mart workers pay 33% of theirs. 91% percent of Costco's employees are covered by retirement plans, with the company contributing an annual average of $1,330 per employee, while 64 percent of employees at Sam's Club are covered, with the company contributing an annual average of $747 per employee. These practices from Costco are clearly more expensive, but they have an offsetting cost-containment effect: turnover is unusually low, at 17% overall and just 6% after one year's employment. In contrast, turnover at Wal-Mart is 44% a year, close to the industry average. In skilled and semi-skilled jobs, the fully loaded cost of replacing a worker who leaves, excluding lost productivity, is typically 1.5 to 2.5 times the worker's annual salary.

A comparison between these two companies is made, assuming the total cost of replacing an hourly employee is only 60% of his or her annual salary. The cost of replacing a Costco employee is $21,216 while for a Sam's Club employee is $12,617. At first glance, it may seem that the low-wage approach at Sam's Club would result in lower turnover costs but, the turnover rate is different. Wal-Mart's Sam's Club loses more than twice as many people as Costco does: 44% versus 17%. Hence, the total annual cost to Costco of employee churn is $244 million, whereas the total annual cost to Sam's Club is $612 million. That's $5,274 per Sam's Club employee, versus $3,628 per Costco employee.

Another interesting fact is that While Sam's Club and Costco generated $37 billion and $43 billion, respectively, in U.S. sales last year; Costco did it with 38% fewer employees. Costco generated $21,805 in U.S. operating profit per hourly employee, compared with $11,615 at Sam's Club. This makes Costco's stable and productive workforce offsets its higher costs.

These figures challenge the common assumption that labor rates equal labor costs; a cost-leadership strategy need not be a race to the bottom said the author.

Relationship to IMT/KSM Principles

- LS: no assumptions; making assumptions that lower wages will in fact translate in lower cost, without knowing all information leads to an incorrect approach.
- LS: no information; not having all information can lead to an incorrect assumption.

Article#29: The Earnings Game: Everyone Plays, Nobody Wins

The key quote from the author is “quarterly-earnings reports say little about a company’s financial health and yet this number dominates and distorts executives’, analysts’, investors’, and auditors’ decisions”.

The article mentions that this collective emphasis on quarterly earnings spawns sleazy practices that can destroy companies. Many of these practices entail “borrowing” sales and profits from the next quarter to cover the current quarter’s shortfall. An example is presented where this potential danger and its possible effect can be seen. To inflate earnings, appliance maker Sunbeam sold millions of dollars of backyard grills to Sears and Wal-Mart in midwinter, booking the sales but allowing deferment of payment until spring. By summertime, the retailers already had enough grills, so Sunbeam had no fresh revenue to cover its “borrowed sales”. Humiliated, Sunbeam had to restate several quarters of revenue and earnings. Its CEO was ousted; its customers and investors felt betrayed. Sunbeam filed for bankruptcy protection in February 2001.

The final recommendation from the author is to stop earnings-game abuses by the executives taking action. One possibility he mentions: introduce a range of quantifiable value measures in addition to quarterly earnings; e.g., training investments, patent-royalty income, new-product introductions and forbid managers from making “stupid business decisions for the sake of steady earnings”.

Relationship to IMT/KSM Principles

- LS: information; not having or ignoring the real information of revenues and their recognition will tend to force the executives to make a decision on when to recognize it.

- LS: no decisions; making decisions about when to recognize revenue without being realistic or ignoring the real information can cause a catastrophic effect on a company.

Article#30: So You Think You Understand Revenues

Key quote: “revenue is one of the most misunderstood, mismanaged, and neglected measures in business. Consequently, many executives still rely on gut feel, rather than on hard data, to make revenue decisions; this often destroys value in the process and, has happen in the dozens of companies studied”.

The authors explain in detail the definition of revenue and its behavior as follows. Companies often assume that the armies of accountants and sophisticated technologies they bring to bear on costs can also illuminate their revenues. But revenues and costs behave fundamentally differently. Costs are active; they directly cause future effects. The relationship of volume to cost of goods is generally linear, and most management accountants tend to use linear equations in calculating cost-volume relationships. In contrast, revenues are the passive (and often indirect) result of past activity, so understanding them involves looking back in time at the many events that influenced current sales and the nonlinear relationships that govern them. To fully understand their revenues, companies should recruit skilled financial-modeling and econometrics specialists. Just as important, train board members, as well as senior and middle managers, in the basics of revenue measures. The new modeling specialists can deliver detailed revenue reports, but the people who make strategy must know how to use them.

Relationship to IMT/KSM Principles

This article shows basically the same two principles that the previous article, “The Earnings Game” shows and, in related in the same manner.

- LS: information; not having or ignoring the real information of revenues and their recognition will tend to force the executives to make a decision on when to recognize it.

- LS: no decisions; making decisions about when to recognize revenue without being realistic or ignoring the real information can cause a catastrophic effect on a company.
- LS: no assumptions; assuming the revenue and cost behave in the same way is incorrect and analysis based on this assumption will be err as well.

Article#31: Using the Balanced Scorecard as a Strategic Management System

There's an Editor's Note that reminds in 1992, Robert S. Kaplan and David P. Norton's concept of the balanced scorecard revolutionized conventional thinking about performance metrics; by going beyond traditional measures of financial performance, the concept has given a generation of managers a better understanding of how their companies are really doing. These non-financial metrics are so valuable mainly because they predict future financial performance rather than simply report what's already happened. This article, first published in 1996, describes how the balanced scorecard can help senior managers systematically link current actions with tomorrow's goals, focusing on that place where" (Figure E.3).

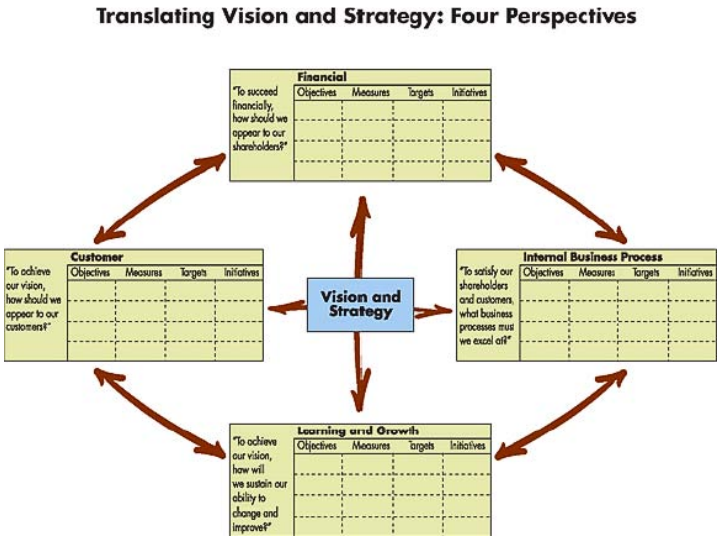

Figure E.3 – Four perspectives (Kaplan and Norton, 2007)

In this case, the balanced scorecard supplemented traditional financial measures with criteria that measured performance from three additional perspectives: those of customers, internal business processes, and learning and growth. The authors say: “as companies around the world transform themselves for competition that is based on information, their ability to exploit intangible assets has become far more decisive than their ability to invest in and manage physical assets”.

By making use of this tool, the authors propose that a new process for managing strategy is created and, this new process is the equivalent to the “Cycle of Learning” of IMT. This strategy is composed of four processes which are explained in detail in the article (Figure E.4).

Figure E.4 – Managing Strategy (Kaplan and Norton, 2007)

Relationship to IMT/KSM Principles

- LS: use performance information; how using “key performance indicators” will lead to achieve better results by predicting the future.
- LS: measurement; the use of measurement of performance is the key to getting the real fact information and be more competitive then.

Article#32: Emerging Giants: Building World-Class Companies in Developing Countries

Key quote from the authors is: “don’t look now, but rivals from developing countries are about to give you a run for your money”.

Various examples of these successful companies from developing countries are presented, such as “Mahindra & Mahindra”, Indian automaker; Guatemala’s “Pollo Campero” and others.

The authors then ask the following question: how to compete with such emerging giants? Don’t assume your multinational strength, big-name brands, sophisticated technologies, state-of-the-art innovation systems, will keep upstarts at bay. Instead, understand how emerging giants work around the lack of local business-enabling institutions (regulatory systems, contract-enforcing mechanisms). And analyze the steps they take to dominate their own markets, expand into other developing nations, and finally take on advanced economies.

A closer look at emerging giants’ competitive strategies is presented in the article, showing and explaining in detail the following: exploit Knowledge of Local Consumers (i.e.: Chinese appliance maker Haier learned that rural Chinese used its washing machines to clean vegetables; it modified the product to accommodate this need); Leverage Familiarity with Labor and Capital Markets (i.e.: Multinationals operating in India have difficulty sorting talent; Indian information technology companies, such as Infosys and Wipro, are familiar with local institutions and know where the talent resides) and; Treat Lack of Institutions as Business Opportunities (many developing countries lack institutions that facilitate commerce; local companies that take on these roles can build successful businesses).

Relationship to IMT/KSM Principles

- LS: no assumptions; assuming that your multinational strength will keep you in the in a most advantageous positions than local emerging companies from developing countries can make you lose competitiveness.

- LS: information; getting all information on how these emerging competitors are working will lead your company to be more competitive by approaching these techniques.

Article#33: The Hidden Dragons

This article main idea is the same from the one called “Emerging Giants” and the author’s key quote is: “Multinationals have ignored an important development: the emergence of Chinese companies as powerful rivals not only within China but also in the global market. Why? Many global managers assume that Chinese companies aren’t big enough or profitable enough, or sufficiently financed or equipped, to pose a threat”.

An explanation for this question is presented and, in words of the authors is like this “as the Chinese government encourages more private ownership of companies, firms that blend private and public ownership are tackling the global market. Though these companies enjoy state support, the government doesn’t interfere in their management. It permits them to list on the China stock exchange ahead of other companies and acquire other firms quickly. Armed with these advantages, some "mixed-ownership" companies have quietly grabbed market share from older, bigger, and financially mightier rivals in Asia, Europe, and the United States. Western managers who ignore these "hidden dragons" risk seeing them become their strongest rivals in the next five years.

Four groups are made to categorized these Chinese companies are simultaneously tackling the world market and, they are also explained in detail; they are: National Champions; Dedicated Exporters (leveraging their economies of scale, dedicated exporters set their sights on the external market), Competitive Networks (operating as a cohesive, interdependent entity, they take on world markets), Technology Upstarts (Chinese government built a large infrastructure for scientific and technological research, this encouraged scientists to become entrepreneurs in emerging industries).

Relationship to IMT/KSM Principles

- LS: no assumptions; assuming that your multinational strength will keep you in the in a most advantageous positions than local emerging companies from China can make you lose competitiveness.
- LS: information; getting all information on how these emerging competitors are working will lead your company to be more competitive by approaching these techniques.

Article#34: Regional Strategies for Global Leadership

The author starts the article by saying that many companies competing in foreign markets try to gain success by using a single worldwide strategy and the problem with this is that, despite globalization, regional distinctions such as cultural, political, legal and economical, are not disappearing. He says that contrary to this thought, in order to be successful companies have to capitalize on regional differences, crafting strategies that complement their global and individual country tactics and, a few global powerhouses are mentioned such as GE, Wal-Mart and Toyota. An example of how can this be achieved is mentioned and in words of the author is “use the “home base” strategy, locating your R&D and manufacturing in your country of origin, if the economics of concentration outweigh those of dispersion. Or use the “portfolio” strategy, establishing operations outside your home region that report to home base, if you need to average out economic cycles across regions. Shift among the five regional strategies, or combine them, as circumstances evolve”.

The author explains five regional strategies for serving foreign markets and summarizes in the next table (Table E.2).

Table E.2

Regional Strategies (Ghemawat, 2007)

Strategy	How to Implement	Example	Pros and Cons
Home base	Locate R&D and manufacturing in your country of origin.	Spanish fashion company Zara designs and makes items near its manufacturing and logistics hub in Spain and trucks them to Western European markets.	Lets you get time-sensitive items to market quickly, but you risk eventually running out of room to grow.
Portfolio	Establish operations outside your home region that report to home base.	Toyota applied its renowned production system (its distinct competitive advantage) to factories it built in the United States (its most important overseas market).	You accelerate growth in foreign regions and average out economic cycles across regions, but portfolio strategies take time to implement.
Hub	Build regional bases that provide shared resources and services to country operations.	Toyota began producing a limited number of locally exclusive models in its principal foreign plants. Each plant had its own platform, with products designed for sale within the region.	You add value at the regional level by catering to regional preferences, but you risk sacrificing cross-regional economies of scale.
Platform	Reduce the number of basic product platforms you offer worldwide.	Toyota has reduced the number of its vehicle platforms from 11 to 6 by allowing customization atop common platforms engineered for adaptability.	You achieve greater economies of scale in design, procurement, and other functions, thus delivering variety more cost-effectively, but taking platform standardization *too* far can backfire if regional customization creates excessive disparity across regions.
Mandate	Give certain regions mandates to supply particular products or perform certain roles for your entire organization.	Toyota's innovative International Multi-purpose Vehicle (IMV) project funnels common engines and manual transmissions for pickup trucks, SUVs, and minivans from Asian plants to four assembly hubs there and in Latin America and Africa. These parts are then forwarded on to major global markets except the U.S., where vehicles are larger.	You achieve economies of specialization as well as scale, but broad mandates can't handle variations in country, national, or regional conditions (which is why IMV excludes the U.S.).

Relationship to IMT/KSM Principles

- LS: information; ignoring the regional differences of the markets will lead you to ignore the power of creatively blending the regional strategies and force to make an assumption.
- no assumptions; making an assumption that a single worldwide strategy will be good enough to serve all international markets is mistaken and not lead to success.

Article#35: Find the Gold in Toxic Feedback

The key from the authors is "managers need feedback, even if it's biased, rude, off the mark, or irrelevant, and much of it is. The trick is learning to extract and decode the meaningful stuff and turn it into something usable". The authors classify the executives in two types, one category called "most managers" and another one they called "alchemist",

which are individuals who, in words of the authors, “are adept at transforming the base minerals of low-quality feedback into pure gold”. The differences among these are listed in the following table.

The definitions the authors give to the alchemist is the following “alchemists are able to avoid those traps and learn from even the most noxious or apparently useless comments. Their method has an emotional component that enables them to be aware of and manage their visceral reactions and a cognitive component that allows them to extract the useful information intelligently. They neither become obsessed with the feedback nor ignore it. The result is that they distinguish the message from the medium and focus on the information they need for the problems they face. They are able to look beyond the literal meaning and find valuable second- and third-order data about people’s perceptions, assumptions, and attitudes. They are able to focus on their strengths and place negative messages in the context of the positive feedback they have received in the past” (Figure E.5).

The Philosopher's Stone
Alchemists, who are skilled at turning toxic feedback into useful information, consistently react differently from most managers.

When the feedback is:	Most managers:	But alchemists:
Personally offensive	Allow anger and defensiveness to cloud their understanding	Listen carefully to the message while managing their emotions
	Provide explanations, which speakers usually dismiss as excuses	Don't immediately try to explain their actions
	Allow the emotional tone to escalate	Maintain a neutral tone
Inaccurate	Reflexively question the feedback's accuracy	Postpone accuracy considerations until later
	Focus on the feedback's inaccuracies	Focus on the accuracies
	React to the literal meaning	Look beyond the literal meaning to learn about people's perceptions, assumptions, and attitudes
Irrelevant	Focus on all of the feedback, pertinent or not	Focus on just the information that can help them deal with the problems they face
Unbalanced (exaggerates the negative and ignores the positive)	Lose touch with their own strengths and so remain vulnerable to obsessing about their weaknesses	Place negative feedback in the context of prior positive feedback from others, as well as generate their own internal positive feedback messages

Figure E.5 – The Philosopher’s Stone (Bartolomé, 2007)

Relationship to IMT/KSM Principles

- LS: no emotions; being emotional will make the executive react offensively to the feedback, not being able to obtain the important thing out of the message.
- LS: look for accuracy; reflexively questioning the literal meaning will make the executive loose concentrating on the accuracy.
- LS: fast processing speed; type "A" gather and process feedback information with a faster processing cycle because they just pick the important data, while type “C” is processing slower because cannot differentiate the important information.

Article#36: Becoming the Boss

The author says that sometimes new managers, in the early days as bosses, are sometimes disoriented and, she suggest this happens because most novice bosses don’t realize how sharply management differs from individual work. How to overcome this? She proposes to beware of common misconceptions about management and that once armed with realistic expectations, you’ll more likely survive the transition to management and generate valuable results for your organization.

The suggested approach is to “replace myths with realities” and “don’t go it alone” and, summarizes it in the following Table E.3.

Table E.3

Realities replace Myths (Hill, 2007)

Myth	Reality	To manage effectively…	Example
Managers wield significant authority and freedom to make things happen.	You are enmeshed in a web of relationships with people who make relentless and conflicting demands on you.	Build relationships with people outside your group that your team depends on to do its work.	A U.S. media-company manager charged with setting up a new venture in Asia initiated regular meetings on regional strategy between executives from both businesses.
Managers' power derives from their formal position in the company.	Your power comes from your ability to establish credibility with employees, peers, and superiors.	Demonstrate character (intending to do the right thing), managerial competence (listening more than talking), and influence (getting others to do the right thing).	An investment bank manager won employees' respect by shifting from showing off his technical competence to asking them about their knowledge and ideas.
Managers must control their direct reports.	Control doesn't equal commitment. And employees don't necessarily always follow orders.	Build commitment by empowering employees to achieve the team's goals—not ordering them.	Instead of demanding that people do things her way, a media manager insisted on clarity about team goals and accountability for agreed-upon objectives.
Managers lead their team by building relationships with individual members of the team.	Actions directed at one subordinate often negatively affect your other employees' morale or performance.	Pay attention to your team's overall performance. Use group-based forums for problem solving and diagnosis. Treat subordinates in an equitable manner.	After granting a special parking spot to a veteran salesman—a move that ruffled other salespeople's feathers—a new sales manager began leading his entire team rather than trying to get along well with each individual.

Relationship to IMT/KSM Principles

- LS: team work (vs. personal authority); instead of managers wielding authority to make things happen, there is a team effort involve to reach the goal(s).
- LS: power by performance (vs. formal positions); the manager's power derives from the performance obtained and not by the formal position itself.
- LS: no control; control does not equal commitment.

Article#37: The Key to Managing Stars? Think Team

This article is a Q/A interview, to the researchers of a recent study that measure the performance of knowledge workers, called "stars" in this article, for a large sample across a large number of firms in an industry contained very good information about the quality of colleagues for each analyst and, had data over a long period of time for all these factors.

The key quote of the authors is “it is true that a star's past performance indicates future performance, but the quality of colleagues in his or her organization also has a significant impact on the ability to maintain the highest quality output”. The article outlines important implications for star players as well as their managers and these are listed below in the same words of the authors:

- even though an individual's past performance can indicate future performance, the organization also significantly affects top performers' ability to maintain their performance;
- some have pointed out that the main difference between knowledge workers and, say, manual workers, is that knowledge workers own the means of production but, analysts rely a lot on the quality of the colleagues that their organization provides to sustain top performance;
- when considering a career move, it is very important for stars to evaluate the level of support they are receiving from their colleagues in different parts of the organization;
- firms that already have a large stable of high-performing individuals might have built a competitive advantage; firms that lack this advantage fight an uphill battle.

Relationship to IMT/KSM Principles

- LS: related to type “A” knowledge workers; the article differentiates from type “A” and type “C” workers in an organization.
- LS: performance information; use of past performance information to predict future performance.
- LS: an organization with more type “A” environment characteristics members; to maintain the good quality output within an organization is necessary to have a team with those good quality characteristics.

- LS: no information; to predict the future outcome is necessary to have all relevant information, in the case of an organization about the complete environment and not only one person.

Article#38: Leading Change Without a Burning Platform

This article purpose is to define how to create a sense of urgency when business is good. The article starts illustrating with an example of a successful company and how this works.

GTECH, a leading gaming technology and services company, now part of Gruppo Lottomatica, Rome, in 2002 was in clover; the firm had captured 70% of its market, its stock price had skyrocketed, and it had a loyal customer base. Richard Koppel, their VP of advanced technologies, knew trouble could lie ahead; he said "our systems were old, inflexible, and highly proprietary". Unless the company overhauled its technology platform, Koppel said, "we wouldn't be able to innovate quickly or affordably enough to meet customers' needs. He encountered stiff resistance from the people who would have to carry out the change and because the company was doing so well, they didn't see a reason for such a dramatic transformation.

The authors then suggest a series of steps and explaining them in detail on how to overcome and surpass this situation, which are: communicate and educate constantly; set boundary conditions by dictating the business requirements that need to be met and letting employees decide how they'll fulfill those requirements; acknowledge difficulties and admit your mistakes or trial and error; adjust your leadership style where the authors says "you can't implement a major change through command and control; you can't make people learn something they don't want to learn".

Relationship to IMT/KSM Principles

- LS: change; constant change, even when business is good, leads towards innovation and adaptability to changing conditions.

- LS: flexible; being flexible will make the business able to adapt to the environment changing conditions.
- LS: trial and error; "trial-and-error" is a characteristic that goes along with constant change.

Article#39: Fair Process: Managing in the Knowledge Economy

Key quote from the authors is: “in knowledge-based organizations, whose lifeblood consists of employees’ trust, commitment, and ideas, fair process is essential”. The definitions the authors give to this so called “fair process is “a decision-making approach that addresses our basic human need to be valued and respected. When people feel a decision affecting them was made fairly, they trust and cooperate with managers; they share ideas and willingly go beyond the call of duty and, Corporate performance soars”. The authors clarify that fair process isn’t decision by consensus or democracy in the workplace; its goal is to pursue the best ideas, not create harmony. Three main principles are explained as the ones that represent the process:

Engagement: involving individuals in decisions by inviting their input and encouraging them to challenge one another’s ideas.

Explanation: clarifying the thinking behind a final decision.

Expectation clarity: stating the new rules of the game, including performance standards, penalties for failure, and new responsibilities.

Relationship to IMT/KSM Principles

- LS: change; a company that’s able to change will be in a better position to adapt to the changing conditions and to achieve success. The article is basically trying to explain a method which purpose is to have a positive environment within a company that will accept change.

Article#40: Turning Great Strategy into Great Performance

The authors mention that most companies’ strategies deliver only 63% of their promised financial value. Why? Because leaders press for better execution when they really need a

sounder strategy or, they craft a new strategy when execution is the true weak spot. How to avoid these errors? The articles says that by viewing strategic planning and execution as inextricably linked and then raise the bar for both simultaneously.

Then, seven rules for successful strategy execution are explained in detail and examples are shown to illustrate these; they are listed below:

- Keep it simple: avoid drawn-out descriptions of lofty goals. Instead, clearly describe what your company will and won't do.
- Challenge assumptions: ensure that the assumptions underlying your long-term strategic plans reflect real market economics and your organization's actual performance relative to rivals'.
- Speak the same language: unit leaders and corporate strategy, marketing, and finance teams must agree on a common framework for assessing performance.
- Discuss resource deployments early: challenge business units about when they'll need new resources to execute their strategy. By asking questions such as, "How fast can you deploy the new sales force?" and "How quickly will competitors respond?" you create more feasible forecasts and plans.
- Identify priorities: delivering planned performance requires a few key actions taken at the right time, in the right way. Make strategic priorities explicit, so everyone knows what to focus on.
- Continuously monitor performance: track real-time results against your plan, resetting planning assumptions and reallocating resources as needed. You'll remedy flaws in your plan and its execution and avoid confusing the two.
- Develop execution ability: no strategy can be better than the people who must implement it. Make selection and development of managers a priority.

Relationship to IMT/KSM Principles

- LS: simple; clearer descriptions instead of drawn-out detailed descriptions will make a better understanding of the desired goals.

- LS: no assumptions; assumptions should be based on real market conditions and organizational performance.
- LS: look far ahead; looking far ahead on any project will identify the necessary resources early being able to do a proper alignment.
- LS: performance information; use performance understanding with a common frame-work for the assessment then, continuously monitor the performance for feedback about the process, being able to change if necessary.

Results

The following Table E.4 summarizes the characteristics found on the “successful” business practices, after applying the KSM method.

Table E.4

LS characteristics found

LS characteristics
Alignment
Change
Continuous improvement
Look at 30k ft
Measurement
No assumptions
No control
No decisions
No emotions
No traditions
Performance information
Pre-planning/look ahead
Quality
Teamwork
Think of us
Use of information
Win-win/think of the whole supply chain
Fast processing speed
No expectations
Adaptable
Trial and error
Simple
Accept criticism
Agile (instead of inactive)
Logic
Creativity
Efficiency
Thinkers (instead of spokespeople)
Listening

Table E.5 presents the quantity of appearances each of characteristics found had.

Table E.5

LS characteristics found with respective quantity of appearances

Characteristics found on the business practices that led to success		
Ranking	**LS characteristic**	**Qty of appearances of "LS characteristics" as Success**
#1	Use of information	15
#2	Performance information	9
#3	Change	7
#4	No assumptions	7
#5	No control	6
#6	No decisions	6
#7	Fast processing speed	6
#8	Alignment	4
#9	No traditions	4
#10	Continuous improvement	3
#11	Look at 30k ft	2
#12	Pre-planning/look ahead	2
#13	No expectations	2
#14	Adaptable	2
#15	Trial and error	2
#16	Simple	2
#17	Measurement	1
#18	No emotions	1
#19	Quality	1
#20	Teamwork	1
#21	Think of us	1
#22	Win-win/think of the whole supply chain	1
#23	Accept criticism	1
#24	Agile (instead of inactive)	1
#25	Logic	1
#26	Creativity	1
#27	Efficiency	1
#28	Thinkers (instead of spokespeople)	1
#29	Listening	1

APPENDIX F

CASE STUDIES OF “FAILURE/INCONSISTENCY”

CASE STUDIES OF “FAILURE/INCONSISTENCY”

Data/Discussion

Outlines of 30 articles that discuss “failure/inconsistency” and their relationship to IMT/KSM Principles

Article#1: Avoid the Four Perils of CRM

The authors mention when “Monster.com rolled out a customer relationship management (CRM) program in 1998, it was sure it had a new money-making strategy on its hands – they spent over $1 million in customized software and integrated all its computer systems in an attempt to boost the efficiency of its sales force. The new system proved to be frighteningly slow, with people in finding themselves unable to download customer information from the company’s databases. Monster.com was forced to rebuild the entire system and lost millions of dollars along the way, not to mention the goodwill of both customers and employees.”

Some relevant figures the authors mentioned are: “55% of all CRM projects don’t produce results, according to Gartner Research. According to Bain’s 2001 survey of management tools, CRM ranked in the bottom three for satisfaction out of 25 popular tools. According to a survey in 201 of 451 senior executives, one in every five users reported that their CRM initiatives not only had failed to deliver profitable growth but also had damaged long-standing customer relationships.”

Their research shows that “many executives stumble into one or more of four pitfalls while trying to implement CRM. Each of these pitfalls is a consequence of a single flawed assumption—that CRM is a software tool that will manage customer relationships for you.”

Relationship to IMT/KSM Principles

- RS: technical/complex; technology is not the solution to the problems and very complex systems make it more difficult to understand and implement a solution.

- RS: assumptions; launching an initiative without having the necessary information to plan/guide the effort, led to making assumptions which contributed to failure.

Article#2: Putting the Enterprise into the Enterprise System

The article mentions how “enterprise systems appear to be a dream come true.” Commercial software packages that promise full integration of all processes in a company, also known as ERP (Enterprise Resource Planning) systems.

The author questions whether “these systems are living up to companies’ expectations”, and discusses the “growing number of horror stories about failed or out-of control projects” which should make think twice. Part of the blame for such debacles “lies with the enormous technical challenges of rolling out enterprise systems”, which are greatly complex pieces of software requiring large investments of money, time, and proficiency.

The author contributes the main reason for failure as business problems, where companies fail to align the ERP with the business needs. “If a company rushes to install an enterprise system without first having a clear understanding of the business implications, the dream of integration can quickly turn into a nightmare.”

Relationship to IMT/KSM Principles

- RS: technical/complex; technology is not the solution to the problems and very complex systems make it more difficult to understand and implement a solution.
- RS: lack or planning/reactive; launching a program without understanding the needs first.

Article#3: Vision Statement: When Failure Looks Like Success

The authors explain how “the global effort to bring clean water to Bangladesh appeared to be a huge success. But each time, the success contained the seeds of epic failure.” They describe how Bangladesh, country of 90,000,000 people, was having in the 1970s 250,000 deaths annually from waterborne diseases; having in 1970 a mortality rate for under-5s 24%.

Fix number one initiated by UNICEF in 1972 was to “install massive tube wells that allow pull of pure underground water to the surface”, going from zero wells in 1970 to 10 million wells in year 2000; this decreased the under-5 mortality rate to 15% by 1980 and to 9% by 2000. A disturbing discovery takes place in 1983, where doctors start noticing patients showing symptoms of arsenic poisoning. In 1983 the first case was found; by 1987 1200 cases were found; by 1993 40,000 cases were found. Contaminated water leads to tainted rice (rice constitutes 73% of peoples diet), showing a level arsenic of about 200 parts per million. Well-water contaminated with arsenic occurs naturally in the country’s rocks and soil.

Fix number two, in 1991 a multi-million dollar programs of screening of wells, education and public relationships takes place – solution is to paint wells in green when they are safe and paint them in red when they are unsafe. Unforeseen consequences then take place: villagers who live close to red wells are stigmatized; those affected with arsenic poisoning get discriminated in ways such as unemployment, young women face diminished marriage prospects making them turn to prostitution to survive. Some owners of contaminated red wells repaint them in green to avoid shame.

The authors in the research contribute the failure to two main reasons:

- "Designing for instead of with: the organizations behind the first initiative were international bureaucracies with an incomplete understanding of the local population.”
- “A lack of whole measurements: the organizations did not fully assess their projects impacts, focusing on number of wells built and ignoring other factors such as increase of other waterborne illnesses, and ignoring the social problems the “wells painting” would entail.”

Relationship to IMT/KSM Principles

- RS: lack of measurement; how the success of the implement of a solution cannot be concluded without proper and constant measurements.

RS: decisions; establishing a solution or making a decision without understanding the environment.

Article#4: Seven Ways to Fail Big

The article discusses that businesses fail and lose money for a variety of reasons. It is based on a study of 750 of the most significant business failures in the US (bankruptcies of companies with at least $500 million in assets in the last quarter before bankruptcy and write-offs and discontinued operations greater than $100 million) over a period of 25 years (1981-2005) and they suggest “nearly half the failures could have been avoided.” In the majority of cases the attribute failure to “flawed strategies and not inept execution”, as most of the literature places blame said the authors.

Their study shows the “seven strategies which accounted for failure” and offered advice on how to overcome them. These are listed as follows (Table F.1):

Table F.1

Seven strategies that accounted for failure (Carroll and Mui, 2008)

Siren	How It Can Fail	Example
The Synergy Mirage: Seeking synergies by merging with firms with complementary strengths	Culture and systems clashes may prevent capture of synergies.	Insurers Unum and Provident (operating in the group and individual markets, respectively) merged. But the two sales forces had different skills and no desire to collaborate on cross-selling. Costs and complications raised prices. Unum undid the merger; its stock price plummeted.
Faulty Financial Engineering: Using overly aggressive financial practices to drive growth	Flawed offerings that prove excessively risky long-term can result.	Green Tree Financial made a fortune offering 30-year mortgages on trailer homes. But trailers depreciate rapidly, leaving owners owing more than the trailers are worth. Defaults ultimately bankrupted the company.
Staying the Course: Sticking to your current strategy despite market changes	Executives may underestimate the significance of market changes.	Eastman Kodak stuck to print photo processing in the face of a blatant danger (digital photography) because traditional processing's margins were high. The firm's delayed move into digital cost it 75% of its stock market value.
Pseudo Adjacencies: Selling new products to existing customers, or existing products to new customers or through new channels	Companies may overestimate the transferability of their core capabilities.	School-bus operator Laidlaw bought into the ambulance business, figuring its logistics expertise would transfer. But ambulances are part of the complex, highly regulated medical business. Laidlaw struggled with negotiating contracts and collecting payments. It sold off the ambulance units at a considerable loss.
Wrong Technology Bets: Overrelying on technology to create the next breakthrough offering	Technology-dependent strategies may be ill-conceived from the start.	Motorola was so enamored of its Iridium satellite-telephone technology that it failed to do objective market research. Customers rejected the system's bulky $3,000 phones and high monthly charges; the venture folded after only a year.
Consolidation Rush: Consolidating to reduce capacity and overhead as your industry matures	Executives may buy problems along with assets.	Ames Department Stores acquired discount chain G.C. Murphy, which had no inventory-checking system. Disgruntled Murphy employees reputedly stole goods off delivery trucks, then logged complete shipments into stores. Ames lost $20 million in merchandise.
Roll-up: Combining huge numbers of small businesses into a large one to increase purchasing or brand power	Expected gains may never materialize.	Loewen Funeral Homes bought hundreds of independent funeral homes, anticipating a death-rate increase with baby-boomer aging. But the increase never happened. The cost of acquiring and integrating the homes far outweighed the slight scale gains. Loewen filed for bankruptcy.

Relationship to IMT/KSM Principles

- RS: misalignment; when a merger takes place and resources are not aligned appropriately per their skills.
- RS: assumptions; assuming long-term strategies would work the same for long and short life assets (i.e.: long term mortgages for fixed homes would work the same for mobile homes).
- RS: lack of change; not being able/not wanting to change and adapt to environmental changes (market) can cause reactive measures to be late and costly.

- RS: assumptions; assuming a strategy in one market would work exactly the same in another one.
- RS: technical; technical driven strategies without the proper logic planning have a high risk of failure.
- RS: ignore performance information; ignoring performance information could lead to take decisions with unpleasant results.
- RS: decisions; making decisions with expectations could lead to unfavorable results.

Article#5: Why Hard-Nosed Executives Should Care About Management Theory

The authors start the article by making an analogy between medicine and business by using this example: “imagine going to your doctor because you’re not feeling well. Before you’ve had a chance to describe your symptoms, the doctor writes out a prescription and says – take two of these three times a day, and call me next week – But I haven’t told you what’s wrong – you say – How do I know this will help me? – Why wouldn’t it? – says the doctor – It worked for my last two patients.”

Then, the example on how Lucent Technologies in the late 90s divided and reorganized the company’s three main operating divisions into 11 smaller units, to make then run independently, was given. This caused the organization to be slower and less flexible in responding to customer needs, by the silos created in this strategy.

Relationship to IMT/KSM Principles

- RS: Silos; the operation into silos causes confusion and reduces full visibility and integration of the process (es).

Article#6: How to Sell Services More Profitably

The article shows the results of the study of 20 industrial companies from different business markets, being every firm among the top three of their industry. Results show one group of companies with a high volume of sales and profit derived from their sales of services. Another group in contrast, had very low revenues and margin in the service

market, where their investment in services was barely a “brake-even” result. A comparison between the strategies applied by both groups was made and the most significant results were presented.

The authors mention that “companies unsuccessful at developing service businesses have tried to transform themselves too quickly” – they mention in this group the presence of poor planning and making decisions too quick. In the other hand, the companies that had success in the services market had the commonality of identifying, slowly, the need for services and supplying those at first; by listening to customer needs and inserting new services as needed.

Relationship to IMT/KSM Principles

- RS: lack or planning/reactive; launching a program without understanding the needs first.
- RS: Decisions; deciding to venture into providing new services without listing to market/customer needs first.

Article#7: Understanding the causes of business failure crises- Generic failure types

The authors start the article by mentioning some relevant figures of failure in the United Kingdom, where in the first half of the 1990’s decade, “one in 38 active British businesses went into liquidation in the third quarter of 1992; and in 1991 a total of 21,287 business failed compared to 15,051 in 1990 (a jump of 45 per cent).” The study, based on literature research, separated failure types into big organization and small organization contexts, and described the processes associated to these business failure types. The four main categories of business failure the authors describe are presented as follows:

- The slumbering company: organizations that, with the pass of time, failed to change their paradigm and activities while the environmental situation was changing; due to reasons such as:
    - complacency of previous success,
    - management blindness to new approaches,

- a hierarchy orientation that foster decisions,
- cultural rigidity,
- entrenchment of the existing status quo,
- the large search for consensus in the compromise of solutions,
- the push for organizational growth rather than productive growth,
- benefits awarded without productivity measurements,
- rising of what the authors called “white-collars cost”, whereby there is no real measurement of productivity,
- low motivation among employees.

- The ambitious company: organizations which managers feel they need to be in many parts of the markets; where these managers showed decisions made with arrogance and based on long-standing position/title.
- The money-messing company: where managers that care more about themselves than the company were found; and where “political” decisions within the same company were made, favoring one group or another one in the organization due to relationships
- The failed start-up: where assumptions were made about new projects without major knowledge/research in that new area; and failure to perform appropriate planning.

Relationship to IMT/KSM Principles

- RS: lack of change; not being able/not wanting to change and adapt to environmental changes (market) that made it impossible for the company to react when needed.
- RS: by formal position/title (instead of by performance); whereby hierarchy and titles were more important that actual performance.
- RS: lack of measurements; where lack of measurements of productivity and other factors blinded the management of necessary changes.

- RS: decisions; decisions driven companies based on positions/titles.
- RS: think of me and them (instead of us); managers that care only for their own benefit instead of the benefit of the company.
- RS: lack of planning; venturing in new areas/projects without the proper research and planning, leading to failure.

Article#8: Why do Most Firms Die Young?

This article describes how a model was built to explain why most firms die in the first years of trading and the relationship to management human capital (MHC). The authors propose a theoretical mathematical model for this prediction based on managerial and financial capital, and measuring it with the management skills of the initial resources. Based on this model the authors propose that failure is due to the following reasons:

- "the initial rise in the failure rate was that initial financial resources were depleted through time as a result of trading losses;" and
- "the role of managerial human capital which enabled the more talented entrepreneur to grow faster at lower cost measured by the increase in her firm's equity risk"

Relationship to IMT/KSM Principles

- RS: misalignment; failure or lack of identification of the proper resources before a business venture begins resulted in higher failure rates.

Article#9: The Mechanics of Failure

The author suggests that "companies do not fail, what fails is the management," and describes how great the cost to society is with "broken homes, unemployed workers and unpaid creditors." The article show figures on when companies fail: less than 1 per cent during their first year, 11 per cent during their second year and 17 per cent during their third year.

The presented common cause for failure is lack of planning/poor planning, with visibility to long, medium and short-term reach. "Cash-flow should be aimed and driven in the

direction of best case results, but all activities must be planned with recognition and preparedness for the worst possible results" said the author.

Relationship to IMT/KSM Principles

- RS: lack of planning; where a business plan is not carried out taking into account limitations of cash-flow availability.

Article#10: Sarbanes-Oxley Will Make Little Difference - Understanding the real reasons for corporate failure

The author's main point is to outlay that legislation will not be the solution to avoid failures such as Enron and the WorldCom collapses, and cites the piece of legislation named "Sarbanes-Oxley Act in early 2002 which does not, and cannot, address the underlying problems."

The article is based on research into recent corporate failures that included Metalgeselshaft, Rolls-Royce, Guinness and Barings Bank. Based on the analysis the main causal factors are listed as follows:

- Poor strategic decisions: decisions of new products or markets without the proper research to back it up.
- Over-expansion: companies what wanted quick growth that turned into acquisitions lacking plans for the merger.
- The dominant CEO: where like-minded executives and complacency makes the company avoid/ignore performance indicators and falls into the habit of CEO's decision.
- Weak internal controls: whereby blurred reporting lines leave holes in control systems and dispersed departments that do not work closely together.

The article ends with this quote: "it is better to manage market expectations that to manage earnings to meet expectations" and reemphasizes that "legislation isn't enough to prevent companies from pursuing flawed strategies" because they do not address the root causes of failure.

Relationship to IMT/KSM Principles

- RS: control; legislation as a way to define certain governance guidelines fails to address the root causes of the problems.
- RS: decisions; poor strategic decisions due to lack of research.
- RS: lack of planning; making acquisitions without a proper planning of the merger.
- RS: by formal position/title (instead of by performance); whereby hierarchy and titles were more important that actual performance
- RS: silos; departments that operate in their own silos making it more difficult to work together and see the “big picture”.

Article#11: Results of studies are in and the news is all bad

The article is about a study by KPMG on failed Canadian IT projects, “the failures cost Canadian organizations more than $360 million. The primary reasons found for failure were poor planning, a weak business case for the project, and lack of involvement from top management.”

The study surveyed 1,450 public and private sector organizations across Canada and analyzed 100 failed projects. The author mentions a recent study (1995) by the Standish Group in the Unites States, which shows how “31 per cent of software projects will be cancelled, and of those completed, 53 per cent would cost almost twice their previous estimates.”

The enchantment by technology of senior management is pointed out, and how this management does not know how to measure results accurately and how to plan for these projects.

Relationship to IMT/KSM Principles

- RS: technical; technology is not the solution to the problem and it may make it more difficult to understand and implement a solution.
- RS: lack of planning; implementing a strategy without the proper plan in place.
- RS: lack of measurement; the lack of a mean of measurement of the results can mislead in predicting project outcome.

Article#12: Managing complexity: Most software projects fail to meet their goals. Can this be fixed by giving developers better tools?

As the title of the article describes it, the author says that “most software projects fail to meet their goals” and illustrates it by putting some examples.

On September 14, 2004 the radios and air-traffic control center Palmdale, California shutdown because the software running the system meant that computers had to be rebooted every month, and somebody forgot to do it – “poor design” says the authors.

America’s Internal Revenue Service (IRS) wrote off a failed $4 billion overhaul effort on the computer system.

An $844 million software project for Britain’s Child Support Agency which came in a year late and failed to deliver payments to a vast majority of the applicants.

The study from the Standish Group is mentioned, that says 30 per cent of all software projects are cancelled; about half come in over budget, 60 per cent are considered failures and 90 per cent come in late. Another study by America's National Institute of Standards (NIST) in 2002, found that software mistakes cost the economy $59.5 billion annually.

The main cause according to the author is complexity and how it is managed; the article says “software projects have become more and more complicated, it has become impossible for even the most talented team of programmers to keep track of the millions of lines of “code” required.”

The article describes the “three main trends that are shaping the future of software development which are”:

- Awareness of the need to pay greater attention to the lifecycle of a piece of software, from the initial setting of requirements to ongoing implementation.”
- Automating the testing of software – cost of software failures could be eliminated simply by improved testing.”
- The emergence of open-source code software development.

Relationship to IMT/KSM Principles

- RS: lack of planning; lack or poor planning in designing lifecycles of the software solutions.
- RS: lack of trial and error/testing; not enough and/or not significant testing applications for the solution being design.
- RS: silos; the control of codes that prevents collaboration and creates operational silos.

Article#13: Beware of low-flying banks

The articles suggests that “bankers are reluctant to report near-misses” – and puts Barclay Bank, Britain’s second-biggest bank, as an example on how they have implemented a technique in which their “managers are encouraged to come clean, instead of owning up to mistakes they can file “process-improvement-opportunities.”
The article says that “banks are in the business of managing risk and they have tried hard to quantify the risk involved in lending and trending.” However, not that many banks measure operation risk. Only a “handful of banks is beginning to measure and model operational risk just as they do lending and trading risks.” A couple of examples of bank failures are presented and how operational risk measurement could have helped in avoiding/minimizing the impact.
The articles illustrates with examples of these new measurements, such as:

- Bankers Trust has been collecting data on control breaches, systems failures, fraud and a host of other operational risks.
- SBC Warburg Dillon is interested only in its own operational failures, but Bankers Trust collects data about operational failures in other banks and industries, and screens them for relevance to the bank's own operations.

The intent of the analysis of the data collected is to be able to build statistical models that identify severity and frequency of operation risks, and to sort-out these risks faces by their different business units. All this with the purpose of minimizing operations risks and let the banks operate safer.

Relationship to IMT/KSM Principles

- RS: ignore performance information; discarding previous history on risks can lead to ignore cause of failure.
- RS: lack of measurement; whereby this constrains having a better understanding of the risk management strategies.

Article#14: Failure processes and causes of company bankruptcy: a typology

This paper is an effort for understanding the "relationship between the characteristics of a company, the underlying causes of failure and the financial effects," based on case study research of 12 Belgian companies of different industries, sizes and ages. The article points out how in bankruptcy literature there is a high number of bankruptcy prediction models, all based on financial symptoms.

The authors mention the research effort from Argenti (1976) which explains the non-financial causes of failure and analyze failure as a process – according to him the three trajectories are:

- "Typical failure path of a start-up company with inappropriate management in terms of skills or personality."

- "Young companies after a very precipitous growth and an even steeper decline. Their collapse is also caused by management deficiencies, but when operational and financial management are ignored during the growth phase."
- "Mature and inert companies that refrain adaptation of management structure and lose touch with their customers. The company goes bankrupt because they do not respond adequately to environmental changes."

The authors later expand in their research effort, and define four types of failure processes that explain a company's failure – they are:

- "The failure process of an unsuccessful start-up company: due to a typical initial shortcoming finding of lack of managerial or industry-related experience."
- "The failure process of an ambitious growth company: ambitious growth companies which are risk lovers with industry-related experience and ambitious objectives, with an increase of the firm's debt/equity ratio large, which did an overestimation of demand due to over-optimism or to an overestimation of either market size or customers' switching behavior."
- "The failure process of a dazzled growth company: more mature companies where growth is desired and new strategies are developed, success: dangerously dazzled over-optimism. Growth and capital expenditures increase together with leverage, pitfalls are ignored and the organizational structure remains almost unchanged. This inevitably leads to a loss of control and to unawareness of possible issues that could affect operational efficiency or turnover."
- "The failure process of an apathetic established company: companies which management is unaware of the gradual change in the environment, competitors do reach to these reaches, and then the company loses strategic advantage."

Relationship to IMT/KSM Principles

- RS: misalignment; failure or lack of identification of the proper resources before a business venture begins resulted in higher failure rates.
- RS: expectations; having expectations that make management ignore important information and therefore, taking the wrong path.
- RS: ignore performance information; whereby growth make management ignore certain performance indicators
- RS: lack of change; not being able/not wanting to change and adapt to environmental changes (market) that made it impossible for the company to react when needed.

Article#15: Learning About Failure: Bankruptcy, Firm Age, and the Resource-Based View (Thornhill, Stewart & Amit, Raphael)

In this paper the authors study the differences between the determinants for firm failure between firms that fail early in their life and firms that fail after being established. The research analyzes date from 339 Canadian corporate bankruptcies, utilizing scope of age, size, and population density mechanisms.

The results show that firms have a higher exposure to failure in their earlier stages of life. The two causes identified by the authors for the two different firms' age groups are:

- "Failure among young firms is attributed to deficiencies in general management skills."
- An evolving competitive environment is identified as a significant influence in the demise of older organizations," which reflects the inability of the company to adapt to environmental changes.

Relationship to IMT/KSM Principles

- RS: misalignment; failure or lack of identification of the proper resources before a business venture begins resulted in higher failure rates.

- RS: lack of change; not being able/not wanting to change and adapt to environmental changes (market) that made it impossible for the company to stay competitive.

Article#16: The Relationship between Written Business Plans and the Failure of Small Businesses in the US (Perry, Stephen C.)

This paper studies the influence of planning on small (fewer than 500 employees) business failures in the United States; defining failure as a bankruptcy with losses to creditors. The sampling was failed and non-failed businesses listed in the Dun & Bradstreet credit reporting database. The author explains, by quoting Dennis (1993) and Perry (1993), how representative the selection of small (less than 500 employees) businesses is as follows:

- "99 per cent of the 21 million entities filing a tax return in the US are small business;"
- "Half of the small businesses have fewer than five (5) employees;"
- "90 percent of the small businesses have fewer than 20 employees."
- Business failure rates average 70,000 annually in the earlier years of this research;
- Respective liabilities averaging $40 billion annually

The author mentions a quote from Peter Drucker (1973) "planning what is our business, planning what it will be, and planning what it should be have to be integrated… Everything that is planned becomes immediate work and commitment."

The main conclusion that the author reaches after concluding his research, is that "very little formal planning goes on in U.S. small businesses; however, non-failed firms do more planning that similar failed firms did prior to failure."

Relationship to IMT/KSM Principles

- RS: lack of planning; when a business plan is not carried out exposure to failure increases significantly.

Article#17: Estimating the Small Business Failure Rate: A Reappraisal (Haswell, Stephen & Holmes, Scott)

The article studies small business in Australia. The authors quote some figures found in "The National Times paper, from August 1980) which indicate: "half of all small businesses fail within the first two years and 80 per cent within the first five years." They also quote Flahvin, (1985) who found that about "70 percent of companies which start out with nothing will fail within two years." This article points out that the prior studies about failure rate differ in their findings because they all use different definition of failure; and therefore the groups of data captures contain different information; they later concentrate in the study in identifying the causes for small business failure and cite:

- "90 per cent of business failures are associated with management inadequacy;"
- " Management 'problems' represented the major contributing factor; interestingly, a significant element in the failure of many of the businesses reviewed was deficient or not accounting records – more than half had nil records;"
- "Management failure was also a function of having limited access to the information required to assist business decisions – failed to access or prepare information to assist in business decision making."

Relationship to IMT/KSM Principles

- RS: misalignment; management inadequacy
- RS: lack of measurement; no accounting records
- RS: No information; having limited access to information required to assist business decisions

Article#18: Causes of New Venture Failure: 1960s vs. 1980s (Bruno, Albert V. and Leidecker, Joel K.)

The authors intend to make a comparison of studies that discuss reasons for business failure, in the period of twenty years, from 1960 to 1980. The article shows that reasons

behind failure have not changes much in those twenty years. The authors summarize, in a comparative table, the findings of the various studies of Failure Research (Table F.2).

Table F.2

Comparative Table of Failure Research by Source (Bruno and Leidecker, 1988)

Comparative Table of Failure Research by Source

	Source					
	Argenti	*Altman*	*D & B*	*Buckeye Hudson et al*	*Bruno Leidecker Harder (1960s)*	*Bruno Leidecker (1980s)*
Type of Failure Factor						
Problems with Management Team	*		*		*	*
Shortcomings of the Entrepreneur	*		*		*	*
Problems with Strategic Planning	*				*	*
Weaknesses in the Finance Function	*	*	*		*	*
Operating Problems					*	*
Market Problems	*					*
External Influences on Firms	*	*				*
Unclassified Problems		*	*	*		*

After the analysis of all these studies, the authors mention: “failure can be better understood through analysis of both, the underlying causes and performance indicators that identify symptoms of eventual demise. The financial modeling approach is useful for predicting the likelihood of failure, but it does not identify the causes of that failure.”
The authors also tracked performance of 250 firms founded in the Silicon Valley in the 1960’s and scrutinized findings on the research of failed companies. Based on this they come out to a set of conclusions of their own which are listed next:

- “launching a new product without having the necessary information to design it and perform the appropriate market research about timing and distribution of the selling strategy;”

- "unclear business definition due to a failure to have a plan for the start-up of the business venture; which caused problems such as having an initial undercapitalization and assuming debt a instrument too early"
- "ineffective teams and personal problems; explained as not building and maintaining a qualified management team with the support of key employees and outside professionals and, inability to recognize their own strengths and weakness and act accordingly."

Relationship to IMT/KSM Principles

- RS: assumptions; launching a new product without having the necessary information to design it and market research for timing and distribution.
- RS: lack of planning; launching a start-up without the proper business plan in place
- RS: misalignment; launching a start-up and having an ineffective team.

Article#19: Small Firm Bankruptcy (Carter, Richard & Van Auken, Howard)

The article discusses the results of a survey and the respective analysis of 57 bankrupt firms and the comparison to 55 non-bankrupt firms, with the purpose of identifying root-causes of bankruptcy. The authors first, look for the common definitions of failure and identify five different ones as: "(1) discontinuance for any reason; (2) bankruptcy/loss to creditors; (3) business liquidation to prevent further losses; (4) failing to "make a go of it". The authors point out that the "failure rates varied depending on the definition used." The authors make use of 25 different factors which are surveyed out, and by statistical analysis, the main factors get defined in three main categories: (1) debt; (2) knowledge and (3) climate. Factors (1) and (3) are considered as external while factor (3) is the only internal factor.

Further discussion of the meaning of the internal factor takes place, knowledge, and it is explained as follows: "owner/manager sophistication in the way of experience and training impacts the likelihood of failure." And the authors mentioned parameters found

that contributed to this factor such as “lack of management skills and lack of knowledge”; all this due to improper selection of the management resources.

Relationship to IMT/KSM Principles

- RS: misalignment; failure or lack of identification of the proper resources before a business venture begins resulted in higher failure rates.

Article#20: The success of business failure prediction models (Altman, Edward I.)

The article discusses various studies that tried to create and test business failure models outside the United States. The author points out “failure risk models” as one of the few types of financial models utilized internationally in this type of research efforts.

The author lists four (4) statistical models in the United States that try to determine “insolvency risk” in firms based on financial indicators, which are:

- “The Z-score model;”
- “The Zeta model;”
- “The gambler’s ruin model;”
- “The QES score.”

The articles starts to compound the findings on studies of failure in countries such as Japan, Germany, Switzerland, Brazil, Australia, England, Ireland, Canada, The Netherlands and France – all of these found in the late 1970’s and early 1980’s. The author focuses on the quality and reliability of the prediction models, but also identifies and groups the reasons for business failure found and mentions improper selection of management resources before and during the business ventures as important. He cites “managerial incompetence, lack of managerial experience, unbalance experience, neglect-ion and lack of knowledge.”

Relationship to IMT/KSM Principles

- RS: misalignment; failure or lack of identification of the proper management resources needed in a business resulted in higher failure rates.

Article#21: Business Failure & Change: an Australian Perspective (Bickerdyke, Ian et al)

The research paper is an effort from the Productivity Commission, an independent Commonwealth agency that provides advice to the Government of Australia. In this article they did an extensive study of business failure and business change, and review and discuss Australia's policies for insolvency issues. Here, they revise the factors influencing the likelihood of business failure, and the causes of business failure.

The authors mentioned key external factors as a big contributor to business-related bankruptcies; and the other major contributor for business failures found on the study, were lack of business ability, training and experience, due to improper selection of management resources. After performing a statistical analysis on the data gathered by the authors or this article (business bankruptcies between 1972 and 1999), specific reasons leading to business failure were found and are listed next:

- "Lack of capital: an underestimation of the necessary working capital to sustain the business due to having an incomplete or null business plan."
- "Lack of business ability: not doing a proper selection or a proper alignment of the resources needed to manage the business, resulting in managers without training or experience, resulting in failure to assess potential or business or detect risk."

Relationship to IMT/KSM Principles

- RS: lack of planning; lack of sufficient working capital to sustain the operation reflects lack/poor planning in the business development.
- RS: misalignment; defects in management training, mistakes and assessments due to failure or lack of identification of the proper management resources needed.

Article#22: Learning from Business Failure: Propositions of the Grief Recovery for the Self-employed (Shepherd, Dean A.)

This article focuses more on a psychological approach on why an "emotional response to business failure impedes and hinders the ability to learn from the events surrounding the loss."

The author mentions that "in 2001, 12,457 businesses ceased operations. This statistic under-states the number of business failures because it failed to account for those business sold or merged with another firm to avoid bankruptcy."

The author compiles different studies; Cooper, Gimeno-Gason, and Woo, 1994; Romanelli, 1989; and Shepherd, Douglas and Shanley, 2000; and determines the most common cause of business failure is "insufficient experience". He describes this as not doing a proper selection of resources of management prior to enter into, and during the business venture.

The author later quotes McGrath (1999) that "argues that the benefits of failure have not been given sufficient attention." He later discusses the emotions that affect and/or prevent learning from business failure after an insolvency event. He ends proposing "that a dual process of grief recovery, one that involves oscillating between a loss and a restoration orientation, provides the speediest path to grief recovery."

Relationship to IMT/KSM Principles

- RS: misalignment; entrepreneurs with more experience possess knowledge to perform the roles more effectively, hence, a lack of identification of the proper management resources needed will increase the likely hood of failure

Article#23: Business failures in the construction industry (Arditi, David et al)

This paper studies data from Dun and Bradstreet's, related to US business failure in the construction industry, by making use of an "environment/response matrix developed by Boyle & Desai (1991)". The overall results attribute failure to budgetary and macroeconomic issues (macroeconomic are issues related to strategic long term

planning), and to a lesser extent, issues of adaptability to market conditions and the construction business issues.

The illustration of the reasons behind business failure in the construction industry is presented in this article as follows:

- "small firms do not pay as much attention to financial ratios ad do larger firms," which led the business o fail due to "'insufficient profits, heavy operating expenses, insufficient capital, burdensome institutional debt and receivable difficulties."
- "human/organizational capital issues included lack of business knowledge, lack of managerial experience, fraud, lack of line experience, lack of commitment and poor working habits," all this due to not doing a proper selection alignment of resources upfront.
- "issues of adaptation to market conditions", in which the lack of strategic planning was a factor for decreasing the firm's "change" capability to the environment.
- "business issues inherent to the construction industry such as the business conflicts" between the parties involved, due to the nature of the low-bid procurement method.
- "macroeconomic issues are those related to how volatile the construction industry is, in which construction investment follow a cyclic patter that is heavily influence by business conditions, interest rated and growth prospects." The failure is attributed though, to missing or having a poor strategic long term plan.

Relationship to IMT/KSM Principles

- RS: lack of measurements; where firms that do not pay as much attention to financial ratios have a higher tendency of failure.
- RS: misalignment; management with lack of business knowledge, experience, commitment, due to improper alignment/selection of management resources.

- RS: lack of change; companies that failed to adapt to environmental/market changes.
- RS: lack of planning; companies that lack strategic planning, which is a factor that can increase firm's adaptability capacity.
- RS: (price tag/low-bid, technical, control, inefficient, bureaucratic, lack of measurements, relationships, no accountability); business issues/conflicts/claims that arise due to divergence of interests, objectives and priorities between the involved parties.

Article#24: Causes of Contractor's Business Failure in Developing Countries: The Case of Palestine

The article tries to identify the main causes for contractor's business failure in Palestine. The authors start with a quote from Clough and Sears (2000): "the construction contracting business has the second highest failure rate of any business, exceeded only by restaurants." They mention how "a number of scholars have studied this failure at a project level, rather than company level."

The paper research methodology is in a survey sent out to 92 different contractors in Palestine. The survey questions were developed by analyzing prior studies in the area an identifying the reasons for failure these studies encountered. The results were group in five areas: 1) managerial factors; 2) financial factors; 3) business growth factors; 4) business environment factors; and 5) political factors. The top ten causes found are listed next:

- "Delay in collecting debt from donors;
- Border closure;
- Dependence on bank loans and paying high interest;
- Lack of capital;
- Cash flow mismanagement;
- Lack of experience in the line of work;

- Segmentation of Gaza Strip;
- Absence of construction regulations;
- Low margin of profit due to competition;
- Award contracts to the lowest price."

Attributable factors to all these ten causes were illustrated are lack of financial indicators that could prevent from financial stress due to under-collections, available cash-flow. Other influential factors to these top ten causes are politics, how issues with border closures and geographical segmentation affected contractors in their operations. Lack of experience from the managers in this area due to improper selection of resources, and to the small availability of training and education programs in this market segment. Finally, the conflicts and claims that arise due to the procurement method of construction, low-bid, that were created from divergence of interests.

Relationship to IMT/KSM Principles

- RS: lack of measurement; no use financial indicators that prevents under-collections and cash-flow and working capital mismanagement
- RS: politics/bureaucratic; issues with border closures and geographical segmentation
- RS: no training/education; management without knowledge to run this type of business
- RS: price-tag only/low-bid; conflicts/claims arise due to divergence of interests

Article#25: Early Warning Indicators of Business Failure (Sharma, Subhash and Mahajan, Vijay)

The research effort in this paper consists on developing a model to predict the business failure of retail establishments – this model is based on financial indicators. The authors, however; differentiate along their study between causes of failure, and symptoms or failure; where the financial indicators represent the symptoms. The study proposes the

need for: “1) identification of causes of failures; 2) identification of the indicators of failures; and 3) development of mathematical models for predicting failures.”

“By 1977, several hundred thousand firms started and almost equal number is discontinued every year. Even more firms transfer ownership or control. In 1977 about 8,000 firms failed. Their aggregate liabilities totaled about $3 billion.” Quoted by the author and taken out of The Business Failure Record (1978).

The findings the paper points out as causes of failure are explained as follows: “ineffective or poor management usually leads to mistakes in formulating a strategic market plan and/or its implementation. Just like an excellent strategic plan can be ruined by improper execution.” This reflects how important and critical is the selection and alignment of management resources, to create and execute an effective plan.

The symptoms of failure, the financial performance indicators, are later described in the study, as well as the relationship between the causes and the ending consequence reflected by the financial indicator.

The final model suggested by the authors can “predict failure by analysis of either the causes of failure or the performance indicators; having the later the limitation of the inputs to the model being based on manager’s judgment (bias and error).” The final quote of the author brings up to light, that “these models, while being completely objective, do not tell the causes of failure. They only predict the possibility of failure.”

Relationship to IMT/KSM Principles

- RS: misalignment; lack or poor alignment/selection of resources of management leading to mistakes in formulation of strategic plans

<u>Article#26: An exploratory study of factors affecting the failure of local small and medium enterprises (Theng, Lau Geok & Boon, Jasmine Lim Wang)</u>

This article brings up to light the high mortality rate among small and medium enterprises (SME) in Singapore. The authors explain “the potential contribution of SMEs towards employment and economic growth in Singapore,” but they do mentioned “that a large

percentage of SMEs fail within the first five years of operation. Nadu (1978) suggests that two-thirds of small businesses fail during their first five years of operation. Hollander (1967) found that 67% of new small businesses which were studied discontinued in their first five years of operation.

A Dun and Bradsheet (1967) report suggests that only one of three new firms survives the first four years after founding."

The indent of this paper is to seek the factors influencing SM failures, and they divide them into "external" factors (presumably out of control) and "internal" factors (presumably in control). The effort was carried out by sending out a survey to nearly 300 companies from the Singapore Manufacturer's Association Directory 1991.

Among the internal factors the most important were "lack of knowledge of the company's product(s), followed by lack of managerial experience and skill, lack of initiative, lack of vitality and enthusiasm and lack of entrepreneurial judgment," all this, due to not doing a proper selection and alignment of resources on the early stages of the company.

Under the factors related to financial and operational shortcomings, the most relevant factors founds were "high operating expenses and lack of capital, followed by lack of control over cash, inappropriate marketing strategy, low labor productivity, lack of cash flow analysis and lack of budgets or forecasts." The authors comment that "financial mismanagement" due to lack of measurement or the non-sues of measurement means through financial indicators, was "seen as largely responsible for the demise."

Relationship to IMT/KSM Principles

- RS: misalignment; lack or poor alignment/selection of resources of management leading to mistakes in formulation of strategic plans and business execution
- RS: lack of measurement; not using financial and performance indicators as a guide to plan and develop the business

Article#27: Causes of Business Failure (Richardson, A. P.)

The article long dated from September, 1914, presents a quick summary of the causes of business failure. The most common cause the author mentions the "lack of appreciation of the importance of right bookkeeping and accounting methods," as means of measurement of the health of the business which could guide direction of business decisions – he adds: "mean fail in business because they never know where they stand."

Relationship to IMT/KSM Principles

- RS: lack of measurement; lack of financial and performance indicators that prevent the business managers to know the real condition of the company

Article#28: Examining the possible causes of business failure in British public houses (Pratten, J.D.)

This paper looks for identifying some of the reasons of business failure, concentrating mainly on small and micro-businesses in the United Kingdom. "In the UK, there are between 350,000 and 400,000 business closures a year, which represents about 10 per cent of the total of 3.7 million operations of all size (taken from Small Business Service, 2001)."

The author discusses the previous research from Altman (1991), who studied causes of business failure and found five rations of different financial indicators, which combined makes the "Z" variable, an indication of the company's propensity to fail. He also discusses Argenti (19976), who discusses "non-financial indicators such as the management structure, inadequacies in the accounting information systems, audit lags, the manipulation of financial statements and gearing." The author also discusses prior work in the UK, from Laitinen and Gin Chong (1999), Collis and Jarvis (2002) and Kwansa and Parsa, 1990); where causes for business failure were found, respectively: "management incompetence due to improper selection of resources, and inadequacies in the accounting system, problems in financial management with issues of financial measurement and accounting techniques; and poor business planning".

The author self findings in this research effort about micro-business failure in the UK are listed as follows:

- Companies should ensure their management resources posses the financial and technical management skills necessary to run a business;
- Constant and accurate monitoring of the finances of the business has to be present;
- Firms themselves should recognize problems as they arise and look for assistance if needed.

Relationship to IMT/KSM Principles

- RS: misalignment; lack or poor alignment/selection of resources of management leading to mistakes in formulation of strategic plans and business execution
- RS: lack of measurement; bad or lack of financial measurements to indicate the condition of the business and help in the business execution
- RS: lack of planning; poor or lack of strategic business plans that led to failure

Article#29: Causes and consequences of managerial failure in rapidly changing organizations (Longenecker, Clinton O. et al)

The paper reunited three different experts from two US universities, whom call attention to how important is for organizations to understand the factors that cause managers to fail. To that extend, they "focus on data collected from 1040 managers from over 100 different U.S. manufacturing and service organizations experiencing large scale organizational change in order to help identify the primary causes of managerial failure." The end results of this article find the 15 main causes of managerial failure, which are resumed next in Figure F.1.

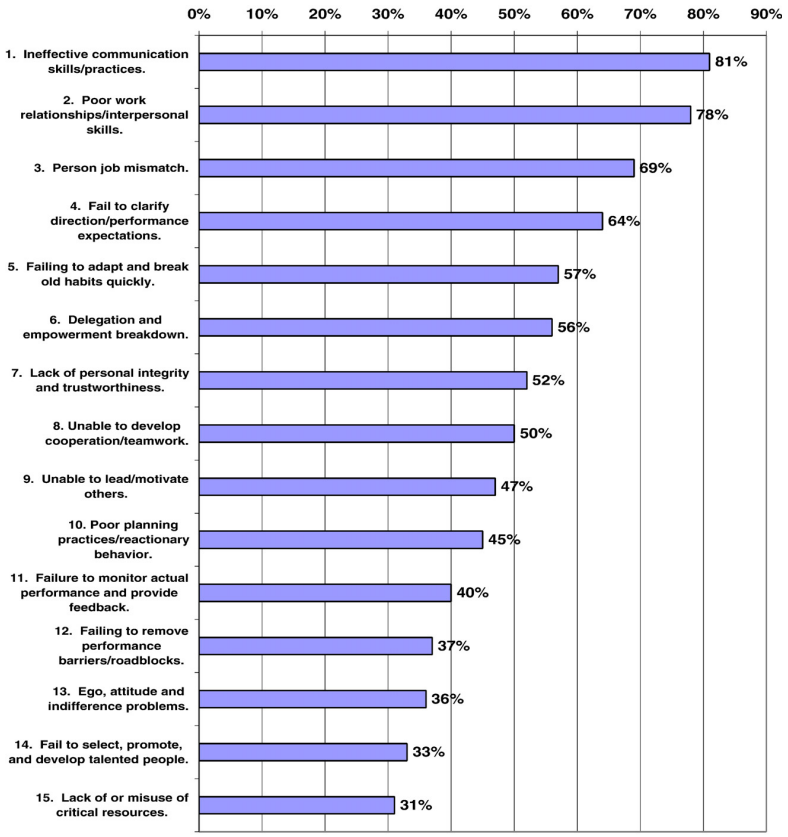

Figure F.1 – Primary causes of managerial failure in rapidly changing organizations (Longenecker, et all; 2007)

Relationship to IMT/KSM Principles

- RS: no listening; ineffective communication skills/practices.
- RS: lack of leadership; poor work relationships/interpersonal skills.
- RS: misalignment; person job mismatch.
- RS: lack of planning; fail to clarify direction/performance expectations.
- RS: lack of change; failing to adapt and break old habits quickly.
- RS: dependency/lack of empowerment; delegation and empowerment breakdown.
- RS: think of me and them (instead of us); lack of personal integrity and trustworthiness.
- RS: lack of leadership; unable to develop cooperation/teamwork.

- RS: lack of leadership; unable to lead/motivate others.
- RS: reactive; poor planning practices/reactionary behavior.
- RS: lack of measurements; failure to monitor actual performance and provide feedback.
- RS: ignore performance information; failing to remove performance barriers/roadblocks.
- RS: think of me and them (instead of us); ego, attitude and indifference problems.
- RS: think of me and them (instead of us) / lack of leadership / no listening; fail to select, promote and develop talented people.
- RS: misalignment; lack of or misuse of critical resources.

Article#30: Factors for small business failure in developing countries (Al-Shaikh, Fuad N.)

The article focuses on a research among two hundred (200) small business owners in the manufacturing sector in Jordan, who were surveyed about causes of small business failure. The results were categorized in managerial factors and financial factors.

The main causes of failure of small businesses that the authors found, in order of importance, were:

- Poor planning;
- Lack of financing, resulting from the poor business planning mechanisms;
- Poor management;
- Competition from larger firms with monopolies and;
- Lack of experience.

The authors finalize the article by providing some recommendations, based on the results of another part of the survey, which could help overcome and minimize the presence of these causes of business failure. Some of these are reduction of monopolies and improvement and availability of education and training programs for operational and financial management.

Relationship to IMT/KSM Principles

- RS: lack of planning; poor planning strategies without the proper research leading to failure.
- RS: misalignment; lack or poor alignment/selection of resources of management leading to mistakes in formulation of strategic plans and business execution.
- RS: no training/education; management without knowledge to run this type of business.

Results

The following Table F.3 summarizes the characteristics found on the business practices that led to “failure”, after applying the KSM method.

Table F.3

RS characteristics found

RS characteristics
Assumptions
Bureaucratic
By formal position/title (instead of by performance)
Complex
Control
Decisions
Dependency (instead of empowerment)
Expectations
Ignore performance information
Inefficient
Lack of change
Lack of measurement
Lack of planning
Lack of trial and error/testing
Misalignment
No accountability
No information
No leadership
No listening
No training/education
Price-tag/low-bid
Reactive
Relationships
Silos
Technical
Think of me and them (instead of us)

After organizing the characteristics found and counting the appearances each had, results appear in the following summary (Table F.4).

Table F.4

RS characteristics found and the respective quantity of appearances

Characteristics found on the business practices that led to failure		
Ranking	**RS characteristic**	**Qty of appearances of "RS characteristics" as Failure**
#1	Misalignment	17
#2	Lack of planning	14
#3	Lack of measurement	12
#4	Lack of change	6
#5	Technical	5
#6	Assumptions	5
#7	Decisions	5
#8	Ignore performance information	4
#9	Think of me and them (instead of us)	4
#10	Reactive	3
#11	Silos	3
#12	No leadership	3
#13	Complex	2
#14	By formal position/title (instead of by performance)	2
#15	Control	2
#16	Price-tag/low-bid	2
#17	Bureaucratic	2
#18	No training/education	2
#19	Lack of trial and error/testing	1
#20	Expectations	1
#21	No information	1
#22	Inefficient	1
#23	Relationships	1
#24	No accountability	1
#25	No listening	1
#26	Dependency (instead of empowerment)	1