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6 Sigma helping achieve Cost Reduction and Process Improvement/Productivity in the Service Industries (Bank)

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UBT IEM– Engineering Management 2005 -2006

Master Thesis

6 Sigma helping achieve Cost Reduction and Process Improvement/Productivity in the Service Industries (Bank)

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1. Introduction

The aim of this paper is to examine the contribution made by 6 SIGMA to a modern systematic and disciplined approach to improve processes and cooperation to Total Quality Management (TQM considered as a philosophy).

I will elaborate how the 6 SIGMA is intended to assist Management being responsive to the expanding market for high quality products and services in order to gain new markets and existing ones.

I will account for the limitations and the relevance of the purpose in the end of this chapter.

2. Problem Discussion

Six Sigma and TQM philosophy, Six Sigma employs some of the same tried-and-true tools and techniques of TQM. Both Six Sigma and TQM emphasize the importance of top-down support and leadership. Both approaches make it clear that continuous improvement of quality is critical to long-term business success. The PDSA cycle used in TQM is not fundamentally different than the Six Sigma DMAIC cycle.

¹I would say TQM provides set of philosophical guidelines for management to follow. Total Quality Management is the broad spectrum of 6 SIGMA implementations into business operations for the continued quality and improvement. The purpose of 6 SIGMA techniques is to create a better way of doing things and achieve TQM.

Six Sigma was created by some of America's most gifted CEOs. People like Motorola's Bob Galvin, AlliedSignal's Larry Bossidy, and GE's Jack Welch. These people had a single goal in mind: to make their businesses as successful as possible. Once they are convinced that the tools and techniques of the quality profession could help them do this, they developed a framework to make it happen. Six Sigma.

¹ Bob Galvin, AlliedSignal's Larry Bossidy,

In Kosova for the first time 6 Sigma was introduced in Banking Services , first time was introduced in 2004 , and I will be able to track the successes of 6 Sigma philosophy in 2009 , so the data collected for cooperation are from 2004 to 2009.

2.1 Problem Formulation

TQM has always been the application and synthesis of many methods. To understand TQM, one needs to understand the works of: Joseph M. Juran, W. Edwards Deming, Armand V. Feigenbaum, Philip B. Crosby, Kauru Ishikawa, Genichi Taguchi, Walter A. Shewhart, Acheson Duncan, to name several. There are many more.

The Six Sigma may point out that Six Sigma is TQM on steroids. In my definition, TQM is the development, deployment and maintenance of systems/processes related to quality producing business process excellence, you can add ISO 9000, QS 9000, TL 9000, MBNQA and whole host of other standards and practices.

From my view, the name has been changed, a new coat of paint added and it is still the same car, just a new salesman.

So the research question of the thesis is:

- Does Six SIGMA management technique fulfill managers' needs to achieve Total Quality Management?
- How does 6 Sigma help achieving Cost Reduction and process improvement/productivity improvements,

i

3. Background – TQM and 6 Sigma

There are different approaches/philosophies to improve processes/productivity I will mention few:

²Total Quality Management. Six Sigma. ISO. Supply Chain Management. Strategic Alliances. Balanced Scorecard. Management by Objectives. Best Practices. Partnering. Downsizing. Cross-functional Teams. Self-Organisation. Entrepreneurs. Intrapreneurs. Corporate Culture. Horizontal Organizations. Portfolio Management. Decentralization. Zero Base Budgeting. Theory Z. Experience Curve. Brainstorming. Mission and Vision Statement. Benchmarking. Core Competencies. Learning Organization. Customer Retention. Customer Satisfaction Management. Customer Segmentation. Just-in-Time (JIT) Inventory Management. Managing Innovation. Knowledge Management. Market Disruption Analysis. Merger and Acquisitions. Strategic Planning. Merger Integration

² [Wizdom Works](#)

Teams. Values Statement. One-to-One-Marketing. Mass Customization. Outsourcing. Real Option Analysis. Discounted Cash Flows. Scenario Planning. Shareholder Value Analysis. Business Process Reengineering. EmpoIrment. Cycle Time Reduction. Networks. Virtual Organizations. Borderless Corporation. Electronic Commerce. Continuous Improvement. Virtual Teams. Ib-based Collaboration and ITIL.

In recent years, there has been produced a great amount of techniques and new concepts for managers to use. Many of these new ideas become widely popular among managers, even if only for a short period of time.

The term "total quality management" has been coined to describe a philosophy that makes quality values the driving force behind leadership, design, planning, and improvement initiatives. According to [Wizdom Works](#), TQM is "Both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization.

TQM is the application of quantitative methods and human resources to improve the material and services supplied to an organization all the processes within an organization, and the degree to which the needs of the customer are met, now and in the future." TQM requires managing the entire organization so that it excels in all dimensions of products and services that are important to the customer. This is the philosophy behind TQM that gives us an understanding of what it is and how we should use it. How ever, in order to successfully implement TQM concepts such as: [Continuous Improvement](#), [ISO 9000](#) and [6 SIGMA](#) are used. And when these ideas and concepts have been fully utilized and successfully implemented, the government recognizes these companies with the [Malcolm Baldrige National Quality Award](#) and the [Deming Prize](#).

³What are the factors that are responsible for this increasing quest for new approaches to management? A frequently discussed explanation for the growing demand for management techniques points to the continuously increasing complexity and dynamic of the environment, in which businesses are operating. Developments such as globalisation, new technologies, or the intensification of competition are some of the most important

³ Tom Peters

factors generally associated with the increasing number of new management techniques. It is argued that this increase in complexity forces management to adopt innovative management techniques. Tom Peters' message for organizations is illustrative: "Get innovative or get dead."⁴ Of course, change and innovation are important. But I believe that this explanation merely touches upon the surface of the growing popularity of management techniques.

The principal quality systems -- Total Quality Management (TQM), Six Sigma, ISO9000, QS9000 -- are all focused on process improvement. ISO9000 and QS9000 focus on the quality system. TQM and Six Sigma (in the broad sense) address the whole business. The greatest Value (return for invested effort) from any quality system is obtained when the processes being improved align with the strategic and financial plans for the business. The Six Sigma Improvement Methodology combines the team-based Process Improvement methodology of TQM with the process measurement strengths of Six Sigma. The customer requirements analysis of Quality Function Deployment (QFD) and the cost analysis and team brainstorming of Value Analysis (VA) are integrated into the Six Sigma.

3.1 SIX SIGMA Methodology

In this chapter, I present a theoretical fundament, on which I will base our discussion of the official and unofficial functions of management techniques. After the discussion on 6 SIGMA Methodology, its implication/changes in the management style. I will argue that 6 SIGMA prove useful in several ways in the Banks (service industries).

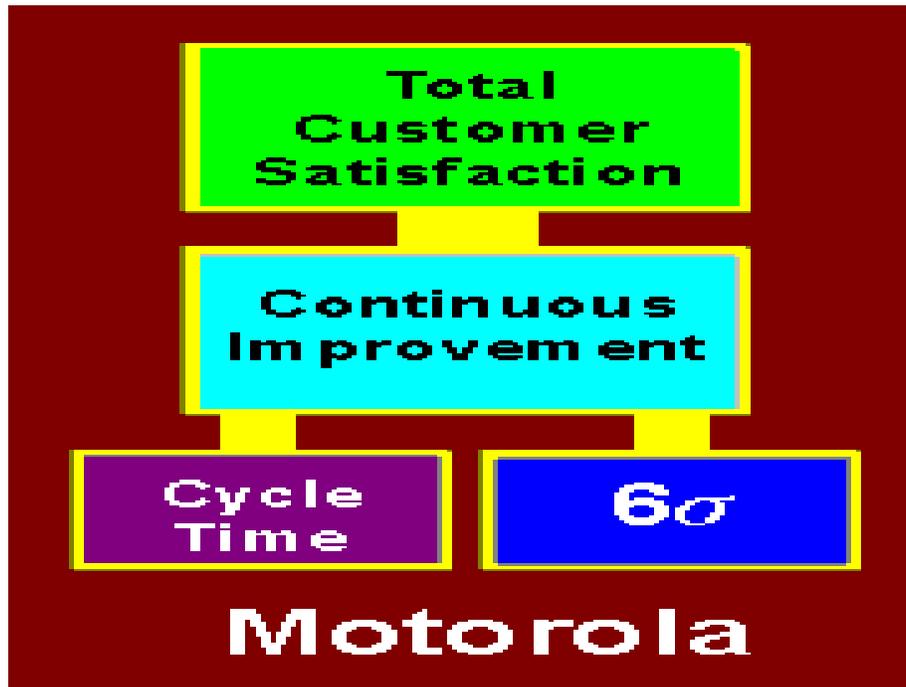
3.2 A Review of 6 SIGMA methodology

Performance Leadership in Meeting Customer Requirements by Doing the Right Things
Right the First Time - Is this Total Quality or Six Sigma?

➤ **The answer is BOTH.**

Six Sigma provides a structured approach to Total Quality. In 1988, Motorola and the Westinghouse Commercial Nuclear Fuel⁵ introduced 6 Sigma.

Chart . number 1. Division (WCNFD) won the first Baldrige National Quality Awards (15).



Both Motorola and Westinghouse had undertaken major quality improvement programs in the early 1980's.

Motorola used Six Sigma quality and Cycle Time reduction as the foundations of its Continuous Improvement program. The goal was Total Customer Satisfaction (TCS). In the late-1970's, Westinghouse began using Cycle Time reduction to dramatically reduce its investment in inventory. In the early 1980's, WCNFD also focused on improving process yield (fundamentally a Six Sigma approach). These similar Continuous Quality Improvement (CQI) programs paid huge dividends. Motorola achieved a dominant market position in pagers and cell phones and WCNFD did so in nuclear fuel.

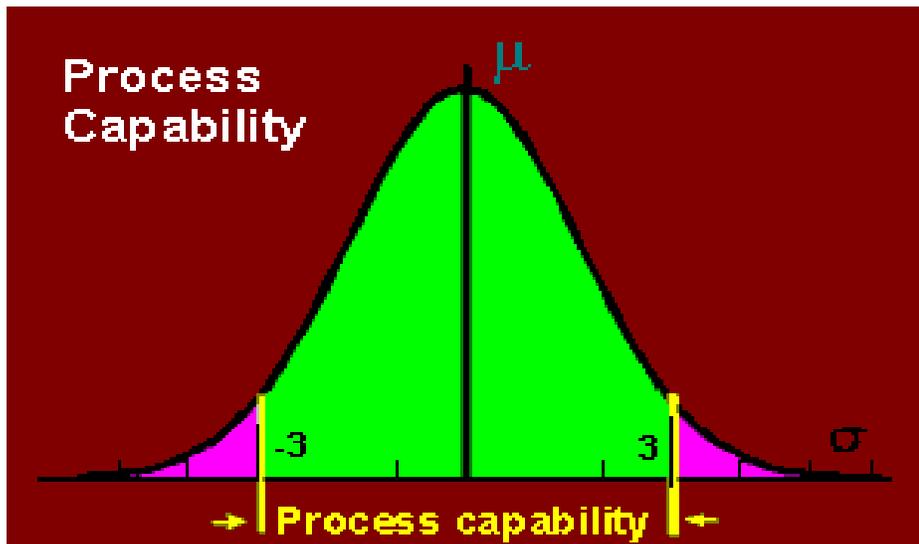
⁵ <http://www.isixsigma.com/library/content/c020717a.asp>

Today, we see many corporations -- most notably GE -- adopting similar quantitative quality improvement programs to achieve significant bottom line results. Strong management leadership and support has been as vital in these successes as the quality improvement techniques themselves -- Bob Galvin at Motorola, Mead D'Amore at WCNFD, and Jack Welch at GE.

3.3 Six Sigma Process Quality

⁶In 1985, Bill Smith at Motorola demonstrated a correlation between how often a product was repaired during manufacture and its life in the field. Defect levels in the parts per million (ppm) rather than in parts per hundred (%) were needed to improve the reliability of semiconductors and electronic products in order to compete with the Japanese. Hence, the development of the Motorola Six Sigma quality program with its landmark quality level of 3 ppm defects.

Chart 2 [process deviation in normal distribution]

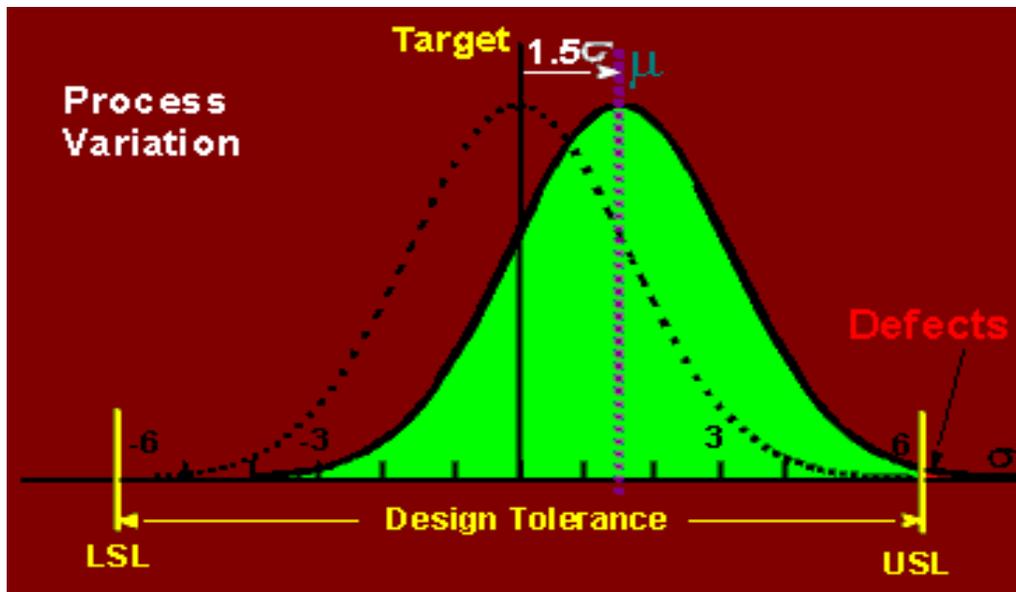


^{6 6} <http://www.isixsigma.com/library/content/c020717a.asp>

Six Sigma was intended to improve the quality of processes that are already under control -- major special causes of process problems have been removed. The output of these processes usually follows a Normal distribution with the process capability defined as ± 3 sigma.

The process mean will vary each time a process is executed using different equipment, different personnel, different materials, etc. The observed variation in the process mean was ± 1.5 sigma. Motorola decided a design tolerance (specification width) of ± 6 sigma was needed so that there will be only 3.4 ppm defects -- measurements outside the design tolerance. This was defined as Six Sigma quality.

Chart 3 [Deviation within normal distribution]



Six Sigma Process Improvement -- (D) MAIC

⁷A more quantitative version of Deming's PDCA (Plan-Do-Check-Act) Process Improvement methodology was developed to implement this statistical approach -- it is commonly referred to as MAIC.

- Measure
- Analyze
- Improve
- Control

Key product-process performance variables are measured, analyzed, improved, and controlled using statistical methods. The simple "statistical" quality tools that were popularized in the Total Quality era are reinforced with Design of Experiments (DOE) and more sophisticated Statistical Process Control techniques.

Process sigma is the primary unit of measure. It is determined from an analysis of the number of defects observed in a process. Performance is compared to the Best-In-Class sigma for that process to determine whether the process needs to be improved or the product / service needs to be re-designed. When improvement is necessary, Design of Experiments (DOE) are used to determine which product or process parameters are most important and specific parameter values that will give the best performance. SPC is used to continually monitor product and process performance.

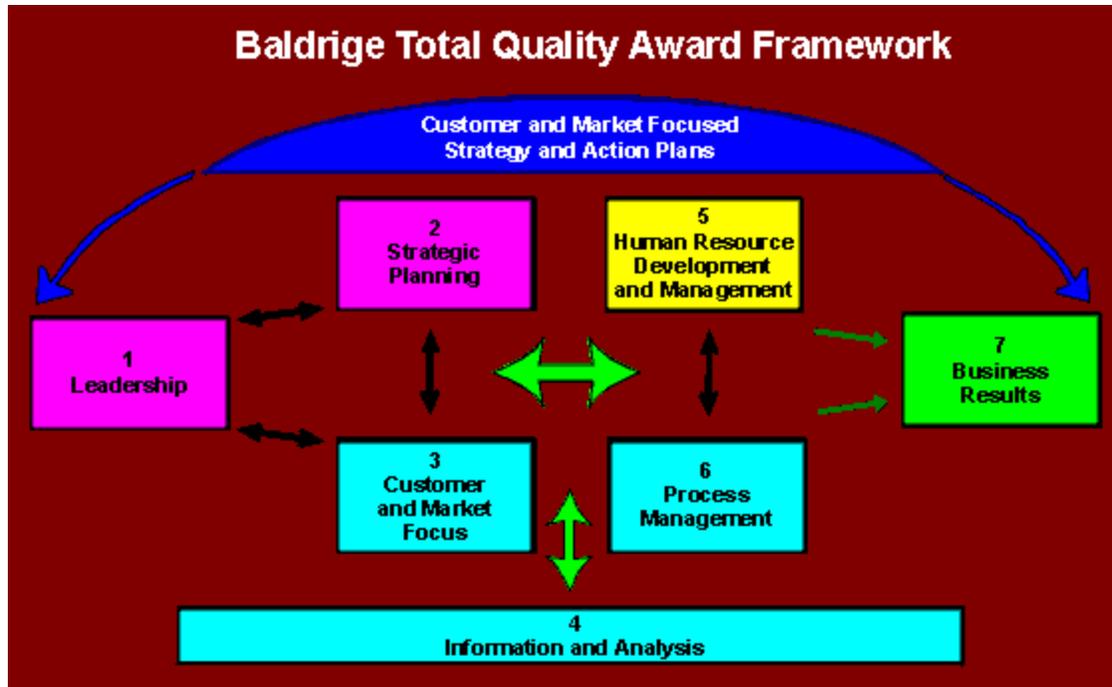
Similar to the problem-solving models where an initial step to define the problem was frequently added, some practitioners prefer to precede MAIC with a Define step. They feel that selecting and defining the right process is critical. Effort can easily be wasted working on poorly selected, ill-defined processes -- as illustrated by many TQM failures.

^{7 7} <http://www.isixsigma.com/library/content/c020717a.asp>

3.4 Total Quality Management (TQM)

⁸TQM is an overall business (quality) improvement system. It encompasses leadership, strategic planning, and human resources as well as Process Improvement -- as seen in the Baldrige Award Framework below.

Chart 4 [TQM Framework]



The previously described Six Sigma Process Improvement methodology would be covered in criteria 3, 4, and especially 6 -- Customer and Market Focus, Information and Analysis, and Process Management respectively. The Baldrige criteria does not prescribe the use of a specific quality improvement methodology such as Six Sigma. A business can select or develop its own process, but it must show that results are obtained.

The Baldrige criteria does assess whether all personnel are enabled to contribute effectively through work teams and individually. TQM provided a big impetus to problem-solving teams, quality improvement teams (QITs), and cross-functional teams. Companies generally trained teams to use simple statistical quality tools in solving

^{8 8} <http://www.isixsigma.com/library/content/c020717a.asp>

problems. These teams have been very effective in developing and implementing consensus-based solutions to productivity and quality issues.

The core values and concepts of the Malcolm Baldrige Total Quality Awards are

- Customer-Driven Quality
- Strong Leadership
- Continuous Improvement
- Employee Participation (Teamwork)
- Fast Response
- Design Quality
- Management by Fact (measures)
- Partnerships
- Measurable Results

Customer requirements, design quality, measures, and continuous improvement are key elements of Six Sigma Process Improvement.

3.5 Six Sigma Improvement System

Many Total Quality improvement efforts did not achieve their objectives because there was a lack of commitment to the specific improvement actions and to their effective implementation. Six Sigma, as a system, overcomes that weakness by:

- focusing on the common commitment to meeting customer requirements,
- developing a consensus set of improvement actions,

- prioritizing those actions, and
- establishing measures that assure accountability in implementation.

Many companies today are achieving dramatic results with a company-wide Six Sigma Improvement System based on the previously described Six Sigma Process Improvement methodology -- MAIC. Large numbers of technical personnel are trained as "black belts" to lead teams in applying the statistically-based methodology. Most black belt training programs focus heavily on these advanced statistical techniques.



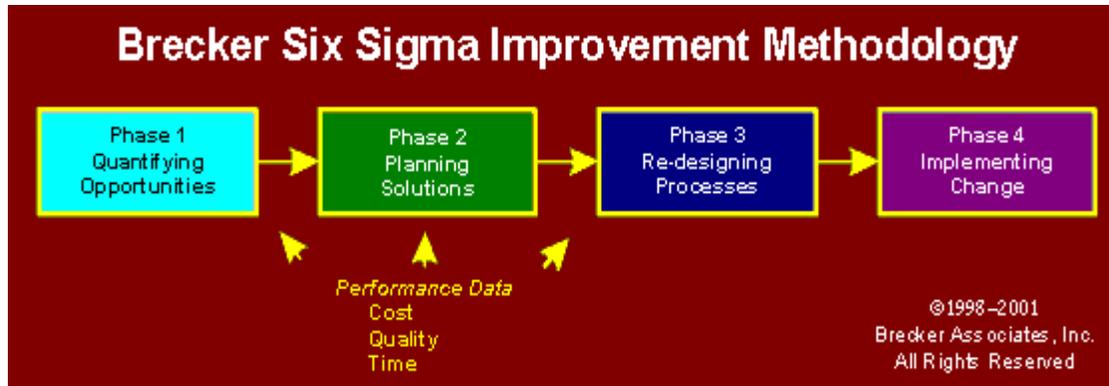
High level executives are appointed as "champions" to drive the Six Sigma Program within their segment of the company. Master Black Belts coach black belts and coordinate Six Sigma projects. Some companies provide basic process improvement training to Six Sigma project team members and refer to them as "green belts." Black belts and / or teams are assigned process improvement projects with specific performance improvement goals.

To reduce the workload on their key personnel, to lessen the need for extensive training, and to minimize costs, small organizations (and some large ones, too) obtain external facilitation and statistical methods support.

Six Sigma Improvement Methodology

The four-phase Brecker Six Sigma Improvement Methodology incorporates elements of Value Analysis (VA), Quality Function Deployment (QFD), and QS9000 (ISO900-2000 is now similar) into the Six Sigma Improvement System to provide better results with less effort and cost.

Chart number 4 [Six Sigma Methodology]



Six Sigma Value Analysis Workshops (Phase 2) are used to identify, evaluate, and prioritize potential improvements. As shown by many TQM failures (high implementation and training costs with few significant results), the bottom-up projects of the traditional approach may not produce the desired financial results. Value Analysis techniques are used to quantify cost and productivity issues. Six Sigma techniques are used to quantify quality issues. Potential solutions are developed and prioritized. Six Sigma Leaders then lead multi-functional teams in implementing high priority projects (Phase 3).

⁹Phase 1 takes the Six Sigma Improvement Process to the business level. General customer and business needs are identified. The value of product lines / services and business processes are evaluated. Specific product / services and processes to improve and business processes to re-engineer are selected. Six Sigma Value Analysis Workshops (Phase 2) and Re-engineering Workshops are used to determine potential solutions.

Implementation can be undertaken at 3 levels

- Process (Phase 3)
- Product Line / Plant (Phases 2-3)

^{9 9} <http://www.isixsigma.com/library/content/c020717a.asp>

- Business (Phases 1-3).

Organizations can pilot this methodology at the product line / plant level (Phases 2-3) before committing to company wide implementation and training. Traditional Six Sigma training addresses Phase 3.

Phase 1: Key problem areas are identified and quantified.

¹⁰Senior personnel analyze customer, financial, operational, and quality data to identify improvement opportunities and quantify possible improvements. An Activity-Based Costing approach is frequently taken. Improvement goals are aligned with strategic business objectives. This is akin to DMAIC at the business level with the Critical to Quality (CTQ) and Critical to Business (CTB) parameters being passed down from Phase 1 to Phase 3 (similar to QFD or Hoshin planning).

Phase 2: Potential product / process improvement solutions are quantified.

Product line / plant teams use value analysis style workshops to develop and evaluate specific product / service and process improvements needed to meet quality, productivity, and cost objectives. Lean thinking, Six Sigma, and other quality and productivity concepts are considered.

Phase 3: Multi-functional teams improve key processes.

Multi-functional teams analyze products and processes in depth and develop detailed implementation plans for improvements. Lean thinking, Six Sigma, Kaizen, and other quality and productivity tools are used as appropriate.

Phase 4: Improvements are implemented and monitored.

Strong management support is essential in making significant and lasting improvements. Decision-making needs to be crisp. Follow-up needs to be relentless. Improvement goals and the implementation schedule must be met to achieve the projected returns.

¹⁰ ¹⁰ <http://www.isixsigma.com/library/content/c020717a.asp>

Focus!

Focus!

Focus!

The Six Sigma Improvement System insures that management and workers are working on the "right" problems and that quality and financial goals are met or surpassed.

Product Line - Location Pilot

¹¹The complete improvement process above can be piloted at the product / service line or location (plant, HQ) level. Facilitated Six Sigma Value Analysis Workshops with teams including potential Six Sigma Leaders would identify and prioritize specific improvement projects. The potential Six Sigma Leaders would be coached in leading multi-functional teams addressing the high potential solutions. The Six Sigma Leaders and teams would apply the Six Sigma Process Improvement, QFD, Value Analysis, and productivity improvement methodologies in implementing product / service and process improvements (Phase 3).

Smaller businesses or smaller units of large corporations can continue to obtain the benefits of Six Sigma in this manner without the expense of large scale black belt training. Team leaders would gradually acquire the skills of Six Sigma Leaders. Low cost supplemental training would be used to train a limited number of Six Sigma Leaders as additional projects are undertaken.

When an organization decides to commit to a full-scale Six Sigma Improvement System, the system and training can be customized to fit the needs of the specific business. The general approach is the same, but the Six Sigma statistical tools, additional statistical tools, QFD and productivity methodologies, and team approach are adapted to business

^{11 11} <http://www.isixsigma.com/library/content/c020717a.asp>

and personnel needs. Combining training with implementation of improvements leads to virtual self-funding -- there is no need for costly up-front training.

The full benefits of the Brecker Six Sigma Improvement Methodology are obtained through the application of the Value methodology to the business. The contribution to Value-Added of all products / services and processes including business processes is determined and analyzed using Re-engineering techniques. Improvement areas are selected and objectives are set.

3.6 Six Sigma Leaders

¹²Six Sigma Leaders training is combined with the implementation of coordinated Six Sigma improvement projects. Potential Six Sigma Leaders experience the general improvement methodology in the Six Sigma - Value Analysis Workshop (Phase 2). They are coached in applying Six Sigma, Value Analysis, QFD, and productivity techniques in Product / Process Re-Design Workshops (Phase 3). In addition, Leaders are trained in Six Sigma and other statistical techniques as they lead their assigned teams through the analysis and improvement of a specific product / service and processes. Training is customized to the needs of the particular business, process, and personnel.

3.7 Continuous Improvement

The quality journey is continuous -- never-ending. Over time, products / services change, customers change, processes change, people change, suppliers change. Quality may change suddenly or deteriorate slowly. Serious problems need to be addressed as soon as they become evident. ISO9000 and QS9000 (automotive) both require Corrective Action Systems to document and resolve serious quality problems. QS9000 (and now ISO9000-2000) requires a Continuous Improvement system to eliminate waste and to prevent small problems from becoming big problems.

Cost and productivity also need to be evaluated periodically. New materials, new suppliers, new processes, new scheduling techniques to accommodate volume and

¹² ¹² <http://www.isixsigma.com/library/content/c020717a.asp>

product mix changes, etc. may make cost and productivity improvements possible. Therefore, a Continuous Improvement (CI) system that not only resolves quality problems but also evaluates potential cost and productivity improvements is desired. Periodic Six Sigma Value Analysis workshops accomplish this quality, productivity, cost review.

4. Working Hypothesis

I will argue that 6 SIGMA concepts are attractive, because they help to structure organisational reality; they are valuable tools in motivating employees; they help to legitimize the organisation to internal and external stakeholders and they help the company to create meaning out of the usually unstructured organisational reality.

4.1 Entity

I will test my hypothesised functions of 6 SIGMA in RAIFFEISEN BANK. Since I am investigating our phenomenon from a managerial perspective, it is regarded as necessary to conduct personal interviews with top- as well as middle managers.

4.2 Purpose

The purpose of the thesis is to explain the functions, which 6 SIGMA fulfils for managers. Thereby, I want to prove empirically that 6 SIGMA offers – besides their official functions – a number of unofficial or latent functions, which managers find most useful.

4.3 Relevance of the Purpose

Finding an explanation of the management fashion phenomenon is critical for several reasons. Many people in employment are currently experiencing the consequences of some fashionable management techniques whether it is Business Process Reengineering, Total Quality Management, or 6 SIGMA. The phenomenon of the increasing popularity of management fashions is of particular interest, since there are major doubts about the

efficiency of the core ideas.¹³ Therefore, I believe that management science must reflect on the “new concepts” which in fact might be nothing more than old wine in new bottles. This thesis is intended to contribute to a 6 SIGMA fashions with the aim of finding an explanation of the increasing popularity of these concept.

4.4 Limitations

- The main limitation is that I will base my empirical research on a one management technique. Therefore, I will only exemplary show how managers make use of management fashions. I am not claiming that my arguments apply to all sorts of management techniques. This limitation can only be overcome through more empirical evidence concerning other management techniques.
- I have chosen the managerial perspective, since I want to find out, which functions management techniques fulfil for managers. Therefore, I will not interview non-management employees or other organisational stakeholders.
- As I work in a deductive manner, it is clear that the proposed framework can only be considered as a possible explanation which does not claim validity or completeness.

4.5 Methodology

In this chapter the methodological choices are presented – at this point, it is not only important to describe the method used in this thesis, but also the motivation behind the selection. I will start the methodological approach by presenting the research journey. In what follows then, the research approach, the research method, access to empirical data, the organising of the research process, and the analysis of evidence will be presented.

4.6 Scientific Approach

In order to get a clear understanding of a scientific work it is essential to state the scientific point of view the authors have. The mental models of the authors are probably the one factor that influences the structure and the result of the thesis most. The research

¹³ Carroll 1983, Clark and Salaman 1996

paradigm represents the researcher's underlying assumptions, values and perspectives that influence the research actions. It guides the authors both, in the choice of the theoretical framework, and the choice and perception of the empirical data. There are two different scientific approaches: the positivistic and hermeneutic view:¹⁴

The positivistic approach concentrates on the description and explanation of situations; the work is based on things that can be seen or proved. Knowledge can only be obtained through objective observation. The hermeneutic view attempts to interpret a situation in order to understand certain phenomena. The research object is considered in a whole context and not as a network of determinate relationships between single parts.¹⁵ The researcher regards him/herself as part of the reality being studied¹⁶, instead of being an external observer as in the positivistic school.

The purpose of our thesis is to explain the functions, which 6 SIGMA fulfil for managers. Therefore, I will make use of the positivistic research approach. I will analyse the general literature used to sell the management techniques and determine the official functions that these techniques fulfil for managers. In order to shed light on those functions of management fashions, which are less obvious, I will use literature that approaches the topic of 6 SIGMA from a rather positive perspective. Based on my theoretical analysis I will generate some concepts on the official and unofficial functions of 6 SIGMA. The most plausible concepts will then be tested in an empirical case study.

4.7 Research Approach

The research approach deals with the way the scientist confronts the empirical world. This is of particular interest, since the way the researcher approaches reality will have an effect on the structure of the thesis and the journey of the work. Usually the researcher can choose between two opposite approaches: induction and deduction.¹⁷ When using the deductive approach the researcher starts the inquiry in theory. Thereafter, he/she attempts to apply a theoretical extracted question on a specific case. The inductive approach starts

¹⁴ Gummesson 2000, 19.

¹⁵ Morgan 1980, 491

¹⁶ Morgan 1980, 493

¹⁷ Gummesson 2000, 176.

with the observation of empirical data. Then he/she she systematises these data in order to be able to make generalisations, upon which he/she may create theories.¹⁸

In this study, I will try to analyse the functions that fashionable management techniques fulfil for their users by generating assumptions on the basis of a number of theoretical frameworks. In the field of management fashion there has already been conducted some research. However, these studies are mainly theoretical and not so much empirically proved. It seems reasonable to make use of the existing theoretical framework and restructure it in order to generate some realistic assumptions about the functions of management fashions. Hence, reality is approached with specific theories and concepts which are, in a second step, tested against empirical data. Consequently, I will work, in congruence with the paradigmatic assumptions stated above, in a deductive manner.

4.8 Research Method – Qualitative Case Study

In a qualitative case study, the selection of the case(s) is usually non-random, purposeful, and small. The design is flexible and responsive to changing conditions, which gives the researcher room for emergent data. This way of conducting research corresponds directly to the needs of our research object. The topic under investigation can be considered as rather complex and difficult to test against empirical data. Managers might hesitate to lay open their true motivation for the adoption of a management technique. One reason might be that his/her managerial position or the role he/she performs in the organisation might be directly related to the particular technique. The disclosure of motivation that stands behind the adoption of a new technique might not be in the interest of the particular manager. In this regard, the qualitative research method allows us to perform a detective role. Our interview guide with open questions gives us room for probing techniques, which allow us to get closer to the functions that 6 SIGMA concept perform for the manager.¹⁹

¹⁸ Gummesson 2000, 176

¹⁹ <http://www.tgsa.edu/online/cybrary/case1.html>, 2001-04-20

4.9 Access – Raiffeisen Bank

A qualitative case study can either consist of a single case or of multiple cases.²⁰ Our choice of the case companies is based upon some predetermined criteria: A suitable companies should have had already experiences with the use of 6 SIGMA. For the purpose of our thesis it is not of important which technique was used In order to get better insights into the functions of management fashions, it seemed appropriate to choose RAIFFEISEN BANK as they are using 6 SIGMA. Moreover, I regarded it as necessary to conduct interviews with top as well as middle managers, since I can gain a greater deal of information concerning the functions from different levels of the organisation.

When I started to search for representative RAIFFEISEN Bank Network Branches, care was taken to ensure that the Network Banks covered different branches of business and that they did already have experience with 6 SIGMA.

Interviews will be conducted via email , telephone and one to one.

4.10 Organising the Research Process

Basically, the best way to acquire the relevant information is to ask managers and employees in a face-to-face situation. Therefore, I have chosen the interview as the main instrument for collecting our empirical data. Moreover, documents such as brochures and internal documents were utilised but in a minor role. Concerning archival records I used implementation 6 Sigma projects, which helped us to figure out what has changed in the day-to-day business after implementation of a 6 SIGMA.

4.11 Data Analysis

In order to reveal the functions of management fashions on the basis of non-numerical and unstructured qualitative data, the theoretical and empirical data needs to be categorised or otherwise recombined. Qualitative data analysis can be divided in two

²⁰ <http://www.tgsa.edu/online/cybrary/case1.html>, 2000-04-20

phases. First of all, the researcher has to form categories of variables. In a second step, relationships between the variables have to be discovered and explained.

As already mentioned, I structured our open questions around five categories, which helped us to match the unstructured empirical data with our four concepts developed out of the theoretical framework. The first category contains general information of each Network Bank. The second one includes the data, which can be related to the reasons that stand behind the adoption of 6 SIGMA. The next category is concerned about the goals which are pursued with the new concept. The third category has to do with the implementation process and the last one deals with the effects of the 6 SIGMA on the organisational structure. I have developed the following relationships between these categories and our three concepts, which are going to be tested in our case study:

In order to find out if 6 SIGMA adopted to legitimise the organisation, I have to investigate in the first place the reasons that stand behind the implementation and the goals, which are pursued with new concept. External motivations, such as customer demands or competitive pressure would be indicative for the legitimising function. For a more holistic view on the legitimising function it seems appropriate to investigate not only the internal, but also the external stakeholders of the particular organisation. However, since the purpose of our thesis is to reveal the functions of 6 SIGMA for managers, I have chosen the managerial perspective and not a holistic perspective. If we want to find out, if 6 SIGMA is integrated into the actual workflows or if they remained in fact decoupled from the existing structure, I have to study the implementation process and the effects of the 6 SIGMA on the organisational structure.

With the aim of revealing a motivation function, I have to take the goals for the implementation as well as the implementation process into consideration

4.12 Scientific Credibility

In order to build a credible, coherent and consistent research some criteria need to be fulfilled. According to Yin, the diversity of evidence, the ability to articulate research questions and theoretical propositions and the research design influence the confidence in

the result.²¹ There are, however, no established ways of testing the credibility of a qualitative case study. In this thesis, I intend to use the same criteria that are used in order to measure the quality of a quantitative theory testing study. The major difference is that instead of dealing with quantitative variables, where statistical relationships are the main issue, we are dealing with data that can only be measured in words, and where the data input derive from substantially fewer numbers of empirical sources. According to Yin, the central issues to measure the quality of a study are validity, reliability and the possibility to make generalisations out of the conclusions.²²

4.13 Validity

Validity concerns the ability to measure what it was designed to measure. In other words, the validity of the research measures if the study achieved the objectives which were supposed to be achieved. When dealing with qualitative studies, there are no absolute criteria to test validity against. Rather, the scientist has to prove that the information and the conclusions are within a certain degree of reasonableness. This is done by demonstrating that the conclusions are built upon a rich material, and that they are applicable in different situations.

When collecting the empirical data I set out to find data that would function as an empirical base for us to be able to explain which functions 6 SIGMA techniques fulfil for their users. To ensure that I measured the correct data, I used an interview guide to discuss our categories, which I linked back to our theoretical concepts in a systematic model.²³

4.14 Reliability

Reliability is concerned with the data collection instrument that should produce stable results, which are independent of the researcher. When working with quantitative data a

²¹ Yin 1994, 36

²² Yin 1994, 36

proper way of testing reliability is to determine if the study would produce the same results if repeated.²⁴

The qualitative case study was conducted in an as systematic way as possible: I used predefined criteria to select the case, and used an interview guide to structure the personal interviews. In addition, I applied the concept of triangulation: I have exploited three different sources of evidence, which are the interview, documents as well as archival records in order to discover the different functions of management fashions. To strengthen the trustworthiness of the thesis, I tried to reduce the risk of empirical bias by both authors signing the declaration (electronically agreeing).

Concerning the reliability of the theoretical sources, I mainly use sources of renowned magazines and authors that are often quoted in the field of management theory. Therefore, I believe in the trustworthiness of the theoretical framework.

5. Generalisation

One of the frequently cited limitations of the case study method is the difficulty in generalising the findings. But, as Yin emphasises, the logic of case-study research is to generalise theoretically, rather than empirically and to shed light on processes by getting close to them in a way one could not in a survey-style project.²⁵ The possibility to generalise is highly determined by the way the researchers choose their research population. In our case the choice of the research population has been chosen rather subjective. Based upon predetermined criteria and without randomised choice I selected RAIFFEISEN BANK for our empirical investigation.

5.1 Empirical Part

In this chapter I will account for the empirical data that our qualitative case study has resulted in. After a brief chronological overview over the access to our empirical data, I will shortly give some general information the Raiffeisen Bank. In a second step, I will present the results of interviews, which I have structured in four categories: 1. Reasons for the implementation. 2. Goals, which are pursued with the management technique. 3.

²⁴ Yin 1994, 37

²⁵ Yin 1994

The implementation process. 4. The effects of the management fashion on the organisation. The categories will be related to our three concepts in our analysis.

6. Raiffeisen Bank (6 Sigma implementation)

The foundation of Raiffeisen banks goes back to an initiative of the German Friedrich Wilhelm Raiffeisen (1818-1888), who, by founding the first Raiffeisen cooperative banking association in 1862, has laid the cornerstone of what has since become the global organisation of Raiffeisen cooperative societies. According to Raiffeisen's fundamental principle of self-help, the promotion of their members' interests is a key objective of their business policies.

With a balance sheet total of nearly € 68 billion as of year-end 2004, RZB is Austria's third largest bank. It provides the full range of commercial and investment banking services in Austria and ranks among the leading banks in Central and Eastern Europe.

The EBRD, owned by 60 governments and two inter-governmental institutions, aims to foster the transition from centrally planned to market economies in Central and Eastern Europe and the Commonwealth of Independent States. The EBRD is the largest single investor in the region and mobilises significant foreign direct investment beyond its own financing. It invests mainly in private enterprises, usually together with commercial partners. The mandate of the EBRD stipulates that it must only work in countries that are committed to democratic principles.

Raiffeisen International's banking subsidiaries in Central and Eastern Europe practically cover the whole region: More than 40,000 employees in 16 subsidiary banks with approximately 2,400 local business outlets serve the region's corporate, investment banking and private customers. In eight markets, the respective Network Bank ranks among the three largest local banks.

Raiffeisen International's banking subsidiaries

Chart. 5. [Bank Appendix]

1987 Hungary	Raiffeisen Bank
1991 Slovakia	Tatra banka
1991 Poland	Raiffeisen Bank Polska
1993 Czech Republik	Raiffeisenbank
1994 Bolgaria	Raiffeisenbank (Bulgaria)
1995 Chroatia	Raiffeisenbank Austria
1997 Russia	Raiffeisenbank Austria
1998 Ukraine	Raiffeisenbank Ukraine
1998 Romania	Raiffeisen Bank
2000 Bosnia and Herzegovina	Raiffeisen BANK Bosna i Hercegovina
2001 Serbia and Montenegro	Raiffeisenbank
2002 Slovenia	Raiffeisen Krekova Banka
2002 Kosovo	Raiffeisen Bank Kosovo J.S.C.
2003 Belarus	Priorbank, JSC
2004 Albania	Savings Bank of Albania

6.1 In Raiffeisen Bank (service industry), Six Sigma Improvement phases and implementation, ²⁶

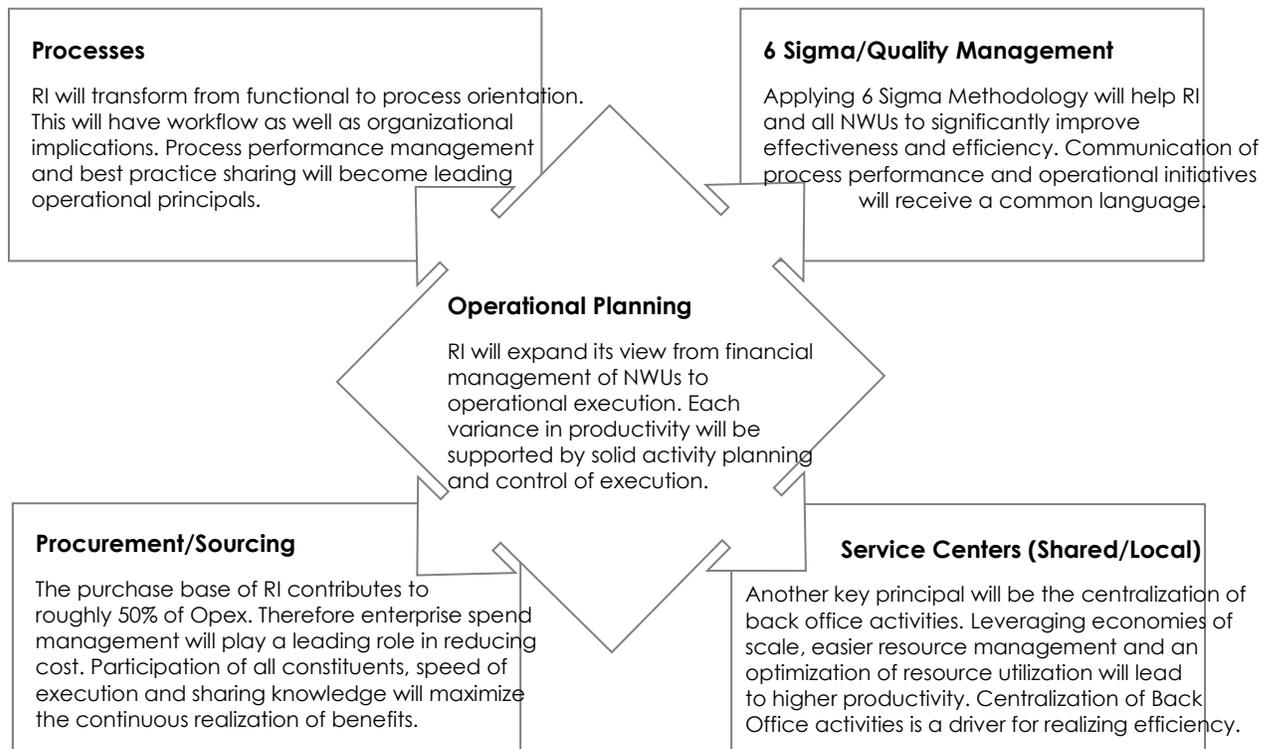
In this days it's required to be on top and have all the processes measured and automated, to do so in RBKO 6 Sigma plays a good role in measuring and improving processed.

The problem with implementing the 6 Sigma philosophies is because people are not trained nor use the 6 Sigma languages.

The trained Green Belt number is very small , and other are afraid of improving processes as they consider that this will affect them by reducing their manual work and not having what to do .

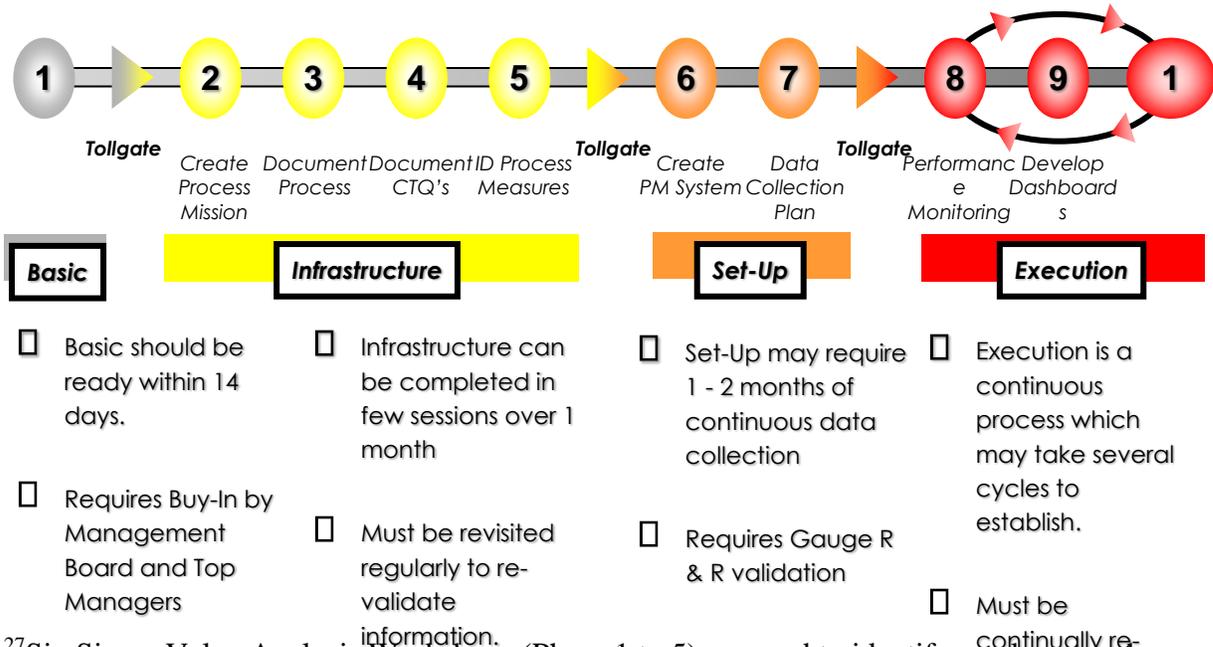
This is the biggest resistance in giving information or changing for good the processes in the Bank .

Bellow the process of implementation and steps in Raiffesisen Bank Of Kosova.



²⁶ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Raiffeisen Six Sigma Phases



²⁷ Six Sigma Value Analysis Workshops (Phase 1 to 5) are used to identify, evaluate, and prioritize potential improvements. Value Analysis techniques are used to quantify cost and productivity issues. Six Sigma techniques are used to quantify quality issues. Potential solutions are developed and prioritized. Six Sigma Leaders then lead multi-functional teams in implementing high priority projects (Phase 8 to 10).

Phase 1-5 takes the Six Sigma Improvement Process to the business level. General customer and business needs are identified. The value of product lines / services and business processes are evaluated. Specific product / services and processes to improve and business processes to re-engineer are selected. Six Sigma Value Analysis Workshops (Phase 6 and 7) and Re-engineering Workshops are used to determine potential solutions.

Six Sigma Project - Financial Analysis

One of the most distinct differences between Six Sigma and other quality management systems is the connection to business financials.

^{27 27} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

²⁸The rigor associated with linking Six Sigma projects to business financials helps connect everyone within the business -- not just the Six Sigma department/team and the Six Sigma Steering Committee. The entire organization, including the CEO, CFO, line managers, employees and shareholders, looks to Six Sigma to increase cost savings, productivity, and incremental revenue. It also helps differentiate substantial process improvements from insignificant 'fluff' projects that have little long-term benefit for the business.

The Raiffeisen Group standard approach to calculating Six Sigma project financial benefits.

It is used as a guide in recognizing benefits of individual Six Sigma projects. Primary goal in this exercise is to achieve consistency and integrity among the various Raiffeisen businesses.

Financial benefits can come in two broad forms: cost reductions and incremental revenue. We also must offset these benefits with the implementation cost of our projects. The basic equation is:

Pre-Tax Benefit = Cost Reduction + Incremental Revenue – Implementation Cost

Cost Reduction

Cost reductions come in one of four forms:

- labor savings from headcount reduction
- savings from material cost reduction
- productivity gains while process volume is increasing
- time value added from productivity gain

All recognized cost reductions must be direct, incremental, and auditable. The recognition window for claiming cost reductions is, by rule, two years starting with the

^{28 28} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

control phase. However, there are three cases where the cost reduction can be recognized for more than two years:

- when significant benefits are realized during the improve phase
- when there exists intermittent phasing of discrete cost reductions
- when there exists a significant capital asset investment or up-front consulting expenses

All cost reductions must be recognized in relation to a historical and year-over-year expense.

Incremental Revenue

²⁹Incremental revenue, like cost reductions, must be direct, incremental, and auditable. It is often more difficult to tie incremental revenue to an individual project and prove a statistically significant increment. Six Sigma tools such as a T-Test can be helpful in this task. Incremental revenue can result from any of four scenarios:

- increased sales volume
- increased sales price
- reduction of customer attrition
- change in risk rate

The basic equation for the Contribution margin 1 on account volume is:

CM I1 = gross income – standard product costs – standard risk costs +/- standard liquidity costs – deposit insurance

^{29 29} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

In defining the period of recognition we must distinguish between volume and revenue on our products. Incremental volume is recognized for two years. Incremental revenue, however, is recognized for the average life of the affected portfolio.

Cost of Quality

³⁰The Costs of Quality can be classified into two main categories: project implementation costs and Six Sigma infrastructure.

Project implementation costs are those expenses that are incremental and related to a specific project. These include systems, data collection, consulting services, team members – calculated based on actual working time – and other expenses.

The Six Sigma infrastructure includes all the costs of our Six Sigma department/ team: compensation and benefits, travel and living, and training for Six Sigma

Leaders, Blackbelts, and Six Sigma Financial Analysts. These costs are fixed in the short term and should not be included on an individual project basis. Rather, they should be included in our aggregate Six Sigma net income figures.

DMADV Projects

In DMADV projects we are dealing with a new product or process; there is no existing process for which to calculate baseline performance. Thus, benefits are not incremental in reference to any historical financial structure. We must take a slightly different approach in recognizing the financial benefits of DMADV projects.

The financial benefit for these projects is equal to the entire net income of the product or process recognized over the life of the relevant affected portfolio,

^{30 30} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Raiffeisen 6σ Project Financial Directive³¹

Financial Analysts as to how we should be calculating the financial impact of individual Six Sigma projects. These issues are related to the recognition of project benefits and will also serve as a baseline for the project prioritization Matrix.

It would serve us well to take a moment and ask ourselves why we are calculating project financials. It seems like an elementary question, but our framing of the meaning of this exercise affects how we view many of the surrounding issues. We want to make sure that we are thinking on the same level from the beginning. Our goal here is not to create a separate section on our financial statements for Six Sigma; nor is our goal to decide whether or not to embark on a given Six Sigma project. Rather, our purpose is to devise a methodology that allows us to consistently and accurately measure the impact of Six Sigma across our various businesses. We want to replace intuition and best guesses with some quantitative analysis of the impact of Six Sigma. Finally, we want to achieve data integrity for the purposes of controlling and evaluation of the entire Six Sigma initiative.

Costs and Benefits analysis in the Six Sigma Project

When preparing the Cost and Benefit Analysis in a project, we start with the estimates (Cost / Benefit Estimation), then, when deeply exploring the opportunities, we finalize the Benefits analysis (Quantify The Opportunity), then, when generating the solution we finalize also the Costs analysis (Cost Benefit Analysis). After the implementation of the solution (one month to two years after, based on the nature of the project) we look back on the results of the implementation (Review of Cost / Benefit Analysis). This we can compare with the Cost / Benefit Analysis.

The calculation period is at least 2 years. When the investments are done, then until the depreciation is over.

Four forms of the analysis in the detail

³¹ Raiffesien International

1. Cost / Benefit Estimation (CBE) – phase Define

Once we know what the customer wants (VOC), which CTQs we therefore want to improve and how the customer will value this improvement, we have the rough estimate of benefits. This estimate is crucial for the decision about the launch of the project. In this time we also have to estimate the costs of changing some underlying processes (or designing new) to reach the CTQs improvement. Nevertheless we hardly know the solution from the beginning and therefore we can openly claim, that the costs can vary from this estimate.

This is the reason why we use the so-called pre-budget. If we see the benefits, want to run the project and do not know the costs even very roughly, we can ask the Steering Committee to approve the pre-budget which will allow us to come to the solution and therefore to specific costs and than we can ask to approve the full budget for the project.

We prepare the CBE together with the finalization of the project charter

2. Quantify The Opportunity (QTO) – phase Analyse

In this stage we deeply explored the problem (or the opportunity) and we know now very precisely which benefits we can deliver. We identified the problem (or opportunity) not the solution. We have to change the benefits estimate from CBE to benefits analysis. This means that we really work with relevant and supporting data (created in measure phase) for each of the benefits category.

Costs can basically be used from the CBE again, only if we have the better idea about some of the costs, we change the costs estimate.

3. Cost / Benefit Analysis (CBA) – phase Improve

In this stage we generated the best solution (in line with DMAIC methodics). Therefore we can in detail analyse the costs of the implementation.

This is the time when we finalize the Cost Benefit Analysis and ask the Steering Committee to approve the implementation of the solution and the final budget of the project

Review of C/B Analysis (RCBA) – phase Control

Based on real data, after the change is implemented, we compare the situation with the CBA. This is the time for the reflection if the project was successful or not. It can than be used as a show case for example.

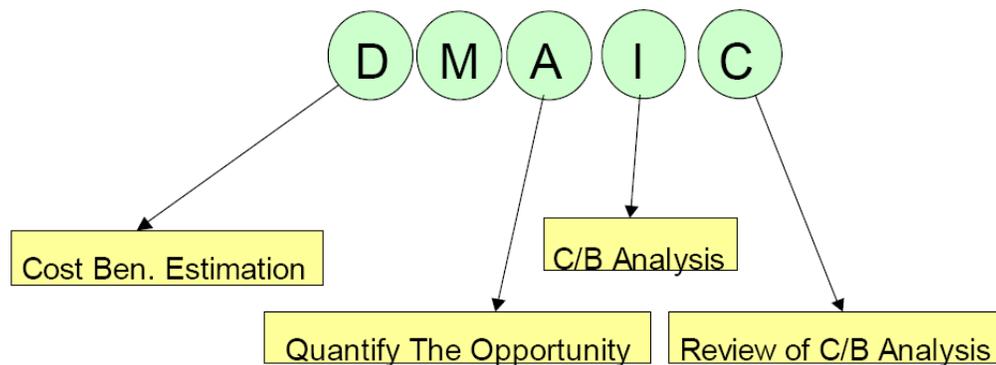


Chart 7 [process improvement flow]

NPV – Net Present Value

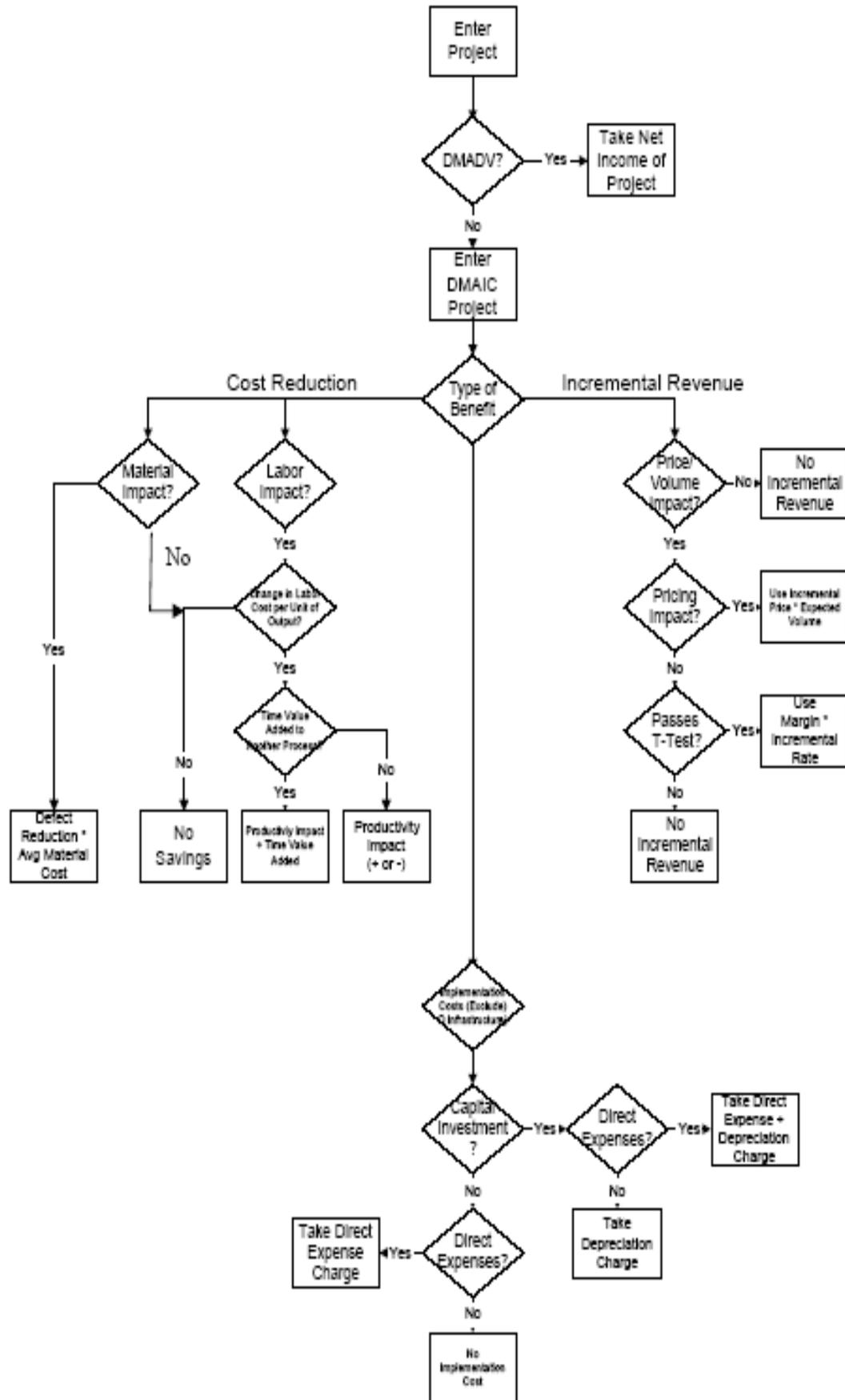
Please note that benefit calculations presented in this document are not made on a net present value basis. The scope of the current discussion is to recognize project benefits, not to make present value comparisons among projects. It is, of course, important to

discount future benefits when we do wish to compare projects, especially considering that we are recognizing certain revenues for several years into the future.

Using the Flow Chart

Attached to this introduction is the projects financial flow chart. This chart provides a basic graphical representation of the path we should follow in addressing project benefits. The use of this flow chart is fairly straightforward: each flow path should be traced until we have exhausted our options as detailed by this chart. There should not be any neglected decision points. Please reference the chart periodically as you review this document; it provides the overall picture of how each individual section fits into the whole concept.³²

³² Raiffeisen International 6 Sigma Implementation



COST REDUCTION

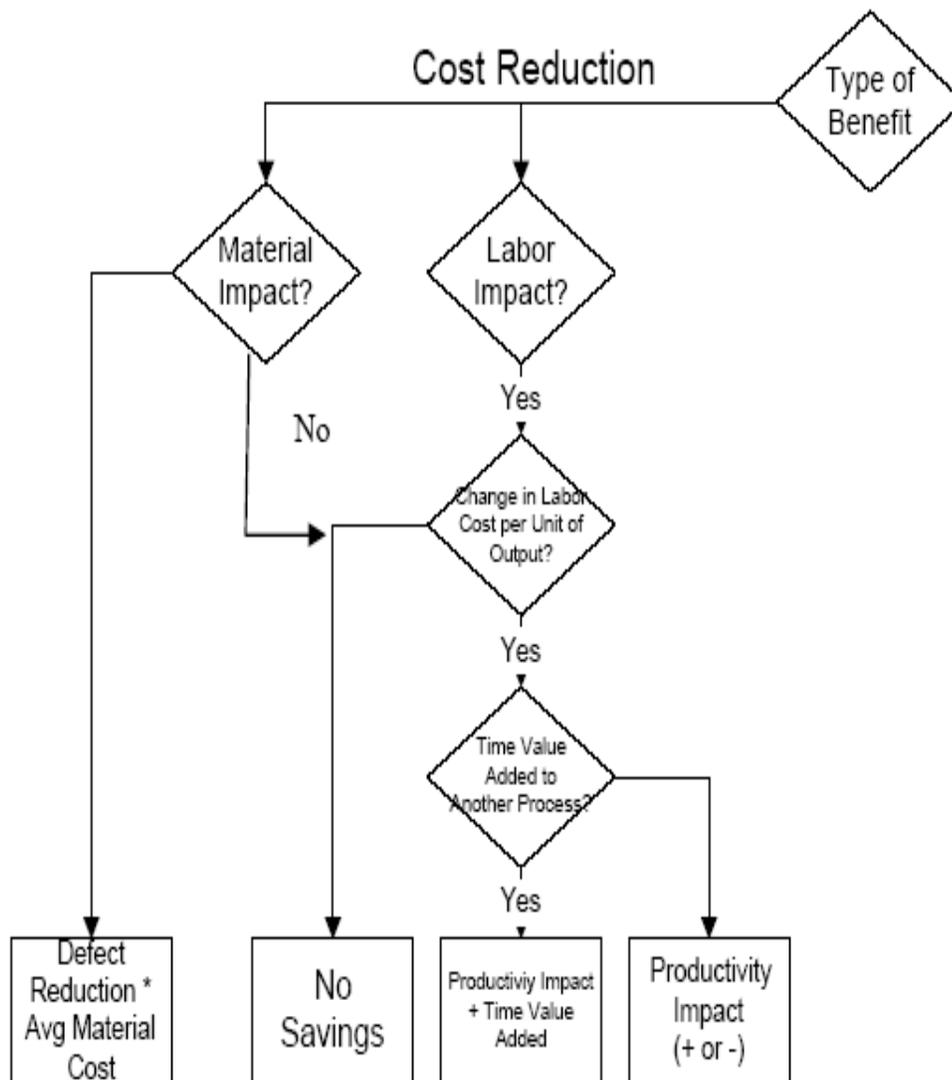


Fig: 9

In trying to capture cost reductions of a Six Sigma project, we are looking for savings that are direct, incremental, and auditable. Savings are direct if they maintain a concrete cause and effect relationship with a specific project. A cost reduction in a given process is not necessarily direct, simply because it is realized concurrently with the implementation

of a Six Sigma project. We often assume that we are operating in an all-other-things-the-same environment, but it is important to realize that there are other factors, which affect our cost structure. Savings are incremental in that they represent the difference between the historical costs of a process and the costs once the Six Sigma project is complete. If a cost reduction is not recognized in relation to a historical and consistent expense, it is not incremental. Finally, cost reductions must be auditable. We should expect Six Sigma financials to exhibit accuracy and integrity just as all other financial data do. One of our goals in calculating project financials is to make these projects meaningful from a controlling perspective.

Cost reductions come in two forms – a labour impact and a material impact. Given that we are a service business, the great majority of our direct cost reductions will come in the form of a labour impact. However, there may be circumstances where a material impact applies.³³

Cost Reduction Calculation - Direct Labour Impact

Six Sigma projects can have a significant effect on the cost of labour. If a process has improved labour productivity (i.e. the process requires less amounts of labour to achieve the same or greater output) there exists a possible opportunity to reduce headcount. Labour cost reductions should be expressed in terms of FTEs (full-time employees) that have been removed from the process.

Labour savings = (FTE reduction) (applicable salary and average benefits)

The expression of cost savings in units of FTE does not exclude part-time and temporary worker reductions. For example, if a project results in the removal of three part-time workers from a process who were each working 20 hours per week the headcount reduction would be: (3 workers)(20 hours)/(40 hour work week) = 1.5 FTE. Also, any overtime reduction is considered a labour impact.

³³ Raiffeisen International 6 Sigma Implementation

Overtime cost reduction = (overtime hours) (overtime rate) + benefits

Again, it is important to remember that people must be removed from the process in order for there to be a cost saving due to headcount reduction. It could be the case that a Six Sigma project improves labour productivity but has no financial impact. For instance, a project may relieve workload stress on exempt employees and allow them to work less hours. However, no cost reduction exists because they receive their salary no matter how many hours they actually work. There are cases, though, where labour cost reductions exist without headcount reduction. A explanation of these cases follows.

Productivity Impact without Headcount Reduction – See Appendix #2

Oftentimes a Six Sigma project will increase labour productivity, but there will be no headcount reduction; however, a financial benefit can still exist.

Incremental Productivity Gain with Increasing Process Volume

³⁴ It is possible that a Six Sigma project will be dealing with a process that is experiencing increasing volume. A productivity gain in such a process will not necessarily lead to a headcount reduction, as we will need extra headcount to handle this new volume. We can certainly recognize a benefit in this case, though. In order to do so, we will have to calculate some historical productivity measure:

Productivity = output/input = volume/resources

As an example, let us assume that we have five people working full time in a loan application processing department. Historically, this department processes 5,000 applications each month. Thus, the historical process productivity is:

Productivity = 5,000 appl. (output)/5 FTEs (resources) = 1,000 appl./FTE

³⁴ ³⁴ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Now assume that we have completed a Six Sigma project to increase the efficiency of this department. Also, because of growth in our business the volume of applications has increased. We now have six people working full time in this department processing 12,000 applications per month. Our new productivity is:

$$\text{Productivity} = 12,000 \text{ appl./}6 \text{ FTEs} = 2,000 \text{ appl./FTE}$$

Now that we have a 'before' and 'after' productivity measure, we can calculate the cost savings due to our productivity gain. To do this, we take our historical productivity measure and apply it to our current process volume to determine how many resources we would need if we had not improved productivity:

$$\text{current volume} = 12,000 \text{ appl.}$$

$$\text{historical productivity} = 1,000 \text{ appl./FTE}$$

$$\text{new productivity} = 2,000 \text{ appl./FTE}$$

$$\text{resources required if no productivity gain} = 12,000/1,000 = 12 \text{ FTEs}$$

$$\text{resources required given new productivity} = 12,000/2,000 = 6 \text{ FTEs}$$

$$\text{labour savings} = 12 \text{ FTEs} - 6 \text{ FTEs} = 6 \text{ FTEs}$$

Since we were able to recognize a consistent and historical productivity measure of this process, these six FTEs are a labour cost reduction of the project. We calculate the financial impact for this improvement just as we calculate a headcount reduction:

$$\text{Cost reduction} = (\text{FTE saving}) (\text{applicable salary and average benefits})$$

The key to this benefit recognition is that a project has resulted in an improvement in relation to a year-over-year and historical productivity measure. In the example above, we could have removed people from the process if the volume had remained constant. An

increase in volume should not force us to exclude a productivity gain from our benefit calculation simply because there is not an actual headcount reduction.

Time Value Added from Productivity Gain

³⁵There is one case where we can recognize a benefit even if there is no headcount reduction or volume increase. A financial benefit exists if employees have extra time available that is used in some value added process – in other words, the labour time saved is used to generate incremental revenue. For example, assume that a customer service representative works 40 hours per week answering complaint calls. Because of a Six Sigma project that was aimed at improving call centre efficiency she can finish her work in 30 hours. She can now use the extra 10 hours to make sales calls. If the sales department knows the hit rate per unit of time spent selling, the incremental sales she generates can be assigned as a financial benefit of the call centre project.

Please see the Incremental Revenue section for information on revenue calculation.

Cost Reduction Calculation - Direct Material Savings

- Material cost reduction will not usually be an issue since we are a banking business, but there may be instances where there is some material impact. Some possible examples include:
 - contracted services such as maintenance
 - utilities
 - supplies
 - eliminated office space/rent
 - computer software/hardware
 - postage

^{35 35} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

- cards production
- cost of debt
- concessions/rebates
- accounts payable discounts/procurement

As always, any material savings must relate directly to the project in consideration. We will have to use our judgment on a case-by-case basis, and we should include our assumptions in the benefit calculation.

Period of Recognition

The general rule here is that cost reductions are relevant over a 24-month period. This two-year period begins when a project enters the control phase. There are, however, three cases where we can recognize cost reduction benefits for longer than two years.

Significant Benefits During Improve Phase

³⁶If there is some circumstance, that lengthens the DMAIC cycle we may be able to recognize some benefits in the improve phase. For instance, the improvement process may involve multiple steps. If one of these improvement actions creates a significant cost reduction while the improve phase is still ongoing, we should be able to start recognizing the benefit during this phase. While this approach may result in the recognition of cost reduction over more than two years, the approach is fair because it allows us to offset implementation costs that we have been recognizing since the beginning of the project.

³⁶ ³⁶ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Intermittent Phasing of Discrete Cost Reductions

³⁷There may be a case where a process is in control while certain pieces of the cost reduction are phased in intermittently rather than implemented immediately. The most common example of this case will be a sequential headcount reduction. If a project results in greater labor productivity, we may decide to reduce headcount. This reduction, however, will not necessarily occur immediately. The process of removing people can be difficult for a number of reasons, and it may be months before that process is complete. If a project has entered control while certain cost reductions are waiting to be phased in incrementally, those particular cost reductions should be recognized for two years starting with their implementation. Thus, while each particular cost reduction of a project is recognized for only two years, the total period of recognition may actually be longer.

Significant Capital Asset Investment or Consulting Fees

Our approach of recognizing cost reduction for only two years may cause us to grossly underestimate the benefit of projects that have a relatively large capital asset investment or up-front consulting fees. In order to offset these large up-front costs we should extend the recognition period of cost reduction for certain projects. Specifically, for any projects where these initial costs are significant we can recognize the cost reduction for the duration of the depreciation. Of course, the definition of ‘significant’ here requires a judgment call on a case-by-case basis. As a rough rule, let us say that we can lengthen the recognition of cost reductions for a project where the sum of capital investment and up-front consulting expenses is greater than or equal to 75% of the yearly cost reduction. Again, this rule is rough and should be evaluated for each specific project and be adjusted once we gathered more experience with RI Six Sigma projects.

Notice that we are lengthening the recognition window to. If the cost reduction is relevant for a shorter period, however, we should only recognize the reduction for that relevant period!

^{37 37} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Cost Increases

We may find that a Six Sigma project results in a negative productivity impact (i.e. we input more resources to achieve the same or lower level of output.) This does not mean that the project has failed. In embarking on our Six Sigma initiative, one of our goals is to get things right the first time. It is quite possible that this could require us to dedicate more resources to a certain process. It is acceptable to have negative cost reduction; let us just make sure that we offset it with incremental revenue.

Productivity versus Quality

As a final note on cost reduction, let us revisit the subtle distinction between productivity and quality. Quality and productivity are different animals, and they do not always share a cause and effect relationship. Productivity is often a business goal, and quality can be one of several tools aimed at reaching that goal. In our discussion of project financials, productivity is a prevalent issue because it is usually the only quantifiable way in which quality manifests itself on the cost reduction side of the equation.

Productivity is about efficiency, not effectiveness. We are more productive if we produce a greater or constant amount of output given less resources. The quality or effectiveness of this output is inconsequential. Quality, on the other hand, is intimately concerned with both efficiency and effectiveness. 'Faster' does not necessarily mean 'better.'³⁸

At the same time, we should not draw narrow limits around the potential benefit of productivity. Reduced headcount is not the only benefit of a productivity gain. Think about how employees are using their extra time. Are they generating more volume in the existing process? Are they cross selling for incremental revenue? Are they helping to reduce costs in another process? The point is that we should explore all possible benefits tied to productivity while maintaining realistic assumptions of what the word means.

³⁸ Raiffeisen International 6 Sigma Implementation

INCREMENTAL REVENUE

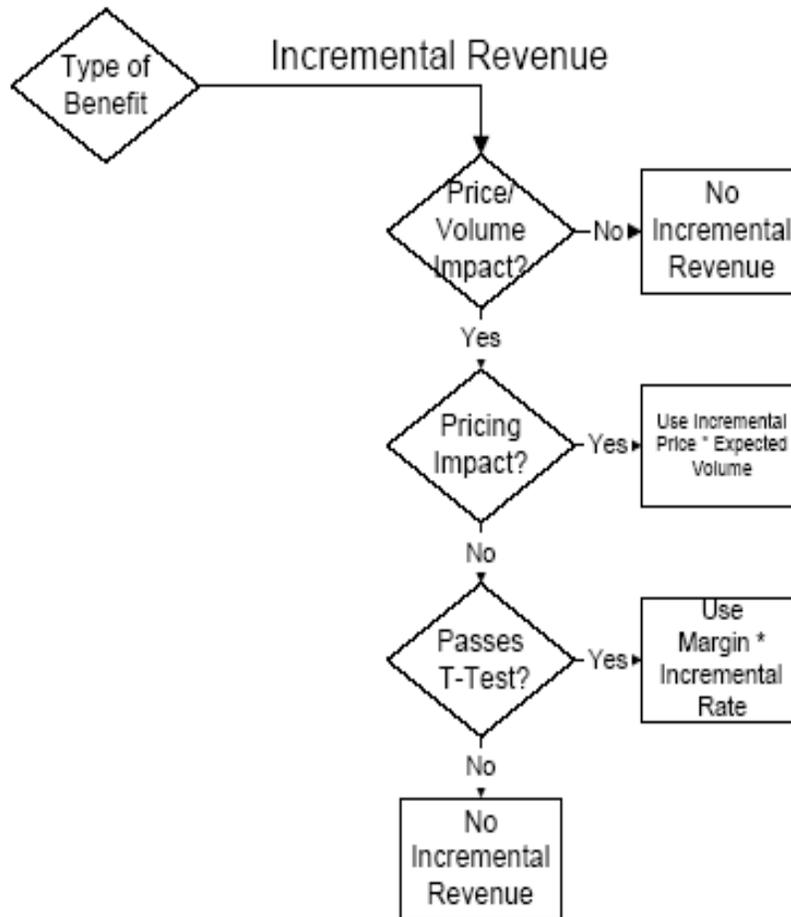


Fig: 10

Like cost reductions, incremental revenue benefits must be direct, incremental, and auditable. In general, incremental sales are harder to quantify than are cost reductions, and the business measurement framework becomes increasingly important as it is difficult to tie increased revenue to a specific Six Sigma project. Incremental revenue can manifest itself in four ways:

- increased sales volume

- increased sales price
- reduction of attrition rate
- change in risk rate

³⁹It is also important to recognize the various sources of incremental revenue. The factors that influence incremental revenue are often defined narrowly as the existence of ‘more time for selling’. However, Six Sigma projects can impact incremental revenue in a number of ways, including but not limited to:

- increased capacity
- enhanced functionality
- improved service levels
- sales force productivity
- improved pricing administration
- investment income from accelerated collections

Increased Volume

⁴⁰Any time a Six Sigma project directly results in an increase in accounts receivable volume or additional income generating transaction volume, there is an incremental revenue. Any increase in revenue should be expressed in terms of contributed value:

$$\text{Project Contribution}_2 = (\text{Product Profitability [CMI1]}) (\Delta \text{ Volume})$$

The incremental revenue derived from additional volume shall be computed in a way that the Product Profitability (CMI1) is used as a basis and multiplied by the additional volume.

Statistical Significance

One of the problems that we incur in calculating incremental revenue is that revenue per unit of time follows a pattern of variation. To determine if incremental revenue is statistically significant, we should conduct a T-test on the data. If we cannot statistically prove an impact from the project, the benefits cannot be quantified with any confidence.

Increased Price

If the increased quality of a process allows us to charge a higher price we can recognize an incremental revenue. The calculation for a price increase with constant volume is:

$$\text{Project Contribution}_2 = (\Delta \text{ price}) (\text{expected volume})$$

Notice that we do not consider the funding rate or the risk reserve in this calculation because the price increase does not affect these costs. However, if we have a price increase and a volume increase the calculation is:

$$\text{Project Contribution}_2 = (\text{Product Profitability [CMI1]}) (\Delta \text{ Product Profitability})$$

⁴⁰ ⁴⁰ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

+ Δ new volume

There may be a case where a price increase is accompanied by a volume decrease. A new pricing policy could actually decrease volume while increasing total revenue. The calculation is:

Project Contribution₂ = (Product Profitability [CMI1]) (Δ Product Profitability)

– Δ new volume

Customer Retention - Reduced Attrition Rate

⁴¹If we have a year-over-year and historical attrition rate we can take credit for any reduction due to a Six Sigma project. Again, we must show that the change in the attrition rate is statistically significant. The calculation is:

Project Contribution₂ = (Δ attrition rate) (volume of affected portfolio)(profit margin on affected portfolio)

It is important not to confuse customer retention with cost avoidance. Customer retention is often described as, ‘retaining sales that would have been lost in the future had the project not occurred.’ There is a subtle but crucial difference between these two issues. Customer retention is based on a year-over-year and historical attrition rate; by showing a statistical difference between the ‘before’ and ‘after’ attrition rate, we can prove that incremental revenue has come from the Six Sigma project.

⁴¹ ⁴¹ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Change in Risk Rate

If the goal of a Six Sigma project is to change the business' risk profile or increase the effectiveness of credit scoring there may be a reduction in the required risk reserve for certain accounts. Any reduction in the required risk reserve that is a direct result of a Six Sigma project can be claimed as incremental revenue since risk reserves are part of the contribution margin scheme. The calculation is:

$$\text{Project Contribution}_2 = (\Delta \text{ risk rate}) (\text{affected portfolio volume})$$

It is important to realize that any change in the risk profile or credit scoring may also result in a change in volume. Any change in volume, of course, must be included in the benefit calculation. Also realize that a Six Sigma project could actually increase the risk rate for a particular product or portfolio. For instance, a business could realize that it is being too conservative, and that the increase in volume associated with a greater risk tolerance could actually justify the extra risk losses. The calculation for a change in risk rate in conjunction with a change in volume is:

$$\text{Project Contribution}_2 = (\text{new Product Profitability}) (\text{new volume}) - (\text{old Product Profitability}) (\text{old volume profitability})$$

⁴²Period of Recognition

Because of the nature of loan products, it is important to draw a distinction between 'volume' and 'revenue' when we consider the time frame of our incremental revenue. The incremental volume can be the addition to accounts receivable balances tied to the Six Sigma project. The incremental revenue, of course, is the net interest income we earn from these receivable balances.

⁴² Raiffeisen International 6 Sigma Implementation

Risk

The issue of risk is fairly; we must apply risk costs to our Six Sigma-induced incremental revenue just as we apply them to all revenue.

Risk must be considered within the product profitability as standard Risk Costs. Each business should have some estimated risk rate that they apply to all products. From there the calculation is simple:

Project Contribution₂ = (new Product Profitability) (volume) – (old Product Profitability) (volume)

Project Benefits Overlap

We may find that more than one project is affecting the same piece of incremental revenue. A T-Test may be helpful here to prove that one project improved the process by some measurable amount, but we should not double costs in trying to split the benefits. We should be able to show, of course, that benefits are direct results of at least one of the projects, but reporting the benefits jointly is certainly sufficient if we cannot assign those benefits to specific projects.

COST OF QUALITY

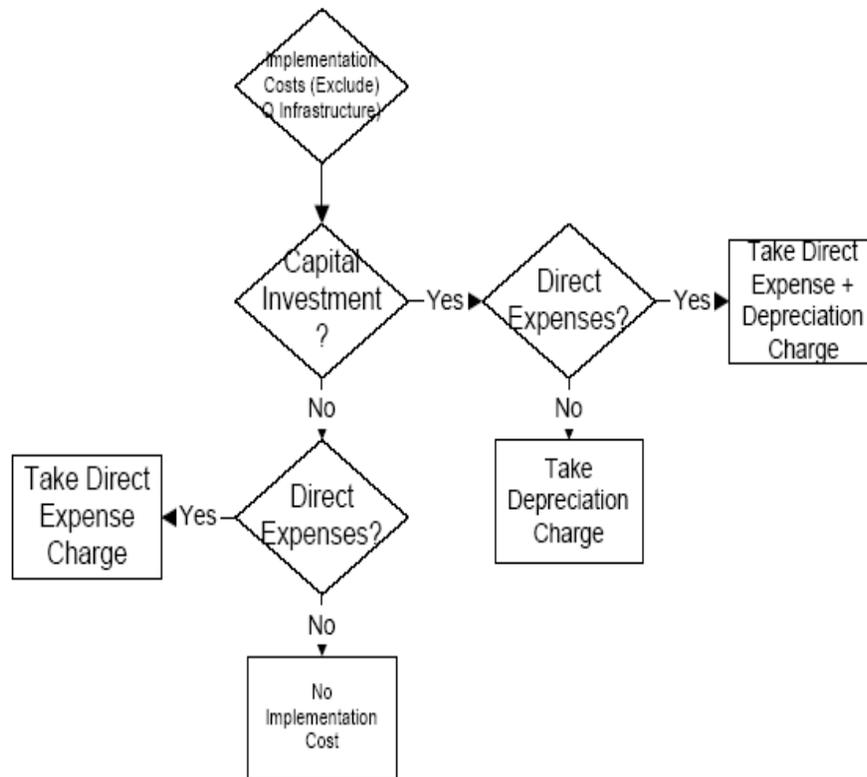


Fig: 11

⁴³Unfortunately, the Six Sigma initiative is not for free. And while we believe that the benefits of Six Sigma will far outweigh the investment, we need to include the cost of this investment in our project financial calculations. The Costs of Six Sigma are of two main types: project implementation and investment in Six Sigma infrastructure.

Project Implementation Costs

⁴³ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Project implementation costs are those expenses that are incremental and related to a specific project. These expenses include systems (computer3 , information, etc.,) data collection costs, consulting services, and other expenses.

Capital Asset Depreciation

⁴⁴Any capital investments made for a project should be depreciated over their useful life, and we should follow standard accounting practice on this issue (e.g. computer software has a three year life, hardware a five year life.) The real issue arises when the life of an asset is longer than the recognition period of the project benefits. Our approach to this issue is to recognize depreciation expense only as long as we recognize project benefits (the longer of incremental revenue or cost reduction.) To illustrate: capital asset value: €1,000,000

useful life: 5 years

yearly depreciation (assuming straight line): €200,000

project benefit recognition window: 2 years

Tab. Year Calculation no 1,

year 1	year 2	year 3	year 4	year 5	total
project benefit	€	€	0 0	0	€
depreciation expense	200,000	200,000	0 0	0	400,000

^{44 44} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Data Collection Costs

The cost of collecting data can be a significant part of a project. We should apply specific project data collection expenses to the cost of implementation on an individual project basis. Any broad or business-wide data collection (e.g. Voice of the Customer) should not be allocated to individual projects.

Other Expenses

While systems and data collection are likely to be recurring project costs, other expenses will vary greatly on a case-by-case basis. The application of these costs should be a fairly straightforward exercise; let us use our best judgment to decide which costs are directly related to the implementation of the project.

Investment in Six Sigma Infrastructure

⁴⁵Basically, the Six Sigma infrastructure includes all the costs of our Six Sigma department/team: compensation and benefits, travel and living, and training for Six Sigma Leaders, Blackbelts, and Financial Analysts. These costs apply directly to Six Sigma and certainly require a substantial investment; however, these costs should not be allocated to individual projects. One reason is that we needlessly burden ourselves with tracking how much time and training each Six Sigma resource spent on each project; this is not a value added measurement exercise. A second and more compelling reason is that team costs are essentially fixed; we can define our teams as ‘Six Sigma overhead.’ Once we have made the investment in our Six Sigma team, those costs are sunk - at least over the short term. Embarking on an additional project does not incrementally raise these costs (save T&L, perhaps.)

⁴⁵ ⁴⁵ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

Of course, we should not ignore these costs. Given that they can be considered fixed, we should apply team costs to our aggregate Six Sigma financials; thus, our total net income calculation would be:

$$\text{(cost reduction + incremental revenue - investment)project 1 + (cost reduction + incremental revenue - investment)project 2 + (cost reduction + incremental revenue - investment)project n - Six Sigma team costs = total Six Sigma net income}$$

DMADV PROJECTS

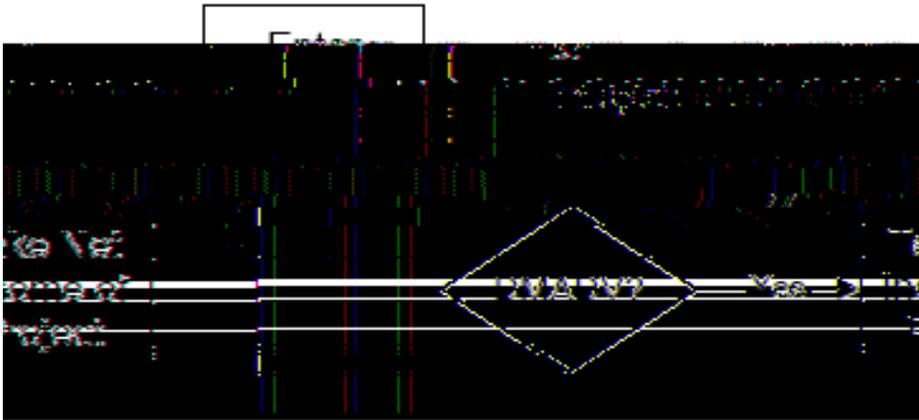


Fig: 12

⁴⁶DMADV projects are aimed at new products or processes; there is no existing process for which to calculate baseline performance. Thus, benefits are not incremental in reference to any historical financial structure. We must take a slightly different approach in recognizing the financial benefits of DMADV projects.

The recognition for DMADV projects is fairly straightforward. The financial benefit is equal to the entire net income of the product or process recognized over the life of the relevant affected portfolio. If the project involves a new product the calculation is relatively simple. The difficulty arises when the project involves some cost center

⁴⁶ ⁴⁶ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

process. For example, if we embark on a DMADV project to build a customer call center there may not be any clear and immediate incremental revenue, and the implementation cost is likely to be quite substantial. Of course, we do not want project financials to be a de-motivating force, so it becomes increasingly important in these situations to find some hard and quantifiable benefits. In the call center example, we could find some data that directly links the project to a decreased attrition rate and an increase in the average customer balance.

⁴⁷Since we are taking a slightly different approach with DMADV projects, our reported benefits will not be directly comparable with those of DMAIC projects. At the same time, however, we should try to maintain as much consistency as possible between the two methodologies. Thus, we should take the same approach for issues such as risk, recognition period, depreciation, implementation cost, etc. that are relevant to both DMAIC and DMADV.

Inevitably, we will encounter a case where our calculation methodology does not work for a DMADV project. The methodology is not perfect, and there may be cases where project benefits are simply impossible to quantify.

“SOFTER” ISSUES

The calculation of project financials is a very rich subject, and a discussion can uncover an endless array of topics. Some of these issues are important while not an immediate part of the benefit equation. The following section addresses some of the more pressing of these issues.

Hard versus Soft Benefits – Indirect Benefits

We should only include hard benefits in our financials calculations. By ‘hard’ we mean those benefits that are direct, incremental, and auditable. In addition, ‘hard’ refers to

^{47 47} Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

benefits that come straight off of the flow chart. 'Soft' benefits should be included in our benefit calculations on a memo basis only.

Six Sigma projects are always going to result in some soft and indirect benefits. Unfortunately, we cannot include these benefits in our calculation. We simply have to be satisfied with the fact that we know these benefits exist. An improvement in one process may indirectly improve another process and initiate a rippling of benefits throughout the entire business. That, of course, is our ultimate goal. Six Sigma is much, much more than the numbers we put down on paper. Let us hold realistic expectations about the function of our financial assessments. We are simply trying to implement a consistent and quantitative methodology so that our Six Sigma initiative achieves some level of financial integrity. The probable result of our conservative approach is that we are underestimating the benefits of most of our projects. Let us simply note this fact and delight ourselves in it.

The magnitude of the Six Sigma initiative in which we are currently implementing often leads us to view Six Sigma as a separate business process and function. It is important that we keep focus on Six Sigma as a tool for business – not a core business process itself. At the end of the day, Six Sigma does not appear as a separate item on our financial statements; rather, we hope that Six Sigma has woven itself into every part of that statement, and that Six Sigma has become an expected piece of every business activity.

Making a Good Thing Look Good

In quantifying Six Sigma project benefits, we are constantly seeking to strike a balance. On one side, we have to report our numbers with accuracy and integrity.

On the other side, however, we do not these measurements to encourage the wrong behaviours. In other words, if we know that a project is a good idea, then we want to make it look like a good idea in our benefit calculation. That is why we include, for instance, exceptions to the two-year rule on cost reduction recognition.

Unfortunately, we will sometimes encounter project benefits that we simply cannot quantify. However, we do not want to ignore the existence of such benefits. Let us always include a section in our benefit calculation where we make memo notes about soft benefits that we cannot quantify. This may help to justify some projects that look sub-par from a net income perspective.

Detail

It is not a value added exercise for us to spend a lot of time worrying about this issue. Each Financial Analyst should use his or her best judgment here. We probably do not need to report benefits down to the cent, but at the same time we do not want our rounding conventions to impact the integrity of our numbers.

Reviewing Benefit Calculations

Our financial calculations for Six Sigma projects are always estimates, and we should continuously revise these estimates in light of new information. As a general rule, Financial Analysts should be responsible for looking at the financials at four points during the life of a project. The first calculation should take place before the project starts to get a rough estimate of the opportunity. Next, we should revisit the financials at the ‘analyze’ phase when the expected benefit may be more accurately ascertained. Third, we should calculate the costs and benefits of the final solution. Finally, we should get our most accurate estimate during the ‘control’ phase when the project benefits are actually being manifested. The financial control of each Six Sigma project should last for two years and has to be reviewed quarterly.

Customer/Employee Satisfaction

We need to be careful when we start talking about customer satisfaction in relation to project benefits; ‘customer satisfaction’ is extremely nebulous and vague. In fact, in considering the benefits of customer satisfaction we engage ourselves in circular reasoning. We define ‘quality’ (at least externally) as the profitable satisfaction of

customer requirements. Quality has no meaning aside from that ascribed to it by the customer. Thus, 'quality' and 'customer satisfaction' can become one and the same. When we say, 'the benefit of quality is increased customer satisfaction' we are essentially saying, 'the benefit of quality is increased quality.'

The point is that we should avoid thinking about the vague idea of customer satisfaction. Instead, we should address the specific and quantifiable elements of this satisfaction. While increased customer satisfaction is certainly our ultimate goal, the issue is beyond the scope of any one project. We are hoping to achieve customer satisfaction by incrementally addressing each of its components one project at a time.

Quantify the Benefits of Six Sigma Projects

Financial Benefits of Six Sigma Projects

- Creates additional/new revenue
- Creates cost savings through tax avoidance
- Enables cost avoidance
- Faster return on investments
- Increases cash flow
- Increases profitability of existing products/services
- Increases revenue of existing sources
- Increases stock price/shareholder value
- Lowers cost of production
- Lowers cost of servicing

Organizational Benefits of Six Sigma Projects

- Builds company reputation
- Creates new customer opportunities
- Fosters company vision and mission
- Improves market position relative to competitors
- Improves the ability to serve customers
- Increases competitiveness and ability to charge a premium

Operational Benefits of Six Sigma Projects

- Decreases employee work loads for undesirable work
- Eliminates non-value added activities
- Improves employee morale / team spirit
- Improves internal communication between departments and groups
- Improves use of workspace
- Increases employee and process productivity
- Reduces cycle time
- Reduces cycle time of production/process
- Reduces external inputs to processes

- Reduces person-hours
- Reduces process steps
- Simplifies processes and workflow steps

Information Technology Benefits of Six Sigma Projects

- Decreases maintenance/support costs
- Enables service level agreement (SLA) obligations
- Improves application/system performance
- Improves application/system utilization rate
- Increases efficiency of support activities
- Increases productivity through automation
- Maintains intellectual property investment
- Preserves value of technology
- Reduces application/system variation (increases reliability)
- Reduces paper documentation requirements
- Strengthens application/system security

Process Cost Accounting Example

Case study: Basic Info

⁴⁸Simplex Mortgage Bank specializes in loans for financing real estate. Last year, the bank's market share contracted by 10% as other banks are increasingly granting loans on more favorable terms. In order to determine the scope for pricing policy, the bank's management asks you to budget lending costs and to reduce them as part of a business-process optimization plan. Until now, the bank has only used cost-type and cost centre accounting. Your experience is that "process-oriented standard unit cost calculation" is the most suitable instrument for calculating lending costs.

a) Calculate the unit costs for the application process of a REAL-ESTATE LOAN using process-oriented unit cost calculation and the necessary subtotals.

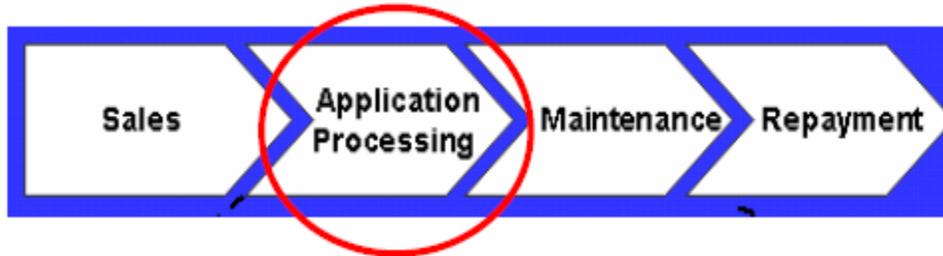


Fig: 13

⁴⁹b) In April 2000 420 new loans were handled. Calculate the capacity utilization involved in handling these loans on the assumption that the loan-processing departments were solely involved with new business processes.

You can make use of the enclosed data from the controlling and human resources departments.

⁴⁸ ⁴⁸ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

⁴⁹ ⁴⁹ Publication: Raiffesin International Bank - 6 Sigma implementation Guideline,

(This case study represents a simplified depiction of reality! This is the only way of dealing with the main aspects of process-oriented standard unit cost calculation within the time available.

Case study Basic information :

Real-estate customer relationship cost center		Processing cost center
Number of employees	15	8
Average salary p.a.	EUR 27,500	EUR 21,000
Average work days p.a.	250	250
Vacation	30 days	30 days
Av. absence due to illness	5 day	5 days
Av. absence due to training	5 days	10 days
Hours worked per week	38.5	38.5
Personal distribution time	15%	15%
Non-personal distribution time	15%	10%
Work place costs		
Notional rent for floor space	20 m2 at EUR 15 per mo./m2	15 m2 at EUR 10 per mo./m2
Depreciation of furniture	20% (purchase price 2,500)	20% (purchase price 1,500)
Depreciation of work. mat.	20% (purchase price	20% (purchase price

	9,000)	15,000)
Telephone costs per year	EUR 600	EUR 125
Miscellaneous per year	EUR 1,200	EUR 925

Calculating the cost-per-minute rate for looking after real-estate customers

Work days	250
Vacation	30
Illness	5
Further training	5
Attendance per year	210
Hours/week	38,5
Hours/day	7,7
Minutes/year	97020
Personal distribution time	15%
Productive work time	82467
Non-personal distribution time	15%
Basic time	70097
Average annual salary of an employee	27500
Job costs p.a.	7700

Total costs of an employee	35200
Costs-per-minute rate	0,50

⁵⁰Calculating the cost-per-minute rate for looking after real-estate customers

Work days	250
Vacation	30
Illness	5
Further training	10
Attendance per year	205
Hours/week	38,5
Hours/day	7,7
Minutes/year	94710
Personal distribution time	15%
Productive work time	80504
Non-personal distribution time	10%
Basic time	72453

⁵⁰ Raiffeisen International 6 Sigma Implementation

Average annual salary of an employee	21000
Job costs p.a.	6150
Total costs of an employee	27150
Costs-per-minute rate	0,37

7. Interviews

The following answers are the result of four interview sessions. One interview was conducted with the 6 Sigma leader in Raiffesin Bank Kosava (Liza Marku) and the other one with over all (all Network Banks) 6 Sigma leader Mr. Alex When I present the responses, I will attach subsequent to each answer.

Other mangers in Raiffesin Bank Kosovo were asked only about implementation of 6 Sigma.

7.1 Raiffeisen International answers - 6 Sigma questioner

The questioner is general there is room to comment and give ideas which would be considered as usefully for my master theses, topic that I choose is How does Six Sigma contribute to TQM.

I have to investigate in the first place the reasons that stand behind the implementation and the goals, which are pursued with new concept. External motivations, such as customer demands or competitive pressure would be indicative for the legitimising function.

Questions are divided in three subjects:

1. Reasons for the implementation.

Data which can be related to the reasons that stand behind the adoption of 6 SIGMA

2. Goals, which are pursued with the management technique (6 Sigma).

Concerned the goals which are pursued with the new concept

3. The implementation process.

4. The effects of the management fashion on the organisation.

Effects of the 6 SIGMA on the organisational structure

Questions and answers from Mr. Fleshman RI responsible to enrol the 6 Sigma methodology,,

Concerning the Reasons and for the Adoption

Which factors have triggered the implementation of a new management technique 6 Sigma?

Answers from Mr. Fleschman RI responsible;

- The desire to convert Raiffeisen Banking Group from a functional oriented organization to a process oriented organization
- This conversion shall help to have a stronger focus on process optimization to meet customer requirements more profitably
- The reason to focus on this topic was to improve service quality measurably while at the same time Raiffeisen needs to improve its productivity

Your opinion concerning the quality of implementation?

Answers from Mr. Fleschman RI responsible ;

- Based on the planning phase the roll out of 6 Sigma went to a large extent smoothly. Now 3 years after the start of the implementation one can say that 1/3 of all NWBs are delivering already very good results, 1/3 is performing on a mid to low level, the remaining NWBs do not treat the topic with the appropriate attention. However a recent survey amongst CEOs and COOs demonstrated the awareness amongst top management about the importance of the subject, as 80% of the respondents rated this with 1 or 2 (being very important/Important to meeting their business goals).

Who are the stakeholders of Raiffeisen and which role they play?

Answers from Mr. Fleschman RI responsible ;

- Stakeholders in Raiffeisen need to be seen on various levels. In RI HO this is clearly driven by the COO (Mr. Wiedner) and strongly supported by the CEO (Mr. Stepic) and Retail (Mr. Bogdaneris

(MBB)). Throughout the NWBs it has to be amongst other topics on top of the agenda of every CEO. The 6 Sigma Champion is usually the COO of the bank however individual 6 Sigma goals need to be set in every board area to achieve measurable progress. From the top it needs to be lived through all hierarchical levels.

Customers and their influence on the adoption of 6 Sigma?

Answers from Mr. Fleshman RI responsible ;

- Customers simply don't care which methodology a business is using. What they expect are convenient and reliable services.
- With reliable I mean a service that is provided always the same way with little errors. What 6 Sigma and BPMS in particular helps to achieve is a proactive approach. Businesses realize non performing processes before they really get "hot" and therefore can act much faster. This is how the customer feels the difference.

About the Six Sigma in general your opinion:

Answers from Mr. Fleshman RI responsible;

- For midsize to large organizations 6 Sigma is one of the most promising programs to improve effectiveness and efficiency at the same time.

Concerning the Goals

Which goals you wish to achieve with a new management technique ?

Answers from Mr. Fleshman RI responsible

- Consistent and sustainable improvement of process performance
- More satisfied customers ultimately resulting in more business
- Lower unit cost

Which role motivation plays in the adoption of a new management technique?

Answers from Mr. Fleshman RI responsible ;

- I guess a very big one. However motivation doesn't come from a tool like 6 Sigma. Motivation can only come from the set goals and an environment that lets stakeholders feel motivated. 6 Sigma is "only" a tool that helps to reach these goals. Of course it also provides a lot of management techniques that help to create a supporting environment, like the TOP tools e.g.

Does Six Sigma give the company a new sense from time to time?

Answers from Mr. Fleshman RI responsible :

- No! The new sense may only come from new business strategies. 6 Sigma is a for once a management tool/philosophy.

Concerning the Implementation Process

Difficulties during the implementation of 6 Sigma?

Answers from Mr. Fleshman RI responsible;

- Not enough attention from the top. There is nothing like a little 6 Sigma!
- The wrong people with not enough skills to drive it!
- Wrong project selection (resolve world hunger with 6 Sigma doesn't work); to put it more practical, huge projects that didn't work in the past will also not work with 6 Sigma.
- Sigma supports creating transparency in an organization which not all stakeholders like, thus they create resistance, which again can only be overcome by strong leadership

How the information flow was organised for the period of implementation?

Answers from Mr. Fleshman RI responsible ;

- RI P&PM team provided necessary support, coaching of implementation, roll out, identification of projects, coaching of projects. Conference calls with the all 6 Sigma Leaders were/are held every 6 weeks to discuss open issues and share best practices. RI Intranet was established and is being used as most important channel to share information, such as new 6 Sigma tools for download, articles surrounding the 6 sigma topic etc. Just recently a joint project database has been developed to share information regarding projects.

Concerning the Effects of Management Techniques on the Organisational Structure

Who is affected in the implementation of a new management technique the individual work activities or the organisation as a whole?

Answers from Mr. Fleshman RI responsible;

- I would say both. It starts out with individual work activities which ultimately result in revamping the organization into a process oriented organizational set up (see intro above). Once the process is converted one of 6 sigma's main principles is to build process teams led by a process owner. This activity changes the entire organization.

Do you believe that the ideas of the management techniques, such as the BPMS, are converted into action?

Answers from Mr. Fleshman RI responsible;

- It is not a question whether they are converted into action now, but if we want to remain successful we must introduce BPMS. Long term one can only run a business successfully with data that provides an outlook and helps to take action based on facts. BPMS will enable this.

Benefit of a particular management technique (6 Sigma) for the organisation after the completion of the reform/implementation?

Answers from Mr. Fleshman RI responsible;

- According to our current measurements in RI-Group we run a 10/1 ratio for every invested €, which means benefits are tenfold to the invested money.
- In more theoretical terms let me refer to the following slide:

Answers from Mr. Fleshman RI responsible, with diagrams instead of written.



Answers from Mr. Fleshman RI responsible, with diagrams instead of written.

Why Process Management now:

- Globalization and instant access to information, products and services have changed the way how customers conduct business
- Today's competitive environment leaves no room for error
- We must delight our customer and relentlessly look for new ways to exceed their expectations
- Process Management is a way to improve both quality and cost continuously

Why 6 Sigma:

- Six Sigma is a proven technique used by many successful companies in the manufacturing as well as in the service industry
- Encourages a process management mindset beginning and ending with the customer
- Will still provide a competitive differentiation in the market
- Helps to empower people
- Drives key goals like productivity and growth
- Reduces Cost

**We Cannot Allow
The Current Trends to Persist**

<Date>
20

Did the bureaucracy increased through the adoption of the 6 Sigma?

Answers from Mr. Fleshman RI responsible;

- If 6 Sigma is applied properly this absolutely will not happen. It rather speeds up project turn around time as it reduces the likelihood of project failures and project rework. In a nutshell more project get completed successfully.

Did the company integrate the 6 Sigma into the existing organisational structure or if there exist two different structures – one for representative purposes and the other for action.

Answers from Mr. Fleshman RI responsible;

- Sigma as department should help to apply the methodology. 6 Sigma only really lives If it is used within the business by the process owners, thus it is part of the organization.

Does the company use nicknames for different tools used or persons running the project?

Answers from Mr. Fleshman RI responsible ;

- Yes! Main purpose is to use a common language. So across the group people understand what a Black Belt, Green Belt, FMEA, QFD, VOC, CTQ etc. is!

Questions and Answers by Liza Marku :

Concerning the Reasons and for the Adoption

Which factors have triggered the implementation of a new management technique 6 Sigma?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Productivity improvement , efficiency and better service to our clients,
- Faster Time to Yes and Time to Cash ,

Your opinion concerning the quality of implementation?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- We are in the beginning of the implementation stilt there are people who do not understand the methodology and we have to keep it as simple as possible not to confuse them till we train them.

Who are the stakeholders of Raiffeisen and which role they play?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- COO and Project Managers play the biggest role in implementing the 6 Sigma methodology.,

Customers and their influence on the adoption of 6 Sigma?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- There is no big influence by customers ,

About the Six Sigma in general your opinion:

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Productivity improvements and cost reduction,

Concerning the Goals

Which goals you wish to achieve with a new management technique ?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Cost Reduction and streamline the processes,

Which role motivation plays in the adoption of a new management technique?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- With bonuses which are linked to cost reduction or reduction of employee power,

Does Six Sigma give the company a new sense from time to time?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Yes as it's a different way of approving new processes,

Concerning the Implementation Process

Difficulties during the implementation of 6 Sigma?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Not all understand the benefits , as its new for everybody in Kosovo,

How the information flow was organised for the period of implementation?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Training and awareness from trained people , we are trying to reach minimum of 10% trained people,

Concerning the Effects of Management Techniques on the Organisational Structure

Who is affected in the implementation of a new management technique the individual work activities or the organisation as a whole?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- In the case with Raiffeisen is Management Biard,

Do you believe that the ideas of the management techniques, such as the BPMS, are converted into action?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- They are indicators of the processes and measure Critical to Quality , .

Benefit of a particular management technique (6 Sigma) for the organisation after the completion of the reform/implementation?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- In 2006 Raiffesin benefited with cost saving of 600 tsd by simplifying processes and automating processes,

Did the company integrate the 6 Sigma into the existing organisational structure or if there exist two different structures – one for representative purposes and the other for action.

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- It is par of Organisational Structure as an department ,

Does the company use nicknames for different tools used or persons running the project?

Answers by Liza Marku 6 Sigma Responsible In Kosova:

- Yes , CTQ, Fish diagram, Brain Storming , VOC, etc,

7.2 Analysis

We will now relate the categories of data presented in the previous chapter relate to our three concepts “Structuring Managerial Tasks”, “Legitimising”, “Motivation” and “Creation of Meaning”.

7.3 Structuring Managerial Tasks

In literature it is often argued that management fashions help to structure the organisation – they offer a well-planned action programme for an organisational reform process and provide management with clear step-by-step instructions for handling their work activities. Thereby, they help to impose order into a chaotic organisational reality.

For instance, concerning the goals for the implementation, Alex opinion that the company implements such techniques in order to put some problems into focus.

At the moment According to current measurements in RI-Group, run a 10/1 ratio for every invested €, which means benefits are tenfold to the invested money.

Concerning the goals pursued with the adoption of new management technique 6 Sigma , emphasized that such techniques have helped to structure their way of working in the organisation. “At that time, we were a fast growing company. We had no structure in the way we are working and therefore, we used the ideas of the 6 Sigma to get some structure. ☹...☹” This statement clearly indicates that 6 Sigma has helped RI – Group to find a well-regulated and ordered working scheme.

In the last category “effects of the management techniques on the organisation” we can find further arguments, which are indicative for the structuring function. For example, the 6 Sigma managers in Raiffesine Bank Kosova stated: “☹...☹ problems can be better handled ☹...☹ Now, we have more and better possibilities to control what we do.”

Liza also emphasised better possibilities to control what they do and “to find better measures” which help to ensure that the organisation still corresponds to its goals. These expressions suggest that management fashions helped to give managers the feeling that they gain more control over the company and to be better able to govern it. It is very often difficult to exercise this control, and this is an important reason for proposing reforms or new management fashions, because they offer clear step-by-step instructions for carrying out organisational tasks. Thereby, they help to reduce the complexity of organisational reality and make it appear better manageable.

Although it seems that all arguments support the function of structuring managerial tasks, the respondents remained rather vaguely concerning the changes and benefits, which could be achieved through the use of the management techniques. It was difficult for the respondents to point out, what in fact was different after the implementation.

It seems that it was easier for the respondents to point out the negative effects of the techniques. Some managers in Raiffeisen Bank complain about too much bureaucracy and too static workflows or procedures: “☹...☹ It’s too much bureaucracy ☹...☹.” RBKO 6 Sigman Manager argued: “☹...☹ But I still think, the system is a little bit too bureaucratic, but the good thing is that it’s a system.”

As we have already emphasized in the theory chapter, many modern management techniques are based on the idea that management is a process of planning, implementation, and control. These highly standardised and packaged approaches certainly offer some advantages. For example, they seem easy to handle and universal applicable.⁵¹ The disadvantage, however, is that detailed action plans narrow down the scope of action for the employees. A new management technique that consists of many standards and principles, such as the ISO standards, restricts the freedom of the organisational members. It is less likely that experiments take place, through which something new can be tried out.

7.4 Legitimising

If one takes a closer look at the reasons that stand behind the adoption of a specific management technique, it is quite obvious that in all three cases organisational stakeholders, such as customers, competitors or suppliers play a central role, if not *the* role in the taking up of a new management fashion. In Raiffesin most of the pro-arguments for the 6 Sigma are more efficient quality assurance, to fulfil demands from customers or competitors.

So far we have limited our analysis only to the 6 Sigma and the quality management. If one investigates the interview answers concerning the other management techniques, one can notice that the external environment is also of central importance.

“... when everybody uses such techniques, you have to ask yourself, why you are not doing it...”.⁵² In many answers we can find indicators that both mechanisms – pressures from the customer as well as imitation – are interacting with each other of central importance for the adoption. Institutionalistic theory suggests that the dissemination of popular management techniques is promoted by a high degree of uncertainty concerning future developments.

Another trigger for the adoption of a new technique was the desire to be a little bit ahead from other companies: “... we just want to be the best company in Europe. Therefore, you have to implement such things...”.

Theory suggests, if the new rules do not correspond or harmonise with the actual workflows, organisations are likely to decouple their formal structure from the structure in use. Thus, the organisation is enabled to correspond to the expectations of important stakeholders and simultaneously to fulfil the demand for rational and efficient work operations. In order to verify if our case companies have decoupled their management

⁵¹ Kieser 1997, Furusten 1995

⁵² Human Resource Manager, Arta Celina, Raiffesin Ksovo,

techniques from their actual processes, we need to take a closer look at the implementation and the effects of the management techniques on the organisational structure.

Another explanation for the uncomplicated and smooth transfer of the new management concept is offered by Brunsson and Olsen.⁵³ They argue that it is possible to implement reforms only at the level of talk and not at the level of action. Consistency between the talk of managers and employees make the reform seem to be implemented. Under such circumstances the normal organisational operations do not need to be changed. Corresponding to the analytical distinction between change on a level of talk and on a level of action, we have used the term “decoupling”, if the formal structure is detached from the real work activities.

Altogether we can say that adoption of a new management concept support the legitimising function, such as “improving the image” or “sharing the same language with competitors and customers”. These arguments point to the relationship between organisation and environment. The techniques are not so much regarded as technical rational instruments that help to coordinate internal work activities and workflows. Hence, our interview result support the theory of the latent functions and not so much the theory that management techniques are designed in order to make the organisation technical more efficient.

7.5 Motivation

We have argued that management fashion offer a promising and persuasive language, which may make it easier to persuade organisational members of the need to change. The new language might also motivate people during a reforming process and helps to overcome resistance to change.

A wishful thinking so to say.” In this connection we can refer back to Brunsson and Olsen, who argue that new reforms are particularly attractive, because they often promise future benefits which look of course much more attractive than the current organisation with all its problems, conflicts and discontinuities.⁵⁴ Therefore, it seems reasonable to suggest that the positive rhetoric of many management techniques helps to draw a nicer

⁵³ Brunsson/ Olsen 1993, 87

⁵⁴ Brunsson/ Olsen 1993, 33

picture of the future organisation, which might – at least to some extent – help to motivate people in their everyday business life.

We asked how the information flow is organised during the implementation of a new management concept. Sometimes we got the impression that even the managers themselves are not fully informed about the techniques used in the company.

If a new management technique is considered as limited to the boundaries of specific positions – and not as something, which is lived by all organisation members – it is almost impossible that the new concept helps to create an atmosphere that facilitates change.

All things considered we might state that management fashions are less used for motivation and for initiating organisational change. This seems reasonable, especially against the background that many ideas are obviously not translated into action. If the techniques are perceived as additional work or as something which does not belong to the area of responsibility, it is unlikely that management fashions can help to generate a dynamic that enhances change and learning. The interview results point out at least partly that techniques are not regarded as a means that helps to enhance the workflows. Instead, they became an end in itself. Again, this does not argue for the official perspective. Rather, the answers support the assumption that management techniques have latent functions that center sociological and psychological aspects and not so much technical purposes.

7.6 Reflection

Before drawing the conclusions it is necessary to point out that the company needs to be considered in their individual business settings. As explained above, it was regarded as necessary to conduct interviews in different branches of business and at different hierarchical levels of the organisation. In what follows now, we want to reflect our findings with simultaneous consideration of the specific business setting. Finally, a reflection of our methodology will be presented.

8. Conclusions

Before unravelling the questions, which official and unofficial functions management fashions fulfil for managers, we first want to return to the phenomenon of the increasing popularity of management fashions in the last two and three decades.

This phenomenon seem to be even more astonishing, since management fashions are severely criticised. They are frequently accused of being technically inefficient, they do not suffice scientific standards, and they are in fact nothing more that “old wine in new bottles”.⁵⁵

The apparent contrast between the increasing popularity of management fashions on the one hand and the severe criticism on the other hand suggested to research into management fashions and the functions they fulfil for management. We assumed that besides the official functions management fashions offer a number of advantages for managers, which are not explicitly discussed in literature. By revealing also the latent or unofficial function, we sought to contribute to an explanation of the increasing attractiveness of management fashions. The managerial perspective seemed adequate, since it is predominantly top management who, through reading bestsellers, attending seminars or communicating with other top managers (or by a mixture of all these), become enthusiastic about a specific fashion. Moreover, congresses and seminars which promote management fashion are usually predominantly addressing this group at first.⁵⁶

In order to shed light on the functions of management fashions, we investigated various managerial literature and generated a theoretical framework consisting of nine functions – three official and six unofficial functions. As official functions we exposed “professionalization of management”, “structuring managerial tasks” and “pooling of experience”. In addition, we uncovered the following unofficial functions: simplification, creation of meaning, insecurity absorption, micro politics, motivation, as well as legitimating.

Due to the fact that some functions of management fashions appear to be more plausible than other functions, we decided to review those functions that seem to be of particular relevance for managers. Our theoretical model, which was tested in Raiffesin Bank consisted of four functions or “concepts”. We decided to select the structuring function as

⁵⁵ See Abrahamson 1995, Kieser 1997, Clark/ Salaman 1998, Kieser et al. 2000

⁵⁶ Kieser 1997, 66

our first concept, because management techniques are often based on the classical management theory, which places ideas such as planning, organising, coordination and control in the foreground.

The second function we chose to test against empirical data is legitimisation, because literature has spend much attention to the organisation's need for institutional support. In this context, we wanted to review if the management techniques have led to serious changes in the organisational structure or strategy or if they were merely implemented in order to legitimise the company. Since the rhetoric that is offered by management fashions represents a powerful instrument for management to communicate the need to change more convincing, we selected the concept of motivation as our third concept.

Finally, we selected the creation of meaning. Since fashionable management fashions provide managers with metaphors and a special rhetoric, it seems reasonable to suggest that such techniques help to "frame" organisational reality and thus, give the organisation sense and meaning.

Before summarising the main findings, we repeat the cautions raised in the limitations of the thesis. Although the data gathered provide detail on the functions of management fashions, they are less than ideal. The main limitation is that we could collect empirical evidence only on a 6 Sigma focused on a specific technique □ what function the management techniques fulfil for our respondents, the answers are often related to a few specific techniques, such as the quality management, the ISO standards.

Therefore, we base our conclusions on a relatively small number of management techniques. Moreover, especially uncovering the unofficial functions of management fashions is connected with difficulties, since managers might hide their true motivations for the adoption of a new technique.

It is interesting to note that the bigger part of the functions seems to be unofficial, which means that they are neither pointed out in management textbooks nor used by consultancies to sell such concepts. To avoid a lop-sided view of new management concepts, we have argued that the management fashions phenomenon requires also a thorough analysis of their covert functions for managers.

All respondents seem to agree that management fashions help to structure organisational reality. Every case company reported on better structures, clearer goals and enhanced

processes. The interview partner agreed that they did not change that much or even nothing at all in their organisation when they started working with the new concepts. One explanation for this contradiction – better processes on the one hand and no changes on the other hand – is that change took place merely in the heads of the managers, e.g. through the use of a new language and not so much at the level of action. Another explanation for this inconsistent result could be that some respondents regarded the researcher as an external stakeholder and wanted to present the company in a most possible favourable light. Under such circumstances the respondent might have tried to justify the company's decision to work with fashionable management techniques.

The main reasons for the adoption of a new management technique can be attributed to implicit pressures from the external environment. Goals pursued with the adoption, such as “attracting customers” or “implementing a new technique because the competitor does it as well” point at external motivations and not at the desire to improve the internal efficiency of the organisation. Therefore, one of the main findings in this thesis is the notion that management fashions are used as rhetorical means to legitimise the organisation, and that they sometimes remain decoupled from work activities.

Concerning the motivation function of management fashions we must state that the empirical evidence we got that managers have to motivate their employees to work with new management fashions. However, we assumed in our theoretical reflections, that a management fashion itself can be used to motivate people to initiate change and that the new concept helps to lend the organisation new energy. Hence, based on our empirical data we cannot find enough evidence that supports the motivation function of management techniques.

Nevertheless, these answers support the notion that management techniques do not improve the efficiency of an organisation, since additional efforts need to be undertaken in order to motivate the employees to work with the new management ideas. The techniques are not seen as a means, which can be used to improve organisational performance. It seems more reasonable that the organisation regards the techniques as an end in itself, for which the workforce needs to be motivated.

Concerning the last function – creation of meaning – we found that management techniques are indeed used to give the organisation a new sense. The impact of the new language on the organisation was very strong on the organisation. Although we could not

detect major changes in the organisational activities, it appeared that the changes took merely place in the thoughts of the employees. In fact, the organisational procedures and workflows remained the same. However, the managers and employees shared a new language after the implementation of a new technique, which made the reform seem implemented. The importance of language and the role it plays in framing managerial reality also supports the notion that management techniques are not implemented for technical, but rather for psychological and sociological purposes.

The major finding of this thesis is that we have identified a huge gap between the interview results and what is usually discussed in many management textbooks. Against the background of our analysis, we can state that many functions of management techniques are seldom purely official ones. In fact there exists a sharp contrast between the official rhetoric taught at management schools or used to sell such concepts and reality.

For instance, the popularity of the quality management cannot simply be explained with the enormous improvements or “quantum leaps” in quality. This is the traditional perspective, which regards such concepts as “tools” that help to improve the efficiency of the organisation in almost the same manner as a hammer helps to pound a nail in the wall.

Theorists on management fashions on the other hand are not so much concerned about the technical purpose of management fashions. They put the emphasise on rhetoric – an aesthetic form. From this perspective, management fashions have a couple of other functions, which are seldom discussed among management authors. In our study we have shown that these latent functions can be proven empirically and that they have a comparatively great importance. Again, these findings contravene the traditional “tool-perspective”. Our empirical findings in the first place support the latent functions and the fashion theory.

It was our purpose to show that management fashions fulfil a number of functions for managers, and that many of these functions are seldom purely official ones. Thereby, we sought to contribute to an explanation of the increasing popularity of such fashionable concepts. As we did not test all functions discussed in the theory chapter, it is clear that the untested concepts can only be considered as possible – but, hopefully, plausible – functions. This limitation can only be overcome through the provision of more empirical evidence, which is still scarce in the field of management fashions.

⁵⁷There is one company, and one man, that people revere more than any other when it comes to Six Sigma implementation. So when Jack Welch, former CEO of GE, took to the stage the packed auditorium fell completely silent in anticipation!

“One of the great things about Six Sigma, as I see it, is it is as much a leadership tool as it is a quality program. It really develops better thinking and every time it is wasted on those other than high potential individuals I find it a questionable exercise.”

Dan Quinn of Rath & Strong, one of the event’s main sponsors, kicked off the questions which quickly snowballed from the floor as delegates gained in confidence and took advantage of this once-in-a-lifetime chance to hear directly from the "Godfather" of Six Sigma.

“I wouldn’t even think of starting a program if the CEO wasn’t 150% behind it, wouldn’t even think of it, forget about it – it’s a waste.” - Jack Welch

Jack was as entertaining as he was educational and controversial ("Getting rid of the least 10% of workers is kind not cruel") and the delegates all took away very valuable lessons from his own experiences at GE

“You may get a little cost reduction here or there, a little improvement here or there but if you’re not building leaders with Six Sigma in your company you’re missing something.”

In the fast paced world of today, business’s need ways to improve and to keep improving. Continuous Improvement and 6 Sigma are the processes and operations that make it possible to achieve continual improvement. Total Quality Management is the broad spectrum of these implementations into business operations for the continued quality and improvement. Along with awards and standards such as the Baldrige award and the Deming prize that create a higher level to achieve and goals to pursue. The purpose of total quality Management is to create a better way of doing things.

⁵⁷ Jack Welch – CEO of GE

9. Future Discussion

The problem with understanding the Philosophies like 6 Sigma or TQM and implementations are becoming futuristic , and every manager is trying to introduce them for their benefit .

I would argue that this tools are consulting tools so others would see the people talking with sophisticated language as them “ VIP” and this should be measured as how big a difference they make in working environment after they are introduced comparing when there was nothing.

10. Literature

Donna N. Anderson April 26, 2004 Operations and Quality Management MANA 6333
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