

2009

The application of a phenomenological framework to assess user experience with museum technologies

Wasana Bandara

Queensland University of Technology, w.bandara@qut.edu.au

Diana Heckl

Process Lab, Frankfurt School of Finance & Management, d.heckl@frankfurt-school.de

Michael

Queensland University of Technology, m.rosemann@qut.edu.au

Follow this and additional works at: <http://aisel.aisnet.org/ecis2009>

Recommended Citation

Bandara, Wasana; Heckl, Diana; and Michael, "The application of a phenomenological framework to assess user experience with museum technologies" (2009). *ECIS 2009 Proceedings*. 142.

<http://aisel.aisnet.org/ecis2009/142>

This material is brought to you by the European Conference on Information Systems (ECIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2009 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

INFLUENCES OF SIX SIGMA EMBRACEMENT AND ABONDENMENT (TEACHING CASE)

Bandara, Wasana, Queensland University of Technology, 126, Margaret Street, Brisbane,
QLD 4000, Australia, w.bandara@qut.edu.au

Heckl, Diana, Frankfurt School of Finance & Management, Sonnemannstraße 9-11, 60314
Frankfurt am Main, d.heckl@frankfurt-school.de

Rosemann, Michael, Queensland University of Technology, 126, Margaret Street, Brisbane,
QLD 4000, Australia, m.rosemann@qut.edu.au

Abstract

Six Sigma is a methodology that uses data and statistical analyses on business processes to measure and improve the conduct and the output of production and service-oriented processes. Derived from a variety of quality management and industrial engineering approaches, it has emerged into one of the most popular process re-design methodologies. This paper complements the rich body of knowledge on Six Sigma methods and techniques with insights into the actual adoption of Six Sigma. Sunstate Financials¹ is one of Australia's leading financial organizations. Having recognized the advantages of Six Sigma, Sunstate Financials started their Six Sigma journey in 2001. The peak of Six Sigma deployment at Sunstate Financials lasted for approximately 2 years. Almost every person in the company was aware of the Six Sigma methodology, and many projects commenced under the Six Sigma banner. Although the use of Six Sigma has shown dramatic process improvements and cost reductions, Six Sigma is no longer in use at Sunstate Financials. This teaching case explores the Six Sigma experiences of one of Australia's leading financial service providers, and why this methodology failed as a sustainable long term approach. It describes the key issues of Six Sigma and provides valuable lessons learnt.

Keywords: *Six Sigma, Success Factors, Business Process Management, Business Process Improvement*

1.0 INTRODUCTION

While business process improvement is widely seen as the top priority for sustainability and growth (Blechar et al. 2008), it is also acknowledged that it is a complex phenomena. There is a limited body of knowledge or operational guidelines on how to best conduct it, or what methods work best where, why or how (Antony, 2004). Hence it has been common practice for most organizations to scan for 'best of breed' process improvement methods and to 'try things out' (Nohria et al. 2003). Sometimes such initiatives succeed and at other times decrement, with many organizational and environmental

¹ Please note that 'Sunstate financials' is an alias name used for the case presented here. The company's real identity has been kept confidential due to the nature of the details provided in this narrative.

elements playing a key role in how such methodologies are perceived, introduced, deployed, adapted and sustained.

Organisations seem to dwell into process improvement initiatives in an adhoc manner, designing and applying various methods and tools as they best seem to fit the circumstances they are facing at any given instance. As a consequence, a high number of improvement methodologies such as, Lean Management, Process Innovation, Business Process Re-Engineering, Six Sigma and Business Process Management are available and are competing for the attention of managers. The focus of the academic discussion tends to be on the toolboxes of these approaches and little is known about the organizational adoption and long-term experiences with the comprehensive deployment of these methodologies.

Six Sigma is a prominent example within this set of methodologies. In this teaching case, one of Australia's leading financial organization's experiences with its Six Sigma implementation and adoption is unfolded. Six Sigma was initially introduced to the organization with the aim of having one coherent methodology that provides the essential guidelines for improving the company's business processes. The main objective of this initiative was to streamline the operational efficiency and to prepare the organization for a growing business and an increasingly competitive environment. This teaching case first provides an introduction to the Six Sigma method. It then introduces the case organisation. The next section describes the adoption, and the abandonment of Six Sigma at Sunstate Financials, detailing the factors that influenced and determined the path of this journey.

2.0 INTRODUCING SIX SIGMA

Six Sigma is a methodology that uses data and statistical analyses on business processes to measure and improve the output of production and service-oriented processes (Magnusson, Kroslid, Bergman, 2004). The methodology was named Six Sigma, because it has been derived from the definition of a normal distribution by Carl Friedrich Gauss (1777-1885). The standard deviation (σ) shows the deviation (rate of defects) from the statistical mean. Based on a standard deviation of 1σ , only 68.27% of all outcomes would be produced within acceptable limits. A standard deviation of 3σ would result in 99.73%, and with 6σ the value would be 99.99985% which equals to 1.5 defect parts at a production of 1 million parts (Breyfogle, 2003). Since most authors (Breyfogle, 2003; Kumar and Gupta, 1993) agree to accept a permanent fluctuation of outputs – which is especially relevant in financial services – a correction of 1.5σ is common sense (see Figure 1).

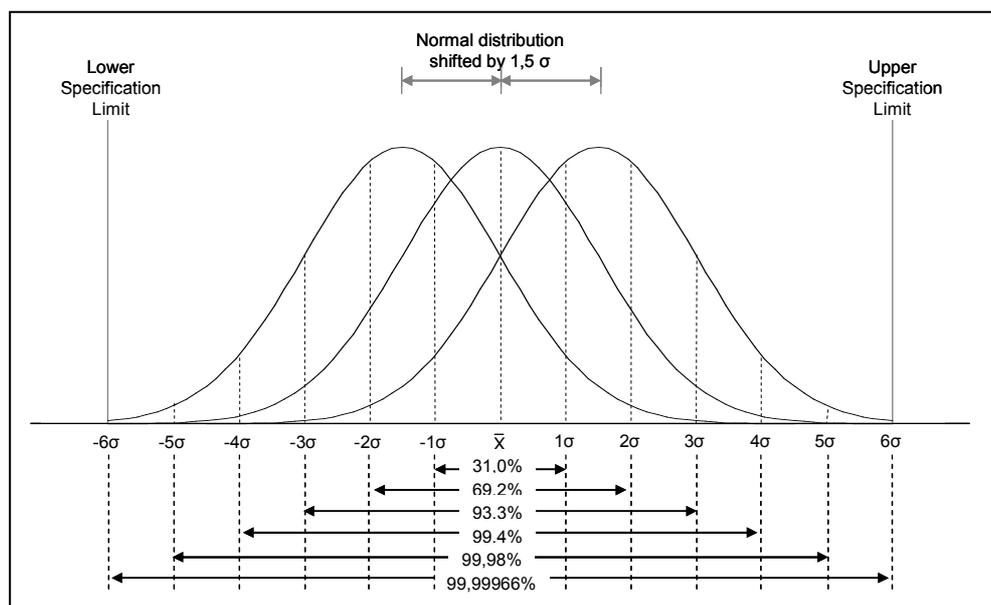


Figure 1: Shifted normal distribution and corresponding quality levels

This results in a 99.99966% quality level which means 3.4 defects per 1 million opportunities (DPMO) (Pande et al., 2000). For most manufacturing processes a 5σ deviation is considered to be sufficient because the cost for process improvement would exceed the cost caused by defects (Chowdhury, 2005). For processes in other industries however, e.g. landing process of airplanes, even 6σ would be disastrous. Here, 7σ is a more appropriate goal (pursued by airline companies such as Lufthansa and Qantas).

The procedure of any Six Sigma process improvement project is based on the DMAIC cycle. This five stage lifecycle model consists of the phases Define, Measure, Analyze, Improve, and Control (Antony, 2004). The goal of the *Define phase* is to outline the scope and the target of the project. Problems, processes, and sponsors of the project have to be identified (Jugulum and Samuel, 2008). Tools such as a project charter (to show the business case, problem definition, target, focus, roles and milestones of the project), a SIPOC diagram (to analyze suppliers, input, process steps, output, and customers) and a Critical-to-Quality (CTQ) matrix (incorporating customer demands) are common in this phase (George, 2003; Pande et al., 2000). Within the *Measure phase* the real world problem is transformed into a statistical one. A process result Y_i is determined through several factors x_{ij} as follows:

$$Y_i = f(x_{ij}) = f(x_{i1} + x_{i2} + \dots + x_{ij})$$

The aim is the identification of critical factors x_{ij} that influence the process result Y_i most. In order to find these factors graphical and statistical methods such as slice diagrams, histograms, and box plots are used (Schonberger, 2008). Statistical measures such as mean, median, standard deviation, and variance are also common. Once the critical factors x_{ij} are identified the project team tries to explore the root causes for the inadequate performance of these factors.

The exploration of causes for inadequate performances is conducted in the *Analyze phase*. Here, Cause-and-Effect diagrams are used. A popular example is “5Ms and 1P” (Material, Method, Machine, Measures, Mother nature, and People) which concentrates on six major factors that cause variations in business processes (Pande et al., 2000). Swim lane diagrams are another frequently used tool. Finally, statistical methods such as correlation analysis and (multiple) regression are used to measure the relation of factors x_{ij} and process result Y_i . This final step during the analyze phase clearly differentiates Six Sigma from other business process improvement methods (Klefsjö et al., 2001). However, a mathematical equation as suggested above is not a necessary outcome of this phase. More often, a logical cause and effect relation is sufficient.

The *Improve phase* is about adjusting the critical factors in such a way that the results comply with pre-defined quality standards determined by the process customers (Harry and Schroeder, 2006). Certain constraints (such as the reduction of personnel and the introduction of new technology), have to be considered when alternative processes are designed by the project team (George, 2003). Usually, the newly designed process will be implemented as a pilot. Afterwards, the roll-out for all relevant processes will be planned and carried out (Ehrlich, 2002).

In the *Control phase* (steps following the optimization), the process owner will be responsible for the management of the whole process and its results. Problems that are caused by the implementation of the improved process should be anticipated in advance wherever possible.

Besides the strong process improvement procedure, the methodology provides a hierarchical role concept: green belts, black belts and master black belts (Pande et al., 2000). For becoming a *green belt*, trainings for about two weeks has to be done; the green belt has to show his/her trained skills in a coached process optimization project as a project member. Potential *black belts* undertake a training program up to four months consisting of one week instruction each month. They will also receive coaching in this time period from a master black belt to guide them through two projects at their company. Black belts have to show through these projects, that they can use the learned Six Sigma tools and that they can lead the project (as a project leader). *Master black belts* receive a long project experience and have completed a ‘train the trainer’ type of course. Normally their full time job consists of coaching the black belts and reviewing actual projects.

Six Sigma as a business strategy has been well recognised as an imperative for operations and business excellence. It made the global headlines when companies like General Electric (GE) and Motorola reported millions of dollars of savings as a result of the deployment of this methodology. Motorola reported, through their Six Sigma briefings, that savings for a 10-year period from 1985 to 1995 were \$11 billion. GE in 1999 reported US\$2 billion in savings attributable to Six Sigma, and in their 2001 annual report discussed the completion of over 6,000 Six Sigma projects probably yielding over US\$3 billion in savings by conservative estimates (Hayes, 2008).

Six Sigma does have its limitations, which can sometimes lead Six Sigma projects to fail. Some examples are: the challenge of having quality data available, (especially in processes where no data is available to begin with); not much guidance to choose and prioritize projects or which tools to use when; defects being treated in amalgamation (it is illogical to treat all defects equally); no guidance on how to institutionalise Six Sigma into a corporate culture. Furthermore, the non-standardisation procedures in the certification process of black belts, green belts, etc., means not all black belts or green belts are equally capable. Methods such as Six Sigma has a high dependency on expertise deployed in the project, hence projects can run the risk of not having the right skills set to effectively use the method (Antony, 2006).

3.0 INTRODUCING THE ORGANISATION

Sunstate Financials, is a Queensland (one of the states in Australia) based financial organisation, and is one of Australia's 20 top listed companies. Sunstate Financials operates across three lines of business – Banking (retail and business), General Insurance (personal and commercial) and Wealth Management (risk, superannuation, investment). Sunstate Financials's banking division provides a full range of banking services including loans, savings and investment accounts, credit cards, foreign currency services for retail and small to medium business customers. Sunstate Financials's general insurance group offers products across Personal, Commercial, Workers Compensation and CTP insurance. Wealth Management covers life, super and managed investments. It also includes the funds management activities of the Sunstate Financials Group.

Recent mergers and acquisitions has increased the customer base and diversified the business mix with growth in personal and commercial insurance and workers compensation. Sunstate Financials is a market leader in Australia in Agribusiness lending and Compulsory Third Party insurance, a major force in motor insurance and home and contents insurance. Sunstate Financials also has a strong market share in personal and commercial insurance lines nationally and internationally in the region (i.e. New Zealand). Customers have access to 180 plus Sunstate Financials retail outlets, including branches and agencies and 60 plus business banking outlets, predominantly in Queensland. Sunstate Financials provides a range of banking and insurance products directly to customers through an extensive branch and agency network, call centre operations, on line facilities, and through intermediaries and corporate partners.

The long-term economic viability of Sunstate Financials requires sustainable profitable growth and meeting the needs of the company's stakeholder groups (namely shareholders, employees, customers and community). This means providing sound returns whilst building long-term performance. Sunstate Financials achieves this through the unique business model of diversified financial services delivered through segmented customer brands underpinned by strong cost management. For the employees, it means creating an environment that enables them to work, grow, succeed and lead. This requires an ongoing commitment to enhancing the culture, developing leadership capabilities and investing in the development of the people resources with a focus on growing the company. For customers it means providing financial solutions through segmented brands that meet their unique needs and delivers a superior customer experience. Sunstate Financials's main aim is to achieve sustained leading customer

satisfaction across their portfolio. For the community, it means taking a stance and contributing to key issues and causes that are relevant to the community.

Sustainability is the fundamental tenet of Sunstate Financials's strategy. This philosophy is encapsulated in the overall organizational vision to be 'the most admired financial service organization in Australia and New Zealand'.

"We are developing the strategies and business models that are essential steps in our objective to become a highly performing financial services provider on a sustained basis"

(Chairman, Sunstate Financials, July 2007)

Sunstate Financials strives to deliver a compelling portfolio that's sufficiently tailored, so that a cross selling quote of 4 to 5 products per customer can be achieved. For satisfying the customer with the current products, it is necessary to cluster the customers, after which, an analysis of the needs of each customer cluster can be done. In the end, the alignment of products and customer requirements within a specific customer cluster is the key to become a highly performing financial services provider. In order to achieve this business model Sunstate Financials had to change, as the following statement shows:

"The reason that customers buy a Sunstate Financials home loan is because they've already got a Sunstate Financials home insurance and Sunstate Financials car insurance and a Sunstate Financials transactional bank account. They become Sunstate Financials customers while it's convenient to them and if you make it easy then they will remain a customer. But it changes. Even staff moves their home loan, their credit card and their transactional bank account to another bank, or their insurance to another insurance company. That is a clear indication that we don't understand our customers very well. What follows is to realise that we have to be able to deliver process management, customer oriented process management."

[Anonymous², Sunstate Financials employee (senior mgmt), Personal Comm, 04,04, 2008]

4.0 SIX SIGMA AT SUNSTATE FINANCIALS

"Six Sigma has given us a powerful range of tools for achieving our strategic objectives. [...] we have enough early successes to know that it really works and delivers tangible bottom-line benefits."

(Program Director, Customer Satisfaction & Six Sigma, Sunstate Financials, 2005³)

As Figure 2 depicts, Sunstate Financials initially adopted Six Sigma in 2001. The adaptation of Six Sigma can be described across five phases (see Figure 2). The following sections describe these phases in detail.

Wave I: The whole Six Sigma initiative was strongly supported by, the Managing Director at that time. The company had reached the status of being one of the biggest 25 companies in Australia (by market capitalization), and was driven by one core purpose "to make it far easier for customers to manage their finances better so they can realize their dreams and protect the things they hold dear".

² Information for this case narrative was derived from content analysis of existing documentation and detailed interviews. Quotes from interview transcripts are left anonymous to maintain confidentiality of the individuals

³ Extracted from project documents disseminated in 2005

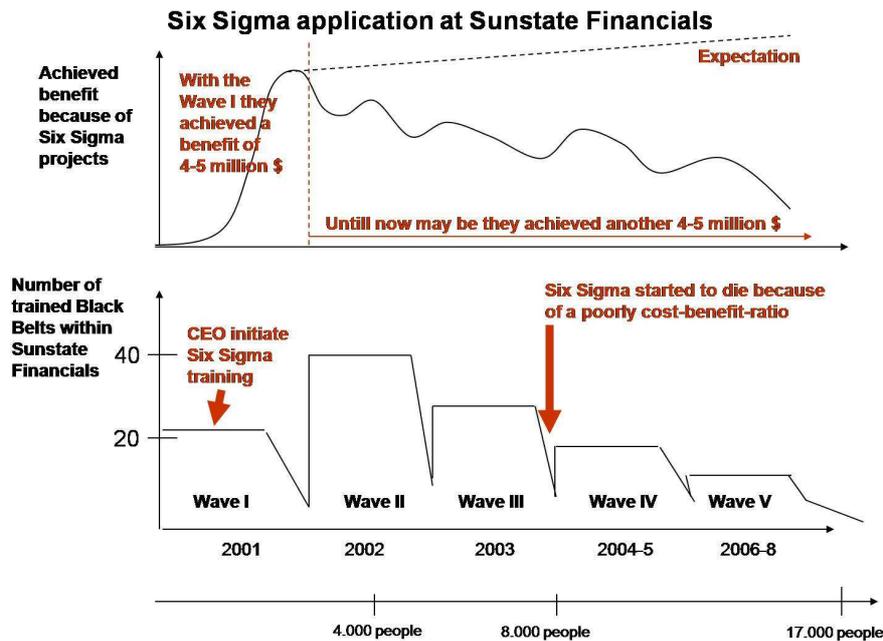


Figure 2: Six sigma Application at Sunstate Financials

Adopting Six Sigma was not a decision made of mere whim, a significant amount of research had taken place (for 12-18 months) before the initiative finally kicked off. The primary goal of the Six Sigma implementation was the reduction of costs. It was generally expected that a minimum cost saving of AU\$ 250,000 for every Six Sigma project could be realized. Next to that, the increase of customer satisfaction and development of staff was in the focus of the Six Sigma deployment at Sunstate Financials.

“Our goals?... Increasing customer satisfaction, reducing costs and process improvement which directly related to increasing the bottom line, simply decreasing costs and making savings. Making sure they were aligned to our strategic objective, which again, really is the customer,... along the lines of customer satisfaction or the process improvement in terms of being the best at what we do. [...] Ultimately the side one was developing staff and allowing staff to develop and move into future management positions.”

[Anonymous; (remaining) Black Belt from Sunstate Financials, Personal Comm, 20.03.2008]

The company executives were highly committed to the Six Sigma initiative and believed in the anticipated outcomes. Hence, they made a strong commitment to provide all required resources and supported the initiative. Significant amounts of training were conducted, with education and awareness programs reaching all levels of employees in the organization. The first intake of black belts (22) in 2001 was handpicked and were those who resonated from the rest by showing a keen interest in Six Sigma. Once trained, these first black belts were assigned to work closely with the general managers. They were in their business line and directly reported to them about the progress of the Six Sigma activities and projects. The general managers themselves took part in an introductory Six Sigma training. They supported the initiative and worked closely with the black belts to identify the Six Sigma projects. Each black belt was expected to save one million AU\$ per year across the projects they were deployed in.

In order to engage every employee in the search for process problems and solutions (and not only trained Six Sigma black belts), Sunstate Financials implemented within the Six Sigma methodology “workout” sessions. These workouts strongly supported the Six Sigma projects in its first wave by enabling staff to contribute to organizational improvements in a non-threatening, productive way.

Certain periods of time were dedicated to these workout sessions, whether it be half a day, a day, or a couple of days. During these sessions, staff who raised problems were given a room 'to work out' and to explore the related issues using a range of techniques. The message was clear, the limitations they bought up were supposed to focus on the process, not the involved people. This mindset was intended to reduce the threat in bringing these issues out as the aim was to fix the process in order to provide a more effective environment for the employees. This gave the staff the confidence and power to go through the process and identify weak spots and to come up with the ideas of how they should be solved. At the end of the session, the "Town Hall" would be called in, which was generally the general managers or group executives, who were accountable for that particular business line and processes. A presentation would be given to them as to what the problem was and the recommended solution being put forward including the potential costs and impacts. Almost at all times, projects were approved and commenced immediately. This saved the black belts from having to conduct meeting after meeting trying to get the various process stakeholders in order to reach agreement and a widely approved business case. The initiated process improvements were very simple, relatively tangible and very close to the operational front. For the first time, 'process improvement' thinking was seeded from the grass roots of the organization.

"One of the big take outs I think for everyone with Six Sigma is the fact that it has people embedded in the process who actually know where and what the problems are. They don't realize how big or small they are because they don't understand the end-to-end-process, and they are the ones who actually do have the solutions but they don't either have the empowerment or they are asked what could potentially be the solution for this, so it's the staff in the process who actually do really have the knowledge and the solutions. It's just that they're not often given the opportunity and Six Sigma certainly helped to do this ."

[Anonymous; (remaining) Black Belt from Sunstate Financials, Personal Comm, 20.03.2008]

Wave II: This peak of Six Sigma deployment at Sunstate Financials lasted for approximately 2 years, with 40 black belts trained within these early phases. After these 2 years almost every person in the company comprehended the general idea of Six Sigma. An average black belt who stayed with the program completed a project every 3-6 months. However, some projects were not finalised and were ceased. This most often occurred after the completion of the third phase in the Six Sigma lifecycle model, the measure phase. In many cases, the efforts of obtaining the right measures and data were not cost effective. However, those projects that were completed, almost always fulfilled the target goal [which was then generalized to be a minimum cost saving (or obtained benefits) of AU\$ 250,000 for every Six Sigma project that was deployed].

Wave III: Sunstate Financials was steadily adopting Six Sigma across all areas of the organisation after its initial deployment in February 2001, until external events influenced a changed directions. The 2002 financial year was a year of global turmoil – financially, economically and politically. The Sept 11th terrorist attack, the start of the war in Afghanistan, accounting frauds that took place in major US companies like Enron, Worldcom and others had massive impact in all financial companies globally. Sunstate Financials still played along relatively steadily with its vision of being a major Australia wide player – growing with company mergers. The acquisition of a large General Insurance business, which took effect from the 1st of July 2001 was a major step for the company despite the backdrop of some of the external global events. This acquisition promised significant rewards for the shareholders, but the company had to transform, with still a significant amount of integration matters that had to be addressed by the end of 2002.

All these elements triggered the call for an organizational restructure over the years. A new leadership framework was introduced and significant restructuring took place leading to substantial process re-design. There were changes in the board and the company strategy was being revisited. All these mission critical tasks preoccupied the executives, who's support was essential, yet not fully obtained

for the Six Sigma program to proceed. Even though Six Sigma was slowing down, by the end of the 2003 financial year, Sunstate Financials reported a 23.5 percent increase in net profit. The improvement in profit was very satisfying, and included a record half year result of AU\$229 million for the final six months of the year – up 45.8 percent on the prior period

Wave IV and V:

In the end, the existence of Six Sigma continued for a while, with a few more waves of employee training and recruitment for Six Sigma projects after the first wave. But, with each new wave, Six Sigma gradually dissipated, failing as a methodology to assist Sunstate Financials realize the target benefits of deploying it. By the beginning of 2008, a statement made by one of the few remaining black belts, about the Six Sigma application within Sunstate Financials confirms that Six Sigma is no longer in use at Sunstate Financials:

“Six Sigma does not really exist within the company now. The only way Six Sigma would exist in the company now is through those black belts, that have been through the program and who still use some of those techniques for themselves.”

[Anonymous; (remaining) Black Belt from Sunstate Financials, Personal Comm, 20.03.2008]

Summary of the Six Sigma progression and decent at Sunstate Financials:

One of the commonly stated issues was the scoping of projects. The selected scopes of the individual Six Sigma projects became a barrier to deploy the methodology effectively. The changed organizational structure (since 2003) inhibited the black belts (who were mostly external to the process area) to be involved in analyzing processes. When Six Sigma was deployed, black belts were sent out to do specific targeted work within projects (i.e. to do specific measurement or FMEAs⁴), rather than running projects. One major issue was that these black belts were part of a project division and they were being sent out on a chargeable basis. Hence, the business areas in which they would be deployed were not very content of having to pay someone (just because they were called a *black belt*) to come in and do work that they thought they knew best. Often, it was asked “*Why can’t I use my own staff to do it?*”. The program got very much diluted with Six Sigma being deployed to only very specific parts of processes. This resulted in Six Sigma projects which were too narrowly scoped and did not deal with entire value chains. Consequently, projects were not well aligned to Sunstate Financials’s overall strategy. Thus, the benefits realized in the last years of application were of low impact (if at all), and hence the promises of the Six Sigma methodology not being fulfilled.

The little time that Six Sigma did shine as an organizational success, was not sufficient to embed the Six Sigma culture that was essential for its long term acceptance as a methodology for continuous process measurement and improvement. This was especially true when the concurrent Six Sigma projects started to yield less and less impacts; the benefits were simply not realized, and people started to lose belief in the methodology.

The changed board of directors in 2003 also resulted in a different level of top executive support for the methodology. Those senior executives who were knowledgeable and supportive of Six Sigma, who were the actual champions of the Six Sigma initiative, left the organization for different reasons and were not replaced with others who were equally passionate about steering Sunstate Financials towards

⁴ **Failure Modes and Effects Analysis (FMEA)** is used to systematically identify key modes of process or product failure, analyze risks and prioritize improvement efforts. It is a technique for analyzing potential reliability problems early on in the development thereby enhancing reliability through design. Effects Analysis is used to identify potential failure modes, determine their effect on the product, and identify actions to eliminate or at least reduce the possibilities of failures.

success. After the executives who introduced Six Sigma left the organization, the Six Sigma program lost its identity.

“My perception is, that Six Sigma as a program died the day that Steve Jones, the former CEO, walked out the door.”

[Anonymous; (remaining) Black Belt from Sunstate Financials, Personal Comm, 20.03.2008]

The succeeding managers made new and different strategic directions, and were very strongly supportive of the idea of overall process improvement, but did not see Six Sigma as a separate program on its own right. There were more critical and urgent matters (i.e. dealing with the acquisitions and related integration efforts, new strategic direction to address the turmoil in the global financial sector that had to be counter parted with) required their attention. Six Sigma thus far had not demonstrated any radical improvement that would help them with these matters. Resources that are essential to run a Six Sigma program (i.e. the full time black belts being trained and maintained, contributions from the different levels of employees at the lines of business, the resources to collect the data etc) were seen more as a cost than an investment. Hence, the support for these gradually dwindled.

The decrease in executive support was followed by a decrease in employee participation in the Six Sigma program. The core strength of the first wave was the employee’s sense of empowerment and acknowledgement of ‘being heard’, which diminished with all the background noise that occurred externally and internally. Employees saw little value in participating in the program and there was no incentive schema in place that encouraged engagement. Six Sigma became more a hindrance than a support to their day to day work.

“So eventually it sort of died, because people thought at that point, well I’m getting no satisfaction from doing this, therefore why do I want to be part of it”

[Anonymous; (remaining) Black Belt from Sunstate Financials, Personal Comm, 20.03.2008]

The continuous attrition of trained employees was another contributing factor for the putrefaction of Six Sigma at Sunstate Financials. The Six Sigma skills and knowledge was of high accolade, creating a demand for the trained black belts to move up the organization to higher designations (different and away from Six Sigma) or to competitors. This created a gap in the anticipated return on investment for staff training, each time calling for a new wave of people to be trained. It is an accepted standard that 1-2% of the organization’s staff will be trained black belts and 5% will be trained green belts in a correctly deployed Six Sigma organization (Air Academy Associates, 1998). The trained employees make sure that the process thinking is practiced in the whole company and that occurred problems are referred to the process. The growth at Sunstate Financials with the continuous mergers and acquisitions together with the already problematic attrition with the trained staff disabled fulfilling this standard at Sunstate Financials.

Six Sigma’s success is known to be driven by *access to accurate data* (Adams, 2003). However, access to correct data has always been a challenge with most Six Sigma projects (Coronado and Antony, 2002). Often, the required data is not been readily available and/or new manual data collection procedures needing to be implemented. The obstacle of data collection was aggrandized with the diminishing employee support in general and high attrition rates of trained Six Sigma personal, internally in the organization.

“Generally the data wasn’t readily available. We had to actually work out how to get it. [...], you’ve got all the senior management who are saying well, why aren’t we fixing it? You’ve been here six weeks, why haven’t you fixed it yet? “

[Anonymous; (remaining) Black Belt from Sunstate Financials, Personal Comm, 20.03.2008]

5.0 NEXT STEPS AT SUNSTATE FINANCIALS

Six Sigma does not exist as a separate methodology within Sunstate Financials at all anymore. The only traces of Six Sigma noticeable in the company now are through those few (3) remaining black belts that have been through the program and still use some of those techniques for day to day process improvements. However, process analysis and continuous improvement, remains a number one priority at Sunstate Financials. Competition analysis shows that Sunstate Financials has to reduce the production and product costs, to maintain competitive in its business. Also the recent and planned mergers with other organisations is calling again for more structured methods of process improvement. In particular the Sunstate Financial's Business Technology Division is undergoing major changes due to new systems challenges through these mergers. They have started to use ad-hoc agile methods as a new framework promoting simple, quick and flexible working practices so that when the requirements of a project change, the teams adapt, communicate and collaborate with their business and technology customers.

Typically, in each business department, there are product and process managers: The product managers are responsible for the performance of each product line; the process managers are responsible for each single process line. Next to the process manager there is a small group in each department, who is mainly responsible for the documentation and improvement of the processes, however their view and vision of the process is limited to functional fragments dealt within their department.

"They're working on a process fragment rather than on an end to end process"

[Anonymous, Sunstate Financials employee (senior mgmt), Personal Comm, 04,04, 2008]

Next to the process management people in the business divisions, there exist a small business process management group in the Information Technology department. For the last 4 years, this group have tried to capture the end to end processes drawing the end to end process models of various business areas using ARIS and EPCs as a consistent approach and language for process documentation.

"We don't have a consistent, structured approach to process management at Sunstate Financials, either from a Six Sigma or from a BPM perspective. We have a very ad hoc approach depending on the business area. Some business areas have a mature process that they have used consistently for a long period of time that may or may not be proven to be valuable."

[Anonymous, Sunstate Financials employee (senior mgmt), Personal Comm, 04,04, 2008]

Even though there is no structured organisational wide approach yet developed and deployed at Sunstate financials, management are trained and encouraged to use the developed in house expertise on systems development, business process management and mapping/modelling techniques, to provide the business customers with a range of viable solutions so they can adapt to the ever changing and competitive marketplace as a result of lateral thinking. Sunstate has been actively recruiting staff in Business Analyst roles, who can use their own agility and excellent communication skills and who can generate innovative ideas for business process enhancement, to assist achieveing business goals.

Six Sigma *died* at Sunstate Financials almost as soon as it managed to just reach the whole organisation. The method has remained dormant for the last 3-4 years at Sunstate Financials. the once a 'whole of organisation' Six Sigma initiative, is literally non-existent at the moment. The organisation invested much resources with the anticipation of returns that has not been reported. *Why do these initiatives start and end in this form?*

Sunstate admits to not having a consistent, structured approach to process management, and has been open to responding to process change in an ad-hoc, somewhat 'agile' manner. But still has remained a leading Financial Institution, in the midst of global financial crisis. They have reached the national and

international press headlines in recent years for innovation in products and services in the financial sector. *What could this mean to the call for 'whole of organisational process management methods' - is this just another management fad?*

REFERENCES

- Adams, C., W., (2003), *Six Sigma Deployment*, Elsevier, New York, NY.
- Air Academy Associates, (1998), *Sony: Six Sigma Greenbelt Training*, Air Academy Press, Colorado Springs, CO.
- Antony, J., (2004), "Some pros and cons of six sigma: an academic perspective", *The TQM Magazine*, Vol. 16, No. 4, pp. 303-306.
- Antony, J. (2006) "*Six Sigma for service processes*", *Business Process Management Journal* Vol. 12 No. 2, 2006 pp. 234-248
- Blechar, M., Cantara, M., Gassman, B., Genovese, Y., Gilbert, M., Hill, J., Kerremans, M., Lheureux, B., McCoy, D., Natis, Y., (2008), "Hype Cycle for Business Process Management", *Gartner Group Report (G00159215)*, July 2008
- Breyfogle, F., W., (2003), *Implementing Six Sigma: smarter solutions using statistical methods*, 2. ed., Wiley Hoboken, NJ.
- Chowdhury, S., (2005), *Design for Six Sigma: the revolutionary process for achieving extraordinary profits*, Dearborn Trade Publications, Chicago, IL.
- Coronado, R., B., and Antony, J., (2002), "Critical success factors for the successful implementation of Six Sigma projects in organizations", *The TQM Magazine*, Vol. 14, No. 2, pp. 92-99.
- Ehrlich, B., H., (2002), *Transactional Six Sigma and Lean Servicing*, St. Lucie Press, Boca Raton, FL.
- George, M., L., (2003), *Lean Six Sigma for Service*, McGraw-Hill, New York, NY.
- Harry, M., and Schroeder, R., (2006), *Six Sigma: The Breakthrough Management Strategy Revolutionizing the World's Top Corporations*, Doubleday, New York, NY.
- Hayes, B. (2008), *Six Sigma Critical Success Factors*, available at <http://www.isixsigma.com/library/content/c020415a.asp>, last accessed November 26th, 2008.
- Jugulum, R., and Samuel, P., (2008), *Design for Lean Six Sigma. A Holistic Approach to Design and Innovation*, Wiley, Hoboken, NJ.
- Klefsjö, B., Wiklund, H., and Edgeman, R., L., (2001), "Six Sigma seen as a methodology for total quality management", *Measuring Business Excellence*, Vol. 5, No. 1, pp. 31-35.
- Kumar, S., and Gupta, Y., (1993), "Statistical process control at Motorola's Austin assembly plant", *Interface*, Vol. 23, No. 2, pp. 84-92.
- Magnusson, K., Kroslid, D., and Bergman, B., (2004), *Six Sigma. The Pragmatic Approach*, 2. ed., Studentlitterature, Lund.
- Nohria, N., Joyce, W., Roberson, B., (2003), "What Really Works", *Harvard Business Review*, Vol. 81, No. 7, pp. 42-52.
- Pande, P., Neuman, R., and Cavanagh, R., (2000), *The Six Sigma Way: How GE, Motorola and Other Top Companies are Honing their Performance*, McGraw-Hill, New York, NY.
- Schonberger, R., J., (2008), *Best Practices in Lean Six Sigma Process Improvement*, John Wiley & Sons, Hoboken, NJ.