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Six Hard Lessons in Implementing Six Sigma - *Lessons in cultural change in a service and transactional processing environment*

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1   ABSTRACT

Implementing Six Sigma based on training people in courseware is not a turnkey solution to achieving Six Sigma success. The culture and environment must ensure that it is allowed to have first project success then its first project failure and then group learning's in order to achieve success at a program level for customers and shareholders.

It is quite possible to take the principles of DFSS to a potential Six Sigma program and anticipate the problems, which you will confront.

At BT we have taken an embryonic and pragmatic approach to implementing Six Sigma and over time with good sponsorship the desire to apply Six Sigma to a variety of problems has grown.

2   KEY WORDS
Change Culture
Leadership Style
Financial Services
Transaction processing
Training
Black Belt certification
Problems with Six Sigma

3   INTRODUCTION

BT Financial Group started on the Six Sigma journey in 2000 in order to achieve an up lift in the way we delivered on our quality promise to our customer base by analysing the rework and customer complaints

Now five years later the journey towards Quality is still part of our customer promise and we have learned much about how to use the Six Sigma tools and apply them.

This paper is designed to share the lessons learnt about establishing the quality program at a time when 'Six Sigma' has become the next big thing in Financial Services around cost control and customer expectation delivery. The paper highlights what needs to happen to ensure that it is not just a fad and you enjoy the benefits of introducing a structured problem solving methodology to your organisation too.

Our journey involved incubating Six Sigma to look at rework and customer complaints to now having measures over most touch points in our transactional processing area and the culture to continue to address root causes of the problems the measures highlight. We know what to do in order to drive cost down without sacrificing quality for the customer that is definitely something we didn't know as well five years ago.

4   WHAT ARE THE SIX HARD LESSONS?

These are the six hard lessons I have had around Six Sigma journey in BT which are further developed in turn in the paper.

4.1 Result don't come overnight, but they will happen

Results don't come overnight but they are expected to… because Hey – you're the guru right. It has taken a number of years for aspects of our program to be suddenly perceived as an overnight success

4.2 Your data set for measurement is awful

The first problem is project selection because you have no data. You need to be pragmatic and realise that if you had data and measurement you probably wouldn't be in this mess in the first place. Once you have identified your focus area then you are up against getting the right data at the granular level.

4.3 Training courses in Six Sigma are not magical

There has never been a training course I have gone to were I have 100% knowledge retention from the course. However when people see a 'certificate of attainment' for a sigma belt suddenly a magical aura is at risk of being bestowed. Six Sigma training has the same retention rates as all other training. Then amongst those that are trained you have those that succeed at theory (academic) and you will have to wait and see who can relate the classroom to the business needs.

4.4 People selection is critical

A fool with a tool is still a fool. I am more interested in your five years experience than the five-day course you have been on. One of the maxims is recruitment is "If you hire on technical skills you will want to manage out on behavioural skills, but if you hire for behavioural skills you can coach the technical". I see the bulk of Six Sigma training is a methodology, a technical skill, which will be skilfully applied by great people.

4.5 People aren't always interested in data

"You can't handle the truth" – is a classic line from *A few good men*. The business world has many people promoted purely on their technical merits versus their ability in soft skills around removing obstacles and application of negotiating and influencing skills.

Technical people may feel their position threatened if you want data to solve their problem than relying on their technical judgment: this can be a real threat to how they see themselves and if they are going to buy into the Six Sigma methodology for solving problems in the future.

Six Sigma measurements helps people look at the business a different way, but sometimes this is uncomfortable. Leadership buy in is essential to keep program traction.

4.6 Slow and Steady
Start slow, build success – the infrastructure (people, systems and process) is not there to support you at day one. If you expected to transform the way

people work overnight you are defying what most change management books would suggest is possible in terms of culture change – that is, it takes 2 years if it is a strongly guided change and 10 years for unguided change.

5   THE SIX LESSONS EXPLAINED

5.1   Result don't come overnight, but they will happen

There is a massive hype about six sigma in the transactional processing environment, with this hype comes the desire for many firms to 'get on board' and be able to say 'me too'. What this does is part some extra dynamic into the market place and in turn expectations of Six Sigma programs.

Imagine if you will for the purpose of an analogy that someone has become overweight, they of course did not do that overnight, the weight was put on over a period of time. So to in your organisation the problem you are up against did not happen overnight, your problems are the result of a number of circumstances of a period of time.

So also when we turn the analogy to weight loss we wouldn't expect an over weight person on a diet to show a massive body shape transformation overnight. Waste removal in your organisation is like weight reduction … it is best sustained by constant incremental waste reduction over a period of time in order to achieve your organisational ambitions.

5.1.1   Six Sigma practitioners are attracting a premium in terms of salaries. When business people pay a premium they expect premium outcomes. Premium means the promise of Six Sigma is delivered effortlessly. The astute practitioner will continue to question the environment to be successful in, as the infrastructure needs to be there for project to succeed, i.e. what is the ability to execute any solution (sponsorship, cost, time).

The same rules of project management and sponsor selection apply in Six Sigma, which is the longer your project goes without an effective sponsor your ability to attract an effective sponsor is diminished.

5.1.2   Achieving an environment for Six Sigma implementation to succeed is not easy. The textbook will say that it needs a serious commitment from a sponsor and time, mental energy and resources availability. In practice this means the sponsor has to have some appetite for risk and backing in the bedding down of a new process and culture in the company. Potentially this is the first time that people in your organisation have been exposed to an option of structured problem solving. Compounding this is that you are introducing a methodology that takes time to implement and fights against the need for a "quick win".

Your sponsor can be effective just by having them come to your entire workshop to signal that it is important use of time. The happy by product of this is that the sponsor will be engaged and bought into what is the prize at stake if you need a few more resources on the fly. A

great sponsor will also do the accountability piece for the project – that is in three months after implementation and well into the control phase they ask to see the result demonstrated and the financial outcome attained. When the financial outcome is attained for the first time the 'rubber has hit the road' and people start to trust the methodology. I cannot stress enough that first the sponsor must take the leadership position in the organisation allowing the first project and you can build from the organisation trust the first result achieves and buy in become easier after that.

5.1.3   My recommendation is avoid razzle dazzle for the first few projects, to incubate the realities about how the DMAIC methodology is going to sit inside the Project Methodology in your organisation. You need a way of getting sense about how good your new hire black belt is, or how attuned you trained staff are to being able to execute a Six Sigma project. You will personally learn about what makes up a good Six Sigma project and how strong and tight your problem statement needs to be.

Six Sigma needs to sit inside your existing project governance framework for the organisation. Project Management (PMBOK) and Six Sigma (DMAIC) are complimentary methodologies. One is resource management of the full project lifecycle the other is for work units that involve problem solving. DMAIC answers the work units inside a project for the problems that need to be solved – do not think that Six Sigma on its own is going to cure all ills.

5.2   Your data set for measurement is awful

5.2.1   When you begin your six sigma journey you are ready to start analysing information in ways you never have before. There is a management maxim which is 'what is measured, gets attention'. If you think about the very premise of problem solving is that it is difficult and there is not clarity then it is likely to follow that there is little robust data available to you. Often I have been told we have loads of data about an area, but it is not at a granular enough level to help you out.

What we found is that our internal MIS was avoiding us getting a sense of the customer experience (or Voice of the Customer). What was measured well was the performance of activities of a business unit… the organisation silo. The success of a silo is not necessarily representative of what a customer perceives as value.

At BT we have spent four years migrating workflow process from our old workflow system to a new workflow system that measures and rewards outcomes. We had to do this, as none of that MIS had the capability of moving with us in our desire to have high customer service goal attainment; we had to measure by the voice of the customer. We had to make the voice of customer systemised into the workflow system to mandate success.

Often in our early process improvement sessions the MIS system would show up on our fishbone diagrams as being the reason for why a process was failing. Imagine the horror we felt to find that a reporting system limitations were the very things risking our customer service ambitions.

I have found this in both our transactional processing environment and also our call centre environment that the data your need is not at the level of granularity you need to make a difference in terms of constructing a strong pointy headed problem statement about what is driving inefficiency in your business and why we need to resolve it.

So while you are fixing your major and newly discovered MIS issues you need to take a pragmatic approach to data, by using multi rating tools that turn intuition and gut feel into data. It is my view that 90% of problems are solved with a good flow chart and fishbone diagram.

5.2.2 You have to focus on the data as project selection criteria (alongside your strategic objectives see 5.2.6.1 Is Six Sigma for continuous improvement?) as without a clear idea of the problem you are trying to solve you will have no idea what success looks like.

If you do not use data then you are at risk of 'group think' or 'tribal behaviour' within an organisational silo to define the problem. You risk improving for the silo but not the customer.

The words "I think this is the case" need to be shifted to "I know this is the case"; with this paradigm shift you about to have resources execute the ideas from the Improve phase will become easier.

5.3 Training courses in Six Sigma are not magical

5.3.1 Given our experience in implementation of six sigma we are often asked to answer the question around 'what training provider got you started?' The question can also be followed with 'what is the ideal ratio of green and black belts?' It is quite an odd question isn't it when you think you would never ask a professional footballer around what coach got them started.

What gets you started is the passion and desire to make a difference, to go out and practice and when you realise that you need help to heighten your current performance you bring in some training (I accept of course that this might be quite soon! But with some experience you know what you need as opposed to hiring a 'coach' when you don't know what you don't know)

To extend the sporting analogy, if you were getting started in football the basics around access to playing field, resources, team mates are mandatory the coach is not. The coach is required for high performance.

The high performance is your green belt or black belt certification. The Champion or yellow belt qualities are good to give you a sense for what is involved.

5.3.2 If you agree to the view that data collection is very tough in the service environment then you also need to ponder that in light of your training course. Given that Black Belt courses which are the most expensive focus a good deal of time around statistical analysis and process capability assessment you may be paying for training that you will never see applied in your organisation. Your organisations largest step forward may be in just removing the amount of variation it gets from it customers.

So if you are intent on having Black Belts because it seems like the right thing to do then you may have the horsepower to analyse problems beyond what the organisation needs to be transformational. In this instance all you do have the ability to puff out your organisations chest with brag rights about how many black belts trained staff you have, but with that capability there and what you pay to have those people on board you CFO will want to see the return on investment.

I personally see far more merit in Lean Sigma Black Belts for the service and transactional processing environment given the most of the journey will be one that focuses on a reduction on waste.

5.4 People selection is critical

This is the area I cannot underline enough. If you don't have the aptitude for data manipulation, or analytics then you won't suddenly get this at a training course. I have focused all my recruitment effort following the criteria below and then assessed their Six Sigma training accreditation or training needs.

5.4.1 Recruitment criteria

a. **People**: Your recruit must have an empathetic style, must be able to build rapport and sell concepts. People that consult from their desk fail to engage the business and those people who are not consulted will fail your program.

b. **Judgment**: Your recruit must be able to draw conclusions from disparate information, link concepts, and perceive applications of solutions in other areas: essentially this is   commercial acumen. People that do not have this will short change you at the Analyse phase and the quality of thinking in the Improve stage will then be further limited.

c. **Drive**: The sense of energy that they have. Are they actually interested in doing this stuff, or do like to postulate on methodologies as a career? Do they see Sigma training as the current fad in the organisation and want to be trained to improve their remuneration?

d. **Outcomes**: The ability to focus on the end game. The ability to decide at what point you have enough information to leave Define to go the measure

and then on Analyse. Noting that your organisation may need to have a pragmatic approach to the methodology at times this can be important.

When you have this then adding Six Sigma skills to this person(s) is the right foundation to build from. In the interview get examples about how they have behaved in the past around these attributes as it ensures they will perform not just understand theory.

5.5 People aren't always interested in data

5.5.1 As you are introducing a new methodology to the organisation you are making a statement that the current way of solving things is flawed, relying on people 'experience' in handling situations is not longer enough. Be very careful with the term subject matter expert, as this might be limited to negotiating the problem versus knowing how to solve it. You are in for a shock if you thought people were all happy to sign up for the big cost savings though this Six Sigma thing which the CEO asked you all to get excited about as people might not like having the dirty laundry exposed.

This all works just fine at the conceptual level, but when this means you are going to be chasing down the root cause of problems in a business area, you may expose their soft underbelly – and they might not be handling the truth too well.

You need to avoid embarrassing people and off siding them in your data recovery phase.

After you have put them through the emotional wringer around having their dirty laundry exposed then you are going to come back to them in the Control phase and ask for the savings and tell the finance area that the new budget lines are (for example) $300k less in this business unit per annum.

Sensitivity is the key here all the way through. This underlines the importance having an active sponsor. It also for my mind shows the value of having Six Sigma problem project as a work unit inside a wider program of work managed by a Project Manager. That way your Six Sigma specialist has managed the problem solving piece and the Project Manager has been working through the impacts of what benefits realisation might be for example the need to wait for staff attrition, redundancy issues or how best to redeploy capacity.

Managers typically are in roles because they can articulate and opinion as a behavioural trait. This means at the start of a Six Sigma project they are not going to enjoy the patient and persistent peeling open the process to find the root cause, when they already know what you should be doing (just ask them!) as they recommend that you could go straight to Improve phase.

What I have found is that those Managers ideas are best parked and left on the minutes until the improve phase. They become one of the

ideas for putting back on the table at the Improve phase and understanding the feasibility and effectiveness of the solution against the known root cause. I have usually found that you can use their idea and a number of others to eliminate root cause and they themselves are surprised and engaged around the need for a multi threaded solution approach.

5.5.2　Some people are concerned that when you start using structured problem tools you lose the organisations flair, it ability to be spontaneous and the like.

This problem is very hard to say what is going on categorically. On one hand it can be a smoke screen for not be able to get their opinion through anymore through the feeling the it takes too long.

Length can be answered by compression of time into a kaizen blitz type event, but it take the participation of the agitator in the Solution brain storming aspect of the improve phase to see that creativity is a part of the process, but more often than not it is about them being heard.

5.6　Slow and Steady

5.6.1　Is Six Sigma for continuous improvement?

It is at the headline level, and works well when applied for bottom up problem solving, but if you want to get the savings per project or greater than $250k per project then you need to invest in some top down thinking about where the organisation needs to go strategically and sees it as important to spend a bunch of investment capital money in that space to have the year on year savings to be made be seen as effective. If you do not do this alignment then you may get to the Improve stage gate and not get the broad executive support to spend money in this area.

Using your Six Sigma tool set in that space defined by top down ambitions, gives you the financial outcomes, linked to strategy = maximum pay off and six sigma being seen as effective in your organisation. If you just react to your biggest source of problems it might be in your legacy product or customer segment – imagine solving all the problems in typewriter manufacturing when the rest of the world has moved onto personal computers.

Your program of work needs to fit with the strategy of the organisation for it to become perceived as an essential part of the culture. I do not make this statement just to see you ticking the boxes around making your project fit to the current strategy in your organisation. Consider there is no commercial (for profit) organisation that wouldn't have a strategy around improved quality, lower cost, higher customer satisfaction and the like.

You need to go a level higher and say that quality and cost improvement are outcomes, now ask what area of this business do we

need to see these outcomes? What is the CEO saying around what products we need to be in, key markets to excel in, is there any winds of change in consumer spending patterns and the like which you need to be across and then look to improve quality and cost performance in that space. Do this keeps you six sigma program relevant to achieving the organisations goals.

5.6.2 Is Six Sigma the utopian methodology for your business?

For us the answer is yes in terms of problem solving, but it is a no when respecting methodologies around Project Life cycles or System Development life cycle. You need to have clear appreciation for the specialisation that many parts of the organisation bring to the table.

For BT it was to actually look broader and see that each Six Sigma project needed a dedicated project manager as well as the lead Six Sigma facilitator (green or black belt). The Project Manager is the conductor of the orchestra, bringing into play the various stakeholders as required, some with their specialised methodology of Six Sigma or others around System Development life cycle when we are at the Improve phase and need to execute the ideas in our technology systems.

5.6.3 Issues around change management

When you think about change management in an organisation you will have the small group of change radicals (those that want to get excited about the next big thing) then there is the early adopters, the late adopters and the last group who are change hostages (the ones that seem to sit there and say 'you can have my body, but you will not influence my mind').Your first project selection is critical in terms of making sure you have a safe space to experiment and learn as well has a high ability to execute a solution.

On the people side it is equally critical to think about who sits in those sessions. You are looking for a smattering of early adopters, as these are the people that will be your organisational champions and reinforcing the value in Six Sigma to others (the late adopters) in the organisation.

Then there is the role of sponsor that I continue to emphasise through this paper. The sponsor being on board to hear the stories as the flow charts and fishbone diagrams bring out the dead in the organisation gives them a sense of optimism that there is a way out of the mess. There is a penny dropping moment for them that fixing something quite basic may lower rework costs. Exciting for them as the ability to contain costs has gone deep below the Profit and Loss statements and ledger lines they would normal look at and they start to see the general ledger being composed of a lot waste in amongst a lot of value.

6 CONCLUSIONS

What I hope you have gained as a result of the BT learning's is that your story will be an embryonic one. You need the sponsorship and passion to keep it

going, you need the commercial acumen to work out were it can work and which areas of you organisation have the maturity to handle structured problem solving techniques in the first instance.

Starting with an incubation concept and learning and building out from there will allow you to achieve results in a small space. From there you can work out how to take structured problem skills across your enterprise. Pleasantly it might just be your sponsors coming to you with where to apply the tool set next.

If you do not do this you program will be all about training and methodologies without outcomes and your organisation will wonder what might have been.