



**Deloitte.**

Process Intelligence  
Six tenets of Intelligent  
Process Improvement

Applications in Banking, Insurance and  
Investment Management



# Introduction

The Westfield Sydney to Melbourne Ultramarathon was first run in 1983. At a distance of 875 kilometers, it was going to be one of the most challenging ultramarathons in the world. Most entrants knew that to be competitive, they would need to run 18 hours each day, while sleeping only six hours.

A 61-year-old man named Cliff Young showed up to run the race wearing worn-down overalls and worn-in work boots. When asked if he had ever run in a marathon before, he replied, “See, I grew up on a farm where we couldn’t afford horses or tractors, and the whole time I was growing up, whenever the storms would roll in, I’d have to go out and round up the sheep. We had 2,000 sheep on 2,000 acres. Sometimes I would have to run those sheep for two or three days.” The runners all laughed. Young was clearly not up to the standard of these world-class athletes.

Amazingly, though, the 61-year-old underdog won the race, beating the record for similar races by 40 percent, or almost two full days!<sup>1</sup> How was this possible? Young didn’t “know” what everyone else knew—that he had to sleep—so he just shuffled along each night at a slower

pace while all of the pro runners dreamt soundly. His win catapulted him to fame in Australia—the race thereafter was named the Cliff Young 6-Day Australia Marathon—and launched a new era of ultramarathon running. Now that world-class runners “know” that it’s possible to run days at a time without sleep and that they can conserve energy by adopting an easy shuffle jog, they have a new way of approaching ultramarathons.

*Business process improvement today is in a similar state as ultramarathons were before Young’s feat — people often “know” which process improvement methodologies work, and they approach those methodologies the same as they have for decades. Yet despite those decades of history to learn from, companies are still struggling to realize success from their process improvement efforts.<sup>2</sup>*

*Why do some process improvement efforts succeed and others do not? This paper outlines six tenets to help companies think beyond what is currently “known” and bring more “intelligence” to process improvement.*



<sup>1</sup> “The Legend of Cliff Young: The 61 Year Old Farmer Who Won the World’s Toughest Race,” Elite Feet for Runners, December 30, 2007, <http://www.elitefeet.com/the-legend-of-cliff-young>.

<sup>2</sup> 3rd Biennial PEX Network Report: State of the Industry, Trends and Success Factors in Business Process Excellence,” PEX Network, Fall 2013, <http://www.processexcellencenetwork.com/downloadContent.cfm?ID=1697>.

# Tenet #1: Challenge conventional wisdom

Many organizations are constrained by conventional wisdom, much like the world-class runners in Australia. For example, companies are moving away from Six Sigma as a methodology for Process Excellence because they feel their firm doesn't have the necessary level and quality of data to effectively support a Six Sigma based approach. This may explain why the methodology has steadily declined since 2005<sup>3</sup>. Instead, companies may take a flexible approach to process improvement, allowing teams to pick and choose methodologies and toolsets.

But isn't flexibility a good thing? Not necessarily. Companies that stick with a consistent approach realize an average of 40 percent more benefit than those that don't.<sup>4</sup> A demonstrated and time-tested approach to process includes the following five steps:

- Clarify the problem and set a goal for improvement.
- Measure performance levels today.
- Uncover the root causes of the problem.
- Figure out ways to address those root causes.
- Make it stick.

These steps happen to be the same logical and time-tested approach employed by Lean Six Sigma, currently the second most widely used methodology in the process improvement tool kit, only behind Lean<sup>5</sup>. It's also quite flexible, as it can be applied to a variety of problems of various sizes. It's an "intelligent" approach that has been shown to be effective and efficient in problem solving, even without significant levels of data and statistical analysis.

## Example

A property and casualty insurance carrier was having problems with growth and profitability in the small commercial marketplace. The pricing on very similar risks varied significantly which impacted both the profitability of the business and the willingness to expand into new market segments. By challenging conventional wisdom that each deal required individual attention, the process was standardized and automated to refer only the unique or specialized risks to the underwriting group while systematically pricing the rest. The carrier was able to capture benefits on multiple fronts. First, it was able to increase its average premium while maintaining conversion and retention rates. At the same time, it was able to drive growth because underwriters were able to spend more time working with customers and improving service rather than performing administrative and technical underwriting activities on standard risks.

When the Financial Services industry first leveraged Six Sigma in the early 2000's, the deployments were closely tied to the Manufacturing roots of the program. This included fundamentals of the methodology, the tools, and the focus on cost reduction. Over time, enthusiasm faded, in part due to the perception that the program was not applicable to and/or flexible enough for a service-based business.

Lean Six Sigma is gaining an increasing foothold in Financial Services firms again. But as in other industries, some financial firms have chosen to bypass the basic fundamentals, seemingly in response to the initial strict deployments. However, when deploying Lean programs, maintaining the "DMAIC" approach can be critical to effectively solving business problems.

The fact-based foundation of Lean Six Sigma is particularly effective in challenging conventional wisdom. Many service-based businesses are notorious for seeing more uniqueness in their business models, clients and processes than they do the commonalities. This contributes to skepticism with respect to the applicability of benchmarks, over or underserving clients, and to the formation of highly complex and variable processes. With the facts, companies can achieve efficiencies that last, and improve client experience where it matters the most.

<sup>3</sup> "3rd Biennial PEX Network Report: State of the Industry, Trends and Success Factors in Business Process Excellence"

<sup>4</sup> LSS Aberdeen Six Sigma Report

<sup>5</sup> "3rd Biennial PEX Network Report: State of the Industry, Trends and Success Factors in Business Process Excellence"

# Tenet #2: Stretch beyond process mapping

Another commonly accepted practice is to use process mapping as the core tool in process improvement. Process mapping is an important tool, but it has limitations. Process maps show how people think a process typically works or how it should work. How the process actually works often is quite different.

Various advanced analytical tools can provide much richer insights and “intelligence” related to actual process performance. For example, Deloitte’s Process X-Ray is a process analysis platform that reconstructs the actual process execution based on data from a company’s underlying technology. It enables users to ask up to 10,000 questions to find the variants and root causes of problems in the process. Similarly, Detailed Value Stream Analysis recreates actual process performance at a handoff level of detail, enabling process improvement teams to identify which steps in the process are not adding value.

The “intelligent” insights gleaned from these analyses help generate breakthrough improvements that are hard to realize when process maps alone are used. As companies increase focus and investment on workflow automation and data analytics (big data), supplemental analytical process intelligence tools will become increasingly more important in driving toward solutions.<sup>6,7</sup>

Due to the highly variable processes in Financial Service-based businesses, process mapping can be a complex undertaking that yields incomplete results. Often times, this is because employees indicate that the process works one way when in reality, it doesn’t.

Understanding service-based businesses requires a more advanced approach. One technique is value stream mapping, which traces what actually happens by intimately shadowing a process to understand value and non-value added activities and trace handoffs.

Another approach involves purpose-built tools. Deloitte’s proprietary tool called Process X-ray reconstructs what really happened and provides organizations with the capabilities to isolate root causes. Clients have seen significant benefits of this deeper, data-based analysis including operating margin improvement of 15-25% and working capital reduction of 10-15%.

Gaining insight into how work is actually being done enables leaders to determine an ideal work flow, establish guardrails to guide behaviors, and more effectively train knowledge workers.

## Example

A bank needed help increasing the efficiency and profitability of its middle market business. By conducting stakeholder interviews, Deloitte gathered many opinions on what the largest opportunities for improvement were. Rather than take these “insights” as truths, each was framed up as a hypothesis that could be proven or disproven with additional data and analysis. For example, one area of the business was heralded for its effectiveness. However, a detailed Value Stream Analysis and a time study revealed that deals underwent many more underwriting reviews than were required. This resulted in increased handling time, longer lead time for lending decisions, and ultimately decreased customer satisfaction. Uncovering and addressing this effective, but highly inefficient step in the process yielded significant time savings and increased effective capacity, allowing the bank to process more deals at current staffing levels while delivering improved turnaround times to customers.

<sup>6</sup> Ibid

<sup>7</sup> Deloitte internal analysis

# Tenet #3: Follow the facts

There is typically no lack of opinions when it comes to business improvement efforts. But when teams act on opinions, they often jump to the wrong conclusion. A more “intelligent” approach is to convert opinions into hypotheses and test them with data before acting on them.

“Data is what distinguishes the dilettante from the artist.”<sup>8</sup> According to a study conducted by the University of Pennsylvania and MIT, “data-driven decision making” achieved productivity that was 5 percent to 6 percent higher than could be explained by other factors.<sup>9</sup>

Making process improvement decisions based on data-substantiated facts rather than opinions and perceptions may take a little longer, but over the course of time it helps foster alignment among people with different opinions and can lead to superior results.

## Example

A specialty lines insurance carrier needed to increase productivity of their sales and underwriting operation by more than 60% in order to meet aggressive growth and profitability targets. While initially believing that customized, white-glove service was its biggest differentiator, a root cause analysis underpinned by customer interviews and surveys revealed that the biggest drivers of satisfaction were consistency in the underwriting decisions and turnaround time. Process analysis grounded in thousands of lines of transactional data exposed significant variation in quote times across geographies for all product types. These facts regarding what customers truly required and what was creating a gap with those requirements drove a decision to move to a more centralized operating environment while still keeping sales resource in-market, albeit focused on the larger, more complex risks. The move to a more centralized environment provided significantly increased service levels with a fraction of the headcount allowing the carrier to plan for an organization that could meet both their growth and profitability objectives.

Financial services and insurance companies are equipped with vast amounts of customer and transaction data. An intelligent approach to process improvement translates opinions into hypotheses and tests hypothesis validity using data analysis. This helps weed out myths and misconceptions and empowers leadership to focus resources on real issues with real financial benefits.

One challenge the financial industry faces with regard to data-based hypothesis testing is a lack of system integration. Historic and continued high levels of M&A activity leads to multiple systems and sources of data – and integration efforts often fall short. Furthermore, the quality and traceability of data is frequently an issue across systems, adding a further dimension of complexity.

One priority area for companies to improve relates to customer data management, not only to develop a comprehensive view of the customer, but also with the intention of tying it to internal process data which would enable end-to-end, customer centric views of process and business performance.



<sup>8</sup> George V. Higgins, The Guardian, June 17, 1988.

<sup>9</sup> “When There’s No Such Thing as Too Much Information,” Steve Lohr, The New York Times, April 23, 2011, [http://www.nytimes.com/2011/04/24/business/24unboxed.html?\\_r=0](http://www.nytimes.com/2011/04/24/business/24unboxed.html?_r=0).



# Tenet #4: Buy runs, not players

In the movie Moneyball,<sup>10</sup> a statistician suggests the following: “People who run ball clubs, they think in terms of buying players. Your goal shouldn’t be to buy players; your goal should be to buy wins. And in order to buy wins, you need to buy runs. Baseball thinking is medieval. They are asking all the wrong questions.”

The same is true in process improvement. Many companies ask questions and use tools that fail to address root causes of problems. They employ temporary fixes that end up being costly and unsustainable. Such process improvement efforts effectively put a bandage on visible symptoms of problems, thus laying the foundation for disappointment – addressing symptoms alone virtually guarantees problems will reappear. When problems are identified and addressed at their core, the benefits tend to be greater and longer lasting.

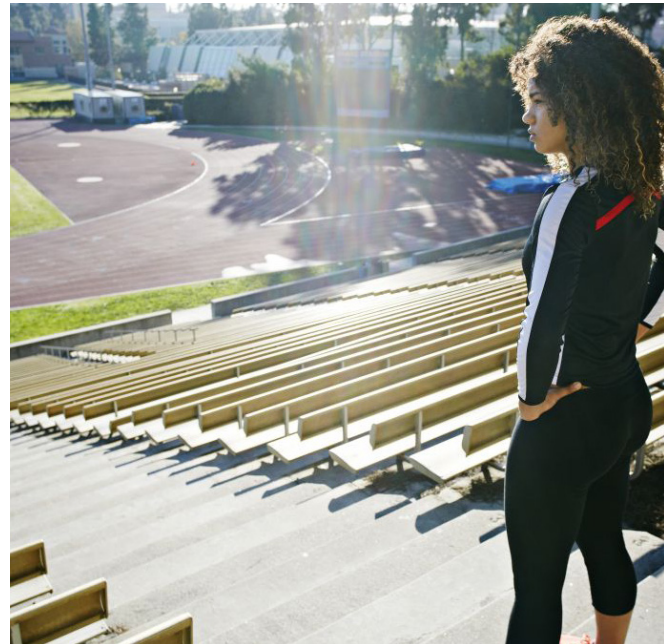
## Example

In an effort to improve its efficiency ratio using revenue growth, one bank took on a large project to improve the effectiveness of its retail branch salesforce. Annual performance metrics were restructured to encourage bankers to sell a certain number of products across several categories. The bank quickly learned a lesson to be careful in what activities are measured. If an organization measures unit sales, the units sold will likely be the cheapest, easiest products to sell. Instead, develop metrics directly tied to the organization’s overall financial goals. Shifting to a performance metric based on contribution margin aligned the sales staff with the bank’s most important measure - the bottom line. As your organization sets financial goals, take the time to evaluate each business unit and individual’s performance metrics and structure them in such a way that you can confidently know you are swinging for the same fence.

In recent years, one of the most important metric for financial institutions has been the efficiency ratio. Banks are feeling significant market pressure to cut operating costs and increase revenue. But many are challenged to know where to grow and where to trim back.

This can be increasingly difficult in financial institutions which often operate as several siloed businesses. Even if top executives formulate a plan to improve efficiency, it is difficult to gain alignment across business units and market leaders.

The politics of cost cutting and investment dollars often gets in the way of fact-based analysis and strategy. Without a hypothesis- based, data-driven approach companies are not uncovering root causes and end up addressing symptoms rather than long-term problems.



<sup>10</sup> From Moneyball, the movie.

# Tenet #5: Carry it across the goal line

In Super Bowl XXVII, the Dallas Cowboys' #78, Leon Lett, recovered a fumble on the Dallas 35-yard line and ran it toward the end zone. At the 10-yard line, approaching the end zone, Lett slowed down and held the football out in celebration, unaware that an opponent was chasing him down from behind. The opponent knocked the ball out of Lett's outstretched hand just before he crossed the goal line, sending the ball through the end zone and costing the Cowboys a touchdown.

In the absence of proactive leadership alignment and change management, process improvement teams can fumble before they cross the goal line, too. Two-thirds of executives indicated in a recent survey that competing priorities for time and resources often take precedence over process improvement efforts, resulting in an unstructured or undefined process excellence program.<sup>11</sup> Process improvement efforts can have the flashiest data-driven analyses and the most insightful recommendations that get at the root causes of the problem, yet those recommendations are worthless if others in the company don't accept and act on them.

In the last ten years, many Financial Services institutions have set out with good intentions of improving processes as a way to drive profitability. However, analysis of efficiency ratios over time shows that these large-scale initiatives often fizzle out or never gain the traction needed to impact real change.

One reason for this is competing priorities. Over time, business leaders shift back to the issues facing their part of the business which causes employees to lose sight of what real matters and business returns to the status-quo.

Financial Services and Insurance companies also face regulatory constraints, frequent changes in organizational leadership and structure, and accelerating innovation and competition fueled by advances in technology. However, with the increasing regulatory scrutiny and competition, process improvement initiatives can significantly help address regulatory pressures and potentially lead to competitive advantage while also helping to manage costs.

## Example

The head of a major global bank was receiving conflicting information on its 300+ person Global Regulatory Operations business. How were productivity metrics rising while backlog was simultaneously increasing? Why were Operations Management reports positive while business complaints were rolling in? A detailed assessment identified opportunities to: 1) realign and streamline workflow, 2) improve workload management and controls, 3) improve productivity and quality, 4) implement actionable metrics, and 5) reduce overall costs. Deloitte supported the client in helping streamline and standardize operations across 14 global sites improving cycle time by 200%, reducing backlog from 5% to less than 1% of population, headcount by 15%, as well as improved productivity, accountability and responsiveness.

To ensure consistent and timely implementation and "carry it across the goal line" globally, the organization employed several strategies. It formed smaller 'pod based' teams, implemented ongoing Quality Assurance checks, and developed ideas to encourage team culture. It also standardized training, metrics tracking, and reporting. A formal governance structure was announced to drive ownership of revamped process documentation and practices. Other keys to success included consistent support from senior management and maintaining visibility at the board level throughout the project lifecycle which was critical to maintain focus against potential competing priorities. A positive audit by the OCC, a tough organization to satisfy, was a significant confirmation of the project's success.

<sup>11</sup> "3rd Biennial PEX Network Report: State of the Industry, Trends and Success Factors in Business Process Excellence"

# Tenet #6: Two heads are better than one

While training is essential for obtaining skills and knowledge, coaching and mentorship help people apply learning in the real world. Research of coaching effectiveness shows that a structured, proactive coaching approach where a schedule is followed leads to more successful project completion in comparison to an ad-hoc coaching approach (see figure 1).<sup>12</sup>

Such a mentorship model is necessary for effective implementation of Lean Six Sigma; it can keep teams motivated, foster continuous learning, and, most importantly, maintain improvement gains. One such model, the “belt” method, has been successful in helping teams draw from the wisdom of those who have walked the path before.



Figure 1- Coaching Improves Outcomes



In the initial launch of Lean Six Sigma programs across Financial Services, coaching and mentoring was a key component and provided primarily through central deployment teams and third party specialists. Today, this support comes from a number of sources, including internal resources that have had years of experience working with the methodology.

Regardless of where companies are on their continuous process improvement journey, a mentorship model should be incorporated into their approach to fully leverage the benefits of the improvement efforts. In addition, mentorship is critical to help build and maintain process improvement capabilities in an industry with a highly mobile workforce, and one that will be significantly impacted by the retiring baby boom population.

## Example

A top regional bank recognized its lack of process discipline and deficiency in fact-based decision capabilities. Realizing Lean Six Sigma’s potential, it launched an LSS program, centered on an internal Enterprise LSS team. The bank engaged an external partner from the beginning to help the bank design their continuous improvement program and capability. This included guidance on the selection and development of resources for the team and a detailed program playbook for maintaining consistency and rigor in project selection and execution. Leveraging this foundation, the bank engaged the external partner to work with the internal team to execute three strategic initiatives, acting in a delivery as well as coaching capacity. This helped accelerate team development by learning first-hand how to utilize the playbook and how to apply the concepts and tools most appropriately and effectively. In addition, the partner brought an external perspective that helped surface opportunities and insights that may not have been identified by a team internal to the organization.

<sup>12</sup> <http://www.isixsigma.com/implementation/teams/how-effectively-coach-green-belts-and-black-belts/>



# Intelligent process improvement: Back to the future

In an age of intense and evolving competition, along with regulatory and pricing pressures, financial service firms increasingly need to sprint in new directions. To meet these immediate challenges, process improvement efforts can be deployed quickly and return results in the near term. However, companies that do this well also take a long term view and recognize the need for continual process improvement efforts over time.

If ever there was an ultramarathon in business, process improvement is likely it. It requires discipline, patience, consistency, and lots of hard work, and the mindset is foundational to any level of change an organization needs to make. When process improvement methodologies first came into vogue in the 1980s and '90s, they challenged

50 or more years of conventional manufacturing wisdom, enabling companies to improve manufacturing quality, reduce production waste, eliminate bottlenecks, streamline processes, and cut costs. Twenty or more years down the path, many variations of standard process improvement techniques and tools have been introduced. Along with them have come many opinions about which techniques and tools are most effective. However, one incontrovertible fact remains: Lean Six Sigma continues to be one of the most prevalent and consistently productive approaches to process improvement. By following the six tenets described in this paper, companies can continue to leverage Lean Six Sigma for solid results in the modern ultramarathon that process improvement represents.



## Case Study

# Fact-based analysis increases competitive advantage globally

Transaction Services can be a highly profitable area for a bank. But with thousands of transactions performed each day and an increasing number of clients banking globally, banks face continual challenges to meet and exceed client expectations, especially amidst stiff competition. A recent client experience survey found one large global bank falling behind the competition in a few key areas, including the ease of doing business and timeliness to address issues. Additionally, the bank was hard-pressed to provide a timely consolidated view of client transactions spread across multiple global regions.

It was clear to the bank that it had outgrown its current service model. As it had expanded globally, it tailored each instance of the model to the local area served. However, providing service across regional boundaries led to inefficiencies and delays and compiling a global view for the clients took weeks to develop.

The bank first attempted to address these gaps by implementing a global tracking system for customer issues. Unfortunately, this system was harder to use than the one it replaced. To circumvent the cumbersome system, manual paper-based processes were developed, resulting in processing times that were six times longer than the previous ones and lacked the transparency needed by the service representatives and clients.

Deloitte was engaged to help the bank address the growing problem. The team conducted an assessment at hubs across North and South America, Europe, and Asia, directly observing over 600 customer interactions and conducting over 200 interviews with managers and staff. This fact finding effort led to the documentation of team structures, service models, performance metrics, and an end-to-end view of the service request lifecycle through high-level and detailed process maps. Pain points were identified and prioritized by cost and degree of impact to the customer experience.

Based on the facts surfaced through this analysis, a target state service model was developed that established standardization where feasible, but maintained flexibility to serve critical local needs. Improvements to key processes and the underlying technology were implemented to support the new model. As a result of this transformation, the bank was able to realize an increase in speed to customer service resolution by 30 percent, a boost in productivity of more than 20 percent, and a \$15 million reduction in annual operating costs.



Case study from Deloitte published paper "Think global. serve local.Helping a global bank in its efforts to increase competitive advantage through improved customer service", Copyright © 2010 Deloitte Development LLC

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Special thanks to **Larry Badler** and **Katie Denlinger** for their contributions to this article.

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