A COMPLETE COLLECTION OF Lean & Six Sigma Success Stories

Compiled from various sources
Table of Contents

General Electric ................................................................................................................. 5
3M ......................................................................................................................................... 8
Lean Six Sigma Success Stories in Automotive and Heavy Equipment Industries ........... 10
  Ford Motor Company ......................................................................................................... 10
  Denso .................................................................................................................................... 10
  Southland CNC ..................................................................................................................... 10
Lean Six Sigma Success Stories in the Biotechnology Industry ........................................ 11
  Agilent Technologies ........................................................................................................... 11
  DJO Global .......................................................................................................................... 11
Lean Six Sigma Success Stories in the Chemical Industry .................................................. 11
  Dow Chemical Company .................................................................................................... 11
  Ecolab ................................................................................................................................... 12
  PolyOne Corporation ........................................................................................................... 12
  Celanese Corporation .......................................................................................................... 12
Lean Six Sigma Success Stories in the Defense Industry ..................................................... 13
  Northrup Grumman ............................................................................................................ 13
  Lockheed Martin .................................................................................................................. 13
  ITT Corporation .................................................................................................................. 13
  General Dynamics ............................................................................................................. 13
  United States Air Force ....................................................................................................... 13
  United States Army ............................................................................................................. 14
  United States Navy ............................................................................................................. 14
  Tinker Air Force Base ......................................................................................................... 14
Lean Six Sigma Success Stories in the Electronics Industry ............................................... 15
  Xerox .................................................................................................................................... 15
  Eastman Kodak .................................................................................................................... 15
  EMC Corporation ............................................................................................................... 15
  LG Corporation .................................................................................................................... 16
  General Electric .................................................................................................................. 16
Lean Six Sigma Success Stories in the Financial Services Industry .................................. 17
  AXA ...................................................................................................................................... 17
  Bank of America .................................................................................................................. 17
  Bank of Montreal .................................................................................................................. 17
  Capital One ............................................................................................................................ 17
  HSBC Holdings plc ............................................................................................................. 18
  Unnamed Financial Services Company ............................................................................. 18
Lean Six Sigma Success Stories in the Food Industry ......................................................... 19
  H. J. Heinz Company ......................................................................................................... 19
  Nestle Waters ...................................................................................................................... 19
  Jubilant Foodworks ............................................................................................................ 19
Lean Six Sigma Success Stories in the Government .............................................................. 20
  United States Air Force ....................................................................................................... 20
  United States Army ............................................................................................................. 20
  United States Navy ............................................................................................................. 21
Lean Six Sigma Success Stories in the Healthcare and Medical Industries ....................... 22
  Aetna ..................................................................................................................................... 22
  Premier Health Care Alliance ............................................................................................. 22
  Millipore ............................................................................................................................... 22
  Baxter .................................................................................................................................... 22
  Blue Cross Blue Shield Louisiana ....................................................................................... 23
  GlaxoSmithKline ................................................................................................................. 23
  Humana ............................................................................................................................... 23
<table>
<thead>
<tr>
<th>Lean Six Sigma Success Stories in the Telecommunications Industry</th>
<th>26</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lean Six Sigma Success Stories in the Heavy Equipment Industry</td>
<td>27</td>
</tr>
<tr>
<td>Lean Six Sigma Success Stories in the High Technology Industry</td>
<td>28</td>
</tr>
<tr>
<td>Lean Six Sigma Success Stories in the Heavy Equipment Industry</td>
<td>28</td>
</tr>
<tr>
<td>Lean Six Sigma Success Stories in the Logistics Industry</td>
<td>32</td>
</tr>
<tr>
<td>Lean Six Sigma Success Stories in the Manufacturing Industry</td>
<td>33</td>
</tr>
</tbody>
</table>

**Source:** www.goleansixsigma.com (April 2013)
Avis Budget Group...........................................................................................................38
Boeing...............................................................................................................................38
Cummins.........................................................................................................................38
Delphi...............................................................................................................................38
Goodrich Corporation......................................................................................................38
Mercury Marine...............................................................................................................39
Network Rail ....................................................................................................................39
Regal-Beloit......................................................................................................................39
Textron.............................................................................................................................39

Lean Six Sigma Success Stories in Water, Energy and Utility Industries..............................40
Dominion Resources........................................................................................................40
JEA, Inc............................................................................................................................40
General Electric – Six Sigma

Source: www.qgspl.com (April 2013)

Six Sigma has forever changed GE. Everyone – from the Six Sigma zealots emerging from their Black Belt tours, to the engineers, the auditors, and the scientists, to the senior leadership that will take this Company into the new millennium – is a true believer in Six Sigma, the way this Company now works.
– GE Chairman John F. Welch.

When a high profile corporate leader* starts using words like “unbalanced” or “lunatics” in connection with the future of the company – you might expect a plunge in the company’s share price. At General Electric, however, that passion and drive behind Six Sigma have produced some very positive results. The hard numbers behind GE’s Six Sigma initiative tell just part of the story. From an initial year or so of break-even efforts, the payoff has accelerated: $750 million by the end of 1998, a forecasted $1.5 billion by the end of 1999, and expectations of more billions down the road. Some Wall Street analysts have predicted $5 billion in gains from the effort, early in the decade. GE’s operating margins – for decades in the 10 percent range – continue to hit new records quarter after quarter. The numbers are now consistently above 15 percent, and even higher in some periods. GE leaders cite this margin expansion as the most visible evidence of the financial contribution made by Six Sigma.

Improvements from Services to Manufacturing

The financial “big picture,” though, is just a reflection of the many individual successes GE has achieved through its Six Sigma initiative. For example:

- A Six Sigma team at GE’s Lighting unit repaired problems in its billing to one of its top customers – Wal-Mart – cutting invoice defects and disputes by 98 percent, speeding payment and creating better productivity for both companies.
- A group led by a staff attorney – a Six Sigma team leaded – at one of GE Capital’s service businesses streamlined the contract review process, leading to faster completion of deals – in other words, more responsive service to customers – and annual savings of $1 million.
- GE’s Power Systems group addressed a major irritant with its utility company customers, simply by developing a better understanding of their requirements and improving the documentation provided along with new power equipment. The result: Utilities can respond more effectively to their regulatory agencies, and both the utilities and GE have saved hundreds of thousands of dollars a year.
- The Medical Systems business – GEMS – used Six Sigma design techniques to create a breakthrough in medical scanning technology. Patients can now get a full-body scan in half a minute, versus three minutes or more with previous technology. Hospitals can increase their usage of the equipment and achieve a lower cost per scan, as well.
- GE Capital Mortgage analyzed the processes at one of its top performing branches and – expending these “best practices” across its other 42 branches – improved the rate of a caller reaching a “live” GE person from 76 to 99 percent. Beyond the much greater convenience and responsiveness to customers, the improved process is translating into millions of dollars in new business.
The Actions behind the Results

GE’s successes are the result of a “passionate” commitment and effort. Notes Welch: “In nearly four decades with GE I have never seen a Company initiative move so willingly and so rapidly in pursuit of a big idea”. Ten of thousands of GE managers and associates have been trained in Six Sigma methods – a hefty investment in time and money (which is appropriately deducted from the gains cited earlier). The training has gone well beyond “Black Belts” and teams to include every manager and professional at GE – and many front-line people as well. They’ve instilled a new vocabulary revolving around customers, processes, and measurement.

While dollars and statistical tools seem to get the most publicity, the emphasis on customers is probably the most remarkable element of Six Sigma at GE. As Jack Welch explains it: “The best Six Sigma projects begin not inside the business but outside it, focused on answering the question-how can we make the customer more competitive? What is critical to the customer’s success?..... One thing we have discovered with certainty is that anything we do that make the customer more successful inevitably results in a financial return for us.”

The Story of Six Sigma and GE

written by: N Nayab • edited by: Jean Scheid • updated: 3/21/2011
GE’s tryst with Six Sigma started in 1995 when CEO Jack Welch made it a corporate goal to be a Six Sigma company by 2000. He led from the front and ensured GE attained its Six Sigma goals within the stipulated period. Read on to find out more about Six Sigma and GE.

General Electric’s (GE) focus on quality started in the late 1980s with the launch of the “Work-Out” program that opened GE culture to ideas from everyone and everywhere. The resultant learning environment prepared the ground for Six Sigma.

Credit for the implementation of Six Sigma at GE goes to CEO Jack Welch, who made it a corporate policy to attain Six Sigma goals by 2000. GE adopted most of its Six Sigma concepts and methodology from pioneers such as Motorola.

Training

Six Sigma implementation at General Electric started with a heavy emphasis on training the workforce for data-based problem analysis. GE required all exempt employees to undertake a 13-day, 100 hour training program in Six Sigma methodologies and complete a Six Sigma project by the end of 1998.

The training covered the DMAIC procedure:
- Definition or identification of the process
- Measurement of process output
- Analyzing process inputs for criticality
- Improving process by modifying inputs
- Controlling process by controlling the appropriate input

Employees completing the initial course went through follow-up training to reinforce these newly acquired skills.
Mentoring

The success story of Six Sigma and GE would not have been possible without GE's system of mentoring programs.

Full-time Master Black Belts, hired specifically for implementation of Six Sigma, led the process change. Each Master Black Belt trained and mentored key process employees for the Black Belt level. Employees selected for Black Belt underwent four-month training and applied Six Sigma tools at work under the guidance of the Master Black Belt mentor. GE soon deployed full time Black Belt teams to implement Six Sigma projects throughout GE.

Part time project leaders or employees who received Six Sigma training that were placed on Six Sigma projects only became Green Belts.

Leadership

General Electric’s experience in the implementation of Six Sigma shows that the best of training and mentoring efforts would crumble without effective leadership.

Jack Welch, GE’s CEO supported the Six Sigma initiative not just with the necessary financial resources, but also through securing vital commitment from both the senior executives and the workforce. Welch linked promotion and bonus to quality improvement. Forty percent of each top management bonus depended on the successful implementation of Six Sigma goals and a Green Belt became the minimum requirement for the promotion of any employee.

Jack Welch and other top management, most notably Dave Cote, President, and CEO of GE Appliances followed a hands-on approach to Six Sigma and led from the front through the following methods:

- Spending time in Six Sigma Training sessions and personally answering questions for employees undergoing training
- Surprised visits to Six Sigma review sessions
- Work-floor visits to make first hand observations on the extent of Six Sigma implementation At the workplace
- Weekly summary reports and monthly reviews with the Master Black Belt team.

Focused Implementation

One major reason for the success story of Six Sigma and GE is the focused approach toward implementation. GE’s three time-tested implementation approaches are “Show Me the Money,” “Everybody Plays,” and “Specific Techniques.”
3M – Six Sigma

Resource: www.isixsigma.com (April 2013)

3M’s corporate Six Sigma journey began shortly after James McNerney took over at the helm in January 2001. Prior to his arrival, there was some Six Sigma activity taking place in parts of the company, but not at all like 3M would see with McNerney’s corporate driven approach. Now, more than 4 years later, the progress is remarkable, and the company continues to innovate new products as well as new business processes.

“3M is in the midst of a transformation, McNerney said. Six Sigma, 3M Acceleration and our other corporate initiatives are now integrated into every business, every function and every subsidiary of 3M, and we expect they will generate both productivity improvements and revenue growth for years to come.” Press Release, February 18, 2005

3M’s growth strategy encompasses a broad set of corporate initiatives: Six Sigma, Global Sourcing, 3M Acceleration, eProductivity and Indirect Cost Control.

“Today, we have more than 30,000 employees trained, with plans to complete Green Belt training for all salaried employees by the end of 2004 — including, of course, the entire Industrial Business sales force and technical teams. Globally, over 11,000 projects have closed and more than 12,000 projects are currently underway.” Website

Savings and Benefits


The tell-tale sign of a mature Six Sigma program is one that spreads Six Sigma to customers and suppliers. GE masterminded a program called “At the Customer For the Customer” (ACFC). They send their own team out to their customers to help them solve their business problems. 3M is following suit as well with a similar program, “Six Sigma with our Customers”. To date, they have partnered on more than 250 projects, with customers such as Grainger, DuPont, Ford, Estee Lauder, The Home Depot, Motorola, Procter & Gamble, Land Rover, Toyota, and Wal-Mart.

“The power of Six Sigma Six Sigma is 3M’s overarching initiative, and it continues to drive growth, reduce costs and increase cash flow in 3M businesses around the world. Since its launch four years ago, it has become deeply embedded in every function, every business and every country. Simply put, it’s now the way we work.”

“Today, more than 700 of our leaders around the world are dedicated to Six Sigma on a full-time basis. We already have completed more than 16,000 projects, and an additional 16,000 projects currently are under way. These include more than 400 “Six Sigma with Our Customers” projects, in which teams of employees from 3M and other companies work side by side to solve pressing
problems. “These joint projects produce a relationship with customers that transcends that of the traditional role of a product supplier. We come to be appreciated as a valued business partner, as well. During the year, we attained our goal, set in 2001, of training more than 36,000 salaried employees worldwide in the Six Sigma way of doing business.”
Lean Six Sigma Success Stories by Industry

Lean Six Sigma Success Stories in Automotive and Heavy Equipment Industries

Source: www.goleansixsigma.com (April 2013)

Ford Motor Company

Consumer-driven Six Sigma saves Ford $300 million
To achieve Nasser’s vision of becoming a consumer products company and gain the coveted increase in customer satisfaction, Ford turned to Six Sigma. In 2000, Consumer Driven 6-Sigma contributed $52 million to the bottom line. Ford estimates a $300 million contribution from closed projects and a two-point increase in customer satisfaction in 2001. Vu estimates that 1,000 Six Sigma projects have been completed and that about 3,000 other projects are in various stages of completion.

Denso

Ergonomics and Manufacturing Excellence
How do you link ergonomics to Lean Manufacturing and Six Sigma metrics? The answer typically lies in productivity and quality. In some cases, savings associated with workers’ compensation are significant enough to warrant the involvement of these initiatives, but there is no sustainable opportunity for improvement. Once workers’ compensation costs are minimized, additional cost savings in this area disappear. In contrast, productivity gains are durable; ergonomics improvements at the workstation level can translate into time savings at the work cell level ranging from 25 percent to 40 percent.

Southland CNC

Southland CNC Uses AME Fixture To Reduce Cycle Times By 50%
Southland CNC, a full-service automotive machine shop, depends on Six Sigma conformity for its major automotive customers. This was achieved with an AME-designed vertical machining centers that use hydraulic tombstone fixturing for its high volume orders. The fixture reduced load/unload time, scrap rates, and cut cycle time by over 50% without additional machines. Designed for error-free handling, the AME fixture has run 20 hours per day, 5 days a week for over 7 years without a single problem. They were therefore able to cut turnaround times and go from 50 parts per day to over 110 with no loss in accuracy or finish quality.
Lean Six Sigma Success Stories in the Biotechnology Industry

Source: www.goleansixsigma.com (April 2013)

Agilent Technologies

Agilent Technologies uses SCOR/Lean/Six Sigma framework to streamline $2 billion supply chain

Agilent Technologies, a $5.4 billion Fortune 500 global manufacturer providing bioanalytical and
electronic measurement solutions in 110 countries, has achieved significant results in year one of a
three-year supply chain transformation. Using SCOR Lean Sigma converged models, they have
delivered a 32% lead time reduction, lowered inventory levels by $16 million, and improved
productivity 21% year-on-year.

DJO Global

DJO Global Reduces Lead-Times By 80% And Inventory From 84 To 14 Days

DJO Global, a medical devices products and services provider world-renowned for its rehabilitation
products, has combined effective reduction of costs and overall manufacturing excellent to reduce
their lead-times by 80% and inventory from 84 to 14 Days. Overall, both management and employees
have utilized Six Sigma, 5S, Value Stream Mapping, First Pass Yield, and Kaizen programs to help
DJO Global achieve an average 4.2% growth in 2010 through a combination of operating principles,
industry best practices, and continual improvement tools.

Lean Six Sigma Success Stories in the Chemical Industry

Dow Chemical Company

Applying Six Sigma Methodology to Energy-Saving Projects

The company’s 1999 annual report stated that by the end of 2003, Dow expected its Six Sigma
implementation to deliver revenue growth, cost reductions, and asset utilization totaling $1.5 billion in
earnings before interest and taxes (EBIT). At the close of 2002, Dow achieved its $1.5 billion
cumulative financial goal—a full year ahead of schedule.
Ecolab

Ecolab Earns Lean Six Sigma Award for Its Successful Deployment Efforts
“Ecolab created significant momentum and sustainability in our Lean Six Sigma deployment,” said Jeff Burt, Vice President & Global Deployment Leader for Lean Six Sigma at Ecolab. “Extensive upfront planning, combined with a high level of executive engagement has created a successful launch of our LSS program. It has also created strong leadership and talent development opportunities for our associates, as well as a culture that continues to support our efforts to streamline operations while maintaining a strong customer focus.”

PolyOne Corporation

PolyOne Recognized for World’s Best Lean Six Sigma Deployment
PolyOne launched Lean Six Sigma globally in late 2008 and by the end of 2010, more than 25 percent of PolyOne’s 3,900 associates around the world will have completed training, including 1 percent who will hold LSS black belt certification. The expansive size and scope of the LSS training ensures global, cross-business, and cross-functional support and expertise for the process improvement projects. Kedrowski continued, “Our LSS success was a direct reflection of our ability to translate customer feedback into process improvement projects. We are thankful to our customers for partnering with us and allowing us to transform their needs into mutually beneficial solutions. The program has been instrumental in allowing us to improve customer service and quality while delivering both balance sheet and operating margin improvements.”

Celanese Corporation

Six Sigma Decreases Outside Litigation Costs by 30% For Celanese
Celanese Corporation, a Fortune 500 chemicals and advanced materials business, uses Six Sigma to make important decisions. The process-driven approach replaces hunches and guesswork for everything from deciding which law firm to hire to how to settle contract disputes. These processes have increased organization and efficiency, decreasing outside litigation expenses by 30% since 2009 while still encouraging creativity and imagination.
Lean Six Sigma Success Stories in the Defense Industry

Source: www.goleansixsigma.com (April 2013)

Northrup Grumman

Northrop Grumman improves its business with Six Sigma
Global defense company Northrop Grumman builds efficiencies and reduces costs using Six Sigma.

Lockheed Martin

Lean Six Sigma Maturity at Lockheed Martin
“We have a formal lean Six Sigma program at Lockheed Martin that we call Lockheed Martin in the 21st Century (LM21),” says John Vogel, director of enterprise excellence at LMSIO. “Here in Owego, we have three formally trained Master Black Belts, 53 Black Belts, and 435 Green Belts out of a population of about 4,000 employees. Through September 2007, we have run 1,154 structured improvement activities (lean Six Sigma events), yielding over $95 million in savings helping us to improve our productivity and competitiveness.”

ITT Corporation

Best Practices — ITT Champions Six Sigma
Every day in more than two dozen countries from the U.S. to the People’s Republic of China, ITT Industries Inc. is fielding teams of champions. They are black belts and other employees who are making a comprehensive performance-improvement initiative known as Value-Based Six Sigma (VBSS) work. In 2001 alone, the program produced about $135 million in cost savings for the $4.7 billion White Plains, N.Y.-based engineering and diversified manufacturing firm.

General Dynamics

General Dynamics relies on Lean/Six Sigma at Maine gun facility
General Dynamics Armament and Technical Products is investing in production equipment and accelerating its enterprise-wide focus on Lean/Six Sigma-based process improvements at its Saco, Maine, gun manufacturing facility to increase the plant’s capacity. The site serves as General Dynamics’ core production site for single- and multi-barrel aircraft and crew-served weapon systems.

United States Air Force

Air Force improving production with Smart Operations 21
The Air Force used the best parts of several civilian efficiency programs to develop an Air Force-unique process-improvement program called “Smart Operations 21,” Secretary of the Air Force Michael W. Wynne said. The program is based on both Lean and Six Sigma business process improvement tools. These tools were developed chiefly in the private sector to focus on increasing value to customers, save time and money, reduce waste and improve quality.
United States Army

Lean Six Sigma
The root of both Lean and Six Sigma reach back to the time when the greatest pressure for quality and speed were on manufacturing. Lean rose as a method for optimizing automotive manufacturing; Six Sigma evolved as a quality initiative to eliminate defects by reducing variation in processes in the semiconductor industry. It is not surprising that the earliest adopters of Lean Six Sigma arose in the service support functions of manufacturing organizations like GE Capital, Caterpillar Finance, and Lockheed Martin.

United States Navy

Lean Six Sigma
ONR’s Lean Six Sigma Program is guided by its Command Business Strategy, which sets forth goals, objectives and initiatives to guide our organizational improvement and responsiveness to our stakeholders. Its goal is to improve the efficiency and effectiveness of ONR’s core business processes thereby increasing science and technology product transitions to the Navy and Marine Corps. Our goal of increasing the speed and quantity of quality science and technology products that transition to the Navy and Marine Corps hinges upon improving our internal responsiveness and agility. It is with that focus that the maturation of ONR’s Lean Six Sigma efforts strives to embrace continuous process improvement principles to further improve productivity, encourage innovation and foster a culture of change in the pursuit of excellence.

Tinker Air Force Base

Team Tinker Increases Advanced Assignment Notification Time from 45 to 68 Days Using Process Improvement
Four members of Team Tinker at Tinker Air Force Base have received Six Sigma Green Belt Facilitator certification in Air Force Smart Operations for the 21st Century. One improvement was advance assignment notification time, which notifies Tinker airmen when they are transferred to a new assignment. Using process improvements, this advanced notification time has increased from 45 to 68 days, well beyond their original 60-day goal.

“With Lean, 6-Sigma, and AFSO21 tools used regularly for dramatic process improvements, the Transformation Office is focused on mentoring and coaching Green Belts to become more proficient in order for them to guide teams toward strategic goal achievement,” said Laura Culberson, who recently retired as OC-ALC chief of staff. “Continuous Process Improvement, properly aligned to Center goals and objectives, is critical; we need a cadre of professional facilitators to help us reach those goals.”
Lean Six Sigma Success Stories in the Electronics Industry

Source: www.goleansixsigma.com (April 2013)

**Xerox**

**Xerox Lean Six Sigma and Quality Go Hand in Hand**

Xerox Lean Six Sigma is a powerful business-improvement tool that can enhance the effectiveness of Xerox and of the services we provide to our customers. It leads to solutions that no one person could ever develop alone. And the return on investment can be huge. The Xerox Lean Six Sigma tools, processes and principles are built on earlier Leadership Through Quality and new quality efforts at Xerox. Since 2003, Xerox people have been using Xerox Lean Six Sigma tools and methods in both internal projects and projects for customers. These projects focus on reducing waste and increasing effectiveness in vital business processes to bring measurable improvements in results for customers and the company.

**Eastman Kodak**

**The Kodak Operating System: successfully integrating Lean and Six Sigma**

Reducing cycle time flow from 100 days to just four was only one of the challenges when Lean and Six Sigma was introduced at the Kodak GCG manufacturing plant in Leeds, UK.

<table>
<thead>
<tr>
<th>KPI</th>
<th>Measure</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Lost Time Accidents</td>
<td>Record 2 years without an accident</td>
</tr>
<tr>
<td>Quality</td>
<td>Complaints</td>
<td>50%</td>
</tr>
<tr>
<td>Service</td>
<td>OTIF</td>
<td>89%</td>
</tr>
<tr>
<td>Volume</td>
<td>Square Metres</td>
<td>63%</td>
</tr>
<tr>
<td>Yield</td>
<td>% of good</td>
<td>7%</td>
</tr>
<tr>
<td>Utilisation</td>
<td>% available time</td>
<td>24%</td>
</tr>
<tr>
<td>Productivity</td>
<td>Square metres per man</td>
<td>85%</td>
</tr>
<tr>
<td>Inventory</td>
<td>Average annual inventory</td>
<td>33%</td>
</tr>
<tr>
<td>Headcount</td>
<td>Full time equivalents</td>
<td>15%</td>
</tr>
</tbody>
</table>

**EMC Corporation**

**Role of Process Improvement Methodology in BPM**

PI—and Six Sigma in particular—brings an emphasis on process stability and the data collection and analysis to support it. The fate of capital-intensive BPM proposals could be enhanced by incorporating a Six Sigma level of analysis in identifying benefits—both process and financial. Once implemented, BPM could incorporate, in addition to one-dimensional problem alerts, business activity monitoring (BAM) data used to measure and report on process stability. This functionality would allow recognition
of trends and corrective action to be taken in anticipation of problems. In addition, this data on process variation can be used to develop improvement targets on an ongoing basis.

LG Corporation

LG and the six sigma sense
LG Electronics India has 60 six sigma projects running in the areas of production, purchase and HR. Some of the achievements are: The communication cost control project slashed the phone bills for the land line from Rs 13 lakh per month to Rs 5.5 lakh per month.

General Electric

GE Develops New Durathon Battery
General Electric’s internal, 45-person internal startup, Energy Storage Technologies, has developed a new molten salt battery with a high energy density, recharges quickly, is rugged, and has a longer life than comparable batteries. Called the Durathon, it stores as much energy as batteries twice its size and lasts 10x longer. Six Sigma manufacturing experts in conjunction with the development team helped to reduce defect rates; the first battery to a customer broke on shipment, proving the worth of Six Sigma methodologies.
Lean Six Sigma Success Stories in the Financial Services Industry

Source: www.goleansixsigma.com (April 2013)

**AXA**

**A Process-focused Approach to Improving Business Performance**
The operational performance of a business is the result of the performance of its processes in a coherent value chain delivering what customers want. A process focus in a business allows it to be tuned up, maximising opportunities and eliminating non-value added activities, with or without changing IS support.

**Bank of America**

**Bank of America: Investing in Six Sigma**
Two years ago, when Barbara J. Desoer was named global technology, service and fulfillment executive at Bank of America Corp., she immediately began applying to its IT and fulfillment practices the Six Sigma quality management expertise she had developed as chief of the bank’s consumer products group. One of the key areas where Bank of America’s IT organization has contributed to the bottom line has been through its systems integration work following its April 2004 acquisition of FleetBoston Financial Corp. The effort to consolidate systems between the two banks, which was completed last fall, helped contribute to $1.85 billion in pretax operational savings for Bank of America, says Desoer. In other merger follow-ups, the IT organization plans to combine the bank’s credit card portfolio onto the IT platforms of MBNA Corp., a Wilmington, Del.-based credit card issuer that Bank of America acquired in January. This effort, which will take 1 million staff-hours to complete, is expected to help generate $850 million in after-tax cost efficiencies in 2007, Desoer says.

**Bank of Montreal**

**BMO Financial Group Wins International Quality and Productivity Awards**
BMO Financial Group has been recognized with the prestigious Global Six Sigma Awards. Judge BMO among industry-leading companies worldwide: Process initiatives to provide $55 million in savings on just $5.3 million in investments.
Using Lean Six Sigma methodologies, BMO’s deployment, launched in 2005, has reduced errors, improved cycle-time, eliminated waste and is already anticipated to provide annualized savings of nearly $55 million over a five-year benefit period on just $5.3 million in investments.

**Capital One**

**Capital One banks on Six Sigma for strategy execution and culture transformation**
When a major shift in strategy propelled Capital One Direct Banking business in a new direction, the organization—arming itself with Six Sigma expertise and capabilities—set out to change its management model, redesign its major business processes, and nurture a culture centered around customer focus and continuous improvement. Three years later, the associates have embraced this new culture of customer focus and a commitment to continuous improvement—all with enviable results to the bottom line. The Direct Banking business has been recognized both internally within Capital
One and by external organizations with numerous awards for accomplishing this impressive cultural transformation.

**HSBC Holdings plc**

*How Six Sigma transformed HSBC’s US Futures business*

In a business environment where many questioned the applicability of Six Sigma, the Quality team at HSBC transformed an under-performing unit in HSBC’s Investment Banking unit with a single DMAIC project, using Six Sigma tools such as Process Mapping and Activity Based Costing and data partitioning. The result: a 274% improvement in net income and a business 100% focused on continuous improvement. This article chronicles their journey.

**Unnamed Financial Services Company**

*How a Cause and Effect Diagram Helped Reduce Defects By 19%*

Facing a inquiry response time 4x longer than their own set standard of 5 days, an unnamed Financial Service Company turns to a Cause and Effect diagram to discover the multiple causes contributing to delayed responsiveness. By moving from “usual suspects” to an in-depth investigation to determine true root causes, this company was able to increase the number of tasks completed in 5 days to 97% – 19% better than their original rate, and 2% over their own goal.
Lean Six Sigma Success Stories in the Food Industry

Source: www.goleansixsigma.com (April 2013)

H. J. Heinz Company

**Six Sigma**
“Lean helps us get after the low hanging fruit, reduce all waste and optimize flow,” explains Thomas. “For example, on a yield improvement project, lean will help us optimize the waste hitting the floor while six sigma would help us optimize the fill heights in the product through our SPC process. If we are over-filling by half a gram of ketchup in every bottle, for instance, what is the statistical sampling we have to take to adjust it so that we are in control, while still maintaining our spec.?”

Nestle Waters

**Nestle USA: Manufacturing That Sustains**
Complying is resource-intensive, so Nestle set out to consolidate its way of managing its standards and all management practices. A new program called Nestle Continuous Excellence (NCE) is being implemented across all plants. It’s a management system that consolidates the principles of Lean Manufacturing, Total Productive Management, Six Sigma, 5S and other methods familiar to followers of the Toyota Production System and other quality and productivity disciplines.

Jubilant Foodworks

**Jubilant Networks Deploys Six Sigma To Limit Food Inflation To 5-6% Per Annum**
Ajay Kaul, CEO of Jubilant Foodworks (which operates Domino’s Pizza in India) discusses how he has deployed Six Sigma on a large scale to keep food inflation in check. This limits food price increases to no more than 5-6% in a single year, important in a country with a 7% consumption-drive economy.
Lean Six Sigma Success Stories in the Government

Source: www.goleansixsigma.com (April 2013)

United States Air Force

Air Force improving production with Smart Operations 21
The Air Force used the best parts of several civilian efficiency programs to develop an Air Force-unique process-improvement program called “Smart Operations 21,” Secretary of the Air Force Michael W. Wynne said. The program is based on both Lean and Six Sigma business process improvement tools. These tools were developed chiefly in the private sector to focus on increasing value to customers, save time and money, reduce waste and improve quality.

United States Army

Lean Six Sigma
The root of both Lean and Six Sigma reach back to the time when the greatest pressure for quality and speed were on manufacturing. Lean rose as a method for optimizing automotive manufacturing; Six Sigma evolved as a quality initiative to eliminate defects by reducing variation in processes in the semiconductor industry. It is not surprising that the earliest adopters of Lean Six Sigma arose in the service support functions of manufacturing organizations like GE Capital, Caterpillar Finance, and Lockheed Martin.

Tobyhanna division earns Shingo Silver Medallion for efficiencies
Lean Six Sigma helped improve the depot’s equipment receiving process. The number of days it took to induct equipment dropped from 57 days to 28. Improvements made during the last four years to incorporate the Army business improvement methodologies of Lean Six Sigma and Value Stream Analysis resulted in an average savings of 31.9% since fiscal year 2008.
Lean Six Sigma
ONR’s Lean Six Sigma Program is guided by its Command Business Strategy, which sets forth goals, objectives and initiatives to guide our organizational improvement and responsiveness to our stakeholders. Its goal is to improve the efficiency and effectiveness of ONR’s core business processes thereby increasing science and technology product transitions to the Navy and Marine Corps. Our goal of increasing the speed and quantity of quality science and technology products that transition to the Navy and Marine Corps hinges upon improving our internal responsiveness and agility. It is with that focus that the maturation of ONR’s Lean Six Sigma efforts strives to embrace continuous process improvement principles to further improve productivity, encourage innovation and foster a culture of change in the pursuit of excellence.
Lean Six Sigma Success Stories in the Healthcare and Medical Industries

Source: www.goleansixsigma.com (April 2013)

Aetna

Aetna CIO Meg McCarthy Brings Disciplined Delivery to Aetna
McCarthy singles out Aetna’s network and data center infrastructure organization in this respect, which operates at a Six Sigma level and, she asserts, has no peer in the health insurance industry. “We run a very cost-efficient infrastructure organization in support of our portfolio of business capabilities,” she says. “We are usually compared to large banks and have outperformed our banking colleagues by over 40 percent in all of the commodity aspects of the benchmarks that we apply annually.”

Premier Health Care Alliance

Premier Health Care Alliance Members Save $4.2 Billion By Improving Care Delivery Processes
Members of the Premier healthcare alliance collectively saved over $4.2 billion in 2011 through a combination of improved processes and care delivery efficiencies. Collaboration, data integration, and new purchasing practices accounted for $1.45 billion, while lowered hospital product pricing made up the remaining $2.75 billion in savings. In total, this is equivalent to the annual salary of over 70,000 nurse practitioners.

Millipore

Application of Lean Six Sigma Methodologies to Enhance EHS Performance
Application of Lean Six Sigma methodologies can, and do, yield EHS benefits by:
– Reducing wastes: solid wastes, movement
– Decreasing costs: disposal, medical, inventory
– Improving quality: removal of non-value added steps
– Increasing benefit to shareholders and customers: increasing profitability and continuity of supply

Baxter

Six Sigma, the Baxter Way
Baxter Healthcare takes a unique approach to organizational excellence, treating each facility as if it were its own independent small company. Six Sigma has allowed the company to make tremendous strides in productivity. Allen Harmon, director of operations at Baxter’s Biologics facility in Hayward, Calif., explains how.
Blue Cross Blue Shield Louisiana

Visual Management Helps Reduce Penalties From Delayed Health Insurance Claims

The migration to the new system was completed in 2011. The chart above reflects the downward trend in the percentage of claims associated with interest penalties over the past 4 years. There is still room for improvement, but we have started the trend in the correct direction and have prevented an additional $2M in 2011 if the same penalty rate had continued through.

GlaxoSmithKline

The Six Sigma Cure

Valeant reports that it saved $10 million in its first full year of practicing lean Six Sigma, a figure that includes deep staff reductions in almost two dozen of its worldwide manufacturing plants. The company has reduced its manufacturing staffing levels from almost 12,000 to just over 3,800, and its number of plants from 33 to just eight. The company reports that it plans to further reduce its manufacturing staff this year, when it closes facilities in Montreal and Brazil. Overall staffing levels are expected to remain steady, though, as the company hires additional sales representatives. All of this—fewer manufacturing personnel, but additional sales reps—is a testament to the remarkable efficiencies Valeant has made.

Humana

The Power of Six Sigma in Procurement

Accurate tracking of the cycle time through the procurement process, common definition of an “initiative” and key process steps, and actionable reporting.

McKesson Corporation

Six Sigma

McKesson’s deep experience with complex back office, supply chain, and information technology in health care management projects has earned us recognition as an industry leader. By implementing Six Sigma discipline, the company has achieved outstanding results:
• Transformed business from function-oriented to process-oriented
• Achieved more than $100 million in internal savings
• Proven method to identifying and eliminating profit leaks
• Improved customer experience and service capabilities
• Gained a competitive and cost advantage

**Patheon Inc.**

**Patheon’s Lean Times**

Patheon Advantage is successful for us because it is based on the principles of Lean Six Sigma: focus on customer value, make decisions based on data, eliminate waste and variation, and engage our people to make change. One of the most valuable Lean Six Sigma tools for us has been value stream mapping. It helps us understand our business “door-to-door,” so we can eliminate the bottlenecks and waste that inhibit responsiveness and increase cost.

**Providence Health & Services**

**Providence Health & Services, California Wins Top International Business Award as “Best of the Best”**

The Catholic non-profit healthcare organization, which saved about $11 million over two years in streamlining processes, also won the award for Best Achievement of Organizational Business Improvement in Health Care.

**Quest Diagnostics**

**The Power Of Six Sigma Quality**

• Achieved >85% defect reduction in wait times with no additional staffing.
• Achieved 60% reduction in specimen processing accuracy.
• Achieved >80% defect reduction in missing/lost specimens
• Achieved >75% reduction in instrument measurement variability
• Achieved >50% reduction in outbound TNP calls
• Achieved 60% defect reduction in hospital neonatal intensive care specimen collection errors

**Rhode Island Hospital**

**Six Sigma Techniques Improve Operating Room Patient Flow**

The researchers found that implementing Six Sigma methodology identified ways to improve the efficiency of frontline staff members and streamline workflow to improve OR patient flow, reduce workflow stress, and eliminate redundancy and waste, but didn’t require a reduction in the number of employees. Employee morale, job satisfaction and safety, and patient experience were all improved.

**Teradyne**

**Real-Time Radiography Automated X-Ray Inspection Strategies**

Product quality can keep pace with the ever-changing world of SMT board design and manufacturing. But to keep pace, manufacturers must look to adopting solutions that utilize process data to
limit and perhaps prevent defects, even on complex PCBA’s with high joint count toward six sigma defect levels. Automated control offers the most effective solution to enable process and defect management. With recent advances in real-time software solutions, on-line data collection, and display can help manufacturers keep pace with their demanding environment.

Legacy Salmon Creek Medical Center

*Lean Reduces ICU-transfer-to-bed Time by 50% For Legacy Salmon Creek Medical Center*

Lean management principles are paying off for the Legacy Salmon Creek Medical Center in Vancouver. The hospital began developing a systematic way to monitor and improve work processes in 2010 through multiple pilot lean initiatives in its ICU, food/nutrition, and rehabilitation departments. Results include reducing the time it takes to secure a bed for ICU-transferred patients by 50%, visual management boards with performance measurements, and recognizing good work by specific employees.

Saskatoon Health Region

*Saskatoon Health Region Sees Encouraging Early Results In Utilizing Lean To Reduce Budget By $30 Million*

Saskatoon Health Region’s goal is reduce its budget by $30 million without cutting back on services or staff by using Lean. So far, $800,000 in lost time due to just scheduling problems has been identified. According to CEO and President Maura Davies, “We know there is waste in the system. In a large, complex one like ours, we know there are opportunities, and we want to go out and find them.”

Part of the Lean approach is to protect staff health and safety, which can reduce overtime and sick pay expenses. Davies acknowledges the health care industry could be more diligent in protecting its workers and stresses, “it needs to be part of the culture of the organization.” This focus on safety has already led to a reduction of 12 less cases of surgical site infection, which in turn resulted in a savings of $300,000. Rapid process improvement workshops have also helped to reduce patient walking time by 85% time and removed unnecessary steps in patient label creation.

Overall, Davies is optimistic about early results. “I think we will find savings this year, and we will continue to find them over many years.”

Northeast Georgia Health System

*Northeast Georgia Health System Recognized As One Of Metro Atlanta’s Top 100 Workplaces, Due In Part To Lean Six Sigma Practices*

Northeast Georgia Health System (NGHS) has been recognized as one of Metro Atlanta’s Top 100 Workplaces by the Atlanta Journal-Constitution for 2012. Part of their success is due to Lean Six Sigma principles; NGHS encourages their front-line staff to take personal ownership of patient care excellence, resulting in multiple refinements in policy and practice. Once problems are identified, NGHS forms a multidisciplinary team from different departments to find process solutions.
Two Top Ten Pharmaceutical Companies

Two Top Ten Pharmaceutical Companies Realize Up To 80% Time Savings And $3 Million Cost Savings Utilizing ELN And Lean Six Sigma Workflow Analysis

The successful implementation of an ELN are the focus of two case studies at two top ten pharmaceutical companies. For the uninitiated, ELN stand for electronic laboratory notebooks, and are used by researchers to gather information electronically—as opposed to the traditional bench-flow workflows that utilize paper logbooks.

In the first case study, a top ten pharmaceutical company replaced over 1,000 paper logbooks, wiped out handwriting legibility issues and transcription errors, and improved log retrieval times using an ELN. The time savings were considerable:

- 75% time savings in documenting standard preparations
- 80% time savings in verifying weight balances
- 33% time savings in creating an instrument work list for the Chromatography Data System
- $500,000 in savings each year

In a second study, another top ten pharmaceutical company eliminated waste and variability. The result? A staggering cost savings of $3 million per year by implementing ELN as an information hub and exchange vehicle.

In both cases, Lean Six Sigma workflow analysis was crucial in helping both businesses to transition from paper logbooks to ELN.
Lean Six Sigma Success Stories in the Heavy Equipment Industry

Source: www.goleansixsigma.com (April 2013)

Caterpillar

Six Sigma helps Caterpillar pursue emissions goals
In 2006, Caterpillar reduced its total global greenhouse gas (GHG) emissions by 36 percent per dollar of revenue, exceeding its 2010 goal of 20 percent intensity reduction. The company again exceeded the goal in 2007 with a 38 percent intensity reduction over 2002. Projects implemented by Six Sigma teams focused on heating efficiency, more efficient lighting and control of equipment and can be replicated across the globe at Caterpillar facilities, not only reducing emissions, but also saving money, improving quality and engaging employees.

Hypertherm

Lean Six Sigma Key Component Of Hypertherm’s Growth And Environmental Sustainability
Lean Six Sigma is one of the reasons for high temperature metal cutting products company Hypertherm’s success. Hypertherm’s first forays into continuous improvement began with instituting safe work habits using 5S and Visual Factory. The company has since created a corporate improvement team with Lean Six Sigma experts to contribute to further improvement. The results speak for themselves: Hypertherm has a “no-layoff” policy, regularly averages a 24% profit-sharing payout per employee, has given 30% of its stock to employees, and has created training academies for further educate employees and help them advance their careers.

Hypertherm’s use of Lean Six Sigma techniques has expanded to include environmental sustainability: in 2011 alone, the company eliminated 52 tons of waste using zero-sort recycling and another 13 tons using composting. Furthermore, Hypertherm has reduced heating oil usage from 155.86 to 75.85 gallons/day, has saved 1,062 kWh/year with LED lights, changed their manufacturing coolant to canola oil, installed a filtration and re-use system, and returns shipping materials to suppliers to encourage reuse.
Lean Six Sigma Success Stories in the High Technology Industry

Source: www.goleansixsigma.com (April 2013)

Inventec Corporation

Quality Assurance
We are committed to achieving Six Sigma performance throughout our operations and business processes worldwide. Inventec Corporation was the first Taiwan electronics company to adopt the Six-Sigma strategy, and also the first one to deploy the “Design for Six Sigma”. We have benefited from Six Sigma deployment on cost reduction, and increased customer satisfactions and operating efficiency through process improvement.

Xerox

Xerox Lean Six Sigma and Quality Go Hand in Hand
Xerox Lean Six Sigma is a powerful business-improvement tool that can enhance the effectiveness of Xerox and of the services we provide to our customers. It leads to solutions that no one person could ever develop alone. And the return on investment can be huge. The Xerox Lean Six Sigma tools, processes and principles are built on earlier Leadership Through Quality and new quality efforts at Xerox. Since 2003, Xerox people have been using Xerox Lean Six Sigma tools and methods in both internal projects and projects for customers. These projects focus on reducing waste and increasing effectiveness in vital business processes to bring measurable improvements in results for customers and the company.

Convergys

Six Sigma-based Training Leads to Better Problem Resolution at Convergys
As a result of this training program, the Convergys client paid a lower cost of outsourcing, Convergys got higher rate for each transaction, agents received higher incentives and the problem got resolved faster for the clients customers. The problem resolution score improved by 10% i.e. 10% more calls were successfully handled (problem resolved) within the first call. Clearly, this meant 10% improvement in productivity. Moreover, the economic impact of this improvement effort exceeded Convergys’ INR 5.8 crores (USD 1.18 MM @ Rs 49= 1 USD). This economic benefit is the total of the benefit accrued to the client, to Convergys and to its employees. Says Manisha, “The client gained as they pay per call and since we improved first call resolution by 10%, they paid for 10% less calls post the improvement. Convergys gained as we received the highest possible call.”

Skyworks Solutions

Six Sigma Methodologies Support Back-End Yield and Quality Metrics Improvement
Six-sigma methodologies lead to understanding of root causes of yield loss in the back-end process. A data-driven decision making process is used to allocate resources and to optimize process flows. As a result, the yield of the backend process was increased by nine percentage points over the last three years. The team has achieved backend process (post-probe) yield increase of 3% per year for each
of the last three years. Yield improvement activities also improve quality by reducing the PPM defective delivered to the downstream operations (the customer). Further, sustained yield improvement contributes significant cost savings.

Siemens

Siemens Achieves Continuous Improvement Through Six Sigma, ITIL With VMware vCenter Configuration Manager
Siemens IT Solutions and Services, Inc. is an internationally leading provider of IT solutions and services. Siemens IT Solutions and Services, in its ongoing efforts to optimize processes, sought comprehensive analytics to help automate its ITIL and Six Sigma best practices initiatives, to drive more efficiency and better service levels. VMware vCenter Configuration Manager gives Siemens proactive insight into correlation between configuration changes and business performance.

Rockwell Automation

A QUALITY COMMITMENT
To continuously improve quality within Rockwell Software, the organization adopted the principles defined within Six Sigma. The techniques used within these methods improve the process by identifying root causes and eliminating variance. The Six Sigma Define, Measure, Analyze, Improve, and Control (DMAIC) method is a data-driven quality strategy for improving processes. It is an integral part of Rockwell Software’s Six Sigma quality initiative. We are using the DMAIC technique on existing products or processes that are not performing adequately or are not meeting customer needs.

Motorola

Six Sigma Still Pays Off At Motorola
“Six Sigma’s stamp is all over the Razr,” says Michael S. Potosky, Motorola’s corporate director of Six Sigma. Engineers, for instance, applied the process to the phone’s antenna, helping keep it hidden while maintaining call clarity. With hits like the Razr, the Schaumburg (Ill.) company has climbed from a 15.4% market share in mobile phones to 22.4% over the past two years. Motorola netted $4.6 billion on $36.8 billion in revenues last year, helping it earn the No. 13 spot on the BusinessWeek 50 list of top corporate performers.

Microsoft

Six Sigma Can Help Project Managers Improve Results
Improving business results is important in every organization. Project managers are often the change agents charged with leading the improvement efforts. Understanding and incorporating the Six Sigma DMAIC steps into every project can help project managers not only be more effective but can lead to breakthrough results. Attaining a Six Sigma Green Belt certification is the best approach for project managers who want to demonstrate that they are ready to accept the challenge of improving their organization’s business results.
Ingram Micro Inc.

**Ingram Micro’s Business Continuity/Disaster Recovery Services**

By leveraging ITIL, Six Sigma(TM), and other Total Quality Management (TQM) process models, Ingram Micro’s BC/DR services also provide a repeatable, consistent approach to service that can grow and change with solution providers’ and end users’ business needs.

Dell, Inc.

**Best Practices: Measuring the Success of Enterprise Testing**

A good approach to measurement is provided by the Six Sigma framework, which describes four families of measures. These families are known as the PFQT measures, which detail the productivity (process), financials (cost), quality, and timeliness (schedule) of a project. An effective measurement strategy includes metrics that address these four areas.

Computer Sciences Corporation

**SNCF Cleans Up With Six Sigma**

SNCF employed the problem-solving methodology Six Sigma, supervised by CSC consultants, to optimize its cleaning processes, so that each euro invested provides returns for travelers. A detailed study of critical aspects, such as the lack of preventive maintenance for the wash stations and the inefficient programming of train washes, enabled CSC and SNCF to precisely target the required improvements and obtain everybody’s adherence to them. As a result, the indicator measuring compliance with the cleanup rules increased from 48 to 66 percent. A six-month forecast for one line’s external cleanliness was 80 percent.

Cisco Systems

**Accelerating Lean Productivity with Immersive Collaboration**

Cisco’s Internet Business Solutions Group (IBSG) proposes an immersive, interactive virtual environment to overcome the challenges of time, distance, and limited resources. Through this robust, interactive environment, they were able to design new processes and make recommendations that resulted in a significant reduction of time to service customers and overall service costs. The leader of the lean event stated that the immersive, collaborative environment resulted in a 50 percent reduction in time-to-decision among participants on key issues. The session was completed in 30 percent less time than a conventional workout, resulting in significantly increased productivity.
Lean Six Sigma Success Stories in the Hospitality Industry

Wyndham Worldwide

Sustainability and Innovation go Hand in Hand
If you want a good case study of how to use innovation and sustainability to cut costs and improve customer service, talk to Faith Taylor. As Vice President of Sustainability and Innovation at Wyndham Worldwide, Taylor is responsible for Wyndham's green and sustainable initiatives for environmental, social, and economic programs. She has used Six Sigma, Seth Godin’s Purple Cow, as well as various team building and creativity building workshops.

Starwood Hotels & Resorts Worldwide

Six Sigma Kick-Starts Starwood
Instead of hiring consultants or ethnographers, a common first step for a new initiative, the hotel chain relied on a seemingly stodgy process: Six Sigma. Last year, according to Starwood management, programs developed under the famed management technique delivered more than $100 million in profit to its bottom line. As a result, the White Plains (N.Y.) company is one of the world’s most profitable hotel operators: Its net margin is nearly 15%, higher than those of rivals Hilton Hotels (HLT) and Marriott International (MAR), as well as the industry average of 9%. “We have been driving our margin growth faster than our competitors,” says Ballotti. “When people ask why, I point to Six Sigma.”
Lean Six Sigma Success Stories in the Logistics Industry

Source: www.goleansixsigma.com (April 2013)

DHL

DHL taps people power

The First Choice approach comes via the Six Sigma DMAIC (Define, Measure, Analyse, Improve, Control) methodology and the Lean process. While DMAIC arrived at DHL from technology companies such as GE and Motorola, Lean has its origins in manufacturing. For some specific customers, DHL’s clearance documentation has been reduced by three or four days in Sydney; DHL has done initiatives on invoicing timelines in Sydney and Melbourne, and in Brisbane, they did an initiative for ocean freight.

3PL Transplace

3PL Transplace Selected By Dunkin’ Donuts & Baskin Robbins For Inbound Logistics Thanks In Part To Lean Six Sigma

3PL Transplace, a logistics provider, has been selected by National DCP, the cooperative for Dunkin’ Donuts & Baskin Robbins, to manage distribution for over 7,000 locations in the USA. 3PL is an adherent of Lean Six Sigma processes.

Ryder

Ryder Uses Lean Labor Management to Reduce Costs and Boost Performance

Ryder has utilized Lean to create a Lean warehouse, where it has had an amazing effect on employee performance by utilizing these five guiding principles:

1. People Involvement: Engaging every employee
2. Built-in Quality: Striving to prevent mistakes before they happen
3. Standardization: Documenting and making sure best practices are followed
4. Short Lead Time: Filling customer orders ASAP
5. Continuous Improvement: Understanding that a process can always be improved

Numina Warehouse Technologies

Numina Impresses Internet Retailers With Lean Distribution Process

The company’s Lean Distribution Process provides the following benefits to Internet retailers:

- Orders are picked, packed and shipped faster
- Reduced shipping errors (greater than 99.9% accuracy)
- Operating expenses reduced
- Productivity increased by 30%-50%
- Increased customer satisfaction and retention
Lean Six Sigma Success Stories in the Manufacturing Industry

Source: www.goleansixsigma.com (April 2013)

Ingersoll Rand

Case Study: Lean Six Sigma Improves Order Quality at Ingersoll Rand Security Technologies
IR took on the task of improving the order entry process, utilizing the DMAIC approach and Six Sigma tools. As a result of these efforts, defects were reduced dramatically. The process itself is approaching a 70-percent reduction in defects, moving from 0.5 sigma to 3.53 sigma. Customer satisfaction has also improved tremendously.

Acme Industries

Improve Pricing Quality with Six Sigma Methods
This article describes a situation faced by a real company—we’ll call it Acme Industries Inc.—in which it was compelled to adapt its Six Sigma manufacturing expertise to improve its pricing processes. The initial goal of generating $500,000 in incremental revenues during the first year was handily exceeded in only three months. More important, a subsequent across-the-board list-price increase was fully reflected in the top line for this product. By contrast, other product lines realized less than half the increase. That list-price increase, together with the tighter controls the Six Sigma team developed and implemented, resulted in $5.8 million in incremental sales in just the first six months following the project’s implementation, all going straight to the bottom line.

Aluminum Trailer Company

Aluminum Trailer Company Merges Lean and Green Principles
Aluminum Trailer Company (ATC) president Steve Brenneman discusses how the recession spurred his company to use Lean techniques in 2009 battle a drop in sales. Through a combination of streamlined material, information and part flows, the establishment of standards, and the communication of said standards through his company, Brenneman was able to cut warehouse space in half while slashing the sales cycle from 7 to 3 weeks. In 2010, Brenneman shifted the focus to greening his company by using Deming’s PDCA (Plan, Do Check, Act) methodology to upgrade to more efficient lights, encourage plastic, wood, wire, and cardboard recycling for line staff, and cut paper use 50% in the office.

Louisiana-Pacific Corp

Louisiana-Pacific Corp Earnings Call Yields Surprises
Curtis M. Stevens, CEO of Louisiana-Pacific Corp, mentions how Lean Six Sigma assists his company in being more efficient and effective at its manufacturing facilities, which produce building materials, industrial wood products and pulp.
Plasticard-Locktech International (PLI)
Plasticard-Locktech International (PLI) Invests $4.6 Million, Utilizes Six Sigma For Quality Control
Plasticard-Locktech International (PLI) will be investing $4.6 million in facilities and equipment. This includes 30,000 square feet of production space and 42 new jobs, thanks in part to the adoption of Six Sigma for quality control. Six Sigma has helped PLI develop a system of checks to ensure high quality products and satisfied customers.

General Cable
General Cable Drives Down Costs Annually Thanks To Lean Six Sigma
Adopting lean and six sigma over a decade ago has allowed General Cable to remain competitive in an extremely price-sensitive and cyclical industry. The company has 6 master black belts, 64 black belts, 211 green belts, 290 lean technicians that enable them to have a consistency of response — in other words, everyone has both the tools and knowledge to handle situations. As a result of this continuous improvement mindset, General Cable is expected to drive down costs by several percentage points annually.
Lean Six Sigma Success Stories in the Mining Industry

Source: www.goleansixsigma.com (April 2013)

**BHP Billiton**

*Optimizing Six Sigma at the Top of the World*

In 2007, a new management team at BHP Billiton’s EKATI mine kicked off a lean Six Sigma deployment that utilized a five-year plan to drive breakthrough improvements.

**Sterlite Technologies**

*How L&T, Sterlite & Tata are trying to improve processes*

Sterlite Industries, a leading copper producer of India, was facing an accumulation of working capital in the form of Cenvat owing to the cycle time taken between goods received, consumed and credit availed. It urgently needed to significantly reduce the Cenvat availment cycle time from the current 58 days. A brainstorming session, followed by a fish bone diagram plot, data gathering, and a Pareto analysis prioritised the high level causes. A why-why analysis identified a few root causes. A feasibility and cost analysis helped select the solution. Consequently, a SAP R/3 system and SOPs were implemented along with the corresponding training. The tangible benefits included reduction in working capital by Rs 8.40 crore annually and the related interest, and system improvement for Cenvat availment. The intangible benefits included training of team members in the structured ‘Juran on Quality Improvement’ methodology; better teamwork amongst departments; increase in confidence and attitude of employees; and development of a paperless and person independent office system. Sterlite too has the IMC RBNQA criteria integrated into its process improvement methodology.
Lean Six Sigma Success Stories in the Retail Industry

Source: www.goleansixsigma.com (April 2013)

Staples Inc.

Staples: Lean Six Sigma

Accenture’s help with the Staples Lean Six Sigma program has been the impetus for dozens of improvements that have generated tens of millions of dollars in benefit for Staples and produced a 10-fold return on the company’s investment in the process improvement program:

- Rebalance lease negotiations and improve architectural and construction processes—efforts that shaved four weeks off the time needed to open a new store, leading to increase in sales equivalent to eight new stores annual sales.
- Streamline the item-order cycle and have promotional items arrive at stores closer to sale dates—efforts that freed space (especially in smaller stores) and generated inventory savings of $3.3 million.
- Reconfigure the loading dock layout, eliminate extra handling of merchandise, and establish a “receiving and put away team” within one fulfillment center—efforts that improved On-Time to Due Date performance by 21 percent.
- Consolidate freight moving from suppliers to Staples’ distribution and fulfillment centers, which achieved 50% of the budget reduction stretch goal for the year.
- Overall the NAD supply chain budget was ahead by $30M.$13M of that is attributed to LSS; with $5M – $ 7M being realized in FY2007.
- The Lean Six Sigma program has been the impetus for dozens of improvements that, together, have generated tens of millions of dollars in benefit for Staples and produced a 10-fold return on the company’s investment in the process improvement program.

Target Corporation

Six Sigma Makes a Comeback

Target (TGT) claims more than $100 million in savings over the past six years from the program.
Lean Six Sigma Success Stories in the Telecommunications Industry

Source: www.goleansixsigma.com (April 2013)

Vertek

Reducing Costs and Improving Service Using Quality Management Tools
We, at Vertek, can attest to the success of this program. Our consultants have delivered dramatic results to our clients through the use of the statistical methods and quality control techniques outlined in this paper. These improvements can add up to millions of dollars in annual cost savings, not to mention cycle time improvements, efficiency gains, rework reduction and, most importantly, customer satisfaction. One process simulation project reduced a major service provider’s ordering cycle time by 10 days, which translated into over $6.8 Million in annual savings.

Vodafone

Vodafone’s Journey To Quality
Gradual implementation of Six Sigma methodology for managing process improvement projects.
Lean Six Sigma Success Stories in Transportation and Travel Industries

Source: www.goleansixsigma.com (April 2013)

Alaska Airlines

ONLINE EXCLUSIVE: Alaska Air Group’s Lean Transition
Alaska Airline’s organization-wide Lean initiatives continue to yield performance gains. “At the end of our first year, instead of a 45-minute wait for baggage, we achieved a 20-minute wait. Our flight cancellation and missed bag rates went down. We became the No. 1 on-time airline in the country,” Bowers said. “Three years later, we are consistently rated in the top three.”

Avis Budget Group

Avis Budget Group Marks Five Years of Performance Excellence
Avis Budget Group, Inc. celebrates the 5th anniversary of its award-winning Performance Excellence Lean Six Sigma process-improvement initiative, which has helped them generate over $275 million in annual cost savings and other benefits since the program was initiated in 2007.

Boeing

BUILT-IN QUALITY: Better, faster, cheaper—but most of all, better
Most Boeing employees likely are familiar with the concepts of Lean, supplier relationships, and global manufacturing—supporting a design-anywhere, build-anywhere vision of the future. A lean and efficient operation is the heart of the Boeing Production System and is crucial to Commercial Airplanes’ success in the global marketplace.

Cummins

Six Sigma at Cummins
In 1994, former CEO and Chairman Tim Solso lead the way into the world of Six Sigma. Eleven years later the list of improvements is large and diverse. Through 2010, we have completed over 22,000 projects, saved over $3.7 billion, and additionally saved customers $780 million. The people of Cummins have a vision to make people’s lives better by unleashing the power of our Company. Continuous improvement in everything we do is a part of this vision.

Delphi

Application of Six Sigma Methodologies to Improve Requirements Management for Customer Programs
The team evaluated four projects for analysis with the objective of assessing and correcting root causes of project problems due to requirements issues. Using the methodology of Six Sigma, the team utilized lessons learned to determine "Impact Issues," relative to requirements management. These issues were then addressed by the addition of improvements to the Product Development Process.
Goodrich Corporation

Six Sigma for Safe Landings: Six Sigma heightens airline safety.
Goodrich’s management team took notice of the bottom-line savings that companies such as GE and Motorola have achieved by implementing full-scale Six Sigma programs and decided that it was Goodrich’s turn to move onto the runway in preparation for a Six Sigma takeoff. The benefits of full implementation are projected to include an 87 percent reduction in nonconformance occurrence, an 81 percent reduction in both DPUs and DPMOs, a sigma level increase from 3.42 to 4.06, reduced lead times and reduced production costs.

Mercury Marine

Mercury Marine saves big with Six Sigma energy-savings project
A Mercury Marine manufacturing leader explains the results of a Six Sigma project that saved energy and costs at its plant in Wisconsin. They achieved 60% energy reduction, 30% better light levels, and 20% longer life using Orion light fixtures.

Network Rail

Six Sigma speeds up the rail network
When Network Rail took on the UK infrastructure in 2002 it faced many demands. But there was one big issue at the top of the agenda: train delays, severely affecting customers and costing hundreds of millions of pounds a year in penalties. Across various functions, targeted projects delivered initial productivity improvements of 12% and one single project alone reduced material costs by £400,000. Final value delivered includes £60m of efficiency savings, a 50% reduction of train delay minutes pa., over 1,200 people trained to manage and build upon improvements, and full self-sufficiency and capability in Lean Sigma process improvement.

Regal-Beloit

Regal-Beloit says Lean Six Sigma spurred record results
Learning Center vice president Fritz Hollenbach attributed the successful year to the five company-wide initiatives adopted and a favorable business environment. Some of the initiatives were focusing on Lean Six Sigma, or bringing science to business decision-making, and paying close attention to its customers. Company sales reached $1.62 billion, earnings increased 46 percent per share and the company was selected by Forbes as one of the 400 best-managed big companies.

Textron

Executive Suite: Textron CEO zeroes in on Six Sigma
Textron (TXT) launched a major Six Sigma initiative in 2002. Stock in the conglomerate whose products include Cessna jets and E-Z-Go golf carts has climbed 173% since, although it has tumbled in 2008. Textron is holding fast. It will soon have trained nearly 10,000 in-house experts known as black belts and green belts. Even though Cessna has been producing planes for 89 years and jets since 1972, they recently took 17% of the labor hours out of their single-piston aircraft. That’s a big number. They’ve taken the inspection time from 10 days to five. Textron financial used to take 320 hours each month collecting interest from customers. They’ve got that down to 56 hours.
Lean Six Sigma Success Stories in Water, Energy and Utility Industries

Source: www.goleansixsigma.com (April 2013)

Dominion Resources

Six Sigma at Dominion
Six Sigma is a type of business improvement methodology that Dominion adapted in 2001. Dominion uses Six Sigma as a path to achieving excellence. All four of our business units use it to reduce safety incidents and minimize safety risk to the public, employees and contractors:

- Minimize wait times to speak with an agent and assure phone and internet services are helpful, comprehensive and intuitive
- Reduce the number of power outages and minimize the impacts of those that may occur
- Reduce costs to customers by ensuring accuracy of Company equipment, such as remote meter reads
- Manage maintenance schedules to maintain the reliability and integrity of Dominion’s natural gas pipeline
- Improve generating efficiency and equipment reliability to minimize emissions and hold down electricity costs
- Minimize water and natural resource consumption
- Reduce scheduled nuclear outage time
- Launch the first utility Energy Conservation blog on the Internet, which averages more than 50 visits a day and has a growth rate of 70 percent of new visitors from 108 different countries around the world
- Reduce power consumption by 20 percent at Dominion-owned facilities by replacing various lighting switches, bulbs and fixtures (that’s enough to power over 90 average size homes)
- Recycle over 5,200 wood pallets and 5,300 wood reels that were historically disposed of, every year

JEA, Inc.

Lean Six Sigma and Environment Case Study: JEA
JEA utility has applied Lean and Six Sigma process improvement techniques since 2000:

- Achieved a utility-wide cumulative cost savings of $579 million from Lean and Six Sigma initiatives.
- Avoided an impact of $95 million on the utility’s 2010 budget from projects specifically focused on cost reduction.
- Saved an average of $950 per customer and avoided rate increases of $20 per month directly related to process improvement efforts
- Completed over 580 projects since 2000