



## Driving Business Process Excellence with Lean

*White Paper Demonstrating How Various Public Sector Organizations are implementing Lean and Improving their Processes and Customer Service*

*by Kent James*

---

finding *new answers* in business.



# Driving Business Process Excellence with Lean

## Driving Process Excellence in Public Sector Organizations with Lean

Using Lean methodologies to drive operational excellence in public sector organizations has come of age. There is a significant body of evidence that public sector organizations are capable of achieving the same degree of business process improvement experienced in private sector organizations.

Lean tools such as Kaizen Events are an effective way to assist organizations to break unproductive habits, achieve high level of performance, and adopt a continuous improvement culture & philosophy. Cross-functional organizations learn how to work as teams, breaking down traditional public sector silos, quickly analyze a process, identify and prioritize improvement opportunities, implement change, and sustain their benefits. All of this is accomplished in a supportive environment where employee satisfaction typically experiences significant improvement as well.

Below are excerpts of case studies where Lean methodologies were applied in public sector organizations.

### Case Study 1

Agency: Iowa Department of Natural Resources

Source: Iowa Department of Natural Resources State Lean Six Sigma Business Process Improvement Initiative Summary

### Summary

As part of a major commitment to increase efficiency and foster continuous improvement, the Iowa Department of Natural Resources (DNR) has conducted sixteen Lean business process improvement events since June 2003 using primarily kaizen events. Iowa DNR first targeted air quality construction permitting and has since conducted events on processes such as Leaking Underground Storage Tank (LUST) corrective action reporting and

implementation, clean water construction permits, National Pollution Discharge Elimination System (NPDES) wastewater permits, as well as a number of administrative processes. Iowa DNR has achieved compelling results from its Lean Six Sigma Business Process Improvement initiative, reducing most process lead times by more than half. The Department received guidance and assistance in its Lean initiative from the Iowa Coalition for Innovation and Growth, Lean consultants, and from a number of companies in Iowa that have significant Lean experience, such as Pella Corporation, Rockwell Collins, and Vermeer Manufacturing.

### Results

Iowa DNR has achieved compelling results from its Lean Six Sigma business process improvement initiatives. The events have resulted in both organizational and cultural changes in the Department, as well as specific process changes identified during the Lean Six Sigma events. Iowa DNR has conducted sixteen process improvement events, most of which have focused on reducing lead times as shown in the table on the following page.

### Case Study 2

Agency: EPA Office of the Chief Financial Officer—Corrective Action Tracking

Source: Lean Government: EPA Office of the Chief Financial Officer Corrective Action Tracking Kaizen Event Case Study. June 2009. Fact Sheet. (PDF)

### Summary

In December 2008, EPA's Office of the Chief Financial Officer (OCFO) conducted the Agency's first completely internal Lean kaizen event. A team of OCFO managers and staff examined the office's internal process for tracking and closing corrective actions, the term for tasks OCFO has committed to doing as a result of an

Kaizen Event Projects	Before Process Improvement	After Process Improvement
Air quality complex permit	214 days	180 days
Air quality new source construction permit	62 days	6 days
Animal feeding operations construction permits	66 days	36 days
Clean water construction project permits	28 months	4.5 months
Floodplain permits	Implemented: - Pre-design meeting and outreach strategy - Database design - Permit redesign	
Landfill permits	187 days	30 days
Land acquisition: best case	24 months	9 months
Land acquisition: worst case	22 years	6.3 years
Leaking underground storage tanks corrective action decision	38 months	3 months
Legal services: administrative orders	- Consent orders - Unilateral orders - Attorney General referrals	- 40–90% improvement in - lead time reduction
Manure management plans	Incomplete submittals reduced by 50%	
NPDES wastewater permitting	425 days	15 days
Sovereign lands permits: environmental reviews	163 days	86 days
SRF cross-cutters	- Delays reduced by 40% - Steps reduced by 32%	
Vehicle dispatch	Pool vehicles reassigned to Department of Administrative Services- General Services Enterprise	
Magazine production	Allows on-time quality production while meeting day-to-day communication needs	

audit or self-assessment. Specifically, the process was scrutinized from the point at which an Office of Inspector General (OIG) or A-123 corrective action plan was approved until the corrective action was closed. The process was taking too long, was not standard, involved duplication of effort, and did not meet customers' needs.

The week-long event focused on clarifying the corrective action tracking process, developing a standard format for corrective action plans, clarifying the corrective action close-out process, and codifying all process steps into a standard operating procedure. The event dramatically improved efficiency by eliminating non-value added process steps, resulting in a more transparent process with increased data accessibility and improved customer satisfaction.

## Results

### OIG Correction Action Tracking Process

- 86% reduction in number of handoffs (from 92 to 13)
- 68% reduction in time to process an OIG Action (from 324 hours to 104 hours)

- 62% reduction in total number of steps (from 16 to 6)

### A-123 Corrective Action Tracking Process

- 74% reduction in number of handoffs (from 31 to 8)
- 46% reduction in time to process an A-123 Action (from 185 hours to 100 hours)
- 63% reduction in total number of steps (from 8 to 3)

## CASE Study 3

Agency: Colorado Department of Transportation — How State Highway Access Permitting got Lean

Source: Colorado Department of Transportation – Process Improvement Case Study – Lean Case Study

### What is Lean?

Lean is an improvement system and philosophy used by CDOT that helps us deliver excellent services and programs to our citizens.

Lean provides proven principles, methods, and tools to develop a culture that encourages and



enhances employee creativity, innovation, and problem-solving skills. Lean helps us gather experience, learn from that experience, and apply that learning to improve our operations. Lean involves everyone, every day in enhancing the services and programs provided to our fellow citizens. Basically, Lean is a way that CDOT uses our existing resources (including money, employees, and knowledge base) to create more value in the work we do on a daily basis by making sure our processes are effective and impactful.

## Lean Case Study

How State

Highway

Access

Permitting

got Lean



**Background:** Colorado highways are controlled-access facilities. Since 1979, Colorado law has required anyone needing a new driveway (access) or modifying an existing driveway connected to a state highway to obtain an access permit from the Colorado Department of Transportation (CDOT). The permit review process includes inspection of the proposed access point for compliance with standards of the Colorado Access Code and other acceptable engineering standards. The permit application review and approval is dependent on volumes of applications received, intense cooperation between CDOT and other units of local government, and reviews by miscellaneous engineering disciplines. During last several years, the permitting process has remained slow due to these varying factors.



In support of Governor John Hickenlooper's commitment to an Efficient, Effective and Elegant government, a process improvement program was initiated in late 2010 to review and evaluate cumbersome state processes using the well-known

Lean concept. CDOT took the opportunity to pioneer a Lean process improvement for the access permit program.

**Taking Action:** A project team and an advisory committee was developed to initiated and plan the process improvement initiative.

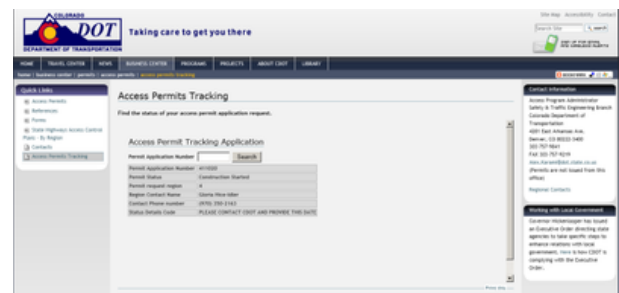
An improved vision statement was the first step taken to define the project purpose and set expectations. Then, based on the purpose and expectations, project objectives and scope were established.

During a four-day workshop the project team defined the current state of the access permitting process by breaking down each and every step currently required. Each step was then evaluated to ensure it adds value for the customer. Any non-value added processes were reduced or eliminated without sacrificing compliance with rules and regulations governing the program.



Next, the team provided additional transparency for the process, our customers, and management by developing a new website that is able to track the status of each and every application. Other improvements were made, including providing open workshops and office hours to allow customers gain better access to staff to discuss their project needs. Regular meetings with CDOT's local government counterparts are being scheduled to improve understanding of the requirements and expectations of each agency. Providing sample applications, checklists, and holding pre-application conferences to assist customers with their applications preparations will ensure customers are better served. Customer feedback surveys will be sent out on regular basis to every permit recipient to ensure CDOT stays informed of customers' issues and improve the process going forward.

Finally, long term goals were established to further improve customer service. CDOT is improving database functionalities to ensure that we are operating within a more stable and effective technological environment. CDOT also plans to further explain the permit process using online videos, public announcements, and improved program brochures.



**Process Improvement:** The Lean process helped CDOT identify the complex steps required to acquire an access permit and identified where steps could be shortened or combined in order to improve the process. From initial inquiry and accepting applications, to review, evaluation, and issuance of permits, no stone was left unturned in the quest to eliminate waste from the process. By reducing steps while maintaining quality of service, the process has been much improved.

**Much Faster:** The new Lean process will reduce permit application reviews and approval steps that are no longer necessary. Current regulations allow 20 days for the department to review applications for completeness and 45 days to offer a permit. Reporting measures are now in place to track our process and insure we are meeting our commitments. We will also use these reports to measure future improvements.

**Working Smarter:** The project team created several tools such as sample applications, check lists, customer surveys, and reporting mechanisms to make the process easier and more transparent for customers. A webpage was developed to allow applicants to track the status of their individual permit applications.

## Case Studies: EPA & State Lean Activity

Below are links to many case studies where public sector organizations have utilized Lean methodologies and experienced significant benefits.

U.S. Environmental Protection Agency. [Lean Government: Office of the Chief Financial Officer \(OCFO\) Superfund State Contract \(SSC\) Accrual Process Lean Event Case Study](#). December 2010. [Fact Sheet \(PDF\)](#) (4 pp, 101K)

U.S. Environmental Protection Agency. [Lean Government: EPA Office of Pesticide Programs Antimicrobial Testing Program Lean Event Case Study](#). February 2011. [Fact Sheet \(PDF\)](#) (4 pp, 1.1MB)

U.S. Environmental Protection Agency. [Lean Government: Region 7 and Four States – Clean Air Act Implementation Plan \(SIP\) Kaizen Event Case Study](#). July 2010. [Fact Sheet \(PDF\)](#) (5 pp, 1.54MB)

U.S. Environmental Protection Agency. [Lean Government: EPA Region 6 Pesticides Enforcement Kaizen Events Case Study](#). June 2010. [Fact Sheet \(PDF\)](#) (5 pp, 1.5MB)

U.S. Environmental Protection Agency. [Lean Government: Region 7 and 4 States—National Pollutant Discharge Elimination System \(NPDES\) - Kaizen Event Case Study](#). August 2009. [Fact Sheet \(PDF\)](#) (3 pp, 436K)

U.S. Environmental Protection Agency. [Lean Government: Region 7 and 4 States—Water Quality Standards Review Process - Kaizen Event Case Study](#). August 2009. [Fact Sheet \(PDF\)](#) (3 pp, 482K)

U.S. Environmental Protection Agency. [Lean Government: EPA Office of the Chief Financial Officer—Corrective Action Tracking Kaizen Event Case Study](#). June 2009. [Fact Sheet \(PDF\)](#) (3 pp, 745K)

[Delaware Department of Natural Resources and Environmental Control State Lean Process Improvement Initiative Summary](#).

Florida Department of Environmental Protection. [Florida Submerged Lands and Environmental Resources Permit Process](#). August 2009. [Fact Sheet \(PDF\)](#) (3 pp, 623K)

[Iowa Department of Natural Resources State Lean Six Sigma Business Process Improvement Initiative Summary](#).

Iowa Department of Natural Resources. [Iowa Wastewater Permitting Process Kaizen Event Case Study](#). 2004. [Fact Sheet \(PDF\)](#) (2 pp, 22K)

[Michigan Department of Environmental Quality Lean Process Improvement Initiative Summary](#).

[Minnesota Pollution Control Agency Six Sigma Process Improvement Initiative Summary](#).

Minnesota Pollution Control Agency. [Minnesota Wastewater Permitting Process Six Sigma Project Case Study](#). 2004. [Fact Sheet \(PDF\)](#) (2 pp, 23K)

[Nebraska Department of Environmental Quality Business Process Improvement Initiative Summary](#).

South Carolina Department of Health and Environmental Control. [South Carolina Storm Water Permitting Process Case Study](#). 2009. [Fact Sheet \(PDF\)](#) (2 pp, 304K)

Vermont Agency of Natural Resources, Department of Environmental Conservation, Wastewater Management Division. [State of Vermont Wastewater Permit Process Kaizen Event Case Study](#). 2006. [Fact Sheet \(PDF\)](#) (2 pp, 21K)

[Wyoming Department of Environmental Quality New Source Review Process Lean Event Case Study \(PDF\)](#)

[EXIT Disclaimer](#). June 2007.

---

## About The Edge

Today's competitive environment demands that companies reinvent themselves by at least 20 percent each year in order to stay competitive.

We call this 20-percent reinvention the Edge. For interesting perspectives on Lean advantages for the public sector, visit the CGN Edge Blog at:

[http://cgledge.blogspot.com/2012\\_06\\_01\\_archive.html](http://cgledge.blogspot.com/2012_06_01_archive.html)

---

To learn more about how CGN Blackwell can help your public sector organization apply Lean Government to your processes and projects, please contact our Public Sector Account Executives. Learn more about CGN Blackwell at [www.blackwellgc.com](http://www.blackwellgc.com). Let us find answers for you!

---



**Nancy Draper**  
Business Development Executive,  
Education & Government Solutions  
[nancy.draper@blackwellgc.com](mailto:nancy.draper@blackwellgc.com)  
309/472-4473



**Bronwyn Lottering**  
Business Development Executive,  
Education & Government Solutions  
[bronwyn.lottering@blackwellgc.com](mailto:bronwyn.lottering@blackwellgc.com)  
312/873-5385

---

CGN Blackwell is a global management consulting firm providing services to federal, state and local public sector as well as private organizations. Our subject matter experts work collaboratively with our clients to create transformative Lean processes. The results afford improved performance at a lower cost while improving constituent satisfaction. In essence, we help you do more with less

---

## Our Focus Areas

### Global Emerging Markets Strategy

We take the guesswork out of new markets, with local teams that know their markets and use that knowledge to create a strategy for your successful growth—and then work with you to execute it quickly and effectively. Our expertise includes new market analysis, market entry strategy, manufacturing footprints, network mapping, supplier development and supply chain management.

### Global Supply Chain & Operations

We can turn your supply chain into one of your biggest assets. Our experienced practitioners look at your supply chain from end to end—understanding your costs, identifying savings opportunities and developing a strategy to improve your overall efficiency. We help you develop an agile, responsive and flexible supply chain to manage the volatility in global demand and supply.

### Global Supplier Collaboration & Procurement

Superior supplier partnerships can help you improve quality and efficiency throughout your entire supply chain—increasing cash flow and productivity. We offer sourcing strategy and relationship support through our signature processes and tools, aiding you in supplier rationalization, cost modeling, product lifecycle cost management, supplier performance management, quality assurance and improvement.

### Organizational Transformation

We will transform your business—identifying needs to restructure, reposition and resize, developing the path, and executing with your team. We help you align strategic and organizational design, engage talent and build strong cultures, accelerate change and deliver breakthrough performance.

### Business Technology Integration

We bridge the gap between business and technology—aligning the two to ensure IT facilitates the successful implementation of your business strategy. We provide advisory, implementation and support services, including process and technology definition, governance support, systems integration and business intelligence.

**CGN Blackwell**

[contactblackwell@blackwellgc.com](mailto:contactblackwell@blackwellgc.com)

tel. 1.312.553.0730

**United States**

**Europe**

**India**

**China**

CGN Blackwell is a preferred advisor for leading Fortune 500 companies. Our team provides customers with a range of consulting solutions that cover their strategic and operational technology needs and enable sustainable competitive advantage.

### Management Consulting

Ensuring success in optimizing, standardizing and transforming operations to execute your business strategy.

- Organizational Transformation
- Change Management
- Project Management
- Strategic Technology Planning
- Business and IT integration

### Enterprise Technology Solutions

Delivering high-impact technology solutions that transform business results

- Service-Oriented Architecture
- User-centered Design
- Portal and Web Solutions
- Integration and Implementation
- ERP Solutions (PeopleSoft & Oracle)
- Network and Infrastructure Assessment
- Security Services
- Messaging and Collaboration
- WAN/Wireless Design and Implementation

[blackwellgc.com](http://blackwellgc.com)

finding *new answers* in business.

