Lean in Government Starter Kit Version 3.0

How to Plan and Implement Successful Lean Initiatives at Environmental Agencies

OTHER PUBLICATIONS FROM THE LEAN GOVERNMENT INITIATIVE

- *Working Smart for Environmental Protection: Improving State Agency Processes with Lean and Six Sigma* (Lean Government Primer)
- *Lean in Air Permitting Guide: A Supplement to the Lean in Government Starter Kit*
- *Lean Leadership Guide*
- *Lean Government Event Scoping Guide*
- *Lean Government Metrics Guide*
- *Guide to Lean Government Training*
- *Lean: Excellence in Government* (Fact Sheet)
- Case studies and other information about EPA and State Lean activities can be found at the EPA Lean Government Initiative website (www.epa.gov/lean/government).

Acknowledgments

We are pleased to announce the release of version 3.0 of the *Lean in Government Starter Kit*. In the spirit of Lean and continuous improvement, version 3.0 (released 2011) builds on the information, guidance, and resources included in the original Starter Kit published in 2007 and version 2.0, published in 2009. In particular, version 3.0 includes new and expanded sections and resources on Lean methods, Lean training, Lean event follow-up and implementation tracking, and building a Lean enterprise.

This Starter Kit was developed through a collaborative process involving representatives from five States (Delaware, Iowa, Michigan, Minnesota, and Nebraska), the Environmental Council of the States (www.ecos.org), and the U.S. Environmental Protection Agency (www.epa.gov). EPA's Office of Policy provided advisory and contractor support to this effort.

The EPA-state workgroup coordinating the development of this Starter Kit included the following agencies:

- Delaware Department of Natural Resources and Environmental Control (www.dnrec.delaware.gov)
- Iowa Department of Management (www.dom.state.ia.us)
- Michigan Department of Environmental Quality (www.michigan.gov/deq)
- Minnesota Pollution Control Agency (www.pca.state.mn.us)
- Nebraska Department of Environmental Quality (www.deq.state.ne.us)

Special recognition should be given to the Iowa Department of Management's Office of Lean Enterprise. Many of the resources in this Starter Kit are based on resources that have been prepared for agency managers in Iowa (these resources are available at http://lean.iowa.gov).

Version 3.0 of this Starter Kit includes more recent input from the Environmental Council of the States (ECOS) and state environmental agencies, including many agencies who were not originally involved in the development of the Starter Kit. Additionally, this version draws on experience, resources, and lessons with Lean implementation shared by representatives at EPA and other federal agencies who have used Lean, such as the U.S. Department of Defense.

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GUIDE TO RESOURCES IN THE LEAN IN GOVERNMENT STARTER KIT

This Starter Kit contains three types of resources:

- ⇨ Practical guidance and background information on how to use Lean methods to improve agency processes (Chapters 1–7)
  - o Look for "Resources" textboxes throughout the document for links to supporting tools in Appendix Band web-only resources
- ⇨ Bibliography of Lean References (Appendix A)
- ⇨ Resources, tools, and templates to support agency Lean implementation efforts (Appendix B), covering the following topics:
  - o Understanding Lean and the continual improvement system
  - o Selecting a Lean project
  - o Lean event scoping
  - o Event planning
  - o Lean event implementation
  - o Lean event follow-up
  - o Diffusing Lean activity and becoming a Lean enterprise

The website version of the Lean in Government Starter Kit (www.epa.gov/lean/government/starterkit) contains downloadable versions of all the resources in Appendix B, as well as additional resources available only on the website.

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Chapter 1. Introduction

Since 2003, environmental agencies at federal, state, and local levels have used Lean methods to advance their mission—protecting human health and the environment—in better, faster, and cheaper ways. Numerous other government agencies have also used Lean to improve the effectiveness, efficiency, and transparency of government programs and services. Lean government enables agencies to work more effectively and efficiently by eliminating waste in government processes. This *Lean in Government Starter Kit—Version 3.0* is designed to assist government agencies in planning and conducting successful Lean improvement events. The Starter Kit builds on ideas presented in *Working Smart for Environmental Protection: Improving State Agency Processes with Lean and Six Sigma.*

The Starter Kit contains practical tools, resources, and tips for:

- ⇨ Understanding what Lean is
- ⇨ How to select a Lean project
- ⇨ How to scope and prepare for a Lean event
- ⇨ How to conduct and manage the phases of a Lean event
- ⇨ How to implement follow-up activities after a Lean event, ensure accountability, and evaluate performance
- ⇨ How to diffuse Lean activity and become a Lean enterprise

The Starter Kit answers questions to help agency managers determine whether Lean is right for their agencies, provides practical "how to" guidance on implementing Lean events successfully, and presents ideas for agencies interested in expanding their Lean initiatives. The underlying goal of this Starter Kit is to provide information, tools, and resources that agencies can use to develop or incorporate into a Lean continual improvement system. Each section includes a set of downloadable resources that can be tailored to meet the specific needs of an agency.

Key Questions the Starter Kit Answers

Conducting a Lean improvement event is an eye-opening experience for agencies just getting started as well as agencies with significant experience implementing Lean. The rapid, dramatic, and transformative improvements that many public environmental agencies have achieved using Lean along with the trend toward implementing continual improvement systems have piqued the interest of many more agency managers—even in large governmental agencies. This Starter Kit addresses the following key questions about Lean in government.

How do we know if Lean is right for our organization?

Chapter 2 introduces Lean methods, explains how Lean is different from other initiatives, and helps agency decision makers consider whether Lean is right for their agencies. This chapter introduces Lean and explains why agencies should consider using Lean to achieve continual

improvement within their agency. The chapter also examines the five key elements that are important for sustaining long-term success with Lean.

How do we select a Lean project?

Chapter 3 provides guidance, resources, and tips for selecting a Lean project and information on how to select a Lean method. This information will help you assess the desirability of potential Lean projects by weighing strategy-driven versus pain-driven selection criteria. Information on the variety of Lean methods and techniques will help your organization select a method that is most appropriate for your improvement goals. Lean events are journeys that require skilled facilitation and guidance as well as hard work from a committed team. Chapter 3 also provides tips and resources to identify a Lean facilitator.

How do we scope and prepare for a Lean event?

Scoping and pre-work is critical to the success of Lean events. **Chapter 4** provides guidance, resources, and tips for preparing for a Lean event, including team selection and planning event logistics. During the pre-event scoping meeting described in this chapter, your Lean team will develop the Lean event charter, laying the groundwork for a successful event, including well-defined goals and objectives, boundary conditions, and necessary pre-work. Pre-event communication will help ensure that your event will be as successful as possible.

How do we conduct Lean events?

Chapter 5 provides guidance, resources, and tips for conducting a Lean event from start to finish. The topics in this chapter include kicking off a Lean event, managing the phases and change during the event, and identifying follow-up activities.

How do we conduct follow-up after Lean events?

Chapter 6 provides guidance, resources, and tips for conducting Lean event follow-up activities. This stage of the Lean event is vital to realizing and sustaining the benefits associated with the event. This chapter addresses tracking and implementing follow-up activities, internal and external communications about the event, and how to sustain Lean improvements.

How can we diffuse Lean effectively and become a Lean enterprise?

Once your agency has completed a Lean event, it is important to think strategically about how to sustain the improvements and to effect a transformation to a culture of process improvement throughout your agency. **Chapter 7** discusses models for deploying Lean in an organization, along with specific steps to sustaining and diffusing Lean activity and becoming a Lean enterprise.

The possibilities are exciting, whether you plan to use Lean for targeted problem-solving or to transform the culture of your agency. Whatever your path, this Starter Kit will help you get the most out of your Lean events and activities.

Chapter 2. Understanding Lean and the Continual Improvement System

As your agency considers learning more about Lean and the continual improvement system, you will likely encounter questions from managers and staff who wish to understand why your agency is taking the time to do a Lean event and what that will mean for the organization. This chapter provides a brief overview of Lean methods and discusses some of these common questions and topics, including:

- ⇨ What is Lean?
- ⇨ Why do Lean?
- ⇨ What is needed for long-term support of Lean?

What Is Lean?

Lean *refers to a collection of principles and methods that focus on the identification and elimination of non-value added activity (waste) in any process.*[1] While Lean process improvement approaches were developed originally for use in the private sector to target manufacturing processes, there has been steady progress towards adapting these approaches for use on service and administrative processes. The adjacent textbox lists examples of Lean wastes relevant to administrative processes. Public sector interest in Lean is increasing rapidly, fueled by strong improvement results and in some cases, economic hardship. Lean methods include value stream mapping and kaizen events, in addition to other methods. Six Sigma is often used in conjunction with Lean, but is a distinct process-improvement methodology that uses a collection of statistical tools to analyze causes of variation in a process and to identify and test improvements. It is often said that Lean is "common sense uncommonly applied."

WASTES	EXAMPLES
Inventory	Backlog of work (permits, plan approvals), excess materials/info, obsolete databases/files/folders
Defects	Data errors, missing info, errors in documents, confusing instructions or requirements, typos
Overproduction	Unneeded reports and copies, excess e-mail messages, doing work not requested
Complexity	Unnecessary process steps, too many signature levels, unclear job descriptions
Waiting	Time for approval cycles, waiting for information or decisions, waiting for people in meetings
Excess Motion	Trips to printer and copier, unnecessary movement to find files or supplies, travel to meetings
Moving Items	Report routing, transport of documents, document storage
Environmental Resources	Excess use of paper, energy, or water

[1] James Womack, Daniel Jones, and Daniel Roos coined the term "lean" in their 1990 book *The Machine that Changed the World* to describe the manufacturing paradigm (often referred to as the Toyota Production System) developed by the Toyota Motor Company based on principles pioneered by Henry Ford.

Value stream mapping and kaizen events are the Lean methods most commonly used by agencies getting started with Lean. These methods are described below, along with Six Sigma, which some agencies use along with Lean. The "how to" guidance on implementing Lean events in Chapters 3-6 focuses on kaizen and value stream mapping events, although many of the recommendations and tips are transferable to other types of process improvement projects.

Value Stream Mapping (VSM). Value stream mapping refers to the activity of developing a high-level visual representation, from start to finish, of the process flow involved in delivering a desired outcome, service, or product (a "value stream") to customers. In the context of environmental agencies, a value stream could be the process of enabling redevelopment of brownfield sites or attracting and hiring new agency staff. VSM events typically last two to five days depending on the complexity of the process being mapped.

Kaizen Events. Kaizen events—also called rapid process improvement events or kaizen blitz events—focus on eliminating waste in a targeted system or process, improving productivity, and achieving sustained improvement. Kaizen events can be as short as one or two days, but they often last about five days. They are the primary implementation method for Lean, aside from "just do it" actions, which are changes that can be made on the spot to improve processes and don't require team participation.

Resources

- Lean Overview Presentation

Six Sigma. Six Sigma is often used in conjunction with Lean, but is a distinct process-improvement methodology that uses a collection of statistical tools to analyze causes of variation in a process and to identify and test improvements. Trained Six Sigma experts, called "black belts" and "green belts," typically support teams in using Six Sigma tools in a project context. While this Starter Kit does not focus on Six Sigma, Lean and Six Sigma methods can be effectively combined (often called "Lean Six Sigma"). Lean eliminates unnecessary time and process wastes, while Six Sigma targets quality improvements and variation.

More detailed information on these methods and other Lean methods can be found in Chapter 3.

What Other Tools Are in the Lean Toolbox?

Agencies use a variety of Lean tools to support the process improvements identified using value stream mapping, kaizen events, and Six Sigma. Your organization can establish a culture of continual improvement by encouraging employees to identify waste in their everyday activities, using the following tools:

- **5S**: 5S is an improvement process involving five steps (Sort, Set in order, Shine, Standardize, and Sustain) to create and maintain a clean, neat, and high-performance workplace. 5S is often used to ready the workplace for future kaizen events and continual improvement efforts. Some organizations add a sixth "S" for Safety.
- **Standard Work**: Standard work represents the sequence of activities needed to perform a given operation. Improvements made during kaizen events are immediately

documented as standard work to ensure that all employees understand and consistently implement the new process.

- **Visual Controls**: Visual controls are used to reinforce standardized procedures and to display the status of an activity so every employee can see it and take appropriate action. Visual controls are frequently implemented during kaizen events to simplify the workplace and provide visual feedback on process performance.
- **Process Walk**: Process walks are done by a team of employees who walk through a working area and look for any wastes that they can identify and then implement "just do it" actions to immediately improve the process. By learning to identify inefficiencies and problem solve in their working environment, employees can gain skills and habits necessary to incorporate Lean thinking into their everyday work.

HOW TO LEARN MORE ABOUT LEAN

- Read *Working Smart for Environmental Protection* (EPA/ECOS Lean Government Primer), which provides additional information on Lean and Six Sigma methods, describes the activities and lessons learned from several state Lean efforts, and includes contact information for staff involved in those efforts. You can find this publication and additional information on public agencies and companies implementing Lean at EPA's Lean Government website (www.epa.gov/lean/government) and on Lean Project page of the Environmental Council of the States' website (www.ecos.org/content/project/detail/2292).
- Consult the bibliography (Appendix A) of this Starter Kit for a list of references and websites geared towards agencies interested in learning more about Lean principles and methods.
- Go to EPA's Lean Government website for more information and case studies on federal and state environmental agencies using Lean (www.epa.gov/lean/government), including a *Lean in Air Permitting Guide* focusing on air permitting examples.
- Talk to other agencies implementing Lean. Agencies are generally excited to share their experiences and can be helpful resources for agencies considering Lean.

How Does Lean Relate to Government?

While Lean originated in manufacturing, it quickly spread to the service sector and to address administrative and office systems. In the early 2000s, a handful of federal, state and local government agencies in the U.S. saw the relevance and power of Lean and began applying Lean methods in the government context. Since then, Lean implementation has grown dramatically in the government sector.[2] Increasingly, Lean has provided an alternative path to navigating tough budget pressures and customer service and responsiveness demands experienced by many public agencies. Instead of focusing on hiring freezes, program cuts, travel restrictions and delayed investment, some agencies are using Lean to look closely at processes, operations, and systems—the work itself—to do more, better, with less time, resources, and hassle.

[2] See EPA's Lean Government website for information on how Lean is being applied by EPA and state environmental agencies.

So why is Lean so promising for improving government? Ken Miller, the author of *We Don't Make Widgets: Overcoming the Myths That Keep Government from Radically Improving*, has written about three reasons:[3]

1. **Lean focuses on operations**. The whole point of Lean is to rethink the way we produce what we produce, to increase our capacity to provide value to those we serve. Lean recognizes that inefficiency resides in our systems and our operations—the way we have designed our work. Lean is not another planning model, measurement method, or accountability system. Lean is not a pithy slogan or something you tell employees to do. Lean actually focuses on the work of the agency.
2. **Lean has a measurable impact on time, capacity, and customer satisfaction**. That is, it actually works. Lean projects produce amazing results, and they are often completed in as few as five days.
3. **Lean involves employees**. Specifically, the employees who work within the process or system being improved. Government agencies have tried employee involvement before, with suggestion programs, quality teams, and so forth. While the intent of those programs was good, the focus was too small. Employees may be able to suggest ways to improve their own performance, or the piece of the process they're involved in. But systems cut across silos. Most employees can only see a part of the whole system. Therefore, what might help them personally be more productive could actually hinder the larger system. Lean projects, on the other hand, involve all the key players in a system (including the "customers") to analyze and improve the whole system.

Government agencies have numerous "processes" that produce "products"—including regulations, guidance memos, reports, grants, workshops, inspections, travel authorizations, employee benefits processes, mail delivery, and on and on. All of these processes have work flows waiting for improvement. Therein lays the promise of Lean.

At the same time, there are barriers that limit Lean's success in government. The textbox below highlights some important barriers to consider. In addition, numerous ideas, tips, and cautions are included throughout this Starter Kit to help overcome these and other obstacles to success. While barriers and challenges exist, experiences with Lean in government over the past decade paint a compelling picture of the value of moving forward with Lean. The next section addresses the question of "Why Do Lean?" for government agencies.

[3] The three reasons are quoted from the following article: Ken Miller, "Lean Government's Promise of Going 'Lean'," *Governing*. May 21, 2009, www.governing.com/blogs/public-great/lean-government.html.

OVERCOMING BARRIERS TO LEAN'S SUCCESS IN GOVERNMENT

Numerous quality and process improvement fads such as TQM, quality circles, and reengineering have come and gone in government. Many in government are beginning to see the power of Lean thinking for driving excellence in government programs and processes. They see Lean's potential for being more than a passing fad. How can that fate be avoided? Here are some barriers that must be overcome:

- The industrial jargon of Lean is a turn-off. Lean will only thrive if people in government believe the concepts and methods apply to them. We have a ways to go in helping government managers and staff members to see the relevance and power of Lean without experiencing it firsthand. Consider ways to minimize the use of jargon and the desire to develop names and acronyms for improvement efforts (e.g., you may want to use the term "rapid improvement event" [RIE] instead of kaizen event).
- Government managers often don't care about operations and work processes. Many government leaders and managers didn't join government to manage. Instead, they are driven by a deep desire to address an issue or solve a problem. They get excited about bold new programs and solving big problems—not about making operations and processes hum. But the key to results in government is a combination of innovative policy and improving the performance of operations. Effort is need to uncover and celebrate the value of improving operations—the work that gets done day in, day out. Plus, eliminating non-value added activity ("waste") gives everyone more time to focus on your agency's highest priorities and new initiatives.
- The emphasis of Lean may seem like it's on the wrong thing. Much of the current focus of Lean is on reducing waste, including process inefficiency and complexity. The real challenge facing many government agencies is capacity—having enough resources to keep up with ever-expanding and ever-more complex workloads and challenges. Lean needs to be refocused to emphasize its ability to increase our capacity to do more good. It can thus be a vehicle for process improvement and increased capacity, even in the face declining resources conditions. (It is important to make a commitment that no one will lose their jobs due to process improvement activities, or no one will want to participate.)

Source: Adapted from Ken Miller, "Lean Government's Promise of Going 'Lean'," *Governing*. 21 May 21 2009, www.governing.com/blogs/public-great/lean-government.html

Lean can dramatically improve the performance and effectiveness of agency processes in a relatively short timeframe (see textbox for a list of typical benefits). The impressive results from environmental agency Lean efforts also speak for themselves. Here are a few examples of how EPA and state environmental agencies have used Lean events to design more efficient processes:

- **Delaware Department of Natural Resources and Environmental Control** lowered a backlog of air construction permits from 199 to 25, while reducing the average permit processing time to less than 76 days under the new process design.
- **EPA Region 6** decreased the total processing time for its Pesticide Enforcement Case Resolution process from 455 days to 216 days (a 53 percent reduction). EPA focused on eliminating non-value added time, in order to increase EPA's ability to close enforcement actions, and thereby increasing overall responsiveness to the public and decreasing the risk to human health and the environment.
- **Iowa Department of Natural Resources** streamlined the corrective action process activities in its Leaking Underground Storage Tank program, reducing the number of decisions by 80 percent and the number of process steps from 43 to 26 (a 40 percent

reduction). These improvements promise to drop the average decision-making timeframe from 38 months to 3 months.

- **Michigan Department of Environmental Quality** decreased the average time needed to process major air construction permits from 422 days to 98 days. Quality also improved, with initial application administrative completeness rising from 82 to 95 percent.
- **Vermont Agency of Natural Resources** decreased the time needed to process an on-site wastewater permit from as high as 542 days to 34 days (a 94 percent reduction) with the new process design, and cut the number of steps in the permitting process from 150 to 38.
- **EPA's Office of Water, EPA Region 7, and four States** (Iowa, Kansas, Missouri, and Nebraska) are using Lean to significantly improve water quality standard (WQS) setting and National Pollutant Discharge Elimination System (NPDES) processes. The team's new WQS process design reduced process steps from 50 to 26 (a 48 percent reduction), cutting the length of the process from a few years to several months.

These agencies achieved these results by using value stream mapping, kaizen events, and other Lean methods. For more information and case studies about EPA and state Lean activity, see EPA's Lean Government Website (www.epa.gov/lean/government).

BENEFITS OF LEAN

By using Lean tools, an agency can expect to:

- Eliminate or dramatically reduce backlogs
- Reduce lead times by more than 50 percent
- Decrease the complexity of processes and eliminate unneeded process steps
- Improve the quality and consistency of work products and activities
- Allocate more staff time to "mission critical" work
- Improve staff morale
- Enhance process transparency to internal and external audiences

The table on the next page shows examples of how environmental agencies have used Lean events to develop more efficient air permitting processes.

Estimated Improvements in Air Permitting Timeframes Resulting from Lean Events

STATE AGENCY	SPECIFIC AIR PERMITTING PROCESS	PERMITTING TIMEFRAME BEFORE LEAN EVENT (IN DAYS)	PERMITTING TIMEFRAME AFTER LEAN EVENT (IN DAYS)	DECREASE
Idaho Department of Environmental Quality	Permit to construct	270	97	64%
Indiana Department of Environmental Management	Title V permit modifications	164	144	12%
Iowa Department of Natural Resources	Standard air quality construction permits	62	6	90%
Iowa Department of Natural Resources	Air quality complex permits	214	180	16%
Michigan Department of Environmental Quality	Major air construction permits	422	98	77%
Michigan Department of Environmental Quality	Minor air construction permits	143	50	65%

Distinguishing Lean from Other Improvement Initiatives

Lean is different from past improvement efforts in several key ways. Lean:

- Takes a "customer service" perspective that seeks to optimize value delivered to the environment, the public, and the regulated community;
- Involves employees and external stakeholders in continual improvements and problem-solving activities;
- Deploys a rapid continual improvement framework that emphasizes implementation rather than prolonged planning;
- Seeks to reduce the complexity of processes; and
- Uses metrics and visual controls to provide rapid feedback to improve real-time decision-making and problem-solving.

By eliminating non-value added activities, environmental agencies can redirect staff time to higher-priority activities related to their core mission of environmental protection.

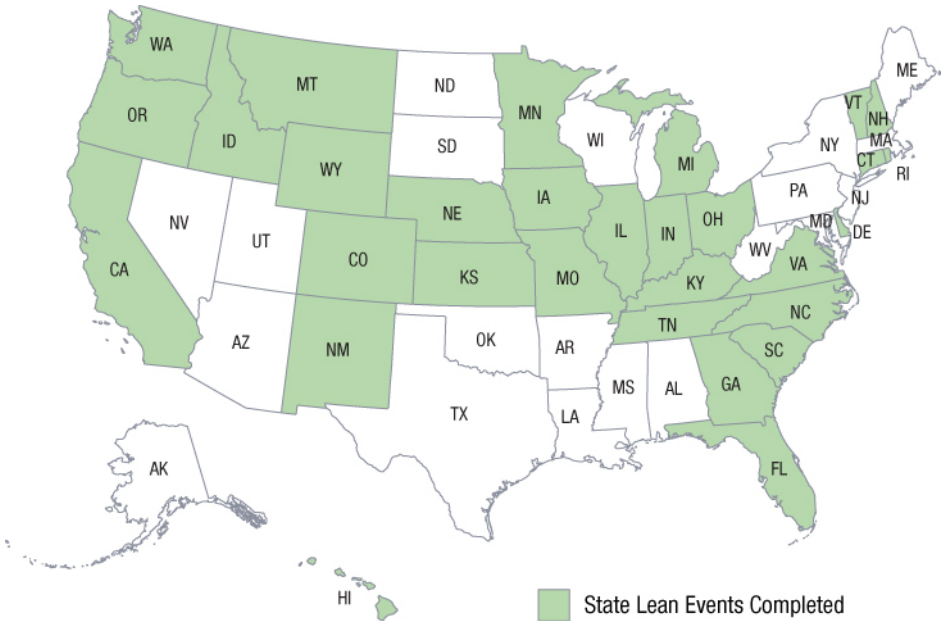
Using Lean to achieve process excellence is a growing trend among government agencies, including those focused on environmental protection. The 2006 *Working Smart for Environmental Protection* primer looked in depth at the Lean experiences of five state environmental agencies, all of which have continued with Lean implementation efforts. But

those were just the initial pioneers of Lean at state environmental agencies! As of June 2011, there are 29 state environmental agencies that have conducted Lean events, as shown in the map below (See "Inventory of State Lean Events" on the ECOS website for more information about the Lean activities of these states: www.ecos.org/content/project/detail/2292/).

Resources

- Lean Inventory

Lean and State Environmental Agencies



Events EPA is aware of as of June 2011.

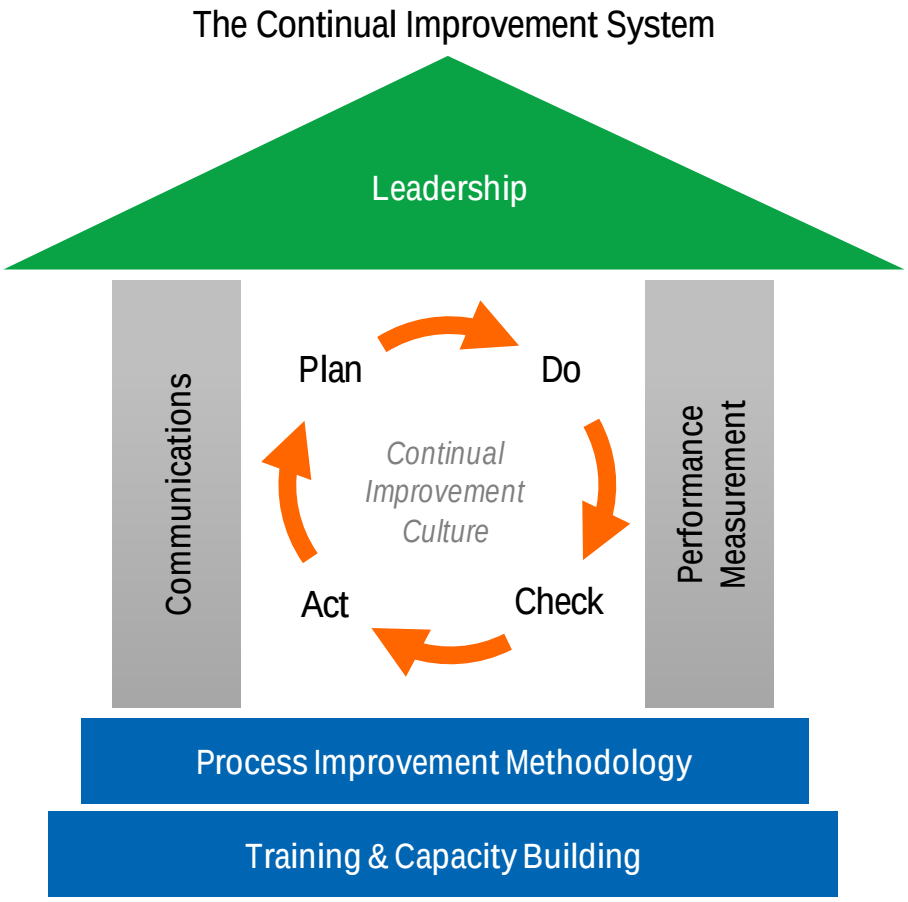
Lean efforts have also taken off at EPA, other federal agencies, and in many local jurisdictions.[4] As of October 2011, EPA has conducted over 10 Lean events at EPA headquarters and in regional offices around the country, including several joint efforts between regional offices and state agencies. There is a large network of over 30 federal agencies implementing Lean, and several federal agencies have established substantial process improvement efforts. The U.S. Department of Defense (including the Air Force, Army, Navy, and other agencies), for example, has conducted *thousands* of Lean and Six Sigma projects. Local government agencies, including energy and water utilities, have launched successful Lean programs as well. For example, the City of Fort Wayne, Indiana, has completed over 100 Lean projects in city departments to improve customer service, decrease costs, and increase productivity, resulting in millions of dollars of savings.[5] These improvements can also translate into real environmental results: JEA,

[4] See http://leangovcenter.com/govweb.htm as well as http://en.wikipedia.org/wiki/Lean_Government for lists of links to federal, state, and local government agency Lean websites.
[5] See www.tqmnet.com/lssHPG.php for more information on Lean and Six Sigma at Fort Wayne, Indiana.

an electric, water, and sewer utility in Northeast Florida, used Lean Six Sigma methods to reduce nitrogen discharges from a wastewater treatment plant by 74 tons per year, meet regulatory requirements two years ahead of schedule, and avoid the need to invest in costly plant upgrades.[6]

What Is Needed for Long-Term Success with Lean?

This Starter Kit is designed to help you effectively plan for and implement Lean process improvement methods—such as kaizen and value stream mapping events—thereby reducing process time and complexity, improving customer service, and making more time for high-priority activities. Whether you are considering conducting one or 100 events at your organization, there are several key activities that will help ensure that your Lean efforts yield the best results over time. Successful process improvement efforts, including Lean government transformations, involve five key elements: leadership, process improvement methodology, communications, performance measurement, and training and capacity building. These five elements collectively support the development of a continuous improvement culture. The relationship of these elements is shown in the Continual Improvement System "House" diagram below.



[6] See www.epa.gov/lean/environment/studies/jea.pdf for more information on JEA's Lean Six Sigma efforts.

Leadership

The involvement and commitment of leaders and senior managers is the most important factor in the long-term success of Lean process improvement efforts. Supportive and engaged leaders can inspire the confidence and enthusiasm of others who are necessary to making improvements become a reality. Leadership support is essential for enabling the success of both individual Lean improvement events and your agency's overall process improvement initiative. A Lean leader should take several critical steps, listed below, to support Lean process improvement initiatives and to actively engage with Lean teams before, during, and following Lean events. The Lean Leadership Guide (see resource) has specific examples of what leaders can do in each of these steps. For example, a Lean event sponsor can play a key role in enabling the success of the event by clearly articulating a vision of success, detailing what goals the improved process should accomplish, and empowering the team to develop approaches to achieve those goals. Lean leaders play an important role in removing barriers to change.

Resources

- Lean Leadership Guide

CRITICAL STEPS FOR LEAN LEADERS

1. Choose where to focus improvement efforts
2. Define process excellence and set clear goals
3. Actively participate in process improvement events
4. Assign staff and resources
5. Provide visible support for Lean efforts
6. Monitor progress and hold people accountable
7. Clear obstacles to successful implementation
8. Recognize and celebrate accomplishments

Process Improvement Methodology

Effective process improvement initiatives rely on a clear and structured problem-solving approach that employees at all levels can use and embrace. At their core, Lean and Six Sigma are based on the Plan-Do-Check-Act continual improvement cycle developed by Dr. W. Edwards Deming. They include tools to help employees understand what the standard process is, identify when deviations occur, and then make changes to get back on course. Chapters 3–6 of this Starter Kit are a "how to" guide for implementing Lean improvement events—a powerful way to put the Plan-Do-Check-Act cycle into practice with a burst of on-going concentrated activity over a short period. Through Lean improvement events, your team will:

- **Plan:** Set process improvement goals, analyze your current process as it actually operates, design a new and improved process, and develop a robust implementation plan.
- **Do:** Implement process changes to reduce process complexity, increase efficiency, and improve environmental results.
- **Check:** Monitor implementation efforts to see whether they are on course and report on progress made.

- **Act:** Adjust implementation efforts as needed to meet process improvement goals and conduct additional Lean events to drive further improvements.

This Starter Kit focuses primarily on kaizen events and value stream mapping events; however, there is a range of Lean, Six Sigma, and other tools that can support your agency's process improvement initiative. Some of these tools can be implemented during a Lean event, while others involve separate processes or may be implemented as part of daily work practices. See chapter 3 for more information about business process improvement methods.

Resources

- Frequently Asked Questions About Lean

Communications

As with any new change initiative, an effective communications strategy can make the difference between something that falters and something that takes root and grows. Without consistent supportive messages from leadership, Lean efforts are not likely to succeed. Especially during early stages of implementation, people may have a lot of questions and misconceptions about what Lean is, why the agency is using it, and what it means for their work. Use the *Frequently Asked Questions About Lean* document (see resource) to support your Lean efforts and address common questions agency staff and stakeholders may have. Internal and external communications are a critical aspect of effectively conducting Lean events. Chapter 4 provides additional guidance on communications activities leading up to Lean events, and Chapter 6 offers recommendations and tips for post-event communications with internal and external audiences.

Performance Measurement

The Lean production system is built around close attention to performance measurement. This includes key dimensions of value relevant to the customer such as time (e.g., how long it takes to get a permit application processed), quality (e.g., whether there are errors or omissions in a document), and cost (e.g., how much staff time and agency resources are used). The *Lean Government Metrics Guide* (see resources) and the metrics discussion in Chapter 4 have more information about the types of metrics used in Lean efforts. Much of the value of Lean process improvement events comes from delving deep into the way that processes actually work, analyzing performance data for the process using key metrics, and charting a course for improvements based on the team's collective understanding of that real-world data. The estimated performance gains that the new process will yield then serve as targets for implementation activities. Agencies with more established Lean programs should consider what kind of consistent performance measurement, tracking, and reporting system for Lean implementation efforts makes sense for their culture and needs. Providing a common framework for reporting on Lean success stories and implementation efforts can be incredibly useful for promoting process improvement efforts and ensuring accountability for results.

Resources

- Lean Metrics Guide

Training and Capacity Building

Training and capacity building are important foundations for sustainable process improvement programs and key to fostering a continual improvement culture within an organization. However, as with many aspects of Lean, training should have an applied, value-added focus. Many organizations starting out with Lean or Six Sigma falsely assume that they need to do a lot of training before beginning process improvement activities. Unlike TQM, which places a heavy emphasis on training as a mechanism for process improvement, Lean is primarily a "learn by doing" approach. For this reason, many Lean training courses incorporate simulation exercises to give participants a sense of how Lean concepts and tools work in practice. Similarly, Lean and Six Sigma certification programs generally involve a combination of coursework and requirements for participants to complete improvement projects at their organizations. For many Lean event participants, their primary Lean training is provided on day 1 of the Lean event (this is sometimes called "just in time" training), to prepare them to engage in the process-improvement activities during the remainder of the event. A large component of your organization's Lean training may come as a "byproduct" of conducting kaizen events and generating process improvement results! By immediately applying the knowledge learned in just-in-time training in the context of an actual event, participants can quickly achieve a basic level of proficiency in understanding and conducting Lean tools.

Resources

- Guide to Lean Government Training

When deciding what Lean training is appropriate for your agency, it is important to consider the goals of your effort. In general, there are at least four goals for education and training efforts:

- **Inform and Engage:** For your Lean initiative to be successful, it is critical for people in your agency and other important stakeholders to understand what Lean is and why it is important. One category of education and training, therefore, focuses on explaining what Lean is, how it relates to environmental agencies, and helps build the case for "What's in it for me?" to managers who may be considering using Lean to improve their processes.
- **Coach:** Prior to Lean events, it is helpful to educate and coach key participants in the event, including the event sponsor, the team leader, and any other important decision makers who will be involved on what happens before, during, and after the Lean event, and how they are expected to participate during each stage. If your agency is using an outside consultant facilitator, be sure the facilitator knows your expectations for the event, including the scope, desired approach, briefings and report-out presentation, and follow-up plans, and clearly delineate the division of roles and responsibilities between the team leader and facilitator. Use this Starter Kit as a guide and resource for coaching presentations and discussions.
- **Enable:** Another key training objective is to provide the skills and knowledge that people need to effectively participate in Lean events and implementation activities. Training for event participants focuses on Lean methods and principles, and is typically done (at least as a refresher) on the first day of the event. Following the event, additional training is needed to educate staff on the new process and any standard work that the

team developed, and enable everyone involved in the process to work together towards successful implementation.

- **Build Capacity:** While relying on external consultants to provide Lean facilitation can be a valuable strategy for rapidly generating process improvements initially, there are advantages to developing in-house capacity for Lean facilitation and training for process improvement programs over time. In addition, it is useful to build the capacity of staff to problem-solve and identify inefficiencies as part of their daily work practices. This allows process improvements to occur regularly and not wait for a kaizen event. Successfully conducting Lean events and other process improvement activities depends not only on the "technical" knowledge of Lean methods, but also softer skills such as project and process management, change management, and effective team dynamics.

If you're just beginning with Lean, you may not need much more than an orientation to Lean concepts and the just-in-time training that a Lean facilitator provides during a Lean event. However, if you've decided to embark on a broader, process-improvement initiative, you may want to train some staff to become continual improvement coordinators. Many environmental agencies began their Lean efforts by relying heavily on external consultants as Lean event facilitators, but over time have shifted towards in-house facilitation of Lean events and using consultants only for strategic guidance or for facilitating particularly complicated or contentious events. Chapter 7 discusses steps, including training, for building a Lean enterprise and diffusing Lean activity within your agency. See the *Guide to Lean Government Training* on EPA's Lean Government website (www.epa.gov/lean/government) for guidance on designing an agency Lean program and information on the range of options that are available for learning about Lean concepts and methods.

The next several chapters discuss how to select, plan, and conduct Lean process improvement events, as well as how implement follow-up activities effectively.

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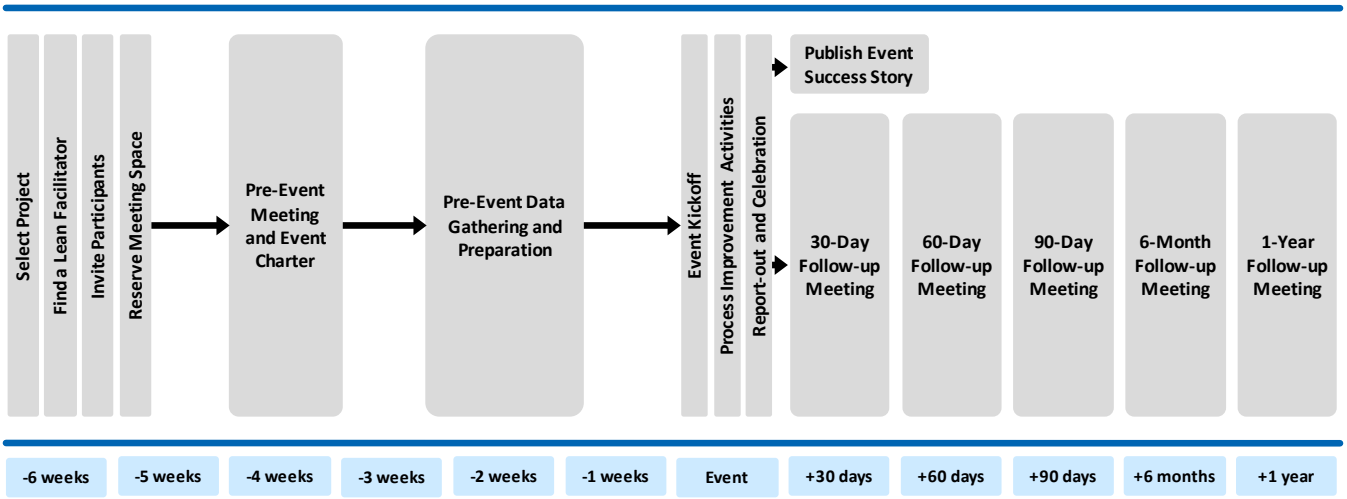
Chapter 3. Selecting a Lean Project

This chapter provides advice on the first steps to take when planning a successful Lean event: selecting a Lean project, choosing a Lean method, and locating technical assistance for your Lean effort. Chapters 4, 5, and 6 then describe the scoping and preparation you should do to help ensure that your event will be a success, and provide information on conducting the event. Chapter 7 discusses follow up after the event to ensure effective implementation of the process improvements identified by the team.

Most agencies begin their Lean implementation efforts with a pilot project to improve an existing agency process. The diagram below shows the steps that your organization should take in the weeks leading up to, and the months following, a Lean event. By following this timeline, you can be sure to be well-prepared prior to the event, and ready to stay on-track with implementation of process improvements during the important period following the event.

Lean Event Planning Timeline



Step 1: Select a Lean Process Improvement Project

As you begin your Lean journey, it is important to take the time to carefully select your first process to target for improvement. This section lists the steps you should take to select your Lean process improvement project. Select a process to target for improvement during your Lean event prior to the pre-event meeting (typically held four to six weeks before the event). More information about the steps to take when selecting and scoping your process is available in the *Lean Government Event Scoping Guide*.

Resources

- Lean Government Event Scoping Guide

List Potential Processes to Target

If this is your agency's first event, it may be useful to start with a relatively simple process (e.g., air construction permitting for minor sources or a permit modification process) or an internal process that does not directly interface with external parties (e.g., audit action tracking), to get a feel for Lean methods. The selected process should be sufficiently important to capture organizational attention, but not so complex as to make progress difficult through a single event. It is critical to start with a process area where there is a high level of management support and commitment to ensuring a successful Lean event. However, other circumstances may dictate which process is the best candidate for a Lean event. For example, it may make sense to hold the Lean event in conjunction with another major change within the agency during the implementation of a new rule or major staffing changes.

Most agencies select a process to target in a Lean event while guided by either strategy or "pain"—that is, the greatest perceived problems. Strategy-driven process selection and pain-driven process selection can be based a variety of factors, such as those below.

Strategy-driven process selection factors:

- New initiatives
- Regulatory programs
- Degree of criticality to agency mission

Pain-driven process selection factors:

- Backlogs and amount of work in progress (WIP)
- Administrative bottlenecks and delays
- Customer and staff complaints
- Funding concerns

Use either approach (strategy or pain), or a blend of both, to generate a list of potential processes, and try to identify the high-level purpose of each potential improvement effort (e.g., reduce lead times, improve quality, or eliminate rework). In many organizations, it makes sense to initially conduct some pain-driven events, then evolve to selecting events that are linked to the agency's strategic plan and workforce development goals.

Assess Project Desirability

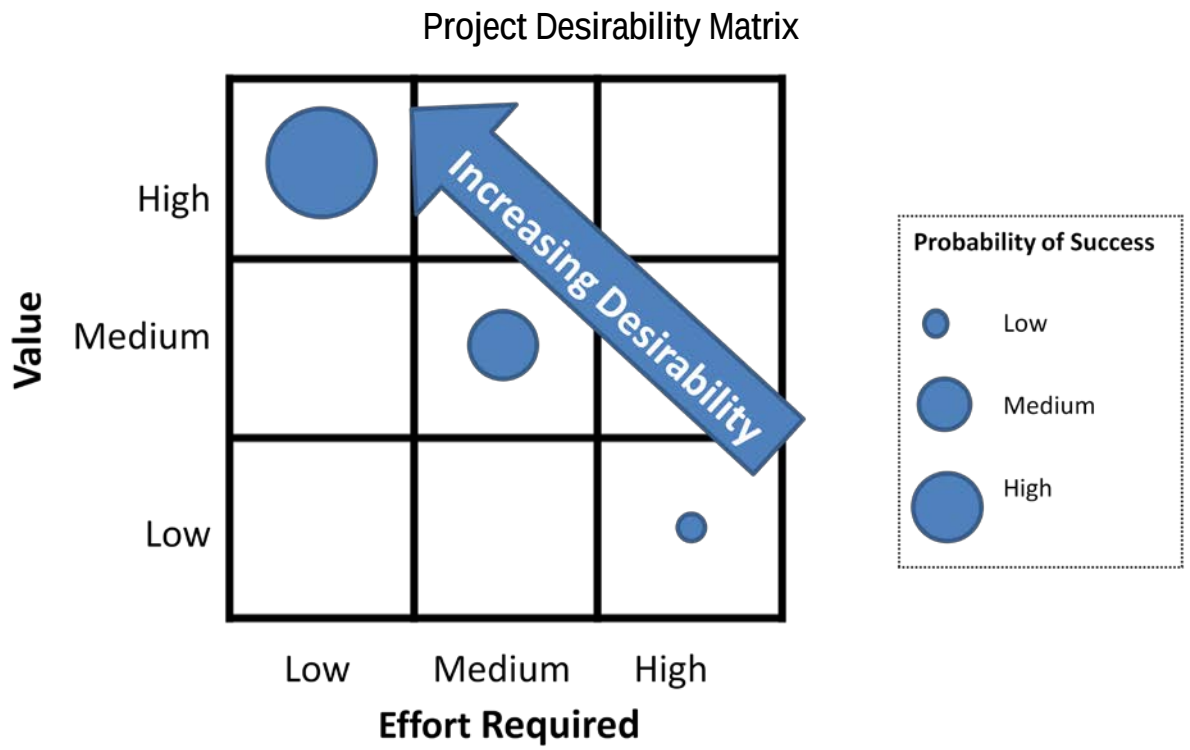
The next step in project selection is to assess the processes you've listed to determine which ones would work well in a Lean event. Consider the following three factors in ranking project desirability.

- ***Value to the organization.*** This factor refers to the effect that potential process improvements will likely have on the organization or its stakeholders. Value could be considered in terms of environmental outcomes, quality of service, or cost-effectiveness of budget investments, among others.
- ***Effort required.*** This factor captures the amount of time and resources that will likely need to be devoted to the Lean event and follow-up activities in order to realize value.

Complex processes and well-established processes may require a high level of effort to change.

- ***Probability of success.*** Reflect on the various risk factors that may affect the likelihood that improvements will be successfully implements. A low probability of success may hinder projects that require a large financial investment, that will not show benefits for more than a year, or that require assistance from extremely busy people, among other factors.

Rate potential projects based on the three criteria above, and then plot them on a project desirability matrix.



Source: Based on a presentation by Guidon Performance Solutions, "How to Scope a Lean Event," at the Lean Government Exchange in Des Moines, IA, 9-11 June 2009, www.slideshare.net/guidon/how-to-scope-a-lean-event.

The type of government process may influence the level of desirability for investing in process improvements. For example, some processes may require substantial effort to improve and the improvements may contribute little value to the organization and its ability to achieve its mission. While all processes can benefit from Lean implementation, the types of Lean results—time, quality, and cost—can vary depending on the type of government process that is targeted. Quick, impressive process improvement results are often important for building organizational support and momentum, while freeing resources and time to focus on more mission-critical work. While applying Lean to more complex processes may not yield quick time and cost savings, sustained focus on Leaning complex processes may yield dramatic improvements in the agency's ability to achieve its mission. The textbox below discusses how different government process types can affect Lean results.

Screen for Readiness to Select the Project

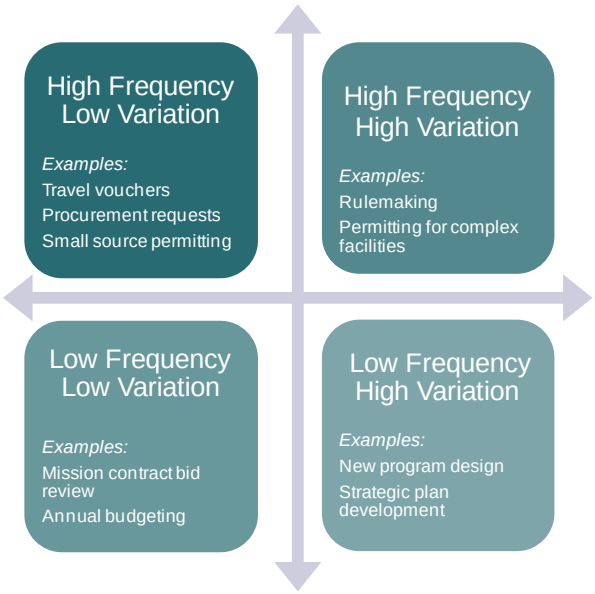
After you have narrowed your list to the most desirable projects, screen the projects for readiness. You should select the project that is most well-suited at the present time to produce positive results for your organization, and serve as a model to inspire future events. Consider the following factors:

- ***Presence of a "champion."*** If there is no obvious individual to oversee and lead a Lean event on the process and motivate others to change (a "champion"), then it is not likely a good candidate for improvement.
- ***Engagement of key managers.*** If key managers show resistance or opposition to an improvement effort, it can be difficult to move forward with implementation following the event.

GOVERNMENT PROCESS TYPES AND IMPLICATIONS FOR LEAN RESULTS

Government processes can vary both by *frequency* and *variation*. Process frequency refers to how often a process is executed. Process variation refers to the degree of change or difference among outcomes or products produced by a process. These attributes can have important implications for the types of results—time, quality, and cost—that can be achieved and should be expected from Lean implementation. For example:

- *High frequency-low variation processes*. Lean results can be particularly compelling for high frequency-low variation processes, particularly in terms of time and cost savings. The benefits from Lean improvements accrue each time a high frequency process is executed. For example, Lean improvements to a travel authorization/travel voucher process or a procurement/purchase card process can save time and money every time the process is executed. When these processes are exercised thousands of times per year, benefits add up quickly. Low variation processes are often less complex, making is easier to use Lean tools to drive out non-value added activity. Think about opportunities for building momentum with Lean success on high frequency, low variation processes.



- *Low frequency-high variation processes*. It can take longer to realize impressive Lean results with low frequency-high variation processes. These processes are typically more complex and do not occur as often as high frequency processes. While the initial time and cost savings can be less dramatic than for high frequency-low variation processes, Lean methods can be highly effective for improving the quality and effectiveness of low frequency-high variation processes. For example, applying Lean to a periodic strategic plan development process or a rulemaking process can produce meaningful time and cost savings, but the real value may lie in improvements to the quality, effectiveness, and transparency of these processes. Value stream mapping and other Lean methods are powerful tools for reducing the complexity of high variation processes. Lean also creates more robust institutional memory of the process that avoids reinventing the wheel in the future.

Another Dimension that Can Affect Lean Results: *Multi-Agency Processes*

Processes that involve hand-offs among multiple government agencies or offices pose unique challenges and opportunities. Each agency has its own internal process that interfaces with other agencies' processes. These agency-specific processes may not be well-aligned and process "ownership" boundaries may not be clear. Value stream mapping can be a powerful tool for building cross-agency understanding, trust, and alignment. Kaizen improvement events can help improve internal agency processes that interface with the multi-agency process. Leadership and political will across the participating agencies is typically needed to navigate obstacles arising from differences in agencies' missions, goals, and organizational cultures.

Think carefully about which processes types you want to target first and set realistic expectations for results.

Step 2: Select a Lean Method

Once the initial scope of the event has been determined, consider which Lean methods to use. Two common event-based Lean methods are value stream mapping and kaizen events. While these event-based Lean methods are powerful methods for driving continuous improvement, there is a range of complementary Lean methods that can also support continuous improvement and process excellence. This Starter Kit focuses on event-based Lean methods; however, other important Lean methods are summarized later in this section. Your Lean facilitator can guide you in choosing the methods that are right for your agency and process.

- A **kaizen event** is a highly structured, two to five day facilitated event involving a team of agency staff and stakeholders that is designed to rapidly make progress in identifying and implementing improvements to a process. Participants map out the steps of the process, gaining an understanding of all parts of the process, and then identify areas where non-value added steps can be eliminated in order to reduce waste. Kaizen events are characterized by immediate implementation of process improvements. The event is typically followed by weekly implementation team meetings and post-event progress meetings with leadership, usually 30-, 60-, and 90-days after the event, to track the implementation of identified improvements.
- A **value stream mapping event** is similar to a kaizen event, but higher level in focus; it also requires the dedication of a team of participants, generally for three to four days, and the services of a facilitator. The team maps out the entire process from start to finish in its existing state in a high-level visual representation of process flows. Participants then create an alternative future state map based on the elimination of waste from the existing state. Improvements are identified to transition from the existing process to the future state. A value stream mapping event approach is more high-level and strategic than a kaizen event, and can be used to create a full picture of a process before drilling down into tactics through another method such as a kaizen event.

Agencies just starting out with Lean often use kaizen events to quickly achieve the results that have interested many in Lean. Conducting one or a few kaizen events can help build momentum for a Lean initiative. Some agencies choose value stream mapping (or simplified process mapping) for their first event, since this method can help an agency clearly understand its process and identify areas of waste that can be targeted through future kaizen events. Other agencies have integrated value stream mapping and kaizen rapid implementation techniques in the same event.

Resources

- Pre-Screening Application for Lean Events

Kaizen and value stream mapping events are very powerful methods, yet they can require substantial investments of time, energy, and financial resources. In some cases, other Lean tools may be most appropriate, such as in situations where resources are limited. The *Lean Methods Table* on the following page describes various Lean methods and the situations in which it makes sense to apply them. Some of the Lean methods, such as 5S and visual controls, can be

implemented either during or outside the context of Lean events. Appendix A includes a list of references with additional information about many of these methods.

Keep in mind that while many of these valuable tools involve a formal, planned approach to process improvement, your organization can also regularly implement "just-do-it" actions that do not require team participation or little or no formal tools. These quick fixes can empower employees to perpetuate continuous improvement through their everyday operations, and reduce waste and improve efficiency outside the bounds of formal events. You can identify "just do its" in kaizen events, or through process walks or in your daily work once you have an understanding of Lean concepts. In this way, processes can continue to improve without the need to wait for the time and resources to be dedicated to another event.

Lean Methods

METHOD	DESCRIPTION	WHEN TO USE THIS METHOD	EXAMPLES
Process Walk / Treasure Hunt	A cross-functional team of employees walks through the work area over a short period of time, identifying opportunities to reduce waste and introduce improvements as they walk. Improvements can usually be implemented rapidly, resulting in quick gains. This method can help to engage employees in spotting waste in their day-to-day activities beyond the scope of the initial treasure hunt or waste walk.	To identify immediate and/or easy changes; to identify waste in a process "on the floor"	South Carolina Department of Environmental Health and Control conducted a waste walk prior to a Lean process improvement event in order to establish an understanding of areas with the greatest need for improvement.[7]
Standard Work	This tool represents the sequence of activities needed to perform a given operation, and forms the baseline for other continuous improvement efforts. Improvements made during kaizen events are immediately documented as standard work to ensure that all employees understand and consistently implement the new process. Standard work (e.g., templates, forms, & process maps) ensures consistency and prevents errors.	In conjunction with other process improvement efforts, to document and sustain identified process improvements	EPA Office of the Chief Financial Officer developed a standard format for corrective action plans, dramatically improving efficiency and data accessibility.[8]
Visual Controls	Visual controls, which are signs or symbols to remind employees of standard procedures, can be used to reinforce the improvements made to a workspace using 5S. These controls are also used for implementing standard work and improvements identified during other Lean events, to provide visual feedback on process performance.	To quickly remind employees of identified improvements and ensure continued implementation, reducing deviations from the desired standard	Examples of visual controls include color-coded filing systems, labels, timers, and signs reminding employees of standard practices.

[7] For more information, see the South Carolina Stormwater Permit Process case study: www.epa.gov/lean/government/state-initiatives/southcarolina.htm

[8] For more information, see the EPA Office of the Chief Financial Officer Corrective Action Tracking case study: www.epa.gov/lean/government/epa-initiatives/ocfo-casestudy.htm

METHOD	DESCRIPTION	WHEN TO USE THIS METHOD	EXAMPLES
5S	5S is a method for maintaining a clean & orderly workplace based on five steps: • Sort (organize tools and materials, retaining only what is essential) • Set in Order (arrange and label items in an order that maximizes workflow) • Shine (regularly straighten and tidy workspaces and restore items to their place) • Standardize (spread identified improvements to all workstations) • Sustain (maintain and review standards to ensure they continue to be implemented) Some organizations add a sixth "S" for Safety.	When there is a need to improve workstations and workplace organization	The state of Minnesota has established a 5S training program for government offices; Indiana Department of Environmental Management (DEM) has applied 5S to establish orderly, efficient work areas.
A3	This rapid-deployment tool complements organizational strategy by displaying the connections between overall priorities and tactical Lean efforts. Individuals or small teams diagram a process or problem using only what they are able to fit on a standard A3-sized (approx. 11 x 17") piece of paper. This method requires that the team communicate well to depict the process simply, and results in a high-level view of the current steps in the process. The team, having improved their problem-solving capacity and gained a fuller understanding of the process, then uses the view of the process created on the paper to identify areas for improvement.	To connect overall organizational strategy to all levels of process improvement efforts; to identify areas for quick improvement and flag areas for potential future improvements	Indiana DEM has applied the A3 method at the staff level to improve connections between strategy and improvement efforts, and to improve communication across the agency.
Mini-Lean Event/ Point Kaizen	A condensed, small-scope improvement effort on a single improvement that can be completed in a very short time-frame, often a matter of a few days or even hours. Point kaizen events focus on a small part of a process or work cell. Improvements are implemented rapidly in order to realize short-term results.	Time constraints and/or limited financial resources; when there is a need for extremely rapid small-scale improvements	Iowa Department of Natural Resources has conducted six point kaizen exercises on processes with a small scope and condensed timeline.
Kaizen Event	A structured event led by a facilitator in which a team of participants (composed of a mix of leaders, staff, and people less familiar with the process) map out a process and identify areas for rapid improvements and areas for waste elimination. Sometimes called a "kaizen blitz," this tool can help jump-start a larger, sustained process improvement effort across an organization by serving as a pilot project.	The primary implementation method for Lean, use kaizen events to identify process changes for practical implementation	Florida Department of Environmental Protection's Submerged Lands and Environmental Resource Permitting Program kaizen event achieved a 50% reduction in the time it takes for an application to reach a processor.[9]

[9] For access to several case studies on kaizen events, see the EPA Lean Government Publications page: www.epa.gov/lean/government/publications/casestudies.htm

METHOD	DESCRIPTION	WHEN TO USE THIS METHOD	EXAMPLES
Value Stream Mapping Event	A structured event led by a facilitator in which a team of participants maps out an entire process in detail from beginning to end, identifying areas for future process improvement efforts. This method provides a thorough, high-level understanding of the process and helps identify future steps for improvement.	Prioritization and planning tool to gain high-level understanding of processes and identify areas for future improvement efforts	EPA Region 6 Pesticides Enforcement value stream mapping event reduced total processing time by 53%.[10]
Six Sigma	A process improvement methodology that aims to improve processes by reducing variability and removing defects (or errors) using quality management methods including statistical analysis of processes. Processes are rated by their "sigma rating," which indicates the percentage of defect-free results or products generated. Organizations train staff to become Lean Six Sigma yellow- or black-belts, who are experts in reducing defects. Six Sigma improvement efforts follow the DMAIC methodology: • Define the problem • Measure key aspects of process data • Analyze the data • Improve or optimize the current process • Control the future state process to correct any deviations	When the specific problems in a process are quality related or highly variable and statistical analysis would be useful (Requires knowledge of statistical methodologies)	Minnesota Pollution Control Agency used Six Sigma to improve the timeframes for its NPDES permitting timeliness from 9% to 75% within 180 days and reduce the NPDES reissuance permitting backlog from nearly 50 percent to 8 percent.[11]
Lean Process Design	Methods for designing new processes or products or for redesigning existing ones. These methods incorporate Lean and Six Sigma concepts and tools to design processes that meet customer needs through processes that are as simple and waste-free as possible, anticipating and addressing potential problems early. Lean process design methods include Design for Lean Six Sigma and Production Preparation Process (3P)	When designing a new process or product, or redesigning an existing one (More advanced Lean method)	Iowa DNR applied Design for Lean Six Sigma to its effort to design a new agency magazine to achieve on-time high-quality production while meeting day-to-day communication needs.
Strategy Deployment	A strategic planning methodology in which all employees participate in process management to "cascade down" strategy deployment goals through all levels of the organization. This method is designed to ensure that all staff go about their work in a way that applies the master plan of the organization consistently. Regular review of actions is necessary to address deviations from the strategic plan. Also known as policy deployment or Hoshin Kanri.	When an organization is interested in connecting process improvement efforts to overall strategic goals (More advanced Lean method)	Iowa DNR applies policy deployment to prioritize process improvement efforts based on strategic objectives, and to select projects that promise to have the greatest impact on agency performance.

[10] For more information, see the EPA Region 6 Pesticide Enforcement Case Resolution case study: www.epa.gov/lean/government/epa-initiatives/r6-pest-casestudy.htm

[11] For more information, see the Minnesota Wastewater Permitting Process Six Sigma Project Case Study: www.epa.gov/lean/government/state-initiatives/minnesota-wastewater.htm

Step 3: Identify a Lean Facilitator

All Lean events are led by a Lean facilitator who organizes and manages the discussions. The importance of securing a skillful Lean facilitator cannot be overstated. The Lean facilitator serves as a team's guide throughout the Lean process, helping to scope the Lean event, facilitate the event, and advise on follow-up activities. Sometimes the Lean facilitator is referred to by the Japanese term *sensei* (SEN-SAY), meaning teacher or "one who has gone before."

Most agencies seek outside assistance at the beginning of their experience with Lean efforts; indeed, relying on external consultants to provide facilitation can be a valuable strategy for generating positive Lean results rapidly and helping your program take off. Over time, many agencies choose to build capacity for in-house facilitation and training in order to reduce dependence on external facilitators, which can be costly. However, even agencies that have developed in-house capacity for Lean training and facilitation find value in occasionally seeking additional assistance, especially for more complex or politically sensitive projects. See Chapter 7, "Diffusing Lean Activity and Becoming a Lean Enterprise," for more advice on building Lean capacity within your organization over time.

If you do choose to pursue external resources for facilitation, there are a range of technical assistance providers that facilitate Lean events, including private consultants, non-profit National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) centers, and university-based training programs.[12] Private sector companies who are using Lean have also provided technical support to agencies by allowing agency staff to attend industry trainings and providing Lean facilitators for agency events.

When evaluating a potential Lean facilitator, it is important to consider the facilitator's past experience, areas of expertise (e.g., supporting Lean in government and office settings), price, and availability. In general, the cost of an experienced Lean facilitator ranges from approximately $2,000 to $3,400 per day. The cost of having an experienced facilitator is typically well worth it to ensure a successful Lean event.

Resources

- Lean Facilitator Request for Proposal

Several helpful tips for securing a Lean facilitator include:

- Talk with representatives from other government agencies to ask for recommendations for potential Lean facilitators.
- Consider issuing a request for proposal to help with the selection of an experienced Lean facilitator. The sample Lean Facilitator Request for Proposal resource document in this Starter Kit should give you some ideas of the types of information to request.
- When evaluating potential Lean facilitators, take into consideration the facilitator's past experience, areas of expertise (e.g., supporting Lean in government and office settings), references, price, and availability.

[12] A directory of NIST MEP centers is available at: www.mep.nist.gov/about-mep/center-info.html.

- Remember that securing a talented facilitator is not the same as securing a talented facilitator who has experience running Lean events.

After your initial successes with Lean projects, try to identify individuals who might be interested in becoming trained Lean facilitators within your organization. Building internal capacity for facilitation in this way can ensure the longevity of process improvement efforts, even through times of financial constraints, and also empower staff to identify areas for improvement during their daily activities. As you "learn by doing," be sure to engage anyone who might be interested in becoming trained to facilitate events. Some agencies even develop internal facilitator training in order to maintain an infrastructure of continuous improvement capacity.

The next chapter explains how to scope the process after you have selected it, and to prepare for the Lean event.

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Chapter 4. Lean Event Scoping and Preparation

Once you have decided to conduct a Lean event, selected a process, and secured a facilitator, conducting effective planning and scoping are essential for success. This chapter explains the process scoping and preparation steps that you should take during the weeks leading up to the event. Follow these steps carefully to ensure that all participants will be well-prepared for a smoothly organized experience during your Lean event.

Team Selection and Planning Event Logistics

The first step to take preparing for the event on the process that you have selected is to identify who will be involved, invite those people to participate in the event, and plan logistics for the pre-event meeting and the meeting itself.

Identify the Lean Event Sponsor and Team Leader

Begin preparing for the Lean event by identifying the team participants and leaders. Several key individuals will bear the lion's share of responsibility for your event's success. The event facilitator, the sponsor, the team leader, and the implementation manager serve vital roles. As you identify individuals to serve in these roles, consider the responsibilities inherent to each role, described below.

Lean Event Roles	
Role	**Description**
Lean Facilitator	The Lean facilitator runs the pre-event meeting, the Lean event, and certain follow-up meetings (e.g., 30-day follow-up meeting). The Lean facilitator has training and experience in Lean facilitation.
Sponsor	The sponsor provides resources and senior leadership support for the Lean event and has the authority to remove obstacles to implementation of the new process. This person should be a senior leader of the division within which the Lean event is taking place.
Team Leader	The team leader is responsible for helping to plan the event, including the logistics, and assisting the facilitator during the event.
Implementation Manager	The implementation manager is responsible for ensuring that a clear and effective event follow-up process is established and conducted. This person should have sufficient authority to lead follow-up activities, remove barriers, and drive accountability.

Sponsor

Identifying a Lean event sponsor is critical to success. Ideally, the sponsor is a director or leader of a division within which the Lean event is taking place. Having a sponsor for an event can also increase buy-in within the agency and among upper management, and assist with removing any

obstacles in getting the event planned and implemented. This role is especially useful when trying to ensure that team members can get two to five days of time away from their regular duties and responsibilities to participate in the event. The sponsor participates at key times during the event and helps with follow up.

The sponsor should be enthusiastic, committed to the process, willing to take risks, and be open-minded and communicate this spirit to the team members. At times it can be difficult to sustain creative thinking and risk taking. The sponsor's role is to help infuse the team with energy and direction, and to encourage openness to out-of-the-box thinking.

Resources

- Lean Event Sponsor Contract

Specific responsibilities of the Lean event sponsor include:

- Provide the necessary financial resources for the event.
- At the event kick off, communicate expectations to the team and set the direction of the Lean event.
- Clearly state that the process that the Lean team develops during the event will be the new process—the team is not making recommendations.
- State that the sponsor will do everything possible to support the new process developed by the team.
- Challenge the team to develop innovative solutions and ideas without introducing pre-conceived ideas.
- Be visible during the event and provide enthusiastic support of the participants.
- Attend team leader meetings and daily management briefings and provide redirection if needed.
- Assist in removing obstacles.
- Be strategic: use the event to advance agency objectives by improving the performance of the targeted process while being aware of the impact to the total system.
- Attend the report-out session for the event to show support and congratulate team members on a job well done.
- Track the status of implementation efforts following the event to make sure the team continues to make progress and does not backtrack.

A Lean event sponsor contract can be used to affirm a sponsor's responsibilities and to demonstrate his or her commitment of support.

Team Leader

The team leader assists the Lean event facilitator in setting the stage for a productive event. There are differing opinions on whether the team leader should work in the area of the event's focus. On one hand, an outsider can sometimes help the team navigate entrenched perspectives,

creating a more open and transparent environment for team members to be creative. On the other hand, it can be useful to have a well-respected individual from the work area that can help drive and sustain commitment to improvements made by the team through assistance with follow-up activities. Think about what makes most sense for your organization. It is common for the team leader to have participated previously in one or more Lean events. Often the team leader helps coordinate event logistics, including securing the event space, arranging for meals, and purchasing supplies. Ideally, the team leader has an assistant who can help support them with administrative tasks that need to be accomplished prior to and during a Lean event.

Specific roles and expectations of the team leader include:

- Support the team members in finding solutions.
- Help facilitate an open exchange of ideas.
- Encourage creative thinking and problem-solving.
- Support the team during event implementation.
- Ensure that all event objectives are met.
- Help prepare for the event.
- Assist in selecting team members
- Prepare the schedule and agenda.
- Gather needed materials and tools.
- Keep up to date on all aspects of the event.
- Assist with documentation and reporting.
- Secure external consulting services of Lean facilitators.
- Arrange a site visit for the Lean team to talk with the workers and see the process in action.

When the team leader is from outside the specific content area in which the event is occurring, good communication is crucial. Team leaders will need to know the goals and objectives of the event, any process requirements, and the expectations of the team members. Any contextual information, such as past problems encountered and gains achieved should be shared with the team leader.

Select Other Participants and Determine Roles

Thoughtful participant selection can ensure a successful and productive event, making it important to carefully select external stakeholders and agency staff participants. Team members are expected to attend the entire event and fully participate by providing input and ideas. Team members are also expected to complete assignments identified during the meeting or tasks that may be defined after the event. Here are some things to consider when selecting participants and determining roles:

THE "THIRDS RULE"

The "thirds rule" provides a guide for structuring the Lean Team. Include:

- 1/3 of participants who work directly in the process
- 1/3 of participants who manage or supervise the process
- 1/3 of participants who are not directly involved in the process (e.g., people from the agency, external stakeholders, customers)

- Ensure the team has cross-functional representation. The "thirds rule" provides a good guide for structuring the Lean team composition (see textbox). It is important that members of the team are empowered to make commitments about process improvement ideas that are within the scope of the event.
- It is often helpful to have a representative from the agency's information technology group, since most processes have some important relationship to agency databases or information systems. It may also be useful to consider whether people from the agency who are indirectly affected by the process or representatives from other support functions, such as accounting, legal, or human resources would be helpful to include.
- Participant selection can help secure buy-in from all levels of an agency for the process improvement efforts. Most importantly, you should include staff and managers on the team that can continue implementation beyond the event itself. Consider involving informal as well as formal leaders on your Lean event team.

TEAM LEADER EVENT PREPARATION CHECKLIST

4 weeks before event:

- ✓ Begin collecting primary data
- ✓ Determine opportunities
- ✓ Define goals
- ✓ Select team members
- ✓ Identify resources required

3 weeks before event:

- ✓ Forward team roster, preliminary data, and event goals to facilitator

2 weeks before event:

- ✓ Confirm availability of personnel and resources
- ✓ Remind leaders and sponsors to be available for report-out
- ✓ Ensure affected parties in the event focus area are aware of the impending event
- ✓ Ensure affected parties have a method to forward observations

1 week before event:

- ✓ Prepare data packets, employee suggestions, supplies, toolkits, forms, and meeting spaces for event
- ✓ Confirm event agenda and schedule with all affected parties

- Lean event teams are typically comprised of 10–12 members. However, some processes are extremely complex and it may take additional participants to get all the right players at the table. If additional participants are required, the largest size recommended is 15. Once the group size gets beyond this size, it can become very challenging to manage, especially for the facilitator.
- If you cannot pare down your list of critical participants for an event below 20, another option to consider is to convene off-site meetings on specific topics, such as holding a meeting that deals exclusively with a specific aspect of the process that some participants may care most about, such as legal review. This approach is suggested for highly complex processes or issues.

- One strategy for getting more people into the room during a Lean event is to distinguish between observers and participants. Observers should be limited in number and should not outnumber team members as too many observers may cause team members to be uncomfortable or hesitant to express their viewpoints. While observers are welcome, it is critical to communicate that they are observers only.
- Team members are expected to shed all of their operational responsibilities during the course of the event, thereby allowing them to completely focus on the event. It is highly disruptive and disrespectful to the team if a senior manager is routinely taking calls, checking email, or leaving the room for other meetings. Ensure that each team member's responsibilities are delegated to other staff during the event and communicate the expectation that team members should not be doing other work during the event.
- If you are having trouble selecting team members, it may be useful to hold a pre-event meeting with a small group of staff to identify all the activities included in the event scope and which staff members are connected to these activities. In addition, the Lean facilitator can provide advice on how to select participants (e.g., qualities/characteristics to look for).

Arrange Meeting Logistics and Invite Participants

All events require a certain amount of logistical planning, such as selecting a date, reserving meeting space, re-distributing staff workloads, and securing meals during the event. Addressing these logistical questions before the event helps to ensure smooth implementation and to create a comfortable, stress-free, and productive environment for participants.

Resources

- Lean Event Supplies List
- Lean Event Logistics Checklist

- *Schedule the pre-event scoping meeting and the event, and invite participants*. Many people have very busy schedules, so be sure to invite participants in advance of the pre-event meeting. You should send invitations to the pre-event meeting and to the event itself as soon as the meeting space is secured, in order to ensure that everyone will be able to attend. The typical duration for a kaizen or value stream mapping event is 3–5 days. Thus, it is important to consider these timeframes when scheduling a Lean event, as holidays or staff vacations could interfere with event timing. If you have opted to hire a Lean facilitator, keep the same scheduling considerations in mind. Sometimes Lean consultants have very limited availability.
- *Reserve sufficient meeting space*. During some Lean events, participants may need to break out into smaller groups for part of the event, so it is important to ensure that space and materials are available for breakout sessions and for the group as a whole. Be sure that meeting rooms have plenty of wall space for posting materials on the walls. Consider whether any special arrangements are needed for the initial training session and/or final report-out presentation, which often involves additional attendees.

Pre-event Scoping Meeting: Develop the Event Charter

Resources

- Lean Event Scoping Guide
- Pre-event Meeting Agenda
- Team Charter
- Example Team Charter

The pre-event meeting occurs between three and six weeks prior to the Lean event. It is probably the most crucial step in planning and preparing for a successful Lean event. The pre-event meeting is commonly held in the venue in which the Lean event training will take place. The pre-event meeting should involve the Lean facilitator, the event sponsor, the team leader, and key managers and staff who oversee or are involved in the process to be targeted by the Lean event. Pre-event meetings typically last between two and four hours, depending on the complexity of the process and event and the Lean experience of the participants. During the pre-event meeting, participants will create the *team charter*, an important document which sets out the scope of the process that will be addressed in the event, establishes the goals and objectives of the event, identifies any work that must be completed prior to the event, and identifies the team members. This section explains how the pre-event meeting participants should decide what each of these important components of the charter should be.

There are five steps (described in this section below) in the pre-event meeting to create a team charter that will best prepare for a successful event:

- Step 1: Develop the event scope
- Step 2: Identify goals and objectives
- Step 3: Clarify boundary conditions for the event
- Step 4: Identify performance metrics and pre-work needed
- Step 5: Record event dates and location

You can read much more about the steps to take when preparing for a Lean event in the *Lean Government Event Scoping Guide* resource, which has examples of environmental agency experiences with Lean event scoping.

Step 1: Develop the Event Scope

The event scope is a critical component of success, and sets the "fence posts" that the team will be operating within. A well-defined scope can significantly increase the probability that the event will be successful.

- *Define key components of the event scope.* Begin by discussing and identifying key components of the Lean event scope that will keep the team focused on specific areas that will best enable them to improve the process. The scope should identify the process, the event name, the trigger that sets the process in motion, the first and last steps in the process, and the specific process conditions that the team assumes to exist for the purpose of the event. Be as specific as possible when documenting the scope in order to avoid confusion.
- *Consider whether the scope is sufficiently narrow.* Once you have clearly documented the components of the event scope, step back and consider whether the scope is narrowly

defined enough to accomplish in a few days time. This step is critical to the success of the event. Many teams have a tendency to scope events too broadly, which can lead to an event consumed by charting the current process and that lacks sufficient focus directed onto creating specific, implementable improvements.

- *Consider implications of the scope and align expectations.* Scoping an event is a balancing act; on one hand you want to scope the event broadly enough to enable a strategic and systems-focused improvement approach; on the other hand, you want to be able to focus in enough detail to be able to drive timely and effective implementation actions during or immediately following the event. Be aware that a too-broad scope will necessitate extra follow-up implementation planning and support, and potentially even additional Lean events. Be sure to align leaders' expectations for results with what can realistically be achieved.

Ask your Lean event facilitator for help with appropriately scoping a Lean event. One strategy that can be useful for managing the scope of events that could otherwise be too big is to conduct a half-day visioning session to map the process to get an understanding of the problem areas and opportunities at a high level and then develop a realistic plan for kaizen events or other improvement projects (see box). Additionally, talk with other environmental agencies that have targeted similar processes using Lean. Staff at these agencies may be able to offer suggestions for scoping and planning your Lean event.

VISIONING SESSION: A STRATEGY FOR EVENT SCOPE MANAGEMENT

If you think your Lean team may be considering a process improvement project with too large a scope, consider convening key leaders during the early stages of event planning to hold a *visioning session*. In a visioning session, leaders involved in the process area meet for a day or less to discuss the process improvement project and map out an overall plan at the "50,000-foot" level. This can be done in conjunction with the pre-event scoping meeting or separately. Use this exercise to gain an understanding of where there may be opportunities to eliminate waste in the process, and then discuss which area or areas to target for more detailed analysis in a Lean event. Holding a visioning session early in the planning process can help avoid the problem of scoping an event too broadly, because leaders will be able to gain an overall understanding of the process before the event and then define an appropriate event scope and goals.

Step 2: Identify Goals and Objectives

Setting clear goals and objectives for the event enables clear targeting, which is essential for success.

Lean event goals are statements of intent that focus team attention on the areas in which improvement results are desired. Goals provide a useful starting point to ensure that the highest

priority areas are targeted by an event. The team should establish a shared understanding of the 1–3 highest-priority goals. Example goals include:

- *Reduce the lead time for reviewing air construction permit applications.*
- *Decrease response time for customer calls related to sewer back-ups.*
- *Increase the percentage of permit applications that are complete and accurate.*

Lean event objectives differ from goals in that they are specific and measurable. Objectives should include the goal, metrics associated with the goal, targets, and timeframes. Examples of well-defined objectives include:

Resources

- Event Preparation Checklist

- *Reduce the maximum time for first response to permit applicant inquiries to 24 hours within 3 months.*
- *Improve first time quality of water quality data submittals from 72 percent to 95 percent by June 1.*

Step 3: Clarify Boundary Conditions for the Event

During the event scoping discussions, it is crucial that the event sponsor, possibly in coordination with other key agency managers, set clear boundaries for the Lean event. Setting boundaries in advance helps a Lean team to keep its focus on those aspects of the process and potential solutions it has reasonable control over. It is important that the scope for the event be limited to areas for which the Lean team is empowered to make changes and decisions. There are two key types of boundaries:

- *Process-scope boundaries*. It is important to clearly identify where the process starts and ends, at least insofar as which parts of the process will be discussed during the Lean event. It may also be necessary to draw clear lines where hand-offs are made to other processes. For example, it may be appropriate for a state Lean event to set an external review process (e.g., EPA review, public comment process) as a part of the broader value stream or process that is "out of bounds" during the Lean event.
- *Solution-scope boundaries*. It may also be important to set limits on the types of changes that are allowed as part of the Lean event. For example, it is typically appropriate to say that policy changes are off-limits.

Establishing clear boundary conditions for the Lean event can address potential concerns that some agency staff or stakeholders may have while also clarifying team expectations about aspects that are fair game for improvement. Key examples include:

- *Clear boundary conditions ensure that agency objectives—such as environmental protection and public participation—are not undermined.* For example, changes that would require rulemaking action are generally considered out of bounds during a Lean event, although these ideas could be held in a "parking lot" for future consideration.
- *Boundary conditions can be helpful in addressing key stakeholder concerns up front.* For example, when conducting a Lean event on a permitting process it may be necessary to

clearly state that public comment and participation opportunities will not be lessened, or that the time for substantive analysis and review by permit engineers will not be lessened.

- *Boundary conditions can help set clear expectations about the availability of resources.* Lean events are designed to strongly encourage creativity to find ways to reduce costs rather than to increase capital expenditures.

EXAMPLE BOUNDARY CONDITIONS FOR A STATE AIR PERMITTING EVENT[13]

In Scope	Out of Scope
▪ Interpretation of agency rules, policies, and guidance documents	▪ EPA regulations
▪ Internal organizational structure	▪ Interpretation of EPA rules, policies, and guidance documents
▪ Internal permit process and timing	▪ Modifying existing agency rules
▪ Applicant interaction and timing	▪ Additional resources
▪ Electronic submittals	▪ Permit appeal process
▪ Application content and format	▪ Mandated public participation requirements
▪ Permit and technical memo format	▪ Permit involving enforcement action
▪ Special condition content	▪ Public hearing process/officer
▪ Communication (internal/external)	

While it is okay to allow teams to set some boundary conditions during the event, it is important to identify which boundary conditions must be set in advance.

Step 4: Identify Performance Metrics and Pre-Work Needed

Determining performance metrics, identifying pre-work and collecting data on baseline metrics are important steps for effectively using your time in a Lean event. Collecting data on the current state of a process enables a Lean team to understand the process, identify areas for improvement, and assess the effectiveness of potential changes to the process. Often, pulling together information at the sub-process level can help inform the team's understanding of the current state of the targeted process. It is not enough to know the overall process performance, it is also necessary to understand how things work at the process step level. In addition, there may be other materials to assemble before the event and other tasks that need to be completed ahead of time, such as getting approvals for making certain types of changes during the event.

Pre-work

During the pre-event meeting, take time to assign individual responsibility for "pre-work," the tasks that need to be completed before the Lean event. Pre-work is needed to establish baseline

[13] Example "In Scope, Out of Scope" list based on a presentation of the Delaware DNREC.

metrics and to gather background documents that are likely to be useful during the Lean event, such as existing process maps, procedures, or examples of process outputs (e.g., recurring reports). Pre-work assignments should include:

- Clear identification of the person responsible for each pre-work task
- Due dates
- People responsible for following up with those performing pre-work
- A clear link between data analysis and the event goals and objectives

Resources

- Pre-event Data Collection Guide
- Lean Government Metrics Guide

Although Lean events usually include some time to collect baseline data, it can be quite valuable to gather these data in advance, if possible, so that the Lean event team can spend more time working on solutions to eliminate waste in the process. Data collection should be driven by the goals and objectives that the team has defined for the event.

Sometimes it can also be helpful to have information on how key "customers" or stakeholders perceive the targeted process and its outputs. Getting a sense of the "customer's voice" prior to the Lean event can be helpful, particularly if key customer groups will not be represented on the Lean event team. It may take some time to get customer input, through interviews or surveys, so plan for and collect this information in advance of the Lean event.

Metrics

Current state metrics establish the baseline by which to measure the outcome of a Lean event. Metrics should be quantified before, during, and after Lean events. The *Lean Government Metrics Guide* (see resource) provides definitions and examples of metrics often used in Lean government efforts. There are several categories of metrics for evaluating improvements to specific processes, as follows.

- *Time metrics*. What is the total lead time for the process (e.g., start-to-finish time for a permit application review)? What percentage of that time adds value from the customer's perspective? How long does it take to complete a cycle or transaction within the process? What percent of products (e.g., permits and travel authorizations) are delivered on time?
- *Cost metrics.* How much does the process cost to operate (e.g., the number of full time equivalent employees)? What cost savings did the team identify in the Lean event?
- *Quality metrics*. How often does the process lead to mistakes (e.g., incomplete or inaccurate forms) that require rework? How do customers view the effectiveness and efficiency of the process?
- *Output metrics.* How many products (e.g., permits) are completed or processed each month or year? What backlogs exist in the process?

- *Process complexity metrics.* How many steps are in the process? How many of those steps add value, from the customer's perspective? How many times is a document handed off between individuals, offices, or departments in the process?
- *Resource metrics*. How much paper does the process consume? How much energy? How much landfill waste is produced? How much of an environmental impact does each step of the process have?

LEAN GOVERNMENT PROCESS METRICS		
Time Metrics	*Cost Metrics*	*Quality Metrics*
⇨ Lead Time ⇨ Best and Worst Completion Time ⇨ Percent On-Time Delivery ⇨ Processing Time ⇨ Activity Ratio ⇨ Value Added Time ⇨ Non-Value Added Time ⇨ Non-Value Added but Necessary Time ⇨ Percent Value Added Time	⇨ Labor Savings ⇨ Cost Savings ⇨ Cost per Product	⇨ Customer Satisfaction ⇨ Rework ⇨ Percent Complete and Accurate ⇨ Rolling First Pass Yield
Output Metrics	*Process Complexity Metrics*	
⇨ Production ⇨ Backlog ⇨ Work in Process ⇨ Inventory	⇨ Process Steps ⇨ Value Added Process Steps ⇨ Decisions ⇨ Delays ⇨ Handoffs ⇨ Loops ⇨ Black Holes	

MEASURING ENVIRONMENTAL OUTCOMES

The ultimate goal of using Lean and Six Sigma in environmental agencies is to improve environmental outcomes more efficiently and effectively. The metrics listed in this Starter Kit provide a number of ways to track and evaluate the efficiency of government processes and the operational benefits from process improvement efforts; however, making the connection between process efficiency improvements and environmental outcomes is more challenging. Measuring the contributions of specific Lean events or Six Sigma projects to environmental outcomes—such as drinking water quality, human exposure to air pollutants, changes in greenhouse gas emissions, and habitat condition—is difficult, given the variety of variables that influence environmental outcomes. In most cases, administrative processes targeted by Lean (e.g., a permitting process or grant distribution process) are removed from having direct impacts on environmental outcomes. However, there are indirect environmental outcomes that can have significant benefits. By getting process activities and procedures to function smoothly and consistently, agencies free staff time to focus on higher value activities that are more directly linked to environmental protection (e.g., conducting compliance inspections, providing technical assistance to businesses, completing environmental permits, etc.). When a process targeted by a Lean event has a more direct impact on environmental outcomes, the project team should consider whether it is appropriate to set a baseline environmental outcome measure and evaluate the changes to the measure as a result of the improvements made to the process. Decide whether to set a baseline environmental outcome by asking the question: "How does the targeted process affect environmental outcomes?"

In addition to measuring the results of individual Lean events, environmental agencies may also want to track the progress and results of Lean implementation at an organizational level. Types of metrics relevant in this context include the following.

- *Lean deployment metrics.* How many Lean events have we completed this year? How many employees have participated in at least one Lean event? How many employees have participated in Lean training classes or certification programs?
- *Morale metrics.* How satisfied are employees with the agency or office? What is the staff turnover rate and how does it compare to the average for government agencies?

METRICS FOR EVALUATING AGENCY-WIDE LEAN EFFORTS

Lean Deployment Metrics	*Morale Metrics*
⇨ Lean Events Conducted ⇨ Lean Event Participation ⇨ Lean Training	⇨ Employee Satisfaction ⇨ Turnover

Consider these points when identifying key metrics:

- *Determine the purpose of the metrics.* Measuring the wrong things can waste people's time or reinforce undesirable behaviors. In selecting metrics, consider questions such as:
  - What is the purpose of the metric? What wastes are we trying to eliminate? What behaviors are we trying to reinforce?

- Who are the key audiences for the metric?
- How will we use the measurement data?

- *Just use a few metrics.* No more than a few metrics per category are needed. Having too many metrics dilutes the focus of the improvement efforts and can create unnecessary work.
- *Use only the appropriate metrics.* Ask whether there is something important about a targeted process related to each category of process metrics, and do not worry if the answer is "no." Also consider which metrics would be useful to evaluate across the agency, depending on the status and goals of the Lean or Six Sigma initiative.
- *Focus on customers and agency leadership needs.* While many metrics can show improvements made during Lean events (e.g., reductions in the number of process steps), only a few metrics matter to customers, including the time it takes to receive a service or product (lead time) and the quality of the service or product. Make sure to include some metrics that reflect key interests of customers, along with metrics that will resonate with agency leaders and support the agency's strategic goals.
- *Engage data users in the design of the metrics.* It is important to engage people who are familiar with the process in the design of metrics and the development of a system for collecting and reporting performance data. Without consulting front-line employees, agencies risk choosing metrics that are poorly understood, irrelevant, or inconsistently used by the people who do the work.

Step 5: Record Event Dates and Location

Setting ground rules for the event helps ensure that all participants respect and hear all ideas and viewpoints expressed during the event. Ground rules also remind participants to keep an open mind and to "think outside of the box." Ground rules are reviewed during the kick-off meeting and are prominently posted for all participants to see. Example ground rules are included in the adjacent resources box.

EXAMPLE LEAN EVENT GROUND RULES

- ⇨ Keep an open mind to change
- ⇨ Maintain a positive attitude
- ⇨ Never leave in silent disagreement
- ⇨ Create a blameless environment
- ⇨ Practice mutual respect every day
- ⇨ Treat others as you want to be treated
- ⇨ One person–one voice, regardless of position or rank
- ⇨ There is no such thing as a dumb question

Finally, be sure that the team charter records the meeting locations, event dates, and meeting times. Team participants will use the charter as a reference, so this information will serve as a useful reminder to clear their schedules in advance of the event.

Event Preparation

Review the Charter

After the team has developed the charter during the pre-event scoping meeting, distribute the charter to everyone who will be involved in the event. Be sure that both managers and staff have the opportunity to review the charter. Make any necessary revisions based on input from team members, and ensure that all participants support the charter, agreeing to the scope, goals, objectives, and boundary conditions for the event, including any modifications based on data collected since the pre-event meeting.

Prepare the Event Agenda

Prior to the Lean event, prepare an event agenda that clearly articulates the objectives and timing for the event. An effective agenda ensures that the objectives and goals of the event match the given timeframe. The Lean facilitator is typically responsible for preparing the agenda, or at least reviewing it prior to sharing it with participants. It is important to distribute the agenda to participants before the event.

Resources

- Kaizen Event Agenda

KEY QUESTIONS FOR LEAN EVENT PREPARATION

Ask these key questions after the pre-event meeting to ensure that the team is well-prepared for the event.

- ✓ Are all participants and affected parties aware of and in agreement with the objectives, scope and expectations for the event?
- ✓ Have you identified the individuals who will officially kick off the workshop (sponsors and process champions are good candidates)?
- ✓ Have you determined when senior staff will be present—for the entire event, for daily report-outs, or for the report-out at the end of the event?
- ✓ Have you planned how follow-up activity progress post-event will be communicated to the sponsor and management team? By whom?

Communicate About the Event

Communicating proactively with your entire organization is critical to building organizational buy-in to process improvement efforts. Transparent communication, particularly with employees whose work may be affected by the Lean event, is vital to ensuring success.

- *Schedule a briefing with senior management once the scope and objectives of the Lean event have been set.* Top management support is crucial for a successful Lean event, in part because it can affect budget and staff availability. It is also important for senior management to approve many of the aspects of a Lean event, including:

- The process that will be addressed;
- The decision to hire an external Lean facilitator;
- The anticipated timeframe, products, and results; and
- How the event will affect staff availability and workload.

- *Schedule daily management briefings at the end of each day during the event.* Ensuring that senior managers are aware of the activities of the Lean team throughout the event keeps them appraised of the process and engaged in its success, and prevents potential negative reactions during the final report-out.
- *Inform staff about the Lean event.* Notifying internal staff that a Lean event will occur provides transparency to the process and is a great opportunity to solicit feedback and ideas on event scope or "areas of pain" in the targeted process. Communications with staff should include information on the Lean event as well as background information on Lean methods and how the Lean event could affect staff.
- *Address staff concerns about Lean.* Be extremely proactive in "selling" the idea of Lean to the entire organization. Process improvement efforts in the long run depend on a groundwork of support that you can build by dispelling myths and alleviating fears about Lean prior to the first event. Be sure to directly address potential concerns that some employees may have about Lean or the focus of a particular event. Clearly indicate that no staff will lose their jobs as a result of improvements made from the Lean effort. One state environmental agency noted that staff were initially afraid that Lean would result in lost jobs. Leadership communicated that that would not be the case, and eventually, Lean improvements actually helped to prevent any jobs from being eliminated. The "*Frequently Asked Questions about Lean*" resource contains information that is often helpful to communicate to others in the organization.

Resources

- Frequently Asked Questions About Lean

Collect needed data and information

Prior to the event, collect background materials and data about the current state of the process, based on the performance metrics and pre-work identified during the pre-event meeting.

Finalize Logistics

As the event nears, complete final logistical arrangements:

- *Finalize logistics and schedules.* Logistical preparations such as setting aside space for the Lean event team or meal orders and the finalization of the agenda should be addressed or completed prior to the event.
- *Send reminder e-mail.* It is helpful to send a reminder e-mail or calendar invitation to ensure that team members have the correct dates and times blocked on their calendars.

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Chapter 5. Conducting a Lean Event

This chapter addresses key activities and steps involved in conducting a successful Lean event, including the following:

LEAN EVENT STEPS

- ⇨ Lean Event Overview
- ⇨ Kick off a Lean Event
- ⇨ Manage the Phases of a Lean Event
- ⇨ Manage Change During a Lean Event
- ⇨ Identify Follow-Up Action Items from the Event
- ⇨ Report Out at the End of the Event
- ⇨ Celebrate a Successful Event

Lean Event Overview

The diagrams below lay out the main phases of a kaizen event and value stream mapping event. Kaizen and value stream mapping events generally take place over a two- to five-day period. Value stream mapping events tend to be three or four days, since their primary focus is on prioritizing future improvement opportunities and developing an implementation plan for process improvements. Kaizen events are the key method in Lean for making rapid changes to improve a process; they are most effective when you already have a good understanding of the process and the problems in it, and want to focus on implementation. The length of kaizen events varies depending on the scope of the problem to be addressed, ranging from a one-day "point kaizen" event that focuses on a very specific area for improvement (e.g., a 5S event to organize a supply room) to a five-day kaizen event to address a permitting process. Most events follow the steps outlined below. Lean experts highly discourage efforts to shortcut the kaizen or value stream mapping process, since much of the power of Lean lies in following the methods closely. For more information about Lean methods, see the Lean Methods Table in Chapter 3 or the references in Appendix A.

Kaizen Event Overview

5-day Kaizen Event Agenda Outline

Day 1	Day 2	Day 3	Day 4	Day 5
Training Day Begin mapping and measuring current work process	Discovery Day Measure and analyze current work process	Do Day Create and map new process	Do, Re-Do, Document Day Finalize new process design, estimate benefits, develop action plan	Celebration Day Present results and celebrate

Some Lean facilitators alternately describe the flow of a kaizen event as (1) measure, (2) analyze, (3) improve, (4) control, and (5) report and celebrate. While the terminology may vary slightly, the steps and flow of a kaizen event tends to vary little whether it is being applied to a manufacturing workshop or an office administrative environment.

Value Stream Mapping Event Overview

One of the main differences between a value stream mapping event and a kaizen event is that a value stream mapping event typically focuses at a higher level, mapping the entire chain of processes that create and deliver something of value to a customer. While the general structure of a value stream mapping event is similar to that of a kaizen event, the value stream mapping event is typically designed to develop a road map to guide future kaizen events that target specific areas where improvement is needed. Value stream mapping events emphasize planning and prioritization of future activities, whereas kaizen events focus on implementing process changes. Some environmental agencies have extended a typical three-day value stream mapping event agenda to four or five days to include additional time for implementation planning.

3-day Value Stream Mapping Event Agenda Outline

Day 1	Day 2	Day 3
Training & Current State Map VSM training; map & analyze the current state of the process	Future State Map & Implementation Plan Map a desired future state for the process; develop an implementation plan	Celebration Day Present results and celebrate

Team Leader Daily Agenda

In addition to the event agenda prepared during the pre-event scoping meeting (see Chapter 4), it is also important to prepare a *team leader daily agenda*. This detailed agenda is essential for identifying the team leader's responsibilities and actions throughout the event. This agenda also ensures that the flow between the main phases of a Lean event is smooth and that all activities are well executed.

Resources

- Team Leader Daily Agenda

Kick Off a Lean Event

Planning for the kick-off of your Lean event is essential for success. This is a key time for Lean leaders to show their support. The kick-off session is typically introduced by the Lean event sponsor and the Lean team leader, and then handed off to the Lean facilitator. The kick-off session should include the following activities.

- *Introduce all team members and observers*. Ask each team member to briefly address a few key questions:
    1. Who are you and where do you work?
    2. What are your goals for this event?
    3. What do you like to do when you are not at work?
- *Capture team members' goals on a flipchart and post them on the wall*. By understanding participants' goals, it is often possible to create improvements in a form and manner that meet diverse needs.
- *Have the event sponsor say some opening words*. This can be helpful to clearly articulate the event scope and boundaries, while encouraging (or even inspiring) team members to work towards the desired outcomes and event goals.
- *Review ground rules for the event*. It is important to review the ground rules that were established during the pre-event scoping meeting and post them prominently for all participants to see.
- *Briefly review key performance data and background materials that have been assembled.* This can help anchor the team around desired outcomes and key reasons for working creatively to improve the process.
- *Set a tone for having fun!* Team engagement is key to success. Make the event fun for everyone, including staff and support personnel. If the event facilitator and team leader are fully engaged and show enthusiasm, it will be contagious.

Training

Lean training is typically a core part of the first day of a Lean event. For many people this may be their first event and it is important that all participants be on the same page about how the Lean event will work. Think of this as just-in-time training—where participants learn about Lean immediately prior to implementation. Most organizations continue to have training as part

of the kick-off for every Lean event, even if most or all team members have previously participated in a Lean event. Most organizations find that the just-in-time training provides invaluable reminders, gets everyone on the same page, and serves as an icebreaker to get the team warmed up for several days of intensive activity. Training is also discussed in Chapter 7, as well as in the *Guide to Lean Training* (included in Appendix B).

Manage the Phases of a Lean Event

While much of the success of a Lean event rests on careful planning and preparation, managing the event phases is also a significant responsibility. During the Lean event it is easy for the process and participants to get off track. While your Lean facilitator will help direct discussions, it is important for the team leader to maintain the focus on the event's objectives. A few tips include:

- *Develop and adjust the agenda daily and post it in a high traffic area for all participants to see.* The agenda should be accessible to all participants as a reminder of the day's events.
- *Ensure that the team members understand Lean terms conceptually and in practice.* One of the underlying goals of an event is to identify waste or non-value added activity in a process. While some terminology can sound negative, "waste" in Lean terminology refers to anything that adds cost or time without adding value from the perspective of the customer.
- *Promote and encourage creative problem-solving.* It is critical to the success of Lean that the event fosters creative thinking. The facilitator and team leader must work to create space in which all team members feel safe to bring up ideas, even if the ideas seem non-conventional.
- *End each day at a reasonable hour.* Working late into the evening is not necessary and can hurt team morale. If the work is complete, don't hesitate to end early. If longer hours are needed, all participants must agree to this schedule.
- *Assign homework during the event to track actions and the work completed.* Homework often includes ideas that participants did not have the time or resources to complete and can be used to track actions for event follow-up (see the "Lean Event Homework" form included as a resource in Appendix B).

Resources

- Lean Event Homework

- *Conduct daily management briefings.* Short, focused briefings (e.g., 15 minutes) with key managers near the end of each day's work can help them stay informed about the team's progress, allow these managers to engage with the team and learn about how Lean works even if they can't fully participate in the event, and can help prevent a negative reaction in front of the team at the end of the event.

A few method-specific tips include:

- *When doing process mapping in a Lean event, don't assume that the process works as it is intended to work.* Develop the current state map based on actual data and observations about how the process works in practice, even if that makes the map messy. Expect to use a lot of butcher paper and sticky notes (or full white boards); by the end of the week, Lean event rooms are usually covered with process maps and flipchart brainstorm notes.
- *Techniques for helping people get to the root cause of an issue or problem.* When people are stuck on something there are a variety of techniques that a team leader with some Lean facilitation experience can use. Some techniques include:
    - **5 Whys Method:** The approach of asking "why" five times is used to identify the root causes of problems in a process or value stream. By applying the 5 Whys method an agency can identify waste and improvement opportunities. You may find that there no longer are good reasons why a process is implemented a certain way.
    - **Cause-and-Effect (a.k.a. fishbone) Diagram:** This is a useful technique that is used to trigger ideas and promote a balanced approach in group brainstorming sessions where individuals list the causes and effects of problems.

Manage Change During a Lean Event

Real change is difficult. There are often a thousand reasons to maintain the status quo. Yet it is vital to trust the insights and ideas that emerge during the Lean event. Lean methods are specifically designed to help people see processes in a new light, making it painfully clear where improvement is needed and opening paths for change that were not previously evident.

Diverse emotions are often stirred when individuals involved in the targeted process watch the Lean team rip into the work they do on a daily basis and highlight large amounts of non-value added activity. Be sensitive to this, remembering that the focus is on the process, not on the performance or accomplishments of individuals. The team goal is to forge a process that increases all participants' ability to add value and to perform meaningful work. Note that these emotions can be magnified for those who are involved in the targeted process but who may not be participating on the Lean team.

Give some thought to how to best reach out during and after the Lean event to others whose jobs may be directly affected by changes made during the event.

A few tips for managing change during the event include:

- *Brainstorm new ways to eliminate waste and/or to re-conceptualize a process or an entire value stream.* Stay innovative. Don't be limited by what has been tried before.
- *Be flexible and willing to try new things.* Keep testing new ideas during kaizen events but avoid the paralysis of over-analysis. Create value stream maps using sticky notes on white boards or butcher paper, so that they can be easily adjusted during the event. Expect to revisit and revise "future state" implementation plans.

- *Test improvement ideas as much as possible in an event before changing the layout or order of a process.* Afterwards, implement the new plan. Lean encourages testing new improvement ideas and utilizing creative thinking. In value stream mapping events, it is common to develop several iterations of your future process map before settling on one that the team agrees on.
- *Communicate with management.* Immediate supervisors should to be kept informed about changes to the process. As noted earlier, one way to do this is to hold a 15–20 minute daily briefing for the event sponsor and other key managers each afternoon of the event. These brief meetings can help ensure management buy-in and tap help in removing any obstacles the team may be facing.
- *Hold trainings for staff about process changes and future plans*. Explain to workers not involved in the event how the new process will make their jobs easier and more rewarding. Let them know how they can get involved in future process improvement efforts.

Identify Follow-up Action Items from the Event

On the final day of the event document action items your team was not able to complete in the event, assign responsibilities and due dates for individual tasks, and select one person to serve as an overall implementation manager to track follow-up efforts. While conducting your Lean event, you may discover other areas or processes that would benefit from Lean. While common, it is important to maintain the group's concentration on the focus of the current Lean event. *For tracking purposes, make note of these opportunity areas for future projects.*

Report Out at the End of the Event

Participants give a report-out presentation at the end of the Lean event. The event sponsor and other senior managers who did not participate in the Lean event often attend the report-out presentation. *Be sure to invite these managers to attend the report-out presentation well in advance.* The report-out serves as a forum for exchanging ideas and informing others of the team's accomplishments. It also helps to solidify the shared experience during the event.

Resources

- Report-Out Summary
- Event Report-Out Presentation
- Event Evaluation Form

Generally, the presentation includes an overview of the event objectives, activities, and results. A few tips include:

- Assign individual team members with presenting part of the presentation. It is helpful to involve all team members if possible.
- Conduct a "dry run" presentation so team members are comfortable with their roles.

- Invite people to attend from throughout the organization and even from other organizations. Some environmental agencies have invited agencies from neighboring states to attend report-out meetings.
- Focus on the highlights of participants' experience rather than presenting a verbatim recap of the entire event.
- Keep the presentation to less than 45 minutes, leaving approximately 10 minutes for questions and comments by the audience.
- Set up a report-out presentation template for your agency (if your agency is implementing multiple Lean events) to make it easier to develop the presentations during the event, and so that the facilitator, team leader, and event sponsor know what to expect.
- Hand-out an event evaluation form prior to the presentation. This allows participants to share their experiences confidentially and can be used to identify possible process candidates for future Lean events.

Celebrate a Successful Event

Upon completing the Lean event, it is important to celebrate the achievements and hard work of the event. An event celebration is a great way to extend thanks to participants, planners, and managers, and to recognize the team's contributions.

- Coordinate with the event sponsor or staff support to plan the celebration.
- Take a team photo and make copies for all team members.
- Consider sharing the results of the event through an agency newsletter, a posting on a bulletin board, or in a press release (also see communication ideas in the next section). Many agencies have found that short case studies or success stories with team photos or other visuals are very helpful for communicating about Lean, boosting team morale, and increasing interest in additional Lean events.
- Consider providing each team member with a certificate or a small token of appreciation to commemorate the event, which they can display in their offices to help spread awareness of and interest in Lean.
- Give credit to support personnel, other staff in the area, and the team members for making the gains possible.

Resources

- Lean Event Certificate Template

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Chapter 6. Lean Event Follow Up

Now that you have completed your Lean event and designed a new process, effective follow-up is vital to realizing and sustaining the benefits. Key steps for Lean event follow up include:

- ⇨ Track and Implement Event Follow-up Actions
- ⇨ Document the New Process and Communicate Internally
- ⇨ Evaluate Performance
- ⇨ Communicate Externally
- ⇨ Integrate Lean Follow-Up Into a Continual Improvement System

Track and Implement Event Follow-up Actions

Follow-up is critical to reap the full benefit of your Lean event. One of the most important products of a value stream mapping event is the "future state" implementation plan, yet that only delivers value to the extent it results in future process improvements. In addition, while kaizen events encourage implementation of many process changes during the event (e.g., developing new forms or standard work), there is often a list of follow-up actions that the team was not able to make during the event. Effective follow-up is also vital to sustaining the team-based culture that is often created during Lean events. Be sure to take time to design a firm implementation plan with clear assignments to ensure that identified actions will be completed on schedule.

Action items should be clearly documented and tracked carefully to ensure completion by target dates. Prompt follow-through on incomplete actions is vital to overcome inertia that can cause an organization to revert to the old process. Move forward with implementation on the Monday following your Lean event.

COMMON FOLLOW-UP PITFALLS

- Monitoring follow-up requires a lot of effort. This effort can get lost if it is not an assigned part of an individual's day-to-day work.
- Coordinating follow-up solely by email has pitfalls, as it is easy for people to ignore, neglect, or misinterpret email messages.
- If the implementation manager is offsite and/or does not work directly within the implementation team, it is harder to play a motivational role on follow-up activities.

Identify an Implementation Manager

One of the most essential steps to ensure effective follow-up is to identify an *implementation manager*. The implementation manager (could also be called the "process champion," among other titles) is responsible for ensuring that a clear and effective event follow-up process is established and conducted. Specific responsibilities of the implementation manager include:

- Schedule and run event follow-up meetings (it's often helpful to have meetings weekly immediately after events, so that you do not lose momentum);
- Lead efforts to identify and remove obstacles to effective follow-up;
- Hold the team accountable for follow-through on actions;
- Ensure that progress is periodically evaluated and corrective actions are implemented, as needed; and
- Ensure that post-event communication plans are executed.

EXAMPLE AGENDA FOR WEEKLY MEETINGS

- Review progress in addressing action items
- Identify obstacles to follow-up
- Agree on a plan to address the obstacles
- Update action item list as needed

Carefully select the implementation manager. This role can be filled by the Lean event team leader or another qualified person in the agency. (The implementation manager should not be one of your agency's Lean facilitators, however, since they don't have any process ownership.) The individual should have sufficient stature, authority, and connection to the process to lead follow-up activities, remove barriers, and drive accountability. The individual must also be able to make sufficient time available to ensure follow-up activities happen. It can be helpful to select an implementation manager who is somewhat familiar with Lean and who is co-located with other team members.

LEAN EVENT IMPLEMENTATION MANAGER

The implementation manager has one of the most important jobs in ensuring Lean efforts are successful, and the value of filling this role with an enthusiastic, organized, and engaged individual cannot be overstated. The implementation manager shepherds the improvements identified during the Lean event through the event follow-up process to become reality. The time commitment involved can be substantial. Be sure that the person chosen to take on this role is ready to work hard to remind team members to begin implementing the new process, and to avoid slipping back into the old way. The implementation manager should have the full support of organizational leadership and the event sponsor, and should be empowered to make decisions after the event. The presence or lack of an engaged and hard-working implementation manager can be a determining factor in the success or failure of a Lean event.

Tracking Follow-Up Actions

It is critical to establish an effective system to document and track follow-up actions to ensure their completion. In particular, make sure there is a person responsible (an "owner") and a deadline associated with each action item. Many Lean events show great promise during the report-out, but fail to deliver results when follow-up actions are postponed or forgotten. Be proactive in ensuring that follow-up is done diligently and in a timely manner in order to realize the results of the process improvement effort.

When tracking actions and results, keep in mind the following tips:

- *Stretch, but be realistic.* While it is important to keep pressure on to quickly address Lean event follow-up actions, try to set the team up for success. Discuss potential obstacles that could derail efforts to complete actions within the first 30 days and brainstorm ways ("countermeasures") to navigate around these obstacles.
- *Track follow-up actions in a centralized place.* Consider using the Lean event follow-up action tracking template provided in the Starter Kit. Someone on the team should be tasked with keeping track of the status of follow-up actions. Post follow-up action lists in a shared place onsite. If some team members are offsite, an online collaboration website may be a useful place to track actions and post relevant post-event resources and information. Using color codes on an action list can make it easier to quickly assess follow-up status, particularly when there are numerous open actions.

Color Coded Signals on Action Item Tracking List

	Green =	On track
	Yellow =	Needs attention to keep on track
	Red =	Off track; needs urgent attention

- *Remind participants to complete their action items.* Implementation of follow-up actions is easy to forget as participants return to their daily activities. The implementation manager is responsible for reminding others to complete their follow-up actions and for scheduling additional follow-up meetings if identified improvements are not on track. An ideal person for this role will be energetic and persistent in reminding fellow team members about their responsibilities.
- *Send weekly emails.* Update the team and the rest of the organization periodically on the progress of follow-up activity after the event. People will be much more inspired to conduct their assigned actions if they are held accountable in a weekly email.

Resources

- Lean Event Follow-Up Action Tracking Form

- *Conduct daily or weekly implementation check-in meetings with the core members of the Lean team.* Set up brief daily or weekly meetings with a small implementation team comprised of team members with event follow-up responsibilities. In some cases, the check-in meetings can be piggybacked on

another project or staff meeting, if the appropriate team members are present. The meetings can be quick (e.g., 5–15 minutes) and even held standing up–-some organizations try to make these check-ins have a distinct feeling and energy that differentiates them from conventional meetings. The tone of these check-in meetings should be one of team-based problem solving. If an individual's follow-up actions are not getting completed, have the team explore ways to free the individual's time or consider alternatives for getting the actions completed.

The weekly check-in meetings should take place until all follow-up actions have been completed. If possible, hold these meetings where the work is actually performed to provide an opportunity for the implementation team to talk with workers, see the process in action, and hear firsthand what is going well and where there are obstacles. See the textbox above for an example weekly check-in agenda.

While it may sound like an unnecessary hassle, holding a 5–15 minute daily or weekly stand-up team check-in meeting can do a lot both to ensure effective event follow-up and to sustain a sense of teamwork. These quick check-ins can play a major role in reinforcing a collaborative, team-centered organizational culture.

- *Walk the process.* Implementation managers, event sponsors, and other team members should periodically walk around the office, following the flow of the process work and checking in with staff involved in the process. Too often, managers do not leave their offices. Checking in with staff involved in the process sends a message that their work, and the changes made and planned through the Lean event, are important and valued. These interactions can also provide real-time feedback on process performance and follow-up action status, allowing for quick troubleshooting where needed.
- *Conduct monthly report-out meetings.* Most organizations conduct 30-, 60-, and 90-day report-out meetings to supplement the weekly check-in meetings. Six- and 12-month report-out meetings are also important to ensure that improvement results are sustained and to identify the need and scope for potential Lean events in the future.

  These meetings are typically more formal than the weekly check-ins and provide an opportunity to measure process performance and drive ongoing improvement (see the section below on "Evaluating Performance" for more discussion of the monthly report-out meetings). The focus of weekly meetings described above is more tactical—to ensure that event follow-up actions are being completed. In the monthly report-out meetings, the Lean team can think strategically about the new process and evaluate the process performance using key metrics identified during the event.

  It is best if the full Lean event team, including consultant support, members from outside the process, and management sponsors, can attend the monthly report-outs (either in-person or via teleconference). These meetings give team members a chance to see the results of their labor, assist with identifying and removing obstacles to improvement, and strenghten their ownership of the improved process. Many agencies endeavor to make these meetings fun, which helps keep enthusiasm high among all particpants.

Document the New Process and Communicate Internally

The new work process resulting from a Lean event needs to be clearly documented and communicated to all involved in the process. Transparency is vital to ensuring that changes are understood and executed. When documenting the new process, keep in mind the following tips:

- *Prepare and post a clear map of the new process.* A concise, visual map of the new process can be a powerful tool for communicating key steps and elements of the process. Think creatively about where to post the map to ensure that it is seen by those who have a role in the process. For example, process maps can be displayed on bulletin boards or white boards in hallways or conference rooms, and/or on a web page on the agency's intranet. Placemat-sized maps can even be developed (with color and graphics) and laminated for hanging in employees' work stations.
- *Develop "standard work" procedures.* Standard work procedures are highly-effective Lean tools for ensuring that a new process is implemented in a clear and consistent manner. Standard work procedures should be clear and concise and use consistent formatting. They should be prominently displayed where the work is actually performed; procedures that sit in binders on shelves typically do little to influence behavior. Involving employees who perform the process step to assist with developing the standard work documentation can both increase ownership and capture valuable knowledge. Standard work documentation can help ensure expectations are clear regarding desired work approaches under the new process. Standard work can also help an agency prevent backsliding when staffing transitions occur.
- *Boldly express management support for the new process.* Managers can play a key role in event follow-up by expressing unambiguous support for the new process developed during the Lean event. Managers can also allay employee concerns. For example, some employees may fear that development of "standard work" procedures and a more transparent process may affect their job security or eliminate room for employee creativity within the process. Managers can make it clear that the goal is to free employees to have the time and space to add more value to the process and other activities for which they have responsibility.

In addition to documenting and communicating about the new process, it is important to consider implementing other communication activities that can generate momentum for success.

- Send thank-you letters to all internal and external participants.
- Present event results at a department or division meeting or retreat.
- Post results on bulletin boards, closed-circuit LCD monitors, and/or "exhibit areas" in the agency lobby or common spaces.
- Acknowledge Lean event results or activity at a staff meeting or an agency awards ceremony.
- Write an article in your agency's internal newsletter that outlines your Lean implementation experience, and include an announcement about the event's success as a paycheck-stuffer.

- Post information and photos of the Lean event, as well as follow-up information, on the agency's intranet/internet.

Evaluate Performance

Regularly evaluating performance and analyzing results is a critical component of Lean. Lean's continual improvement focus means that the Lean event marks the beginning of improvement efforts. Lean leaders and those working in the process need to continue to monitor the performance of the process over time, and be on the lookout for countermeasures needed to address problems as well as additional process improvement opportunities. It is important to both evaluate performance based on the key metrics identified during the pre-event meeting and to track the extent to which the event achieved the goals and objectives set for the event. For more information on metrics, see the Lean Event Planning section in Chapter 3 or the Lean Government Metrics Guide resource available on EPA's Lean Government website (http://www.epa.gov/lean/government/).

Keep the following tips in mind when evaluating post-event process performance:

- *Discuss process performance at the monthly report-out meetings.* A key focus of the 30-, 60-, and 90-day report-out meetings is to assess the post-event performance of the process and to make adjustments to sustain or improve results. These are times when the Lean implementation team regroups and steps back from tactical implementation activities to report to leadership on progress, results, and next steps. Consider using the questions in the box below as a guide for these meetings.

KEY QUESTIONS TO EXPLORE DURING MONTHLY REPORT-OUTS

- Are all employees following the process as designed in the event (or as modified since the event)?
- Is there evidence that all employees, including those new to the area, have been trained on the new process?
- Is process performance being measured and reported as set forth in the kaizen event?
- Is the implementation manager monitoring and supporting compliance with the new process?
- Is the appropriate leadership informed of and engaged in the process?
- Are consequences for not following the new process design in place?
- Have any unintended consequences (positive or negative) arisen? Check with downstream customers.
- Are workers pleased with the improvements? Do they feel their work has been simplified?

- *Use the event objectives as targets for monitoring the performance of the process.* Referring back to the team charter and other early documents can help ground the results. It also may be useful to identify milestones that represent interim steps to reaching the final performance objectives.
- *Consider using visual displays or dashboards to show progress towards the performance objectives and to motivate additional improvement efforts. Visual* displays can be

powerful communication and motivational tools. It is important to keep them simple, so that they are easy to understand and do not become a time-consuming task to create and update. Many organizations use a whiteboard or color-coded wall chart to track how the process is performing. If updated for the weekly meetings, the chart can serve as a focal point and motivational tool.

- *Consider adjusting key performance metrics to ensure that you have a clear dashboard to monitor the future performance of the process.* For example, in value stream mapping events, you should rely on the initial metrics identified in the current state map and future state maps as indicators of success. These metrics should be reported on at 30-, 60-, and 90-day events. Having a few good measures can help identify potential backsliding and spur action to sustain momentum for improvement. This information can also help identify appropriate timing for a follow-up Lean event, if one is warranted.

WHY DO SOME LEAN EVENTS "FAIL"

- ✓ Inappropriate Scope: Event scale or scope was too large to address in a 4-5 day event. The size and complexity of the process should instead have been addressed with a value stream mapping event followed by a series of kaizen improvement events.
- ✓ Lack of Visible Management Commitment: Unless managers visibly commit to and actively support the improvements and process changes, it is easy to backslide to business as usual.
- ✓ Poor Event Facilitation or Support: Failure to adequately prepare for a Lean event limits what can be accomplished; similarly, lack of a skilled facilitator can inhibit progress during a Lean event.
- ✓ Inadequate Follow-up: Insufficient attention, resources, and accountability can prevent the new process from being successfully implemented in a reasonable timeframe.
- ✓ Strategic Misalignment: When multiple autonomous departments or agencies are involved in an event, conflicts can emerge due to differences in mission and strategic direction. This misalignment can undermine management support for follow-up and implementation activities.
- ✓ Unrealistic Expectations: Expectations for what the event could achieve were not realistic given the process type, complexity, or other factors.

Learning from Failures

Sometimes, despite the best preparation and planning, Lean events do not achieve some or all of their desired goals. It is common for organizations to conduct one or more Lean events that are not viewed as a success. The text box below lists several factors that can lead to a Lean event being viewed as unsuccessful. It is important to remember that such "failures" do not mean that Lean cannot work in your agency. Leader organizations use these "failures" as teaching moments. In fact, the Lean process itself is intended to be a continual improvement learning process. If your organization experiences a "failure," diagnose the event and make a follow-up plan that directly addresses the key factors that undermined past success.

Communicate Externally

External communication about process improvement efforts can go far beyond making process description and performance information available to key stakeholders and the public. Spreading the word about Lean efforts can be a powerful means for bolstering enthusiasm and spreading interest in Lean throughout your organization and others. In addition to accomplishing the important task of making sure that external parties involved in or affected by a process are sufficiently aware of changes made, these communication efforts will help to ensure the longevity of your Lean efforts by helping to create a network of people with an interest in process improvement.

Basic information that should be communicated externally about the event includes:

- Brief description of the process and the problem (What was not working well?)
- Basic information on the event (What? When? Who?)
- Key results related to time, cost, quality, and other outcomes
- Key differences between the old process and the new process (What has changed or will change? What types of improvements were made?)
- Brief statements on the significance of the improvements
- Outline of future improvement plans

Several components of an effective external communications strategy will help to spread Lean efforts outside your initial event:

- Cast a wide net when sending invitations to the event report-out. At the Minnesota Department of Administration, invitations to event report-outs are distributed to anyone interested in coming, and some report-outs have been attended by as many as 100 people.
- Create a case study describing the goals and results from your event. Include photos or other graphics to make it more visually appeally. For links to EPA and State environmental agency examples, see the EPA Lean Government website (www.epa.gov/lean/government) or the 2009 ECOS "Lean Case Studies" Report (www.ecos.org/files/3578_file_April_2009_Green_Report_Lean_Case_Studies..pdf).
- Reach out to your customers and key stakeholders to identify any changes to the process that affect their involvement.
- Use media to communicate about your Lean efforts and generate enthusiasm. Several state agencies, including Ohio and Minnesota, publish a Lean newsletter summarizing recent Lean activities to inspire interest in efforts in other areas. Write an article for your agency's website or public newsletter that outlines your Lean implementation activities.
- Maintain an attractive and interesting website that informs people about Lean activity in your organization. Post results from events and team photos, being sure to keep content updated and "fresh."
- Conduct a webinar to brief key stakeholders and interested members of the public on process changes and improvement results.

Integrate Lean Follow-Up into a Continual Improvement System

While Lean methods can be used for one-time, one-shot improvement efforts, the real value of Lean lies in its focus on continual improvement. It is important to connect follow-up efforts for individual Lean events into your organization's overall continual improvement system, such as the one described in Chapter 2 of this Starter Kit. The more effectively your organization integrates follow-up into your organization's culture and systems, the easier it will be to sustain success and prevent back-sliding. Three activities are vital for sustaining Lean improvements across organizations: 1) champion event follow-up, 2) revisit processes with future Lean events, and 3) cultivate employee ownership of process improvement.

Coordinate and Encourage Event Follow-up

The event follow-up activities discussed earlier directly prevent back-sliding by focusing attention on completing open action items and addressing challenges that may have arisen after the Lean event. As described above, it is useful to designate an implementation manager to remind people about their assigned follow-up responsibilities and to ensure that implementation remains on-task. That person needs to have the persistence, enthusiasm, and sufficient authority to coordinate the implementation team throughout the entire follow-up process. Your agency's Lean initiative can provide critical support to these implementation managers by coaching them on their roles and responsibilities, providing resources such as tracking tools and other templates, and assisting with broader agency communications.

The brief weekly check-in meetings, coupled with 30-, 60-, and 90-day report-out meetings, are essential investments to ensure that the results from Lean events are sustained and enhanced. These meetings alone, however, may not be enough to ensure that the process improvement results estimated during the event can become reality. Utilize tracking tools to monitor which follow-up actions have and have not been completed, and distribute these tracking sheets to team members in weekly emails. Taking these steps to make sure that estimated benefits of Lean events become reality is crucial to establishing a lasting process improvement culture throughout your organization.

Revisit Processes with Future Lean Events

Lean is not a one-time event. Follow-up is essential to ensure that the new process takes hold, runs smoothly, and achieves the desired results. Moreover, significant improvements can result from conducting periodic improvement events on the same process every one to five years or more frequently. World-class Lean organizations are often amazed at the magnitude of process improvement results that can be achieved when processes are targeted multiple times over a few years. Some Lean experts say that a process is not truly "Lean" unless it has gone through at least five kaizen events! Fresh thinking and perspectives often unleash time, quality, and cost improvement ideas that could not have been imagined during the first Lean event. Other Lean methods, such as 5S and visual controls, focus on sustaining Lean improvements by keeping workspaces well organized and making potential problems visible so they can be quickly addressed.

Cultivate Employee Ownership of Process Improvement

Empower employees involved in a process to become active stewards of the process. By actively engaging those involved in a process to "own" its activities and performance, it is possible to identify and address improvement opportunities "on the fly." Managers should routinely ask employees for their improvement ideas and process "malfunctions" should be examined for lessons and improvement options. Another way to get fresh ideas is to give employees the opportunity to exchange roles for a few hours and learn how different parts of a process work. The new vantage points can help team members see the process—and improvement opportunities—in a new light. Consider developing formal or informal systems for collecting improvement suggestions from employees (such as idea boards) and make sure to recognize employees for their suggestions and initiatives.

Follow-up is an integral component of a successful Lean event. It is hard work and requires a lot of effort, but is key to maintaining the momentum of fast-paced improvement inspired during the Lean event. In addition, conscientious follow-up activities help people to develop a continuous improvement mindset.

The next chapter discusses how to expand your Lean success beyond your event and transform your organization into a culture of continuous improvement.

Chapter 7. Diffusing Lean Activity and Becoming a Lean Enterprise

Doing one or more Lean events at a government agency can be an eye-opening and exciting experience. Observing rapid and dramatic improvements in an agency process can offer a glimpse into what is possible to accomplish—even in a large government bureaucracy. Yet running a few successful Lean events is not enough to realize the full gains from process improvement efforts, nor is it enough to develop a continual improvement culture across an agency. The power of Lean is truly realized when individuals in an organization internalize a proactive, problem-solving approach and the organization becomes adept in supporting improvement as part of daily work practices. It is important to remember that diffusing Lean into an agency is a critical part of the overall Lean work. After the first few Lean events, inevitable questions arise.

- ⇨ What does Lean mean for our agency for the long term?
- ⇨ How can we sustain and diffuse the successes of our initial Lean activity?
- ⇨ How can we use Lean to promote a continual improvement culture in our agency?

Responses to these questions can range significantly—from "we are done with Lean" to "let each part of the agency use Lean methods on its own" to "we are going to incorporate Lean into how our agency does its business." Each agency must decide whether it sees sufficient value to continue using Lean. If an agency decides to continue with Lean, then it must decide how to proceed. There is no right answer to this question, but failure to strategically consider it can have serious consequences. At best, failure to think strategically about sustaining and diffusing Lean activity will increase the cost of capacity building, Lean training and facilitation, and Lean tool development. Far worse, one or two poorly planned and executed Lean events can sour the agency on Lean and undo past progress. Furthermore, given the frequency of changes in agency leadership, initiatives that are not well-planned or entrenched in the agency can be vulnerable to elimination.

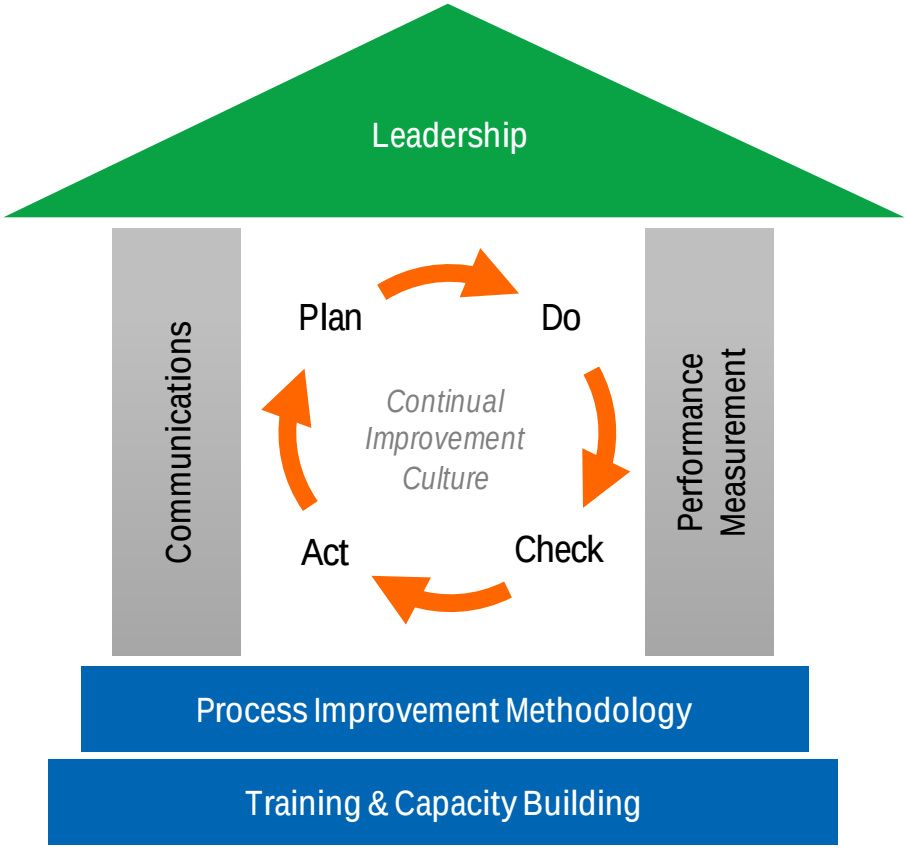
This chapter is designed to help you think strategically about how your agency can sustain and diffuse Lean continual improvement activity. The topics covered in this chapter include:

- Understanding the Lean Journey
- Getting Started with Lean Diffusion
- Four Deployment Models for Lean Diffusion
- Future Directions: Building a Lean Continual Improvement Agency

Understanding the Lean Journey

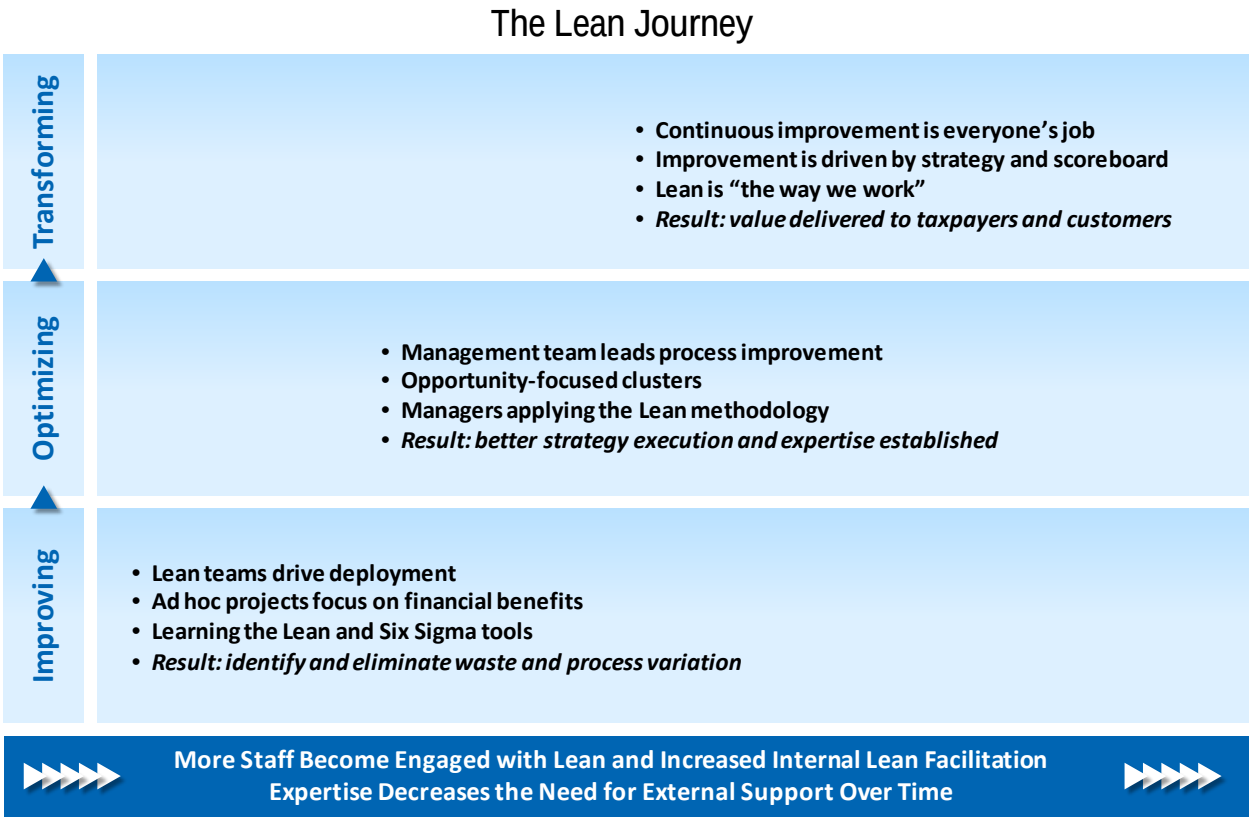
As described in Chapter 2 and shown in the "house" diagram below, there are five key elements of a continual improvement system that Lean supports. First, leaders provide goals, direction, and support to enable process improvement activities. Following this direction, agency managers and staff use Lean methods to eliminate inefficiencies, simplify processes, and allow more time to be spent on "mission critical" work. This Starter Kit is one tool your agency can use to support the Lean process improvement methodology for your agency. Building from this foundation, applied Lean training ensures that employees can effectively participate in and lead process improvement activities. Next, targeted communications keep internal and external audiences informed about the agency's Lean efforts and their importance. Finally, a performance measurement system allows the agency to track and evaluate progress over time and make adjustments to implementation activities as needed.

The Continual Improvement System



Fully developing this continual improvement system and fostering culture change does not happen overnight. Lean organizations often describe their efforts as a "journey," consisting of various phases of Lean activity and culture change. Often this involves starting with pilot testing Lean in one or two areas to gain experience and see how it best can be applied within an organization's culture. Following initial piloting, an organization may move towards more strategic uses for Lean to address organizational priorities as well as persistent problems. Some

organizations may then take Lean to the next level, embarking on a transformation of the organizational culture that relies not only on Lean events to drive change, but also embeds process improvement in the daily work practices of employees. The figure below describes three key stages that often occur as an organization matures in its use of Lean: improving, optimizing, and transforming.



The time that an organization takes to shift between these stages can vary, and it can take 3–5 or more years before an organization fully adopts a Lean culture. The Lean journey does not happen overnight, and that the pace and effectiveness of the transformation depends on multiple factors, including leadership support, organizational culture, the sense of urgency for change, available resources, and implementation strategy. The road on the Lean journey is not always smooth, and many organizations implementing Lean experience a greater chance of failure between 6 and 18 months into their Lean journey. Failure during this period of a Lean journey often occurs due to a combination of three factors:

- A *lack of strategic focus* to the Lean activities
- A *lack of management passion and commitment* to successful Lean implementation
- A *lack of staff time and money* devoted to support the journey

During this period, initial excitement and momentum from the first few Lean events can subside, especially without active leadership or a clear plan for continuing and propagating Lean activity. These are key reasons why leadership engagement and communications are critical to sustaining success with Lean process improvement efforts.

Getting Started with Lean Diffusion

While a hands-off, grassroots approach to Lean may be appealing in some agencies, some cross-agency coordination and planning is invaluable for effective Lean implementation. Lean leaders in the public and private sectors have found strategic ways to expand Lean activity at a lower cost, with more consistency, and better results than if they implemented Lean in a piecemeal approach. There are six important steps for diffusing Lean within an agency.

LEAN DIFFUSION STEPS

1. Implement Lean in several areas and share results
2. Send clear and consistent supportive messages from agency leadership
3. Establish an agency Lean coordinator
4. Build a core Lean team and expand staff capacity through training
5. Develop a consistent approach and tools for implementing Lean
6. Keep at Lean to sustain momentum, but do not push too hard too fast

1. Implement Lean in Several Areas and Share Results

The best way to sustain, expand, and build momentum for Lean activity is to achieve results and to share them throughout the agency. Identify several departments or programs that may be good places to conduct Lean events and to build staff experience with Lean. Conducting isolated events throughout an agency can yield good improvement results and expose many personnel to Lean, but this approach will not necessarily build centers of Lean experience that are sufficient to sustain organizational interest and attention and to champion Lean activity. Many Lean experts tout the value of creating "Lean learning labs"—places where Lean activity is concentrated that can serve as models for Lean deployment and learning elsewhere in organizations. There is no better way to learn about Lean than to experience it firsthand through Lean events, and there is no better way to realize what Lean can do for your agency than to try it out.

After your first Lean event, when selecting areas for further Lean activity, consider these four factors in addition to the criteria described in chapter 3 for selecting a Lean project:

- One or more processes in the area have significant improvement needs and/or opportunities for impressive results
- Managers and/or key personnel in the area are highly receptive to using Lean
- Managers and/or key personnel in the area are well respected throughout the agency and could become an effective champion and/or advocate for Lean within the agency
- Personnel in the area have previous experience using Lean methods

After completing Lean events, share the results and let them speak for themselves. Chapter 3 includes information on measuring and communicating Lean results. Prepare a brief, attractive presentation that shares key information on Lean events conducted throughout the agency. Involve key personnel from other departments and divisions in the report-out presentations for Lean events to help introduce key personnel and "idea leaders" within the agency to Lean. Consistently communicate messages about why Lean is important to the agency and the results that have been achieved through Lean events and implementation activities. Once people discover that Lean can make their jobs easier and deliver real results, momentum will build.

2. Send Clear and Consistent Supportive Messages from Agency Leadership

Strong support from agency leaders is critical to both effective implementation and diffusion of Lean. Without the personal and visible support of senior managers, the effectiveness of Lean events can be undermined. Effective Lean implementation requires sustained attention and resources, along with an openness to change. Visible leadership commitment and support are also vital to encourage other parts of an organization to step forward and try Lean. Leadership commitment is crucial to ensuring that the agency will back and support the work of Lean practitioners, both during specific Lean events and in broader organizational deployment of Lean. Several actions that Lean leaders must take are outlined in the box below and in the *Lean Leadership Guide* on EPA's Lean Government website, www.epa.gov/lean/government/.

Resources

- Lean Leadership Guide

KEY ACTIONS FOR LEAN LEADERS

Create a clear and compelling case for change.

- Communicate continually with internal and external constituents
- Address employees' questions about "what's in it for me?"
- Define success—and celebrate when it occurs

Build the infrastructure for change.

- Align employee rewards and compensation to support process improvement efforts
- Clear obstacles to change and improvement as they arise
- Identify and nurture leaders who emerge during Lean implementation

Establish metrics and reinforce accountability.

- Expect follow-through and track open actions
- Encourage the use of visual management approaches to share results

Visible leadership is also critical to help many managers who are new to Lean overcome the perceived risk of trying a new and unfamiliar process improvement method.

POSSIBLE INITIAL REACTIONS TO LEAN

- ✓ We've already tried that
- ✓ We're too busy to take time out for an improvement event
- ✓ We don't have time to focus on process improvement
- ✓ It will cost too much to do a Lean improvement event
- ✓ It will never work in our area or department
- ✓ Nothing's broken, so why fix it
- ✓ We're not like a manufacturing company; those concepts and tools don't apply to us

Most organizations that embark on a Lean journey soon discover that the excuses for not trying Lean are unfounded and that the payback from Lean efforts can be quick and dramatic.

3. Establish an Agency Lean Coordinator

Resources

- Agency Lean Coordinator Job Description
- Agency-Wide Lean Tracking Sheet

Once your agency has committed to implementing multiple Lean events, it is critical to identify an agency Lean coordinator to help guide and keep track of Lean activity throughout the agency. An agency Lean coordinator can help prevent unnecessary rework by linking those interested in using Lean with potential consultants or event facilitators, training resources, lessons learned, and other helpful information. Some government agencies have found it useful to task the Lean coordinator with leading the development of an organizational Lean deployment strategy. Such a strategy can support organization-wide Lean activity and ensure that it is connected to the organization's overall mission, strategic plan, and other priorities. An agency Lean coordinator can also track the use of Lean across other government agencies and look for benchmarking and information sharing opportunities. The Lean coordinator can track process improvement efforts across the organization and ensure that implementation is followed after each event (see Agency-Wide Lean Tracking Sheet).

While it is helpful to have a single point of contact for your agency's Lean initiative, especially for communications purposes, that doesn't mean that the "coordinator" should necessarily be the only person involved in coordinating Lean activities across your agency. In fact, it is critical for leaders across the agency—or the department/division within which you are implementing Lean—to be actively engaged in your organization's Lean process improvement efforts. Some Lean experts advocate establishing a Lean Steering Committee to enable alignment across the leadership team for process improvement efforts, as well as to communicate activities and results, evaluate progress, gather and prioritize improvement ideas, and allocate resources. The agency Lean Coordinator can serve as the central focal point for a Lean initiative. They can work under the direction of senior leadership and/or a Steering Committee to develop and support the agency's Lean deployment strategy, including communications, training and capacity building, performance measurement, and the regular application of Lean methods.

4. Build a Core Lean Team and Expand Staff Capacity through Training

Begin to build Lean expertise in your organization by having a few employees participate in multiple Lean events across your agency (and/or at other public agencies or organizations). The best way to learn about Lean and become skilled as a Lean practitioner is by observing and participating in Lean events. While training courses can be useful, they are no substitute for time spent in Lean events, even if the events are focused on processes different than those the individual works on.

Many organizations report that assistance with Lean event facilitation and deployment from experienced Lean consultants is essential until an organization has developed sufficient internal expertise. Leverage consultant support for Lean events to advance broader internal capacity-building and deployment goals. Over time, this effort can reduce dependence on Lean consultants for event facilitation services, which can be costly. Many experienced Lean organizations retain some level of strategic advising and support on Lean deployment from Lean consultants. Another strategy that some organizations take is to hire Lean expertise by bringing in one or more experienced Lean practitioners who have successfully led Lean events or deployment efforts on administrative processes elsewhere in public or private sector organizations.

Invest in several employee team members who demonstrate interest and skills with Lean and related skills such as facilitation and change management. Get these team members to participate in as many Lean events as possible. Give them increasing responsibility for leading Lean teams and facilitating Lean events (sometimes with consultant help). While it may take a couple of years of practice to independently lead Lean efforts, these team members can assume significant responsibility for Lean application quite quickly, reducing the need for consultant time. As discussed below, building a Lean training program can speed capacity-building efforts and ensure the use of consistent methods and tools. The *Guide to Lean Government Training* on EPA's Lean Government website (www.epa.gov/lean/government) provides additional guidance and options for designing a Lean training program.

Resources

- Guide to Lean Government Training

5. Develop a Consistent Approach and Tools for Implementing Lean

As Lean is diffused across an organization, avoid having each office or department reinvent existing Lean tools or processes. This Starter Kit provides a variety of templates that can be adapted to meet your agency's needs. Experienced Lean government practitioners report that without a consistent organization-wide approach, it is difficult to replicate performance improvements from one department to another. Many organizations have found that a consistent approach to implementing Lean methods and tools can still accommodate sufficient flexibility to meet the needs of diverse offices, programs, and processes.

Government organizations should consider employing a common approach for selecting and contracting with a Lean facilitator, until sufficient in-house Lean facilitation capacity is developed. This can be an important way to ensure that each project or event uses a common

approach to Lean. Agencies also may find that a standardized approach may reduce transaction costs associated with hiring and retaining Lean consultants. For example, some consultants may tend to emphasize kaizen events, while others may place more emphasis on the Six Sigma Design-Measure-Analyze-Improve-Control process. If an agency uses different terminology, tools, and processes for each event, it can make broader organizational communications and training more challenging. When an organization is ready to build internal capacity for Lean facilitation through training and certification, a single Lean training curriculum will enable internal Lean event facilitators to implement Lean events throughout the agency.

6. Keep at It to Sustain Momentum, but Do Not Push Too Hard Too Fast

Successful Lean implementation requires a lot of hard work, but the results are often well worth the effort. In general, the more Lean events your organization conducts, the more process improvement gains are possible. However, as noted in this Starter Kit, it is important to remember that supporting the activities during the Lean event is only one stage of Lean process improvement efforts; careful scoping and preparation for events and dedicated attention to implementation efforts are critical to long-term success. Consider your organization's overall process improvement goals and needs, and your organization's culture when choosing the appropriate level of investment in Lean to sustain interest and momentum.

While it is not uncommon for leading Lean organizations in the public and private sector to run numerous Lean events each year, remember to pace yourself. Moving too aggressively with Lean when an agency is not ready can quickly turn people off and make it seem like too much attention has shifted to Lean efforts, at the expense of the agency's core mission. Organizations that are well into their Lean journeys often find that it's useful to have one "Lean event week" during a month, with multiple process-improvement events scheduled during that time. Several state environmental agencies have successfully used the concept of Lean event weeks to make Lean consultant resources go further (with one consultant supporting multiple events) and create momentum for Lean efforts. According to many Lean experts, once an organization has matured on its Lean journey, a good general rule of thumb is to hold at least one Lean event per year for every 10 employees (the *n*/10 rule).[14] Lean implementation at that level can drive double-digit annual performance gains, but that scale and pace of implementation may not make sense for many organizations, especially those early on in their Lean journeys. The pace and level of investment in Lean efforts at an organization over the long term are important questions for leadership to answer, and they influence the choice of deployment model, discussed below.

Four Deployment Models for Lean Diffusion

Once an agency decides to expand its use of Lean, the challenge shifts to how to effectively and efficiently proceed. There are four main models for deploying Lean in an organization, including: *Agency-Wide (Transformative), Department/Division (Transformative, but Selective Application), Targeted (Strategic),* and *Grass Roots (Opportunistic),* which are further described in the table below. These models range from sporadic implementation initiated by individual

[14] The *n*/10 rule is from George Koenigsaecker, *Leading the Lean Enterprise Transformation*, New York: CRC Press, 2009.

champions potentially yielding pockets of success to strong top-down leadership and systematic investment that may yield more significant and sustainable results.

LEAN DEPLOYMENT MODELS		
	Characteristics:	*Deployment Considerations:*
Agency-Wide Model (Transformative)	⇨ Top down driven ⇨ Comprehensive ⇨ Major culture change ⇨ Rapid, highly visible deployment	⇨ Requires significant, sustained investment and solid leadership from top management ⇨ Large infrastructure and full-time staff ⇨ Significant planning and management ⇨ Integration with other management systems ⇨ Need for common language and problem-solving methodology ⇨ Need to address cross-agency processes ⇨ 5+ years to achieve lasting culture change
Department/ Division Model (Transformative, but Selective Application)	⇨ Department leadership but agency management support ⇨ Department pilot for agency ⇨ Comprehensive at the department level ⇨ Culture change	⇨ Similar to agency-wide model but on a smaller scale ⇨ Easier to start due to smaller scale ⇨ Slower pace is possible; scale up after initial success ⇨ Greater use of consultants and outside training ⇨ Less integration with management systems ⇨ Risk of not getting beyond the department level
Targeted Model (Strategic)	⇨ Top management leadership ⇨ Focused on a few specific agency problems ⇨ Driven by a desire for strategic impact ⇨ Culture change is not a deployment objective	⇨ Easy to get started ⇨ Can work in smaller agencies ⇨ Infrastructure needs are small; generally use contracted resources ⇨ Little systematic integration with management systems ⇨ Quick results because problems are identified ahead of time ⇨ Risk of not sustaining the gains
Grass Roots Model (Opportunistic)	⇨ Originates at the bottom of the agency ⇨ Highly motivated individuals lead the effort ⇨ Project- or problem-specific ⇨ Culture change is not an objective	⇨ Relatively easy to do but difficult to sustain over time ⇨ Very vulnerable to changes affecting staffing ⇨ Few if any initial infrastructure needs; no integration with management systems ⇨ Often rely on external Lean consultants ⇨ Lean implementation approach may vary across agency ⇨ Can generate good results from individual projects ⇨ Track record for sustainable improvement is not good

Most highly successful organizations in the public and private sectors have found that having a guiding vision and clear goals is critical for effective change management. Long-term agency goals, resources, and leadership commitment should drive which model is selected. Key goals to consider include:

- Organizational culture and transformation
- Strategic improvement
- Problem-solving
- Cost reduction
- Image

Resources

- Lean Deployment Presentation

When selecting a model for diffusion, careful thought should be given to three factors: desired impact, implementation scale, and organizational readiness (see table below).

DIFFUSION MODEL SELECTION FACTORS

Desired Impact	*Implementation Scale*	*Organizational Readiness Factors*
⇨ *Business Transformation* ▪ Agency-wide deployment ▪ Major culture change ⇨ *Strategic Improvement* ▪ Targeted deployment on critical problems ▪ Projects necessary for success or survival ⇨ *Problem-solving* ▪ Specific operational problems ▪ Incremental improvements in agency performance	⇨ Entire agency ⇨ Department/division ⇨ Project/section/team	⇨ Culture ⇨ Past process experience ⇨ Management team ⇨ Stability

Select a deployment model and adapt it to best fit your agency's situation. You may also choose one deployment approach during your organization's initial efforts with Lean, and then shift to another deployment approach after a few years of implementing Lean methods. There is no one "right" Lean deployment model, although many Lean leader organizations voice strong support for the agency-wide model, since it is the only one that can achieve cultural change throughout an organization. Regardless of which model is selected, management support and commitment is an essential ingredient for long-term success. Consider developing a five-year improvement plan that realistically charts where you want to be in five years compared to your current performance and that outlines what it will take to get there in terms of time, resources, leadership, outside expertise, training, and communications.

COMMON OBSTACLES TO BUILDING A LEAN ENTERPRISE

According to Lean author and consultant Karen Martin, common obstacles that organizations face when building a Lean enterprise and potential strategies to address them include the following:

- Weak or no leadership buy-in (Strategy: Leadership engagement and executive champions)
- No sense of urgency (Strategy: Communications that emphasize the pressures on the agency, the unknown, and the need to change)
- Non-existent or unrealistic strategy (Strategy: Develop clear goals and a realistic, five-year plan)
- Lack of alignment around improvement strategy (Strategy: Establish a Lean Steering Committee)
- Lack of understanding or missing skills (Strategy: Establish clear learning objectives for training, identify appropriate participants, and ensure it is connected to real-world application)
- Inadequate improvement resources (Strategy: Leverage external resources to provide learning opportunities; internal resources can be a combination of dedicated and shared responsibility)
- Slow results (Strategy: Focus year one on quick successes and don't attempt to tackle your toughest problems first before you've learned more about how to do Lean projects successfully)
- Results not communicated (Strategy: Use multiple communication means, such as an Intranet, displays in hallways and break rooms, closed circuit LCDs, paycheck stuffers, newsletters, and meetings)
- Processes are not monitored and continuously improved (Strategy: Establish a process owner who monitors a few key performance indicators for the process, reports on performance, and leads improvement efforts as needed)
- Everything waits for a kaizen event (Strategy: Establish employee suggestion boards and other ways to encourage individual initiative and "just-do-it" actions)

Source: Adapted from Karen Martin & Associates, "Building a Lean Enterprise: Navigating the Common Obstacles to Success," Webinar Presentation, 13 May 2010, www.slideshare.net/KarenMartin2/building-a-lean-enterprise.

Future Directions: Building a Lean Continual Improvement Agency

Lean can be much more than a process improvement tool to be used only when a process seems broken. There are many opportunities for environmental agencies to implement Lean to improve existing programs and processes or to efficiently create new ones.

Develop New Programs, Regulations, and Initiatives Using Lean

While improving existing processes is important, environmental agencies can realize significant value by designing new programs and processes to be efficient and effective from the start. Lean process design methods such as Design for Lean Six Sigma and Production Preparation Process (3P), described in the Lean Methods Table in Chapter 3, offer powerful approaches and tools for designing new processes to be highly effective and efficient. These methods can also be used to design or redesign products (e.g., an agency newsletter or permit application), processes, and programs. Once your organization is familiar with basic Lean principles and methods, such as identifying "wastes" in office processes and the process mapping used in kaizen events or value

stream mapping events, you may begin to identify opportunities where Lean thinking could be applied to design better, more efficient processes from the beginning. (See Appendix A for a Bibliography of Lean References to learn more about Lean design methods.)

Improve and Manage Agency Value Streams

Most high-performing Lean organizations work to manage and improve key value streams—the full chain of processes and activities that deliver value to customers or stakeholders. For an environmental agency, this could be the services the agency provides to society and to key constituents and working to optimize these flows of value. This may lead to more holistic approaches to environmental management that go beyond the traditional air, water, and waste silos. For example, a state or local environmental agency could look comprehensively at how it delivers all environmental protection services (permitting for air, wastewater, and hazardous waste impacts, as well as technical assistance with pollution prevention and sustainability initiatives) to businesses seeking to locate in the state, rather than focusing on optimizing just air permitting or another part of that value stream. Some municipalities have taken this customer-oriented view and set up neighborhood service centers where citizens can access services from multiple government departments all in one place. Similarly, some states have developed one-stop business centers to support streamlined business licensing and permitting. Looking broadly at value streams also can be important for thinking holistically about strategic priorities for kaizen improvement projects.

Lean approaches offer some useful lessons in how to effectively plan, organize, and manage organizations to optimize their value streams. Such lessons may open up exciting possibilities for environmental agencies.

Link Lean Improvement Events to Agency Mission and Strategy

As organizations make the transition to becoming Lean continual improvement enterprises, they are increasingly linking their improvement activities to their strategic planning and goal-setting processes. A powerful method known as "strategy deployment" (also known as *hoshin kanri* and policy deployment) elegantly links the strategic goals of an organization with a cascade of increasingly specific programs and activities that support those goals. Strategy deployment typically has a one- to five-year focus (updated annually), taking longer-term strategic planning goals and objectives and honing in on what needs to be accomplished in the coming year.

A3, as noted in the *Lean Methods Table* in Chapter 3, is a powerful Lean method that complements strategy deployment by clearly displaying the connections between an organization's priorities and tactical Lean implementation efforts on a single piece of paper. (A3 refers to the paper size, approximately 11 by 17 inches.) The visual presentation of this highly interactive strategy deployment planning process using the A3 method incorporates key performance measures and assigns specific responsibilities for achieving the goals to individuals at all levels of the organization. This creates a powerful means for connecting Lean initiatives with an organization's mission and strategy. The end result is a living, dynamic strategic planning process that is intrinsically linked to the activities and improvement efforts that are planned and executed in the organization.

Concluding Thoughts

While the Lean journey takes hard work and perseverance, the results can be transformative—freeing employees to focus more time on value-added mission-critical work dramatically improves performance outcomes, customer and stakeholder satisfaction, and employee morale. The Lean journey can lead to satisfied constituents, empowered and engaged employees, passionate leaders, and better environmental quality. Best wishes for a productive and successful Lean effort.

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Tapping, Don. *The Lean Office Pocket Guide XL: Tools for Elimination of Waste in Administrative Areas!* New York: MCS Media, 2006.

Tapping, Don and Tom Shuker. *Value Stream Management for the Lean Office: Eight Steps to Planning, Mapping, and Sustaining Lean Improvements in Administrative Areas*. New York: Productivity Press, 2003.

Teeuwen, Bert. *Lean for the Public Sector: The Pursuit of Perfection in Government Services.* New York: Productivity Press, 2011.

Thompson, Jim. *Lean Production for the Office: Common Sense Ideas to Help Your Office Continuously Improve*. Toronto: Productive Publications, 2009.

Venegas, Carlos. *Flow in the Office: Implementing and Sustaining Lean Improvements*. New York: Productivity Press, 2007.

Womack, James P. and Daniel T. Jones. *Lean Solutions: How Companies and Customers Can Create Value and Wealth Together*. New York: Free Press, 2005.

---. *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*. New York: Simon & Schuster, 1996.

Templates and Tools

See the following links for templates and other resources related to Lean methods. All links were accessed on November 11, 2011.

5S Matrix: www.lean.state.mn.us/LEAN_pages/tools_resources_5S_event_tandm.html

5S Resources:
www.lean.state.mn.us/LEAN_pages/tools_resources_5S_event_tandm.html

5S Training Presentation: www.oregon.gov/DAS/TRFM/docs/5S.ppt

A3 Resources: www.accountability.wa.gov/leadership/lean/tools.asp

Kaizen resources:
www.lean.state.mn.us/LEAN_pages/tools_resources_kaizen_facilitator_tandm.html
http://lean.iowa.gov/resources/index.html

Lean Six Sigma Case Study: www.epa.gov/lean/environment/studies/jea.pdf

Policy Deployment tips:
www.manufacturing.net/Articles-Policy-deployment.aspx?menuid=242

Point kaizen tips:
www.gembapantarei.com/2006/12/when_is_point_kaizen_ok.html

Process Walk Checklist Examples:
www.seemp.co.uk/lean_waste_walk_checklist.pdf
www.bluehangar.com/uploads/5/3/2/3/532364/bh_process_walk_checklist.pdf

Standard Work presentation:
www.oregon.gov/DAS/TRFM/pub.shtml

Value Stream Mapping resources: www.dnrec.state.de.us/DNREC2000/VSM/Index.htm

Visual Controls tips:
http://theleanthinker.com/2007/08/20/sticky-visual-controls/

Websites

Environmental Council of the States (ECOS), http://www.ecos.org/content/project/detail/2292/. (ECOS is an organization that supports strategic initiatives for state environmental agencies.)

U.S. Environmental Protection Agency, Lean and Environment website, www.epa.gov/lean/index.htm. (This is an EPA website providing resources and information on Lean and the environment for the private and public sector. This website includes Lean Government tools, methods, and resources as well as information on Lean initiatives at state environmental agencies, EPA, and other federal agencies.)

State of Iowa, Office of Lean Enterprise website, http://lean.iowa.gov. (This website provides background information on Lean concepts and tools, a series of downloadable resources for Lean events, and information about Iowa agency Lean efforts.)

State of Minnesota, Enterprise Lean website, http://www.lean.state.mn.us/. (This website provides information on Lean tools, resources, training opportunities, and Minnesota agency Lean efforts.)

Lean Enterprise Institute, www.lean.org. (LEI is a non-profit research and training organization focused on value stream mapping and Lean principles. Check out LEI's "Lean Government" forum at http://www.lean.org/FuseTalk/Forum/.)

National Institute of Standards and Technology, Manufacturing Extension Partnership, www.mep.nist.gov. (NIST MEP centers are non-profit Lean technical assistance providers.)

Productivity Press, www.productivitypress.com. (Productivity Press is a private Lean publishing company.)

Weblogs that discuss Lean government topics:

- Curious Cat Management Improvement: http://management.curiouscatblog.net
- Evolving Excellence: www.evolvingexcellence.com/blog
- Gemba Panta Rei: www.gembapantarei.com/lean_government
- iSixSigma: www.isixsigma.com
- Training Within Industry: http://trainingwithinindustry.blogspot.com/2009/01/obamas-lean-government.html

Appendix B. Resources

This appendix includes practical tools and resources for learning about Lean, conducting successful Lean process improvement events, and becoming a Lean enterprise. A summary description of each resource appears below. The resources are organized according to the chapter in which the Starter Kit references them, with a separate list of the resources that are only available on-line. *All of the resources are available for download from EPA's Lean Government website, www.epa.gov/lean/government.*

List of Starter Kit Resources

Web-Only Resources

The following resources are not included in the Appendix to the Starter Kit, but are available for download online.

- Lean Overview Presentation
- Lean Inventory
- Lean Leadership Guide
- Lean Metrics Guide
- Guide to Lean Government Training
- Lean Government Event Scoping Guide
- Event Report-out Presentation
- Lean Deployment Presentation

Chapter 2: Tools and Resources for Understanding Lean and the Continual Improvement System

- Frequently Asked Questions about Lean

Chapter 3: Tools and Resources for Selecting a Lean Project

- Pre-Screening Application for Lean Events
- Lean Facilitator Request for Proposal

Chapter 4: Tools and Resources for Lean Event Scoping and Preparation

- Lean Event Sponsor Contract
- Lean Event Supplies List
- Lean Event Logistics Checklist
- Pre-event Meeting Agenda
- Team Charter
- Example Team Charter
- Event Preparation Checklist
- Pre-event Data Collection Guide

- Kaizen Event Agenda
- Frequently Asked Questions about Lean

Chapter 5: Tools and Resources for Conducting a Lean Event

- Team Leader Daily Agenda
- Lean Event Homework
- Report-out Summary
- Event Evaluation Form
- Lean Event Certificate Template

Chapter 6: Tools and Resources for Lean Event Follow-Up

- Lean Event Follow-up Action Tracking Form

Chapter 7: Tools and Resources for Diffusing Lean Activity and Becoming a Lean Enterprise

- Agency Lean Coordinator Job Description
- Agency-Wide Lean Tracking Sheet

Descriptions of Starter Kit Resources

Web-Only Resources

The following resources are not included in the Appendix to the Starter Kit, but are available for download online.

- **Lean Overview Presentation.** This presentation introduces senior agency management to Lean principles, methods, and key success criteria, and offers example results from past agency improvement efforts.
- **ECOS State Lean Inventory.** This inventory summarizes Lean implementation efforts at state environmental agencies. It can be used with managers and staff to provide context for your agency's Lean initiative.
- **Lean Leadership Guide.** This guide describes eight critical steps that Lean leaders should take in order to ensure the success of process improvement efforts.
- **Lean Metrics Guide.** This guide provides definitions and examples of metrics often used in Lean government efforts.
- **Guide to Lean Government Training.** This guide provides information and guidance on how to think about and structure a Lean training program for your agency, an overview of options available for seeking Lean training, and a potential roadmap for how Lean training activities could evolve over time.
- **Lean Government Event Scoping Guide.** This guide is designed to help government agencies select, scope, and charter successful Lean events. It includes specific examples from environmental agency Lean events.

- **Event Report-Out Presentation.** This presentation provides an example of the type of information shared in a Lean event report-out presentation.
- **Lean Deployment Presentation.** This presentation outlines several options as well as key considerations for broader agency Lean deployment.

Chapter 2: Tools and Resources for Understanding Lean and the Continual Improvement System

1. **Frequently Asked Questions about Lean.** This sample Question and Answer document answers many of the key questions that get raised about Lean events. The document can be distributed to agency staff prior to an event.

Chapter 3: Tools and Resources for Selecting a Lean Project

1. **Pre-Screening Application for Lean Events.** Once an agency has conducted its first Lean event, it is helpful to have a standard form for evaluating and prioritizing potential future events. This application outlines questions for agency managers and staff to answer about potential value stream mapping projects.
2. **Lean Facilitator Request for Proposal.** This sample request for proposal describes potential qualifications to look for in a Lean facilitator and how to rank candidates.

Chapter 4: Tools and Resources for Lean Event Scoping and Preparation

1. **Lean Event Sponsor Contract.** This contract is signed by the team sponsor and team leader to ensure that the sponsor understands the event's focus and the critical role that the sponsor plays.
2. **Lean Event Supplies List.** This supplies list includes materials frequently used at Lean events. To help ensure smooth event functioning, come prepared with the right supplies on hand.
3. **Lean Event Logistics Checklist.** This checklist provides a chronological guide for making food and logistical arrangements for a Lean event. While food and logistics preparation may seem like minor issues, they ensure that an event functions smoothly and allow participants to focus on the process.
4. **Pre-event Meeting Agenda.** This agenda includes a set of objectives and guiding questions to discuss with the event team during the pre-event meeting.
5. **Team Charter.** This team charter allows an agency to articulate the scope, goals, and objectives of the event, along with follow-up dates to ensure that the process will move forward after the event.
6. **Example Team Charter.** This is an example of a completed team charter.

7. **Event Preparation Checklist.** This event preparation checklist provides a summary of key actions needed across the phases of Lean event planning and implementation.
8. **Pre-event Data Collection Guide.** This guide outlines critical steps and questions associated with gathering baseline or "current state" data before a Lean event.
9. **Kaizen Event Agenda.** This kaizen event agenda provides an example of time allocation over a five-day kaizen event. The agenda is a high-level guide and can be easily modified to be more event-specific.
10. **Frequently Asked Questions about Lean.** (See description listed under Chapter 2)

Chapter 5: Tools and Resources for Conducting a Lean Event

1. **Team Leader Daily Agenda.** This detailed agenda outlines specific roles and responsibilities of a team leader over a five-day Lean event.
2. **Lean Event Homework.** This homework sheet is a useful way to track action items and assignments identified during a Lean event.
3. **Report-Out Summary.** The event report-out summary is a one-page "snapshot" of the event results. The summary includes the event scope, objectives, goals, a tabular representation of improvements, and a list of actions implemented.
4. **Event Evaluation Form.** This form is used to evaluate and solicit feedback from event participants. It is important to listen to participants' perspectives since their responses can inform the success of future events.
5. **Lean Event Certificate Template.** Print out this certificate of participation and fill in each Lean team member's name, the process improved, and the date, and award to everyone involved. The certificates help to spread awareness of Lean when displayed in team members' offices.

Chapter 6: Tools and Resources for Lean Event Follow-Up

1. **Lean Event Follow-up Action Tracking Form.** This tracking sheet is a useful way to track action items assigned during the event report-out. The sheet identifies who is responsible for completing an action item and when the item is due.

Chapter 7: Tools and Resources for Diffusing Lean Activity and Becoming a Lean Enterprise

1. **Agency Lean Coordinator Job Description.** This job description outlines the roles and responsibilities of an agency Lean coordinator; it can be used by agencies interested in expanding their Lean efforts.
2. **Agency-Wide Lean Tracking Sheet.** This spreadsheet can be used to track the process improvement efforts throughout an organization, including next steps and the status of implementation and follow-up.

Frequently Asked Questions about Lean

1. **Are we compromising environmental protection?**
   This is not about loosening environmental regulations or our agency's commitment to environmental protection. We are looking for efficiencies in workflow, paper processing, number of steps in our process, etc. In fact, our goals are to enhance our ability to protect the environment by being able shift more time and resources on environmental protection activities.

2. **Will anyone lose his or her job by making this process so efficient?**
   Our people are very important and will continue to be part of this agency. Some people's job duties may change and some may have different office locations or configurations. But all staff will remain part of this agency.

3. **Municipalities, consulting engineers, and other external entities slow down the permitting process. How are they involved, and who will make them more efficient?**
   Outside stakeholders will take part in the event to help identify opportunities and concerns. However, this is not about how other organizations conduct processes, which we cannot control. Rather, we are focusing on what we can control, and that is how we move a permit through the approval process.

4. **What guarantees do we have that this will actually help the process?**
   Lean is a proven methodology used to break through barriers and cut through bureaucracy, helping teams reach their goals.

5. **Why are we doing this on [Event Name]? Why not another issue?**
   First, [Event Name] meets the three criteria for undertaking a Lean event: it should be a large-volume process; it should use the same steps every time; and it should be a core business activity. Second, we see this issue as an integral step to improving the water quality in the State.

6. **Have we messed up? Have we done something wrong?**
   The [Agency] is proud of the professionalism and performance of this staff. Conducting a Lean event is a way to enhance that performance. The goal is to give people the tools to do their jobs better. Each of us, in our own work areas, could benefit from that type of assistance.

7. **Is this a test of my job performance? Will I get in trouble for not doing well in my job?**
   These events are performed under the assumption that everyone involved is already doing their best—but that with some assistance, efforts can be altered to lessen steps, delays, and time, with no loss of performance or quality. Improvements will focus on reducing the time that no one is working on a project. The time it sits in someone's in-box or is waiting for a reply is waste that can be reduced.

8. **How can you expect to get meaningful change in one week?**
   These events are specifically engineered to achieve results in an intense, one-week work session. Additionally, preparation has taken place prior to the actual event.

9. **How can they understand something as complex as [Event Name or Process] in a week?**
   The participants will learn the steps in the process, not how to conduct the process. The process will be laid out in graphical form to make it easier to understand the sequence and how steps are interrelated.

10. **Who is involved and why?**
    The team that will be designing the new process is composed of [Team Members], other Agency employees involved in the [Event Name], and some of the people who are impacted by the process or who impact the process. All of these different viewpoints are important in designing a better process.

11. **Even if I'm not directly involved on the team, what will I need to do during that week?**
    You may be asked questions by the team members to clarify your part in the process. Please take the time to answer their questions completely. Team members may also ask to observe and time you while you complete a step in the process or discuss the time necessary to complete a step.

12. **Will people be in my office? Will they observe us talking about confidential issues, sensitive operations, controversial issues, sensitive policy issue debates, and phone calls that all occur each week?**
    The team is not interested in specific projects, but how the process works in general.

13. **What happens if I have to leave during the week?**
    If you are a member of the team, please coordinate your absence with the team leader, [team leader name]. If you are not on the team, you only need to coordinate your absence with your supervisor, as usual.

14. **Will the recommendations be rigid or able to change in the future if they fail or cause unintended consequences?**
    The team will not be making recommendation—they will design an improved process that will be implemented immediately. The new process will be tested during the event, but if adjustments need to be made later, they will be made.

15. **How is this process to be judged a success or failure?**
    Data are being gathered on how well the process performs before the event and data will be collected after the event for comparison.

Pre-Screening for Application for Lean Events

1. Identify the area of study:

2. Is the anticipated scope manageable?

3. What are the current problems with the value stream for this area of study (from the organization's perspective and from the customer's perspective)?

4. What is the extent of variation in the area of study?

5. What data is currently collected to measure activities in/about the area of study?

6. Who touches the value stream or process?

7. What is in and out of scope for the proposed value stream mapping workshop or kaizen event?

8. Who is directing the process?

9. What do your customers want that you are currently not able to supply?

10. Is there senior executive leadership support for this area of study?

11. Is there sufficient funding available to support the value stream mapping event or kaizen event?

12. What is the anticipated schedule for the event?

Lean Facilitator Request for Proposal

Please describe in detail how you will meet each requirement. The successful Vendor will work the [insert Agency name] (the Agency) to facilitate the expansion of lean process improvement methodology in executive branch agencies. Such services shall include, but are not limited to, the following:

A. Lead department Kaizen events, Design for Lean Six Sigma events, value stream mapping events, conduct 5S training and audits, and consult with the Agency on other relevant Lean tools and methodologies. While serving as the lead consultant, the service provider will also coach and mentor state employees, serving in the capacity of team lead, to build the Agency's capacity to successfully lead Lean events.

B. Meet with Agency leadership to identify potential Lean projects. Conduct pre-work events that result in the identification of project scope, objectives, goals and data compilation. The consultant will also guide the Agency in team member selection for participation in Lean events.

C. Provide follow-up services, on an as needed basis, to ensure sustainability of Lean process improvement efforts.

D. Work with department leadership to implement policy deployment so that Agency improvement efforts are linked to strategic goals.

If a Vendor's proposal does not meet the required services, the proposal will be rejected.

1.1. QUALIFICATIONS AND INFORMATION

Vendors should offer detailed answers to the questions in this section.

A. Please describe your experience facilitating and consulting on Lean in a public sector organization.

B. Please describe the methodology used to implement Lean in an organization. Please outline basic methodology as well as tools.

C. Please describe in detail any additional services that you believe would assist the Agency in this project. The benefit that is provided to the Agency should be specifically addressed.

1.2. VENDOR INFORMATION

The following information is required of prospective Vendors and will be used to evaluate their qualifications:

A. Name of Vendor

B. Form of business entity (e.g. corporation, partnership, etc.).

C. State of incorporation (if a corporation).

D. Home office address and telephone number.

E. List of branch locations.

F. Provide a description of your background, organizational history, size and years in business.

G. Specialized services, if any, and years of experience in each such area.

H. Minimum of three (3) business references from companies or government agencies that use services within the scope of this RFP.

1.3. SELECTION PROCESS

A. Evaluation criteria and assigned point values**:**

- Credentials and Qualifications *35 points*
  - Demonstration of vendor's qualifications and expertise
  - Number of years experience in providing service sought by RFP
  - Level of experience providing types of services sought in RFP in a public sector organization
  - List of services similar to those sought by RFP that vendor has provided to other organizations.
- Proposal Meets Mandatory Requirements *35 points*
- References *10 points*
- Completeness and Organization of Bid *10 points*
- Costs *10 points*

Total *100 points*

The cost will be used in the cost formula below to compute the relative number of cost points awarded to each proposal. The lowest cost will receive the maximum number of cost points.

$$\frac{\text{Lowest Cost}}{\text{Vendor Cost}} \times \text{Available Points} = \text{Points}$$

Lean Event Sponsor Contract

The purpose of this contract is to help you and your team achieve successful event outcomes. Critical behaviors to help ensure your team's success include:

- Passionate—Enthusiastic support of the team to ensure team success.
- Strategic—Using the event activity to advance a business objective by improving the performance of the targeted process while being aware of the impact to the total system.
- Committed—Engaged from pre-event planning through sustainment.
- Risk Taking—Encourage creative thinking to drive paradigm-breaking results.
- Open Minded—Influence the team to develop the best solution without introducing pre-conceived ideas.

It is the responsibility of the team sponsor to ensure clarity regarding the coverage of event expenses including team members coming in from other locations. It is suggested that the team sponsor review with the team leader, as well as with parties who may be covering the event expenses, early in the planning stages of the event activity.

I have read and support the position paper for this event and understand the critical role that I play within the event process. As a team sponsor, I will follow the event-planning checklist to ensure my role to support the overall success of the team.

Event Sponsor Signature: _____

Team Leader Signature: _____

Date: _____

Team leader is to retain the signed contract along with all other event documentation.

Lean Event Supplies List

Note: Supplies quantities are for an event with approximately 18 people.

Description	**Qty**	**Estimated List Price**	**Estimated Total Cost**
Perforated Note Pads (White)	2	$12.73 DZ	$25.46
Butcher Paper Roll 36” W X 150’ L	1	$13.04 RL	$13.04
Self Stick Easel Pads	2	$25.26 PK	$46.52
Construction Paper (assorted)	4	$1.36 PK	$5.44
Sticky Notes (pastel color) 3”X5”	3	$5.05 PK	$15.15
Sticky Notes (florescent color) 3”X5”	1	$5.91 PK	$5.91
Ballpoint pens (Black or Blue)	20	$.60 EA	$12.00
Permanent Markers (Black)	6	$.75 EA	$4.50
Flip Chart Markers (4 colors)	4	$1.95 ST	$7.80
Removable Glue Stick	4	$.84 EA	$3.36
Adhesive Spray	2	$8.12	$16.24
Masking Tape 1” X 60yards	2	$5.71 RL	$11.42
Scissors	8	$1.45 EA	$11.60
Twin Pocket Portfolios 25 per box	1	$4.21 BX	$4.21
Hang Name Badges 50 per box	1	$10.95 BX	$10.95
Easels for easel pads	4	$14.12 EA	$56.48
GRAND TOTAL			**$250.08**

Supplies to bring that do not require additional purchase:

- Laptop with training briefings and sample results (an extension cord if needed)
- Seven wastes checklist and ground rules
- Digital camera (be sure to get permission from site, and include process map photos, team photos, and all whiteboards)

Lean Event Logistics Checklist

6 weeks before event

- ❑ Find meeting rooms
  - ▫ Monday 1:30 – 4:30 - T-TH 8-5:30 - F 7:30-noon
  - ▫ Fridays – Reserve the report-out location
- ❑ Order supplies

2 weeks before event

- ❑ Order meals
- ❑ Make nametags (get list from team leader)
- ❑ Prepare team member folder (agenda, charter, nametags)

1st Day of event

- ❑ Help team leader set up room
- ❑ Make coffee, set up all coffee supply (1 hour before start of event)
- ❑ Set out team member folder
- ❑ End of day disconnect coffee pot

2nd, 3rd, and 4th Day of event

- ❑ Make coffee
- ❑ Bring breakfast into room
- ❑ Fill cooler with pop, juice and water
- ❑ Bring lunch into room
- ❑ Bring snacks into room
- ❑ Order dinner (if necessary)
- ❑ Assist in clean up at the end of the day

5th Day of event

- ❑ Make coffee
- ❑ Bring breakfast into room
- ❑ Set up snack/coffee/drink at the report-out location (if necessary)
- ❑ Assist in clean up at the end of report
- ❑ Collect and store all extra meal supplies

After the event

- ❑ Gather all receipts
- ❑ Fill out Travel Payment to pay vendors
- ❑ Summarize event evaluations

Pre-event Meeting Agenda

[Date, Time]
[Location]

I. Understand critical issues
   - What is the purpose of this event?
   - Why is it taking place?
   - What is the desired outcome?
   - What are the boundaries of the activity?

II. Understand and discuss high-level process steps

III. Develop scope statement based upon agreement of boundary conditions

IV. Define goals and objectives for the event

V. Identify pre-work for event: what, who to complete, etc.

VI. Which resources must/can be utilized?

Team Charter

[Agency]
[Division/Bureau of event and event name]
[Event Date]

SCOPE
The breadth, or area, of opportunity to change and improve [e.g., *this event will address the process from / of* _____*to* _____.]

OBJECTIVES
[A narrower version of the scope of the improvement event.]

GOALS
Specific numbers or percentages
For example:
1. Reduce lead-time by XX%, from ___ to ___.

PARTICIPANTS

Team leader	Team Leader Name, Agency, bureau
Sub-team leader	Sub-team leader Name, Agency, bureau
Consultant	Consultant Name
Members	Name, Agency, bureau
	Name, Agency, bureau
	Name, Agency, bureau
	Name, Company Name
	(No more than 20 people/event)

PRE-WORK
1. [e.g., determine average lead time] (name person responsible)
2.

FOLLOW-UP DATES
Month, day, year – 30 day
Month, day, year – 60 day
Month, day, year – 90 day
Month, day, year – 6 month
Month, day, year – 1 year

Example Team Charter

SCOPE

This event will address the Iowa DNR's Air Quality Bureau – Construction Permits section, and the process for reviewing and issuing Complex Construction Projects.

Complex construction projects are generally those that involve Prevention of Significant Deterioration (PSD) permitting, Air Toxics review under 112g of the federal Clean Air Act, Netting evaluations for PSD credit, Non-attainment State Implementation Plan (SIP) permitting, and other permitting that involves establishing facility-wide or extensive permitting to limit potential emissions to reduce the facility's regulatory burden.

OBJECTIVES

1. Streamline the process to review and issue Complex Construction Projects and reduce variability.
2. Develop a standard operating procedures guide for project reviewers and project applicants.

GOALS

1. Issue 100% of Complex PSD permits in a maximum of 180 calendar days (132 work days) from the application received date.
2. Reduce lead time for processing projects from 210 days (including 40-day comment period) to 125 days (including 40-day comment period). (Reduction of 50% not including comment period).
3. Reduce requests for additional information by 50%.
4. Reduce the number of unanticipated comments in the comment period by 50%.

Team	Daily Briefing Participants:
Consultant:	[Insert name here]
Team leader: [Insert name here]	[Insert name here]
[Insert name here]	[Insert name here]

PRE-WORK

- Process Mapping ([Insert name here]) – Completed draft 8/16/04
- Matrix Construction ([Insert name here])
- Data Collection ([Insert name here])
- Guide Materials ([Insert name here])

EVENT DATES, TIME, AND LOCATION

- Monday, Noon to 6:00 PM, Tuesday through Thursday, 7:30 AM to 7:00 PM, Friday, 7:30 AM to Noon
- Some additional after hours work may be required during the week.
- Location: Air Quality Bureau, 7900, Suite 1, Hickman Road, Urbandale
- Pre Event Meeting will be held at the Air Quality Bureau – October 5, 1:30-3:00

Event Preparation Checklist

Planning

- ❑ Scope of event
- ❑ High level process steps
- ❑ Data available (time, quantity, frequency)
- ❑ Budget (cost center)
- ❑ Potential internal and external team members
- ❑ Identify support staff (refer to support staff role)
- ❑ Identify communication staff (prints team certificate, communicates with other employees)
- ❑ Identify staff with Microsoft Visio or other process mapping software (installed on laptop)
- ❑ Reserve room for pre-event, event, and report-out presentation
- ❑ Reserve laptop, projector and speakers
- ❑ Send invitation/email to team members about pre-event and event date, time, and location

Pre-event Meeting

- ❑ Set up room
- ❑ Set up projector and laptop (for Lean overview)
- ❑ Set up one easel stand and pad, provide easel markers
- ❑ Develop scope, goals, and objectives for event
- ❑ Identify pre-work
- ❑ Finalize team member selection
- ❑ Identify sub-team leader
- ❑ Finalize team members meal selection

Before Event

- ❑ Order meals, snacks and drinks
- ❑ Order supplies (refer to supplies List)
- ❑ Print/order training manuals
- ❑ Prepare folders and nametags (include training manual, agenda, scope, goals, and objective)
- ❑ Invite management to daily report (e.g., Tuesday and Wednesday from 4:00 to 4:30 p.m.)
- ❑ Invite interested parties and employees to report-out (e.g., Friday from 10:00 to 11:00 a.m.)
- ❑ Arrange a site visit for the Lean team to talk with the workers and see the process in action during the event.

Event

- ❑ Set up room and layout folders and nametags
- ❑ Set up projector, laptop and speakers
- ❑ Set up two easel stands and pads, provide easel markers
- ❑ Event supplies available in the room
- ❑ Provide meals, snacks, and drinks
- ❑ Take team picture on Tuesday morning (for team certificate)
- ❑ Setup room with 2–3 computers/laptops on Wednesday and Thursday (connected to network for accessing files if possible)
- ❑ Print and distribute team certificate on Friday
- ❑ Communicate with other staff via website or email on progress of team

After Event

- ❑ Email team member report-out presentation and other relevant files to event participants
- ❑ Fill out travel payment form
- ❑ Send thank-you letters to team members
- ❑ Set up 30-day follow-up date, time, and location
- ❑ Develop communication plan (e.g. update website with event results, inform stakeholder groups)

Pre-event Data Collection Guide

Pre-event Data Collection Steps

1. Initial map of the current process developed by the area that is going through the kaizen event.
2. Determine from the map steps that can and cannot be changed, i.e., identify those steps that are mandatory by rule.
3. Outline what items are currently tracked for time.
4. For those items currently tracked for time, determine longest item, quickest item and an average of the items. Do not try to gather data here that you do not already know.
5. Have the staff write down what they do for a week. This includes the projects, as well as meetings, site visits, telephone calls, regular meetings, etc.

The "Voice of the Customer" Data Considerations
Some questions to ask as part of the "voice of the customer" are the following:

1. What do they want?
2. When do they want it?
3. Why do they want it?
4. How do they use the product and how much of it do they use?

These questions will ultimately help in determining the "value-added" steps in the process, as well as provide potential design criteria for the final "product." The best approach would be to ask our customers (select a few), or at least think through these questions from their perspective. If the process has different customer segments, the questions could be asked for each one. As above, this information would be useful for goal setting purposes.

Bench marking would also be helpful in establishing goals for the event. Additionally, it could equip the team with example strategies for achieving the goals for the event.

OTHER POTENTIAL BASELINE METRICS INCLUDE:

- Number of process steps
- Total lead time
- Data on staffing needs
- Data on staff time
- Cycle time
- Data on transaction volume in process (e.g., number of applications)
- Number of handoffs
- Amount of backlog
- Rework percentage (e.g., percent of permits needing rework)

Kaizen Event Agenda

[Date and Location]

Monday:	***Training Day***
1:30 P.M.	Team member introduction.
1:45 P.M.	Training.
4:30 P.M.	Adjourn for the day.
Tuesday:	***Day of Discovery***
8:00 A.M	Work on process mapping, data needs, opportunities for waste elimination, and review ideas against scope and objectives.
12:00 P.M.	Working lunch.
12:30 P.M.	Continue with previous work. Create implementation plan.
5:00 P.M.	Draft Wednesday assignment.
5:30 or later	Adjourn for the day.
Wednesday:	***Do Day***
8:00 A.M.	Review Tuesday work. Begin working on selected projects. Sub-teams report progress.
12:00 P.M.	Working lunch.
12:30 P.M.	Continue with previous work. Sub-teams report progress.
5:00 P.M.	Sub-teams report-out. Make Thursday assignments.
5:30 or later	Adjourn for the day.
Thursday:	***Do, Re-Do, Document Day***
8:00 A.M.	Review Wednesday work. Continue Wednesday's work. Sub-teams complete specific opportunities for improvement and report-out. Implement new process operation procedures, forms, process map, and baseline data.
12:00 A.M.	Working lunch.
12:30 P.M.	Continue with previous work. Document changes and complete the new process. Report out from sub-teams and review all work to ensure everything is complete.
5:00 P.M.	Prepare for Friday's presentation.
5:30 or later	Adjourn for the day.
Friday:	***Day of Celebration***
7:30 A.M.	Finish work on presentation.
10:00 A.M.	Team presentation.
11:00 A.M.	Adjourn event. Thank you!

Team Leader Daily Agenda

Day 1

Morning

- ❑ Arrange the room (get someone to help)
- ❑ Get the supplies, easel and easel pad
- ❑ Set up one easel and easel pad
- ❑ Set up the laptop, projector and speakers
- ❑ Set out the folders, training manuals, and nametags

Afternoon

- ❑ Greet everyone when they arrive
- ❑ Start promptly at 1:30 p.m.
- ❑ Welcome everyone and introduce yourself
- ❑ Go through logistics (parking, building access, cell phones, restrooms, meals, etc.)
- ❑ Go through agenda (warn team of potential late nights on Tuesday, Wednesday, and Thursday)
- ❑ Go through ground rules
- ❑ Have everyone introduce themselves
    1. Who are you? Where do you work?
    2. What are your goals this week?
    3. What you like to do when you are not at work?
- ❑ On the easel pad, write "Goals of Team Members" and capture the team member goals
- ❑ Post "Goals of Team Members" on the wall
- ❑ Introduction from senior manager
- ❑ Introduce consultant and/or trainer (begin training)
- ❑ Review the goals and objectives
- ❑ Discuss pre-event data collected
- ❑ Let team know they can leave folder in the room
- ❑ Remind team of start time tomorrow

Evening

- ❑ Disconnect laptop and projector (store in safe location overnight)
- ❑ Tape roll paper on opposite walls (get 1–2 people to help)
- ❑ Spray paper with adhesive glue
- ❑ Setup two easels and easel pad
- ❑ Write on easel pad and post on the wall "Parking Lot/Bike Rack" and "Homework"

- ❑ Lay out scissors, color pad, and markers for flow mapping
- ❑ Tidy up the room (unplug the coffee pot, pick up bottles and cups)

Day 2

Morning

- ❑ Start on time
- ❑ Ask if anyone have question about yesterday's training
- ❑ Start training on flow mapping
- ❑ Ask for volunteer for each flow mapping task
- ❑ Review the goals and objectives
- ❑ Start mapping current state (Identify functions, steps, handoffs)
- ❑ Visit process site for walk through of process.
- ❑ Identify value-added activities and delays on map
- ❑ Estimate lead time (best case, worst case, and average) based on data collected

Afternoon

- ❑ Count the number of steps, handoffs, loops, delay, value-add, delay
- ❑ Calculate lead time (best case, worst case, and average)
- ❑ Make arrangements for dinner by 3 p.m. if it will be needed
- ❑ Attend 4 p.m. daily report out to management
- ❑ Remind team of start time tomorrow

Evening

- ❑ Setup three easels and easel pad
- ❑ Tidy up the room (unplug the coffee pot, pick up bottles and cups, markers and note pads)

Day 3

Morning

- ❑ Start on time
- ❑ Communication staff takes team pictures
- ❑ Ask if anyone have questions or comments about the current process
- ❑ Give the team 20 minutes to write down what they think the ideal state should be individually
- ❑ Capture the team members ideas on easel pad
- ❑ Break up team into groups (5–6 people per group)
- ❑ Give each group some of the ideas and ask them to apply it to de-selection matrix
- ❑ Ask group to write down on easel pads seven ways of implementing the ideas in the High Impact and Low Difficulty quadrant
- ❑ Have each group report to the team

Afternoon

- ❑ Start to map the ideal/future process
- ❑ Capture Parking Lot/Bike Rack and Homework items on easel pad
- ❑ Identify value-added activities and delays on new process map
- ❑ Estimate lead time (best case, worst case, and average) based on data collected
- ❑ Count the number of steps, handoffs, loops, delay, value add, delay
- ❑ Calculate lead time (best case, worst case, and average)
- ❑ Make arrangements for dinner by 3 p.m. if it is needed
- ❑ Attend 4 p.m. daily report out to management
- ❑ Remind team of start time tomorrow

Evening

- ❑ Setup three easels and easel pad
- ❑ Tidy up the room (unplug the coffee pot, pick up bottles and cups, markers and note pads)

Day 4

Morning

- ❑ Set up laptop and projector
- ❑ Ask if anyone has concerns or comments about the new process map
- ❑ Review the goals and objectives
- ❑ Review the parking lot and homework items
- ❑ Ask team to volunteer to work on homework items
- ❑ Collect the completed homework items from each group

Afternoon

- ❑ Assign/volunteer team members to homework items that are incomplete
- ❑ Review "Goals of Team Members"
- ❑ Prepare report-out presentation
- ❑ Inform team about flow of report-out presentation (where to stand, introduce next speaker, what to expect, who will answer questions from audience)
- ❑ Assign/volunteer team members to different slides in the presentation
- ❑ Vote on team name
- ❑ Send team name to communication staff
- ❑ Prepare report-out summary
- ❑ Make 50 copies of report-out summary
- ❑ Attend 4 p.m. daily report out to management
- ❑ Remind team of start time tomorrow

Evening

- ❑ Disconnect laptop and projector (store in safe location overnight)
- ❑ Tidy up the room (unplug the coffee pot, pick up bottles and cups, markers and note pads)

Day 5

Morning

- ❑ Set up laptop, projector and speaker
- ❑ Show “Staff Motivation” video
- ❑ Distribute “Kaizen Event Evaluation” to team members
- ❑ Collect filled out evaluations
- ❑ Set up laptop and projector in the auditorium
- ❑ Practice report-out presentation
- ❑ Collect team participation certificate from communication staff
- ❑ Distribute report-out summary to audience
- ❑ Report-out presentation
- ❑ Return supplies to team leader
- ❑ Put the room back in order (get 1–2 people to help)

Afternoon

- ❑ Give completed evaluations to team leader
- ❑ Place all files for event on computer server

Lean Event Homework

As of:
Event #:
Event Name:
Owner:

Item	Item Description	Person Responsible	Due Date
1	Hold meeting to standardize "front end" documents with other funders/agencies	Gabe	12/17/11
2			
3			
4			
5			
6			
7			
8			

Notes:

Report-out Summary

DATE:

SCOPE:

OBJECTIVE:

GOALS:

RESULTS:

	Old	New	% Change
Steps			1 - (new # / old #)
Value Added Steps			
Decisions			
Loop Back			
Handoffs			
Delays			
Functions in Process			

IMPLEMENTED

[List actions implemented]

Kaizen Event Evaluation Form

Event: _____ Date: _____

Facilitator: _____

Team Leader: _____

You have just completed an event to improve one of your processes. We are interested in your opinion on how things went during the event. We are continuously trying to improve the effectiveness of the events. Below is a list of questions that will help us improve future events. Please be open and honest with your ratings and comments. Thank you.

On a scale of 1 to 5 please rate the questions below.

1 – Strongly Disagree **2** – Disagree **3** – Neutral **4** – Agree **5** – Strongly Agree

Rating	Questions
	I was given at least 2 weeks notice prior to the event.
	The training on Day 1 was effective and prepared me for the event.
	The consultant was effective teaching and guiding the team through the event.
	The consultant listened to my ideas and suggestions.
	The team leader was effective and helpful through the event.
	When my ideas or suggestions were not used, the reasons were explained to me.
	Management support and direction was adequate.
	The time spent this week was productive.
	I have increased my understanding of the value of continuous improvement.
	The material provided was useful.
	The food and beverages provided were adequate.

What did you find most useful during the event?

What suggestions or comments do you have that could help us improve future events?

Lean Event Certificate Template

Certificate of Accomplishment

This is to certify that

_____

has successfully participated in a Lean event to improve the

_____ *process*

On the ____ day of _____ in the year _____

Signed,

_____

_____

Process Improvement Excellence

Lean Event Follow-up Action Tracking Form

As of:
Event #:
Event Name:
Owner:

Item	Item Description	Person Responsible	Due Date	Revised/ Completed Date	Expected Results
1	Hold meeting to standardize "front end" documents with other funders/agencies	Gabe	12/17/11		
2					
3					
4					
5					
6					
7					
8					

Notes:

Parking Lot Issues:

- [Add outstanding parking lot issues here]

Agency Lean Coordinator Job Description

This position is located in the Director's Office under the immediate supervision of the Deputy Director and functions as a program manager for the Agency's process improvement program. The person in this position is responsible for implementing and managing the department's Lean process improvement program, including the deployment of training and other duties that will enhance organizational efficiency and support a culture of continuous improvement and customer satisfaction.

Lean Deployment and Facilitation: Develop and implement an action plan for the deployment of all aspects of the Agency's Lean process improvement program, including, but not limited to kaizen, 5S, value stream mapping, and Design for Lean Six Sigma events. Responsible for working with department managers in identifying areas for process improvement events, establishing objectives for each project, and selecting cross-functional team members and leaders. Act in the capacity of the facilitator for each event. Coordinate each project/event phase and ensure that participants and stakeholders have the tools and resources they need, necessary information, and guidance to enable them to fully engage in the process and maximize the potential outcome of each event.

Tracking Progress: Develop and implement an action plan for tracking, analyzing and reporting return on investment of programs that have undergone process improvement initiatives. Monitor the progress of projects, including ongoing status reviews. Ensure that the database is current relative to process improvement activities. Responsible for coordinating and participating in 30-day, 60-day, 90-day, 6-month, and 1-year follow-up meetings for each event to ensure follow-up activities are completed and improvements are realized and maintained. Develop a comprehensive report which delineates the status and outcomes of each event, including, but not limited to, efficiencies gained, increased customer satisfaction and/or reduced costs or savings realized. Conduct formal reviews with the management team on a quarterly basis to review accomplishments, identify areas for improvement, and respond to questions.

Training: Coordinate the training of Agency staff on Lean process improvement techniques, including a plan for deployment of training to all Agency staff. Ensure that tools, resources, and instructional materials are developed, updated as necessary, and maintained to meet ongoing needs. Responsible for tracking participation and associated costs of time and materials for training deployment. Establish a library of learning materials, both electronic and paper, which can be made available to interested staff. Conduct research focused on benchmarking world-class business process performance at other agencies and utilize findings to assist supervisors in establishing tangible measures of time, cost, and quality.

Communications: Develop and implement an effective strategy for communicating the status and results of the Agency's improvement efforts to partners, customers, and staff. This includes, but is not limited to, the development of an Internet presence to showcase departmental activities. Keep staff informed of revised procedures and methods and related work changes as implemented.

Agency-Wide Lean Tracking Sheet

Agency-Wide Lean Tracking Sheet					
Process/Project	Method*	Team Leader/ Implementation Manager	Start Date	Expected End Date	Comments (e.g., Next Steps, date of most recent update)

**Methods could include 5S, Process Walk, Kaizen Event, or others*

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