



United States  
Environmental Protection  
Agency



# STATE OF --- LEAN AT EPA

How Lean Is Making a Difference

INCREASING  
EFFICIENCY AND  
PRODUCTIVITY

WORKING  
FASTER AND  
SMARTER

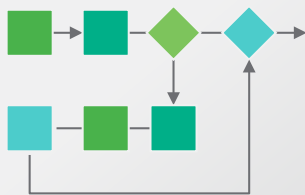
LEVERAGING  
OUR  
SUCSESSES

April 2017  
EPA- 231-R-17-002

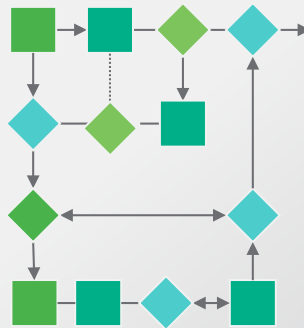
# Increasing Efficiency and Productivity

**Lean principles and tools identify and eliminate non-value added activity – waste.**

## HOW WE THINK THE PROCESS LOOKS



## HOW IT ACTUALLY LOOKS



## HOW WE WOULD LIKE IT TO LOOK

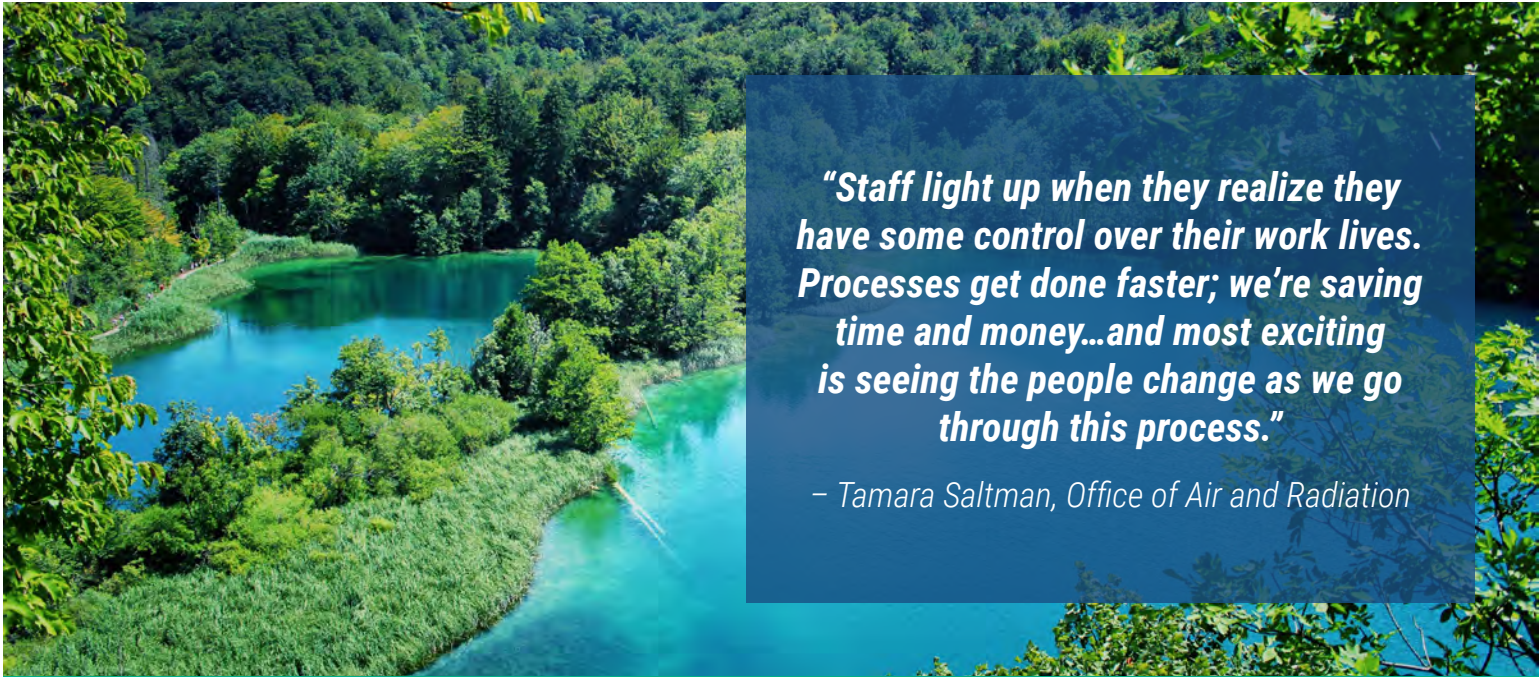


## Lean...

- Removes obstacles that cause inefficiencies
- Increases quality and accuracy
- Improves morale and encourages continual improvement
- Reduces rework
- Enhances transparency and clarity to internal and external audiences, including states and regulated industries







***"Staff light up when they realize they have some control over their work lives. Processes get done faster; we're saving time and money...and most exciting is seeing the people change as we go through this process."***

*– Tamara Saltman, Office of Air and Radiation*

## INCREASING EFFICIENCY AND PRODUCTIVITY ACROSS EPA

Aggregated Results of Projects Reporting Progress Since 2013

### Total Process Time

↓ **50%**

average reduction in how long a process takes from beginning to end (includes waiting)

### Participant Satisfaction

**2.3 → 4.13**

increase (on a scale of 1-5) in the average participant satisfaction rating with the newly designed process

### Total Work Time

↓ **46%**

average reduction in total time spent actually working on the task – "touch time" (excludes waiting)

**252**

**Total projects**  
(January 1, 2013 – present)

**165 Regional Projects**

+

**87 NPM Projects**



**2,544**

staff and manager attendees in Lean awareness **training**



**2,417**

total **participants** in Lean events (includes participants in multiple events)



**15**

**designated groups** in regional and program offices foster continuous improvement within their organization

# Working Faster and Smarter



Streamlining EPA processes **advances our mission** to protect human health and the environment and deliver more value to customers.

- Standardized inspection reports reduce delays, improve consistency, and boost stakeholder satisfaction.
- Timely approval and issuance of required permits increases certainty for the regulated community.
- Decision processes for environmental requirements, such as water quality standards, involve fewer steps and benefit from improved communication.



Lean fosters a **continuous improvement culture** by **empowering EPA employees** at all levels to improve their jobs.

- Lean summits, training opportunities, and projects inspire a growing community of employees to make EPA a high-performing organization by how they perform their daily work.
- EPA has a cadre of internal Lean facilitators across headquarters and regional offices leading process improvement projects.
- Employees generated over 230 ideas on how to make EPA more efficient through the Lean into Change GreenSpark Challenge.



Lean improvements **save time and resources** in EPA operations, freeing up staff time to focus on mission-critical work.

- From faster employee onboarding to triaging correspondence, Lean projects tighten EPA operations to reduce wait time and help staff meet deadlines.
- Introducing standard templates and checklists into EPA operations, like purchasing equipment, reduces errors and shortens review time.
- Lean Agile and Startup principles help EPA develop and integrate new technologies to streamline and automate business processes.

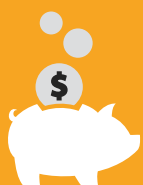


Region 4 Transit Subsidy Project Business Process Improvement Team

## OPERATIONS SPOTLIGHT

## Saving Money Through Improved Transit Subsidies

When budget cuts threatened Region 4's **transit subsidy program**, the region initiated a business process improvement effort to accommodate flexible telecommute schedules, reduce money spent on unused benefits, and relieve over-burdened transit support staff. The effort replaced separate transit contracts with one standard transit fare card and scaled subsidies for each employee.



**\$310,000 in Annual Cost Savings**

**1,400% Return on Investment**  
after 1 Year, Based on \$20K  
Initial Cost

***"The value [of Lean] is giving everyone—from the Administrator down to the staff—the chance to think about how work processes can be done better. Given that chance, everyone can both propose how we're going to do things and follow through."***

— William Rhea, Region 6

## Improving Data-Driven Decision-Making

The Office of Environmental Information and Region 8 are transforming **data quality assurance** at EPA. A Lean effort simplified the annual quality assurance reporting process by eliminating non-essential data from the collection requirements. The project prompted EPA to develop an enterprise reporting system that will enable real-time collection of quality assurance data.



### Developing an Electronic Reporting System

**91% Reduction in Process Steps**

**BEFORE**

**AFTER**



**74% Reduction in Wait Time**



**72% Reduction in Total Process Time**  
**265 → 75 Calendar Days**



Poor-quality environmental data can hinder decision-making, waste funds, and create unacceptable risks to human health and the environment



# Leveraging Our Successes

**EPA is leveraging project successes and partnering with states to spread Lean solutions. More efficient processes in EPA and the states ensure better service and less cumbersome transactions for the regulated community.**

**29 Lean projects** selected for transference in FY2017

**23 Projects** transferred changes, practices, or tools from previous projects

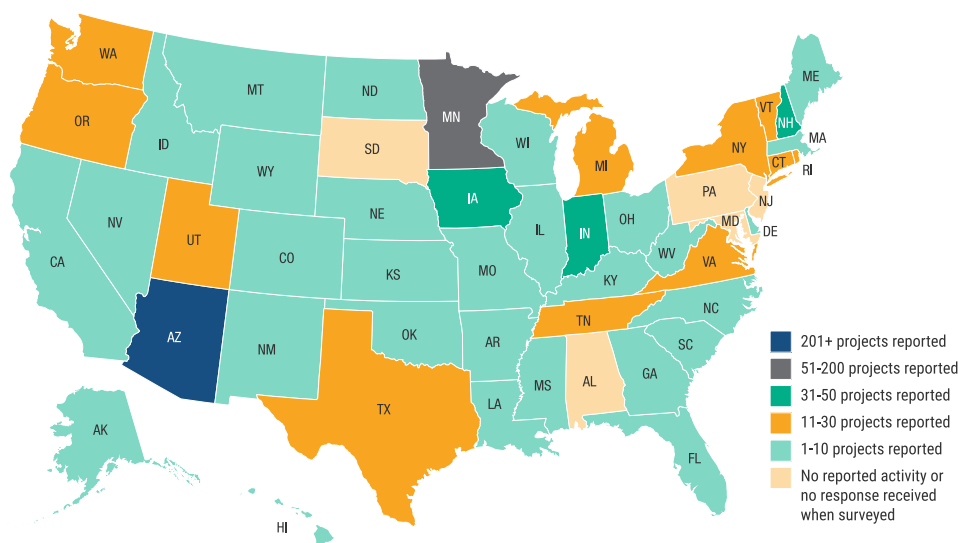
**10%** of EPA Lean projects have involved co-regulators

## THE LEAN ACTION BOARD (LAB)

Commissioned in 2015, the LAB brings EPA and state environmental leaders together to advance the practice of Lean. The LAB identified Lean projects with transferrable solutions and is working with EPA and state partners to share successful results with other offices and regions with similar processes in need of improvement.

## STATE LEAN ACTIVITY

LEAN PROJECTS COMPLETED OR UNDERWAY (2011–2016)  
BASED ON STATE INVENTORY CONDUCTED BY ECOS



***“As we continue our Lean work in the Agency, our efforts to recognize and embrace our partnership role with the states are critical to our collective environmental successes.”***

*— Becky Weber, Region 7, Director, Air & Waste Management Division*



A RCRA FIRST Toolbox training held in Region 7 in July 2015

## TRANSFERENCE SPOTLIGHT

### Streamlining Cleanup Decisions with RCRA Corrective Action

Through the **RCRA Facility Investigation Remedy Selection Track (FIRST)** project, Region 3 and Region 7, along with state and industry partners, streamlined the process for investigating contamination and deciding on cleanup actions at RCRA corrective action facilities.

To help other EPA Regional staff and state partners take advantage of the efficiency and quality gains using RCRA FIRST, Regions 3 and 7 created a toolbox with how-to guidance, process flow maps, and tools and templates to make it easier to complete different parts of the approach and monitor its effectiveness. Since completing the toolbox, Regions 3 and 7 have held a series of mini-Lean events and trainings to help other organizations adapt and incorporate the tools and lessons into their processes.




## TRANSFERENCE SPOTLIGHT

### Faster Site Cleanups with PCB FAST

Region 9 is working with other regions to reduce delays in PCB site cleanup approvals. Incomplete applications, inadequate site characterization, and poor communication resulted in major slowdowns of approvals. After creating a streamlined process using Lean principles, Region 9 developed the **PCB Facility Approval Streamlining Toolbox (FAST)** with guidance and tools for regions experiencing similar delays to implement the solutions.

The PCB FAST approach:

- Reaches agreement up-front on project plans before application submittal.
- Incorporates routine communications early and often.
- Provides a checklist to prevent errors on application forms.
- Encourages completion of a site characterization before submitting a cleanup application to avoid a formal amendment delay.


**20%**  
 Reduction in application approval time from 80 days to 64 days

Improved Communication



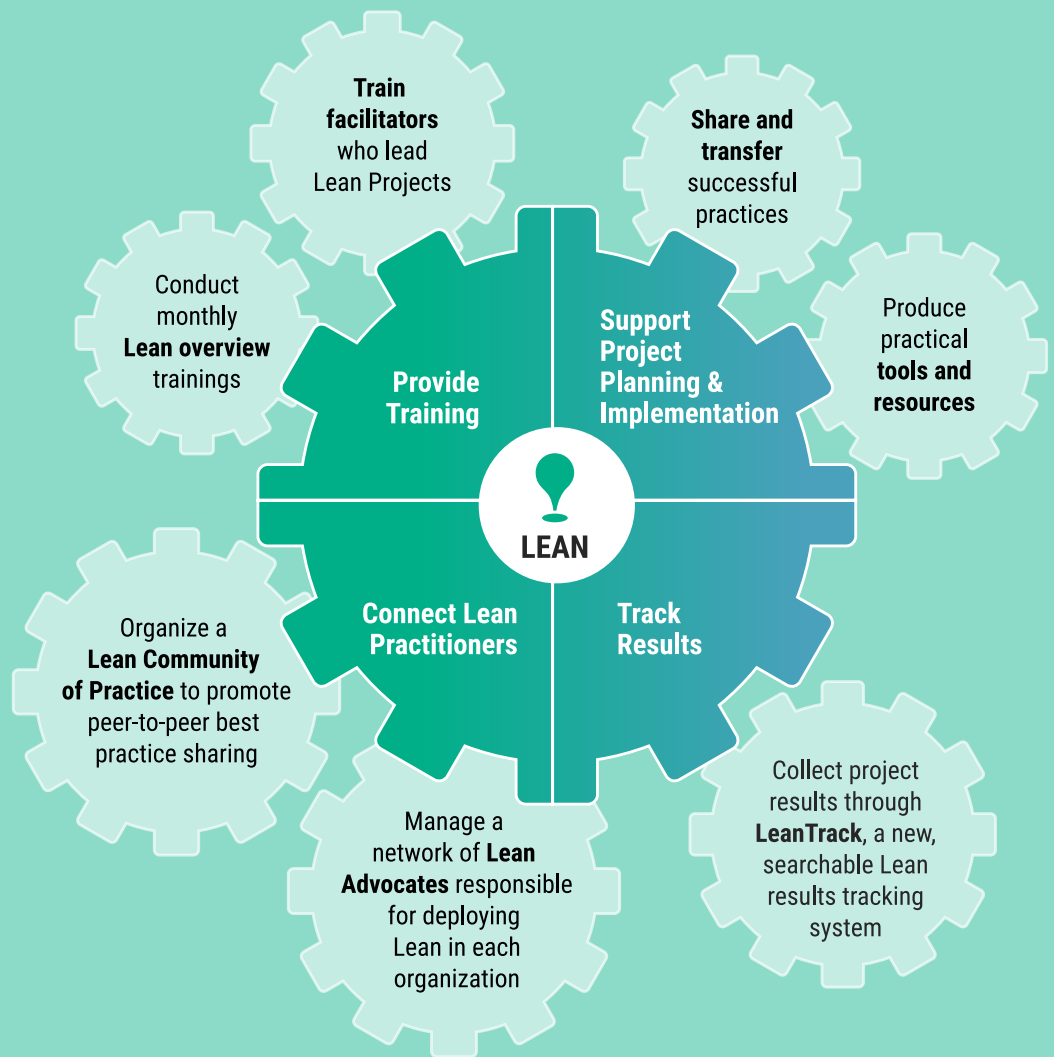
Lean event participants in Region 9 map the PCB cleanup process

# ADVANCING LEAN AT EPA: THE NATIONAL LEAN PROGRAM

The National Lean Program in the Office of Policy provides a variety of services to promote the spread of process efficiency and foster a culture of continuous improvement across the Agency.

Visit the EPA Lean website at [www.epa.gov/lean](http://www.epa.gov/lean) or our intranet site at [intranet.epa.gov/lean](http://intranet.epa.gov/lean) for more information, including:

- Lean case studies, success stories, and project results
- Training materials and resources
- Information on state Lean activity
- Lean in Government Starter Kit, Lean and IT Toolkit, and other publications



## 15 YEARS OF LEAN AT EPA

