



# APPLYING CONTINUOUS IMPROVEMENT IN GOVERNMENT—LEAN LEADERSHIP IN ACTION





## Applying Continuous Improvement in Government—Lean Leadership in Action

Perhaps more than with any public or private business entity, the task of improving quality and efficiency in the delivery of services by entities in the government sector is a highly variable and complex process. The sheer size and scope of government activities contribute to the challenge. Efforts to improve processes can be impacted by the expectations and demands of the citizenry as well as the divergent political considerations and agendas of elected officials. These and other factors can often result in usually well-intentioned actions that produce little actual improvement.

The principles and practices collectively known as Lean production (or Lean, for short) have been successfully adopted for more than 20 years in a wide range of production and service activities, from manufacturing operations to healthcare services. The maturation of Lean and other continuous improvement methods and tools, and their broader application to operations and leadership behaviors and practices, has resulted in a culture of improved quality, increased efficiency, reduced costs and greater levels of employee engagement and customer satisfaction. Because of these potential benefits, continuous improvement principles and practices are now being applied to operations and activities in the government sector, where similar results are being achieved.

This UL white paper discusses the application of continuous improvement principles and practices in the operation of government sector entities in the U.S. The paper begins with a brief overview of the operational issues and challenges facing U.S. governments at the federal, state and local level, and then provides an explanation of the continuous improvement framework. It then presents a case study of the application of continuous improvement principles in government, focusing on specific improvements achieved in connection with the operation of the St. Johns River Water Management District in Florida. The white paper concludes with some final thoughts about the application of continuous improvement practices in the government sector.





### Challenges and Opportunities in Government Today

Government agency activities at the state, federal and local level constitute one of the major industry sectors in the U.S. economy. With an annual budget approaching \$4 trillion (USD), the U.S. federal government alone has more than 450 individual departments, agencies and offices, and employs over 2.6 million people, not including uniformed military personnel.<sup>1,2</sup> In addition, the governments of each of the 50 states and hundreds of cities, towns and municipalities in the U.S. employ another 4.3 million people in departments and offices that complement or support those at the federal level.<sup>3</sup>

The 22 million people employed in government sector jobs work conscientiously to provide important services to the citizenry. Given the scope and scale of government operations, some amount of waste and inefficiency would be expected. However, the actual cost and magnitude of waste can be truly eye-opening. The U.S. Office of Management and

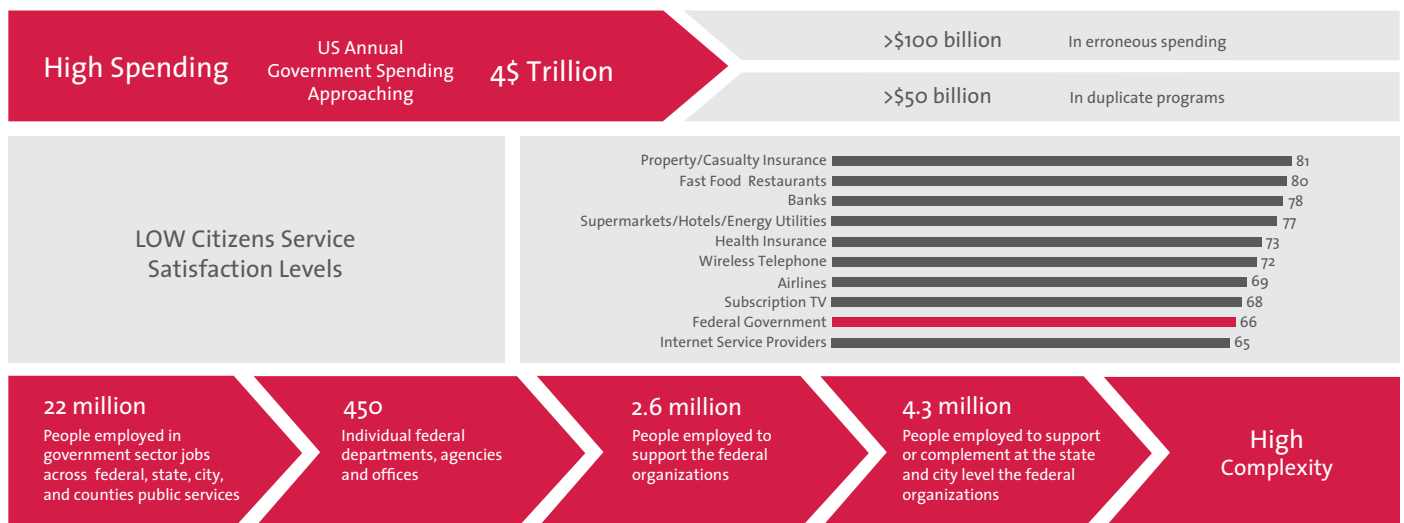
Budget estimates that the federal government issued about \$106 billion in improper federal payments<sup>4</sup> in fiscal year 2013, representing approximately 3.5 percent of that year’s total federal budget. In a separate accounting of government waste and inefficiency, a 2012 report by the federal Council of Inspectors General on Integrity and Efficiency (CIGIE) identified nearly \$50 billion in potential savings that could be achieved through more efficient government programs.<sup>5</sup>

The waste of tax dollars is compounded by perceptions by citizens that they receive relatively poor quality services from government agencies. A 2013 survey of customer satisfaction conducted by the University of Michigan’s American Customer Satisfaction Index ranked the federal government below most private sector service industries, including insurance companies, banks and wireless telephone carriers. Only Internet service providers were ranked lower than the federal government by survey participants.<sup>6</sup>

This and other data serve to illustrate the opportunities to reduce waste and

improve the quality of services in the government sector. At the same time, it also presents a situation potentially responsive to new approaches and new solutions to solving an age-old problem. In the past few years, efforts to introduce continuous improvement principles and practices in government have gained increased acceptance as government departments and agencies at the federal, state and local levels evaluate new methods to reduce waste and increase efficiency. Continuous improvement initiatives in government settings have been applied to activities as diverse as scheduling of public safety employees, purchasing practices in schools, and the economic development of blighted areas.

The U.S. Environmental Protection Agency (EPA) is just one example of a government agency that has embraced the potential of continuous improvement. The EPA reports that its adoption of continuous improvement methods has reduced the number of process steps by more than 63 percent and processing timeframes by as much as 82 percent. Further, the EPA estimates that state environment agencies that







have applied continuous improvement principles have reduced administrative review times by more than 50 percent in some cases, dramatically cutting permitting backlogs.<sup>7</sup>

### The Continuous Improvement Framework

The continuous improvement framework is a comprehensive and systematic approach to the production or delivery of products or services that reduces waste and inconsistencies while increasing value to customers. The primary focus of the continuous improvement framework is the achievement of the following three goals:

- **Align**—Achieving constancy of purpose and organizational attention. A key tool that helps provide alignment is strategy deployment (also known as policy deployment, or Hoshin Kanri in continuous improvement terminology), where leaders develop a strategy and align organizational

and operational resources to achieve their objectives.

- **Enable**—Focusing on the process, and embracing scientific thinking, flow and pull value to assure quality at the source and to seek continuous improvement. Having an effective problem-solving system to enable continuous improvement is essential. Lean and Six Sigma continuous improvement methodologies have been used in a variety of industries to help address efficiency and quality issues, and to reduce lead times and variations in processes. Scripted process like “plan, do, check, act,” or Six Sigma’s “define, measure, analyze, improve and control,” can effectively support these methodologies.
- **Empower**—Leading with humility and respecting every individual via employee continuous improvement engagement and enhanced leadership behaviors. Empowering employees is probably one of the most important, and most

difficult aspects, of the continuous improvement model. One example of a tool used to empower employees is a “red card, green card” system, in which employees provide managers with feedback to help spur continuous improvement. In other cases, employees continuously provide ideas for process improvement as part of their daily routine.

An organization’s efforts in achieving these goals may involve many years of work. Indeed, an authentic continuous improvement initiative never ends. Nonetheless, this approach can produce increased value and return on investment year after year.

Figure 1 provides an example of a Lean continuous improvement roadmap used in connection with the initiative described later in this paper. This roadmap identifies the specific activities required to achieve the goals of align, enable and empower over a two-year timeframe.

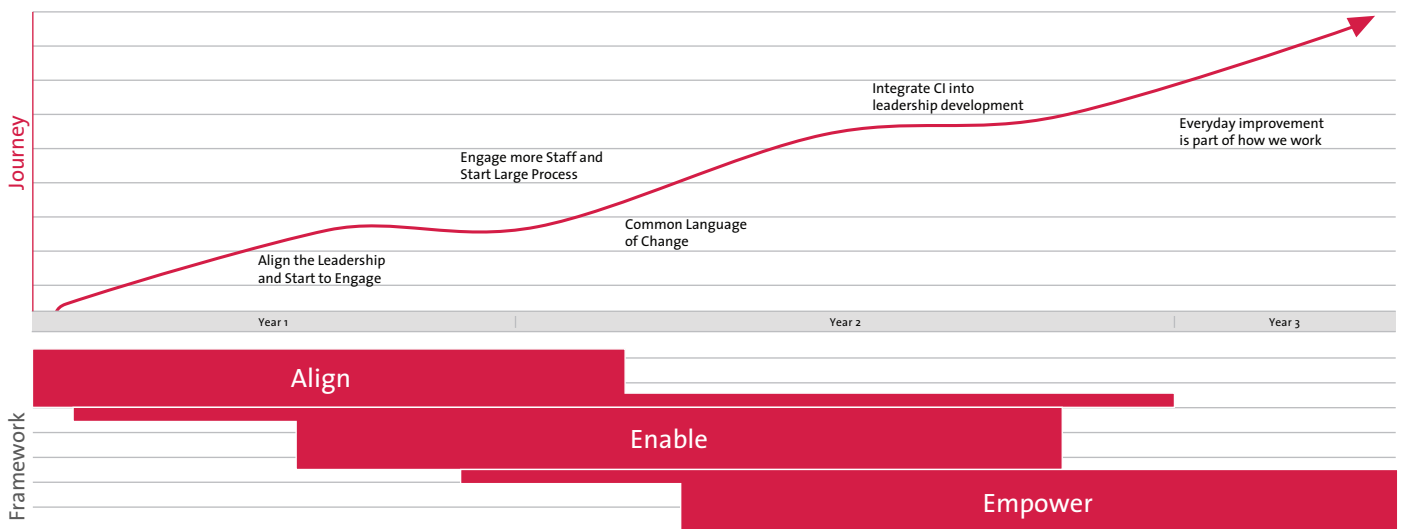


Figure 1: An example of a continuous improvement roadmap



### CI Application and Results in Government—Case Study

The continuous improvement framework is currently being applied by the St. Johns River Water Management District (SJRWMD), one of five water management districts located in the state of Florida. Serving approximately 25% of all Florida residents, the mission of the SJRWMD is to protect groundwater and surface water resources, and to promote their sustainable use in all or part of 18 counties in northeast and east central Florida. The operation policies of the SJRWMD are set by a governing board consisting of nine members, each appointed by the Florida governor and confirmed by the Florida state senate. The agency's executive director reports to the Governing Board, and administers the board's policies on a day-to-day basis.

In 2012, the SJRWMD reduced its work force by more than 25%, from around 800 employees to just under 600 due to a government-wide budget initiative. However, the SJRWMD was expected to maintain its current service levels and to improve the effectiveness and efficiency in its delivery of services to the citizens of Florida. Under the leadership of Hans Tanzler III, the SJRWMD's new executive director, the SJRWMD's executive management team (EMT) met in October 2012 to organize its approach to streamlining and realigning its scientific and service delivery processes.

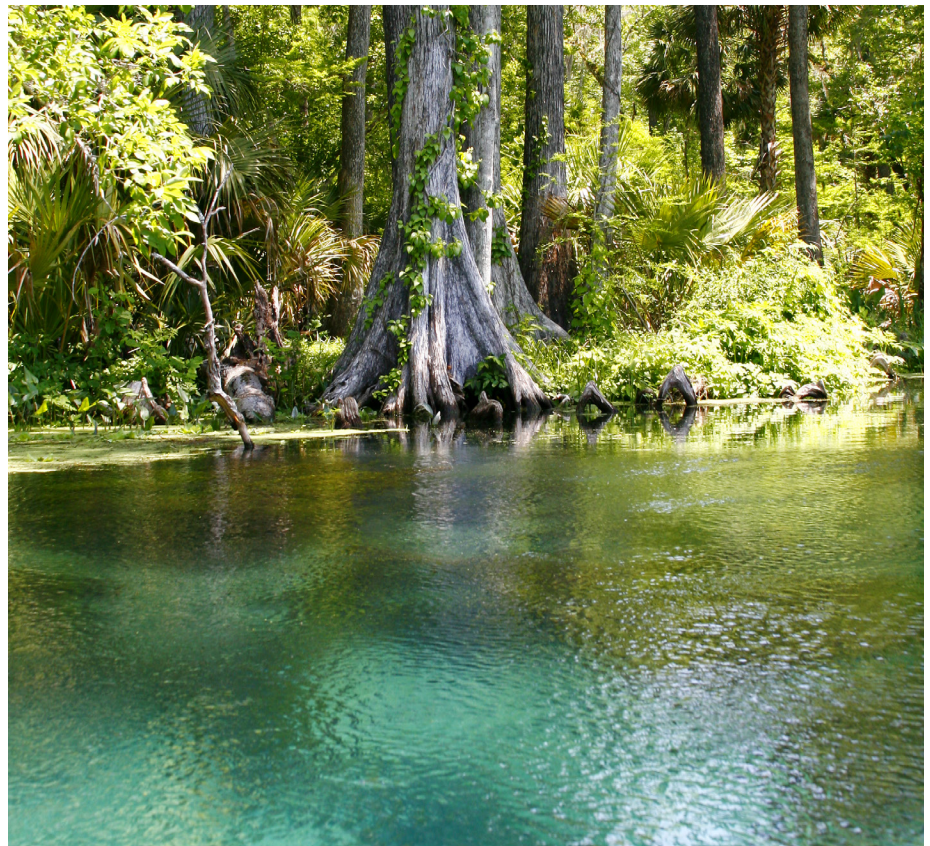
In April 2013, UL assisted SJRWMD in focusing the realignment process and to identify issues that could potentially derail its implementation. In its initial analysis, the UL team identified a lack of a consistent understanding among employees about the scientific and programmatic initiatives and deliverables

of the SJRWMD. UL found skepticism among members of the management team and employees about the ability to execute the tasks necessary to accomplish them. Over 50 core activities were identified, but these activities were being managed within silos of functions, frustrating efforts at alignment and masking root cause issues.

Applying the key elements of the continuous improvement framework (align, enable and empower), and the DMAIC (define, measure, analyze, improve and control) problem-solving methodology, the UL team first recommended that the SJRWMD deploy a horizontal structure (also called a value stream structure) and an operating mechanism (also known as

strategy deployment) that would allow for the cross-functional implementation of two strategic initiatives in a three month pilot program. Each of the two initiatives was managed by an initiative leader specifically selected for leadership characteristics, who worked under the direct guidance of the EMT. The EMT worked quickly and launched the pilot program within weeks of UL's recommendation.

During the course of the pilot program, it became evident that employees tasked with supporting individual initiatives were struggling with the conflicting demands of other work priorities. To better enable employees (the second element in the continuous improvement framework), the UL



Picture depicting the St Johns River



team once again applied the DMAIC problem-solving methodology to the work functions and activities of the water resources division that was staffed with over 200 scientific professionals. The UL team evaluated over 1,200 documents and identified 57 services and 680 individual tasks. The team also conducted extensive staff interviews to develop a better understanding of work structure and processes within the division. With this information, the UL team collected information by interviews with more than 80% of all employees to identify root cause issues affecting productivity.

Ultimately, the UL team recommended a reorganization of the water resources division to reduce the focus on individual work silos while also improving the use of the division’s available resources. The work of the newly restructured organization was supported by the augmentation and realignment of strategic and process planning functions within SJRWMD, along with a process management mechanism to maintain focus on the original intent of each initiative.

The UL team also recommended the deployment of process improvement projects (representing the third element of the continuous improvement framework, empower), that allowed SJRWMD employees to personally drive continuous improvement efforts. In support of this effort, the UL consultants trained a team of SJRWMD employees in the DMAIC problem-solving methodology to work on individual process challenges. During a three-month period, this team's prototypical effort showed immediate success for process improvement with an associated direct cost savings of more than \$300,000

(USD), and for empowering other employees to identify and address new continuous improvement opportunities.

Most importantly, UL's involvement with the SJRWMD improved the alignment of scientific and engineering support of a newly focused set of strategic initiatives, with overall budgets of more than \$200 million (USD), enhancing the execution of the 5 year strategic plan. This resulted in a direct and positive increase in overall productivity and output of projects within these initiatives improving water resource protection and sustainable use. Specifically, the SJRWMD identified 12 restoration and/or protection initiatives that require strategic solutions to be generated from the focused and realigned scientific support, and with enhanced productivity can be implemented within the framework of the strategic plan, as follows:

- North Florida Water Initiative
- Indian River Lagoon Protection
- Springs Protection
- Land Management Enhancement
- Regional Water Supply Plans — Development and Implementation
- Central Florida Water Initiative
- Minimum Flows and Levels — Development and Prevention and Recovery Strategies
- Upper St. Johns River Restoration
- Flood Protection and Levee/ Structure Rehabilitation
- Northern Coastal Basins
- Middle and Lower St. Johns River Water Quality Improvement
- Lake Apopka and Upper Ocklawaha River Basin

With an estimated value of more than \$200 million (USD) over five years,

		Focus			
		Jan	Mar		
Alignment	EMT			Collaboration Mechanism	
				Communications EMT	
				Communications District	
				Inclusiveness	
				Collaboration-	
				Collaboration-Vertical	
				Engagement Mechanism	
				Schedules	
				Initiative Elements	
	Horizontal			Visibility	
				Communications	
				Continuous Improvement	
				Leadership	
				EMT Engagement	
				Red Card Feedback	
				EMT Perception	
				Management Support	
				Procedures	
				Team Engagement	
				Empowerment	
				Recognition	
				Staff Perception	
				Collaboration - Vertical	
		Vertical			Collaboration - Horizontal
					Engagement Mechanism
					Order Request
					Visibility
			Scope of Work		
			Capacity Analysis		
			Current Work		
			Understanding		
			Communications		
			Leadership		
			Process Improvement		
Process Optimization				Feedback	
			Procedures		
			EMT Engagement		
			Management Support		
			Team Engagement		
			Recognition		
			Staff Perception		
	Enable and Empower Staff			Identified Projects	
				Trained Problem Solvers	
				Projects Progress	
			Project Reviews		
			EMT Engagement		
			Champions Engagement		
			Communications/ Visibility		
			Staff Perception		
			GB Support		

Figure 2: Control scorecard used to assess SJRWMD's continuous improvement progress





these initiatives permitted the agency to perform key activities such as water sampling, laboratory testing and research, all without the need for additional resources or increased expenses.

According to Tanzler, UL's assistance in implementing the agency's 12 strategic initiatives was essential to its success. "The list of deliverables embedded within the initiatives was initially large and diverse, reflecting the increase scientific demands on the SJRWMD," noted Tanzler. "UL's continuous improvement approach not only helped us to organize these, but also allowed us to identify and deploy a management structure best suited to achieving the necessary results."

UL continues to provide coaching support to the SJRWMD EMT and staff, and performs quarterly assessments of the SJRWMD's continuous improvement efforts using the control scorecard shown in Figure 2.

### Continuous Improvement Lessons from the SJRWMD

The SJRWMD case study illustrated the following key factors in successfully driving continuous improvement in government settings:

- 1. Top leadership commitment and engagement**—Executive Director Tanzler and the SRJWMD's EMT have been committed and engaged throughout the continuous improvement process, and are inextricably linked with the success of the overall effort.
- 2. Assigning a specific resource to drive change**—The SJRWMD's former IT division director, a member of the EMT, was assigned full-time responsibility as the continuous improvement director.

This appointment has brought increased focus to continuous improvement efforts throughout the organization.

- 3. Receptivity to candid feedback**—The SJRWMD EMT has consistently remained open and receptive to all types of feedback. This approach has helped make employees more receptive to receiving feedback, and has lowered barriers to change.
- 4. Making the invisible visible**—A complete and informed understanding of all organizational activities is essential for meaningful change and any continuous improvement effort.
- 5. Effective communications**—Continuous communication is the fuel that drives continuous improvement efforts. The SJRWMD makes sure that all stakeholders are kept informed of developments, from SJRWMD employees to the SJRWMD board of governors.
- 6. Regular assessments of progress**—Ongoing third-party assessments are critical for validation of progress, and are also instrumental in highlighting opportunities where further improvements can be made.
- 7. Using data to engage employees in change efforts**—A data-based process is essential in helping employees to understand why change is necessary and the prospective benefits to them. It also helps to engage employees in the change effort, and to build a collaborative effort.

- 8. Work quickly**—Working quickly in making changes not only helps forward momentum, but it also builds credibility around change initiatives. A sense of urgency can support efforts to build commitment and execution speed.

### The Business Case for Continuous Improvement in Government

As the SJRWMD case illustrates, the application of continuous improvement principles and practices in government can have measurable impact in a number of areas, including but not limited to the following:

- Improved citizen satisfaction**—Continuous improvement initiatives can increase value for citizen customers and the public in general by providing services that more effectively and efficiently address the expressed need.
- Improved capacity and reduced operating costs**—The application of the continuous improvement framework can provide additional organizational capacity through improved work processes and workflows. This capacity building is often achieved without increases in staff or facility costs.
- Greater employee engagement**—Employees are likely to be more engaged when they know they are enabled to do their job, and when creativity and teamwork are used to improve service levels and increase value for customers. Engaged and enabled employees are also likely to be more satisfied with their jobs, resulting in reduced rates of employee attrition.



### Summary and Conclusion

The application of continuous improvement principles and practices in the government sector represents a promising approach to reduce government waste and inefficiency. The continuous improvement framework offers important advantages over traditional quality improvement efforts by increasing efficiency and reducing waste while simultaneously improving the quality of services to the citizenry, all without increasing costs. At a time when government agencies are being asked to do more with less, the continuous improvement framework can achieve significant performance improvements that benefit government agencies, their employees and the constituencies they serve.

For additional information about UL's Lean advisory services, contact Juan Amador, director of continuous improvement solutions, at [juan.amador@ul.com](mailto:juan.amador@ul.com).

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