Schedule 13
Funding Request for the 2013-14 Budget Cycle

Department:	Governor's Office
Request Title:	Continuous Improvement Program
Priority Number:	R-1

Dept. Approval by: _[signature]_ 10/29/12 Date

OSPB Approval by: _[signature]_ 10/29/12 Date

☑ Decision Item FY 2013-14
☐ Base Reduction Item FY 2013-14
☐ Supplemental FY 2012-13
☐ Budget Amendment FY 2013-14

Line Item Information		FY 2012-13		FY 2013-14		FY 2014-15
		1	2	3	4	5
	Fund	Appropriation FY 2012-13	Supplemental Request FY 2012-13	Base Request FY 2013-14	Funding Change Request FY 2013-14	Continuation Amount FY 2014-15
Total of All Line Items	**Total**	1,403,975	-	1,403,975	975,868	9,332
	FTE	19.5	-	19.5	-	-
	GF	-	-	-	975,868	9,332
	GFE	-	-	-	-	-
	CF	-	-	-	-	-
	RF	1,403,975	-	1,403,975	-	-
	FF	-	-	-	-	-
(3) Office of State Planning and Budgeting, Personal Services	**Total**	1,403,975	-	1,403,975	975,868	9,332
	FTE	19.5	-	19.5	-	-
	GF	-	-	-	975,868	9,332
	GFE	-	-	-	-	-
	CF	-	-	-	-	-
	RF	1,403,975	-	1,403,975	-	-
	FF	-	-	-	-	-

Letternote Text Revision Required? Yes: ☐ No: ☑ If yes, describe the Letternote Text Revision:

Cash or Federal Fund Name and COFRS Fund Number: N/A

Reappropriated Funds Source, by Department and Line Item Name: N/A

Approval by OIT? Yes: ☐ No: ☐ Not Required: ☑

Schedule 13s from Affected Departments: N/A

Other Information: N/A

GOVERNOR'S OFFICE

FY 2013-14 Funding Request
November 1, 2012

John W. Hickenlooper
Governor

Henry Sobanet
Director, OSPB

_____ Signature _____ Date

Department Priority: R-1
Continuous Improvement Program

Summary of Incremental Funding Change for FY 2013-14	Total Funds	General Fund	FTE
Continuous Improvement Program	$975,868	$975,868	0.0

Request Summary:

The Office of State Planning and Budgeting requests $975,868 General Fund to support the continuation of the statewide process improvement program and to support training and additional initiatives centered on continuous improvement and customer-focused performance management.

Problem or Opportunity:

Colorado State government departments deliver services to their citizens and respond to the needs of their constituencies with diligence and dedication. However, until recently, the State has lacked an organized and methodical system oriented toward identifying improvements in operations based specifically on needs identified by customers and citizens. Since Fall 2011, the Governor's Office of State Planning and Budgeting (OSPB) has been designing a centrally coordinated and resourced improvement initiative utilizing repurposed and one-time funds from the American Recovery and Reinvestment Act (ARRA) State Fiscal Stabilization Fund. In order to continue significant results and growing momentum, OSPB requests funding to continue the existing program through FY 2013-14.

Brief Background:

Beginning in October 2011, OSPB began implementing a statewide program focused on enhancing the efficiency of Colorado's government operations. Partnering with and building from systematic improvement programs underway in several departments like Public Health and Environment and Transportation, OSPB has worked over the past 13 months to introduce Lean operational process improvement methodology to most State departments in order to support the development of an independent culture of continuous improvement and a systematic approach to designing and delivering efficient, effective, and elegant services to Colorado citizens.

The current program, funded with $2.5 million of ARRA SFSF funding, relies on a single design, prioritization and coordination team located in the Office of State Planning and Budgeting. This team has the responsibility of identifying and designing projects, deploying contracted resources, developing and administering training and a coaching and mentoring program to ensure adoption and ownership by State employees, and implementing a measurement system.

To date, these efforts have resulted in significant improvements and long-term efficiencies in State operations. For example, one team of State employees facilitated by an expert consultant, focused on redesigning the current tax document processing pipeline in the Departments of Revenue and Personnel and Administration. Improvements in this process will result in operating savings totaling nearly $1.1 million in the first year of implementation and ongoing savings of nearly $2.1 million total funds on a permanent basis. The results of this single project nearly re-pay the total ARRA SFSF investment in statewide process improvement. Budget requests to capture these changes are included in the November 1, 2012 FY 2013-14 Executive Operating and Capital Construction Budget Requests.

In another example, a team in the Department of Education examined the process for reviewing educator license applications and identified a series of improvements to reduce the time that educators were waiting on results by nearly 50%.

In yet another instance, employees in the Department of Local Affairs deconstructed the paperwork necessary for the housing assistance program and identified opportunities to eliminate over 50% of the forms currently required of landlords and tenants to secure safe and affordable housing.

These results are exciting examples of important improvements. OSPB is committed to developing a sustainable and meaningful system of change that permanently transforms how departments deliver service.

In recent years, public and governmental entities have employed Lean and other process improvement methodologies with success, including approximately 20 different State governments and several federal agencies. Lean is a collection of tools and techniques that support process improvement and has been proven as a successful, applicable, and easy to implement methodology used by well-known entities like Toyota, General Electric, and Boeing. In addition to the State, several local public entities and local governments run process improvement programs, such as Denver Health, Denver Water, the City and County of Denver, Boulder County, and the City of Aspen.

To understand how successful process improvement programs in commercial and manufacturing environments could be translated to the government environment, OSPB conducted a survey of State governments to learn more about coordinated improvement efforts and found that the following factors are critical for successful and sustainable change:

- leadership and high level support;

- front-line employee support;

- integration of Lean and other process improvement tools into the day-to-day management of the departments;

- communication about successes;

- dedicated resources to the program;

- availability of government-specific training and support to a broad range of employees; and

- tangible, measurable improvements.

The program in OSPB includes a comprehensive scope covering a variety of success factors and key concepts. A critical function of the program is to identify and prioritize opportunities where process improvement can be applied to the best effect for the State of Colorado.

While Lean and other improvement programs encompass a robust set of specific tools and practices, the State's program focuses on several key concepts that drive common vision, purpose, and scope for long-lasting change. Key concepts include:

Value: The value of the specific activities in processes that deliver a service should only be defined by the customer and should not be

skewed by pre-existing assumptions, technologies, and assets. Identifying value and non-value add activities in processes often results in immediate improvements.

Waste: Waste in government is often characterized as excess or unnecessary spending; however, waste is more appropriately characterized as any activity that consumes resources but does not create value for the customer. There are over a dozen specific types of waste that should be identified and eliminated to improve performance, talent utilization, and customer service. Examples of waste include:

- excess processing, unnecessary approvals or duplicative data gathering;

- customers waiting in a phone or office queue or employees waiting due to system downtime;

- failure to fully utilize the time and talent of the workforce;

- work backlog waiting for review, approval, or other operations; and

- failure to error proof forms, reports, or applications resulting in rework and frustration.

Continuous improvement: The relentless chase after perfection through continuous evaluation and improvement should be motivated by a vision of customer-focused service and performance improvement. Appendix C includes more information about process improvement and Lean concepts.

OSPB continues to coordinate with leaders of improvement initiatives in State departments to multiply the impact of the work in progress. For example, process improvement projects currently underway directly address the needs identified by citizens, businesses, and customers as part of the "Cutting Red Tape in Colorado State Government" initiative. Indeed, the associated report states, "While immediate one-time fixes are important, and can certainly provide limited

relief, the longer term goal must be to address the root causes of the problem of red tape, and to avoid persistent and recurring governmental inefficiencies."

To support a systematic, comprehensive, and sustainable transformation of how customers interact with and receive Colorado State government services, OSPB has partnered with expert consultancies Optimal Performance and Strategy, North Highland, and BMGI to achieve the following (through October 2012):

- active participation across most State departments, introducing and supporting methods for leadership to identify and prioritize highest value efforts and customer-focused improvements;

- 55 distinct projects underway utilizing OSPB program resources, with additional projects planned (current as of October 2012);

- approximately 40 additional projects in progress or completed by departments independent of program resources with many leveraging training materials, tools and templates developed by the program;

- customized training curriculum and coaching and mentoring program to create independent capability;

- nearly 2,100 employees have participated in training, including eLearning and classroom sessions;

- over 400 employees have been directly involved with developing solutions on project teams; and

- individual departments, supported by OSPB's program and resources, have hosted three inter-department sessions to share learning from experts and between departments.

Under the current funding, Lean projects and related work will continue through March 2013. OSPB will continue improvement projects,

training, and coaching activities while working to integrate these efforts into a comprehensive and statewide system for improving the efficiency and effectiveness of government operations.

Appendix B includes more details on the specific improvement initiatives funded through the current program, including:

- the in-patient admission, evaluation, and restoration processes at the Colorado Mental Health Institute at Pueblo;

- the fact-finding processes for collecting information to evaluate unemployment insurance claims;

- regulatory processes such as permit issuance and license investigations;

- the dispute resolution process between insurance companies and medical providers for workers' compensation cases;

- the time it takes citizens to connect with call centers; and

- internal support processes like hiring and onboarding new employees.

Proposed Solution:
The success of the work completed to date helps establish a foundation of continuous improvement supporting greatly enhanced customer service and citizens' interactions with State government. Developing the statewide ability for employees to identify and target high leverage and customer-focused improvements, creating measurement systems to capture long-term impacts, and designing a training curriculum contextualized and specific to government and transactional environments are key elements to this successful change program.

Going forward, OSPB requests resources to maximize and multiply the work that is in progress and create the additional framework necessary for an independent and sustained cultural shift toward continuous improvement.

Additionally, OSPB will remain focused on expanding a system of performance measurement and reporting strategies to align with the requirements set forth in the State Measurements for Accountable, Responsive, and Transparent (SMART) Government Act as well as strategic and operational planning guidelines.

When considering how best to capture results and impacts from improvement efforts, OSPB has designated four common metrics as those with the highest potential to demonstrate a return on investment for the program on a statewide level. The four metrics include:

- **costs saved**: verifiable reductions in existing costs resulting directly from an improved process or set of processes impacted by a process improvement project;

- **costs avoided**: measure of financial benefit related to avoided spending (different than decreased spending). Calculations are based on current conditions, consider future costs, and are verifiably linked to improvements made as a result of a process improvement project;

- **time saved**: verifiable time efficiencies resulting directly from an improved process or set of processes impacted by a process improvement project. Time efficiencies include direct impact to individual customer time and/or employee time and to process cycle time; and

- **increased throughput**: total output production of a process, between the first step of a process and the last step to include all processing, queuing, reviewing, transportation, etc. (i.e., the time required for a product or service to proceed from concept to launch, order to delivery, request to resolution).

Quantifying specific results in each of these categories is an ongoing effort at OSPB. Our initial analysis indicates that the financial

recovery of the ARRA SFSF funds will be recovered in the tax document and remittance process improvement project alone over the next two fiscal years. Cost and time efficiencies exist in a diverse array of current processes and a concerted, supported effort toward identifying, recording, and taking action on those efficiencies continues to be a primary objective of OSPB.

Additional service and process metrics will continue to be identified for each individual improvement effort. Validating and documenting related improvements is also critical to understanding and evaluating the efficacy of government services.

To adequately resource this initiative, OSPB requests $975,868 General Fund for FY 2013-14 to fund program management and contracted expert services. This funding will position the State to better apply change management principles - Lean and beyond - to maintain a long-term focus on results for customers. A funded and supported strategy that is centered on the customer will provide a clear path for prioritizing process improvements and will empower employees and deliver results.

Denver Health, as one model for successful implementation of a whole-scale process improvement initiative, currently dedicates several full-time staff to improvement initiatives and has integrated process improvement into the fabric of their operations since they began in 2006. Denver Health's efforts have resulted in significant financial and service benefits.

Alternatives:
Alternatives to this proposal are explored and defined in the section that describes the consequences if the request is not funded.

Anticipated Outcomes:
Based on activity over the past 13 months, OSPB anticipates that this level of funding will enable the delivery of 20-30 additional process improvement projects, ranging in complexity from simple, single program efforts to more complicated, multi-departmental initiatives. Projects will include vision development and incorporate best practices and knowledge sharing from leaders in commercial and public entities.

Additionally, the requested funding will support further training and skill development in process improvement techniques, strategic and operational planning, and change and customer-focused performance management for State employees, including the development of curriculum and course materials to be fully owned by the State of Colorado.

Finally, the requested funding will support the ongoing efforts of OSPB to solidify and embed a sustainable, customer-centric, and employee-led improvement program.

Assumptions for Calculations:
Calculations for this request are based on current program costs and contractual rates, including resources for a program manager and professional contract services at a level sufficient to support an additional 12 months of project and training activity. Detailed calculations are included in Appendix A.

In FY 2013-14, funding for a program manager is requested for eleven months to account for the provisions of Section 24-50-104 (8) (a) (I), C.R.S. (pay date shift). Accordingly, funding is requested for one month's worth of FTE expenses for FY 2014-15.

Consequences if not Funded:
Although departments will be able to continue their individual efforts, without a central coordinating office and without moving to integrate strategic and operational planning, the State will lack the ability to effectively prioritize process improvement efforts, to train the necessary additional staff for developing an independent culture of continuous improvement, and to deploy interdepartmental projects that focus on improving the experience for common customer groups.

Individual departments will identify, fund, and deploy process improvement projects within the limitations of existing departmental resources and will rely on the Department of Personnel and Administration or other external resources for training and skill development as budgets allow. Progress toward a large-scale cultural shift toward customer-focused continuous improvement and alignment between performance and strategic and operational planning will continue at a slower and more fragmented pace.

Importantly, Colorado is positioned to be a national leader in this effort given a successful transition to sustainable, self-financed, and culturally supported model for change and improvement. Work over the initial 18-month timeframe has centered on a statewide effort to introduce concepts and methodologies for continuous improvement, train employees, and accomplish a diverse array of process improvements with important and real impacts to employees and customers. The current program is at a fragile point for ensuring the sustainability of the cultural transformation of continuous improvement. OSPB requests resources for an additional year to deepen the experience and expertise within departments, to address complex and multi-departmental processes, and to support the ongoing enhancement of the efficiency of Colorado State government operations.

Impact to Other State Government Agency:
Departments and other agencies will be able to partner with OSPB to develop and deploy inter-department projects that address common customers. Additionally, OSPB will lead a collaborative effort to develop best practice customer-focused performance management, integrating strategic and operational planning. Government agencies will benefit from increased effectiveness of operational planning and the implementation of process improvement projects.

Current Statutory Authority or Needed Statutory Change:
Statutory authority exists in Part 2 in Article 7 of Title 2, C.R.S., created by the State Measurements for Accountable, Responsive, and Transparent (SMART) Government Act (House Bill 10-1119) and the Lean Government Principles Act (House Bill 11-1212). Further statutory authority for strategic planning and oversight by the Office of State Planning and Budgeting exists in Parts 2 and 3 in Article 37 of Title 24, C.R.S.

Additional Request Information	Yes	No	Additional Information
Is this request driven by a new statutory mandate?		X	
Will this request require a statutory change?		X	
Is this a one-time request?	X		
Will this request involve any IT components?		X	

Appendix A: Detailed Calculations

FY 2013-14 Personal Services Increase			
Description	**Amount**	**FTE**	**Notes**
Salary	$82,500	0.0	Salary at $7,500 per month for 11 months to account for pay date shift. OSPB has sufficient FTE authority in the existing budget.
PERA	$8,374		FY 2013-14 rate: 10.15%
AED	$2,970		FY 2013-14 rate: 3.60%
SAED	$2,681		FY 2013-14 rate: 3.25%
Medicare	$1,196		FY 2013-14 rate: 1.45%
STD	$146		FY 2013-14 rate: 0.177%
Health-Life-Dental	$4,421		
Subtotal - FTE	**$102,288**	**0.0**	

FY 2013-14 Contract Services		
Description	**Cost**	**Notes**
Process Improvement Project Delivery	$632,780	Estimated cost based on current contracted rates ($170 per hour) and historical project delivery hours (130-150 hours) for 20-30 projects ranging in scale from small, single program efforts to large, complex, multi-department efforts
Training Program	$107,800	Estimated cost based on current contracted rates and historical delivery of 5-7 training sessions to equip 25-30 employees per course for independent capacity in process improvement, strategic operational planning, and change management techniques. Includes costs for facilitators, materials, and course development.
Professional Services	$133,000	Estimated cost based on current contracted rates for enhanced program management, subject matter expertise, statewide operational and strategic deployment support, archiving and case study development
Subtotal – Contract Services	**$873,580**	
FY 2013-14 Total	**$975,868**	0.0

FY 2014-15 Personal Services Annualization			
Description	**Amount**	**FTE**	**Notes**
Salary	$7,500	0.0	Salary at $7,500 per month for 1 month to account for pay date shift, OSPB has sufficient FTE authority in the existing budget.
PERA	$761		FY 2014-15 rate: 10.15%
AED	$300		FY 2014-15 rate: 4.00%
SAED	$281		FY 2014-15 rate: 3.75%
Medicare	$109		FY 2014-15 rate: 1.45%
STD	$13		FY 2014-15 rate: 0.177%
Health-Life-Dental	$368		
FY 2014-15 Total	**$9,332**	**0.0**	

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Agriculture	Agriculture License Consolidation	Provide "one stop shopping" for businesses to obtain all of their required licenses in one transaction	Targeted 75% reduction in paper transactions and eliminate the duplication of efforts in the current license processing system
Corrections and Public Safety	Community Corrections Utilization	Achieve an efficient and appropriate system of referrals, placements and releases of offenders in community corrections and maximize utilization of community corrections	Achieve maximum utilization of existing resources in community corrections, including non-traditional uses of offender placements Increase the number of higher needs offenders in community corrections beds
Corrections and Revenue	Identification Issuance for Offenders	Improve the Offender ID process, creating a more effective and efficient process to ensure more offenders will receive an ID upon release	3-fold increase in the number of identification cards issued Reduction in transportation
Corrections	Parole Board Hearings	Standardized the scheduling system for all parole board hearing and streamline services for all customer groups	26% reduction in the number of parole hearings Simplified scheduling and logistics for all involved parties
Corrections	Offender Movement Standard Placement Criteria*	Develop an integrated, standardized, and weighted-value placement decision process	Reduce the number of offender moves between facilities and create a more transparent offender movement decision-making process
Corrections	Offender Movement Value Stream Analysis	Develop and identify the current set of processes and opportunities for improvement for the Offender Movement value stream	Value stream map and opportunities identified from the analysis along with an execution roadmap; DOC is working to complete several projects to implement improvement opportunities
Education	Educator Licensure Evaluations	Decrease licensure cycle and processing time to increase qualified educator capacity at the school district level	50% reduction in evaluation cycle time Reduced application backlog

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Education	Educator Licensure Enforcement	Reduce cycle time of cases with charges requiring action by the Colorado State Board of Education	36 % reduction in investigative cycle time for new cases 3.5-fold increase in number of cases with charges submitted for action to the Board
Education	Call Center	Increase first call resolution for an average of 3,800 telephone calls per month	Targeted 85% of incoming calls resolved on first attempt Targeted 70% of calls answered within 2 minutes
Education	Accreditation - School and District Performance Frameworks and Improvement Plans*	Increase efficiency and accuracy of school and district performance frameworks and pre-populated unified improvement plans	Target significant increase in accuracy and efficacy Significant improvement in efficiency and delivery
Governor's Office	OIT Service Lifecycle Model for Voice & Data Services*	Improve OIT and agency customer experience with more transparent ordering and billing of new voice/data services	Targeted outcomes include increased billing accuracy and consistency and a reduced process cycle time
Governor's Office	Colorado Energy Office Procurement	Create an efficient, effective, and elegant procurement process that focuses on customer needs	Targeted 45% reduction in cycle time while maintaining all (and only) necessary thresholds and approvals
Governor's Office	OEDIT Best Practices in Grant Management	Create an efficient and effective internal grant management process	Targeted outcomes include cycle time reduction resulting in faster distribution of grant funds to customers and elimination of duplicative tasks

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Governor's Office	DPA eProcurement and OIT Storefront	Improve and begin to redesign the procurement process and improve service delivery within state departments	Enhance customer experience Minimize duplication of efforts Progress toward single interface for purchasing all goods and services
Health Care Policy and Financing	Long Term Care Case Management*	Developing a uniform standardized case management review process	Address the number of appeals and judgments Improve client and case manager experience
Health Care Policy and Financing	Customer Care Center	Improve the Customer Care Center Experience	Increase percent of issues addressed on customer's first contact, increase percent of customers indicating satisfaction with the service received, and decrease percent of calls where the caller hangs up before speaking
Health Care Policy and Financing	Time to Hire	Streamline hiring process to reduce overall cycle time and improve the quality of hire	Targeted 80% reduction in the number of handoffs and approvals Targeted 54% reduction in overall cycle time
Human Services	Colorado Mental Health Institute at Pueblo - Hospital Admissions	Improve CMHIP's evaluation and restoration services, including ensuring that no individual will wait more than 28 days to be admitted for an inpatient evaluation or restoration	Targeted 64% reduction in the average number of days to admission to CMHIP treatment unit
Human Services	Colorado Mental Health Institute at Pueblo - Arrival Administration	Improve CMHIP's evaluation and restoration services, including ensuring that no individual will wait more than 28 days to be admitted for an inpatient evaluation or restoration	Reduce patient waiting time for admission by more than 40% Improved patient and staff safety Improved patient care and comfort

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Human Services	Fort Logan Hospital - Medication Errors	Reduce the number of medication errors related to ordering, transcription, and data entry at Ft. Logan Mental Health Hospital	Targeted 75% reduction in medication errors rate Streamlined process to provide more efficient patient intake and medication delivery
Human Services	6S Group Home Facilities	Develop a safe and efficient working environment with effective standards for staff and pooled resources to create the best living environment possible for group home residents	Initial improvements in 14 group homes Established a system to standardize and organize critical areas for all group home facilities
Human Services	Time to Hire	Streamline the process to fill vacant positions	40% reduction in median time to hire 50% reduction in hand-offs and approvals
Labor and Employment	Unemployment Insurance Fact Finding Process	Streamline and coordinate the fact finding process to collect information from all sources related to unemployment insurance claims	Three-fold increase in quality of facts obtained, resulting in a more efficient and accurate decision process
Labor and Employment	Unemployment Insurance Customer Service Center*	Improve the customer experience with the call center through lower wait times and a more consistent and value-added experience	Improved median wait time Increased number of calls handled per week due to improved Customer Service Center capacity Improved customer satisfaction ratings and scores on quality reviews
Labor and Employment	Worker's Compensation Dispute Resolution	Improve the payment dispute resolution process between payers and providers within the Worker's Compensation system	52% reduction in cycle time 20% reduction in hand-offs

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Labor and Employment	Petroleum Storage Tank Fund (PSTF) Reimbursement process	Streamline the Petroleum Storage Tank Fund reimbursement processes while maintaining accuracy and supporting faster turnaround times for reimbursing costs	Targeted 80% reduction in application review time. Increased efficiency for applicants in providing information and submitting documentation
Labor and Employment	Conveyance Certificates of Operation and Temporary Certificates of Operation*	Evaluate and improve the Certificate of Operation and Temporary Certificate of Operation issuance process for regulated conveyance owners	Targeted outcomes include reduced cycle times and increased accuracy and consistency
Labor and Employment	Hiring Process	Improve and streamline CDLE's hiring process	Reduce number of days to fill positions, improve communications with internal and external customers, and ensure consistency in the selection process
Local Affairs	Housing Choice Voucher Program	Streamline the housing choice voucher intake, re-certification, reporting, and transaction processes	50% reduction in the number of required forms. 15% reduction in number of days payments are issued to landlords
Local Affairs	Grant Contracting Process	Develop timely and efficient process for grant contracting	Improve turnaround time. Enhance accuracy
Military and Veterans Affairs	Colorado Veterans Claims Processes*	Increase capacity to process claims for Colorado veterans and Increase overall number of Colorado veterans who receive benefits	Increase the claims-processing capacity of the office, reduce wait times for appointments, establish a standard claims input system, enhance service to under-represented areas of the state, and streamline the claims process

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Military and Veterans Affairs	Contract Process	Improve the internal contracting process	Reduce the average processing time Rationalize approvals and handoffs Simplify and streamline the process
Military and Veterans Affairs	Emergency Field Change Orders and Amendments	Improve the emergency field change order process	Improved timelines Simpler, more consistent forms Simplified process
Natural Resources	Procurement Processes	Improve and streamline procurement processes	Reduce the number of days to complete a procurement and reduce the number of review and approval steps Improve quality of information exchange, reducing "re-work"
Natural Resources	Travel Approval Process	Streamline ad hoc out-of-state travel request and approval process	60% reduction in number of approvals 60% reduction in cycle time
Personnel and Administration	State Archives	Improve operational efficiency and customer service in the State Archives	Enhanced visibility/tracking to individual requests and improved work methods to drive efficiency
Personnel and Administration	Statewide Selections Process Improvement*	Increase the efficiency and effectiveness of identifying and selecting employees to fill vacancies	Days to fill and % of positions filled within target days to fill Establish best practice and shared service model, as applicable
Public Health and Environment	Air Permitting Value Stream Analysis	Develop and identify current set of processes and opportunities for improvement for the Air Permitting value stream	Value stream map and opportunities identified from the analysis along with an execution roadmap; CDPHE is working to complete several projects to implement improvement opportunities

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Public Health and Environment	Air Pollution Permit Modeling	Reduce the frequency, complexity and length of time required to complete permit modeling reviews	Reduced overall permitting cycle times that result from decreasing the number of modeling reviews, the complexity of modeling reviews, and the uncertainty that can attach to the modeling process Increased customer satisfaction
Public Health and Environment	Laboratory Services Storeroom	Improve the inventory control process for supplies needed for collection and testing by internal and external customers	Improve customer service and satisfaction by reducing the time it takes to fulfill an order and standardize Central Services' storeroom inventory control processing
Public Health and Environment	Water Quality Control Division Storm Water Construction Compliance	Improve the storm water inspection and compliance process	Improved stakeholder satisfaction, consistent inspection and enforcement processes, improved transparency of the process, and reduced timeframe between inspection and notification of results
Public Health and Environment	Fiscal Processes Standardization	Improve the internal and external customer experience through standardized fiscal processes	Many improvement opportunities identified from the analysis along with an execution roadmap; CDPHE is working to complete several projects to implement improvements
Public Health and Environment	Accounts Payable	Improve the fiscal year-end accounts payable process and preserve fiscal compliance	Standardize year-end A/P process across all divisions and improve internal controls

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Public Safety	Public School Building and Fire Code Permit Process	Improve the Division of Fire Safety public school building and fire code permit process	Create a simplified, 'one-stop-shop' type submittal process with fewer applications and improved ease of use for the customer, reduce major and minor plan review errors, and reduce the total permit process timeline
Public Safety	Onboarding New Employees	Improve the new employee onboarding process to increase employee productivity	83% reduction in approvals required Parallel processing
Regulatory Agencies	Call Center Standard of Service	Improve customer service across DORA call centers	60% reduction in initial connection time First call resolution
Regulatory Agencies	Regulatory Investigative Procedures	Increase the efficiency of the investigative program for the Division of Real Estate	Targeted reduction in number of days (cycle time) to resolve a complaint and improve the quality of staff findings
Regulatory Agencies	Expedited Settlement Procedure	Reduce the time and cost required to resolve disciplinary matters	90% of in cases resolved in 60 days or less
Regulatory Agencies	Division of Real Estate Forms Design*	Streamline the annual process to update real estate contracts and disclosure forms	Targeted outcomes include reducing the cycle time, developing an efficient tracking and review process for suggestions from the real estate industry, and implementing a more transparent comment period for the public
Revenue	Tax Resource Alignment	Align resources to fully leverage and support the recently implemented customer-centric tax processing and administration system	Operational effectiveness and efficiency through streamlining business processes Decreased processing backlogs

Appendix B: OSPB-Resourced Projects and Improvements
(Through October 2012)

Department	Project Title	Project Summary	Targeted Improvements
Revenue	Rules Management	Develop a single transparent process for reviewing, developing, and implementing rules and regulations	Increased stakeholder engagement with feedback loops 80%+ compliance with best practice Improved collaboration with AG's office
Revenue and Personnel and Administration	Tax Document and Remittance Processing Pipeline	Streamline the tax document and remittance processing pipeline	Anticipated $2.1 million in ongoing savings Significant improvement in number of days required
Transportation	Access Permits	Improve the Access Permit process while increasing accessibility and customer satisfaction	Developed customer web-interface that allows access to status of permit request Enhanced consultative process, expectations, and customer education Enhanced promptness and consistency
Transportation	Local Agency Project Delivery Value Stream Analysis	Develop and identify current set of processes and opportunities for improvement for the Local Agency Project Delivery value stream	Value stream map and opportunities identified from the analysis along with an execution roadmap; CDOT has since completed several projects to implement improvement opportunities
Transportation	Oversized Overweight Truck Limits	Modernize the permitting process to help reduce the error rate and cycle time for single trip, annual, and special permit while also improving customer service	Increased accessibility and ease of use for customers Reduced error rate

* Project currently in process; results yet to be determined

Introduction to Lean

Overview

Lean is a systematic approach to continuous improvement, applying principles and tools to identify and eliminate waste. While Lean was popularized in Japan, Taiichi Ohno, the father of the Toyota Production System, claimed he learned all he needed to know from three distinctly American concepts: the Indy 500, Ford's River Rouge Plant, and supermarket distribution. Toyota consolidated years of thinking into a systematic approach that is relevant not just to factories, but to business processes as well. The president of Toyota's support for the program was driven by the idea of removing waste as a result of two important beliefs that align to our goal of effective, efficient, and elegant state government:

- Waste is disrespectful of humanity because it wastes scarce resources; and
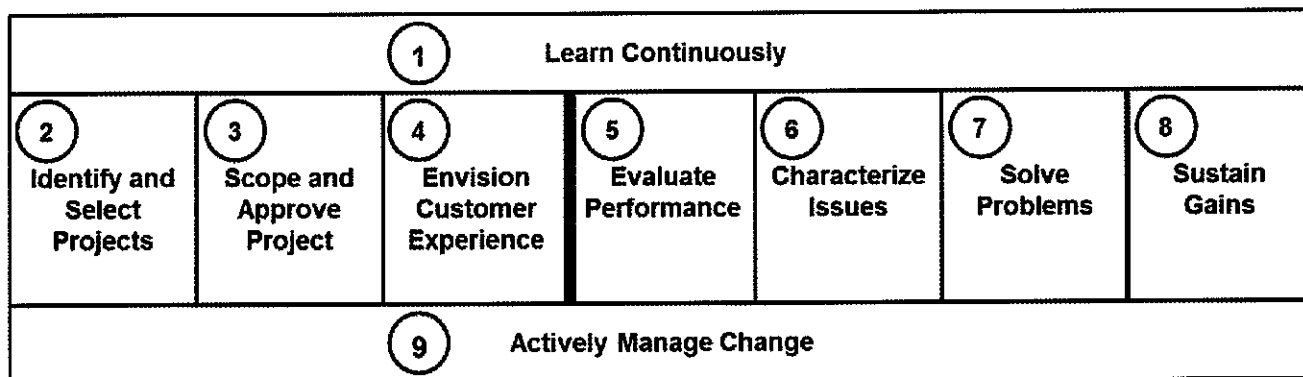- Waste is disrespectful of individuals because it asks them to do work with no value.

While the list of Lean tools is long, there are just five guiding principles:

1. **Define value** – *value can only be defined by the customer;*
2. **Map value steams** – *documenting information and material flow that provide the product or service citizens require;*
3. **Create continuous flow** – *internally having everything ready as needed for a symphony of service or production;*
4. **Implement pull** – *provide a product or service only when it is needed and no earlier; and*
5. **Strive for perfection** – *relentlessly chase perfection through error proofing and continuous evaluation and improvement.*

Throughout your training you will be introduced to a number of principles, methodologies, and tools. To help organize all the different components of Lean and to assist you in taking the right action at the right time, the State of Colorado has developed its own Lean Model. As you are introduced to each topic, you will also learn how to apply the information within context of this framework.

Before we dive into individual topics, please take time to review the model in greater detail.

State of Colorado Lean Model

1 Learn Continuously							
2 Identify and Select Projects	**3** Scope and Approve Project	**4** Envision Customer Experience	**5** Evaluate Performance	**6** Characterize Issues	**7** Solve Problems	**8** Sustain Gains	
9 Actively Manage Change							

Key Information

✓ Lean is a systematic approach to continuous improvement that aims to make processes more efficient, effective, and elegant by eliminating waste.

✓ The Lean methodology can be summarized into five key principles but is supported by numerous tools and techniques.

✓ The State of Colorado Lean model will help provide a framework for all Lean tools and methods.

Additional Resources

Book: Extreme Government Makeover by Ken Miller
Book: Lean Thinking: Banish Waste and Create Wealth in Your Corporation by James P. Womack, Daniel T. Jones
Article: http://www.lean.org/WhatsLean/Principles.cfm

Introduction to Lean (cont'd)

State of Colorado Lean Model
This model will help you understand how Lean components relate and work together to form a continuous improvement cycle.

1 - Learn Continuously
Lean is comprised of a multitude of principles, methodologies, and tools. While you will be armed with the basic tools you need to get started, you will need to continue to refine and deepen your knowledge. Lean cultures are based on continuous improvement and your development is no exception. Leaders in a Lean organization will be expected to continue their learning through self-guided materials or additional course work.

Operationalize Lean
Sponsors, champions, and Lean project leaders work together to operationalize Lean. Operationalizing Lean is not confined to project completion; it also includes daily management and on-going process evaluation. Sponsors and champions will assist project leaders as they execute projects by guiding the project approach, offering insight, and asking probing questions.

This process is broken into (7) main phases to help compartmentalize the tools and methodologies, but some tools may span across phases. As you continually advance your Lean knowledge and experience, you will begin to see the ways you might leverage a practice in more than one area.

2 - Identify and Select Projects	3 - Scope and Approve Projects	4 - Envision Customer Experience	5 - Evaluate Performance	6 - Characterize Issues	7 - Solve Problems	8 - Sustain Gains
• Identify potential value streams and service areas that could benefit from a Lean approach • Prioritize these opportunities based on criteria	• Complete project scoping, clarifying opportunity, targeted outcomes and project boundaries • Gain leadership approval for scope, resources, and schedule	• Specify value in the customer's eyes • Articulate the intended customer experience to guide Lean teams' efforts	• Clarify customer and strategic needs • Establish performance baseline • Narrows focus to key areas that impact process performance	• Identify and quantify defects and errors impacting performance • Isolate root causes and prioritizes problems	• Solve problems as a group • Implement new methods for executing processes • Enhance efficiency through workplace organization and cooperation	• Change the process and workplace to retain gains • Establish monitoring of improved processes • Engage all levels in process ownership and improvement
Topics • Project Selection	Topics • Project Scoping • SIPOC	Topics • Gaining Customer Perspective and Feedback • Envision Customer Experience	Topics • Value Stream Map • Lean Process Metrics • Value Add v. Non-Value Add • 8 Wastes • 5 Government Process Pitfalls	Topics • Process Flow Diagram • Check Sheet • Histogram / Pareto • Cause & Effect / Fishbone • 5 Whys • Spaghetti Chart	Topics • 5S • Kaizen • A3 • Workload Balancing • Product Family Matrix • Cellular Flow • Kanban	Topics • Visual Management Techniques • Mistake Proofing • Lean Daily Management (QDIP) • Sustainment Checklist

9 - Actively Manage Change
Lean is founded on the idea of continuous improvement, so your organization and team will be improving processes frequently. This change will be beneficial, but it can be difficult as it requires adjusting to a new way of doing things. You will need to understand your stakeholders, develop and execute a communications plan, conduct training, and prepare to manage feedback and resistance.

Search Terms / Related Topics

- 5 Principles of Lean
- Toyota
- Overview
- Waste
- State of Colorado Lean Model
- Tools
- Methodologies
- Continuous Improvement
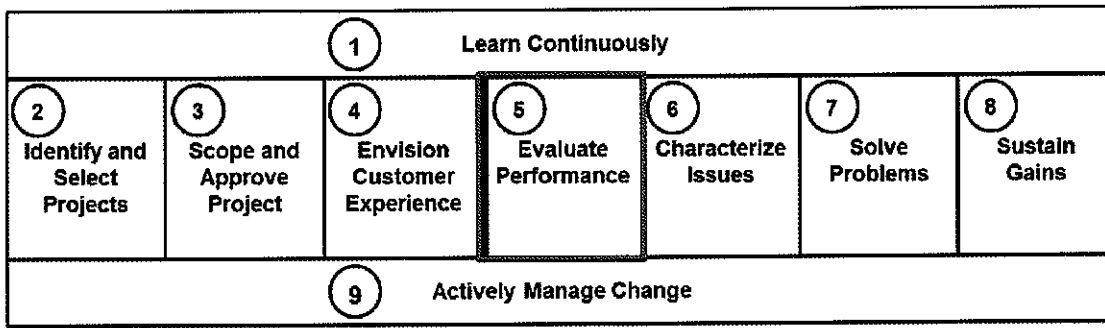
Value Add v. Non-Value Add Activities

Overview

Value in a Lean system can only be defined by the customer and should not be skewed by pre-existing assumptions, technologies, and assets. It often helps to think of value adding (VA) activities as those that change the product or service, that are executed correctly the first time, and those for which the customer (e.g. taxpayer, citizen) is willing to pay.

Non-value add (NVA) activities consume time, funding, and/or space, but do not contribute to creating value. These activities reduce the overall ability to meet customer needs. Some non-value add activities include approvals, rework, and inspection. The aim of a Lean system is to eliminate non-value add activities.

Some non-value add activities may be required by the business or by law. A business non-value add (BNVA) activity is any action required to run the business but not seen by the customer such as report development. A regulatory non-value add (RNVA) activity is an activity required by law that does not add value. Consider reducing, rationalizing, or automating these activities.

State of Colorado Lean Model

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When To Use It In the Lifecycle

The ability to identify value add and non-value add activities is an essential component of executing a Lean project or running a Lean organization.

Customer value should be clarified while evaluating performance of the value stream.

Through this identification, you and your team will be able to evaluate current state performance and begin selecting processes that require work to eliminate non-value add activities.

How to Apply It

Select a process to assess and break up the process into individual steps. At each step consider the following:

- Does this step transform the product or service in terms of form, fit, or function?
- Is this a requirement of our end user?
- Is the customer willing to contribute even one cent more for this processing step?
- Can we eliminate any non-value add activities, rationalize and automate any business or regulatory non-value add activities, and innovate to link existing value add activities?

Key Information

✓ Value can only be defined by the end customer.

✓ Improvement is attained by the elimination of any non-value add activities and by reducing, rationalizing, and automating non-valued add activities that are required for the business or required by law.

Additional Resources

Video: http://www.youtube.com/watch?v=4WBvgNwGeEs&feature=youtu.be
Book: Learning to See: Value Stream Mapping to Add Value and Eliminate Muda by Shook and Rother
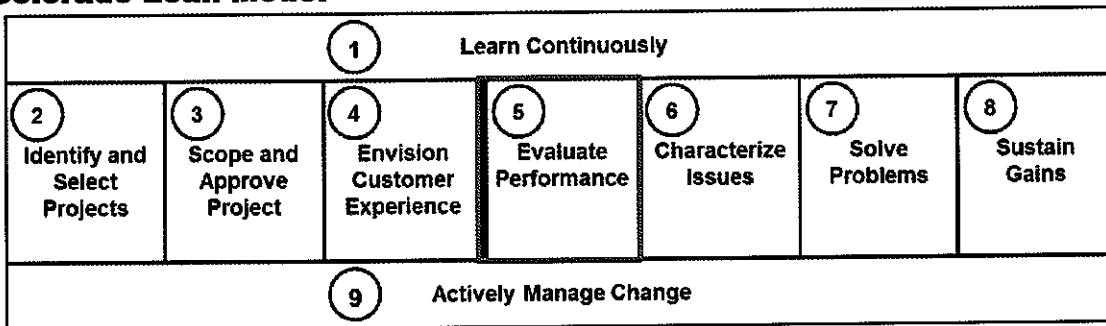Book: Extreme Government Makeover by Ken Miller

8 Wastes

Overview

Waste can be characterized as any activity that consumes resources but does not create value for the customer. The main goal of Lean is to eliminate waste. Lean projects are a systematic approach to both identifying and eliminating waste in processes. There are eight specific wastes classified in Lean and the first letter of each form the mnemonic "DOWNTIME":

1) **Defects** - Any rework, mistakes, and corrections
2) **Overproduction** - Producing too much or too soon
3) **Waiting** - Waiting on materials or information
4) **Non-utilized talents** - Failure to fully utilize time and talents
5) **Transportation** - Conveyance of the materials and information
6) **Inventory** - Any more than the minimum to get the job done
7) **Motion** - Employee motion that does not add value
8) **Excessive processing** – Unnecessary activities, features, or complexity

State of Colorado Lean Model

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2 Identify and Select Projects	**3** Scope and Approve Project	**4** Envision Customer Experience	**5** Evaluate Performance	**6** Characterize Issues	**7** Solve Problems	**8** Sustain Gains
9 Actively Manage Change						

When To Use It In the Lifecycle

Applying the concept of waste identification and elimination should be a constant activity. In fact, it should become a way of thinking for all members of a Lean organization. This may be challenging at first, as you may not recognize waste in existing processes because "that's the way we've always done it." Over time, though, all employees will be able to quickly and accurately identify waste within a process.

Identifying waste helps evaluate the performance of the current process. For example, once you can identify defects in your process, you can begin to collect data on those defects and understand their impact on performance. Eliminating wasteful activities is the most effective way to improve performance and customer service.

How to Apply It

Take a "waste walk." Tour the workplace and follow the process steps, asking yourself and your team (respectfully!) at each step:

- Is this step necessary to achieve the process goal?
- Does the person completing this step have to wait for something or someone to begin their work?
- Do you store any partial or completed products (e.g., applications)?
- What errors are typically found? What is the source?
- Does any information get entered multiple times?

Key Information

✓ Performance is improved by eliminating waste, not by working harder.

✓ Waste can be characterized as any activity that consumes resources but does not create value for the customer.

✓ There are eight types of waste and each type should be eliminated where possible to increase efficiency and overall value of a process.

Additional Resources

Article: http://www.bizwizwithin.com/2011/04/lean-in-office-8-wastes.html
Book: Value Stream Management for the Lean Office by Tapping and Shuker

8 Wastes (cont'd)

Example

Wastes	Definition	Examples
Defects	Any rework, mistakes, and corrections	• Rejection of a purchase order • Incorrect data entry on an application
Overproduction	Producing too much or too soon	• Information sent when it is not required • Printing documents before they are required • Processing items before they are required by the next person in the process
Waiting	Waiting on materials or information	• Customers waiting to be served by a call center • System downtime
Non-utilized talents	Failure to fully utilize time and talents	• Limited authority and responsibility • Individual assigned to a job that does not utilize their talents • Inadequate ways to implement employee suggestions
Transportation	Conveyance of the materials and information	• Movement of files and documents from one location to another • Multiple hand-offs
Inventory	Any more than the minimum to get the job done	• Items and documents waiting to be processed
Motion	Employee motion that does not add value	• Searching for data and information • Movement of people to and from filing, fax, copiers, etc.
Excess processing	Unnecessary activities, features or complexity	• Unnecessary checks and approvals • Same data required in number of places in an application form • Filing of documents that are not needed

The mnemonic "DOWNTIME" is formed by the first letter of each of the eight wastes. Consider listing the eight wastes down the left hand side of a sheet of paper and recording the wastes you see by category as you take your waste walk.

Search Terms / Related Topics
- Evaluate Performance
- Muda
- Value

- Defect
- Five process pitfalls
- Error

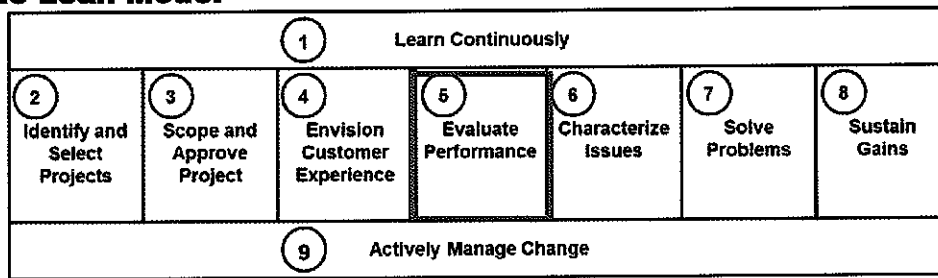State of Colorado Lean Program

2 of 2

Five Government Process Pitfalls

Overview

Waste can be characterized as any activity that consumes resources but does not create value for the customer. The main goal of Lean is to improve process flow by eliminating waste. Lean projects are a systematic approach to identifying and eliminating waste in processes. When applying Lean to government, in addition to the 8 Wastes we should consider the following five common pitfalls:

- **Backlog** – Work waiting to be processed is called a backlog. This causes a cycle where customers call to find out the status of their case, forcing workers to handle request rather than accomplish the work itself.
- **Batching** – This involves grouping items before moving the stack to the next phase of the process, causing a delay as the first item waits for the last item to be processed prior to advancing.
- **Bottleneck** – A step in the process that cannot keep up with the rest of the steps. Work piles up here.
- **Forcing One Process to Handle All Types of Work** – 'One size fits all' is ineffective. Process designs should be customized to the type of work being performed.
- **Failure to Error-Proof** – Quality cannot be inspected in. Quality must be built into each step of the process, catching errors when and where they're created, or better still, preventing them altogether.

State of Colorado Lean Model

① Learn Continuously						
② Identify and Select Projects	**③** Scope and Approve Project	**④** Envision Customer Experience	**⑤** Evaluate Performance	**⑥** Characterize Issues	**⑦** Solve Problems	**⑧** Sustain Gains
⑨ Actively Manage Change						

When To Use It In the Lifecycle

Similar to using the lens of eight wastes, identifying and eliminating common process pitfalls should be a constant activity. In fact, it should become a way of thinking for all members of a Lean organization. At first, you may not recognize waste in existing processes because "that's the way we've always done it," but over time all employees should be able to quickly and accurately identify these pitfalls where they exist in their process.

Identifying waste helps evaluate the current performance of the process. Once you can identify, for example, where batching is affecting your process, you can begin to understand the impact on performance. Eliminating wasteful activities is the most effective source for improvement in performance and customer service.

How to Apply It

Take a tour of the workplace and follow the process, asking yourself and your team (respectfully!):

- How can we redesign the process to avoid work piling up?
- Is this how we would do it if we handled only one?
- How can we avoid batching or get to a batch size of one?
- Can we do the entire process in one day so we don't have to track and no customers call forcing us to look for their item?
- Is some of the work holding up other work and should we handle that work in a separate process?
- Is there more we can do to a) identify mistakes where they originally occur: and b) prevent mistakes before they occur?

Key Information

✓ Performance is improved by eliminating waste, not by working harder.

✓ Waste can be characterized as any activity that consumes resources but does not create value for the customer.

✓ In government we should focus on the five pitfalls that prevent us from delivering to our customers in an effective, efficient and elegant way.

Additional Resources

Book: <u>Extreme Government Makeover</u> by Ken Miller

Five Government Process Pitfalls (cont'd)

Example

Pitfall	Definition	Examples
Backlog	Work that builds up in front of a process or in process – sometimes due to increase of demand, a problem with one item, or the absence of someone involved in the process	• Stacks of documents waiting for a machine or operation • Inbox of files 'for review' • File drawers full of incomplete work
Batching	Human nature-driven tendency to perform one task on multiple items of work. This may make an individual more efficient, but slows the overall process as the first item waits for all the other items to be processed.	• Documents grouped into large packs so they can be inventoried and shipped to another group or department • Grouping permit applications by type and reserving time during the week to work on one stack while another stack builds • Invoicing for user fees once per quarter
Bottleneck	A point in a process where capacity is constrained. If resources upstream have greater capacity, or multiple processors feed one processor, as in a review step, a bottleneck results.	• One step in the process takes considerably longer than the others and hence customers or documents moving through this step must wait • Multiple processors create files that one supervisor must review/approve
Forcing One Process to Handle All Types of Work	Different tasks may require different 'pipes' to process. Government processes are often designed to avoid risk, which may be associated with only one type of item to be processed. Requiring all types, even low-risk items, to be processed this way is a waste of resources.	• One type of document takes significantly longer or requires different levels of approval or review • Investigations that may result in dismissal or enforcement action are treated the same until the very end of the process, even though the outcome is known earlier in the process. • Dry cleaner's permit processed the same as oil/gas well permit despite different permit requirements as well as different familiarity with the permitting process on the part of the applicant
Failure to Error-Proof	Designing processes to immediately acknowledge errors, or to prevent them all together saves time in error correction and improves customer satisfaction. If an application is received incomplete but the applicant isn't informed until much later, customers are unhappy.	• Multiple errors are caught much later in the process at which time correcting the error causes disruption and delay • Reviewing finished reports rather than first reviewing the decisions/conclusions made before the report was written – now, if errors found, the entire report must be re-written • Financial reports written with columns of figures in a word processing program rather than a spreadsheet program where arithmetic errors can be easily avoided

Search Terms / Related Topics	• Evaluate Performance • Value • Defect • Error