

# Public Sector Guide to Lean Process Management and Improvement

## Introduction

Public Sector managers and supervisors are the front line for ensuring the efficiency and effectiveness of their program work, and the development and management of best practices should be your first responsibility. This guide provides a framework and guideline for ensuring efficient and effective work through use of the practices of Lean Process Improvement in Government<sup>1</sup>. Process is the way we do most of our work<sup>2</sup>, and is defined as a repeatable sequence of connected events that lead to defined, value-added outcomes. Process work is characterized by its predictable, on-going, and repetitive nature. Process work is performed in a standardized way that can be called a “best practice”. Once work process is standardized, it’s measurement, analysis and improvement is an easy next step. This guide will help you achieve standardization and improvement in your primary work processes.

Your use of these Lean Process Improvement practices are expected to encourage and sustain excellent operational performance within your unit.

## Defining Your Process Inventory

Every program and office has many processes that it carries out – some are more important than others. Process flowcharting takes time and resources, and as a result, it is not helpful to process flowchart everything. It will provide a lot more benefit to focus only on “key processes.” The next question though is which processes are key?

Generally speaking, key processes are the ones that your customers and external stakeholders feel are “what you do”, and that are best known about your office. They are the processes that you use to create value for the greater world – why you exist. You can presume that your highest value processes are those that:

- Include the greatest number of actions or people;
- Require the biggest part of your time;
- Represent the greatest part of your budget;
- Have the highest public visibility;
- Reflect your primary purpose.



<sup>1</sup> The term Lean Process Improvement refers to the tools and knowledge associated with quality management and continuous quality improvement, and is sometimes referred to as “doing right things right the first time,” and eliminating waste. It had its origins in the Toyota Production System of the 1970’s, and embraces a broad body of professional knowledge championed by the American Society for Quality. It provides an essential part of the U.S. National Quality Award.

<sup>2</sup> Projects are the other way work gets done. Projects are defined as a temporary endeavor undertaken to create a unique product, service, or result of lasting benefit. Projects generally have a fixed resource base, and a project team that will disband upon project completion.

As a beginning point, once you have identified one or more of your key processes, you should complete Attachment 1, “Initial Process Documentation,” to confirm the process and how you have named it, and to define the limits of the process improvement you will undertake.

### **Deciding Which Process to Work on First**

The decision about which process to work on first should be based on an assessment of how well each process performs now, and which provides the best opportunity for improvement. Using the list of key processes you have just developed, ask yourself the following questions about each:

- Does it meet its mandates?
- Is it producing outputs that meet expectations and requirements?
- Is it mostly free of delay, error, and re-work?
- Do we have sufficient resources to do what we need done?
- Does it meet legal and ethical standards?
- Are there on-going complaints about its performance?

Using these questions to evaluate, select your best opportunity for improvement, and begin on the following framework.

### **Summary of Improvement Methods**

Business process improvement is a requirement of fundamental good management. It is based on a comprehensive and structured review of a key business process, within the context of a two-way discussion between supervisors and front-line staff. Essential aspects of a process improvement effort include:

- Review and confirmation of mandates (these define process design requirements – what the process must do);
- Business process flowcharting;
- Development of accurate data regarding process flow and results;
- Development of the process design of the future (the “to be” process);
- Analysis of improvement efforts in view of what was learned, and;
- Negotiation of appropriate improvement opportunities with management.

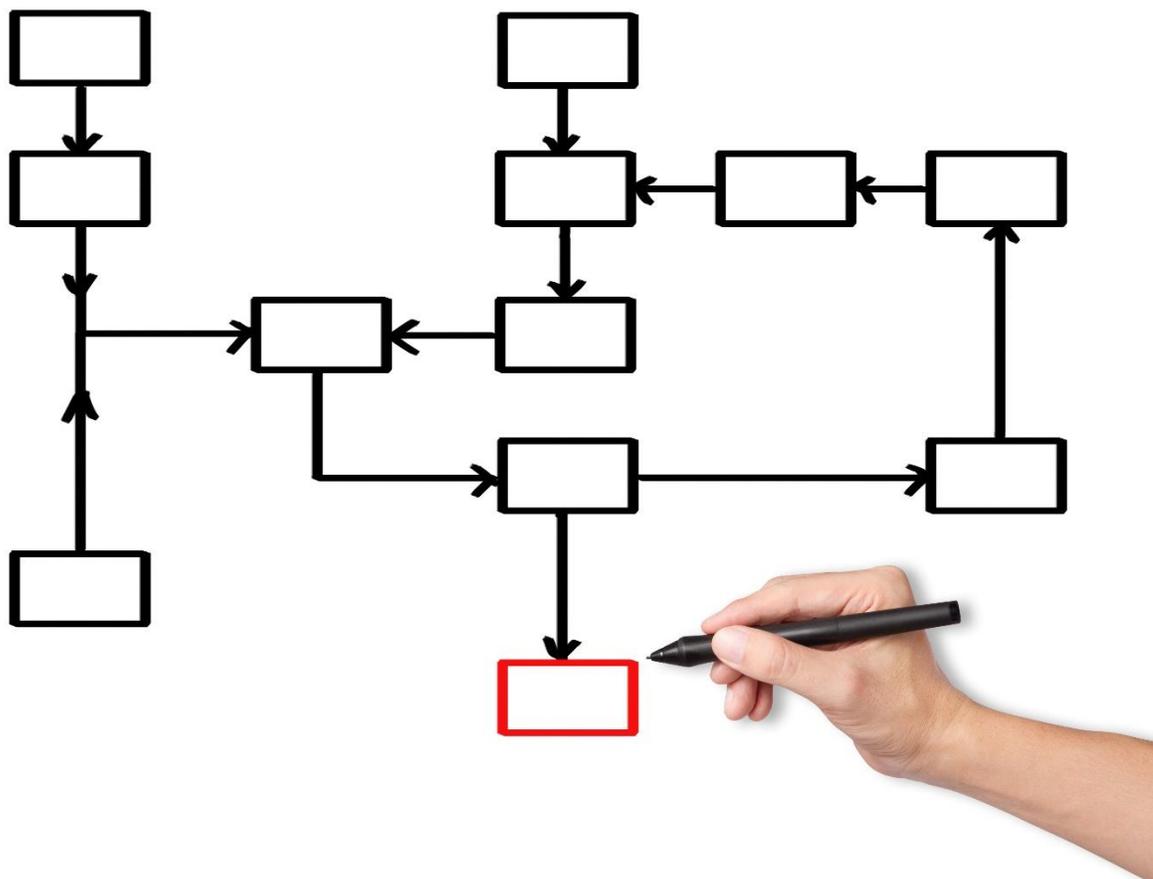


### Using Your Work Team to Analyze Process

The overall effort to improve work is based on streamlining, simplifying, eliminating waste, improving timeliness, and eliminating non-value added steps. Up to now you should have inventoried your principal business processes, and selected one for improvement. Your next steps are to research mandates, educate your team, and develop performance metrics. Here are some steps you can follow:

- 1) Hold an initial meeting with your identified work team to discuss the goals of this project - simplification of work and elimination of waste are good ones.
- 2) Engage the team in an open discussion of what will be done, over what period of time, and how the effort will move forward. Schedule subsequent meetings about every two weeks throughout the duration of the project.
- 3) Research the mandates and requirements for the process you have selected, so that you can objectively see its strengths and weaknesses as you get started.
- 4) Document why the process exists, and the measures or indicators of its successful operation. This should include documenting the measurable reasonable expectations of internal and external customers. (This discussion can be structured by having your work team review, edit, and update the Attachment 1 you have already completed.)
- 5) Begin process flowcharting by asking each member of the workgroup to tell the group what is done, by whom, and in what order. If you write these down on half-sheets of paper you can arrange them in order on a table, or tape them to the wall to create your first version of an “as is” process flowchart.
- 6) Ensure that the team clearly describes what constitutes each completed task, the level of completeness before one person hands off to the next, and what to do when exceptions arise. Process steps that review correctness or completeness are called “decision points”, and your notes should have clear criteria for all decisions, so everyone can understand. Don’t be afraid to go through your process flowchart several times to make sure everyone thinks of all the major steps and the principal decision points.
- 7) Develop measures of current process performance, with assistance from the work team. Your measures should include how long the process takes from start to end and in each primary work step. They should include the percentage of work that diverts from the preferred process path at decision points. (This may reflect the rate of process error and re-work.) Calculate the work time required for each major process milestone, and the total work time used to fix errors. (Further detail on appropriate measurements is provided in the next section).

- 8) Develop a streamlined “to be” process once finalization and standardization of your current process flow is complete. Common areas for streamlining come from “error-proofing”, and elimination of unneeded inspections, approvals, duplication, tracking, hand-offs, and delays.
- 9) Use your process measures to identify the tasks and steps that cause the most error and re-work, or take the most time without adding much value. These represent the “possible causes” of process problems, and a long list may be created. Those possible causes with greatest potential to improve the process represent “most likely cause(s).”
- 10) Ask for everyone’s best ideas on how to repair the tasks and steps that are taking the most time, or creating the most waste. These ideas should describe the “possible solutions” to most likely cause(s).
- 11) Ask for everyone’s input on the most actionable areas within that group, and the possible solutions that will address those most actionable areas. Ultimately this information will allow you to build a “To Be” process, and to develop additional recommendations for short- and long-term improvement.



## Development of Process Performance Measures

The most valuable process performance metrics are often not available in existing standard reports, and must be based on a few minutes of simple observation or analysis. Timing the completion of a small sample of transactions is often the best way to understand process time. This can be done by designating a time-keeper to watch work processing and record the time required to complete each major step in the process. After an appropriate sample is gathered you will be able to develop an average time per transaction. By categorizing each process step or group of steps as value-add, non-value add (something a customer would not pay for) and waste (something that requires additional work or a redo) you can then see what proportion of the total process time is required for each. Calculations of time in the correction of waste, or in value-add versus non-value added work are very helpful to see where improvements will be most beneficial.

A review of a sample of case records is often the best way to discover error rates, and first pass correct. Once the process flowchart is complete you should identify the decision or review points that work must pass, and the preferred path that “correct” work must follow. Review case records to identify the percent of all work that flows down the correct path versus the incorrect path: Incorrect work can be called “waste” since it will require additional work or a re-do to be completed. From this analysis you can then see the number (or amount) of process waste, based both on the number and percent of such actions, and the amount of staff time required to correct this waste.

If no other reports are available, studying a sample of case records will also reveal the amount of calendar time that elapsed in each type of process transaction. This can then be compared to active “processing time” (defined in the following list) to calculate the time work is in queues, batch, and transit. The best measures to use in analyzing your process are the following:

- Transaction calendar time. Sometimes called “lead” time, this is defined as the average total time elapsed from receipt of a processing request to its successful completion. Its calculation should include only work days and hours required to process the transaction. Calendar time should include only work weeks of five “calendar” days and 40 hours.
- Transaction processing time. This is defined as the amount of working time that was devoted to processing that transaction. It excludes time in transit between work stations, time in queue and batch, and time waiting for necessary information inputs.
- The ratio of transaction calendar time to transaction processing time.
- Value added work time ratio. This is the share of all transaction work time necessary to create the value-add component of defined outputs.
- Non-value added work time ratio. This includes the percentage of time spent correcting errors and any research and response to inquiries about the status of pending

transactions, and research into the reasons that transactions were not correctly processed on their first attempt.

- First pass correct. Defined as the overall percent of occurrences that the work passes through the entire process without needing re-work. This can be calculated by multiplying the percent correct at each decision (or review) point, with all other percent-correct calculations in the process.

Using this information, it is then possible to see where and how various process improvements could improve work flow, and the possible staff savings possible from such changes. This is essential information for you to recommend changes and improvements.

If you have followed through with the outline provided earlier, you will next be looking at improvement steps. The following is provided as a guide to the negotiation of appropriate improvement opportunities with management.

### **Developing and Analyzing Most Likely Solutions**

The improvement phase is usually described as having the following steps.

1. Describe the problem
2. Describe possible causes
3. Describe most likely cause
4. Describe possible solutions
5. Describe most likely solution
6. Implement the solution

In the above process, the identification and verification of possible causes is usually much easier than the development of a solution and an action plan, because solutions often require changes in how the process is now performed, including re-configurations of work and possibly providing additional resources. Most types of government work have evolved over many years, and have been deliberately shaped into the pattern in which it is done today. There are reasons why that equilibrium has developed. Improvement and change will challenge that equilibrium, and must be based on identified benefits, leadership, and a feasible action plan. This justification will depend on your development of all possible solutions, and evaluating the positive benefits of each of those solutions, with due consideration of the risks and barriers that each will face. The recommended means to develop options and most likely solution(s) follow:

Describe all the possible benefits from process changes, including the “most likely causes” of your identified process problems. Next develop a list of scoring criteria to evaluate the variety of actions to correct problems. Such criteria may include: (Score 5 if ‘yes’ and 1 if ‘no’)

- Expected to have a large impact on the identified problem
- Direct correlation between the suggested solution and a significant problem
- Can be quickly implemented
- Will not large amount of staff time to implement

- Will not require permission from higher management
- Will not require technical support from outside the workgroup

This same kind of analytic method can be used to identify risks and barriers to each solution and a negative score given to those with highest risk and greatest barriers. So for example, if your public sector customers may oppose the solution, that negative factor must be considered. Your final solutions will then be scored by taking the positive factors minus the negative ones. This method of evaluating your process solutions will lead you to those most likely to be successful, and to make the most significant impact.

### **Conclusion**

Process Management and Improvement is not a one-time event, and process flowcharts are an on-going tool of good management. You should plan to review and update each of your key process flowcharts with your work team on an annual basis.

Your current process flowchart should be dated when complete, and shared with your next level supervisor. A copy should be distributed to every employee to communicate job requirements and expectations. You should ensure that your unit performance feedback includes your key process measures, and goals.

Good management requires clear expectations and requirements, and process management and improvement are the primary ways to do so.



ATTACHMENT 1 -

**Initial Process Documentation:**

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**Purpose or Outcome of Process**

**Trigger – What starts the process?**

**First step:**

**Last step:**

**Customer/ User(s):** Who directly gets or uses your process output?

**Stakeholders:** Include secondary users and those who have great concern about the process outcomes (“have a stake” in it)

**Requirements:** Briefly describe quality outcomes and how they are measurable? A measure of reasonable time to complete is generally one measure you will need. More than one measure of success is recommended.

**Name of Process:** Name the process as a final step. Having the prior information, including desired output, will help with an appropriate name.

## Following a Process Maturity Roadmap:

### The Process Maturity Roadmap

1. Standard Process:
  - a. Designed to perform
  - b. Matched to mandates
2. Validated Process:
  - a. Known/ Defined/ Agreed
  - b. Repeatable
  - c. Measureable (But not necessarily measured!)
3. Managed/ Measured
  - a. Stable
  - b. Aligned with customer requirements
  - c. Multi-year measurement of performance



Tools and Structured  
Problem Solving are  
**NECESSARY** to  
advance!

4. Capable
  - a. Routine analysis of measures clearly show the level of performance.
  - b. Management can document that it is consistently meeting customer requirements – and improving!
5. Innovating/ Best Practice:
  - a. Agile
  - b. Systematic Learning
  - c. Re-engineering

A uniform and empirical Process Measurement Standard is available on the Government Division web page, at <http://asq.org/gov/>. It is also presented in the book, *Quality Standards for Highly Effective Government*, by Richard E. Mallory, available through Amazon Books.