Stages of Process Performance

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Process owners are constantly confronted with the question "*Are your processes running the way you think they are running?"* The Stages of Process Performance is a guide for an organization to assess how its business processes are functioning and how effective they are in providing a needed product or service to the organization's customers on a regular basis. Organizations that want to be competitive in their marketplace (and this is increasingly important today for governmental public health agencies) focus on their processes as a whole and regularly employ quality improvement, cost reduction, and cycle-time reduction tools and methods to improve their performance. It is important to improve all of the organization's business processes to achieve the desired competitive edge.

A process is a set of sequenced steps, operations, or tasks incorporated into a documented standard plan following a systematic way to create an output, product or service which provides value to a customer or supplier. The standard plan establishes the process owner, inputs, suppliers, customers, and the timing and sequence of activities.

When processes perform robustly, they improve the productivity, efficiency, and effectiveness of the organization. When they do not perform well, they can cause customer dissatisfaction, delays, frustration, and financial losses to an organization. Organizations need to have all of its processes explicitly defined, managed, measured, and controlled, and their performance continually improved over time to constantly be a competitive force in their marketplace.

Every process has some amount of common and special cause variation[2]. Variation in a process cannot be totally eliminated, but it can be measured, monitored, reduced and controlled to make a process capable of producing an acceptable service or product on a consistent basis. Once all of an organization's processes are producing acceptable output on a consistent basis the organization will have achieved strong business processes that provide the engine to execute a successful long-term business strategy.

To maintain these strong business processes an organization must have capable and motivated people running them, continuous measurement and analysis of the processes, institute statistical process controls to optimize the processes performance, and constantly improve the process through quality improvement methodology.

Figure 1 shows the Stages of Process Performance that an organization can attain over time.

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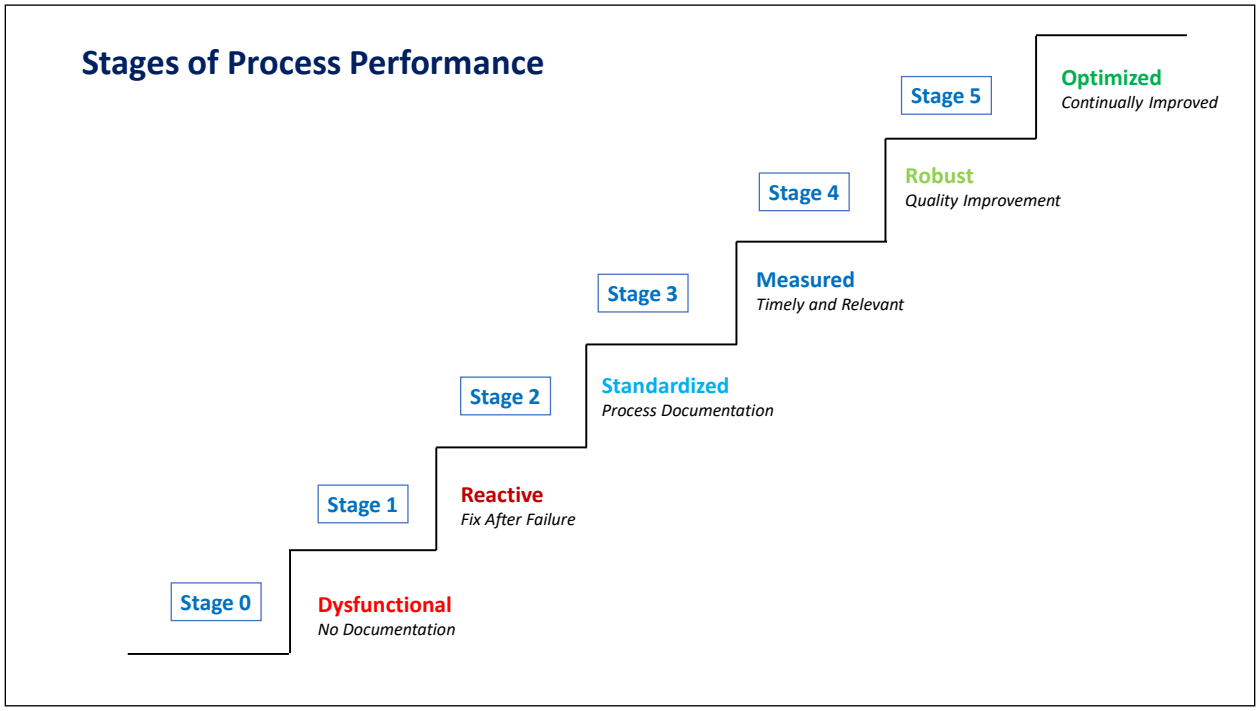
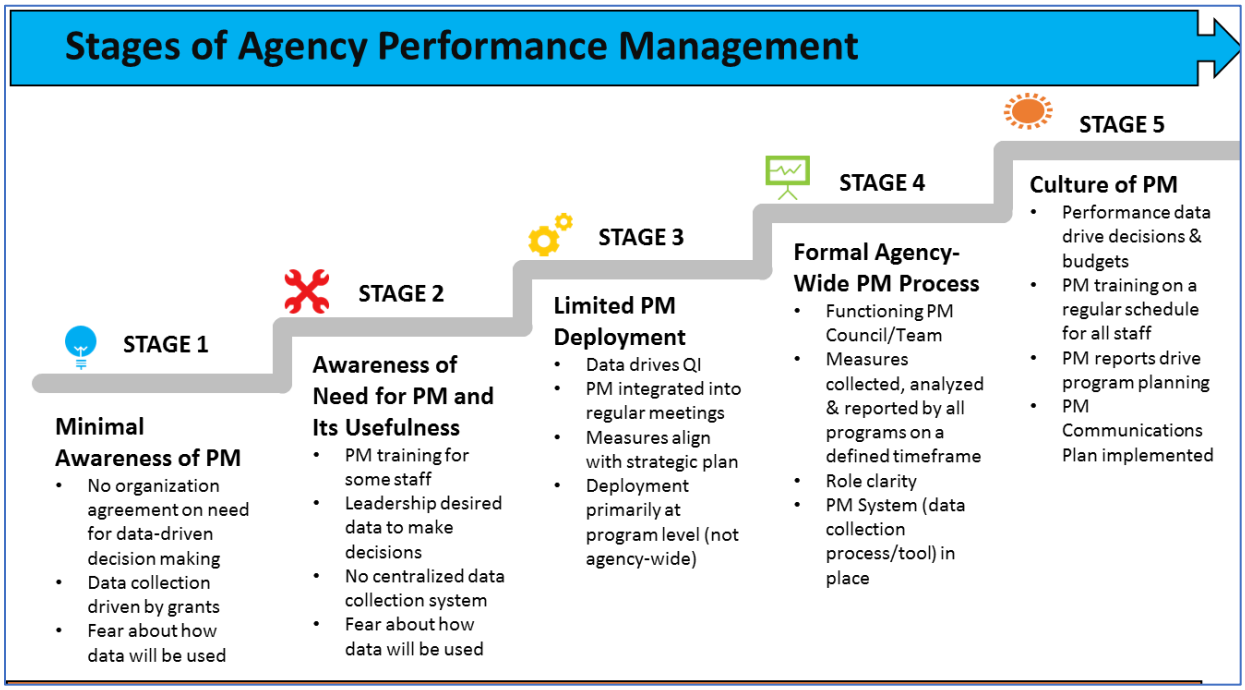
[2] http://asq.org/quality-progress/2012/03/back-to-basics/understanding-variation.html (accessed 1/10/2020).

Figure 1 – Stages of Process Performance



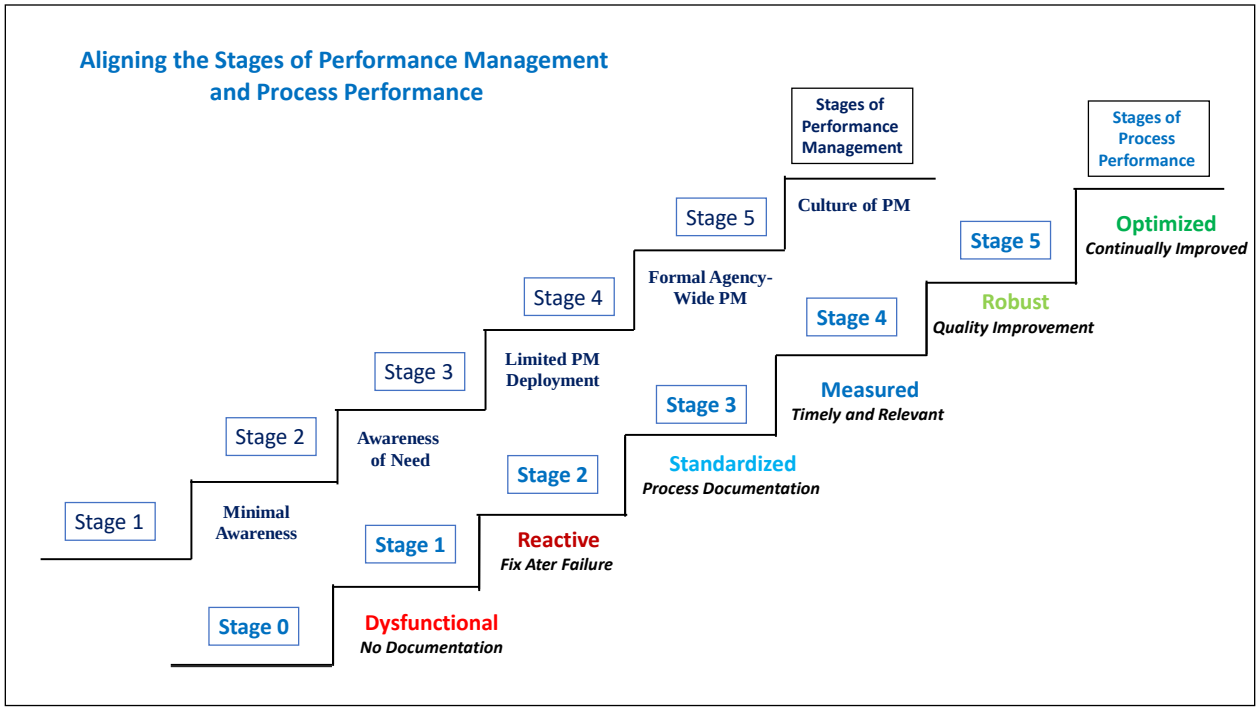
It also is important for the organization to have a robust Performance Management System as shown in Figure 2.

Figure 2 - Stages of Agency Performance Management



The Performance Management System should consist of performance measures and indicators that represent how the organization's processes are performing and the outcomes observed as a result of these processes. These Stages of Performance Management[3] track closely with the Stages of Process Performance. If they are out of sync, there will be an imbalance in the organization. When there is an imbalance, the needed reliable process measures are not being produced to guide the process owners to make needed changes in their processes. Stages one through five of both the Stages of Performance Management and the Stages of Process Performance align as shown in Figure 3.

Figure 3 - Aligning the Stages of Performance Management and Process Performance

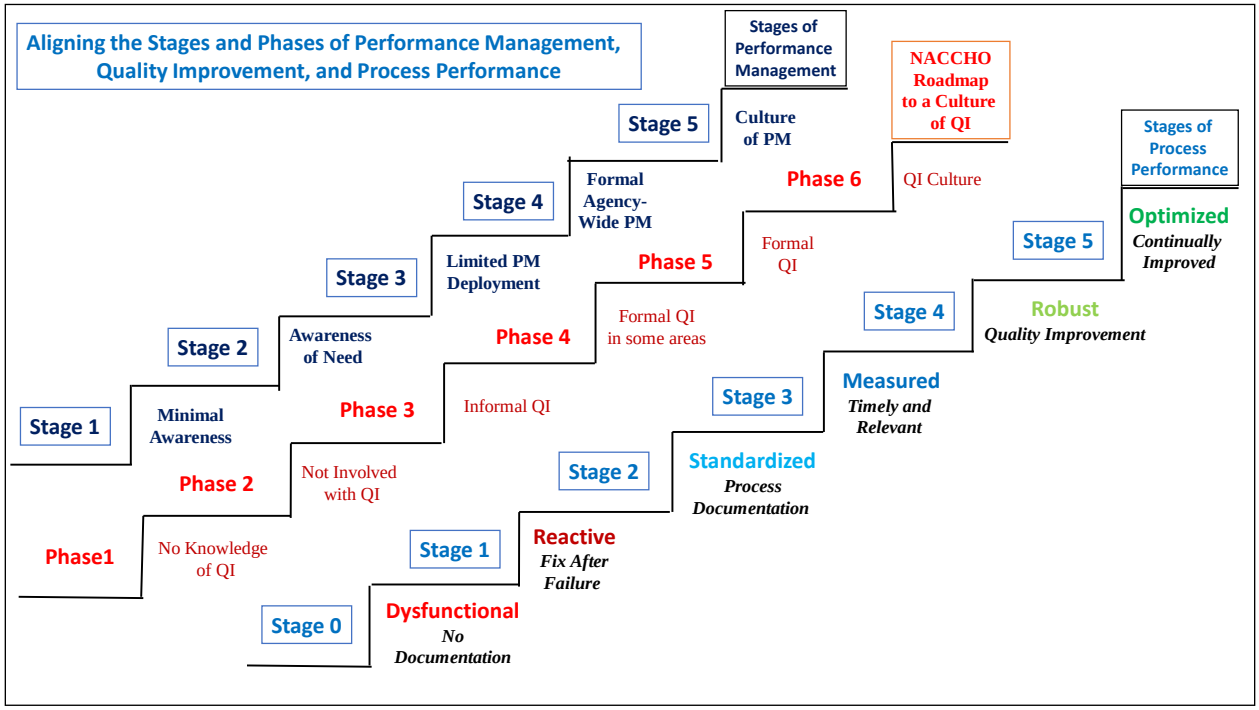


When the National Association of County and City Health Officials (NACCHO) Roadmap to a Culture of Quality Improvement[4] is positioned between the Stages of Performance Management and the Stages of Process Performance, as shown in Figure 4, we can see how quality improvement (QI), Performance Management, and Process Performance all support each other. However, to achieve robust processes, it is necessary for organizations to invest the resources to make sure these all are in sync.

[3] http://www.phf.org/resourcestools/Pages/Guide_to_the_Stages_of_Performance_Management.aspx (accessed 1/10/2020).

[4] http://qiroadmap.org/resources/ (accessed 1/10/2020).

Figure 4 - Aligning the Stages and Phases of Performance Management, Quality Improvement, and Process Performance



The following is a discussion of key characteristics of each of the Stages of Process Performance:

Stage 0: Dysfunctional

- Processes are undefined and do not operate correctly.
- Processes that are defined are not followed consistently; they are not measured or monitored.
- It is difficult to identify problems when processes are not clearly defined.
- Over time, processes have become overly complex, garbled, and disorganized as they are constantly being tinkered with to get them to perform. Since everything is done on the fly, there is no documentation on the fixes instituted.
- Processes performed in multiple locations are all done differently.
- Workers receive little training and learn by doing it wrong.
- Workers get frustrated and have low morale.
- Managers and supervisors are in a constant fire-fighting mode.
- Processes are loaded with non-value-added work.
- Leadership does not make process performance a priority.
- Customers regularly complain about poor product quality or bad service.
- SIPOC+CM[5] architecture is not in place and without this architecture management is flying blind with no way of making informed decisions about correcting a process.

[5] *The Public Health Quality Improvement Handbook*, R. Bialek, G. Duffy, and J. Moran, ASQ Quality Press, ©2009, pp: 183-185.

- Costs are constantly increasing and resources are wasted.

Stage 1: Reactive

- Reactive processes are ones where an incident is fixed after the event has happened.
- Struggle with process management and documentation.
- Managers are doing fire-fighting and not process analysis.
- The processes regularly make *HOW* mistakes since the managers constantly wonder "*how* did that happen?" *HOW* mistakes occur when there is failure to build robust systems, there is no documentation, measurement is not done carefully, and there is limited employee training.
- This stage is often described as *fix after failure*.
- A few processes have been defined utilizing some type of flow chart, but there is a lack of process ownership.
- The need for a SIPOC+CM architecture is somewhat understood, but not practiced or not properly implemented.
- Most processes are running in an "open loop state,[6]" therefore reactive since there are minimal process metrics with limited feedback in place.

Stage 2: Standardized

- Managers are starting to do less fire-fighting and more process documentation and analysis of mistakes.
- The need for a SIPOC+CM architecture is generally understood and starting to be utilized.
- Organization has adopted a standardized Process Characteristics Sheet which defines the owner, objectives, resources required, process inputs, process steps, process outputs, controls, and metrics for a process. The Process Characteristics Sheet provides the information needed to take the input from one activity and transfer its output successfully to the next input stage.
- Major processes have been fully defined with linked boundaries that include defined process ownership and specific process metrics with benchmarks.
- Workers are being trained in the standardized processes.
- **When processes are standardized, it is easier to train new and existing workers.**

Stage 3: Measured

- The organization understands the need to obtain timely and relevant information about its customers, markets served, processes, and product and service outcomes.
- Dashboards are developed to track measures and this information is used as a basis for process improvement decisions.
- Some managers are applying statistical methods to the data and displaying it graphically. This converts the data to useful information to help make informed decisions.
- Key Process Indicators (KPI) have been developed on most processes such as:
    - *Effectiveness*—does the process output conform to stated requirements? Goal: Doing the right things

- *Efficiency*—does the process produce the required output at minimum resource cost? Goal: Doing the right things well
- *Quality*—does the output meet customer requirements and expectations? Goal: Increase customer satisfaction
- *Timeliness*—does the process produce its output correctly and on time? Goal: perfect product production within time parameters
- *Productivity*—how well does the process use its inputs to produce its output? Goal: Establish the ratio of the amount of output per unit of input
- *Output*—how much does the process produce in a given time period?
- Goal: Develop a run chart for output produced per shift/day and determine the average output per day/shift

- **Baselines are being developed for each process to help start a continuous improvement program.**

Stage 4: Robust

- The organization begins to realize the benefits of having standardized processes since they are producing consistent outputs in a timely fashion with improving customer satisfaction.
- A quality improvement approach (such as PDCA[7]) has been instituted throughout the organization and is utilized in making process improvements identified by the process data.
- All processes have a SIPOC+CM architecture in place.
- Process owners are identified for all processes and monitor performance data and document changes made based on the data.
- Processes standardization ensures consistency among decisions and actions for the same process done at multiple locations.
- A Tri-Metric Matrix[8] has been developed for all processes. The Tri-Metric Matrix helps to guide the decision maker to measure the important aspects of a process's capacity, performance, and outcomes.
- For every process the following questions can be answered by the process owner:
    - What is the measure measuring?
    - What is the baseline for this measure?
    - If no baseline exists, can one be obtained or developed?
    - Will this measure be used to understand how the process is functioning?
    - Is the measure directly linked to the current strategy?
    - Will this measure positively impact the process under study?
    - Will the measure positively impact the customers if there is improvement in what is being measured?
    - Will employees have personal incentives to improve what is being measured?
    - Are improvements in what is being measured likely to result in better service?
    - Are the resources available for improving what is being measured?

[7] http://www.phf.org/resourcestools/Pages/Modular_kaizen_Dealing_with_Disruptions.aspx (accessed 1/10/2020).

[8] http://www.phf.org/resourcestools/Pages/Modular_kaizen_Dealing_with_Disruptions.aspx, PP. 69-76 (accessed 1/20/2020).

- All processes are now documented using a standard procedure.
- All processes operate on a closed loop with measurement feedback on a regular basis regarding performance and customer satisfaction.
- Most processes demonstrate increased efficiency and effectiveness in meeting customer needs since they have been documented and measured.
- New employees are trained on how to do the process and quality improvement methodology, and effectively use data generated by the measurement system.
- **When problems arise, a Modular kaizen[9] approach is used to identify where the root cause is before making any adjustments.**

Stage 5: Optimized

- Everyone in the organization understands how to measure and monitor a process and can use data and information to prioritize where improvements need to be made.
- A Combination of Quality Improvement Tools, Modular kaizen[10], Kaizen, and Lean are used on all processes for continuous improvement, improved customer value, and the elimination of waste on a regular basis.
- A Tri-Metric Matrix has been developed for all processes. The Tri-Metric Matrix helps to guide the decision maker to measure the important aspects of a process's capacity, performance, and outcomes.
- Small improvements made regularly will ensure that processes remain relevant and efficient.
- Technology and automation are being used on processes to improve efficiency, where applicable.

Overview on How to Move to the Optimized Stage of Process Performance

Step 1: Map the Process

Once you have decided which process you want to improve, document each step using a Flowchart technique. It is important to explore each phase in detail as some processes may contain sub-steps that are not easily seen or apparent. Consult people who use the process regularly to ensure that you do not overlook anything important. Check both the positive and negative process flow. The negative process flow is what happens when something goes wrong. Usually, you will find that there are many different approaches to the process that need to be documented and analyzed.

Step 2: Analyze the Process

Use your Flow Chart or Swim Lane Diagram to investigate the problems within the process. Consider the following questions:

- What is the process supposed to produce or accomplish?
- What are the process data showing?

[9] http://www.phf.org/resourcestools/Pages/Modular_kaizen_Dealing_with_Disruptions.aspx (accessed 1/10/2020).

[10] http://www.phf.org/resourcestools/Pages/Modular_kaizen_Dealing_with_Disruptions.aspx (accessed 1/10/2020).

- Where do team members or customers get frustrated?
- Where are the bottlenecks?
- What drives costs up and/or quality to go down?
- Which of these steps requires the most time or causes the most delays?
- Use Root Cause Analysis and Cause and Effect Analysis to trace the problem to its origins. After all, if you only fix the symptoms, the problems will continue or resurface at a later time.
- Walk the process and speak to the people who are affected by the process. What do they think is wrong with it? And what suggestions do they have for improving it?

Step 3: Adjust or Redesign the Process, if Necessary
Once you understand the root cause of a process's failure you need decide the extent of the solution necessary to fix the root cause. Does the process simply need an adjustment or is it broken and in need of a major redesign to fix it to eliminate the problems you have identified in step 2?

Use a Solution and Effect Diagram[11] to develop potential solutions and then narrow your list of possible solutions by using an Impact and Effort Plot[12] or other prioritization techniques.

When implementing a process improvement, it is best to work with the people who are directly involved in the process. They are more likely to buy into change if they have been involved at an early stage in the change process.

Once you and your team agree on a new process, create new Flow Charts, SIPOC+CM architecture, and/or Process Characteristic Sheets to document the new process flow.

Step 4: Implement and Communicate Change
After improving or redesigning a process, it is likely to involve many changes such as:
- Changing existing systems
- Changing work teams since there may be a need to hire new team members
- Changing software
- Organizing training
- Identifying and acquiring new resources

All these changes need to be communicated and understood by the team members that will be operating the new process.

Step 5: Review and Monitor the New Process
After you implement a new process, it needs to be closely monitored to determine if the process is performing to expectations in the weeks and months that follow the rollout of the new process. This monitoring will also allow you to address any problems as they occur.

[11] *Public Health Quality Improvement Encyclopedia*, J. Moran, et. al., Public Health Foundation, 2012, pp:125-126.
[12] *Public Health Quality Improvement Encyclopedia*, J. Moran, et. al., Public Health Foundation, 2012, pp:55-56.

On a regular basis, make it a priority to ask the people involved with the new process how it is working, what frustrations they are experiencing, and what improvements they would make.

Adopting continuous improvement strategies to make improvements will ensure that the process remains relevant and efficient.

Summary

The *Stages of Process Performance* is a guide for an organization to assess how its business processes are functioning and how effective these processes are in providing a needed product or service to the organization's customers on a regular basis. Organizations that want to be competitive in their marketplace, and serve their customers well, should focus on their processes as a whole and regularly do quality improvement, cost reduction, and cycle-time reduction to improve their performance. It is important to improve all of the organization's business processes to achieve the desired competitive edge.

Henry Ford said that *"if you always do what you always did, you'll always get what you always got.*[13]*"* Why then, would you continue to do the same things over and over when you already know what the outcome is going to be?

Results are not likely to change unless you change your approach to process improvement. Process improvement aims to eliminate weak points or bottlenecks and improve your process's performance, which can help your organization to:

- Provide a consistent output to your customers while reducing process cycle time.
- Improve process efficiency and effectiveness.
- Improve process quality.
- Eliminate wasted effort and maximize resource utilization.

Ultimately, improving process performance is a way for your organization to become the best it can be.

[13] https://www.goodreads.com/quotes/904186-if-you-always-do-what-you-ve-always-done-you-ll-always (accessed 1/10/2020).