

Metrics-Based Process Mapping

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Value stream mapping is viewing work systems from a macro-level perspective in order to create an organization-wide alignment, and to design an improved future state.¹ Metrics-Based Process Mapping (MBPM) is a detailed analysis used to design process-level improvements. Value Stream Mapping is done at the strategic planning level, whereas MBPM is done at the tactical, step by step, level. Martin and Osterling explain that “a process-level map enables deeper analysis in a more narrowly defined portion of the value.”² It is the root cause analysis level. Martin and Osterling (“the authors”) suggest improvement in any process, including ministry process, “can only be achieved if you know how the process is performed, you can measure process performance, and you have the ability to see where the gaps exist within the process.”³

I. Metrics-Based Process Mapping

What is a process? According to the authors, “A process is a sequence of activities performed to design, produce, or deliver a good or service to an internal or external customer.”⁴ The authors describe two types of processes: “value-adding and non-value-adding as viewed through the eyes of an external customer.” The church and school staff, along with lay leaders and volunteers may be very busy, for instance attending meetings, but the members and visitors may find these activities providing little value.

In order to analyze a church’s ministry activity the authors refer to the traditional understanding of a “work” process which has three components: *inputs, activities, and outputs*. Inputs are requests or expectations and can be verbal or written. A church worker’s job description is an example of written input. Comments at a voter’s meeting, or a parent teacher meeting, are examples of verbal input. Outputs are the products and/or services generated in response to the input. Examples would be the responses by the church worker or teacher to the job description or comments. The authors conclude that “process activities are the actions that are taken to convert inputs into outputs.”⁵

Churches, members, and visitors stand to benefit the most when all of these interactions (inputs, output responses, and activities) are documented. The authors observe the benefits of documentation, stating:

¹ Karen Martin and Mike Osterling, “Value Stream Mapping,” (McGraw Hill Education, 2014.), xiii.

² Karen Martin and Mike Osterling, “Metrics-Based Process Mapping,” (CRC Press Taylor & Francis Group, 2013.), 7.

³ Ibid., 2.

⁴ Ibid.,

⁵ Ibid., 2.

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“First, formally and clearly defining customer requirements and expectations is necessary to ensure that process outputs are properly designed and delivered. The quality of process outputs is directly related to the quality and consistency of process inputs and the process design itself. Second, understanding and documenting inputs and activities is necessary to identify and eliminate wasteful activities that add expense, slow delivery, erode quality, create unnecessary risk, and frustrate employees, customers, and other stakeholders. Finally, process documentation is also necessary for training process workers, measuring process performance, and serving as the foundation of continuous improvement.”⁶

Good processes help to build predictability in the delivery system and the quality of ministry service. Not only is there a benefit to congregational members (external customers) but also to staff and lay leaders (internal customers) who seek “greater engagement, reduced interpersonal and interdepartmental friction, and less frustration and stress while performing their jobs. Poor process management can hinder the realization of all of these needs.”

The authors recommend continuous process improvement, with “annual improvement plans that align with an organization’s business goals.”⁷ The authors see Metrics-Based Process Mapping valuable in training new hires into the areas that touch the process. They observe, “It is critical that all parties understand their role in the process, what the expectations are for the quality of the inputs they receive and the outputs they deliver, the timeframe for doing so, and the work effort they should expend doing the work.”⁸

The authors recommend the use of “charters to plan, communicate, and build consensus around all improvement activities.”⁹ The charter includes key positions: executive sponsor, facilitator, value stream champion, and the team leader. Scoping is the effort to focus, or frame, the specific process to be analyzed and mapped. This includes defining the beginning and ending “fence posts” – the first and last steps – within which the performance improvement team will focus their efforts. The authors assert the need to “clarify the problem to be solved and scope the activity”¹⁰ before forming the mapping team. They assert, “Once the root cause(s) for waste, overburden, and inconsistencies are clearly identified, it’s easier to know which countermeasures are appropriate.”¹¹

II. Current State Analysis

Documenting the current state is necessary as it becomes the baseline to establish how a process is working and what improvements may be required. The authors are emphatic: “If you

⁶ Ibid.

⁷ Ibid., 12.

⁸ Ibid.

⁹ Ibid., 15.

¹⁰ Ibid., 17.

¹¹ Ibid., 45.

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don't do the heavy lifting to understand all of the ins and outs of how you currently perform, no matter how difficult it is to gain this level of clarity, you'll miss the key learning that you need to design an effective future state."¹² Mapping the current state processes can be of real value for church and schools when replacing key staff members or adding new components to key ministries. They also state that people need the requisite mental framework and psychological readiness to embrace the change: "If people involved don't see the reason why an improvement is being suggested, which they learn through mapping the current state, you're far more likely to experience resistance to the improvements being suggested."¹³ A process level mapping event for ministries in transition is ideal.

Mapping the current state is an involved process which will entail three passes: (1) first pass, identify the process steps; (2) second pass, add key metrics for each step, create the timeline, and calculate the summary metrics; and (3) third pass, classify the steps as value-adding and necessary non-value-adding. Metrics-Based Process Mapping improves on simple process flow diagrams because the maps include metrics. Process flow charts are helpful, but without metrics "they are not effective tools for quantifying disconnects, bottlenecks, poor quality, and delays."¹⁴

III. Designing the Future State

Future stage mapping involves being able to identify and eliminate the root causes of "waste" in the current state processes. The authors recommend that improvements "focus on reducing lead time, reducing process time, and improving the quality of the output produced in each of the remaining steps."¹⁵ Team members must become familiar with the countermeasures available for improvement (elimination of waste), without thinking they can put the solution "in place and then move on to the next problem." The authors are sensitive to the term "solution," asserting, "Avoiding the term solution helps set more realistic expectations and builds the mental framework you need to build a continuous improvement culture."¹⁶

A future state appears to benefit from some level of standardization. The authors state, "Standardization provides more predictable outcomes, which aids in planning, decision making, work management, making customer commitments, and the like. (Note: it can sometimes take an organization years just to create standard work for its major process.)"¹⁷ The benefits of standardization are far-reaching: (1) standardization creates a baseline to measure performance and make improvements; (2) standardization enables effective decision-making

¹² Ibid., 21.

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¹⁴ Ibid.

¹⁵ Ibid., 43.

¹⁶ Ibid., 44.

¹⁷ Ibid., 45.

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with a degree of predictability and confidence; (3) it provides a basis for training new staff,
board members; and (4) volunteers with well-defined and documented processes.

Theological Reflections

MBPM is the ground game in performance improvement. I envision it at the level of sanctification; that is, learning to see *how* to love thy neighbor.