

PROCESS MANAGEMENT

Introduction

Process management is the monitoring, management and improvement of the front-line operational processes, to ensure that they deliver what the customer needs, right first time, every time with maximum efficiency and minimum waste. Figure 13.1 locates it in the context of the wider business systems.

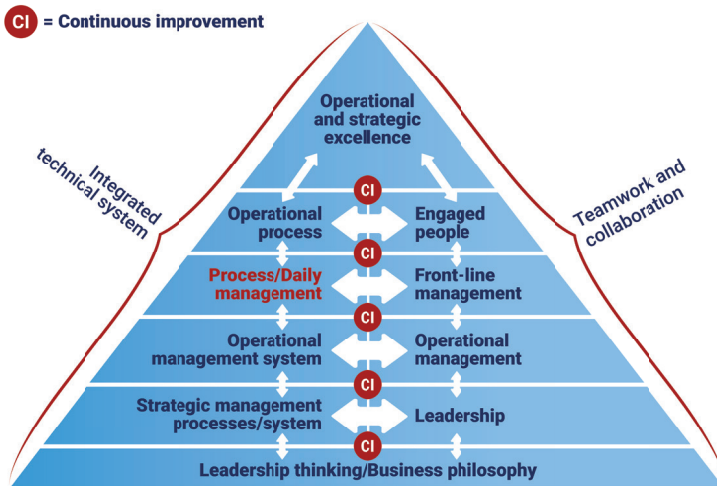


Figure 13.1: Process management in context

Process management is itself, of course, a process. It has:

- **A clear purpose** (described above)
- **Customers:** The operational process and the people who work with it

- **Inputs:** Information from the operational management system and performance data from the operational process
- **Outputs:** Information and communication to manage demand, to trigger the input processes and to coordinate with the wider operational management system
- **Process steps:** For the gathering, analysis, presentation and discussion of information, and for making and communicating decisions
- **Takt time:** Regular and consistent timing

Figure 13.2 illustrates in greater detail how process management operates.

The performance and capability of the process (the VoP) is monitored, as is the VoC (data on customer service and satisfaction), along with information regarding process demand (what is required of the process and when) which is fed in from the operational management system. The resulting analysis is then shared and discussed with:

- Front-line colleagues, to inform any in-flight adjustments or process improvements
- The operational management team, to inform any required alterations in demand, resource adjustments or other course corrections

Process management also coordinates activities with the various input processes which supply the required material, information, tools, people and sundries to the front-line process.

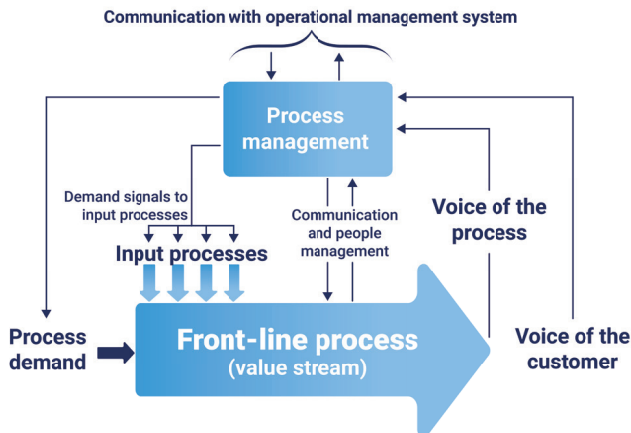


Figure 13.2: Process management and the front-line processes

Key factors

There are three facets of process management: design, ongoing management and continuous improvement.

Design

Before an operational process can be successfully managed and improved, its fundamental structure must be sound. This means:

- Identifying the process owner
- Mapping the value stream and designing (or redesigning) it to flow smoothly
- Designing the process measures and aligning them with the overall business strategy and with other processes
- Designing the management forums (e.g. daily, weekly and monthly meetings)

Ongoing management

This includes:

- Load management (matching capacity and demand)
- The planning and scheduling of process activity
- Resourcing
- Priming and maintaining
- Ongoing performance monitoring and management
- Engaging, managing and developing people
- Ensuring compliance with regulatory requirements

Continuous improvement

This includes:

- Ongoing kaizen improvements
- Identifying, capturing and prioritising improvement opportunities
- Tracking and managing ongoing improvement projects in a disciplined way
- Training colleagues in the fundamentals of structured problem-solving

- Making process-improvement specialists available to help with more complex problems
- Improving the process management process itself

Let's look at these in more depth.

Design

Process owner identified

The owner of the process must first be identified – the person who will be responsible for the overall design, management, improvement and performance of that process.

This is particularly important where the process is used across different shifts and where there is a risk either of no one taking responsibility for the overall integrity and improvement of the process, or of different people changing the processes in different ways, creating inconsistencies and misunderstandings.

Value stream designed for smooth flow

The next step is to make sure that the fundamental structure of the process is sound. This creates a capable, fit-for-purpose process and establishes a standard that can subsequently be improved upon.

The best way to do this (initially at least) is to map the process using a length of brown paper and coloured sticky notes. Here's a quick overview of the suggested method, known as value-stream mapping . (We'll talk about this more in later chapters, and a fuller explanation is provided in Appendix B.)

First, record who the process owner is (shown in orange) – the person responsible for its design, management and improvement. The 'SIPOC' tool then provides a useful structure for the main body of the map.

Along the top, (shown in red) map out the:

- **Suppliers:** List the main suppliers who are feeding information, tools or material into the process
- **Inputs:** List the information, tools, equipment, raw materials or sundries that the process requires

- **Process steps:** Set out the process steps, from left to right, in sequence from beginning to end (shown in yellow)
- **Outputs:** List the value-added products, information, services or experiences that the process is intended to create
- **Customer(s):** List the customer(s). Bear in mind that the customer(s) may be internal (the adjacent process steps), or a retailer, rather than the end user
- With the core structure mapped out in this way, you can capture further useful detail on the success criteria for the process (shown in blue), including:
- The **Voice of the Customer (VoC)** – what the customer has actually asked for. This is usually defined by some kind of measure of quality, on-time delivery and service (and cost if it's the end customer)
- What you understand the **purpose** of the process to be. Ensure that it aligns with the VoC. (They don't always, which makes this a crucial check)
- The **measurement** criteria that are used to monitor process performance, again ensuring that these are aligned with the VoC and process purpose

Next, capture information relating to the management of the process (shown in green), including:

- The operating plan for whatever look-ahead period is available, and how this both manages and balances the **demand** on the process (its timing, frequency and volume) and the **capacity** of the process (the factors that influence capacity and their current status)
- How and when the process is being monitored and managed

Finally, 'pain points' (not illustrated) can be noted, where there is significant waste or where there are other improvement opportunities.

Mapping the process in this way makes the key parameters visual, allows the process to be designed to flow smoothly, and enables significant problems to be identified and addressed.

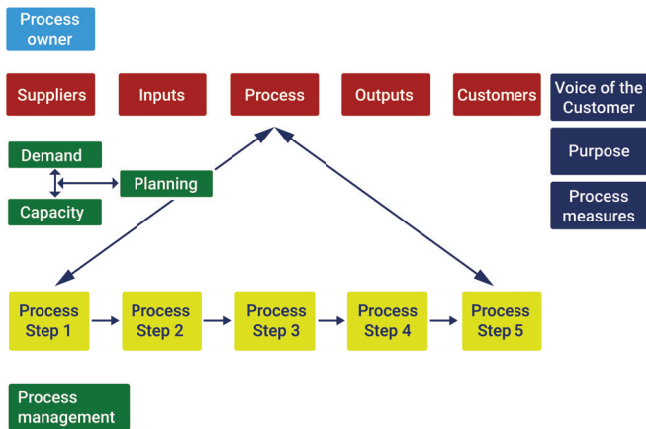


Figure 13.3: Process map template

Designing process measures and aligning them with strategic direction and other processes

'Make your workplace into a showcase that can be understood by everyone at a glance. In terms of quality, it means to make the defects immediately apparent. It means that progress ... measured against the plan, is made immediately apparent. When this is done, problems can be discovered immediately, and everyone can initiate improvement plans.' (Taiichi Ohno)

Properly designed measurement is necessary to enable people to manage and improve the process both operationally (in real time), and strategically (over the longer term).

Output measures and in-process measures are both required. Output measures show overall process performance. They are likely to include the QCD measures of quality, cost and delivery performance. They are lag measures, showing the results of actions already taken.

In-process measures are real-time measures that allow problems to be spotted and corrected in real time. These lead measures also provide an early-warning system for potential problems. They ensure better control of the process and more accurate prediction of process performance.

Measures should be:

- Aligned with the requirements of the internal or external processes or customers they supply
- Aligned with the strategic direction, measures and goals
- Relevant and sufficient (conveying useful information, and measuring all key factors in the process)
- Useable, providing information that can be easily understood and acted on immediately by those working in the process
- Accurate and up to date
- Visible – immediately accessible

The latter point is particularly important as it facilitates ‘visual management’: making available information that shows the process status and allows people to intervene. There are two levels:

- Live data – for example, warning lights or floor markings that indicate where material, equipment or people should (or should not) be. This level of visual management allows problems to be identified clearly and early by the person doing the job, enabling them to see directly and immediately when something is off course and to make informed, autonomous decisions and take timely and effective action
- Charts and graphs displayed in comms zone areas that show medium- to long-term patterns and trends, and that can be discussed and acted upon at the regular scheduled meetings where longer-term improvements are made

Management forums designed and scheduled

The forums where performance will be discussed need to be designed and scheduled. This would typically include:

- The daily stand-up meeting: A short and focused five- to ten-minute meeting at the start of each day, the purpose of which is to review the previous day, to draw any lessons, and to plan the day ahead and anticipate and prevent potential problems. (These are also referred to as ‘Tier 1’ meetings: the first tier of the daily performance update process.) The agenda would typically be:
 - **Planned:** What output was planned for this interval?
 - **Actual:** What was the actual outcome?

- **Variance:** What was the nature and size of any difference? What is the cumulative difference for the day?
- **Reason:** What led to the difference?
- **Action:** What will be done to get back on track and prevent recurrence?
- A gemba walk: The manager walking the work area (or otherwise checking with people) to ensure standards are being maintained, spot any potential problems, and be visible and available
- Weekly and monthly meetings: To look at trend data, to identify themes and patterns in process performance, and to look ahead to the next period
- One-to-one reviews and ongoing coaching

Each forum should have a clear, defined purpose and agenda so that it can be run in a disciplined way to a consistent standard, so that best use is made of the time.

Ongoing management

Load management (matching capacity and demand)

Process demand should be monitored (i.e. its nature and timing/frequency), both in the short and longer term. Process capacity must also be assessed and understood and the two compared to inform the planning, scheduling and resourcing of the processes, so as to either manage demand or adjust process capacity. Or both.

This sets up the process to flow smoothly and ensures that it consistently operates within capacity, neither lapsing too far into inefficiency due to over-resourcing, nor being driven into overload. (Alternatively, when not done well, it sets up the process to run unevenly and inefficiently.)

Within the strategy process, both business-as-usual and breakthrough goals should be set as part of the annual plan, derived from the longer-term plan and cascaded through to each process as appropriate. The activities necessary to achieve the breakthrough goals should be incorporated into the planning and woven in with the daily activities to ensure that they are scheduled and appropriately supported and resourced. The impact this has on process capacity must also, therefore, be factored in.

Planning and scheduling process activity

Following on from the above, operational activity, with the strategic implantation activities woven, in should be planned and scheduled to match demand and process capacity, so as to deliver on-time-in-full without inefficiency or hitting overload.

The activities necessary to achieve the strategic breakthrough goals should also be incorporated into the planning and woven in with the daily activities to ensure that they are scheduled and appropriately supported and resourced.

Targets, responsibilities and timings should be communicated clearly, systematically and in good time to the people who run the process, to facilitate effective coordination.

Resourcing

The process must be properly resourced with the right quality and quantity of raw materials, tools, equipment and consumables, and the right numbers of people with the right skills, attitudes and motivation. All of which need to be in the right place at the right time.

Priming and maintaining

It is also important that the process is properly set up at the start of each day/shift so that work can begin without unnecessary distraction or delay, and that it is maintained to a standard that allows efficient working with no avoidable downtime for the full day/shift.

This includes taking a systematic and disciplined approach to:

- 5S (Sort, Set in order, Shine, Standardise, Sustain) – having everything that is necessary to accomplish the task in working order, and in the right place
- TPM (total productive maintenance) – maximising equipment availability/uptime and overall equipment efficiency and effectiveness

See Chapter 14 for more on 5S and TPM.

Ongoing performance monitoring and management

Once the measures and the management forums have been designed to an operable standard, they must then be run in a systematic and disciplined way to monitor and manage the process.

The flow of work, key measures and other vital signs should be consistently monitored in real time, to allow for:

- Course corrections, adjustments, running repairs and fine-tuning
- Problems to be spotted and fixed before they escalate
- Deeper-seated process limitations to be identified

The Tier 1 daily stand-up meetings should run every day, on time and to agenda, and the wider and longer-term patterns and themes should be picked up and addressed at weekly and monthly meetings, which should also be run in a disciplined fashion, on time and to agenda.

Engaging, managing and developing people

The management process should empower, engage and support people to deliver excellent, and continuously improving, performance. At a technical level, this includes providing:

- Effective operational processes, tools and resources
- Performance data that can be used to understand and improve how the processes perform
- Forums that give people the opportunity to discuss performance, problems and ideas in an environment free from fear and blame and focused on constructively resolving problems

Equally important is effective people management to ensure that each individual has:

- Clear expectations
- Appropriate skills and knowledge
- Ongoing coaching
- Accountability for personal attitudes, behaviour, performance and results
- Empowerment to solve problems, including continuous-improvement training, and appropriate time, authority and support

Ensuring compliance with regulatory requirements

The process manager should ensure that the process is compliant with regulatory requirements, including health and safety, financial and any industry-specific requirements, by remaining aware of these and building them into the process goals, standards and reviews.

Continuous improvement

The aim of process improvement is to increase the capability, stability, coherence, flexibility and resilience of the process, to underpin long-term success and sustainability.

There are two broad directions from which improvement opportunities might come: those that are identified locally in the course of operating and managing the process, and those cascaded down from 'breakthrough goals' set as part of the strategy process.

Within the locally identified opportunities, there are some for which there is a fairly clear and obvious solution that can be acted upon immediately – the kaizen improvements. There are others for which there is no immediately obvious solution or root cause. These require fuller investigation using structured problem-solving.

The key criteria for well-managed process improvement therefore includes the following.

Fast implementation of kaizen improvements

Ongoing kaizen improvements (obvious quick fixes) should be flagged up to the process owner and implemented immediately.

Improvement opportunities identified, captured and prioritised

The performance-improvement opportunities that are identified through the various management forums should be captured on an opportunities list, systematically prioritised and worked through using a structured problem-solving methodology that allows the root causes of problems to be identified and removed.

Management of the improvement projects

The activities and resources necessary to complete the locally identified improvement projects and to achieve the breakthrough goals should be incorporated into the planning and woven in with the business-as-usual activities to ensure that they are scheduled and appropriately supported and resourced.

Central to this is making sure that the people involved are given adequate time, and are all available at the same time as each other, to allow the project to progress on schedule.

All improvement projects should be monitored in a structured, disciplined way to ensure that they are successfully completed on schedule, and that the gains are sustained by embedding the improvements into standard practice.

Colleagues trained in structured problem-solving

All front-line colleagues should be trained in structured problem-solving techniques so that they can be empowered to systematically and successfully work through the major improvement opportunities in their area.

Expert support available when required

Expert support from process-improvement specialists should be available to coach and assist teams when they face more complex issues, to help resolve the issues and simultaneously enhance the team's expertise.

Improvement of process management

The approach to process management should itself be reviewed and improved; in particular, how the measures and the discussion forums work in practice. Ways should always be actively sought to make them more effective and, where possible, simpler and leaner.

Summary

Process management is the design, monitoring, management and improvement of the front-line operational processes, to deliver what the customer needs, right first time, every time with maximum efficiency and minimum waste.

This requires three things:

- Getting the fundamental design of the process right
- Taking a systematic and disciplined approach to measuring and managing the process in real time, as well as identifying and addressing longer-term trends and patterns across weeks and months
- Capturing and prioritising the improvement opportunities identified and systematically addressing them using structured problem-solving