

## Using Process Orientation for Efficient Mine Start-Ups

By Kay Sever

Mining companies invest significant dollars and resources when designing and implementing continuous improvement programs with expectations of millions of dollars of return to the bottom line. Management teams organize employee training in process improvement tools, and communicate to the workforce that “this program is the most important thing we have to work on”. If a company appears to do everything right, why don’t the projected benefits materialize?

Hidden barriers to success and sustainability with Continuous Improvement exist in all organizations and often transcend typical continuous improvement tactics applied to affect culture change. Cultural conditions that create that obstacles to improvement are not always obvious, but their symptoms are easily recognizable:

- o Organizational silos that are perpetuated, tolerated or accepted by management:
  - o Incentive Plans rewarding high levels of production that result in significant inventory builds, not additional cash flow.
  - o Operations and maintenance “fighting over equipment”.
  - o A mine that out-produces a mill because it can, not because it should.
- o Permitting processes delayed by months or years due to rework and incomplete forms submitted.
- o Capital approvals delayed for weeks or months due to incomplete or incorrect data.
- o Personality conflicts that interfere with efficient communications and/or process management.
- o Start-Up of new equipment or operations that is pushed months past initial estimates because no one seems to understand the “master plan”.

These symptoms and their associated hidden barriers can survive a continuous improvement implementation if the company depends only on charts, graphs, and process flows to achieve and sustain improvement. Why? Because charts, graphs and process flows do not directly address the “people side of improvement”, the source of every symptom listed above.

There is a methodology that is very successful in addressing the people side of improvement, breaking down silos in an organization, improving communications, and reducing rework

that occurs as a result of multiple departments executing a process. It is called **Process Orientation**.

Process Orientation involves educating your suppliers and customers (internal or external) about what your process requires and where value is being lost so that they are able to see how they can add value, anticipate your needs and suggest changes that would help all parties meet their requirements. It enables suppliers, process owners and customers to “think as one mind” about maximizing the performance of jointly-owned processes. See figure below:



Process Orientation is widely taught and successfully applied in Europe as an essential element to process improvement in construction, manufacturing and service industries like IT, E-Business, Supply Chain, as well as and communication processes that overarch all industries. Once employees are trained in the approach and practice customer/supplier thinking, they tend to incorporate “process thinking” in everything they do. That’s when **the culture moves towards self-actualization on a grand scale** and the symptoms listed earlier either disappear or are greatly minimized as the culture morphs to a higher level.

### **Organizational Silos, Poor Communications, Commitment to Change and Process Orientation.**

Organization charts tend to encourage organizational silos to form due to the “boxes” drawn around areas of responsibility. The box for each individual defines their role, but often does not include the touchpoints with other departments. Interdepartmental touchpoints are assumed to be co-owned by managers – in real life, there is often no joint accountability on the org chart or in the incentive system that causes managers to make the touchpoints a priority **(especially true for the suppliers to a process)**. As a result, broken “touchpoint processes” become areas of contention between departments and may go unresolved in the face

of Process Improvement initiatives. Based on my experience in this area, **broken touchpoints result in millions of dollars of lost margin and excess cost**, but are often overlooked in continuous improvement work.

How are individual employees and departments affected by Process Orientation? Process Orientation helps departments and managers to proactively choose to “co-own” problems and facilitates interdepartmental communications required for improvement. During the design and implementation of process changes, Process Orientation requires face-to-face contact of process owners and their customers and suppliers. Sending emails or handing out a manual are ineffective methods of communicating process changes when more than one department is involved in the change. Unfortunately, these methods of communicating change are chosen because they are quick, easy, and allow the process owner to avoid confrontation with suppliers who may have not met the needs of their customers in the past. **Impersonal ways of communicating change prevent culture change** that was supposed to result from process improvements.

Employee commitment to change is the ultimate deal-breaker for continuous improvement. People must “believe” that a new way of doing things really will be better for them before they choose to make a permanent commitment to change. Process Orientation “helps employees make this choice because they can see how they personally affect the rest of the organization and the value created when they perform according to what their customer needs, not what they want to deliver or have always delivered.

Steps for breaking down silos and getting commitment for change with Process Orientation include:

- A joint meeting between all suppliers and the process owner/customer.
- An agenda that creates a “shared need” for cooperation and change.
- A visual that depicts a macro view of the entire process, showing the activities that occur and all the stakeholders involved in the execution of the work processes, communications and approvals.
- A clear description of the process steps that the suppliers are involved in.
- A list and/or visual of the specific tools or tasks that will be different for each supplier. This will help each supplier understand what will be different for

him/her without understanding the detail for other suppliers.

- An estimate of the value being lost due to the current state.
- What will be gained if everyone does their part to adopt the new procedures and tools.
- What will be lost (financially and otherwise) if a supplier drops the ball.

The Process Orientation approach may be perceived as a lot of unnecessary work for companies that are not used to rolling out process changes in this manner. These companies may recognize the value only after “experiencing the process” the first time.

### **Case Study: Start-Up Process for New Operations**

Historically, project start-ups experience extended delays (several months), significant rework and excess costs that may run into the millions. Engineering is often the process owner but must interface with multiple departments across the company, as well as outside agencies. Process Orientation is the perfect tool to improve this process (during design and implementation).

Design Phase: I facilitated a cross-functional team that was charged with designing a process for starting up new operations. Their operating strategy called for multiple mines to feed downstream conversion facilities, some of which would be run by contractors. Each team member was an “expert” in his/her process step, but no team member had “the vision” of the entire process. One of the contractors participated on the team. Significant delays and cost over-runs occurred each time a start-up occurred.

Several team meetings were needed to define the details of each process step (including customer/supplier requirements). Interdepartmental process breakdowns usually occurred as the result of missing or incomplete information required by a downstream customer (internal and external). These breakdowns resulted in much of the delays, rework and excess cost for each start-up. Checklists, new forms, and new communications were designed to push the decision-making and information gathering upstream, eliminating months of delay in the overall process.

Depending on the characteristics of a culture, some teams may not believe that real change can occur in their company, no matter what the team recommends. Process Orientation can

help change this mindset, increase the level of team commitment to the process, and develop confidence in a team when they feel defeated before they start.

Implementation Phase: The design team had determined that conservatively the new Start-Up Process could reduce time required for the entire process by 20% (150 days) and avoid thousands and sometimes millions of dollars in cost overruns. Commitment of all stakeholders in the process (internal and external) was key to delivering this value.

Some of the team members felt that other departments and agencies would probably not cooperate or “buy into” process changes that had been defined for them. We used Process Orientation to build commitment of the participating departments during the roll-out session with great success.

All internal stakeholders were invited to a regional roll-out of the new process. The main goal of the roll-out session was to give stakeholders and process participants a vision of how their role impacted the entire process. This vision is key in getting commitment to change.

The roll-out included a review of the process as a single process with steps that included the involvement of several departments. A Process Touchpoint Matrix showing the relationship between process steps and all departments was presented to develop/increase “process thinking” for all participants and help them understand their role in contributing to the end result. A List of “Waiting on Other Department” Delays was also prepared to show the current number of days that the process was delayed due to waiting time between departments and the impact each department could make in shortening the entire time frame. It emphasized that “we are all in this together”.

Separate meetings with outside agencies occurred the day before the regional roll-out session. I had predicted that the agencies would be interested in the new process and might even modify their internal processes as a result of our session with them. Team members scheduled the sessions with the agencies, but had low expectations of the agencies’ interest based on the historical process problems with some of the groups. To the team’s surprise, the agencies were very interested in the process. One group even offered to create an additional checklist to help themselves and my client be more efficient.

## WHEN THE BARRIERS COME DOWN...

Bringing down barriers and building interdepartmental relationships results in real culture change but takes time. Nurturing change is like tending a garden. Management must be willing to give employees time to build trust between departments and develop commitment to working together in new ways. Patience is key.

I watch for the following signs to know that sustainable culture change is occurring as the result of incorporating Process Orientation as a tool in continuous improvement work:

- Language changes from finger-pointing to talking about broken processes.
- Continuous improvement implementation changes to a balanced approach (removing people barriers is just as important as proficient use of tools).
- Stress level goes down.
- Communications are process-focused.
- Employees step up and co-own interdepartmental issues.
- Employees ask the right questions.
- Measuring change is as important as measuring today’s performance.

I view Process Orientation as “foundation work” for any continuous improvement program. Tools like control charts, trend graphs, root cause analysis, Six Sigma, Lean, etc. are important to identify and quantify improvement opportunities and monitor change, but will not affect a sustainable culture change unless employees understand the upstream and downstream requirements (what they should receive and what they should send) and choose to make those requirements a priority in their daily work and communications. Process Orientation has the potential to deliver significant culture change because it addresses the “people side of improvement”.

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