The Culture of Continuous Improvement

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Introduction

In its simplest form, a Continuous Improvement Program (CIP) is an ongoing effort to improve. In the past, programs, processes, procedures and ultimately plant reliability have typically been driven by a reactive work culture in the fossil energy industry which worked quite well when utilities were regulated. However, in the very competitive unregulated market that many companies are faced with today, continuous improvement becomes an essential business strategy. Imagine the coldest day of the winter or the hottest day of the summer and one of your big generators trips off-line. As you watch the price of electricity skyrocket, you think to yourself how much revenue the “other guy” is raking in. And once again, the “fire drill” begins with everyone supporting the need to get the plant back on-line as soon as possible.

The strategic elements of any CIP can take many forms from a Corrective Action Program to the Cultural Human Performance aspect of work. However, chances are that neither will do much good unless leadership expectations are communicated, enforced and measured. In other words, to use the old cliché, how well they “walk –the-walk” and “talk-the-talk” has a direct bearing on how successful the change will be and is especially important in an “old school” show me culture.

To implement any change in this type of organization, the workers play as important a role as the leadership, so it is essential to get them involved. At the most fundamental level, it requires some training to give workers the tools to solve problems with the capability to distinguish between a symptom and the real issue. At the strategic level, it requires management to set the cultural tone and establish clear direction, which is easier than it sounds. The concept of CIP is extremely difficult for an “old school” culture to get their “heads wrapped around” – regardless of how well management communicates their expectations or how much they are involved. Just think about it for a minute. What the worker is being asked to do is quite intangible. They are supposed to analyze problems and correct gaps so the problem doesn’t happen again, not just fix or replace the equipment that failed. The end result is that without any immediate short term benefit that they can look at and see, they find it hard to reap the reward for their hard work.

The bottom line from all of this is that the culture behind any CIP implementation is a huge deal. The culture is the foundation for how the organization works, how different organizations interact and communicate, what improvements are viewed as necessary and valuable, and which changes will succeed and which will fail. A successful CIP
cannot be viewed as the “program of the month” or it’s doomed to fail before it even begins.

The Journey

Continuous improvement growth models come in various sizes and shapes. However, regardless of the form they take, a huge amount of patience is needed, regardless of how they are comprised, simply because the paradigm shift won’t happen overnight. In order to lay the foundation for what a CIP can bring, a good place to start is to package the business models with a strategy of optimizing processes and technologies at the “enterprise” level to achieve the most value. A fully functioning CIP provides several major benefits and advantages to companies:

- Keeping data in a single repository (instead of dispersing it throughout multiple systems) and having that data updated instantaneously across the system when changes are made both simplify the flow of information and connect the enterprise. Experience has shown that when data is dispersed across multiple applications, the time required to manage this data and deliver reports required to make the best business decisions can be very high. Maintaining one versus multiple systems can also lead to significant cost savings for storing and managing data as well. Studies have shown that application maintenance typically makes up the largest portion of most IT budgets and is typically about one fifth of their total spend.
- Standardizing processes will add the advantage of speed, flexibility and savings giving the organization the ability to streamline certain common functions and achieve better coordination throughout the business.
- Higher equipment reliability translates into increased revenue. When equipment is broken the business suffers, so many companies are re-visiting processes to detect problems before they happen and affect the necessary repairs on a planned schedule instead of using the old “fire drill” concept, which will obviously cost more for both materials and labor.
- Repairing equipment once and not having to address the issue again is where the “rubber meets the road”. By performing a thorough and comprehensive analysis that digs into both the technical and human reasons for the failure and effecting SMART (Specific/Measureable/Achievable/Relevant/Timely) corrective action, companies can eliminate a significant amount of repetitive rework and further improve their revenue.

With continued economic pressure to reduce costs, many companies have begun to revisit their business strategies. By diagnosing the current process, system, data and strategy states, identifying target states and gaps, developing a strong implementation strategy and roadmap, and by effecting a radical cultural paradigm shift, companies can
fit the continuous improvement puzzle together as depicted below and better plot out their ascent toward an optimal operational model.

One of the hurdles to overcoming cultural challenges can result from a conflict between the implicit concept logic of the software tool and the comfortable process logic of the business. It is extremely important to be able to deal with the impact that operating within a real-time, more disciplined, less flexible highly entrepreneurial environment may have upon the organization. To prevail over this potential conflict, companies need to strategically decide that software system logic is more critical to its mission than driving the software system towards process logic, to the extent that implementing a simple tracking solution doesn’t get to the heart of continuous improvement by driving gap closure.

Organizational and cultural roadblocks are a significant piece of the story. Created by the fear of the unknown, every human factor from individual resistance to corporate politics can raise significant conflict and hurdles to success. The uncooperative environment will typically result in a variety of barriers that are raised with everything from ignoring it and hoping it will go away to doing as little as possible to support it.
and just “filling the square” with little regard for actually doing what it takes to make a difference.

**Keys to Success**

There are a number of fundamental drivers in overcoming the cultural challenges and delivering a successful CIP solution.

- Direct Executive Involvement, Not Just Sponsorship and Support. Obtaining unbridled management backing with direct participation going beyond simply affording superficial support
- Business Stakeholder Involvement from Day One
- Communicating clear expectations that will transport the culture to a new way of thinking, acting and working
- Sufficiently dissecting the business to identify process changes and gaps with fully engaged subject matter experts
- Establishing clear Business Objectives and Strategies
- Correctly assessing and documenting company goals from the executive level to the end user
- Embracing the concept of placing the system logic over business process logic as a strategic direction
- Constructing a clearly defined plan
- Developing a roadmap to success

**Detailed Description of the Challenges**

- Shared Cultural Vision and Focus
  Executives that fool themselves into thinking that they get the whole picture by sitting on a committee and getting periodic updates are sadly mistaken, as they do not see what’s really going on first hand. - To be sure, periodic status updates do serve a purpose and can afford the executive with some level of insight. However, until executives start asking the direct questions and actually get involved in weekly or, in some cases, daily discussions where current significant events and system and data states are put on the table and discussed, they don’t really have the true picture. It will be very evident how this potential challenge plays out, especially if a decision is made to advance the project schedule, resulting in very little time for management to communicate their vision and focus. The ramifications of workers feeling like they got it dumped in their laps can be significant and may result in:

  1. Workers accepting it to the extent of placing it as priority number “21” on their top “20” priority list
2. Workers ignoring it hoping it will just go away
3. Focusing on less significant issues because they are easier to manage

- Change Management
  The best-of-the-best individuals from line organization need to be involved from day one and become “champions” for their organization. They are always the ones most sought after and typically have to most insight to offer. Not getting these individuals involved and then telling them they are the “go-to” folks for help greatly waters down the influence they can have on overall acceptance. In all cases, the effect will be to make their job unnecessarily more difficult than it has to be and adversely affecting their ability to:

  1. Clearly articulate system functionality
  2. Understand the process well and therefore have the ability to fully support the program
  3. Possess the right tools to identify gaps, issues and problems between the current and target state for the purpose of identifying, developing and communicating solutions

- Business Objectives
  Requirements must be clearly defined. With the strategic, operational and functional needs properly delineated, the roadmap to success will assume a unidirectional path with a common goal and focus. When this is not done, technical and cultural pitfalls won’t be identified and key activities that can be used to overcome these barriers can’t be factored into the equation. Some of these include:

  1. Identifying the key puzzle pieces needed to reach the target state
  2. Building a detailed business case for each piece
  3. Selecting a final solution that achieves the overall goal and objective
  4. Employing a realistic schedule that allows sufficient change management to occur to help drive the cultural shift

- Strategic Roadmap
  This tool needs to be constructed early to relationally lay out the scope and plan so that everyone can see how it all fits together. It can be used as both a communication tool as well as the basis for a detailed project plan, especially when there are other concurrent projects underway within the organization. Realizing too late in a process that an entire project is going to fall flat on its face is both a waste of money and resources. The roadmap needs to be constructed by:

  1. Identifying process, system and data activities that are required to be changed to reach target state
2. Prioritizing the complete spectrum of activities
3. Highlighting conflicts and issues within the business that could impact the objective

- Governance
  Strict adherence to the original scope and plan is a constant struggle in any project and has to be a focus from the outset. It is unrealistic to assume that certain details do not get missed and need to be included. However, as changes are uncovered, the leadership team must quickly decide what needs to be included and what doesn’t. A simple process can be used to evaluate and accept or reject changes. When scope changes are left solely to one individual and never vetted with users, the final product being developed can be based on assumptions that are inconsistent with the user culture being asked to implement it. This creates unnecessary barriers to success and slows progress towards any value realization.

- Technology
  Integration of a technology into the business using strategic logic that does not holistically account for all supporting processes may result in unnecessary additional work. The company needs to evaluate if this is in line with the objectives and best interests of the company, as it will unarguably lead to dissatisfied and frustrated end users. Without a holistic approach, the improvement gains that are made in one area are quickly negated in another, with organizations devising and expanding other means to capture and track activities to avoid having to work in the new technology.

The internal business complexity of most organizations makes it essential that all the touch-points are identified with a complete understanding of what data is needed and what data needs to be sent where. If this is not mapped out in precise detail and critical integrations developed, it could result in asking people to enter the same information in multiple places which is counter-productive and does nothing for their willingness and acceptance of the value it brings. Experience has shown that in many cases the strategic objectives and business requirements are rigid and companies feel obligated to undertake the effort with tunnel vision. However, if the goals are flexible enough, the right mix of process and technology can go a long way towards eliminating this type of expensive and time-consuming work. By selecting the right technology logic over process logic as the primary driver, cultural barriers can be quickly overcome, ensuring CIP success. This can be summed up in the following list of typical project activities that tend to be the biggest failure culprits:

1. Ending up with electronic system processes that are too complex and rigid can have a negative effect on the culture and how quickly the system will be accepted and treated as a “core business” process, since it may
eliminate the source of efficiencies that organizations have gained in getting work done. With inflexible system requirements, users may be forced to seek help to perform certain tasks that they could do themselves in the past resulting in an efficiency loss that standard system logic brought with it.

2. Defining clear objectives and detailed requirements as the basis for the technology. Necessary process adjustments and/or system reconfigurations can only be made if the requirements are specific enough to really understand the business need. Only individuals that are both subject matter experts in the business and have a deep knowledge of the system have the insight to tackle the level of definition required.

3. Developing a detailed business case to holistically examine the project in order to adequately define the scope. This plays out during implementation phase as companies find that they either do not need the entire set of modules that were procured for the project or need additional functionality they did not plan for. Experience has shown that most companies have the tendency to develop their business case around the financial aspect of an already determined scope instead of using a meticulously detailed scope to substantiate the breadth of the project. They need to be more deliberate in knowing exactly what aspect of the technology will actually serve their needs. Once established, any waiver from the original scope and plan should not be taken lightly and only pursued with sufficient justification.

4. Rigorously managing issues. Nice-to-have technical enhancements need to be meticulously separated from must-have issues. As the organization gets on board and grasps the benefits being offered, new ideas and changes will surface that may fall outside the original scope and plan. A lack of scope control resulting from poor issue management can quickly impact schedule and budget. To completely change system logic to coincide with the business processes will make it was extremely difficult to classify any change as nice-to-have, not to mention make it much more difficult and expensive to conduct future improvements.

- Organization
  The organizational structure can be a major productivity hurdle in some distributed organizations and all the more reason that an “enterprise” solution is critical. Cultural barriers occur at all levels in the organization. The end result of an enterprise solution is that communication lines will be forced open when the “fleet” concept is used. Distributed organizations have the tendency to work within their own confines, becoming their own little island. But, when they are forced to manage a certain amount of work that is rolled out from some type of
issue at another organization, the silos start to break down. The executives who are involved can make certain that this type of paradoxical shift happens by regularly discussing these issues and establishing the right expectations within their organization. The “bottom line” is that everybody wins within the fleet. It’s a turf battle to start with, but every time even the smallest of improvements are made workers start to see the benefits from CIP and the program gains momentum especially in the following areas:

1. Expensive and time consuming repairs and lost generation from a significant failure at one plant can be avoided at other plants.

2. Sharing lessons learned on best practices or avoiding some type of safety issue can save time and money and reduce the number of injuries.

3. Siloed organizational cultures start with a philosophy of not wanting to “air their dirty laundry”. But, as they begin to document their events and responses to issues in an “enterprise” system, they soon see the value of being able to easily retrieve knowledge from across the organization. The end result is that what was once historical tribal knowledge of how to perform some type of work or repair some type of equipment problem, which had once been buried in someone’s file, desk or computer, can now be used to improve efficiency. This becomes especially important in an aging workforce where people retire and take that information with them.

Critical Drivers for a Successful CIP

- Direct Executive Involvement and Support, Not Just Sponsorship
  1. Executive Leadership should actually participate from day one in the project at some functionally active level and not just get a periodic update within some committee.
  2. Management oversight committees need to make tough, rapid decisions as a function of strategic goals and not the corporate cultural environment.

- Dedicated Business Stakeholder Involvement
  1. Staff champions who ultimately become company trainers and system administrators as a result of knowledge transfer during the project need to be involved on a full time basis from day one.
  2. Subject matter experts that know the ins and outs of the business are critical to the project team for resolving conflicts and issues that will arise between process and system logic to design work-around solutions and configuration enhancements in order to provide the best tool.
• Clearly Defined Business Objectives
  1. An all-encompassing Strategic roadmap of corporate goals that defines the business needs will serve to establish the high level direction.
  2. Development of a holistic business case that exemplifies the roadmap will determine exactly which process functionality must be included from both a technical and financial perspective.

• Specifically Characterized Business Requirements
  1. An all-inclusive, very rigorous and detailed set of system functional requirements that are technically feasible must be established in concert with the business needs.
  2. A detailed breakdown of the overall importance of each requirement to the business into “must have”, “should have” and “nice to have” categories, coupled with the imperative reason behind it, will go a long way toward understanding the business and establishing the project scope and plan.

• Making Cultural Believers
  1. Don’t underestimate the cultural impact. Start as simple as possible and build upon the grass roots acceptance.
  2. Limit the breadth of system reconfiguration focusing on only what has shown to be best practice critical logic ensuring that projects stay on course and companies don’t lose control of what is really important by significantly reconfiguring system logic to match process functionality.
  3. Communicate, communicate, and communicate.
  4. Be patient, this type of change won’t happen overnight.

Conclusion

CIPs can cover the full gamut of financial investment making it extremely important that companies clearly define their strategic needs.

Spending a few hundred thousand dollars in today’s economy is not trivial for most companies, so it needs to be spent on the right solution so that the solution quickly becomes “core business”. Start the change management process and cultural evolution even before the project begins with full and unabridged leadership support. A successful CIP culture is difficult to attain but can have significant payback in the long term as evidenced by the fact that every successful corporation regardless of the industry has been able to overcome their culture issues and implement some form of a CIP that is an important factor in their success. Typically, implementation of any large project is challenging. Throw a culture factor into the equation and it becomes that much more difficult to achieve the original goal.