The Best Approach to Improving IT Management Processes

IT operations process maturity is weak. An improved IT operations strategy can result by using the IT Infrastructure Library, the Capability Maturity Model and the theory of constraint.

IS organizations continue to struggle with basic network, system, storage, database and application management. In today's more difficult economic times, the battle to reduce costs while improving service levels gets more frustrating. Furthermore, the quest for the technical panacea that solves network, system, storage, database and application management problems is perpetually solved by the next version or next-generation architecture. In short, current network and systems management (NSM) technology leaves enterprises wanting significantly more than the products deliver.

In addition to the lack of strong NSM products and pressure to do more with less, the IT infrastructure is generally overprovisioned because of the overspending in the late 1990s through 2000. Real utilization levels are often at 10 percent and less. IT processes are not maturing and, in far too many cases, are not even defined. An overprovisioned infrastructure, with little major new application deployments, combined with the goal of doing more with less, create opportunity. Now is the time for IS organizations to focus inward and develop strong IT management processes to prepare for the next wave of technology implementations.

An obvious question is, "What NSM technology or vendor will answer this opportunity for us?" This is the wrong question. The answers to doing more with less do not begin with an NSM product; they begin by developing strong operational processes in problem management, change management, asset management and planning. Most enterprises are not beyond this first step, nor is this an easy, simple or quick path. There are issues with culture, governance, fragmented IS organizations, complexity and ever-growing change with technology and people. However, this path is the "right one" to embark on, and starting down the path is the best first step.
Where to Begin

It is best to begin by defining the goals of the IS organization, which are to:

- Improve the quality of service (for example, availability, response time and end-user satisfaction)
- Lower the cost of ownership
- Reduce risks

The processes that are the basis for IT operations are problem, change, planning and asset management. These are critical, because IS organizations fix problems, make changes to the infrastructure, plan new implementations or upgrades, and track the inventory of the infrastructure.

Step 1: The IT Infrastructure Library (ITIL)

If there are no processes that are documented or in place, the best reference model to start from is the ITIL. The ITIL is a set of best practices that creates a reference model for enterprises to begin with. However, this is insufficient on its own. The technologies and best practices may change, and this is not a "set and forget" solution. The ITIL is used as the base.

Step 2: The Capability Maturity Model (CMM)

With the base processes established and documented by using ITIL as the template, the CMM can be applied to show how to move from reactive management to proactive management and eventually up to services and value-based management through the instrumentation of these management processes. The CMM defines five levels of process maturity. Although initially designed for application development, the CMM can readily be applied to any process, including the IT problem, change, asset and planning processes.

Step 3: The Theory of Constraint

Work on optimizing established IT management processes. Here, ITIL has no real methodology for optimizing these processes. ITIL presumes that they are already optimized. The CMM explains that processes should be optimized, but does not explain how to optimize them. Yet, optimization can be in terms of cost (efficiency) and throughput (effectiveness). Process optimization is not a new concept. Its roots are in manufacturing, where process optimization for cost and throughput are ingrained. The methodology or technique used in manufacturing is known as the theory of constraint. This methodology tries to simplify complex interactions and, therefore, improve process
efficiency by addressing one variable at a time. To improve a process, the theory of constraint would be as follows:

- Identify the biggest bottleneck
- Remove this bottleneck
- Go to the new biggest bottleneck until the improvement goals are met (or, more likely, continually improve the process throughput and cost)

Note that this bottleneck can be the most costly (efficiency) or the most time-consuming (effectiveness) task in the overall process. In all cases, IT process improvement can only begin when the processes are instrumented and documented.

Theory of constraint process improvement models are not new. This technique is a tried and proven methodology used in continuous manufacturing for continuous process improvement where efficiency and effectiveness are two critical elements to the manufacturing process success. Applying the same techniques to IT recognizes that IT is in the continuous manufacturing business. IT is manufacturing services, as opposed to goods. Using theory of constraint techniques is helpful in all IT cases. It seems to work especially well and fosters stronger business alignment with manufacturing organizations.

Key Facts:

- NSM goals need to be identified.
- Process development should begin with ITIL as the basis; however, this is insufficient by itself.
- With processes in place, the CMM provides the best approach to process improvement.
- For process efficiency, the theory of constraint provides the best methodology for continuous process improvements in effectiveness or efficiency.
- IT spending rates are down.
- IT infrastructures are generally overprovisioned.
- IT processes lack maturity.

**Bottom Line:** There is no one methodology for IT processes. The best approach for enterprises to improve IT management processes is to start with ITIL as the base template to develop these processes. Use CMM to improve the maturity of these processes, and then use the theory of constraint techniques as part of an overall continuous process improvement methodology.