



The Miracle In Detroit

Putting the ROI into ITIL

How do you put the ROI in ITIL? That is the question many IT organizations are grappling with today. This article is based on conversations with IT executives in Fortune 2000 companies, all of whom see value in using the ITIL framework, but are trying to figure out where to start, how to quantify benefits, how to justify it at a business level and how to make a smooth transition into an ITIL world. We were on a quest to find the answer and one day, sitting in the office of a senior executive at one of the largest companies in Detroit, the answer presented itself. We call this the “Miracle in Detroit” and we want to share it with you.

Introduction

Every IT manager intuitively understands the difficulty of achieving, and as importantly, demonstrating, a return on investment for technology projects. We all know the drill – delays, changing requirements, changing environments, all leading to challenges in meeting the stated goals of the project. These issues are particularly acute for large, multi-phase deployments such as an ITIL implementation.

The IT department has become the central artery of a large number of organizations. This central artery increasingly finds itself in a predicament – increasing dependence on its services with decreasing budget is putting an enormous strain on the organization. The annual cost in terms of downtime, compliance costs, and organizational inefficiency is high.

The IT Infrastructure Library (ITIL) offers a solution. But a first

look at ITIL can be challenging for IT managers: A massive high cost project which is hard to sell to management and promises returns many years in the future and only after significant investment. If you can pick concrete milestones and, for each milestone, demonstrate and measure the value provided to the organization, much of this risk would be mitigated.

What can you pick as a first milestone in an ITIL project which will make others say: “Wow, yes this is the right way to go?”

What can you do to get management to buy into your vision? Read on.

The Miracle in Detroit

Our quest is to find that magical milestone; a milestone that makes believers out of nonbelievers, a milestone that can be realized quickly with limited resources. First, we went out to several high performing organizations and began asking

them what this milestone would look like. Not surprisingly there was no clear cut answer.

So we stepped back and began asking the question in a more quantifiable manner: what is the one metric that could be used to show management how much work is actually required to keep the clogged arteries running as of this moment. We considered several alternatives - uptime, downtime, and % utilization of infrastructure – but none was able to capture the essence of what we were after.

Then one day sitting in the offices of a senior executive at one of the largest companies in Detroit the answer presented itself.

Cost of IT Operations ↔ Amount of Change

Could it be that simple? What about automation? What about strategic planning? An intense session followed and it emerged that this executive had saved hundreds of millions of dollars in operational cost across three different companies during his career. And this was not theory: he had the numbers to prove it! The gist of the conversation went as follows:

What is the IT cost of running fax machines? We set them up and then the secretaries take care of the paper in them. I don't have to touch them afterwards. Why? Because there is no change to them, when they break we throw them out and get new ones, connect them to the network and we are done?

When I look at areas where my people are spending most of their time, they are usually areas of large change: either planning for it, or testing it, or rolling it out or recovering from the effects of it, or discovering something which should not have changed. When something goes wrong we are chasing what has changed.

Even if you look at development organizations, the more people you have, the more change in terms of updates is happening to the application servers. The entire operations

budget and how to narrow it down comes to one variable "Change".

Wow!

Where are the savings?

Armed with this insight we began asking questions about the various processes that constitute the ITIL framework. In particular, we wanted to know what variables people felt the cost of those processes depended upon.

The results were illuminating. First, we learned that three variables are enough to quantify the change environment:

1. Number of request for changes (RFC)
2. Number of file changes
3. Number of releases (a release is a batch of changes grouped together for build, test and push)

And when we asked about what input variables each ITIL process depended upon, the answers came back as the following:

The cost of

- Change Management¹ = F(# of RFC)
- Release Management² = F(# of releases, # file changes,)
- Configuration Management³ = F(# of releases)
- Incident Management = F(# changes)
- Problem Management = F(# changes)
- Root Cause Analysis = F(# changes)

Depending on the organization one could statistically build a model based on this data and determine exactly how much it was costing organizations to perform these functions.

Satisfied that change was a great metric for the cost of IT operations, we began asking where the savings would come from.

Asked in a different manner what were the key characteristics of operationally efficient organizations? And we came up with four of them;

¹ Change Management refers to the approval process to allow a change to be permitted in production.

² Release Management refers to the build, test of a change and then its grouping with other changes prior to being deployed in production

³ Configuration Management refers to the maintenance of the definitive build library or CMDB or configuration information about all systems

- Frequency of Change
- Percentage of change outside change management process
- Multi-organization coordination to implement change
- Percentage of total changes that occur in the last 1/3rd of the change control window

Control Frequency of Change

How frequently is change happening in your environment? Is it controlled in any manner with change control windows? Organizations at the bottom of the efficiency curve have a continuous change profile, they have changes happening continuously. The first step towards maturity is going to periodic (weekly) change windows. If you can move to monthly change windows that also brings about significant cost savings.

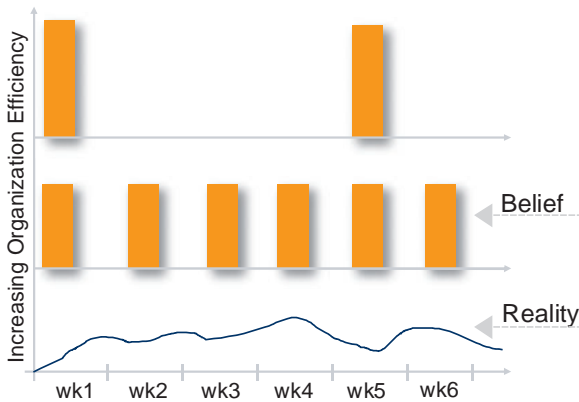


Figure 1: Organizations believe all change is planned; reality is messier.

Second, some organizations believe that their change windows are weekly while in fact change is happening all the time. Violations of the change windows only come to the fore when a service becomes unavailable.

Finally, organizations tend to tip over from one state to the next; it is rarely consistent. For example, consider an organization had good process and weekly change control windows. Suppose now that slowly, the volume of change increases (perhaps led by a project that is falling behind schedule and feels pressure to deploy faster). Over time

changes will start to happen in a continuous manner. At some point during this process the discipline of the organization tips over.

Reduce % of change outside Change Mgmt

In most organizations system administrators have a tough job juggling conflicting guidelines. When a service is unavailable they are under pressure to recover from it as quickly as possible. A lot of the recovery happens in real time and falls into the bucket of ad-hoc changes.

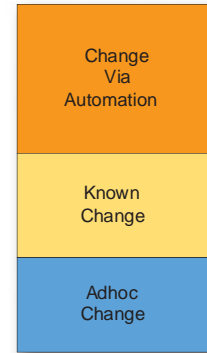


Figure 2: Sources of change

Another factor contributing to ad-hoc change is that in some organizations the controls and documentation required by management is so cumbersome that people seek to work around it rather than use it, just to get their job done. In many cases, management knows this but is unable to find a workable alternative.

Whatever the reason, these ad-hoc changes take their toll in terms of immediate causes such as time and resources devoted to these changes. More insidiously, they are also a huge resource drain over the long-term. The reason is that these changes eventually increase the incident and problem occurrence rate, either because of dependencies which could not be discovered because of the undocumented nature of systems or an inability to rebuild the machine without increasing its fragility. Since there is a time gap between cause and effect it is difficult to see the correlation. These ad-hoc changes also contribute to “tipping over” an rather than the change window profile as described in the previous section. The only solution here is to make the process so simple and transparent that people can continue to do their job yet follow the change process.

Reduce multi-organization coordination required to implement change

The age-old saying “too many cooks spoil the broth”, is as applicable to IT as it is to cooking. If you have multiple organizations which are responsible for various portions of the software stack, then the cost of change management, remediation and root cause analysis go up by several orders of magnitude. In many organizations, this is done for efficiency reasons: a central group maintains all OS images and security patching, while the business logic is owned by the business unit. However, it can actually end up as a huge time and resource sink.

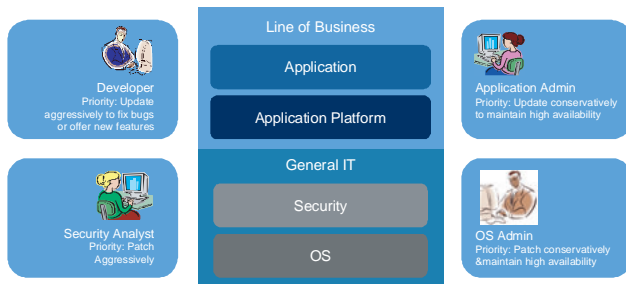


Figure 3: Change requires coordination across groups

Reduce % of Change at the end of the change window

Good practice around change control windows is to make all the changes in the first third of the window, test the change in the second third and, if there is a problem, back out the change in the last third of the window.

An insight several people shared with us is that they can tell whether something is going to cause problems by looking at the change control window and seeing if someone was scrambling to get changes completed in the last third of the window. If this is the case, the organization is likely to have very high percentage of their time being spent in incident and response processes.

ITIL's Moment of Truth

Are you ready for the moment of truth? The recipe for successful ITIL implementations, to win over the nonbelievers, happens in 4 steps.

Step 1: Increase visibility & quantify change in your enterprise

Gain visibility into the amount of change actually happening in your enterprise. Provide this visibility and the causes of change to the IT team and to your management. The most common reaction is going to be “Wow! We were not aware you guys were doing so much work.” Second you will very quickly have the data to suggest concrete actions to improve efficiency as well as to quantify these improvements.

If you already run an organization with very good processes this will give you a third party validation of your superior operational capabilities. You can take it to management and demonstrate that nothing more can be squeezed out of your area of the organization.

Step 2: Quantify “ad-hoc” change

The second step is to quantify ad-hoc change in the enterprise. This is done by correlating all the known and approved work with the actual work happening on the systems themselves. This does two things to improve operations. First, this data when provided to employees increases self-regulation. Second, linking this change to root-cause analysis creates a feedback loop which helps people see how they can improve efficiency in their day to day activities.

A side-effect, but still a huge benefit of step 2, is that it gives you the foundation to meet most of the compliance requirements for SOX. That will give something to your management to smile about. You are already ahead.

Step 3: Expose changes and calendar across different silos

Expose the changes as a calendar across different silos so that the organization has visibility into what is happening on a given set of servers. This will also ensure that everyone is behind your ITIL strategy as most ITIL implementation eventually requires some change in behavior on the part of the IT organizations. This is a huge win.

Step 4: Encourage Self-Regulation

Give the visibility to employees, help them see how they can save the organization millions of dollars and let them self-regulate. Enforce it technically when most of the organization is already aligned.

From Follower to Leader

The four steps discussed above form the foundation of implementing processes using the ITIL framework. These steps also enable a smooth and continuous transition into the ITIL world in addition to leveraging existing investments. Change is the centerpiece in linking these processes (e.g. release, configuration, change management and service desk) to the CMDB. At each stage you can quantify, see and demonstrate the effects of your investments. You can move from a reactive IT stance to a proactive and strategic position within your organization.

Good luck with your ITIL implementation!

About Solidcore Systems

Solidcore Systems is the leading provider of real-time change control solutions. Solidcore S3 Control software improves IT service availability by closing the change control gap between IT service management and the IT infrastructure.

Solidcore's innovative solutions enable comprehensive control of the computing environment of an enterprise. Solidcore's solutions are operationally-friendly, low-touch, and low overhead; they can be deployed on a wide range of enterprise infrastructure including servers, databases and network devices,

Solidcore facilitates real-time visibility and enforcement of control to realize immediate value in change control, compliance and security. Leading Fortune 500 companies and U.S. government organizations use Solidcore to understand and control change. Solidcore is a private, venture-backed enterprise software company with its headquarters in Palo Alto, California.

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