Calculating the ROI of ITIL: Case Studies, Issues, and Results

By Doug Tyre

Calculating ROI for ITIL implementations is notoriously difficult, but some companies have made attempts at capturing quantifiable results. Some of these are gathered here, as well as some issues to consider when making such attempts.

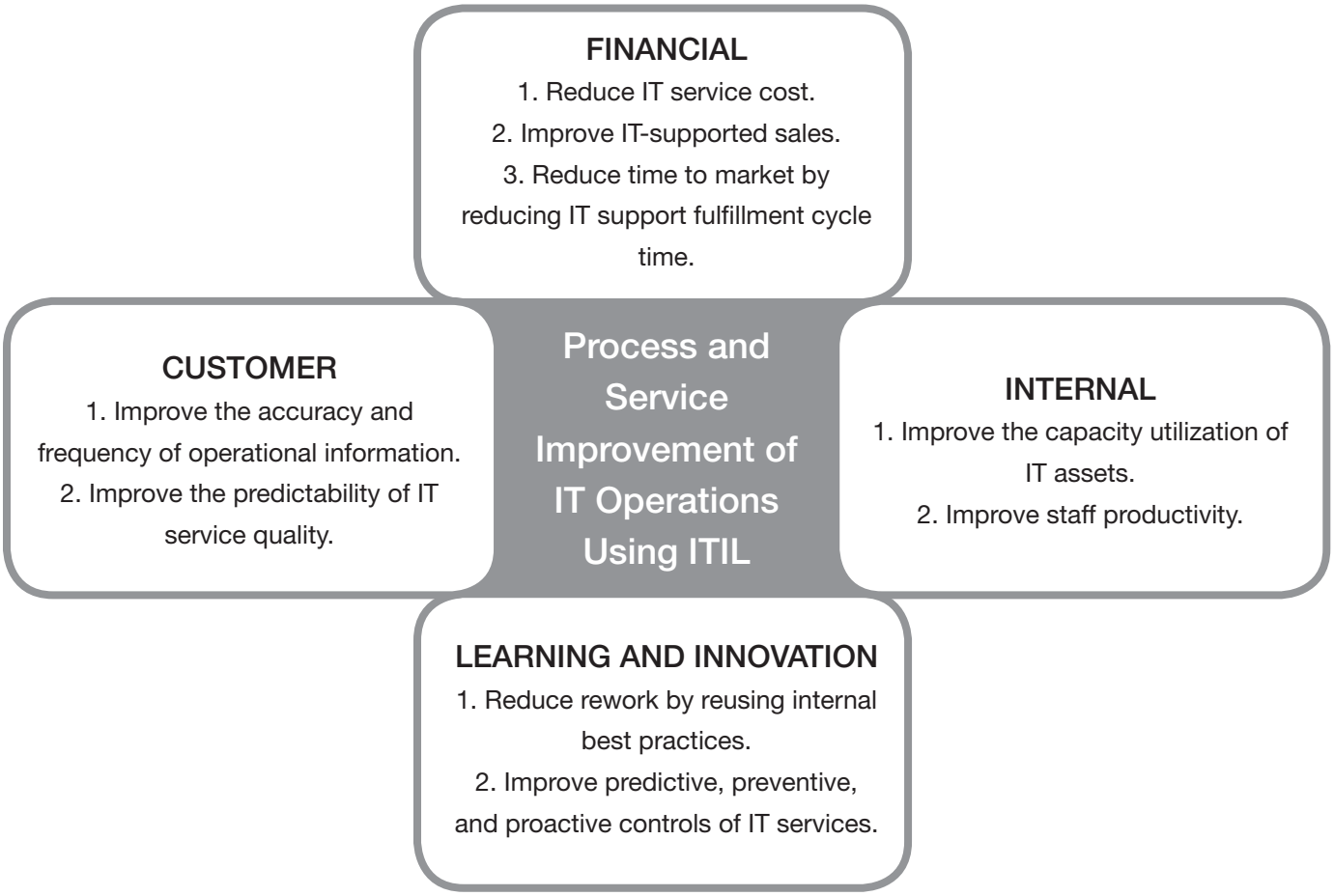
I'm often asked, "Do you have any information regarding calculating return on investment (ROI) for implementing ITIL?" This may be the most important question I get in class, as it seeks to understand why we are here in the first place. Is this really worth all the effort—not just the investment in training and the money and time required for implementation, but the pain associated with culture change in our organizations?

The monetary costs of an ITIL implementation are mostly quantifiable (culture change notwithstanding), but the benefits are much more difficult to capture. No two ITIL implementations are alike. Which processes are attempted and to what level varies widely. From where is the organization beginning the effort? At what level of maturity are the service management processes that will be improved upon? What level of resources will be invested? Even then, can an organization really capture all of the avoided costs? How much does an incident really cost? What is the real financial impact of downtime, unplanned work, failed changes, and inaccurate budget forecasts? What is customer satisfaction really worth? These are not just the intangible benefits that cannot be calculated (e.g., goodwill), but tangible benefits for which quantification may seem nearly impossible.

In this article, I plan to explore the benefits of ITIL and quantify those with sample ROI models, process KPIs, and actual case studies, and in so doing, provide answers to our most important ITIL questions.

The Benefits of ITIL

According to Gartner, clients that have "made a serious commitment to improving their maturity by leveraging ITIL during a two- to three-year period" have seen a 50–75 percent reduction in unplanned work for mission critical services, 10–25 percent in labor productivity benefits, and a 20 percent improvement in customer satisfaction surveys. Other benefits are listed in the diagram on the following page.



Source: Gartner (June 2011)

These claims sound great, but they amount to generic platitudes when it comes time to calculate financial ROI. In reality, to get a complete and accurate idea of ITIL ROI, there must be sophisticated costing information throughout IT and beyond. For example, in order to calculate the financial impact of downtime, the cost of idle users in the business (i.e., outside of IT) should be included. While overall ITIL ROI calculation seems daunting, if not impossible, a divide-and-conquer approach should be used where benefits are calculated one process at a time. The table below provides lists of the benefits and metrics you would need to calculate ROI for incident, problem, and change management. A similar chart could be constructed for all proposed ITIL processes with the objective of calculating all avoided costs.

Process	Benefits	Metrics Needed to Calculate ROI
Incident Management	• Reduction of incident volume • Reduction of elapsed incident handling time by agreeing to improvements between first- and second-level support teams • Maintain the quality of IT services • Increase customer satisfaction • Increase the visibility and communication of incidents to business and IT staff • Increase business confidence in IT capabilities (very hard to quantify)	• Cost per incident[1] • Cost of downtime of IT services • Labor cost of incident handling time at first and second level • Customer satisfaction survey results/cost of customer dissatisfaction[2] • Incident handle time
Problem Management	• Increase first-level resolution and decrease second-level work, which can be four to six times as expensive • Reduction of incident volume • Reduction in service downtime (mean time to restore service) • Reduction of open problems/ shorter problem lifecycle • Minimize the impact to the business of incidents that cannot be prevented • Increase business confidence in IT capabilities (very hard to quantify)	• Labor cost of incident handling at first and second level • Cost per incident[1] • Cost of downtime of IT services • Cost per problem • Cost per open problem[3] • Forecast of number of incidents prevented
Change Management	• Reduction in the number of failed changes • Increase the percentage of changes that meet the customer's agreed requirements (e.g., quality, cost time, etc.) • Increase the accuracy of predictions relating to change (e.g., time, quality, cost, risk, etc.) • Reduction in the number of incidents related to change • Reduction in the number of unauthorized changes • Increase the accuracy of the CMS • Better compliance with governance, legal, contractual, and regulatory requirements • Reduction in downtime (mean time to restore service)	• Cost of failed changes including service disruption, defects, and rework • Amount attributed to the cost of an IT service that is due to unmet customer requirements • Budget and costing variance forecast vs. actual • Cost per incident[1] • Cost of unauthorized changes[4] • Costs resulting from inaccurate asset and configuration data • Cost of noncompliance • Cost of downtime of IT services

[1] Cost per incident should include not only labor involved in incident handling and unplanned work, but also lost productivity during incident duration of business and/or IT staff and the cost associated with diminished ability to meet SLA targets.

[2] Customer dissatisfaction could be measured by costs incurred when the business circumvents IT (e.g., duplicate software/hardware licenses, additional local business staff to support rogue local IT services).

[3] Cost per open problem includes those associated with inefficiencies (i.e., using workarounds) realized by both the business and IT while problems are pending resolution.

[4] Cost of unauthorized changes would include rework, downtime, incidents, and other failed changes resulting from changes not communicated.

Plexent produced the ROI example below in order to calculate savings from an incident management implementation. Notice the assumptions include metrics: incident count, cost per incident, cost per escalation, labor cost, incident handle time, and first call resolution rate. Improvements are then estimated and shown in the table below, under the Factor column. These are "common average numbers based on Plexent's experience."

Assumptions

- Incidents per month = 5,000
- Average cost per case = $40
- Average cost of escalated case = $150
- Average burdened cost of support personnel = $8,167
- Average time in first contact (minutes) = 12
- Average time in escalated incident (minutes) = 18
- First call resolution = 40%
- IT headcount = 100

Estimated Incident Management ROI

Improvement	Factor	Current	Projected	Savings
Reduction in incidents	10%	5,000	4,500	$20,000
Reduce first call time	1 minute	12	11	$16,667
First call resolution rate	20%	40%	30%	$20,000
Reduce escalations	5%	35%	33%	$27,500
Redirect to self-service	10%	0	10%	$20,000
			TOTAL	$120,500

Source: Plexent Sample Report, "Return on Investment: Incident Management" (2011)

General ITIL Case Study Results

In a Gartner case study published on July 6, 2011 (ID: G00214213), Japanese companies that implemented various ITIL processes reported these results to Gartner.

- Improved initial response rate by about 20 percent in the area of incident management.
- Decreased the number of relatively severe problems that required between one and five eight-hour days for resolution by about four percent per year.
- Decreased the number of major system failures from six in 2008 to two in 2009.
- Decreased human error in release management by 20 percent in one year.
- Increased the number of managed servers per person by a factor of ten.
- Cut costs by 30 percent after a three-year effort to integrate and automate processes.

More case studies from a Pink Elephant paper issued in 2006. (These are all ITIL v2!)

Education

- **Purdue University** cut second-level support calls by 50 percent and enabled $73 million ERP implementation without adding more full-time personnel or degrading service levels. *InfoWorld*

Manufacturing

- **Finisar** customer satisfaction rates rose from 33 percent to 95 percent. *CIO Magazine*
- **Proctor & Gamble** realized a six to eight percent cut in operating expenses and reduced help desk calls by ten percent. *Network World*

Telecommunications

- **Telkomsel** reduced operational IT costs by 50–60 percent. *Computerworld UK*
- **Avaya** cut its IT budget by 30 percent. *Techworld*

Finance

- **Pershing** reduced incident response time by more than 50 percent. *CIO Magazine*
- **Raymond James Financial** dropped the number of calls to help desk by as much as 25 percent within eighteen months. *Computerworld*
- **JPMorgan Chase** eliminated 500,000 service desk calls.
- **Capital One** reduced system crashes and software distribution errors by 30 percent and "business-critical" incidents by 92 percent. *Computerworld*
- **Sallie Mae** reduced the length of help desk calls by 40 percent. *Bank Tech News*

- **PEMCO** estimated an overall savings in 2002 of $500,000.
- **Visa** saw a reduction in the time it takes to resolve incidents by as much as 75 percent. *Smart Enterprise Magazine*

Government

- **The State of North Carolina** improved the ability to resolve incidents within the target time frame by 32 percent, service requests by 20 percent. *ITIL v3 Continual Service Improvement*
- **The State of Illinois** saved over $130 million annually.
- **The USPS** realized a 50 percent reduction in incident resolution time and a 30 percent shorter time to realize new changes. *Pink Elephant*

Conclusion

Calculating ITIL return on investment is an inexact science. Forecasting avoided incidents, for example, is little more than an educated guess. Case studies can help with making these predictions, but how does your organization compare with these case studies? Are you starting your effort further along the service management maturity curve? And once you have a forecast, how do you convert these impact data into monetary value?

Any attempt to gather meaningful ROI data resulting from an adoption of ITIL best practices requires appropriate cost accounting information. This presents a challenge to many organizations where budget account classifications (i.e., a chart of accounts) are not constructed to provide these data easily. These accounts are usually organization-wide and may not be budgeted at the appropriate levels of IT. For example, if your IT department has a budget that is not broken down further into individual IT departments, collecting cost information is very difficult. ITIL's financial management process best practice advises us to break down costs by service and/or customer, but organizations considering undertaking an ITIL initiative usually don't have this information available.

So what to do? The adoption of ITIL as a whole is similar to adopting each individual ITIL process. We are faced with the complications of adopting one process because it relies so heavily on other processes that have yet to be adopted. Similarly, the financial management process is required to fully justify an ITIL adoption, but implementing financial management would only follow the decision to adopt ITIL itself. It's the classic chicken-and-egg scenario. Faced with this dilemma in the real world, the avoided costs have to be estimated to the best of our ability. The best approach is to divide and conquer the processes you plan to attempt and calculate/estimate the benefits and avoided costs for each.

Underlying the discussion of ITIL ROI is the fundamental concept of ITIL that "it's all about the business." Most of the discussion has traditionally been about the money saved in IT. That is an important part of ITIL ROI, but the real benefit should be to the rest of the organization (unless the business is providing IT services). Those benefits certainly include avoided costs like service downtime and better services delivered that adhere to business requirements. This is a result of adopting better practices in service design, transition, and operation. But even more difficult to determine and usually ignored, are the service strategy benefits realized when IT is a strategic partner at the highest level of the organization, compiling the optimum mix of services that benefit the external customers with the most efficient use of organizational resources.

Finally, we have talked about monetary benefits and avoided costs experienced by IT and the business, but intangible benefits and costs should not be ignored. Intangible costs, including those associated with culture change and resistance, will undoubtedly be encountered in the short term. But these costs can be mitigated by more transparency, communication, and training. But make no mistake, adopting ITIL best practices can be a major change to the way an organization does business, and no change comes without risk. But risk is also associated with stagnation and must be considered. There are also nonmonetary benefits and they tend to be more long-term. The relationship between IT and the business will improve trust and confidence that the IT department will meet service requirements. Understanding and defining these requirements organization-wide is improved through better communication when adopting ITIL best practices.

So what is the answer to that crucial classroom question about ITIL ROI? In short, yes, we have a lot of information about calculating ROI, but it is only of limited use to your organization. Current and forecasted costs and benefits (tangible and intangible) are unique to every organization. Use the available information combined with your budget numbers to estimate the return that can be expected and always include mention of those elements that cannot be quantified. They may provide the most significant long-term returns of all.

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