Using ROI to Measure the Results of Business Process Improvement Initiatives

Overview

Given today's economy and the need to do more with reduced resources, budgets, etc., organizations are looking to improve efficiencies across departments and business units. This means reviewing the current processes and improving them, or putting processes in place where nothing formal currently exists. Process improvement initiatives are becoming a focal point for organizations – regardless of their size or industry – and Executives want to see the positive monetary impact from these initiatives. Here is where Business Impact and ROI analysis comes into play to measure the effectiveness of an organization's process improvement initiatives.

Why Business Impact and ROI Analysis?

Business Unit Managers are turning to the use of business impact and ROI to show the value of their organization's business process improvement initiatives for a variety of reasons, including

- Ensuring business process improvement initiatives are aligned to the organization's strategic business objectives
- Determining the monetary contribution of the business process initiative to the organization
- Assisting with decision making regarding the continued rollout of business process initiatives to other parts of the organization
- Demonstrating to the executives the benefits of the business process improvement initiatives
- Justifying the budget for beginning a business process improvement initiative
- Gaining credibility with senior leaders for other such initiatives.

Through the use of the Phillips ROI Methodology™, organizations can demonstrate the business impact and ROI of their process improvement initiatives. The Phillips ROI Methodology™ (ROI Institute™) process generates six types of data to measure the business impact and ROI of a process initiative. For example,

1. Reaction to a new process initiative introduced within the organization
    a. Level 1 evaluation: Do employees feel positive about the new process and their involvement in rolling out the new process?
2. Confidence in utilizing the new process
    a. Level 2 evaluation: Do employees feel confident in their training on the new process and that they have acquired the necessary skills to implement the new process?
3. Proof that employees can apply the new process.
    a. Level 3 evaluation: Have employees been utilizing the new process in their roles?
4. Business impact of the new process
    a. Level 4 evaluation: What impact does the new process have on the business?
5. Return on Investment (ROI)
    a. What is the ROI of the new process?
6. Intangible benefits
    a. What other benefits (not measured in a monetary value) were gained, e.g.:
        i. More confidence/less stress among employees who are using the new process
        ii. Increased job satisfaction among employees

Four major steps encompass Phillips ROI Methodology™, as depicted below.

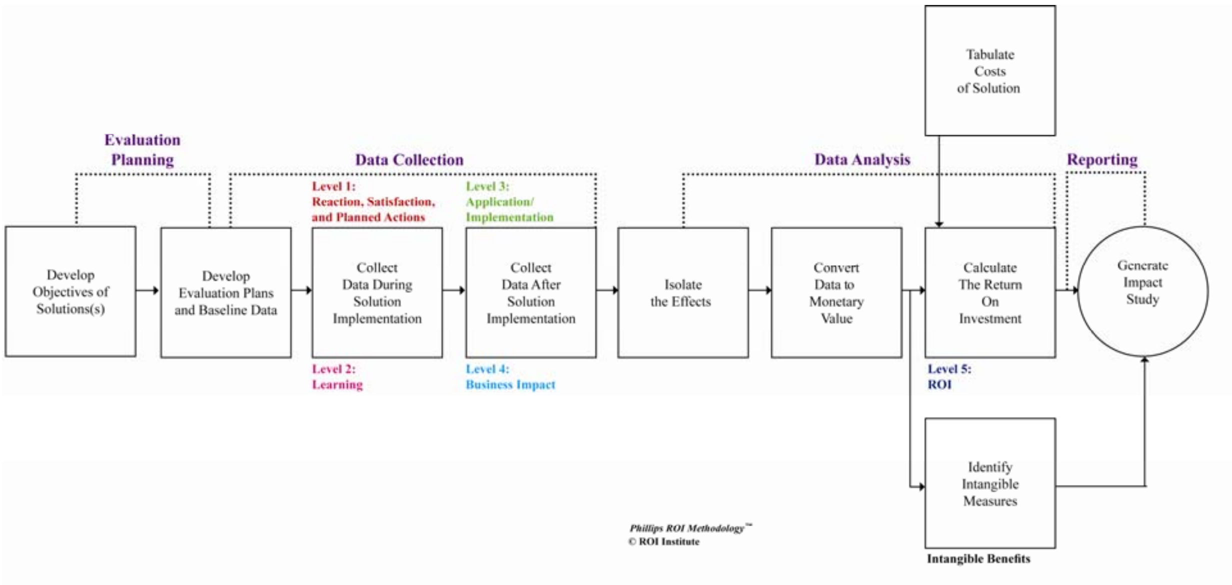

Figure 1: Phillips Methodology

When Should You Use ROI to Measure the Impact of a Business Process Initiative?

Business Impact and ROI should not be performed for every business process improvement initiative within the organization – only those initiatives that have an impact across many divisions or business units or those initiatives that are costly to implement. Select those business process initiatives that

- have a long lifecycle
- are linked to the organization's strategic long-term goals and objectives
- have executives with an interest in evaluating at a monetary level
- are higher cost
- have visibility throughout the organization
- affect a sizeable number of employees within the organization

Getting to Business Impact Measurement and ROI

Development of Objectives, Evaluation Plan, and Baseline Data

The steps to business impact and ROI measurement start with the development of the objectives for the business process improvement initiative. These objectives must be mapped to the goals of the organization. Some examples to illustrate this point include

- A consulting organization that needs to track billable hours of consultants via time sheet submission through a review and approval process and then to client invoicing
- Improvement in sales order processing and order fulfillment
- Improvement in manufacturing processes to enable for increased efficiencies and faster time-to-market
- Improvement in medical claims processing

These are just a few examples of process improvement initiatives that would have an impact throughout the organization.

Training should be provided to employees who are affected by the process improvement initiative to ensure they are able to work with the new process and to ensure that implementation of the process is successful. Once objectives have been developed for the initiative, an ROI Analysis Plan[1] is developed to include the following components:

- Methods to be used to isolate the effects of the initiative
- Methods to be used to convert data to a monetary value
- Cost categories to be used
- Expected intangible benefits
- Other influences/issues to be considered
- Communication plan for the final report to executives and other stakeholders

The appropriate data needs to be gathered right from the beginning of the process and throughout implementation – the better the planning up front, the more accurate and robust the analysis.

A project plan will be developed delineating all action items, target dates, and roles and responsibilities. This study would be managed just as any project is managed.

Collecting and Analyzing Data Before and After Business Process Improvement Implementation

Data is collected before and after the business process improvement implementation in order to measure both the impact on the organization and the return on investment. Data is collected around four levels of evaluation:

- Level 1 evaluation: Reaction and satisfaction with the initiative as it is revealed and communicated.

- Level 2 evaluation: The skills and knowledge gained from the training around use of the new process.

Data for these first two levels are gathered and analyzed immediately after the rollout of the initiative and the training to ensure participants have the skills to work within the new process.

- Level 3 evaluation: Whether the participants have learned new skills to begin working with the new process and a further definition of issues that may arise as part of the rollout is defined.

- Level 4 evaluation: The business impact of the new business process initiative on the organization (what improvements/efficiencies /changes are realized)

Level 3 and level 4 evaluations are done at a designated time after the implementation of the new process and the training around the process, and after the participants have been able to work with the new process and the organization has been able to measure improvements to the organization due to implementation of the new process. This may be anywhere from 3 months to 6 months after the end of the new process implementation and training, dependent upon what is being measured and the ideal time for participants to begin working within the new process (level 3) and the impact on the business (level 4).

- Level 5 ROI: The specific return on investment of the new process initiative.

This timeline is dependent on the organization, the process initiative implemented and its reach within the organization, and the time needed to gather the data to measure impact on the business, and, subsequently, ROI.

[1] ROI Institute™

Isolating the Effects of the Solution

A key component of the business impact and ROI process is to isolate the effects of the solution. As an example, let us assume that, in addition to improvements to business processes within an organization, that same organization is also looking at new technology to roll out throughout the organization that will have an impact on how employees perform their role, or that they are developing a new business unit that will take on some tasks currently performed by other business units within the organization. Each of these examples of influences outside of the improvements to business processes would have an impact on the organization and should be isolated from the effects of the business process improvement initiative and any related training to that initiative. This helps to ensure a realistic and conservative ROI – a monetary value that the CFO and other executives are confident is valid and credible.

There are a variety of ways to isolate the effects of the solution, including pilot groups, trend line analysis, and estimates. The choice of what to use to isolate the effects of the solution is dependent upon the particular circumstances of the individual organization. Keep in mind, however, that it is imperative to isolate the effects of the solution, and this is not a step that should be ignored.

Calculating Return on Investment (ROI)

When calculating the ROI, use the formula: **ROI = Net Program Benefits / Program Costs x 100**

Some definitions:

- Net program benefits = program benefits minus project costs
- Program benefits = linked to what is being measured: increased productivity, improved efficiencies, increased throughput, etc.

The ROI calculation shows the efficient use of capital invested in a process. In the case of a process improvement initiative, it will show the actual earnings (benefits minus costs) from the invested capital (cost of the process initiative).

Let's work through an example of an ROI calculation for a process improvement initiative that was launched to increase the number of medical claims processed by Company ABC. Company ABC is responsible for processing medical claims for a number of doctors' offices in the region.

Calculating ROI Sample: Company ABC

A new business process was established to increase the number of medical claims processed per day/per processor for Company ABC. Training was provided to all processors on the new process, and for one month their work was monitored to ensure they were applying what they learned and that the new process was working.

The following data was collected and analyzed:

Business Performance Measure	Six Months Prior to New Process Implementation and Training/Monitoring	Six Months After New Process Implementation and Training/Monitoring	Factor for Isolating the Effects of the Program
Throughput	32 medical claims processed per person/per day 35 processors 32 x 35 = 1120 medical claims processed per day	48 medical claims processed per person/per day 35 processors 48 x 35 = 1680 medical claims processed per day	85% 85% of improvement is directly attributed to the new process implemented and the training around the use of the new process

Additional information for this example includes

- Unit of improvement = 1 additional medical claim processed per person/per day
- Number of processors = 35
- Daily salary of medical claims processor = $160.00
- Cost of 1 medical claim processed prior to solution = $5.00
- Cost of 1 medical claim processed after solution = $3.33
- Total improvement = 48 – 32 = 16 additional medical claims processed per person/per day
- Improvement related to solution = 16 x 85% = 13.6 additional medical claims processed per person/per day
- Value of improvement per person/per day = 13.6 x 3.33 = $45.29
- 45.29 x. 35 = $1,585.15 x 250 work days = $396,287.50 (annually, for the first year post solution)
- Expected lifecycle for new process initiative = 3 years
- Monetary benefit over lifecycle = 3 years x $396,287.50 = $1,188,862.50
- Total cost of solution = $185,000 (planning, implementation, training, technology improvements, etc.)
- Net benefits = $1,188,862.50 - $185,000 = $1,003,862.50

ROI = Net Program Benefits / Program Costs x 100

ROI = $1,003,862.50/$185,000 x 100

ROI = 543%

The above numbers do not include other benefits such as the ability of Company ABC to take on additional clients for claims processing without increasing head count or intangible benefits, which might include reduced stress of employees who are processing claims.

Reporting Your Results

The last step of the process is to develop the Executive Report and communicate the results to all interested parties. This would include the executive team, other stakeholders, and other individuals within the organization with an interest in the evaluation.

The report should include the following components:

- Study objectives and background
- Methodology used for the study
- Results of the study
- Recommendations/next steps based on the results

The Executive Report enables you to show the benefits to the organization of the process improvement initiative, thereby providing you with the top down support needed for future initiatives.

Summary

In the example above, we only used one potential benefit of the process improvement initiative. We also used very conservative methods of calculating the benefit.

As the business environment becomes more competitive, organizations search for a method to improve their processes in order to make them much more effective and efficient while at the same time reducing costs to give them the competitive edge. The challenge for an organization is to discover what segment of the organization requires process improvement initiatives, and what are the appropriate initiatives. By using the Phillips ROI Methodology™, an organization can create pilot projects and use the methodology to validate that the initiatives they are undertaking do provide a monetary benefit to the organizationThe Business Impact and ROI methodology enables organizations to show the value of implementing new and/or improved process initiatives with the presentation of a monetary benefit that can be attractive to the executives. Investments in business process improvement initiatives do not come cheaply and showing the monetary value of these initiatives helps to secure funding for future initiatives within the organization, thus aligning the process improvement initiatives to the organization's strategic outlook.

Author

Gina M. Westcott-Abudi is the Vice President, Strategic Initiatives, for the Boston University Corporate Education Center. She can be reached at gwestcott@bucec.com.

