Return on Investment Measures Success

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EXECUTIVE SUMMARY

The demand for accountability through measurement continues to increase. Calculating return on investment is a time-tested method for valuing programs. It can be put to use in a variety of industries and for many different types of programs to gauge success.

Calculating return on investment has been a valuable measurement tool for a long time. During the 1920s, ROI was the emerging tool to place a value on the payoff of capital investments. In recent years, the application of the concept has been expanded to all types of investments. This reflects the growing demand for evidence of positive returns on investing in programs. Today, clients — those funding the initiative — require critical evaluation data, and measuring ROI can be a valuable tool for communicating the positive impact on the organization. Throughout this article, the term "program" is used to note any implementation of technology, quality, processes, policies, procedures, transition programs, change management programs, marketing, and any activity whether it is a new project, initiative, solution, or event.

Within the industrial management and industrial engineering context, the ROI method has been used in a variety of applications spanning the entire management in an organization. For example, the ROI method described in this article has been used to capture six types of data, including ROI for each of the following:

- Implementation of technology to support operations in a manufacturing plant
- Six Sigma implementation in a construction firm
- New processes in the federal government
- Marketing strategy for a pharmaceutical firm
- New policies and practices in a call center
- Major transition program for a transmission division of an international electric utility
- A major change program for a large banking organization
- Implementation of a talent management system for a health care provider
- Executive leadership development in a Canadian bank
- A business development conference in a software manufacturer

As these examples illustrate, the method is flexible, diverse, and credible. For an ROI process to be feasible, it must balance many issues, including feasibility, simplicity, credibility, and soundness. The ROI method described in this article meets these challenges. More specifically, it considers the three major target audiences that an ROI process will affect.

- The community: Staff members must have an easy-to-understand approach to measurement. If the process appears confusing and complex, then professionals will give up in a fit of frustration, assuming that the ROI cannot be developed or that it is too expensive.
- Internal clients: Those who are the recipients of programs need a process that will provide quantitative and qualitative results, as well as one that earns their confidence. The measurement program should be effectively communicated to other areas of the business.
- Research community: Researchers in measurement and evaluation need a process that they can support — one that holds up under their scrutiny and close examination. Such professionals also need a process that can be replicated from one situation to another, a reliable process that will result in the same measurements if two different practitioners are evaluating the same program.

An awareness of these audiences is critical to get the ROI process up and running and ensure that it can be communicated across the organization.

Developing the ROI process

To develop a credible approach for calculating ROI, several pieces of an evaluation puzzle must be developed and integrated:

- An evaluation framework defines the various levels of evaluation and types of data as well as how data are captured.
- A process model provides a step-by-step procedure for developing the actual ROI calculation. Part of this process is the isolation of the effects of the program from other factors in order to show the monetary payoff of the project.
- A set of operating standards with a conservative philosophy keeps the process on track to ensure successful replication. The operating standards also build credibility within the organization.
- The necessary resources should be devoted to implementation issues to ensure that the ROI process becomes operational in the organization. Implementation addresses issues such as responsibilities, policies, procedures, guidelines, goals, and internal skill building.
- Finally, successful case applications are critical to show how ROI actually works in the organization. Users of the ROI process are encouraged to develop a case study quickly.

Together, these five elements are necessary to solve the ROI puzzle and develop a comprehensive evaluation system that contains a balanced set of measures and can be easily replicated.

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The evaluation framework

There are six types of data used in the ROI process. Although these data types can be considered separately, they are inevitably woven together, and their meaning lies in their relation to one another.

The first type of data, reaction from participants, is measured on almost all programs, usually with generic questionnaires and surveys. Although this level of evaluation is important as a customer satisfaction measure from program participants, a favorable reaction does not ensure that participants have learned to implement the program.

Learning measurements focus on

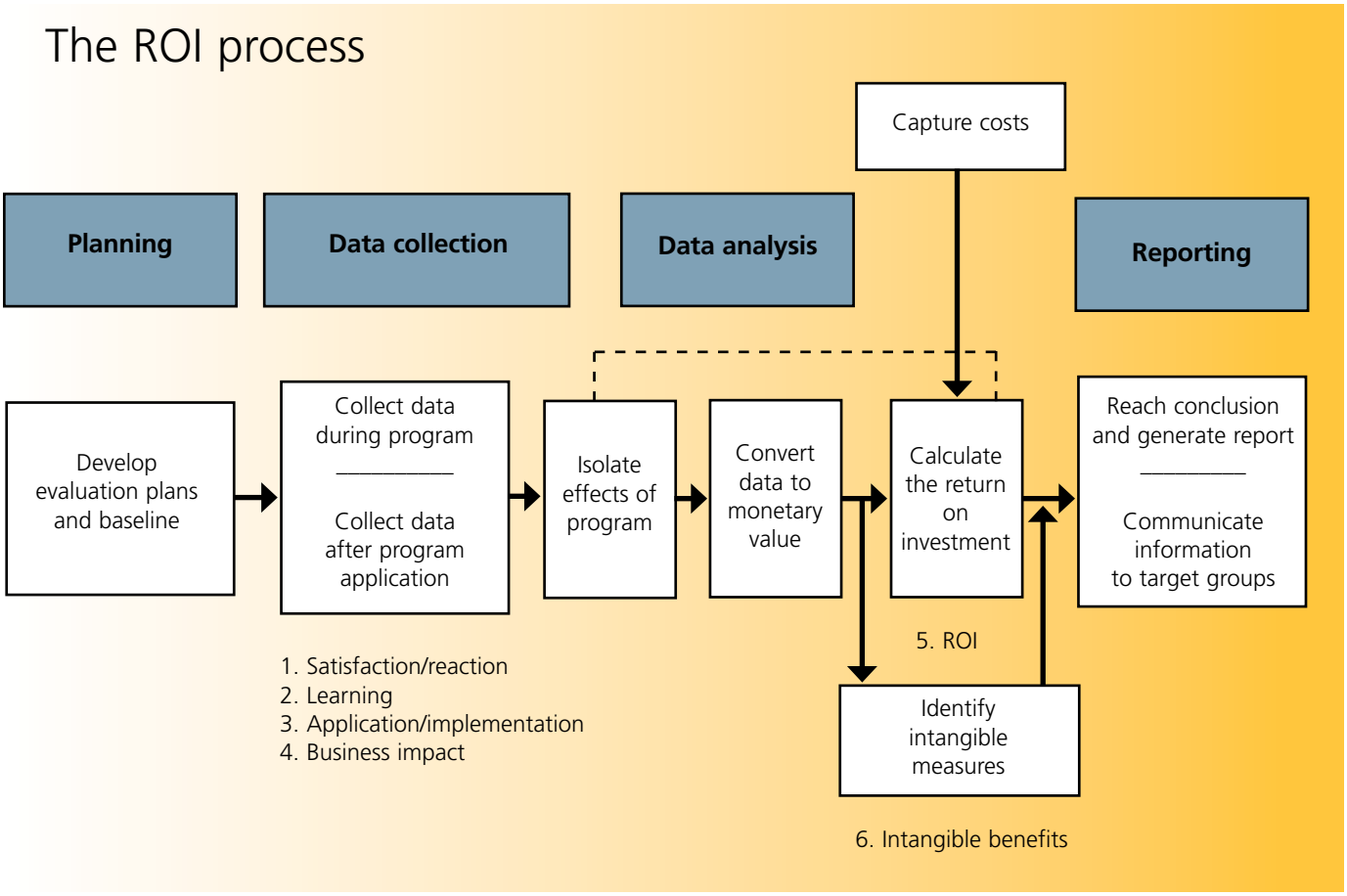

Figure 1. In the ROI process, data are developed at different times and gathered from different sources to develop the six types of measures.

what participants learned during the program. A learning check is helpful to ensure that participants absorb new skills and knowledge and know how to make the program successful. However, a positive measure at this level is no guarantee that the program will be successfully implemented.

Measuring application and implementation is necessary to determine if participants implement the program successfully. The frequency and use of skills are important measures at this level. In addition, this measure includes all the steps, actions, tasks, and processes involved in the implementation of the program. Although the evaluation is important to gauge the success of the program's implementation, it still does not guarantee a positive business impact on the organization.

Measuring business impact focuses on the actual business results achieved directly from the program. Typical business measures include output, quality, costs, time, and customer satisfaction. Although the program may produce a measurable business impact, there is still a concern that the costs for the program may be too high. Measuring cost involves monitoring or developing the cost related to the program. A fully loaded cost profile in which all direct and indirect costs are tabulated is recommended.

ROI is the ultimate level of evaluation, where the program's monetary benefits are compared with the costs. Although ROI can be expressed in several ways, it is usually presented as a percentage or benefit/cost ratio. In addition to tangible, monetary benefits, most programs will drive intangible, non-monetary benefits. Intangible benefits are defined as implementation and business measures benefits not converted to monetary value.

Although almost all staff groups conduct evaluations to measure satisfaction, few actually conduct evaluations at the ROI level. Perhaps the best explanation for this is that ROI evaluation is often characterized as a difficult and expensive process. A chain of impact should occur through the levels and types of data as the skills and knowledge learned during the program are applied on the job during implementation to produce business impact and drive a positive ROI. If measurements are not taken at each level, it is difficult to conclude that the results achieved were actually produced by the program. Because of this, it is recommended that evaluation be conducted at all levels when planning an ROI evaluation.

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The process model

Represented by the model in Figure 1, the ROI process has been refined and modified over many applications. As the figure illustrates, the process is comprehensive because data are

developed at different times and gathered from different sources to develop the seven types of measures. Each part of the process is outlined below.

Evaluation planning. The first two parts of the ROI process focus on critical planning issues. The first step is to develop appropriate objectives for the initiatives. These are often referred to as the ultimate objectives of the program. These range from developing objectives for satisfaction to developing an objective for the ROI. A specific program should have multiple levels of objectives.

Documentation. With the objectives in hand, the next step is to develop two important planning documents. A data collection plan indicates the type of data collected, the method for data collection, data sources, the timing of collection, and the various responsibilities for collection.

The ROI analysis plan details how the initiative is isolated from other influences, how data are converted to monetary values, the appropriate cost categories, the expected intangible measures, and the anticipated target audience for communication.

Collecting data. Data collected during the launch of the program measures reaction, satisfaction, and learning to ensure that adjustments are made to keep the program on track. The reaction, satisfaction, and learning data are critical for immediate feedback to make early changes. Post-program data are collected and compared with pre-program data and expectations. Both hard data and soft data, including work habits, work climate, and attitudes are collected. Data can be collected using a variety of methods:

- Follow-up surveys and questionnaires measure satisfaction and reactions from stakeholders as well as uncover specific application issues with human resources programs.
- On-the-job observations capture application and use.
- Tests and assessments measure the extent of learning.
- Interviews measure reaction and determine the extent to which the program has been implemented.
- Focus groups determine the degree of application of the program in job situations.
- Action plans show progress with implementation on the job and the impact obtained.
- Business performance monitoring shows improvement in various performance records and operational data.

The important challenge in data collection is selecting the method appropriate for the setting and the specific program within time and budget constraints.

Isolating the effects of the program. This often-overlooked step is essential because many factors will influence performance data after a program is implemented. Specific strategies in this step will pinpoint the amount of improvement directly related to the program. The result is increased accuracy and credibility of the ROI calculation. The following strategies have been used to address this important issue:

- A pilot group of participants in a program is compared with a control group not participating in the program to isolate program impact.
- Trend lines are used to project the values of business impact data, and projections are compared with the actual data after a program.
- Participants and stakeholders estimate the amount of improvement related to a program; supervisors and managers estimate the impact of a program on the output measures.
- External studies or previous research provide input about the impact of a program; independent experts estimate the impact of a program on the performance variable.
- Customers provide input about the extent to which the program has influenced their decisions to use a product or service.

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Collectively, these strategies provide a comprehensive variety of strategies to tackle the critical issue of isolating the effects of a program.

Converting data to monetary values. To calculate the return on investment, business impact data need to be converted to monetary values and compared with program costs. This requires a value to be placed on each unit of data connected with the program. The list below shows most of the key strategies available to convert data to monetary values. The specific strategy selected usually depends on the type of data and the situation:

- Output data such as an additional product or service provided are converted to profit contribution (or cost savings) and reported as a standard value.
- The cost of a quality measure, such as a customer complaint, is calculated and reported as a standard value.
- Employee time saved is converted to fully loaded compensation.
- Historical costs or value of a measure, such as preventing a lost-time accident, are used when available.
- Internal and external experts estimate a value of a measure, such as an employee complaint.
- External databases contain an approximate value or cost of a measure, such as employee turnover.
- The measure is linked to other measures for which the costs are easily developed (for example, employee satisfaction linked to turnover).
- Participants estimate the cost or value of the data item, such as work group conflict.
- Supervisors' or managers' estimates of costs or values when they are capable of providing an estimate

Comparing ratios

Benefit/cost ratio and return on investment present the same general information but with slightly different perspectives. Here's an example that illustrates the use of these formulas.

An absenteeism reduction program produced savings of $581,000, with a cost of $229,000. Therefore, the benefit/cost ratio is:

$581,000 / $229,000 = 2.54 (or 2.5 : 1)

As this calculation shows, for every $1 invested, $2.50 in monetary benefits is returned. In this example, net benefits are $581,000 - $229,000 = $352,000.

Thus, the ROI would be:

$352,000 / $229,000 X 100 = 154%

This means each $1 invested in the program returns $1.50 in net benefits after costs are covered. The benefits are usually expressed as annual benefits for short-term programs, representing the amount saved or gained for a complete year after the program has been implemented. Although the benefits may continue after the first year, the impact usually diminishes and is omitted from calculations in short-term situations. For long-term projects, the benefits are spread over several years. The timing of the benefits stream should be determined before the impact study begins, as part of the planning process.

(for example, an unscheduled absence).

- The staff estimates a value of a data item, such as a sexual harassment complaint.

This step in the ROI process is critical and is absolutely necessary for determining the monetary benefits from a program or solution. The process is challenging, particularly with soft data, but can be methodically accomplished using one or more of the above strategies.

Tabulating the cost of the program. The denominator of the ROI formula is the cost of the program. The following cost components should be included:

- Initial analysis and assessment, possibly prorated over the expected life of the program
- Purchase or acquisition cost, if applicable
- Development and design cost (prorated if necessary)
- Participant and stakeholder time using fully loaded compensation costs
- Materials and supplies
- Application and implementation costs
- Maintenance and monitoring costs
- Administration and overhead costs allocated in a convenient way
- Evaluating and reporting costs

The conservative approach is to include all these costs so that the total is fully loaded. Taking all costs into account will ensure a stronger position from which to present your final findings.

Calculating ROI. The return on investment is calculated using benefits and costs. The benefit/cost ratio is the monetary benefits of the program or intervention divided by the costs. In formula form, it is:

BCR = Benefits / Costs

Sometimes this ratio is stated as a cost/benefit ratio, although the formula is the same as the benefit/cost ratio. The return on investment uses the net benefits divided by costs. The net benefits are the program benefits minus the costs. In formula form, the ROI becomes:

ROI = Net benefits / Costs x 100

This is the same basic formula used in evaluating other investments where the ROI is traditionally reported as earnings divided by investment.

Identifying intangible benefits. During data analysis, every attempt is made to convert all data to monetary values. For example, hard data — such as output, quality, and time — are always converted to monetary values while soft data conversion is attempted. However, if the conversion process is too subjective or inaccurate and the resulting values lose credibility in the process, the data are listed as intangible benefits with the appropriate explanation. For some programs, intangible, non-monetary benefits have extreme value, often commanding as much attention and influence as the hard data items. Intangible benefits may include items such as improved public image, increased job satisfaction, increased organizational commitment, reduced stress, and improved teamwork.

Case applications and reporting

A final operational step of the ROI process is to generate an impact study to document the results achieved by the program and communicate them to various target audiences. The impact study presents the basic process used to generate the seven measures of data. The method, assumptions, key concepts, and guiding principles are all outlined before the actual results are presented. Next, the seven categories of data, beginning with reaction and satisfaction and moving through ROI and intangible measures, are presented in a rational, logical process, showing the building blocks to success for the study.

Conclusions and recommendations are always a part of the study. This study becomes the historical document that presents the complete assessment of the program.

A variety of target audiences need information, so different reports and formats usually need to be generated. All the stakeholders involved will need some communication about the

success of the program, including executives who may not be interested in knowing the full details. A general interest report may be appropriate for stakeholders who are involved but not directly responsible for the project. A variety of different reports and formats are used to disseminate the information, ranging from the complete impact study described above to a one-page summary for clients who understand the process. The key issue in this step of the ROI process is to analyze the target audiences detailed during the evaluation planning and develop the appropriate report to meet their specific needs.

Guiding operating principles

To ensure that each study is developed the same way, consistent processes and operating standards for the measurement and evaluation process should be implemented. The following guiding principles should be used as operating standards when implementing the ROI process:

- When an evaluation is planned for a higher level, the previous level does not have to be comprehensive.
- When a higher-level evaluation is conducted, data must be collected at lower levels.
- When collecting and analyzing data, use the most credible sources.
- When analyzing data, choose the most conservative approach among alternatives.
- At least one method must be used to isolate the effects of the program.
- If no improvement data are available for the performing group, it is assumed that little or no improvement has occurred.
- Estimates of improvement should be adjusted for the potential error of the estimate.
- Extreme data items and unsupported claims should not be used in ROI calculations.
- The first year of benefits (annual) should be used in the ROI analysis of short-term programs.
- Program costs should be fully loaded for ROI analysis.

These guiding principles will ensure that the proper conservative approach is taken and the impact study can be replicated and compared with others. More important, the principles build credibility with and support from clients and senior managers who review and scrutinize results.

The organizations experiencing the most success with the ROI process have devoted adequate resources for implementation and deliberately planned for transition.

Implementation

The best tool, technique, or model will not be successful unless it is properly used and becomes a routine part of the function. As with any change, it will be resisted by the staff and other stakeholders. Some of the resistance will be based on realistic barriers, while part of it will be based on misunderstandings and perceived problems that may be mythical. In both cases, specific steps must be taken to overcome the resistance by carefully and methodically implementing the ROI process.

Implementation involves many issues, including assigning responsibilities, building the necessary skills, and developing the plans and goals around the process. It also involves preparing the environment, individuals, and support teams for this type of comprehensive analysis. The organizations experiencing the most success with the ROI process have devoted adequate resources for implementation and deliberately planned for transition from their current state to where they desire the organization to be in terms of accountability.

Final thoughts

Various forces are creating a critical need for increased accountability. An evaluation framework, the ROI process model, operating standards and philosophy, implementation, and case application are all necessary to develop a reliable, credible process that can be replicated from one project to another. This process is not without its concerns and barriers, but many of them can be overcome with simplified, economical methods and a disciplined approach. ❖