

INFORMATION MANAGEMENT

A GAP ANALYSIS PROCESS TO IMPROVE IT MANAGEMENT

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INSIDE

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INTRODUCTION

Those installations concerned with providing an improved array of IT products and services to their customers should seriously consider a “gap analysis” approach to information technology (IT) management. This process offers a straightforward, non-complex process to improve several areas of the IT function.

Gap analysis can be completed quickly and inexpensively, in contrast to other methods of improving the IT department. In addition, because the process is easily controlled, it can be effectively applied to small- or medium-sized efforts.

Furthermore, it is very easy to develop pilot gap analysis processes, and verify the process results. This enables organizations to test out the validity of the approach before heavily committing to the process for more extensive work. Finally, the gap analysis process can be effectively applied to any area of the IT function.

Many IT organizations struggle with the need to improve their contribution to the organization. And, at times, massive approaches are the only practical answer to resolving IT problems. However, all too often, IT improvement efforts become too comprehensive, complex, and expensive, and they sometimes fail. So installations can use the gap analysis

PAYOFF IDEA

Gap analysis is a way to measure the distance from the current state to a goal. IT managers can use it for improving many areas of IT. The process can be applied to small- and medium-sized efforts because it is straightforward, non-complex, quick, inexpensive, and easily controlled. Because gap analysis lends itself to pilot projects, there is limited risk and expense. IT managers should try the method, in order to quickly bring about incremental improvements to any area of the IT function.

method to quickly bring about incremental improvements. In addition to the IT department, a gap analysis process can benefit the entire organization.

This article explores the use of gap analysis within the IT department, the mechanics of the process, and the benefits to be attained through its use. A project management example demonstrates the process, identifies the people who should be involved, and illustrates practical uses for process results.

THE GAP ANALYSIS PROCESS

Gap analysis need not be a complex process. Indeed, if it becomes too complex, it is probably not being used correctly. Gap analysis work should be based on a clear understanding of what needs correction, as well as identification of those issues that hinder improvement, and use of a direct process that addresses those improvements. Gap analysis can be seen as a process that measures the distance (i.e., the gap) between where a particular item currently stands and where it should be, to better meet the organization's needs.

The steps required to make the process work include:

- identification of the gap analysis goals
- analysis of the current process hurdles that preclude reaching the desired goal
- development of a plan to close the gap between the process's current status and attainment of the desired goal
- a review of the proposed gap analysis plan by members of the IT department and the business units responsible for the processes to be analyzed, in order to secure agreement and commitment to the plan
- an audit at the completion of the process; the audit should determine if the goals have been met, and if those who used the process now understand it, making its future use more productive

In determining and closing the gaps in a particular process, the first step is a meeting of those people managing the process and the stakeholders in the work that the process performs. This includes members of the IT department and the business units affected.

Because the first phase of the process aims at laying out the issues and the associated problems, the business unit members should use the meeting to explain their goals. (For internal IT analysis, this step can be skipped.) In addition, they should document the anticipated results of the gap analysis. Once the issues and goals are developed, the business and IT people should both articulate what they believe will prevent the process from meeting the goals.

After the goals and associated hurdles are stated, the group should discuss the practicality of the goals; clarify the hurdles — or difficulties in meeting them; and determine what is creating these hurdles. For example, someone might be concerned that changes to existing applications are being incorrectly applied. On examination, the problem may actually lie in poorly defined change instructions, rather than in the changes themselves. Thus, the group must agree on identification of the exact hurdles before it begins analysis.

The meeting must also establish that the anticipated goals are realistic and attainable. Meeting the goals may be so costly or disruptive that meeting them would not make business sense, and rushing to an impractical solution may be worse than taking no action at all. So, anticipated goals should be discarded if they do not serve a sound business purpose that can be attained at reasonable cost.

A FRAME OF REFERENCE

Gap analysis should not be considered an alternative to reengineering or restructuring the IT organization. In fact, the decision whether or not to use the approach should be tied to the size of the effort to be undertaken.

Where the organization must deal with a large number of intransigent problems, reengineering or restructuring the IT department is warranted. When IT suffers from massive, deeply ingrained problems, extensive change is the only practical method for identifying and correcting these problems. A gap analysis approach will not be sufficiently comprehensive here, where there must be a concentrated effort to bring about the needed structural and cultural changes.

For its part, the gap analysis process brings about changes and improvements more rapidly and on a smaller scale than is the case with reengineering or restructuring. So, the approach works best when it focuses on IT areas requiring improvement that are important, but smaller and less difficult.

A pilot project is a good way of introducing a gap analysis effort. It helps build confidence in the process if its viability is tested with a small analysis project. And gaining experience before moving on to something larger will help build confidence in the process. Most IT installations have many small projects they can use as good test cases, before they move to a larger effort.

Because gap analysis offers a low-cost, rapid way to address specific areas of IT difficulty, the group should initially consider the size and severity of the item to be corrected. It should then weigh the ramifications of using gap analysis versus a larger, more complex, more expensive approach to solve the problem. It is worth the time and effort to understand what is to be accomplished, and the best means to do so.

A PRACTICAL EXAMPLE

The effectiveness and benefits of the gap analysis process can be demonstrated through an example of its use to improve the IT project management process. Virtually all organizations can benefit from improvements in managing IT projects, because their performance record is not good, for delivering projects that are on time and within the original budget estimates. Some organizations require only minimal improvements in order to meet the time and budget objectives. Others must put forth considerable effort to meet their project goals.

Whatever the organization's current state of IT project management, gap analysis can assist in attaining the project delivery goals. The approach here is adoption of a straightforward method of bringing about improvements, rather than a lengthy reengineering or restructuring process. Gap analysis works to improve existing IT project management processes and the results delivered through that process. This enables organizations to concentrate their focus on a few essential items that can be quickly changed, to provide immediate benefits to IT project management.

In this example, gap analysis can be thought of as a stepped process, whereby the process produces a quick result. Once that is in place and working, the organization moves to the next quick result. Building in this way upon the successes of the gap analysis process will ensure a continuing string of successes.

This scenario emphasizes improvement of an existing process. The example assumes that a formal IT project management process is in place, and its use is being enforced. If an organization lacks a project management process, gap analysis cannot bridge the large gap between what the organization wants and its current status. Such an organization should first install and begin to use a project management system. Later, it can consider the use of gap analysis.

The gap analysis steps discussed earlier demonstrate how the process can strengthen the IT project management function, providing a practical example of the analysis steps. Because gap analysis is a consistent process, the process steps will always be the same, although the particulars will be different for each situation. Therefore, as the organization gains experience with gap analysis, it will be able to deliver benefits more rapidly.

Process Goals

Although the example organization uses a formal project management process for all IT projects, it does not deliver high-quality projects on time and within budget. Gap analysis has identified a goal with the following components:

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- *Development of a two-step process to improve the delivery of IT projects within the organization.* The organization will first move to a 90 percent baseline for IT project delivery, whereby the baseline is an average of all IT projects. Once the 90 percent-level is consistently achieved, the goal will be to increase to 95 percent.
 - *With rare exceptions, once the requesting section approves the project requirements and specifications, the project will be considered “frozen,” and no changes will be allowed.* At issue here is the addition of project components for new items, or items that were left out of the original specifications. In the current development process, these items are combined into additional project phases.

To meet the improved IT project delivery times, additional items will require that a new project be developed and approved by a member of senior management. Such changes will only be allowed if they are proven to materially affect the project. If so, the original project expense and deadlines must be adjusted to compensate for the changes.

- *The approved project will be delivered within a budget that is not more than 10 percent of the final budget estimate.* If the original estimate is exceeded, the organization must clearly document why.
- *A project reporting system will be installed for each IT project, to provide up-to-date information for everyone interested in the project.* The reporting system will detail the current project status, compared to the time and dollars in the original project estimates. If any project component is behind schedule of the original project plan, there must be a plan to bring the project current.

Process Hurdles

- *IT projects are habitually late and often cost considerably more than the original estimate.* In the example organization, IT projects are being delivered at 75 percent of the original estimates in both dollars and time.
- *The IT department has a problem controlling project scope; that is, scope creep.* Once a project is approved, new items are often added, expanding the project cost and time. As the size of the project effort grows, the growth is uncontrolled. Rather, project components are regrouped into “phases,” which then become adjuncts to the original project proposals.

These problems arise because the organization spent too little time and effort on project planning and on investigating project components before it began the technical work. In addition, political issues arise

when extra items are added without the appropriate consultation and approval by senior management.

- *Project overruns create problems even beyond their expense.* A late project adversely affects the business functions for which it was designed and approved. It also has a negative effect on morale — in both the IT department and in the business units that are anticipating the project's completion.

IT project overruns are also associated with lost opportunity. When an IT project requires more time to complete than was originally planned, other work must be delayed, and the organization loses something of value.

- *The business units and senior management are concerned that, as they move through the development process, they are not informed about the status of IT projects, there are too many project development surprises.* When IT acknowledges project-related problems, there is seldom an accompanying plan to bring about the needed corrections. Nor does IT estimate the time and expense required for problem correction.
- *Those business unit members assigned to IT projects do not always take an active role in project development, and there are delays when IT is forced to wait for business unit response.* Business unit personnel do not understand their priorities here, but work on project issues only in their spare time.

There is another factor at work here with adverse effects. IT sometimes starts a project without a well-defined set of specifications in order to meet the deadline. As the project progresses, then, work must be redone, so the expense increases, the time lengthens, and the project team's frustration level grows.

As these hurdles are identified, people should try not to become defensive. The intent is to accurately analyze what is impeding improvement of the IT project development process, and to cooperatively overcome the hurdles. The problems will not be resolved if the process focus shifts from hurdle identification to pinpointing responsibility for what has happened. The person in charge of the analysis process must therefore firmly control the process, maintaining proper focus.

A strong individual should therefore be appointed to manage the analysis project, in order to appropriately drive the process. This person must be as objective as possible so that the goals and hurdles are clearly and appropriately identified. The process will work most effectively when the project leader comes from outside the areas where the analysis is being

conducted. Not having a turf to defend ensures greater objectivity and brings a different perspective to the issues.

PROCESS MECHANICS

Development of a plan helps close the gap between the current process status, and attainment of the desired goal. The stage is set for development of the gap analysis plan when the gap analysis process is used to provide understanding of what is to be accomplished, and identification of the hurdles.

First, all parties interested in an improved environment must agree that the goals and hurdles have been correctly identified. They must next determine the practicality of overcoming the hurdles and meeting the goals.

The parties should determine how reasonable the goals and hurdles are; that is, whether the identified work can be accomplished with a reasonable effort and time through the gap analysis process. If so, the process should go forward. If not, or if there is doubt, a greater effort will be required to address the problems.

Once agreement is reached, the plan's development can begin, based on mapping the hurdles to the identified goals. Starting with a particular goal, the parties identify the hurdles that hinder the goal's achievement, linking them to the goal. If additional hurdles or goals are identified as the process moves forward, they should be included.

A specific plan should be developed for each set of hurdles and goals, outlining what must be done. In the example organization above, one identified goal was to move the project's time and budget delivery rates to 95 percent, as part of a two-step process. Several identified hurdles must be addressed to attain this goal.

First, the organization must develop a method to more accurately measure IT project delivery performance. The current process of tracking project performance is based on estimates; a different method must be introduced to for more accurate and consistent measurement. Developing more precise measurements may simply require people to carefully record the time they allocate to the project. Perhaps people incorrectly record time spent on non-project issues against the project. Until they consistently provide accurate figures, there remains uncertainty about whether the new delivery goals are being met.

A more serious issue in improving IT project delivery is that business unit personnel do not deliver project requirements and specifications on a timely basis. When the project delivery dates and budgets are set, everyone involved in the project must be willing to accept responsibility for meeting these dates and amounts. It should be a very clear process to map the hurdle of late or incomplete project specifications back to the goal of improved delivery.

Finally, the organization must address scope creep if it wishes to improve IT project delivery performance. Scope creep generally develops when items are overlooked that should have been included in the project, or people want to add extra features or components to the project as it moves forward. Therefore, before setting the project time and expense schedules, the organization must take the time to identify and include everything needed for the project in the project plan.

The gap analysis process can also suffer from scope creep. As the organization reviews the issues, it will undoubtedly wish to add goals and hurdles. However, because the process aims at rapid improvements, the organization should not become distracted with additional items. When important additions are uncovered, the organization can develop a new analysis initiative to address them.

Again, the organization should set the analysis scope appropriately and move forward to completion. A strong analysis project leader will not allow scope creep to occur.

Once the goals and hurdles are mapped, the organization must develop a detailed plan to eliminate the hurdles. It must determine the responsibilities of the people involved as well as the tasks to be completed, and develop a timetable that commits to task completion by an agreed-upon date. In addition, a process must be in place to monitor progress, thereby ensuring that the work remains on schedule.

At this point, members of the IT department and the business units responsible for the processes under analysis, must review the proposed gap analysis plan to secure agreement and commitment. Once the plan is developed, the appropriate parties must review it to ensure that the actions to be taken will meet the anticipated goals. The manager of the analysis process must communicate with the process stakeholders as the plan is being developed. This identifies areas of concern or disagreement, and early resolution of the issues. Securing agreement is straightforward when there is good planning communication, and everyone agrees with the plan's details.

Although everyone involved in the process may not completely agree, all should understand why the goals were developed and the hurdles identified. When areas of disagreement are identified and resolved, they will not become bottlenecks as the plan goes forward.

The plan's components plan should include the results to be achieved, the identified hurdles, the methods to be used to overcome those hurdles, the estimated time required to complete the analysis, and the roles of those involved in the process. Again, the organization must take appropriate time at the beginning to clarify the process. When planning and communication are correctly done, realizing the gap analysis goals will be a much more effective process.

There should be an audit when the process is complete that assesses three points. Thus, the audit should determine if the gap analysis goals

have been met, and if those who used the process understand it well enough to make its use more productive in the future. The audit should also gauge if the gap analysis process has been proven to produce results.

Because gap analysis has potential use in many situations throughout the organization, the audit is a mandatory process component. It need not take long; it need only highlight areas of success or difficulty with the particular analysis process. The audit should also identify how use of the gap analysis process can be encouraged throughout the organization. When the process is continually sharpened and improved in this way, its use will spread to benefit the entire organization.

After several gap analysis audits, the organization will determine if the process is beneficial. If so, it might develop a set of procedures as a guide for future, successful process use. Again, because of its adaptability throughout an organization, the process knowledge should be readily available to anyone with an interest in its use.

While the organization can gain considerably from the use of gap analysis, the process can have flaws and problems. The audit can prove its worth by identifying these issues, and suggesting concrete ways of addressing them. A well-done audit will highlight the minor adjustments and changes required to fine-tune the process, resulting in its wider acceptance throughout the organization.

CONCLUSION

By solving IT problems, and addressing the concerns of business unit personnel, the gap analysis process can become a tool for communication between the two areas. Indeed, the process forces such communication because it cannot succeed without dedicated involvement from all parties involved. For process success, several groups must meet and discuss the process's goals and hurdles. They must also agree on how to complete the analysis, and they must cooperate in order to meet the goals set forth in the plan.

Key to process success is an objective approach in dealing with the issues that surface, and avoidance of fingerpointing, as the hurdles are identified and documented. There must be no defensiveness on anyone's part if the analysis is to deliver the expected results. Rather, the focus must be on solutions.

Cooperation between IT and its customers will increase when people understand the causes of their continuing problems, when they see that solutions can be found, and when they realize that the organization is interested in putting these solutions in place. Getting to that point will take time and patience, but there will be strong results if the process is carried out correctly.

Therefore, every IT manager should carefully consider using a gap analysis approach in dealing with IT department issues. In the worst

case, the exercise will fail. However, little will be lost even in the unlikely event of failure, because the analysis process is associated with only limited risk and expense, particularly when a pilot process tests the process's value. And the potential benefit should override any concern about risk or expense.

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