Inventory Your IT Skills and Competencies to Meet Business Needs

A critical component of workforce planning is understanding the IT organization's bench strength. Here are best practices for CIOs and IT and HR leaders looking to inventory skills and competencies for an objective assessment of their enterprises' ability to deliver on short- and long-term goals.

Gartner foundational research is reviewed periodically for accuracy. This document was last reviewed on 3 July 2015.

Additional Perspectives

- Midmarket Context: 'Inventory Your IT Skills and Competencies to Meet Business Needs' (26 March 2013)

Key Challenges

- Most IT organizations don't have an objective and current inventory of the bench strength of their workforce. Less than one-third have a formal workforce planning process to forecast short- and long-term needs and to identify talent gaps.

- The inability to properly plan workforce needs has resulted in many IT organizations overusing supplemental staffing (for example, contractors), increasing their turnover levels and decreasing performance levels.

Recommendations

CIOs and IT and HR leaders:
Decide on the scope of the skills and competency inventory, and consider starting the process on a pilot basis in an area of high vulnerability (for example, critical skills) or an area that has strong leadership commitment.

Develop a communications plan to ensure participants are aware of the purpose and the benefits to them for participation. Ensure that the messaging shows how the inventory process links to other key HR processes to drive long-term sustainability.

Ensure the process for data collection is user-friendly, and that processes are designed to drive meaningful and useful results. Encourage a partnership between employees and managers to ensure the assessments are valid, and that proper and timely development plans are created and executed.

With a clear picture of what success looks like, identify a few key meaningful qualitative and quantifiable metrics that determine program success.

Introduction

The dynamic and fast-paced IT landscape makes it increasingly difficult for CIOs and IT and HR leaders to confidently project what roles, skills and competencies they will need in the IT workforce to properly align with and support the execution of the business strategy. Furthermore, many IT organizations don’t have a framework and a systematic process, making them blind to the skills and competencies that exist in their current workforce. This makes it impossible to assess and forecast gaps, and determine the actions they need to take now to always have the right people in the right roles with the right skills and competencies at the right time. Unnecessary risk is introduced to the IT organization by not having the data that is needed to understand current bench strength capability gaps, as well as what can be anticipated for the future.

A current and continuously maintained inventory of the IT organization’s skills and competencies will provide a complete workforce profile, which will enable better decision making in the areas of recruiting, sourcing, resource management, and training and development.

Analysis

To effectively tackle the challenges faced by IT organizations in preparing the IT workforce to meet future business needs, CIOs and IT and HR leaders must start with establishing a formal skills and competency inventory process. This minimizes business risks and has proven to deliver the following benefits:

- Provides a systematic framework and process for defining current as well as future profiles of roles, technical skills, and business and behavioral competencies required to execute the business and IT strategies.
- Enables a formal resource management process to be established that better leverages internal talent pools.
- Allows for informed sourcing decisions on the optimal mix of internal and external resources (for example, contractors).
- Identifies and monitors critical skills areas for risk management and mitigation purposes, such as succession planning to address an aging workforce in key roles.
- Provides valuable insight, and oversight, to training and development strategies, such as implementing succession planning for key roles, and creating leadership development strategies for those with high potential.
- Prioritizes and optimizes training investment to improve the effectiveness of training and development programs.
- Improves staff retention through integrated talent management programs, with a strong focus on personal and professional growth.

Conducting an inventory and assessment of workforce skills and competencies is a key step in the workforce planning process that provides the data and insight CIOs and IT and HR leaders need to formulate the strategy and plans for acquiring and developing the right skills and competencies in the IT workforce (see the Glossary section for the definitions of "skills" and "competencies" as the differentiation is important to understand). Typically, skills will cover technology-related capabilities and are easier to assess. The number of skills that need to be assessed will be significantly greater than competencies. The importance of skills is greater (relatively) for entry-level jobs, whereas for competencies, they become much more important for senior-level roles. Competencies are harder to assess, and as such, the manager’s validation is critical. Competencies are also harder to improve through training but are absolutely the true differentiators for performance in the longer term (see "Ramp Up Workforce Performance Through Competency Development").

Figure 1 shows the road map to managing skills and competencies, while Figure 2 gives the associated definitions. This road map demonstrates that the inventory process is critical to integrating talent sourcing, development and management strategies.
Define Objectives, Process and Scope

The first step in developing and implementing an IT skills and competency inventory process is to set clear objectives for "Why are we doing it?" Some questions to ask are:

### Table: Road Map Definitions for IT Skills and Competency Management

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<thead>
<tr>
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<tbody>
<tr>
<td><strong>IT strategy</strong></td>
<td>What are the strategic IT initiatives?</td>
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<tr>
<td><strong>IT forecast</strong></td>
<td>What skills and competencies will be needed to achieve each strategic initiative?</td>
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<tr>
<td><strong>Skills and competency inventory</strong></td>
<td>What skills and competencies do internal members of IT have and at what proficiency levels?</td>
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<tr>
<td><strong>Sourcing alternatives</strong></td>
<td>What sources — internal or external — will be used to resource projects?</td>
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<tr>
<td><strong>Gap analysis</strong></td>
<td>What learning is necessary to close any gaps between current and desired skills?</td>
</tr>
<tr>
<td><strong>Learning plans or delivery</strong></td>
<td>What mix of development activities and delivery vehicles will be required?</td>
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Source: Gartner (October 2012)
What are the expected outcomes and business value?

How will the process help enhance the management and retention of organizational knowledge and capabilities?

How will the process align with and contribute to the planning for short- and long-term resource needs?

How will it be used to enhance other HR processes (for example, hiring and career development)?

An understanding must be gained and shared throughout the organization that this process is a fundamental piece of the value chain for the talent management strategy.

Some organizations may decide to conduct an organizationwide inventory as a one-off project. However, to truly reap the benefits identified earlier, CIOs and IT and HR leaders should develop a formal process that is ongoing and agile and is integrated with other key processes (for example, performance and career development planning) to maintain an up-to-date database of IT workforce bench strength.

A key success factor to ensuring higher objectivity and smooth execution of the inventory is to clearly define and communicate, step by step, what employees and managers can expect and need to do to complete the assessment (see Figure 3). Throughout the process, ongoing communications will be instrumental to helping employees stay focused to maximize the benefits they receive from performing the self-assessment with honesty and objectivity.
Figure 3. Skills and Competency Inventory Process

- **Kickoff**
  - Validate the scope
  - Review objectives
  - Identify the project team
  - Define key roles or responsibilities

- **Information Gathering**
  - Review sample questions
  - Identify additional "cuts" of data needed
  - Gather skills and competency information
  - Enable access to listing

- **Identification**
  - Select skills and competencies to be inventoried
  - Identify job families
  - Map inventory participants to job families

- **Collection**
  - Have participants self-assess (using selected tool)
  - Roll out inventory by job family
  - Have managers validate proficiency levels, if appropriate

- **Data Analysis**
  - Perform multiple data cuts
  - Analyze data
  - Summarize findings

- **Delivery**
  - Provide data to stakeholders
  - Present findings

**Communications**

- Communicate the project to the organization
- Set objectives and purpose
- Send out instructions for completing the inventory
- Set the timetable for job family rollout
- Communicate progress and "next steps"
- Communicate results, where appropriate

Source: Gartner (October 2012)
A skills and competency inventory process comes under the broader umbrella of workforce planning, and neither of these efforts normally has to start from scratch. A multitude of data and information is likely residing in strategy documents, project management office, HR information systems (HRISs), performance management system, career development reviews and so forth that can provide input as to what skills and competencies should be assessed, proficiency levels, and so on. The point here is to make sure to review the data and information that are currently available within the HR and IT organizations to expedite the process and get it off the ground.

It is recommended, where feasible, to consider conducting the inventory beyond the IT workforce by expanding it enterprise-wide to assess and improve the utilization of all available resources. However, this may not always be the best approach at the initial launch of such an initiative for a number of reasons, including culture, time and cost constraints. For many organizations, it often makes more sense to start a pilot with selective segments of the IT workforce. In this case, the pilot usually includes capability areas that present the most vulnerability and risk to the business (for example, mission-critical business system management, or aging workforce in key roles). The pilot may also be conducted in groups where there will be less resistance, and where it can be implemented with minimal disruption and risk.

Develop a Communications Plan

Whenever implementing a new process, IT and HR leaders must get sufficient buy-in and commitment from employees and managers to ensure the expected outcomes can be achieved. Timely, open and ongoing communications are therefore essential not only to keep everyone informed about the process but also to engage and motivate people to take actions accordingly (and to drive behavioral changes where needed). A common challenge that IT organizations face when conducting a skills and competency inventory, and must address, is that employees’ skepticism and fear of any negative consequences often cause their resistance to actively taking part in the assessment with honesty and objectivity.

Through developing a communications plan, IT and HR leaders can ensure that, at each step of the process, what employees need to know and do is clearly defined and communicated, along with feedback mechanisms that promptly address employee concerns and resistance at both individual and team levels. There must be ongoing communication by leadership and management alike. This will keep employees informed and prepared, so that they support existing and ongoing changes as it relates to this process. In particular, the plan should:

- Specify the timing, audience, messaging and appropriate media used to educate employees and managers on why the inventory process is important to the continued success of the organization.
- Explain how the outcomes of the assessment will be used to develop the employees and change the way they do their work.
- Define what support and assistance are available to employees when needed.

All these messages are important to the success of rolling out a skills and competency inventory process.
Far too many organizations have never fully realized the benefits of a skills and competency inventory, because it was looked at as a one-time event (in cases where it wasn't intended to be a one-time event). To gain the benefits outlined earlier, organizations must continuously maintain the inventory and take into account future needs. Since this is a long-term endeavor, sustainability will be achieved only by understanding how this process integrates into other key HR processes (for example, performance management, career development and hiring) and how behaviors throughout the enterprise will need to be changed. As a result, the key messaging from the communications plan must outline and reinforce what needs to be changed, and how.

Make the Process "User-Friendly" and the Results Meaningful

Another key success factor is to design a user-friendly process and tools to collect and analyze data that will derive more-actionable advice and decision support to the CIO, HR and IT line managers. Getting to the right level of detail for each skill and competency is critical, as are the right categorizations, to simplify and facilitate the assessment process. This balanced approach is important to provide comprehensive information that the organization needs to make decisions on learning activities to address the gaps.

There is virtually an unlimited list of skills and competencies that can be compiled and against which employees can be assessed. However, the best practice is to not try to cover everything, but to focus on key skills and competencies that enable and improve the organization’s ability to execute its strategy and goals for the short term and long term (approximately three years). It is imperative to keep the number of skills and competencies in which staff are assessed against and that is maintained in the inventory to a manageable level. Organizations should also include legacy skills, as needed, to identify areas of potential vulnerability (for example, aging workforce and potential retirements).

Skills and competencies should be categorized into major clusters (for example, by function or technology platform) and appropriate sublevels (for example, programming languages and business skills) in a meaningful manner. This enables people using the assessment tools (employees and managers) to easily locate, match and evaluate against appropriate skills and competencies for relevant IT roles and functional capabilities. When designing the inventory assessment tool, HR and IT leaders should be mindful of the types of reports to be generated from the inventory database. A minimum requirement of any purchased or developed tool is that it supports the import and export of data in Microsoft Excel format. The most common reports used include the following categories:

- Skills and competency profile by individual employee
- Bench strength — for example, the average proficiency level by skill
- Strongest skills and competencies, by proficiency level and/or by role
- Weakest skills and competencies, by proficiency level and/or by role
- No advanced or expert proficiency levels for a critical skill
- Analysis of top critical skills — number of employees who possess them, number by proficiency level and average years of experience
Encourage Employee and Manager Partnership to Execute the Assessment and Development Plan

One of the primary challenges as mentioned earlier in conducting an inventory is ensuring employees understand its purpose and benefits. This is important because most skills and competency inventory programs are designed and conducted based on employees performing self-assessments, followed by the managers’ validation. This is prevalent and recommended primarily for two reasons or assumptions:

1. While managers often have an accurate understanding of the bench strength of their teams, each employee has the best knowledge of his or her own knowledge, skills, abilities and experience.

2. It gives the process more credibility and integrity as employees are responsible for and in control of what they input to the process.

The talent management decisions based on the results of the inventory assessment will therefore have greater buy-in when employees know the source of data and its validity. Managers play an important role in improving the accuracy of data through validation of the data submitted by employees and subsequent discussions with employees to address any disparities emerging through this process.

The results of the inventory assessment can then be used to facilitate the career-development-planning conversation between the employee and the manager. The purpose of the discussion is to:

- Prioritize areas of learning.
- Plan training and other learning opportunities.
- Discuss employee desires for the types of future assignments.

The goal is to prioritize and balance the organization needs with the short- and long-term career goals of the employee (see "Build a Career Profile, Not a Career Path").

Identify Metrics to Determine Program Success

As with any initiative that requires a meaningful investment of time and money, the measures of success must be identified and agreed on upfront. This will help set the baseline and help monitor the impact of the skills and competency inventory process on aligning and improving workforce capabilities over time. Figure 4 provides a list of commonly used metrics, both quantitative and qualitative.
To gain the most out of the time and financial investment in conducting an inventory, organizations are highly recommended to design the program to ensure it is continuously refreshed using a self-service system. However, governance-type processes must be implemented so employees and management can maintain the inventory’s currency and leverage the benefits.

### Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

- "2012 Strategic Road Map for I&O Staffing"
- "Aligning Employee Skills With Future Goals Enables I&O Leaders to Build Effective Teams"
- "Australian Governments Adopt SFIA as Basis for ICT Skill Framework"
- "Build a Career Profile, Not a Career Path"
- "Interview With Peter Leather, Host of the SFIA User Forum"
"Jump-Start IT Skill Assessment Using SFIA Skill Categories and Definitions"

"Leverage a Career Profile for Ongoing Success"

"New Skills for the New IT"

"Ramp Up Workforce Performance Through Competency Development"

"Strategic IT Workforce Planning: From Process to Technique"

"The Business Case for Strategic Workforce Planning"

**Acronym Key and Glossary Terms**

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<thead>
<tr>
<th><strong>Competency</strong></th>
<th>A set of characteristics of an individual that are observable, measurable and predictive of superior performance within a given role or job. They are &quot;how&quot; the job gets done.</th>
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<tbody>
<tr>
<td><strong>Skill</strong></td>
<td>The observable manual capabilities required in the execution of a job or task. They define &quot;what&quot; is performed within a job.</td>
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**Evidence**

This research is based on expertise gained through a significant number of skills and competency inventories conducted through Gartner’s consulting organization. In addition, we have previously conducted case-based research with clients who have successfully executed a skills and competency inventory.