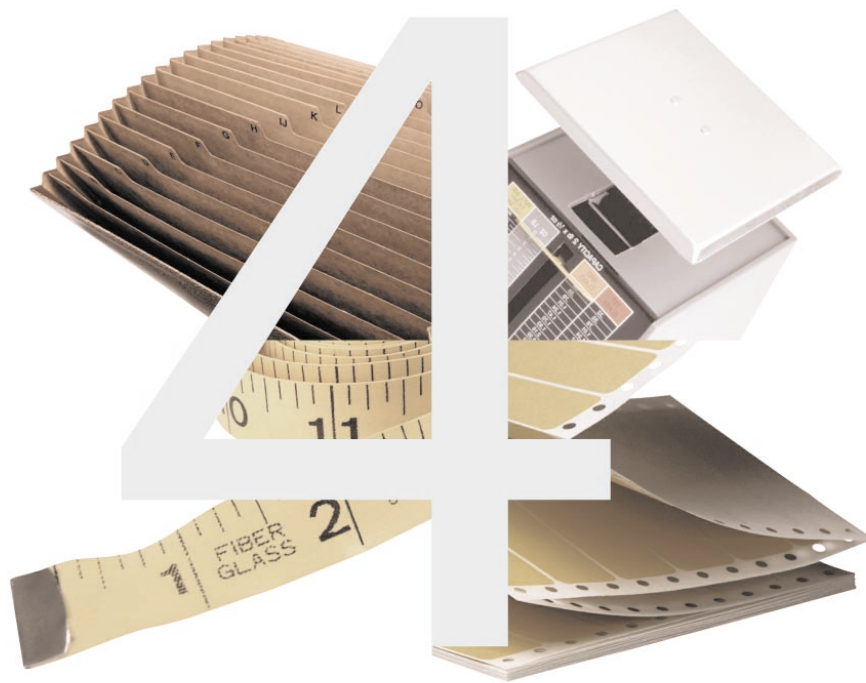# Four Essential Components
for Skills Inventory Management

1. A Well-defined Classification System

2. A Consistent Unit of Measure

3. An Efficient Measurement Process

4. A Practical Tracking and Reporting System

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Four Essential Components for Skills Inventory Management

It's Business 101—track supply and demand for a critical business resource, and you can better manage inventory levels to maximize profitability. Sound simple? It is, unless you've tried applying the age-old business principles of inventory management to the employee skills that are critical to the success of your enterprise.

The following questions are on the minds of executives currently engaged in skills inventory management initiatives:

- Which of our employees' skills should be inventoried?
- How do I account for various levels of skill?
- What skill sets will be needed to meet the needs of critical projects, programs, and customers?
- Where does our inventory of critical skills fall short, and by how much?

These questions must be addressed as part of any skills inventory management initiative. If you find yourself frustrated as you try to inventory the skills that drive everything from customer satisfaction and product development to sales and operational success, you're not alone.

Objective metrics are the missing link.

Decision-makers in today's smartest companies are recognizing the importance and challenge of managing employee skills for bottom-line performance. The good news is, skills can now be managed effectively as a vital business inventory, thanks to the development of new tools for delivering the missing link in skills inventory management: practical, objective metrics.

A system for achieving objective metrics enables companies to manage vital employee skills for measurable success. What makes a skills inventory management initiative improve business performance, and how do objective metrics fit in? A look at four essential components of inventory management provides an answer.

#1. A Well-defined Classification System

A detailed system of classification is fundamental to any inventory management program. But unlike physical inventory items, such as part numbers or products, employee skills don't have convenient item numbers for identification.

Problem—Lack of definition leads to an unmanageable array of skills to track.

When it comes to creating the basic classifications for building a skills inventory, the problem often stems from a lack of standardized definitions for skills. What one manager refers to as a "Programmer" may be similar (but not the same as) another manager's definition of "Systems Engineer." The result: an inability to distinguish between "apples and oranges," leading to an inaccurate or unreliable inventory measure.

Solution—A pre-defined classification system provides the basis for effective skills inventory management.

An objective system must rely on an established list of predefined skills and an agreed-upon set of criteria by which to measure them. Managers must be able to select a group of employees to participate in a skills inventory initiative and quickly decide which skills are critical to the group's success. And they must be able to do so without having to endure the time-consuming process of defining each skill.

A focused list of critical skills is often the best foundation for what will later grow into a wider skills inventory management capability. As a foundation for establishing a skills program, many companies begin by agreeing on key business objectives and identifying the skills that most closely impact those goals. An objective skills classification system frees decision-makers to focus on critical skills and business objectives, and helps to clearly establish the parameters for a successful initiative.

#2: A Consistent Unit of Measure

While companies have little difficulty tracking their inventory of office supplies or other physical resources–which can be measured by number of units, weight, or volume–calculating the supply of employee skills is a different story.

Problem—Without a consistent unit of measure, companies can't track or verify skills levels.
Traditionally, companies have measured skills by "headcount." That is, a manager from a department or project group may account for 25 Java programmers, 4 project managers, and 10 customer service experts. But the numbers can be deceiving for several reasons.

First, how do you verify that the 25 Java programmers in the group have the level of Java skills required for the job at hand? Many organizations rely on subjective forms of assessments for the answer. For example, they may simply ask employees to rate their own skills, or they may rely on the recommendations of others in the group. While self-assessment or verification by a supervisor is important, both are subjective forms of validation. Self-assessments are routinely inaccurate, with inexperienced employees overrating their skills (because they don't "know what they don't know") or with experts underrating their ability. Personal verification is subject to the variables of individual bias—not necessarily a question of a supervisor being fair, but more an issue of the supervisor being more familiar with one employee over another.

Second, when a skills headcount is the unit of measure, how do you measure each employee's level of skill? A detailed knowledge of skills levels enables managers to identify top performers for leadership or mentoring roles, and it ensures that strong performers are assigned to specific project roles. Without a detailed measurement system, decision-makers are forced to rely largely on unreliable, subjective skills data.

Solution—An objective skills measurement system provides detailed metrics for tracking skills levels across the enterprise.

Online skills measurement systems are now giving managers the unit of measure they need to account for skills levels on a consistent basis. The SkillsBench system, by online skills measurement provider Brainbench, provides a detailed score ranging from 1.00 to 5.00 for each skill. Unlike subjective measures, these metrics will not vary from one department or administrator to another. The whole system is accessed, delivered, and reported online.

Another difference is that the objective measurement system calculates changes in skills levels over time. That is, with a consistent and detailed unit of measure to track skills, employees and managers can document skills improvement. Supervisors and managers can track skills inventories, identify shortfalls (skills gaps) and surpluses (skills strengths). They can also distinguish between the skills levels of different employees, information that is vital to meeting the demands of each client or project.

Industry Comparison
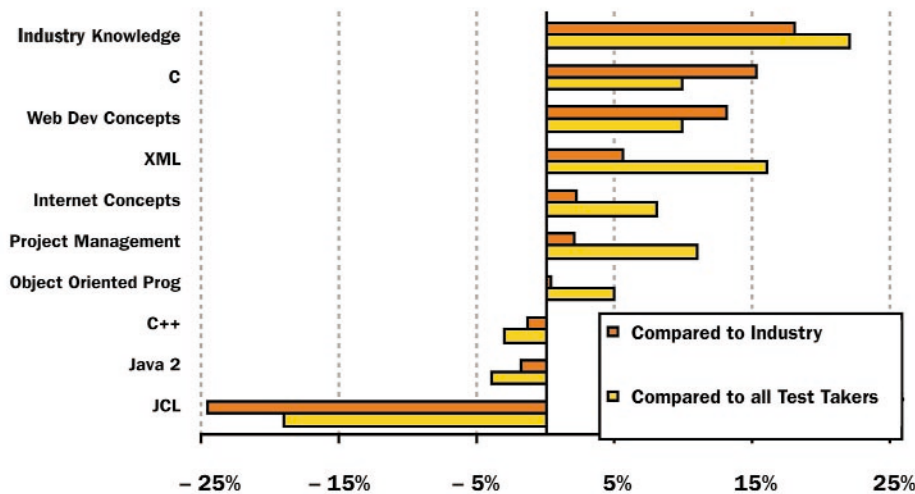
A consistent unit of measure enables decision makers to analyze skill levels within the enterprise. Using the Brainbench skills measurement system, which includes a database of millions of test-takers, decision makers can benchmark against industry averages to identify relative skills gaps.

#3. An Efficient Measurement Process

The need for an easily-administered measurement process is probably the most neglected requirement of a skills inventory management plan. A company's ability to assess skills on a periodic basis and arrive at a quantifiable measurement can determine program success. How can companies develop a practical skills measurement system—one that continues to be used long after implementation? Ease of use and meaningful feedback are crucial.
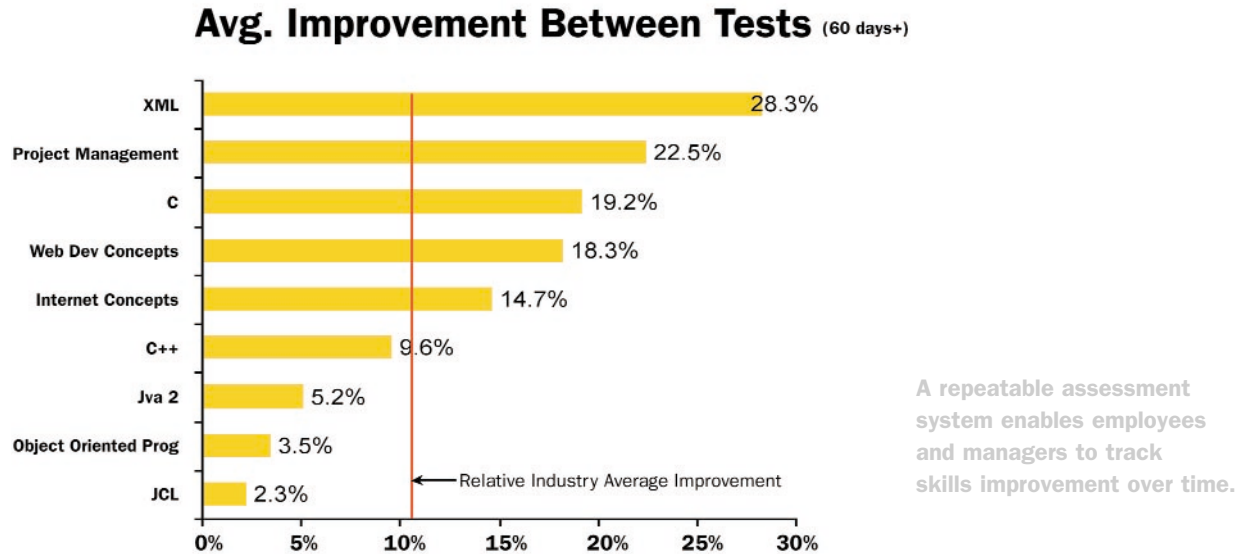
Problem: Skills inventory management initiatives can fail due to a fall-off in employee and manager participation.

While the enterprise may not have to re-measure its skills inventory with the same frequency as it tracks other items, repeat measurement is essential. Without the ability to deliver repeat assessments, a skills inventory management initiative becomes nothing more than a one-time employee test, with perishable data that cannot track changes in a company's supply of skills.

Many companies have made unsuccessful attempts at tracking skills in the past, and frequently they still apply the same flawed strategies today. Employees may be asked to complete and submit self-rating forms, or they may be asked to take a test associated with a career milestone such as a training event or a periodic review. Unfortunately, the results of such assessments frequently "disappear" into a records system without re-emerging as actionable information for the company or for the employee. When results fail to facilitate action, the usefulness of the initiative is compromised, and participation declines.

Solution: An online objective measurement system enhances ease of testing, provides fast and meaningful feedback, and ensures continued participation.

The secret to successful skills inventory management lies in the ability to automate test administration and provide fast, actionable feedback. Through an online testing system, an employee can take a skills assessment on his or her own time without the need for supervision. Results can be calculated and delivered immediately. The system addresses the two issues that have traditionally hindered skills inventory management efforts:

Avg. Improvement Between Tests (60 days+)

Skill	Improvement
XML	28.3%
Project Management	22.5%
C	19.2%
Web Dev Concepts	18.3%
Internet Concepts	14.7%
C++	9.6%
Jva 2	5.2%
Object Oriented Prog	3.5%
JCL	2.3%

← Relative Industry Average Improvement

0% 5% 10% 15% 20% 25% 30%

A repeatable assessment system enables employees and managers to track skills improvement over time.

- **Ease of Testing**—An online system makes it easy for employees to measure their skills at will, without imposing a test administration burden on the company. Employees can access skills assessments online and take tests on their own schedules. Company decision-makers can create an assessment schedule without committing the resources or facilities demanded by a traditional pencil-and-paper testing regimen.

  In addition to easy accessibility, online skills measurement also facilitates repeat testing. Traditional tests may present the employee with the same questions over repeat assessments. Because of this repetition, they tend to measure the test-taker's ability to memorize previous tests rather than provide an accurate measurement of skill and knowledge. Through the use of Computer Adaptive Testing (CAT) technology, an online system can facilitate challenging repeat assessment by dynamically selecting questions as the test is being taken. As a result, the user takes a different test with each assessment, ensuring a challenging experience with each test.

- **Fast, Meaningful Feedback**—With ease of use and repeatability, an online system can provide a practical skills management resource for employees and company decision-makers alike. But what keeps them coming back? In an efficient skills inventory management effort, the answer lies in the immediate feedback provided by an online system. With one data repository at their fingertips, managers have real-time access to the information they need to assemble teams, focus training, or make many skills or performance-related decisions. For employees, feedback stimulates self-improvement and is provided at the time when motivation for improvement is strongest—immediately after an assessment.

#4. A Practical Tracking and Reporting System

The success of any inventory management initiative is based on its ability to deliver consistent, actionable results. Skills inventory management is no exception. The immediate availability of objective metrics enables managers to take action to focus training, make assignments, and deploy project teams. To be effective, traditional skills management efforts must address a common reporting problem:
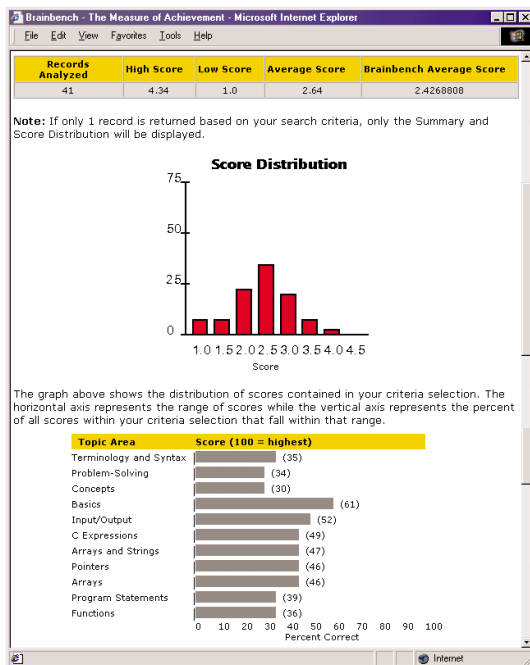
Problem—Skills data commonly becomes mired in disparate administrative processes before it can be interpreted into actionable information.

If you are running a warehouse, easy access to detailed inventory information is crucial. With a skills inventory management initiative, accurate and relevant data is just as important. In traditional skills management initiatives, the need for repeatable real-time measurement and

Advanced online reporting capabilities enable companies to track skill levels across the enterprise at a glance.

reporting is often overlooked as impractical or impossible. Faced with the prospect of managing large amounts of raw data or continuously pursuing employees to assess and reassess their skills, manager support for a skills inventory management initiative will decline.

Solution—Objective measurement systems automate the reporting process.
Lying at the heart of an objective skills measurement system is the automated reporting function. An online system delivers results without bias, based on calculations from the test-taker's answers. The idea of objective test results is not new—but the online measurement system is the first to be able to deliver objective results repeatedly, across a large body of test-takers, and with no administrative burden. The results delivered by online reporting systems can be used to determine skills gaps, identify top performers, or track employee learning progress across the organization, regardless of the size of the enterprise.

Skills Inventory Management Delivers a Human Capital Advantage

The need for skills inventory management has never been greater, as all organizations struggle with the challenge of optimizing their investment in human capital. Until now, however, the systems for applying Business 101 principles to the inventory of employee skills have not been available. Make sure that your organization's approach includes each of the above four basic components, and you'll avoid many of the mistakes that have kept other skills inventory management initiatives from getting off the ground.

This Report is Brought to You by Brainbench

Headquartered in Chantilly, Virginia, Brainbench was founded in January 1998, and is now the world's most respected online skills measurement authority. For businesses and individuals, Brainbench provides online assessment and certification of over 400 different skills that drive business success today. SkillsBench, the Brainbench enterprise skills measurement system, enables enterprise-wide management of knowledge resources for comprehensive business process improvement.

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