



Measuring and Managing Human Capital Intelligence

The New Wealth in Information Age Organizations

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Executive Summary

One of the ironies of the Internet age is that, far from replacing people, as some feared, the pervasiveness of technology has validated that human talent is truly an organization's greatest need and, once acquired, its greatest asset. You can gain the competitive advantage by applying Internet technology to the measurement and management of your organization's talent needs — the human capital of your organization.

Today's marketplace realities have rendered old ways of doing business obsolete. Most companies operate in increasingly commoditized markets where new products and services can be copied within days. Mergers and acquisitions are no longer a viable method of gaining market share or growing revenue. The pace of change means strategies that succeed today may very well be outdated in less than a year.

Companies must differentiate themselves through the value of the experience that they provide to customers. They need intelligence on customer behavior and profitability. They need intelligence about their suppliers to ensure those suppliers contribute to delivering a high-value customer experience at a sustainable cost. They need intelligence about organizational performance to make and affect decisions that drive their business forward. Effective strategies are more crucial than ever, and better intelligence is the only way to get there.

In a rapidly moving human capital environment, it is very difficult to do three essential tasks well:

- Present information that anticipates, predicts and forecasts workforce changes.
- Analyze trends while they are still current news.
- Deploy and leverage human capital using objective evidence, as well as anecdotal evidence.

To do these three things correctly, organizations must recognize the value of human capital intelligence, be able to acquire the intelligence they need and deliver that intelligence quickly enough to act on it.

Time for an HR Revolution

In today's economy, where more than half of the Gross National Product is allocated to the information sector, the driving force is knowledgeable people. The old adage, "people are our most important asset," is more than a morale-boosting slogan. It is an economic reality. In an information-based economy, an organization's real value resides in the collective experience and intelligence of its people. Of course, people are not the only contributing factor to success. The key to gaining the competitive advantage is the willingness and ability to share the knowledge, skills and attitudes found in human capital. It is the people, processes and technologies that are an organization's wellspring of innovation and competitive advantage.

So why do so many organizations focus on the cost of *paying* people rather than the value of *investing* in them?

Traditionally, human capital has been hard to identify, harder to quantify and harder still to manage effectively. Human capital is more than simple reports on headcount, compensation, turnover and absenteeism. The concept of human capital embraces all facets of the knowledge, skills, intellectual property and experience that generate wealth for the organization.

Traditional organizations weren't designed to manage knowledge assets; they were designed to manage physical assets. In most cases, knowledge management generally focuses on protecting intellectual property rights, such as trademarks, patents and trade secrets.

These types of organizations use accounting systems based on debits and credits that reflect the cost of material and labor and measure what happened last month, last quarter or last year. In a volatile economy, it is necessary to anticipate changes that will affect the work force of tomorrow. Competition for product and service offerings is easily copied in a matter of days, and strategies put in place today may be outdated in less than a year. Constantly looking in the rear view mirror while trying to drive forward does not work. Organizations need to understand issues that are happening now, such as increased turnover and low performance scores, and be able to build models that will allow the organization to see what the turnover is costing or if the employees best suited for leadership in the succession plan are likely to leave. Validating groups of people and individuals most likely to leave allows the organization to see true financial costs and be able to implement policies and procedures that can optimize costs and recruitment and retention efforts.

With employee costs often exceeding 40 percent of corporate expense, it is essential to gauge the value of human capital, says Jac Fitz-enz, Ph.D., author of *The ROI of Human Capital* and founder of the Saratoga Institute, a global leader in the study of human capital management. Fitz-enz maintains that a human resource (HR) function in an organization must be more than a helpmate with staffing, training and compensation decisions. HR must also contribute as a strategic partner on issues that show genuine, bottom-line impact. When knowledge emerges as a key ingredient in economic success, managing intellectual assets becomes a critical task of business.



Figure 1: Human capital alignment life cycle

Today's HR management teams need to adopt a holistic focus, looking at human capital strategies that are linked to the overall goals of the organization. HR should be able to strategically acquire, develop, deploy, maintain and retain the human capital needed to get the desired outcome. As this strategy is successfully implemented across the business units of research and development (R&D), customer service, quality control and others, the individual units become aligned to achieve organizational goals.

Moving from HR Management to Human Capital Management

Traditional Human Resource Information Systems (HRIS), Enterprise Resource Planning (ERP) systems and legacy systems automate transactions, supply employee and manager self-service, automate workflow, and enhance the task-driven routines formerly performed by HR departments. This information is fed into standard and custom reports. The new vision of human capital management introduces a new role for HR — that of strategic asset management, a shift from tactical processing to data driven expertise. This new role requires additional skills and mind sets within HR to ensure success.

The new structure looks at the corporate goals and cascades these goals to the business units, tasked with achieving the goals. Supplying business units with the most effective human capital is achieved through strategies of effective hiring, development and retention.



Figure 2: Linking Human Capital Management with organizational goals

Historically, individual employees and managers called upon HR to satisfy requests. On an individual level, requests by employees were typically about tracking and accessing personal information concerning compensation, benefits and retirement issues. Front-line management required HR to provide information on recruitment, remuneration, training and termination. These HR services have become obsolete with self-service applications and with line management doing most of the traditional HR work.

Increasingly, HR's internal customers include top-level managers, corporate officers and the board of directors. As these senior executives make mission-critical decisions, their requests are focused on strategic goals, such as increased revenue and quickly developed innovative product/service offerings. As budgets are tightened, organizations attempt to do more with less. Thus, building business cases and supporting them with the appropriate measures should drive human capital management.

Unlike traditional transaction-based HR systems, today's human capital management systems should:

- Support organizational goals by providing the information to acquire, maintain, develop and retain the right employees. "We can develop strategies that anticipate and meet our organization's human capital needs"
- Align people, processes and technology around common goals. "We know how our progress on each measure impacts organization-level objectives."
- Measure the strategic value of human capital investments. "Our customers need accurate information in a timely manner in a simple at-a-glance view."
- Anticipate, forecast and predict human capital changes. "We can effectively provide human capital intelligence for supporting business cases."
- Learn from best practices by leveraging benchmark data. "We have a way to compare practices and begin to identify indicators for competitive advantage."

SAS: Meeting Human Capital Management Needs

SAS Human Capital Management empowers HR departments to make the most of traditional HR information and other non-traditional information necessary to benefit organizational objectives. With SAS Human Capital Management, HR professionals can:

- Quantify the bottom-line impact of HR processes as leaders of financial returns.
- Mine data to explore potential problem areas and discover unusual patterns in information.
- Model employee behaviors such as turnover or performance abilities for proactively determining and meeting workforce-planning needs.
- Anticipate, forecast and predict changes in human capital resources – both in your organization and in the emerging economic environment.
- Access and understand human capital information through the HR Scorecard – which allows HR to identify and then quantify the appropriate strategy and support organizational goals.

Built on the award-winning SAS data warehousing technology, SAS Human Capital Management was hailed as the first comprehensive HR analytical system and named by *Human Resource Executive* magazine as one of the top ten HR products.

The Challenges of Human Capital Management

You don't have to look too hard at the products, services and wealth in today's economy to agree that intellectual assets are, in fact, an organization's greatest assets. However, most of an organization's intellectual assets exist in the collective brainpower of its people. These assets can't be owned, only rented. Employees are free to walk their assets out the door to your competitor at any time for a better offer.

Using human capital management, HR constantly profiles its human capital against evolving company needs. As talent needs emerge or shift, the human capital must be reevaluated to match. Thus, the HR function is no longer a function of simply managing headcount – it is a matter of protecting high-value corporate assets.

HR is embracing the concepts of customer relationship management (CRM) with the organization's executives as customer. The latest data indicates that nearly 40 percent of organizations will invest heavily in CRM this year to build lifelong customer relationships. Progressive thinking organizations will also find ways to maximize the value of human capital, to minimize negative influences, and to court and retain the most valued people in a volatile marketplace. In addition, these organizations will use effective strategies to maintain alignment with enterprisewide goals. In short, it is time for HR to perform like a strategic corporate contributor, not just an internal taskmaster of personnel functions. The changing model of human resource management — human *capital* management — requires re-engineering the management of human capital through analytics and measurements.

For HR to play a genuine role in developing and managing human capital, it has to measure intangibles, identify unusual patterns in data through technologies such as data mining, anticipate future needs by understanding correlations between measures, and take action. But organizations have historically been reluctant to try to quantify human capital. Organizations don't own human capital; they share it with employees. The value of human capital is manifested in hard-to-quantify things, such as brand equity, expertise level and innovation — some of which can be measured in artifacts or dollars, some not.

Moreover, it is difficult to relate the cost of acquiring human capital to the value of having it. The cost of acquiring human capital is generally more easily measured because it is usually identified as a dollar amount. The value that human capital brings to an organization is much less tangible. Human capital costs can be determined by recruitment costs such as the number of days a position remains open or the number of applicants that translate into candidates that then become employees. The value of the human capital, once acquired, consists of things that are not easily measured. Think of the difficulty in determining the true value of trust, love, support or honesty. As individuals we know these are extremely important characteristics but very difficult, if not impossible, to place a dollar value on.

Making Human Capital Management Successful

Organizations can meet the challenges of human capital management with a comprehensive HR analytical system. The right system creates a roadmap for deploying HR strategy through predefined and user-defined objectives and associated metrics within a strategy framework. This framework is designed to measure the value of human capital assets and organizational effectiveness through HR-specific analysis and reporting.

With the right system, HR professionals can confidently say:

- We can deliver needed information into the hands of the decision makers.
- We can easily accommodate changes in the organizational structure.
- We can connect HR to the organization by building business cases and supporting them with metrics.
- We can make comparisons and differentiate, not copy.
- We can anticipate changes and build models to accommodate those changes

Let's take a look at how an effective HR analytical system can turn human capital management challenges into victories.

“We can deliver needed information into the hands of the decision makers.”

The value of any analytical reporting from a human capital support system is only as good as the underlying data. An HR analytical system is designed to help the organization establish a data framework as well as to identify measurements and information that are important, not just clutter.

Traditional ERP systems are automated for quick retrieval of employee information, not highly summarized and calculated information. These systems typically consist of small, specific types of information contained within many tables. These systems are designed for automating the input of data to report on standard information about an employee. They are not designed to intelligently pull together information for making higher-level business decisions.

For example, one table may contain ID, pay rate and pay date; another table has name, gender and address; and yet another has department, employee ID, manager name and bonus. To see the average annual pay and bonus for all employees by department and manager, all of the above tables must be accessible and joined to generate the answer. Joining these tables is difficult in the traditional system because that is not the purpose of these systems. The user must identify and pull together all the necessary information, and more importantly, the user must be able to use the software to get the answer. The effective HR analytical system intelligently gathers information and produces the answer without adding any work for the user.

Unlike transaction-oriented databases, SAS Human Capital Management provides a predefined HR data model that produces tables and data elements that provide the intelligence layer on top of the underlying operational systems. SAS Human Capital Management enables dynamic exploration of all necessary information without requiring additional expertise from an outside vendor.

With SAS Human Capital Management, multidimensional tables, or “cubes,” let you view summary statistics, such as totals and percentages, and standard deviations on measurements, including separations, headcount and turnover, aggregated across any number of information points, such as lines of business units, locations, or gender. This type of processing is typically not possible with transactional software and made even more difficult by the highly normalized nature of the data in most transaction systems.

Valuable information can be gleaned from non-HR data contained in other systems, such as financials, spreadsheets and external data sources, or on individual desktops. With SAS Human Capital Management, this information is assembled, cleaned and transformed in the data warehouse, ensuring that data from disparate sources is valid and consistent.

The solution displays results in tabular and graphic forms. And, you can easily view the information by multiple information points as your business needs change or as the underlying information changes. In addition, current and historical information is updated from the linked transactional systems, so the right information goes to the right person, instantaneously.

Master tables merge basic data with all appropriate detail tables to create composite pictures of relevant information. For example, if a user wants to see a list of promotions in 2002 for females in a particular line of business or location, that information is easily extracted out of one master table. There is no need to join multiple tables to produce all the desired fields. The task is already complete, saving time, resources and money. With solutions such as SAS Human Capital Management, you can be more proactive and can get answers without needing additional technical expertise.

“We can easily accommodate changes in the organizational structure.”

To become a strategic partner in the organization, HR must be able to accurately analyze information and view that information in a way that has never been possible before. As discussed previously, traditional systems optimize data for automation. HR analytical systems, on the other hand, optimize data for quick, accurate decision making.

“How many employees do I have enterprisewide?” That sounds like a straightforward question, until you consider the possibilities. How many are out on short- or long-term disability, family medical leave or sabbatical? How many are new-hires awaiting benefit participation? How many are single positions filled by several part-timers, or conversely, how many are single people holding multiple titles? How many are contingency workers, such as contractors? Does each contributing data system calculate or define full-time employees in the same way?

Human capital management means pulling this information from all sources, adequately summarizing the information, and combining the data in a way that accurately reflects a true headcount. Imagine the power of getting an accurate headcount by state, county and zip code, in graphical representation with statistical measures of employees, with a single mouse click. In minutes, you could report employee demographics, such as age, beneficiary information and benefit selections, broken down by any element of information. Armed with this information, HR can think strategically, rather than reactively.

Consider the example of maintaining an organizational chart — a nightmare in today’s dynamic, matrix-formed, dotted line, cross-functional, project-team environments. An HR analytical system makes it easy to perform “what if” analysis as the organization changes, enabling you to graphically depict restructuring changes before they happen, to clarify issues such as compensation cost per department, number of days positions are open, revenue by business unit, and skills and competencies of a newly formed group.

Next, consider the difficulty of organizations facing mergers/acquisitions. Both companies involved have varying sources of information and often two major HRIS. Typically there are two decisions the organization must make in relation to the information sources. They can either go through an extensive implementation process to pull one system into the other or keep the two systems and implement an HR analytical system to handle the various business rules of each system. An HR analytical system maximizes time, money and resources. The system complements the underlying HRIS and moves HR ahead with a solution needed for strategy. If HR must constantly focus on integrating information and the updates to those systems, very little time is left for implementing strategy.

Other questions challenging HR are: What is the turnover for the organization by manager, by department and by location? What are the causes of voluntary separations? Can HR accurately predict those employees most likely to leave and the associated skills of those employees necessary to keep the organization competitive in the future? What would be the cost or value of removing certain employees from their present positions to form a project team creating a new product line? The SAS solution provides answers to these questions in minutes with a few mouse clicks. No need to understand the underlying statistical analysis nor rely on outside assistance from an information technology (IT) group.

SAS Human Capital Management includes a wide range of pre-defined analytics to further simplify analysis for the non-statistician. Anticipating, forecasting, regressions, correlation, and time-series analysis are point-and-click accessible through a Web-enabled browser. Typical users can gain an on-demand, comprehensive picture of human capital assets — present and future. Quantitative experts can then delve behind-the-scenes to fine-tune the analytical process.

Managing intellectual capital means finding rigorous ways to track performance on multiple dimensions and to correlate that performance with financial results. It means being able to custom-define indicators to reflect the organization's unique sources and uses of intellectual capital. One company's key indicator might be trivial for another company in a different industry or one pursuing a different vision of success.

You can ascribe dollar values to such factors as brand equity and market share, gather face-value numbers on such obvious measures as headcount and tenure, and assign numeric values to subjective measures such as employee satisfaction and level of expertise. But you must understand which measures provide meaningful information, how they relate to one another, and how to assure that similar data are being compared.

Far too often, HR is viewed as a collection of loosely associated functions — payroll, talent discovery, benefits, etc. — rather than the foundation of corporate impact, says Fitz-enz. Human capital is represented in a range of interrelated subsystems, influenced by forces both internal and external to the HR function.

“We connect HR to the organization by building business cases and supporting them with metrics.”

An effective HR solution should enable you to analyze metrics against ad hoc analysis as well as pre-determined measures. For example, you may want to compare turnover as it relates to voluntary separation, involuntary separation and churn. You may then want to calculate the rate at which each type of turnover occurs based on employee demographics such as age, ethnicity and years of service, skill level or competencies.

With transactional systems, this type of benchmarking is difficult at best. Gathering cross-sectional information requires a highly summarized warehouse that displays the information you need in any way that is easy to interpret. SAS Human Capital Management can accomplish this task.

How do you become the employer of choice? How do you inspire employee loyalty, motivate their best efforts and help them get products to market faster? How do you achieve world-class customer service? How do you measure the financial effectiveness of ongoing HR processes and major projects, such as mergers and acquisitions or restructuring?

Measuring and Managing Human Capital Intelligence

HR strategies are the foundation of organizational goals. The HR function is the basis for supplying the right people into the functional units of R&D, sales and marketing, finance, customer service and quality control.

The proactive, strategic HR group provides the direction and foundation for the organization as a whole and requires a system that enables you to gauge HR performance within the context of organizational goals.

Toward that objective, SAS became exclusive technology partner to the HR Scorecard Action Working Group of the Balanced Scorecard Collaborative. The HR Scorecard Action Working Group embarked on a six-month program designed to advance the practice of human capital measurement through the lens of the balanced scorecard, a management system that helps people throughout an organization focus their efforts and measure progress toward strategic goals.

This working group brought together more than a dozen major corporations and the creators of the balanced scorecard vision to devise practical solutions for the difficult questions facing HR professionals today:

- How do we measure the contribution of human capital in creating value?
- What are the roles of the HR organization in measuring and managing human capital?
- How do we identify, quantify and replicate HR strategies and programs to maximize the value of human capital?

SAS' role was to create proof-of-concept prototypes that incorporate the balanced scorecard management strategies pioneered by Drs. Robert Kaplan and David Norton. The end result was the SAS Human Capital Scorecard integrated with the latest version of SAS Human Capital Management. The SAS Human Capital Scorecard:

- Distills data from the HR data warehouse to surface key performance indicators.
- Quickly alerts the user to problem areas needing attention.
- Enables the user to drill down to the underlying information.
- Identifies industry benchmarks on more than 250 key performance indicators.
- Allows the user to define new measures and benchmarks easily within the system.
- Visually explains the relationships between performance measures and objectives.
- Provides guidance as to appropriate actions to take.

The SAS Human Capital Scorecard serves as a tactical tool, tracing logical cause-and-effect pathways back up the chain to the highest organization goals. The software clarifies status on current measures and suggests key indicators of readiness for the future. The Human Capital Scorecard identifies lagging and leading indicators of other phenomena, thereby enabling proactive early planning.

“We can anticipate changes and build models to accommodate those changes.”

Being able to anticipate changes while the news is current is one of the most difficult challenges HR faces. Organizations have used traditional accounting methods that focus on what happened in the past to predict what will happen in the future. However, this type of analysis does not account for the rapidly changing economic environment.

The ability to build models that look for unusual patterns in data and are able to statistically validate behaviors is essential. To anticipate changes, SAS Human Capital Management provides a model that focuses on employee behavior. Once a behavior is accurately modeled, you can easily produce a plan to manage the predicted changes.

A Model for Employee Voluntary Turnover. Let’s look at the SAS Human Capital Management employee behavioral model for voluntary turnover — a significant issue facing organizations. Some turnover is unavoidable and sometimes even desirable. Undesirable turnover imposes very tangible increased recruiting and training costs plus the intangible costs associated with the loss of knowledge capital. For these reasons, it is important for an organization to be able to measure turnover, understand factors attributing to it, and design programs for controlling it.

SAS Human Capital Management contains standard reports that measure turnover as well as depict relationships between selected employee characteristics and the event of voluntary termination. A report from this model shows the degree to which various characteristics such as salary, educational level, skills or length of service contribute to turnover. Additionally, employees are individually ranked based on an assigned probability that they will voluntarily terminate within a specific time window.

Once your organization identifies behavioral characteristics of those employees most likely to leave, you can accurately anticipate changes and adopt plans to deal with these changes. Succession planning can become more effective. If individuals identified as most likely to leave are part of the organization’s elite, strategies must be put into place to retain them. The difficulty with adapting to change is exacerbated by the need to contribute to the change. Once the behaviors are identified, HR can maximize or minimize the behavior to measure the contribution.

“We make comparisons and differentiate, not copy other HR departments.”

You want to be competitive. But how do you know where you stand, unless you regularly, frequently and objectively measure your organization’s performance against benchmark data. This information is essential for proactively managing employee relationships. After all, your most valued human capital resides in the top talent that is most likely to be courted by your competitors.

Many existing ERP systems allow you to benchmark against specific metrics, but the metrics are limited and inflexible, not customized for your unique requirements. The ability to define measures specific to your organization is the key competitive advantage for setting strategy. While ERP systems automate processes, they are designed for standard ways of looking at organizational information. Do you want to define strategy by the same standards as your competitors? Do you want to define your organization by what a software vendor deems important?

Your answer is probably a resounding “no.” So which key performance indicators *are* important to benchmark against industry practice? We consulted with Fitz-enz and then built into SAS Human Capital Management the capability to calculate 250 metrics as standard features. You can choose from the available metrics or easily create your own. By accessing external benchmarks, organizations can compare their data to industry norms and to their aggregate return on investment (ROI) per employee, turnover rate, cost-per-hire and other key performance indicators to support sound strategic business decisions. The ability to compare internal HR metrics with external benchmarking sources further enhances the value of workforce planning and helps HR executives validate the contributions of HR to corporate goals.

Summary

HR professionals need a clear picture of how human capital management initiatives support and add value to the organization as a whole. They need to focus on activities that add greatest value and profitability. That requires the ability to easily explore, analyze and present integrated information that is specific to HR yet incorporates information from outside the HR function. They need to make rapid business decisions that can be backed up with quantifiable, accurate information, wherever and whenever they need it, without relying on the IT department.

A carefully considered HR analytical system meets all these needs:

- Support corporate goals by providing the information necessary to acquire, maintain, develop and retain the right employees.
- Align people, processes and technology around common goals, helping users understand how progress on key performance indicators impacts organization-level objectives.
- Provide a validated central data warehouse function that draws information from multiple systems and platforms into a multidimensional foundation for analysis.
- Enable the HR professional to gauge the organization's progress against industry best practices.
- Provide a clear picture of cause-and-effect relationships among key performance indicators by acknowledging that human capital is shaped by a multitude of interrelated factors.
- Support pre-defined and ad hoc analysis, forecasting, and modeling to quantify human capital assets and support fast, strategic decision-making.
- Provide on-demand access to expert counsel to help turn information into actionable knowledge.

If HR management is to be taken seriously as a valued contributor to organizational success, not just a transaction-based cost center, it needs to adopt a holistic focus and manage human capital as a tangible asset, by generating valid, meaningful performance indicators and using them strategically and persuasively to promote bottom-line profitability.



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