



## Strategy & Leadership

Measuring the value of human capital investments: the SAP case  
Susan Cantrell, James M. Benton, Terry Laudal, Robert J. Thomas,

### Article information:

To cite this document:

Susan Cantrell, James M. Benton, Terry Laudal, Robert J. Thomas, (2006) "Measuring the value of human capital investments: the SAP case", Strategy & Leadership, Vol. 34 Issue: 2, pp.43-52, <https://doi.org/10.1108/10878570610652626>

Permanent link to this document:

<https://doi.org/10.1108/10878570610652626>

Downloaded on: 10 July 2017, At: 08:49 (PT)

References: this document contains references to 0 other documents.

To copy this document: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

The fulltext of this document has been downloaded 3823 times since 2006\*

### Users who downloaded this article also downloaded:

(2011), "Measuring human capital", Strategic HR Review, Vol. 10 Iss 2 pp. 30-35 <a href="https://doi.org/10.1108/14754391111108338">https://doi.org/10.1108/14754391111108338</a>

(2014), "Human capital, social capital and organizational performance", Management Decision, Vol. 52 Iss 2 pp. 350-364 <a href="https://doi.org/10.1108/MD-04-2013-0260">https://doi.org/10.1108/MD-04-2013-0260</a>

Access to this document was granted through an Emerald subscription provided by emerald-srm:333301 []

### For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit [www.emeraldinsight.com/authors](http://www.emeraldinsight.com/authors) for more information.

### About Emerald [www.emeraldinsight.com](http://www.emeraldinsight.com)

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

\*Related content and download information correct at time of download.

# Measuring the value of human capital investments: the SAP case

Susan Cantrell, James M. Benton, Terry Laudal and Robert J. Thomas

Susan Cantrell is a senior research fellow at the Accenture Institute for High Performance Business in Wellesley, Massachusetts (susan.cantrell@accenture.com). James M. Benton is a partner in the Accenture human performance service line (james.m.benton@accenture.com). Terry Laudal is senior vice president of human resources at SAP America (terry.laudal@sap.com). Robert J. Thomas is the Institute's executive director (robert.j.thomas@accenture.com). *[Editor's note: Of the authors, Cantrell, Benton and Thomas were the developers of the human capital development framework tool described in this case and Laudal was a user].*

*Executives rarely know whether company spending on human capital is financially justifiable. A new tool can help them learn whether they are getting significant return on their investment, as this recent case history of SAP America reveals.*

Corporate leaders frequently make speeches extolling the value of their human capital, asserting that “our most important assets wear shoes and walk out the door every evening.” But in actuality, corporations often treat people as costs to be managed, especially when earnings numbers are at stake. Even when they do invest in people, they rarely apply the discipline to these spending decisions that they would to budget requests involving technology, product development, plant construction, and so on.

Why the disconnect between most leaders' genuine concern that their corporation recruit and train top talent and their failure to be disciplined about their HR investments? One reason is that executives lack the tools they need to accurately measure the return on investment in human capital. A recent Accenture survey revealed, in fact, that many companies don't even make the attempt at such measurement. Fewer still attempt to link their spending on human capital processes to actual improvements in the company's business results.

Over the past three years, however, we have developed and used a new measurement tool that assesses the maturity of an organization's human capital development processes, benchmarks the processes' performance against other organizations, and determines the relationship of each process to bottom line business results to help executives make significantly more informed choices about their investments in human capital. The tool, known as the human capital development framework, now has been tested in more than 60 organizations[1]. In this article, we highlight how one organization in particular used it to help turn around a struggling business.

## SAP America's new strategy

In 2002, SAP America, Inc., the North American division of the global software corporation, was in the doldrums. It had consistently missed financial targets for five years, sometimes by as much as 50 percent. It had lost market share, and revenues were declining. Not surprisingly, the division's customer and employee satisfaction scores were the lowest in the corporation. In addition, the organization did not have strategic alignment between its major parts.

To get the business back on track, executives envisioned a change in strategy. The division found itself in a very competitive situation in a perceived maturing market for software sales to large US firms. The executive team knew they would need to expand into the mid-market and sell not just software, but customer-focused solutions and services. This shift would require a change in the division's culture, to one that brought more accountability and discipline into critical process execution, while preserving some of its entrepreneurialism.

**“Over the past three years, we have developed and used a new measurement tool that assesses the maturity of an organization’s human capital development processes, benchmarks the processes’ performance against other organizations, and determines the relationship of each process to bottom line business results to help executives make significantly more informed choices about their investments in human capital.”**

To implement the new strategy, the company would also have to rethink and re-engineer some of its core human capital processes. In the software industry, up to 75 percent of a company’s market value is related to intangible assets such as people and their knowledge, and people costs represent nearly 40 percent of total costs in the average software company. As SAP America’s President and CEO, Bill McDermott, put it, “The people component of executing our strategy was by far the most important. If we didn’t get that part right, we wouldn’t win. And we were in this game to win.”

Like many companies, however, SAP America had been making investment decisions in their people largely on the basis of faith rather than empirical, quantifiable data. But as the firm moved to instill a more disciplined culture, executives knew that facts supported by data would be more valuable than intuition in many instances.

Like many organizations, SAP America was largely unsatisfied with many of the data-based measurement options it had tried. Metrics that track business performance, such as economic value-added (EVA) and return on invested capital didn’t reflect the increasing importance of people assets. And the few people-oriented metrics that SAP tracked, such as training budget per employee, were not deemed as helpful for making investment decisions. Senior vice president of human resources Terry Laudal explained the problem: “These numbers tell us nothing about the effectiveness of our people programs. If you are spending a lot on human capital investments, for example, you may be wasting money on inefficient execution of transactional processes, or you may be using resources that are not aligned with critical business priorities.”

In addition, survey data collected from employees was seen as helpful, but limited in utility. The company regularly held employee and management advisory council meetings and surveyed its employees to obtain information on their satisfaction with people programs and to get a pulse on the level of engagement. First, executives were wary of equating employee satisfaction with business results; just because satisfaction with a particular people program had gone up, for example, didn’t necessarily mean it would yield better business results. Second, although executives had some idea of the engagement level of their employees – or how emotionally involved, aligned, and committed their employees were to their work and the organization – they had no way of knowing how their engagement levels compared with those of other companies. Nor did the company know what specific actions would empirically lead to improved engagement, or how engagement was associated with operating and financial outcomes.

SAP’s executives needed tools that would enable them to evaluate a broader range of human capital processes and capabilities than they were currently assessing. In addition, and most importantly, they needed help to set investment priorities according to their expected business impact. As CEO Bill McDermott explained, “I judge the HR function on instinct and on the anecdotal evidence that they are getting things done, like bringing in the right people or enabling our mission and goals. On that scorecard, I give them good marks. But when I ask, ‘Is HR the cockpit of a world-class organization, able to make resource

decisions and trade-offs using facts supported by data to determine where we can get the biggest bang for our buck?' Until recently, I gave them low grades on that. They weren't doing it, and we needed it." SAP America isn't alone. Only 11 percent of companies surveyed by Accenture said they do a good job of continuously measuring and improving their human capital processes.

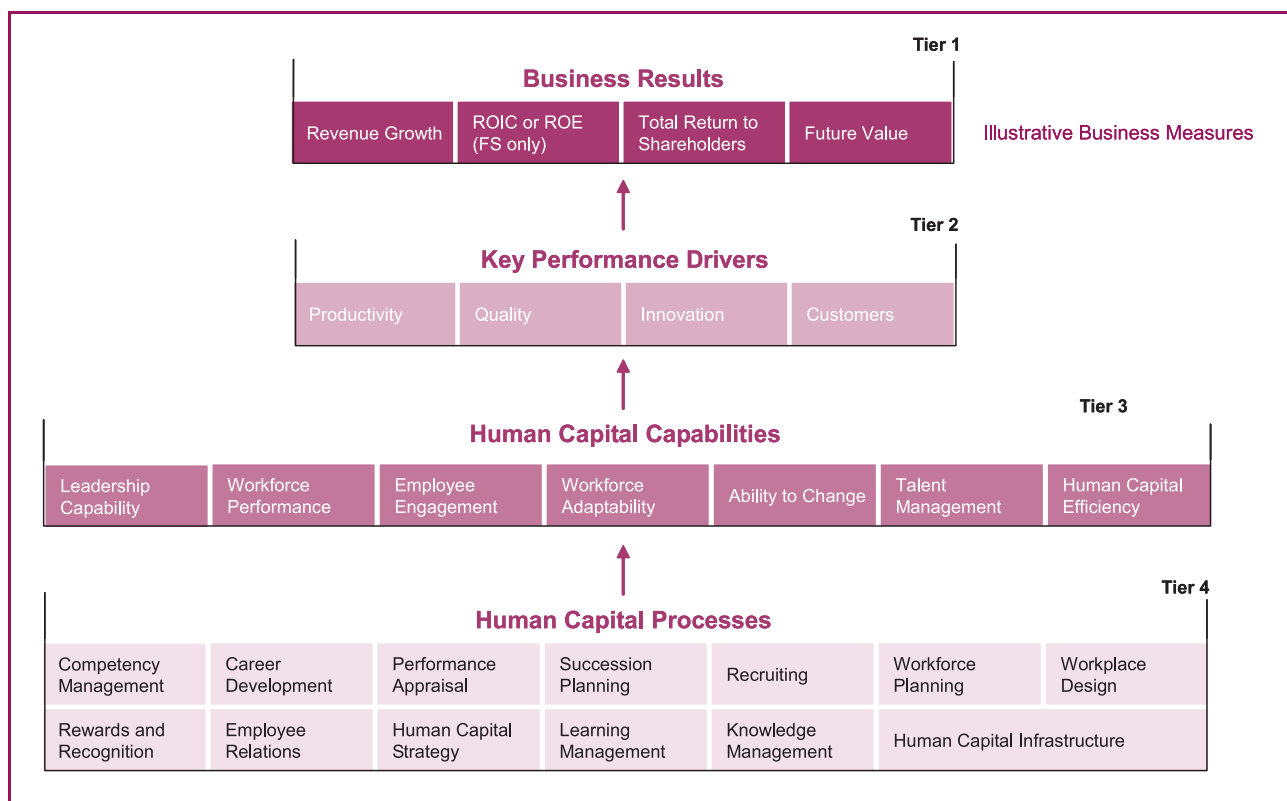
### A new framework for human capital

One year into its new business strategy, SAP America decided to implement the framework on human capital development. And to track progress, it repeated the process in 2005. Each implementation took approximately eight weeks. During that time, interviews were conducted with business and HR leaders to determine feedback on the company's strategy, culture, and unique values; web-based surveys were administered to both HR executives and a large cross-section of employees; and factual financial and HR data were collected for both the company and its industry.

Once all data were collected, a scorecard was provided that showed how well SAP America was performing in not only their human capital processes, but in other critical business areas as well (see the scorecard framework in Exhibit 1). The framework starts with an assessment of *human capital processes* such as learning or career development (tier 4). These are the activities, an executive can pursue to drive improved performance in *human capital capabilities* like employee engagement or workforce performance (tier 3). Improved human capital capabilities, in turn, may drive improvement in *key performance drivers* like innovation, customer satisfaction, or quality (tier 2). Finally, key performance drivers are those targets an executive might hope to improve to produce better *business results* such as total return to shareholders or revenue growth (tier 1).

For each element in the model, effectiveness scores for tiers 2 through 4 were provided for SAP America on a scale of 1 (low effectiveness) through 5 (high effectiveness); scores are

**Exhibit 1** The human capital development framework



based on weighting and scoring schemes specific to each tier[2]. For example, effectiveness scores for human capital processes (tier 4) are based on an equal weighting of survey data from HR executives, non-managerial employees, and managerial employees. Other elements of the model that rely on factual data (such as human capital efficiency in tier 3) are assigned a score based on the performance of the company relative to a cross-company benchmarking average[3]. Effectiveness scores are then compared with those of other organizations in the framework database. Each element of the model is also given a specific color (representing a benchmarking ranking) according to where each effectiveness score falls, quartile by quartile, in relation to other effectiveness scores in the database.

When they were presented with the results of the first implementation of the framework, SAP's executives were pleased to see that one year into their turnaround efforts, many initiatives seemed to be paying off in relatively high process and capability scores. More than half of the organization's human capital processes were in the top quartile of benchmarking results (e.g., better than 75 percent of the other organizations in our study); nearly all the rest were in the second quartile of benchmarking results. Human capital capabilities showed a similar pattern: three were in the top quartile, one in the second, and two in the third. They felt that the organization's higher than average engagement scores, for example, enhanced communication with employees about the company's strategy, vision, and mission. And while they were pleased to find that the organization was performing well compared with others in the framework database, they also noted that many of the raw scores tended to hover around 3, indicating plenty of room for improvement. Financial scores, as expected, also needed improvement.

In addition to effectiveness and benchmarking scores for each element in the framework, SAP America executives were also presented with the results of cross-company data analysis that suggested specific relationships between elements in each tier. They learned that those organizations with the best financial performance in the study, for example, excelled at seven of the 13 human capital processes measured. In addition, they learned which elements were most strongly related to an element in the subsequent tier (see sidebar "From human capital development to business results").

### Using the framework to make decisions

Using the information provided in the initial assessment, SAP America had access to better information to help determine where it should focus its human capital investments in order to produce the greatest business benefits. Executives based investment decisions on three criteria: the relative effectiveness of each human capital process, the presence or absence of evidence that a given process was strongly associated with financial performance, and the strategic or cultural importance of each process based on its linkage to particular key performance drivers of human capital capabilities. For example, certain key performance drivers like innovation or quality could be of greater strategic importance as compared to others. Likewise, an organization's culture may favor certain human capital capabilities – like workforce adaptability or employee engagement – over others. In general, companies will achieve the greatest benefits if they focus on developing processes that are the least mature (as indicated by a low effectiveness score or benchmarking ranking) and most related to either financial performance or the performance of an important key business driver or capability. For executives at SAP America, this suggested that they should focus on learning management, human capital infrastructure (that is, the firm's transactional HR processes), and the succession planning process (see sidebar). All three of these processes are strongly associated with superior financial performance (see sidebar : "From human capital development to business results"). In addition, all but succession planning are linked to human capital capabilities that are in turn linked to innovation, an element critical to the company's business strategy. For SAP America, the ability to deliver a steady stream of innovative new software applications to its customers and to tailor them to their targeted market segments is vital to its strategy. Executives thus wanted to ensure that it focused on those processes that could help it maintain its innovative capability.



## From human capital development to business results

Those organizations in our study with more mature human capital processes have better financial performance than those organizations with less mature processes. Specifically, we found that those organizations that focus on processes devoted to three key areas – creating a people strategy aligned with the business strategy, providing supportive work environments, and developing employees by giving them ample opportunities to learn and grow – achieve far greater economic success than those that do not (see Exhibit 4)[4]. (See also Exhibit 5.)

Just how much of a difference does investing in people processes and programs make? Results of the initial implementations of the framework suggest that financial performance improves as a company improves its scoring in those critical human capital processes with strong relationships to financial success. As an organization moves from one benchmarking quartile to the next in these processes within the framework scoring, its capital efficiency – or the ratio of total annual sales to the capital invested in the operations of the business by shareholders and creditors – improves from 10 to 15 percent.

Most executives would agree, however, that mature people processes (tier 4 in the framework model) do not immediately impact financial performance; they first improve human capital capabilities like employee engagement and workforce performance (tier 3 in the framework model), which in turn improve key performance drivers like customer satisfaction and innovation (tier 2 in the framework model) before ultimately impacting financial results (tier 1 in the framework model; see Exhibit 1: The human capital development framework). Initial implementations of the framework have started to reveal a myriad pathways through which human capital processes influence financial results. Although the relationships between elements in each tier are too numerous to list here, an example of one pathway to high performance results will illustrate the concept. We found statistically significant relationships between an organization's innovation capability (a tier 2 key performance driver which influences financial results) and employee engagement (a tier 3 human capital capability); employee engagement in turn has statistically significant relationships with ten of the 13 tier 4 human capital processes (all but succession planning, workforce planning, and competency management)[5]. (See also Exhibit 6.) This suggests that organizations competing on innovation will achieve better financial results by improving employee engagement through improving a broad range of human capital processes.

## Exhibit 2 SAP America's decision-making chart

Human Capital Processes (Tier 4)		Business Outcomes (black squares represent strong relationships between elements)			
	2003 Effectiveness Score <sup>a</sup> and Benchmarking Quartile Ranking <sup>b</sup>	Financial (Tier 1) Capital Efficiency	The Human Capital Capabilities (Tier 3) Linked to Innovation (Tier 2 Key Performance Driver)		
			Leadership	Engagement	Workforce Performance
Employee Relations	3.3				
Human Capital Strategy	2.7				
Learning Management	2.8				
Career Development	2.8				
Human Capital Infrastructure	3.6				
Recruiting	3.3				
Workplace Design	3.4				
Succession Planning	2.6				
Knowledge Management	2.9				
Rewards and Recognition	3.2				
Performance Appraisal	3.5				
Competency Management	3.1				
Workforce Planning	2.6				

<sup>a</sup> 1 = low, 5 = high

<sup>b</sup> green = 1st quartile, yellow = 2nd quartile, red = 3rd quartile, black = 4th quartile



### *Learning management*

Framework results revealed that the company should identify clear learning and training requirements for their job families and ensure that managers work more with employees as coaches and mentors to develop learning plans. The results also showed that more than half of all employees surveyed felt that they were not getting the training they needed to excel at their current or future jobs.

In the past, most employees had to travel to corporate headquarters in Germany for training. But, as Bill McDermott noted, this had to change: "Since we were more focused on local markets, we needed to start tailoring our training to meet the specific needs of US and Canadian customers." Since the initial implementation of the framework, the organization has developed a "learning culture" team of cross organizational leaders who team with HR and develop training solutions that will be available more readily and customizable via a "university" business model. Executives have carefully selected curricula from corporate headquarters while also developing new curriculum that is most appropriate for the workforce.

### *Human capital infrastructure*

The division's HR executives were interested to learn that this process was linked to financial results and to two of the three drivers of innovation. They intuitively understood, however, that improving the accuracy and user friendliness of processes involving payroll, benefits administration, and the HR call center could boost employee engagement, which in turn could lead to better business results. In addition, they felt that improving those processes could help free up time to focus on more strategic human capital processes because as much as 70 percent of HR's time was spent on transactional activities in some parts of the organization.

To improve this process, the framework analysis suggested that managers should be provided with easier access to data (through the ability to obtain custom data reports from a single source, for example), and that employees could benefit from transactions that were easier to complete (through the broader implementation of self-service technologies, for example). After the initial implementation of the framework, SAP America was better prepared with key empirical data to help accelerate a shared-service service delivery model to improve quality and accessibility, and cut the costs associated with transactional processes.

### *Succession planning*

The division's low score on this process reflected its traditional and entrepreneurial resistance to planning. Learning that succession planning is linked to financial performance for most companies only strengthened SAP's resolve to improve this process. In the past, the organization had relied heavily on bringing leaders in from the outside. However, division leaders knew that it would be much healthier to more effectively leverage their internal candidates who would better understand the business and culture of the company, and execute faster because of their internal networks. Framework results revealed that the weakest part of the process was that succession candidates were not given specific opportunities to grow; career development solutions were weak and employees rarely had development plans in place such as rotational or special assignments. Since the initial implementation, SAP America has established a process to give managers a clearer picture of the people who may later be qualified for key positions, and has established a process to ensure that high-potential individuals receive development plans to help them build their skills.

### *Tracking results*

After implementing the framework a second time in 2005, SAP America was able to see the results of its efforts. All three processes the organization focused on received higher scores (see Exhibit 3). Most improved was the human capital infrastructure process, which improved by 14 percent. Since implementation of the shared service delivery organization,

### Exhibit 3 Improvements in SAP America's human capital process scores over time

Human Capital Processes (Tier 4)		Business Outcomes (black squares represent strong relationships between elements)				Human Capital Processes (Tier 4)	
	2003 Effectiveness Score <sup>a</sup> and Benchmarking Quartile Ranking <sup>b</sup>	Financial (Tier 1)	The Human Capital Capabilities (Tier 3) Linked to Innovation (Tier 2 Key Performance Driver)			2005 Effectiveness Score <sup>a</sup> and Benchmarking Quartile Ranking <sup>b</sup>	Change in Effectiveness Score
		Capital Efficiency	Leadership	Engagement	Workforce Performance		
Employee Relations	3.3					3.5	+2
Human Capital Strategy	2.7					3.1	+4
Learning Management	2.8					3.2	+4
Career Development	2.8					3.1	+3
Human Capital Infrastructure	3.6					4.0	+4
Recruiting	3.3					3.6	+3
Workplace Design	3.4					3.2	-.2
Succession Planning	2.6					2.9	+3
Knowledge Management	2.9					3.1	+2
Rewards and Recognition	3.2					3.4	+2
Performance Appraisal	3.5					3.7	+2
Competency Management	3.1					3.4	+3
Workforce Planning	2.6					3.0	+4

<sup>a</sup> 1 = low, 5 = high

<sup>b</sup> green = 1st quartile, yellow = 2nd quartile, red = 3rd quartile, black = 4th quartile

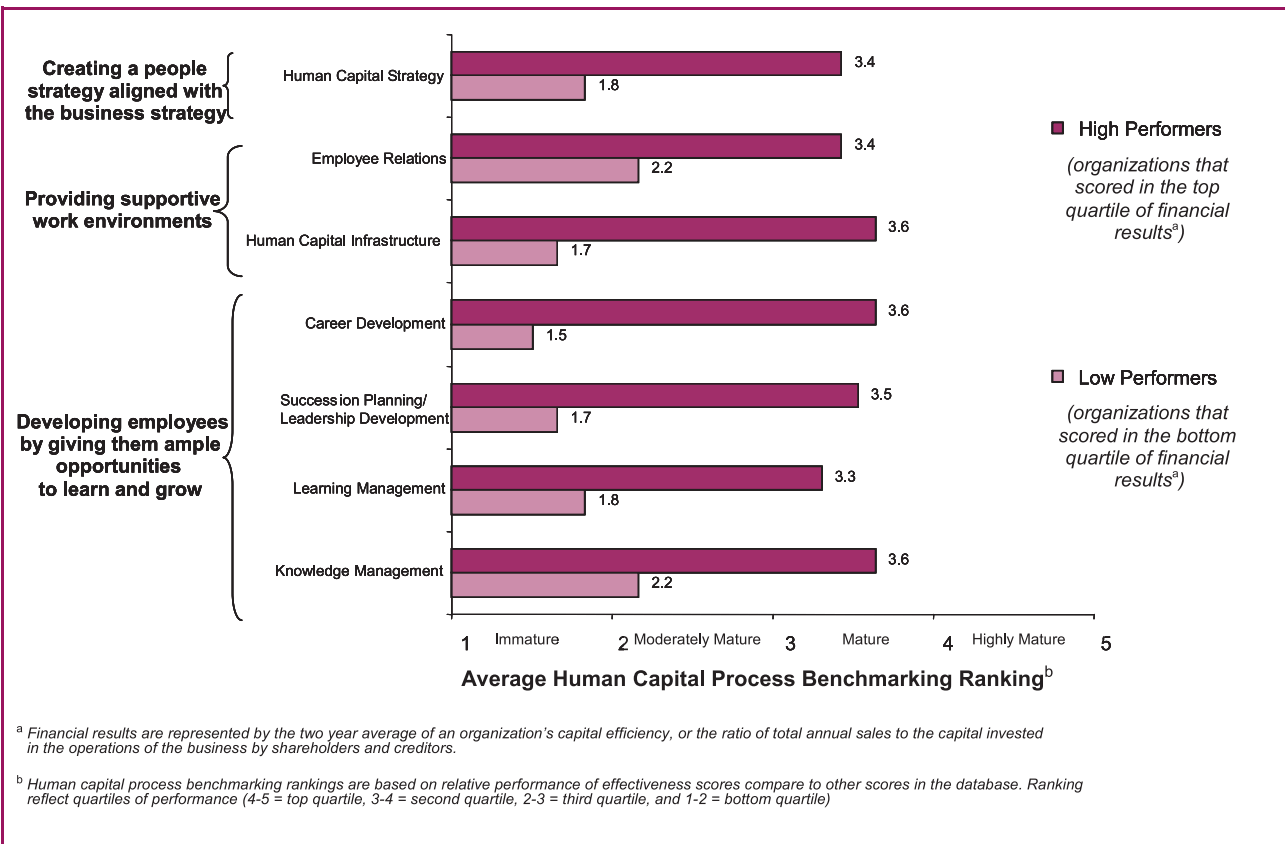
SAP America has reduced the cost of their HR service delivery by approximately 50 percent. Second most improved was the succession planning process, which improved by 12 percent. Since implementing the framework, the division has significantly reduced external hiring for management positions, and overall internal promotion rates within the organization have increased from 5 percent to more than 12 percent. In addition, the learning management process improved by 11 percent. These improvements are significant as evidenced by the fact that two out of the three processes – human capital infrastructure and learning management – moved from the second to the first quartile of benchmarking results.

In addition, several of the human capital capabilities (tier 3) linked to these processes also improved. For example, the leadership capability (or the ability of those who direct, plan, and coordinate the work of a company, function, or business unit to effectively guide the organization in accomplishing its goals) experienced a 16 percent improvement. Analysis shows that organizations with strong leadership capabilities also have more mature learning management processes. Other human capital capabilities improved as well; human capital efficiency (or the ability of the organization to efficiently and cost-effectively manage its human resources) improved by 14 percent, and workforce adaptability (the ability of the workforce to flexibly respond to changing business conditions) improved by 13 percent.

Since improving their human capital processes, the division has enjoyed outstanding results. The division's customer and employee satisfaction ratings have done a complete turnaround – and total turnover has dropped 5-10 percent, depending on the functional area. Operating margin, revenue growth, and capital efficiency have all significantly improved. In addition, not only has the division achieved its operating plan quarter after quarter, but also it is now enjoying record level market share and employee productivity results. Although many developments undoubtedly contributed to the company's success, executives believe that improvements in human capital processes were an important factor in their ability to effectively execute the new strategy and, ultimately, improve financial results.



#### Exhibit 4 Organizations with more mature human capital processes have superior financial performance



#### Exhibit 5

Human capital process	$r^2$ for process effectiveness score and two-year average capital efficiency
Human capital strategy	0.35*
Employee relations	0.32**
Human capital infrastructure	0.48*
Career development	0.42*
Succession planning/leadership development	0.50*
Learning management	0.32*
Knowledge management	0.30**

Notes: \*  $p < 0.05$ ; \*\*  $p < 0.10$

In addition to helping the company target specific actions and track their impact over time, the framework also proved useful as a communications tool. According to SAP senior VP Terry Laudal, "The framework provides the HR team and business leaders a common language and vocabulary concerning the value of human capital investments and the contribution to the bottom line. The only way for HR to be successful is to learn to think and act like a business person; this tool helps us do that." SAP America plans on using the framework in its management development programs to ensure that managers understand how their expertise and skill in managing key human capital processes can improve bottom-line business results.

**Exhibit 6**

<i>Human capital process</i>	<i>r<sup>2</sup> for process effectiveness score and employee engagement</i>
Career development	0.29**
Performance appraisal	0.24**
Recruiting	0.41*
Workplace design	0.51*
Rewards and recognition	0.31**
Employee relations	0.4*
Human capital strategy	0.35*
Learning management	0.39*
Human capital infrastructure	0.24*
Knowledge management	0.23**
Notes: * $p < 0.01$ ; ** $p < 0.05$	

**A versatile tool**

To date, more than 60 organizations have implemented the framework. Companies are using the tool for a variety of ends:

- Harley-Davidson, for example, had been heavily focusing its HR investments on recruiting – a natural tendency given the company's phenomenal growth through the 1990s. Framework results, however, convinced Harley executives that they needed to rebalance and invest more in HR Information Systems that would improve HR's transactional capabilities; the results also pointed to the need for more attention to human capital strategy. The framework results were used to justify these investments with key stakeholders.
- A large Canadian power producer had to change the way it operated in the face of deregulation. The company used the framework to identify HR areas that would be central to the successful transformation of its business model, including competency management, workforce planning, recruiting, learning management, and performance appraisal. Scores for all these processes were in the bottom or second to bottom quartiles of performance relative to peers in the benchmarking database. Company executives have since made a commitment to improving these processes by implementing many of the suggestions provided by the framework.
- Briggs & Stratton Corporation used the framework to help smooth a post-merger integration. In 2001, Briggs & Stratton acquired Generac Power Products, a producer of generators and pressure washers for the home. Implementation of the framework identified significant differences in the effectiveness of the processes between Briggs & Stratton and Generac. Briggs & Stratton had much more effective processes. HR professionals used this information to target best practices from Briggs & Stratton that could be implemented by Generac to improve its HR operations. In 2004, after the company acquired Simplicity, a producer of lawn mowers, executives again used the framework to focus on integration activities. One HR executive explained that, "We could have easily gotten sidetracked and spent lots of resources on non-value added activities such as whether or not we should have separate policies or the like; with the framework, we focused right away on making the decisions that matter."

**Measure and manage**

The inability of human resources executives to point to data that synchs up with business results has hampered their ability to overcome skepticism about the value of "people programs." After all, if there are no persuasive measurements for such programs, then how effectively can they be managed? The framework outlined in this article provides a tool that enables company leaders to make clear-eyed assessments of the payoff from human capital investments. It helps organizations diagnose their strengths and weaknesses in key human

capital practices, to set investment priorities and track performance, and to establish an empirical link between human capital investments, business practices, and overall business performance.

## Notes

1. Accenture and SAP jointly sponsored the initial 60 implementations of the framework. The framework was developed and is owned by Accenture. The number of organizations was limited in the statistical analysis to less than 60 organizations, however, due to unavailable data or the need to eliminate organizations with overlapping employee populations.
2. Most effectiveness scores are created by averaging survey data that is scored on a 1-5 Likert scale. Because tier 1 business results cannot be represented by this kind of data, effectiveness scores are not reported for this tier. However, organizations that implement the framework are provided with financial performance metrics for the company and the industry. To perform statistical analysis and to create the quartile benchmarking score, z scores are created to represent the relative performance difference between the company and its industry average.
3. In the case of human capital efficiency, the average is obtained from the Saratoga Institute's benchmarking database.
4. Seven of the 13 human capital processes we measured have statistical correlations with an organization's two year average capital efficiency, or the ratio of total annual sales to the capital invested in the operations of the business by shareholders and creditors.
5.  $r^2$  for innovation and employee engagement = 0.28 ( $p < 0.05$ ). Correlations between employee engagement and human capital processes are provided in Exhibit 5.

## Corresponding author

Susan Cantrell can be contacted at: [susan.cantrell@accenture.com](mailto:susan.cantrell@accenture.com)

---

To purchase reprints of this article please e-mail: [reprints@emeraldinsight.com](mailto:reprints@emeraldinsight.com)  
Or visit our web site for further details: [www.emeraldinsight.com/reprints](http://www.emeraldinsight.com/reprints)

This article has been cited by:

1. DekoulouParaskevi Paraskevi Dekoulou [evidekoulou@gmail.com](mailto:evidekoulou@gmail.com) Paraskevi Dekoulou holds a Phd degree in Media Management from the Aristotle University of Thessaloniki. She received a MSc degree in Media Management from Stirling University (Scotland) and an MBA degree from Staffordshire University (UK). She has taught Media Management, Innovation and Entrepreneurship, Cultural Management and Advertising at the Aristotle University of Thessaloniki as well as at the Alexander Technological Educational Institute of Thessaloniki. She has published articles in The International Journal of Media Management, the Journal of Media Business Studies and the Journal of Applied Journalism and Media Studies. In parallel with her academic activity, she has worked as a Marketing Officer in the private sector. She is currently working as a Strategic Development Manager at the Centre for Innovation, Entrepreneurship and Employment (KEA), part of the University of Nicosia. TrivellasPanagiotis Panagiotis Trivellas [ptriv@tee.gr](mailto:ptriv@tee.gr) Panagiotis Trivellas is a Professor of Strategic Human Resources Management and Deputy Head of Logistics Management Department at the Technological Education Institute (TEI) of Central Greece. He holds a PhD degree in Management Styles from the National Technical University of Athens (NTUA). He has been a Scientific Coordinator and Head Researcher in several research projects in the field of organizational behavior, leadership and HRM. He has published more than 35 research papers in academic journals and international conferences and he was a co-author of two books. His core research interests focus on the areas of OB, HRM, corporate culture, strategic management and leadership, managerial skills and competences, TQM and quality in higher education. Centre for Innovation, Entrepreneurship and New Technologies, University of Nicosia, Nicosia, Cyprus Department of Logistics Management, Technological Educational Institute of Central Greece, Thiva, Greece . 2017. Organizational structure, innovation performance and customer relationship value in the Greek advertising and media industry. *Journal of Business & Industrial Marketing* **32**:3, 385-397. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
2. Allen D. Engle, Sr., Marion Festing, Peter J. Dowling. 2015. Gaining altitude on global performance management processes: a multilevel analysis. *The International Journal of Human Resource Management* **26**:15, 1955-1964. [[CrossRef](#)]
3. Pharny D. Chrysler-Fox, Gert Roodt. 2014. Changing domains in human capital measurement. *SA Journal of Human Resource Management* **12**:1. . [[CrossRef](#)]
4. Franko MilostInvestments in Human Capital: Elements of Investments, Their Valuation, a True and Fair View of Financial Statements Compiled by Using the Classical Approach, and the Related Financial Performance Ratios 137-159. [[CrossRef](#)]
5. References 147-176. [[CrossRef](#)]
6. Kevin J. O'SullivanYannis ZorgiosCLMS (UK) Limited, Croydon, UK Orestes VlismasDepartment of Accounting and Finance, Athens University of Economics and Business, Athens, Greece George VenierisDepartment of Accounting and Finance, Athens University of Economics and Business, Athens, Greece. 2009. A learning curve explanatory theory for team learning valuation. *VINE* **39**:1, 20-39. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
7. P. Savetpanuvong, U. TanlamaiModeling strategy with Strategic Neuron&#174; 559-564. [[CrossRef](#)]
8. 2007. SAP makes strategic shift after assessing its people processes. *Human Resource Management International Digest* **15**:5, 18-20. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
9. Alfonso UrquizaCompetency Management Information Systems 149-153. [[CrossRef](#)]