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SUSTAINABILITY AND THE TALENTSHIP PARADIGM: STRATEGIC HUMAN RESOURCE MANAGEMENT BEYOND THE BOTTOM LINE

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Sustainability and the Talentship Paradigm: Strategic Human Resource Management Beyond the Bottom Line[1]

John W. Boudreau

Executive Summary

"Strategic" human resource management (HRM) typically means making investments in HRM policies and practices that enhance financial outcomes. This paradigm, focused on "bottom line HR" is being challenged by "Sustainability," an alternative definition of organizational success. It is often defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." This *shift in the prize* from exclusively financial returns to sustainability, includes ecological, social, and ethical considerations. Sustainability language is in the mission statements of many global organizations, particularly those with European roots, and whose products and services carry highly visible ecological and social consequences, and it is rapidly becoming common among organizations beyond Europe and in a wide variety of industries. Sustainability will undoubtedly figure prominently in the future paradigm for organizations, and thus must become a part of HRM. Yet, making sustainability actionable and tangible is much harder than adding words to the mission statement. Simply attaching the word "strategic" to HRM failed to accomplish real change, and simply attaching the word "sustainability" to HRM may similarly raise expectations without results.

Today, Sustainability is typically connected to HRM through the traditional HR paradigm – service delivery, client satisfaction, and HR policies and practices, such as child labour, worker representation, health and safety. This is very important, but just as the traditional HR "service delivery" paradigm overlooks important HRM contributions to financial success, it also risks overlooking important HRM contributions to sustainability. To make sustainability truly actionable requires a framework that connects decisions about the organizations talents with Sustainability in a clear, deep and logical way, just as the decision sciences of Finance and Marketing tangibly connect decisions about money or customers to financial outcomes.

This paper proposes such a framework that simultaneously *shifts the prize* to reflect Sustainability and *shifts the paradigm* of HRM toward a decision science called "Talentship" (Boudreau & Ramstad, 2002). It defines Sustainability and its measures, defines the typical connection between HRM and sustainability using the traditional HRM paradigm. Then, the HC BRidge® talent decision framework that connects HRM, talent, and competitive/financial strategic success, is used to logically make similar connections between HRM, talent and sustainability. Examples from Shell and DuPont show how the combination of shifting the prize and the paradigm reveals pivotal roles for talent that are not apparent with traditional definitions of strategic success and the traditional HRM paradigm.

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Sustainability and the High-Impact Human Capital Paradigm:
Strategic Human Resource Management Beyond the Bottom Line

John W. Boudreau

Companies like Shell International, British Petroleum, Chevron-Texaco and Exxon-Mobil are best known for their petrochemical businesses. Yet, a small but increasingly important element of their corporate strategies is developing alternative energy sources. Consider the following excerpt from the Shell Report in the year 2000, "Meeting The Energy Challenge" (p. 23):

> "Photovoltaic (PV) panels turn sunlight directly into electricity, safely and with no emissions. For most of the estimated two billion people without access to modern electricity, and living in villages 'off grid', PV is practical, and for governments, one of the cheapest ways to deliver electricity. … Shell is committed to building a profitable business from selling, installing and servicing PV systems in off-grid rural areas, as one part of the overall PV strategy. … The off-grid market has real growth potential, as more governments focus on bringing electricity to the rural poor."

The off-grid PV endeavor has the classic characteristics of "sustainability" – meeting the needs of the present without compromising the ability of future generations to meet their own needs. It emphasizes technology with less harmful environmental effects than traditional fossil fuels, it recognizes a market with relatively small short-term financial payoffs, but a potentially very large future implications for the ability of rural populations to meet their future power needs. Thus, it provides an combination of financial potential and social and environmental benefit, which likely why Shell chose to showcase it. Now, consider how the role of human resource (HR) management might be approached in relation to such an initiative.

Shifting the Talent Paradigm and the Organizational "Prize"

Exhibit 1 shows how the talent paradigm, and the organizational prize work together.

Exhibit 1
The Talent Paradigm and the Organizational Prize Define the Strategic Talent Questions

Talent Paradigm	Organizational Prize: Traditional: Financial / Competitive	Organizational Prize: Emerging: Sustainability
Emerging: Talent Decisions – Talentship	*Do we make excellent decisions about the talent resources that are pivotal to our financial and competitive results?* ***Approach C***	*Do we make excellent decisions about the talent resources that are pivotal to sustainable strategic success?* ***Approach D***
Traditional: HR Policies and Practices	*Are our HR policies and practices efficient, and produce acceptable returns on investment?* ***Approach A***	*Are our HR policies and practices consistent and compliant with sustainable employment relationships ?* ***Approach B***

Approach A, in the lower-left corner of Exhibit 1, is the most traditional, viewing HR policies and practices through a

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traditional financial perspective, focusing on the efficiency and payoff of specific HR investments, with measures such as cost-per-hire or HR headcount, and correlating HR practices with financial results. In the Shell example, Approach A, would design and evaluate HR policies and practices for their ability to attract, retain, reward and develop the employees needed to fill the jobs supporting the PV initiative, at low cost and acceptable quality.

Approach B, in the lower-right cell of Exhibit 1, shows the approach of many organizations that initially recognize sustainability, but retain the traditional paradigm of HR viewed through its policies and practices. Organizations taking this approach focus on ensuring that HR policies, practices and employment relationships meet sustainability standards of corporate social responsibility, legality, equity and fairness. The outcomes include not only traditional efficiency but also whether the treatment of the organization's employees and those of its partners reflects sustainable relationships. In the Shell example, Approach B would ensure that HR policies and practices comply with standards of social and corporate responsibility, comparing the Shell's HR practices, and even those of its partners (such as contractors and suppliers), against international codes of conduct that ensure fair treatment, avoidance of child labor, health, safety and freedom of association. Increasingly, this second approach is becoming the expected standard. Like Approach A, this approach focuses on HR policies and practices, but it encompasses sustainable social and employment relationships.

Approach C in the upper-left part of Exhibit 1 is rarer, but increasingly adopted by organizations that implement a new HRM paradigm, a "decision science" for talent akin to Marketing or Finance. Such organizations emphasize decisions about the talents of their employees, rather that simply HR service delivery, and how those talents affect traditional measures of financial and competitive success. In the Shell example, this approach would first identify the logical connections between the financial goals of the PV initiative, the business processes and resources that most affect those goals, and the employee talent pools that most affect those key processes and resources. Enhancing these "pivotal" talent pools would then become the aim of an integrated set of decisions about talent, including but not limited to investments in HR policies and practices. In the Shell example, Approach C would identify the talent pools that most build and protect from competition, resources and processes such as proprietary technology for designing, selling, installing and servicing rural PV systems. Then, HR and other organizational decisions would emphasize enhancing those talent pools for maximum financial and competitive returns. Approach C is often touted as the goal of today's "strategic" HRM.

This third approach is certainly "strategic," but even this approach misses some critical nuances. As the Shell report (p. 23) describes,

> "Our rural PV projects are small, but fiendishly complex. After four years in the field, our people know all about the challenges. The first is establishing a local presence in remote areas. Then there's payment. The PV system has to be paid for by customers with no bank accounts and little cash. Effective partnerships are needed with local credit providers to ensure customers can pay for their systems in small installments. Finally there is a basic logistics. Cash and PV systems have to be moved between branches and customers without going astray, often with no phones or roads."

This requires a new approach. Approach D, in the upper-right corner of Exhibit 1, shows the primary topic of this paper, that shifts both the talent or HRM paradigm and the definition of the organizational prize. It is non-traditional on both dimensions, but increasingly essential for understanding the role or talent resources in long-term organizational success. Like Approach C, this fourth approach would identify how employee *and partner* talents logically connect with key processes and resources. However, Approach D focuses on the processes/resources and talents that support sustainability. The Shell example shows that a sustainable endeavor requires enhancing access to cash, credit and infrastructure throughout the society. So, in addition to selling, installing and servicing PV systems, the key processes/resources include relationships with key funding agencies and a mastery of the rural infrastructure . As the report notes, "The Sri Lankan business succeeded because of grants from the Global Environment Facility (GEF) and credit for our customers from SEEDS – a local micro-finance organization." Fully connecting talent to strategic

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success requires an approach that can reveals the "pivotal talent pools" that establish and maintain good relationships with the GEF and SEEDS, and creatively design credit arrangements.

"Sustainability" is increasingly stated as an organizational goal, and incorporated into organizational mission statements. Yet, without a deep and logical connection between the talents of the organization and specific and measurable sustainability outcomes, such statements can easily become empty rhetoric. Arguably, today most organizations follow Approach A or Approach B, and Approach C is growing with increasing demand for more financially or economically "strategic" approaches to human capital.

This paper proposes achieving true sustainability requires that organizations must accomplish two important shifts. The first is to *shift the paradigm* from traditional HR management to a "decision science" for organizational talent. The second is to *shift the prize*, beyond traditional financial outcomes to sustainability. Shifting both reveals the connection between decisions about "talents" and "sustainability," that is key to sustainable strategic success.

The decision-science paradigm described here has suggested deeper and more logical connections between talent and *financial* success. High-impact talent pools have been identified through their connection to traditional competitive and financial outcomes. Examples include the "sweepers" in a Disney theme park, who spend even more minutes with customers than characters (Mirza, 2003), the "retail-savvy" web designers of Williams-Sonoma (Raimy, 2000) and the "information savvy" web surfers of Encyclopedia Britannica (Boudreau, Dunford & Ramstad, 2001), who not only deliver the latest web technology but ensure that it enhances and communicates the unique market image of their organization. This approach also reveals deeper and more logical connections between talent and *sustainability*. Combining the decision-science paradigm with sustainability gives organizational leaders a potent tool for identifying and building high-impact talent.

The Changing Context for Strategic Human Resource Management

Does human resource management affect the bottom line? This question has intrigued both managers and scholars for decades. Significant evidence suggesting that human resource practices do, indeed, associate with financial outcomes, though whether they cause changes in financial outcomes remains unclear. Typical studies have measured the association between human resource activities, such as merit pay, teams, valid selection, training, etc., and changes in financial outcomes such as profits and shareholder value creation (e.g., Becker & Huselid, 1998; Delery & Doty, 1996; Huselid, 1995; Huselid, Jackson & Schuler, 1997). As Gerhart, et al. (2000) have noted, this approach is also reflected in research on the performance of individual plants or facilities (e.g., Arthur, 1994; Ichniowski, Shaw & Prennushi, 1997; MacDuffie, 1995; Youndt, Snell & Dean, 1996), suggesting the existence of a particular combination of HR practices, such as "high-performance work systems," deemed appropriate across a wide variety of organizations (Pfeffer, 1998).

The explosion of tools such as HR scorecards, operational efficiency benchmarks, best-practice indices, and service-value-profit analyses shows thoat there is a strong desire among HR professionals to link HR management to the economic and financial success of organizations (Boudreau & Ramstad, 2003a; Boudreau & DeCieri, in press). The evidence suggests that human resource practices associate with financial outcomes, though whether they *cause* changes in financial outcomes remains unclear (Boudreau & Ramstad 2003b). Nonetheless, leaders both within and outside the HR profession increasingly recognize the correlation between HR policies/practices and financial outcomes.

Moving beyond a focus on HR policies/practices, toward a deep and logical framework connecting talent to organizational success, requires a *shift in the paradigm* of strategic HR. The traditional HR paradigm has focused on best-in-class HR services and practices, and ensuring that those service achieve an acceptable return on investment. The new paradigm – which might be called "Talentship" – takes as its model the "decision sciences" of Marketing and Finance (Boudreau & Ramstad, 2002, 2003b; Boudreau, Ramstad & Dowling, 2003). Just as the Marketing decision science enhances decisions about customers, and the Finance decision science enhances decisions about money, the

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emerging talent decision science will enhance *decisions* about talent, whether they are made within and outside the HR profession, and it will emphasize *optimizing* the return from HR investments, not just achieving acceptable returns. A talent *decision science* articulates the connections between HR investments, their effect on human capacity, and the impact of human capacity on core processes and resources that most affect sustainable strategic success (Boudreau & Ramstad, 2002). Research in areas as diverse as industrial psychology, sociology and operations management increasingly focus on these connections (Boudreau & Ramstad, 2003b; Boudreau, 2003; Boudreau, Hopp, McClain & Thomas, in press).

One implication of this decision-based paradigm is the importance of identifying "high-impact" or "pivotal" talent pools – where variations in the quality and quantity of talent have the biggest effect on the processes or resources that most affect sustainable strategic success. The financial "bottom line" is certainly one important element of that success, and this new HR paradigm has significant implications for connecting talent decisions to the financial bottom line. Yet, sustainable strategic success requires looking beyond financial and economic outcomes, as Boudreau and Ramstad, (2003a, p. 89) recently concluded. A strictly "bottom-line" definition of strategic success seems increasingly deficient, and "sustainability" is suggested as the alternative. The World Commission on Environment and Development (WCED), the "Brundtland Commission," defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). Thus, sustainability is not incompatible with financial success, and can reveal significant and often-overlooked resources and processes that build long-lasting advantages that are difficult for competitors to duplicate (Porter, 1985). In the World Business Council for Sustainable Development (WBCSD) report on "Corporate Social Responsibility" Sir Philip Watts, Chairman of Shell International and Mr. Richard Holmes, Chairman of Rio Tinto (Holme & Watts, 2000, p. 6) suggest,

> "The benefits then perceived are increasingly obvious to many corporate leaders: a better alignment of corporate goals with those of society, and indeed of the companies own managers; maintaining the company's reputation; securing its continued license to operate; and reducing risk and its associated costs. In other words, taking the longer term view. CSR is the means by which business contributes to that stability rather than detracting from it."

Mr. Watts and Mr. Holmes continue, "Our basic message is very simple. Business is not divorced from the rest of society. Business and society are interdependent and we must ensure, through mutual understanding and responsible behavior, that the role of business in building a better future is recognized and encouraged" (The World Business Council on Sustainable Development (WBCSD, 2000, p. 2). Shell reports that integrating sustainable development principles into its business operations produces four key levers of opportunity: reduced costs, increased options (new markets, evolving business portfolios), new customers and reduced risks (Shell, people, planet & profits, 2001 www.shell.com).

Chad Holliday, CEO of DuPont has stated, "We define sustainable growth as creating value for society and our shareholders while consistently reducing the environmental footprint of our operations and products. Our main strategies to accomplish that include a thorough integration of all our scientific capabilities; increasing the knowledge content of products we make and services we provide; and a constant focus on productivity to stay competitive." (Holliday, 2003).

Sustainability has been a focus for some time among some global corporations, governments and non-government organizations (NGO's, e.g., the International Labor Organization, ILO, the UN, and the World Health Organization, WHO). Yet, it is frequently absent from the frameworks that shape strategic human resource management in U.S. companies and research. So, the next section of this paper briefly introduces sustainability, and encourage HR and organizational leaders to examine how sustainability shapes the agendas of leading global corporations as well as governments and NGO's.

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Shifting the Prize: From "Strategic Advantage" Toward Sustainability

An internet search on the term "sustainability" will uncover a multitude of websites, articles and references defining sustainability, so this paper will not attempt to integrate them. Nonetheless, it is useful to briefly touch on some of the main themes, to provide a backdrop for later sections that connect HR and talent to sustainability.

The World Commission on Environment and Development (WCED), the "Brundtland Commission" defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). Gladwin and Kennelly (1995) noted that this definition "has been widely accepted and endorsed by thousands of governmental, corporate, and other organizations worldwide." The Academy of Management Journal (2000) and the Academy of Management Review (1995) published special issues on the topics of "ecologically sustainable organizations" and "organizations in the natural environment." In the 1995 issue, Gladwin and Kennelly (1995) stated, "Sustainable development has been variously conceived in terms of vision expression (Lee, 1993), value change (Clark, 1989), moral development (Rolston, 1994), social reorganization (Gore, 1992) or transformational process (Viederman, 1994) toward a desired future or better world." The WBCSD (WCBSD, 2001) defines their sustainability mission to include the "cross-cutting themes" of: Eco-Efficiency, Innovation and Technology, and Corporate Social Responsibility, Ecosystems, Sustainability & Markets, and Risk.

Veiderman (1994, p. 5) suggests,

> "sustainability is a participatory process that creates and pursues a vision of community that respects and makes prudent use of all its resources – natural, human, human-created, social, cultural, scientific, etc. Sustainability seeks to ensure, to the degree possible, that present generations attain a high degree of economic security and can realize democracy and popular participation in control of their communities, while maintaining the integrity of the ecological systems upon which all life and all production depends, and while assuming responsibility to future generations to provide them with the where-with-all for their vision, hoping that they have the wisdom and intelligence to use what is provided in an appropriate manner."

Corporate social responsibility (CSR) is sometimes treated as a subset of sustainability, and provides a useful perspective on strategic organizational goals. Holme & Watts (2000, p. 10) defined CSR as "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life," noting the following five topics as priority areas: Human rights; Employee rights; Environmental protection; Community involvement; and Supplier relations.

Measuring Sustainability … Beyond the "Bottom Line"

The scope of sustainability and its evolving nature are illustrated in the myriad web sites that provide specific definitions and measurements of sustainability dimensions. Widely-cited web sites include: Global Reporting Initiative (GRI): Sustainability Reporting Guidelines - www.globalreporting.org; Institute of Social and Ethical Accountability: AA1000 Standards - www.accountability.org.uk; The Social Reporting Report, published by SustainAbility - www.sustainability, and Sustainable Measures at www.sustainablemeasures.com.

Sustainability is increasingly recognized by financial investment organizations in evaluating organizational performance. According to the World Business Council on Sustainable Development (Heemskerk, Pistorio & Scicluna, 2000, p. 9),

> "Financial markets are demanding more and more information on companies' environmental and social performance because there is increasing evidence that good performance on these fronts

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> translates into better overall performance. A comparison between the Dow Jones Global Index and the Dow Jones Sustainability Index between January 1997 and April 2002 showed that the Sustainability Index significantly outperformed the other index. Some very important investors, such as pension funds in major European and North American markets, are now taking sustainability evaluations of companies into account when making investment decisions. A growing share of investments is indeed being placed in sustainability funds in comparison to conventional funds. Shell estimates that in 2001, Socially Responsible Investment (SRI) funds were worth some USD 3 trillion in the US alone."

Alan Wild, of the International Labor Organization (ILO) notes (2003, Chapter 2) that non-governmental organizations (NGO's) are also a useful source of measures and standards,

> "NGOs involved in this area can be more or less conveniently split into broad groups; 'Single issue' organisations like Anti Slavery International, Amnesty International or Save the Children; 'Globalisation campaigners' like GlobalExchange.org or worldexploitation.com; 'Corporate watchdogs' like Business-Ethics.org and Corpwatch.org; Ethical shopping guides like responsibleshopper.org and ethicalconsumer.org; Promoters of self determined codes of conduct like CleanClothes; Promoters of voluntary codes established jointly with companies like the Fair Labor Association and the Ethical Trading Initiative; and Single company campaigns like Nikewatch.org run by Oxfam Community Aid Abroad."

The WBCSD (Holme & Watts, 2000, p. 11) provides a summary of CSR measures, arrayed by key issues and stakeholders. Company reports on their own sustainable development and social responsibility also provide a useful perspective. The WBCSD posted a 'reporting portal' on its website (www.wbcsd.org) in late 2002, that offers examples of how WBCSD members are reporting on sustainable development, and includes a survey of the contents of 50 reports from 14 business sectors, mostly based in Europe and North America. For example, Shell's report, Meeting the Energy Challenge (Shell International, 2000) provides data tables reporting not only return on average capital employed (ROACE) and percent shareholder return, but also performance statistics in the areas of Environmental (greenhouse and hydrocarbon gas tonnage, waste and oil spill tonnage, fines and energy efficiency); and Social (accidents and fatalities, levels of security personnel, gender/race/regional diversity percentages, union/staff forum levels and involvement; wages/hours; child-labour prevention procedures; contracts including business principles, social investment, bribery activity; political payments, and restraint of competition cases).

Heemskerk, et al. (2002, p. 50) concluded, "sustainable development reporting is still in its infancy and should be considered as 'work in progress'. Indeed, there is a lack of understanding and agreement on how to describe sustainable development performance. All parties involved should recognize the need for innovation – and the uncertainties, controversies and technological challenges that currently exist."

While consensus on the meaning and measurement of sustainability remains elusive, it is increasingly at the heart of the most critical organizational dilemmas:

- *The increased scrutiny of organizational ethics in the wake of high-profile accounting scandals can be seen as attempts to ensure relationships between companies and their investors that are based on sustainable trust, rather than on unsustainable exploitation.*
- *Demands for fairness in executive remuneration reveal the need to sustain the ability to attract and retain the necessary executive talent, and yet also support trust among our employees and other constituents that are so vital to continued business success. It's no longer enough to be technically or even legally correct in executive remuneration, it must be perceived to be fair, equitable and fully transparent.*

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- *The emergence of diversity and inclusiveness as significant organizational goals can be seen as a recognition that in an increasingly globally-connected world, sustainable relationships with customers, suppliers and employees will require an appreciation and respect for many different points of view.*
- *The dilemmas regarding employee health and welfare reflect the need to balance the financial goal to control the costs of employee health and welfare programs, with the desire to provide a sustainable employment relationship based on security and mutual respect, and a desire to properly balance the sustainable roles of governments and corporations.*
- *The increasing recognition that decisions to "offshore" work by moving it to locations with lower labor costs, are financially tempting but often have consequences for local economies and cultures with tangible costs that are relatively invisible to traditional financial analysis, as well as significant questions about long-term viability and relationships with workers and other constituents in higher-labor-cost locations.*

We cannot wait for perfect definitions and measures to begin connecting human resources and organizational talents to sustainability goals.

The next section reviews attempts to make this connection through traditional HR paradigm – service delivery and HRM programs and policies.

Sustainability and HR Management … the Traditional Paradigm

Because sustainability encompasses a wide array of dimensions, including those directly affecting workers, such as representation, safety, health and welfare, the human resource management field has focused sustainability through employment relationships and HR policies and practices. Wild (2003, chapter 1) suggests three issues face organizations striving to create sustainable trust-based relationships,

> "The first issue relates to how companies deal with their own employees around the world in terms of employment conditions and in particular their approach to employment security and stability. The second is how they deal with the employees of third party companies, often in less developed countries, which are a part of their supply chain. The third is how companies manage the responsibility for handling the "family silver" they are increasingly inheriting from the public sector – their approach to privatisation."

So, this section will briefly consider how sustainability and HR management relate, through the traditional paradigm of HR policies, practices and activities, particularly the ILO and UN conventions. It will draw heavily from the work of Allan Wild at the ILO, in his unpublished manuscript "Putting Trust Back Into Business." The ILO is one of the leading global NGO's addressing employment issues. The purpose is to illustrate how the HR-sustainability connection reflects the traditional HRM paradigm, emphasizing HR activities, services and professional practices. This is a vital and important connection, and an essential backdrop to the emerging decision-based paradigm, that focus on the "pivotal talent pools" that affect sustainability, discussed next.

Wild (2003, Chapter 4) notes that the ILO Declaration urges the governments of the world to eliminate child labour and forced or compulsory labour, to eliminate discrimination in employment and to promote freedom of association and collective bargaining. The UN Global Compact supports all of the elements of the ILO Declaration and also asks companies to protect internationally proclaimed human rights and to assure they are not complicit in human rights abuses.

> "Very many global corporations publish value statements relating how their employees around the world can expect to be treated. Almost 200 of these are reproduced and analysed in the International Labour Organisation's BASI database on 'Codes of conduct and multinational enterprises'. By far the most common elements in the make up of these codes are the consistent references to 'Safety

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> and Health' and 'Discrimination in the Workplace'. By comparison, there are relatively few references by companies to the other parts of the values or principles that underpin the UN Global Compact and ILO core labour standards; child labour, forced labour, freedom of association; and collective bargaining. It is probable that most multinationals would feel more than a little insulted if it was felt necessary to produce a value statement that contained a commitment that they would not employ children or used forced labourers. Multinationals very commonly apply these standards as requirements to subcontracting companies in their supply chain without feeling the necessity to make similar pronouncements relating their own workforce. In some cases, it may be due to difficulties in turning the broad concepts of freedom of association and promotion of collective bargaining into global value statements or management principles."

HR typically activities focus on the organization's current, former or potential employees, but, the link between HR and sustainability frequently extends to employment practices of corporate partners. Wild (2003, Chapter 5) notes,

> "Today's consumers are either not aware or, more likely, don't care about the niceties of supply chain management in a modern global business. When a customer buys a shirt with Ralph Lauren on the label and a polo player on the pocket, or a pair of trainers with the famous Adidas three stripes on the outside, they believe the company is just as responsible for the employment conditions of those who stitched or glued the product as they are for its' price and quality. … Consumers increasingly believe that the rule of responsibility that applies to the quality control of material inputs should apply equally to the quality of treatment of the people who make the product. … The same issue is there not only for manufacturers but for service organizations as well. Shell, for example, has 115,000 employees but many times that number of contract employees in its franchises or working as contractors in its oil fields. So, being cognizant of your supply chain, and ensuring that employment and other sustainability dimensions are attended to in that supply chain is important. The employment aspects of that attention are appropriately the typical domain of HR."

Certainly when HR becomes concerned with employees beyond its boundaries, this extends traditional HR in very useful way, but the paradigm is still traditional, emphasizing the policies, practices, and activities *within the HR function*. The connection between HR activities and sustainability has received significant attention both from leading organizations and global policy organizations. Seen through the traditional paradigm of HR activities, policies and practices, it is clear that HR has much to contribute to sustainable employment relationships. This is important and vital work. Yet, there are important connections between talent and sustainability that require a different paradigm to connect talent to sustainable strategic success. The supply chain is a common element between the traditional employment-practice paradigm, described above, and the decision-based focus described next.

Shifting the HR Paradigm … The Talentship Decision Science

This section briefly reviews the elements of a "decision science" for talent, and the HC BRidge® framework (Boudreau and Ramstad, 2002, 2003a, b) that connects decisions about talent to sustainable strategic success. The need for a decision science for talent – which has been called "Talentship" – emerged from the observation that Finance and Marketing are powerful business disciplines in part because they are decision sciences that connect decisions about money and customers to competitive success. Decisions about money and customers are supported by professional practices of Accounting and Sales. Today, HR is an essential and highly-developed professional practice, like Accounting and Sales, but has yet to establish a decision science for talent that has the same level of logic, rigor and deep connection to the organizations success as Finance and Marketing, for decisions about money and customers.

Talentship should provide a "teachable" logic about how talent connects to organizational success, just as Finance and Marketing provide the logic for understanding how money and customers connect to strategic success. The key

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decisions about talent rarely involve merely HR programs, but instead arise as non-HR leaders choose organization strategy, financial investments, customer or market segments, and production designs, often without fully or accurately addressing talent implications. Today's HR often tries to remedy this by forcing talent considerations into these decisions through rules or controls, but the evolution of Finance, Marketing and other well-developed decision sciences suggests that decisions are more effectively enhanced when non-HR professionals (line managers, employees, executives, etc.) learn to better understand and connect their own talent decisions to competitive success.

This suggests significant implications for sustainability and HRM. Today's sustainability measures, goals and conventions approach HR through the traditional "professional practice" paradigm, focusing on HR activities and policies, and the employment relationship of organizations and their partners. Despite the importance of these efforts, significant talent contributions to sustainability will be found beyond HR programs, and require a different paradigm to identify and account for them. The next section proposes a framework for this new paradigm, the HC BRidge® model, followed by a section that applies the HC BRidge® framework to an actual organizational example, identifying the "pivotal talent" for sustainability.

The HC BRidge® Framework for Talentship: Connecting Talent to Sustainable Strategic Success

Highly-evolved decision sciences such as Finance and Marketing rest upon powerful and shared logical frameworks that articulates how resources such as money and customers connect with organizational success. Finance has the logic of "net present value," "return on investment" and "portfolio analysis." Marketing has the logic of "product life-cycles" and "customer segments." These are not rigid processes or procedures, but rather logical frameworks that enable decision makers throughout the organization to discuss, understand and enhance their decisions about monetary and customer resources. Traditionally, the HR profession has relied on frameworks that primarily reflect what the profession *does*, rather than how talent resources connect to organizational success. The research literature in strategy, strategic human resource management and management theory, however, suggests a set of linking elements that articulate the connection between investments in HR, effects on organizational talent, and sustainable strategic success – the HC BRidge® framework, shown in Exhibit 2 below (see also Boudreau, 2003; Boudreau & Ramstad, 2002, 2003b; Boudreau, et al., in press).

The top linking element of the HC BRidge® framework is "sustainable strategic success," a term chosen to encompass not only competitive and financial success based on the traditional definitions of strategic advantage, but other potential elements of success that are critical to sustainability (Boudreau & Ramstad 2003, p. 89). The HC BRidge® framework is based on three anchor points, that are common to all standard business decision sciences – Impact, Effectiveness and Efficiency.

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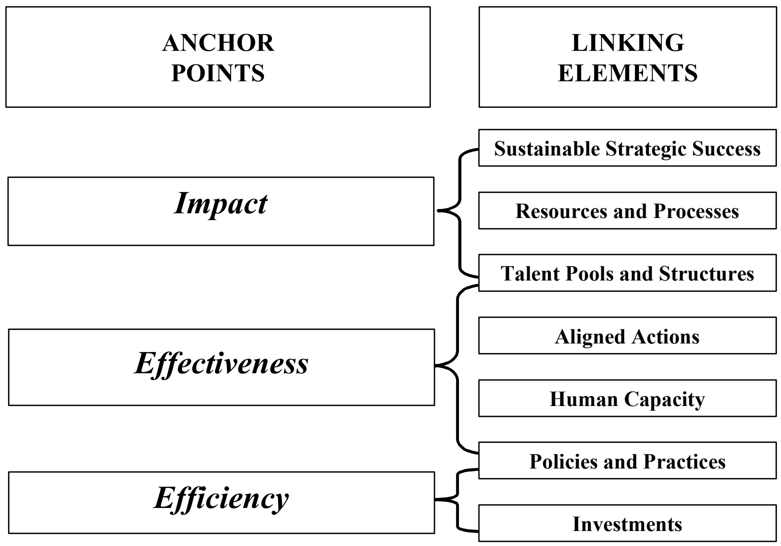
Exhibit 2
HC BRidge® Framework



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In the Talentship paradigm, **"Impact"** asks, " What is the relationship between the changes in the quality of the talent pools and our sustainable strategic success?" Most HR research and systems focus on the average value of talent, but it is often changes in talent quality that are key, revealed by questions such as, "What difference does it make to have top performers versus simply average performers in this role?" or "Which talent and organizational structures are pivotal to building and protecting sustainable strategic success, and why?" The HC BRidge® framework uses "Talent Pools and Structures" to describe these groups and their relationships. Some talent pools fit traditional categories such as jobs, skills, hierarchies or competencies, but often they span and integrate parts of several jobs or competencies. The "pivotal roles" within Talent Pools are usually revealed through processes or resources. For example, there is seldom one job description that delivers "customer contact at the point of service," or "rationalizing acquired and existing product lines to support cross-selling," or "obtaining sufficient subjects for clinical drug trials," or " anticipating customer service needs." Pivotal roles exist throughout the organization, not just among the top leadership.

Organization leaders typically believe they know which talent is most important to organization success, and that everyone agrees with them, because it is so "obvious." Yet, when they name the talent, their answers are usually quite different, because business leaders and strategists analyze business processes and market outcomes using a decision science (Finance, Marketing, etc.) that is not designed to identify the specific talent contributions. For example, when asked what talent is most critical to the success of a Disney theme park, virtually no one mentions the sweepers or store clerks. Yet, a close analysis shows that customer delight is a key strategic outcome, and it hinges on customer relations during the park visit. Sweepers and store clerks spend more time interacting with theme park guests than entertainers, characters or park managers and designers. The quality of customer interaction by sweepers and clerks creates thousands of opportunities a day, to either diminish or enhance customer delight. Thus, understanding the "pivotalness" of roles in talent pools requires clear and logical connections from strategy to talent, through processes and resources.

In the Talentship paradigm, **"Effectiveness"** asks, "What distinctive HR systems will build the pivotal talent quality and performance, and how?" The HC BRidge® tools and processes for "Effectiveness" show how human resource policies and practices affect talent, through human capacity (capability, opportunity and motivation) that supports aligned actions.

Today's HR is typically more adept at "effectiveness" than "impact," so organizations often mistake effectiveness for strategic impact. For example, in organizations with revenue growth as a key strategic goal, HR professionals often attempt to be strategic training and compensation programs for salespeople, usually delivered with high quality, and with evidence to show that they enhanced salesperson learning or behaviors. Yet, upon deeper analysis, below-expected sales revenues were often not due to poor salesperson performance, but rather to a lack of timely and appropriate products or services. The "impact" of enhanced sales "job performance" was significantly limited by a completely different talent pool – those who affect product design and development. HR delivered "effectiveness" for the sales talent pool but failed to enhance back-office talent pools, so the "impact" was far less than its potential.

In the Talentship paradigm, **"Efficiency"** asks, "What resources are required to produce our HR policies and practices?" The HC BRidge® tools and processes for "Efficiency" identify what human resource policies and practices (such as training, compensation, staffing, communications, etc.) are generated from resources such as money and time, invested in the HR function. Today's HR offers a vast array of efficiency measures including time-to-fill-requisitions, training-hours-per-employee, HR functional costs per total costs, etc. HR outsourcing is often motivated and measured exclusively by such efficiency improvements. Though organizations often suspect that such relentless cost cutting jeopardizes their competitive advantage, "effectiveness" and "impact" are not well-captured by efficiency measures, so such suspicions often go un-addressed until too late.

The HC BRidge® framework has been used to describe how to enhance the connection between talent and financial and competitive success in disciplines such as industrial psychology (Boudreau & Ramstad, 2003) and operations management (Boudreau, et al., 2003), and with applications to internet retailing (Boudreau, Dunford & Ramstad 2001; Raimy, 2000) and global value chains (Boudreau, Ramstad & Dowling, 2003). These applications have typically defined sustainable strategic success in financial and competitive terms, but the framework is also useful for understanding talent contributions to sustainability, or "sustainable strategic success" in Exhibit 2.

"Effectiveness" and "Efficiency" for Sustainability

Efficiency and Effectiveness have implications for sustainability. Efficiency refers to using resources frugally. Sustainability expands efficiency beyond the traditional resources of money and time, to consider disruptive work requirements (e.g., extensive overtime, working during religious holidays or requiring single parents to work when needed at home), or contentious relationships with constituents (e.g., by promoting collegial and cooperative relationships with labor organizations or government labor authorities to promote trust rather than contention).

Effectiveness refers to the effect of HR policies and practices on human capacity (a combination of Capability, Opportunity and Motivation), and the aligned actions of the target talent pools. Sustainability draws attention to capacity and aligned actions that go beyond traditional job and performance requirements, to include Capability such as knowledge about the organization's social responsibility and ethics codes, Opportunity such as time off from work to do volunteer tasks in the local community, and Motivation such as employee perceptions that their efforts to contribute to sustainability goals are noticed and considered when allocating rewards and opportunities.

Thus, Effectiveness and Efficiency are often reflected in today's sustainability principles, measures and codes of conduct, applied to HR policies and practices. However, far less attention has been paid to applying the Impact element of HC BRidge® to sustainability. The next section describes how this approach, connecting talent to sustainability at a deep and logical level, and simultaneously "shifting the prize" and "shifting the paradigm," through decisions about *talent*, not just decisions about HR programs.

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Shifting the Paradigm and the Prize Together: High-Impact Pivotal Talent for Sustainability at DuPont

"Impact" identifies how talent resources connect to sustainable strategic success. Exhibit 2 shows that this connection happens through Resources and Processes. "Strategic" Resources are those in which differences in the value, feasibility, scalability or unique protectability make a significant difference to sustainable strategic success. "Strategic" resources are those where enhancing their quality, reliability, or volume makes a significant difference to sustainable strategic success. Talent pools are "pivotal" where talent quality or availability has large effects on strategic resources and processes.

An example from DuPont will illustrate how combining Sustainability, Resources, Processes and Talentship enhances talent decisions. In 2000, DuPont and three other large agricultural companies agreed to share technology, free of charge, with African scientists to increase food production in areas where mass starvation is a recurring threat. They would donate patent rights, seed varieties, laboratory know-how and other aid to help African agricultural scientists who are working with small farmers to battle plant disease, insects and drought (Chad Holliday speech to the WBCSD, 2000). The typical strategy analysis would focus on creating an advantage over competitors to maximize financial gain. In contrast, the DuPont decision implied that patent rights, seed varieties and laboratory know-how, *freely donated*, ertr pivotal to a longer-term sustainability goal – alleviating starvation in Africa. Let's apply the Talenthip paradigm to this example.

Redefining Strategic Resources and Processes Through Sustainability at DuPont

Strategies rests on two key foundations: Resources and Processes, as shown in Exhibit 2. Resources are collections of tangible and intangible assets (Barney, 1996; Collis & Montgomery, 1995), such as patents, access rights, and knowledge. Resources are more strategic, the more they add value to products, services or processes, can be deployed at acceptable volume and cost levels; and can be protected from duplication, acquisition or substitution by competitors. DuPont identified patent rights, seed varieties and laboratory know-how as strategic resources. "Business processes" are the transformation processes that an organization uses to creates value, and strategy rests on these unique and coordinated activities (Porter, 1985, 1996). The value-chain for DuPont might include R&D, regulatory approval, commercialization, manufacturing, packaging, sales, distribution and service, with support processes such as information systems, procurement, legal and HR. It is important to identify the processes where improvements can have the greatest effect on the entire system, and Boudreau and Ramstad (2002, 2003) have used the metaphor of constraints in a pipeline, to help organizations locate and define these key process points.

A traditional strategy analysis (focused on competitive advantage and financial outcomes) would identify patent rights, seed varieties, laboratory know-how as strategic resources, because they are valuable, deployable and protectable. It would identify strategic processes such as commercialization (transforming discoveries into product/service features that customers will pay for and applying them to high-profit and/or high-volume products), and protection (creating legal or physical barriers around intellectual property to keep competition at a disadvantage), because improving these processes would make a large difference in achieving competitive advantage and strong financial results.

The sustainability objective of alleviating hunger in Africa can use the same logical framework, but with very different implications. The resources of laboratory know-how and seed varieties are now important for their effectiveness in hunger-reduction, not profits. Patent rights may actually be a detrimental resource, because starvation reduction requires knowledge that is *unprotected* so that other collaborating companies and African communities can easily copy and disseminate it. The core processes are also different. Commercialization is less critical than transforming discoveries into product/service features that provide the greatest nutrition, and applying them to low-cost and easily-used products. Protection becomes less critical than dissemination (creating methods to make knowledge easily copied, transmitted and applied, so maximize collaboration).

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Redefining the Pivotal Roles Through Talentship at DuPont

Specifying the resources and processes that underlie DuPont's sustainability strategy reveals new talent implications. Continuing with the HC BRidge® framework in Exhibit 2, the connection between talent pools and processes/resources identifies pivotal talent and the aligned actions that make the biggest strategic difference. In the traditional financially-driven strategy, pivotal talent would include research scientists and intellectual property lawyers. The key "aligned actions" for scientists would be to direct their research toward discoveries that yield highly profitable product features. For lawyers, "aligned actions" would be to create patent or other legal protections against competitive espionage and duplication.

Applying the framework to the sustainability strategy of alleviating hunger, the aligned actions for DuPont's scientists would be to discover starvation-preventing product features that can be cheaply and easily deployed. DuPont's laboratory talent must not only develop seed varieties that can be profitably cultivated in Africa, but find seed varieties that thrive in starvation-prone areas, and that produce food products that efficiently alleviate starvation. Instead of intellectual property lawyers, a pivotal talent pool will be translators and trainers, whose "aligned actions" would be to transfer the knowledge as quickly as possible, not only to the communities that must apply it, but also to *competitors*, so that the dissemination network grows as quickly as possible. One can imagine that DuPont's "marketing" talent must now go beyond simply selling DuPont's products to consumers and governments with the ability to pay, and instead effectively overcome cultural and knowledge challenges in starvation-prone regions.

The framework connects HR investments and the strategic outcomes and business measures to account for their effects. The financially-driven strategy would measure the frequency of profitable breakthroughs, and the minimum number of competitive challenges. The sustainability –driven strategy would measure the proportion of the local population that uses the technology, and the number of competitors who are actively collaborating.

Finally, the Effectiveness element HC BRidge® in Exhibit 2 shows that the traditional versus sustainability strategy imply very different human capacity, and the HR investments, programs and policies necessary to build that capacity. The traditional financial strategy requires capability, opportunity and motivation (COM) for research and product development aimed at high margins and profits, as well as secrecy and knowledge protection. The Sustainability strategy of alleviating starvation requires COM for research and product development aimed at community adoption and hunger reduction, as well as transparency and open dissemination of knowledge. The implications for HR policies and practices now go well beyond simply assuring that they are compliant with the directives and recommendations of NGO's and government authorities. The focus now is on the HR investment *decisions* and their specific effects on the talent, processes and resources that support the strategy.

Conclusion

Sustainability has been described as a work in progress. As organizations embrace sustainability, and assert goals such as "meeting the needs of the present without compromising the ability of future generations to meet their own needs," it will be important to beyond the words and focus on execution. Formal structures and rules have limited ability to govern globally complex organizations, so organizations will increasingly rely on shared "mental models" of goals and the appropriate means to reach them (Boudreau, Ramstad & Dowling, 2003). This is especially true for change as profound as the shift from defining the "prize" in traditional terms outcomes versus in terms of sustainability.

Perhaps the most important implication of combining Talentship and Sustainability is the potential for shared line-of-sight among employees, leaders and stakeholders. Even when employees embrace the high-level sustainability values of an organization, they can hardly be blamed for behaving consistently with traditional financial outcomes. After all, the financial models are deeply ingrained in traditional business strategy processes, and financial outcomes are most clearly measured and rewarded. Sustainability in action requires culture change, which rests on how deeply, consistently and

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logically employees can connect their own efforts with sustainability goals, and thus make better decisions about their own talents and human capital. A shared framework for connecting strategic success to talent decisions is always important, but it is perhaps most important when the strategy requires deep and lasting changes in values and behaviors. Incorporating sustainability into the definition of strategic success poses just such requirements.

References

Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal, 37* (3), 670-687.

Barney, J. (1996). *Gaining and Sustaining Competitive Advantage*, Reading, MA: Addison-Wesley.

Becker, B.E. & Huselid, M.A. (1998). High performance work systems and firm performance: A synthesis of research and managerial implications. *Research in Personnel and Human Resource Management, 16*, 53-101.

Boudreau, J.W. (2003). Strategic knowledge measurement and management. In S.E. Jackson, M. Hitt and A.S. DeNisi (eds.). *Managing knowledge for sustained competitive advantage.* San Francisco: Jossey-Bass/Pfeiffer, pp. 360-396.

Boudreau, J.W. & DeCieri, H. (in press). Global human resource metrics. In J.E. Edwards, J.C. Scott, and N.S Raju (eds.) *The Human Resources Program Evaluation Handbook.* Sage Publications.

Boudreau, J.W., Dunford, B. B., & Ramstad, P. M. (2001). The human capital impact on e-business: The case of encyclopedia Britannica. In N. Pal & J.M. Ray (Eds.) *Pushing The Digital Frontier*, Chapter 10, pp. 192-221. New York: Amacom.

Boudreau, J.W., Hopp, W., McClain, J.O., & Thomas, L.J. (in press). On the interface between operations and human resources management. *Manufacturing and Service Operations Management.*

Boudreau, J.W. & Ramstad, P.M. (2003a). Strategic HRM measurement in the 21st century: From justifying HR to strategic talent leadership. In *HRM in the 21st Century*, Marshall Goldsmith, Robert P. Gandossy & Marc S. Efron (eds.), 79-90. New York: John Wiley

Boudreau, J.W. & Ramstad, P.M. (2003b). Strategic I/O psychology and the role of utility analysis models. In W. Borman, D. Ilgen and R. Klimoski (eds.). *Handbook of Psychology*, (Vol. 12, "Industrial and Organizational Psychology", Chapter 9, 193-221). New York: Wiley.

Clark, W.C. (1989). Managing planet earth. *Scientific American*, 261 (3) 47-54.

Collis, D. J. & Montgomery, C.A. (1995). Competing on resources: Strategy in the 1990's. *Harvard Business Review*, July-August.

Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational predictions. *Academy of Management Journal, 39,* 802-835.

Gerhart, B.A., Wright, P.M., McMahan, G.C. & Snell, S. (2000). Measurement error in research on human resources and firm performance: How much error is there and how does it influence effect size estimates? *Personnel Psychology, 53* (4), 803-834.

**Working Draft, December 18, 2003. Comments Welcome. Copyright © 2003, John W. Boudreau.
Please do not distribute without permission**

Gladwin, T.N., Kennelly, J.J. & Krause, T.S. (1995). Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of Management Review, 20* (4) 874-907.

Gore, A. (1992). *Earth in balance: Ecology and the human spirit.* New York: Houghton Mifflin.

Heemskerk, B., Pistorio. P. & Scicluna, M. (2000). *Sustainable development reporting: Striking the balance.* Geneva: Switzerland, World Business Council for Sustainable Development, **www.wbcsd.ch**

Holliday, C. (2003). *Corporate social responsibility, sustainability and markets.* Speech delivered to the Wharton China Business Forum, March 29. Available from the World Business Council for Sustainable Development, **www.wbcsd.ch**.

Holme, R. & Watts, P. (2000). *Corporate social responsibility: Making good business sense.* Geneva: Switzerland, World Business Council for Sustainable Development, **www.wbcsd.ch**.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal, 38* (3), 635-672.

Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Organizational characteristics as predictors of personnel practices. *Personnel Psychology, 42,* 727-786.

Ichnioswki, C., Shaw, K., & Prennushi, G. (1997). The effects of human resource management practices on productivity: A study of steel finishing lines. *American Economic Review, 87* (3), 291-313.

Lee, K.N. (1993). Greed, scale mismatch and learning. *Ecological Applications, 3* (4) 560-564.

MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review, 48,* (2) 197-221.

Mirza, P. (2003). Evolution of finance, marketing cited as HR model. *SHRM Conference Daily*, June 24, 2003, p. 6. Washington, D.C.: Society for Human Resource Management.

Pfeffer, J. (1998). *The Human Equation*, Boston, MA: Harvard Business School Press.

Porter, M.E. (1985). *Competitive advantage: Creating and sustaining superior performance.* New York: Free Press.

Porter, M.E. (1996). What is strategy? *Harvard Business Review;* Nov-Dec 74, (6) 61-77.

Raimy, E. (2000). Cyber move. *Human Resource Executive*, September.

Rolston, H. (1994). *Conserving natural value.* New York: Columbia University Press.

Shell International (2000). *Meeting the energy challenge: The Shell report 2000.* London, UK: Shell International Limited.

Shell International (2001). *Shell, people, planet and profits.* London, UK: Shell International Limited. **www.shell.com**

Viederman, S. (1994). *The economics of sustainability: Challenges.* Paper presented at the workshop, The Economics of Sustainability. Fundacao Joaquin Nabuco, Recife, Brazil.

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Wild, A. (2003). *Putting the trust back in business.* Unpublished working paper. Geneva, Switzerland: International Labor Organizaiton (ILO). Alan Wild, wild@ilo.org

World Business Council on Sustainable Development (2001). *Cross-cutting themes.* Geneva: Switzerland, World Business Council for Sustainable Development, **www.wbcsd.ch**

World Commission on Environment and Development (WCED) (1987). *Our common future.* Oxford, UK: Oxford University Press.

Youndt, M. A., Snell, S. A., & Dean, J. W. (1996). Human resource management, manufacturing strategy, and firm performance. *Academy of Management Journal, 39* (4) 836-867.

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John W. Boudreau, Ph.D., Visiting Professor and Research Director at the University of Southern California's Marshall School of Business and Center for Effective Organizations, and Professor of human resource studies at Cornell University is recognized worldwide for breakthrough research on the bridge between superior human capital, talent and sustainable competitive advantage. His research has received the Academy of Management's Organizational Behavior New Concept and Human Resource Scholarly Contribution awards. Dr. Boudreau consults and conducts executive development with companies worldwide that seek to maximize their employees' effectiveness by quantifying the strategic bottom-line impact of superior people and human capital strategies, including Boeing, Bristol-Myers Squibb, Corning, Citigroup, Frito-Lay, GE, The Hartford, IBM, JPMorganChase, Merck, Novartis, Royal Dutch Shell, Schering-Plough, Sun Microsystems, ToysRUs, Unisys, the United Nations, and Williams-Sonoma. Professor Boudreau was an architect and the first Visiting Director of Sun Microsystems' unique Research and Development Laboratory for Human Capital. Professor Boudreau is a Fellow of the National Academy of Human Resources.

Dr. Boudreau has published more than 45 books and articles. In addition to HR metrics, Dr. Boudreau's large-scale research studies and highly focused qualitative research have addressed decision-based HR, executive mobility, HR information systems and organizational staffing and development. His research findings have been published in *Management Science*, *Academy of Management Executive*, *Journal of Applied Psychology*, *Organizational Behavior and Human Decision Processes*, *Personnel Psychology*, *Asia-Pacific Human Resource Management*, *Human Resource Management*, *Journal of Vocational Behavior*, *Human Relations*, *Industrial Relations*, *Journal of Human Resources Costing and Accounting*, and *Personnel Administrator*. He co-authored a best-selling textbook on human resource management that reached its eight edition and was translated into Chinese, Czech, Spanish and others.

Features on his work have appeared in The Wall Street Journal, Fortune, Business Week, Training, and Human Resources Management.

The recipient of the General Mills Award for teaching innovations at Cornell University, Dr. Boudreau also founded the Central Europe Human Resource Education Initiative, which links American HR professionals and academic researchers with faculty and students in the Czech and Slovak Republics. A strong proponent of corporate/academic partnerships, Dr. Boudreau directed the Center for Advanced Human Resource Studies (CAHRS), which partners executives from America's top corporations with university researchers and students to explore leading-edge HR issues.

Dr. Boudreau is a member of the board of advisors the Human Resource Planning Society, and for Brassring.com, a technology information and career portal. He is a Trustee for the Foundation of the National Academy of Human Resources. He chaired the Academic Advisory Board of the California Strategic HR Partnership, a silicon-valley HR executive consortium, and served on the boards of advisors for the Saratoga Institute, a leading global source of human capital benchmarking and performance measures. He has also been elected to the executive committees of the Human Resources Division of the Academy of Management and the Society for Industrial and Organizational Psychology. Dr. Boudreau holds an undergraduate degree in business from New Mexico State University, and a Masters degree in Management and Ph.D. in industrial relations from Purdue University's Krannert School of Management.

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