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People in the E-Business: New Challenges, New Solutions

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People in the E-Business: New Challenges, New Solutions

Abstract
[Excerpt] Human Resource Planning Society's (HRPS) annual State of the Art/Practice (SOTA/P) study has become an integral contributor to HRPS's mission of providing leading edge thinking to its members. Past efforts conducted in 1995, 1996, 1997, 1998, and 1999 have focused on identifying the issues on the horizon that will have a significant impact on the field of Human Resources (HR). This year, in a divergence from past practice, the SOTA/P effort aimed at developing a deeper understanding of one critical issue having a profound impact on organizations and HR, the rise of e-business. The rise of e-business has been both rapid and dramatic. One estimate puts the rate of adoption of the internet at 4,000 new users each hour (eMarketer, 1999) resulting in the expectation of 250 million people on line by the end of 2000, and 350 million by 2005 (Nua, 1999). E-commerce is expected to reach $1.3 trillion by 2003, and of that, 87 percent will go to the business to business (B2B) and 13 percent to the business to consumer (B2C) segments, respectively (Plumely, 2000).

Keywords
job, research, practice, firm, performance, challenge, business

Disciplines
E-Commerce | Human Resources Management

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WORKING PAPER SERIES

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Patrick M. Wright
Lee Dyer

Working Paper 00 - 11

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Advancing the World of Work

People in the E-Business: New Challenges, New Solutions

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This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research available to others interested in preliminary form to encourage discussion and suggestions.

SECTION ONE: INTRODUCTION

Human Resource Planning Society's (HRPS) annual State of the Art/Practice (SOTA/P) study has become an integral contributor to HRPS's mission of providing leading edge thinking to its members. Past efforts conducted in 1995, 1996, 1997, 1998, and 1999 have focused on identifying the issues on the horizon that will have a significant impact on the field of Human Resources (HR).

This year, in a divergence from past practice, the SOTA/P effort aimed at developing a deeper understanding of one critical issue having a profound impact on organizations and HR, the rise of e-business. The rise of e-business has been both rapid and dramatic. One estimate puts the rate of adoption of the internet at 4,000 new users each hour (eMarketer, 1999) resulting in the expectation of 250 million people on line by the end of 2000, and 350 million by 2005 (Nua, 1999). E-commerce is expected to reach $1.3 trillion by 2003, and of that, 87 percent will go to the business to business (B2B) and 13 percent to the business to consumer (B2C) segments, respectively (Plumely, 2000).

This meteoric growth has presented the field of HR with an immense challenge. Numerous HR executives express that while their organizations are in the beginning or the midst of developing an e-business, they have little understanding of how this would impact their role. This uncertainty stems in large part from a lack of reliable data on how moving from a traditional brick and mortar business model to an electronic business model will change the organization and the people issues that arise with such a change.

Thus, the objective of the 2000 SOTA/P was to provide leading edge knowledge regarding the organizational, people, and HR issues related to the transformation to, or the implementation of an electronic business model. In contrast to past SOTA/P's, we sought depth rather than breadth in our approach, conducting multiple in-depth case studies in order to gain detailed knowledge of the issues these "e-businesses" faced.

Methodology of the Study

In order to ensure that we were able to identify all of the issues that might be inherent in formulating and implementing an e-business strategy, we sought out a wide variety of firms to participate. We wanted firms that represented a variety of industries, particularly including both "old" and "new" economies, so that we could see the differences between e-businesses grown out of existing brick and mortar (e.g., Chevron) as well as those that were founded along an e-business model (e.g., Amazon.com). We also sought to examine firms along the whole spectrum in the development of their e-business from those that were just in the

beginning stages (e.g., CIGNA) to those that were leaders in their industry (e.g., Charles Schwab).

Consequently, case studies were conducted with 7 organizations that represented a variety of industries, and differed substantially in their level of progress in implementing their e-business. Amazon.com exemplified the most advanced stage of e-business, a firm founded on an e-business model, and while young, being viewed as one of the leading e-commerce companies in the world. Amazon employs approximately 7,600 people and had just over $1.6 billion in revenues in 1999.

Two computer companies also participated in the study. Compaq Computer has 67,000 employees and reported just over $38.5 billion in 1999 revenues. Compaq's vision of "everything to the internet" is the driving force behind their current strategy. People within the firm indicated that their history of "partnerships" with distributors had been one of the factors that initially slowed their movement to e-business, but that with the appointment of Mike Cappellas to the CEO position, e-business has become the number one priority.

Sun Microsystems employs almost 30,000 people and reported just under $12 billion in 1999 revenues. Sun has historically been organized in independent business units as a means of encouraging an entrepreneurial mindset among the business leaders. While the firm advertises that it is "the dot in dot-com," e-business initiatives within Sun have traditionally been the domain of each business unit. However the current focus is on creating a coordinated strategy from the existing business unit e-strategies.

Charles Schwab's Electronic Brokerage was created within the existing Charles Schwab Corporation which employs 18,000 people and had 1999 revenues of just under $4 Billion. The electronic brokerage at Schwab is recognized as the leader in the industry in terms of number of customers and assets, as well as operational measures of customer satisfaction.

Wingspanbank.com was created within FirstUSA, a division of Bank One Corporation. Wingspanbank made history by not only being the first internet based bank, but also by being created in the shortest period of time. It was launched on June 18, 1999 in 122 days. The initial goal was to obtain over 1 million customers by 2000, however, this goal was revised downward as only 100,000 customers had signed up after 6 months. Bank One overall employs 86,000 people and reported 1999 revenues of $17 billion.

CIGNA Corporation is a large insurance company located in Connecticut. It employs 42,000 and reported 1999 revenues of almost $19 billion. Similar to Sun CIGNA's electronic

business efforts were located in the different business units, but these efforts were not as extensively implemented as at Sun. In addition, the current focus was on trying to grapple with how to create an integrated web strategy across the various businesses.

Finally, Chevron Corporation represented another traditional industry, petrochemical, and another large established firm trying to develop an e-business. Their e-business concerns focus mostly on the retail side of the business, but they currently have three efforts underway. One deals with managing an independent joint venture with Oracle and WalMart. Chevron employs over 36,000 people and recorded over $36 Billion in revenues in 1999.

In conducting the case studies, we spent between 1 and 2 days on site with the leaders of the business. We asked to talk with (a) the line executive with strategic authority over the e-business, (b) the HR executive with responsibility for the e-business, and (c) anyone else that our contact thought we needed to talk to in order to understand both the strategy and operations of the business. In most cases we spoke with between 2 and 5 line executives, and between 2 and 5 HR executives.

Each interview lasted between 45 and 60 minutes. We followed a structured interview that focused on 3 basic issues: (1) What was the strategy behind the e-business, (2) what organizational and people issues did they face, and (3) what was HR's role. With regard to each issue we probed to identify what aspects were different from a traditional brick and mortar business.

Finally, a major part of the study was also to conduct an extensive literature review on e-business. This was a considerable task as just about every major business periodical developed an "e-business" section during the course of the study, providing a large amount of writing to sift through. While a substantial literature has developed, one striking finding was that very little of it focused on people issues. Most of the literature described generic business models, the nature of competition, or even the use of technology, most often focused on what a particular company was doing with regard to its e-business. In spite of the fact that virtually every one of the line executives we interviewed pointed to people issues as the most critical, the business press has seemingly ignored them.

We structure the remainder of this report around 4 areas. First, we will present the basic findings of the study both describing the variety of views of what constitutes e-business, and identifying major issues and challenges that we uncovered in our research. Second, we explore the paths that companies are taking in moving into the e-business world. Third, we will present our model of agile e-businesses, describing the systems, structures, and people who

can effectively function in an e-business environment. Finally, we will examine the implications of these challenges and organizational responses for HR.

SECTION TWO: STUDY FINDINGS

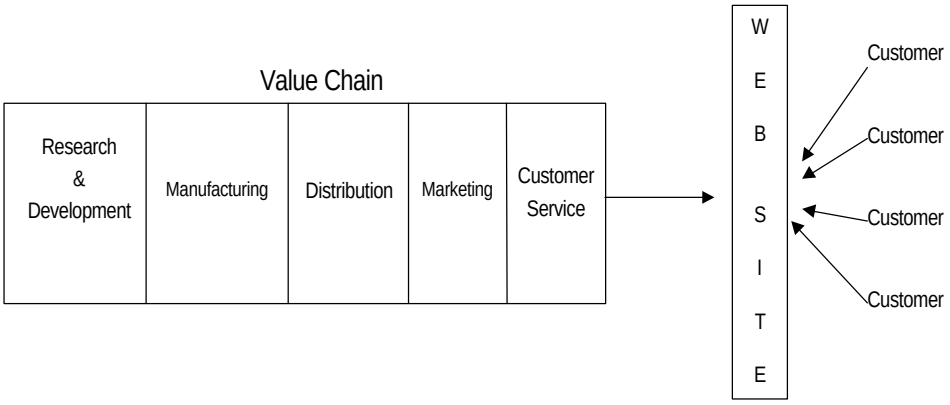
The findings of the study represent the basic themes that we identified and will examine two main areas. First, in order to provide a foundation for premise of the study, we must address the basic question of "What is E-business?" Second, we will describe the 10 e-business challenges that emerged from our results.

What is E-business?

Despite the plethora of writing on e-business, our research revealed that different people and different firms have different conceptions of what constitutes e-business. People throw around terms such as e-commerce, e-business, B2B, B2C etc. with little specificity as to what they really mean. In order to identify how e-business will impact organizations, one must first understand the ultimate goal of e-business. Thus, we present four different models that we identified in our research.

First, ***e-commerce*** represents the most popular view of e-business and is depicted in Figure 2.1. E-commerce consists of the linking of businesses to consumers, so that consumers can make purchases over the internet. The goal (either implicit or explicit) behind e-commerce initiatives is to add another distribution channel, i.e., provide customers with an alternative channel for making purchases. Most e-commerce initiatives largely focus from the standpoint of the business as a way to present products to customers with the major goal to increase revenues. However, more advanced e-commerce approaches recognize that in addition to (and maybe even as important as) gaining revenues from customers, firms are also able to gain information from customers. This information ranges from the number of hits on different pages to the actual placement of "cookies" on the customers' computers which track and feedback to the firm what other sites the customer visits as well as purchases that customers make. In either case, e-commerce represents the business to customer (B2C) link.

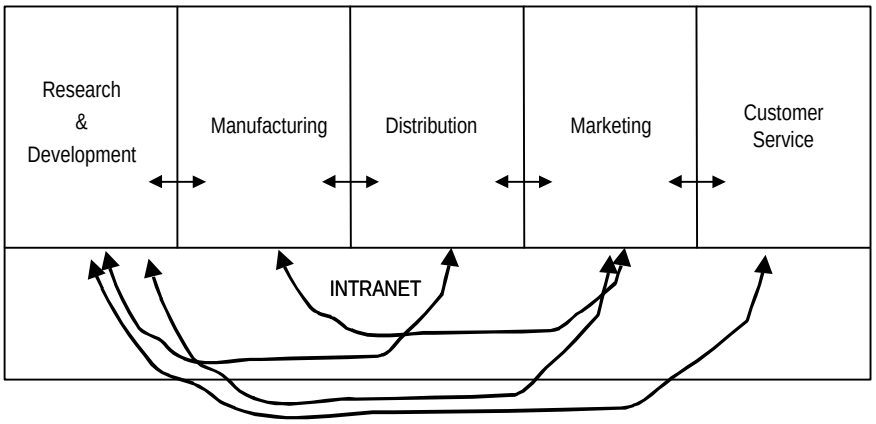
Figure 2.1
E-commerce (channels)



Second, some individuals think of ***enterprise resource planning*** systems (ERP's) as being e-business initiatives. ERP's seek to provide information systems platforms which form the foundation for increasing integration across the different components of the value chain within the firm as depicted in Figure 2.2. ERP's promise the potential to provide significant cost savings through integrating a variety of processes, as well as to increase overall organizational effectiveness through providing better information within the value chain. In essence, ERP's often could be used as the platform for business to employee (B3E) and/or employee to employee (E2E) efforts through gathering and disseminating information within the firm.

Figure 2.2

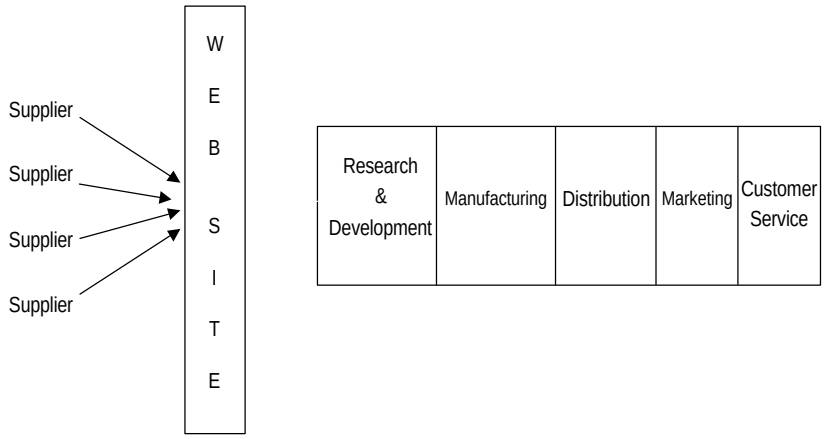
ERP (value chain integration)



Third, ***supply chain management*** initiatives seek to provide an internet link with the firm's suppliers as is illustrated by Figure 2.3. Two generic versions of this approach exist, but both share significant cost reduction as a goal. First, one approach is simply to link to existing suppliers so that orders can be placed on line. Such a linkage allows firms to maximize the effectiveness of their just-in-time inventory systems to create cost reduction through better inventory management. Second, a more recent approach has been the development of on-line auctions for contracts with both existing and potential suppliers. In this case, firms achieve cost reduction through lower overall supply costs. These represent the increasing B2B market which should exhibit the most growth over the next few years.

Figure 2.3

Supply Chain (inventory control)



These three models of e-business best depict the current state of most e-businesses. Many firms have implemented ERP's over the past 5 years as a means to better integrate their activities. The past 1-2 years have seen a tremendous growth in traditional brick and mortar firms (particularly retailers) develop web sites for taking customer orders as well as stand alone e-businesses which seek to allow customers to order products online. The 1999 Holiday season saw an incredible amount of attention on B2C efforts. Most recently, B2B efforts have garnered considerable attention in the business press. With the announcement that GM, Ford, and DaimlerChrysler had entered into a consortium to develop an online purchasing business, more and more firms see the need to get into the "business to business" business.

Interestingly, one aspect common to both the supply chain management and e-commerce initiatives is the concept of "one face." E-commerce initiatives recognize that in a multidivisional firm, customers don't want to have to deal with 5 independent entities, but rather one firm. Thus, these efforts focus on creating one face to the customer. On the supply chain side, while suppliers may be less concerned with dealing with "one face," firms recognize that aggregating and coordinating purchases provides greater leverage and thus, lower costs. As the CEO of Emerson Electronics told us, in some cases suppliers have dropped their prices by as much as 50% as a result of their use of FreeMarkets.com's bidding process. This cost

savings is possible because with larger orders, suppliers can amortize the costs to a much lower average unit cost. Thus, the "one face" aspect of e-business provides one critical driver of movement toward the net.

While each of these individual approaches have gained attention, our research found that the next generation of e-business will be focused on integrating these three different components into what we refer to as the ***integrated*** e-business as depicted in Figure 2.4. This ideal e-business aims to leverage information to increase customer focus. It requires a seamless integration of the systems managing the business to customer, business to employee, and business to business interfaces. It requires a paradigmatic shift in how firms seek to relate to customers and suppliers, as well as to one another within the firm.

> *"E-business is using the model to go to another level in understanding what you want to capture from your customers and what you want to be offering your customers."*
>
> *David Parsons,*
> *Director of NseB Solutions Marketing at Compaq*

Interestingly, while so much of the focus on e-business has been with regard to the technology, our research reveals that to focus on the technology is to lose sight of the forest for the trees. In particular, firms can dwell on the internet overall, as well as the web sites, information systems, etc. within the firm, but to do so is to miss the most important aspect of e-business. That is, that ***e-business provides the catalyst or tool by which the firm can transform itself to leverage information and create systems, structures, and processes to increase customer focus.***

> *At the highest level, the company is using the web as an enabling mechanism to turn itself inside out, migrating from a company that measures itself internally to one based on how customers see the company."*
>
> *Dave Berthaiume,*
> *Director of Business Architecture, e-Sun*

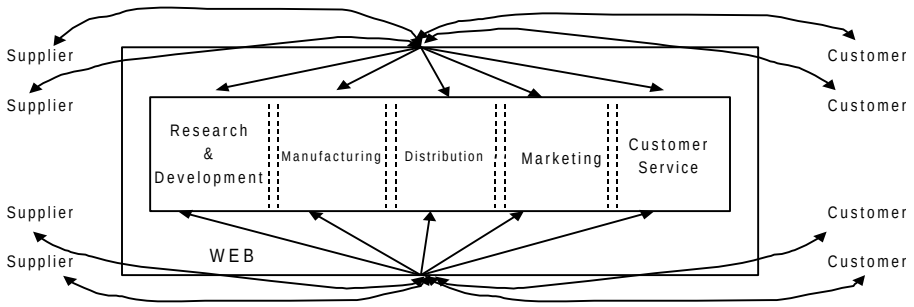
This represents the potential that those visionary e-business leaders see for how e-business will increase their competitiveness. Rather than view it as simply the application of a technology to decrease costs or add a distribution channel, e-business holds the potential to be the catalyst for organizational transformation. This organizational transformation aims at

developing an entire firm which focuses on the customer, and does so by capitalizing on information that can be gained via the web.

Additionally, the importance of e-business lies with how it will transform entire industries. In addition to firms internally transforming to change their attitude toward and relationships with customers, the web will create a new paradigm for interorganizational relationships. As firms such as the automobile manufacturing consortium require all bids and orders to be conducted on line, firms that are slow in moving to the net will not be able to survive. In essence, having web capability in the B2B market will become a requirement just to stay in business. However, successful firms will be those that engage with suppliers in an even deeper way, through tying their systems together to allow virtually zero inventory-carrying costs. This is the beauty of Dell's direct model. Through partnerships with suppliers such as Intel, when a customer configures his/her desired computer on line and submits it, the system immediately checks for the availability of parts for the assembly of that computer. In addition, this information can immediately be transmitted to each partner supplier, so that Intel simultaneously knows to prepare a shipment for replacement chips.

Figure 2.4
Integrated E-Business

(Leverage Information/Customer Focus)



Note, however, that this new paradigm requires a different kind of relationship between partners. Partners have to have access to more information from one another, and some of this information might be proprietary. The systems must be simultaneously linked and secure. In essence, the two company infrastructures, to some extent, become one.

> *For those companies that aren't linked via the net, they'll be out of business. As this begins to grow, there's no turning back. Your company infrastructure becomes my company infrastructure. It's far bigger than anything that has ever been done before.*
>
> *David Parsons,*
> *Director, NS eB Solutions Marketing, Compaq*

Thus, this new paradigm represents entirely new relationships with customers and with suppliers, the outcomes of which remain uncertain. What we know, however, is that this new e-business paradigm will result in a number of challenges. The next section describes these challenges.

The 10 E-biz Challenges

In identifying the challenges, we sought to synthesize the large number of issues that individuals described into themes which seemed to be consistent across the firms in our sample. In order to make the list, the challenge had to be mentioned in at least 4 of the firms. Thus, while many of the specific issues identified at Amazon.com stemmed from its rapid growth (more than doubling in size in less than one year), a "growth" challenge did not make the list because none of the other firms were growing at such a rapid pace. Consequently, the list presented below is not exhaustive of all the challenges facing any particular e-business, but rather represents challenges that are highly likely to be faced by all firms in their e-businesses.

We organize the challenges in terms of organizational and people issues in Table 2.1. The first five challenges deal with organizational systems, structures, and processes driven by forces within the competitive environment. The second five challenges describe the problems inherent in managing people within the e-business.

Table 2.1
10 E-business Challenges

Organizational	**People**
Uncertainty	Project Focus
Speed	Technologist as Manager
Technology	Generational
Integration	Job Churn (Death of a Saleman)
Project Structure	Labor Market Exuberance

Uncertainty Challenge

Certainly, the cause of greatest anxiety among firms moving into e-business is uncertainty. Past interventions such as reengineering, or learning organizations required firms to engage in a whole new set of activities. However, in these cases, one could always point to a model firm (e.g., General Electric) that had been through the change process, and follow that model. Some of the anxiety associated with the fact that the focal firm had not been down the road before was alleviated by being able to look to one or more firms who had, from which learning could be gleaned.

Uncertainty with e-business stems from the fact that at this point in time, no model firm exists. The upstarts such as Amazon.com, Dell, E-bay, Priceline.com, etc. began as e-businesses with no brick and mortar institutional mindsets to hold them back. Employees in these firms started working in e-environments and processes emerged from an e-logic. However, established firms that seek to create e-businesses face a choice. First, they can develop it from within and face all of the institutional resistance from existing people and power structures that have been built over the years from their brick and mortar logic. Or the firm can create an independent entity outside of the institution without the institutional and logical constraints, but which cannot create synergy within the existing bureaucratic structure. In either case, the path is one untravelled by the firm, and no model firm exists whose path another firm can follow.

> *What's different is the uncertainty. When you've gone through efforts such as reengineering in the past, there was always a model to pattern your effort after. But with the development of an e-business, there's no model for us to learn from. You have to learn as you go and be willing to experiment.*
>
> *Rick Chapura*
> *Director of HR, e-Sun*

Therefore, the uncertainty challenge requires firms to take a new posture towards managing, one that requires innovation, creativity, experimentation, and tolerance for failure. Rather than follow the "GE" way, firms must plow their own path, constantly sensing internal and external factors to identify when the firm is on or off track.

Speed Challenge

The speed challenge constituted a consistent theme voiced by those we interviewed. The term "on internet time" reflects a speed between 6 and 10 times faster than normal. E-

businesses function in internet time, requiring considerably quicker response than brick and mortar businesses.

For example, consider how long it would take a brick and mortar business to add a product line such as tools to its existing product line such as books. One would expect this to take well over a year. Amazon.com adds product lines (or stores) in months. Or consider how long it takes firms to track slow sales in a particular product line. Again, e-businesses have constant real time feedback on which products are selling at what rates, and can adjust prices in real time. For example, Mercado.com advertises that the price customers will ultimately pay depends upon the number of units bought. As more units are purchased the price is adjusted downward in real time.

Thus, the speed of change in every aspect of a firm's business model increases exponentially in e- as opposed to brick and mortar businesses. This increasing speed of change requires organizational systems capable of responding more quickly than businesses have ever had to before.

Technology Challenge

The technology challenge reflects how even the most traditional businesses become knowledge based in an e-environment. Technology becomes a strategic necessity without which firms cannot survive. The problem with technology is that it is both infinitely innovatable and easily imitable. Innovations constantly take place that provide competitive advantage, but those innovations are quickly imitated taking away the advantage.

For example, traditional retail organizations may have used technology for inventory tracking. While providing substantial benefits, the information system was probably not central to the firm's ability to compete. However, now the retailer must have inventory tracking systems that monitor sales and coordinate with suppliers. In addition, as they develop e-businesses, they must also harness web technology to create web sites that are attractive, easy to navigate, and secure. All this assumes only that the purpose of the technology is to facilitate transactions. Add in the requirement that the systems provide information that will aid business decision making and the constant rapid change in available technologies, and one sees how managing technology presents a considerable challenge.

Most would view Charles Schwab as a discount stock brokerage that has developed an e-business. Such brokerages, one normally assumes, provide online transactional capability, so that individual investors can more easily manage their investment portfolios. However, Schwab executives do not view themselves so much as an investment brokerage as they do a

technology company. They constantly struggle to stay ahead of the technology curve in order to provide customers with the leading edge information and tools to manage their portfolios. Schwab has not lost its mission of helping customers to realize their financial dreams, but recognizes the increasing centrality of technology as a means for fulfilling that mission.

Integration Challenge

E-businesses create value in a number of ways. First, value may come from cost reduction by eliminating the duplication of effort across a variety of business units. Second, the creation of "one face" to the customer provides better customer service. Third, putting procurement online can both reduce inventory and provide for greater purchasing power driving down material costs. When all of this takes place in a single business, the value is created with minimal coordination costs.

> *"Customers demand a single face and single way of doing business, so while e-business is great for driving efficiencies, more important is the creation of one face to the customer."*
> *Flint Brenton*
> *VP E-business, Compaq*

When implementing an e-business within a multidivisional firm, however, the integration challenge becomes paramount. Take a multidivisional firm where the various business units have traditionally functioned with relative autonomy. Such a structure encourages an entrepreneurial mindset and provides for strict accountability for business results. To realize the benefits from an e-business model, however, requires that formerly autonomous business units must forfeit some autonomy. Rather than managing their own web sites, a central web site must organize all transactions across units. Certain duplicated jobs also will need to be eliminated. Most importantly, business unit managers must transform their mindsets from one of business first, corporation second, to corporation first, and business second.

In essence the integration challenge facing firms requires that systems, processes, and people must be integrated in a way that has not previously existed. To attain this goal successfully necessitates a changed mindset among managers regarding their ownership over systems, processes, and people.

Project Structure Challenge

Most of the e-businesses in the study functioned along a project basis to a greater extent than their brick and mortar counterparts. While organizational structures (e.g. an organization chart) might exist, the actual functioning of the business focused more on projects

rather than stable structures. In this project structure project teams consist of a number of individuals assembled for a relatively short time focused on the completion of that project. In addition, individuals work on a series of projects with no requirement that they see any one project from inception to completion.

The project structure presents a number of issues. First, because the project teams are made up of individuals thrown together for a short time frame, interpersonal/team skills emerge as extremely important. Second, because people frequently move from project to project, institutional memory does not develop. When situations arise, no one knows who to ask because know one knows who has faced that situation before. This results in considerable inefficiency in problem-solving. Finally, in some cases moving from project to project is demotivating as (a) employees never gain the satisfaction of seeing the results of their work as the project reaches completion and (b) they lack self-efficacy because as soon as they develop the knowledge for one project, they are thrown onto a new one.

Project-Focus Challenge

Corresponding to the project structure challenge is the project-focus challenge. This refers to the tendency for managers in a project-structure to focus on project completion to the exclusion of other managerial responsibilities. In essence, because the firm rewards managers for project completion (on-time, on-budget), a single-mindedness of purpose develops around that goal. In the process, managers may neglect their people-management responsibilities.

For example, in one firm in the sample arranged a focus group with 4 senior line executives who spoke about their experiences in managing the projects within their e-business. Consensus evolved around 2 issues. First, the managers believed that the number one cause for turnover of employees was when they felt like they were not being managed well, particularly not being developed and recognized by their manager. Second, the managers expressed that they viewed their jobs not as people managers, but as project managers. Interestingly, they did not see the linkage between these two areas of agreement.

Thus, firms face the challenge of balancing managers' attention between the immediate need for project completion with the long term capability gleaned from effective management of people.

Technologist as Manager Challenge

In addition to the project-focus challenge, the technologist as manager challenge further limits the firm's ability to properly manage people to meet their intrinsic and

developmental needs. This challenge stems from firms' tendency to promote highly effective technology employees to management positions. These technology employees often possess tremendous technological expertise that far exceeds their people management skills.

Again, consistently observed among the e-businesses in our study was the fact that employees left the firm when they felt they were not properly managed. This requires managers who show respect and concern for employees, particularly with regard to understanding their career goals and providing development opportunities to help them achieve these goals. Failing to provide such managers inevitably results in employees fleeing to the nearest competitor who offers marginally greater compensation.

The skills necessary for managing people this way seldom appear naturally in highly technical employees. Such employees tend to focus on technological issues and solutions, and assume that people work like machines. Given the centrality of technology in e-business, these managers are easily drawn toward focusing on either the technology or project completion to the neglect of their people.

> *The more technology is leveraged, the more important people become to organizational success. This new way will put a premium on people managers skills, more so than at any time in history. If people are not challenged and motivated, they won't succeed, and the managers who put together these kinds of teams are going to have much more success.*
>
> *David Parsons,*
> *Director, NS eB Solutions Marketing, Compaq*

Generational Challenge

The highly technological base of e-business, firms naturally find a greater number of young employees who possess state-of-the-art technological skills. While all firms must absorb younger (and in particular, generation X) employees, the e-businesses seem to attract a significantly greater percentage of such employees. Successfully integrating these younger employees with different values and mindsets presents another challenge for managing an e-business.

One aspect of this challenge lies with the governance or management of younger employees. Because they place greater value on autonomy and have less respect for authority, control via position power is less effective. Because many of them entered the job market in a situation of high demand, they believe that they have much greater leverage and control over their own careers and are thus less influenced by traditional reward and coercive power. Finally, because their technical skills probably exceed those of their managers, they

are less likely to be subject to expert power. Thus, the effectiveness of traditional modes of exerting power over employees dissipates. Rather, these employees are more effectively influenced by charismatic leaders who can appeal to their idealistic vision.

> *The biggest factor in retention is your manager. If you have a strong manager you'll like work. If not, then you're not going to have a good experience. It highlights the importance of developing skills in how to coach, develop, and manage people.*
>
> *Bob Taylor,*
> *Charles Schwab Electronic Brokerage*

While the downward influence of managers over employees presents one problem, another aspect of this challenge lies with opening the minds of managers to the expertise of this younger generation. These employees certainly possess up to date technical skills. More importantly, however, they bring a mindset and ideas unlikely to be seen among the older generation of workers. Because they grew up surrounded by technology, they see opportunities and applications invisible to those of previous generations.

> *These kids understand the technology much more deeply than my generation. They grew up with it and they live with it. They see how it can be applied in ways we would never think of. Our challenge is getting our older managers to be open to the ideas that our younger employees have. If we capitalize on those ideas, we'll succeed. But if we ignore them, they'll leave here and go start up a new business to compete with us.*
>
> *Al Ormiston*
> *VP of eSun*

Thus, the challenge is to both absorb younger employees into the firm and to find ways to exploit their knowledge.

Job Churn (or Death of a Salesman) Challenge

As more and more business moves to the web, firms must address what will happen to their sales and procurement jobs. Surprisingly, firms and individuals do not agree on how moving to e-business will impact jobs, in particular sales positions. Agreement exists that the nature of the job will change. The change will see sales representatives moving from transaction processors (filling out order forms) to customer consultants. This new consultant role will require that sales representatives understand customer problems in detail and then provide solutions to those specific problems.

However, little agreement existed regarding how moving business to the web will impact the number of sales representatives needed. Some individuals indicated that the absolute numbers would stay the same, but that there might be a churn such that those unable

or unwilling to take this new consultative role would leave and replaced by others. Other individuals indicated that in addition to the churn, a reduction in actual numbers would also ensue.

The latter probably most accurately describes the true job churn challenge. Given that, for example, Dell's internet sales reps are 50% more productive than their other reps, logic dictates that the same volume of sales would require fewer sales reps. However, this reduction would be negated if the volume growth exceeded the productivity advantage (which explains why Dell has not had to reduce their sales force as more business moves to the web).

In addition, while seldom discussed, one must recognize that a similar effect will occur with regard to the procurement positions in organizations. As more and more raw materials orders move to the web, the nature of the procurement job will change, as will the number of procurement specialists needed.

Thus, firms must address the job churn challenge as the move business toward the web. Undoubtedly the nature of many jobs will change, and arguably the number of employees needed in those jobs will change.

Labor Market Exuberance Challenge

Finally, the labor market exuberance challenge describes the intense and even irrational competition for labor that has arisen among e-businesses. Clearly, firms must obtain the necessary technical skills (e.g., html programming) for the management of the technical aspects of the e-business. In addition, experience in managing in an e-environment also exists in short supply, and firms engage in heated competition for these skills as well.
The intense competition for talent combined with the faster flow of information via e-recruiting sites such as Monster.com provide employees with considerable leverage in negotiating pay. Compensation has exploded as firms seek to lure talent from their competition (or any other firm) by offering considerable increases total compensation. Competitors' response of even comparable or higher packages results in spiraling compensation.

While the desire to draw talent is rational, irrational behavior increasingly appears. For example, Wingspanbank was created within FirstUSA with existing FirstUSA employees. However, these employees began receiving calls from search firms with offers of significant pay increases. To retain these employees FirstUSA had to increase their salaries, thus creating some internal inequity within the firm. As the business moved further along, more and more FirstUSA employees sought to move to Winspanbank to receive the higher salaries. This rational behavior, however, saw irrational consequences. Carlo Frappolli, VP of HR at

FirstUSA notes that some employees who transferred to Wingspanbank began receiving calls from search firms with offers of huge pay increases within their first week on the job because they had "internet experience."

The intense competition for talent has resulted in spiraling compensation packages and increasing variability in the quality of talent obtained. This creates a situation where firms must pay more, but face serious risk of getting far less than they paid for.

What is Different about E-businesses?

In looking over the challenges identified above, one certainly could ask, "So what is really different about e-business?" Overall, the answer that firms have faced most of the challenges identified in the past, and that this simply represents the latest iteration of these challenges.

Organizations have faced the challenge of integrating autonomous businesses. A considerable literature has grown up around all of the problems in managing projects. Any technology-based firm must deal with developing people skills among their technical managers, be they engineers, financial analysts, or software developers. Managing across generations is certainly not a new issue. And both the job churn and the ensuing talent shortage are inherent in any technological revolution. Thus, again, what's new? We argue that two factors distinguish managing people in an e-business today from managing in a brick and mortar business.

The first factor distinguishing e-business from traditional business is the complexity of the problem. What seems different about managing e-businesses today stems from the interaction of facing all of these challenges simultaneously. While organizations may have faced each of these challenges before, they have probably never faced so many challenges at the same time. This creates a level of complexity seldom experienced before.

A second, more important set of factors was noted explicitly by the respondents. In fact, when pressed on these issues, respondents agreed as to the distinctiveness of two of the challenges: Uncertainty and speed. Virtually every person we interviewed first noted that the biggest change in moving to e-business is the speed. Things happen so much more quickly, requiring faster organizational response than they had ever faced before. Second, while fewer noted it specifically, the uncertainty challenge was at least implicit if not explicit. They noted the concern with not knowing for sure how to manage in the present environment that was accentuated by uncertainty regarding what might happen next. It seems that the combination of uncertainty regarding the way in which certain factors will change in the future with the

increasing speed at which they will change presents the most formidable management challenge unique to an e-business.

Thus, managing an e-business today requires dealing with an unusual amount of complexity, uncertainty, and dynamicity. This certainly requires a new paradigm for organizing in terms of how the structure, processes, and people of the firm are managed. However, before discussing this new paradigm, we will first examine the different evolutionary paths taken by different e-businesses.

SECTION THREE: THE PATHS TO E-BUSINESS

As we move from broad challenges to specific issues and actions associated with e-business, it quickly becomes apparent that firms differ a great deal depending largely on their legacies and their current stages of development. Differences between established brick-and-mortar firms and more entrepreneurial dot-coms come as no surprise. Less often noted, though, are the gaps that exist between the brick-and-mortar firms that are just beginning to peek and poke their way into e-business and those that are taking, or have taken, the full plunge, as well as between the newer dot.com start-ups and their longer-surviving brethren. What follows here, then, is first a brief look at brick-and-mortar and dot-com firms that are in the early stages of e-business and then a more in-depth exposition of the more advanced players. In the latter case, the basic thesis is one of convergence; namely that, irrespective of previous paths taken, uncertainties inherent in current and future e-business environments are pushing both brick-and-mortar and dot-com firms toward a new -- and common -- organizational paradigm.

Brick and Mortar Firms: The Peekers and the Pokers

Brick-and-mortar firms that are just peeking or poking their way into the e-business fray face significant business and human resource issues. Not surprisingly, though, their responses tend to be cautious, mostly ad hoc, and piecemeal.

Peekers

First peeks into e-business come in the form of web sites. Motives vary. Some seek simply to get in on the action, perhaps because of the relative run-up of dot-com stock prices. Lou Gerstner, Chairman and CEO of IBM, quotes a highly regarded CEO of a major U.S. multinational as having told his executive committee, “Do something with the Internet -- anything” (Gerstner, 2000). Less randomly, many old economy firms are using web sites to provide information to customers and other stakeholders, while simultaneously exploring the

technology. A recent survey, reported in *Business Week*, suggests that while some 60% of brick-and-mortar firms now have web sites, the vast majority use them primarily for informational purposes (Stepanek, 2000).

Given the list of previously cited e-business challenges, peekers are concerned mostly with technology and speed. They are preoccupied with designing, launching (and often revising and re-launching) appealing, informative, fast, and secure web sites and doing it fast enough to avoid falling even further behind the e-business curve. Discussions of human resource issues focus squarely on talent. Peepers talk a lot about having to "bend the rules" to try to attract and retain technical talent (in the context of today's labor market exuberance) and to accommodate the expectations of Gen Xers. In despair, some peekers sublimate their learning goals to short-run expediency and wind up outsourcing much of the work on their web sites. Said one, "We're a small business…. we can't pay a guy right out of college $75,000. We rely on an Internet service provider -- and some kid named David".

Pokers

Inevitably, peekers poke further into e-business by beginning to buy and/or sell via the Internet (i.e., move into supply chain management and/or e-commerce, perhaps backed by revamped enterprise resource planning systems). Common goals are cutting purchasing or inventory costs, reducing time to market, and reaching new customers. Surveys suggest that some 25% of brick-and-mortar firms have reached this point, although the volume of business by pokers remains relatively small (Stepanik, 2000; Towers Perrin, 2000). Sometimes some or all of traditional transactions are converted to the web; other times new mechanisms of trade are devised. A few traditional manufacturers, for example, seek to sell direct to consumers (B2C) via the web rather than doing all their business through the usual distribution and retailing channels. (Not surprisingly, some pretty big-name manufacturers, such as Levi Strauss, have had to back off this approach in the face of fierce opposition from entrenched distributors and retailers.) Retailers are busily trying to figure out how to shift part of their sales on line without cannibalizing store sales. A number of old economy firms and innumerable upstarts are vying to establish e-marketplaces (e.g., auctions, reverse auctions, and procurement hubs) where buyers and sellers can trade (mostly B2B) everything from advertising space to construction machinery. As these efforts advance, steps may be taken to use the Internet to share real-time information with suppliers and/or customers, handle logistics, provide financing, or deal with warranties and returns. "Bricks-and-clicks" or "clicks-and-mortar" hybrids emerge as physical operations are more closely linked to web-based ones.

With each additional step into e-business, brick-and-mortar firms encounter additional uncertainty, increasingly complex technology, and greater pressures for speed (all of a sudden there is a lot of talk about "Internet time"). E-business projects become bigger and more intrusive leading to the structural challenges mentioned earlier (i.e., general confusion about priorities, uncertainty about lines of authority, and loss of institutional memory).

Talent related challenges can no longer be avoided. E-business projects increasingly involve organizational core competencies and, thus, cannot be completely outsourced. So, there is little choice but to do everything possible to attract, retain, and learn to live with those scarce, non-conforming Gen Xers. Recruiting, now done via the Internet, becomes more aggressive. Rules get bent even further to make competitive signing bonus and salary offers and find ways to provide, or compensate for the lack of, stock options. The softer side of retention -- making sure positions are adequately challenging, providing ample opportunities to sharpen cutting-edge skills, and flexible work arrangements -- gets more attention.

Eventually, as e-commerce extends its reach, there is the inevitable culture clash. The aggressive and favored techies, some now in management ranks, become increasingly frustrated with the putative ignorance and slow pace of the legacy organization. They, in turn, become seriously resented by the brick-and-mortar crowd. In-house or outside consultants are deployed and redeployed -- in the short run to quell the uprisings, in the longer-run to facilitate a seemingly unending series of large-scale organizational change efforts.

Entrepreneurial Dot-Coms: The Flippers and the Floppers

On the other side of the coin are the entrepreneurial dot-coms. Much has been written about their dazzling technologies and seemingly endless array of business models (a particularly helpful taxonomy of web business models, constructed by Michael Rappa of North Carolina State University, can be found at: ecommerce.ncsu.edu/business_models.html). But, most of these firms have not, and in all likelihood will not, make a successful transition from start-up to serious player. Some because they didn't, or don't, intend to. Others because they simply don't cut it.

Flippers

A lot of entrepreneurial dot-coms, as Jim Collins (2000) points out, are "built to flip" from the get-go (in contrast to the "visionary" firms he and Jerry Porras [1994] examined in their classic book, *Built to Last*). These firms are simply vehicles through which a few innovative entrepreneurs and their financial backers can take a run at the potentially lucrative web lottery. The whole idea is to quickly demonstrate the feasibility and applicability of the hot ideas and,

just as quickly cash out. The process, nonetheless, can have enduring social value. Some flippers serve as what Collins calls "disposable injection devices", a means of developing and injecting innovative technologies or other new ideas into the hands of acquiring firms capable of carrying them forward into useful products and services.

Floppers

Floppers, on the other hand, are those entrepreneurial dot.coms that, irrespective of original intent, soon find themselves on *Fortune* magazine's newly-devised "Dot-Com Deathwatch", a list of the recent dearly departed. Although often, and not always unfairly, satirized as the works of brilliant young techies with a lot more knowledge of html than P&L, floppers are, in reality, an inevitable part of the risky dot-com scene. (And, again, they sometimes leave useful ideas, not to mention some real wealth, in their wake.) Who remembers, or even much laments the passing of, Boo.com, Craftshop.com, NetImperative, RedRocket.com,, Toysmart.com and WebGalaxy, all of which were on *Fortune's* inaugural (June 1, 2000) "Dot-Com Deathwatch" list?

Flippers and floppers, while around, are less vexed than brick-and-mortar firms by the aforementioned technology and uncertainty challenges. Taking technology into uncharted waters is, after all, what they are all about. Speed is less of an issue for them as well since they tend to exemplify the proverbial "work 'til you drop, sleep in the office" culture that characterizes the Silicon Valley mythology. On the other hand, their tendency to operate beyond, rather than at the edge of, chaos makes them prime candidates for major organizational challenges (e.g., those having to do with project structure and project focus), which they rarely last long enough to really confront.

Further, flippers and floppers face perennial people challenges, although to some extent these, too, differ from those faced by their brick-and-mortar counterparts. Of course, start-up dot-coms participate in the ubiquitous labor market exuberance surrounding technical talent, and indeed often exacerbate it by handing out stock options like popcorn. Further, they usually suffer from a serious shortage of managerial talent. Experienced managers may view them as too risky, stock options notwithstanding, or may find that their competencies, often honed in brick-and-mortar companies, simply do not apply in this hurly-burly world. Out of desperation, bright, but basically clueless, techies and Gen Xers are thrust prematurely up the organizational ladder (sort of a reverse generational challenge), sometimes with disastrous results. Although not obvious from reading the business press, sometimes it clearly is the inability to deal with organizational and people challenges -- rather than lack of vision, great

technology, or even business savvy -- that leads entrepreneurial dot-coms to execute otherwise undesired flips, or even to flop.

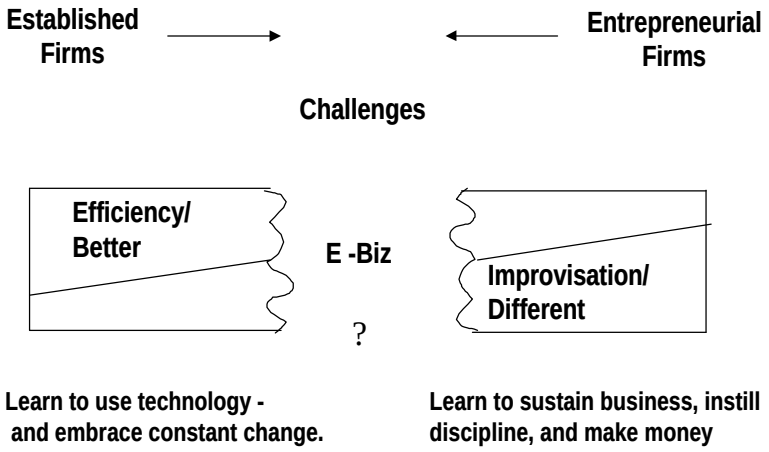
Comes the Convergence

Doing e-business is not the same as being an e-business. So, usually sooner rather than later, brick-and-mortar firms find it necessary to move from poking to plunging into the Internet world (i.e., into what was earlier called the ideal e-business model). There is a need to sell to or service more and more customers on line. Doing this in a world-class way requires total integration and connectivity among far-flung operations -- research and development, procurement, manufacturing, distribution, sales and marketing, customer support and service, and even human resources. Then it becomes essential to extend connectivity throughout the value chain -- from suppliers on one end, through various partners in the middle, to customers at the other end so that all relevant parties can collaborate on product design and production schedules and even modify design features and specifications while orders are in progress. Billing and payment goes on-line. Authorized users inside and outside organizations can instantaneously gather, process, and share performance-related data and take action to correct deviations and deficiencies. In brief, these brick-and-mortar firms -- Cisco Systems and Charles Schwab are perhaps the poster children here -- succeed by enhancing their abilities to innovate and serve their customers better by doing what the best of the dot-coms do: embrace the Internet (it takes courage; Charles Schwab did it knowing that it would result in an immediate 60 percent drop in prices) and the reality of running on a technological treadmill, act with a deep sense of urgency, and keep the pedal to the metal.

At the same time, several entrepreneurial dot-coms have moved beyond the flips and flops, at least for now, and a few are actually flourishing. Some -- e.g., America Online, Yahoo!, Priceline.com, and eBay -- have, through incessant experimentation, managed to define and redefine solid niches in the marketplace. Others -- e.g., Amazon.com and E*Trade -- have added new dimensions to old industries and, in the process forced some solid incumbents -- on the one hand Barnes and Noble and on the other even the venerable Merrill Lynch -- to change their ways. No doubt, these firms have succeeded in large part by capitalizing on their grasp of technology, sense of urgency, and ability to move with amazing speed. But, they are also on their way to learning to sustain their businesses by getting better at some rather traditional business virtues: staying focused, coddling their customers, operating with a sense of operational and (especially) financial discipline, and, of course, making money.

So, as shown in Figure 3.1, we see signs of convergence. Old-line businesses and upstarts are learning from each other as both search the e-business frontier for elusive sources of sustainable competitive advantage. (For an interesting perspective on this convergence, see *Fortune's* interview with Jack Welch, Chairman and CEO of GE, representing the old guard, and Scott McNealy, CEO of Sun Microsystems, representing the new [Schlender, 2000]). Where is it all leading? Will all business soon be e-business -- or out of business? Or will we continue to see an almost endless variation of mixed business and organizational models? At this point the only honest answer is, "no one really knows". But, of course, the beat goes on. So we look to draw some tentative insights into how best to proceed in this uncertain world by observing the ways in which savvy companies are attempting to deal with its inherent unpredictability.

Figure 3.1
Evolution to E-Business



SECTION FOUR: A NEW PARADIGM FOR AN UNCERTAIN TIME

In our interviews and workshops, we (along with a colleague, Dick Shafer) often ask participants to speculate about the future. How much change do they foresee? What kind of change? And so forth. Invariably, there is a lot of commonality -- as long as the discussion remains fairly abstract. When we start digging for details, however, the consensus quickly evaporates. Just about everyone anticipates a continuing flow of new, even radically new, Internet and other technologies. But, there is far less agreement about what these will look like. Most people are quite sure that markets will keep moving faster and faster. But, who knows in what directions? Rare is the person who expects anything other than increasingly fierce competitive conditions. But, few seem very certain about who their key competitors will be or about the forms this competition might take.

In brief, especially in the context of e-business, most knowledgeable observers anticipate a future characterized by the constant recurrence of non-recurring events. They have in mind what the noted management guru, Peter Drucker, and others call discontinuous change, the kind that may or may not be unprecedented and unparalleled, but without question is unrelenting and -- here's the key point -- largely unpredictable.

Traditional, that is to say bureaucratic, organizations are not meant for this world. They are based on the assumption that external environments are (or can be made to be) relatively stable most of the time. So, they are structured not only not to change, but also to not change. If, or when, they encounter discontinuous change in the outside world and, thus, fall seriously out of sync with key developments, major upheavals -- the ubiquitous large-scale organizational change efforts -- are usually necessary to create new equilibria. As the world becomes inherently less predictable or controllable and disequilibria thus become more common, such organizations find themselves in almost continuous and even overlapping rounds of restructuring, reengineering, rightsizing, and the like. No small number of brick-and-mortar firms rushing headlong into e-business will recognize the scenario.

An alternative organizational paradigm, of more recent origin, assumes the validity of unstable and uncontrollable external environments and seeks to position change as an opportunity rather than a threat. Adherents propose organizational forms that are specifically designed to create or adapt effectively to chaos in the outside world as a matter or course; that is, without internal upheaval. The paradigm's intellectual underpinnings lie in so-called chaos or complexity theory (for an accessible review, see Maquire & McKelvey, 1999). Models abound: flexible firms (Volberda, 1998); kinetic organizations (Fradette & Michaud, 1998);

adaptive enterprises (Haeckel, 1999); quantum organizations (Youngblood, 1997) and, our personal favorite, agile organizations (Dyer & Shafer, 1999; Goldman, Nagel & Price, 1995; Gunneson, 1997). By whatever names, such organizations are not to be confused with frenzied start-ups that change business models at the drop of a venture capitalist's hat. While they do strive to retain or duplicate the improvisational and high-energy nature of start-ups, they also operate with a surprising degree of discipline and control.

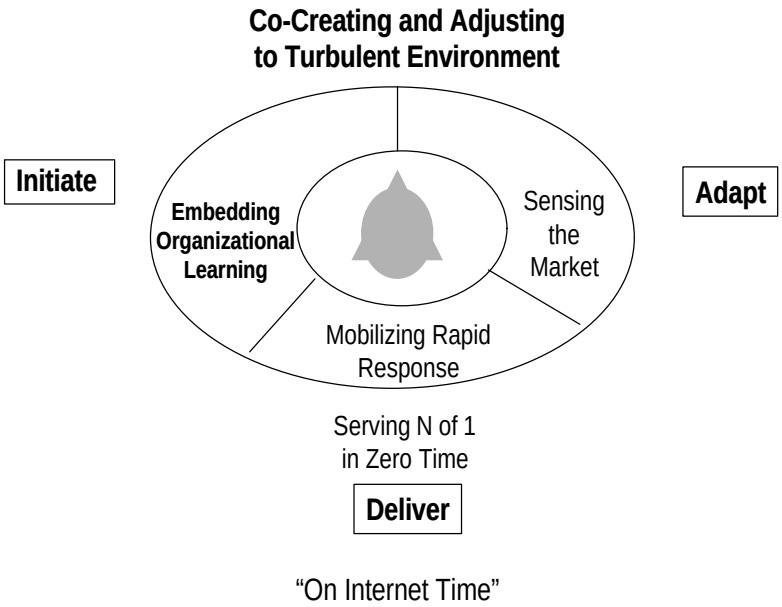
For the unforeseeable future of e-business, our observations suggest, this new paradigm -- we will use the terms agile organizations or agile e-businesses -- may be the answer to the "?" in the center of Figure 3.1. That is, it may offer a preferred path forward for e-businesses of both etiologies (brick-and-mortar and entrepreneurial dot-com startups) hoping to survive the inevitable shakeouts to come. This perspective, as will be seen, represents a mid-range approach built on guiding principles at a conceptual level below the broad-brush generalizations so common in the business press, but above specific activities that, at best, apply to only one or a few particular business models.

As might be expected, the guiding principles of agile organizations differ from those of bureaucratic and totally ad hoc organizations in just about every way that counts. Here we highlight the key features of agile organizations by focusing on the ways they approach business strategy, the composition of organizational infrastructure, and, especially, people management.

Fostering Marketplace Agility

In the rock and roll world of e-business, sustainable competitive advantage stems from marketplace agility; that is, an enhanced capacity to continually outmaneuver current and potential competitors by creating or quickly taking advantage of rapidly changing circumstances, while consistently delivering value to customers. This approach, which Brown and Eisenhardt (1998) quite appropriately call "competing on the edge", in turn, requires that agile e-businesses develop three strategic capabilities to world-class standards (see Figure 4.1):

Figure 4.1
Model of E-Business



Initiate

This is the capacity to consistently find or create and, then, close opportunity gaps in the marketplace (what Haeckel [1999] calls "anticipate and preempt"). It involves being on a constant lookout for embryonic places to exploit an ongoing stream of new, net-based concepts, products, services, ideas, or technologies faster, smarter, and better than current or potential competitors. Successful initiation, continually coming up with "the next big thing" usually means grabbing the first-mover advantage, which is often so critical to e-business success. Sometimes initiating changes the rules of the game -- e.g., Dell's ongoing extension of its web-based direct selling model across an increasingly wide range of products and services -- or even the nature of the game itself, as Enron did when it pioneered Internet-based energy trading and later extended the model to numerous other commodities, including most recently telecommunications bandwidth. But, efforts to initiate can also involve less grandiose extensions of existing products or services such as Charles Schwab's efforts to devise new Internet-based financial services to tempt its on-line stock traders (or vice versa) and eBay's moves to develop on-line auctions for just about everything.

Adapt

This is a matter of preferably anticipating or otherwise quickly discovering and, then, just as quickly closing challenge gaps in the marketplace ("sense and respond" in Haeckel's [1999] terms). Challenge gaps emerge, of course, because every other e-business is out there initiating. Recently, John Chambers, CEO of Cisco Systems, estimated that as many as 400 to 500 entrepreneurial start-ups had entered the market against his company in the last 18 months. One poster company for the capacity to adapt is Charles Schwab, given its quick, gutsy, and successful response to E*Trade and other on-line brokers. The most frequently cited negative example is Barnes and Noble because of its tardy and anemic response to the challenge posed by Amazon.com. The capacity to adapt is the antidote to becoming "Amazon.toast".

Deliver

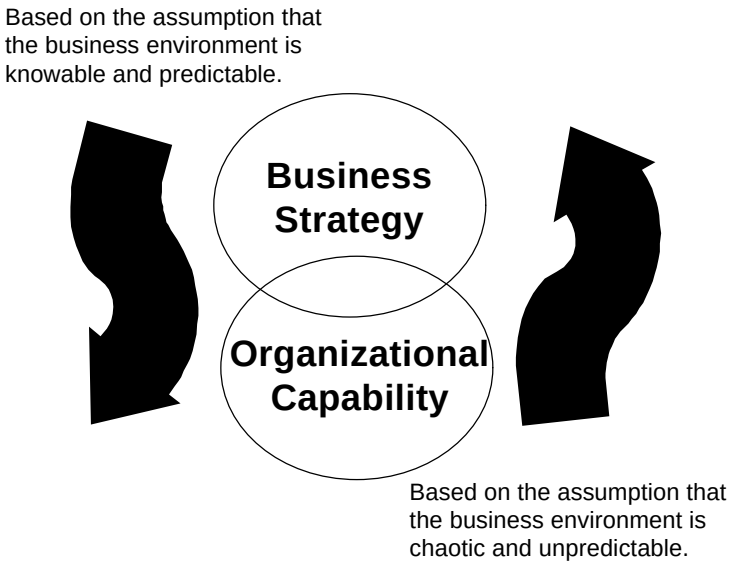
There is more to marketplace agility than initiating and adapting, although these tend to get most of the press. It is also important to keep the performance gap closed; that is, of meeting customers' rising expectations for high quality products and/or services delivered reliably and efficiently time after time. Increasingly, as the Internet reaches its full potential, this is a matter of delivering customized "offerings" (integrated products and services) to individual customers in less and less (euphemistically, zero) time. Dell was an early pioneer. But, today, on-demand Internet offerings are becoming commonplace. Even those brick-and-mortar behemoths, the automobile companies, are talking about delivering individually configured cars, replete with Internet-based gizmos and service capacities, to buyers' driveways in as few as three days.

Clearing the ever-rising bar of marketplace agility requires serious rethinking of the relationship between business strategy and organizational capability. Bureaucratic firms operating in stable and fairly predictable (or controllable) marketplaces think in terms of strategy driving structure, or more accurately, organizational capability (see the left side of Figure 4.2). In such firms, strategic planning is a top-down exercise based primarily on forecasts of environmental opportunities and threats and somewhat on assessment of organizational strengths and weaknesses. The product is usually a fairly elaborate document -- an intended plan -- that, once in place, drives the development of the organizational capability required to implement it.

But, as suggested in the earlier discussion of bureaucracy, this approach breaks down when external environments become turbulent, unpredictable (or uncontrollable). Under these

conditions, intended plans quickly become obsolete, sometimes even before the print is set, leading to endless, and sometimes superimposed, rounds of disequilibria, re-planning, and large-scale attempts at organizational change. The result: more turmoil than the organization, and the people in it, can tolerate.

Figure 4.2
Key Organizational Capabilities



The agility paradigm, starts with a different perspective of the nexus between business strategy and organizational capability (as shown on the right hand side of Figure 4.2). Top management still sets broad strategic direction and domain; Microstrategy, Inc., for example, states these as “converting information into intelligence and distributing it widely, anytime and anywhere, through wireless devices” (Salter, 2000). But, beyond this, top management’s basic task, in Gary Hamel’s (2000: p. 100) words, “isn’t to build strategies. Rather, its job is to build an organization that can continually spawn cool new business concepts, to design context rather than invent content”.

Initially, especially for brick-and-mortar firms, this usually means adopting a different mindset about business strategies. First, with respect to initiating, the focus moves from being customer-driven (because so much is new, customers can’t always know, or articulate, what they need or want) toward being idea-driven and consumer informed; that is, on the leading edge of emerging technologies, while simultaneously working closely with current and potential

customers to turn ideas into offerings that are marketable (Balu, 2000). Second, agile e-businesses think of strategies not as grand schemes, but as emerging themes (Mintzberg, 1989). Because of environmental uncertainty, business strategies rarely stem from formal analyses conducted at rarified heights. Rather, they generally emerge from ongoing series of rapid, relatively low-cost experiments -- portfolios of real options -- designed and conducted by those close to the action. Success lies in quickly separating the promising from the unpromising and rapidly moving resources toward the former (to develop the capacity to deliver, which is still all about being customer-driven), while just as rapidly removing resources from the latter.

Not that agile e-businesses do no planning. But rather than engaging in formal forecasting exercises at the enterprise level, they do what Clayton Christensen (1997) calls "discovery-driven planning", or planning to learn. Here project leaders, at whatever levels in their organizations, spend time at critical points in their initiatives identifying what needs to be known about markets, technologies, and the like -- and by when -- and then devising plans that mirror these priorities. Learning, thus, becomes both efficient and effective in the sense that critical uncertainties are resolved as fully as possible before major resource commitments must be made. This is an example of agile e-businesses enhancing their improvisational prowess with an appropriate level of discipline and control.

As noted, the pursuit of sustainable competitive advantage through marketplace agility -- that is, the capacity to initiate, adapt, and deliver through a steady stream of emergent business strategies at net speed -- shifts much of top management's attention from formulating business strategy per se to building organizational capability (refer again to the right-hand side of Figure 4.2).

Essential Organizational Competencies for Agile E-Businesses

The first task in building organizational capability is to identify the essential organizational competencies (or critical success factors) that must be developed. The previous discussion, as well as additional research (Dyer & Shafer, 1999), suggest that there are at least three such competencies for agile e-businesses: sensing the market, mobilizing rapid response, and embedding organizational learning (see the inner circle of Figure 4.1).

Sensing the Market

Volatility, as earlier suggested, is baked into the e-business world -- at least for now. Thus, agile e-businesses must be able to scan external environments, locate and analyze emerging developments on the fly, and quickly turn the resulting information into actionable

decisions (Teece, Pisano & Shuen, 1997). This means being actively engaged with not only with current or potential customers, but also with actual and would-be competitors and key suppliers, as well being attuned to broad demographic, lifestyle, public policy, and, of course, technological developments on an ongoing basis. In agile e-businesses, everyone has a hand in sensing the market; employees at all levels, not just so-called boundary-spanners (e.g., sales people), must keep their eyes and ears open to pick up potentially useful tidbits of market intelligence and bring this information in-house for rapid dissemination, processing, and decision-making by those most directly involved. This is the way agile e-businesses learn about, and learn how to pay attention to, emerging opportunities and challenges soon enough to have a chance at initiating and adapting on a timely basis.

Mobilizing Rapid Response

Making informed and timely decisions is one thing, operationalizing them can be quite another. Because agile e-businesses engage in constant improvisation, they must be world-class at moving resources (financial, physical, and human) from where they are to where they need to be. This is partly a matter of having the right organizational mindset; that is, a willingness, even eagerness, to embrace change. And it is also partly a matter of reducing or, if possible, eliminating organizational barriers to resource allocations or reallocations. The ability to mobilize rapid response is essential to timely initiating and adapting, of course. It is also particularly important to e-businesses that are trying to deliver customized offerings to individual customers in “zero time”.

Embedding Organizational Learning

This involves the creation, adaptation, dissemination, and replication of knowledge to continually improve organizational performance. Reams have been written on this topic, but basically there are two types of organizational learning that are essential to e-business success (Morgan, 1997; Senge, 1990). The first is adaptive or single-loop learning, which is aimed at making incremental changes in policies, practices, and programs that, in turn, contribute to continuous improvements in key organizational competencies (sensing the market, mobilizing rapid response, and even embedding organizational learning itself) to enhance the operation of the strategic capabilities (initiate, adapt, deliver). The second type of learning, generative or double-loop, involves the constant questioning and challenging of all aspect of the business: fundamental operating principles, strategic direction and domain, and even core values. Through ongoing experimentation, as well as education, dialogue, and

debate, agile e-businesses insist that employees at all levels help to keep their organizations on the leading edge through both continuous and quantum improvements.

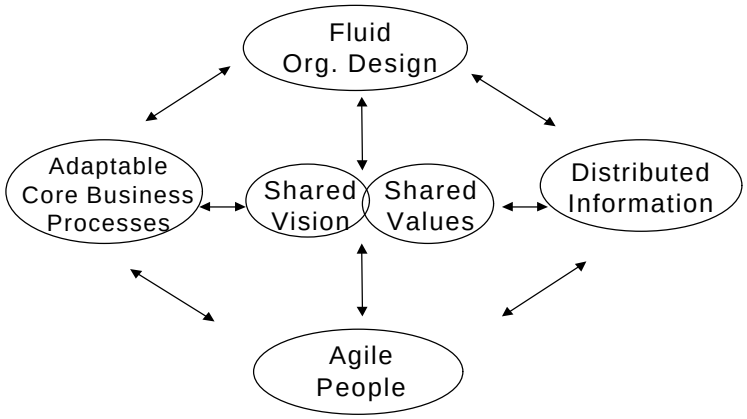
While additional research into e-businesses may well uncover other critical organizational competencies, these three, for the moment, appear to meet Barney's (1997) well-known criteria for achieving competitive advantage: valuable, rare, and inimitable. First, they are valuable in the sense that they promote the strategic capabilities of initiating, adapting, and delivering through emergent business strategies. Second, they appear to be rare; at least we have yet to encounter any firm that claims to have them honed to a fine edge. And, finally, while they are not strictly inimitable, they are obviously difficult and costly competencies for brick-and mortar firms, as well as entrepreneurial dot-com startups, to copy or duplicate.

Which brings us to the issue of how agile e-businesses go about developing and refining these organizational competencies; that is, to Barney's (1997), fourth criterion: organization. E-businesses that are world-class at sensing the market, mobilizing rapid response, and embedding organizational learning obviously have a leg up on the competition -- for a while (Barney, 1997; Wright, McMahan & McWilliams, 1994). But, to sustain this competitive advantage, especially in volatile and dynamic environments, requires an organization that can not only develop and exploit these organizational competencies, but also keep renewing them better, faster, and cheaper than current and potential competitors.

Building Organizational Capability in Agile E-Businesses

"[T]he number one requirement for harnessing the Net successfully is overhauling a company's culture. Companies that fail to do so will probably be roadkill in five years." (Stepanik, 2000). This is a commonly expressed sentiment that, alas, is just as commonly followed by, at best, a few broad generalizations about the essential features of the new culture. We share the sentiment, although we prefer the term organizational capability to culture, and can at this point, with some degree of confidence, offer a few principles or guidelines for crafting organizational capability for e-business success. The basic framework, derived from our research, is shown in Figure 4.3.

Figure 4.3
Agile Organizational Capability



At the center is a relatively stable inner core consisting of shared vision and shared values or, collectively, a core ideology. Around the core is a reconfigurable organizational infrastructure consisting of three components -- organizational design, adaptable core business processes, and distributed information. Embedded throughout are agile people who, through their decisions and actions configure and reconfigure the organizational infrastructure.

The systemic nature of this framework cannot be over-emphasized. Complexity theorists are prone to focus primarily on organizational infrastructure, while managers (both line and staff in our study) talk a lot about the importance of people. The framework shown in Figure 4.3 eschews this static dichotomous view; rather the model is meant to represent a dynamic system in which every component relates to, and indeed reinforces, every other, making them all equally critical. The basic premise is this: In agile e-businesses, the key to sustainable competitive advantage lies in crafting and integrating the various components of organizational capability in ways that constantly improve a firm's capacity to sense the market, mobilize rapid response, and embed organizational learning to generate a constant stream of emergent business strategies that enhance marketplace agility.

The Core Ideology

Agile e-businesses are, by definition whirling dervishes. Something has to hold them together and serve as "anchors in a sea of change" (as one respondent put it) for the people involved. Our research suggests that this role is played by a core ideology consisting of shared vision and shared values (the center of Figure 4.3).

Life is difficult, if not impossible, when change is the only constant. So, it is important for agile e-businesses to have visions and values that are clear and compelling, endure over time (through changes in business models, technologies, and managements), and are widely shared. Visions help to generate and nourish a sense of direction and the energy, cohesion, and identity necessary to support and sustain constant experimentation and regeneration. "The guardians of our customers' financial dreams" is clearly intended to give the folks at Charles Schwab both a reason for getting out of bed in the morning and plenty of maneuvering room. As Hamel (2000, p. 102) puts it, "The courage to leave some of oneself behind and strike off for parts unknown comes not from some banal assurance that change is good but from a devotion to a wholly worthwhile cause."

Values provide day-to-day guidelines for behavior in ambiguous situations. Students of organizational values (e.g., Collins & Porras, 1994) argue that, by definition, there is no universal set that fits all organizational situations. While not countermanding this completely, our research suggests that certain core values -- embracing change, trust, a sense of urgency, prudent risk-taking, cooperation and teamwork, continuous learning, and the like -- may be particularly supportive of organizational agility.

Generating clear and compelling visions and values that endure is, by definition, a one-time (although not necessarily easy) thing. Assuring that visions and values are widely shared is, as we shall see, a critical and ongoing component of agile e-businesses' human resource strategies.

Reconfigurable Organizational Infrastructure

In agile e-businesses, reconfigurability refers to the ease and speed with which employees can manipulate organizational components, business processes, and information to create, operate, and disband temporary organizational forms (collages of project teams, partnerships, and alliances) on an ongoing basis (the outer edge of Figure 4.3). The specifics of a reconfigurable organizational infrastructure are impossible to delineate at this time; we have yet to encounter a firm that has addressed this issue in a systematic way, let alone one that even approaches the ideal state. So, we hope the reader will excuse a brief, and alas only suggestive, foray into related research that does suggest some guiding principles for designing the key components of reconfigurable organizational infrastructure. (For more complete reviews, see Maguire & McKelvey [1999] and Volberda [1998], especially chapter 6.)

Fluid Organizational Design.

Agile organizations, and by extension, agile e-businesses, are often thought of as being on the lunatic fringe of organizational design; common metaphors include networks, clusters, starbursts, and holographs. In some cases, these characterizations may fit -- for a time -- but we favor a slightly different perspective. Mostly it has to do with mindset. Agile e-businesses, we believe, are better off viewing organizational design as a verb, rather than a noun; that is, as a process that is constantly happening rather than an ideal structural form. With this mindset in place it is possible to delineate at least some of the organizing principles that facilitate the desired degree of flexibility, while simultaneously avoiding degeneration into total chaos (in complexity terms, the guiding "rules" that allow a firm to operate at "the edge of chaos").

Basically, these organizing principles conform to the essentials of what Burns and Stalker (1961) long ago associated with "organic" organizations, with a few modern twists: (1) minimize hierarchy; (2) "divide and differentiate" into small, autonomous business units (Hamel, 2000); (3) within units, focus the front of the house on potential and current target markets (not just current customers -- recall that rather than being customer-driven, agile e-businesses are idea-driven and consumer-informed); (4) organize elsewhere within units (except perhaps staff functions) on the basis of modularization -- that is, around evolving modules, or teams, to build or enhance key organizational competencies (sensing the market, mobilizing rapid response, and embedding organizational learning) or internal capabilities (e.g., processes); (5) form virtual webs of suppliers, distributors, service providers, infrastructure providers, and even customers to extend core organizational competencies; and (6) use authentically negotiated mutual commitments to outcomes, rather than imposed goals or standards or tightly-defined activities, to achieve coordination across organizational levels, units, modules (teams), and even firms (see Haeckel, 1999, especially chapter 8).

Adaptable Core Business Processes*.*

Given the foregoing, it might be reasoned that agile e-businesses eschew, or at least minimize, the formalization of both broad business processes such as planning, budgeting, and decision-making and more specific business processes such as new product development and order fulfillment. But, this is only partly true. As David Pottruck, president and co-CEO of Charles Schwab, puts it: "I've had people come to me from dot-com companies and say, 'We don't use those old systems of measurement, project budgets; we just make a decision and go.' Companies that do that are going to go down the drain. You still have to have

measurements… [But you've] got to be flexible…[and] … you … can't take months and months to figure it out." (Andrews, 2000, p. 12).

The challenge for agile e-business, once again, is to find the fine line between the flexibility required to initiate and adapt in the marketplace and the control needed to promote organizational learning, achieve efficiencies, and deliver value to customers. Brown and Eisenhardt (1998, pp. 48-51), in their study of 12 "high velocity" (but not necessarily e-) businesses, uncovered a potentially instructive mix of firm rules or "structure points" and less well-defined and enforced protocols. The former included regular "gut-wrenching" planning sessions to affirm or reestablish priorities and related resource allocations based on well-defined and generally accepted criteria. (An example of this type of process at work, again from Charles Schwab, can be found in Pottruck and Pearce [2000, pp. 169-179]). The second "structure point" was a clear process for establishing major responsibilities (similar to the process of authentically negotiating mutual commitments mentioned above), along with targeted measures of performance on these dimensions. And the third was a strict adherence to deadlines.

Within these bounds, units such as project teams focused on specific business processes such as new product development and order fulfillment were free to establish their own protocols or commonly accepted ways of getting things done. While these protocols were intended to be helpful and regarded as generally instructive, they were also subject to constant tinkering and ad hoc adaptations as exigencies required.

Distributed Information.

Agile e-businesses run on real-time, easily accessible information. The need is for a distributed, or broadcast, model of information management; that is, for a mindset, along with the supporting technology, that (1) enables the timely acquisition and instantaneous distribution of all kinds of information and (2) encourages employees to take responsibility for establishing their own information needs and, concomitantly, makes it easy for them to instantly access whatever information they need whenever they need it.

One company that garners good press on this dimension is Cisco Systems, which does a major portion of its business on the Internet. The company uses its internal Web site for a host of activities including: gathering and distributing information about competitors; tracking revenues, income, margins, orders, expenses, and customer satisfaction ratings, cutting the data by region, product, and customer on a real-time basis, and making relevant portions of the results accessible to different parts of the organization on a daily, and sometimes hourly,

basis; distributing video presentations on its constant stream of acquisitions, making it possible for employees to stay informed about the company's constantly evolving store of products and technologies; and tracking and analyzing customer service inquiries, experiences, and reactions real-time. The information flow is extended beyond the company's walls by granting access to certain parts of the Web site to customers, suppliers, contract manufacturers, distributors, and other partners.

Unchecked, the philosophy of distributed information can easily lead to employee overload and neglect. Enter a new technology: B2E (business-to-employees) portals -- or more simply, people portals (Ransdell, 2000). Whereas company intranets capture and disseminate information that the firm considers important, people portals are customized, ever-changing mixes of information and tools that employees (within certain limits) design on their own. A wide range of content options and applications (including popular Web sites such as eBay) lies behind the portals, but individuals can personalize these offerings in ways they find both appealing and helpful. In a company with 100 different projects, for example, a particular individual may choose to track only the five with which she is personally involved. The underlying idea, when it comes to distributed information, is for companies to think about employees the way Yahoo!, say, thinks about its customers. This basically means making every possible effort to assure that a wide range of compelling information is readily available in manner attractive enough to routinely win the ongoing war for employees' eyeballs.

In agile e-businesses, the reconfiguring of organizational infrastructures is instantaneous and pretty much spontaneous. Consequently, the system must be people-driven (rather than, self-organizing, as the complexity theorists would have it). Employees at all levels must view organizational infrastructure as a dynamic tool rather than a necessary evil to be surreptitiously circumscribed (through skunk works or whatever) or, worse, passively accepted. And everyone is expected to play a role in forming and reforming mini-organizational infrastructures (project teams, partnerships, virtual organizations) as circumstances require. This, in turn, requires agile people.

Creating a Human Resource Strategy for Agile E-Businesses

"In the face of change, the competent are helpless" (Godin, 2000, p. 234). Uncertainty and unpredictability invalidate the very behaviors that make people competent -- flawless execution of predictable, reliable processes for solving particular sets of problems the same way every time -- and so, understandably enough, the highly competent have a strong preference for the status quo. To thrive in turbulent times, organizations need incompetents.

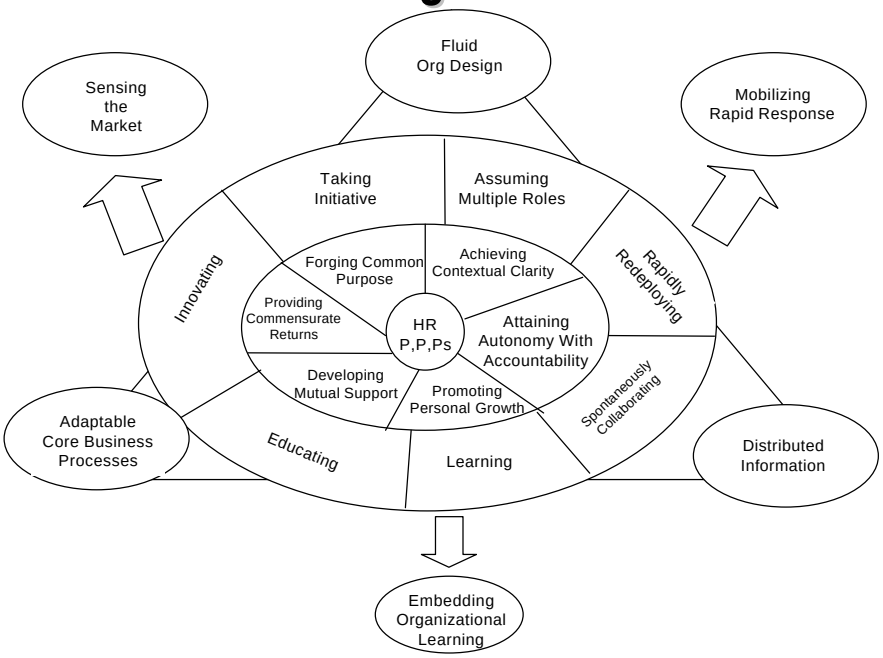
Not perennial incompetents, of course, but serial incompetents -- folks who have the option of becoming competent, but instead are always reaching out to learn and try new things, knowing full well that they will forever be climbing learning curves and, thus, never quite reaching full competence (in the traditional sense). Accordingly, in devising human resource strategies for agile e-businesses, the first challenge is to define the behaviors associated with serial incompetence, while the second is to develop key principles to guide the choice of human resource activities that encourage and sustain these behaviors.

> *"The more technology is leveraged, the more important people become. E-Business puts a premium on people management skills -- more so than at any time in history."*
> *David Parsons,*
> *Director of NseB Solutions Marketing at Compaq*

Again, we know of no firm that has these issues all figured out (Towers Perrin, 2000). (For an in-depth case study of one that has made real progress, see Shafer, Dyer, Kilty, Amos & Ericksen, 2000). Accordingly, we have engaged in a bit of detective work to piece together clues from various sources to take a first cut at addressing them. The derived model is shown in Figure 4.4. The model is designed, first, to focus attention on the three key organizational competencies of agile e-businesses: sensing the market, mobilizing rapid response, and embedding organizational learning. Second, it is intended to reinforce the view that these three key organizational competencies are fostered by a reconfigurable organizational infrastructure that is truly people-driven (as indicated by the by the big three-rung circle). Finally, the model indicates the core components of human resource strategy: the agile employee behaviors (shown in the outer rung of the center circle) and the key principles (shown in the middle rung of the center circle) that guide the choice of human resource policies, programs, and practices (p, p, p's, as shown in the inner rung of the center circle) designed to engender the essential behaviors.

> *The more technology is leveraged, the more important people become. E-Business puts a premium on people management skills -- more so than at any time in history.*
> *David Parsons*
> *Director, NseB Solutions, Compaq Corporation*

Figure 4.4
The Big Picture



Agile Employee Behaviors

Although the language varies, our research suggests that agile e-businesses essentially seek to engender seven focal behaviors: initiate, innovate, assume multiple roles, rapidly redeploy, spontaneously collaborate, educate and learn. For convenience we encapsulate these seven behaviors into three major categories:

Proactive.

First, agile e-businesses need employees who are proactive; that is, who initiate and innovate. Because of the pace of change, employees in agile e-businesses operate relatively autonomously. Thus, each and every one has to take responsibility for making things happen. As one respondent told us, “This is not a business where people can stand around and wait to be told what to do. If they’re not out there taking action, the competition will just pass us by”. Further, agile e-businesses thrive on fresh approaches -- new business models, radical marketing propositions, revolutionary ways of dealing with customers, quantum improvements in internal processes, and the like -- and so it is essential that their individual and collective initiatives also be on the cutting edge much of the time. In sum, in this type of environment, it is up to employees to make shift happen, not let it happen.

Adaptive.

Second, agile e-businesses require employees to be adaptive. This encapsulates three behaviors. First, employees at all levels are expected to assume multiple roles -- team leader, team member with a major part, team member with a minor part, individual contributor, and so forth -- often simultaneously. Second, they must be willing and able to rapidly redeploy from one role or assignment to another. When Enron was about to enter the bandwidth trading business, for example, management identified 70 people who could help jump-start the effort. Of the 70, 64 made the move -- within a week. All because, in Hamel's (2000) terms, "Enron has an open market for talent". Third, because of all this moving around, employees in agile e-businesses must spontaneously collaborate; that is, they must readily jump into new ventures and with a minimum of folderol begin productive work right away, even if they have little or no prior experience with, or knowledge about, the others involved.

Generative.

Third, agile e-businesses demand that employees be generative. The obvious component of this, from all that has been said, is that they are required to be lifelong learners (i.e., serial incompetents). Less obvious, perhaps, is the other side of the coin. Employees at all levels must take responsibility for educating others, for continually sharing what they know with colleagues on a timely basis. What one person knows, all must have access to.

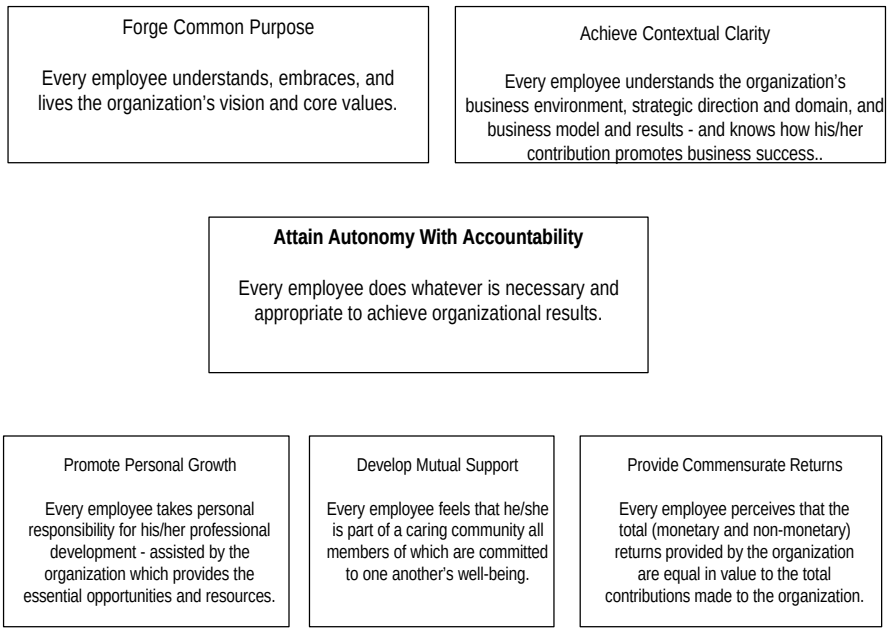
Key Human Resource Principles

At one level, the human resource management task in agile e-businesses is a familiar one: attract and retain employees who are proactive, adaptive, and generative and develop and motivate them to be even more proactive, adaptive, and generative. But, what, specifically, does it take to do this? Preliminary analyses suggests that this is best accomplished through human resource policies, programs, and practices that clearly and consistently adhere to the six interrelated (and, indeed, synergistic) principles pictured in the middle rung of the center circle in Figure 4.4 and delineated in Figure 4.5. The central principle, shown in the middle of Figure 4.5, is attain autonomy with accountability. The top line in that Figure includes two principles not usually found in bureaucratically oriented human resource strategies, but essential to agile e-businesses: forge common purpose and achieve contextual clarity. Across the bottom line are three more commonly encountered principles: promote personal growth, develop mutual support, and provide commensurate returns.

Principle 1: Attain Autonomy With Accountability

For employees to be maximally proactive, adaptive, and generative, they must see themselves not as occupants of fixed jobs simply doing work or carrying out tasks, but as owners of fluid assignments responsible for achieving results. So, in agile e-businesses human resource policies, programs, and practices are, above all, designed and implemented in ways that promote individual autonomy, along with personal accountability for outcomes, at all levels of the organization.

Figure 4.5
Supporting Key Principles and Goals



To a large extent, this is a matter of managing work design. In our research and consulting work, we often ask managers to delineate the governing principles of work design in their organizations and indicate who is responsible for promulgating and enforcing the principles. Most often the answers indicate that there are no such principles, which means that individual managers and supervisors have a great deal of autonomy, but little accountability, on this important dimension. Consequently, other employees experience mixed amounts of autonomy and accountability, which surely engenders confusion and serves to shut down proactive, adaptable, and generative behaviors. While probably not good in any organization, this situation is obviously unacceptable in agile e-businesses.

Operationally, the principle of attaining autonomy with accountability is achieved through work design as follows. First, jobs (and thus any possibility of the "That isn't my job" or TIM-J syndrome [Bridges, 1994]) are eliminated in favor of temporary assignments. Second, authority is distributed to the lowest conceivable level. This is emphatically not the same as employee empowerment, at least as that term is generally conceived (i.e., as dividing jobs into permissible and forbidden behaviors and then slightly expanding the former while shrinking the latter, as when employees expenditure authorizations are increased from $100 to $500 or assembly line employees are given additional inspection tasks to do). Rather, it is a matter of viewing temporary assignments as mixtures of required and discretionary components and taking every opportunity to minimize the former, while encouraging employees to expand the latter. Third, temporary assignments are organized around authentically negotiated mutual commitments to outcomes (see Haeckel, 1999, Chapter 8 for a protocol) and not activities, as noted in the earlier section on organizational design. This means that everyone has meaningful input into work design and is clear about what is to be accomplished and how his or her performance will be measured, which of course encourages accountability. It is also necessary to tie desired rewards to outcome attainment, a point to which we shall return.

Principle 2: Forge Common Purpose

The goal here is for every employee to understand, embrace, and live the organization's core ideology (i.e., vision and core values). We previously noted the important "anchoring" role that core ideology plays as agile e-businesses are tossed about in seas of constant change. But, as mentioned, this works only if the core ideology is embedded in the very fabric of an organization. Thus, although often not recognized, an important element of human resource strategy in agile e-businesses is to assure that all human resource policies, programs, and practices serve to reinforce organizational vision and core values.

This is a major challenge because of the asymmetry involved; core ideology is tough to promulgate but easy to destroy. Guidance on forming and sustaining core ideology are legion (see, for example, Collins & Porris, 1994, Chapters 3 and 11; Pottruck & Pearce, 2000, Chapter 2; Shafer, et al, 2000), and there is no need to repeat it here. Rather, we emphasize just a few especially important points in the context of e-business. With vision, the key is to keep it clearly front and center through constant reiteration, especially by the CEO, and through images, stories, rituals, and the like. While this takes time and attention, it is the easiest part of sustaining core ideology.

The more difficult task is to embed core values, first, because they are on the line every day and, second, because they are easy to sacrifice in the interest of expediency in rapidly changing, uncertain environments. Again, intensive and extensive communication efforts are essential. But, not sufficient. Even more important is to assure that core values are ingrained into every major decision-making process regarding people. This means assessing new employees on the extent to which their personal values coincide with the organization's core values. It means embedding core values in every orientation session and many training programs. It means measuring current employees, in part, on the extent to which their behaviors exemplify the core values, and rewarding those who live the core values, while punishing even otherwise high performers who do not. And it means doing ongoing values gap analyses as part of regular unit assessments (e.g., project progress reviews and post-project debriefs) to determine the extent to which teams and team members are embracing core values and devising action plans to close apparent gaps. And, above all, it means constant vigilance -- a thousand right moves are helpful, one slip-up can be a major setback.

Principle 3: Achieve Contextual Clarity

As owners of fluid assignments, employees at all levels in agile e-businesses are, in the end, responsible for keeping themselves focused and their individual and collective actions on track. So, it is necessary to create a context that encourages them to be business-driven, to have a sense of urgency and "healthy paranoia", and to make quick and high quality decisions. To these ends, agile e-businesses strive to assure that every employee understands the organization's business environment, strategic direction and domain, and business model and results, and knows how his or her contribution promotes business success. Abiding by other principles, while failing on this one, can result in highly energized, but rudderless, employees -- all thrust and no vector.

Achieving contextual clarity involves a change in mindset from the notion that knowledge is power to the belief that knowledge is powerful, but only if widely shared and used. In a way, this is simply bowing to the inevitable; with widespread access to the Internet there is more and more transparency every day anyway. But, still, the requisite mindset is a whole lot easier to elucidate than to achieve, especially among managers with backgrounds in brick and mortar companies. Some areas of emphasis include: participation, training and development, communication, compensation, and staffing. Deliberate efforts are made to bring typically under-represented employees -- technical talent, staff people, and newcomers -- into strategy-making sessions and, of course, as earlier mentioned, into negotiations over

outcomes, which serves not only to enhance the quality of these processes, but also to educate the participants (at all levels) (Hamel, 2000). Another common approach to participation is to create ad hoc innovation teams made up of employees from various units and levels. Employees who know they may be called upon to contribute in substantive ways in highly visible forums have plenty of incentive to keep themselves informed about business issues. And again, actual participation serves not only to enhance this knowledge, but also to generate a steady stream of useful ideas. Although focused on participation, these examples also reinforce a few important points about training and development in this context. For one thing, it is essential, since not all employees will have the background to make intelligent use of the information otherwise provided. Second, there is, as always, a clear preference for doing as much training and development as possible on-the-job and on-the-fly (rather than in formal settings such as classrooms). And finally, the clear intent, here as elsewhere, is to place responsibility for learning squarely on employees. (There will be more on the last two points later).

Similarly, employees in agile e-businesses are responsible for keeping themselves informed about business issues. But, firms do all they can to make it easy. They provide a steady stream of contextual information (e.g., through the B2E portals mentioned earlier) from which employees can cherry-pick as needed. One firm, MicroStrategy, for example, has a "five-minute rule"; the company's databases and Web site are designed in such a way that any employee can find any (legitimate) piece of information -- about the business environment, the business itself, or employees -- literally within five minutes (Salter, 2000). In fact, AES Corporation provides so much information about the business that all employees are considered financial insiders.

Compensation schemes based on organizational results (e.g., gain-sharing, profit-sharing, and stock ownership) encourage employees to seek contextual clarity. So do systems of internal posting and bidding for assignments (what Hamel [2000] calls "free markets for talent"), which require employees to be informed consumers of opportunities. Whether or not employment continuity -- i.e., low levels of employee turnover and minimal use of contingent employees -- is important in this context, however, is an unresolved issue. Tentatively, we have concluded that while controlled turnover is essential, the significance of contingent employees depends on how they are managed. The reasons for these conclusions are explained below (Principle 5).

Principle 4: Promoting Personal Growth

Promoting personal growth in agile e-businesses is, as suggested above, a joint venture. Employees are responsible for keeping their competencies on the cutting-edge ("owning their own employability", in Andy Grove's terms), while firms are responsible for providing the essential opportunities and resources. Many of the activities previously discussed are also helpful here. Certainly, employees faced with the prospect of constantly seeking, or being sought for, series of fluid assignments in (mostly) team-based settings and being paid, at least in part, on the basis of their individual and collective results have some solid reasons to keep their skills razor-sharp. Those who fail to respond face the rather dim prospects of becoming lone rangers -- unsought for assignments and ostracized by team members. (In one company we were told that there were really only two ways people could get fired: by violating the firm's core values or by letting their competencies slip.) On the other side of the coin, an ongoing series of stretch assignments can be an effective way to keep skills sharp.

Still, it must be recognized that it is not easy for agile e-businesses to keep their end of the bargain here. Given the pace and the immediacy with which most operate, it takes a real commitment just to keep the issue of employee development on the table (although, in recent years, tight labor markets have helped in this respect). And, even when the commitment is there, the pace of change makes it difficult to provide employees with current, let alone anticipatory, information about competency requirements. Further, the demanding work environment makes it difficult to get team leaders to select people for assignments based, even in part, on development needs rather than on the prospect of immediate contribution. So, some firms make it a norm that a portion (say, one-third) of employees' assignments involve a deliberate development component (although, even so, firms admit that divine intervention is often necessary to enforce this).

Unfettered on-the-job, on-the-fly development can be both ineffective and inefficient leading some firms to formally train employees in providing ongoing, real-time behavioral- and results-based feedback both within and across teams (sort of de-bureaucratized 360-degree feedback.) Some also evaluate team leaders on how well they develop talent, as well as on how well the team performed.

Of course, even in agile e-businesses there is always some training and development that is best done off the job. Here agile e-businesses lean as much as possible toward doing it on-line and on-demand, eschewing formal classroom training except as a last resort.

Project-based organizations pose particular difficulties in keeping functional skills up-to-date because there are few opportunities for those with common expertise to co-mingle. One potential solution is to encourage each employee to have a functional mentor to advise on developmental and career needs and plans. Another is to encourage the development of so-called "communities of interest" or "communities of practice" around critical skill groups to clarify and validate competencies, promote informal information exchanges via e-mail and the like, or even develop more formal workshops or seminars on topics of common concern, perhaps through distance learning via the Internet.

Principle 5: Developing Mutual Support

The goal here is to create a climate in which every employee feels that he or she is part of a caring community all members of which are committed to one another's well-being. While this goal generates little controversy in principle, it is quite obviously not always pursued in practice. Which is strange. Agile e-businesses ask a lot of employees: act autonomously, be accountable, be proactive, be adaptive, be generative -- in other words do all you can to support the business -- and do it all in the whirl of constant change. To what extent can employees be expected to rise to the challenge, in other than the short run, in an atmosphere characterized by rampant free agency and a casual indifference to the human side of enterprise? What will keep them from bolting for the door at the first opportunity? Or the first time their stock options head for the tank?

Part of the quid pro quo is a climate of mutual support. Again, much has been written about the key components of such a climate (see, for example, Wright, Dyer & Takla, 1999), so here we provide just a brief summary in the context of e-business. One CEO summed it up rather straightforwardly, if not uniquely, "Do what is fair". Solid steps in this direction emanate from the first four (as well as the sixth) principle enumerated here: providing employees with operating autonomy within expanding spheres of accountability, consistently abiding by the firm's core values (especially when it's not convenient to do so), providing employees access to the information they need to operate autonomously in a fast-moving world, and investing in employees' competencies.

But, there is more to be done. Consider the investment made by MicroStrategy in developing a sense of community (Salter, 2000). All new recruits participate in a six-week "boot camp" to introduce them to the company's mission ("To make intelligence accessible everywhere"), core values, business model, and technology (sound familiar?) and to develop their esprit de corp. The company's employee directory, which of course is on its intranet,

contains detailed personal profiles of all employees. Each January the entire company (most recently, 1,600 employees) goes on a Caribbean cruise to review events of the previous year and recharge for the next one. In April there is the Friends and Family Weekend for which every employee receives a $750 stipend to bring those close to them in for an up close and personal look at the company.

Another important piece is to help employees achieve a healthy work-life balance, no small feat in hard-charging agile e-businesses. To a large extent this is a matter of strongly encouraging employees to put limits on their otherwise essentially open-ended work commitments, and making sure no one is penalized for doing so. Other helpful practices here include flex-time, telecommuting, and assistance with child and elder care. More symbolic, perhaps, but nonetheless potentially important, are such things as minimizing status differentials among employees (Pfeffer, 1998), designing physical space to maximize interpersonal interactions (Enron did away with elevators to increase the number of chance encounters on the stairs), and engaging in various types of celebrations and ceremonies (perhaps through the "communities of interest/practice" mentioned above).

Clearly, there is (as suggested above) a symbiotic relationship between a climate of mutual support and low rates of employee turnover. The same logic prevails with respect to layoffs. No agile e-business can guarantee employment security. Nonetheless it behooves such organizations to do all they can to avoid, or otherwise minimize, layoffs and to make sure that employees are aware of this commitment. In this respect, it may not be helpful to adopt the currently fashionable practice of telling employees that personal competence and marketability are the only real sources of employment security, however accurate this may be in today's e-business environment.

Logically, it would be difficult to foster a climate of mutual support while employing large numbers of contingent (part-time and, especially, temporary employees). Recent legal and union challenges by Microsoft's temporary employees appear to bear this out. Yet, we recently encountered an agile e-business that is operating quite successfully with a professional workforce of whom almost one-half are temps. Asked about the sense of mutual support at the company, the respondent indicated that this was a non-issue since the firm goes to great lengths to treat temps just like its regular employees in every important respect (except, of course, for employment continuity); that is, it provides both groups with the same orientation, communications, training and development opportunities, access to choice assignments, perks and benefits, and so forth. Pushed on the costs of this, the respondent acknowledged that it is

expensive, for example, to invest in the training of temps. But in the company's view the costs are more than recouped through equal levels of contributions across the two groups of employees, coupled with the savings accruing from the inherent flexibility to adjust the size of the temp workforce to fluctuating workloads. So, apparently, it is possible for agile e-businesses to successfully pursue appropriate human resource principles even with relatively large numbers of contingent employees. But, it certainly requires a special effort.

Principle 6: Providing Commensurate Returns

Another important element of the quid pro quo -- "Doing what is fair" -- pertains, of course, to providing total (monetary and non-monetary) returns to employees that are commensurate with the total contributions they make to the organization. In agile e-businesses, at least so far, our research suggests that this has been (to quote a colleague) "a process of searching for approximate solutions to insolvable problems". Following, with no claim to closure, are some observations on the general directions the experimentation seems to be taking.

First, there is a tendency to view rewards in terms of total (i.e., both monetary and non-monetary) returns. This in recognition of the fact that several aspects of agile e-businesses designed primarily for other purposes -- fluid assignments, adherence to core values, extensive communication and feedback, opportunities for growth and development, and the like -- are things that are generally valued by the types of employees who are attracted to these businesses. Thus, they are de facto part of the "deal".

Second, brick and mortar companies tend to regard compensation systems as lag variables (i.e., the last things to be systematically changed) in the transformation to agile e-businesses (Shafer, et al, 2000), while entrepreneurial dot-com startups traditionally treat pay in a rather ad hoc way (Reznic, 1999). In both cases, decisions regarding compensation seem to be driven mostly by tight labor market conditions. In our interviews, we heard countless tales, on the one hand, of surreptitious end-runs around established compensation policies to attract scarce talent and, on the other hand, of inexplicable pay structures resulting from a series of individually negotiated packages. In both cases, issues of perceived internal inequities were becoming major concerns. These concerns related to both stock options (whether above or below water) and cash compensation.

Third, experiments (or intentions to experiment) with pay systems in agile e-businesses seem to be moving in the following directions (see also Wanderer, 2000). With respect to pay structure, there is a tendency toward broad-banding, which is natural enough given relatively

flat structures and reliance on fluid assignments rather than narrowly-defined jobs. The pricing of bands is a bit of a crapshoot since survey data are perennially obsolete (Wanderer, 2000). In general, though, former brick and mortar firms aim toward the high end of the market to help attract and retain otherwise uninterested technical talent. Former entrepreneurial dot-com startups, on the other hand, have tended, until very recently, toward the low side, partly because they are otherwise more attractive to techies and partly because of their relatively heavy reliance on stock options. At the individual level, a fair amount of pay is at risk, mostly it seems in the form of bonuses. Bonus pools tend to be based on firm performance (e.g., profit sharing) to encourage identification with the enterprise as a whole, foster inter-unit cooperation (e.g., the open sharing of ideas and "best practices"), and facilitate internal employee mobility. Individual distributions are determined on the basis of contribution to project or team performance. This, in turn (and as noted above), typically requires a team-based approach to performance assessment since people usually work on several projects with many different team leaders and colleagues during the course of a year. At Enron, for example, individual performance is assessed by committees made up of as many as 24 people, including many non-supervisors (Stewart, 2000).

Putting the Six Key Principles To Work

Collectively, the six key principles form an architecture that, if consistently applied, enable aspiring agile e-businesses to take a systematic, rather than piecemeal approach, to the design and implementation of human resource policies, programs, and practices. Initially this can be done by assessing the extent to which the principles are supported by current human resource activities. Another, somewhat similar, approach is to assess the extent to which the time and efforts of line and human resource managers are allocated in ways that are consistent with the principles. Action planning to close uncovered gaps is facilitated when these assessments are accompanied by analyses of factors that are helping or hindering the application of the principles.

Of course, the architecture is rather broad. As aspiring e-businesses move forward, specific business initiatives will require specific supporting human resource activities (recruiting, training, etc.) (For a model to guide this process, see Boudreau & Ramstad, 1999, and for a case study of the model applied to e-business, see Boudreau, Dunford, & Ramstad, 2000.) As this specific planning takes place, however, the big picture can be used to guide decision-making. All new, or proposed changes in current, human resource policies, programs, and practices can be deliberately designed or undertaken in ways that specifically

support, or at a minimum do not conflict with, the principles. This, in turn, will hasten the transformation process.

Finally, in multi-business firms, the principles can be used to facilitate the transformation of various units through deliberate efforts to embed organizational learning (Kerr, 2000). Periodically, each unit analyzes its progress on the various principles using a 1 to 4 scale, where 1 = fledgling, 2 = competent, 3 = world-class, and 4 = confirmed world-class (i.e., verified as world class by two independent observers). Units that progress to ratings of 3 and, especially, 4 are then used as benchmark organizations for those that are lagging. More proactively, different units can be assigned different principles to attack first, second, etc., with the deliberate intent of cross-unit fertilization as progress is made.

Irrespective of approach, however, it is essential to keep in mind that when it comes to applying the architecture, a shortcut will be the longest distance between two points. That is, nothing good can come from trying to short circuit the process by focusing on just one or a few principles. At best this will result in only minimal, and certainly slower than desired, progress toward a successful transformation to a full-fledged e-business.

Summary

Theory and research on human resource strategy suggests that when human resource policies, programs, and practices are both aligned with one another (in what is known as horizontal integration or fit) and aligned with organizational infrastructure and business strategy (vertical integration or fit) the result, other things equal, is enhanced organizational performance (Becker & Gerhart, 1996). Figure 4.4, to reiterate, shows our tentative conclusions as to how this process works in agile e-businesses.

Internal alignment among human resource policies, programs, and practices is achieved when they are individually and collectively designed and implemented in ways that promote the realization of the six key principles: attain autonomy with accountability, forge common purpose, achieve contextual clarity, promote personal growth, develop mutual support, and provide commensurate returns. Internal alignment, in turn, fosters critical agile employee behaviors: taking initiative and innovating (i.e., being proactive); assuming multiple roles, rapidly redeploying, and spontaneously collaborating (i.e., being adaptive); and educating and learning (i.e., being generative).

> *People are the foundation. We can develop and buy technology and other resources. But, at the end of the day, if we don't have good people making good decisions and effectively guiding processes, we will fail.*
>
> *Kirk Koenigsbauer*
> *Product Manager, Amazon.com*

External alignment is achieved as employees engage these behaviors to configure and reconfigure organizational infrastructure (i.e., to assemble project teams capable of adapting core business processes and critical information) in ways that increasingly improve the organization's capacity to sense the market, mobilize rapid response, and embed organizational learning. Agile e-businesses then apply these three organizational capabilities to outmaneuver competitors by initiating innovative actions or quickly adapting to rapidly changing circumstances, while consistently delivering value to customers. Eventually, these hit and run tactics add up to emergent business strategies that, with a little luck, result in the degree of marketplace agility required to attain, and if the organization is truly capable sustain, competitive advantage in dynamic business environments.

SECTION 5: MANAGING HR IN AN E-BUSINESS WORLD

Having identified the challenges e-business brings to firms and how organizations and people can respond to maximize success in such an environment, we now turn to HR's role. While firms face a number of tremendous challenges discussed above with regard to organizational structures, systems, and people, HR functions face one overarching challenge. The challenge confronting HR is to leverage technology in a way that mirrors the business, enabling the function to focus on delivering better, faster, and smarter HR solutions. HR functions become critical partners in driving success, but to do so requires that HR change its focus, its role, and its delivery systems. We explore each of these in greater detail below.

> We can't do HR the traditional way. We have to blow it up and entirely reinvent the way we do HR here."
>
> Scott Pitasky,
> Director of Strategic Growth, Amazon.com

Change in Focus

Traditionally, HR functions have focused on developing and delivering comprehensive almost perfect quality HR systems and services to the organization. To do so required that they spend considerable amounts of time gathering and analyzing information, garnering political support, and soliciting considerable amounts of input from multiple sources at each stage in the development process. Pilot rollouts in small groups allowed them to obtain specific feedback from potential users of the system to work out as many bugs as possible. They sought a goal of near-perfect HR systems that defied managerial or employee circumvention. The cost in developing such a system was that it was both labor intensive and

it took a long time. This may account for why last year's SOTA/P found that respondents indicated that the design and implementation of HR systems takes on average between 18 and 20 months (Wright et al., 1999).

Given the rapid pace of change in an internet environment, firms cannot wait this long to develop HR solutions to organizational challenges. Instead, HR must deliver solutions as close to real time as possible lest the problem cost the firm its position to more agile competitors. To deliver solutions quickly requires refocusing HR's attention from comprehensive optimal solutions to simpler satisfactory solutions.

Table 5.1 describes some of the major dimensions on which HR must refocus. In essence, in the past HR functions focused on responding to business issues through spending considerable time and resources in analyzing, and then solving the problem. If the analysis did not paralyze the function, then it created programs and policies, the development of which usually took months or even years. Once developed, they were stored and communicated via paper memos or manuals.

Table 5.1

Change in Focus

From		To
Programs	→	Deliverables
Policies	→	Solutions
Paper	→	Cyberspace
Years	→	Weeks
Complexity	→	Simplicity
Analyze, then Solve	→	Solve, then Analyze
Analysis Paralysis	→	Action Learning

While functional in the past, such an approach does not allow the function to work at internet speed. Within an e-business, HR must focus primarily on solving problems quickly and then analyzing the solution to see if it achieved the desired effect along the lines of a fast paced action learning model. The solutions have to focus on deliverables that are achieved in

a matter of days or weeks rather than months or years. To do so requires the leveraging of technology to store and communicate solutions in cyberspace.

This describes a change in mindset. In essence, HR professionals have to view themselves as providing solutions to business problems in real time. They must have the competence and confidence to provide expertise in these solutions that focus on delivering satisfactory, rather than optimal improvement in the short term, with a goal of delivering optimal solutions over the long term through an iterative experimental process.

Change in Roles

Certainly Dave Ulrich's (1997) roles of strategic partner, change agent, administrative expert, and employee advocate dominate the thinking of the HR community. Many have extrapolated from his basic paradigm to suggest that the strategic partner role takes priority in today's organizations, largely because this seems to be where the fewest skills currently exist and where line executives seem to place their greatest demands.

Table 5.2

Change in Roles

From	To
Strategic Partner	Change Agent
Change Agent	Strategic Partner
Employee Advocate	Employee Advocate
Administrative Expert	Administrative Expert

Interestingly, within e-businesses, we observed a shift in priority as illustrated in Table 5.2. Rather than the strategic partner role being most frequently identified, rather we found that line executives have greater demands for HR to play a role as a change agent. Given the speed and uncertainty challenges, this should not be surprising. However, it does suggest

something different about HR in e-businesses. To be more specific, one would not say that the change agent role receives primacy above the strategic partner role. Rather, within an e-business (particularly for brick and mortar firms moving to an e-business), one finds very little (if any) distinction between the two roles. In essence, one cannot possibly act as a strategic partner apart from acting as a change agent.

This is especially true for brick and mortar businesses attempting to create an e-business within the enterprise. Businesses evolved with power structures and reward systems that reflect the current business model. Those in the power positions have achieved status through their competence and expertise relevant to different aspects of the value chain. If, in fact, e-business is the catalyst by which an organization transforms itself, then one can safely say that the power structure will have to be dismantled and rearranged. Divisions may be combined, positions eliminated, and jobs changed. The institutional systems, political power structure, and individual personalities stand aligned against the necessary transformation.

> *The key role for human resources to play in this is in facilitating change. The change component is incredible, and I look to HR for that. The books on change don't work. It's understanding the company and the executive personalities, and how to drive change in that context.*
>
> *Al Ormiston*
> *Vice President, e-Sun*

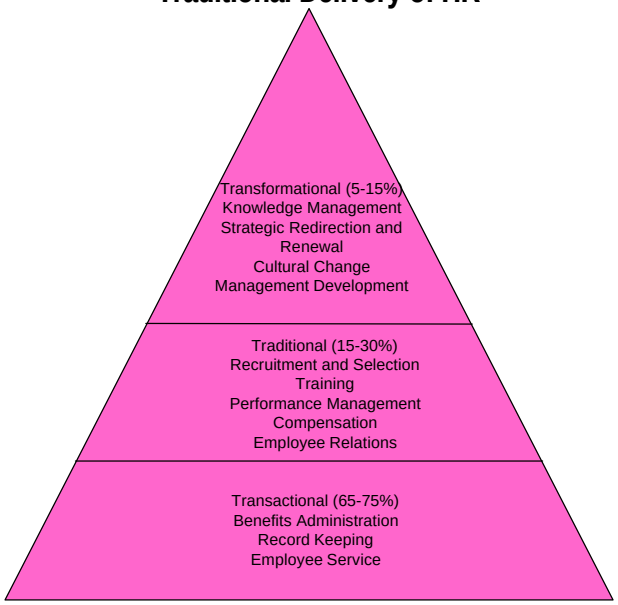
Change in Delivery

Again, one aspect of the key HR challenge is finding ways to leverage technology to allow for better, faster, and smarter HR solutions. This represents the next stage in the evolution of HR functions today.

Figure 5.1 depicts the various categories of HR services and the time HR functions used to spend on each. Transactional activities such as benefits administration and record keeping demand the bulk of HR time. Traditional services encompass the basic HR functional systems such as compensation, training, staffing, and performance management. While only these are critical building blocks to the management of people, many HR functions are so bogged down in transactional activities that the have considerably less time to devote to these higher value added services. Finally, transformational activities such as knowledge management, culture management, and strategic redirection and renewal constitute the highest value added activities, yet those to which most HR functions have very little time to devote.

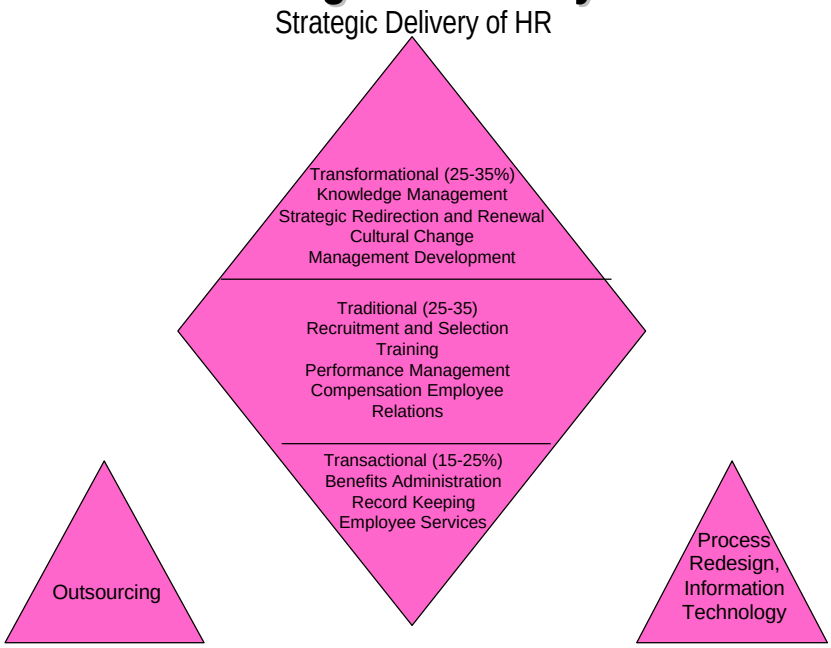
Figure 5.1
Change in Delivery

Traditional Delivery of HR



Over the past 5-10 years, as HR functions sought to play a more strategic role in the organization, the first task was to eliminate the transactional tasks in order to free up time to focus on traditional and transformational activities. As indicated in Figure 5.2, outsourcing of many of these activities provided one mechanism for reducing this burden. However, more relevant to this study was the focus on the use of information technology to handle these tasks. Early on this was achieved by the development and implementation of information systems that were run by the HR function but more recently have evolved into developing systems to allow employees to serve themselves. Thus, for example, employees can access the system and make their benefit enrollment, changes, or claims online. Clearly, technology has freed HR functions from transactional activities to focus on more strategic actions.

Figure 5.2
Change in Delivery

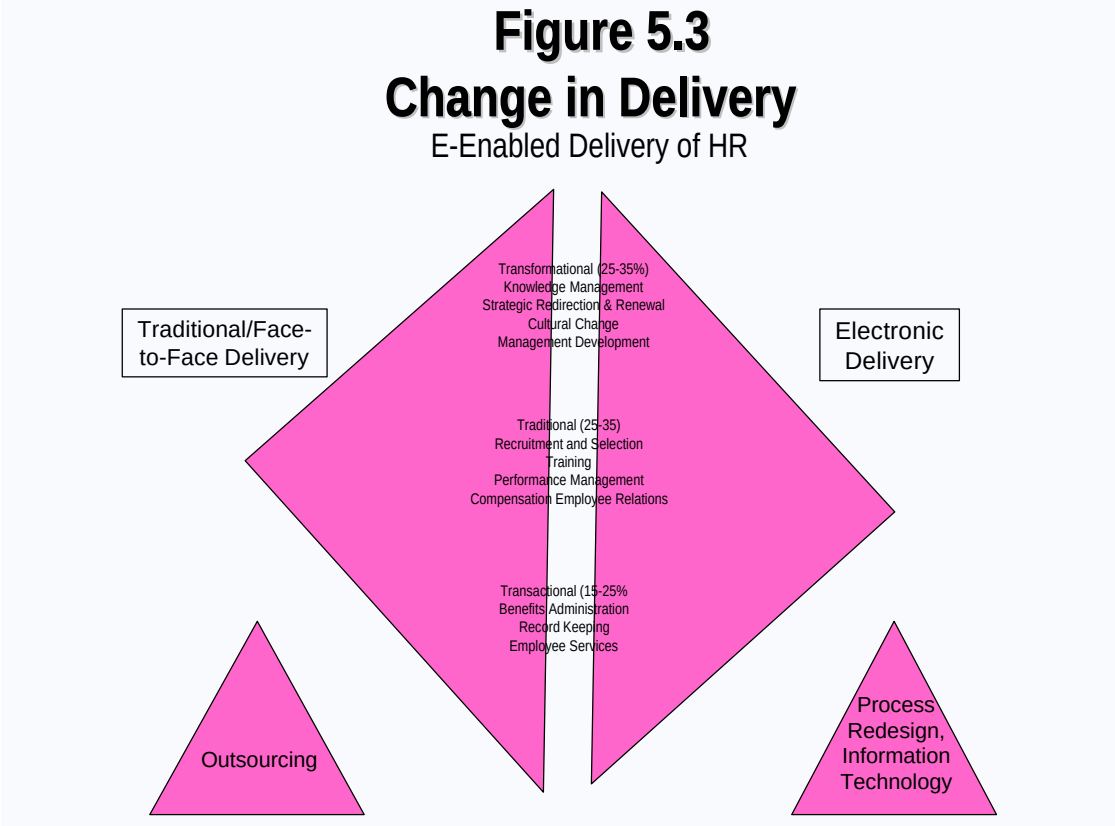


However, the speed requirements of e-business force HR functions to explore how to leverage technology for the delivery of traditional and transformational HR activities. This does not imply that over time all of HR will be executed over the web, but only that a number of HR activities currently delivered via paper or face to face communications can be moved to the web with no loss (and in fact even gains) in effectiveness and efficiency. This is illustrated by Figure 5.3. We explore some examples below.

Recruitment/Selection.

While traditional recruitment and selection processes have required considerable face-to-face communications with recruitment firms and potential employees, labor intensive assessment devices, and significant monitoring of managerial decisions to ensure that hiring patterns and decisions do not run afoul of regulatory requirements. However, technology has transformed these processes.

For example, on line recruiting accounted for 1 of every 8 hires last year according to k-force.com's poll of 300 US companies. IBM employees now fill out forms on the Web to identify contract help they need, and that information is immediately sent to 14 temp agencies. Within an hour agencies respond with resumes for review, allowing IBM to cut hiring time from 10 days to 3 and save $3 million per year.



In addition, firms such as Q-Hire located in Austin, Texas, provide online testing services. Applicants for positions at a firm are directed to a web site where they complete an assessment device. Their scores are immediately compared to an ideal profile and this profile comparison is immediately communicated to the company screening manager. Firms can gather considerable amounts of job relevant information on potential employees long before they ever need to set foot on the company's premises.

Finally, technology has enabled firms to monitor hiring processes to minimize the potential for discriminatory hiring decisions. For example, Home Depot was accused of forcing female applicants into cashier jobs while reserving the customer service jobs for males. While not admitting guilt, as part of their consent decree Home Depot uses technology to identify people who have skills for jobs they are not applying for based on key words in their resumes. In addition, the technology forces managers to interview diverse candidate sets before making decisions.

Compensation/Rewards

Compensation systems in organizations probably reflect the most pervasive form of bureaucracy within HR. In spite of the critical role they play in attracting, motivating, and retaining employees, most systems consist of rigid, time consuming, and ineffective processes.

Managers fill out what they believe to be useless forms, ignore guidelines, and display a general disdain for the entire process.

Leveraging technology may allow firms to better achieve their compensation goals with considerably less effort. For example, one problem many merit or bonus pay plans face is that managers refuse to differentiate among performers, giving everyone similar pay increases. This allows them to spend less time thinking about how to manage (rate and review) performance as well as minimizing the potential conflict they might face. Thus, employees do not see linkages between performance and pay, resulting in lower motivation among all employees and higher turnover among top performers (and possibly lower turnover among bottom performers). To minimize this, Cypress Semiconductors requires managers to distinguish between equity and merit, and forces distributions with regard to both concepts (O'Reilly & Caldwell, 1998). For example, equity means that salaries should result in the top-ranked performer in any group of peers making 50% more than the lowest ranked performer, and that people with comparable performance receive comparable salaries. With regard to merit, there must be at least a 7% spread between the lowest and highest pay raises (e.g., if the lowest raise is 3%, then the highest must be at least 10%). If ratings and raises are inputted into a system, then the firm can immediately monitor and even control the rating process to ensure that adequate differentiations are being made consistent with the policy.

More important than the simple application of technology to effectively implement basic pay policies, technology can also eliminate the rigidity of pay practices. In a provocative Fortune column, Michael Schrage suggested that technology allows compensation tailored to an individual in ways never before possible. Consider cafeteria benefit plans. Employees receive a specified amount of money to spend on a variety of benefits that suit their own needs. The goal is to provide a tailored benefit package that employees will find attractive. One might question, why limit this to benefits. Why not expand the concept to include the employee's total compensation. Thus, employees who valued time off might opt for lower pay and more vacation time and some might opt for less insurance and more cash. In today's environment of a critical war for talent, it seems obvious that firms can leverage technology to create tailored compensation systems that generate a bigger bang with individual employees for the same buck.

> *Every smart company in the world should now be striving to offer all its people the equivalent of a myowncompensation.com.*
>
> *Michael Schrage*
> *Fortune, 4/3/00*

Training and Development.

Exploring different vehicles for delivering training (e.g., PC, Video, etc.) certainly is not a new concept. In addition, a number of firms have begun delivering training via the web. Their experience suggests that at least some types of training can be done effectively via the internet or intranet, while others might not. For example, companies such as IBM and Dell both boast that they have developed internet-based training for at least some parts of their workforce.

Interestingly, the challenges identified above, particularly the speed challenge, bring the concept of internet-based training to the forefront. Again, recognize that in today's competitive environment, firms compete for both customers and talented employees. Attraction and retention come to the forefront of organizational concerns. How well the firm develops and treats existing employees largely determines how well they achieve these outcomes. Yet the speed, project focus, and technologist as managers challenges create environments that discourage managers from performing their people management responsibilities, resulting in a situation where employees may not feel respected or valued.

> *"How do you train people to run a marathon when the business requires you to sprint every day?"*
> *Scott Pitasky*
> *Director of Strategic Growth, Amazon.com*

This presents a challenge to firms to provide both the incentive and the skills for managers to treat employees like assets rather than commodities. Consider how internet based training might facilitate this. Assume that you work for Widget.com, a fast growing, fast-paced e-business. You arrive at work Monday morning and when you log onto your e-mail, a high priority message with either an attachment or a link to a url. It is your Monday morning challenge from the CEO, and you know that the system will track whether or not you link and complete the challenge. When you link it, you see a digital video of your CEO telling you how people are Widget.com's competitive advantage, and that when they don't feel valued, they leave. Thus, his challenge to you is to make your employees feel valued today. To do so, you will in the next 10 minutes learn how to express appreciation to an employee. You then receive 6 learning points, you observe a digitized video model performing the learning points, you review the learning points again, and take a learning point quiz. You then see the CEO giving you the final challenge, that in the next 15 minutes you are to take one of your employees aside and express your appreciation to them using the skill you just developed.

Notice the advantages to this process. First, it was not time-consuming like most 3 day or one-week training programs. The entire process (training and demonstration with a real employee) took less than 30 minutes, you have developed a skill, and an employee now (hopefully) feels better about the organization. Second, it communicated a real organizational value or necessary competency. Third, it didn't require any travel expenses to an exotic training facility. Fourth, it did not overwhelm you with so much information that you would be lucky to remember 10% of what you were exposed to. Finally, it was a push, rather than pull approach to training. The firm did not wait for you to realize you had a deficiency and then go search out and sign up for training. It pushed the training to you.

Thus, technology allows for firms to deliver training and development for at least some skills or knowledge faster, more efficiently, and probably more effectively. It can merge training, communication, and immediate response to strategic contingencies, and do so quickly.

Employee Commitment.

Last, creating and nurturing a committed workforce presents a tremendous challenge to firms today. To do so requires that firms monitor commitment levels, identify potential obstacles to commitment, and to respond quickly to eliminate those obstacles. In large part, attitude surveys have constituted the platform from which these activities are managed in the past.

Consider the traditional attitude survey administration. Surveys are administered to employees over a period of 4-6 weeks. The data are then entered and analyzed requiring another 6-8 weeks. Then a group interprets the results to identify the major problem areas and task forces are formed to develop recommendations. This process easily takes another 4-6 months. Finally, decisions must be made about implementing the task force recommendations. In the end, at best employees might see responses to their concerns 12-18 months after the survey, and then the survey administrators cannot understand why employees think that completing the survey is a waste of time.

Now, consider how technology can shorten that cycle. E-pulse represents one attempt to create a platform for almost real time attitude surveys. Developed by Theresa Welbourne at the University of Michigan, E-pulse is a scaleable survey device administered on line. Normally a basis of 3 questions are asked regarding how employees feel about work, but more questions can be added at any administration to get feedback on any specific issue. The survey goes out on-line and when employees complete it the data is immediately entered and

analyzed. In essence, the part of the process that took 4 months in the past has been reduced to a day.

Next, the firm can decide how it wants to use the information. For example, it could be broken down by business, site, work unit etc, with the relevant information going to the leader of the chosen unit of analysis. In essence, a supervisor could receive almost immediate feedback regarding the attitudes of his/her work group, or a general manager about his/her business unit. The supervisor/manager can respond immediately in terms of communication, even if it is only to communicate that s/he realizes a problem exists and will take action soon.

One must recognize that while the technology provides for faster HR, only a more systemic approach will ensure better and smarter HR. For example, disseminating the information to the supervisors and managers may be faster, but unless those individuals possess good problem solving and communication skills, they may either ignore the information, or worse yet, exacerbate the problem with inappropriate responses. As we noted with regard to training, this systematic approach requires knocking down traditional functional walls to deliver organizational solutions rather than functional programs. Thus, the challenge is to get beyond viewing the technology as a panacea or even as a functional tool, but as a catalyst for transforming the HR organization in a systematic way.

Conclusion

Electronic business holds the key to transforming organizations to become more customer focused and efficient. The movement toward e-business will not dissipate soon, but rather will grow in increasing importance over the next few years. Over time it will evolve into a basic platform for conducting business much like the advent of the telephone or the computer. However, in the mean time it will profoundly impact organizations as they must respond to the challenges of transforming their organizations to this new paradigm.

> *The most successful e-commerce companies will be those that combine people and technology.*
>
> *Alexandro Macia,*
> *VP HR, Schwab Electronic Brokerage*

The e-business potential lies not in the technology itself, but in how well people can harness the technology and the information it provides. While current popular press focuses on e-business models and technological applications, those inside these businesses, from both the line and HR, recognize people issues as predominant. This research indicates that while people issues dominate, managers with the skills and orientation toward managing

people are in limited supply. As organizations develop and implement e-business models, those that will prevail will be those that manage people well, thus highlighting the critical role that HR can play in creating competitive advantage.

> *The role of managers becomes critical. Managers are going to have to become extraordinary people managers in this environment.*
>
> *Ron Gibson,*
> *Director HR, e-Sun*

HR functions must both facilitate and even drive the organizational change needed to create an e-business mindset. They must also develop systems, structures, and processes that enable the firm to manage people effectively, and they must do so at internet speed. This requires a corresponding change in mindset and temporal orientation of those in HR.

Last year's SOTA/P study recognized the importance of becoming better, faster, and smarter in HR. The orientation was moving systematically toward these objectives. Thus, we suggested that the HR strategy design and implementation process that last year's study revealed to be an average of 18-20 months should be shortened to 6-9 months and the assumption was that it would take a 3-5 years to create the systems and structures to achieve that goal. This year's SOTA/P moves beyond that. HR must respond strategically at internet speed (weeks or a month) or as close to real time as possible. The major implication for HR in e-businesses is that they not only must become better, faster, and smarter, but they must get that way better, faster, and smarter.

References

Andrews, F. (2000). Hard lessons learned at Schwab. *New York Times*, Business Section, April 30, 4.

Anonymous (2000). Dot-com deathwatch. *Fortune,* June 12, 42.

Balu, R. (2000). Change your mind, grow your company. *Fast Company,* April, 82.

Barney, J. (1997). *Gaining and sustaining competitive advantage.* Reading, MA: Addison-Wesley.

Brown, S. & Eisenhardt, K. (1998). *Competing on the edge: strategy as structured chaos.* Boston: Harvard Business School Press.

Becker, B. & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *Academy of Management Journal,* 39, 779-801.

Boudreau, J. & Ramstad, P. (1999). Human resource metrics: Can measures be strategic? In P. Wright, L. Dyer, J. Boudreau & G. Milkovich (eds). *Strategic human resource management in the 21st century.* Research in Personnel and Human Resource Management, Supplement 4. Stamford, CT: JAI Press.

Boudreau, J., Dunford, B., & Ramstad, P. (2000). *The human capital "impact" on e-business: The case of encyclopedia Britannica.* Center for Advanced Human Resource Studies Working Paper No. 00-05. Ithaca, NY: Cornell University.

Bridges, W. (1994). *Job shift.* Reading, MA: Addison-Wesley.

Burns, T. & Stalker, G. (1961). *The management of innovation.* London: Tavistock.

Christensen, C. (1997). *The innovator's dilemma.* Boston: Harvard Business School Press.

Collins, J. (2000). Built to flip. *Fast Company*, March, 131-162.

Collins, J. & Porras, J. (1994). *Built to last.* New York: HarperBusiness.

Dyer, L. & Shafer, R. (1999). From human resource strategy to organizational effectiveness: Lessons from research on organizational agility. In P. Wright, L. Dyer, J. Boudreau & G. Milkovich (eds). *Strategic human resource management in the 21st century.* Research in Personnel and Human Resource Management, Supplement 4, Stanford, CT: JAI Press.

eMarketer 1999. The E-Business Report. December (URL: www.emarketer.com)

Fradette, M. & Michaud, S. (1998). *The power of corporate kinetics.* New York: Simon & Schuster.

Gerstner, L. (2000). Blinded by dot-com alchemy. *Business Week,* March 27, 40.

Godin, S. (2000). In the face of change, the competent are helpless. *Fast Company,* Jan-Feb, 230-234.

Goldman, S., Nagel, R. & Preiss, K. (1995). *Agile competitors and virtual organizations.* New York: Van Nostrand Reinhold.

Gunneson, A. O. (1997). *Transitioning to agility: Creating the 21st century enterprise.* Reading, MA: Addison-Wesley.

Haeckel, S. (1999). *Adaptive enterprise: Creating and leading sense-and-respond organizations.* Boston: Harvard Business School Press.

Hamel, G. (2000). Reinvent your company. *Fortune,* June 12, 99-118.

Kerr, S. (2000). Organizational learning. Session conducted at the annual meeting of the Human Resource Planning Society, New York.

Maguire, S. & McKelvey, B. (1999). Complexity and management: Where are we? *Emergence,* 1, entire special issue.

Mintzberg, H. (1989). *Mintzberg on management.* New York: The Free Press.

Morgan, G. (1997). *Images of organizations.* 2nd edition. Thousand Oaks, CA: Sage.

Nua 1999. Internet Surveys. (URL:www.nua.ie).

O'Reilly, C., & Caldwell, P. 1998. Cypress Semiconductor (A): Vision, Values, and Killer Software. Stanford University Case Study, HR – 8A.

Pfeffer, J. (1998). Seven practices of successful organizations. *California Management Review,* 40, 2, 96-124.

Plumely, D.J. 2000. Global eCommerce: The market, challenges, and opportunities. Irvine, CA: Browne Global Solutions.

Pottruck, D. & Pearce, T. (2000). *Clicks & mortar: Passion-driven growth in an Internet-driven world.* San Francisco: Jossey-Bass.

Ransdell, E. (2000). Portals for the people. *Fast Company,* May, 366-375.

Reznic, M. (1999). You've changed man - compensation in growing companies. *Compensation and Benefits Review,* Sep-Oct, 21-31.

Salter, C. (2000). Purge that ignorance. *Fast Company,* April, 190-202.

Schlender, B. (2000). The odd couple. *Fortune,* May 1, 106-126.

Senge, P. (1990). *The fifth discipline.* New York: Currency Doubleday.

Shafer, R., Dyer, L., Kilty, J., Amos, J., & Ericksen, G. (2000). *Crafting a human resource strategy to foster organizational agility: A case study.* Center for Advanced Human Resource Studies Working Paper No. 00-08, Ithaca, NY: Cornell University.

Stepanek, M. How to jump-start your e-strategy. *Business Week,* June 5, 97-100.

Stewart, T. (2000). Making decisions in real time. *Fortune,* June 26, 332-334.

Teece, D., Pisano, G. & Shuen (1997). Dynamic capabilities and strategic management. *Strategic Management Journal,* 18, 7, 509-533.

Towers Perrin (2000). *Top e-business organization issues: Fast forward to tomorrow.* New York: Towers Perrin.

Ulrich, D. 1997 Human Resource Champions. Cambridge, MA: HBS Press

Volberda, H. (1998). *Building the flexible firm.* Oxford: Oxford University Press.

Wanderer, M. (2000). Is dot.comp something new? Unpublished paper, ILR School. Ithaca, NY: Cornell University.

Wright, P., Dyer, L. and Takla, M. (1999). *Execution: The critical "what's next?" in strategic human resource management.* The 1999 Human Resource Planning Society State-of-the-Art & Practice Council Report. New York: Human Resource Planning Society.

Wright, P., McMahan, G. & McWilliams, A. (1994). Human resource and sustained competitive advantage: A resource based perspective. *International Journal of Human Resource Management,* 5, 301-326.

Youngblood, M. (1997). *Life at the edge of chaos: Creating the quantum organization.* Dallas, TX: Perceval Publishing.