E-Business Requires E-Process

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As traditional business models evolve and incorporate e-business capabilities (and vice versa), the need for process analysis and design becomes more critical, not less. The new economy requires tools and techniques for analyzing, designing, mapping, and modeling the customer experience and e-Process performance . . . and how that performance is likely to change over time. These tools and techniques can be built on the foundation laid by the reengineering and business process design movement.

"When we said 'the new IT-driven design will require 50 percent more staff in the order processing group,' management reacted with considerable surprise." This comment was made in 1992 by the head of an e-business design team. How did the project get so far with so little assessment of its operational impact?

In 1992, this publications subscription service redesigned both its telephony-based and its on-line capabilities (dial-in, not Web) for ordering and customer service. Conducted as an Information Technology (IT) project, the definitions of user requirements, data flows, and coding specifications were all driven by IT. User requirements led to new capabilities (more information collection, more fields, and more screens). Suspecting overkill, and months into the project, the senior executives commissioned a detailed study to determine the following:

- Capabilities to be delivered by the new system;
- Impact of the system on day-to-day operations; and
- Actions needed to insure success.

This was an unusual undertaking in that it involved:

- Accepting a half–developed system as a given.
- Defining a future-state process and day-to-day operation based on that system.
- Redesigning the future state before it was implemented (and without throwing away code and starting over).

In the end, there were significant, but not costly, adjustments to the implied process design. These enabled a 100% improvement in productivity without changing the code at this late stage. Just because capabilities were designed-in did not mean they had to be used. Business processes and company policies were designed to use the capabilities when—and only when—there was a business benefit.

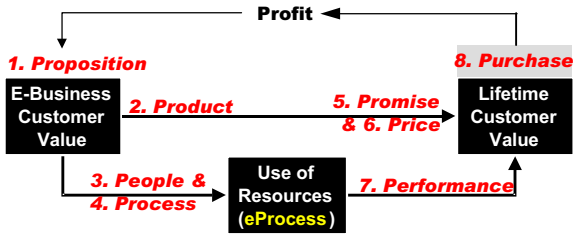
Since 1992, more and more businesses have made the foray into various forms and mixes of on-line and telephony-based capabilities. So what have we learned, and how does it apply to today's mass migration to the panacea of e-business?

The Eight "Ps" of Business Success

First, since e-business is just another form of business, basic tenets still apply. For instance, the ultimate intent is get customers to purchase . . . repeatedly. You might get a customer to purchase once on the basis of price and a promise, but if the product doesn't perform, a repeat purchase is unlikely. However, in the "land grab" atmosphere of the Internet Age, promise and price have sometimes proved sufficient (in the short term, at least) to grab customers and investors alike.

Lasting value comes through consistently good performance of a company's product or service. Heroes, SWAT Teams, and the like cannot sustain consistently good performance, which can come only from exceptionally well managed resources and superior process design. Processes can make possible the consistent and scalable delivery of products and services. The goal is to create a "spiral of success": Customers continue to purchase, profits are generated, new value propositions are developed, new products are designed, processes are designed, and so on and so on.

- **eProcess - the means to match an e-business promise with e-business performance**



It is an e-process that drives performance to the customer. So what's so special about a "e-process?"

From Process to e-Process

For an e-process to provide the means to match an e-business promise, it must have capabilities beyond those of a traditional business process. While a traditional process typically delivers a product or service through one medium to one type of customer, an e-process is more complex. An e-process must enable a tailored experience from a standard delivery platform with complex structures . . . and be able to renew itself rapidly.

Distinct customer groups having different needs each have their own definition of appropriate service. Similarly, individual customers and their specific needs may dictate how they encounter the business on any given day. An e-process must provide a variety of media for customer contacts (e.g., by Web, phone, mail, and e-mail) without losing track of any customer. An effective e-process recognizes that customers are a part of the process.

A tailored experience is not unique to e-business, and it is commonplace among the best service firms. It becomes unique to an e-business when the tailored experience must be delivered from a standard delivery platform. In other words, there are common processes and a system designed to be used by all. Again, an e-process enables flexibility and variety of customer contact, yet it never loses track of the customer.

To make things even more difficult, an e-process typically works with complex structures. In this age of core competencies and outsourcing, multiple internal entities and external partners or vendors are required to make the process work. A seamless flow of work among organizations and specialists is the rule, not the exception, in the Internet Age.

Finally, the e-process is never static and must reinvent itself and be continuously morphing as technological capabilities emerge and customer desires evolve. In other words, the eight "Ps" value cycle is cycling wildly, and only a few companies will remain on their feet long enough to get it under control.

So what can be done to sort out all of this complexity? Start with the customer.

The Customer Experience

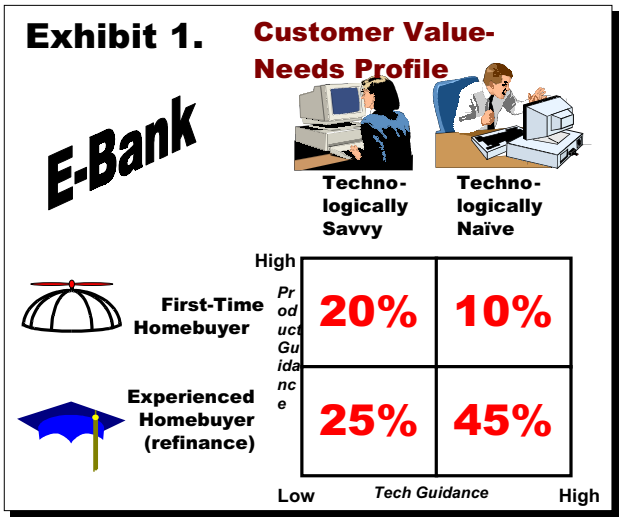
In the old brick-and-mortar world, face-to-face service encounters provide a tailored experience but are all based on judgement calls by the service provider. For example, the guy in the small-town hardware

store comes to know you, your skills, the projects you have underway, and the tools you own. He may suggest certain approaches and related tools based on his knowledge. Similarly, at a local bank, the loan officer knows if it is your first time buying a house or your fifth transaction in a decade. Your experience with the loan process dictates the experience, including the degree of interaction provided by the loan officer. Outside of rural America, the days of tailored face-to-face service are increasingly rare, but the need to deliver the appropriate service to each customer remains.

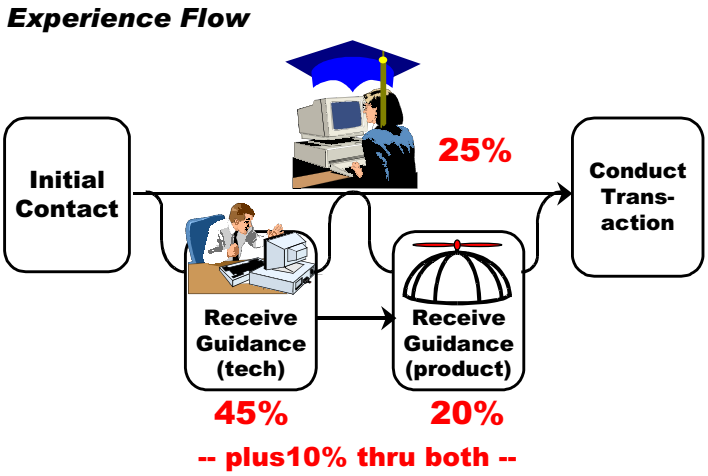
In the e-business world, the customer experience must be designed. At the initial contact, an e-process must segregate customers, not on the basis of demographics and market segment, but on the basis of service required. For instance, in the e-business world, a technologically savvy customer desires little "hand-holding," while neophytes may require extra care and attention. For example, a savvy banking customer may well shun hand-holding during the mortgage application process. Such 'hand-holding' would not add any value and might even prove annoying. But a naïve first-time homebuyer probably values hand-holding and extra attention. The trick is to quickly identify each customer and his particular service needs, and then treat each customer accordingly.

In the e-business world, the customer experience depends upon process (for example, define the customer type, provide the right experience through a defined process, collect the right data, and so forth). The first step in the design of an e-process (or any type of process design) is to define and design the desired customer experiences.

The result of evaluating the customers' desires for service is a "Customer Value-Needs Profile" (see Exhibit 1). In this example, technologically naïve first-time homebuyers represents 10% of the customer base. Such customers probably require a high degree of guidance about both the service and the technology used to deliver it. Conversely, the technologically savvy, experienced homebuyers (25% of the customer base) require little guidance .



When the Value-Needs Profile is translated to a view of the customer experience, a variety of paths are depicted. Savvy customers skip the "Receive Guidance" steps, while naïve customers do not.



This "Value-Needs Profile creates an interesting dilemma. The 10% totally naïve customers are likely to incur the highest cost to serve, yet the lowest revenue. On the other hand, the 25% totally savvy customers will bypass the guidance steps, therefore costing less to serve, and at the same time bringing in more revenue (assuming that savvy and experienced means having bigger bank accounts and higher mortgage values). So the whole reason to provide exceptional service to the lower-revenue customers is to build loyalty. The lower-revenue customers will likely become higher-revenue customers.

The Customer Contact Media

The experience flow (activities and sequence) is one dimension of customer contact. The other dimension is the customer contact media—that is, the means by which activities and encounters are conducted. In the banking example above, the "Initial Contact" may be a walk-in, face-to-face contact with a loan officer, or perhaps a phone call or a web experience. Similarly, the subsequent steps can be delivered via a variety of media.

The media by which service is delivered will have a great impact on staffing requirements as well as customer satisfaction. For instance, as customers migrate from face-to-face encounters to phone-based encounters, staff in branches can probably be reduced, though staff in call centers will probably have to increase. Similarly, as customers move from human contact (whether in person or by phone) to Web-based self-help, staff requirements will also change (for example, more "techies" will have to be hired and fewer service representatives).

Managing the Resource Implications

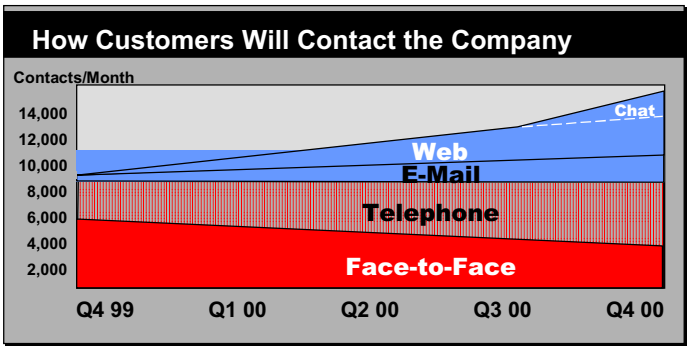
This idea of mixed media and managing the resource implications can be difficult. In most cases, the move from bricks-and-mortar business to e-business is not an all-or-nothing proposition (one notable exception is the software retailer Egghead). Companies need to plan for the migration and understand the resource implications (in terms, for example, of staff, equipment, and facilities).

To complicate matters there is no steady state: Just as customers migrate to web-based self-help (and thus need less human support), an expectation develops for web-chat capability (and more human support). As a recent article in The New York Times proclaimed, "E-commerce sites are starting to use live chats and Internet telephony applications to answer questions, solve problems and, ideally, sell customers more things."[1]

[1] June 28, 1999.

Exhibit 2 shows a migration that was forecasted for a brick-and-mortar company. Note the increasing need for customer-service representatives to handle phone, e-mail, and Web-chat interactions. In this case the self-help web capability slows the need for more staff, but it does not eliminate it.

Exhibit 2. From Bricks and Mortar to E-Business

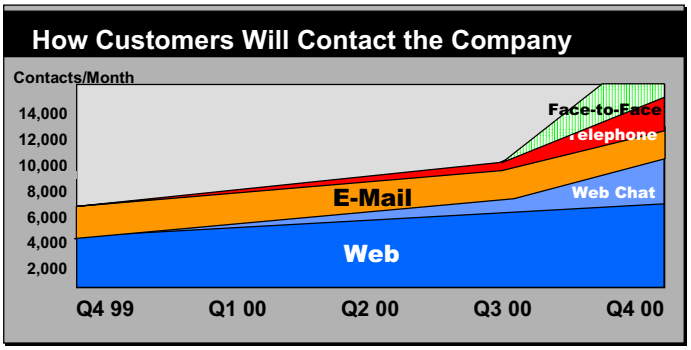


Example only

New e-businesses have the same issues to contend with, but the pattern is different. E-businesses probably have to learn how to provide human interaction of one form or another. For example, Amazon.com might conceivably take space in shopping malls and downtown—probably not traditional bookstores, but possibly kiosks and human assistants to help with on-line ordering. Eventually, books will probably even be printed and bound on thespot.

The following chart illustrates the migration path for an emerging e-business:

Exhibit 3. From E-business to Brick-and-Mortar



Example only

As *The Economist* puts it, "Convergence is the new religion. With e-commerce in America alone set to rise from $12 billion this year to $41 billion by 2002, according to Jupiter Communications, traditional retailers can no longer ignore it. At the same time, and against all expectations, Internet retailers are being forced to recognize the importance of having a physical presence. Many firms are now betting on the power of integrated shopping-combining stores, the Internet, catalogues, the telephone and eventually television."[2]

Leading-edge companies and customer-care outsourcers have caught on to this trend. For instance, TeleTech Holdings, Inc., a leading provider of global customer management solutions, announced the launch of Cybercare. Positioned as a first-of-its-kind, Internet-integrated customer management solution, "Cybercare integrates TeleTech's software, systems integration capabilities and customer care to enable companies to sell to and service their customers on a very large scale anytime, anywhere, over any media. Whether a customer sends an e-mail, clicks an icon on a Web site asking for immediate help or service, or

[2] August 20, 1999

places a telephone call, Cybercare routes the inquiry to a trained and technology-enabled TeleTech agent."

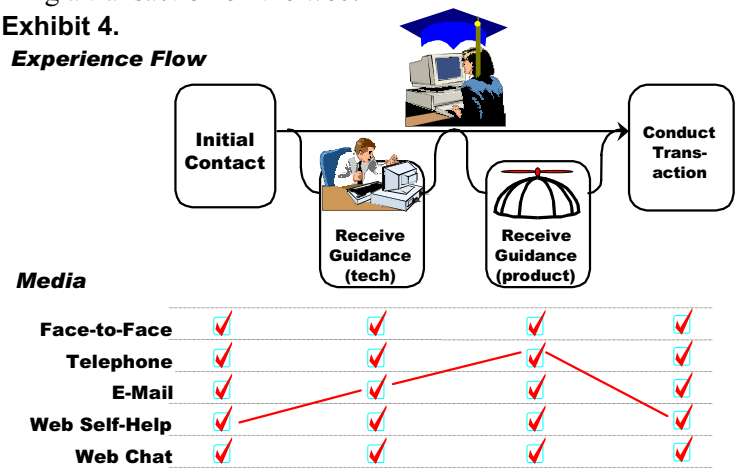
Be Flexible

Whether a company begins as a brick-and-mortar business or an e-business, a key mantra is to prepare to be flexible. A forecast is only a beginning and an aid to preparing for the future. As a recent headline exclaimed: "Banking giant First Union Corp. is hiring 2,000 tellers in an admission it's misjudged how much customers want to see real people for their banking needs."[3]
As these emerging mixed-media companies emerge, the complexities increase exponentially. "How customers will likely contact the company" is not a customer-by-customer distinction. It is a customer-by-customer and step-by-step (in the 'experience flow') distinction.

Exhibit 4 suggests how one customer experience may include a variety of media. In this example, a customer may have an initial contact through the web, then e-mail a question, followed by a phone contact, before performing a transaction on the web.

Exhibit 4.

Experience Flow



So, as customers dictate their preferences, the key is to react quickly and correctly. "Correctly" means providing the right resources to deliver the preferred experience by means of the preferred media. But how can this be done?

E-process Mapping and Modeling

As businesses migrate toward handling a mix of face-to-face encounters, phone-based encounters, and Internet encounters, the whole business changes. Determining the impact of those changes can be done through a combination of the process mapping and modeling tools so widely used during the reengineering wave of the early '90s

Through mapping and modeling of customer encounters—along with related work flows, work volumes, processing times, and the like—the business impact can be determined. The value proposition and supporting process designs can then be refined until they reflect most viable means to provide superior service.

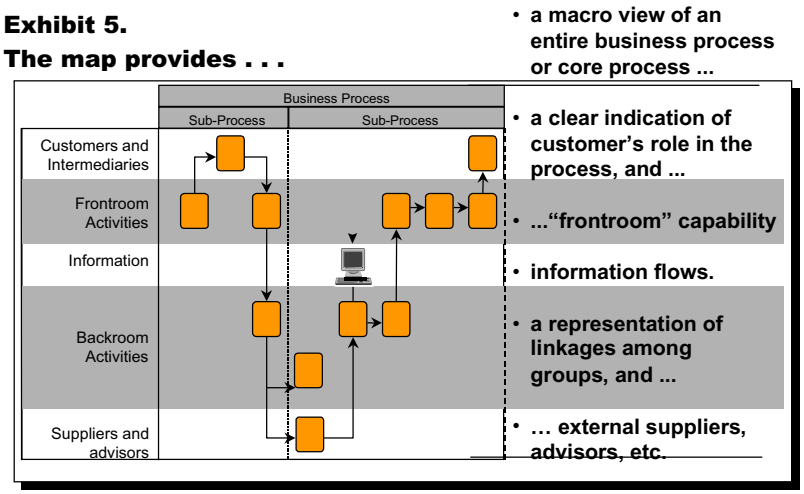
The starting point is an e-process map that places as much emphasis on the customers' experiences as it does on the company's support structures. It is not enough to calculate and plan the resources required by the company: A company must also predict and plan for the customers' experience, particularly as it

[3] The Associated Press, July 19, 1999

relates to their use of time. The number one guiding principle of e-business, according to George Gilder, the noted futurist, is "Do not waste the customer's time." In the e-business world, the winning companies design and manage the consumption of time for both their customers and their employees. The web is not seen solely as a means to shift labor from employees to customers.

After establishing the flow of encounters from the customers' perspective, an e-process map can be constructed to portray the activities and sequences performed by all relevant parties. The framework for such an e-process map is illustrated in Exhibit 5.

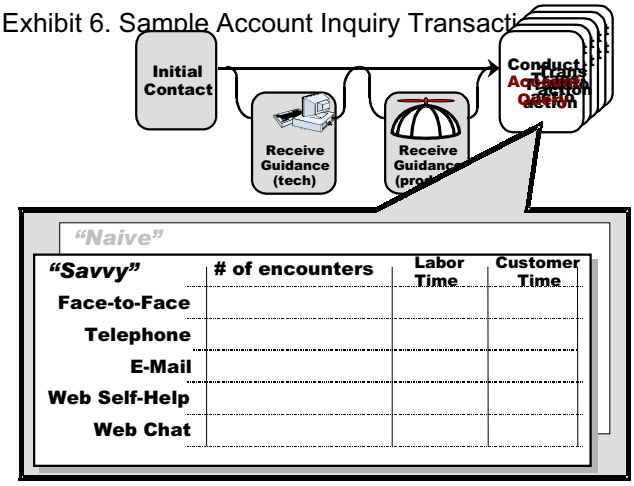
Exhibit 5.
The map provides . . .



With a depiction of the customers' encounters and supporting activities, a model can be constructed to quantify the impact of a variety of changes. Each step on the map can be quantified with work volumes, labor times, and (when appropriate) customer time. Each customer type and each encounter will have its own operating characteristics.

The data required to build such a model can be extensive. For example (as shown in Exhibit 6), the one transaction of performing an "Account Inquiry" (i.e., bank balances and the like) may require 30 pieces of information (15 for the "savvy" customer and 15 for the "naïve" customer).

Exhibit 6. Sample Account Inquiry Transacti



Benefits of mapping and modeling

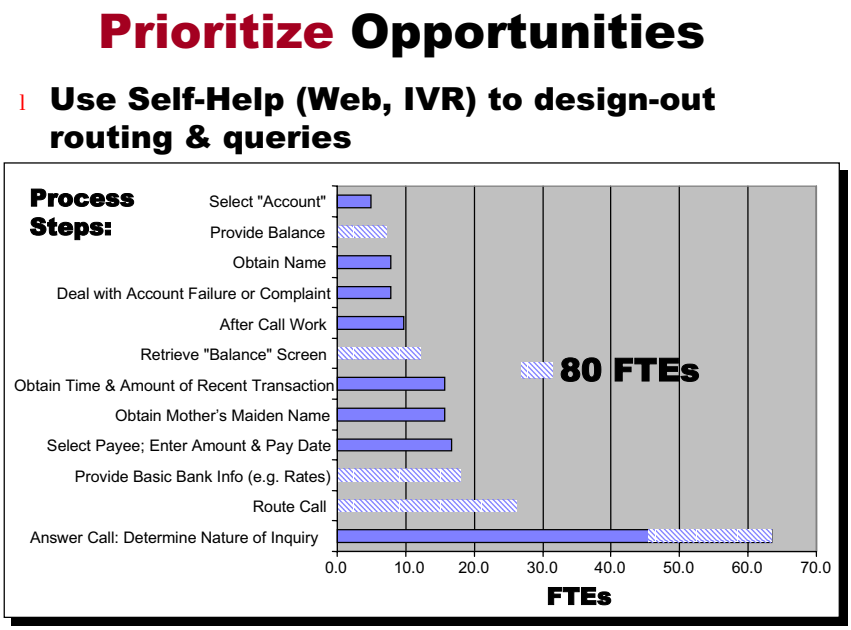
Once the model is built, it provides the means to quickly define the customer impact and operational impact resulting from a variety of changes, such as sales volumes, customer service encounters, operational improvements, and system enhancements. The e-process model answers key questions, such as: "What will happen to our staffing requirements, telephony, and work-station requirements, and also our requirements for facilities and space?"

E-process modeling has enabled companies to:

- Assess the impact of the evolving e-business versus brick-and-Mortar contact media mix on:
  - Customer encounter time.
  - Labor/skills, equipment, and space planning.
  - Transition costs.
  - Future day-to-day operation costs.
- Provide a check and balance on the systems development to:
  - Design-in work-flow and data-flow compatibility.
  - Ensure that feature costs are offset by benefits.
  - Provide input to systems design (e.g., "savvy" fast-track, "naïve" slow-track screen flows).
- Provide feedback on policies, procedures, and work-flow design alternatives
  - e.g. what, when, and how to offload peak work to off-peak time
- provide an ongoing analytical tool for a variety of "what-if" questions
  - what-if phone contacts go up and web contacts go down … or vice versa?
  - Or for only some of the products? For some of the transactions? for only some customers?
  - for various work volumes and mixes, which activities for which services cost the most?

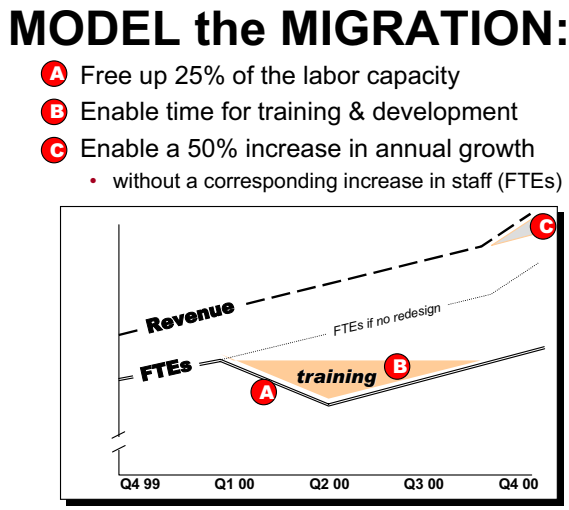
A detailed model of the e-process suggests where the greatest opportunities for improvement reside. For example, one bank's e-process map contained 100+ steps. The steps were quantified, a model developed, and the highest labor consuming steps identified. The model of their call center showed 80 Full Time Equivalent (FTEs) service reps were consumed by routing calls and answering very basic inquiries. While a new e-process design would not eliminate the need for all 80 people, it cut it in half (some people will not use the self-help alternatives)

The following chart shows the 12 highest labor consuming steps for the eBank:



For both the publications service company and the eBank, the e-process Model enabled the planned reallocation of resources for maximum benefit. The intent was not to eliminate staff, but to insure their staff was used to provide the most value to the customer. In both cases the model helped identify 'surgical strike' improvements to free up staff. Then the impact and timing of those improvements was modeled and a migration plan developed and executed.

A typical migration plan is depicted below:



For many of successful e-business ventures, a common theme is ability to continuously free-up staff and train staff to handle the new media and new modes of contact. This ability appears critical to the successful growth of mixed media businesses.

So, in summary, what have we learned, and how does it apply to today's mass migration to the panacea of e-business?

We began this article with our early experience with e-process performance … "When we said 'the new IT-driven design will require 50 percent more staff in the order processing group,' management reacted with considerable surprise." We learned the best e-process/e-business initiatives eliminate surprises through a series of steps that begin with the customer.

Steps for e-process Development and Renewal

- Define customer-driven value and needs.
- Define a valued customer experience.
- Define the workload and map the process.
- Quantify the process time, resources, and costs.
- Quantify the upside revenue and profits.
- Prioritize opportunities.
- Plan the growth.
- Repeat.

The trick is to continuously design, monitor, and improve processes to insure performance as promised, whether in the e-business world or the Brick and Mortar world, or some combination of the two.

BIOGRAPHICAL SKETCH:

Kelvin F. Cross is the president of Corporate *Renaissance*, Inc. - a business process design firm. Kelvin has worked throughout his career analyze, design, and quantify efficient "back room" processes, knowledge workflows, and effective "front room" service encounters for large corporations, as well as start-ups and e-businesses. He has co-authored: *Corporate Renaissance: The Art of Reengineering* (Blackwell, 1994) and *Measure Up! How to Measure Corporate Performance* (Blackwell, 1991). He is the author of over 60 articles and papers.

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