




ibm.com:

Driving to be an on demand Business

A business case study sponsored by IBM



 business on demand

ibm.com: Vital Statistics

Countries:	83
Languages:	31
Currencies:	43
Annual Web Visits:	300 Million
Annual Tele Contacts:	40 Million

IBM and on demand

“IBM's on demand transformation is about becoming more responsive to our customers' needs, achieving new levels of operational excellence and building a superior customer experience.”

—Mike Lawrie, SVP, Sales and Distribution, IBM

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EXECUTIVE SUMMARY

<p>1999-2002</p>	<p>The Seeds of Change</p> <p>Transforming ibm.com</p>	<p>In 1999, the rising importance of productivity had driven customers to expect more from their vendors, including better service—available 24/7—and an improvement in the ease of doing business. For IBM, other factors also pointed to the need for a more cost-effective way to interact with customers, including 1.) IBM’s evolving focus toward the more fragmented small and medium-sized business market 2.) a fall in average revenue per transaction and a rise in more standardized transactions 3.) a growing volume of support inquiries, and the accompanying need to handle them in a cost effective way.</p> <p>IBM’s initial process-related transformation of ibm.com included: 1.) the creation of a single TeleWeb organization and the redesignation of ibm.com from an infrastructure to a business 2.) the start of an effort to redesign customer-facing processes around the customer’s experience and linking them horizontally from end to end 3.) standardization of ibm.com’s look and feel, navigation and content standards. The need to integrate processes horizontally drove the need to integrate data from across the company, which led to an ongoing initiative to put in place a common infrastructure and standards. In the infrastructure area, ibm.com consolidated its 59 portals down to one between 2001 and 2002 and now runs on a standardized, triply redundant architecture.</p>
<p>2002- PRESENT</p>	<p>IBM Enters the on demand Era</p> <p>Business Results</p>	<p>In October 2002, IBM announced the arrival of the era of e-business on demand, whose key theme is the need to integrate end-to-end in order to respond dynamically to customer demands, market opportunities and external threats. While ibm.com was created before the on demand era, its previous transformation initiatives have established a solid foundation on which to become more on demand, for example: 1.) by integrating its Tele and Web capabilities, agents are better able to sense and respond to customer needs; 2.) infrastructure consolidation and the use of common technology components at the data center level and the contact center level have enabled IBM to virtualize its global computing and contact center resources; and 3.) IBM leverages these improvements as it drives toward more productivity and cost savings.</p> <ul style="list-style-type: none"> • In the past year, ibm.com's overall customer satisfaction has risen by nearly four points. In addition, customers who do business with ibm.com and its closest industry competitor, rate ibm.com higher by more than eight points. • ibm.com increased agent productivity by 15 percent based on its ability to resolve customer support problems more quickly and reduce the need to transfer customer calls. • eSupport has enabled IBM to reduce its inbound calling volume by 20 percent. The growth in customer usage of eSupport has resulted in significant expense avoidance while providing customers access to support information on a 24/7 basis. • ibm.com accounts for over 10 percent of IBM revenue.
<p>FUTURE</p>	<p>IBM is expanding its efforts in the area of virtualization, autonomic and grid computing and Web services to add still more flexibility, efficiency and resiliency, thereby enabling the company to serve its customers more responsively and cost-effectively.</p>	

THE SEEDS OF CHANGE

While the *ibm.com* story is largely one of growth and success, it is also characterized by a seemingly constant evolution, a response to the need to adapt to new customer requirements and its own evolving business model.

Background

Of the myriad issues facing companies in today's challenging economic environment, few are more important than the need to sustain productivity gains within their operations. In the face of fierce competitive pressures and slow-to-modest growth, increasing productivity has arguably emerged as the most expedient and effective lever for companies seeking to improve their profitability. Within individual companies, the push for productivity can take on a variety of forms, with efforts directed at cost reduction, better leveraging of existing assets, pushing best practices out across the company—or a combination of these. By the same token, there is also a good deal of diversity among the factors driving companies to improve their productivity. Indeed, companies out to improve their productivity may be responding to a combination of macroeconomic factors (e.g., softening growth), industry factors (e.g., increased competition), company-specific factors (e.g., fixing inefficient processes). What all companies have in common is the need to respond and adapt for their competitive survival.

In many ways, IBM's experience over the last four years stands as a textbook case of how a company—in the face of shifting customer needs and competitive currents—attacks the productivity challenge on many fronts. This is especially true of *ibm.com*, IBM's telephone- and Web-based (i.e., "TeleWeb") channel and one of the primary touch points for its customers and partners. Since its establishment in 1994, the *ibm.com* Web site has become one of the most heavily trafficked destinations on the Web; with experiences in 83 countries and 31 languages, the site serves over 300 million visits annually. Overall, IBM's TeleWeb channel generated over 10 percent of IBM's overall revenue in 2002. While the *ibm.com* story is largely one of growth and success, it is also characterized by a seemingly constant evolution, a response to the need to adapt to new customer requirements and its own evolving business model.

Business Drivers Behind *ibm.com*'s Evolution

In 1999, IBM faced a number of emerging business challenges that affected how *ibm.com* served customers, both current and prospective. The most fundamental challenges related to changing customer priorities, with the issues of productivity and cost control becoming an increasingly important consideration in customers' strategic behavior—especially in the area of IT. With companies looking more and more to justify their IT investments and with budgetary constraints growing, customers began looking harder at streamlining processes and controlling costs. At the same time, customers' collective requirements for service had risen dramatically, with customers conditioned to expect the capabilities unleashed by the mainstreaming of the Web—such as instant information access, online order tracking and other capabilities. The confluence of these factors pointed to a rising demand within customers to "get more, albeit with less," and for their suppliers to do their part to make this happen. In short, ease of doing business was becoming the central criterion on which customers judged their supplier relationships and the key driver of customer satisfaction.

IBM's recognition of these new market dynamics was a key driver of its early business transformation initiatives, whose dominant theme was the need to simplify and transform business processes for the benefit of the customer. While process-based transformation was a companywide goal, the need for it was especially pronounced in the areas where significant customer contact was concentrated—the telephone and Web-based resources (i.e., ibm.com) through which customers interacted with the company. In short, these resources needed to be calibrated to make it as easy as possible to do business with IBM. And while customer-based factors were a strong driver of IBM's transformation, others included:

- **Channel Reach and Economics**—IBM's longstanding emphasis on using "face-to-face" sales reps—complemented by Business Partners—as the predominant channel had been a hallmark of its success. However, as IBM evolved its focus toward the small and medium-sized business market, this approach did not represent a scalable and cost effective model. With IBM poised to aggressively target these segments, it needed to devise an economically viable channel strategy that would allow IBM to reach and serve these segments effectively, yet at a lower cost than face-to-face reps—especially for standardized transactions. Such an approach would also allow IBM and Business Partners to focus more on selling solutions. [Underlying this is the fact that large enterprise customers have come to prefer TeleWeb-based sales interaction for industry standard offerings and on-going repeat purchases.]
- **Changing Product Mix**—In synch with the industry as a whole, IBM's revenue per transaction was falling in certain parts of its portfolio, while the proportion of standardized transactions (such as software license or service contract renewals) was on the rise. To profitably sustain its revenue growth, IBM needed a way to drive more volume (especially its more standardized products) through lower cost channels like its Web site and contact centers, thus enabling a more economically viable distribution model.
- **Support Economics**—In the area of customer support, which has long been one of IBM's strongest suits, two factors affected its strategy. First, customers were demanding more self-service capability, such as the ability to check order status. Second, as the volume of support inquiries rose, IBM needed a support delivery model that would be less costly, while maintaining—if not exceeding—the quality of that support experience for customers. As with selling, IBM saw the need to handle less complex problems (such as order status and product inquiries) through more leveragable channels such as telephone and Web-based support.

"We needed to make it easier for customers to do simple transactions—such as buying PCs—by leveraging our phone and Web capabilities. This addressed a customer pain point by making IBM easier to do business with, and it helped us by reducing the costs associated with face-to-face resources."

—Rich Fennessy, General Manager, ibm.com

To adapt, IBM needed to focus more on its telephone and Web-based resources, which—in addition to providing the most economically viable way to reach the small and medium-sized business segment—also made it easier to interact with IBM. Countering these benefits, however, were a daunting array of operational challenges that could be summed up in the following question:

Challenge:

How can IBM, with a vast and diverse array of offerings, effectively present them to an equally vast and diverse customer base, in a way that creates and maintains enduring customer relationships and high levels of satisfaction?

To meet this challenge, IBM had to efficiently connect customers to the resources they needed anywhere in the company, when they needed them, and in a consistent, seamless fashion. Providing customers with a “patchwork” of experiences, by making information hard to find or irrelevant, would undercut the ultimate goal of making it easier to do business with IBM.

ibm.com: The Keys to Successful Transformation

While the business rationale for focusing more on ibm.com was clear, it was equally important to identify its critical success factors as a primary touch point for customers. Part and parcel of this was a thorough understanding of the issues associated with Tele and Web-based interfaces, and they are best examined in the context of ibm.com’s central goal—optimizing service quality. It’s self-evident that the best way to serve a customer is to know that customer, with “knowledge” ranging from event-specific (e.g., why the customer contacted IBM) to background (e.g., the customer’s contact history, products used or the customer’s industry and size). Under the face-to-face selling model, reps serve as the repository of this knowledge, and can use it to serve their customers in a more efficient and tailored fashion. On this score, ibm.com’s Web and Tele channels were constrained in two ways:

- **Less Interactivity**—They were by and large less able to gather information about the customer during an interactive session. This was more true of the Web than telephone-based contact, which is by its nature more interactive.
- **Depth vs. Context**—Tele and Web channels each had their own limitations in their ability to provide access to resources with both sufficient depth or in the proper context. Telephone agents, for example, are highly effective at determining the context of a customer’s need. However, even though telephone agents are highly trained and account for much of the quality of IBM’s support, the amount of knowledge they can bring to bear during a customer call is finite. The Web, on the other hand, offered almost unlimited depth of information, but was challenged in its ability to do so in the context of the customer’s needs. Given the fact that large enterprises and small and medium-sized businesses required different levels of specificity, providing the appropriate content represented a major challenge.

“The challenge of the Web was that we had to be all things to all people—but we didn’t always know who they were or what they were trying to do.”

—Lee Dierdorff, Vice President, Web Strategy & Design, ibm.com

To overcome these issues and provide an experience that made it easy to do business with IBM, the company needed to transform many of its Tele and Web processes. The most fundamental operational challenge for ibm.com was the need to be dynamic and flexible enough to sense customers’ needs and provide them with information, services and products that were relevant—delivered in a timely, efficient and intuitive fashion. How ibm.com addressed these and other transformation challenges is examined in the following section.

First Steps

IBM saw the need to alter to evolve ibm.com as a channel to adapt to changing customer and marketplace realities. But it first had to address a number of basic implementation issues, including:

- What would the elements of the channel be, and how should they be presented to the customer?
- How would these different elements of ibm.com interact with each other—and with the rest of IBM?
- What products and services would be offered through—and thus would need to be enabled for ibm.com?
- What underlying business processes needed to be adapted to accommodate the transformed ibm.com channel?

For all these questions, one thing was clear—IBM needed to unify its channel for the benefit of itself and the customer. Toward this end, IBM merged its TeleSales and Enterprise Web Management groups in 1999 to create a single TeleWeb organization. At the same time, ibm.com’s designation went from being an infrastructure to a separate business. Operationally, the merger was designed to capture the synergy of Tele channel’s front-line interaction properties and the Web’s depth and breadth of resources, and in so doing lay the groundwork for a more dynamic, satisfying experience for the customer.

To better understand customer behavior, IBM conducted extensive “use-case” research on how different customer segments used ibm.com and, more specifically, what their information needs were at various points in the interaction. The study’s high-level finding was that customers as a whole used ibm.com to perform any or all of the following tasks:

- **learn** about IBM products, services or solutions
- **shop** for various products, services or solutions (e.g., price comparisons)
- **buy** IBM products, services or solutions
- **use** the site to access online support

A more granular finding was that common or similar kinds of information were needed for each of these tasks—regardless of the customer size or industry or other segment characteristic. This finding, which ultimately formed the basis for a buyer behavior construct known as the “Learn, Shop, Buy” model, implies that all customers engaged in (for example) a system upgrade tend to seek the same types of information at the same point in their purchase process. In the context of its efforts to optimize the experience of its customers, ibm.com drew the following lesson:

Lesson:

While dynamically meeting a customer’s needs relies on knowing the customer identity, it is equally important to know what a customer is trying to achieve.

“We need to know what customers are trying to do so that IBM can deliver the right content and function to the right person at the right time. The key question is what are the specific objectives of the visit...If we can determine this, then we can provide a relevant experience and improved goal attainment every time the customer comes to our site.

—Lee Dierdorff

The study also served as a catalyst to internal initiatives meant to speed the transformation process.

Toward a More Customer-Centric Vision

While integrating the Tele and Web channels made life simpler for customers by providing them with a more seamless experience when contacting IBM, opportunities to improve the customer experience remained. The key reason was that IBM, like nearly all large companies, had designed its customer-facing processes around its own needs—instead of its customer’s experience and needs. As a result, these processes had evolved into a series of highly efficient, yet essentially standalone “silos”—parts of the company where information and resources were arrayed vertically: one for the product and services experience, one for the commerce experience, one for the support experience and so on. While this “verticalized” approach had served IBM’s internal needs, it inflicted pain on customers by forcing them to navigate from one silo to the next. Worse still, because these silos didn’t share customer information, customers needed to repeatedly “reintroduce” themselves to IBM as a company. The inconvenience and inefficiency caused by this lack of continuity made it a pain point for customers, while at the same time making it impossible for IBM to present a single face to the customer.

“In many cases, the whole notion of providing a better customer experience leads to a reengineering of key processes back up the chain.”

—Rich Fennessy

To overcome this, IBM needed to transform its customer-facing processes by making them more horizontal—redesigning them around the customer’s experience and linking them from end to end, such that the customer experience looks and feels the same regardless of where the customer is in IBM. This would enable a coherent, efficient interaction under which the customer is “known” to IBM at all stages of the interaction and—based on this knowledge—is guided to resources that are relevant to the customer’s identity and task. This horizontal model would enable:

- a customer to be authenticated and carry that identity throughout the transaction.
- the presentation of the most relevant content by filtering it (e.g., support-related) based on a customer profile related to the customer’s ownership or computing environment.
- more sophisticated personalization that could tailor the resources presented to the customers to the appropriate task (e.g., in a product support page, the customer could be presented with the option to buy, or the opportunity to speak or online chat with a live agent that would have realtime access to the customer’s relevant background information).

This horizontal approach greatly improves the user experience by sensing the customer’s needs and responding dynamically. The integration of Tele and Web resources within *ibm.com* are critical because they are able to close the loop with customers (i.e., not letting them “fall through the cracks”). The integration of Tele and Web also provided major productivity benefits, both for customers (which could spend less time seeking information or explaining their needs) and *ibm.com* (whose reps would be empowered with knowledge management tools to resolve customer requests more quickly and efficiently).

A Transformed User Experience...from the Ground Up

To transform its user experience, ibm.com needed to reshape the fundamental building blocks that governed how IBM's Web sites looked and worked across the enterprise, including:

- **Look and Feel**—IBM's efforts to create a common look and feel ranged from the development of common design templates for Web pages to the establishment of more complex "user-experience" standards. The latter included common product taxonomy standards and naming conventions were introduced to ensure consistent, intuitive navigation across hardware and software product lines and brands, while content labeling or "tagging" standards made data more accessible by creating a uniform search experience across the company.
- **Navigation**—To provide consistent domain-wide navigation and facilitate quick access to content, ibm.com developed a robust set of "user experience" navigation standards.
- **Integrated Experience**—To link customers' Tele and Web experiences, ibm.com introduced Live Assistance capabilities such as Call Me and Text Chat. These services, which integrate Web features with ibm.com's contact centers, enable customers to get immediate answers with a realtime response from a sales specialist.
- **Content Presentation**— To tailor its content presentation for specific segments (e.g., medium-sized businesses) and make it easier for customers to find information and resources that were relevant to them, IBM created audience-specific portals. To facilitate the personalization required to deliver this tailored content, IBM created a scheme known as Web Identity (that has thus far registered nearly one million users). As part of the portal initiative, the company also created portals known as "e-sites" for its larger customers which present customer-specific resources (e.g., pricing, catalogs) within a customized, logoeed environment.

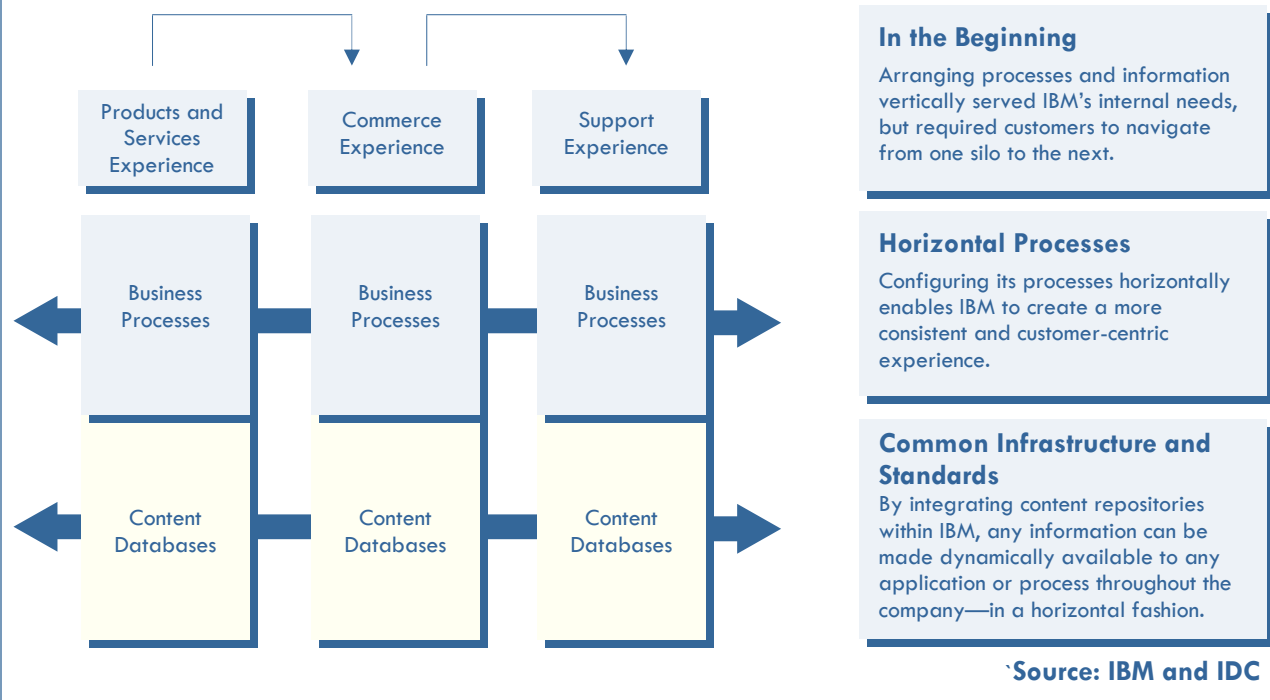
"When customers deal with IBM they want to get some research, shop, buy, receive support—either technical or professional—they don't see what's behind the curtain. This is what on demand is all about: teaming, breaking down silos that exist between groups and organizations that keep us from being customer focused."

— Linda Sanford, SVP
Enterprise on demand
Transformation and
Information Technology

The Drive to Integrate

While a standardized user experience was necessary to create a "horizontal," customer-centric experience, it was clearly not sufficient. Perhaps the biggest value of a horizontal process framework is that it enables customers to access resources according to their needs—not according to how these resources were configured within IBM. But aligning processes horizontally required a matching alignment of content resources. Thus, the fact that content lived in separate "islands" in different parts of the company—with each designed to support vertical processes or business units—represented a critical gap that needed to be bridged. In 2001, as part of its broader transformation efforts, IBM launched an initiative to put in place a common infrastructure and standards. Its ongoing goal is to integrate content repositories within the company, such that any information could be made dynamically available to any application or process throughout the company, in a horizontal fashion.

EXHIBIT 1: BREAKING DOWN SILOS BY REDESIGNING PROCESSES



“One of the major challenges was how to create an infrastructure that was secure enough for customers, and also had the standards that would allow it to be efficient and scalable...The fact that we had lots of content developed in lots of different places following lots of different formats was a key barrier to having a real ‘one IBM’ experience.”

— Susan Watson, Vice President of TeleWeb Transformation, IBM

The need for a common infrastructure and standards reached a critical mass in 2001, when IBM encountered major gaps in its ability to provide dynamic, up-to-date information where it was critically needed. One such gap was between its new product announcement processes and ibm.com's TeleSales operations. Because its new product announcement processes were not fully integrated with its broader content management processes, IBM was unable to bring together new product and pricing information in a dynamic way, making it harder to keep TeleSales reps—and the customers with whom they interacted—up to date. A similar problem existed on customer e-sites which, because they ran on their own infrastructure, made it hard to keep them up to date on such dynamic data as pricing, new products and promotions. These and other data-sharing problems underscored how crucial an integrated infrastructure was to the end-to-end transformation of business processes. But in 2001, when IBM first began its companywide integration efforts, decentralization was the rule. The company operated 59 portals that served 59 countries, and each product had its own home page. IBM's various infrastructures employed a mix of different standards and data formats.

In addition to making it next to impossible to share information across the company, IBM's fragmented infrastructure also posed potential barriers to IBM's emerging strategy of moving more business through ibm.com. Because ibm.com would be handling more customers and more transactions over time, the infrastructure it ran on needed to be:

Key Components
Software
<ul style="list-style-type: none"> • IBM WebSphere Application Server • IBM WebSphere MQ • IBM WebSphere Commerce • IBM WebSphere Portal • IBM WebSphere Edge Server • IBM WebSphere Studio Application Developer • IBM DB2 Universal Database • IBM Tivoli Family of Products • IBM Lotus Notes/Domino • IBM Rational Rose
Servers
<ul style="list-style-type: none"> • IBM eServer pSeries
Services
<ul style="list-style-type: none"> • IBM Global Services

- **Highly Available**—IBM needed to ensure that customers could always get access to the resources they needed, when they needed them. This high-availability requirement applied not only to the ibm.com site, but also to IBM’s worldwide base of contact centers. On a practical level, this meant that if any site or contact center around the world goes offline—for whatever reason—ibm.com needed to automatically “heal” the problem in a way that was transparent to customers.

Problem: The fragmentation and heterogeneity of IBM’s global infrastructure in 2001 made seamless disaster recovery capability nearly impossible to implement.

- **Secure**—Just as customers require a system that’s always up and running, they need to know their transactions and information are always secure.

Problem: As intuition would suggest, a dispersed, disconnected infrastructure like IBM’s in 2001 is much more difficult and costly to secure.

- **Scalable, Efficient and Manageable**—Given the economic underpinnings of its emerging business model, IBM needed an infrastructure that could provide scale-based cost advantages—especially in the areas of manageability, utilization efficiency and performance.

Problem: For scale-based benefits to be realized, standardization is key. The fact that IBM lacked this coherent base of standards obstructed its ability to grow, optimize and manage the infrastructure.

In 2001, IBM attacked the infrastructure challenge head-on. Between 2001 and 2002, IBM consolidated its 59 portals down to one, while expanding coverage to 83 countries. The portal, which now runs on a standardized, triply redundant architecture built with IBM’s WebSphere, DB2 and Tivoli software running on IBM eServer pSeries servers, has achieved 100 percent availability. IBM has also aggressively consolidated its global base of contact centers, in the process deploying standardized hardware (e.g., switches) and software (e.g., Call Me). While an ongoing process, IBM’s integration efforts were largely successful in that they enabled the company to transform many of its customer-facing processes—establishing the necessary foundation for ibm.com’s next transformation.

Unleashing the Power of Integrated TeleWeb

By integrating its Tele and Web capabilities, agents are better able to respond to customer needs, making them more productive and better able to serve customers. Consider support inquiries, where customers using ibm.com have the option at any time to speak to an agent by clicking a “Call Me” request on the page or to have a text chat. Because the site tracks the user’s Web Identity, the agent knows the subject-matter context of the call (based on the point from which the request was launched) and can then respond more efficiently. Further enhancing the agent’s productivity is a highly searchable, knowledge-based tool known as Datacase, which the agent can access to address the customer’s query. To get the most out of these capabilities, IBM developed First Access Resolution, a support policy whose goal is to answer customers’ questions—to close the loop—

“By linking the Web and telephone together, we have increased satisfaction and made agents more responsive and productive.”

—Rich Vazzana, Vice President, ibm.com Support and Enablement

on the first call. The policy is based on a support model known as Access Point which, by routing inquiries to specified agents, has improved productivity, sped up the resolution of problems and noticeably improved customer satisfaction. The site’s improved search capability has also led to faster problem resolution for customers. The fact that over 42 million technical support searches were conducted on ibm.com in 2002 attests to its popularity.

The infusion of customer information has also led to dramatically more effectiveness in generating and closing new business opportunities. One of the main drivers of these gains has been the deployment of CRM within ibm.com, which has enabled TeleSales agents to know more about their customers and therefore serve them better. General process improvements in the Tele area have also led to an improved customer experience. Retooled processes have also led to a more effective hand-off of leads to face-to-face brand specialists and to IBM’s Business Partners. In the past year, by combining customer support history, product ownership data and other account data, agents have achieved a 20 percent higher win rate than unstructured programs. These same properties, along with e-mail-based marketing tools, have expanded IBM’s cross-selling and up-selling opportunities.

ibm.com ENTERS THE ON DEMAND ERA

Defining on demand

An on demand business is one whose business processes are integrated end-to-end, enabling it to respond with flexibility and speed to any customer demand, market opportunity or external threat. An **on demand** business is:

- **Responsive** to factors that affect its business, such as changing customer needs.
- **Variable** in terms of its cost structures, with the ability to adapt processes flexibly.
- **Focused** on its core skills, and its differentiating tasks and assets.
- **Resilient** by managing changes and threats, with consistent availability and security.

A New View of e-business

In October 2002, IBM President and CEO Samuel J. Palmisano announced the arrival of “the era of e-business on demand.” This announcement heralded a totally new vision of how enterprises integrate their business processes end to end—across the company and with key partners, suppliers, and customers—so that they can respond with flexibility and speed to any customer demand, market opportunity or external threat. While IBM’s on demand transformation builds on its previous transformation efforts (1999-2002)—which stressed end-to-end process integration around customer-facing processes—in many ways, it represents a quantum leap. IBM’s on demand business framework is largely about becoming more responsive and adaptive to its overall business environment—and about having the flexibility and resiliency to make it happen. As ibm.com moved into the on demand era, its transformation initiatives to date gave it a strong foundation to build on. Indeed, the rationale for its integration initiatives were not only still valid in the on demand era—but absolutely essential (see box on left).

The on demand business model was critical for ibm.com because it redefined how it viewed its business, its goals and its customers—and in so doing helped ibm.com frame its business problems in on demand terms. So while many of the supporting strategies and initiatives were generally the same before and after on demand, the difference for ibm.com was how they fit into the broader view of the business ecosystem. Put simply, it gave ibm.com a different context to view the things that it already knew were important. But more important, it provided strong guidance on how it should build on and tune its previous initiatives and strategies to become more responsive, adaptive and dynamic. This “adaptation of approach” is seen in the way ibm.com has accentuated its focus on strengthening customer relationships

Enabling on demand

For a company to attain on demand attributes, it needs an **operating environment** that is:

- **Integrated** in terms of both core business processes and systems so that business itself can flow inside and across enterprises.
- **Open** in its use of standardized technology to enable both internal and external integration.
- **Virtualized** in terms of its ability to optimize the use of its infrastructure by making it more flexible, dynamic and efficient.
- **Autonomic** in terms of its systems' ability to essentially manage themselves (i.e., self-configure, self-heal and self-optimize).

and improving efficiency—with improved responsiveness now the lens through which it views success.

Upon entering the on demand era, ibm.com paused to reexamine its goals, strategies and capabilities with an eye toward becoming more on demand. Since October 2002, ibm.com has refined key aspects of its business and brought them into tighter alignment with the imperatives of the on demand model. Overall, this shift has been characterized by an even closer focus on the customer, backed up by an improved sense and respond capability and a higher level of resiliency to meet the challenge. Examples of initiatives launched in the on demand era have focused on:

- **Improved Sense and Respond**—ibm.com began a new marketing program that is designed to build on its customer relationships by putting new processes in place that sense customer needs (based on their purchasing history, installed base, etc.) and respond to these needs with targeted offerings for all IBM products. This “smart” approach relies on synthesizing, integrating and analyzing customer data.
- **Improved Resiliency through Virtualization**—ibm.com in the on demand area has intensified its integration efforts and moved closer to creating a more dynamic, virtualized environment. Seeing the need to improve resiliency across its global computing and contact center resources, ibm.com has increased the level of virtualization by integrating and standardizing processes. While a work in progress, this has begun to improve the infrastructure's ability to sense threats and shift load to other resources when necessary.
- **Standardized Security Practices**—Security is always a “moving target.” With threats to data security proliferating, companies need to constantly update their knowledge of these potential threats. To this end, ibm.com (working IBM Global Services Managed Security Services) has enacted a series of processes (e.g., vulnerability scans) designed to sense these threats faster and respond accordingly.
- **Optimizing Traffic through Autonomic Routing**—By building autonomic routing capability into its hosting environment, ibm.com has greatly diminished its vulnerability to risks related to its bandwidth providers, such as outages or “brownouts.” In the last year, ibm.com introduced a solution that allows it to sense congestion and route network traffic dynamically over the most efficient path.

BUSINESS RESULTS

IBM's business results thus far can be categorized into two broad categories that tie back to its initial business drivers:

- Improving **customer satisfaction** by making it as easy as possible to do business with IBM—of which being more responsive to customer needs is a key component.
- Improving the **efficiency** of processes such that customers receive better service—delivered at lower cost—through more productively deployed human and technical resources.

Resiliency in Action

ibm.com's increased resiliency was evident when its Contact Center in Greenock, Scotland had a brush with disaster. Gale-force winds had ripped off the roof—threatening to leave customers out in the cold. To maintain high levels of service, ibm.com instantly rerouted customer calls to an alternate site in Dublin, Ireland. Within that day, the ibm.com Disaster Recovery team had an alternate site in Greenock up and running, with virtually no impact on service levels.

First the customer-centric benefits. Since IBM began its on demand initiative in 2002, its customer satisfaction has risen strongly and steadily. In the area of technical support—where IBM has invested heavily in new processes like First Access Resolution—satisfaction has risen. And the Tele/Web integration underlying these new processes has been a major driver of this satisfaction. How much so? Consider that the share of customers “completely satisfied” with their interaction is a full six points higher for Tele/Web than for telephone-only interactions. More broadly, IBM's support-related satisfaction (measured by goal attainment) has risen 20 percentage points. Looking at the growing adoption of e-support services shows why. Half of IBM's customers that were seeking support saved a telephone call by using ibm.com's e-support—and of those that did, more and more used the Web prior to calling the Tele centers. IBM is on track to provide over 125,000 customer sessions through Call Me and Text Chat this year, drawing on ease of use as a differentiating factor. On the strength of these online services, IBM will convert about five percent of the responders into validated leads immediately—dwarfing an industry average of one to two percent. Based on research, IBM will likely win over 20 percent of those leads, reflecting their high quality. Presenting customers with targeted, relevant information has also been a major factor in presenting customers with an on demand experience.

Recent transformation initiatives have also led to a surge in process-related efficiencies, yielding both top-line and bottom line benefits. On the revenue side, the use of CRM in its outbound TeleSales operations enabled ibm.com to increase

EXHIBIT 2: BUSINESS RESULTS FOR ibm.com

Initiative/ Capability	Key Business Benefits/Metrics
<p>Integration of Tele and Web Capabilities</p>	<ul style="list-style-type: none"> • In the past year, ibm.com's overall customer satisfaction has risen by nearly four points. In addition, customers who do business with ibm.com and its closest industry competitor, rate ibm.com higher by more than eight points. In the past two years, IBM's support-related satisfaction (measured by goal attainment) has risen by 20 percentage points. • Integrating knowledge management tools like Datacase into its contact center operations, ibm.com increased agent productivity by 15 percent based on its ability to resolve customer support problems more quickly and reduce the need to transfer customer calls. • The growth in customer usage of eSupport has resulted in significant expense avoidance while providing customers access to information to address support questions 24/7.
<p>Integration of Customer Content</p>	<ul style="list-style-type: none"> • Through online services such as Call Me and Text Chat, ibm.com has achieved a conversion rate (leads generated) of approximately five percent—dwarfing an industry average of one to two percent.
<p>Integration of Web-based Communications Capability</p>	<ul style="list-style-type: none"> • ibm.com's use of Call Me, Text Chat and Request a Quote features is projected to generate \$500 million in new leads for 2003.
<p>Revenue</p>	<ul style="list-style-type: none"> • ibm.com now accounts for over 10% of IBM's overall revenue.

Source: IBM and IDC

opportunity creation. Inbound lead generation was strengthened by the channel's Call Me, Text Chat and Request a Quote services, which have more than lived up to their promise as a way for product specialists to up-sell, cross-sell and close orders.

These transformation initiatives have also enabled IBM to reduce costs and increase process efficiency, making it the more cost-effective channel its planners envisioned. Increased productivity, one of the key business goals of IBM's initial business transformation, has been a major benefit of Tele and Web integration. For example, by integrating knowledge management tools like Datacase into its contact center operations, ibm.com increased agent productivity by 15 percent based on its ability to resolve customer support problems more quickly and reduce the need to transfer customer calls. More broadly, extensive deployment and use of the Web to provide customer self service for various forms of support has enabled IBM to avoid several hundred million dollars in annual costs.

THE ON DEMAND JOURNEY AHEAD

Like any company on the path to on demand, IBM's journey is ongoing. This means processes that are continuously evolving to be more responsive to the customer, the market or any other factors that impact its business. It also means a continual drive toward more efficient, flexible processes that increase productivity, reduce costs and better leverage assets and infrastructure. The last point underscores one of the key lessons of IBM's transformation—the notion that on demand process delivery requires an on demand infrastructure. For IBM, the creation of a single standardized architecture—which enabled the company to increase utilization efficiency—represents a starting point. IBM's current efforts in the areas of virtualization, autonomic and grid computing and Web services are designed to add still more flexibility, efficiency and resiliency, thereby enabling the company to serve its customers more responsively and cost-effectively. Its continued use of IBM Global Services to manage this infrastructure adds to this flexibility while enabling the company to focus on its customers' needs.

“As ibm.com continues to evolve in its on-demand journey, our focus will be to continue to strengthen our core value proposition which is to provide fast and easy access to IBM products and business expertise.”

—Rich Fennessy

While the need to be on demand addresses a wide spectrum of business requirements, customer satisfaction tops the list. To deliver it, IBM will continue to push the envelope on sensing and responding to customer needs by more tightly integrating its Tele and Web functions, providing more relevant and timely information and providing customers with more choices. Another customer benefit of IBM's on demand efforts has been the flow of bleeding-edge product and process innovations that these efforts have spawned. IBM has aggressively integrated these innovations into its core product lines in areas ranging from the WebSphere product line to computer-integrated telephony software. This, like all other aspects of IBM's on demand journey, demonstrates a single-minded focus on the customer.

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U.S.A.

Produced in the United States of America

11-03

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