IBM takes customer service to the next level:
The world’s largest implementation ever of Siebel eBusiness Applications continues
This case study presents some of the major lessons learned so far during the successful implementation of Siebel eBusiness Applications globally across IBM’s customer-facing business functions. The initiative will take six years to complete and will be used by more than 80,000 IBM employees, thousands of IBM Business Partners and eventually millions of customers worldwide.

Executive summary

From one perspective, the story of IBM’s internal implementation of Siebel eBusiness Applications is a story about change on the smallest, most personal scale imaginable. It’s about changing the way IBM serves its customers, one by one. It’s also about changing the way IBM employees access timely customer information, individual by individual.

Looked at from another angle, however, it’s quite another story. It’s about change on a massive scale—a scale never before attempted by any other business in the industry. It’s about IBM employees and Business Partners around the world moving to a single view of the customer and accessing that customer information anywhere, in realtime. It’s about enabling fast, convenient self-service for customers worldwide. And, it’s about improving the way major, global IBM divisions collaborate with each other and their business partners—all for the sake of providing better customer service.

In short, it’s about one company’s determination to become a more globally integrated, customer-focused company, with unprecedented speed and scale. Person by person. Phone call by phone call. E-mail by e-mail. Or by whatever means the customer chooses to do business with IBM.
Says Vince Ostrosky, Vice President, Customer Relationship Management (CRM) at IBM:

“Our goal is to be viewed as one IBM by our customers and to work as one IBM internally. We’re aiming to make IBM best of class in its industry for sales, marketing and customer service excellence. We believe we can achieve this goal by using Siebel applications to leverage our existing strengths as a market-intelligent enterprise. We’re transforming our business to take speed, responsiveness and efficiency to a whole new level.”

By using Siebel eBusiness Applications to integrate all the parts of its business that touch the customer, IBM expects to bring one of the world’s largest corporations closer to its customers, one by one. The front-office elements of the solution include:

- ibm.com Contact Centers
- Pre-Sales and Post-Sales Technical Service and Support
- Business Partners
- Field Sales (all IBM brands)
- Professional Services (IBM Business Consulting Services)
- Customer Self-Service
- Marketing
- Customer Solution Design

As of year-end 2002, more than 8,000 IBM employees and several thousand business partner firms in more than 43 countries worldwide— including South Africa, Philippines and Hong Kong—were using some aspect of the Siebel solution. In addition, approximately 13,000 U.S. customers were registered users of the post-sales support functionality delivered on IBM’s customer Web site.
The number of internal users will more than quadruple in 2003. By the end of 2005, core Siebel application functionality will be rolled out to major user groups—including additional IBM customers—around the globe.

Given the scope and complexity, the stakes are high. It’s a mammoth investment for IBM. The business case, however, is equally significant and is based on achieving the following benefits:

- Increased sales efficiency, resulting in reduced cost of sales, incremental teleweb revenues and reduced nonselling activities
- Increased revenue, through improved sales effectiveness and channel integration
- Improved customer satisfaction and loyalty, through greater responsiveness and ease of doing business with IBM
- Improved management effectiveness, reflected in tighter management and controls, proactive sales coaching, improved forecast accuracy and reporting, enhanced partnership management and better employee morale
- Increased IT operational efficiencies and accelerated development cycle through eliminating multiple legacy applications

The Siebel eBusiness Applications implementation is still in progress, but the results are already impressive. Overall, IBM expects to realize significant savings related to productivity gains, IT cost savings, and the ability to reassign headcount to more critical tasks.

“Today we are successfully supporting common worldwide processes by using Siebel technology in many areas of our business,” says Steve Wright, IBM Vice President, Worldwide CRM Deployment. “As a result, we are now gaining a better understanding of our customers and their requirements. We are able to provide more value to them. And we can be significantly more responsive, on a global basis, because we can come together as one team more swiftly and effectively.”
The starting point

In 1999, IBM set out to realize a new vision of CRM. The company had already established common worldwide business processes. The next step was to deliver added value to customers by doing what IBM knows best: using technology to automate common business activities and to enable access to consistent, timely information worldwide—regardless of whether end users are internal IBM salespeople, marketing, technical service and support professionals, IBM Business Partners or customers themselves.

The timing was perfect. Truly robust, enterprisewide CRM technologies like Siebel eBusiness Applications had just arrived on the market. These packaged offerings are geared to help companies like IBM achieve the highest levels of consistency and responsiveness. They eliminate the need to build CRM functionality internally from scratch—enabling rapid execution. They also eliminate the headaches of inconsistency across multiple divisions or business units.

IBM’s overall goal: to ensure each and every customer interaction is handled with the same degree of excellence, using the same tools and data, across all IBM geographies and channels.

“Siebel Systems is pleased to have the opportunity to work closely with IBM on its internal implementation. This has been a tremendous partnership effort and learning opportunity for the two companies.”

—Steve Mankoff, Senior Vice President
Technical Services, Siebel Systems, Inc.
Siebel eBusiness Applications: The right CRM solution

After a comprehensive review of the industry and its leaders, and using more than 1,400 business capabilities and 400 architectural criteria, IBM found that one solution stood out among the rest: Siebel eBusiness Applications.

“When you look out in the market today, you won’t find another solution that comes close to what Siebel Systems offers in the CRM space,” says Ostrosky. “We recognize Siebel reflects a thorough understanding of today’s best practices for sales, services and marketing.”

Remarks Steve Mankoff, Senior Vice President, Technical Services, Siebel Systems, Inc., “This is the largest and most comprehensive multichannel e-business implementation in the world to date. As IBM moves forward with implementing the Siebel eBusiness Applications suite for over 80,000 users across its sales, service, marketing, contact center and business partner communities, IBM is successfully executing on its original vision of transforming itself into a true multichannel e-business. Siebel Systems is pleased to have the opportunity to work closely with IBM on its internal implementation. This has been a tremendous partnership effort and learning opportunity for the two companies.”

The implementation plan: Full steam ahead

To enable its CRM initiative, IBM had to develop and deploy a robust architecture optimized for Siebel eBusiness Applications and combined with an underlying technology infrastructure consisting of various IBM server platforms and middleware.

The first step was to assemble the project team that would create the underlying business and technology infrastructure and implement the software applications: Along with considerable assistance from Siebel Systems, IBM built a 200-plus strong, world-class team. And in the process, several hundred people at IBM have become Siebel-certified architects and configuration experts.

In addition to technical teams, IBM business units provide part-time resources to supplement deployment and process teams. The Siebel Solution Services group within IBM Global Services is actively involved and is already leveraging IBM’s success with customer organizations.

Moving forward, the project team’s mantra was to enable real business change for as many users as possible. Supporting teleweb capabilities was the number-one priority for the initial release in 2000. By year-end 2001, the project team had deployed Siebel eBusiness Applications to more than 6,800 users in 30 countries, primarily in two business areas (ibm.com and technical service and support).

Now, almost two years later, thousands of IBM employees, business partner firms and customers use Siebel eBusiness Applications in three business areas:

1. ibm.com, an integrated teleweb channel that includes Web sites and contact centers

The IBM project team has deployed Siebel Sales, Siebel Call Center and Siebel Service to roughly 4,800 employees in ibm.com sales and service contact centers worldwide. These centers support inbound and outbound teleservice, telesales and telecoverage activities. They often provide the first customer touchpoint for gathering, qualifying and distributing customer information.
The Siebel eBusiness Applications give ibm.com users a common platform for managing their accounts, contacts, opportunities and activities. The solution also provides advanced automated workflow capabilities and supports data queries. In addition, ibm.com users are using advanced computer telephony integration (CTI) through the integration of Siebel eBusiness Applications with CTI software, which automatically searches the database for the caller’s number and promptly displays the customer record onscreen when it finds a match.

2. Pre-Sales and Post-Sales technical service and support

IBM’s technical service and support team is one of the largest in the world. To date, the IBM project team has deployed Siebel Service and Siebel eService to more than 3,200 internal users worldwide, including TechLine, Sales Productivity Centers and the Personal Computing Division (PCD) in the United States, as well as Sales Support Centers in Europe.

On the Pre-Sales side, IBM TechLine and Sales Support Centers are using Siebel software to work together more effectively to design technical support solutions for customers. Activities here include pricing, configuration (using IBM Configurator for e-business tool), and providing technical information to IBM sales teams.

On the Post-Sales side, IBM support specialists in PCD were the first to move over to the Siebel solution. These employees use Siebel Service to manage customer service requests and answer technical questions more efficiently as calls come into the company’s contact centers. The Siebel solution also supports customer self-service capabilities: Through e-support, U.S.-based PCD customers can submit, track and update their service requests directly online.

3. IBM Business Partners

IBM relies on a vast network of business partners to deliver IBM technology and services solutions. The IBM project team has deployed PartnerWorld Lead Management (PWLM), based on Siebel Partner Relationship Management (PRM), to several thousand partner firms in the U.S. and Europe. PWLM, a Web application, provides a consistent way for IBM to collaborate more effectively with all of its global business partners.
To date, the PWLM implementation* has focused on deploying lead and opportunity management functionality. Once signed onto the system, partners receive leads directly from IBM’s contact center. Leads can be assigned automatically, based on known business partner capabilities, helping to reduce the rejection rate of opportunities. Or, IBM can override this process to assign leads manually to a specific partner.

Either way, an e-mail initiates a closed-loop process. Partners must accept or reject a lead within a certain time frame and then follow up within a specified number of hours or days.

Today, IBM is actually running not one but four identical Siebel installations: one for North America; one for Europe, the Middle East and Africa; one for the Asia-Pacific region; and one for Japan. Down the road, these four separate instances will share data and transactions and operate as a single, logical system worldwide.

“Right now the four separate instances are islands,” explains Gary Burnette, Director, Architecture and Siebel Implementation. “They don’t talk to each other operationally. The data from them is collated in a data warehouse for reporting purposes, but there’s no real-time communication. We’re working with Siebel Systems and other large Siebel customers to develop Universal Application Network technology as a way to improve our ability to communicate between our systems.”

“Most important, Siebel technology is helping us improve the quality of dialogue we have with our customers—around what we can do better for them—something that would have been almost impossible before.”

— Vince Ostrosky, Vice President, CRM
IBM Corporation

*Note: For a detailed implementation chronology, see Appendix A.
Delivering major business benefits

While IBM is only three years into its global Siebel initiative, the benefits are already adding up. With more essential customer and product information right at their fingertips, contact center agents are enjoying significant personal productivity gains. Reporting capabilities have improved. And, in many areas, duplication of effort is becoming a thing of the past, which will result in millions of dollars of cost savings annually.

“With ibm.com, users today are able to manage more leads and handle increased call volumes with the same level of headcount,” reports Ostrosky. “In the service and support area, our ability to respond to customer requests is exceeding the targets we set. We’re also ahead of the game with business partners. The number of leads they are handling and the level of dollar volumes they’re driving are very encouraging. Most important, Siebel technology is helping us improve the quality of dialogue we have with our customers—around what we can do better for them—something that would have been almost impossible before.”

The IT cost savings are equally impressive—largely through the consolidation of hundreds of stand-alone applications. In fact, from year-end 1999 to year-end 2001, no less than 177 CRM-related applications were sunset and replaced by functionality in IBM’s strategic portfolio of CRM applications, which includes Siebel eBusiness Applications and IBM Configurator for e-business. By 2005, more than 90 percent of the 800 stand-alone CRM applications operational in 1997 will have been retired. The Siebel implementation will allow users to interface with many of the remaining CRM applications.
Managing the business challenges

Naturally, such a sweeping business transformation doesn’t happen overnight. Along the way, the IBM project team has learned a number of valuable lessons. It has also developed specific methodologies and tools it shares with customers considering major CRM implementations.

From a business point of view, the following guidelines have been critical to the initiative’s success:

**1. Ensure full senior management commitment**
To derive the most benefit from Siebel eBusiness Applications, it’s important to take an enterprisewide view of the benefits—not to focus on a single business unit or one region out of many. Transformation demands sustained vision and resource commitment, which won’t emerge without total senior management commitment.

**2. Establish strong project discipline, with regular reviews**
To manage its Siebel deployment, IBM is using a three-tier governance structure—the same structure the company uses to manage all of its business transformation efforts. It consists of:

- **An executive investment review board**—The board defines strategic direction and manages portfolio spending.
- **A management team of business leaders and IT leaders**—This team ensures that the project stays focused on meeting each functional group’s specific needs.
- **The CRM project team**—This team is accountable for the day-to-day execution of the project plan, including mapping business processes, planning organizational change activities, defining system requirements and allocating resources. Also within this layer is a centralized architecture team responsible for data modeling and building interfaces with legacy systems.

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**What our ibm.com users say**

“Contact information is more detailed and I am more confident in meeting my customer needs. Our competitors do not have the contact detail advantage that the Siebel solution offers.”

– Sales Agent, Dublin

“On Monday morning, we had an education session for our representatives and our strategy. By the end of the week, we had generated millions of dollars worth of new opportunities.”

– Healthcare Solutions Manager

“We’re getting to the point where we’re integrating the way we communicate to our customers and the value of that is truly exponential. I can’t even begin to communicate how elated we are to be able to do that.”

– Territory Sales Manager, Global SMB

State of Florida
What our business partners say

With the implementation of PartnerWorld Lead Management (PWLM), business partners like Champion Solutions Group can be more responsive to customers. PWLM offers the business partner a tool with much higher system performance. Lead-detail reports give partners a concise way to quickly and easily get the lead details to the appropriate client manager. They also simplify tracking and reporting on the success or status of each lead.

In parallel with the tool upgrade, ibm.com implemented a sales support team called Lead Development Representatives. This team prequalifies customers’ needs before a business partner is engaged, which further improves the quality of leads that are passed to partners through PWLM.

“Immediate access to the lead allows us at Champion to quickly get the sales staff engaged with the customer, potentially increasing sales and customer satisfaction. PWLM and the new process has resulted in many qualified leads, stronger IBM and Champion Solutions Group relationships, and revenue benefiting both parties.”

– Mary Adams
Corporate Data Project Manager
Champion Solutions Group

With numerous subteams involved, IBM has also developed a comprehensive, robust deployment methodology. It covers everything from the earliest stages of the requirements process through the various steps of prioritization, business validation, development of code, end-user testing, systems testing, production launch, change management, communications and ongoing operations. The methodology also enables the diverse teams to act in parallel, with minimal supervision. As a result, the company is able to implement the Siebel eBusiness Applications in an integrated fashion and at an accelerated pace across multiple geographies and business units.

3. Implement in phases for rapid deployment
IBM rolls out new major functionality approximately twice a year. With each release, a new user community is brought on board. Smaller “dot” releases are introduced to the user population as needed.

To further accelerate the deployment cycle, IBM avoids developing prototypes before each release. Instead, the company follows a rigorous methodology that enables developers to configure a release without prototyping and then deploy the new function to end users. This approach allows the project team to build on the lessons learned in earlier phases to improve the quality and time-to-market of subsequent phases of the implementation.

4. Minimize customization
Keeping customization to a minimum accelerates a CRM rollout and reduces the complexity of future upgrades. Modifications to out-of-the-box functionality are always costly in terms of development dollars and time. They also delay the point of payback, which makes it harder to sustain user and management commitment to the implementation.
“The natural human instinct is to configure the system so that it supports what users do today,” observes Burnette. “Yet a major goal of this project is to migrate users into a new world. Our approach is to deliver enough out-of-the-box function in the first pass to introduce the new world. Once people experience that new world, the requirements a design team can generate from users will be very different than those from users with no understanding at all of the new world.”

The Fit/Gap process, part of IBM’s formal implementation methodology, has played an instrumental role in helping the company minimize customization. This process provides a structured way to determine a) how well the existing application fits the business need, and b) the minimum number of changes required to achieve the desired results.

5. Manage the end-to-end change process
First and foremost when introducing new technology and business processes, it’s critical to gain end-user support. IBM is involving end users in all phases of the implementation, from requirements documentation to feature design, and from application testing to validation.

“We believe we now have some of the best Siebel applications expertise in the world within our organization.”

—Gary Burnette, Director
CRM Architecture and Siebel Implementation
Setting expectations is vital. Says Ostrosky, “Business people often don’t acknowledge that when you enter into something like this—especially if you consistently focus on the benefits from an enterprise perspective—it’s going to be better for some of your value chains than others. Trade-offs go on all the time. Sometimes that’s painful, but it’s a reality you have to face.”

6. Educate users
With thousands of users to bring up to speed on the system worldwide, education plays a vital role in the IBM Siebel initiative. IBM Application Management Services (ams) Learning Development develops and delivers all end-user education, applying industry best practices, along with input from the Siebel End User Education team. By using a blended approach that combines classroom and e-learning, the project team estimates it reduced its costs a staggering 67 percent.

That’s not all. With interactive e-learning, the quality of the education is consistent worldwide. Users learn faster and retain what they learn. And, they can learn at their convenience and at their own pace—two very important factors for the field salesforce in particular. In fact, when the IBM project team rolls out Siebel eBusiness Applications to this user group in 2003, it will rely almost exclusively on e-learning.

According to Ostrosky, real success depends on getting the right education and support to the right people at the right time—no matter how many users you have to support or where they’re located. “We have more than 8,000 current registered users today,” he says. “We’re going to bring over 49,000 more by this time next year. We have to be prepared to handle that level of massive ramp-up. If our users don’t have sufficient education or help-desk support, they’ll view the new system as a productivity detractor instead of an enhancer.”
7. Measure results and take corrective action

Postimplementation, one of the greatest challenges is to measure the value of the transformation effort. “We have to hold ourselves accountable for delivering on the commitments we’ve made as IBM, to our customers, to each other and to the business,” says Ostrosky. This means developing meaningful metrics and applying them appropriately over time.

The IBM project team has established a suite of operational measures for the business units to measure the success of the new processes and technology. This worldwide mechanism will analyze business results against targets and determine where changes are needed to achieve better results. It will provide an objective, fact-based model that will allow processes to be more effectively managed and optimized by showing where the project is succeeding and where change is needed.

Above all, the customer is clearly at the center. We’re committed to transforming IBM in a way that is meaningful to our customers. None of what we’re doing matters if it doesn’t convert to greater customer loyalty and increased revenue generation. Ultimately, IBM’s implementation of Siebel applications will help make our customers want to do more business with IBM.”

– Vince Ostrosky
The following graphic depicts the tiered measurement system:

- Executive tier
  - Results-oriented
  - Validates business values
  - Supports business case goals
  - Example: revenue improvement

- Roll-up tier
  - Transition from operational to executive results
  - Provides indicators of executive results
  - Rollup of operational measures to help management direct operating strategy and tactics
  - Example: engaged win rate

- Operational tier
  - Covers a broad range of measurements, focusing in-depth to support business operations
  - Example: validated pipeline

But measurement alone isn’t enough. To close the loop, IBM is also implementing a closed-loop change management process through which lessons learned will generate new requirements. These requirements will then be prioritized and implemented within the appropriate release.
Directing IT capabilities

The IT challenges are gargantuan on a project of this scope, whether in terms of data migration, systems integration or systems management. Just finding the technical resources can be a major hurdle. IBM started with a team of roughly 30 people, two-thirds of whom were Siebel consultants. Today, IBM has approximately 180 developers on the project, leveraging outside resources when needed.

“We believe we now have some of the best Siebel applications expertise in the world within our organization,” says Burnette.

Over the course of the implementation, the project team has drawn on IBM technical experts with previous experience running the company’s global IT infrastructure and executing countless global IT initiatives on behalf of customer organizations. Some of the guiding principles they apply include:

1. Start with a robust, scalable architecture based on open standards
When the IBM project team began to work out the architecture for the Siebel implementation,* it had a number of requirements, including:

• Facilitate extensive systems integration – While Siebel eBusiness Applications will replace most of IBM’s existing CRM systems, the company planned to retain selected legacy systems—especially those that support the design and delivery of customer solutions. These include tools such as the IBM Configurator for e-business, IBM e-pricer and IBM Sales Support Information.
• Deliver the highest levels of availability and response times
• Scale to support more than 80,000 IBM users plus IBM Business Partners and customers worldwide

To ensure a fast, smooth implementation, IBM adopted an open, standards-based, reusable architecture and an integration methodology based on the IBM WebSphere® platform. With this approach, developers can add new interfaces quickly, in a repeatable, consistent way.

*Note: For a detailed solution diagram, please see Appendix B.
2. Ensure high data integrity
Another major challenge for the IBM project team was to ensure the existing enterprise data was ready to go before populating the new Siebel databases. “You really have to start cleaning up data before you ever move it into your new application. If you move over old data, you still have old data at the end of the process,” says Ostrosky. To date, IBM has migrated millions of records from its enterprise databases into a new Siebel database defined on IBM DB2® Universal Database™ (UDB) for AIX®.

3. Implement rigorous controls around the development process
From 1999 to early 2002, IBM introduced five full releases and several dot releases. Version control has been critical. To make the process more rigorous, IBM developers combined a number of software tools from both Siebel Systems and IBM.*

For example, they created a solution that automatically tracks the code in a library structure, including all modifications and fixes. Their approach ensures that new values are applied correctly across all production data. The result is a significant improvement in code quality, as well as an increase in developer productivity.

“We’re at a watershed point now. The deployments we’re about to release are the foundation that will allow us to mobilize ourselves to realize the majority of the benefits going forward.”

–Vince Ostrosky

*Note: For a complete summary of tools used, see Appendix C.
Inside a complex, multitiered solution

The foundation of the IBM and Siebel solution is a multitiered, object-oriented client/server architecture that is consistent worldwide. It features:

- A presentation layer, accessible via virtually any standard Web browser and/or ODBC/DB2 Connect™
- An application server layer, featuring Siebel eBusiness Applications and IBM WebSphere technologies running on IBM @server pSeries™ servers
- IBM DB2 databases with Enterprise Storage Server™

Using IBM’s Global Web Architecture (GWA) allows the same architecture to serve both internal and external users. Databases, which are all IBM DB2, provide a robust, flexible environment for data management. IBM WebSphere MQ middleware furnishes the messaging capabilities to move enterprise data in and out of the Siebel DB2 databases.

To ensure peak performance, the solution also includes IBM Tivoli technology management software, which monitors performance and connectivity, allowing maximum availability of the solution environment. Through a single console, administrators can detect and resolve problems between users and applications before these issues affect information availability and mission-critical business operations.

Next steps: Achieving a companywide implementation

IBM expects to complete its deployment of Siebel eBusiness Applications by the end of 2005. The solution will support more than 80,000 internal IBM employees, several thousand business partner firms and customers worldwide.

Customers of all sizes, in all industries, will find that no matter which way they approach IBM—or in which area of the company—they will get a consistent, swift and professional response. IBM, in turn, will have a single view of its customers. And, the company will be able to leverage its global capabilities to capture more sales opportunities and deliver total solutions more smoothly.

The next 12 months represent a turning point for IBM in this process. Highlights of pending releases include:

- A major technology transformation—All existing users will migrate to Siebel Systems’ “thin client” Web-based solution.
- The first rollout ever of Siebel eBusiness Applications to IBM Field Sales Professionals—This will support the company’s field service operations and logistics. With this step, these employees will be using the same tool to manage opportunities as those used in the company’s contact centers and by IBM Business Partners. All will have common tools for contact and activity management, linked together with opportunity management.
- Implementation of Siebel eBusiness Applications to IBM Business Consulting Services—This application includes workflow capabilities to support the solution design and proposal process.
- The delivery of related functionality to IBM marketing specialists in North America and Europe—Capabilities will include campaign execution, linking IBM’s outbound marketing teams to the contact centers that execute the campaigns; enhanced audience targeting through improved analysis of customer data; scripting to support marketing campaigns; a closed-loop process for marketing campaign execution and data update; and more frequent refreshes of marketing databases.
“The whole idea is to be better enabled to tailor the offer we make to a customer or prospect,” explains Ostrosky. “As a result, we’ll send fewer pieces of mail and the pieces we send will be specifically oriented to the recipients’ interests or needs, so they’ll be more likely to respond. Just as important, we’ll be able to close the loop more easily than we ever could before. We’ll use the feedback we get to better understand our customers, measure the effectiveness of our marketing campaigns and learn how to structure future campaigns more effectively.”

With these new capabilities, IBM expects to be able to:

- Improve customer responsiveness
- Strengthen customer confidence and make it easier to do business with IBM
- Improve teaming and productivity drive increases in selling time
- Increase revenues by improving opportunity identification and sales-team execution
- Reduce costs in supporting legacy systems, with higher quality data

In follow-on releases, the data captured in opportunity management will be the foundation for a new end-to-end solution design and delivery process. At that point, the entire sales execution process will be supported through one tool worldwide, resulting in greater productivity for users and better information to drive business decisions.

“We’re at a watershed point now,” says Ostrosky. “The deployments we’re about to release are the foundation that will allow us to mobilize ourselves to realize the majority of the benefits going forward.”

“No doubt about it, this is the defining moment for our entire CRM endeavor,” agrees Wright. “It will determine whether this initiative is viewed as a success. This is the point where we’re asking an infrastructure that supports 8,000 users today to support more than 49,000 tomorrow.”
Afterword

For IBM, as for any company striving to optimize its customer relationships, CRM involves much more than bits and bytes. It’s about creating the capabilities, implementing the practices and processes, and delivering the support needed to help accelerate IBM’s transformation into a premier e-business and into the best sales and marketing organization in the industry. The company is now well on the way to achieving its overriding goal: to work as one IBM internally and be viewed as one IBM by its customers.

“The fundamental transformation of IBM’s sales and support processes—as well as the ability of the Siebel software to enable these transformations—really centers around two things,” notes Wright. “First, we have to be able to provide a single, end-to-end CRM solution that ensures world-class customer responsiveness. Second, we need to leverage the data we collect in support of these processes effectively. As we add new users and additional function to support these two things, the benefits multiply. We can operate with real facts and track key operational metrics. It’s a win-win scenario for both our customers and IBM.”

“Above all, the customer is clearly at the center,” adds Ostrosky. “We’re committed to transforming IBM in a way that is meaningful to our customers. None of what we’re doing matters if it doesn’t convert to greater customer loyalty and increased revenue generation. Ultimately, IBM’s implementation of Siebel eBusiness Applications will help make our customers want to do more business with IBM.”
Appendix A:
Detailed chronology of Siebel eBusiness Applications deployment in IBM

2000
Siebel Sales
• Opportunity management
• Account management
• Activity management
• Contact management
• Lead management

Siebel Call Center
• Integrated telesales, telemarketing and customer service solution
• Dynamic agent desktop via intelligent call scripting
• Powerful computer telephony integration (CTI)
• Data-driven workflow for routing, authorizations and escalations

Siebel Service
• Data-driven workflow for routing, authorization and escalations
• Creation of service request
• Request tracking
• Assignment manager
• Service order parts fulfillment

2001
Siebel Partner Relationship Management
• Opportunity management
• Account and contact management
• Activity management
• Service request management
• Configurable routing tables
• Partner administration

Siebel eService
• Service request management
• FAQ support
• Customer profile system
• Web collaboration

General e-business
• Login and security
• Prebuilt applications
• Prebuilt e-business objects and components
• Prebuilt e-business data model

2002
Siebel Partner Relationship Management
• Leads processing and integration with IBM Sales

2003
Siebel Marketing
• Comprehensive marketing automation
• First prebuilt customer data chart
• Integrated database marketing and campaign management
• Full marketing communications support
• Measure, monitor and track marketing strategies

Siebel Sales
• Campaign management
• Proposal generation
• Target account selling
• Sales analysis

Siebel eService
• E-mail response management
Appendix B: IBM CRM solution architecture

Siebel eBusiness Applications form the center of the IBM CRM solution. Beyond the Siebel system, there are numerous application systems and data sources, which the Siebel applications must interact with or reference to project the application’s “one IBM” integration view. IBM uses Siebel Systems’ external interface mechanisms coupled with an array of IBM products to create the overall solution.

Built on an XML-based messaging architecture, the main architectural feature ties the Siebel application instances to approximately 50 interfaces and data sources throughout IBM. IBM uses Oasys (an e-commerce standards organization) standard messages to route information between Siebel applications and various “legacy” and partner applications within IBM. These messages run on a “middleware” infrastructure that's comprised of several important IBM WebSphere product components. The standard XML-based messages are an essential factor in the architecture’s robustness; message brokers employed in IBM CRM only have to deal with one set of common XML formats. New applications can be added to the systems by employing a simple adapter, which uses the XML messages to communicate to the legacy systems in their native format.

MQSeries, chief among the middleware components, is used for secure, reliable message transport. In addition, MQIntegrator (MQSI) is used for robust message transformation and routing, and serves to implement the key message broker component of the IBM CRM instances. With this message broker, XML-based messages destined for various applications can be formatted and routed properly. This broker component is also used to implement the messages between the various instances of Siebel eBusiness Applications deployed in the worldwide IBM CRM solution.

In addition to middleware, IBM CRM also uses other essential IBM products, such as DB2 UDB running on AIX—the contains all the databases used by the components of the IBM CRM solution. IBM CRM also uses the WebSphere IBM HTTP Server (IHS) Web servers and the WebSphere Network Dispatcher to provide robust support for the client network connected to the Siebel Systems software instances.
Appendix C:  
Version control process and tools in IBM CRM

The development of the IBM CRM solutions is a complex undertaking with numerous moving parts. To manage this process with accuracy and control, a number of processes and tools are employed. The situation would be complex enough if one were only managing the changes needed to customize the Siebel applications. There are, however, definitions, code, parameters and numerous other items that must be created and maintained for all of the application’s various components.

The major technology component of this mix is the use of an IBM configuration management repository and version control (CMVC) as a change management repository that allows IBM to track and coordinate the myriad pieces required in a release. Employing CMVC in the Siebel context is a challenge in itself as the Siebel Tools application is used to manage the coding and specifications of all the various changes to parts of the Siebel eBusiness Applications and servers. Fortunately, Siebel Tools allows the definition of “projects” within the application, which defines a specific set of “pieces” that can then be imported and exported in a .sif file format. IBM uses CMVC to version control the various .sif files as a means of managing the change process with Siebel Tools. Today, this means creating and changing a component with Siebel software, exporting the .sif, and checking the .sif into CMVC as a part. Further changes require the .sif to be checked out of CMVC, imported into Tools, updated, exported and checked in. IBM is working with Siebel Systems to create a more direct interface to check projects directly in and out from CMVC.

In addition to Siebel eBusiness Applications components, IBM also has parts defined for all of the various infrastructure and system components needed in the complete IBM CRM solutions. This can be as simple as a set of queue name definitions for MQSeries all the way to a copy of the correct install package, instructions and configuration for a system component such as UDB.

In addition to revision control, CMVC has a very sophisticated defect tracking process, which allows IBM to work on and correct defects on any of the parts managed in the repository. IBM also supplements the CMVC repository facilities with a “build process.” The build process is a set of scripts and programs that can obtain a set of parts at a particular level and create all the deployment artifacts necessary to deploy a usable instance of the IBM CRM application system. This includes creating a valid definition file, or .srf, as well as the other artifacts needed by Siebel eBusiness Applications. This process is automated to the extent that the sandbox-level test systems can automatically be rebuilt each night, incorporating the fixes and changes performed during the previous day.