

*Xerox 2000: Leadership through Quality*¹

On February 2, 1994, Paul Allaire, the chairman and chief executive officer of Xerox Corporation, announced *Xerox 2000: Leadership through Quality* as the new framework for managing the company into the future. Allaire told managers, “I intend to use the model at regular operations reviews to inspect implementation. The other members of the corporate office will be doing the same and I expect all of you to do likewise in your pieces of the business.” *Xerox 2000* would

- 1) Establish *manage-for-results* as the key objective for all operations.
- 2) Use a *manage-by-process* orientation in all major decision-making that is based on identifying and broadcasting the core processes of Xerox.
- 3) Restructure the organization around a horizontal network style organization structure consistent with the team-based worker empowerment of TQM.
- 4) Develop and implement a *Xerox management process* model as a basic guideline for all managerial decisions and operations.
- 5) Develop and implement a *Xerox information model* to capture the data needed to support managing by process within the new management process model.

These actions would support two vital objectives - increased revenue growth and improved productivity. As Allaire noted, “They support our drive to be the most productive company in our industry and enable us to be a truly customer-focused, lean and fast-to-market corporation.”

Since becoming chairman and CEO in 1991, Paul Allaire was concerned about the organizational architecture of Xerox Corporation. He explained:

In the 1980s, we went through a number of reorganizations. But none of them got at the fundamental question of how we run the company. The change we are making now is more profound than anything we’ve done before.

The profound change included the development of a new organizational architecture for Xerox. Organizational architecture was described as the art of shaping “behavioral” space to meet the needs and aspirations of a business. The design principles include four areas of decision making:

- **Purpose** defines the design problem to be solved. As purposes change, new designs emerge.
- **Structural materials** provide the opportunities and set the parameters for solving design problem.
- **Style** results from the combination of purpose and structural materials.
- **Collateral technology** ultimately affects design.

A change in any of these areas can result in architectural change. Changes in all four areas could spark an architectural revolution. In carrying out its reengineering of the Xerox business architecture, management established the design principles listed in Table 1.

¹ ©1996 by William R. Boulton, Olan Mills Professor of Strategic Management, Michael L. Gibson, and James Cross Jr. of Auburn University. This case was developed under the sponsorship of the Thomas Walter Center for Technology Management.

Table 1: Xerox Organizational Architecture Design Principles

Principle 1.	Xerox is THE Document Company, not nine individual document companies.
Principle 2.	We will have a strong customer focus.
Principle 3.	We must unleash the entrepreneurial spirit in all employees.
Principle 4.	We will organize for market focus and speed and manage the integration.
Principle 5.	We will leverage and nurture our existing sales, service and administrative core competencies.
Principle 6.	The corporate office works as a team on strategic issues while providing leadership to the division presidents who run their businesses on a day-to-day basis.
Principle 7.	The business divisions run their businesses and have end-to-end responsibility and accountability.
Principle 8.	Customer operations divisions/entities implement business division strategies and have the responsibility to achieve their geographic profit targets by business division.
Principle 9.	Contracting is the management process to define the priorities and resource levels to achieve the business divisions' strategies.
Principle 10.	Eight cultural dimensions characterize the organizational culture we are seeking to create: <ul style="list-style-type: none">• Market connected.• Action oriented.• Absolute results oriented.• Line driven.• Team oriented.• Empowered people.• Open and honest communication.• An organization of reflection and learning.
Principle 11.	We are committed to Leadership Through Quality.

Xerox Business Architecture

The Xerox Business Architecture (XBA), shown in Figure 1, was the first step taken to develop a blueprint for re-engineering Xerox's business processes into closer alignment with its customers and markets. The XBA defined the management, operational, and infrastructural processes. Management and infrastructural processes were intended to support the value chain and core business processes. Management processes were to provide the business portfolio, strategic directions, planning, management for results, inspection, and coaching requirements of the corporation. The infrastructural processes were to include the information systems, human resources, finances, facilities and legal services that enabled the core business processes. According to Bill Kane, the XBA manager:

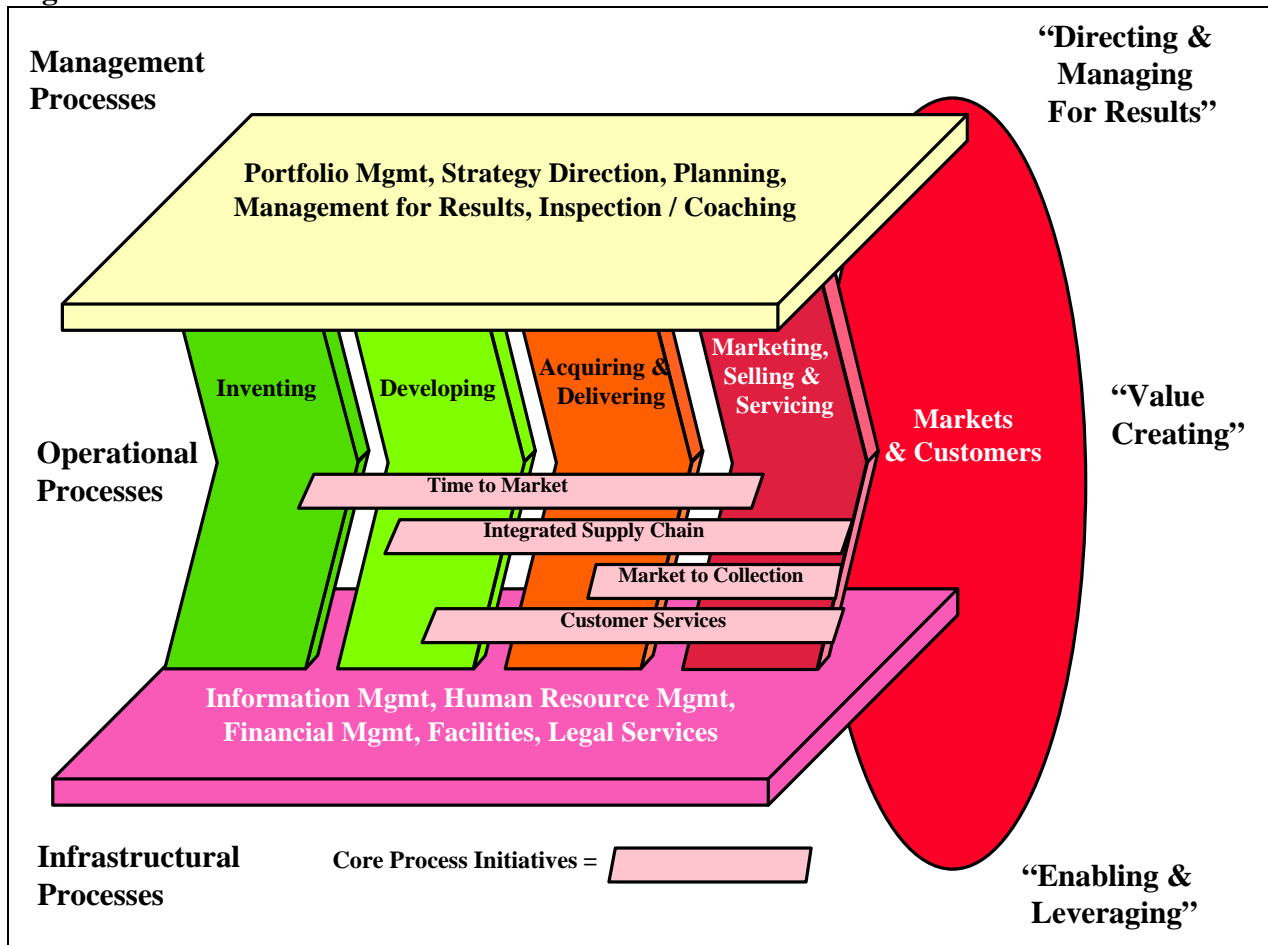
The XBA model defines what we do. It identifies the core processes we want to manage and establishes boundaries for the company. It's the context by which Xerox works together to collaborate and works independently in harmony: the design and the intent. It's designed to be customer-driven and cross-functional value-based, from outside in. It's documented, and it's managed on a cross-functional basis by a process owner. The architecture forms the basis for understanding the whole, management for a systematic breakthrough and improvement effort. It forms the context for empowerment.

Managing-by-process focused attention on the core business processes and their sub-processes. A business process management (BPM) division was established to complete the architectural design. BPM consultants used quality improvement and business process re-engineering projects

to educate Xerox employees, leading to further quality improvements and major process redesign initiatives. Ennala "Ram" Ramcharamdas, director of the BPM division, explained:

In *Xerox 2000*, management modeling is really a reaffirmation of our quality judgment. We were so focused on the quality, tools, and techniques that we were losing sight of the business results that those things should produce. We said we need to tie the quality program to business results, as opposed to a culture change. Given that we have a good feeling about where we have been on the quality journey, we have to build on it. We are trying to go beyond quality, but the quality managers of the company do not like it. They see it as an ongoing journey. Privately, Paul [Allaire] will say "you're going beyond quality." But that's not the right thing for the people to hear because they want to continue the quality journey.

Figure 1: Xerox Business Process Architecture Overview



Ramcharamdas described the approach:

We want to institutionalize process management instead of considering it a re-engineering process. In other words, we want to manage the company by process. We want to bring in new processes. We consider the Xerox business architecture as a context for change, and we talk about the process that manages the change. Policy-setting is what management processes are all about, i.e., organization for result, strategy, managing for results, action strategy, operating plan, and control. Supporting that infrastructural process are information management, human resources, and things that enable a corporation to function.

In overall business process management, corporate-wide processes first need champions to sponsor them, people who are actively engaged in improvements. If senior management is not behind you, nobody will pay attention

to you. Second, you can't have break-through productivity all the time; that's highly risky. It will take a thousand little programs, in addition to the re-engineering project. We have to break the paradigm in certain areas because we need to change processes for two reasons. One is to make the base business more productive. The second is to build new processes for the new business models into which we are evolving: the new markets, technologies, systems, and organizational models that we want to introduce, i.e. the technologies that relate to our digital transition.

The core business processes are those necessary for the business to function effectively. The core business processes link Xerox and its divisions to their customers. The *business process management* (BPM) division was formed to lead the efforts to re-engineer these core processes. According to Ramcharamdas, "the XBA model captures and institutionalizes the organizational learning about core processes that make up the company."²

One of the challenges of business process definition is deciding when to stop defining the process and let the people innovate. The people on the front line are actually wiser in terms of innovation than we can ever dream of. You want to define processes to a level where you empower people to do their own thing. You need to allow people to use their heads. So the challenge for us is deciding where to stop defining a process and letting people innovate, keeping out of change management innovations. Through the XBA framework we're trying to provide the total operational context. In other words, we are trying to create an environment where people know how the total thing fits, then they can do their jobs.

The four end-to-end core processes were *time-to-market*, *integrated supply chain*, *market-to-collection*, and *customer services*. Ramcharamdas described them:

Time-to-market is our product development delivery process. An *integrated supply chain* is the value chain that procures raw material to manufacturing, the logistics systems, and the delivering of the products that provide service to our customers. In *market-to-collection*, we convert market opportunities to cash and develop market opportunities, prospect them, sell to them, deliver to them, and collect the money for them. *Customer Services* maintain the customer relationship after we have established the customer, as well as delivering the soft side -- consulting, software support, technical interventions, and so on.

To manage by process, Allaire established a new organizational structure. As shown in Figure 2, senior management were members of the business process board and served as *champions* to one or more of the core processes. Respected second-tier managers were being named as *process owners* and were to be accountable for productivity improvements through process innovations. According to Ramcharamdas, "The process owner is responsible for developing a process improvement productivity strategy and an implementation plan for the company." Process owner councils included process champions and owners. Bill Kane explained:

Process owners establish and manage the core business process councils. They develop and maintain the core process definitions within the architecture, as well as the operational vision and the strategy of a business transformation. They diagnose current state and determine a transformation plan, and they do the work.

Ramcharamdas continued:

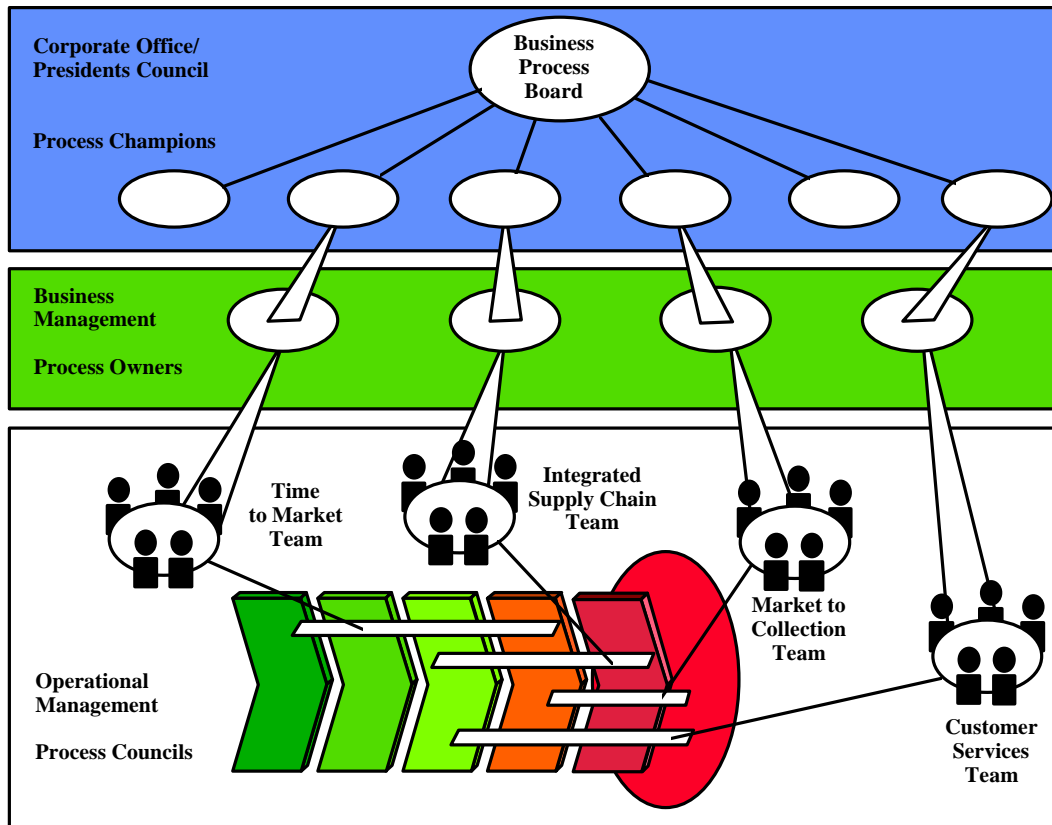
It's important to have institutional ownership of a project instead of having one person driving it. Even if the person stays with the company, people will abandon the change if they do not buy into it. If process development teams are outside the mainstream, nobody will buy into it unless someone sells it to them because they were not involved. At the same time, you need people need from outside the mainstream to provide focus and objectivity.

² Ennala Ramcharamdas, "Xerox Creates a Continuous Learning Environment for Business Transformation. Planning Review, March/April 1994, p. 36.

By having the XBA framework, we are trying to empower people, and at the same time, do some top/down re-arrangements. We want to maintain market focus while desegregating the large company. We still want to be one company, not nine different entities. We want to re-organize without sacrificing the benefits of being a large company.

Xerox management hoped to give employees the ability to make decisions and change within their business processes. Within the context of those boundaries, people were supposed to make changes and act from an entrepreneurial perspective. Architectures were still being developed and process relationships were still to be analyzed. For example, as of mid-1994, the *time-to-market* process owner had yet to be identified.

Figure 2: Business Process Management Structure



To operationalize the XBA, Xerox created proprietary analytic software to run on *Sun* workstations. Someone could select any process on the XBA for analysis, and open windows on the computer screen to review in detail any portion of the process. Creating the software tools became part of the task of the business process management team. Xerox's model-based management system provided guidelines for assessing performance, and for making decisions consistent across business areas as shown in Table 2.

Table 2: *Managing-by-process* Principles

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| <ol style="list-style-type: none">1. Make all decision and perform all actions within the guidelines of the "what to's" of the core business processes and their impact on other core processes.2. Establish owners for all core business processes and sub-processes.3. Designate these owners as responsible for the maintenance and use of that process, with their reward tied to the successful functioning of that process for all Xerox personnel.4. Empower the owners of the process with the responsibility for continuously improving those core processes, and reengineering them when necessary.5. Constrain core process and sub-process owners from making changes to their core processes that may affect other core processes that are owned by other managers.6. Designate responsibility for a change in a core process to the highest-level owner of a core process that is being changed because core sub-processes are being changed by lower-level process owners. |
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As explained by Ramcharamdas:

Managing-by-process focuses attention on the fundamental enablers and on processes that create assets. This ensures that we focus on a relatively few processes in the business, the fundamental things we should do well. It also drives change into these processes.

We view this not as a matter of progress and not as a one-month or two-year project, but as an ongoing program, i.e., a working place that institutionalizes process management instead of considering it a re-engineering process. In other words, we want to manage the company by process. We want to bring in new processes. If you have that kind of framework and instructive, people will relate to what you are trying to do. *Managing-by-process* as the basic way we manage the company is a continual entrepreneurial process, not a one-time event.

The Xerox Management Model

With *Xerox 2000*, Allaire presented his new *Xerox management model* (XMM):

This framework sets the architecture and boundaries for how we all run the business. But if you think of it as something restrictive, you will have missed the point. By giving all of us some boundaries, it actually liberates us. It says, in effect, that the playing field is 100 yards long and 50 yards wide and that there are certain rules by which we all play. But within that structure, entrepreneurship, empowerment, independence and so on are all fair game.

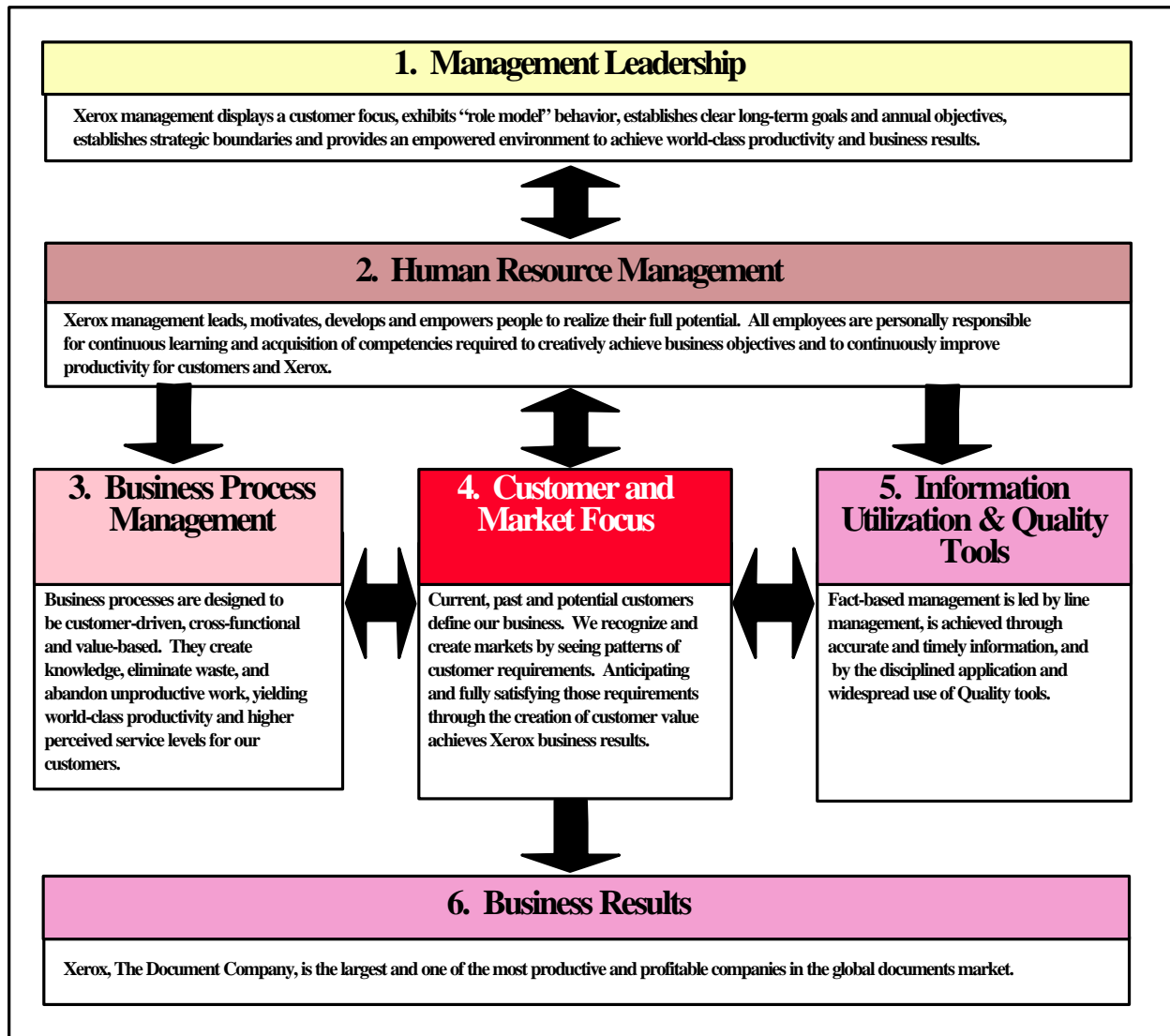
As shown in Figure 3, the XMM integrated some forty of the company's tools and processes into six categories:

- Management leadership
- Human resource management
- Customer and market focus
- Business process management
- Information utilization and quality tools
- Business results

The XMM integrated all activities and initiatives as Allaire explained:

What we have done is take all of our quality tools and organized them into six categories. Together the six categories form the Xerox Management Model -- the tool-kit we all need in order to run our part of the Xerox business. There are, I believe, several benefits to this approach:

Figure 3: The Xerox's Management Model



- First, the model gives us a logical framework that *integrates and connects* all the activities and initiatives that we need to manage. By giving us a better understanding of what we do, the model *simplifies* the running of the business.
- Second, the model *promotes organizational effectiveness* because it offers a “hook” for all existing initiatives. If there is no hook, we should not be doing that activity. If there is one hook with many activities, it is likely that we have duplication of effort.
- Third, the model focuses on *implementation*. We often do not pay enough attention to implementation. This has been an area of weakness for us. We need to pay more attention to in-process measures and how we implement. Five of the six elements in this model address “how” we get results. Results by definition are a lagging indicator. They tell us what already happened. I intend to use this model to ask questions about the other five elements on the model -- in other words, how are you implementing and what are your in-process measures? My expectation is that you will manage you business according to this model.

The XMM put the *customer* at the center and made *business results* an outcome. *Management leadership* drove the model. Leadership was considered the key enabler of the quality strategy. Allaire explained:

We have updated our quality strategy and integrated it into the way we run the business. Total quality management is a management process. It's not a separate strategy. It's only natural that our next big step on our quality journey is to link our quality strategy to our management process.

In setting priorities for action, Allaire argued that "Xerox managers must be leaders of empowered, entrepreneurial workers who manage and perform processes that supports a customer and market focus and empowered workers to use information and quality tools to obtain the best business results." *Human resources* were central to productivity improvements and required constant dialogue with management. *Business processes* provided the context for empowering employees and enabling productivity. *Information and quality tools* were central to productivity improvements. Arrows show the interaction between Xerox and its customers. In applying the XMM to 1994 activities, Allaire focused management efforts on ten specific elements:

- Under *management leadership*, we will focus on managing-for-results, behaviors and empowerment.
- Under *human resource management*, we'll focus on the development of our people, particularly managers.
- Under *business process management*, we'll focus on process ownership and process measurement -- particularly measures for quality, cost and delivery.
- Under *customer and market focus*, we'll concentrate on ensuring that we have a clear two-way line-of-sight with our customers and implementing a customer satisfaction and loyalty measurement system that helps drive market share.
- Under *information utilization and quality tools*, we'll focus on the use of analytical tools.
- And under *business result*, we'll focus on productivity -- particularly implementing productivity metrics at the corporate, divisional and operational levels.

In his address to management, Allaire listed the benefits of using the XMM:

- As with all quality tools, the model gives us a single language to talk about our management process. As a result, it *improves communications*.
- The model is *flexible* so that it can be kept *evergreen*. We can add or shutdown windows as our management process evolves. As new initiatives are proposed, a place must be found for them in the model. As old initiatives are no longer necessary, they should be dropped.

The Information Management Architecture

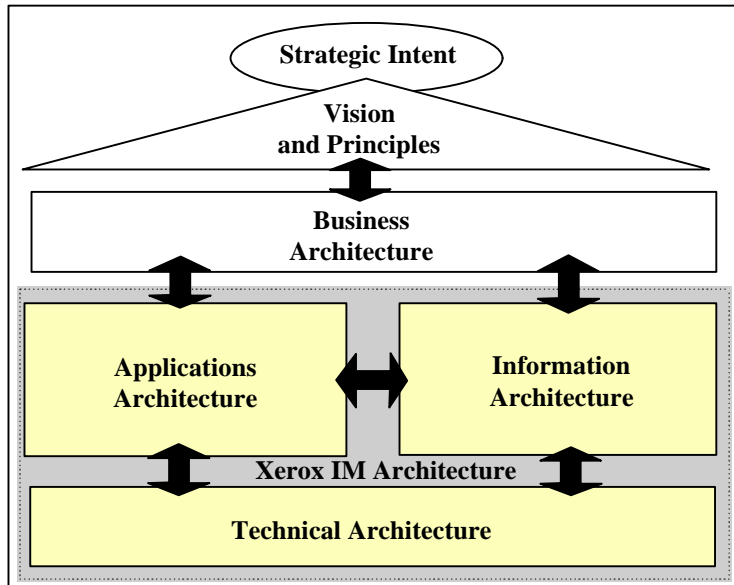
Management believed that the *Xerox information management (IM)* architecture provided the blueprint for delivering consistent, integrated, reliable and globally shared information to business process managers, thereby enabling Xerox to achieve world-class effectiveness and productivity. The IM Architecture, described in Figure 4, provides the capabilities underlying the delivery, operation, and support of products and services.

The IM architecture is a critical component that supports business process applications and data through inter-operable technologies. Through the effective implementation of information technology, IM impacts the productivity of business processes, employee empowerment, and customer communications. The application architecture was under development by the *business process and information management (BP&IM)* group. Applications are intended to provide end users with

intuitive, seamless access to information. The technical architecture is an enabler for the transparent location and distribution of data, applications, and services. According to Ramcharamdas:

We have a good handle on the business architecture, but are working on the technology infrastructure underlying that architecture. I think we probably have the basic computing information architecture completed. For new systems, there are three ground rules: they must be technically based, client/server-based, and object-oriented.

Figure 4: The Xerox IM Architecture



The IM objectives were to provide a limited set of compatible technologies that would provide a fully secure computing environment with efficient access, to facilitate technical efficiency and business effectiveness, and to meet customer requirements. The desired capabilities included:

- Integrated user interfaces to provide access to all services on one workstation per employee or desk.
- Integrated network - supports for data, voice, and video to provide cross-Xerox connectivity to support cross-Xerox business processes and bandwidth sharing for cost effectiveness.
- Choice of client platforms to support different job requirements and provide choice of industry software for productivity.
- Network support for external connections to support mobile employees and connections with customers, vendors, and global Internet, and external information sources.
- Full access to all Xerox' Document Services Products such as scanners, printers, copiers, and FAX products.
- Cross-Xerox mail and document interoperability to enable collaboration across geographic boundaries.

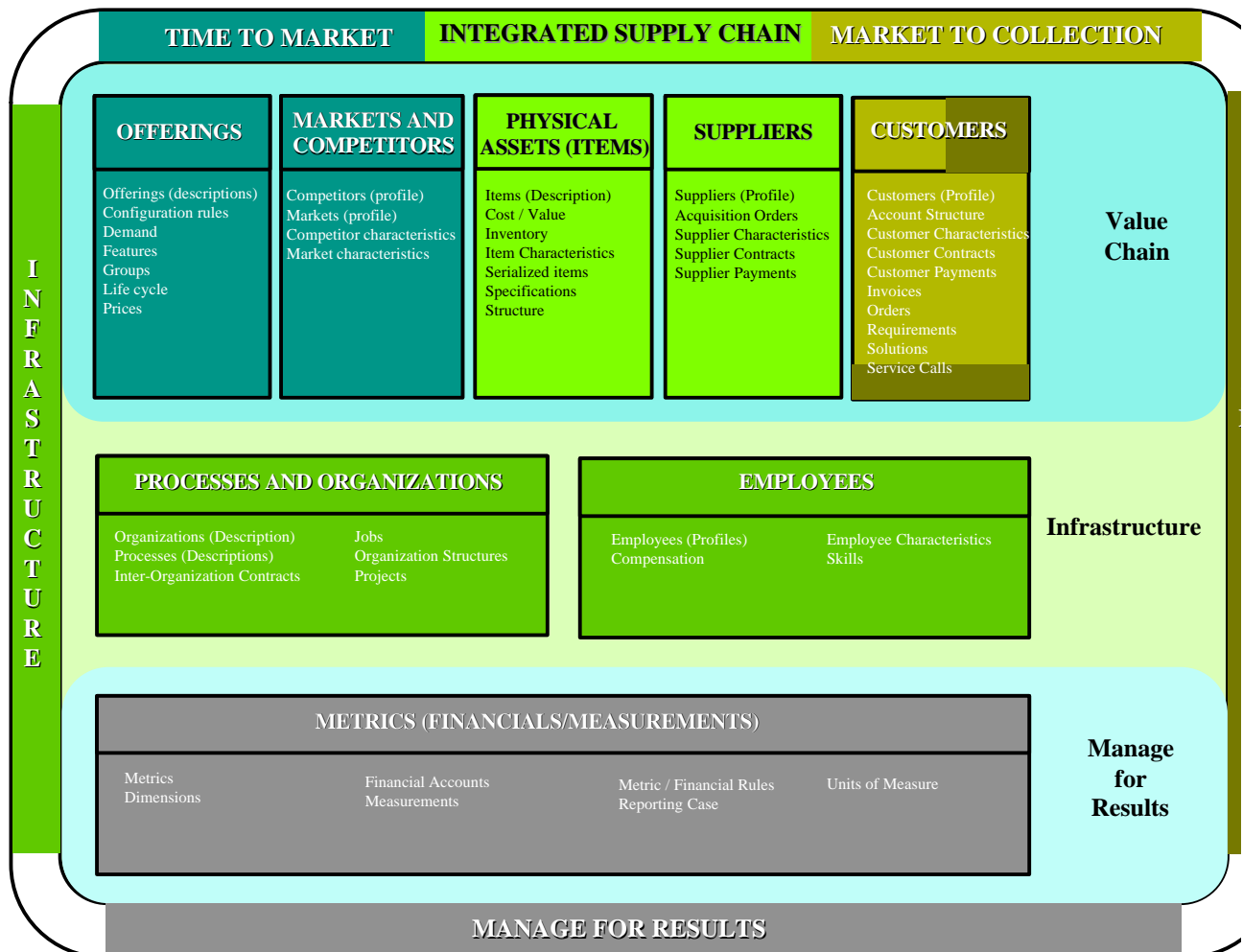
Data was independent of applications and technology platforms. Access to accurate information is essential for management by fact, to enhanced employee empowerment, and to promote customer satisfaction. Unfortunately, current data was characterized by redundancy, poor quality and accessibility, incompatible technologies, and fragmented ownership. The lack of an enterprise-wide information focus had resulted in a functional database design. While these databases served today's applications, new databases were required for the core business processes. Databases had traditionally been designed for narrowly defined functions, rather than cross-functional and global requirements. The old data systems made access to and sharing of common data difficult. For example, some countries identified products by part number while other countries used market or product codes. The

lack of an enterprise-wide definition of products made it extremely difficult to identify the same products in different countries.

The *Xerox information model (XIM)* specifies the information needed to support the document processing business, including the information needs of re-engineered business processes. The XIM contained the business rules, definitions, formats, and value sets for Xerox core information. As shown in Figure 5, it included the entities about which Xerox wanted to keep information, described the relationships between entities, and specified the attributes (data elements) of the data structures. Betty Spinelli, XIM manager, explained:

I believe that regardless of product, regardless of service, regardless of marketing, strategic advantage can be gained by managing information. The information has to be right. That's one of the biggest complaints we get. People say they can't get access to information or the information they get is wrong. We designed information for functional foxholes -- you had your own customer database.

Figure 5: Xerox Information Model (XIM)

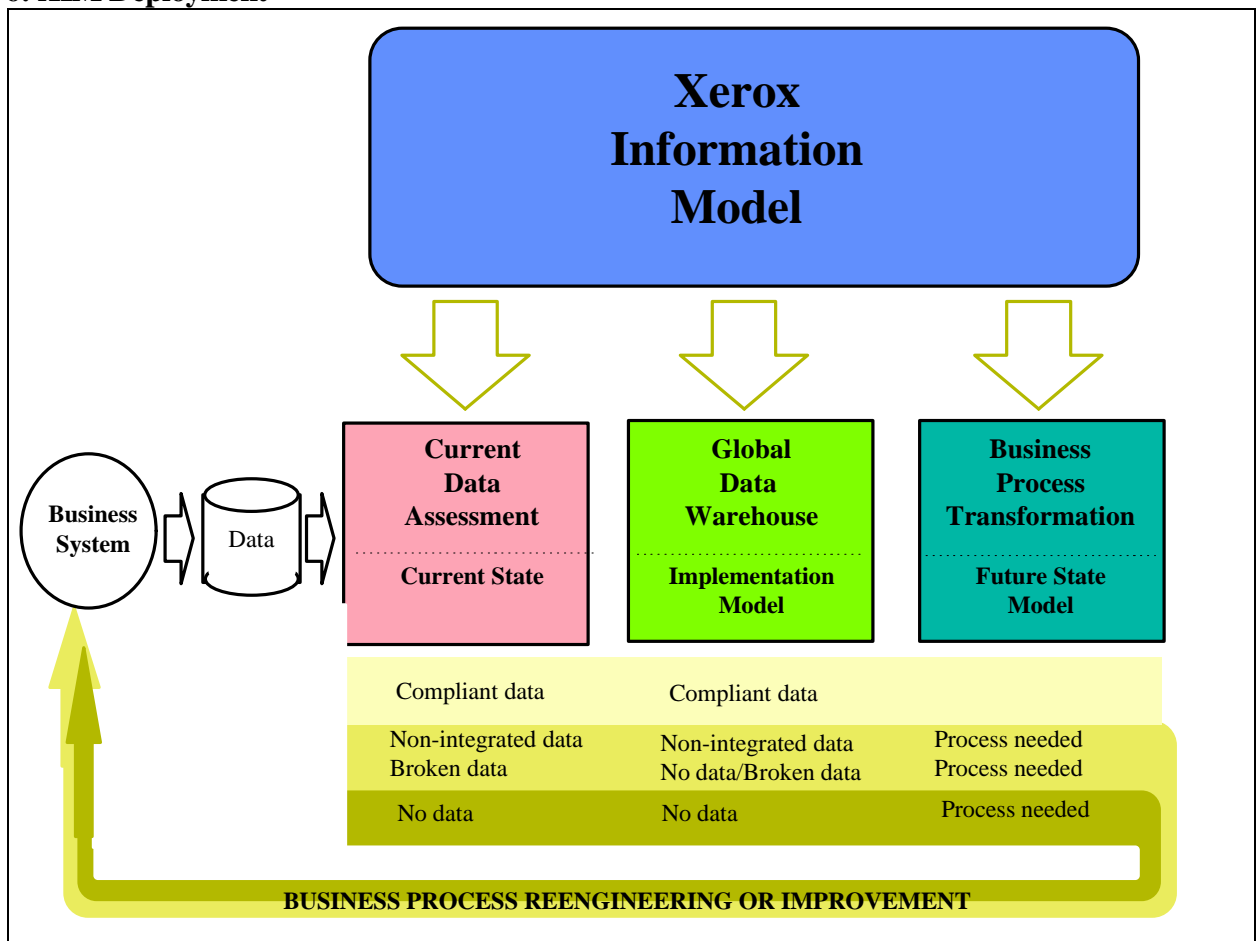


Within our information model, there are eight categorizes. All enterprise information is somehow within those subject areas. The model shows the relationships and business rules between processes, the data that they are using.. With standardized information and definitions, you have more flexibility. But it is difficult to develop

standards because people think they will be forced into definitions they don't want. Business people, as well as IM people, do not understand that processes create data. If you want data, you have to develop processes to create the data. For example, in customer areas, the information is created either from customer service or market-to-collection processes. There are fifty entities within those subject areas.

Figure 6 shows the primary XIM initiatives. Spinelli continued to explain the current assessment: In current-state assessments, we classify existing data into one of four categories. First, data is either *compliant* with the information model or it's *non-integrated* data. The second category is non-integrated data which is scattered and not currently integrated. The third category is *broken data*, meaning that data is missing. If you have broken processes, you have broken data. The fourth category is *no data*. No processes means you have no data. Our assessment of those four categories of data showed that 25% of our data was compliant with our model, 20% was integratable at some level, 25% was broken, and 30% of it didn't exist. That means that approximately 50% of the XIM can be constructed through integration of current data.

Figure 6: XIM Deployment



The global data warehouse integrates the best sources of today's compliant and integratable data, it does not create new data or future-state data. If existing data is compliant, we'll put it into the global data warehouse. If it's non-integrated data, we need to develop some process or translation table in order to integrate the data. If it's broken data, we give the business people the choice of having no data or having bad data. If they insist on data, we have to re-engineer processes or make some kind of modifications that results in new systems and new data that can be integrated. We need to build or re-engineer business processes to create the future-state information.

There is little incentive to fix broken or non-existent data since it is not as glamorous as building future-state processes.

The XIM is used for current-state assessment, global future-state implementation, and business process transformation. We intend to build a global data warehouse that will provide an integrated data base that will provide common data and company-wide access. We are mapping current data for that purpose. We must ensure that the XIM meets the needs of future-state processes like the MTC. We need them to agree on what information belongs in a document. They are starting to relate data to a document life-cycle, and this allows them to define the information they need. We plan to complete the information model in cooperation with business process owners and support implementation of the global data warehouse. We work with the business process owners on their funded initiatives.

With less than half of existing data being usable, process re-engineering was needed in order to link the XBA and strategic initiatives at Xerox.

While the development of architectures and related processes was well underway, they were still far from being fully implemented. Ramcharamdas explained:

The traditional MIS system was used for operational reviews and focused on after-the-fact recording of business results. This model works at the corporate and branch levels. Our new model is a managing system. We want to capture information at the operating level and provide it to the corporate. It should not need to be edited. If it has to be edited, then we are getting the wrong information. We need to put the right systems in place to allow our divisions and operational areas to work together.

We plan to out-source legacy systems to save money and focus efforts on our future needs. The future-state systems are more strategically important to us. EDS will maintain our day-to-day information systems. EDS will minimize enhancements to the old systems as we develop new process-driven solutions and revise old systems. Our objective is to retire the old system. We told EDS that they will get the new systems to maintain.

Experimental NOVA Projects

Beginning in 1992, Xerox management established experimental NOVA (New Operational Vision Achievement) initiatives in three of its sixty-five selling districts. These pilot projects were intended to determine what results were possible from organizational change, technology implementation, and process rationalization. In Phoenix, Arizona, a NOVA team experimented with changes in organization. In Cincinnati, Ohio, a team focused on the application of technology. The Denver, Colorado, team experimented with process innovations. Michael Wiseman, a BPM consultant, worked on the Denver project:

The NOVA project team in Denver worked on developing their process model. They wanted to develop a model, e.g. use background documentation to develop a model of their business processes. The Denver model was not created using the corporate XBA software because it is limited to Denver, Colorado. But we lacked the resources to do a corporate-wide model of the whole market-to-collection process, which we know has to be done and is sorely lacking in our enterprise XBA model. Developing such limited process models is a violation of the Xerox architectural principles, e.g. creating a process model for a single organizational unit. But if we're going to process re-engineering, we had better agree on the definition of a process.

Xerox teamed consultants from Andersen Consulting with business process management division personnel on NOVA projects. They used the XBA process modeling format. The Denver current-state assessment and future-state modeling provided a vision for the process model. Wiseman continued:

For Denver, the project team built a mini-enterprise model of the entire Denver world. The project team identified 47 roles in Denver being done by 280 people, both inside and outside the district. Current and future models were overlaid. After describing the current organization, current policies, current metrics, current objectives and current technologies, the team developed a future-state model of how the Denver franchise would operate in two or three years? We then identified problems, gaps, concerns, and opportunities. What Denver really wanted to identify were the opportunities. Analyzing the connections between process and other objects helped identify gaps and concerns. For example, when process was connected to organization, the project team found that processes in the Xerox future-state model that no one was building. That raised a concern. We identified the where the gaps between target measures and current measures were greater than 20 percent? We identified the processes where competition was twice as good.

The Denver project is now designing solutions. After Denver's management agreed with the available opportunities, they brought in the IM and human resource management staff to make some changes. The Denver project is considered a success story in applying process modeling principles to identify opportunities and to act on those opportunities. Now, opportunities, gaps and concerns are being pushed up the ladder.

The Market-To-Collection (MTC) Project

The *Market-to-collection* (MTC) core process began with prospective customers and ended with satisfied customers. Xerox's worldwide MTC process represented \$14 billion in revenues, \$2.8 billion of expenses, accounting for nearly 21% of Xerox revenues, and \$1.6 billion in assets. Corporate S&G (selling and general) expenses were 32% of revenues, varying across countries from 31% to 35%. MTC expenses represented about 60% of total S&G expenses. MTC employed over 25,000 people. At Xerox, MTC was given resource priority for re-engineering. The process owner, Bill Pittman, believed that MTC had significant room for improvement. An earlier study concluded that the MTC process "does not meet customer requirements and does not support Xerox business goals."

More specifically, the study found that MTC processes currently:

- ◆ Result in dissatisfied or lost customers.
- ◆ Are costly and time consuming.
- ◆ Do not meet current S&G (sales & general) expense targets.
- ◆ Do not support our broad revenue streams or our network products.
- ◆ Are not supported by "modern," integrated information systems.
- ◆ Are inconsistent across entities.
- ◆ Receive "unsatisfactory" to critical audits.

These problems were caused by an overly complex process that included lengthy, multi-step processes and complex pricing systems with numerous exceptions and variations. It took 5 to 6 months to train entry level positions, required 4 separate entries to change customer addresses, took 22 days for customer complaints to be resolved, took 29 customer initials for order agreements, and 60% of orders required exception processing. The study estimated that potential MTC cost improvements could amount to 5% of revenues.

The MTC project goal was to improve current processes and to deliver a new MTC "platform" by 1995 that increases customer value and competitive strength. Specifically, the new platform would enable:

- ◆ Customers to do business with Xerox where, when, and how they choose.
- ◆ Customers to have global access to the best, value-added solution from Xerox and Xerox Partners.
- ◆ Access to information on demand by both customers and Xerox.
- ◆ Truly empowered Xerox people to do what's right for the customer.

- ◆ Customers, Xerox people, and partners to operate the radically re-designed MTC processes intuitively.
- ◆ Core customer processes to be used worldwide, constantly improved and be responsive to evolving customer needs and emerging technologies; best practices to be standardized globally.

Since every country separate *market-to-collection* processes, the MTC project focused on the United States, Canada, the United Kingdom, and Brazil. The MTC process areas included market management, prospect to implementation, and implementation to collection/customer relationship management. The project would result in one core MTC business process in Xerox, including three process areas, 12 processes, 32 sub-processes, and some 200 cross processes. Nearly 70% of potential cost savings were expected to come from the prospect to implementation area.

MTC's re-engineering objectives were to increase revenues, reduce costs, and improve customer satisfaction. They relied on making the selling process more responsive to customer requirements. Developing the right solution for customer needs, quickly and efficiently, and meeting the customer's time requirements were critical factors for success. Re-engineering the central prospecting and selling process was to produce a fact-based proposal that includes solution configuration, price, payment options, equipment availability, agreements for service and support, and terms and conditions of purchase. The proposal would initiate a document life-cycle to meet customer requirements. The "prospect to implementation" process vision is shown in Figure 7.

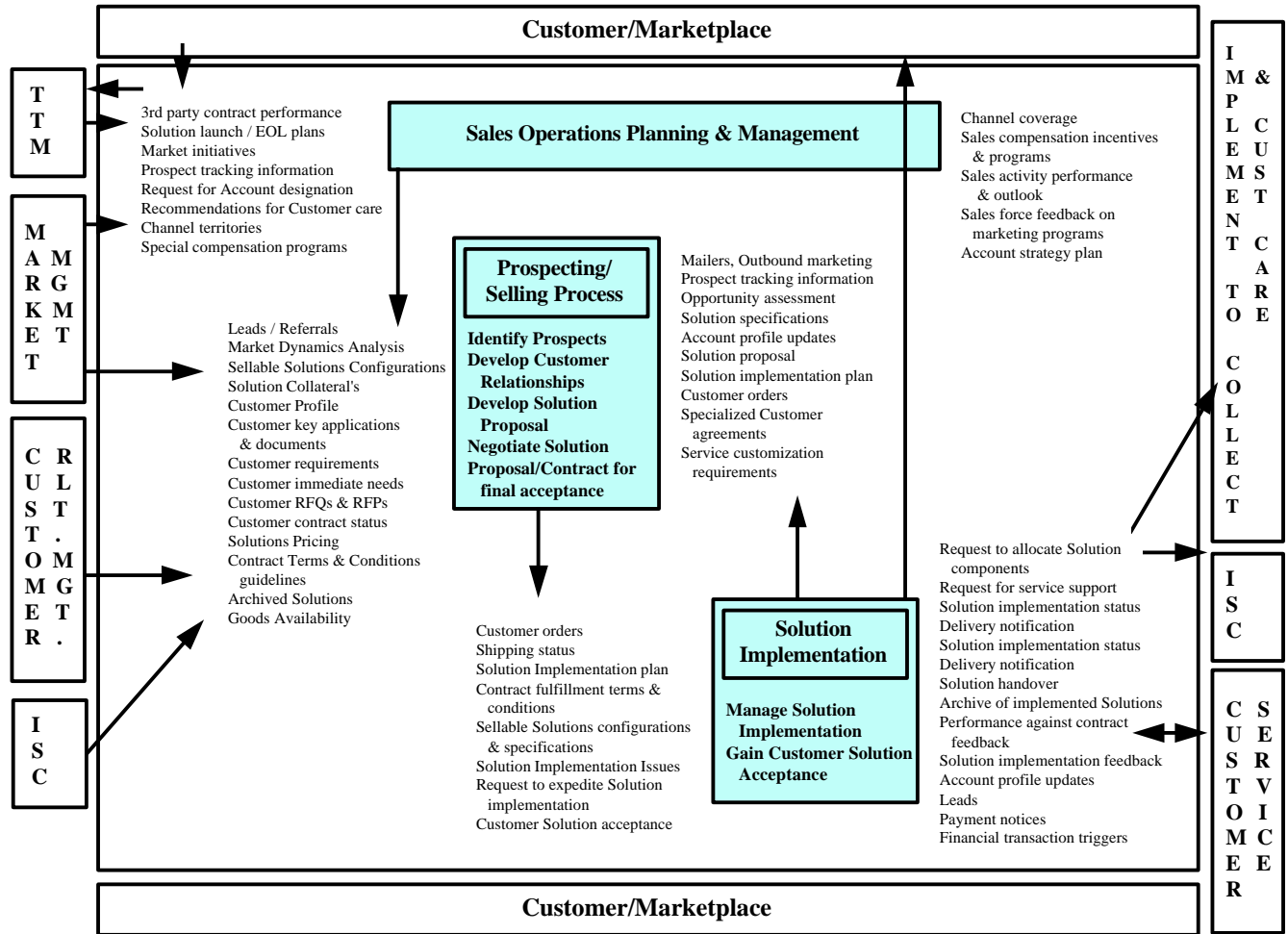
Xerox's concept of a document life cycle was being applied to the MTC process. The project team's theory of L=P=O=I would integrate the prospect to implementation documentation (leads = proposals = orders = invoices) a single document. The current selling process required a sales person to get approvals on 21 different documents. Using the concept of the document life cycle, the document would be updated from a lead to a customer's proposal. Once the customer accepted the proposal, it would become the customer's order. A simple command on the computer would then generate the customer's invoice. The document would be stored in a computer data base for easy access throughout its life-cycle.

In May 1994, Xerox management questioned inconsistencies between ongoing initiatives and the new business process vision. The challenge was to understand the relationships between the new XBA and strategic initiatives. Wiseman explained:

Some people are recording productivity gains and planning productivity improvements on old initiatives. Those initiatives are going in a different direction, achieving a different vision, using different processes, using different data, and applying different technology than we propose in our future-state models. The MTC project team is now trying to catalogue current enterprise initiatives and determine their attributes. The Xerox information management group will make them available to Xerox management for assessment and review. We recognize the need to terminate some of those initiatives even though they may be very political in nature.

The process model required good metrics for setting operational goals. The metrics included Q, C, D (quality, cost, delivery) metrics that came from prior quality activities, and score card metrics that considered strategic performance like customer retention and productivity. Xerox managers were attempting to use these metrics as early warning systems. Senior executives reviewed strategic warnings while operational people reviewed Q, C, or D metrics.

Figure 7: Overview of the “Prospect to Implementation” Process Area of MTC



Unfinished Business

After Allaire introduced the *Xerox 2000* initiative, he described his goals.

By early 1996, we will reduce our worldwide document processing work force of 97,000 by more than 10,000; close and consolidate certain facilities; simplify our business processes; and reduce layers of management. The company estimates that this program will result in pre-tax cost reductions of approximately \$350 million in 1994, approximately \$700 million in 1995 and higher amounts thereafter. We will need to make further incremental investments to enable some of these productivity initiatives and to continue to drive for increased revenue growth. Some of these savings will be reinvested to reengineer business processes and to support Xerox expansion in emerging markets, and to mitigate anticipated continued pressure on gross margins.

According to Bill Kane, "We now have a process-oriented community dealing with all aspects of change, not one that simply addresses the technical side of change and describes a process. The laws governing people and their behavior make the difference" He continued:

From a quality point-of-view, Xerox looks at transformation from several points of view: improving individual tasks, work groups, and business process, to business process re-engineering; and, finally, to total organizational transformation. Transformation requires management of change, as well as developing the architecture for change. The management model fully comprehends the importance and value of focusing on business process management. We re-engineer for breakthrough performance through continuously improving, managing

structural changes, building a base of skills and know-how, managing cultural values and the behavioral shift, and, finally, managing for results by managing the process. We manage the company by process.

Ramcharamdas continued:

We're trying to build competencies -- changing processes and business systems -- within the context of the Xerox management model. We need people who know how, who have been there before, who have done it, whose projects succeed. We need processes, methods, and approaches. We are focusing on the soft side -- managing change. It requires internal communication, marketing, proselytizing, and explaining. How do people change? How do you make new technologies stick. We've fallen short in understanding people's aspirations, values, behaviors, and cultures and focused too much attention on managing technological and process change.

We need to shift complexity from our systems to our people. People can deal with complexity a whole lot better than systems can. By expanding roles and responsibilities, people can do more complex jobs. If people are going to be in organizations, they will end up doing knowledge work. Therefore, we will be depending upon people to deal with system complexity instead of designing more complex systems.

In our process visioning exercise, we have considered the sales job of the future. If you have the right information systems and infrastructure in place, the sales person not only sells but also enters orders on a portable computing device, solves customer's problem, considers service requirements and availability, and, for a knowledge worker, puts the right people in charge of customer installation. You can track delivery and determine the total cost. That can all be done in front of the customer, including, if the customer wants to pay, collecting the money. You don't have to worry about processing the whole deal, and it's a whole lot cheaper. The systems cost is much cheaper when the customer pays upon order or delivery because processing costs are cut. So the future sales person will also be a systems designer, a consultant, an order-entry clerk, a logistics person, and make collections.

Employees want to make a meaningful contribution and to be recognized and appreciated for that contribution. But with all of the change under way, our employees are not feeling valued just now. There is a lot of uncertainty about who will be here after all the changes are made.

Xerox was on the cutting edge of using architectural principles and modeling to guide managers and employees in making-decisions, completing work tasks, and keeping activities consistent with the strategic vision of top management. Actual implementation of the many models still required extensive work. The various models provide workers with boundaries within which they have a degree of autonomy. Extension of the NOVA successes to all Xerox profit centers would require extensive education and training. Implementation of the *management-by-process* philosophy across would impact human resources and culture, organizational behavior, organizational policies and procedures, and technology. This monumental reengineering effort had only begun.

Xerox management viewed modeling as a continuing process for better understanding and control. According to Figure 8, the *strategic architecture* was driving business process developments. A strategy for supporting technologies had also been extensively evaluated through the company's NOVA projects. Other components of the XBA had not yet been integrated with other corporate architectures, such as the data architecture, the strategic architecture, the organizational architecture, and the physical and technological architectures. However, implementation and integration of the XBA depended upon completion of the data and organizational architectures which were still under development.

The evaluation of enterprise initiatives had not yet begun. As resources were required for implementation, older initiatives would have to be evaluated and terminated if inconsistent with the new architecture. Integration of business objectives and their initiatives were expected to be delayed since they were not closely linked to the new business processes. Furthermore, metrics had not been established to determine levels of performance for business objectives. Additionally, the data base required for assessment of business objective did not exist. The XIM had not yet been completed, and many data sources were still “broken” or not in existence. The physical and technological architectures needed to support the XBA were expected to change as new initiatives and objectives developed.

Figure 8: The XBA Development Progress

