

## Case 4-4

# Xerox: Outsourcing Global Information Technology Resources<sup>1</sup>

In June 1994, Jagdish Dalal, head of Xerox's global outsourcing team, finalized a 10-year, \$3.2 billion contract with Electronic Data Systems (EDS). Reflecting on the hard work that effort had involved, Dalal was pleased with what his team had accomplished and confident that the agreement it had crafted would allow Xerox to quickly create the information infrastructure needed to support its new business processes. The new outsourcing model Xerox was pioneering would automatically adjust to environmental changes while keeping EDS's and Xerox's incentives aligned.

The deal was noteworthy both for its facts and figures and for the way it was to be managed. This was reputed to be the largest computer outsourcing deal in history and the first to be implemented on a global scale. Few vendors could support such a contract. The size and complexity drove the management philosophy; the contract would not be used as an instrument to define organizational boundaries and limitations. As noted by Dalal:

The term *outsourcing* is inappropriate. This is really more of an integration of two separate businesses. We wanted to take the best parts of each culture and put them together. The same goes for structure, strategy, and people. We will realize substantial economic value if we can achieve commitment to a high degree of integration. It is the spirit of the agreement

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that creates this commitment; there are no "mechanisms" that can be put into place as a substitute for the spirit.

Finally, for some observers, Xerox's outsourcing had an additional message. Xerox possessed substantial technological prowess in the digital and computer arenas. Xerox PARC<sup>2</sup> had, among other things, invented the first graphics-oriented monitor, the first "mouse" input device, the Ethernet protocol, the first laser printer, and the applications "windowing" concept. Hence, Xerox's outsourcing seemed to signal that even at companies where digital technologies were important core competencies, the information technology (IT) function could be outsourced.

## Company Background

Xerox was a global enterprise that developed, manufactured, marketed, serviced, and financed a complete range of document processing products and services designed to make offices around the world more productive. It marketed copiers, duplicators, digital production publishers, electronic printers, facsimile products, scanners, workstations, networks, computer software, and supplies in more than 130 countries, using a direct sales force and a network of dealers, agents, and distributors.

## Company History

After spending more than a decade perfecting the xerographic (copying/duplicating) process, Xerox introduced its model 914 copier in 1959.

<sup>2</sup>Palo Alto Research Center.

Sales increased from \$32 million in 1959 to \$1.1 billion in 1968; the number of employees surged from 900 in 1959 to 24,000 in 1966. By 1970, Xerox held a 95 percent share of the plain-paper copier market. Gross margins for many products in 1970 ranged from 70 percent to 80 percent. (See Exhibit 1 for selected Xerox financial information.) However, Xerox's phenomenal growth and profitability attracted federal lawsuits. In 1975 Xerox reached a settlement with the Federal Trade Commission: Xerox was forced to forfeit patent protection and had to license its competitors.<sup>3</sup>

From 1976 to 1982, Xerox's share of U.S. copier installations dropped from an estimated 80 percent to 13 percent due to competition from such Japanese companies as Canon, Minolta, Ricoh, and Sharp. Licensing also dramatically increased new product introductions: Between 1971 and 1978, 77 different plain-paper copiers were introduced in the United States; between 1978 and 1980, another 70 arrived (see Exhibit 2).

After struggling to develop a strategy to address its newly competitive environment, in 1980 Xerox began to aggressively pursue benchmarking and employee involvement initiatives.<sup>4</sup> In addition, under the leadership of

<sup>3</sup>Xerox executives recount how the proliferation of lawsuits began to have a chilling effect on company strategy. For example, Xerox became less aggressive in its pricing policies; lawyers began to accompany managers when they met with other companies to ensure that there was no hint of illegal collaboration; managers were coached on what they could say (words such as *annihilate* were outlawed). In addition, costs in terms of legal fees and executive time (the CEO, for example, lost an estimated 30 or 40 days a year) were substantial. See Gary Jacobsen and John Hil Kirk, *Xerox: American Samurai* (New York: Macmillan, 1986), especially pp. 69-75 and 196-200.

<sup>4</sup>The company issues a little red booklet on benchmarking to employees. You see it in offices everywhere. It explains how each department and employee can determine what to benchmark, how to benchmark, and how to use that information to improve Xerox. Jacobsen and Hil Kirk, op. cit., p. 233.

the chief executive officer (CEO), David T. Kearns, Xerox embraced quality as its basis for competition, instituting a program called Leadership through Quality. These three directions—participation, benchmarking, and quality management—worked in unison. "Benchmarking," Kearns noted, "spread like wildfire through the company. We were fast closing in on our goal of having every department in the company measuring its performance against similar operations at other companies."<sup>5</sup> "We had begun to build long-term relationships with our best vendors," he explained. "We began to treat our vendors as part of an extended family and to train them in the principles of Leadership through Quality."<sup>6</sup> Xerox's efforts to improve quality earned the company several prestigious awards: In 1989, it earned the national Malcolm Baldrige Quality Award; shortly afterward, Xerox Canada won the Canadian National Quality Award; and in 1992, Xerox became the first winner of the European Quality Award.

The emphasis on participation, benchmarking, and quality seemed to work in the marketplace as well; between 1984 and 1993, Xerox's market share in low-end copiers rose from 8 percent to 18 percent, while for mid- and high-end copiers its share rose from 26 percent to 35 percent.<sup>7</sup>

### Corporate Restructuring

Despite improvements in market share, overall corporate performance declined in the early 1990s. In 1992 Xerox's CEO, Paul Allaire, announced a major reorganization: Xerox would create nine divisions along market segment lines and three customer operations along

<sup>5</sup>See David T. Kearns and David A. Nadler, *Prophets in the Dark* (New York: HarperCollins, 1992), p. 238.

<sup>6</sup>*Ibid.*, p. 256.

<sup>7</sup>Subrata, Chakravarty, "Back in Focus," *Forbes*, June 6, 1994.

EXHIBIT 1 Xerox Financial Highlights (Operations and Financial Position Numbers in Millions)

	1993	1992	1991	1990	1989	1988	1987	1986	1985	1980	1970	1960
<b>Operations</b>												
Operating revenues (sales, service)	\$13,384	\$13,460	\$12,734	\$12,542	\$11,602	\$11,029	\$10,320	\$9,355	\$8,676	\$8,037	\$1,690	\$40
Cost of sales, service, and rentals	\$7,230	\$7,126	\$6,661	\$6,656	\$6,237	\$5,778	\$5,382	\$4,814	\$4,411			
General and administrative	\$4,585	\$4,779	\$4,497	\$4,286	\$3,929	\$3,847						
Research and development expenses	\$883	\$922	\$890	\$848	\$809	\$794	\$722	\$650	\$597	\$430	\$87	\$3
Income from document processing	(\$193) <sup>a</sup>	\$562	\$436 <sup>e</sup>	\$599	\$488	\$148 <sup>g</sup>	\$353	\$316				
Income from insurance operations	\$4	(\$779) <sup>c</sup>	\$2	\$11	\$154	\$181	\$188	\$129 <sup>f</sup>				
Income from continuing operation	(\$189) <sup>a</sup>	(\$217) <sup>c</sup>	\$438	\$610	\$642	\$329	\$541	\$445	\$381	\$553	\$210	
Net income	(\$126) <sup>a</sup>	(\$1,020) <sup>d</sup>	\$454 <sup>e</sup>	\$743 <sup>f</sup>	\$704	\$388 <sup>g</sup>	\$578	\$465				
<b>Financial position</b>												
Total document processing assets	\$18,158	\$17,140	\$15,178	\$14,421	\$13,488	\$12,415						
Total insurance assets	\$15,418	\$15,479	\$15,552	\$14,579	\$14,864	\$13,036						
Long-term debt	\$7,386	\$8,105	\$7,825	\$8,726	\$9,247	\$6,675						
Shareholders' equity	\$3,972	\$3,875	\$5,140	\$5,051	\$5,035	\$5,371	\$5,105	\$4,687	\$4,386	\$3,630	\$918	\$29
Per share												
Net income per common share <sup>b</sup>	(\$2.46)	(\$3.32)	\$3.91	\$5.51	\$6.56	\$3.50	\$5.35	\$4.52	\$3.46	\$6.69	\$2.33	\$0.13
Dividends per common share	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$2.80	\$0.65	\$0.05
Document processing employees at year end	97,000	99,300	100,900	99,000	99,000	100,000	99,032	100,367	101,636	117,247	59,267	2,973

<sup>a</sup>Includes the following special pretax charges: severance pay and other employee separation benefits (\$843 million), lease cancellation and site consolidation (\$258 million), write-down of various assets (\$94 million), litigation settlements (\$278 million).

<sup>b</sup>Before results of discontinued operations of .62 per share in 1993, -3.84 in 1990, -.67 in 1986, and +.98 in 1985 and special items of -7.97 in 1992 and +.43 in 1986.

<sup>c</sup>Includes insurance operations restructuring charge (\$778 million after tax).

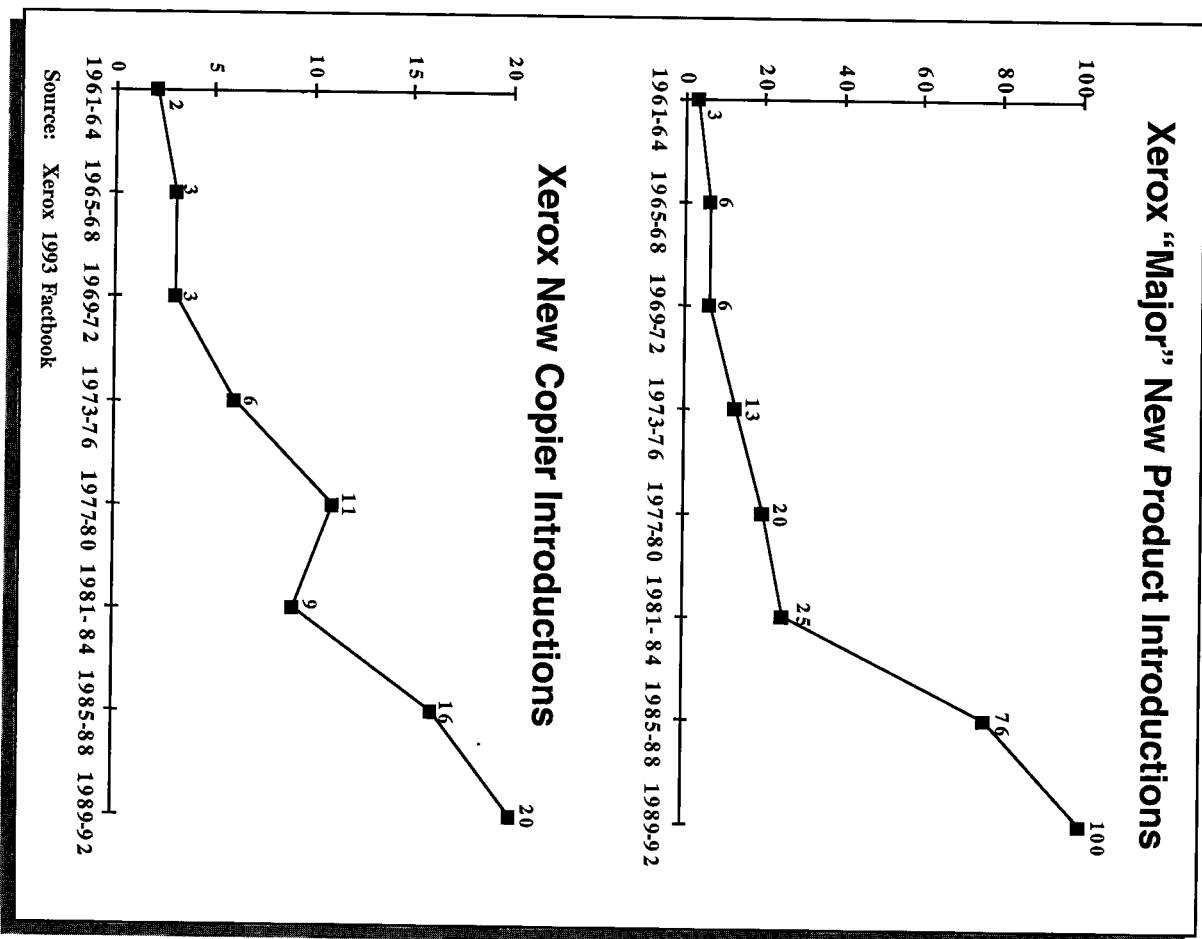
<sup>d</sup>Includes the following special after-tax charges: insurance operations restructuring (\$778 million), adoption of FASB SFAS 106, related to employee benefits (\$606 million); adoption of FASB SFAS 109, relating to income taxes (\$158 million).

<sup>e</sup>Includes a \$101 million after-tax charge for the costs of a workforce reduction.

<sup>f</sup>Includes a before-tax charge of \$375 million as a provision for real estate losses. In 1990 the company discontinued its real estate operation and related real estate financing operations.

<sup>g</sup>Includes several special pretax charges: write-off of excess electronic typewriter manufacturing capacity (\$140 million), overhead and employment reductions (\$100 million), revaluation of assets (\$35 million).

**EXHIBIT 2**  
Pace of Xerox Product Introductions

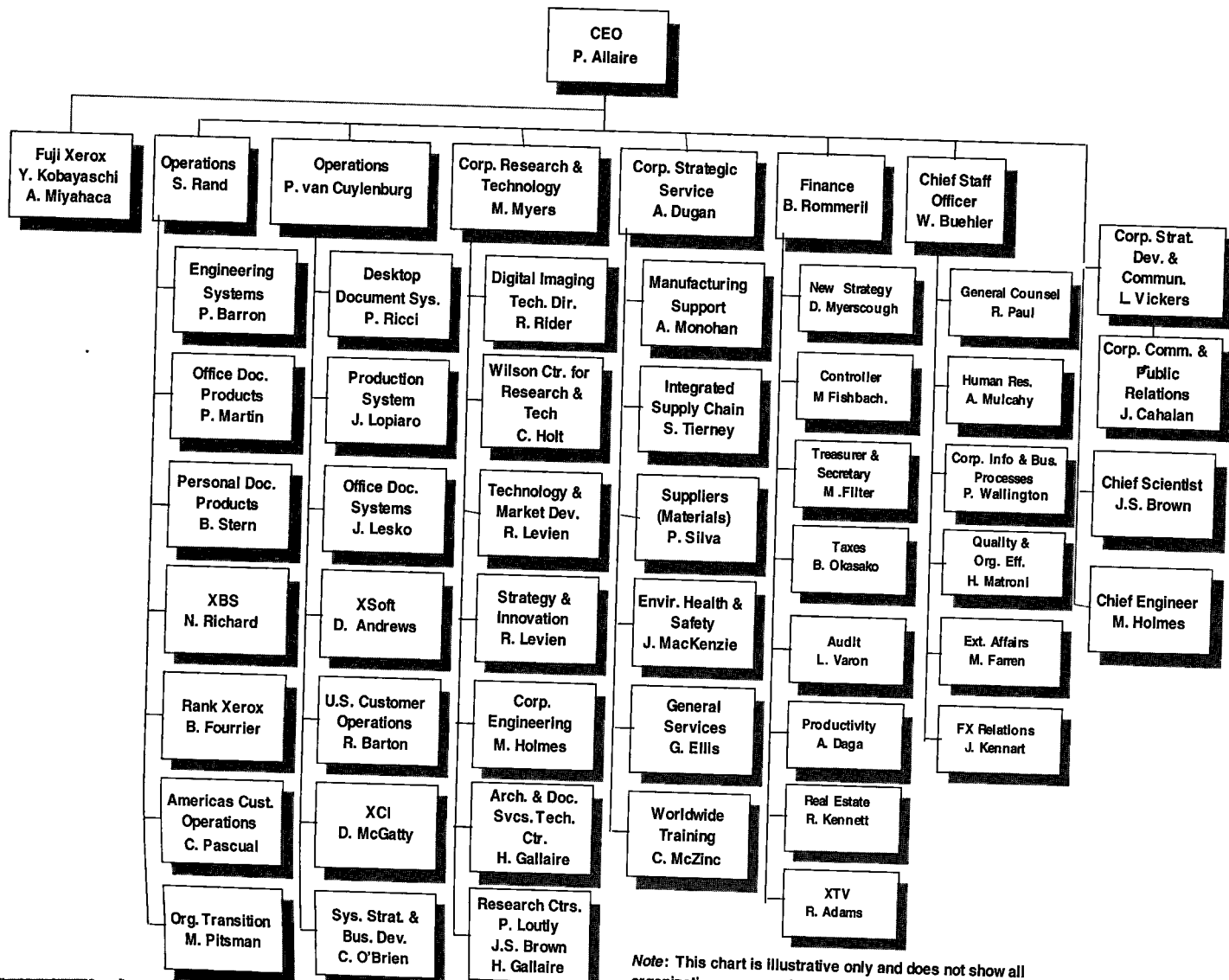


geographic lines<sup>8</sup> (see Exhibit 3). The nine market segment divisions were created to move decision making closer to the customer.

<sup>8</sup>ibid. Also see Xerox 1992 annual report, p. 4.

According to the 1992 annual report, "Each Xerox division [has] 'end-to-end' responsibility for a set of products and services, a set of primary market segments, an identifiable set of competitors and an income statement and

**EXHIBIT 3** Global Process and Information Management Structure



Note: This chart is illustrative only and does not show all organizations or reporting relationships.

balance sheet.”<sup>9</sup> Allaire, who was determined to do more than just change the formal structure, explained, “Many times people will change just the structure and reporting relationships. But if you want to change a company, you’d better change more than that. There’s the formal structure, and then there’s the way the company really works. You have to change the way it really works.”<sup>10</sup>

Reorganizing the corporation along customer lines meant redefining both operational and management processes. The company also focused on its core competencies, as underlined by its moves to sell its financial businesses. In January 1993 Allaire announced, “We’ve decided to disengage from our remaining Insurance and Other Financial Services businesses. . . . With the decision to exit from financial services, we can now focus clearly and unencumbered on our Document Processing business.”<sup>11</sup> Finally, Xerox announced in 1993 that it would be reducing the size of its document processing workforce by 10,000 (approximately 10 percent) over the next two to three years.

## Information Management at Xerox

Xerox established the corporate information management (CIM) unit in the early 1970s<sup>12</sup> to be responsible for managing data centers and networks; in 1987, however, these functions were moved to a separate division called the General Services Division (see Exhibit 4). Patricia Barron, appointed director of CIM in June

1987, explained CIM’s new mission: “[We were] to develop the information technology strategy for Xerox and ensure that it was implemented in all the business units.” Added Bill Glavin, vice chairman in the late 1980s, “We expected CIM to provide the overall information technology leadership to the company.”

Yet as Barron worked to provide this leadership, she found she would not be able to fulfill this mission without substantial organizational changes. “While senior management expected CIM to ensure that the \$500 million information technology budget was well spent, the business unit managers regarded attempts to audit expenditures as unnecessary,” Barron observed. In order to assess information management (IM) at Xerox, in 1988 she brought in an IT strategy consulting firm, which discovered numerous areas of concern. In particular, the diffusion of authority in IT decision making had created many IT problems at Xerox. The consultants elaborated:

There was no overall coordination or management of the hundreds of millions of dollars spent each year and no corporatewide management of IM investment priorities. The CIM organization at Xerox was not positioned, chartered, or staffed to perform many of the CIO functions. Overall, CIM was a peripheral player in the IT management picture because they were not chartered to direct or manage infrastructure or resourced to furnish leadership.

The IT function at Xerox possessed a narrowly focused IM talent pool, reported to senior managers who viewed IT infrastructure investment as an expense to be avoided, required redundant and overlapping efforts to find or reconcile the most basic information, and lacked effective staff development mechanisms.

It was clear that the 1989 Xerox IM infrastructure could not support the company’s strategic direction in the 1990s.

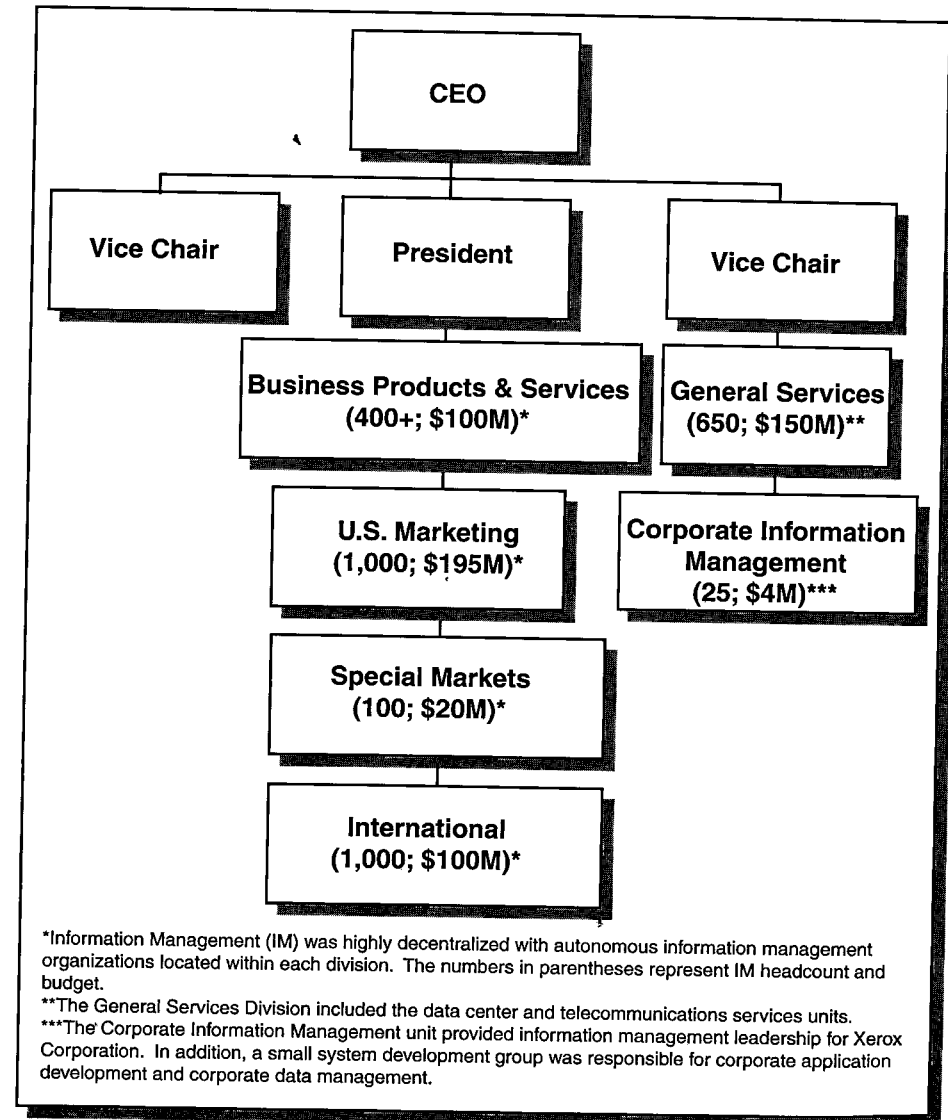
<sup>9</sup>Xerox 1992 annual report, p. 9.

<sup>10</sup>Chakravarty, op. cit., p. 76.

<sup>11</sup>Xerox 1992 annual report, p. 6.

<sup>12</sup>For further information see *Xerox Corporation: Leadership of the Information Technology Function (A)* (Harvard Business School Publishing No. 188-113).

**EXHIBIT 4**  
Xerox Corporation:  
IT Management Organization, 1988



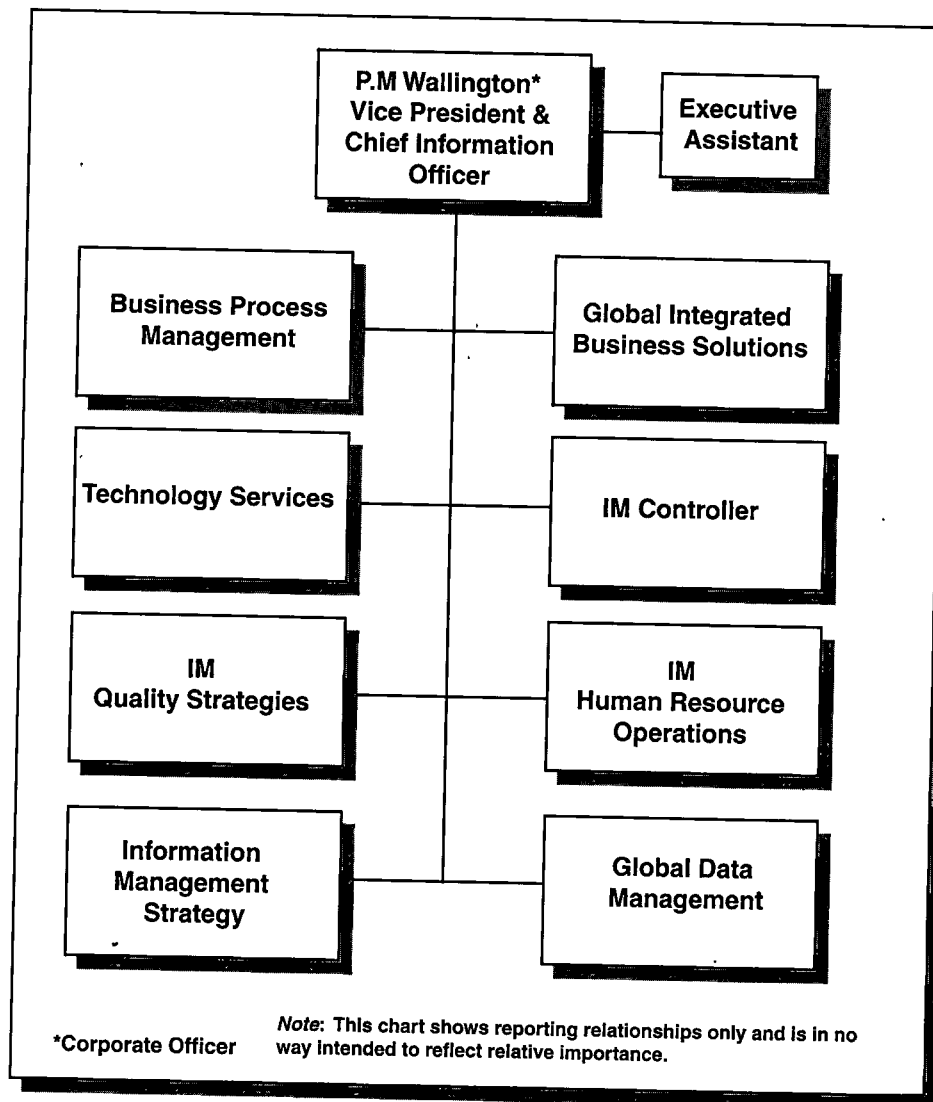
## Centralizing Xerox IM

In 1993, to align IM with the direction the company was taking, Patricia Wallington,<sup>13</sup> head of

<sup>13</sup>Wallington was appointed head of CIM in 1992; Barron, the previous head, was promoted to president of the newly created Office Document Products Division as part of the 1992 reorganization.

corporate information management, asked for and received direct authority over IM worldwide. (See Exhibit 5 for the new IM organization implemented by Wallington.) For several years IM managers had been addressing the problems Barron and the consultants had identified, but change had been slow. Thus, as the IM workforce tried to support the new Xerox divisional

**EXHIBIT 5**  
Xerox  
Information  
Management  
Organization,  
December 1993



structure, it became obvious that the existing information systems infrastructure was inadequate. IM was unable to provide the data needed to support Xerox's new divisions.

After investigating the extent of the problems facing IM, Wallington presented her findings at the Xerox Presidents Council meeting in April 1993. Xerox had spent \$670 million on IM dur-

ing 1992, a figure that was forecast to grow to \$1 billion by the end of the decade, she noted. IM personnel were well aware that the division presidents did not feel they were getting an adequate payback from what amounted to 3.7 percent of total Xerox revenues. Suzanne Higgins, head of IM management processes, commented on Wallington's presentation: "She actually pulled

together all this information; it was a real eye-opener. At that point the Presidents Council said we needed to get control of these dollars. There was a sense from the division presidents that they were not getting what they needed for the dollars being spent."

### The IM 2000 Project

To address IM problems, CIM started the "IM 2000" reengineering project in mid-1993. An initial IM 2000 design team was formed to identify IM problem areas and recommend strategies to address them. Projects supporting these strategies would be implemented by transitional teams, which would ultimately move IM to a new information systems infrastructure.

### Salient IM Problems

Xerox possessed an aging applications portfolio built on proprietary technologies created to support the earlier functionally structured organization.<sup>14</sup> IM appeared to be "trapped in a spending spiral on outdated legacy systems."<sup>15</sup> The corporate change to a divisional structure had exposed the inflexibility of existing information systems. Janice Malaszenko, head of the CIM strategy function, explained:

The company had reorganized the previous year to a divisional, product line focus versus what primarily had been a regional or geographic focus. Where our systems essentially fell apart was in not being able to supply information about how a particular division's products were doing globally. We were jury-rigging a lot of systems and a lot of data to try to respond to this new divisional structure. The division presidents were not getting the information they needed to run their businesses. We needed better access to information and flexible solutions that would be relevant even if the number of divisions changed.

<sup>14</sup>IM 2000, issue 2 (a Xerox internal publication), December 1993, p. 13.

<sup>15</sup>ibid., p. 5.

Dalal noted that in part, Xerox's "legacy"<sup>16</sup> systems prevented IM from addressing division needs. "I spent 110 percent of my time on legacy systems; there was not enough time to implement new ideas," he commented. "You had to maintain the old systems. It took a lot of resources and a lot of time. It was like an additional weight on your shoulders and prevented you from moving quickly forward."

There were financial challenges as well. "We were a support function in a company operating in a very competitive industry, and we had a hard time competing for the investments we needed in tools and training," noted Dick Bailey, a member of the core outsourcing team.

Finally, Xerox's culture, with its emphasis on autonomy, had allowed significant duplication of effort in IM across functional areas. "We had no consolidated list of applications—what their technology was, what development methods were used, or what business process they supported," one manager observed.

### Design Team Strategies

After studying IM's problems, the IM 2000 design team recommended specific strategies by which IM could quickly develop the IT infrastructure and capabilities required to provide Xerox's business divisions with the information they needed. (See Exhibit 6 for a graphic depiction of these strategies.) The four strategies were

1. *Reduce/redirect.* IM would seek to reduce overall costs by reining in the expense of legacy systems. A part of any savings would be retained by IM to fund new applications and infrastructure able to support new Xerox business processes.

<sup>16</sup>Legacy refers to transaction processing systems designed to perform a specific function which over time may not accurately reflect business information needs. In addition, as hardware and software improvements occur in the information systems (IS) marketplace, older IS solutions may be more costly to operate and maintain.