

Case Study 2.2

Classic Case: Paradise Lost: The Xerox Alto³⁵

Imagine the value of cornering the technological market in personal computing. How much would a five-year window of competitive advantage be worth to a company today? It could easily mean billions in revenue, a stellar industry reputation, future earnings ensured—and the list goes on. For Xerox Corporation, however, something strange happened on the way to industry leadership. In 1970, Xerox was uniquely positioned to take advantage of the enormous leaps forward it had made in office automation technology. Yet the company stumbled badly through its own strategic myopia, lack of nerve, structural inadequacies, and poor choices. This is the story of the Xerox Alto, the world's first personal computer and one of the great "what if?" stories in business history.

The Alto was not so much a step forward as it was a quantum leap. Being in place and operating at the end of 1973, it was the first stand-alone personal computer to combine bit-mapped graphics, a mouse, menu screens, icons, an Ethernet connection, a laser printer, and word processing software. As a result of the combined efforts of an impressive collection of computer science geniuses headquartered at Xerox's Palo Alto Research Center (PARC), the Alto was breathtaking in its innovative appeal. It was PARC's answer to Xerox's top management command to "hit a home run." Xerox had profited earlier from just such a home run in the form of the Model 914 photocopier, a technological innovation that provided the impetus to turn Xerox into a billion-dollar

company in the 1960s. The Alto represented a similar achievement.

What went wrong? What forces combined to ensure that no more than 2,000 Altos were produced and that none was ever brought to market? (They were used only inside the company and at some university sites.) The answer could lie in the muddled strategic thinking that took place at Xerox while the Alto was in development.

The history of Xerox during this period shows a company that stepped back from technological leadership into a form of incrementalism, making it content to follow IBM's lead in office automation. *Incrementalism* refers to adopting a gradualist approach that plays it safe, avoiding technological leaps, large risks, and consequently the possibility of large returns. In 1974, Xerox decided to launch the Model 800 magnetic tape word processor rather than the Alto because the Model 800 was perceived as the safer bet. During the next five years, a series of ill-timed acquisitions, lawsuits, and reorganizations rendered the Alto a casualty of inattention. What division would oversee its development and launch? Whose budget would support it, and PARC in general? By leaving such tough decisions unmade, Xerox wasted valuable time and squandered its technological window of opportunity. Even when clear indications showed that competitor Wang was in line to introduce its own line of office systems, Xerox could not take the step to bring the Alto to market. By 1979, Xerox's unique opportunity was lost. No longer was the

Alto a one-of-a-kind technology, and the company quietly shelved any plans for its commercial introduction.

Perhaps the ultimate irony is this: Here was a company that had made its name through the phenomenal success of a highly innovative product, the Model 914 photocopier, but it did not know how to handle the opportunities presented by the next phenomenon. The Alto was so advanced that the company seemed unable to comprehend its possibilities. Executives did not have a strategic focus that emphasized a continual progression of innovation. Instead, they were directed toward remaining neck-and-neck with the competition in an incremental approach. When competitor IBM released a new electric typewriter, Xerox responded in the same incremental way. The organizational structure at Xerox did not allow any one division or key manager to become the champion for new technologies like the Alto.

In 1979 Steven Jobs, president of Apple Computer, was given a tour of the PARC complex and saw an Alto in use. He was so impressed with the machine's features

and operating capabilities that he asked when it was due to be commercially launched. When told that much of this technology had been developed in 1973, Jobs became "physically sick," he later recounted, at the thought of the opportunity Xerox had forgone.

Questions

1. Do you see a logical contradiction in Xerox's willingness to devote millions of dollars to support pure research sites like PARC and its refusal to commercially introduce the products developed?
2. How did Xerox's strategic vision work in favor of or against the development of radical new technologies such as the Alto?
3. What other unforeseeable events contributed to making Xerox's executives unwilling to take any new risks precisely at the time the Alto was ready to be released?
4. "Radical innovation cannot be too radical if we want it to be commercially successful." Argue either in favor of or against this statement.