

Throughout business history, early technology pioneers rarely prevail in the end. VisiCalc, for example, was the first major personal computer spreadsheet.²⁶ Where is VisiCalc today? Do you know anyone who uses it? And what of the company that pioneered it? Gone; it doesn't even exist. VisiCalc eventually lost out to Lotus 1-2-3, which itself lost out to Excel.²⁷ Lotus then went into a tailspin, saved only by selling out to IBM.²⁸ Similarly, the first portable computers came from now-dead companies, such as Osborne computers.²⁹ Today, we primarily use portables from companies such as Dell and Sony.

This pattern of the second (or third or fourth) follower prevailing over the early trailblazers shows up through the entire history of technological and economic change. IBM did not have the early lead in computers. It lagged so far behind Remington Rand (which had the UNIVAC, the first commercially successful large-scale computer) that people called its first computer "IBM's UNIVAC."³⁰ Boeing did not pioneer the commercial jet. De Havilland did with the Comet, but lost ground when one of its early jets exploded in midair, not exactly a brand-building moment. Boeing, slower to market, invested in making the safest, most reliable jets and dominated the airways for over three decades.³¹ I could go on for pages. GE did not pioneer the AC electrical system; Westinghouse did.³² Palm Computing did not pioneer the personal digital assistant; Apple did, with its high-profile Newton.³³ AOL did not pioneer the consumer Internet community; CompuServe and Prodigy did.³⁴

We could make a long list of companies that were technology leaders but that failed to prevail in the end as great companies. It would be a fascinating list in itself, but all the examples would underscore a basic truth: Technology cannot turn a good enterprise into a great one, nor by itself prevent disaster.

History teaches this lesson repeatedly. Consider the United States debacle in Vietnam. The United States had the most technologically advanced fighting force the world has ever known. Super jet fighters. Helicopter gunships. Advanced weapons. Computers. Sophisticated communications. Miles of high-tech border sensors. Indeed, the reliance on technology created a false sense of invulnerability. The Americans lacked not technology, but a simple and coherent concept for the war, on which to attach that technology. It lurched back and forth across a variety of ineffective strategies, never getting the upper hand.

Meanwhile, the technologically inferior North Vietnamese forces

adhered to a simple, coherent concept: a guerrilla war of attrition, aimed at methodically wearing down public support for the war at home. What little technology the North Vietnamese did employ, such as the AK 47 rifle (much more reliable and easier to maintain in the field than the complicated M-16), linked directly to that simple concept. And in the end, as you know, the United States—despite all its technological sophistication—did not succeed in Vietnam. If you ever find yourself thinking that technology alone holds the key to success, then think again of Vietnam.

Indeed, thoughtless reliance on technology is a *liability*, not an asset. Yes, when used right—when linked to a simple, clear, and coherent concept rooted in deep understanding—technology is an essential driver in accelerating forward momentum. But when used wrong—when grasped as an easy solution, without deep understanding of how it links to a clear and coherent concept—technology simply accelerates your own self-created demise.

TECHNOLOGY AND THE FEAR OF BEING LEFT BEHIND

The research team ferociously debated whether this topic merited its own chapter.

"There must be a technology chapter," said Scott Jones. "We're bombarded by the importance of technology these days at the business school. If we don't address it, we'll leave a huge hole in the book."

"But it seems to me," countered Brian Larsen, "that our technology finding is just a special case of disciplined action, and it belongs in the previous chapter. Disciplined action means staying within the three circles, and that's the essence of our technology finding."

"True, but it is a *very* special case," pointed out Scott Cederberg. "Every one of the companies became extreme pioneers in the application of technology long before the rest of the world became technology obsessed."

"But compared to other findings like Level 5, the Hedgehog Concept, and 'first who,' technology feels like a much smaller issue," retorted Amber Young. "I agree with Brian: Technology *is* important, but as a subset of discipline or perhaps the flywheel."

We argued throughout the summer. Then Chris Jones, in her typically