THE INNOVATOR'S DILEMMA: When New Technologies Cause Great Firms to Fail

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"Successful companies can fail by making the 'right' decisions in the wrong situations"

The Department of Defense has a history of successfully pushing technological innovation to advance America's military dominance and to benefit citizens—GPS technology, auto-injector syringes (the basis for EpiPens), and digital photography to cite a few. Yet Christensen points out that an organization's very success and capacity, born from making the "right decisions" at critical points, can actually hamper future success in the face of changing mission, technologies, and threats. To meet this challenge, Christensen examines innovation theory and how organizations can build a structure to sustain yesterday's successes and design new technologies that result in the next disruptive innovations.

Christensen describes two types of technologies: sustaining and disruptive. Sustaining technologies improve a current technology's performance and typically involve making incremental improvements in the performance of products that have an established role in the market; large organizations typically focus on sustaining technologies. Christensen asserts that many of these same large organizations have problems anticipating and responding to disruptive technologies, or innovations that solve problems before the market recognizes the need. These technologies eventually disrupt the existing market, displacing the established market leaders and alliances. Larger, more storied organizations are not insulated from disruptive technologies. Christensen says, *"huge size constitutes a very real disability in managing innovation."*

While Christensen seems to paint a grim picture for large organizations, he presents a methodology that can increase the organization's ability to identify, develop, and successfully bring to market emerging, potentially disruptive technologies before they overtake the traditional sustaining technology. The first challenge facing an organization is the lack of available data: *"Markets that do not currently exist cannot be analyzed,"* and one cannot predict what technologies will be embraced by the market or the probability of success. Christensen proposes that organizations engage in *discovery-driven planning,* which operates on *"learning by doing."* The key obstacle to success with this approach is the stigma of failure. He is clear though that *"failure is an intrinsic step toward success."* This is addressed by organizations leaving room for, and in fact

embracing, failure in the planning phase and being willing to make an investment in what may be a potentially disruptive technology. *"In reality, spinning out is an appropriate step only when confronting disruptive innovation."*

Christensen continues that once a potentially disruptive technology is identified, organizations must circumvent the hierarchy and bureaucracy that can stifle the free pursuit of creative ideas. He suggests that organizations provide experimental groups within the firm – similar to Lockheed Martin's "Skunk Works"– with a free rein to develop and quickly market the new technology. *"With a few exceptions, the only instances in which mainstream firms have successfully established a timely position in a disruptive technology were those in which the firms' managers set up an autonomous organization charged with building a new and independent business around the disruptive technology."* he says.

The Innovator's Dilemma is of interest to requirements and acquisition community stakeholders because the Department relies on both sustaining and disruptive technological solutions to maintain its advantage. By applying the methodology that Christensen outlines along with a tolerance for failure, executives, program managers and engineers are more likely to successfully identify and investigate new disruptive technologies that can be adopted, developed, and supplied to the warfighter.

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