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GE's Digital Big Swing

By Thomas H. Davenport

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Some companies seem to understand that we are in a period of business transformation in which information technology plays the most important role. Others don't. Those who do GE t it tend to embark on what I call "digital big swings" to reshape their products, services, and business processes. To my mind they are going to be the companies that thrive in the future.

There are a growing number of examples of this phenomenon. I'll focus on one, GE, for most of this column. But there are others to choose from, each with a different focus. Monsanto Co., which I wrote about here, is developing prescriptive planting services from data and analytics. Barclays is transforming its consumer financial business by providing better information. Procter & GambleCo. made a big bet on better internal decision-making. And practically everything Google Inc. does is a digital big swing.

GE is taking a digital big swing that's based on what it calls the Industrial Internet. I don't know how it will all turn out in the end, since it's a big bet that will take a long time to play

out. But as I'll argue later, it seems to already be paying off for the 123-year-old firm. By the way, I have done a little bit of compensated speaking for GE, but I don't have any other stake in the company.

The new focus at GE first became apparent in 2011, when the company announced it was building a new software and analytics capability in the East Bay area of San Francisco. Shortly thereafter I met Bill Ruh, the new head of the initiative, who had helped to build the Advanced Services business at Cisco Systems Inc. Mr. Ruh told me he planned to hire about 400 data scientists, which is about as ambitious a hiring plan as there is. The hirings and the new center were the heart of a $1 billion investment in software development, the WSJ reported at the time. Perhaps obviously, at that scale your CEO needs to be behind the investment, and Jeffrey Inmelt has been an enthusiastic supporter and even driver of the Industrial Internet program.

It soon became apparent to me why this seemingly out-of-the-blue move made a lot of sense. The Internet of Things (IoT) was starting to take off, and GE saw sensor data and analytics as a way to understand how its industrial products performed after installation. The company gets about 75% of its industrial business earnings from services—which could be transformed with better information and capabilities like predictive asset maintenance. Other companies were knocking on GE customers' doors and offering to begin connecting up industrial devices. That focus on the industrial side of the house allowed GE to replace revenues and profits as it sold off much of its GE Capital businesses.

So the company stepped up to the plate with a big, expensive new bat. In addition to hiring a bunch of data scientists, Mr. Ruh and his colleagues decided that GE needed to have a common way to connect and manage data from industrial devices—an Industrial Internet platform, so to speak. The platform came to be known as Predix. The internal integration across GE's diverse businesses—extracting and managing data from gas turbines, jet engines, locomotives, MRI machines, and so forth—is almost as difficult as integrating data across companies and industries. And being the commercially-focused company that it is, GE decided to market Predix, analytics software of various types, and cloud-based services for the Industrial Internet to the external world. It also partnered with companies like Pivotal, Accenture PLC, and AT&T Inc., and invested in several key partners as well.

Although it's a bit early to declare victory—as I have written here, the IoT is a long game—things seem to be moving in the right direction for GE's big swing. The company's industrial businesses are growing rapidly—19% year over year at the last quarterly financial

announcement—and its industrial devices are becoming somewhat less commoditized. New products from various GE businesses, like the Digital Wind Farm for wind turbines, and the Movement Planner for locomotives, are harnessing sensor data and analytics. Service margins for the industrial businesses grew over the last year by 130 basis points. The couple of billion or so invested in the software business is looking like a wise move given that the business will yield about $6B in revenues this year.

This was a bold move for GE, but a logical one. Companies in all sorts of industries should be making similar types of decisions, although each specific digitization focus will differ according to the company's strategy and competitive situation. In retrospect, GE's decision seems almost obvious, but most of its competitors have not made similarly aggressive moves toward the IoT. I suspect that they now wish they had. GE's digital big swing may not be the key to its success for another 123 years, but it is likely to give the company a successful push into the future.

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