Why Wal-Mart Had To Deploy RFID

If the retailer didn't move to use RFID in its supply chain, it risked allowing upstarts to use the new technology to erode Wal-Mart's competitive advantage.

Nov. 29, 2004—Many business strategists, academics and pundits view Wal-Mart's deployment of RFID technology as an incremental improvement in operational efficiency. They don't see it as a strategic move because the technology is being standardized, and other retailers can deploy it so there's no competitive advantage? I believe that deploying RFID is a strategic move by Wal-Mart—one the company had to make.

Throughout the last century, many successful businesses have deployed emerging technologies to gain an edge on their competition. By becoming the first to leverage a particular technology, they gained a first-mover advantage. As the technology matures and becomes available off-the-shelf, competitors have used it to try to catch up. But when the first move deploys the technology in innovative ways that support their business strategy, the technology can help to create an entirely new form of competitive advantage or extend an existing advantage.

With its low-cost business model, Wal-Mart maintains an edge by having highly efficient supply chain operations. Wal-Mart’s large scale and power in its industry means it can leverage its purchasing power on suppliers to drive down prices. Its efficient operations can then cost effectively distribute these goods from its distribution centers to its stores. Technology plays only a supporting role to Wal-Mart’s overall business success, but Wal-Mart must pay continual attention to advances in IT. Any emerging technology that has the potential to take significant cost out of the supply chain can change industry dynamics and shift the balance of power in an industry with razor-thin margins.

Wal-Mart’s RFID mandate was therefore a classic strategic move. Wal-Mart detected the potential of RFID to take cost out of the supply chain very early on and quickly moved to not only adopt the technology but also to neutralize the threat that it posed to their industry. By using its industry strength, it was able to push out infrastructure costs to suppliers, limit its own exposure to costs, and reap the benefits through its own supply chain. The mandate also helps to speed the commoditization of the technology by making it more pervasive. This helps to mitigate Wal-Mart’s risk of being adversely affected by others adopting the technology since it becomes a common way of doing business.

The fact that Wal-Mart adopted the technology and issued a mandate to speed adoption and control its internal cost shows that the retailer recognized the technology as a key competitive enabler in its industry. A retailer adopting the technology stands to take millions or even billions of dollars of cost out of their supply chain operations and can translate these cost savings into increased profit margins at the point of sale. Additionally, the retailer can cut prices and further extend its low-cost advantage. Had Wal-Mart been slow to adopt RFID, it could have lost ground to other competitors who moved aggressively to exploit the technology's potential.

The issue of the timeframe for adoption is important as well, and there is, contrary to popular belief, a considerable time window for sustainable competitive advantage from RFID. Barcoding took fifteen years to be widely implemented in the retail industry. Even if it takes just five to 10 years for RFID to become pervasive in the consumer packaged goods industry (an aggressive estimate since the technology has already been around since World War II), that is a considerable amount of time for early adopters to gain competitive advantage in the initial years. In fact, with most Fortune 500 companies having a life expectancy of forty to fifty years, even if RFID is completely commoditized and provides no competitive advantage after another five years, those initial five years where it does provide advantage equate to over 10 percent of the lifespan of a typical corporation.

The lesson learned is that even organizations where technology plays a minor role in their overall business strategy need to keep a careful eye on emerging and disruptive technologies and react accordingly. It is critical to understand your organizations' business strategy and form of competitive advantage, and then understand how technology innovation and enablers can positively or negatively influence the dynamics of your business processes, your organization itself, and even your entire industry.

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