

Team Project - Week 4

RFID in the Retail Industry

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Industry's primary function, size, and output:

The primary function of the retail industry is where businesses sell goods and services to customers through different channels of distribution to make a profit. However, there are varieties of retail sectors such as department stores, discount stores, multi-channel stores, specialty stores and more. With all these different sectors, the retail industry can be divided into two categories which are hard retail and soft retail. The hard retail category includes appliances, electronics, furniture, while the soft retail category includes clothing and fabrics. In terms of retail size, according to a Forbes article, retailers had \$3.53 trillion in sales in 2017 and the retail sales are expected to increase between 3.8 to 4.4% in 2018. (Anders, 2018).

Types of workers who are employed by the industry and any qualifications or certifications they are required to have:

The Retail industry using the RFID technology would require people from Supply Chain Management background, Operations, IT and Support Engineers, Telecommunication Engineers, Data Warehouse Management Specialists, Data Analysis Specialist, Hardware developers, and Systems, Quality, and Security Engineers. An expertise in these fields can be obtained with an educational background and relevant work experience in that industry.

Companies that would use RFID technology will have customized requirements specific to their business needs and will build their own certification programs in the near future.

One company that is leading right now with their certification program is Amazon Web Services. It provides knowledge of best practices in cloud architecture, management, and security.

Important facts about the industry

According to the National Retail Federation, retail sales are expected to grow between 3.8 and 4.4% in 2018. In 2017, retailers reported \$3.53 trillion in sales, a 3.9% increase from 2016 as per the US Census Bureau. (Anders, 2018). According to SML, a global business and branding solutions provider, the RFID market is growing 30% per year and is widely being adopted in the retail industry.

Companies like Macy's, Walmart, Target have adopted the RFID technology. SML says that RFID tags improve inventory accuracy by more than 98%, as opposed to "usually less than 70% in store". Target has already said that tagging its inventory has increased its online sales by up to 50%. (Patrick, 2017). According to Dean Frew, CTO and SVP, RFID Solutions, SML-RFID, "Over the next five years about one-third of apparel and footwear retailers will adopt RFID technology because power is now in the hands of consumers." (Frew, 2017).

Evolution of Retail in the Internet Era

With the emergence of the Internet in the 90s, retailers adopted e-commerce as a new channel of reaching their audience and building a brand. Today, the boundary between

online and physical worlds is blurring rapidly with the ubiquity of mobile phones and mobile e-commerce. Most major retailers have adopted omnichannel retailing - online and offline presence, and have improved the overall shopping experience for consumers. Omnichannel retailers have consistent pricing across their chain of stores and allow shoppers to buy online and pick up at the store, shop online and receive home delivery or just buy the item at the store the old-fashioned way. Fashion and clothing retailers like H&M, Uniqlo, Zara, and Forever21 are utilizing Cloud technology to optimize their processes - design, manufacturing, supply chain and sales (Ellis,2015). This has enabled them to gain a competitive edge over other traditional retailers as they can have the latest collection available at the earliest at multiple locations with consistent and competitive prices.

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