



## **PRE-READING ASSIGNMENT NO. 1 (4 pages)**

### **WEEK 1 SYLLABUS: EXPONENTIAL TECHNOLOGIES**

#### **(The Drivers of Digital Transformation)**

## **DIGITAL TRANSFORMATION AND TECHNOLOGY INNOVATIONS**

### **What Is Digital Transformation?**

Digital transformation is the incorporation of computer-based technologies into an organization's products, processes and strategies. Organizations undertake digital transformation to better engage and serve their customers and thus improve their ability to compete. A digital transformation strategy positions organizations to survive and thrive in a future where technology is the key economic driver.

A digital transformation initiative can require an examination and reinvention of all facets of an organization, from supply chains and workflows, to employee skill sets and org charts, to customer interactions and value proposition to stakeholders. Successful digital transformations yield ongoing business benefits. Digital technologies and processes enable organizations to adeptly respond to customer demands in the present and as demands evolve. Digital transformation also builds the infrastructure and skills required for taking advantage of fast-evolving technologies that could confer a competitive advantage.

### **Importance of Digital Transformation**

The digitization of society started in the late 20th century and underwent rapid acceleration in the first two decades of the 21st century, spurring a growing need for digital transformation across industries. Indeed, many organizations believe they must either adapt to the changing market forces driven by digitization or face extinction. According to Dell's Digital Transformation Index 2021, a third of enterprise leaders are worried their organizations will not survive in the upcoming years, while 60% thought they'd survive but would shed many additional jobs and take years to return to profitability.



The need for transformation is exemplified in the often-cited case of **Blockbuster**, which, in the early 2000s, was a global entity with video rental stores throughout the United States and around the world. But its presence and relevance precipitously declined from about 2005 onward, as Netflix and others harnessed emerging technologies and capitalized on the consumer appetite for on-demand entertainment delivered via highly profitable streaming video services. The power of digital technologies to disrupt is also evident in the rise of Amazon from online bookseller to an electronic commerce (e-commerce) juggernaut that redefined the retail industry.

The danger of market leaders being displaced and disrupted is expected to continue, as emerging technologies enable new business models, more engaging customer experiences, novel products and services, and other innovations.

## Digital Transformation Drivers

Technology's ability to rapidly collect, generate, analyze and transmit data is the principal driver of digital transformation. Artificial intelligence (AI), cloud computing, mobile technologies, social media platforms and next-generation technologies, such as the internet of things (IoT), edge computing and robotic process automation (RPA), have dramatically changed how quickly we get information.

The application of these technologies in the marketplace by digital leaders like **Amazon, Airbnb, Uber, Grab** and others has changed the kinds of products and services people expect. Consumers expect companies to respond quickly, as well as to provide products and services tailored to their needs. They have also have come to expect intuitive, easy-to-use interfaces, and they generally prefer digital interactions that can happen anytime from any device. The same technologies affecting the consumer market are also are transforming workplaces by, for example, automating business processes that, until recently, were done manually; enabling work-from-anywhere environments; providing insights into ever-growing stores of customer data; and providing tools that facilitate collaboration among local and far-flung workforces.



## Digital Transformation Examples

Examples of digital transformation success in business are plentiful but here three high profile case studies.

### Case Study 1: Domino's Pizza

Pizza giant Domino's has been successful at implementing technology-driven transformation to evolve into "an e-commerce company that sells pizza," as Senior Vice President and Chief Digital Officer Dennis Maloney has put it. After the company's stock price plummeted in 2008, Domino's implemented a multipronged initiative aimed at revamping its menu and at using technology to increase agility.

As part of its effort to deliver better products and services to customers, the company launched Domino's Tracker, a next-gen delivery technology at the time that allowed customers to follow the progress of their order online. Today, Domino's **AnyWare** technology lets customers order in more ways on more devices.

The company has touted its use of artificial intelligence and machine learning technology to improve product quality and boost store and online operations. The use of autonomous vehicles and drones for pizza delivery, in addition to its AnyWare technology, has put Domino's in the vanguard of companies that have mastered what research firm Gartner called *multi-experience customer service*.

Experts who have studied the company's success in infusing digital and innovation into its business agreed that its new profile as the "pizza experience company" depended on strong executive support. Creating an extensive and empowered IT department that collaborates with marketing counterparts to attract new and existing customers was also critical to the company's digital transformation.

The ROI has been impressive. Compared with its year-end 2008 stock price of \$4.71, Domino's Pizza stock closed at \$385.71 a share at time of publication -- a rise of 2,152%.



## Case Study 2: Walmart

Retail giant Walmart has been on a journey to transform itself into a technology and innovation company, with the goal of making shopping faster and easier for its customers and offering new digital experiences. Walmart has geared its focus from replatforming its e-commerce business to replatforming across the board and put the digital transformation budget in place to do it, spending \$11.7 billion on technology in 2018. It partnered with Microsoft to capitalize on the cloud giant's compute capacity to scale its artificial intelligence, machine learning and data analytics initiatives, and with Google for voice-enabled shopping. The company has been consistently investing in digitalizing every aspect of its business - from supply chain to sales, customer service, marketing and store operations - to boost its operational and cost efficiency. Walmart's supply chain digitalization is integral to its omnichannel strategy success, which enables the company to serve customers through online, mobile and in-store interactions. All Walmart did was do what people like about Amazon: a really nice experience; customized, great shipping; and good prices. And they just did that and did not try to get over-fancy.

## Case Study 3: Tesla

Electric carmaker Tesla is inarguably one of the most prominent examples of digital transformation success. By infusing technology into all facets of the driving experience, the company has positioned itself as a change agent within the automotive industry. From Tesla cars receiving over-the-air software updates to the company setting a high bar for customer experience, Tesla has disrupted the traditional auto world in myriad ways. Tesla's direct-to-consumer model, where it sells directly to consumers through its website and not through franchised dealerships, has allowed it to control the customer-buying experience. Tesla's in-house production strategy (as opposed to sourcing components from third-party suppliers) provides cost advantages and helps the company to innovate quickly. The launch of Tesla Gigafactory to support its projected vehicle demand has given it a major edge over legacy automakers. Today, Tesla's market cap is \$830 billion and it holds an 18% market share of global electric vehicle sales.