Unit - 3

Digital Transformation in Automobile

What does a Digital Transformation in Automotive Industry look like?

The automobile industry is moving faster than ever before, thanks to the introduction of new technology within the plant and novel consumer goods being introduced. Automotive manufacturers have been integrating digital technology into all aspects of their operations, from product design through procurement, production, and supply chain management, as well as sales and marketing.

A fantastic example is using digital technology to improve online customer support. For example, automobile dealerships that use eCommerce to offer their products directly to customers. Whether it's automobiles, car components, or even accessories.

OEMs and tier suppliers can also use digital transformation to examine their processes and identify what changes they need to make in order to bring these new products to customers.

Examples of Digital Transformation in Automotive Industry

There are many great examples of digital transformation in automobile industry, ranging from product innovation to operational adjustments to customer-facing changes. The following are some examples of how automobile firms have embraced digital transformation:

- Mercedes-Benz teamed with the start-up Circular to measure emissions of climate-relevant pollutants and the quantity of secondary material used in the supply chain of battery cell manufacturers.
- Cisco and Oxbotica, a worldwide autonomous vehicle software startup, have teamed together to showcase an open roaming platform that allows autonomous fleets to securely share large amounts of data while on the road.
- BMW's Regensburg facility used an IoT platform to remarkable effect. It enables them to minimize deployment time by 80% and quality control concerns by 5%.
- Volkswagen collaborated with developers of augmented reality applications to designate car parts with the appropriate equipment to be used in the repair process. Technicians can work more efficiently using this technology, which is known as MARTA.
- Automotive paints and supplies are historically an offline business. PBE Jobbers Warehouse, an auto body equipment wholesaler, integrated its eCommerce, CRM, and ERP systems.

Digital Transformation in Automotive Industry and its impact on customer service

Some elements of automobile buying have origins in the 20th century and until now have changed somewhat. For the selling of new vehicles, eCommerce is for dealers and consumers, but the traditional shopping experience has always been more important. Moreover, the efforts to incorporate digital instruments like iPads in showrooms have done well to enhance customer service.

In 2022, we see a revolution in the world, and clients of all kinds are more likely to go online. Sellers of all sorts, whether offline, B2C, or B2B, can try to enhance the digital experience and interact with clients on social media or the app. This trend can be accelerated.

Within the next two to five years, the automobile sector will see the creation of a distinct digital, connected supply chain. It is essential for all stakeholders in the industry to digitally manage the business by creating an intelligent and digital supply chain.

Additionally, the COVID epidemic has compelled manufacturers to examine their systems more closely in order to see how they can perform more effectively under such challenging circumstances. Production is hampered by issues like chip shortages. Demands for remote monitoring and control, as well as reporting, have increased. Fortunately for automakers, the pandemic has subsided, resulting in an increase in income for the manufacturers, since a greater number of individuals are driving rather than flying.

Automotive manufacturers are expected to raise their digital investment by up to 24% in the next several years, as they confront unprecedented competition, new product needs like electrification, and more.

Top 7 Digital Transformation Trends in the Automotive Industry

Connectivity is the most important

Connectivity is the word that suits the present atmosphere perfectly. It is more than a pleasant supplement. This is a consumer-required requirement.

Nowadays, many drivers want access to applications, music, and social media accounts. They basically don’t want to be limited. Vehicle manufacturers strive to develop vehicles that allow drivers to run their companies and maintain their social lives while driving to meet their requirements and desires.

Only a couple of years ago, people dreamed of owning cars with Wi-Fi. Nowadays, the need for digital connectivity among younger car buyers makes such vehicles widely available. Manufacturers are soon aware that without such networking features it is now impossible to market or to sell vehicles.

Personalized consumer experience

Around 74% of managers think output levels in Western Europe will be below 5% by 2030, which is a 60% decrease by 2017.

The decrease would allow greater transparency and reduced costs in the supply chain. The processes of design, production, and distribution will also be speeded up. In addition, enhanced communication options would allow a factory to receive direct feedback. The

efficiency changes, flexibility, and development would remove the barriers to the construction of intelligent plants.

Predictive maintenance based on IoT connectivity tools

This approach delivers excellent results such as early failure detection and an over 30 percent increase in maintenance.

This technology collects vehicle performance data, uploads it to the cloud, and evaluates any chance that the software and/or hardware of a vehicle will malfunction. The driver will receive notice and advice on any repair or service required to prevent injuries or accidents after processing. Basically, the need for devaluation is eliminated from predictive maintenance technology.

Advanced data security and protection

The car industry is the second most data-driven industry in the world and thus manufacturers collaborate with software development companies.

Modern intelligent cars gather information on traffic patterns, drivers, their regular locations, and more. These data are useful to engage and communicate with drivers. However, to protect driver information, connected systems must be safe. That is why manufacturers are always looking for new defense and safety developments.

Service-oriented mobility

Since moving towards service-oriented mobility modes from private vehicles, Uber has had huge success in its niche.

Vehicles become a vital part of the integrated living environment. In addition, startups like Uber reduce the huge cost of car purchasing, registration, and servicing, and provide some financial assistance.

Digitized vehicle manufacturing industry

2022 will be another year of exciting challenges and changes that bring the world closer to a technologically advanced future.

Much earlier than most people think, progress in the industry can be measured and/or used. Digital transformation in automotive also helps the world and drivers. Manufacturers still have many problems to address, but the automotive sector is changing for the better and better.

Digital transformation in the car buying process

Just a few cars are on display in London’s Audi Virtual Showrooms, but use large video screens for purchasing details.

The method to buy a car was frustrating, as the disruptive seller's stereotype proved valid. Purchasing a new car frequently did not receive information and felt most stressed. Buyers can however check online before visiting a dealer thanks to new digital technology.

Challenges of Digital Transformation in Automotive Industry

Most programs for digital transformation in automotive industry focus on technology-driven developments and customer requirements to remain competitive. In addition, it is very competitive and associated with numerous other sectors in the automotive industry. Trends such as digital transformation in automotive manufacturing, environmental considerations, mobility as a service, and predictive computing are several advantages but also highlight multiple industry challenges. Some of them are here:

Investment

Cash protection and risk management are the key areas of emphasis in this complex economic environment. If car companies concentrate on productivity, they will focus on investments that increase the visibility of the supply chain, efficiency in sales, and customer service. They will have to concentrate on the most valuable use cases with the highest ROI for companies that invest in automotive digitalization. The biggest challenges will remain to forecast the ROI of emerging technology and to find optimal applications in the automotive sector.

A few years ago, for example, the press announced the most significant autonomous truck disruptor. But the arrival of entirely self-sufficient vehicles has been delayed since then. Deloitte's 2020 study revealed that most consumers in Germany (67%) and Japan (61%) do not wish to pay over $500 in their cars for autonomous vehicle technology options. The story is close to the revolutionary technology for powertrains. 58% of German and 54% of US customers replied that they would not pay for alternative-fuel engines more than $500. The shaking investment climate and uncertain consumer technology demand remain some big obstacles for this technological development's key supporters.

Resistance of change

The industry should do more to promote critical strategies for transformation. For instance, anxiety about fields remains a real problem as the range of electric cars grows. The fragmented nature of the automotive industry makes it difficult to push charging infrastructures worldwide or nationally. There is also a continuing discussion about whether it should be the duty of the OEM or the state to charge infrastructure.

Although the car aftermarket industry has long been benefiting from B2C e-commerce, intermittent digital adoption has been observed in other areas of auto e-commerce. Similar problems are faced by manufacturers. One study showed that automakers expect digital investments to rise by 24 percent in the coming years. However, due to low digital sophistication and the pace at which these changes are implemented in the industry, problems remain.

Customer-centricity

A study shows that a lack of attention for customers is an urgent problem for digital transformation in automotive. However, implementing customer-centered reform also involves carrying out corporate programs, as well as being possible at the dealer and the service level, at a national level.

For these systems to work, there should be no distinction between the experience of an individual dealer and the digital experience on all devices. The widening ranks of digital natives are responsive to these interactions and brands need to reflect how they can help enhance the overall experience of car ownership with their buyers, dealers, suppliers, and sellers.

Digital Transformation and its impact on customer service

Inexpensive ways to provide customer care

During every crisis, money plays a very important role. There is little difference in the digital transformation in the automotive industry. Customer service networks can be automated by AI technologies that can reduce the costs for the automotive industry. The transfer to automated customer service processes guarantees 24×7 customer access and decreases dependence on the manual employee.

When they were struck by the pandemic, several businesses were already undergoing **digital transformation**. But Covid-19 has made us aware that the digital support and experience of customers is not simply an add-on. It must be effective and secure.

They may choose to remain linked to customers via various digital channels. The two most common ways to engage consumers are mobile apps with chat and push messages and social media.

Providing post-sales maintenance and customer satisfaction

Since this virus is highly infectious, more drivers prefer services where maintenance and repairs are not essential. Given the current state of the automotive industry, this degree of customer service or expertise is not feasible. Any vehicle to be serviced needs to have a high degree of manual involvement. None of the technically sophisticated interactions nor operations. Automotive companies need to build subscription-based virtual services in order to attain the necessary degree of streamlining.

Predictive analysis is another field where customer service can be optimized and customer loyalty secured. Through its IBM SPSS app, BMW works to please its top clients. The program earlier detects car errors and optimizes processes through Big Data Analysis.

FACTS (Field-data Analysis for Customer Satisfaction) is a core of expertise in the BMW Community, which analyzes enormous pieces of data. The findings from this huge data are

used to affect the satisfaction of customers. The customer satisfaction level of other car manufacturers could be transformed by similar technologies.

Customer delight through chatbots

With the advent of chatbot production, the customer service industry has seen dramatic development. There are several companies with highly functional chatbots for mobile apps. The benefits are following:

- Personalization without disruption of the experience.
- A better experience with self-service.
- Aid in many languages.
- Aid 24 hours a day.

Chatbots have already proven very useful, but a great many improvements and development are necessary for the automotive industry to fill the void.

According to the survey carried out by automakers, nearly 70% of companies are in some phase of chatbots and over 50% have definitive plans for the implementation within the next 3 months.

How to Get Started with Digital Transformation in Automotive Industry

Businesses nowadays must stay ahead of the curve and get in front of customers before their competition. They need to figure out what their present and future needs are, and then collaborate with the best technology partner to help them achieve those goals. Additionally, they need to optimize internal procedures, retain and build partnerships, and reduce expenses.

Odoo is an open-source ERP software for any business that allows business owners to manage all functions of the company including manufacturing, inventory management, sales, net, purchase, service, repair, human resource planning, and customer relations. All Odoo functions can be performed and controlled by several users in the company's system. Magenest has been providing Odoo service throughout the nations for varied sorts of industries. If you're looking for an Odoo ERP implementation service or a single module in your particular demand, we'll help you stay on your digital transformation path and get you to market faster.

Digital Transformation Business Cases

With the rapid pace of technological advancement, every organization needs to undergo digital transformation and, most likely, transform multiple times to stay relevant and competitive.

However, before you can reap the benefits of new technology, you must first get your customers and employees to adapt to this change successfully—and here lies a significant digital transformation challenge.

Organizations thriving in this digital-first era have developed digital innovation strategies prioritizing the change management mindset. This paradigm shift implies that organizations should continuously explore improving business processes.

8 Best Examples of Digital Transformation Case Studies in 2024

1. Amazon Business
2. Netflix
3. Tesla
4. Glassdoor
5. Under Armour
6. Internet Brands®
7. Sophos
8. Michelin Solutions

8 Examples of Inspiring Digital Transformation Case Studies

While digital transformation presents unique opportunities for organizations to innovate and grow, it also presents significant digital transformation challenges. Also, digital maturity and levels of digital transformation by sector vary widely.

However, the best way to develop an effective digital transformation strategy is to learn by example.

Here are the 8 inspiring digital transformation case studies to consider when undertaking transformation projects in 2024:

1. Amazon extended the B2C model to embrace B2B transactions with a vision to improve the customer experience.

Overview of the digital transformation initiative

Amazon Business is an example of how a consumer giant transitions to the B2B space to keep up with the digital customer expectations. It provides a marketplace for businesses to purchase from Amazon and third parties. Individuals can also make purchases on behalf of their organizations and integrate order approval workflows and reporting.

The approach

- Amazon created a holistic marketplace for B2B vendors by offering over 250 million products ranging from cleaning supplies to industrial equipment.
- It introduced free two-day shipping on orders worth $49 or more and exclusive price discounts. It further offered purchase system integration, tax-exemption on purchases from select qualified customers, shared payment methods, order approval workflows, and enhanced order reporting.
- Amazon allowed manufacturers to connect with buyers & answer questions about products in a live expert program.

The value

- Amazon could tap the B2B wholesale market valued between $7.2 and $8.2 trillion in the U.S. alone.
- It began earning revenue by charging sales commissions ranging from 6-15% from third-party sellers, depending on the product category and the order size.
- It could offer more personalized products for an improved customer experience.

2. Netflix transformed the entertainment industry by offering on-demand subscription-based video services to its customers.

Overview of the digital transformation initiative

Like the video rental company Blockbuster, Netflix also had a pay-per-rental model, which included DVD sales and rent-by-mail services. However, Netflix anticipated a change in customer demand with rising digitalization and provided online entertainment, thereby wiping out Blockbuster – and the movie rental industry – entirely.

The approach

- In 2007, Netflix launched a video-on-demand streaming service to supplement their DVD rental service without any additional cost to their subscriber base.
- It implemented a simple and scalable business model and infused 10% of its budget in R&D consistently.
- The company has an unparalleled recommendation engine to provide a personalized and relevant customer experience.

The value

- Netflix is the most popular digital video content provider, leading other streaming giants such as Amazon, Hulu, and Youtube with over 85% market share.
- Netflix added a record 36 million subscribers directly after the start of the COVID-19 pandemic.



3. Tesla uses connected car technology and over-the-air software updates to enhance customer experience, enable cost savings, and reduce carbon emissions.

Overview of the digital transformation initiative

No digital transformation discussion is complete without acknowledging the unconventional ideas implemented by Elon Musk. Tesla was a huge manifestation of digital transformation as the core motive was to prove that electric cars are better than their gasoline counterparts both in looks and performance.

Over the years, Tesla has innovated continuously to improve its product, make itself more economical, and reduce its carbon footprint.

The approach

- Tesla is the only auto manufacturer globally, providing automatic over-the-air firmware updates that allow its cars to remotely improve their safety, performance, and infotainment capabilities. For example, the OTA update could fix Tesla'soverheating issues due to power fluctuation.
- Tesla launched an autopilot feature to control the speed and position of the car when on highways to avoid potential accidents. However, the user still has to hold the wheel; the vehicle controls everything else. This connected car technology has created an intelligent data platform and smart autonomous driving experience.
- Tesla further ventured into a data-driven future, and it uses analytics to obtain actionable insights from demand trends and common complaints. A noteworthy fact is that the company has been collecting driving data from all of its first and second-generation vehicles. So far, Tesla has collected driving data on 8 billion miles while Google's autonomous car project, Waymo, has accumulated data on 10 million miles.

The value

- Tesla's over-the-air updates reduce carbon emissions by saving users' dealer visits. Additionally, these updates save consumers time and money.
- Tesla delivered a record 936,172 vehicles in 2021, an 87 % increase over the 499,550 vehicle deliveries made in 2020.

4. Glassdoor revolutionized the recruitment industry by allowing employees to make informed decisions.

Overview of the digital transformation initiative

Glassdoor is responsible for increasing transparency in the workplace and helping people find the right job by allowing them to see millions of peer-to-peer reviews on employers, including overall company culture, their CEOs, benefits, salaries, and more.

The approach

- Glassdoor gathers and analyzes employee reviews on employers to provide accurate job recommendations to candidates and vice-versa. It also allows recruitment agencies and organizations to download valuable data points for in-depth analysis & reporting.
- It further introduced enhanced profiles as a paid program, allowing companies to customize their content on the Glassdoor profiles, including job listings, "Why is it the Best Place to Work" tabs, social media properties, and more. This gives companies a new, innovative way to attract and recruit top talent.

The value

- Glassdoor created the largest pool of interview questions, salary insights, CEO ratings, and organizational culture via a peer-to-peer network, making it one of the most trustworthy, extensive jobs search and recruiting platforms – and one of the most well-recognized review sites
- Glassdoor leverages its collected data for labor market research in the US. Its portfolio of Fortune's "Best Companies to Work For" companies outperformed the S&P 500 by 84.2%, while the "Best Places to Work" portfolio outperformed the overall market by 115.6%.

5. Under Armour diversified from an athletic apparel company to a new data-driven digital business stream to transform the fitness industry.

Overview of the digital transformation initiative

Under Armour introduced the concept of "Connected Fitness" by providing a platform to track, analyze and share personal health data directly to its customers' phones.

The approach

- Under Armour acquired several technology-based fitness organizations such as MapMyFitness, MyFitnessPal, and European fitness app Endomondo for a combined $715 million to obtain the

required technology and an extensive customer database to get its fitness app up and running. The application provides a stream of information to Under Armour, identifying fitness and health trends. For example, Under Armour (Baltimore) immediately recognized a walking trend that started in Australia, allowing them to deploy localized marketing and distribution efforts way before their competitors knew about it.

- Under Armour merged its physical and digital offerings to provide an immersive customer experience via products such as Armourbox. The company urged its customers to go online and share their training schedule, favorite shoe style, and fitness goals. It used advanced analytics to send customers new shoes or apparel on a subscription basis, offering customers a more significant value over their lifetime.
- It additionally moved to an agile development model and data center footprint with the ERP SAP HANA.
- Under Armour additionally leveraged Dell EMC's Data Protection and Dell Technologies to help fuel digital innovation and find peak value from its data.

The value

- Under Armour created a digital brand with a strong consumer focus, agility, and change culture.
- With the Connected Fitness app, it provided a customer experience tailored to each consumer.

6. Internet Brands® subsidiary Baystone Media leverages Whatfix DAP to drive product adoption of its healthcare businesses.

Overview of the digital transformation initiative

Baystone Media provides end-to-end marketing solutions for healthcare companies by providing a low-cost, high-value subscription offering of Internet Brands® to promote their practices digitally. Baystone Media empowers its customers by offering a codeless creation of personalized websites. However, as its userbase is less tech-savvy, customers were unable to make the most of their solution.

The approach

The idea was to implement a solution for Baystone Media & its sister companies to enable its clients to navigate its platforms easily. In addition to PDFs and specific training videos, the search was on for a real-time interactive walkthrough solution, culminating with Whatfix.

The value

Baystone media saw a 10% decrease in inbound calls and a 4.17% decrease in support tickets, giving them the runway to spend more time enhancing its service for the clients.

7. Sophos implemented Salesforce to streamline its business and manage customer relations more effectively.

Overview of the digital transformation initiative

Sophos went live with Salesforce to accelerate its sales process, enhance sales productivity, and increase the number of accounts won. However, the complex interface and regular updates of Salesforce resulted in a decreased ROI.

The approach

- Sophos implemented Whatfix to provide interactive, on-demand training that helped users learn in the flow of work. The 24*7 availability of on-demand self-support, contextual guidance, and smart tips allowed Sophos to manage its new CRM implementation effectively.
- It unified internal communications using Whatfix content. First, they created walkthroughs for the basic functionality of Salesforce such as lead management, opportunities, etc. Next, they moved to slightly more complex features that their users were uncomfortable with and created guided walkthroughs and smart pop-ups. Sophos also used Whatfix to align the sales and product management teams by embedding videos and other media to unify product communication instead of relying on various communication tools.

The value

- Sophos experienced a reduction in sales operations support tickets globally by 15% (~12,000 tickets). It saved 1070 man-hours and achieved an ROI of 342%.

RELATED RESOURCES

Experian Drives Salesforce® Adoption Across Its Global Employee-Base With Whatfix

E-Marketplace Takealot Automates Self-Training For Sellers With Whatfix

Sentry Insurance: Creating Customized End-User Training 40% Faster with Whatfix

8. Michelin Solutions uses IoT & AI to provide customers with a more holistic mobility experience.

Overview of the digital transformation initiative

The digital strategy of Michelin Solutions has essentially centered around three priorities:

- Creating a personalized relationship with customers and end-users
- Developing new business models
- Improving their existing business processes

The approach

- AI is extensively used in R&D, enabling the digital supply chain driven through digital manufacturing and predictive maintenance. For example, connected bracelets assist machine operators with the manufacturing process.
- It deployed sophisticated robots to take over the clerical tasks and leveraged advanced analytics to become a data-driven organization.
- Offerings such as Effifuel & Effitires resulted in significant cost savings and improved overall vehicle efficiency.
- Michelin Solutions carefully enforced cultural change and launched small pilots before the change implementation.

The value

- Effifuel led to extra savings for organizations and doubled per-vehicle profits.

- A reduction in fuel consumption by 2.5 L per 100km was observed which translates into annual savings of €3,200 for long-haul transport (at least 2.1% reduction in the total cost of ownership & 8 tonnes in CO2 emissions).
- Michelin Solutions shifted its business model from selling tires to a service guaranteeing performance, helping it achieve higher customer satisfaction, increased loyalty, and raised EBITDA margins.

Personalize Your Digital Transformation Solutions

Each industry & organization faces unique challenges while driving digital transformation initiatives. Each organization must find a personalized solution and the right digital transformation model when implementing new technology. Their challenges can prepare you better for the potential roadblocks, but the specific solutions will need to be personalized according to your business requirements.

Open communication with your customers and employees will help you spot potential issues early on, and you can use case studies like these as a starting point.

According to Deloitte, "digital transformation is all about becoming a digital enterprise—an organization that uses technology to continuously evolve all aspects of its business models (what it offers, how it interacts with customers and how it operates)."

As technology evolves, so should your business. At this point, it's not about enterprises choosing to transform; it's more about deciding how to transform.

Digital transformation is about evolving your business by experimenting with new tech and rethinking your current approach to common issues. Because it's an evolution, a transformation doesn't necessarily have a clear end point. The MIT Sloan Management Review, a publication that focuses on how management transforms in the digital age, says, "Digital transformation is better thought of as continual adaptation to a constantly changing environment."

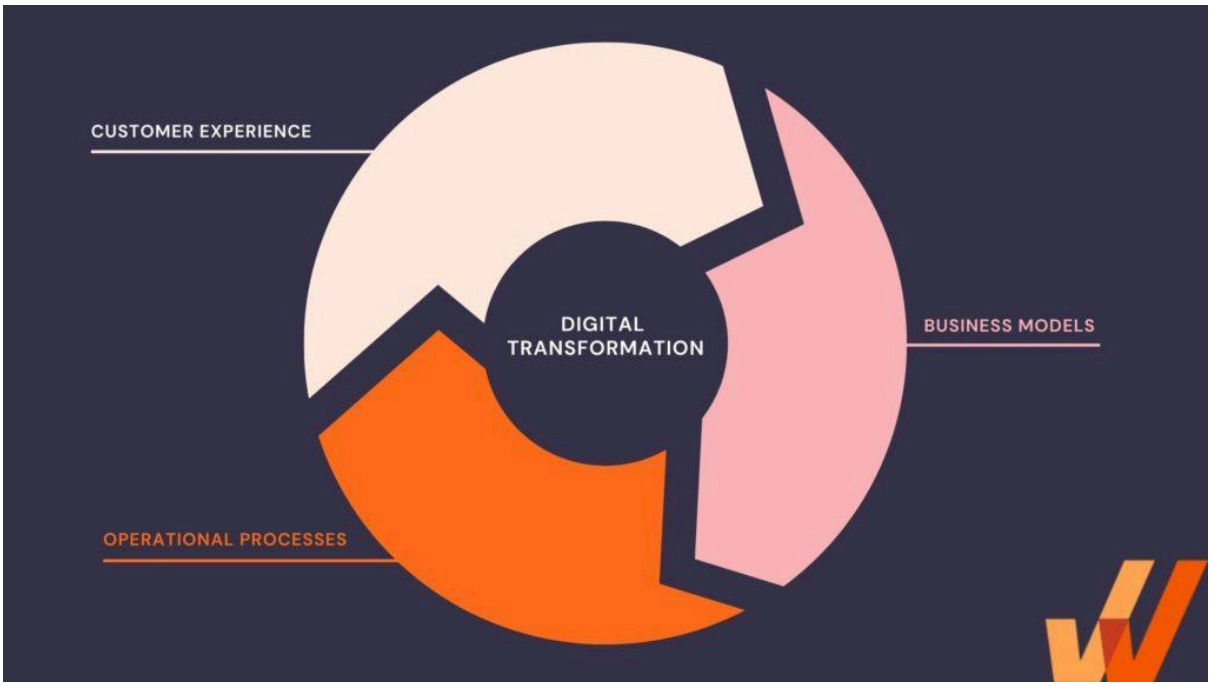
For enterprises, that means continually seeking out ways to improve the end-user experience. This could be through offering improved

on-demand training, migrating data to cloud services, leveraging artificial intelligence, and more.

3 Key Areas of Enterprise Digital Transformation

MIT Sloan Management Review highlights three key areas of digital transformation for enterprises:

1. **Customer Experience** — working to understand customers in more detail, using technology to fuel customer growth, and creating more customer touchpoints
2. **Operational Processes —** improving internal processes by leveraging digitization and automation, enabling employees with digital tools, and collecting data to monitor performance and make more strategic business decisions
3. **Business Models —** transforming the business by augmenting physical offerings with digital tools and services, introducing digital products, and using technology to provide global shared services



Dive deeper into digital transformation.

Learn how digital transformation is uniquely disrupting industries and job functions now.

Explore Digital Transformation by Job Function & Industry

What Is the Importance of Digital Transformation?

While every digital transformation initiative will have its own specific goals, the primary purpose of any digital transformation is to improve

your current processes. Digital transformation is necessary because companies must evolve to remain competitive. If you aren't evolving, you're falling behind.

Let's look at a recent example highlighting the critical nature of digital transformation – Southwest Airlines.

This past holiday season, a major winter storm slammed the US on December 21st, causing major cancellations across airline companies. However, as every other airline company was able to get people to their destinations the next day, Southwest canceled 15,000+ flights on December 22nd, and continued to cancel over 2,500 flights a day over the next week.

The culprit behind this chaos?

A decade-old scheduling system that had already caused smaller issues and that the Southwest Airlines Pilot Association union had been warning the company about since the 1990s.

Southwest failed to keep its IT software and infrastructure modernized, and it cost the company millions in revenue, an enormous about of negative PR, and ravished the company's image with its customers.

But while digital transformation is a must to avoid IT meltdowns, it's not as simple as upgrading legacy systems.

A Bain & Company study shows that "only 8% of global companies have been able to achieve their targeted business outcomes from their investments in digital technology." One of the strategies that set leaders apart is that they spend more on transforming their businesses instead of just running them.

Digital transformation is important because it allows organizations to adapt to ever-changing industries and continually improve how they operate.

For enterprises, that means continually seeking out ways to improve the end-user experience. This could be through offering improved on-demand training, migrating data to cloud services, leveraging artificial intelligence, and more.

The Benefits of Digital Transformation

While the ROI of digital transformation depends on a variety of factors, the right technology can greatly improve how your business functions and how customers engage with it.

1. **Increases productivity while reducing labor costs** — Using technology to work more efficiently is one of the most impactful ways to transform your business. For example, for enterprises, the time and money they spend training new employees and updating digital resources can quickly get out of hand. With the proper tools, you can keep costs down and productivity up.
2. **Improves the customer experience** — Tech-savvy customers want a great experience through multiple touchpoints — mobile apps, social media, email, live chat, etc. Digital transformations are the driving force behind improved customer experiences.
3. **Drives innovation, keeping you ahead of your competition** – Your competitors are looking into digital transformation regardless of whether or not you are. Choosing not to embrace digital transformation is essentially deciding that you don't mind being left behind. Investing in your organization's future allows for

Examples of Digital Transformation

Digital transformation is occurring across all industries and job functions. We've broken up real-world digital transformation examples by both for you to get a better understanding of the implications of digital transformation.

Examples of Digital Transformation by Job Function

Job Function	Digital Transformation	Real-World Example
Sales	Spreadsheets to a Cloud CRM	Sophos improves win rates, streamlines customer relationships, and improves customer data by implementing Salesforce.

HR	In-person training to online elearning.	Comvivas improves its onboarding quality, cost of training, and more by moving its onboarding online.
Customer support	Call support center to online knowledge bases and self-support portals.	Cardinal Health improves its customer satisfaction score, reduces time to resolved tickets, and reduces overall support tickets with self-help.

Examples of Digital Transformation by Industry

Industry	**Digital Transformation**	**Real-World Example**
Healthcare	Virtual visits, telemedicine, and patient portals	Brigham Health uses virtual visits allowing patients to schedule appointments online and conduct a screening via web video.
Hospitality	Online check-in, amenity booking tools	Harrah's uses online check-in for guests to skip the in-person process.
Insurance	Virtual quotes and online claims process	Lemonade uses an online portal for prospective customers to get instant quotes, as well as a portal for customers to file claims online – both using AI-powered technology.

Retail	Loyalty cards, e-commerce stores	Target encourages its uses to download the Target App where it can reach customers through in-app and push notifications instantly, as well as creates a new stream of revenue with its online store

Most Important Aspects of Digital Transformation

To successfully transform, keep the momentum of any initiative moving toward your ultimate business goals. To do so, continually address the main drivers of digital transformation: digital twin, privacy, culture, augmented intelligence, and digital product management.

According to Gartner, CIOs need to focus on these five areas to enable successful digital transformations in their organizations.

1. Digital Twins

Gartner defines digital twin as “a digital representation of a real-world entity or system. The implementation of a digital twin is an encapsulated software object or model that mirrors a unique physical object, process, organization, person or other abstraction.”

Digital twins support digital transformation because they facilitate experimentation and collect data that supports more informed business decisions.

2. Privacy

If you can’t manage privacy, your digital transformation is destined to fail. As more digital solutions become available, organizations tend to jump on trends that offer more convenience. However, Gartner’s research reveals that a large portion of consumers and employees are not willing to give up safety and security just for convenience.CIOs need to take privacy seriously. Employees and consumers won’t support a transformation if they feel it violates their privacy or personal data security.

3. Culture

Resistance to change is a human instinct. When you ignore the cultural aspect of a digital transformation, you'll start hitting walls of resistance fairly quickly. In fact, 46% of CIOs say culture is their biggest barrier to change. Addressing culture ensures you get internal buy-in for your transformation initiative. When you have change leaders — vocal supporters of your digital transformation — you can use their voices to drive your initiative forward.

4. Augmented Intelligence

Augmented intelligence goes beyond artificial intelligence (AI), allowing humans and machines to work in tandem.AI's data collection and analysis capabilities far surpass that of a human worker. But augmented intelligence isn't about replacing employees with machines — AI collects and presents data in a way that allows people to augment their knowledge.

5. Digital Product Management

Gartner explains digital product management as the shifting of mindsets from projects to products. Those products must be designed to improve the customer experience and be delivered through digital channels. Digital product management is about knowing your industry and designing products that serve it. For example, instead of expecting the healthcare industry to align with Apple's offerings, Apple created a watch that monitors the health of the wearer.CIOs who focus on these five key drivers can stay ahead of their competition by constantly improving and growing their businesses.

Why Digital Transformation Projects Fail

Digital transformations fail for many reasons, but most issues can be linked back to one of three digital transformation challenges: people, communication, and measurement. Let's dive further into each:

1. People

People can make or break your digital transformation. Remember: culture is both a top driver of digital transformation and one of the six

pillars of successful ones. If you don't put enough focus on people and culture, your initiative is bound to fail. Sixteen of McKinsey's 21 keys to success in digital transformation involve people.

2. Poor communication

Announcing a digital transformation initiative is not the same as communicating with your team about it. Often, leadership simply mandates changes without taking the time to explain the why and how. If you don't provide specific and actionable guidance before, during, and even after a transformation, your initiative won't make it very far. You can learn more by reading our guide to change communciation.

3. Lack of measurement

You can't have a successful digital transformation if you failed to define what success means to you. Companies sometimes assume they can monitor success based on the key performance metrics (KPIs) they've already established for their business. But if you're changing the way you do business, you'll need to set additional KPIs to monitor the effects.

How to Get Started with Digital Transformation

A digital transformation strategy is a plan of action for introducing, analyzing, and driving a digital transformation initiative forward. Your strategy will define what business goals you aim to achieve and help accelerate digital transformation.

An effective digital transformation strategy will create a framework for you to follow throughout this ever-evolving process. But before you begin, it's important to know what you hope to achieve so you can designate KPIs to track along the way.

For example, if you are migrating users from Salesforce Classic to Lightning, your high-level metrics for measuring adoption would be log-in rates, usage, data quality, and business performance.

In this case, you might drill down further and monitor metrics such as:

- Monthly sales volumes
- Opportunities created
- Sales productivity (e.g., time saved, volume of sales activity per rep)
- User log-in rates
- Prospect account with key fields populated

A well-thought-out strategy will also address how the transformation will affect your customers and your employees. Start internally by designating change leaders who will publicly support your transformation. Putting trusted change leaders in charge of announcing and supporting the transformation will help generate momentum. Regularly soliciting feedback from anyone affected by the change will also help keep the momentum going.

Don't forget to include your team's accomplishments as part of your progress tracking. Whether you're pointing out a quantitative achievement, e.g., a 10% increase in user log-in rates, or qualitative, e.g., Beth created a Slack group to answer questions about the transformation – celebrating milestones throughout the process is important.

Customers and employees alike will turn to the people initiating the transformation to gain the knowledge they need to be successful. It's up to you to provide the necessary tools.

Those tools may come in many forms, but if you're making a digital transformation, chances are, there are digital resources that could support your transition. Will you use e-learning tools for training? Could videos allow users to learn at their own pace?

Keep in mind that transformations are an evolution, so leveraging tools that can adapt quickly, like digital adoption platforms, could save you time and effort down the line.

Digital Transformation Trends

Different types of transformations rise and fall in popularity as technology changes. Keeping up with trends is a great way to see how

you can improve your own digital transformations and prepare for inevitable changes in your industry.

Right now, the hottest trends in digital transformation all tie back to one thing: creating a better customer and employee experience. Although many people, employees in particular, fear that some technology is designed to replace humans, great digital transformations involve technology that complements human work.

AI, Robotic Process Automation, 5G, mobile development, and personalized user experiences are all examples of digital transformation trends that aim to work alongside humans to do everything from improving communication to limiting repetitive work.

Inbound and outbound marketing performance

While outbound marketing uses traditional tactics to 'push' messages out to a broad audience, inbound marketing targets relevant audiences with online content to 'pull' them into the sales funnel. Outbound marketing includes TV ads, billboards, cold calling, and display ads, while inbound relies on slow-burn content marketing, such as blogs, opt-in email nurture flows, and native recommendations.

You've heard the terms "inbound marketing" and "outbound marketing" so many times, but what do they really mean? Who do they target, what tactics do they include, and which works best?

If you've never considered these questions before, read on to discover what is outbound marketing, what is inbound, what is the difference between inbound and outbound marketing, and why you should care.

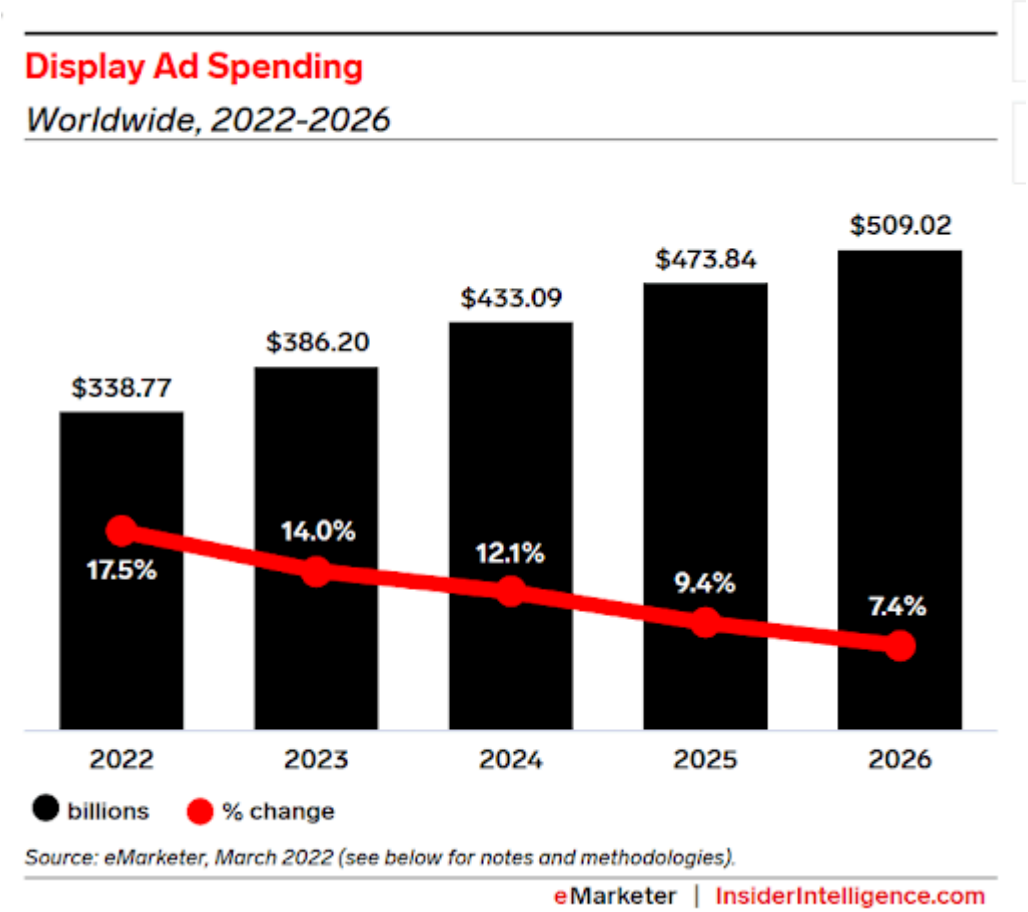
What Is Outbound Marketing?

The most conventional and older of the two types, outbound marketing is what most people think of when it comes to marketing – billboards, radio ads, telemarketing, direct mail, and TV commercials. In the digital realm, it includes banner and display ads, pop-ups and pop-unders, and cold email marketing,

In other words, outbound marketing efforts are those advertising or marketing strategies that push information to consumers, even when they don't ask for it. That's why it is also known as "push marketing."

In recent years, outbound marketing has gotten a bit of a bad rap. Oversaturation – especially online – has led to problems like banner blindness, and the rise of ad blockers.

Even so, outbound marketing is not going anywhere. Instead, brands and advertisers are turning to smarter, more interactive ways of pushing their message to consumers. Out-of-Home (OOH) advertising, including billboards, is on the rise, expected to reach over $42 billion worldwide by 2024. Display ad spend is forecast to soar in the coming years, from nearly $340 billion in 2022 to over $500 billion by 2026.



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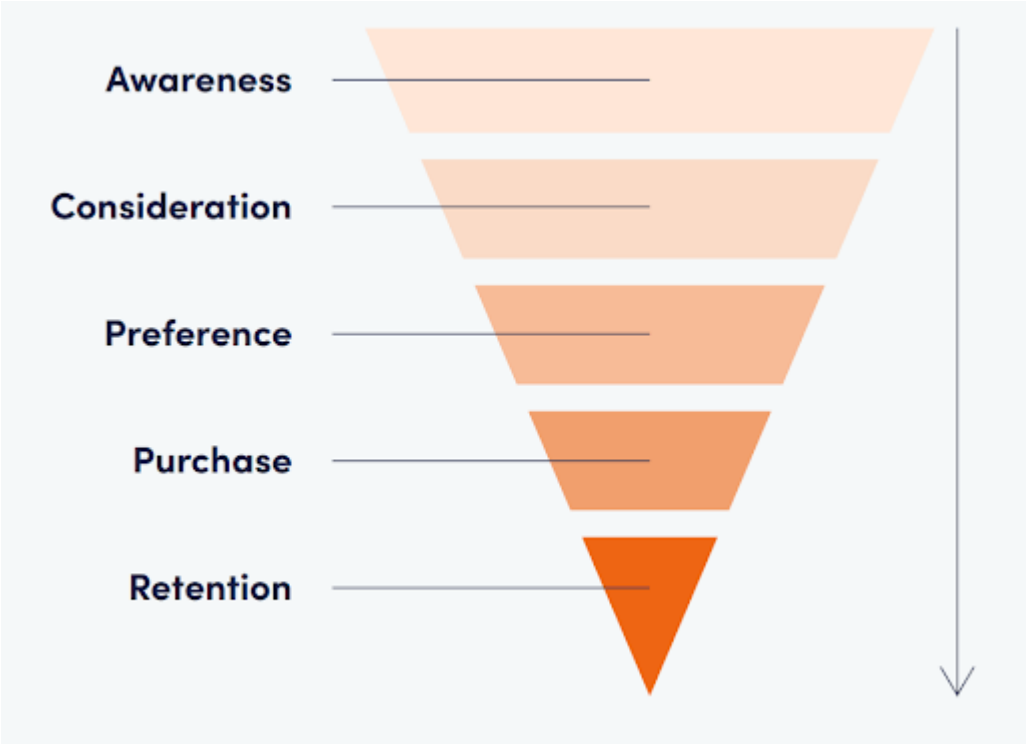
What Is Inbound Marketing?

Inbound marketing is a newer marketing concept, compared to outbound marketing. Rather than pushing ads and messages onto consumers, inbound marketing is designed to pique curiosity and engagement, and draw customers in. That's why it is known as

"pull marketing". It is also often referred to as content marketing, which is the main tactic used in inbound marketing.

Inbound marketing leverages lots of different types of content to engage and interest target audiences. These include blog posts, social media, infographics, white papers, email newsletters, e-guides, quizzes, polls, and more. Paid search and native advertising are other inbound marketing tactics that help people find and engage with marketers' content.

Inbound marketing strategy aims to gently nurture potential customers through the marketing funnel, exposing them to relevant content and brand experiences when they are ready, gradually building brand awareness, increasing customer engagement, and pulling them towards conversion and retention. This is how the inbound funnel works:



What Is the Difference Between Inbound and Outbound Marketing?

Outbound marketing relies on buying ads, acquiring email lists, and maximizing brand awareness and exposure, so that people respond by purchasing your product.

Inbound marketing, on the other hand, focuses on drawing audiences in with great content that aligns with their interests, building awareness and engagement, and nurturing the audience until they convert.

Instead of advertising blindly to a large audience who may not be interested in your product or receptive to your messages, inbound marketing brings customers to you because you're targeting audiences who are interested in, or actively looking for, your services or products.

Another big difference between inbound vs outbound is that while outbound marketing uses both offline and online tactics, inbound focuses primarily on the online realm.

Let's take a look at an overview of the differences between inbound vs outbound marketing:

Inbound	**Outbound**
Pulls in interested audiences	Pushes at a general, wider audience
Puts the consumer at the center	Puts the brand or product at the center
Part of a customer nurturing funnel	Inert, one-way interaction
Easy to track customer engagement Online	Harder to track customer engagement Online & Offline
Fits naturally with user experience	Disrupts user experience
Tactics: Blogs, social media, opt-in emails, search, influencer marketing, native advertising	Tactics: Display ads, billboards, telemarketer scripts, magazines, TV ads, cold email outreach

What's More Effective, Inbound or Outbound Marketing?

Despite the fact that outbound marketing is the traditional choice, it still offers businesses a wide range of benefits.

Increasingly, brands are using an omnichannel strategy to reach their target audience wherever they are, online, in-store and on mobile devices. Outbound marketing is a key element in omnichannel marketing, opening up offline channels and capturing audience attention when they are not on their screens.

Outbound marketing is still a powerful strategy for luxury or big box brands. Think of the importance of the Super Bowl ad spot, or the annual IKEA catalog, still in print!

Older customer segments who are not digital natives like Millenials and Gen Z are comfortable and familiar with radio ads, billboards, and TV commercials, and outbound marketing can definitely tap into their comfort zone in these ways.

In addition, outbound marketing is not typically as targeted as inbound marketing, so it is useful for building brand awareness among broad audiences, rather than focusing on customer conversions.

Outbound marketing has its downsides, though. It can be expensive, and all those high-cost expenditures don't always yield the marketing results a business is hoping for. Another huge downside to outbound marketing is that it's almost impossible to accurately track your reach or return on investment (ROI).

One of the biggest benefits of inbound marketing is the lower cost vs. outbound marketing.

Inbound leads have been shown to cost around 60% less than outbound leads, and 80% of business decision makers say they'd prefer to learn about a brand through a series of articles, rather than an ad.

Here's another key advantage of inbound marketing: because inbound marketing happens online, it is possible to gather data about audience behavior and optimize campaigns accordingly. In addition, online targeting of relevant audiences makes it much easier to find potential customers, rather than just marketing to whoever will listen. This leads to higher conversion rates.

Probably the most important data point about the effectiveness of inbound marketing is simply this: there are 5 billion internet users worldwide (more than half the global population) and 4.65 billion users on social media. With inbound marketing, your audience may be located anywhere in the world, and you'll be able to reach them. Conversely, it also explains why outbound marketing is so popular among local businesses – if your audience is right outside your doorstep, then investing in billboard advertising, shop window posters, and printed flyers is still a smart way to go.

Overview of the Benefits of Inbound and Outbound Marketing

Inbound:

- Global audience, massive potential reach
- Ability to target relevant audiences with specific messaging
- Ability to track audience behavior and optimize campaigns
- Overall cheaper costs than outbound marketing

Outbound:

- Ideal for local, specific audiences
- Integral part of omnichannel marketing
- Appeals to audience segments who are not digital natives
- Strong focus on building brand awareness

By weighing the pros and cons of inbound vs. outbound marketing, you'll start to get an idea of which marketing strategy is better for your business – and you don't have to rule out either entirely, especially if you're operating on a large budget.

When making your decision, consider your business goals, customer base and location, your product/ service offering, available creative resources, and of course, your budget.

WHAT IS ORGANIZATIONAL CHANGE MANAGEMENT?

Organizational change refers to the actions in which a company or business alters a major component of its organization, such as its culture, the underlying technologies or infrastructure it uses to operate, or its internal processes. Organizational change management is the process of guiding organizational change to a successful resolution, and it typically includes three major phases: preparation, implementation, and follow-through.

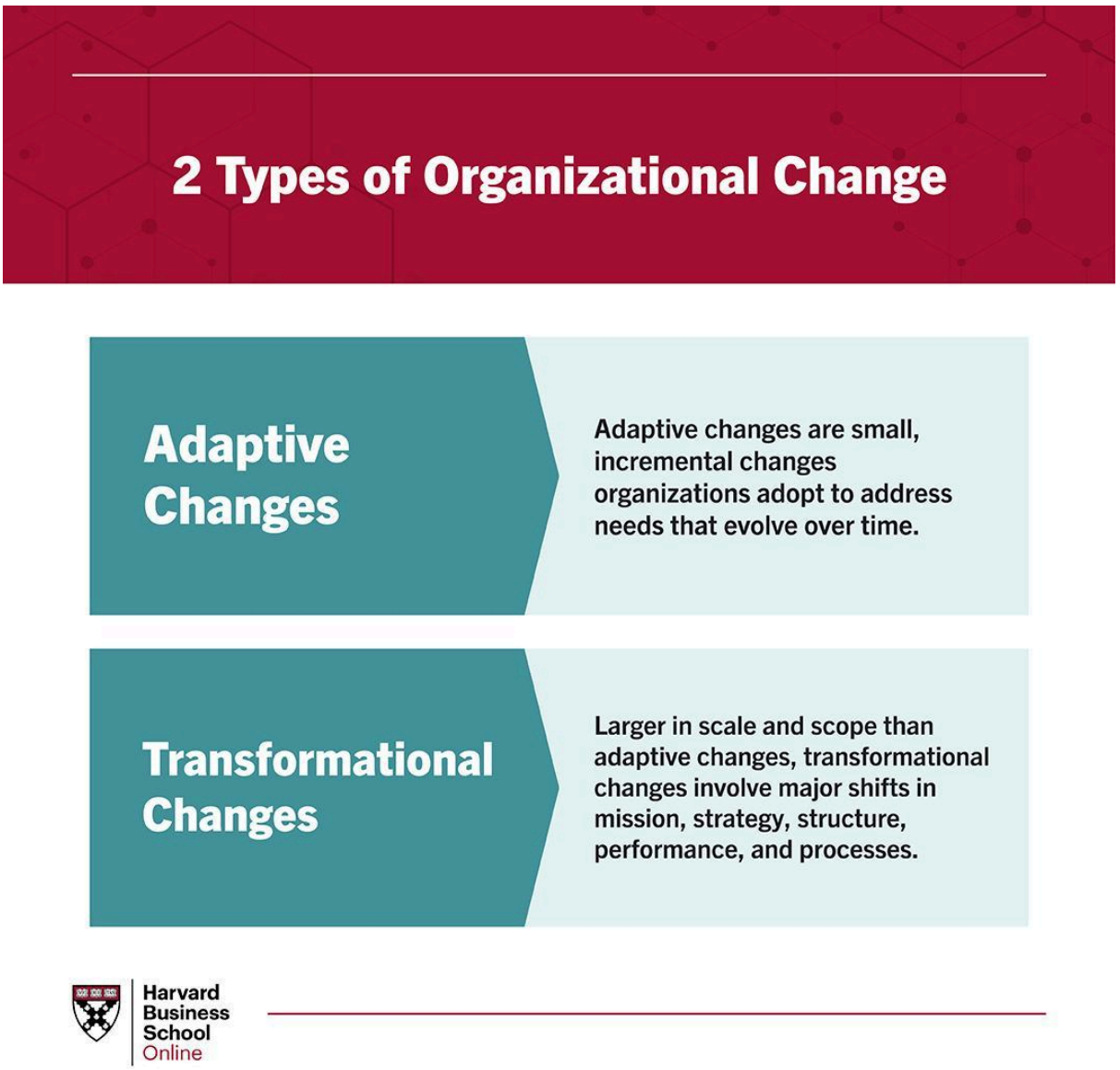
WHAT CAUSES ORGANIZATIONAL CHANGE?

Many factors make organizational change necessary. Some of the most common faced by managers include:

- New leadership at the helm of the company or within its departments
- Shifts in the organizational team structure
- The implementation of new technology
- The adoption of new business models

To ensure a smooth transition, it's important to have a set organizational change management process that can be applied across various types of change.

TYPES OF ORGANIZATIONAL CHANGE



Adaptive changes are small, incremental changes organizations adopt to address needs that evolve over time. Typically, these changes are minor modifications and adjustments that managers fine-tune and implement to execute upon business strategies. Throughout the process, leadership may add, subtract, or refine processes.

One example of an adaptive change is an organization that upgrades their computer operating systems from Windows 8 to Windows 10.

Transformational changes have a larger scale and scope than adaptive changes. They can often involve a simultaneous shift in mission and strategy, company or team structure, people and organizational performance, or business processes. Because of their scale, these changes often take a substantial amount of time and energy to enact. Though it's not always the

case, transformational changes are often pursued in response to external forces, such as the emergence of a disruptive new competitor or issues impacting a company's supply chain.

An example of a transformational change is the adoption of a customer relationship management software (CRM), which all departments are expected to learn and employ.

Many changes will fall somewhere between adaptive and transformational on the spectrum. For this reason, managers need to understand that the change process must be tailored to the unique challenges and demands of each situation.

WHY IS ORGANIZATIONAL CHANGE MANAGEMENT IMPORTANT?

Organizational change is necessary for companies to succeed and grow. Change management drives the successful adoption and usage of change within the business. It allows employees to understand and commit to the shift and work effectively during it.

Without effective organizational change management, company transitions can be unpredictable and expensive in terms of both time and resources. They can also result in lower employee morale and skill development.

A company's reaction and adaptation to change is also a critical consideration for key stakeholders like investors, suppliers, and prospective employees when deciding whether to work with or for a company. As a result, a lack of effective change management can lead to an organization's failure.

A MANAGER'S ROLE IN ORGANIZATIONAL CHANGE

Within an organization, every employee has a different role in assisting with change. While many staff members may complete heavily detailed work, senior-level executives with longer tenure might have different goals. Even within management, leaders and managers perform different tasks.

Leaders, for example, have to be courageous by taking on risks. They need to look at the big picture and articulate high-level change to the company, explain why it's occurring, and motivate people to support the transition. To

be successful as a leader, you must be insightful and know who to put in charge of carrying out change processes.

Managers are more concentrated on making business transitions successful. They focus on implementing change by determining the discrete steps that need to happen and their sequence. Managers are also typically responsible for allocating resources, such as personnel, and determining how success is measured. Ideally, leaders will also be managers, but it's the primary responsibility of a manager to know how to design, direct, and shape change processes.

To achieve this, you must have a wide array of management skills, such as:

- Effective communication, including actively listening to your team and colleagues
- A highly developed level of emotional intelligence
- Strong organizational skills
- Attention to detail
- Problem-solving and decision-making skills
- Delegating without micromanaging

PREPARING FOR ORGANIZATIONAL CHANGE

To prepare for organizational change, it's essential to first define the organizational change, understand why it's critical, and garner support from your colleagues.

Then, create a roadmap that clearly articulates and measures success and explains how the business—and its employees, customers, and constituencies—will be affected.

Ensure the process plan aligns with business goals and outlines the implementation and sustainability of the organizational change. Note what challenges may arise and be flexible enough to adjust accordingly. Be sure to celebrate small victories along the way.

Change management doesn't stop once you've successfully executed an organizational transition. Both during and after the process, you need to continuously assess outcomes, track performance to goals, train employees on new methodologies and business practices, and readjust goals as necessary to increase the likelihood of success.

DEVELOPING THE SKILLS YOU NEED TO MANAGE ORGANIZATIONAL CHANGE

Many managers experience organizational change throughout their careers. By learning how to preempt and address the challenges associated with change, you can ensure you're equipped with the skills and knowledge needed to manage it.

If you're looking for opportunities to improve your organizational change management abilities, enrolling in an online management course, like Management Essentials, is one option that can provide you with real-world skills, teach you common business strategies, and prepare you to handle any transitional challenge that comes your way.

What Is Real-Time Analytics In Big Data?

Real-time big data analytics is a mouthful, but it represents capabilities that are redefining an organization's ability to make quick, proactive, and insightful business decisions. This emerging technology is used to analyze large and complex sets of data as it comes into a storage system and has the potential to drive a huge business impact. To better understand why it's such a game-changer, we need to first unpack its complicated phraseology.

What is Real-Time Analytics?

Real-time analytics refers to the process of analyzing data as soon as it becomes available in a system. Real-time analytics systems apply logic and math to provide faster insights on that data, leading to a streamlined and more informed decision-making process.

While this is a seemingly simple definition, there is some ambiguity. First, "real-time" can mean different things to different people. Depending on the use case and application, this could have some inconsistencies, but it ranges anywhere from a fraction of a second up to a few minutes. Despite these nuances, the important takeaway is that the analytical findings are shared quickly enough to influence a decision. Compare this with historical reporting, which may have highly granular data—and even important insights—but the data comes too late to act upon it. In contrast, real-time analytics grant visibility quickly enough to respond to issues, minimizing their negative impact, and in some cases, avoid them entirely.

When it comes to using this type of analytics, consumers can interact with the process findings in multiple ways. *On-demand* real-time analytics refers to when a user must request the findings. In contrast, *continuous* real-time analytics actively alerts users of the findings or will trigger a response as it comes across certain findings.

What is Real-Time Analytics in Big Data?

Big data is by no means a new concept and has been developing throughout the digital age, so to fully understand this concept, let's first take a step back.

Since the start of the digital age, organizations have been collecting data and attempting to analyze it to guide the decision-making process. As the digital environment developed, the widespread use of digital systems led to massive amounts of data that continues to grow exponentially.

As data sets became increasingly large and complex, they eventually overtook traditional methods of processing and analyzing data. These computational challenges spurred the evolution of analytics that use high levels of computer processing power to extract accurate insights from huge variable data sets.

This process, termed big data analytics, meant that organizations could analyze datasets that were previously inaccessible due to their sheer size. Analyzing increasingly large datasets has unlocked new, crucial insights into a business's processes, customers, market, and more.

Big data analytics is a broad term that can be broken down into a few different sub types. Each has value and is uniquely suited for different scenarios.

- *Descriptive* analytics refers to its ability to describe and make sense of a set of data.
- *Diagnostic* analytics explain the reasons behind the occurrence of an identified trend or event.
- *Prescriptive* analytics analyze the trend or event and propose an action that can aid in the decision-making process.
- *Predictive* analytics employs artificial intelligence and machine learning to predict a probable future based on current and past data.

Applying *real-time* data analytics to big data has transformed previously retrospective processes, enabling into immediate action. An enterprise can now access (and act upon) valuable insights as soon as information enters the big data infrastructure.

Organizations can now understand *why* something is happening as the system processes live information, and accurately predict the outcome of events, equipped with immediate prescriptive advice—even when the magnitude of data is immense. The result: enterprises can gain actionable insights faster which in turn leads to a shorter and more accurate decision-making process.

Benefits of Real-Time Big Data Analytics

Organizations may be hesitant to implement real-time big data analytics due to the perceived initial lift and cost; however, in the long run, there are many benefits that outweigh these due to their impact on business efficiency and profitability. Real-time big data analytics is also often easier to implement than many companies may assume.

Extend Competitive Advantage

Introducing real-time data analytics to big data means significantly less time between the time information is processed to when it can help an organization make changes or critical decisions.

By combining real-time insights on the market, target audience, and competitor actions, organizations can remain innovative and gain a competitive advantage.

Improve Customer Experience

More insight into customer sentiment allows organizations to factor customer feedback in the decisions and evolution of their services and product. Since this data is constantly changing, it's important to act on it while it is still relevant.

Optimize Business Processes

Real-time big data analytics allow organizations to recognize trends in business processes and gain specific insights into how to drive greater efficiencies across the organization.

Minimize Risk

The ability to detect patterns in real time means that organizations can proactively identify and minimize risks—instead of identifying vulnerabilities after the damage is already done. This is especially applicable in identifying potential customer churn, manufacturing operational inefficiencies, and financial vulnerabilities.

Realize Long Term Cost Savings

When looking long term, there is the potential to significantly cut costs and improve profit margins by adding real-time big data analytics to a tech stack. By creating new business process efficiencies, organizations can free up resources and drive cost savings.

Looking Ahead

The addition of real-time analytics in big data redefines an organization's ability to derive thoughtful insights in time for them to impact business outcomes. Without real time analytics the difficulties in transferring and leveraging mass volumes of data often leads to an unnecessary lag in the decision-making process. The benefits of this technology pair are endless and many of them are rooted in their ability to unlock analytical and operational efficiencies in different areas of an organization.