

Unit – I

Digital Technologies, Digital disruptions, organisations' functioning in Digital age, common traps, Transition into Digital era. Aligning firms' strategy and culture, Digital Matrix Framework, Transformation phases to re-invent. Micro economic policies in Digital business. Game Theory.

Unit – II

Areas to digitalise, Biggest pay out or risk, current business model or invent in new digital business. First mover advantage, Risk of late to move, effect of digital attracters. Network and scale effects. Own Vs shared platforms. SaaS – software as a service. Digital, Physical, and Physital options.

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Digital Technologies, Digital disruptions, functioning in Digital age, common traps, Transition into Digital era. Aligning firms' strategy and culture, Digital Matrix Framework, Transformation phases to re-invent. Micro economic policies in Digital business. Game Theory.

What Is Digital Disruption?

Digital disruption is a transformation that is caused by emerging digital technologies and business models. These innovative new technologies and models can impact the value of existing products and services offered in the industry. This is why the term 'disruption' is used, as the emergence of these new digital products/services/businesses disrupts the current market and causes the need for re-evaluation.

Generally, digital disruption happens after a digital innovation, such as big data, machine learning, internet of things or the BYOD (Bring Your Own Device.) movement. Digital innovation then affects how customer expectations and behaviors evolve, causing organizations to shift how they create products and services, produce marketing material and evaluate feedback. This shift in digital strategy can occur on an individual, organizational, industry or societal level.

Digital disruption vs. disruptive technology

The term *digital disruption* has become something of a cliché (seen) in recent years and is often misused to describe any product involving digital technology or the use of digitization to better compete against marketplace peers. It is often confused with *disruptive technology*, a term coined by Harvard Business School professor Clayton M. Christensen to describe a new technology that displaces an established technology.

Examples of Digital Disruption

A few examples of digital disruption include the following:

- The digital camera business disrupted the industry of film photography and photo processing.
- The subscription economy business model - as used by companies such as Amazon, Hulu and Netflix -- caused a disruption within the media and entertainment industries by changing how content is accessed by customers and monetized by advertisers.
- Freemium products, such as Spotify, LinkedIn or Dropbox, which allow users to sample a basic product with the option to pay for the full offer, put more emphasis on developing a well-known brand behind a product or service.
- On-demand services, such as Uber, have disrupted more traditional services like taxis. ➤ The rise of electronic reading has redefined the print and publication industry.

Importance of digital disruption

It is important for organizations to embrace digital disruption in order to gain a competitive advantage. When an industry experiences digital disruption, it typically signals that consumer needs are shifting. Therefore, understanding the disruption enables companies to keep existing customers happy as well as create opportunities for new customers.

It also gives companies a better idea of human behavior and how trends may occur over time. The following are a few best practices to follow that ensure digital disruptions are more of an opportunity than a threat:

1. Pursue initiatives that might cause a disruption and do not be afraid to be the disruptor.
2. Consolidate data assets and use them to make decisions.
3. Brainstorm ideas for entirely unique products, services or channels.
4. Employ customer data in new, innovative ways.

An Example of Digital Disruption: Kodak Cameras Fail To Capture Future Markets Kodak were one of the first to introduce cameras to the mainstream market. They monopolised the markets for the majority of the 20th century, but unfortunately failed to keep up with the changing identities of their customers and the changing needs and expectations that came along with them.

Digital cameras made the move from being a just piece of photographic equipment to being a much more life-friendly, fun gadget. And where as Kodak originally had their target consumer pegged as female, the male digital camera market opened up thanks to the 'gadget' culture. Some clever marketing from other digital technology brands led to changes in consumer perceptions and created a new 'need' for photographic gadgets. This allowed brands such as Sony and Canon to swoop in and steal the hearts of the consumers with their new technologies and approaches, while Kodak stuck to their guns and fought the change for as long as they could. Despite rapidly losing market share, they refused to succumb to the inevitable force of digital disruption and in 2012 they eventually declared bankruptcy.

How Does Digital Disruption Impact Businesses?

The lesson we can learn from Kodak is that digital disruption is an unstoppable force and to try and fight it is futile. But what businesses can do is embrace digital disruption, even plan for it. Keeping an eye on the ball and knowing the signs of digital disruption emerging in your industry means you can get ahead of the game and work with the flow rather than against it. Not only does this prevent the wave of digital disruption from washing away your success, it can also lead to further growth and new opportunities for the business.

The common way for these companies to assimilate the digital world is by getting organized through projects with functional basis. This ensures that over time each area will be formed out of several mini-teams, making difficult the increasingly needed capacity to adapt to changes, and minimizing synergies, because it multiplies roles with similar functionality.

In my opinion, this is a previous step for a bolder model, one that can be considered more risky depending on the binomial risk-profitability that the organization's management has. In some more digitized sectors such as the *Pure Players* one this would probably not occur, while it would be easier to find in those sectors more traditionally conservative.

Another form of organization is the one based on the client, that is, creating structures with heterogeneous roles that are 100% oriented to different types of customers with value for a given organization.

As you can imagine, advantages are immense; just think about the whole team having the same obsession: to satisfy their customer. It also allows centralizing some functions that add less value in the *Porter's Value Chain*, such as support functions.

It is obviously essential to generate indicators to see if the previewed goals are being met; that's the fundamental reason for which this type of structure is created.

Seen it from another point of view: on the one hand it is as if we could divide our customers in offline and online ones, when we have known for years that the same customer interacts in the two worlds, in fact, they use each channel to reach different goals (to find information, to compare prices, to test the product, etc.).

Organisation's functioning in Digital age

1. On-line World Advantages
2. Customized recommendations
 - Possibility for the consumer to follow up on their purchase
 - Comfortable purchase
 - Detailed information (description, evaluation)
 - Broad and deep assortment
3. Off-line World Advantages
 - Personal
 - Experience of touching and feeling
 - Experience of direct purchasing ➤ Use products immediately
 - Personalized tips on purchasing
4. One possible solution would be to establish a link between the channels:
 - Integrated communication (no client exists only off-line or only on-line)
 - CRM based on individual approach to customers in every interaction (calling to call center, visiting our stores, follow up on Facebook, etc). In one word, making the CRM social.
 - Organizing by customer type, customer service to optimize customer satisfaction.

Digital economy

The **digital economy** is a portmanteau of digital computing and economy, and is an umbrella term that describes how traditional brick-and-mortar economic activities (production, distribution, trade) are being transformed by Internet, World Wide Web, and blockchain technologies.

The digital economy is backed by the spread of information and communication technologies (ICT) across all business sectors to enhance its productivity. A phenomena referred to as the Internet of Things (IoT) is increasingly prevalent, as consumer products are embedded with digital services and devices.

Digital transformation of the economy is altering conventional notions about how businesses are structured, how consumers obtain goods and services, and how states need to adapt to new regulatory challenges. The digital economy has the potential to profoundly shape economic interactions between states, businesses and individuals. The emergence of the digital economy has prompted new debates over privacy rights, competition, and taxation, with calls for national and transnational regulations of the digital economy.

Definition

The Digital Economy also referred to as the New Economy, refers to an Economy in which digital computing technologies are used in Economic Activities.

The term *Digital Economy* came into use during the early 1990s. For example, many academic papers were published by New York University's Center for Digital Economy Research. The term was the title of Don Tapscott's 1995 book, *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. According to Thomas Mesenbourg (2001), three main components of the digital economy concept can be identified:

- E-business infrastructure (hardware, software, telecom, networks, human capital, etc.),
- E-business (how business is conducted, any process that an organization conducts over computermediated networks),
- E-commerce (transfer of goods, for example when a book is sold online).

The digital economy is variously known as the *Internet Economy*, *Web Economy*, *Cryptoeconomy*, and *New Economy*. Since the digital economy is continuously replacing and expanding the traditional economy, there is no clear delineation between the two integrated economy types. The digital economy results from billions of daily online transactions among people, organizations (businesses, educational institutions, non-profits), and distributed computing devices (servers, laptops, smartphones, etc.) enabled by Internet, World Wide Web, and blockchain technologies.

Elements of the digital economy

The Digital Economy consists of all sectors making extensive use of digital technologies (i.e. their existence depends on digital technologies)^[21]. However, digitalization spans many economic sectors, making it far from trivial precisely delimit the digital economy within the entire societal economy

A narrow definition would typically just encompass core digital sectors that refers to the provisioning of digital technologies, products, services, infrastructure, and solutions, as well as all forms of economic activities that are completely dependent on digital technologies and data elements. This includes key sectors like information and communication technology (ICT), but also other economic activities such as internet finance and digital commerce that are not seen as a part of the ICT-sector.

Broader definitions also includes industrial digitalization, i.e. the production quantity and efficiency improvement brought about by the application of digital technology in traditional industries, as an important extension of the digital economy into the wider societal economy. Examples of industrial digitalization in traditional sectors includes remote sensing, automated farming equipment, GPS-route optimization, etc. However, few studies include industrial digitalization in the digital economy.

Information technology

The information technology (IT) sector of the U.S. now makes up about 8.2% of the country's GDP and accounts for twice its share of the GDP as compared to the last decade. 45% of spending on business equipment are investments in IT products and services, which is why companies such as Intel, Microsoft, and Dell have grown from \$12 million in 1987 to more than half a billion in 1997 The widespread adoption of ICT combined with the rapid decline in price and increase in the performance of these technologies, has contributed to the development of new activities in the private and public sectors. These new technologies provide market reach, lower costs, and

new opportunities for products and services that were not needed before. This changes the way multinational enterprises (MNE) and startups design their business models.

Digital platforms

A digital platform operator is an entity or person offering an online communication service to the public based on computer algorithms used to classify content, goods, or services offered online, or the connection of several parties for the sale of goods, the provision of a service, or the exchange or sharing of content, goods, and services.

Digital trade

In the U.S. in the 1990's, the Clinton Administration proposed *The Framework for Global Electronic Commerce*. It contained the promotion of five principles used to guide the U.S. government's actions towards electronic commerce so that the digital economy's growth potential remains high. These five principles include the leadership of the private sector, the government avoiding undue restrictions on e-commerce, limited government involvement, the government's recognition of the Internet's unique qualities, and the facilitation of e-commerce on a global basis.

Governments have primarily restricted digital trade through three means

1. **Data flow restrictions:** regulations that require that companies store data (e.g. personal information, business records, financial data, and government data) in a particular country or go through a process before transferring the data abroad. For example, the EU's GDPR law only permits transfers of data on EU individuals to countries that have implemented certain data privacy safeguards and been certified by the EU.
2. **Data localization requirements:** regulations that require that data be stored on servers within a country
3. **Digital services taxes:** taxes on revenues from the sale of digital services or goods (e.g. online sales, digital advertising, e-commerce, data, streaming). By 2022, 29 countries had digital service taxes.

Gig economy

Gig work is labor that consists of temporary and flexible jobs usually done over delivery apps and rideshare services such as Grubhub, Uber, Lyft, and Uber Eats. It can be desirable to those who want more flexibility in their schedule and can allow workers to make additional income outside of their traditional jobs.

Most gig work supplements workers' traditional jobs. The full size of the gig economy and number of workers is not yet known. Katz and Krueger estimated that only 0.5% of gig workers make most of their income off of platforms like Uber, Lyft, Grubhub, and DoorDash. Since these workers are considered independent contractors, these companies are not responsible for giving its workers benefits packages like it would for regular full-time employees. This has resulted in the formation of unions between gig and platform workers and various reforms within the industry. Blockchain and Tokenized equity-sharing gig economy platforms or applications are being developed to accelerate the gig economy as a full fledged digital economy contributor using new technologies.

Impact on retail

The digital economy has had a substantial impact on retail sales of consumer product goods. One effect has been the fast proliferation of retailers with no physical presence, such as eBay or Amazon. Additionally, traditional retailers such as Walmart and Macy's have restructured their businesses to adapt to a digital economy. Some retailers, like Forever 21, have declared bankruptcy as a result of their failure to anticipate and adapt to a digital

economy. Others, such as Bebe stores have worked with outside vendors to completely convert their business one that is exclusively digital. These vendors, such as IBM and Microsoft, have enabled smaller retailers to compete with large, multi-national established brands.

Mobility of intangibles

Both development and exploitation of intangible assets are key feature of the digital economy. This investment in and development of intangibles such as software is a core contributor to value creation and economic growth for companies in the digital economy. In early 2000, companies started substantially increasing the amount of capital allocated to intangibles such as branding, design and, technology rather than in hardware, machinery or property.

Mobility of business functions

Advancements in information and communication technologies (ICT) have significantly reduced the cost associated with the organization and coordination of complex activities over a long period. Some businesses are increasingly able to manage their global operations on an integrated basis from a central location separate geographically from the locations in which the operations are carried out, and where their suppliers or customers are. Consequently, it has allowed businesses to expand access to remote markets and provide goods and services across borders.

Reliance on data

The Digital economy relies on personal data collection. In 1995, the Data Protection directive relating to a natural person who can be identified by reference to his identification number or to information which is specific to him". At that time, this regulation emerged in response to the need to integrate the European market. By adopting common European data protection standards, the EU was able to harmonize conflicting national laws that were emerging as a trade barrier, inhibiting commerce in Europe. For this reason, GDPR and its predecessor were viewed as internal market instruments, facilitating the creation of a digital, single market by allowing an unhindered flow of data within the entire common market

Due to its ability to bridge the information asymmetry between supply and demand, data now has an economic value. When platforms compile personal data, they gather preferences and interests, which allow companies to exert a targeted action on the consumer through advertising. Algorithms classify, reference, and prioritize the preferences of individuals to better predict their behavior.

Via free access to platforms in exchange for the collection of personal data, they make the content non-rival. Thus, the intangibility of content tends to give a collective natural aspect to this information accessible to everyone, to benefit public good by creating a digital public space The McKinsey Global Institute Report (2014) notes five broad ways in which leveraging big data can create value for businesses:

1. Creating transparency by making data more easily accessible to stakeholders with the capacity to use the data,
2. Managing performance by enabling experimentation to analyze variability in performance and understand its root causes,
3. Segmenting populations to customize products and services,
4. Improve decision making by replacing or supporting human decision making with automated algorithms,
5. Improve the development of new business models, products, and services.

In 2011, the Boston Consulting Group estimated that personal data collected in Europe was worth 315 billion euros.

Network effect

The Network effect occurs when the value of a product or service to the user increases exponentially with the number of other users using the same product or service. For instance, WhatsApp provides a free communication

platform with friends and contacts. The utility to use it relies on the fact that a substantial part of or friends and colleagues are already users.

Multi-sided market

The Digital market can be labeled a ‘multi-sided’ market. The notion developed by French Nobel prize laureate Jean Tirole is based on the idea that platforms are ‘two-sided’. This can explain why some platforms can offer free content, with customers on one side and the software developers or advertisers on the other. On a market where multiple groups of persons interact through platforms as intermediaries, the decisions of each group affect the outcome of the other group of persons through a positive or negative externality. When the users spend time on a page or click on links, this creates a positive externality for the advertiser displaying a banner there. The digital Multinational enterprises (MNEs) do not collect revenue from the user side but from the advertiser side, thanks to the sale of online advertisement

What is Digital India?

Launched by the Government of India, Digital India is a program to develop India in a learning future and involves various government departments. The objective of the program is to establish better connect between citizens and the government via e-services and deliver government services in a cost effective and transparent manner.

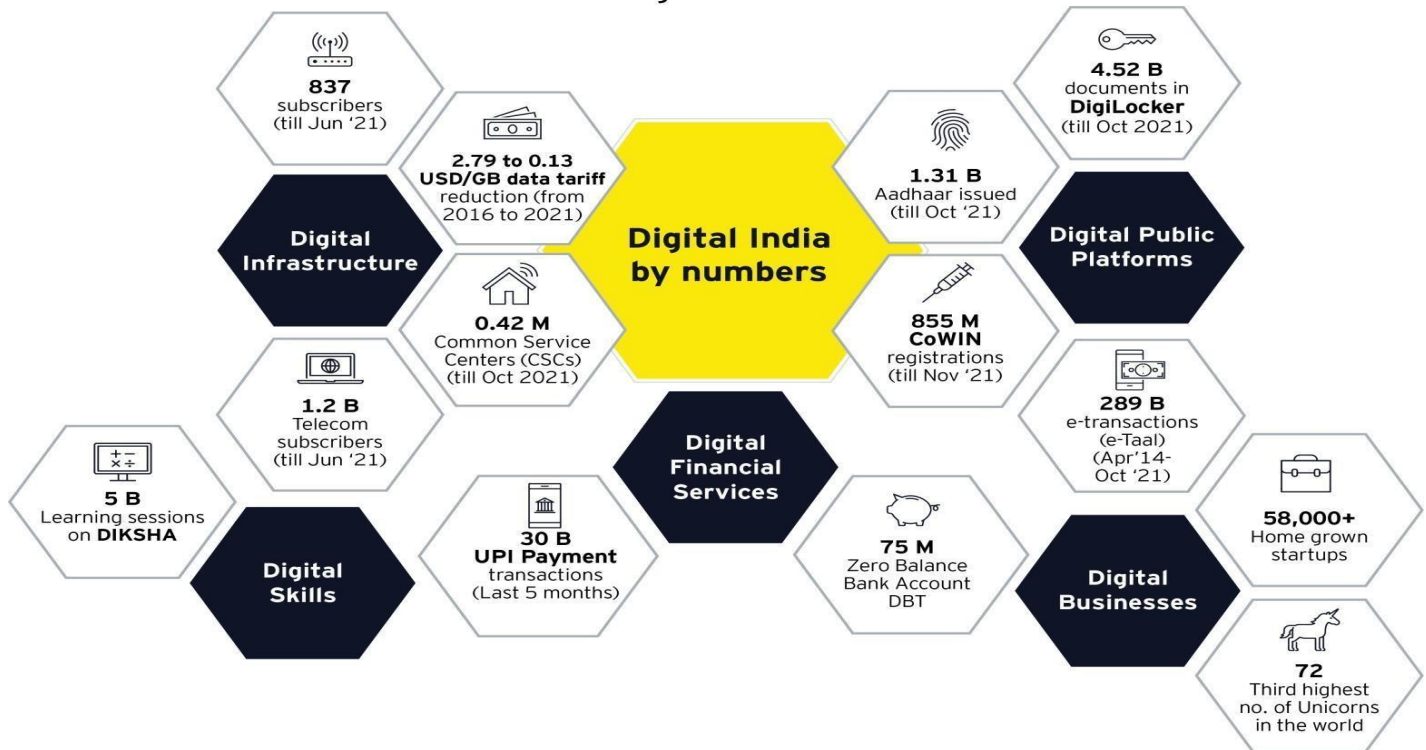
Why digitalization matters

Digitalization is a big technological change which is underway and how countries adopt these technologies will lay the groundwork for the coming decades. It will increase economic efficiency and competitiveness, creating new businesses and products, and addressing challenges relating to increasing financial inclusion, improving governance and reducing disparities.

For India, digitalization is especially important given the large population, with over 60% living in rural areas. Connecting the country together allows for greater access to the benefits and opportunities of a modern economy to a larger number of citizens, thereby bridging the economic divide. Further, the adoption of advanced technologies, such as **AI**, Machine learning, **blockchain**, cloud computing, among others, will improve the efficiency of Indian businesses, making them globally competitive, explore new markets, create new business models, and position them for strong growth over the next few decades.

India has been digitalizing at a rapid pace driven by a combination of factors, including growing broadband penetration, technological advancements, low costs of data usage and the government’s thrust on building **digital infrastructure**. This provided an impetus to the emergence of the start-up ecosystem and entrepreneurship among the relatively young population, which has been quick in adopting and using digital technologies.

Digital India



Digital infrastructure built on India Stack

India has followed a different strategy in digitization of its economy vis-à-vis other developed countries. India has an open internet and there is no firewall between it and the rest of the world. However, the difference is that India has leveraged the internet to create a plethora of digital public goods and government services. This has allowed India to connect numerous citizens and provide a more democratic and an inclusive digital network and infrastructure.

Underpinning this infrastructure is the “India Stack”, a set of open Application Programming Interfaces (API), which is unlocking economic building blocks like identity, **digital payments** and data, thereby creating a platform for facilitating transactions and providing goods and services.

The Aadhaar layer provides online bio-metric based digital identities to 1.35b individuals. Another layer of the Digital Indian Stack is the UPI. There are over 350 banks on the network with over 260m unique users and the network has grown to become India’s largest digital payment network and world’s fifth largest digital payment network by volume.

Development of the UPI interface has fundamentally changed behavior among Indians, with a long-term positive impact on:

1. Formalization of the digital economy in India – through cashless and paperless transactions.
2. Deepening of financial inclusion by bringing in a number of small businesses and unbanked individuals into the formal economy by creating a financial record and credit history and allowing these businesses and individuals to access credit.
3. Provision of an alternate retail payment system and lowering of the dependence on existing card-based payment systems.

4. Provision of an architecture for private players to innovate and develop new business models, for example, fintech and **e-commerce** solutions. As a result of development of this stack, the impact of the pandemic and the growing e-commerce market, digital payments have been exploding with UPI leading the surge in India, confirming its bright future in the country.

Digital payment trends - Total digital retail payments
(in INR billion)



Note: Others include ECS, AEPS, APBS and BHIM
Source: TRAI, RBI

Economic impact of digitalization in India

The economic impact of digitalization can be seen across the Indian economy.

1. India's core digital economy share in GVA increased from 5.4% in 2014 to 8.5% in 2019, with a digitally dependent economy estimated to be around 22% of GDP in 2019.
2. In absolute US dollar terms, India's digital economy exhibited a growth rate of 15.6% over the period 2014 to 2019, which was 2.4 times faster than the growth of the overall Indian economy.
3. Digital output multiplier has increased over time from 1.35 in 2014 to 1.52 in 2019, highlighting the role of investments to drive growth.
4. 62.4m workers were employed in the digitally dependent economy in 2019.
- 5.

Digitalization of government and governance

Government of India has been progressively digitizing its interface with citizens and thereby making it easier to get licenses, certificates, payment of taxes and bringing efficiency in governance outcomes. The government has also digitalized procurement of goods and services by creating a centrally managed marketplace - Government eMarketplace (GeM), which is one of the largest procurement platforms with annual gross merchandise value of US\$14.2b.

Social aspects of digitalization, of bringing relief to people during the pandemic, were driven on India's digital public infrastructure — COWIN36, a **technology** platform created by the government to control the rollout of the world's largest vaccination program.

Broadband usage has been surging, driving marketplaces

Broadband usage in India has been growing at an unprecedented pace. Mobile broadband (MBB) subscribers have increased from 345m to 765m over the past five years. Data traffic per user has seen a jump of 31% over the last five years reaching 17GB as of December 2021. As a result, India's data traffic usage from 2017 to 2021 was among the highest in the world with a CAGR of 53%. India's Gen Z spends an average of 8 hours per day online. The next wave of smartphone adoption is happening in rural India. It is now expected that India would have the second largest universe of online shoppers by 2030, estimated at 500m to 600m.

Online marketplaces have been exploding across all sectors of the economy. Reflecting the behavioral change, it is but logical that these metrics will continue to explode. The size of the e-commerce market is expected to grow to US\$350b by 2030.

Game Theory in Business: A Step-by-Step Guide and Success Stories for Software Companies What exactly is gametheory

Game theory is a branch of mathematics that studies the strategic decision-making of individuals or groups in situations where the outcome depends not only on their own actions but also on the actions of others. It provides a framework for analyzing the interactions of different players in a game, with the aim of predicting the likely outcomes of those interactions.

Game theory is used in a wide range of fields, including economics, political science, psychology, and biology, to analyze decision-making in different situations such as auctions, voting, bargaining, and conflict resolution. It involves the use of mathematical models to represent the behavior of different players and the rules of the game, and the analysis of these models to determine the optimal strategies for each player.

Overall, game theory provides a powerful tool for understanding the behavior of individuals and groups in situations where their decisions are interdependent, and where the outcome of their interactions depends on the choices made by others.

Step-by-step guide for using game theory as a software company to elevate business:

1. Identify the key players: When identifying the key players in the software industry, consider not just your competitors, but also customers, suppliers, regulators, and any other stakeholders who have a significant impact on your business. Look at the dynamics of the industry, including market trends, customer behavior, and technological advances, to determine who the key players are.
2. Define the rules of the game: When defining the rules of the game, consider both the formal and informal rules that govern the software industry. Formal rules might include laws and regulations, while informal rules might include industry norms and ethical standards. Also, consider the incentives that each player faces and how those incentives might affect their behavior.
3. Analyze the game: Use mathematical models and other analytical tools to analyze the game and understand the behavior of the players. Consider different scenarios and the likely outcomes of different strategies. Look at how your competitors are likely to behave and how their actions might affect your business. Consider the potential benefits and risks of different strategies.
4. Determine your own strategy: Based on your analysis, develop a strategy that is tailored to your business's strengths and weaknesses. Consider different scenarios and develop contingency plans in case things don't

go as expected. Consider different ways to differentiate yourself from your competitors, such as by offering unique features, superior customer service, or lower prices.

5. **Test your strategy:** Test your strategy in a controlled environment to see how it performs in different scenarios. Consider using simulation software to test different scenarios and see how your strategy performs in each one. Look for ways to optimize your strategy and make adjustments as needed.
6. **Implement your strategy:** Once you have tested your strategy, implement it in the real world. Monitor your performance closely and look for ways to improve. Be prepared to adjust your strategy as needed based on new information or changes in the industry.
7. **Monitor the game:** Continuously monitor the software industry to stay up-to-date on market trends and changes in your competitors' behavior. Look for opportunities to adapt your strategy or take advantage of new developments in the industry. Consider investing in research and development to stay ahead of the competition.

Overall, using game theory can help you develop a strategic approach to your software business that takes into account the behavior of other players in the market. By analyzing the game and developing a tailored strategy, you can improve your competitive position and achieve long-term success.

10 success stories of companies using gaming theory, and how it helped them succeed?

1. **#amazon :** Amazon has used game theory to develop its pricing strategy, which has helped it remain competitive in the online retail industry. By monitoring the prices of its competitors and adjusting its prices accordingly, Amazon has been able to attract more customers and increase its market share.
2. **#google :** Google has used game theory to develop its auction-based advertising system, which has helped it become one of the world's largest digital advertising companies. By using a Vickrey auction, where the winning bidder pays the second-highest bid price, Google has been able to maximize revenue while ensuring fair competition.
3. **#microsoft :** Microsoft has used game theory to develop its anti-piracy strategy, which has helped it protect its intellectual property and maintain its position as one of the world's largest software companies. By using a combination of legal action and education, Microsoft has been able to discourage piracy of its software products.
4. **#uber :** Uber has used game theory to develop its surge pricing strategy, which has helped it balance supply and demand and improve the overall efficiency of its platform. By charging higher prices during times of high demand, Uber has been able to incentivize drivers to work when they are needed most.
5. **#airbnb :** Airbnb has used game theory to develop its pricing and availability algorithms, which have helped it become one of the world's largest accommodation-sharing platforms. By using a dynamic pricing model that takes into account supply and demand, Airbnb has been able to offer competitive prices to both hosts and guests.
6. **#verizon :** Verizon has used game theory to develop its network optimization strategy, which has helped it manage network congestion and improve the quality of its services. By using algorithms that take into

account user behavior and network capacity, Verizon has been able to ensure that its network runs smoothly even during peak usage times.

7. #deltaairlines : Delta Air Lines has used game theory to develop its baggage handling system, which has helped it reduce delays and improve customer satisfaction. By using algorithms to optimize the handling of bags at each stage of the journey, Delta has been able to minimize the risk of lost luggage and ensure that bags are delivered on time.
8. #procterandgamble : Procter & Gamble has used game theory to develop its pricing and promotion strategies, which have helped it maintain its position as one of the world's largest consumer goods companies. By using algorithms that take into account consumer behavior and market trends, Procter & Gamble has been able to offer competitive prices and promotions that drive sales.
9. #americanairlines : American Airlines has used game theory to develop its overbooking strategy, which has helped it improve its profitability and reduce the number of empty seats on its planes. By offering incentives to passengers to voluntarily give up their seats, American Airlines has been able to maximize revenue while minimizing the risk of overbooking.
10. #cocacola : Coca-Cola has used game theory to develop its advertising strategy, which has helped it remain one of the world's largest beverage companies. By using algorithms that take into account consumer behavior and market trends, Coca-Cola has been able to create effective advertising campaigns that resonate with its target audience.

In each of these examples, game theory has helped companies develop strategies that are tailored to their specific needs and challenges.

Unit – 2

Digitization Strategies

Areas to digitalise, Biggest pay out or risk, current business model or invent in new digital business. First mover advantage, Risk of late to move, effect of digital attracters. Network and scale effects. Own Vs shared platforms. SaaS – software as a service. Digital, Physical, and Physital options. Digitization Strategies

Areas to Digitize: When considering areas to digitize, it is crucial to assess the potential impact and value that digital transformation can bring to your business. Some common areas to consider for digitization include:

- a) Customer Experience: Enhance customer interactions through digital channels, personalized marketing, and self-service options.
- b) Operations and Processes: Streamline internal operations by automating manual tasks, implementing digital workflows, and integrating systems.
- c) Data Analytics: Utilize data analytics tools to gain insights, make data-driven decisions, and improve business performance.
- d) Supply Chain Management: Optimize the supply chain by integrating digital technologies for better visibility, efficiency, and collaboration.

- e) **Product Development:** Leverage digital tools for agile product development, rapid prototyping, and collaboration across teams.

Biggest Payoff or Risk:

Biggest Payoff or Risk: Identifying the biggest payoff or risk depends on the specific context and goals of your business. However, some common areas that can yield significant benefits or pose substantial risks during digital transformation include:

- a) **Customer Acquisition and Retention:** Digital channels can provide an opportunity to reach a wider customer base and enhance customer loyalty. Failing to adapt to digital trends may result in losing market share to competitors.
- b) **Data Security and Privacy:** With increased digitization comes the need to protect customer data and ensure compliance with privacy regulations. Neglecting security measures can lead to data breaches and damage to reputation.
- c) **Disruption from New Entrants:** Digitization can lower barriers to entry, enabling new players to disrupt traditional business models. Failing to anticipate and respond to new competitors can pose a significant risk.
- d) **Employee Skills and Engagement:** Digitization requires a workforce equipped with digital skills. Neglecting to invest in employee training and engagement can hinder digital transformation efforts.

First Mover Advantage

What Is a First Mover?

A first mover is a service or product that gains a competitive advantage by being the first to market with a product or service. Being first typically enables a company to establish strong brand recognition and customer loyalty before competitors enter the arena. Other advantages include additional time to perfect its product or service and setting the market price for the new item.

First movers in an industry are almost always followed by competitors that attempt to capitalize on the first mover's success and gain market share. Most often, the first mover has established sufficient market share and a solid enough customer base that it maintains the majority of the market.

What is the First Mover Advantage?

The first-mover advantage refers to an advantage gained by a company that first introduces a product or service to the market. The first-mover advantage enables a company to establish strong brand recognition and product/service loyalty before other entrants to the market.

It is important to note that the first-mover advantage only refers to a large company that moves into a market. For example, Amazon was not the first company to sell books online. However, it was the first company to achieve significant scale in that line of business.

Benefits of Being a First Mover

1. Technology leadership

First movers can make their technology/product/services harder for later entrants to replicate. For example, if the first mover can reduce the costs of producing a product (an “experience” curve effect), the first mover can establish an absolute cost advantage. In addition, applying for patents can protect and establish a first-mover advantage.

2. Control of resources

The second benefit is the ability to control strategic and/or scarce resources. For example, Wal-Mart was able to locate its stores in small towns and prevent others from entering the market.

3. Buyer switching costs

The third benefit that first movers may enjoy is buyer switching costs. If the first business is able to establish itself firmly, it may be inconvenient for consumers to switch to a new brand later.

First mover advantage refers to the benefits gained by an organization or business that is the first to enter a new market or introduce a new product or service. Here are some key points related to first mover advantage:

- a. **Market Leadership:** Being the first to enter a market allows a business to establish itself as a leader and build brand recognition. This can result in a stronger market position and customer loyalty.
- b. **Early Customer Acquisition:** First movers have the opportunity to capture a significant portion of the market share before competitors enter. They can attract early adopters who are eager to try new products or services.
- c. **Branding and Reputation:** First movers often benefit from being perceived as innovative and cutting-edge, which can enhance their brand reputation. This can create a barrier for later entrants who must work harder to differentiate themselves.
- d. **Learning and Experience:** Being the first to operate in a new market or industry provides valuable learning experiences. First movers can gain insights about customer preferences, market dynamics, and operational challenges, which can be leveraged to refine their strategies.
- e. **Technological Advancements:** First movers in the digital space can leverage new technologies to differentiate themselves and create unique offerings. They have the opportunity to shape industry standards and set the pace of innovation.
- f. **Network Effects:** First movers may benefit from network effects, where the value of a product or service increases as more users or participants join. This can create a barrier for late entrants who struggle to compete with an established network.

Disadvantages of Being a First Mover:

Being the first business in an industry may not always guarantee an advantage.

- a. **Uncertain Market Demand:** Being the first in a new market means there is limited information about customer demand and acceptance. There is a risk of investing significant resources in a market that may not grow as expected.

- b. **High Costs and Risks:** First movers often face higher costs and risks associated with developing new technologies, creating market awareness, and overcoming regulatory challenges.
- c. **Potential Mistakes:** Early entrants may make mistakes or encounter unforeseen obstacles that later entrants can learn from and avoid. Late entrants can benefit from observing and learning from the successes and failures of first movers.
- d. **Fast-Follower Advantage:** Late entrants who closely observe and learn from the strategies and mistakes of first movers can sometimes capitalize on their learnings and enter the market with improved offerings and a more efficient business model.
- e. The first mover may invest heavily in persuading consumers to try a new product. Later entrants would benefit from these informed buyers and would not need to spend as much on educating consumers.
- f. Later entrants can avoid mistakes made by the first mover.
- g. If the first mover is unable to capture consumers with their products, later entrants can take advantage of this.
- h. Later entrants can reverse-engineer new products and make them better or cheaper.
- i. Later entrants can identify areas of improvement left by the first mover and take advantage of them.

It is essential for businesses to carefully assess the market dynamics, potential risks, and the readiness of their own organization before deciding to pursue a first mover strategy.

A few examples include:

1. **Amazon** launched its first online store in 1994, and it was the pioneer of eCommerce sites. Today, its success is tough to explain in words.
2. For example, **eBay** built the first meaningful online auction site in 1995 and has continued to grow. Today, eBay is ranked 43rd on Forbes' list of innovative companies. It has an annual revenue of **₹25.7 billion** and a 2.8% growth rate.
3. **Hoover**, which launched its first portable vacuum cleaner back in 1930, beat their competition by breaking records in new fields.

Examples of Successful Companies That Were Not First Movers

Listed below are three companies that were not first movers in their respective markets, but have now grown to become some of the biggest companies in the world:

1. **Google:** Before Google, there were search engines such as Yahoo and Infoseek. However, Google was able to customize its search engine to perform more effectively and efficiently. They now control over 65% of search activity.
2. **Southwest Airlines:** Southwest Airlines entered the airline industry as a late entrant but was able to expand and become the second-largest airline in the world in terms of the total number of passengers. The company focused on an area that other airlines were not looking at – short-haul flights.

3. **Starbucks:** There were a lot of places to buy coffee before the establishment of Starbucks. However, Starbucks was able to establish a strong brand equity by placing an emphasis on making Starbucks the go-to place when you're not home or at the office.
4. **Facebook:** In the days before Facebook existed, there were Friendster and Myspace. Before that, Classmates.com and SixDegrees.com established the basis for future social networks. SixDegrees was among the first users to create an account page, and Classmates.com allows you to meet people who attended your school. Facebook came into existence much later and wrote a stunning story of success.
5. **Zappos:** The world of shoes isn't something which is the first thing that comes to mind when you think of innovations. However, by launching the largest selection of shoes on the internet and a 365-day free returns policy, Zappos became the biggest retailer of shoes online, surpassing department stores that have been in existence for a long time and were thought to be of as retail staples.
6. **Spotify:** There were many sites where one could (legally) access music online From Pandora and SoundCloud. Spotify's user-friendly and streaming service on demand has been able to convert users who previously streamed songs illegally into customers who pay. Spotify now has control of 86% of the on-demand streaming market.

What is phygital, and how does it impact eCommerce?

The rapid rise of technology has led to the emergence of a new term in the eCommerce industry: phygital. Phygital is the integration of physical and digital elements that provide customers with a seamless, omnichannel shopping experience.

Phygital is a new term created by combining the concepts of physical and digital. Utilize a phone to look at a restaurant's menu, pay for gas without touching a payment terminal, and monitor health with a linked gadget etc., are the integration of physical and digital in customer experience strategy is undoubtedly calls as Phygital.

By combining the best aspects of online and offline retail, businesses can better engage their customers and create more meaningful relationships. This article will discuss what phygital is, its advantages for eCommerce companies, and how it can enhance customer experiences.

What is phygital?

Phygital, also called phygitality, is an innovative concept that integrates physical and digital experiences to bridge the gap between online and offline commerce. It combines elements of physical stores and digital platforms to create interactive customer experiences that emphasize convenience and personalization.

Phygital solutions often use augmented reality (AR), virtual reality (VR), artificial intelligence (AI), beacons, QR codes, and NFC tags (*Near-field communication technology allows two devices to communicate wirelessly. The technology can be embedded in a small tag to facilitate data transfer between nearby mobile phones, laptops, tablets, and other electronics*) to enable customers to engage with products in more engaging ways than traditional shopping methods. This merging of physical and digital can improve customer engagement by providing contextual information, promotions, personalized recommendations, or enabling virtual product trials.

Phygital strategies also allow retailers to bridge the gap between their online and offline shops by offering easy access to a broader range of products. For instance, they can display goods in stores while allowing customers to purchase them directly from their eCommerce website or mobile app. Plus, phygital solutions can promote loyalty initiatives by providing customers with instant rewards or exclusive offers for using a specific service or buying certain products.

However, eCommerce retailers should be careful. According to Jack Underwood, Co-founder & CEO of Circuit, "Phygital shopping experiences have the power to negatively impact eCommerce retailers plagued by supply chain issues. **With 'Buy Now, Pickup in Store' options, retailers have the advantage of local in- store stock that can be ready almost instantly post-order.**

"eCommerce retailers can still offer a more convenient experience if they can quickly get their products into their shoppers' hands. eCommerce retailers with problematic or slow supply chains must work to amend the situation before phygital options come for their market share."

What are the benefits of Phygital Marketing?

Customer-Centric approach:

The majority of purchases begin on internet platforms, where the client conducts extensive research before making the purchase. Though most transactions are online, some customers still prefer an in-store experience that includes physical interaction. In contrast, millennials do not recognize a distinction between physical and digital. They would desire a more consistent and individualized experience.

Increased revenue and sales:

Improved customer experiences result in increased sales and revenue. It makes perfect sense. When customers love purchasing from you, they will do it more frequently.

Advantages of phygital for eCommerce companies

There are several advantages that eCommerce companies can gain from using phygital solutions. Here are the top four.

Improving customer experience

Phygital solutions, which combine physical and digital elements, can be leveraged to help businesses improve customer engagement by creating an enhanced experience. By introducing digital technologies into physical spaces, customers can access a broader range of services and receive elevated service levels.

For example, customers may use augmented reality or virtual reality displays to take advantage of interactive product presentations or receive real-time updates on their orders. In addition, utilizing these technologies allows businesses to provide a more personalized and engaging experience for customers across different channels, such as in-store visits, online shopping, and phone conversations.

Improving internal processes

In addition to providing a more enjoyable experience for customers, phygital solutions can also improve internal processes for businesses. By integrating physical data with digital insights from multiple sources, companies can make more informed decisions faster than ever.

This could lead to increased productivity with fewer mistakes and greater efficiency in daily tasks, such as inventory management and order fulfillment. It can also enable businesses to gain better insights into customer behavior with real-time analytics tools to tailor their customer journey accordingly.

Bridging the gap between online and offline shops

Phygital solutions can help Businesses Bridge the gap between online and offline shops in various ways. By leveraging technology, companies can create an interconnected experience that enables customers to go seamlessly between their physical and digital stores. For example, shoppers can purchase products online and pick them up in a store or place orders in-store and have them delivered to their homes.

This integrated approach ensures customers always get what they need from the business conveniently without compromising on price or quality. Additionally, with phygital solutions, companies can use data collected from online and offline purchases to gain valuable insights about customer preferences, allowing them to tailor their services accordingly.

Promoting loyalty initiatives

Phygital solutions, or the combination of physical and digital experiences, can help businesses promote loyalty initiatives in various ways. For example, offering customers a cohesive experience across different touchpoints can encourage them to return consistently and make higher-value purchases.

For example, companies can use phygital solutions to create personalized customer experiences. Retailers can use data collected from customers' purchase histories to identify preferences and suggest items tailored to their interests. This creates more engaging experiences for shoppers and encourages them to return and buy more frequently.

Examples of how to use phygital in eCommerce

Digital signage and kiosks

Digital signage and kiosks are powerful phygital solutions that can create a cohesive customer experience across different touchpoints. For example, retailers can use digital signage to display product information and promotions in-store and provide customers with access to online shopping catalogs. Similarly, they can use kiosks to provide customers with additional product information and allow them to purchase directly from the store.

Augmented Reality (AR) shopping experiences

AR is another effective phygital solution that can create unique shopping experiences for customers. For instance, retailers can use AR to allow customers to virtually try on clothes and accessories or explore products in more detail before purchasing them. This helps create a more immersive shopping experience that encourages customers to explore items in more detail and make more informed decisions.

Mobile apps and loyalty programs

Finally, businesses can use mobile apps and loyalty programs to create a cohesive phygital experience for their customers. Mobile apps can help customers find items in-store, access product information and reviews, or even make purchases directly from the app. Loyalty programs, meanwhile, can be used to reward customers for making purchases and encourage them to come back more frequently.

Benefits of implementing phygital strategies for customers

Implementing phygital strategies for customers can offer a wide range of benefits. For starters, it allows companies to provide customers with an enhanced and more cohesive experience when shopping online and in-store.

Personalized experience

Adopting phygital strategies can also enable businesses to strengthen their customer relationships by providing seamless omnichannel services that help build trust and loyalty. Customers can shop quickly and conveniently while receiving personalized support and advice from in-store staff members.

Fast and automated shopping process

On top of that, implementing phygital strategies boosts efficiency in operations since companies no longer have to rely on manual processing or outdated technology for managing their physical stores. This significantly reduces costs associated with store maintenance, enabling companies to save money. In addition, customers benefit from the increased availability of products as they can now easily compare prices between physical and online stores.

Adapting to customers' preferences

Not only that, but using phygital strategies also allows businesses to collect data on customer behavior more accurately and gain valuable insights into how customers interact with both physical and digital channels. This helps companies make better decisions, such as tweaking product lines or setting up promotions based on customer preferences, which can improve customer satisfaction.

Challenges faced by businesses when implementing phygital initiatives

One of the significant challenges businesses face when implementing phygital strategies is the complexity of integrating online and offline operations. With digital transformation becoming increasingly important, companies are expected to go beyond simply providing customers with an online presence.

Instead, it requires a comprehensive approach that involves unifying digital and physical processes, products, services, and experiences to provide customers with a seamless experience across multiple touchpoints.

Another challenge for businesses when implementing phygital strategies is developing new skill sets. Businesses have traditionally focused on digital or physical operations, so introducing both can be difficult from a capabilities perspective. Because of that, companies must train employees to manage digital and physical operations effectively while ensuring they're always up-to-date with the latest technology and trends within the industry.

Some companies may find it hard to adjust to shifting customer preferences and behaviors when transitioning into a more phygital approach. Traditional customer segmentation models may no longer work due to changes in behavior caused by mobile devices or new technologies such as AI. Correspondingly, businesses must be able to understand customer needs while tracking their journey through all touchpoints to deliver a personalized experience for their phygital strategy to be successful.

Phygital Marketing examples:

Web portals and websites

Insurance and healthcare are two of the most significant industries to create online portals. Both must be straightforward for customers to self-serve tasks like bill payments and prescription refill requests. But not all websites meet this requirement. Almost everyone has a smartphone, which they use for regular tasks like managing their insurance and healthcare.

As healthcare providers consider how to serve patients best, telemedicine-enabled website portals will be critical. For example, patients who don't need to be seen in person might use website portals to communicate with their doctors in a fashion that fits their lifestyle.

Kiosks

A kiosk is a famous example of phygital. A kiosk allows customers to perform routine tasks quickly and effectively utilizing digital technology in a specific physical space, such as an airport, bank, or restaurant. Many people have used them, and they've become so regular and accepted that most consumers don't even consider it a digital experience.

For example, consider entering a quick-service restaurant and approaching a geofenced kiosk. The kiosk greets you, recommends goods you've already purchased, and matches payment and dietary restrictions from your mobile app. This type of contact simplifies the kiosk experience and makes it more customer-centric, increasing brand loyalty.

Voice

Amazon's Alexa is a cloud-based voice service that is gaining popularity. But they're not simply for gaming or music. More companies are establishing vocal capabilities to help consumers. These encounters often combine digital and physical components like the other instances. For example, maybe you ask Alexa to keep track of your daily medical stats from your wearable. You may view that data at any time, even when you're waiting for a telemedicine visit with your doctor to discuss how it can help you improve your overall health.

Lenskart: Augmented reality (AR) lets customers see a virtual object in a real-world setting. It makes it feasible to become familiar with the virtual product, which was before impossible. Another notable example is Lens kart, which allows users to try on virtual glasses using their phone's camera and get a feel for the product before making a purchase choice. At the same time, Lens, kart has an offline store that offers assistance in choosing the best decisions and other in-store services.

Conclusion

Using phygital strategies has a wide range of benefits for both businesses and customers. However, it's also essential to consider the numerous challenges associated with implementing these strategies, including the complexity of integrating online and offline operations and the need for businesses to develop new skill sets and adjust to shifting customer behavior. By considering all of these factors, businesses can ensure they leverage the advantages of phygital strategies to remain competitive in today's digital landscape.

UNIT - 3

Digital business – Effect on jobs, employment, freelancing, fixed or flexible times and days, office work, remote work, non-employment work arrangements, labour automation with AI and Robotics. Reskilling. Employment quality, need to review rights and obligations related to employment relationships. Safety net for employees affected by Digitalisation.

Freelancer

An individual who makes money on a per-job basis is a freelancer. They usually earn on a per-task basis and generally work for a short time. In simpler terms, they do not work for a firm. Thus, they enjoy the liberty to work on various jobs for different clients simultaneously. However, if they're in a contract to work exclusively for a

particular client, they cannot pick up other tasks till they've completed that project. Let's take a look at the definition to understand clearly what is freelancer.

Definition

An independent labourer earning wages per job is known as a freelancer.

Freelancer

-
- They usually take up short-term tasks.
- They enjoy the freedom of working from home at flexible times. Thus, it allows them to balance their work-life better.
- A freelancer can work full-time or part-time, depending on their contract. These independent contractors start their work with a signed contract and a predetermined fee as per the time and effort they will have to put in to complete that task.
- The payment also depends on the freelancer, and they can choose to get paid based on hour, day, or project.

Pros and Cons of Being a Freelancer: There are different pros and cons of being a freelancer. While some enjoy flexible work hours, they do not have job stability. So, let's take a look at the pros and cons:

PROs

1. **Freedom:** They enjoy choosing the clients they're interested in working with. Thus, they can work with one client or with many clients simultaneously.
2. **Control:** Freelancing allows people to control their workload. They can choose how much they want to work by taking up projects of their liking. Similarly, there's also more focus on the job than distractions that come with full-time employment, such as politics.
3. **Flexibility:** Flexibility is one of the biggest pros of freelancing. Freelancers choose how their working hours. Some of them work full-time during weekdays and part-time during weekends or don't work at weekends to take out time for other things.
4. **Independence:** There is a lot of autonomy in freelancing. You are not confined to a little cubicle and a fixed time. You get to work independently and in a more comfortable space.
5. **Exposure:** Freelancers enjoy a lot of exposure by working on various projects and topics. When people work with a company in-house, they do not get to hone their skills in other areas. But with freelancing, one can broaden their horizons.

CONs

Taxes: It is the responsibility of the freelancers to pay their self-employment taxes at specified periods. While they enjoy tax deductions, it is a must to pay taxes. So, it is better to be well-versed with the laws regarding self-employment taxes so one can set their rates accordingly.

1. **Benefits:** Employees usually get help from their company, but freelancers don't usually enjoy that. As they are self-employed, they have to find and fund their insurance.
2. **Stability:** It is a big task to find steady work. Sometimes, projects start but get shelved. Thus, the contract ends early. Other times, the search for new work takes more time than expected. It is not easy to find consistent clients.
3. **Responsibility:** Freelancing is like running your own business. So, it is your sole responsibility to get clients, manage them, collect the bills and pay the taxes. The onus is on the freelancer to make payment decisions and buy the correct tools and software.

4. **Payment:** One of the biggest cons of freelancing is payment issues. It is not easy to collect payments from clients. Many freelancers have been scammed by clients who haven't paid them after the completion of a project.
5. **Isolation:** Unlike full-time employees, freelancers don't have a team working with them. They can sometimes feel isolated with no one to ask for help or work with. Although, it's a very individualistic preference because some people prefer working alone.

What fields do freelancers work in?

As per freelancer definition, they work in various fields, including creative and skilled. For instance, they are present in film making, copywriting, journalism, tourism, photography, tutoring, marketing, music, event planning, acting, catering, computer programming, and many more.

How can one become a freelancer? To become a freelancer, **one has to define the service they're offering.** Then, find out **their target audience and make up a pricing structure.** After that, make a portfolio with your previous jobs and formulate a convincing proposal. Start looking for clients and create a relationship with them.

Flexi-Time VS. Fixed Time

While some workers are tied to their desks in a standard 9 a.m. to 5 p.m. shift, in some workplaces, employees are given a more flexible working arrangement. They can pick their own work hours or days within a set period or given limits. They can come in later than the standard hours or make some allowances or adjustments to be able to clock out early. The flexible work schedule may even allow work-from-home options or working remotely from any location where mobile Internet is available in order to communicate electronically with clients and other co-workers. This flexi-time schedule can be a win-win situation in some businesses, giving employees a little bit more freedom with their time while providing employers with some benefits of their own. This, however, may also come with some disadvantages that both employers and employees must watch out and be ready for.

Advantage

1. A more flexible work schedule allows workers to pursue other vocations, hobbies, or higher learning.
2. By managing their time better, workers can maintain a work-life balance, gain more control over life events, and have reduced stress, as they find more time to attend to family and personal matters. Depending on their schedule, workers can work at their most productive and most convenient hours.
3. Workers with a flexi time work schedule can avoid the inconveniences of traveling during the rush hours, letting them save more on fuel and car maintenance costs, avoid traffic stress, and come to work more refreshed and motivated to start their day right.
4. A more flexible schedule can be part of non-monetary employee benefits, which can be an advantage to the employer in terms of staff recruitment, employee retention, and reduced absenteeism and tardiness due to stress, sickness, and other reasons.
5. The flexi-time gives the business more flexibility with extended coverage beyond traditional work hours, letting the business save from overtime fees for employees who work beyond the regular schedule and meet business and client demands after the standard office hours.
6. If employees are allowed to work from home or in remote locations and spend less time in the office, employers can benefit from reduced business spending, from desk space to power use. **Disadvantages**

1. The flexi-time schedule allows a lot of distractions and intrusions, which may result in reduced focus, low productivity, and poor time management.
2. Workers with flexi-time arrangements may come and go at different hours, which can affect their interpersonal relationships with other employees and make it more difficult to establish rapport and teamwork.
3. By providing access to office facilities and utilities beyond traditional work hours and at different times, employers will have to deal with added business expenses (such as higher energy bills and utility costs).
4. Flexible working schedules mean added work to the administrative staff who has to make a special recording system for irregular work hours, monitor the varied schedules, and implement special policies for added security, especially for unscrupulous employees.
5. Overseeing the performance of workers with flexible working schedules can be more challenging for supervisors, team leaders, or managers.

Fixed Time Work Arrangement

Advantages

1. Workers with fixed time work schedules can coordinate better with other employees and their superiors because of shared time and common workspace, which help establish better working relationships.
2. Giving instructions to and tracking the performance of people who work during the same hours or shift are more manageable.
3. It's easier to schedule and conduct team meetings and trainings when colleagues and other team members have common work hours.
4. Normal pacing and scheduling can make it easier to focus on project deadlines, team initiatives, and company goals, resulting in higher work productivity.
5. With a regular work shift, employers won't have to accommodate workers beyond the traditional work hours, letting the company save on operational cost.
6. Inter-office communications are more convenient when employees have the same work schedule.
7. When workers don't work at the same designated hours, not only is it more difficult to supervise them but keeping them engaged and motivated can be a challenge as well.

Disadvantages

1. With a rigid work schedule, workers aren't given the much-needed flexibility with their time, which could have been spent doing important errands, attending classes, or pursuing hobbies for personal growth and for dealing with personal needs.
2. Absenteeism and tardiness can become a common occurrence especially during bad weather when traffic is long and heavy and travelling to and from work becomes inconvenient.
3. An inconvenient fixed work schedule or shift can lead to attrition or recruitment problems as some workers prefer having flexible work hours.
4. The rigid work schedule can be restricting to some employees, especially during emergencies or other circumstances, affecting their motivation and productivity.

Reskilling and upskilling: work training in the digital transformation era

On the back of the digital revolution, new professions specialising in technologies like Big Data and Artificial Intelligence are flourishing at a rate the job market can't keep pace with. In an attempt to fill this gap, companies are offering staff training to optimise their performance (upskilling) or to "recycle" them for a different post (reskilling).

According to strategy consultants like **McKinsey & Company**, **the job market is failing to match the pace of the digital revolution**. This means that over the next few years we will find ourselves — in fact it's already happening — with a shortfall of professionals to fill some posts that call for individuals with specialised technological skills.

Having been taken by surprise by the Fourth Industrial Revolution, **companies have undergone huge internal changes** over the past few years, updating their corporate culture, computerising, and encouraging creativity and innovation amongst their staff.

What Are Reskilling And Upskilling? Differences

This is where reskilling and Upskilling come into play for companies **by equipping their staff with new skills to meet business needs**.

The difference between these two concepts lies in the objective of the training:

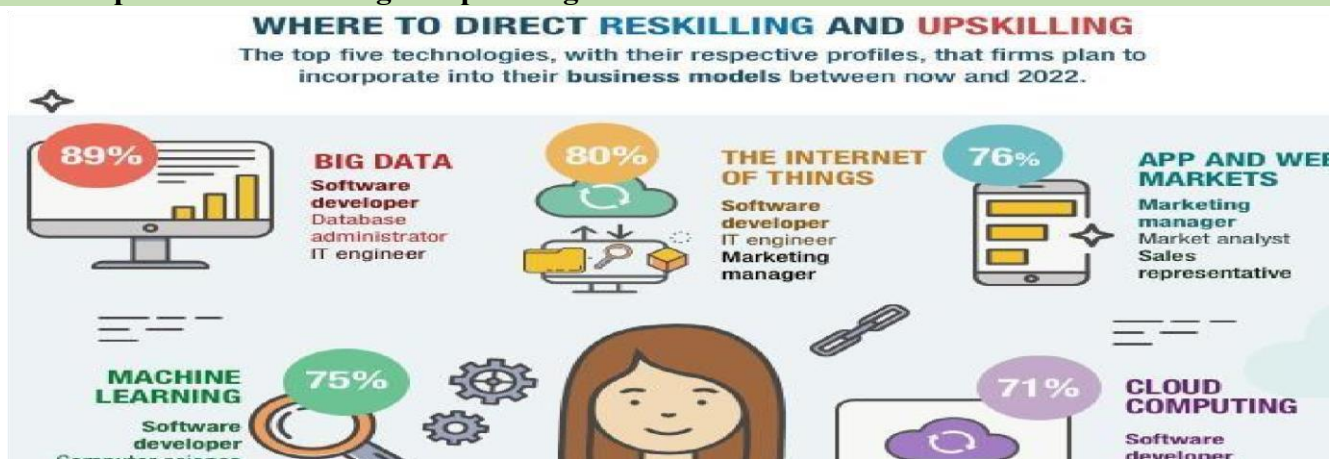
Upskilling aims to **teach employees new skills to optimise their performance**;

Reskilling — also known as professional recycling; sets out to train employees to adapt to a different post/s within the company.

The Objectives of Reskilling and Upskilling

1. They bridge the digital divide at the heart of the company and make it more competitive.
2. They mean less selection procedures and, therefore, shorter adaptation periods.
3. They help to create loyalty and talent retention. Staff are aware that the company is investing in them to improve their professional profile.
4. Offering continuous training enhances the corporate reputation.
5. They encourage a dynamic business culture adapted to an environment in constant evolution.

How to Implement a Reskilling or Upskilling Plan



Although every organisation has its own methods, in general terms the **steps for implementing a reskilling and upskilling** plan may be summarised as follows:

1. Study the requirements of the business to establish which new positions and skills the company needs.
2. Carry out an assessment of existing workforce skills so that, depending on business needs, you can work out who needs upskilling and who needs reskilling.
3. Design a training system for different profiles, making training easy through digital tools and favourable hours, preferably during the working day.
4. Carry out a continuous assessment to determine the level of progress and analyse the level of staff response.

The Impact of Digital India

The Indian government launched Digital India under the auspices of the Ministry of Electronics and Information Technology in order to transform India into a digitally empowered country. This campaign is open to the entire country. The campaign has shown foresight by improving online infrastructure and internet connectivity. India is on the verge of becoming a digital technology leader. Cloud computing and mobile applications appear to be the most important sources of economic growth as well as reshaping social systems.



From a normal store owner to a government officer, today, everybody is using digital technology. It helps us to connect with everyone and share information or issues quite easily. So, here we will talk about the Digital India Programme and its impact.

MAJOR PROJECTS OF DIGITAL INDIA PROGRAMME

Although the Digital India Programme has a large number of projects that it is focusing on implementing in India, we will highlight a few major projects here.

- a. **Digital locker system** for reducing the use of physical documents and allowing e-document sharing across agencies.
- b. **Swachh Bharat Mission (SBM)** was the most well-known initiative, and no one was unaware of it. The mission's goal is to make India a neat and clean country.
- c. Started an **e-Sign** facility for Aadhar authentication.
- d. The e-Hospital application has also been launched for the Online Registration System (ORS). From online registration to blood availability, everything is available online.
- e. The government has launched '**broadband highways**' to deliver services to citizens and provide enabling technologies.
- f. **BharatNet** is another initiative for a **high-speed digital highway** that will connect the country's 2.5 lakh Gram Panchayats. This would be the world's largest optical fibre rural broadband connectivity project.

- g. To replace 30 year old exchanges, **BSNL** has introduced **Next Generation Network (NGN)**, an IP- based technology that manages all types of services such as voice, data, multimedia/video, and other types of packet switched communication services.

Economic Impact

India's growth strategy is being bolstered by a focus on digitalization, connectivity, a cashless/paperless economy, and a start-up innovation ecosystem. Focusing on digitalization can help our country grow tremendously.

According to a report by economic analysts, the Digital India initiative could boost our GDP by around \$1 trillion by 2025. It can also be detrimental to play an important role in macroeconomic factors such as job creation, labour productivity, business development, and revenue generation.

With nearly 259 million broadband users, India is currently the world's second largest telecom and third largest Internet market. According to the World Bank report, there is a tremendous economic opportunity in India because the tele0density in rural India is only 45% while more than 65% of the population lives in villages. According to the report, a 10% increase in mobile and broadband penetration raises per capita GDP by 0.81% to 1.38% in developing countries.

Social Impact

The Digital India programme has had an incredible impact on social issues. Before there were numerous formalities and paper work available, whether we are talking about education, healthcare, or banking facilities. However, thanks to modern ICT, every task has become easier. The availability of m-Education services has played an important role in reaching people in remote areas. According to research, digital literacy in India is only 6.5%, with internet penetration at 20.83 out of 100 people. Through smart and virtual classrooms, the Digital India project will help to provide real-time education while also addressing the issue of teacher shortages in the education system. Mobile devices can be used to provide education to farmers and fishermen.

Environmental Impact

The environment has a significant impact on our lives. We cut a lot of trees because of our heavy use of paper, and it is affecting our lives in some way. Digitalization will assist us in lowering our carbon footprint by reducing fuel consumption, waste management, and creating greener workplaces, resulting in a greener ecosystem. Every task will become more adaptable, and you will be able to complete them without harming the environment. The ICT sector contributes to the efficient management and utilisation of scarce and non- renewable resources. Cloud computing reduces carbon emissions by increasing mobility and flexibility.

Challenges for Digital India

Although Digital India is a positive initiative that will benefit every Indian in a significant way, there are some flaws. Still, we must deal with such circumstances in order to make the Digital India campaign a success.

There are a few challenges:

- a. Many people are unable to comprehend digital devices and technology. The majority of people are unable to use a basic mobile phone.
- b. Although the government has started this programme, it still lacks the basic infrastructure needed to move forward digitally.
- c. Few people can afford all of these amenities due to the increased cost of electronics and internet.
- d. Cybercrime is the most pressing issue today; we do not feel secure about our data and personal information. The government should work on it, and engineers should be properly trained.

UNIT - 4

Platforms – Role of CIO, CTO, Hosting on cloud – Life and shift, IaaS - Infrastructure as a Service, PaaS - Platform as a Service, and FaaS – Function as a Service. Cloud by domain – Supply chain, commercial, and Enterprise. Selection of technology, sourcing, Migration, Migration of existing application. Economic feasibility, and risks. Cloud security, zero-trust applications. Shift of IT Projects to products, Integration with Business. Benefits & rights of platforms. Parent and host country regulations, and restrictions.

Companies employ chief information technology (IT) professionals to specialize in the advancement and implementation of a company's information systems and technology. Two of these roles include a chief technology officer (CTO) and a chief information officer (CIO).

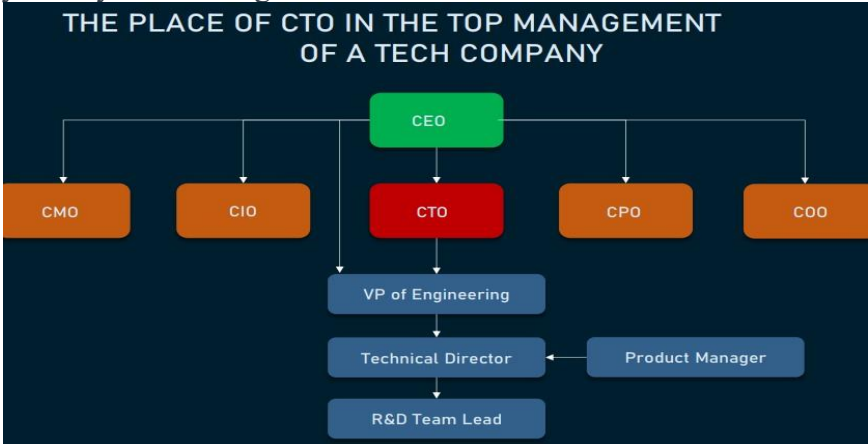
Platforms play a crucial role in the modern digital landscape. They provide a foundation for building and deploying applications, services, and solutions. In the context of platforms the roles of CIO (Chief Information Officer) and CTO (Chief Technology Officer).

CIO (Chief Information Officer): The CIO is responsible for the overall management and strategic alignment of technology with the organization's goals and objectives. When it comes to platforms, the CIO's role involves understanding the business requirements, evaluating different platform options, and making informed decisions about which platforms to adopt. The CIO ensures that the chosen platforms align with the organization's needs, promote scalability, reliability, and security, and enable the digital transformation initiatives.

CTO (Chief Technology Officer): The CTO focuses more on the technical aspects of platforms. They are responsible for evaluating and selecting appropriate technologies to build the platforms. The CTO works closely with the development teams to design and architect the platform, ensuring its scalability, performance, and integration capabilities. Additionally, the CTO monitors emerging technologies, industry trends, and innovation

opportunities to ensure that the platform remains relevant and up-to-date. CIO vs. CTO: A head-to-head comparison

Here, you can briefly see the differences between the CTO meaning and the CIO meaning, based on their responsibilities and day-to-day functioning



What does a CTO do? Chief Technology Officer	What does a CIO do? Chief Information Officer
1. Focuses on external products 2. Responsible for engineers and developers 3. Aims to increase revenue 4. Drives innovation 5. Focuses on customers	1. Focuses on internal processes 2. Responsible for IT operations and infrastructure 3. Aims to increase profitability 4. Drives productivity 5. Focuses on employees
Roles of CTO - Chief Technology Officer	Roles of CIO - Chief Information Officer
Planning the company's technological offerings and products	Managing the company's technology infrastructure
a. Conducting consumer research to identify the technological needs of customers	a. Leading IT teams and departments
b. Managing IT teams	b. Sharing the company's IT goals with their team and other departments
c. Collaborating with vendors and other professionals	c. Discovering technological solutions to streamlining
d. Matching the creation of new products to company goals	d. Planning strategies to promote productivity
e. Understanding all company technology	e. Monitoring the needs of internal employees
f. Increasing the company's sales and revenue	f. Communicating with other department heads and company executives

g. Following technology trends	g. Managing an IT budget
h. Ensuring that all projects follow company guidelines and local business laws	h. Increasing the company's net income

Hosting on Cloud - Lift and Shift:

"Lift and Shift" refers to the process of migrating existing applications or workloads from on-premises infrastructure to the cloud without making significant changes to the application architecture. It involves replicating the application environment in the cloud and moving it as-is, typically using Infrastructure as a Service (IaaS) offerings.

That's correct! "Lift and Shift" is a popular approach for migrating applications to the cloud. It involves moving the entire application stack, including the operating system, middleware, and application code, to a cloud-based infrastructure without making any major modifications to the application architecture.

What is lift and shift? “*Lift and shift*,” also known as “*rehosting*,” is the process of migrating an exact copy of an application or workload, together with its data store and operating system (OS), from IT one environment to another—usually from on-premises to public or private cloud.

Because it involves no change to application architecture and little or no change to application code, the lift and shift strategy enables a faster, less labor-intensive and (initially) less-costly migration compared to other processes. It’s also the fastest and least-expensive way for an organization to begin shifting IT dollars from capital expense (CapEx) to operational expense (OpEx) in order to initiate a **hybrid cloud** strategy and begin leveraging the more economical and extensible computing power, **storage**, and **networking** infrastructure of the cloud.

The process typically involves the following steps:

Assessment: Analyzing the on-premises infrastructure and applications to understand their dependencies, resource requirements, and any potential challenges for migration.

Replication: Creating a similar environment in the cloud using Infrastructure as a Service (IaaS) offerings. This involves provisioning virtual machines, storage, and networking components that closely match the on-premises setup.

Migration: Transferring the application and its associated data to the cloud environment. This can be done through various methods, such as using data transfer tools, network connectivity, or offline data transfer.

Validation: Verifying that the application works correctly in the cloud environment and meets the required performance and scalability expectations. Testing should cover functionality, integration, and performance aspects.

Cut-over: Diverting the user traffic or workload from the on-premises infrastructure to the cloud-based environment. This transition should be carefully planned to minimize downtime or disruption to the users.

In the earlier days of [cloud computing](#), lift and shift migration was worth considering for all but the oldest, most complex and most tightly coupled on-premises applications.

But as cloud architectures have evolved—and enabled improved developer productivity and ever more favorable cloud pricing models—the long-term value of migrating an application ‘as-is’ that cannot leverage the cloud environment has diminished dramatically.

Today, lift and shift is considered primarily as an option for migrating workloads that are cloud-ready to some degree (e.g., VMware workloads, [containerized](#) applications, apps built on [micro services architecture](#)) or as a first step in the process of re-architecting a monolithic (SAME) application for the cloud, on the cloud. Lift and shift benefits

Compared to continuing to run an application on-premises, lift and shift migration can offer several compelling benefits:

1. **A fast, cost-effective, minimally disruptive migration:** Lift and shift lets you migrate quickly, without dedicating a large team to the task. The on-premises application can remain in place during the migration so that there’s no interruption of service, and the application experience remains identical to users.
2. **Potential for improved performance:** Lift and shift offers the opportunity to run applications on updated, better-performing hardware, without having to purchase the hardware yourself.
3. **Expanded capacity while consolidating on-premises:** Add compute capacity, storage, and additional network bandwidth from the cloud on a pay-by-use basis while consolidating your on-premises data center infrastructure and costs at the same time.
4. **Scalability on demand:** Lift and shift can enable your organization to scale an application without purchasing and physically installing new computing capacity. You also won’t have to overprovision hardware to account for peak traffic periods.
5. **Cost-saving elasticity:** Some applications may also take advantage of cloud elasticity—the ability to automatically spin-up and spin-down resources to precisely match demand. The greater your cloud’s elasticity and the more your application can leverage it, the more you stand to save by using only exactly the resources you need at any given time.
6. **Enhanced security:** Once migrated, even legacy applications may be able to take advantage of cloud security services such as role-based access control, multifactor authentication, and unified hybrid security processes.
7. **Reduced on-premises data center costs and headaches:** The more applications you can migrate to the cloud, the faster you can scale down your on-premises infrastructure and the costs of managing and maintaining it.
8. **A simple first step toward a hybrid cloud:** Lift and shift is an easy way to move the applications most ready and best suited to a private or public cloud while you continue to host other applications workloads

on-premises. With the proper management tools, you can manage the platforms together as a single, optimized infrastructure.

9. While "Lift and Shift" offers the advantage of faster migration with minimal changes, it may not fully leverage the benefits of cloud-native capabilities, such as scalability, elasticity, and cost optimization. To take full advantage of the cloud, organizations often consider refactoring or re architecting their applications after the initial migration. This allows them to adopt cloud-native services and optimize the application for the cloud environment.

IaaS - Infrastructure as a Service, PaaS - Platform as a Service, and FaaS – Function as a Service

IAAS, PAAS and SAAS

1. IAAS: Infrastructure As A Service (IAAS) is means of delivering computing infrastructure as on-demand services. It is one of the three fundamental cloud service models. The user purchases servers, software data center space, or network equipment and rent those resources through a fully outsourced, on-demand service model. It allows dynamic scaling and the resources are distributed as a service. It generally includes multiple-user on a single piece of hardware.

It totally depends upon the customer to choose its resources wisely and as per need. Also, it provides billing management too.

Advantages of IaaS

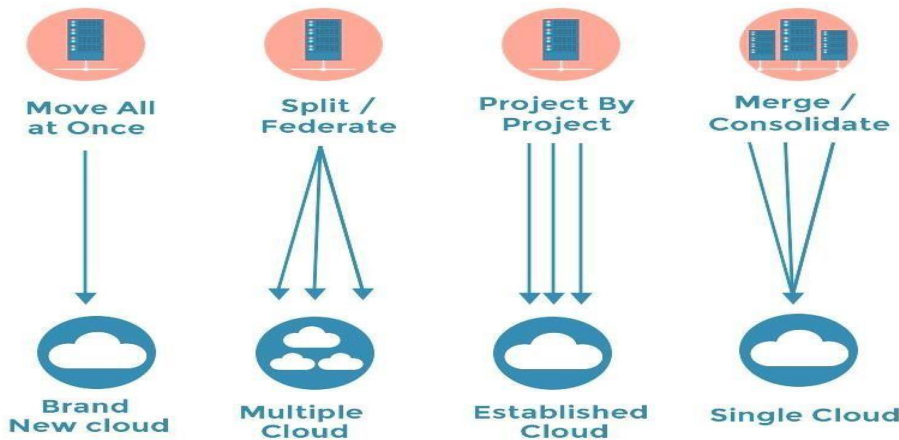
1. The resources can be deployed by the provider to a customer's environment at any given time.
2. Its ability to offer the users to scale the business based on their requirements.
3. The provider has various options when deploying resources including virtual machines, applications, storage, and networks.
4. It has the potential to handle an immense number of users.
5. It is easy to expand and saves a lot of money. Companies can afford the huge costs associated with the implementation of advanced technologies.
6. Cloud provides the architecture.
7. Enhanced scalability and quite flexible.
8. Dynamic workloads are supported.

Disadvantages of IaaS

1. Security issues are there.
2. Service and Network delays are quite issue in IaaS.

2. PAAS: Platform As A Service (PAAS) is a cloud delivery model for applications composed of services managed by a third party. It provides elastic scaling of your application which allows developers to build applications and services over the internet and the deployment models include public, private and hybrid.

Different Approaches in Lift and Shift Migration



3. Basically, it is a service where a third-party provider provides both software and hardware tools to the cloud computing. The tools which are provided are used by developers. **Advantages of PaaS –**

1. Programmers need not worry about what specific database or language the application has been programmed in.
2. It offers developers to build applications without the overhead of the underlying operating system or infrastructure.
3. Provides the freedom to developers to focus on the application's design while the platform takes care of the language and the database.
4. It is flexible and portable.
5. It is quite affordable.
6. It manages application development phases in the cloud very efficiently. **Disadvantages of PaaS**

1. Data is not secure and is at big risk.
2. As data is stored both in local storage and cloud, there are high chances of data mismatch while integrating the data.
3. **SAAS: Software As A Service (SAAS)** allows users to run existing online applications and it is a model software that is deployed as a hosting service and is accessed over Output Rephrased/Re-written Text the internet or software delivery model during which software and its associated data are hosted centrally and accessed using their client, usually an online browser over the web. SAAS services are used for the development and deployment of modern applications.

It allows software and its functions to be accessed from anywhere with good internet connection device and a browser. An application is hosted centrally and also provides access to multiple users across various locations via the internet.

Advantages of SaaS

1. It is a cloud computing service category providing a wide range of hosted capabilities and services. These can be used to build and deploy web-based software applications.

2. It provides a lower cost of ownership than on-premises software. The reason is it does not require the purchase or installation of hardware or licenses.
3. It can be easily accessed through a browser along a thin client.
4. No cost is required for initial setup.
5. Low maintenance costs.
6. Installation time is less, so time is managed properly.

Disadvantages of SaaS

1. Low performance.
2. It has limited customization options.
3. It has security and data concerns.

Difference between IAAS, PAAS and SAAS :

Basis Of	IAAS	PAAS	SAAS
Stands for	Infrastructure as a service. <i>R&D of mfg. Computers and other required materials for virtual base</i>	Platform as a service. <i>Developing Soft wares and other Operating Systems etc. on the demand of clients.</i>	Software as a service. <i>It's a tool for the person demanded based on client demand it works, its vary firm to firm</i>
Uses	IAAS is used by network architects.	PAAS is used by developers.	SAAS is used by the end user.
Access	IAAS gives access to the resources like virtual machines and virtual storage. ONLY R & D PEOPLE	PAAS gives access to run time environment to deployment and development tools for application. ONLY DEVELOPERS	SAAS gives access to the end user. ONLY END USER
Model	It is a service model that provides virtualized computing resources over the internet.	It is a cloud computing model that delivers tools that are used for the development of applications.	It is a service model in cloud computing that hosts software to make it available to clients.

Technical understanding.	It requires technical knowledge.	Some knowledge is required for the basic setup.	There is no requirement about technicalities company handles everything.
Popularity	It is popular among developers and researchers.	It is popular among developers who focus on the development of apps and scripts.	It is popular among consumers and companies, such as file sharing, email, and networking.
Percentage rise	It has around a 12% increment.	It has around 32% increment.	It has about a 27 % rise in the cloud computing model.
Usage	Used by the skilled developer to develop	Used by mid-level developers	Used among the users of
Basis Of	IAAS	PAAS	SAAS
	unique applications.	to build applications.	entertainment.
Cloud services.	Amazon Web Services, sun, vCloud Express.	Facebook, and Google search engine.	MS Office web, Facebook and Google Apps.
Enterprise services.	AWS virtual private cloud.	Microsoft Azure.	IBM cloud analysis.
User Controls	Operating System, Runtime, Middleware, and Application data	Data of the application	Nothing
Others	It is highly scalable and flexible.	It is highly scalable to suit the different businesses according to resources.	It is highly scalable to suit the small, mid and enterprise level business

IaaS (Infrastructure as a Service):

IaaS is a cloud computing model that provides virtualized computing resources over the internet. In IaaS, the cloud service provider manages the underlying infrastructure, including servers, storage, networking, and virtualization. Organizations can access and control these resources through a web-based interface or API. Key features of IaaS include:

1. **Virtualized Infrastructure:** IaaS offers virtualized computing resources, including virtual machines (VMs), storage, and networking, allowing organizations to scale resources as needed.
2. **On-Demand Provisioning:** Organizations can rapidly provision and deprovision resources based on their requirements, paying only for the resources they use.
3. **Infrastructure Management:** The cloud service provider is responsible for managing and maintaining the infrastructure, including hardware updates, security patches, and data center operations.
4. **High Scalability:** IaaS enables organizations to scale resources up or down based on demand, allowing for flexibility and cost optimization.

IaaS - Infrastructure as a Service:

IaaS is a cloud computing model where infrastructure resources, such as virtual machines, storage, and networking components, are provided over the internet by a cloud service provider. With IaaS, organizations can quickly provision and scale infrastructure resources on-demand, eliminating the need for physical infrastructure maintenance. It allows for more flexibility and cost-effectiveness compared to traditional on-premises infrastructure.

Infrastructure as a Service (IaaS) is a cloud computing model that provides virtualized computing resources over the internet. With IaaS, users can access and manage fundamental computing resources, such as virtual machines (VMs), storage, networks, and operating systems, without the need for physical infrastructure or on-premises hardware.

Key features and components of IaaS include:

1. **Virtualization:** IaaS utilizes virtualization technology to abstract physical hardware resources into virtual resources. This allows for flexibility and scalability in provisioning and managing computing resources.
2. **On-Demand Resource Provisioning:** Users can quickly and easily provision or deprovision computing resources as needed, scaling up or down based on demand. This provides cost-efficiency and agility in managing infrastructure requirements.
3. **Infrastructure Management:** IaaS providers handle the underlying infrastructure, including servers, storage, and networking components. Users have control over their virtualized resources and can manage them through a web-based interface or an application programming interface (API).
4. **Resource Pooling:** IaaS providers consolidate their physical resources into a shared pool, allowing multiple users to access and utilize the same infrastructure simultaneously. Resources can be dynamically allocated based on demand, optimizing resource utilization and cost-effectiveness.
5. **Pay-as-You-Go Pricing Model:** IaaS typically follows a pay-as-you-go or consumption-based pricing model. Users are billed based on their actual resource usage, avoiding upfront infrastructure costs and enabling cost optimization.
6. **Scalability and Elasticity:** IaaS offers scalability, allowing users to easily scale their infrastructure resources up or down based on changing requirements. It provides elasticity, automatically adjusting resource allocations in response to fluctuating workloads to ensure optimal performance.
7. **High Availability and Redundancy:** IaaS providers typically offer robust infrastructure redundancy and high availability features. This ensures that users' applications and data remain accessible and protected from potential hardware failures or disruptions.

IaaS provides various benefits, including reduced infrastructure costs, increased flexibility, improved scalability, and faster deployment of IT resources. It is suitable for businesses of all sizes, enabling them to focus on their core competencies while leveraging the capabilities of cloud-based infrastructure.

PaaS - Platform as a Service:

PaaS provides a higher level of abstraction compared to IaaS. It offers a complete development and deployment environment in the cloud, including infrastructure, middleware, development tools, and other necessary components. PaaS enables developers to focus on building applications without worrying about underlying infrastructure management. It promotes rapid development, scalability, and easier integration with other cloud services.

PaaS (Platform as a Service):

PaaS is a cloud computing model that provides a platform and environment for developing, testing, and deploying applications. PaaS abstracts away the complexity of infrastructure management, allowing developers to focus on building and deploying applications. Key features of PaaS include:

1. **Application Development Environment:** PaaS provides a complete development and deployment platform, including development tools, runtime environments, libraries, and frameworks.
2. **Simplified Deployment:** Developers can easily deploy their applications to the PaaS environment, which handles scalability, load balancing, and resource allocation.
3. **Automatic Scaling:** PaaS platforms offer automatic scaling capabilities, allowing applications to dynamically adjust resources based on demand.
4. **Collaboration and Integration:** PaaS often includes collaboration features and integration capabilities, enabling teams to work together and integrate with other services or APIs.

Platform as a Service (PaaS) is a cloud computing model that provides a platform and environment for developers to build, deploy, and manage applications over the internet without the need for infrastructure provisioning or management. PaaS offers a higher level of abstraction compared to Infrastructure as a Service (IaaS) by providing a complete development and deployment platform, including operating systems, programming languages, libraries, and runtime environments. Key features and components of PaaS include:

1. **Application Development Environment:** PaaS provides a comprehensive development environment that includes tools, frameworks, and services necessary for building, testing, and deploying applications. It supports various programming languages and development frameworks, allowing developers to focus on application logic and functionality rather than infrastructure management.
2. **Middleware and Runtime Environment:** PaaS offers a pre-configured middleware and runtime environment that provides the necessary components for running applications, such as web servers, databases, and message queues. These components are managed and maintained by the PaaS provider, allowing developers to focus on application development and deployment.
3. **Scalability and Resource Management:** PaaS platforms typically offer scalability features, allowing applications to handle varying levels of traffic and workload. It automatically manages resource allocation and scaling based on demand, ensuring optimal performance and cost-efficiency.
4. **Database and Storage Services:** PaaS often includes managed database services, such as relational databases or NoSQL databases, which eliminate the need for manual database administration. It also provides storage services for managing application data and file storage.

5. **Integration and Interoperability:** PaaS platforms often provide integration capabilities to connect with other services and systems, such as APIs, messaging systems, and external databases. This enables developers to build applications that can interact with external services and data sources seamlessly.
6. **Deployment and Management Tools:** PaaS offers tools and services for deploying and managing applications efficiently. It may include features like version control, continuous integration/continuous deployment (CI/CD), logging, monitoring, and performance analytics.
7. **Multi-Tenancy and Collaboration:** PaaS supports multi-tenancy, allowing multiple users or teams to work on and deploy applications within the same platform while maintaining isolation and security. It also facilitates collaboration among developers by providing shared development environments and collaborative tools.

PaaS provides several benefits, including reduced development time, increased productivity, simplified application deployment, automatic scaling, and cost savings by eliminating the need for infrastructure management. It is well-suited for developers and organizations looking to focus on application development and innovation without the burden of managing underlying infrastructure.

FaaS - Function as a Service:

FaaS is a serverless computing model where developers can write and deploy individual functions or units of code that are triggered by specific events or requests. With FaaS, developers can focus solely on writing the code for individual functions, and the cloud provider takes care of scaling, managing the underlying infrastructure, and executing the functions as needed. It offers high scalability, cost efficiency, and flexibility for event-driven workloads.

FaaS (Function as a Service):

FaaS, also known as serverless computing, is a cloud computing model where developers focus on writing and deploying individual functions or units of code. In FaaS, the cloud provider manages the infrastructure and automatically provisions resources to execute the functions when triggered by specific events or requests. Key features of FaaS include:

1. **Event-Driven Architecture:** Functions in FaaS are triggered by specific events, such as an HTTP request, database update, or timer.
2. **Scalability and Elasticity:** FaaS platforms automatically scale resources to accommodate the execution of functions, allowing for efficient resource utilization.
3. **Pay-per-Use Model:** Organizations are billed based on the actual execution time and resources consumed by the functions, rather than provisioning and paying for fixed infrastructure.
4. **Focus on Function Development:** FaaS allows developers to focus solely on writing code for individual functions, without worrying about infrastructure management or server provisioning.

Each of these cloud computing models offers different levels of abstraction and functionality, catering to specific use cases and requirements of organizations and developers. The choice between IaaS, PaaS, or FaaS depends on factors such as the level of control needed, development requirements, scalability needs, and cost considerations.

Function as a Service (FaaS), also known as Serverless Computing, is a cloud computing model that allows developers to deploy individual functions or units of code in the cloud without the need to manage or provision servers or infrastructure. Key features and components of FaaS include:

1. **Function Execution Environment:** FaaS platforms provide the execution environment for running individual functions. Developers write the code for a specific function, which is then deployed and executed in the FaaS environment. The execution environment is managed by the FaaS provider and abstracts away the underlying infrastructure details.

2. **Event-Driven Execution:** Functions in FaaS are typically triggered by specific events, such as HTTP requests, database changes, message queue events, or timer-based events. When an event occurs, the corresponding function is automatically invoked, executed, and scaled as needed. This event-driven architecture allows for efficient resource utilization and cost optimization.
3. **Automatic Scaling:** FaaS platforms automatically scale the execution of functions based on incoming event loads. When there is a high number of events or concurrent requests, the FaaS platform dynamically provisions the necessary resources to handle the workload. Scaling is done transparently to the developer, ensuring that the functions can handle varying workloads without manual intervention.
4. **Pay-as-You-Go Pricing:** FaaS follows a pay-as-you-go pricing model, where users are billed based on the actual execution time and resources consumed by the functions. This granular pricing structure offers cost efficiency as users only pay for the actual function execution rather than provisioning and maintaining dedicated servers or infrastructure.
5. **Statelessness and Scalability:** Functions in FaaS are designed to be stateless, meaning they do not maintain any persistent state between invocations. Any necessary data or state is typically stored in external storage systems like databases or object storage services. This statelessness enables easy scalability and horizontal scaling of functions, as they can be executed independently and in parallel.
6. **Function Composition and Orchestration:** FaaS platforms provide mechanisms for composing and orchestrating functions into workflows or larger applications. Developers can define relationships and dependencies between functions, allowing them to build complex applications by combining multiple smaller functions.
7. **Developer Tools and Integration:** FaaS platforms offer developer-friendly tools and integrations to facilitate development, testing, debugging, and deployment of functions. These tools often include SDKs, command-line interfaces (CLIs), and integrations with popular development frameworks and services.

FaaS provides several advantages, such as reduced operational overhead, rapid scalability, efficient resource utilization, cost optimization, and increased developer productivity.

Cloud by Domain - Supply Chain, Commercial, and Enterprise: Cloud computing can be adopted in various domains, including supply chain, commercial, and enterprise settings.

1. **Supply Chain:** Cloud-based platforms can enhance supply chain management by providing real-time visibility, collaboration, and analytics capabilities. They enable efficient inventory management, demand forecasting, logistics optimization, and supplier integration.
2. **Commercial:** Cloud platforms enable businesses to deploy and manage applications, customer relationship management (CRM) systems, e-commerce solutions, and other commercial services. They provide scalability, cost efficiency, and easier integration with third-party services.
3. **Enterprise:** Cloud platforms offer a range of services for enterprises, including infrastructure provisioning, data storage and analysis, enterprise resource planning (ERP), human resources management, and more. They enable organizations to streamline operations, reduce IT costs, and enhance collaboration and productivity.

Selection of Technology, Sourcing, and Migration:

Selecting the right technology for platform development involves evaluating various factors such as scalability, security, integration capabilities, vendor support, and long-term viability. The CTO and technical teams play a crucial role in assessing technology options and choosing the most suitable one.

Economic Feasibility and Risks:

Adopting cloud platforms can bring economic benefits such as cost savings, increased agility, scalability, and faster time-to-market. The pay-as-you-go model in the cloud allows organizations to pay only for the resources they consume, reducing upfront infrastructure costs. Cloud platforms also offer elasticity, enabling businesses to scale resources up or down based on demand.

However, there are risks to consider, including vendor lock-in, data security and privacy concerns, service availability, compliance requirements, and potential operational disruptions. Proper risk assessment, security measures, and contingency plans should be in place to mitigate these risks.

Cloud Security and Zero-Trust Applications:

Cloud security is a critical aspect of platform adoption. Cloud service providers implement various security measures to protect infrastructure, data, and applications. This includes data encryption, identity and access management, network security, threat detection, and compliance certifications.

Zero-Trust Applications are built on the principle of "never trust, always verify." In this approach, every user, device, or service requesting access to an application is verified, authenticated, and authorized before granting access. It helps mitigate security risks by assuming that no user or entity is inherently trusted, regardless of their location or network.

Benefits and Rights of Platforms:

Cloud platforms offer several benefits, including:

1. **Scalability:** Platforms can scale resources up or down based on demand, providing flexibility and cost efficiency.
2. **Agility:** Platforms enable rapid development, deployment, and iteration of applications and services.
3. **Cost Savings:** Cloud platforms eliminate the need for upfront infrastructure investments and reduce operational costs.
4. **Accessibility:** Platforms can be accessed from anywhere with an internet connection, promoting remote work and collaboration.
5. **Integration:** Platforms provide APIs and integration capabilities to connect with other systems and services, enabling seamless workflows.

Regarding rights, organizations must ensure that they understand and comply with the terms and conditions set by the cloud service provider. This includes data ownership, privacy, security, and the ability to retrieve or migrate data in case of vendor changes or contract termination.

Parent and Host Country Regulations and Restrictions:

Parent and host country regulations play a significant role in cloud platform adoption. Organizations need to understand and comply with applicable data protection, privacy, security, and industry-specific regulations in both the country where the organization is headquartered (parent country) and the country where the cloud services are hosted (host country).

Different countries may have varying laws and restrictions regarding data sovereignty (Control), cross-border data transfers, encryption, and intellectual property rights. Organizations must consider these factors when selecting a cloud service provider and ensure that their platform complies with relevant regulations.

Parent and host country regulations can impact the adoption and use of platforms. Organizations must navigate and comply with various legal and regulatory requirements, such as:

1. **Data Protection and Privacy Laws:** Different countries have different regulations regarding the collection, storage, processing, and transfer of personal and sensitive data.
2. **Data Sovereignty (Control):** Some countries impose restrictions on the storage and processing of data within their borders, requiring organizations to ensure compliance with local data residency requirements.
3. **Industry-Specific Regulations:** Certain industries, such as healthcare or finance, have specific regulations governing data handling, security, and compliance.
4. **Intellectual Property Rights:** Organizations should be aware of intellectual property rights and ensure that their use of platforms does not infringe upon the rights of others.

It is essential for organizations to understand and adhere to both parent and host country regulations to avoid legal and compliance issues when utilizing platforms.

Shift of IT Projects to Products and Integration with Business:

Traditionally, IT projects focused on delivering specific solutions or functionalities. However, there is a shift towards treating IT initiatives as products, which are continuously developed, improved, and maintained to meet evolving business needs. This product-centric approach emphasizes value creation, customer satisfaction, and aligning IT deliverables with business outcomes.

Integration with the business is crucial to ensure that technology initiatives support the organization's overall objectives. It involves close collaboration between IT and business stakeholders, understanding business requirements, and translating them into technical solutions that drive business value.

Shift of IT Projects to Products:

The shift from treating IT projects as one-time initiatives to managing them as products involves a change in mindset and approach. Rather than focusing solely on delivering specific features or functionalities, IT projects treated as products are continuously developed, improved, and maintained to meet evolving business needs.

This shift emphasizes:

1. **Value Creation:** IT products are aligned with business objectives and aimed at delivering value to customers and stakeholders.
2. **Customer-Centricity:** Products are developed with a deep understanding of customer needs, preferences, and feedback.
3. **Continuous Improvement:** Products undergo iterative development and improvement cycles based on feedback and market dynamics.
4. **Long-Term Sustainability:** Products are designed and managed with a long-term perspective, ensuring their relevance and viability over time.

Integration with Business:

Integration with the business is crucial for successful IT initiatives. IT projects should align with and support the overall objectives of the organization. Key aspects of integration with the business include:

1. **Understanding Business Needs:** IT teams should have a clear understanding of business requirements, goals, and challenges.
2. **Collaboration:** Close collaboration between IT and business stakeholders ensures that technology initiatives are aligned with business priorities.
3. **Value Alignment:** IT initiatives should directly contribute to creating value for the business, whether through increased efficiency, revenue generation, or improved customer experiences.

4. **Change Management:** Effective change management processes should be in place to ensure smooth adoption and integration of new IT solutions within the organization.

Unit – V Customer preferences, customer centric, Digital Marketing – aligned to firm's culture and products. Design thinking, value innovation, blue ocean thinking, strategy canvas, four action frameworks. Minimum viable product, product life cycle, portfolio of products for digital customers. Business model, revenue model, lean and agile business model. Supply chain, social media management.

Unit V focuses on various aspects related to customer preferences, digital marketing, innovation, product development, business models, and supply chain management. Let's explore each of these concepts in more detail:

1. **Customer Preferences and Customer-Centric Approach:** Understanding and addressing customer preferences is crucial for any business. By being customer-centric, an organization focuses on creating products and services that meet customer needs and expectations. This approach involves gathering customer feedback, conducting market research, and tailoring offerings to suit specific customer segments.
2. **Digital Marketing Aligned to Firm's Culture and Products:** Digital marketing involves utilizing online channels and platforms to promote products and services. It is essential to align digital marketing strategies with the firm's culture and products to ensure consistent branding and messaging across different channels. This alignment helps maintain a coherent brand image and enhances customer engagement.
3. **Design Thinking and Value Innovation:** Design thinking is a problem-solving approach that emphasizes empathy, creativity, and iterative processes to develop innovative solutions. Value innovation involves creating new products or services that offer unique value to customers, often by challenging traditional industry norms and finding new market spaces.
4. **Blue Ocean Thinking and Strategy Canvas:** Blue ocean thinking refers to the creation of uncontested market spaces where competition is irrelevant. This strategy involves identifying new market opportunities by offering innovative products or services that cater to previously unaddressed customer needs. The strategy canvas is a tool used to visually compare an organization's current offerings with those of competitors, highlighting areas for differentiation and strategic focus.
5. **Four Action Frameworks:** The four action frameworks, derived from blue ocean thinking, help businesses create value innovation by simultaneously eliminating and reducing certain factors while raising and creating new factors. These frameworks include eliminating, reducing, raising, and creating actions, which challenge industry assumptions and drive strategic differentiation.
6. **Minimum Viable Product (MVP) and Product Life Cycle:** A minimum viable product (MVP) is the initial version of a product with a minimum set of features to satisfy early adopters. It allows businesses to gather feedback, test hypotheses, and iterate based on customer responses. The product life cycle represents the stages a product goes through from introduction to decline, including development, introduction, growth, maturity, and eventual decline.
7. **Portfolio of Products for Digital Customers:** To cater to digital customers, businesses often develop a portfolio of products that align with digital trends and preferences. This portfolio may include digital products, online services, mobile applications, or other offerings specifically designed for digital channels.
8. **Business Model, Revenue Model, and Lean/Agile Business Model:** A business model defines how a

company creates and delivers value to customers while generating revenue. It encompasses the organization's key activities, resources, partnerships, and customer segments. The revenue model outlines how a company generates income, such as through product sales, subscriptions, advertising, or licensing. Lean and agile business models emphasize flexibility, adaptability, and continuous improvement, enabling organizations to respond quickly to market changes and customer needs.

9. **Supply Chain and Social Media Management:** The supply chain encompasses the processes involved in delivering products or services to customers, from sourcing raw materials to distribution and logistics. Effective supply chain management ensures timely delivery, cost efficiency, and customer satisfaction. Social media management involves leveraging social media platforms to engage with customers, build brand awareness, and manage online reputation.

These concepts provide a foundation for understanding and implementing customer-centric strategies, digital marketing tactics, innovation frameworks, product development approaches, business models, and supply chain management techniques. By incorporating these principles into their operations, organizations can adapt to the digital landscape and meet the evolving needs of their customers.

1. Customer Preferences and Customer-Centric Approach:

Understanding and addressing customer preferences is crucial for any business. By being customer-centric, an organization focuses on creating products and services that meet customer needs and expectations. This approach involves gathering customer feedback, conducting market research, and tailoring offerings to suit specific customer segments.

Most of the businesses focus on innovations and fail to align their brand with customer needs. **Customer-centric companies are 60% more profitable than companies that don't focus on customers.** Being customer-focused help in understanding customers better and align products and services to create great value. Identifying and meeting customer needs should be the focal point of every business to build a solid customer base.

What are Customer Needs?

Customer needs are defined as the influential factors that trigger them to buy your product or service. In order to identify customer needs, it is important to understand the reasons behind their decision making.

In order to understand customer needs better, it's very important to know who your customers are. By defining your target audience and segmenting them based on their industry or other attributes, you not only get a clear view of what's your selling proposition but also identify their needs.

Here are four simple steps to follow in order to meet customer needs successfully.

- **Identify** – Follow customer needs analysis via surveys, interviews, focus groups, or social listening.
- **Distribute** – Once identified the needs, you can distribute it across the right teams and departments.
- **Create** – Tailor product features, create detailed content that speaks about customer needs.
- **Collect** – Obtain customer feedback regularly to learn how your efforts meet their expectations.

Why is it Important to Identify Customer Needs?

Businesses are taking strides to understand customer needs and meet them as early as possible to align with internal teams. **76% of customers expect companies to understand their needs.**

With business operating under a cyclical process of anticipating, and meeting customer needs, you can have quick and positive results. Prior to your business promotions or product launch, it is vital to know your customer needs and wants. Conducting market research can greatly help you to understand your potential customers.

The more you know about your customers, it helps you define your brand positioning around their needs and help your business in the following ways:

- **Provide faster solutions** – One of the common things customers want is real time support. By identifying the needs of your customers you can provide faster and effective support.
- **Improve your products & services** – Customer research helps understand the motives behind the buying process. You can learn about the areas you are missing out and create an effective USP. The insights can be used to enhance the products or services to satisfy customer needs.
- **Reduce the number of support tickets** – Building the product and services considering the needs of the target customers ensures effective solutions to customer issues.

How to Identify Customer Needs?

Recognizing customer needs includes deep research across your industry and asking your customers lots of specific questions. It is very important to gather in-depth details from your customers through regular communication and be sure you can deliver on their individual needs.



Understanding customer psychology can act as a catalyst for your business to deliver better customer service, build long-lasting relationships, and maintain a consistent source of revenue.

What is the customer needs analysis?

It refers to a comprehensive analysis that can benefit your business to understand what value your customers want from your products or services. It provides valuable insights about your target audience that can be inculcated within the brand positioning to make sure that delivers great customer value. Effective customer needs analysis depends mainly on two factors. Firstly, to create customer personas and identify what customer inputs are needed

to create breakthrough products and the second is to know how to capture customer inputs and feedback. Conducting customer research to understand the factors that influence purchasing decisions can be done by:

- **Customer interviews** – It is one of the direct ways of collecting customer data and inputs. You can interact directly with customers who are using your product or who have chosen to buy it. It is considered to be reliable over other ways of acquiring inputs.
- **Focus groups** – Focus groups comprise a small group and focal point is a specific product or topic. The groups emphasize qualitative or quantitative surveys because it provides more opinions and motivations.
- **Surveys** – The analysis done through surveys help businesses to get a picture of their position in the market in terms of fulfilling the needs of their target customers.

Types of Customer Needs

Businesses ought to understand customer needs as it is vital to match the competitive marketplace. Broadly, customer needs are about delivering a better experience by exceeding their expectations. When you anticipate what your customers want, you can create content, and expand your product features or services to meet those needs early. Customer needs can be classified on the basis of customers of the market demographics. However, customer needs can be bifurcated into two verticals.

Product needs

Product requirements are associated with and around the product. If your product matches your customer needs they become your potential buyers and vice-versa. The main attributes of product needs can be:

- **Price** – Customers generally set their budgets for any product purchase.
- **Features** – Customers look for features that would solve their problem and reliability in functioning while using the product.
- **Effectiveness** – The product should be effective in streamlining the process to save time.

Service Needs

Service needs refer to the emotional needs of the customers. Being able to quench the customer service needs, can give your business a competitive edge and set good example for other brands to follow. The key attributes of good service can be:

- **Empathy** – Customers stick to brands that serve them with an empathetic attitude.
- **Clarity** – Customers look for transparent information from the brand related to pricing, refund policy, etc.
- **Information** – Customers need information from the point of interaction until the end. Build FAQ pages, Knowledgebase, how-to videos to educate the customers

Good Examples to Meet Customer Needs

Addressing customer needs is critical for any business that focuses on customer retention in order to create good examples. Because, as important as the discovery phase is, knowledge about what your customer needs from you is only as good as the way you use it.

Let us discuss the best practices of how to meet customer needs and build stronger relationships.

1. Deliver quality customer support

Not always “good product quality” is what customers look for. Customers prefer brands that offer real time support. So, your support teams should focus on providing frictionless service experience and improve customer handoff.

66% of customers believe that valuing their time is the most important thing in any online customer experience. Resolving customer queries faster is a cornerstone of good customer service.

When customers get what exactly they need, there is an increase in the satisfaction rate. If you focus on putting extra effort towards exceeding customer expectations, it will certainly be worthy. You are able to delight your customers with excellent service.

How can you enhance your customer support quality?

- **Provide real time support** – You can connect with your customers with live chat to deliver real time assistance for sales and support queries.
- **Use live assistance solutions** – By using tools like co-browsing and video chat, you can provide faster solutions by reducing the number of touchpoints.
- **Automate your customer support** – Use a chatbot template for information collection to engage with

2. Map your customer journey

A great way to meet customer needs is by understanding the different customer touch points and how they interact with your business across these contact points. You can map your customer journey to get a visualization of the process they go through when engaging with your products or services.

Mapping journeys include multiple phases and touchpoints the customer goes through, right from prospect to loyal customers. It helps you to streamline fragmented efforts and identify points of friction and opportunities for improvement.

Identifying and meeting customer needs in the whole journey are all about providing a delightful experience that will further cultivate loyalty.

3. Measure customer satisfaction regularly

To know how happy your customers are with your overall business you need to measure it on a regular basis. Choosing the right communication channels and customer satisfaction metrics is crucial.

The key KPIs are customer satisfaction score (CSAT), net promoter score (NPS), and customer effort score (CES) help in measuring performance, monitor, and analyze satisfaction level in the overall customer journey.

How does measuring customer satisfaction help to meet your customer needs?

- It provides deep insights into your overall business performance. Based on that you can improve on the areas you are doing well and having loopholes.
- CSAT scores can help team leaders identify coaching opportunities to improve agent performance, give agents visibility into their individual performance to encourage self-correcting behavior.

Based on the inferences, you can restructure your product and services in order to reduce the customer churn by boosting the satisfaction rate.

4. Be consistent in customer communication

Inconsistent customer service is among the top frustration reported by customers. If your representatives are unable to deliver consistent assistance, there are chances that consumers feel confused and alienated.

It takes no time to create a negative impression on your customers and shows that your business strategies are not organized. You can meet your customers' requirements if you make the right efforts to understand the goals and capabilities of the company.

Here are some strategies to you can follow:

- Focus on building an omnichannel customer service strategy to deliver consistent support across all channels.
- Train your support team with customer service etiquette to meet customer needs effectively.

- Provide real time assistance to your customers with live customer engagement tools.

Note: When communicating with your customers make sure your brand voice and brand image are consistent. In case you are communicating with your customers across multiple channels you have to retain your unique voice so your customers will understand your message thoroughly.

5. **Develop a customer centric culture**

One great way to meet your customer needs is to create a company culture that is focused on customer experience at every touchpoint.

The customer experience (CX) is the major differentiator for every business, but creating a great CX isn't that easy. It includes visualizing interactions through every touchpoint from the customer's perspective: What are the expectations, what makes sense, and where do you have a chance to surprise and delight someone? And all these moments won't happen all at once.

What can be done to build a customer centric culture?

- Align your company culture to focus on the customer experience first. Your employees make or break most customer touchpoints, so be clear on your brand's values and what makes the experience delightful.
- Empower your support representatives to be proactive, thoughtful, and creative in making it practically happen.

6. **Enhance the USP of your product**

Every business needs a reason for its customers to buy from them over their competitors, which is known as a **Unique Selling Proposition (USP)**. Your USP can change depending upon the changes in your business and for different types of customers.

A good product is anything that can be offered to a market for attention, acquisition, or consumption satisfies customer needs. Product quality is the characteristic that bears on its ability to satisfy implied customer needs. The USP of your product can be effective to differentiate your brand when the customers are making their buying decision.

The product quality speaks for itself. If your products are built across helping customers to resolve their issues faster, it will attract them and keep them coming back.

In order to maintain the smooth process you need to follow certain tips:

- Conduct customer research on identifying customer needs and analyzing them to serve them much better.
- Ask customer feedback after and categorize it further to implement for improving the brand value to match with customer needs.

7. **Ask customer feedback**

Customer feedback is a vital ingredient for the success of every business. It helps to enhance your products and services to better suit the needs of your customers. This will then raise the chances of the purchase of your improved products or services.

You must always choose the right time to ask for honest customer feedback like after the chat session of a successful transaction. Further, the feedback can be analyzed to generate valuable insights. The insights can help to recreate better products as per their needs.

Essentially, once you receive customer feedback you need to follow certain steps that give opportunities to know your customer needs.

- Analyze the data using quality customer feedback analysis tools and according to internal & external customers' needs and expectations and enhance it.
- Figure out the gaps between your business and customers. Set new plans and strategies to reduce the gaps.
- Make all the team members part of the discussion and give a view about customer needs and wants.

Final Thoughts on Customer Need Analysis

When you start prioritizing customer needs, you need to identify them successfully in your products and services. When customers are able to relate your brand along with their needs, they are highly satisfied. Being able to deliver a great experience grows your customer base of loyal customers.

Having good knowledge of customer needs and wants not only helps to add constructive value but also level up the overall brand recognition. It gives your business a competitive advantage and stays a step ahead in the market.

What is Customer Centricity?

Customer-centricity means putting the customer first and at the center of everything that you do. You might think to yourself, that's easy. I can do that. But is it really that simple?

Being customer-centric entails more than just saying the customer is top of mind. It is about truly understanding the customer, so you can anticipate their wants, needs and communication preferences, create meaningful experiences, and build lasting relationships with them. And that is easier said than done.

Customer-centric organizations take steps to understand the customer and act on that understanding by creating a culture that empowers employees to make the best decisions for both the customer and the company in parallel. They take into account how each business decision, process change, and customer touchpoint affect the experience.

All in all, customer-centricity is as much a strategy as a culture. It has to be ingrained in an organization in order to be recognized by the final decision maker: the customer. Successful organizations realize higher retention rates, more referrals, price premiums, and ultimately greater revenue.

Why is customer-centricity important to your business and brand?

If customers aren't happy, they won't stay with your brand. If you don't have customers, you don't have a business.

Consider your own experiences interacting with your favorite brands. They make it easy to do business with them, they communicate with you via your preferred method, and they may even present offers at the exact time you plan to purchase. Now consider the ones that get it wrong. In the Marie Kondo era of cleaning out, tidying up, and simplifying, how often do you stick with brands that fail to spark joy? Consumers today have an easy path to walk away from brands they love, and they are not afraid to do so. In fact, according to PWC, one in three customers will leave a brand they love, after one bad experience.

Across the customer journey, from awareness to purchase to advocacy, each interaction and stage benefits from a customer-centric approach. In today's digital environment which focuses on personalization, organizations are

being built on their commitment to do what's right for their customers. It is the definitive competitive differentiator.

For example, Nordstrom has always been synonymous with exceptional customer service. In order to pivot with buyers' demands, they have taken the in-store experience they are known for and replicated it in the digital shopping experience with an innovative mobile app as well as new services such as buy online/pickup in store.

The ultimate reward of creating customer-centric processes is loyalty and retention. As the old saying goes, it is easier and more cost-effective to keep a customer than acquire a new one. In 2014, *Harvard Business Review* underscored the fact that acquiring a new customer is anywhere from five to 25 times more expensive than retaining an existing one. This concept is not new. So why aren't more companies prioritizing retention over acquisition?

Customer-centricity done right results in your customers trusting they will not only get what they want and need from your company, but will also experience enjoyable and frictionless service, including: boxless returns, order online/pickup in store, immediate refunds, fast delivery of online orders (sometimes same-day or even 2- hour). These experiences delight and build trust that helps to retain customers for the long haul.

3 common challenges businesses face getting to customer-centricity

It's important enough to repeat: Being a customer-centric organization is easier said than done.

What sounds like a simple concept in theory presents challenges in reality. Everything from culture to organizational structure to data and technology within an organization need to be reoriented around the customer – from the back office to the front line – to fully recognize the benefits.

Customer-centricity challenge 1: Getting buy-in and building a culture

The most difficult challenges to overcome are the least tangible. Creating a customer-centric culture is a good example of that. Culture is not something that is forced or easily changed. It doesn't necessarily translate directly from plan to action. It requires everyone from executives on down to embrace the change that customercentricity brings. Everyone has to want to believe, execute and succeed. At times, it may require taking a leap of faith (albeit a guided leap) centered on a longer-term vision and focusing on more than just the bottom line.

What's the one thing customer-centric organizations have in common? Customer-centricity is a core value. Every employee is focused on the customer and puts the customer first in their thinking and decision-making.

For example, at Informatica, we are guided by our "We DATA" values of which one of them is "Think Customer First." It is called out at every all-company meeting, woven into annual performance reviews, and celebrated through recognition of employees who embody the value. Empowering employees to think about what's right and do the right things puts the customer front and center.

One way to create a culture that values customer-centricity is to encourage teams to answer questions to determine if a decision is customer-centric or not:

- How will this new product introduction benefit the customer?
- How will this new back-office system create an easier, more intelligent way to interact with the customer?
- How will this new process remove unnecessary friction experienced by our customers?

If the answer to any of these questions is no or inadequately defined, you may want to rethink your decision. When employees are empowered to think in this way and challenge any decision that is not customer-centric, good things will happen. When employees feel supported and empowered, they go above and beyond for the customers they serve, resulting in high satisfaction and stronger relationships.

Customer-centricity challenge 2: Shifting from product-centric to customer-centric

In his book, *Customer Centricity*, Wharton School of Business professor Peter Fader gives examples of how brands like Starbucks and Nordstrom successfully pivoted from product- to customer-centric models over the past decade. This shift is due to a change in customer behavior, better access to information, and the ability to scale understanding of and delivery on customer wants and needs. The precision gained with better insights replaces the need to cast a wide net in hopes of getting a bite.

A shift from product-centricity to customer-centricity applies to both consumer and non-consumer-based industries. Think of your bank or insurance agency. In the past, you would have an account number for each account owned, interacting with different representatives for each one. This product-centric approach didn't stop there. Systems recognized a customer by account or policy number, not by name. Processes and experiences were siloed and choppy as a result. You'd often need to share your information multiple times or receive offers for products you already own.

The inefficiencies and poor customer experiences were a result of traditional organizational structures based on the products they sold. Many businesses focused on selling as many products to as many people or organizations as they possibly could. This strategy is 100% product-centric and doesn't take into account customer preferences. In marketing, it results in "spray and pray" campaign strategies where product-focused messages are blasted out to anyone and everyone.

This approach wastes valuable time, money and mindshare because the message most likely misses the target the majority of the time. In addition, a product-centric business model creates silos of teams and silos of data – often resulting in misaligned or competing goals as well as duplicate, inconsistent, and fragmented information across an organization.

Creating strategies and processes focused on customer over product is a critical step in overcoming challenges around customer-centricity.

Customer-centricity challenge 3: Overcoming data silos (storage) and technology

Digital transformation means a successful data management strategy to support customer-centricity is even more important. As customers flock to the growing number of digital channels, interactions with your brand have potentially increased in frequency. Consumers and business buyers alike are making purchase decisions prior to engaging with a salesperson due to the availability of information.

Web chats, online product reviews, and social media create additional channels for customers to learn about and experience brands. And for brands to learn about and understand their customers if they manage the data correctly. With more channels at play and more applications in the mix, technology must be an enabler, not a detraction.

Data is often the biggest challenge when it comes to knowing who your customers are and understanding what they want. In many companies, data is unorganized, siloes, duplicated and, frankly, a mess. This may be due to how a company has grown over time, for example through merger or acquisition, where multiple sets of customer data exist, but have not been unified. It may also be because systems are set up by business unit, product, or department, creating silos and duplicates.

No matter how messy it is, data holds the key to understanding your customers, anticipating their wants and needs, and interacting with them in an authentic, relevant manner. It can help marketers, sellers and customer service reps personalize communications and empathize with the customer.

Breaking down silos and getting control of data – centralizing it, cleaning it, enriching it, governing it – and making it actionable go a long way in delivering customer-centricity. And it doesn't stop with customer data. Customer experience involves product, finance, supplier, employee, and other data, including attributes inferred from social media, chats, and other unstructured data sources. Making the data challenge both more difficult and more rewarding when done right.

How to overcome the barriers to customer-centricity

The first step to becoming customer-centric is getting everyone on board – leadership, marketing, sales, service, support, finance – encompassing both customer-facing as well as back-office roles.

All teams need to recognize the impact of first impressions during the awareness and consideration phases. When customers are at the beginning of their journey, it's critical to ensure marketing hits the mark and doesn't alienate customers. You may not have all the data you need right from the start. But, over time, as data is added and connected with the customer's profile, it guides future decisions and helps build hyper-targeted and more personalized campaigns.

As their journey continues and prospects become customers, customer-centric processes must be in place for a smooth and frictionless onboarding process. Conversations and outreach to customers must add ongoing value to ensure repeat business and loyalty – not to mention brand advocacy.

Here are some customer-centric best practices to help you achieve your vision:

- **Build a customer-centric culture.** Ensure every employee, from the CEO to the frontline worker, lives and breathes the customer. Build it into your mission, values, and vision.
- **Improve your data.** Improve data quality, consistency and availability to help everyone in the organization identify and understand the customer at every stage of the journey. Too often, data is an underutilized asset because of the erosion of quality and the difficulty using it. With AI, data can be

automatically connected to resolve identities and reveal insights that improve personalization and next best offer initiatives.

- **Capture customer feedback.** Gain a better understanding of your customers by really listening to what they want and need. Look for patterns in the feedback. Not every customer is always right, but it pays to listen to many customers who provide the same feedback – whether explicitly stated or expressed by their behavior.
- **Reward employees.** Tie employee compensation, recognition and reward structures directly to meeting the needs of the customer. Build trust within your employee base and empower them to think customer first.
- **Think long-term.** A long-lasting customer is more valuable over time than a single transaction. By creating frictional experiences, having empathy and making a customer feel known, those long-term relationships with your customers will result in loyalty and retention – and ultimately greater revenue. This is truly where CX has an impact on the bottom line.

Measuring the benefits of customer-centricity

Another key step to building a customer-centric strategy and culture is agreeing on the key performance indicators (KPIs) and metrics that you will measure to determine what is working and what needs to be tweaked to ensure success.

What gets measured gets managed. Using customer metrics such as retention rate, propensity to churn, customer satisfaction (CSAT), customer effort score (CES), and wallet share will keep your efforts on track. Customer-centric marketing, sales and service efforts must align with measurable KPIs. In addition to tracking metrics such as revenue by product or channel, you must also capture and measure customer behavior, sentiment, value and other important customer-centric metrics.

For example, most chief marketing officers are laser-focused on increasing customer lifetime value (CLV), which measures the value of a customer over the entire relationship. It is a critical indicator of how well marketing and other tactics are working to establish long-term, highly profitable customer relationships. By tracking CLV, you can spot early signs that a customer might churn, for example if spending subsides below what is typical for that customer. You can also use CLV data to perform customer segmentation for targeted promotions and other offers.

Another key metric is Net Promoter Score (NPS). NPS is widely used, especially by consumer-facing brands and simply asks: “How likely is it that you would recommend [brand] to a friend or colleague?” It is a common predictor of growth and measures overall perception of the brand. Complement NPS with additional metrics and insights to derive actionable insights that will improve customer experience.

Go forth and be customer-centric

People buy from people they trust. And people do business with a company, not departments within a company. This is why customer-centricity must be promoted at the executive level across an organization. The payoff for customer-centric organizations is that loyal customers spend more over time. They are also more forgiving of minor trespasses (a poorly timed offer, an out-of-stock item, a wrong item delivered) because there is a sense of trust that the organization will take care of the customer in the long run. But betray that trust on the bigger items without quick resolution, and you risk losing that customer forever.

Retaining customers and growing wallet share requires having the right culture, data and technology that drive customer-centric sales, marketing, and customer service. The foundation for a successful customer-centric business practice requires technologies that streamline processes and reduce the cost of data management and makes trustworthy data accessible across your enterprise.

BUSINESS MODEL

A business model is a strategic framework that outlines how a company plans to create, deliver, and capture value in the market. It describes the key elements and components of a business, including its target customers, value proposition, revenue streams, cost structure, key activities, resources, and partnerships. Here are some important elements commonly found in a business model:

1. **Customer Segments:** Identifies the specific groups of customers or market segments that the business aims to serve.
2. **Value Proposition:** Describes the unique value or benefits that the business offers to its customers, solving their problems or meeting their needs.
3. **Channels:** Specifies the channels through which the business communicates with and delivers its value proposition to customers.
4. **Customer Relationships:** Defines the types of relationships the business establishes and maintains with its customers, such as personal assistance, self-service, or community building.
5. **Revenue Streams:** Outlines the ways in which the business generates revenue from its customers, including pricing models, sales strategies, and payment methods.
6. **Key Activities:** Describes the primary activities that the business must perform to create and deliver its value proposition, such as production, marketing, distribution, or customer support.
7. **Key Resources:** Identifies the critical resources, including physical, intellectual, human, or financial resources, required to operate the business successfully.
8. **Key Partnerships:** Involves collaborations and partnerships with other businesses or organizations to leverage resources, access new markets, or enhance capabilities.
9. **Cost Structure:** Outlines the costs and expenses incurred by the business to operate and deliver its value proposition, including fixed costs, variable costs, and economies of scale.

A well-designed business model aligns these elements to create a sustainable and profitable operation. It enables a company to understand its customers, differentiate itself from competitors, and generate revenue while managing costs effectively.

Business models can vary greatly across industries and types of businesses. For example, an e-commerce platform may have a business model focused on connecting buyers and sellers and earning revenue through transaction fees, while a software-as-a-service (SaaS) company may have a subscription-based business model. Overall, a business model serves as a roadmap for the company, guiding its strategic decisions, resource allocation, and value creation efforts to ensure long-term success in the marketplace. **Revenue Model**

A revenue model outlines how a company generates revenue and monetizes its products or services. It defines the pricing structure, revenue streams, and the mechanisms through which customers make payments. Developing a solid revenue model is crucial for sustainable business growth and profitability. Here are some common types of revenue models:

1. **Product Sales:** Revenue is generated through the direct sale of physical or digital products. This model involves setting prices for products and earning revenue when customers make purchases.
2. **Subscription Model:** Customers pay a recurring fee at regular intervals (monthly, quarterly, or annually) to access a product or service. This model provides a steady stream of revenue and fosters customer loyalty.
3. **Advertising Model:** Revenue is generated by displaying advertisements to customers. This model is commonly used in media platforms, social networks, and free content websites. Advertisers pay the company to reach its user base.
4. **Freemium Model:** The basic version of a product or service is offered for free, while additional premium features or functionality are available at a cost. The revenue comes from a percentage of customers who upgrade to the premium version.
5. **Licensing Model:** Revenue is generated by granting others the rights to use intellectual property, such as patents, trademarks, or copyrights, in exchange for licensing fees or royalties.
6. **Affiliate Model:** Revenue is earned through referrals or commissions. Companies receive a commission for driving customers to another company's products or services through affiliate links or partnerships.
7. **Transaction Fee Model:** Revenue is earned by charging a percentage or fixed fee for facilitating transactions between buyers and sellers. This model is commonly used in e-commerce marketplaces or payment platforms.
8. **Data Monetization:** Revenue is generated by collecting and analyzing customer data, and then selling insights or targeted advertising based on that data to third parties.
9. **Usage-Based Model:** Customers are charged based on their usage or consumption of a product or service. This model is common in utility services, cloud computing, or pay-per-use software.
10. **Sponsorship Model:** Revenue is generated through sponsorships from companies or organizations that support a particular event, content, or platform.

It's important to note that some businesses may adopt multiple revenue models or combine elements from different models to suit their specific needs and market dynamics. Choosing the right revenue model requires understanding the target market, value proposition, and pricing strategies that align with customer preferences and industry norms.

Regular evaluation and adjustment of the revenue model are essential to ensure it remains effective and profitable as market conditions and customer behaviors evolve.

Lean Development Model and Agile Development Model

1. Lean Model: Lean is one of the efficient methodology that believes the flow of value to the customer through continuous improvements and value for the customer. It optimizes the available resources to create a stable workflow keeping the customer's demand at its center. The Lean Model was first used in 1915, by Henry Ford in the Ford Motor Company's Highland Park factory. It generally refers to a set of knowledge specifically called *Lean Manufacturing*. This focuses on production based on demand and not on supply. It contains 5 principles.

Benefits of Lean Model:

1. Increased product quality
2. Provides more employee satisfaction
3. Improved visibility to stakeholders
4. Predictable delivery of customer value
5. More efficient business processes

2. **Agile Model:** Agile is a well-known development methodology and the best approach for many development teams, especially those looking to create a continuous delivery environment. It focuses around iterative development, short cycles, getting feedback and adapting to the new requirements. Solutions develop through interactions between self-organizing cross-functional teams. Agile is a mindset from the Agile Manifesto which came out in 2001 containing 12 principles and 4 values written by 17 software developers.

Benefits of Agile Model:

- 1. Better customer satisfaction
- 2. Rapid development and delivery
- 3. More emphasis on end users
- 4. Close cooperation between business and development team
- 5. Late and further changes are allowed

The Lean Development Model and Agile Development Model are both iterative approaches to software development, but they have some key differences:

- 1. **Origin:** Lean development originated in the manufacturing industry, while Agile development originated in the software industry.
- 2. **Focus:** Lean development focuses on reducing waste and improving efficiency, while Agile development focuses on delivering value to the customer through incremental and iterative development.
- 3. **Methodology:** Lean development is based on the principles of lean manufacturing, which emphasize continuous improvement and waste reduction. Agile development is based on the Agile Manifesto, which values individuals and interactions, working software, customer collaboration, and response to change.
- 4. **Workflow:** Lean development typically follows a linear workflow, where each step is completed before moving on to the next. Agile development follows an iterative workflow, where development cycles are repeated until the software meets the customer’s needs.
- 5. **Metrics:** Lean development uses metrics such as cycle time and lead time to measure efficiency and waste reduction. Agile development uses metrics such as velocity and burndown charts to measure progress and track performance.
- 6. **Team Structure:** Lean development typically uses cross-functional teams that are responsible for the entire development process. Agile development also uses cross-functional teams, but places more emphasis on self-organizing teams that collaborate closely with the customer.

In summary, while both Lean Development and Agile Development are iterative approaches to software development, Lean focuses more on efficiency and reducing waste, while Agile focuses more on delivering value to the customer and responding to change.

Difference between Lean Development Model and Agile Development Model:

AGILE MODEL	LEAN MODEL
Agile is more focused on continuous delivery through the self organizing cross-functional teams.	Lean is focused on flow of value to the customer.
It is based on the worth and scope of the product.	It is based on how quickly things are developed and how well they turn out i.e. product quality.
Aim- To meet the needs of the end user or stakeholder by providing valuable product.	Aim- Elimination of any process that does not have any significant role to the process of producing the final product.

Agile is always adaptive to change.	Lean is about stable workflow and meeting the customer's demands.
Agile is designed using different frameworks like scrum, Kanban etc.	Lean is designed using transitions from manufacturing processes.
Agile came out in 2001 and was designed by 17 software developers.	The Lean Model was first used in 1915, by Henry Ford in the Ford Motor Company's Highland Park factory.
Agile consists of 12 principles and 4 values.	Lean consists of 7 principles.
Agile delivers products in a dynamic manner in small parts rather than whole products at once.	Lean is used to develop both the quality of the product and the delivery speed as well.
Agile can not be used to cut costs.	Lean can be used to cut costs.
Agile is easier to use for dynamic requirement changes.	Lean is not flexible when the requirements are changed.
Agile believes in end results through responses and feedbacks.	Lean follows a systematic plan for development by eliminating unnecessary things like meetings, documentation etc.
It is a collective collaboration between teams and end users.	It emphasizes maximizing customer value and increasing efficiency.
It offers flexibility when using different frameworks.	It helps with the ongoing evaluation and adaptation of the product.
It acts as a suitable framework for any product development whether big or small.	In this model, there is possibility of the production of small quantities of products.

Aligning digital marketing with a firm's culture and products

Aligning digital marketing involves ensuring that your marketing efforts are in sync with your overall business goals, brand identity, target audience, and digital channels. Here are some key steps to align your digital marketing effectively:

Define your business goals: Clearly identify your business objectives and what you want to achieve through digital marketing. Align your marketing strategies and tactics to support these goals, whether it's increasing brand awareness, driving website traffic, generating leads, or boosting sales.

Understand your target audience: Develop a deep understanding of your target audience's demographics, interests, behaviors, and preferences. This knowledge will help you tailor your digital marketing messages and select the most appropriate channels to reach and engage your audience effectively.

Establish your brand identity: Define your brand's unique selling proposition, values, and personality. Ensure that your digital marketing content, visuals, and messaging align with your brand identity and resonate with your target audience. Consistency across all digital touchpoints helps reinforce your brand and build trust with customers.

Select relevant digital channels: Identify the digital channels that align with your target audience's preferences and your business objectives. Consider using a mix of channels such as search engine marketing (SEM), social

media, email marketing, content marketing, influencer partnerships, and more. Tailor your approach to each channel while maintaining a consistent brand presence.

Create compelling content: Develop high-quality, relevant, and engaging content that aligns with your brand and provides value to your audience. Utilize storytelling techniques, visuals, videos, and interactive elements to capture attention and convey your brand message effectively.

Optimize for search engines: Implement search engine optimization (SEO) techniques to ensure your website and digital content are easily discoverable by search engines. Align your SEO strategy with relevant keywords, user intent, and your target audience's search behavior.

Leverage data and analytics: Utilize data and analytics tools to track and measure the performance of your digital marketing efforts. Monitor key metrics such as website traffic, conversions, engagement rates, and ROI. Use this data to refine your strategies, optimize campaigns, and make data-driven decisions.

Stay updated with industry trends: Keep up with the latest digital marketing trends, technologies, and best practices. Regularly evaluate and adapt your strategies to align with emerging trends and changes in consumer behavior. Embrace innovation and explore new opportunities to reach your target audience effectively.

Remember, alignment is an ongoing process. Regularly review and refine your digital marketing strategies to ensure they remain aligned with your business objectives, target audience, brand identity, and evolving market dynamics.

Design thinking, value innovation, blue ocean thinking, strategy canvas, and the four action frameworks

Design thinking, value innovation, blue ocean thinking, strategy canvas, and the four action frameworks are all strategic concepts and tools used in business and innovation.

Design Thinking: Design thinking is a problem-solving approach that emphasizes understanding user needs, exploring creative solutions, and iterating through prototyping and testing. It involves a human-centered perspective to design products, services, and experiences that meet users' needs and preferences.

Design thinking can be a valuable approach to applying creativity and problem-solving in the context of digital marketing. Here's how design thinking can be applied in digital marketing:

Empathize with the audience: Design thinking begins with empathizing with your target audience. Take the time to understand their needs, pain points, preferences, and behaviors in the digital space. Use tools like user personas, customer journey mapping, and data analysis to gain insights into their motivations and challenges.

Define the problem: Clearly define the problem or opportunity you want to address in your digital marketing efforts. Identify specific goals, such as increasing website traffic, improving conversion rates, or enhancing brand awareness. This step helps you focus your efforts and align them with your overall marketing strategy.

Ideate and generate ideas: Encourage brainstorming and idea generation sessions to explore creative solutions for your digital marketing challenges. Involve a cross-functional team that includes marketers, designers, developers, and customer service representatives. Explore various ideas, even unconventional ones, and create an environment that fosters innovation and collaboration.

Prototype and test: Develop prototypes or mock-ups of your digital marketing initiatives, such as landing pages, email campaigns, social media posts, or website redesigns. Test these prototypes with a sample audience or gather feedback from stakeholders. This iterative process allows you to refine and improve your digital marketing strategies before fully implementing them.

Implement and iterate: Once you have validated your prototypes, implement your digital marketing strategies and campaigns. Monitor their performance and gather data to evaluate their effectiveness. Use analytics tools to track key metrics and make data-driven decisions. Continuously iterate and refine your digital marketing efforts based on insights and feedback.

Focus on user experience: In digital marketing, user experience (UX) plays a crucial role. Apply design thinking principles to create seamless and user-friendly experiences across digital touchpoints. Optimize website navigation, design intuitive user interfaces, and streamline the customer journey. Ensure that your digital marketing efforts provide value and engage your audience effectively.

Foster collaboration and cross-functional teamwork: Design thinking encourages collaboration and cross-functional teamwork. Bring together individuals with different expertise and perspectives to collectively solve digital marketing challenges. Foster a culture of open communication, where team members can share ideas, feedback, and insights.

By applying design thinking principles, digital marketers can develop innovative strategies, campaigns, and experiences that align with user needs and drive business results. It helps shift the focus from a purely transactional approach to one that emphasizes creating meaningful and engaging interactions with the target audience.

Value Innovation: Value innovation is a concept introduced by W. Chan Kim and Renée Mauborgne in their book "Blue Ocean Strategy." It involves creating new market space by simultaneously pursuing differentiation and low cost. Instead of competing within existing industries (red ocean), value innovation focuses on offering unique value propositions that open up new market demand and make competition irrelevant (blue ocean).

Blue Ocean Thinking: Blue ocean thinking is a strategic approach that seeks to create uncontested market space by making competition irrelevant. It involves identifying new market opportunities and developing innovative business models, products, or services that differentiate from existing offerings. By exploring uncharted waters, organizations can achieve growth and value creation.

Strategy Canvas: The strategy canvas is a visual framework used in the blue ocean strategy. It helps organizations compare their current market offerings with those of competitors. By mapping key factors of competition along the horizontal axis and the degree of offering along the vertical axis, the strategy canvas highlights areas where organizations can create unique value and differentiate themselves.

Four Action Frameworks

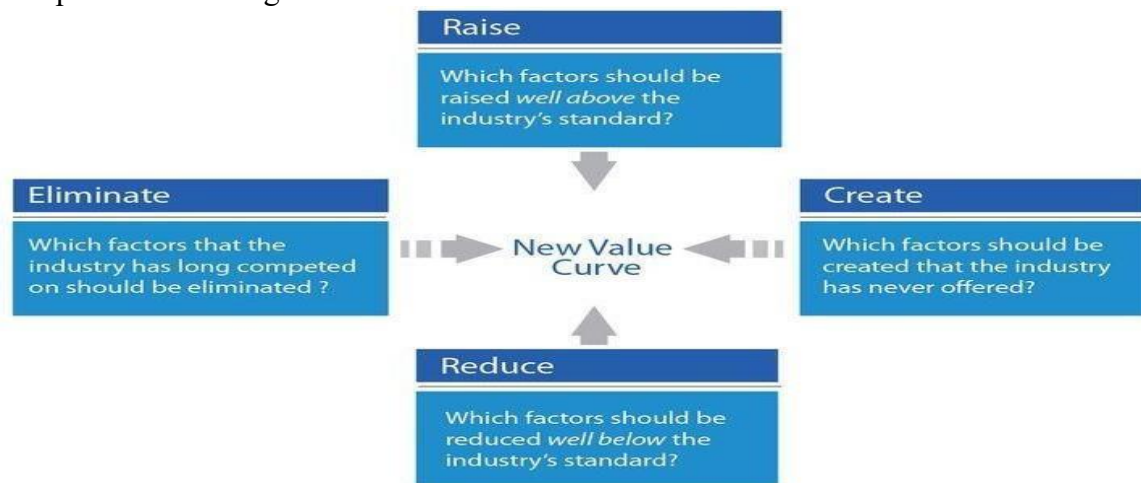
Four Action Frameworks: The four action frameworks, also part of the blue ocean strategy, provide a systematic way to reconstruct market boundaries and create new value. The frameworks suggest four key questions to guide strategic thinking: Which factors should be eliminated, reduced, raised, and created? By challenging conventional industry assumptions, organizations can break free from the competition and unlock new market opportunities.

These concepts and tools are often used together to foster innovation, develop strategic insights, and create value for businesses. They encourage organizations to think differently, identify new growth avenues, and align their strategies with customer needs and market dynamics.

There are several popular action frameworks used in business strategy and management. Four well-known frameworks are:

1. Porter's Four Actions Framework:

Developed by Michael Porter, this framework helps businesses identify strategic opportunities for creating value and gaining a competitive advantage.



It consists of four key questions:

- Which factors should be **eliminated** that the industry has long competed on?
- Which factors should be **reduced** well below the industry's standard?
- Which factors should be **raised** well above the industry's standard?
- Which factors should be **created** that the industry has never offered?

By answering these questions, organizations can reshape their value proposition and differentiate themselves from competitors.

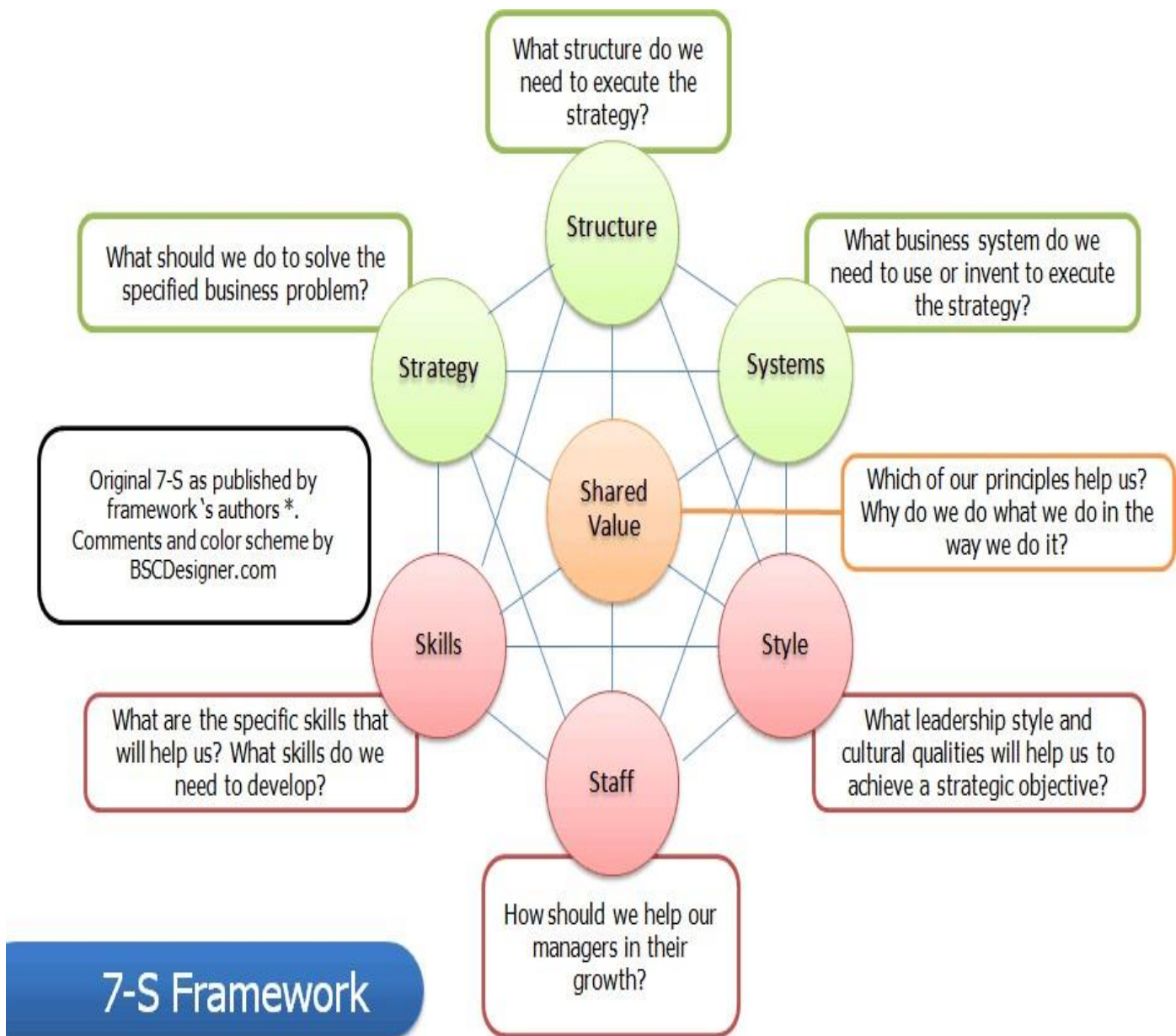
2. SWOT Analysis:

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. It is a simple yet effective framework that helps businesses assess their internal strengths and weaknesses as well as external opportunities and threats in the market. This analysis enables companies to understand their competitive position and make informed decisions about strategy formulation and resource allocation.



3. McKinsey 7-S Framework:

This framework was developed by consultants at McKinsey & Company. It focuses on seven internal elements that need to be aligned for organizational effectiveness. The seven "S" factors are:



* Original 7-S framework was introduced by Robert H. Waterman, JR., Thomas J. Peters, and Julien R. Phillips. in "Structure is not organization", Business Horizons (1980, June). Comments and color scheme by BSC Designer.com

Legend:



Hard Ss



Soft Ss

- 1) **Strategy**: The plan of action to achieve the organization's goals.
- 2) **Structure**: The formal division of tasks, roles, and responsibilities.

- 3) **Systems**: The processes and procedures that guide operations.
- 4) **Shared Values**: The core beliefs, values, and culture of the organization.
- 5) **Skills**: The capabilities and competencies of employees.
- 6) **Staff**: To help/improve individual staff competencies/ growth..
- 7) **Style**: The leadership and management style within the organization.

By examining and aligning these seven elements, organizations can improve their performance and achieve their objectives.

4. The Balanced Scorecard:

The Balanced Scorecard is a framework that measures organizational performance across four different perspectives:

Financial: Focusing on financial indicators such as revenue, profitability, and return on investment.

Customer: Assessing customer satisfaction, loyalty, and market share.

Internal Processes: Evaluating the efficiency and effectiveness of internal operations.

Learning and Growth: Monitoring the organization's capacity for innovation, employee development, and technological advancement.

The Balanced Scorecard helps businesses balance short-term financial objectives with long-term strategic goals and provides a comprehensive view of performance across multiple dimensions.

These action frameworks provide valuable frameworks for analysis, decision-making, and strategy formulation, helping businesses gain a competitive advantage and achieve their goals.

Social Media Management

Social media management refers to the practice of managing and overseeing an organization's social media channels and activities. It involves creating, publishing, and analyzing content on various social media platforms to engage with the target audience, build brand awareness, drive website traffic, and achieve marketing goals.

Here are some key aspects of social media management:

Strategy development: Creating a comprehensive social media strategy that aligns with the organization's goals and target audience. This includes defining objectives, identifying key performance indicators (KPIs), and selecting appropriate social media platforms.

Content creation and publishing: Developing engaging and relevant content, such as text, images, videos, and info graphics, tailored for each social media platform. Scheduling posts at optimal times to reach the target audience effectively.

Community engagement: Actively monitoring social media channels, responding to comments, messages, and mentions promptly. Engaging with followers, fostering discussions, and building relationships with the audience.

Social media advertising: Planning and executing paid advertising campaigns on social media platforms to reach a wider audience, increase brand visibility, and drive conversions. This involves targeting specific demographics, creating compelling ad creative, and optimizing campaigns based on performance metrics.

Analytics and reporting: Tracking the performance of social media campaigns using various analytics tools. Analyzing data such as engagement rates, reach, click-through rates, and conversions to measure the effectiveness of social media efforts. Generating reports to provide insights and make data-driven decisions.

Social listening and sentiment analysis: Monitoring social media conversations and mentions of the organization or relevant topics. Understanding audience sentiment, identifying trends, and addressing customer concerns or issues promptly.

Influencer collaborations: Identifying and partnering with influential individuals or content creators in the industry to amplify the brand's reach and credibility. Managing influencer relationships, tracking campaign results, and measuring the impact of collaborations.

Reputation management: Monitoring online mentions and reviews to maintain a positive brand image. Addressing customer complaints or negative feedback professionally and transparently.

Effective social media management requires a deep understanding of the target audience, a clear brand voice, and consistent engagement. It also involves staying updated with the latest social media trends, algorithms, and best practices to maximize results.