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| --- | --- |
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| **Unit:** | E-Business |
| **Centre:** | Strategy First University |
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# Task-1

Shopify is a leader of e-commerce platform, actively combined, Level up new and emerging technologies to improve platform process and user experience. Following is a detailed that how Shopify uses of technologies:

**Artificial Intelligence (AI) and Machine Learning (ML)**  
  
Product Recommendations: Shopify , that uses AI technology to divide customers behavior and recommend products, helping salesperson increase sales through personal idea.

Chatbots: AI-powered chatbots assist customers with check, order location note, and provide support, improving customer service efficiency.  
  
**AI-Driven Pricing Tools**  
  
 These tools use AI to analyze market data, competitor pricing, and customer behavior in order to recommend optimal pricing strategies in real time.  
  
**Behavioral Analytics**  
  
 Machine Learning models analyze user behavior on a website, including page visits, time spent, and interactions with various elements. Behavioral analytics insights assist merchants in understanding customer preferences and pain points, allowing them to better optimize website design, improve product offerings, and tailor marketing efforts.

**Web scraping**

Web scraping tools extract information from competing companies’ websites, such as product listings, pricing and customer reviews. This data helps Shopify merchants remain competitive by offering information into market trends, competitive pricing strategies, and consumer sentiment.

**Check-out Free Payment System**

These systems use detector and computer vision technology to automatically add or remove things from a customer’s shopping cart upon pickup or return. By removing the traditional checkout procedure, these systems shorten wait times and improve the shopping system.

**Virtual Reality(VR)**

Virtual reality (VR) is a technology that same a computer-programmed environment and makes it possible to interact with it in a very realistic way. It has become more popular in recent years, with applications in fields such as gaming, education, healthcare, and entertainment. (Hlongwane, 2023)

**VR Product Visualization**

VR technology allows customers to view and interact with products in a 3D view, resulting in a detailed and immersive product background. And it is easy to search the customer products more completely. Example useful product or expensive clothes, things, like furniture, clothes, skincare and accessories.

(b)

The inclusion of several technologies in Shopify has a major effect on several important e-commerce processes, improving efficiency, customer marriage contract and overall business growth.  
Predictive Analytics: Shopify uses AI-powered predictive analytics to forecast sales patterns, improve inventory management, and create focused marketing campaigns.  
  
**Customer Experience**

Personalization: Using AI and machine learning technology, Shopify can personalize consumer experiences by making bespoke product recommendations based on browsing and purchase habits.   
AR/VR: Augmented Reality (AR) enables customers to see products in their physical environment before purchasing, increasing confidence and lowering return rates. Chat-bots: AI-powered chat-bots deliver immediate customer help, reducing response times and increasing overall satisfaction.

**The advantages of adopting these new technologies**

Enhanced customer experience:

Technologies such as AI for personalization and AR/VR for idea improve the overall customer knowledge. Order customizing and the ability to see the product before buying increase consumer satisfaction while decreasing the of Likelihood returns. Shopify's business model relies around providing merchants the tools to build an engaging online buying experience. Enhanced customer experience leads to higher sales and customer retention, which aligns with Shopify's mission of assisting merchants in expanding their businesses.

Reduced Efficiency and Productivity:

New technology often brings control for process automatic and better then people make. Artificial intelligence (AI) and machine learning (ML) are examples of technologies that can increase efficiency.

**The disadvantages of adopting these new technologies**

Integration Challenges and Technical Complexity:

Disadvantage: Implementing emerging technologies such as AI, AR/VR, or block-chain might be difficult and need major integration efforts. Ensure seamless integration with existing systems and third-party apps can be difficult, resulting in significant interruptions and delays. Shopify's platform is intended to be user-friendly and accessible to merchants of diverse technical expertise. Complex integrations may cause usability issues or necessitate additional assistance and training, thus disrupting the user experience.

Costs for Implementation and Maintenance  
  
Disadvantage: Adopting new technology frequently incurs upfront expenditures for implementation, customization, and ongoing maintenance. For example, building AI algorithms, deploying AR/VR capabilities, and integrating block-chain technologies might be expensive.   
Impact on Business Model: While Shopify seeks to deliver affordable and scalable e-commerce solutions, the expense of implementing and maintaining complex technologies may increase merchants' overall cost of ownership. This may have an impact on smaller enterprises or startups with limited budgets.

# Task 2

1.

Customer Relationship Management (CRM) refers to a company strategy and technology that manages and analyzes customer interactions and data across the customer lifecycle in order to improve customer relationships, retain them, and drive sales growth. CRM refers to managing a company's interactions with customers and prospects. It can help to increase for the organization's profits. In CRM systems include features for managing customer information, connecting interactions (e.g., emails, phone calls, and social media...), automating sales and marketing activities and analyzing customer data to generate insights that can help strengthen customer relationships.

Understanding Customer Relationship Management (CRM) requires acknowledging its dual position as a strategy and a set of technologies used by businesses to manage customer interactions and relationships across the customer lifecycle.

CRM (customer relationship management) is the combination of usage, strategies and technologies that companies use to manage and understand customer interactions and data throughout the customer lifecycle. The goal is to improve customer service relationships and assist with customer retention and drive sales growth. It entails integrating company operations with customer-centric initiatives in order to boost customer happiness and loyalty. CRM systems include software tools and platforms that help collect, organize, and analyze customer data. These systems often contain features for maintaining customer information, automating sales and marketing activities, and analyzing consumer behavior.

Customer Data Management: Controlling the customer's data such as contact information, interactions, order history and customize. Sales automation streamlines sales procedures including lead management, opportunity monitoring, and forecasting.

Marketing Automation: Automates marketing efforts, lead nurturing, and consumer segmentation using behavioral data.

Analytics and Reporting: Offers insights into customer trends, preferences, and purchasing habits to help influence strategic decisions.

Enhanced customer relationships: CRM enables firms to strengthen client relationships by providing tailored experiences and fast responses. It helps firms better understand their customers' wants and preferences, which fosters loyalty and advocacy.

Increased Sales and Revenue: CRM systems assist sales teams in prioritizing leads, tracking opportunities, and forecasting sales more precisely. CRM improves cross-selling and upselling chances by offering insights into consumer behavior and purchasing habits, resulting in increased income.

Strategic Decision Making: CRM analytics provide meaningful information on customer patterns, market segments, and campaign performance. This data can be used by businesses to improve their marketing tactics, enhance their product offers, and allocate resources more efficiently. (Hashemi-Pour, 2019)

2.

Spatial Computing is a new technological platform that is presently not linked with Shopify. Spatial computing refers to technologies that combine physical and digital realities, allowing users to interact with digital content in the real world using augmented reality (AR) and virtual reality (VR). Shopify may potentially use spatial computing to build immersive shopping experiences in which customers can see things in their real location before making a buy. This technology has the potential to increase customer engagement and pleasure by offering a more dynamic and personalized purchasing experience.  
Spatial computing may dramatically improve Customer Relationship Management (CRM) systems by adding additional levels of interaction and engagement. Enhanced Customer Engagement, Improved Personalization, Visualizing Customization Options, Reduced Product Returns are some of the CRM benefits that spatial computing could provide for firms.  
  
Enhanced Customer Engagement: Spatial computing enables businesses to create immersive experiences in which customers may interact with objects in 3D and AR/VR settings. This interactive experience can increase client engagement by allowing customers to view, manipulate, and explore objects in a more intuitive and realistic manner.  
Visualizing Customization Options: In industries where customization is crucial (such as furniture, fashion, or automotive), spatial computing enables customers to view and customize products in real time. This tool enhances the purchasing experience by allowing customers to preview exactly how modifications will appear before making a purchase choice.  
Reduced Product Returns: One common difficulty in e-commerce is product returns due to unsatisfied expectations. Spatial computing can address this issue by allowing customers to have a better understanding of product dimensions, appearance, and fit through AR/VR simulations, resulting in more informed purchasing decisions and potentially decreased return rates.

# Task 3

A supply chain management system is a storage the things, methods and strategies that businesses use to monitor and control the movement of goods, services, information and finance from point of origin to point of spending. Supply Chain Management of main purpose is to efficiently coordinate all activities involved in sourcing, procurement, manufacturing, shipping and distribution inside a supply chain network.  
Supply chain management (SCM) is defined as "the design, planning, execution, control, and monitoring of supply chain activities with the goal of creating net value, constructing a competitive infrastructure, leveraging global logistics, synchronizing supply with demand, and measuring global performance" (Council of Supply Chain Management Professionals, 2024).

**Benefit of an effective supply chain management**

1. Reduction of cost to the company: One of the benefits of effective supply chain management is that it makes sure that the company spends few money and gets more profit in return. Effective supply chain management complete support companies in the value of their manufacturing process. It helps to discover the problem areas and insufficiency of some processes of materials. The companies can decide how can solve these problems and choose the best course of idea for other faults. It makes sure that the process from raw material to the final product is more products can be manufactured at a few cost.
2. Cost Reduction: An efficient supply chain system enables businesses to optimize procedures, decrease waste, and streamline operations. This can result in cost savings through better inventory management, decreased transportation costs, and increased resource utilization. Businesses can raise profits by lowering production costs and improving overall efficiency.
3. Increased customer satisfaction: A well-managed supply chain guarantees that products and services are delivered to customers on time, resulting in higher customer happiness. Business can better meet client requirements by making the right products available at the right time and in the right quantity, so boosting their reputation and loyalty. In a addition, an efficient supply network.

Effective supply chain management (SCM) is defined as an organization's capacity to strategically coordinate and integrate all supply chain activities in order to create long-term competitive advantage and meet consumer expectations.

The main characteristics and principles of effective supply chain management are

Integration and Collaboration: Successful supply chain management requires seamless coordination and integration among all stakeholders, including suppliers, manufacturers, distributors, retailers, and customers. This integration ensures that information flows smoothly and decisions are consistent with overall strategic objectives.

Efficiency and Optimization: Effective supply chain management focuses on optimizing all aspects of the supply chain, from raw material procurement to final product delivery to clients. This involves decreasing costs, shortening lead times, optimizing inventory levels, and increasing resource use.

Risk Management: Proactive risk management is critical in SCM for anticipating and mitigating disruptions like as supplier delays, natural disasters, geopolitical difficulties, and demand changes. Diversifying sources, developing contingency plans, and forecasting potential dangers using predictive analytics are all possible strategies.

Customer Focus: Supply chain management should be customer-centric, with the goal of meeting and exceeding customer expectations in terms of product quality, availability, and delivery timeliness. Understanding consumer demand trends and preferences aids in coordinating supply chain activities accordingly.

On the whole, effective supply chain management enables businesses to achieve operational excellence, boost customer satisfaction, respond rapidly to market changes, and maintain a competitive edge in a dynamic global economy. It requires a holistic approach that involves strategic planning, operational excellence, technological innovation, and strong cooperation across the supply chain.

Consequences of Supply Chain Management

Supply chain disruptions: Despite efforts to build a robust supply chain, businesses are exposed to a variety of interruptions, including natural catastrophes, geopolitical difficulties, and unanticipated changes in demand. These disturbances can cause production delays, raw material shortages, and disruptions in supply of goods and services. Such disruptions can result in increased costs, lost revenue, and damage to the company's reputation, particularly if customers are dissatisfied as a result of product delays or unavailability.

Managing a supply chain necessitates coordinating a complex network of suppliers, manufacturers, distributors, and logistics providers, each with its own set of risks and issues. To ensure the uninterrupted flow of goods and information throughout this network, adequate risk management systems must be in place to identify, assess, and mitigate any threats. Despite these safeguards, businesses may still face unexpected risks and uncertainties, such as fluctuations in commodity prices, regulatory changes, or supplier bankruptcies, which can interrupt operations and reduce earnings. To remove risks and ensure corporate continuity, supply chain management must be continuously monitored, flexible, and adaptable.

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# Task-4

Using the new technologies nowaday is the best way for e-commer business and online business to increase revenue and to get the attractive more people of interest.

**Technologies that increase business revenue e-commer business and online business**

1. Artificial Intelligence (AI) and Machine Learning (ML)

AI and ML enable businesses to analyses amounts of customer data, ability to serve customers' preferences, and enhance decision-making processes. AI-powered chatbots provide 24 hour customer service, while ML algorithms optimize supply chain operations and demand forecasting, and pricing.

1. Optimizing for mobile

E-commer business are make to convene for mobile user. Always active websites and application are very convening for people who shop using mobile phone. And then this way can increase the number of customer.

1. Augmented Reality (AR) and Virtual Reality (VR)

These technologies can be transform how consumers be in touch with products. AR can give to feel confidence the customer the product to be buy in websites or application. Because it serves customers to view all a part of the products. VR provide for buyer to happy and reduce the problem like refunds and return product.

1. Personalization and Recommendation Engines

By accepting customers' recommendations makes the good relationship for the buyer and seller. The organizers can work on customer preferences, so the sellers can be increase the customer.

1. Gamification

Gamification can boost sales by creating prize draw, rewarding and offering discount for customers. Example promotion days, discount in anniversary day, percent off in year sale.

1. Drones for Delivery

By using the Drowns for delivery is sure to get the customer of pleasurness and full rating star. Because of customers can accept the product they want in a short time and without breaking. And then it save time and does not make people tired anymore.

* **Online marketplace**

An online marketplace is a place where seller and buyers can exchange product, service and information. It allows customers to easily know the products and product's information

by various companies.

1. Description

Amazon is the largest website, import and selling products from all over the world.

1. Justification

Amazon have many customer, because of always import of new product and always use of new technology.

* **Two new or emerging technology platforms**

1. Augmented Reality (AR):

By using AR implement, customer can choose the best item and view the item in advance. For example, users can see which light curtains is look good with bedroom, which sofa and table is suitable with living room, and which clothes color and size is fit.

1. Blockchain Payments

Blockchain has the best security system and made payments no longer time-consuming for both buyers and sellers.

# Task-5

Shopify use default security feature to encrypt data and fortify your account against unauthorized users. Staying informed about security best practices can sustain store’s defense against cyber threats.

E-commerce businesses confront a variety of security weakness that may danger the confidentiality, honest, and availability of their systems and data. Using the some of security threats are –  
Some of security threats are:  
Payment Fraud: This include credit card fraud check system, which occurs when attackers use stolen credit card information to make unlawful purchases. Also include chargeback fraud, in which customers challenge transactions after obtaining products or services. Such as "if the product is not good can return the payment".  
Phishing and Social Engineering: Phishing attacks use fake emails, messages, or websites, page to deceive users into discover important information like login passwords or payment data.  
  
Supply chain Attacks: Attackers may compromise suppliers or vendors associated with e-commerce organizations to gain access to their systems or data, potentially affecting the entire supply chain.  
Technology plays an important role in reducing security dangers faced by corporations, especially e-commerce businesses.

**There are various methods to use technology effectively**  
  
**Encryption**: By using encryption methods to safety the important data at rest and in passage.   
This make sure that data, even if the owner intercepted or accessed by unauthorized individuals, remains unreadable and safe.  
**Firewalls and Network Segmentation**: Firewalls control incoming and outgoing network traffic based on predetermined security rules. Network segmentation separates critical assets or sensitive data from the rest of the network, limiting the spread of threats.  
**Backup and Disaster Recovery:** Implementing regular data backups and disaster recovery plans to ensure data availability and business continuity in the event of a security incident or system failure.  
**Firewalls and Network Segmentation**: Firewalls control incoming data network and outgoing network traffic based on security rules. Network segmentation separates most important resources or sensitive data from the other network, limiting the spread of threats.  
**Backup and Disaster Recovery**: Implementing regular data backups and disaster recovery plans to ensure data availability and business continuity in the event of a security incident or system failure.  
 **Data Protection**: Shopify takes strong efforts to protect data at rest. This involves encrypting sensitive data stored in databases and implementing safe storage techniques to avoid unauthorized access or data breaches.  
**Access Controls**: Access to Shopify's systems and customer data is rigorously managed and restricted using the concept of least privilege. Role-based access controls (RBAC) ensure that workers and contractors have the proper permissions for their job tasks.  
  
  
**Zero-trust architecture (ZTA)**  
  
**Technology Description**: Zero Trust Architecture is a cybersecurity strategy that evaluate no user or device inside or outside the network is fundamentally dependable.  
**Application**: Implementing ZTA would entail using identity-centric security controls, continuous authentication, and rigorous access limits depending on user behavior, device health, and other contextual variables. This method makes sure that sensitive data and systems are only accessed when absolutely necessary and under strict limits. Benefits of (ZTA), that improves Shopify's security against insider threats, unauthorized access, and credential theft.

# Task-6

(a)

At Shopify, aim is to enable entrepreneurs and businesses of all sizes worldwide to succeed in the digital economy. The organization want to be the preeminent platform that allows anybody, wherever, to start, grow, and scale their business seamlessly and sustainably.  
 Many people think and envisage a future of Shopify continues to innovate actively, providing creative technological solutions that simplify commerce and unlock the full potential of every merchant. People want to democratize project through our platform by making tools, resources, and support more accessible, fostering creativity, innovation and success.  
 Humans plan to progress AI and learning machine capabilities to personalize and optimize the merchant experience, improve our global infrastructure to assure lightning-fast speed and reliability, and extend our ecosystem of apps and integrations to support a wide range of business needs.  
  
Through ongoing innovation, unwavering dedication to our merchants' success, and a strong commitment to our values of integrity, collaboration, and customer-first mentality, users envisage a future in which Shopify is the trusted partner for every stage of the entrepreneurial journey, from concept to enterprise. This vision statement encapsulates Shopify's long-term aims of empowerment, innovation, sustainability, and global influence, while also identifying the practical measures and accomplishments that may be taken to realize this vision.

(b)

To establish an strong e-commerce strategy in the next five years, Shopify should take product strategy, customer reconnections and corporate considerations.

**Product strategy**

Product strategy is the main place of product design. Every time should think about that competitor company and who will produce what product. A product strategy is a plan that answers the questions “what,” “why,” and “how” a company will sell its product over time.  
This overarching vision often includes market research, customer landscape analysis, competitive analysis, product positioning, and a marketing plan. Product strategies apply to a company’s entire product portfolio and individual products. The objective is to create a unique value proposition—a compelling reason for the target audience to buy the product. (Keenan, 2024)

**Customer Relationship**

**Enhanced Customer Experience:** Prioritize customer-centricity by constantly improving the Shopify user interface and experience. This includes intuitive design, personalized recommendations, and quick customer service.  
**Community Engagement:** Create a strong merchant community by providing networking opportunities, forums, and educational resources that will help them succeed and support one another.  
**Data-Driven Insights:** Use data analytics to obtain a deeper understanding of customer behavior and preferences, allowing for more targeted marketing campaigns and product advancements.

**Corporate Considerations**

**Ethical Standards:** Maintain high ethical standards in all business processes, including data openness, fair pricing, and diversity and inclusion within the Shopify ecosystem.  
**Global Expansion:** Using specialized tactics that take into consideration cultural, regulatory, and economic variations, Shopify will strategically increase its footprint in emerging areas while consolidating its position in established markets.  
**Partnerships and alliances:** Form strategic alliances and collaborations with technology suppliers, payment processors, shipping carriers, and other stakeholders to strengthen Shopify's ecosystem and deliver comprehensive solutions to merchants.  
By concentrating on these strategic pillars over the next five years, Shopify can improve its position as a leading e-commerce platform, promote long-term growth, deepen customer relationships, and realize its objective of empowering businesses worldwide. These strategies will enable Shopify to react to changing market dynamics, technical improvements, and customer expectations while remaining true to its core values and long-term goals.

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