

The Role of ICT in Business

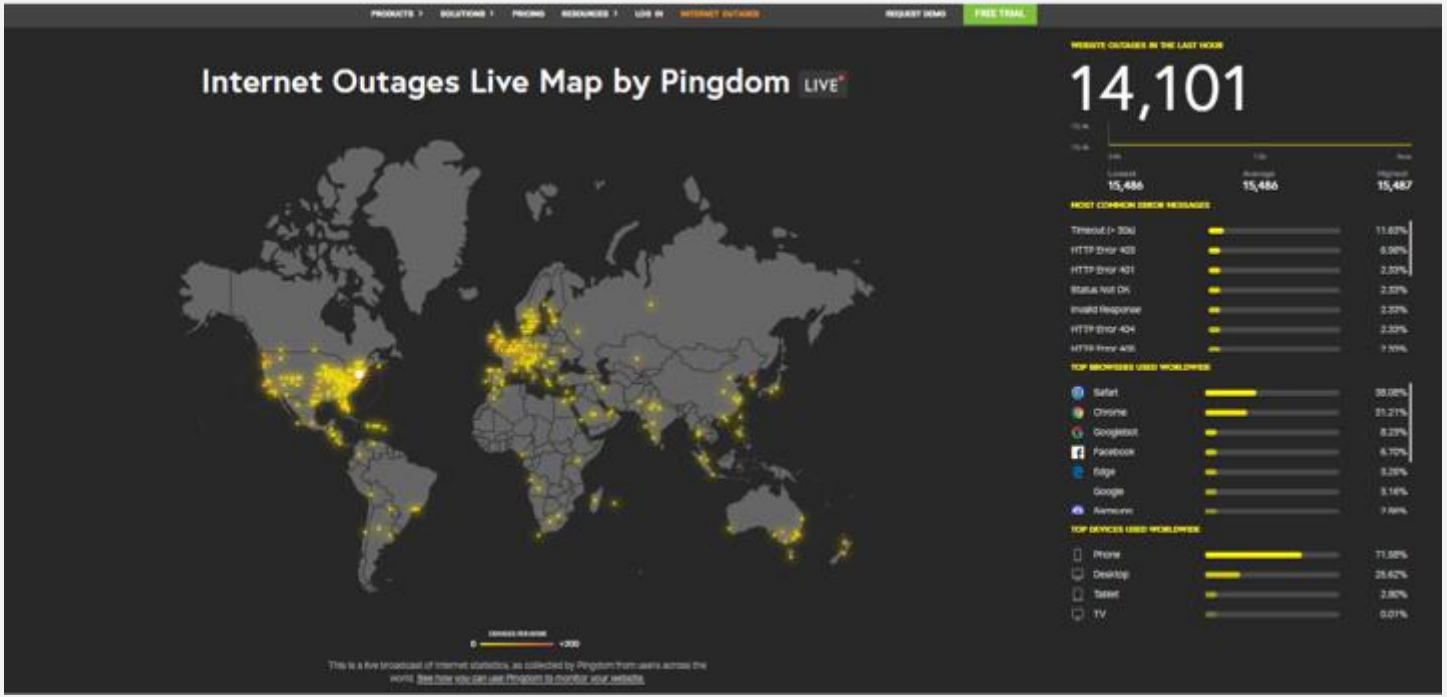
ICT and Business



“ICT revolutionizes business operations by leveraging technology, data, and communication to enhance efficiency, drive innovation, and enable informed decision-making”



Internet Outages Live Map



https://www.pingdom.com/outages/

Scope of eCommerce and eBusiness

eCommerce

- Conducting online transactions

eBusiness

- All the business services and activities operated utilising the web

eCommerce Vs. eBusiness



Types of eBusiness Transactions

- B2B
- B2C
- C2C
- C2B
- B2E
- G2C

New => B2G, D2C, G2G, G2B, B2B2C

Types of eBusiness Transactions - B2B

- Transaction that occurs between two businesses

Examples:

- Manufacturer and Wholesaler
- Wholesaler and Retailer



Types of eBusiness Transactions - B2C

- Businesses sell directly to their end-users.

SriLankan Airlines



Types of eBusiness Transactions - C2C

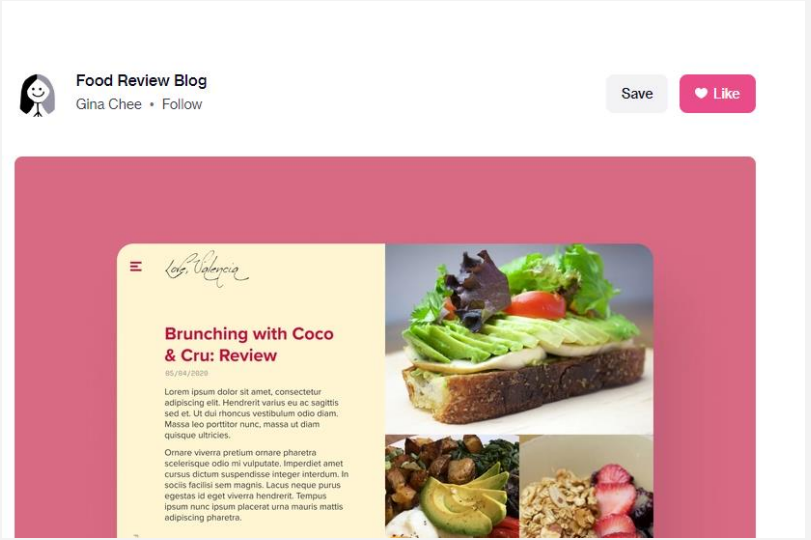
- Sometimes referred to as Online Marketplaces.
- Connect consumers to exchange goods and services and typically make their money by charging transaction or listing fees.





Types of eBusiness Transactions - C2B

- Allow individuals to sell goods and services to companies.
- Consumers (individuals) create value and businesses consume that value.



Examples:

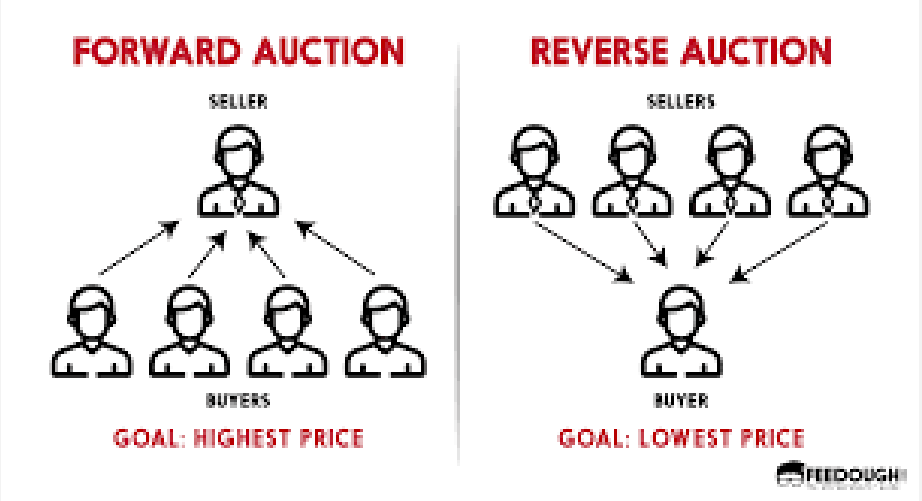
A food blogger who shares an affiliate link to a kitchen company's cooking products on their blog. (Food companies may ask food bloggers to include a new product in a recipe and review it for their readers.)

Reverse Auctions

Type of a C2B initiative

- Sellers bid for the prices at which they are willing to sell their goods and services.

- Opposite of a regular auction, where a seller puts up an item and buyers place bids until the close of the auction, at which time the item goes to the highest bidder.



Types of eBusiness Transactions - B2E

- Strategies taken by a company that focus on employees, rather than on consumers.
- A B2E strategy as such could cover anything from attracting, recruiting, training, onboarding, and retaining employees, as well as providing self-service solutions and individualized access to essential tools or software.
- Has less to do with sales and more to with employee satisfaction and retention.



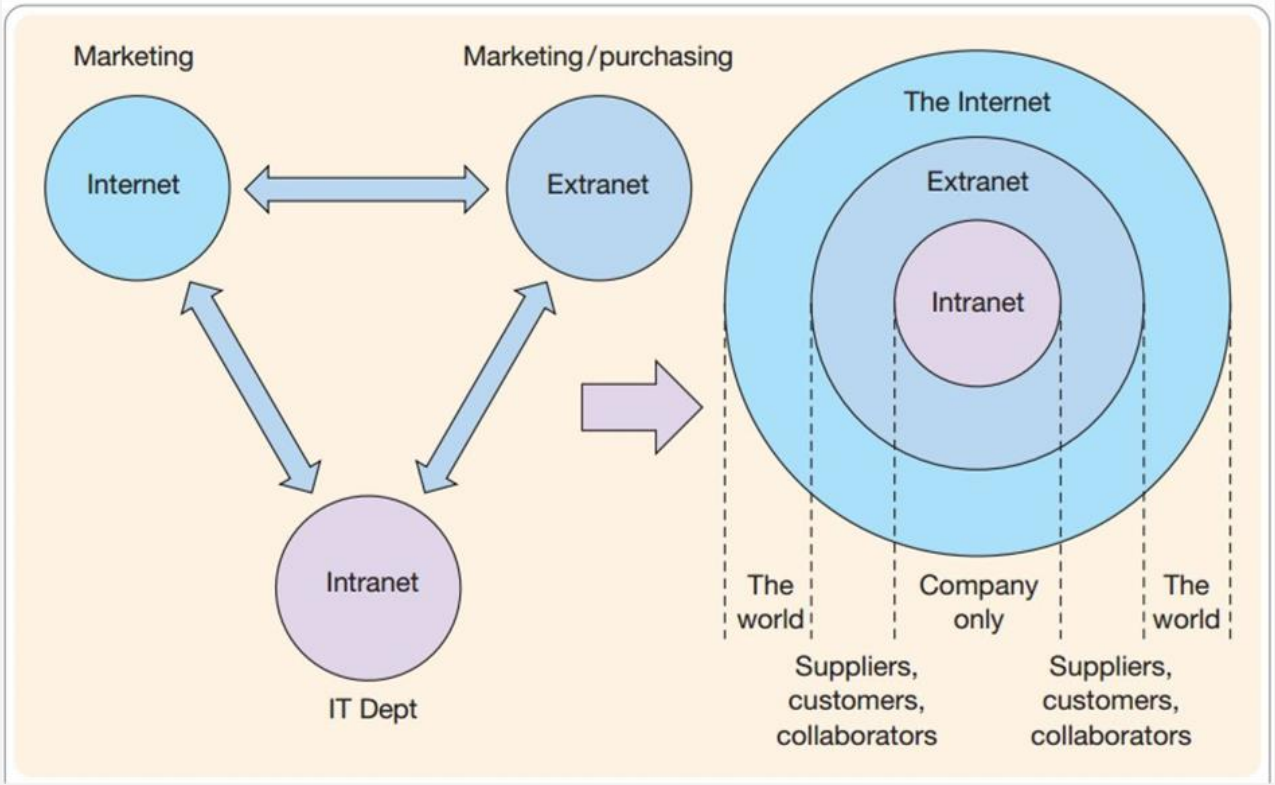
Is B2E Similar to Intranet?

- A B2E portal and an intranet may seem similar, but in fact, each serves its own unique purpose.

- Intranets tend to be designed to serve the needs of an organization at large.

- The purpose of the portal is to organize information, increase efficiency, and provide a greater employee experience.

Intranet, Extranet and the Internet



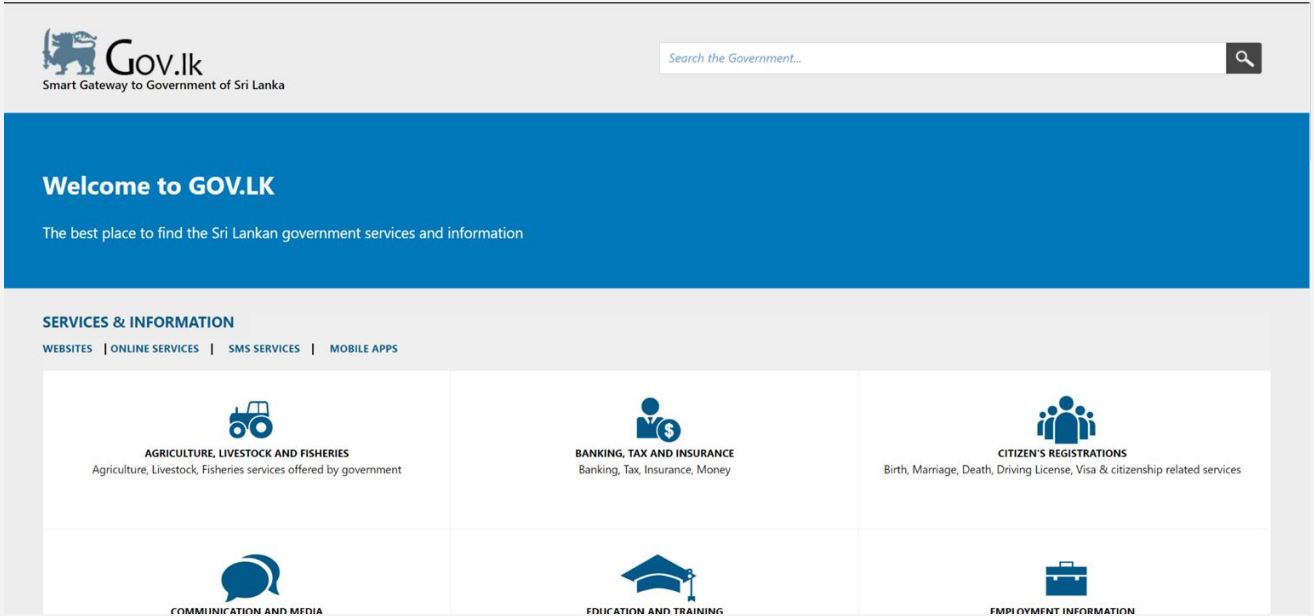
Types of eBusiness Transactions - G2C

- G2C (Government-to-Citizen) eBusiness transactions refer to the online interactions and transactions between government entities and individual citizens.
- **Purpose:** Facilitating the delivery of government services, information, and benefits to citizens through digital channels.
- This will increase the ***Convenience***, ***Efficiency*** and ***Transparency*** government services.

Examples:

- Vehicle Revenue License Renewal System
- Online Tax filing, E-Certificates (Birth, Death, Results) requesting systems

Gov.lk


Gov.lk
Smart Gateway to Government of Sri Lanka
Search the Government...
Welcome to GOV.LK
The best place to find the Sri Lankan government services and information
SERVICES & INFORMATION
WEBSITES | ONLINE SERVICES | SMS SERVICES | MOBILE APPS
AGRICULTURE, LIVESTOCK AND FISHERIES
Agriculture, Livestock, Fisheries services offered by government
BANKING, TAX AND INSURANCE
Banking, Tax, Insurance, Money
CITIZEN'S REGISTRATIONS
Birth, Marriage, Death, Driving License, Visa & citizenship related services
COMMUNICATION AND MEDIA
EDUCATION AND TRAINING
EMPLOYMENT INFORMATION

Types of eBusiness Transactions - B2G

- A business sells and markets its products to government entities.

- This model relies on the successful bidding of government contracts. A government agency will typically put up a request for proposal (RFP) and ecommerce businesses will have to bid on these projects.







Types of eBusiness Transactions - D2C

- Sells its **own product** directly to its end customers, without the help of third-party wholesalers or online retailers.



Types of eBusiness Transactions - G2G

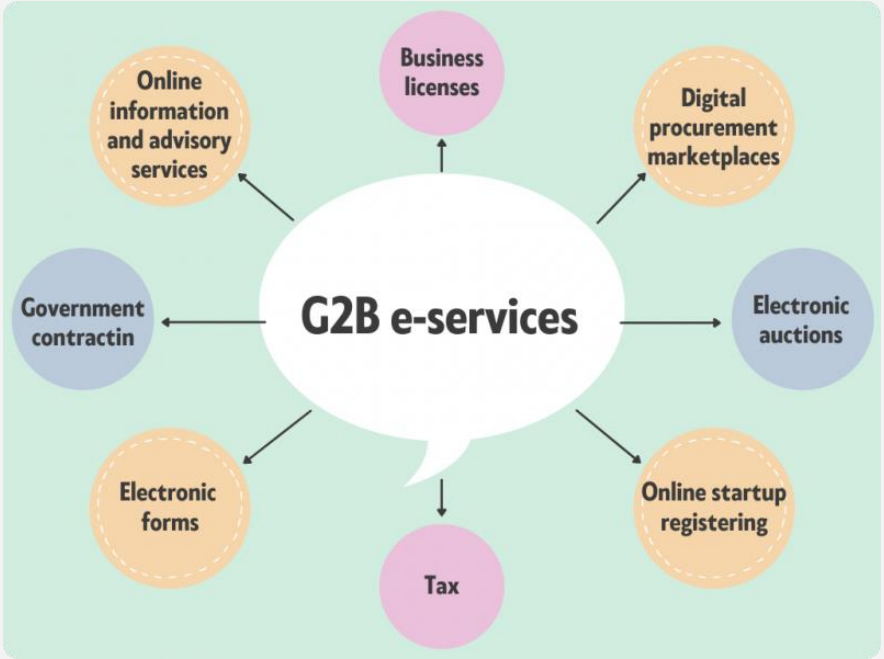
- The electronic commerce activities performed within a single nation's government or the electronic commerce activities performed between two or more nations' governments including providing foreign aid.
- Integration of systems for data sharing and process management.

Examples:

- Interagency Data Sharing - Registrar General Department and Department of Registration of Persons
- Procurement and Contracts
- Financial Management

Types of eBusiness Transactions - G2B

- Government agencies of various levels provide services or information to a business entity via government portals or with the help of other IT solutions.



Effect of Digital Payments on eBusiness

- Digital payments refer to the electronic transfer of funds for goods and services, replacing traditional cash and check-based transactions.
- The rise of digital payments has significantly impacted eBusiness, revolutionizing the way transactions are conducted online.

Key Benefits of Digital Payments for eBusiness:

- Increased Convenience: Digital payments offer seamless and convenient transaction experiences, eliminating the need for physical cash or checks.
- Global Accessibility: Digital payment methods transcend geographical boundaries, enabling businesses to reach customers worldwide.
- Improved Customer Experience: Faster and more efficient payment processes contribute to a positive customer journey and satisfaction.
- Data-driven Insights: Digital payments generate valuable data that businesses can leverage for analytics, customer profiling, and personalized marketing strategies.

Types of eBusiness Transactions - B2B2C

- A company sells its product or service in partnership with another organization to an end customer.







Virtual Storefronts

- An ecommerce experience powered by extended reality tools bridging the gap between digital and real-life shopping.
- Online business owners can sell items they keep in their home and do the shipping themselves, or they can rely on a third party to fill orders without having to do physical labor.
- It's much easier and cheaper to purchase a website address than it is to open a physical store



Information Brokers

- Collects personal information about consumers or company related data and sells that information to other organizations.



- 4 Types of Information Brokers

1. Marketing IB
2. Financial IB
3. Health IB
4. Personal IB

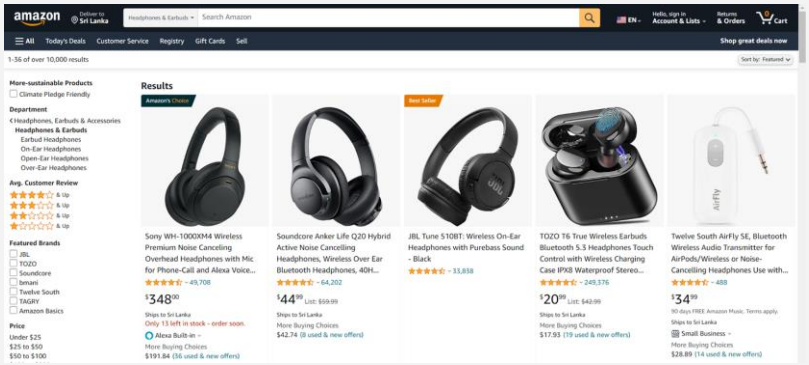
Online Marketplaces

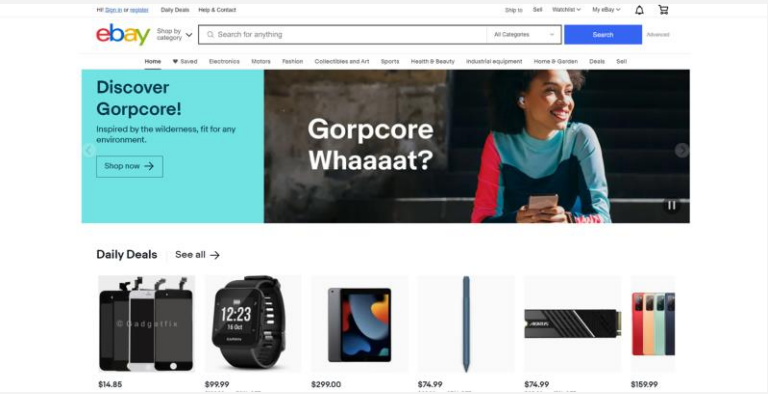
- An online marketplace is a digital platform that facilitates the buying and selling of products or services between multiple buyers and sellers.
- This provides a centralized platform for businesses and individuals to connect, transact, and expand their reach in the global marketplace.

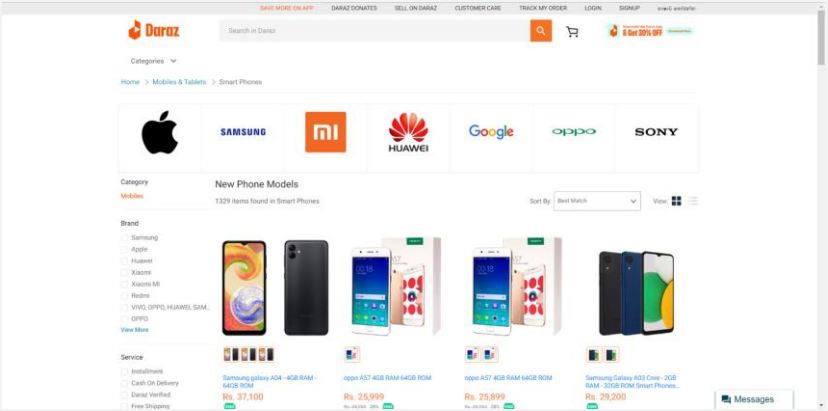
Key Benefits:

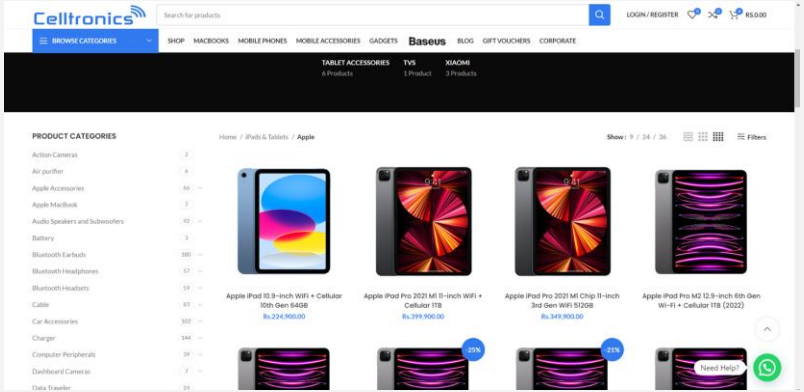
- Global Reach: Access to a wide customer base beyond geographical boundaries.
- Convenience: 24/7 availability, enabling buyers and sellers to engage at their convenience.
- Increased Competition: Encouraging market competition, leading to competitive pricing and better offerings for consumers.
- Streamlined Transactions: Integrated payment gateways and logistics support for seamless transactions.

Examples: Online Marketplaces





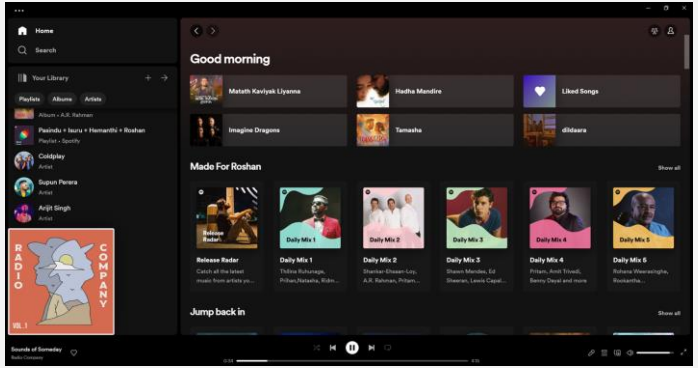




Content Providers

- Content providers in eBusiness refer to websites or platforms that offer a diverse range of digital content such as news, music, photos, videos, and games online.





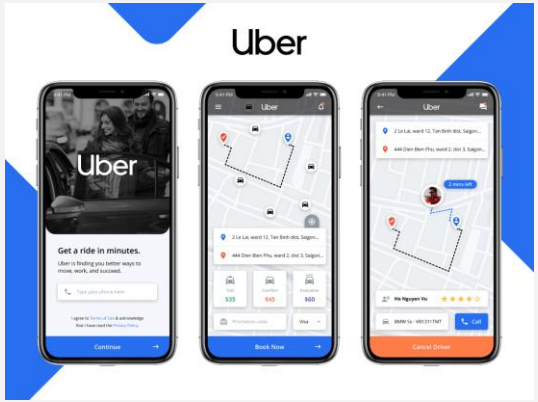
Online Service Provider

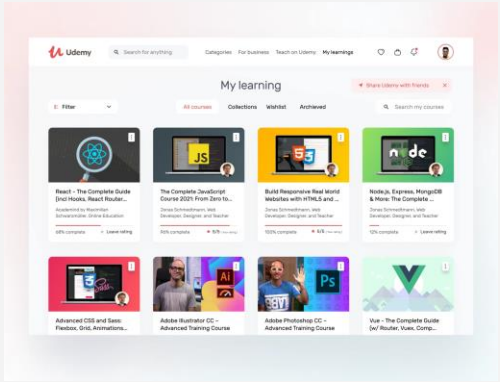
- Online service providers are businesses or platforms that offer a wide range of services through digital channels, leveraging technology to deliver convenience and accessibility.

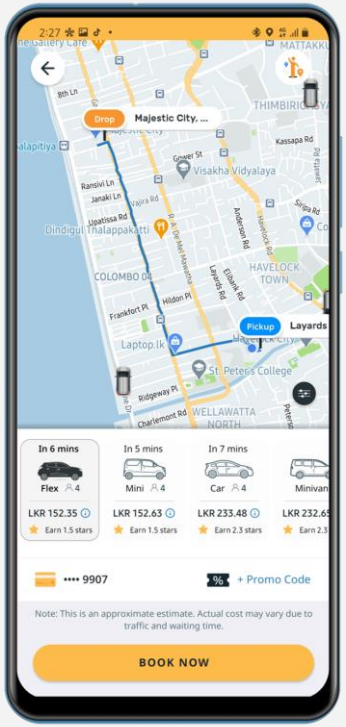
Types of Online Services:

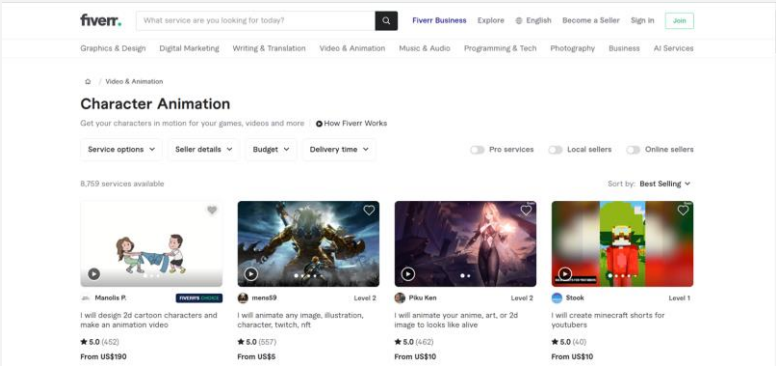
- **E-commerce Platforms:** Websites or apps that enable the online buying and selling of products and services.
- **Online Education and E-learning Platforms:** Platforms that offer online courses, educational resources, and virtual learning experiences.
- **On-Demand Services:** Platforms connecting users with service providers for services like food delivery, transportation, home repairs, and more.
- **Financial Services:** Online platforms providing banking, investment, payment, and other financial services.
- Telecommunication and Communication Services: Providers offering online communication services such as voice and video calls, messaging, and collaboration tools.

Examples: Online Service Providers









Portals

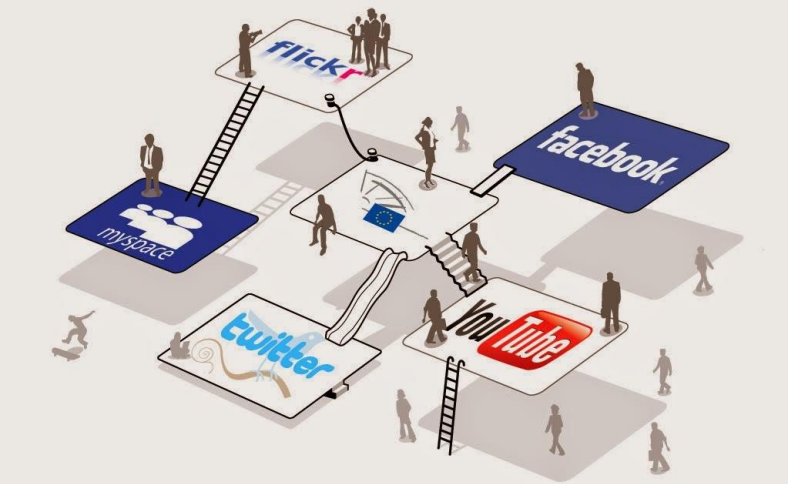
- Portals are websites or platforms that serve as gateways to access a wide range of information, services, and resources from various sources.
- Providing a centralized hub where users can conveniently access and navigate through diverse content and functionalities.

Examples:

- Corporate/Enterprise Portals
- News and Information Portals
- E-commerce Portals
- Educational Portals

Virtual Community

- A social network of individuals who connect through specific social media, potentially crossing geographical and political boundaries in order to pursue mutual interests or goals.



Advantages of eBusiness

- **Global Reach:** eBusiness allows companies to reach a global audience, transcending geographical limitations and expanding market reach.
- **Cost Efficiency:** Operating online reduces costs associated with physical infrastructure, staffing, and overhead expenses.
- **Increased Flexibility:** eBusiness offers flexibility in terms of operating hours, customer access, and scalability of operations.
- **Improved Customer Access:** Customers can conveniently access products and services anytime, anywhere, leading to increased customer satisfaction.
- **Data-driven Insights:** Online transactions generate valuable customer data, enabling businesses to make data-driven decisions and personalize customer experiences.
- **Streamlined Processes:** Automation and digital tools streamline business processes, reducing administrative burdens and improving efficiency.

Disadvantages of eBusiness

- **Security Risks:** eBusiness is susceptible to cyber threats, data breaches, and fraud, requiring robust security measures to protect sensitive information.
- **Technological Dependence:** eBusiness relies heavily on technology, and technical issues or disruptions can impact operations and customer experiences.
- **Digital Divide:** Not all customers have equal access to technology or the internet, creating a digital divide that may exclude certain segments of the population.
- **Lack of Personal Interaction:** eBusiness lacks face-to-face interactions, which may result in reduced trust or difficulty in resolving customer concerns.
- **Intense Competition:** The online marketplace is highly competitive, requiring businesses to differentiate themselves and constantly innovate to stay ahead.

New Trends

- AI in eBusiness
- Personalization
- Chatbots
- Voice Search for Products
- Customer Relationship Management
- Big Data
- AR and VR for Product Visualization
- Snap & Shop
- Cryptocurrency in eBusiness
- Search Engine Optimization

AI in eBusiness

- Personalization by Customer Relationship Management
- Data for pattern identification in customer buying behaviour
- Digital Personal Assistants
- Identifying Cyber Security threats beforehand
- Voice Search for Products
- Image Recognition and Classification

Personalization

- The practice of creating PERSONAL interactions and experiences for customers online

Advantages:

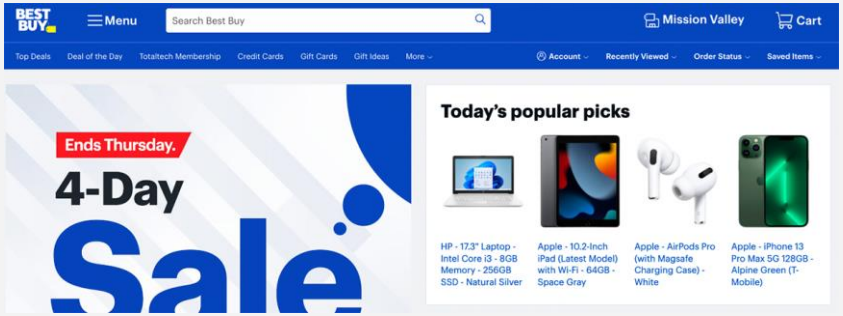
- Helps grab the customer's attention and reduces the amount of browsing time and energy a customer expends while browsing eCommerce sites - Boost Sales
- Increase brand loyalty

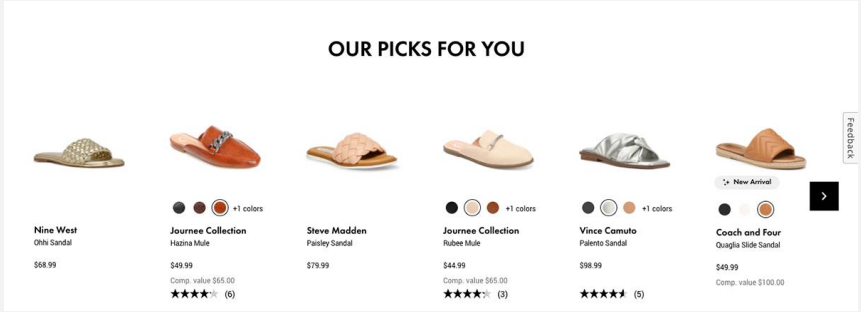
Personalization

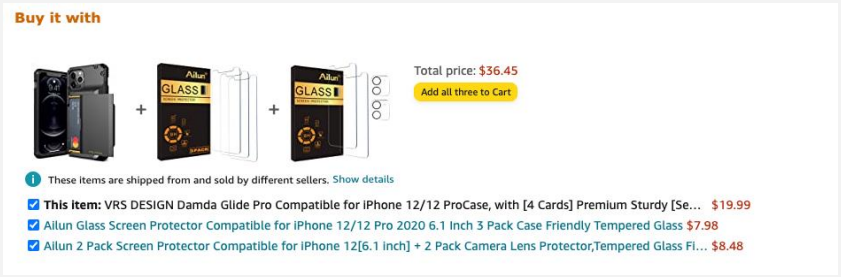
Examples:

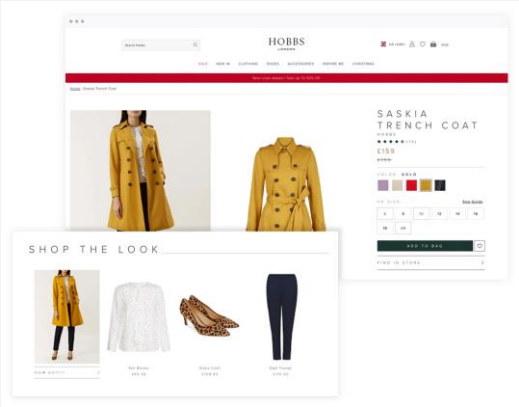
- Offer A Special Offer to First-Time Visitors
- Offer Recommended Searches to Narrow Options
- Suggest Popular Products
- Show Items the Customer Will Like
- Helping complete a certain look
- Suggesting complementary products
- Email customers with suggestions
- Bring customers back with special deals

Personalization



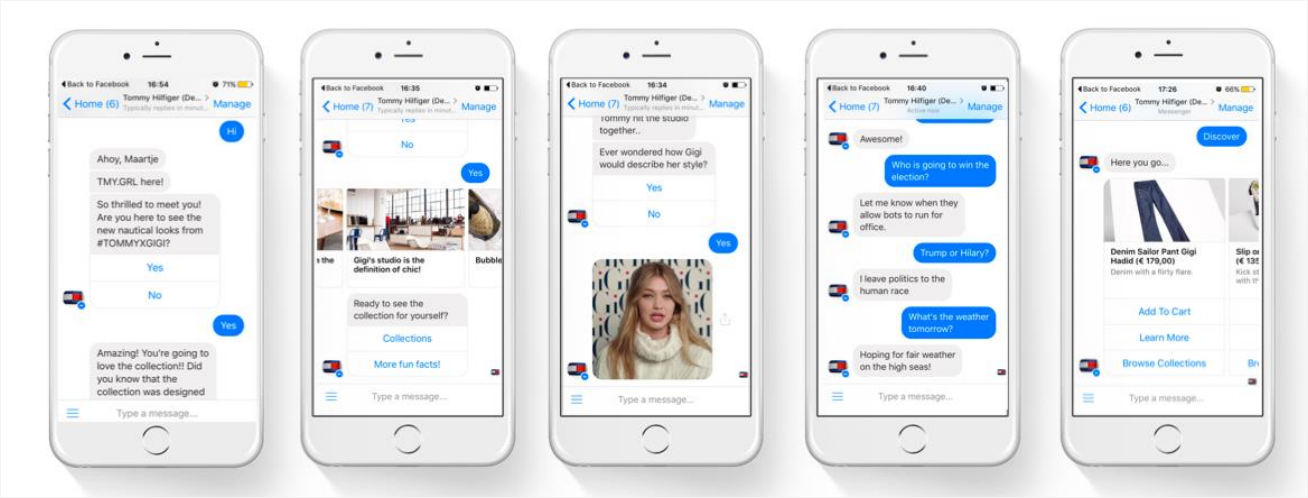






Chatbots

- 24/7 Support
- Personalization
- Reduced Cost by lesser human interactions
- Product Guidance
- Cart Recovery



Voice Search for Products

- AI-based voice recognition technology.
- Online shoppers find it more convenient to use their voice instead of typing out requests for internet searching, ordering, and completing the buying process.
- Virtual digital assistants such as Google Assistant, Siri or Alexa help smoothly integrate the online shopping experience with everyday life: users can purchase something without stopping their routine tasks.



Customer Relationship Management

- Focuses on the sales and customer experiences that are conducted online.
- Able to analyze customer information and sales patterns and record and store data
- Able to do so all day, every day.



Examples:

- Conversion Rates
- Customer Click Through Rates
- Email Subscription Opt Ins

Big Data

- Allows businesses to gain significant insight into the beliefs and shopping preferences of their customers

- Improve Customer Services - Increase Profit



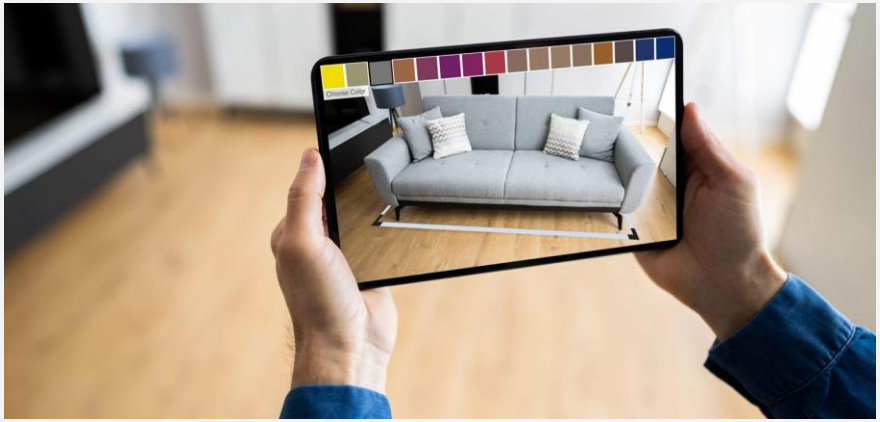
Augmented Reality and Virtual Reality for Product Visualization

- One of the biggest problems that online stores have always faced is the fact that their customers cannot try on.

- Augmented reality technologies can address this issue by significantly expanding the shopping experience.

- With AR solutions, consumers can see how goods will look in real life.

Augmented Reality and Virtual Reality for Product Visualization





Snap and Shop

- Product discovery and sales based on photos of objects in the real world.



Cryptocurrency in eBusiness

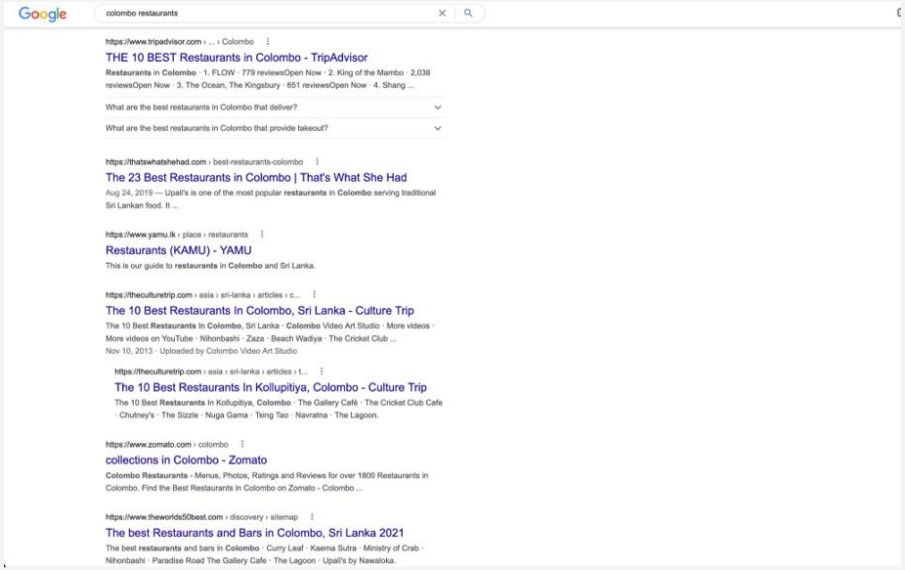
- Cryptocurrency is a digital or virtual payment system
- Peer-to-Peer ecosystem that enables anyone, anywhere to send or receive money by using digital wallets
- Because crypto exists outside of traditional financial institutions, it is able to bypass banks to verify payments, decentralizing transactions and placing the responsibility in the hands of its users

Advantages:

- Lower transaction costs
- Reduced fraud
- Higher Security

Search Engine Optimization

- A marketing technique used to get more traffic to your store by making it more visible on search engine result page



Search Engine Optimization

- **KEYWORDS** let Google **SEE** your site
- **BACKLINKS** let Google **TRUST** your site

- **Onsite SEO** - Optimize website to contain keywords
- **Offsite SEO** - Generate backlinks to website

A backlink is a link from some other website to that web resource

Facebook Newsfeed Algorithm

Source: Edgerank

$$\sum_{\text{edges } e} u_e w_e d_e$$

u_e ~ affinity score between viewing user and edge creator

w_e ~ weight for this edge type (create, connect, like, tag, ect.)

d_e ~ time decay factor based on how long ago the edge was created

Microblogging

- A micro blog differs from a traditional blog in that its content is typically smaller in both actual and aggregated file size”
- Allow users to exchange small elements of content such as short sentences, individual images, or video links
- Microblogging Platforms - Facebook, Twitter, Instagram

Tagging

- Tagging - users add their own metadata to content they produce, consume and share





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