

COMMUNICATION VIA THE WEB

- Mobile technology is technology that goes where the user goes. It consists of portable two-way communications devices, computing devices and the networking technology that connects them.
- Currently, mobile technology is typified by internet-enabled devices like smartphones, tablets and watches. These are the latest in a progression that includes two-way pagers, notebook computers, mobile telephones (flip phones), GPS-navigation devices and more.
- The communications networks that connect these devices are loosely termed wireless technologies. They enable mobile devices to share voice, data and applications (mobile apps).

TYPES OF MOBILE NETWORKS

Cellular networks

- Radio networks using distributed cell towers that enable mobile devices (cell phones) to switch frequencies automatically and communicate without interruption across large geographic areas.
- The same basic switching capability enables cellular networks to accommodate many users across a limited number of radio frequencies.

4G networking

- The current cellular service standard for most wireless communication. It uses packet switching technology, which organizes data into parts or packets for transmission and reassembles the information at the destination.
- 4G — G for generation — is reported to be 10x faster than 3G — and 5G, faster still, is coming. 5G uses a set of aggregated frequency bands to unlock bandwidth and is approximately 20x faster than 4G.

WiFi

- Radio waves that connect devices to the internet through localized routers called hotspots. Short for wireless fidelity, WiFi networks are like cell towers for internet access, but they don't automatically pass service without establishing a WiFi connection.
- Most mobile devices allow for automatic switching between Wi-Fi and cellular networks depending upon availability and user preference.

Bluetooth

- A telecommunications industry specification for connecting devices over short distances using short-wavelength radio waves.
- Bluetooth enables users to quickly connect or pair devices such as headsets, speakers, phones and other devices.

MOBILE TECHNOLOGY CASE STUDIES

- ❖ Increase productivity
- ❖ Capitalize on new business models
- ❖ Create the ideal shopping scenario
- ❖ Enhance customer experiences

KEY CAPABILITIES OF EFFECTIVE MOBILE TECHNOLOGY

Scalability: Creating point solutions that don't scale across an enterprise can be costly in terms of development, management and maintenance. Apps need to be conceived holistically with consideration for lines of business, processes and technical environments.

Integration: IDC has pointed out (PDF, 611KB) that applications offered on mobile phones and tablets have a separation between the mobile app and back-end business logic and data services. Being able to connect logic and data services to the app is critical, whether the logic and data are on premises, on the cloud or in hybrid configurations.

Reuse: Over 105 billion mobile apps were downloaded in 2018. Many are, or can be modified or combined, for business applications. Using existing apps accelerates time-to-value and improves cost efficiency by taking advantage of domain and industry expertise built into the app.

Cloud-based development: The cloud offers an efficient platform to develop, test and manage applications. Developers can use application programming interfaces (API) to connect apps to back-end data and focus on front-end functions. They can add authentication to bolster security, and access artificial intelligence (AI) and cognitive services.

Mobility management: As mobile technology is deployed, organizations look to enterprise mobility management (EMM) solutions to configure devices and apps; track device usage and inventories; control and protect data; and support and troubleshoot issues.

BYOD: Bring your own device (BYOD) is an IT policy that allows employees to use personal devices to access data and systems. Effectively adopted, BYOD can improve productivity, increase employee satisfaction and save money.

Security: The mobile security battle is daunting in terms of volume and complexity. Artificial Intelligence (AI) is emerging as a key weapon to discern security anomalies in vast amounts of data. It can help surface and remediate malware incidents or recommend actions to meet regulatory requirements from a central dashboard.

Edge computing: One of the key advantages of 5G is that it can bring applications closer to their data sources or edge servers. Proximity to data at its source can deliver network benefits such as improved response times and better bandwidth availability. From a business perspective, edge computing offers the opportunity to perform more comprehensive data analysis and gain deeper insights faster.