

CHAPTER 6

DIGITAL PROJECT MANAGEMENT

6.1 Digital technology trends in project management

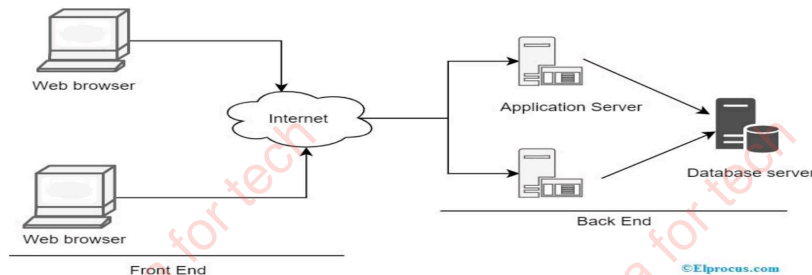
Digital Project Management: Digital technology used for project management

- Digital marketing
- Internet of Things (IoT)
- Big data analytics
- Virtual reality (VR)
- Augmented reality (AR)
- Artificial Intelligence (AI)
- Machine Learning (ML)
- Automation and data analytics.
- Gamification.

6.2 Cloud Technology (Cloud)

Virtual storage space that exists on internet. People can store digital resources such files, software.

E.g.: Google drive



Applications of cloud Technology in Project Management

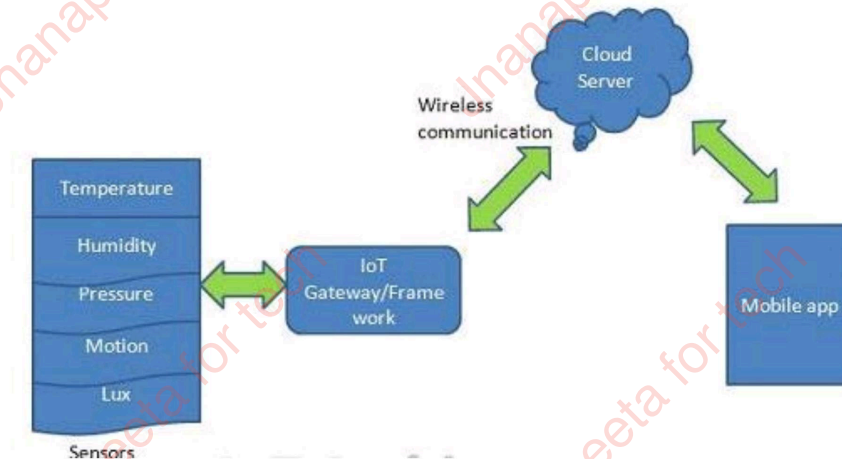
- It allows the people to use the digital resources stored in the virtual space by satellite Network.
- It allows people to share the information and applications across the internet without being the restriction of their physical location.
- Cloud-based project management software coordinates the planning, collaborating, monitoring, and delivering of a project.
- It allows project managers and teams to get work done using a network of tools
- The use of project management software used for business to business and team to team.
- It is designed to make managing projects and deadlines easier and more effective.

6.3 Internet of Things (IoT)

Network of physical objects—“things”—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.

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1. **Sensors:** Sensors are everywhere, sensors sense data from the atmosphere or place the e.g. temperature sensor senses temperature from the room and shares it through IoT gateway.
2. **IoT Gateways & frameworks:** Gateways act as a carrier between the internal network of sensor nodes with the external Internet or World Wide Web. They do this by collecting the data from sensor nodes and transmitting them to the internet infrastructure.
3. **Cloud server:** The data transmitted through the gateway is stored & processed securely within the cloud server i.e. in data centres.
4. **Mobile applications:** The mobile apps will help end-users to control & monitor their devices (ranging from the room thermostat to vehicle engines) from remote locations.

Uses of IoT in Project Management

1. Allow complete monitoring and process control
2. Super-deep data analytics
3. High speed reporting
4. Reduce cost of communication
5. Explosion of valuable project data
6. Raises expectations for all stakeholders
7. Prediction of future trends
8. IoT helps in stricter ethical and legal implications

6.4 AR and VR applications in Project Management

Augmented reality (AR) makes your surroundings by adding digital elements to a live view, often by using the camera on a Smartphone.

Virtual reality (VR) is a completely immersive experience that replaces a real-life environment with a simulated one.

1. Civil Engineering
2. Marketing and sales
3. Education
4. Visual industry: Game, fashion industry
5. Automotive
6. Manufacturing
7. Healthcare
8. Defence.

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6.5 Cloud technology, IoT, AR and VR application in Smart cities OR Digital Technology application in Smart cities

- A smart city is a framework, composed of information and communication technologies (ICT)
- ICT helps to develop and address a growing urbanization challenges.
- ICT framework is an intelligent network of connected objects and machines that transmit the data using wireless technology and the cloud technology.
- Cloud based IoT applications receive, analyse and manage data in real-time.
- Improve energy distribution
- Smart parking of vehicles
- Traffic signal management
- Smart garbage management

6.6 Data science and Data Analytics in Project Management

Definitions:

- Data Science focuses on finding meaningful correlations between large datasets.
- It deals with vast volumes of data using modern tools and techniques.
- Data Analytics is a branch of Data Science that focuses on more specific answers to the questions that Data Science brings forth.
- It processes and performs statistical analysis of dataset.

Data science and Data Analytics in Project Management

- It enables project managers to use various analytical reports
- It helps break down complex project data
- Predict their behaviour and outcomes in real-time.
- It helps to make better decisions and keep projects on schedule and budget.
- It helps the project manager make decisions on the project