

GROUP 06

HOW EMERGING TECHNOLOGIES CAN HELP MES?

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INTRODUCTION

EMERGING TECHNOLOGIES AND
CURRENT SCENARIO IN MES



Introduction

- In last 5 years India has seen an exponential growth in emerging technologies.
- Since the launch of Digital India campaign, digital capabilities of India have improved and connectivity became omnipresent, technology is poised to quickly and radically change nearly every sector of India's economy.
- Every sector is adopting emerging technologies like Artificial Intelligence, AR/VR, Blockchain, IoT and many more.
- Some of the emerging technologies which can help MES are Internet of Things (IoT), Digitalization of work procedures and records, Web Based Monitoring of Projects and 3D Printing.

1

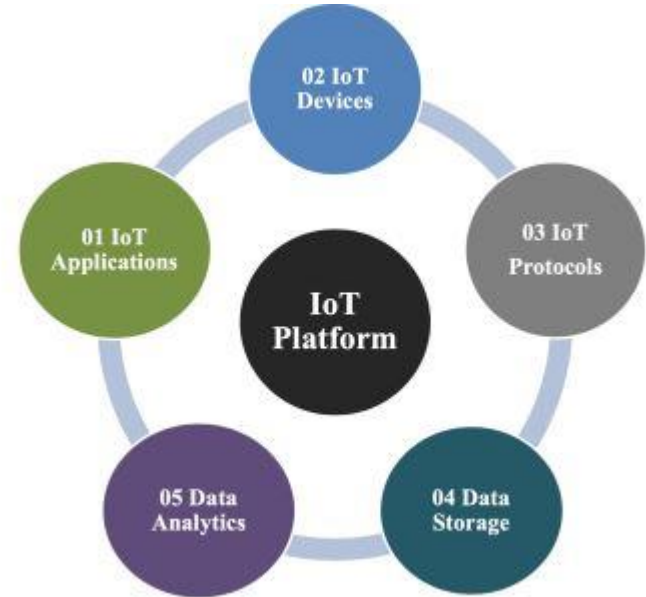
INTERNET OF THINGS





WHAT IS IOT?

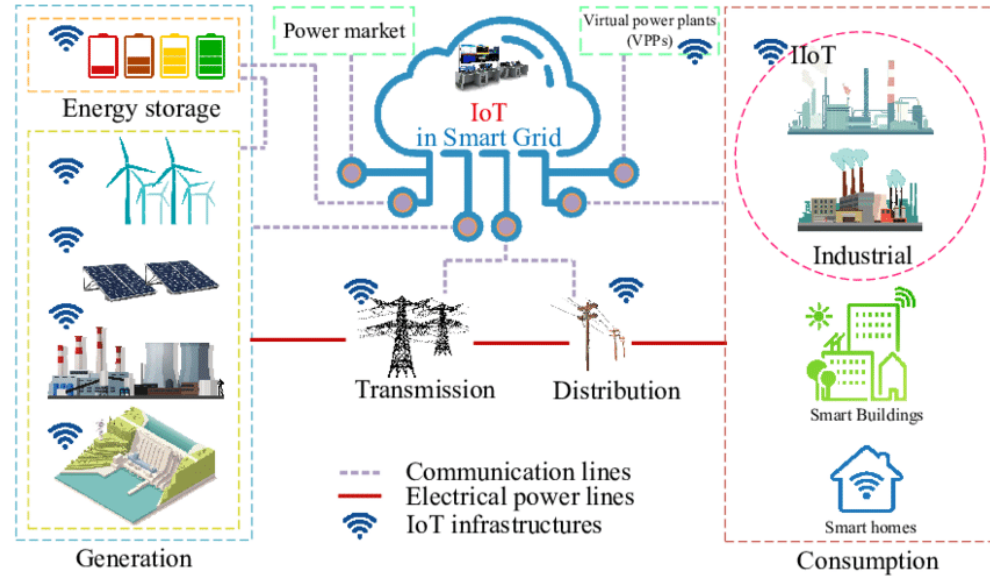
- IoT interconnects a number of devices, people, data, and processes, by allowing them to communicate with each other seamlessly.
- IoT can potentially enhance the quality of life in different areas including medical services, smart cities, construction industry, agriculture, water management, and the energy sector.





Applications in MES

- Digitalizing the complete station
- Smart grids
- Advanced metering infrastructure
- Smart buildings
- Smart installations (STP, Pump house, AC plants)
- Identifying faulty components
- Integrating renewable energy sources with grid
- Improving energy efficiency



2

e-Office

A DIGITAL WORK PLACE SOLUTION

The logo for eoffice, featuring the word "eoffice" in a blue sans-serif font. The letter "o" is replaced by a blue globe icon with white grid lines. Below the main text, the tagline "A DIGITAL WORK PLACE SOLUTION" is written in a smaller, white, all-caps sans-serif font.

eoffice
A DIGITAL WORK PLACE SOLUTION



e-Office

What is e-office

- eOffice is a Mission Mode Project (MMP) under the National e-Governance Programme of the Government.
- The product is developed by National Informatics Centre (NIC).

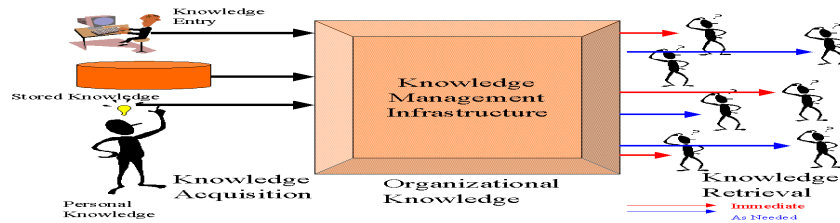
e-office products

1. File Management System (eFile).





- 2. Knowledge Management System (KMS)

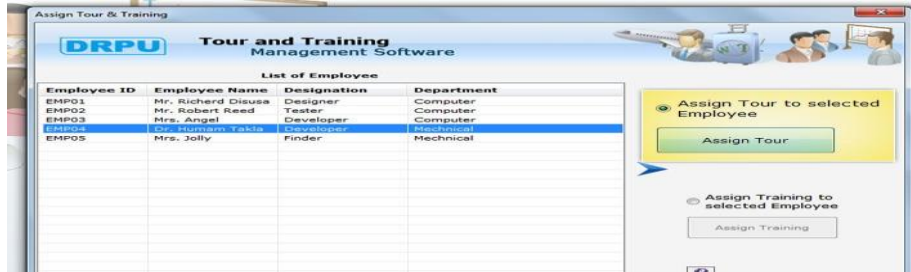


- 3. Leave Management System (e-Leave)





4. Tour Management System (eTour)



5. Personnel Information Management System (PIMS)





6. Property Return Information System Management (PRISM)



7. Smart Performance Appraisal Report Recording Online Window (SPARROW)

The screenshot shows the SPARROW web application interface. At the top, there is a navigation bar with the eOffice logo, the title "Smart Performance Appraisal Report Recording Online Window (SPARROW)", and a red button labeled "BACK TO UNIFIED SPARROW". To the right of the title are links for "About", "Help", and the user name "Shri. CHIRAG GOYAL".

On the left side, there is a vertical sidebar menu with the following items: "APAR - (MILITARY ENGINEER SERVICES (MES))", "Inbox", "Sent", "Delegation", "User Assistance", "Dossier", "DSC", "Support@ServiceDesk", and "IPR".

The main content area displays "Home > Unified Inbox". Below this, there are two tabs: "Standard" (selected) and "Representation". Under the "Standard" tab, there are three sub-tabs: "My Par(0)", "Assess Par(0)", and "Delegated Par(0)". The "My Par(0)" sub-tab is currently active, showing a large empty white space.



Benefits of e-Office

- Enhance transparency.
- Increase accountability.
- Assure data security and data integrity.
- Promote innovation by releasing staff energy and time from unproductive procedures.
- Transform the government work culture and ethics.



3

WBPMP

Web Based Project Monitoring Portal



WBPMP

- Conceptualized in accordance with the Digital India Mission
- Real time monitoring of projects
- All stakeholders not only from MES but also Armed Forces users can gain access to the project information



SCOPE

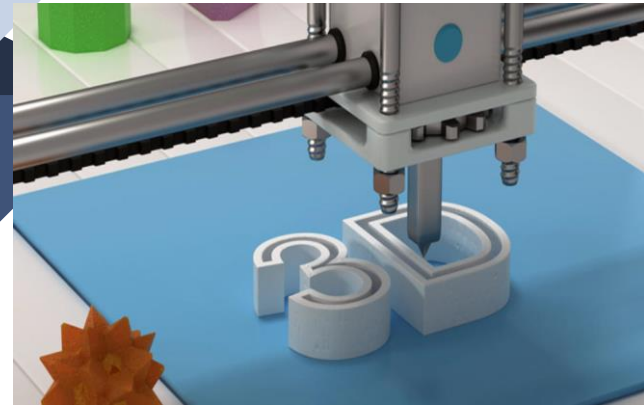
- Product Approval Portal
- AMWP Scrutiny & Status Application
- E-Measurement Book
- Budget Management Portal
- Billing and Construction Account Management
- Contractor and Consultant Enlistment Portal & E-Deviation

Benefits

- Increase productivity
- Reduces cost
- Build transparency
- Improve efficiency towards infrastructural development for the Army
- Visibility to stakeholders

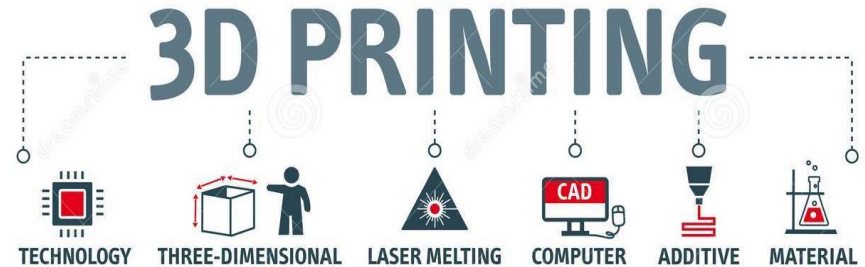
4

3D Printing



3D Printing

- 3D printing is a method of creating a three dimensional object layer-by-layer using a computer created design.
- 3D printing is an additive process whereby layers of material are built up to create a 3D part. This is the opposite of subtractive manufacturing processes, where a final design is cut from a larger block of material.



Advantages

- Cost-effective creation of complex geometries.
- Affordable start-up costs.
- Allows for the creation of parts with specific properties

First and only project of 3D printing in MES

- Indian Army's Military Engineering Services (MES) constructed two houses within three weeks using 3D Rapid Construction Technology.
- The 3D-printed houses, constructed in South-Western Air Command in Gandhinagar, are the first-of-its-kind structures in India.



3D printed house built by Indian Army's MES in Gandhinagar.

Conclusion

- We believe MES is following very old working procedures and technologies due to which many challenges have popped up.
- We have to adopt new & emerging technologies and walk side by side with the outside world to
 - a. Survive
 - b. Improve efficiency
 - c. Strengthen the Indian defence system and
 - d. Become the best infrastructure development organization



THANK YOU

