

# INDIA'S PATH TOWARDS A SUCCESSFUL LEADERSHIP IN 6G (MT – 2030)

**Rajeev Shorey (Ph.D.)**  
**FNAE, FIET (UK), Dist. Scientist ACM**

**Director, IIIT Surat**

**[www.rajeevshorey.com](http://www.rajeevshorey.com)**

**6G Workshop**  
***8 November 2024***



# THE 6G LANDSCAPE

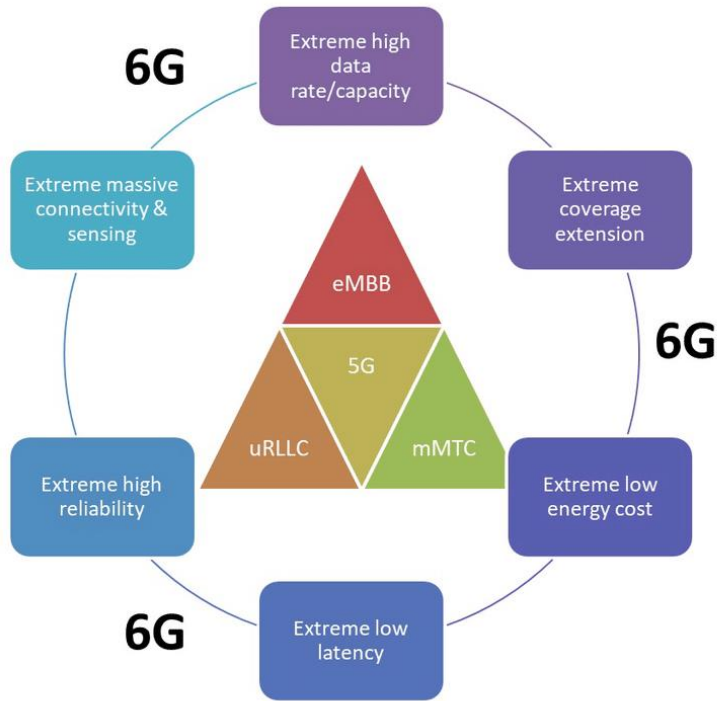
- 6G promises a world of extraordinary speed, connectivity, intelligence, and highly matured networking models
- 6G aims to reach global connectivity and potential deployment of use cases across varied industries
  - Transportation
  - Manufacturing
  - Healthcare
  - Education
  - Disaster management
  - Defense & security
  - Metaverse
  - ...



# Two Important Use Cases

- Education
- Smart Manufacturing
  - *Industry 4.0 & Industry 5.0*

# 6G in Education



## 6G Characteristics



XR-Enabled Learning Platforms

Infrastructure for Distributed Exam Administration

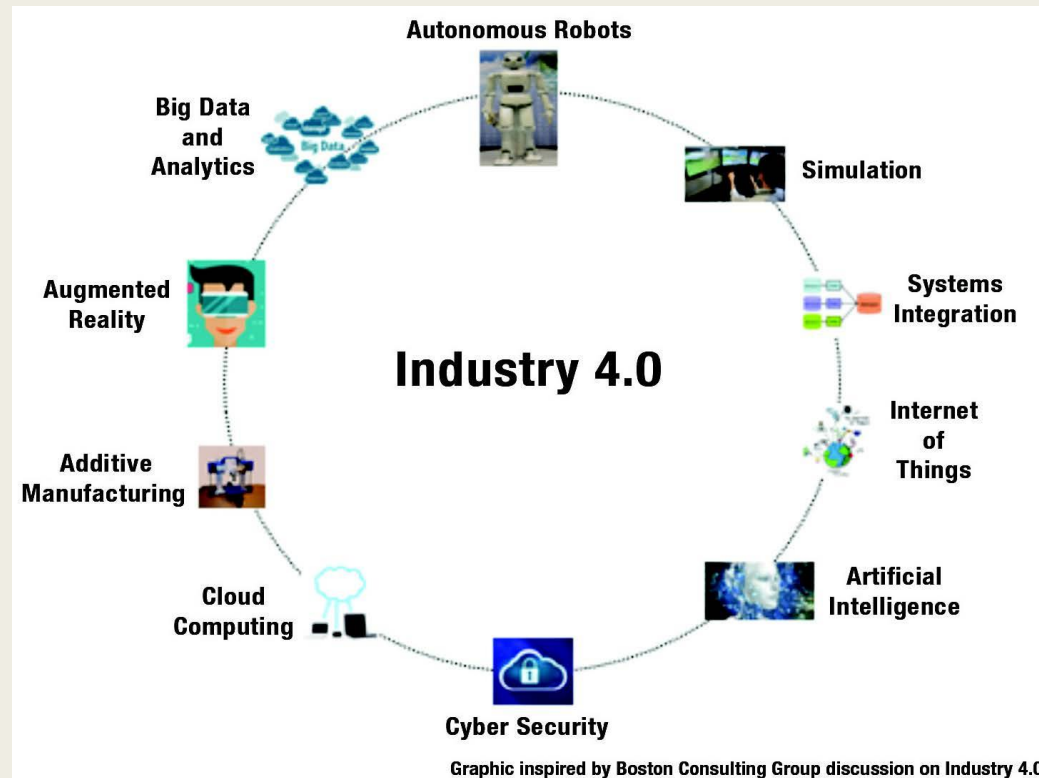
Compliance Management

Immersive & Interactive Classrooms of Future

Accelerated Quality and Adoption of Immersive Learning

Personalized Learning Experiences

# Industry 4.0: Enabling Technologies



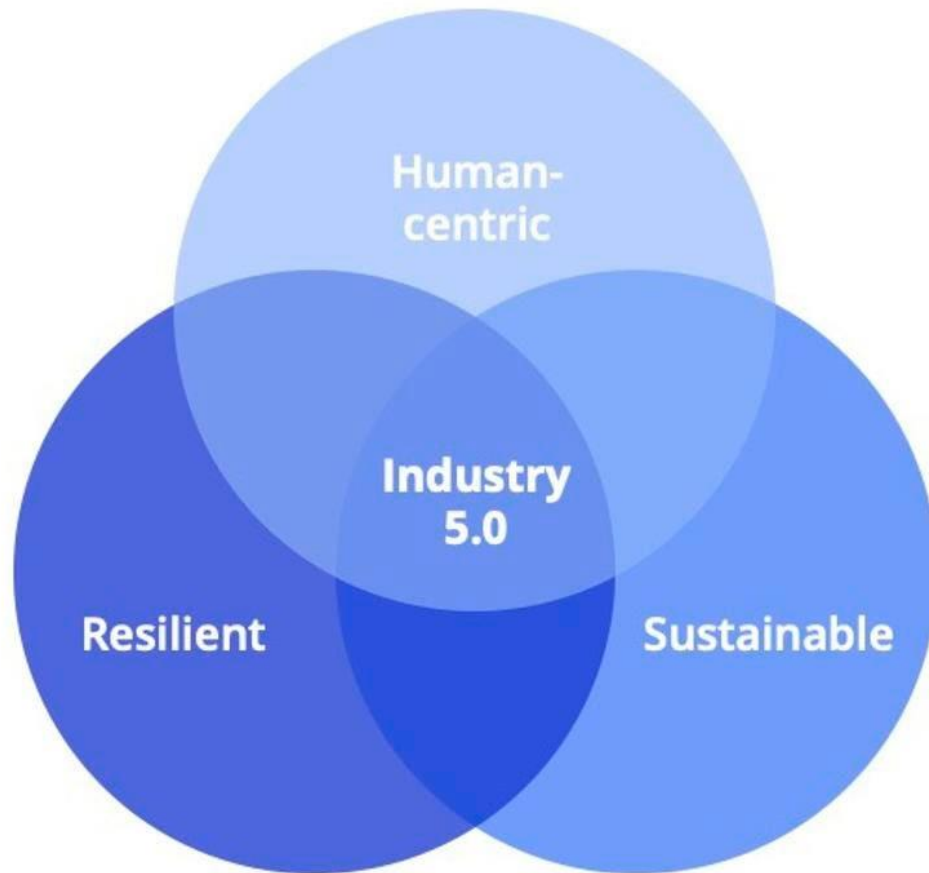
# Key Benefits of Industry 4.0

- Increased Efficiency
- Enhanced Quality Control
- Flexibility and Customization
- Innovation and Product Development
- Supply Chain Optimization
- Workforce Empowerment
- Sustainability



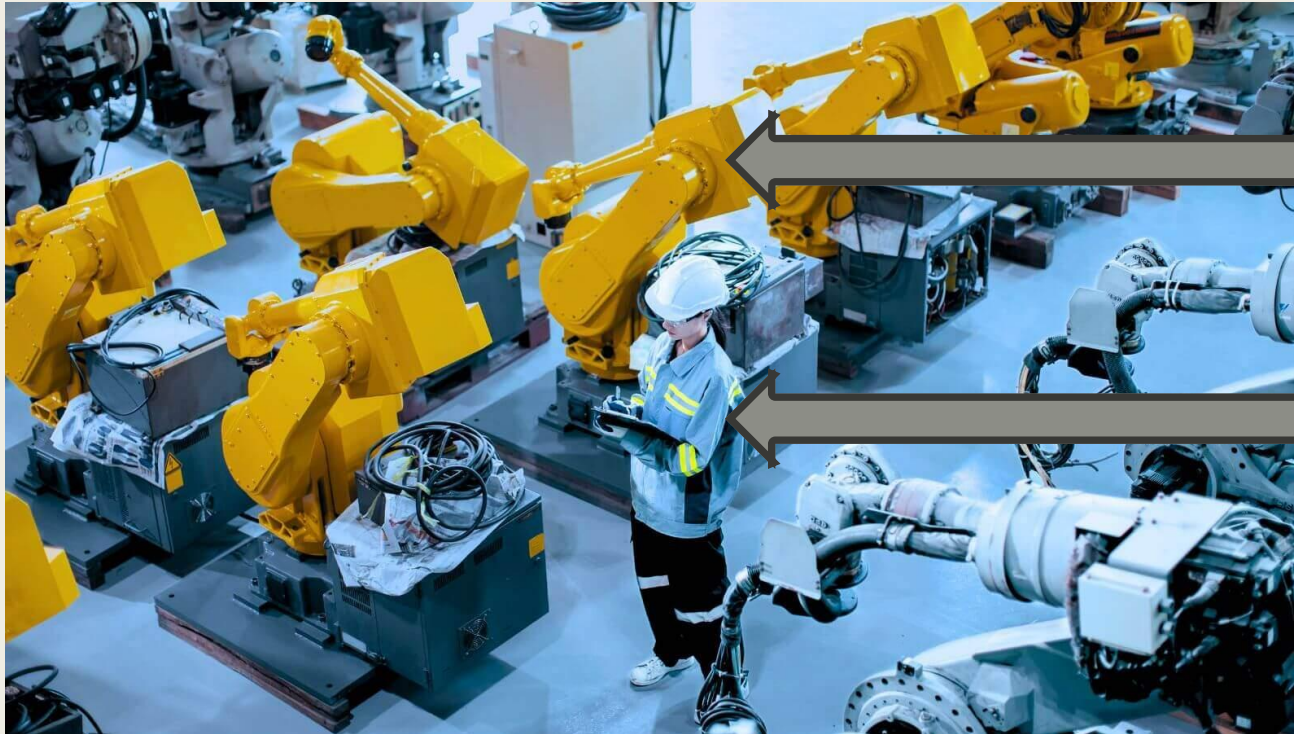


# The Three Pillars of Industry 5.0



Source: <https://www.forbes.com/sites/jeroenkraaijenbrink/2022/05/24/what-is-industry-50-and-how-it-will-radically-change-your-business-strategy/?sh=1d4f4c8720bd>

# 6G as an Enabler of Industry 5.0



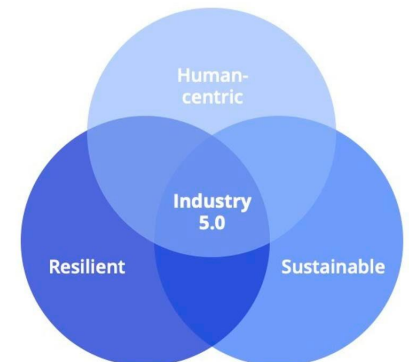
**Speed &  
Efficiency**

**Human  
Centric**

**Sustainable**

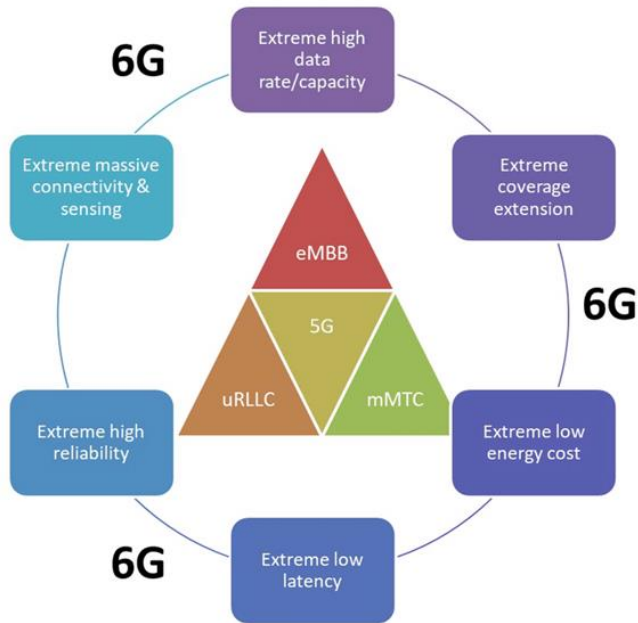


**Scalable  
Digital Twins**

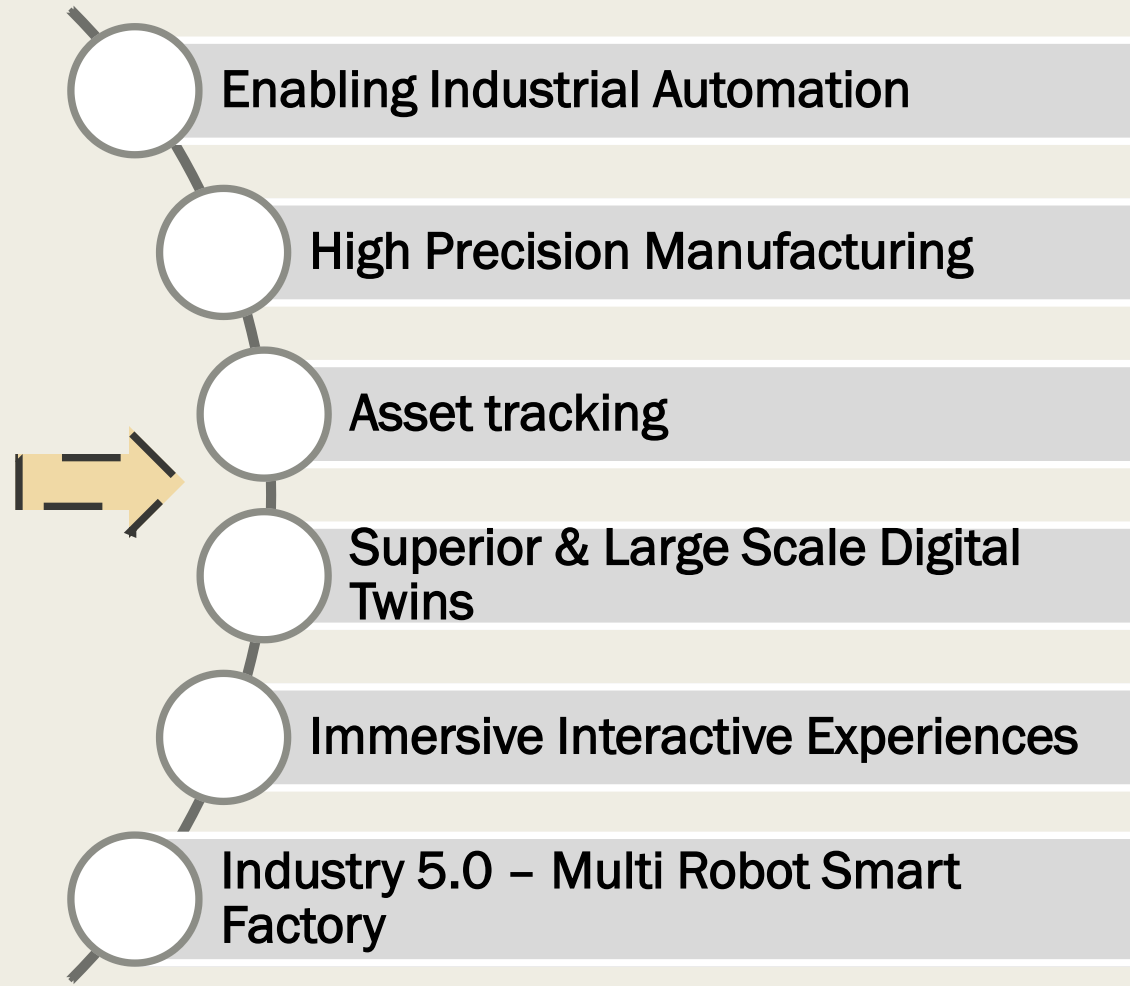




# 6G IN SMART MANUFACTURING



**6G Characteristics**



# Concluding Remarks

- 6G is likely to be leveraged in almost all the Industry Verticals
- It is critical to define clear use cases for the industry verticals and map them with the 6G characteristics in order to reap benefits
- There is a dire need to define use cases in the Indian context
  - *Rural and Semi-Urban scenarios with limited connectivity*

**THANK YOU**