Accelerating the ICT to achieving the SDGs in the era of the fourth industrial revolution 4.0

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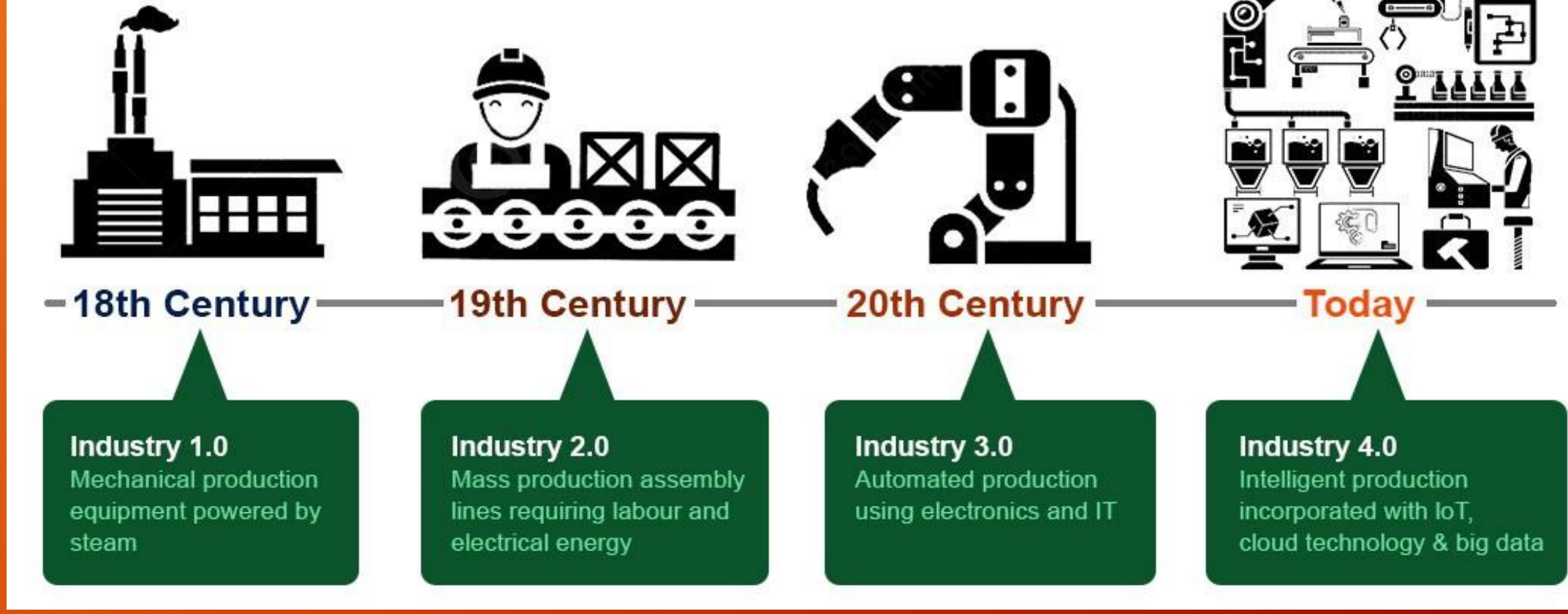
Information and communication technologies (ICT)

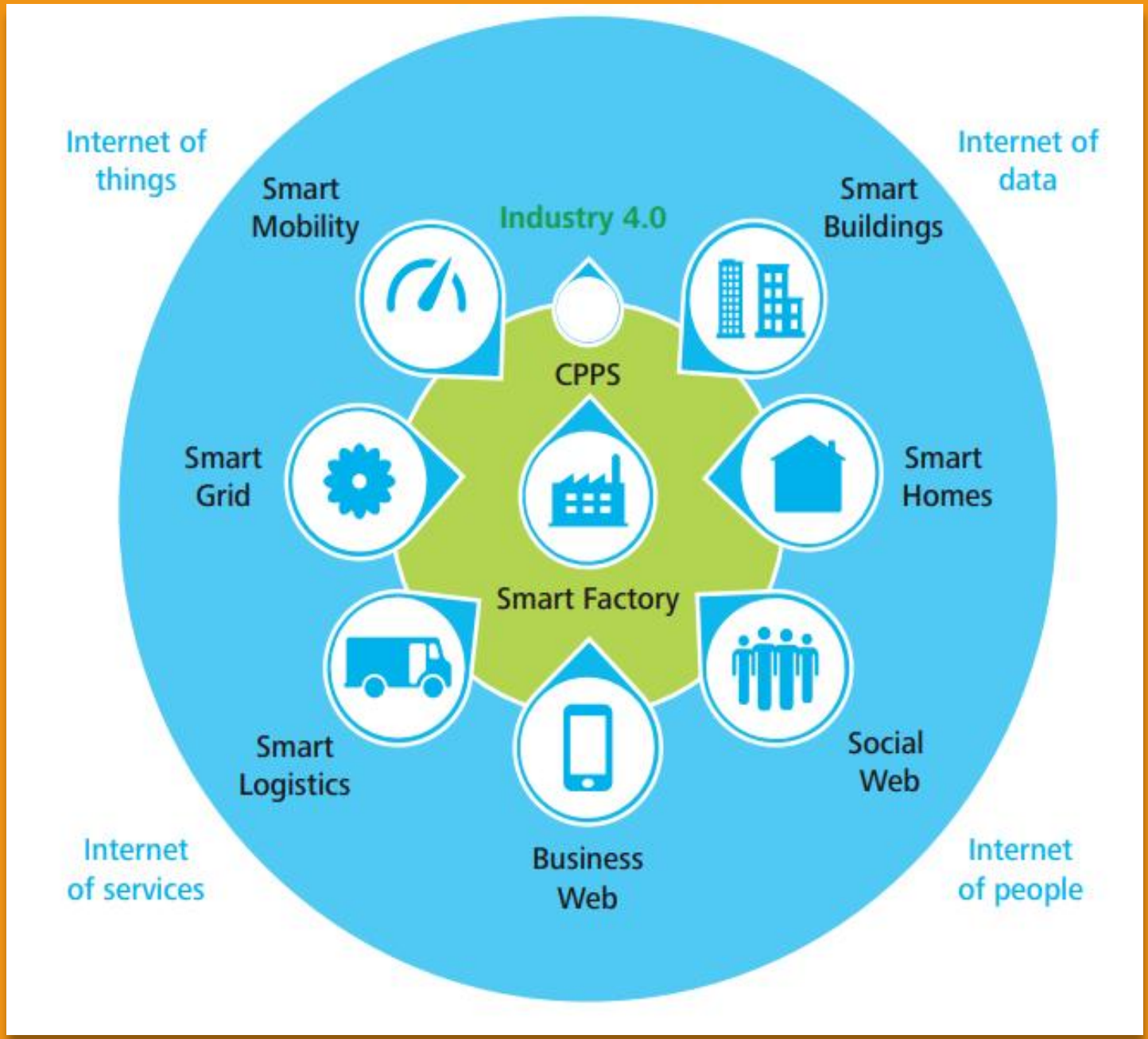
Diverse set of technological tools and resources used to transmit, store, create, share or exchange information.

These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players and storage devices) and telephony (fixed or mobile, satellite, video-conferencing, etc.).

INDUSTRIAL REVOLUTION 4.0



The Industry 4.0 Environment

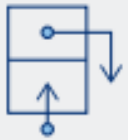


Definitions

Internet of Things

IoT refers to the fusion of Internet connectivity with everyday objects, enabling bidirectional data flows and "smart" products. Its subfield, the Industrial Internet of Things (IIoT), refers to machine-to-machine communication in industrial production, which includes "digital twins" that design units, and test and simulate production, helping to bring products to market faster, with more iterations and experimentation.[2]

Big Data

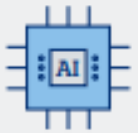


Big data refers to the generation and computation of very large datasets, both structured and unstructured. While there is no simple marker of "big" as opposed to conventional data, a popular definition refers to "three Vs" – volume, velocity and variety – while other commentators have added "variability" and "complexity".

Robotics and Automation

While robots have a long precedent in electronics and manufacturing, their roles are now expanding due to greater 3D situational awareness, flexibility and movement range, which enables them to carry out more diverse tasks such as stacking goods, and providing care services for the elderly.

Artificial Intelligence



Computer-based applications that carry out functions typically associated with humans, such as visual perception, decision-making, and speech recognition. AI's most recent advances include machine learning (ML), in which algorithm-driven tools can self-correct and learn over time. Robotic process automation (RPA) is the application of robotics to the processes of an increasing range of white collar jobs. In the words of AI visionary Andrew Ng, "if a task takes less that a second of thought, a machine can probably do it."[3]

The 17 Goals and 169 Targets are to be met by all nations by the year 2030.

Five ways ICT can help

- Accelerated upscaling of critical services in health, education, financial services, smart agriculture, and low-carbon energy systems.
- Reduced deployment costs addressing urban and rural realities.
- Enhanced public awareness and engagement.
- Innovation, connectivity, productivity and efficiency across many sectors.
- Faster upgrading in the quality of services and jobs

Making ICT the backbone of the economy

Public sector regulations do not currently enable full utilization of ICT.

Mobile broadband physical infrastructure needs rapid expansion and upgrading, especially to public facilities like schools and clinics.

More public-private partnerships are needed to incubate new ICT start-ups to provide locally appropriate services.

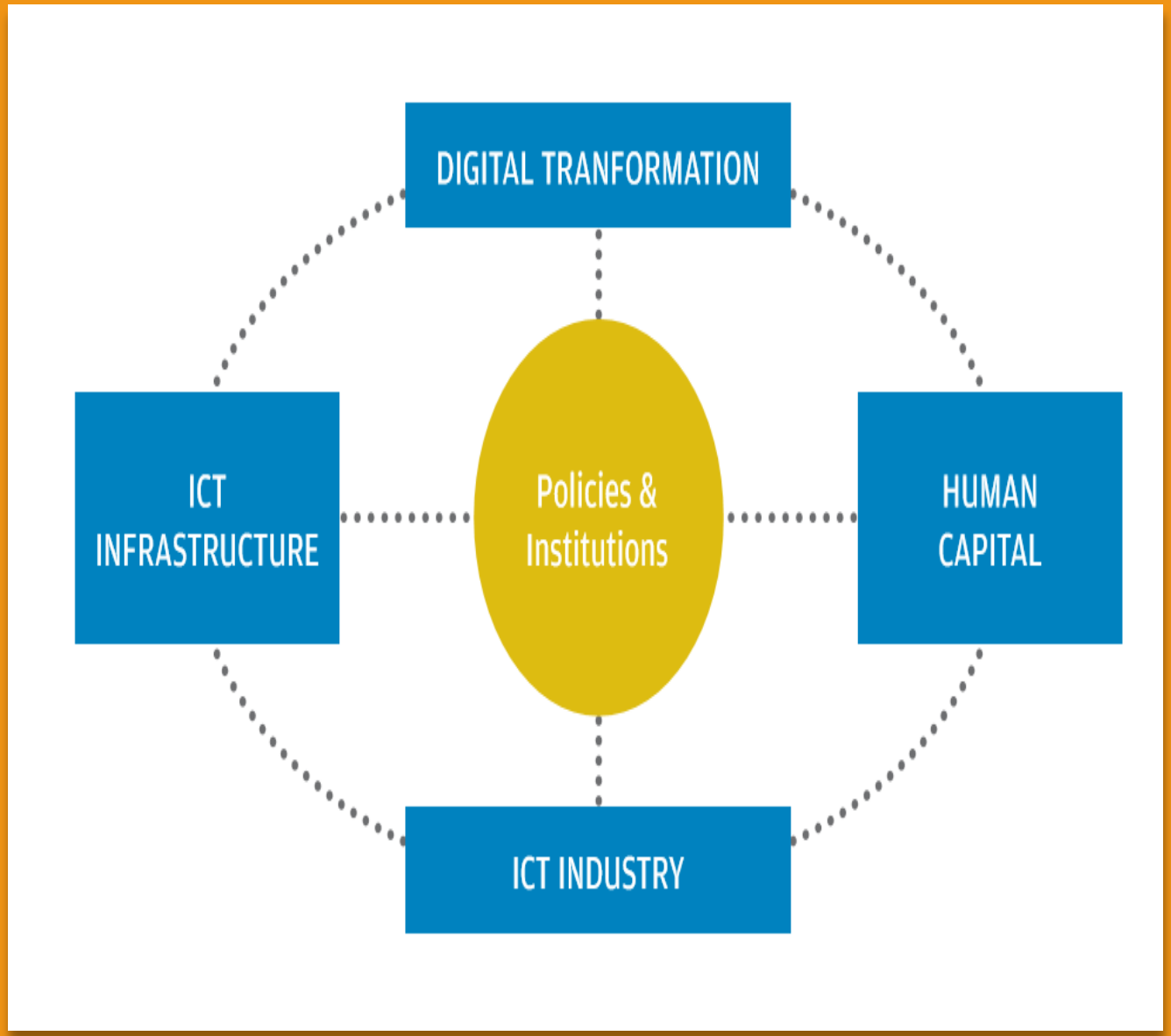
Small, fragmented demonstration projects require national scale-up with business models addressing urban and rural areas.

ICT-based system components need to be interoperable across competing platforms.

Significant training of personnel is required to manage ICT systems.

Policy and regulation must play catch-up with rapid ICT innovation and deployment to ensure that new challenges, risks and threats are effectively managed.

ICT Ecosystem



Twelve challenges that India need will to address

2

Large Scale , Firmly established

- AADHAR
- FUEL SUBSIDY

4

Early Stages ; Scaling Rapidly

- E- KYC
- GST
- ELECTRONIC TOLL
- CASHLESS / MICRO ATM

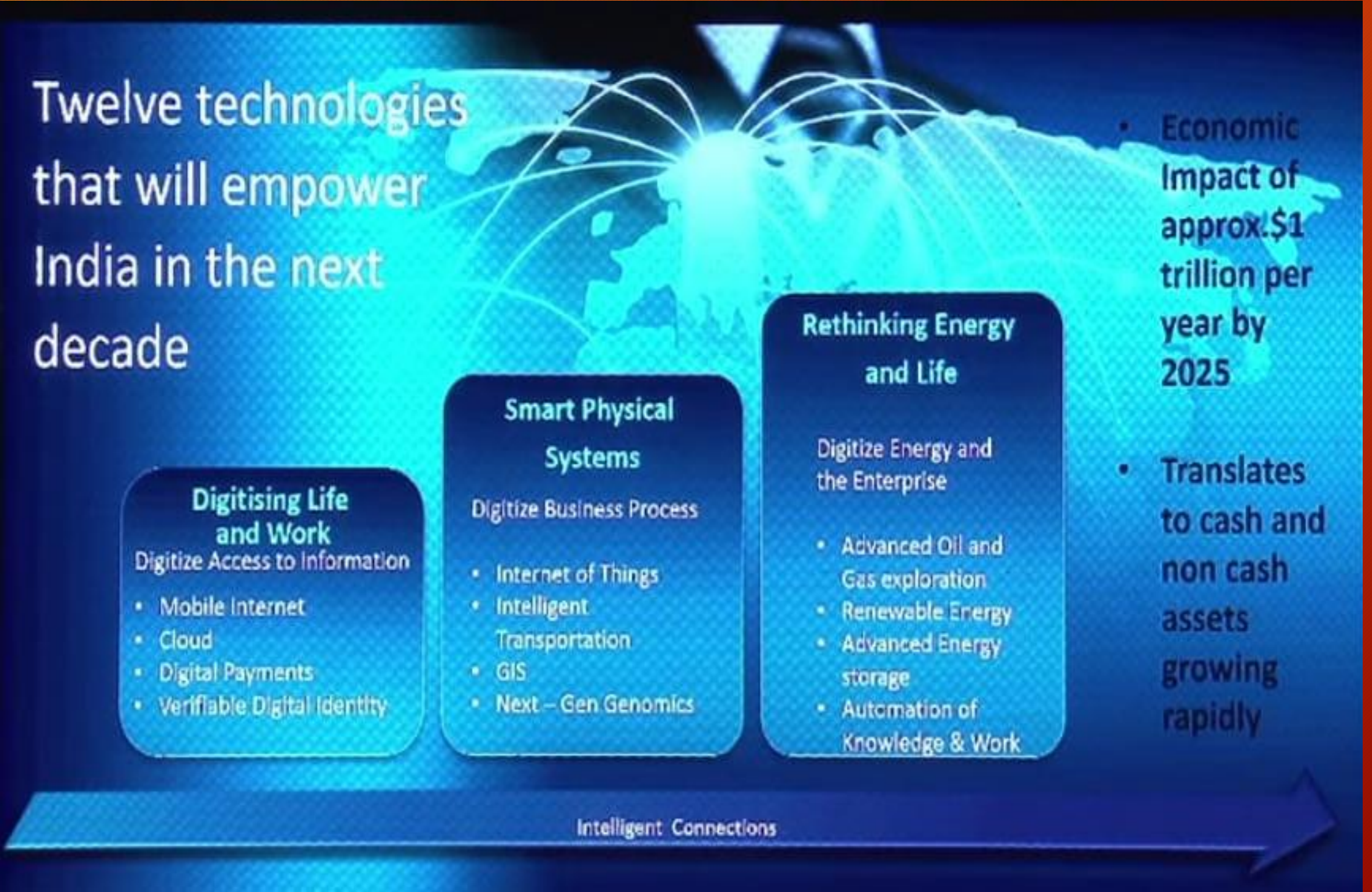
6

Long Term : Aspirational

- ELECTIONS
- EDUCATION
- HEALTHCARE
- ENERGY
- JUSTICE
- EXPENDITURE

Cisco - CGS 2015, McKinsey - India Technology Opportunity 2014

Twelve technologies that will empower India in the next decade



Digitising Life and Work

Digitize Access to Information

- Mobile Internet
- Cloud
- Digital Payments
- Verifiable Digital Identity

Smart Physical Systems

Digitize Business Process

- Internet of Things
- Intelligent Transportation
- GIS
- Next – Gen Genomics

Rethinking Energy and Life

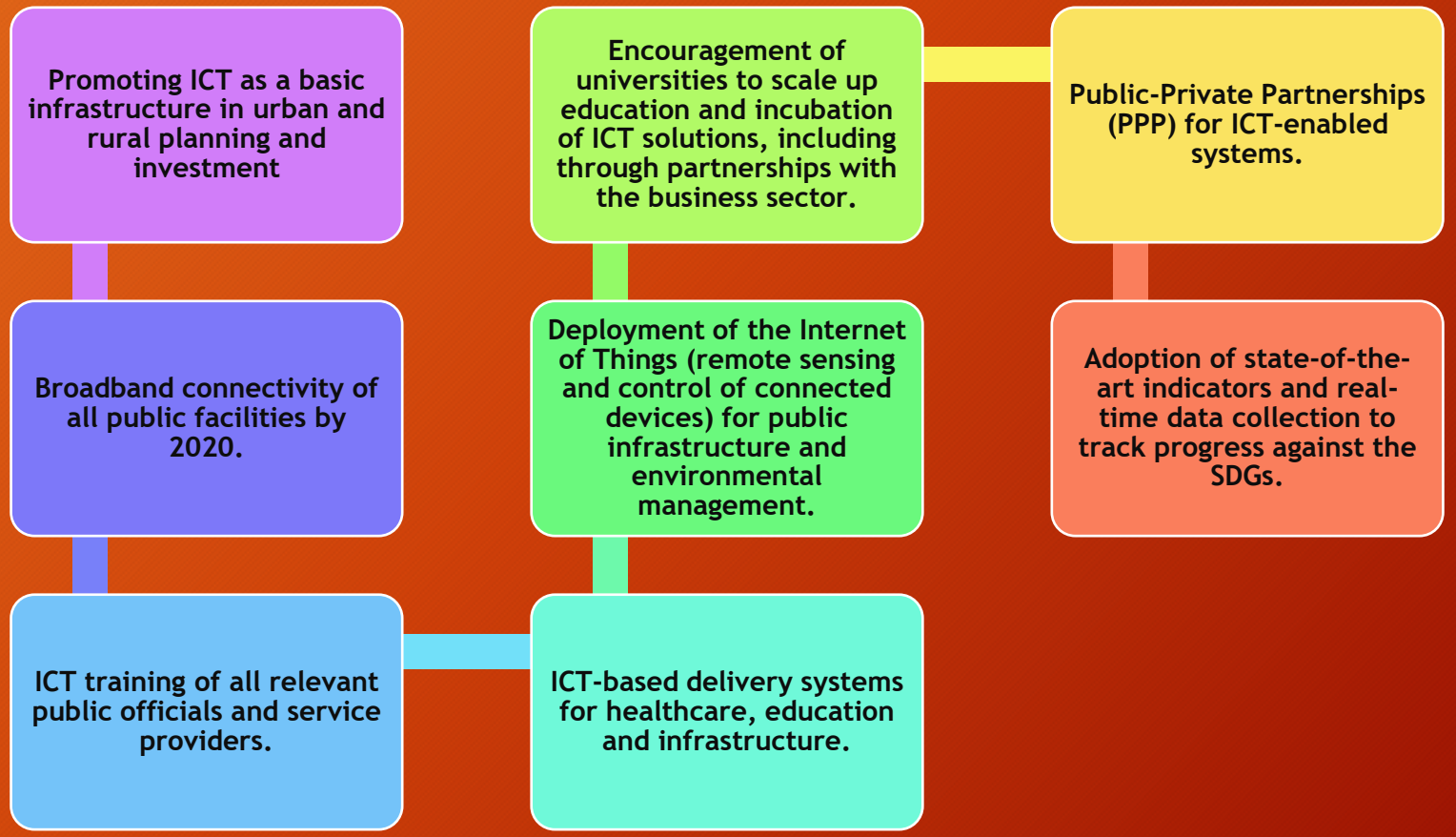
Digitize Energy and the Enterprise

- Advanced Oil and Gas exploration
- Renewable Energy
- Advanced Energy storage
- Automation of Knowledge & Work

- Economic Impact of approx.$1 trillion per year by 2025
- Translates to cash and non cash assets growing rapidly

Intelligent Connections

To harness ICT effectively for the 2030 Agenda



ICT Issues and Challenges

1. Privacy and surveillance

2. Cybersecurity

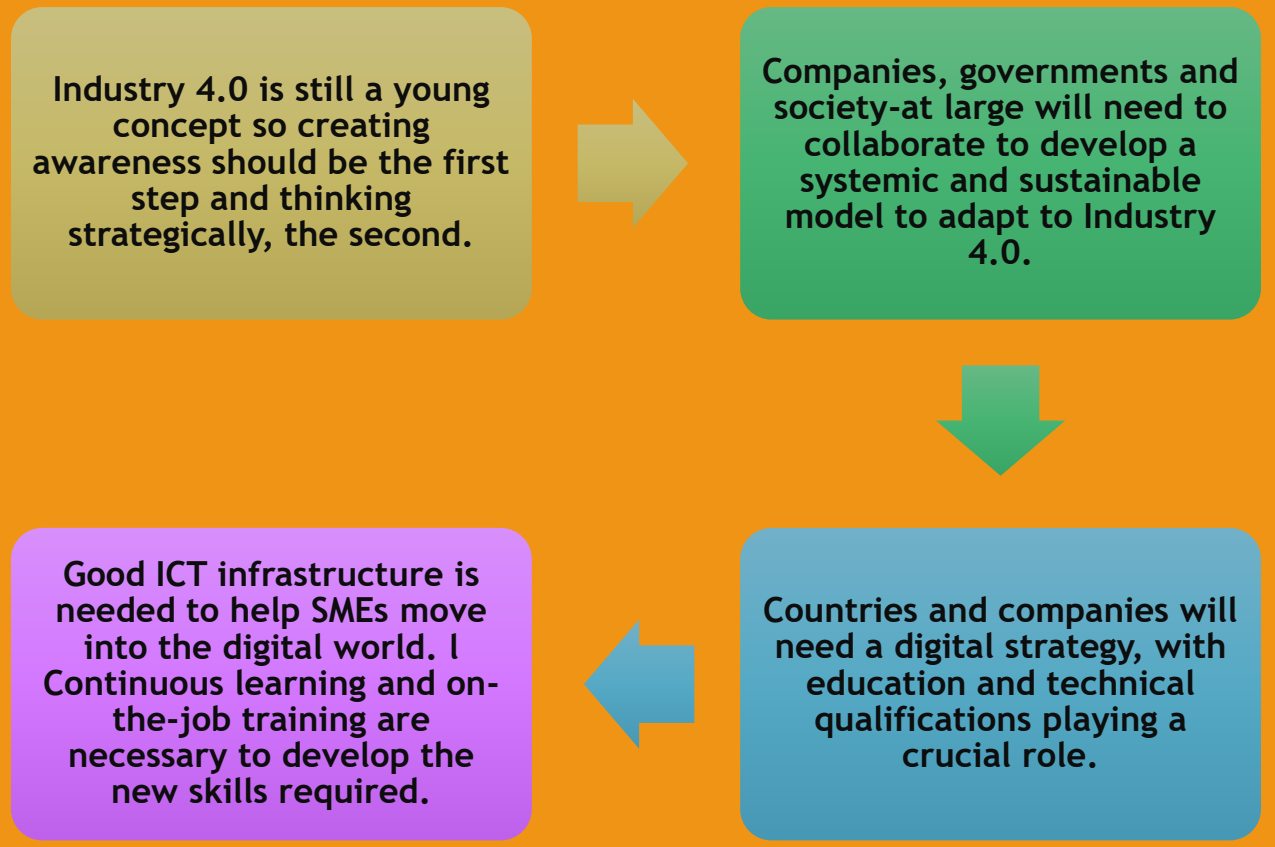
3. Loss of human skills

4. Possible public concern about health effects

5. Electronic waste and carbon emissions

6. Digital exclusion

Recommendation



THANKS YOU