ARTIFICIAL INTELLIGENCE FOR IOT & SMART CITIES

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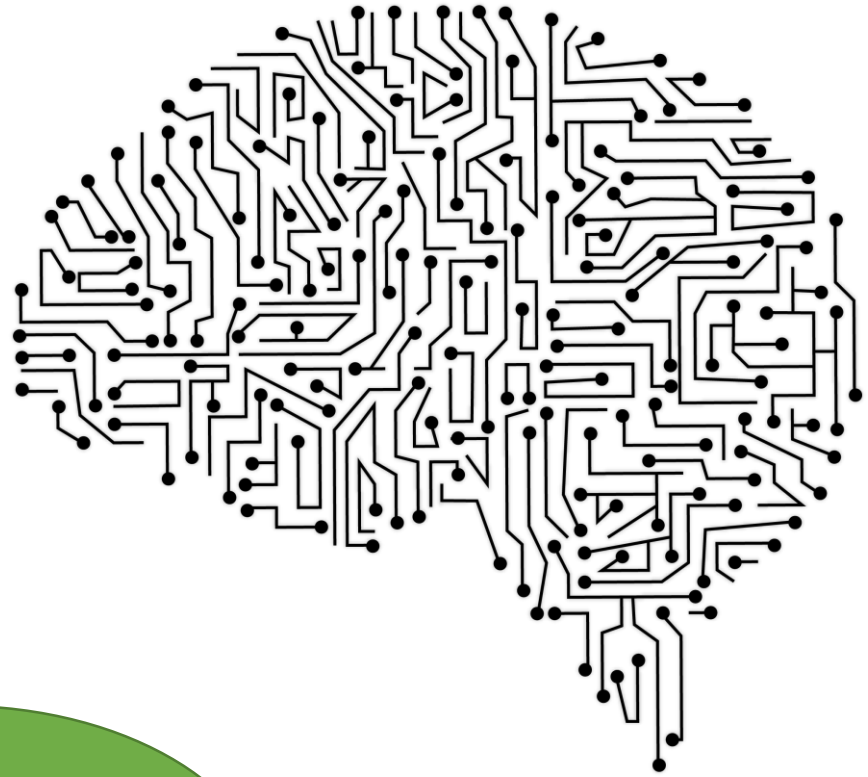
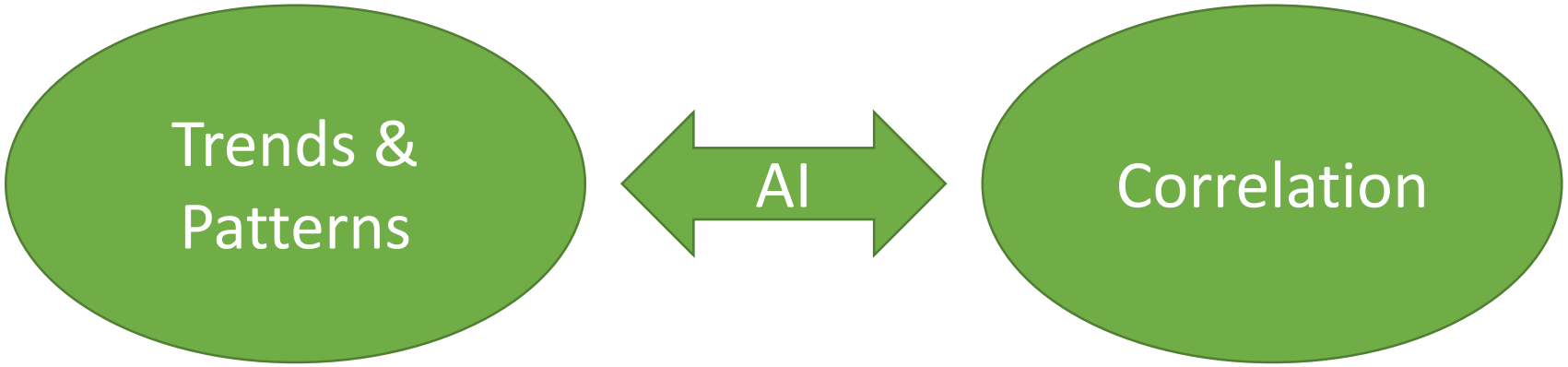
AI Birthday

- 1955-1956:
  - Dartmouth Conference marks the birth of AI

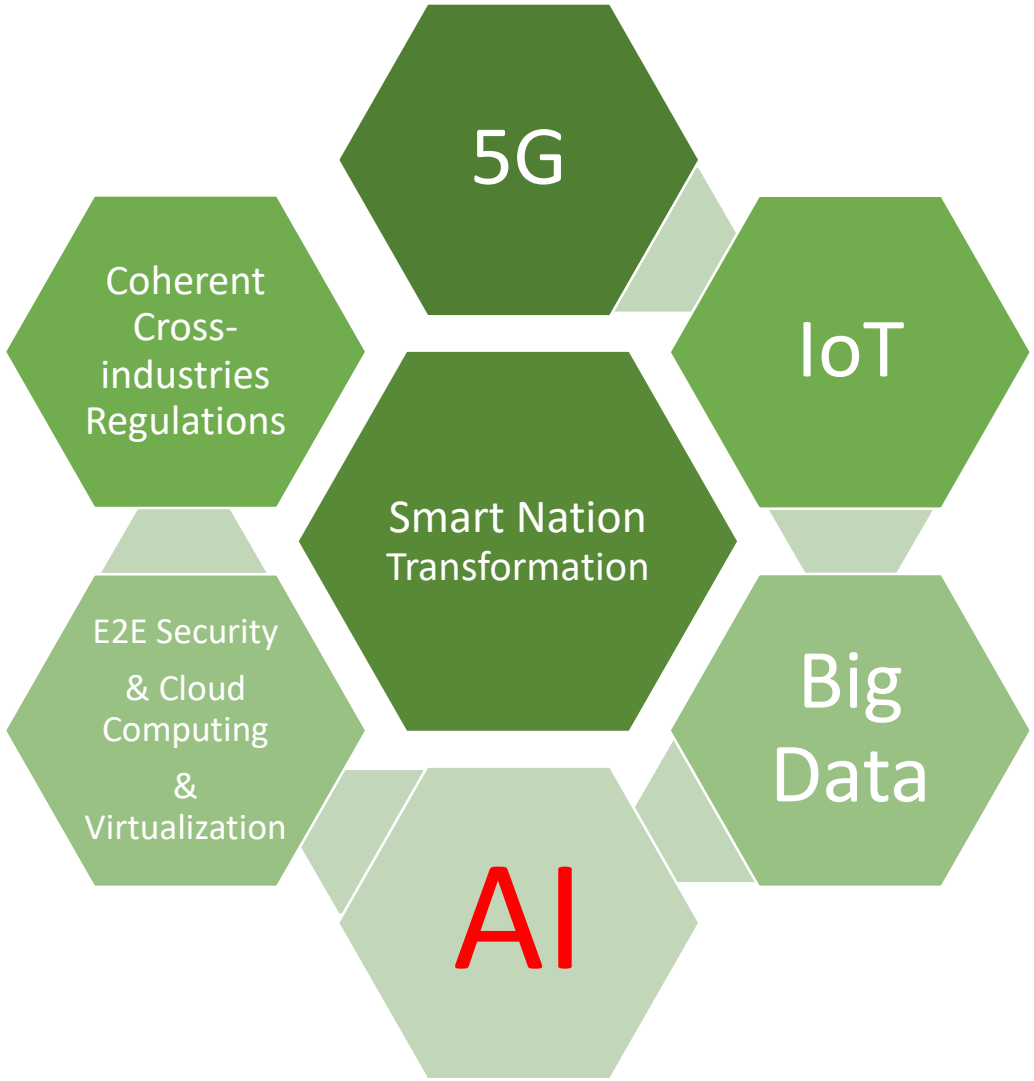
What is AI

- AI is Machine-based intelligent Decision-Making
- AI system: set of tools to emulate human intelligence by:
  - Leaning (Data Collection)
  - Exercising and engaging (Data Analysis)
  - Decisions & Actions





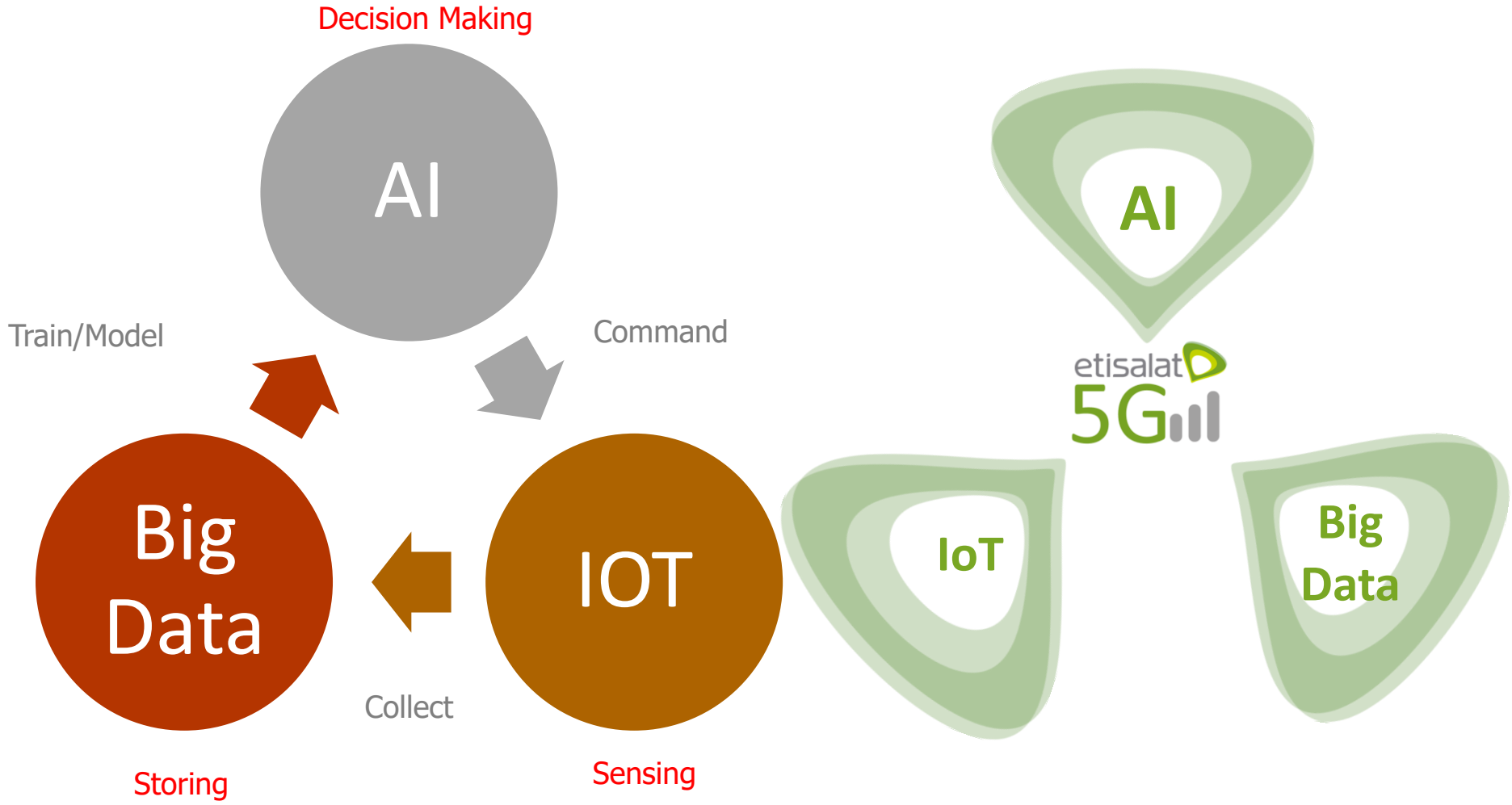
AI for 4th Industrial Revolution



Revolution is all about Data

AI Role for IoT and Smart Cities

- Combination of high speed, reliable, low latency connectivity will allow transformation towards smart cities
- 5G will be major enabler for transformation towards smart cities



Machines vs Human Performance

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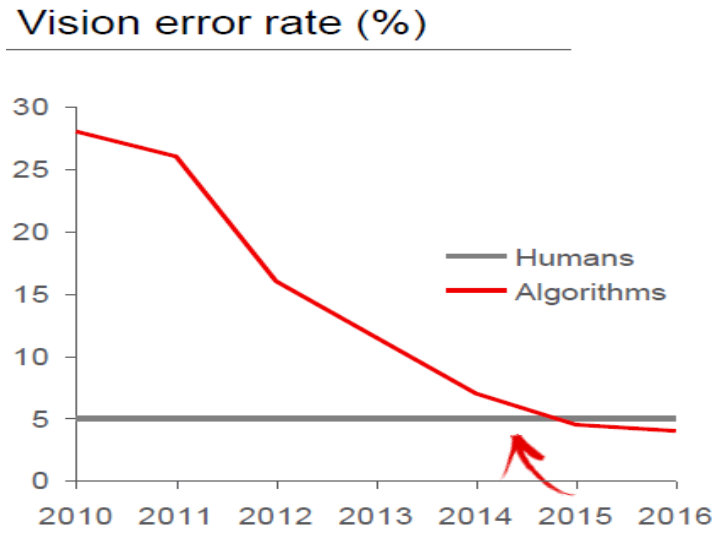
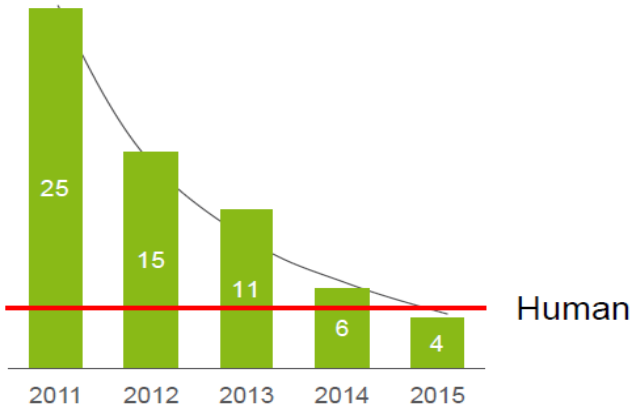




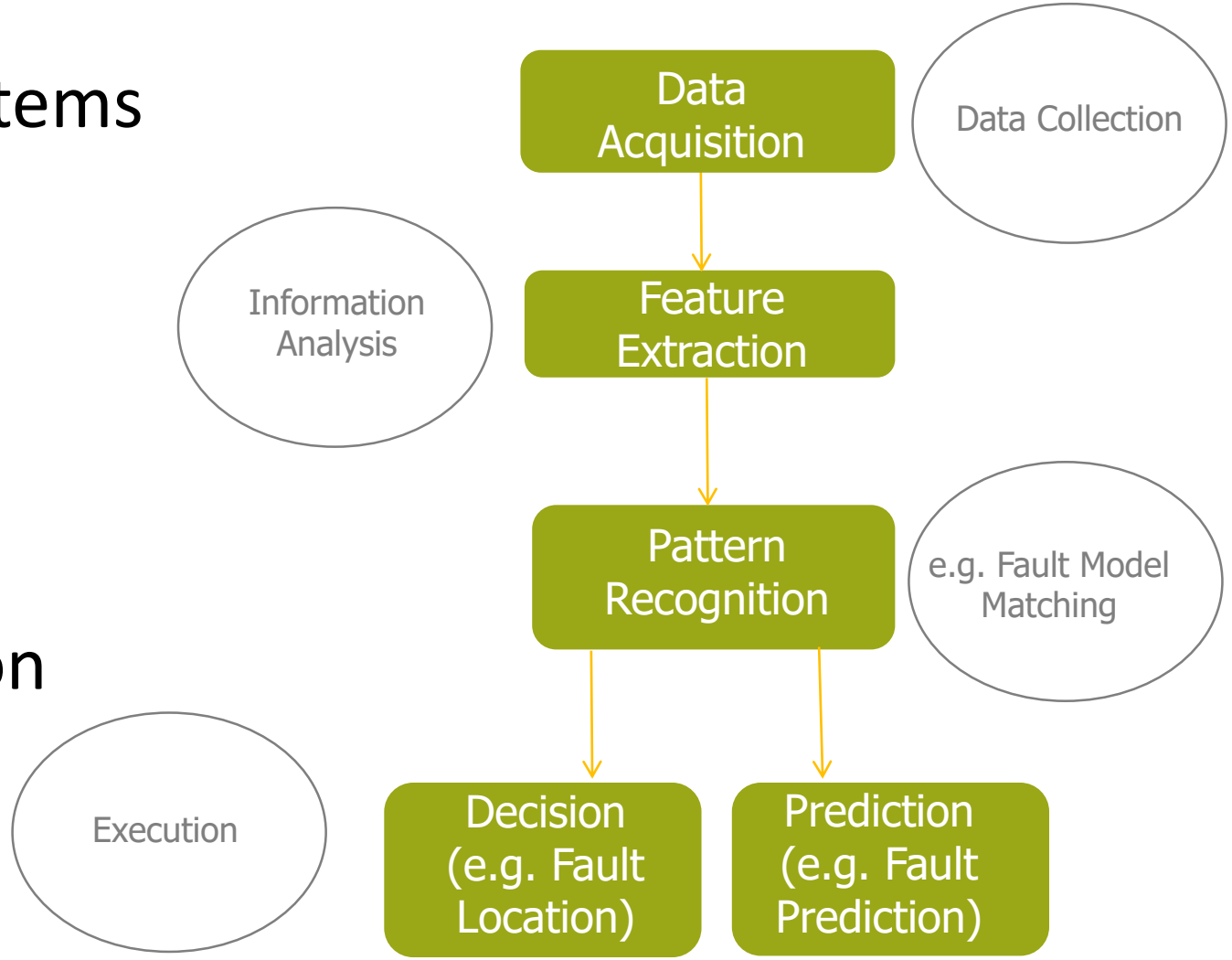
Source: economist.com/news/special-report/21700756-artificial-intelligence-boom-based-old-idea-modern-twist-not; hbr.org/cover-story/2017/07/the-business-of-artificial-intelligence

Muffin or Puppy ?

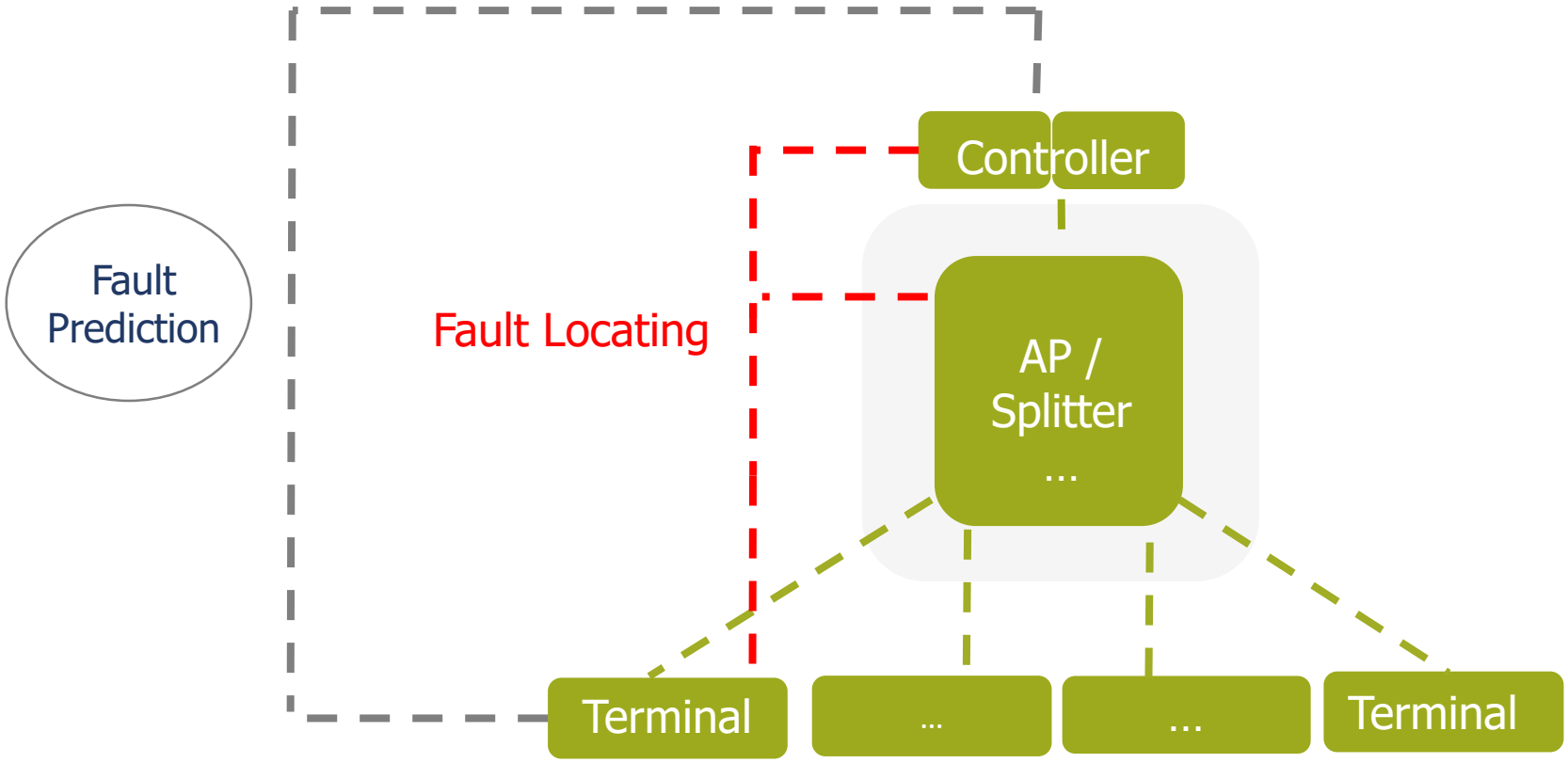
Source: hbr.org/cover-story/2017/07/the-business-of-artificial-intelligence

AI Enabled System

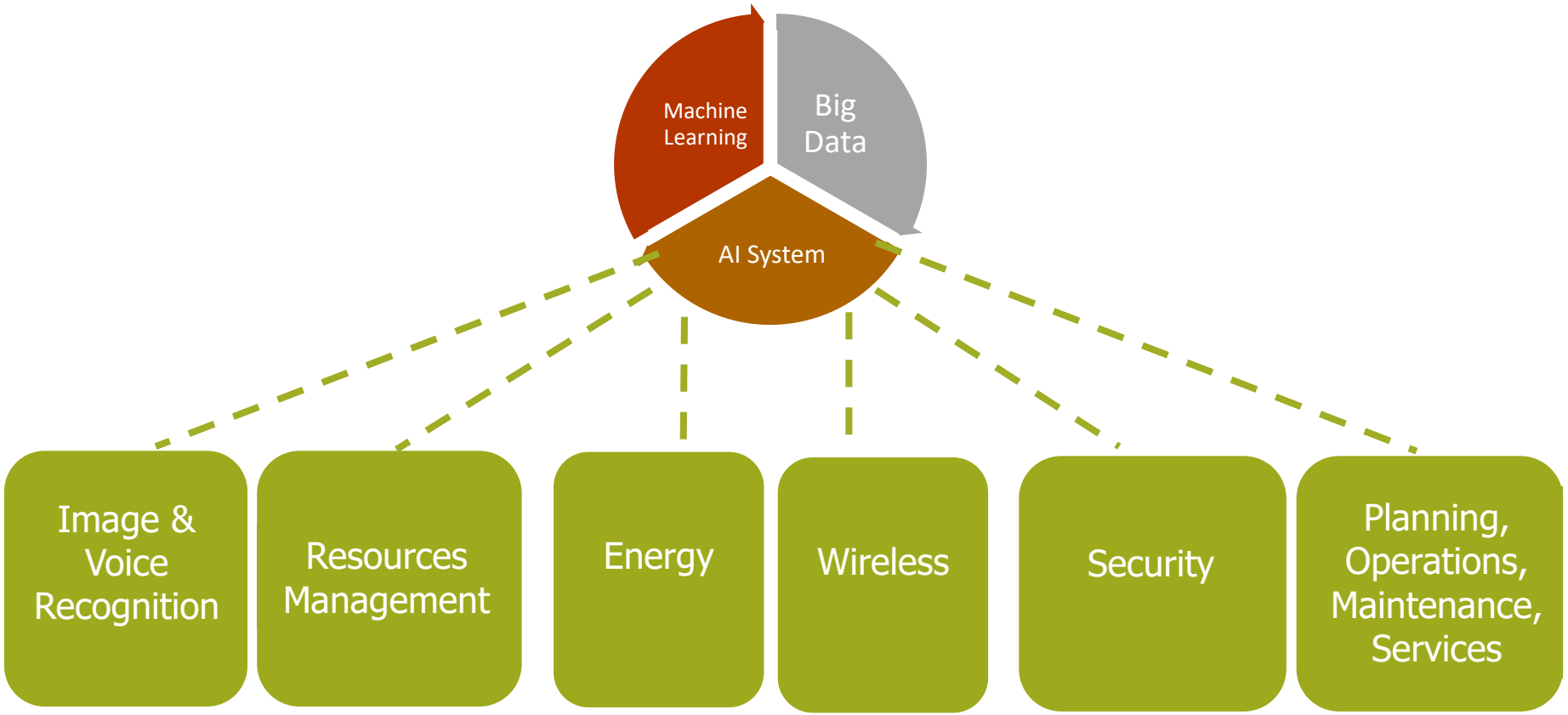
- Open Source systems
- Open APIs
- AI Index
- AI Standardization areas



Example: Fault Location and Prediction



AI combination with different industries / use-cases unlocks new potential



AI Challenges

- Lessons from ITU PP18 on AI Resolution
- AI policies and regulations
- Responsibility and Accountability
- AI Ethics

Work item	Title
Y.API4IOT	Open Data Application Programming Interface (API) for IoT Data in Smart Cities and Communities
Y.FW.IC.MDSC	Framework of identification and connectivity of Moving Devices in Smart City
Y.IoT-DA-Counterfeit	Information Management Digital Architecture to combat counterfeiting in IoT
Y.IoT-Interop	An architecture for IoT interoperability
Y.IoT-IoD-PT	Identity of IoT devices based on secure procedures and ensures privacy and trust of IoT systems
Y.LPWA	Security, interoperability and identification aspects for Low Power Wide Area (LPWA) systems
Y.IoT-Agility	Algorithm Agility for IT Systems and Supporting Infrastructure used in the Internet of Things
Y.IoT-Ath-SC	Framework of IoT-devices authentication in Smart City

Conclusions

- Machines may exceed human performance
- AI is essential pillar for smart city transformation that need to be complemented by other enablers (5G, IoT, Big data)
- AI standardization areas need to be defined with international collaboration
- AI Challenges need to be addressed at early stage

Thank You