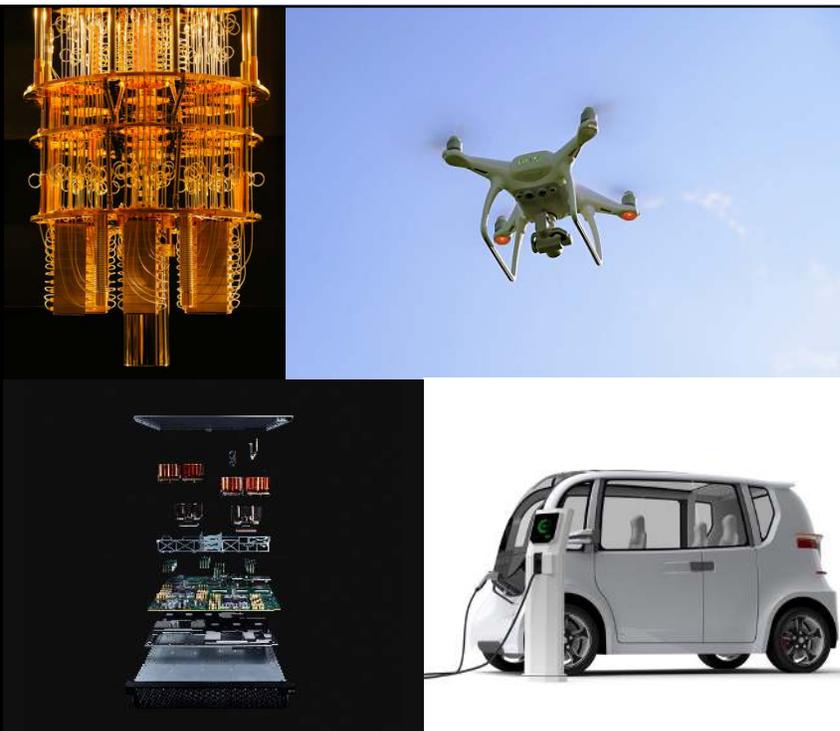


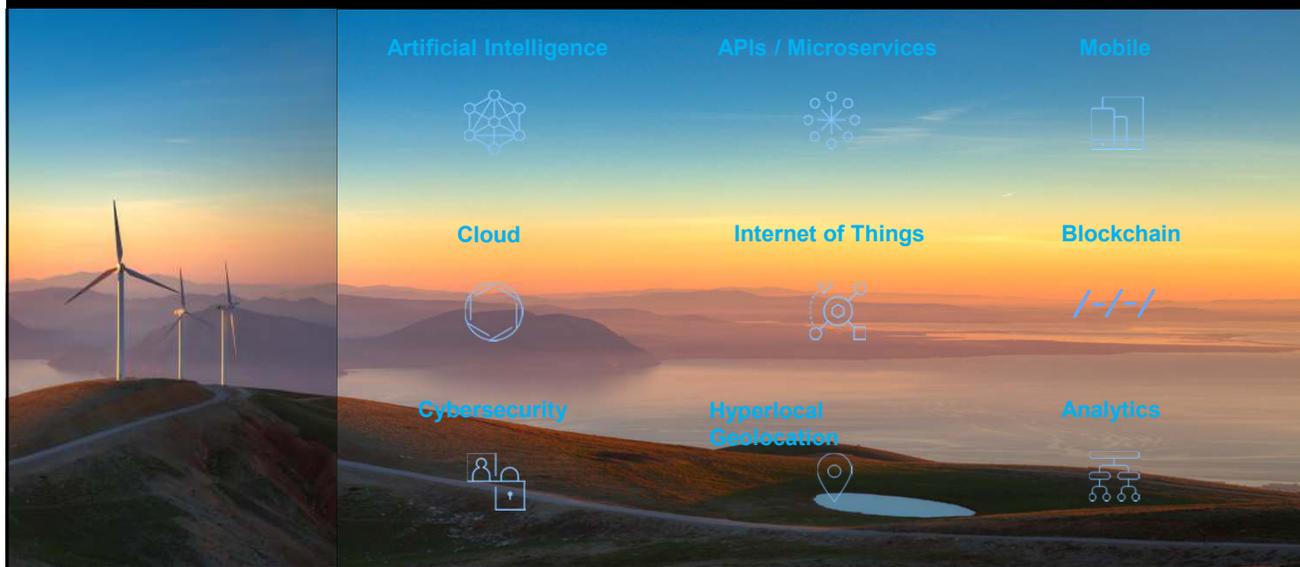
# The Role of AI, Big Data and IoT in an Electrified Society

Dr. John E. Kelly III  
Executive Vice President  
IBM

2019  
Energy & Utility  
Conference



## Digital technology is redefining possibilities in Energy, Environment & Utilities



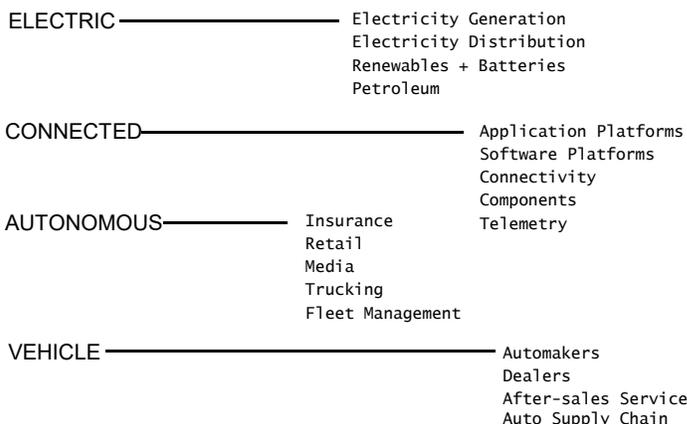
# Exponential Impact

5G, telematics, sensors, robotics, blockchain, AR/VR, smart grids, AI.



To illustrate the exponential impact of new technologies on business, consider the example of:

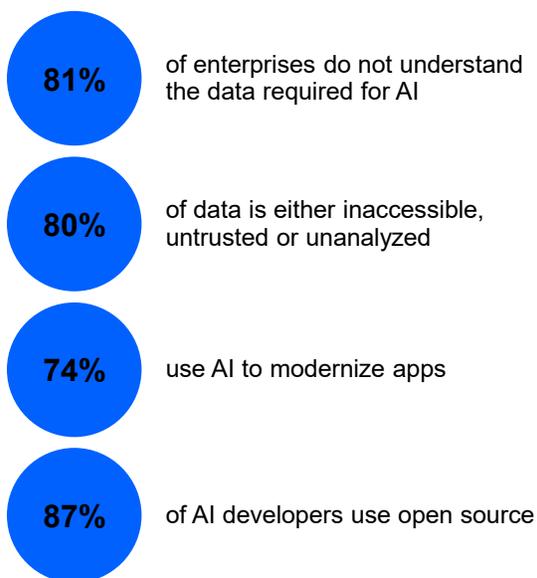
## ELECTRIC CONNECTED AUTONOMOUS VEHICLE



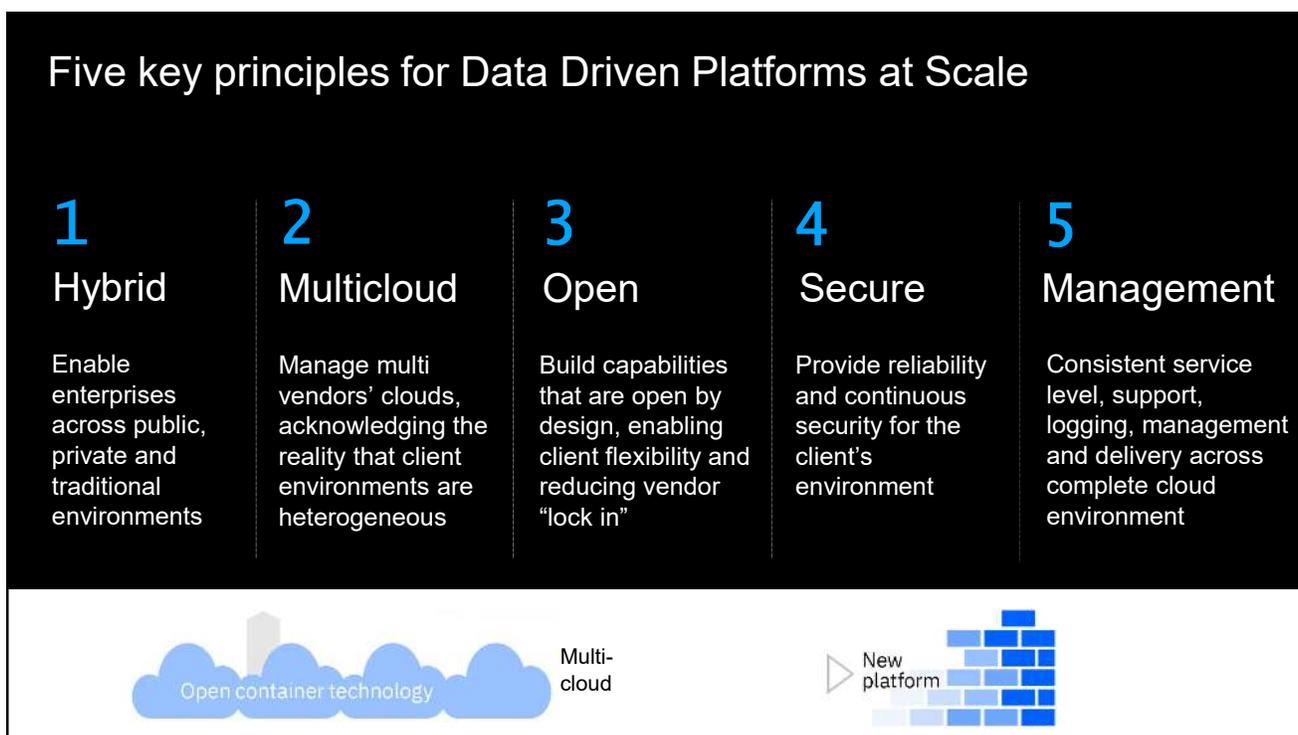
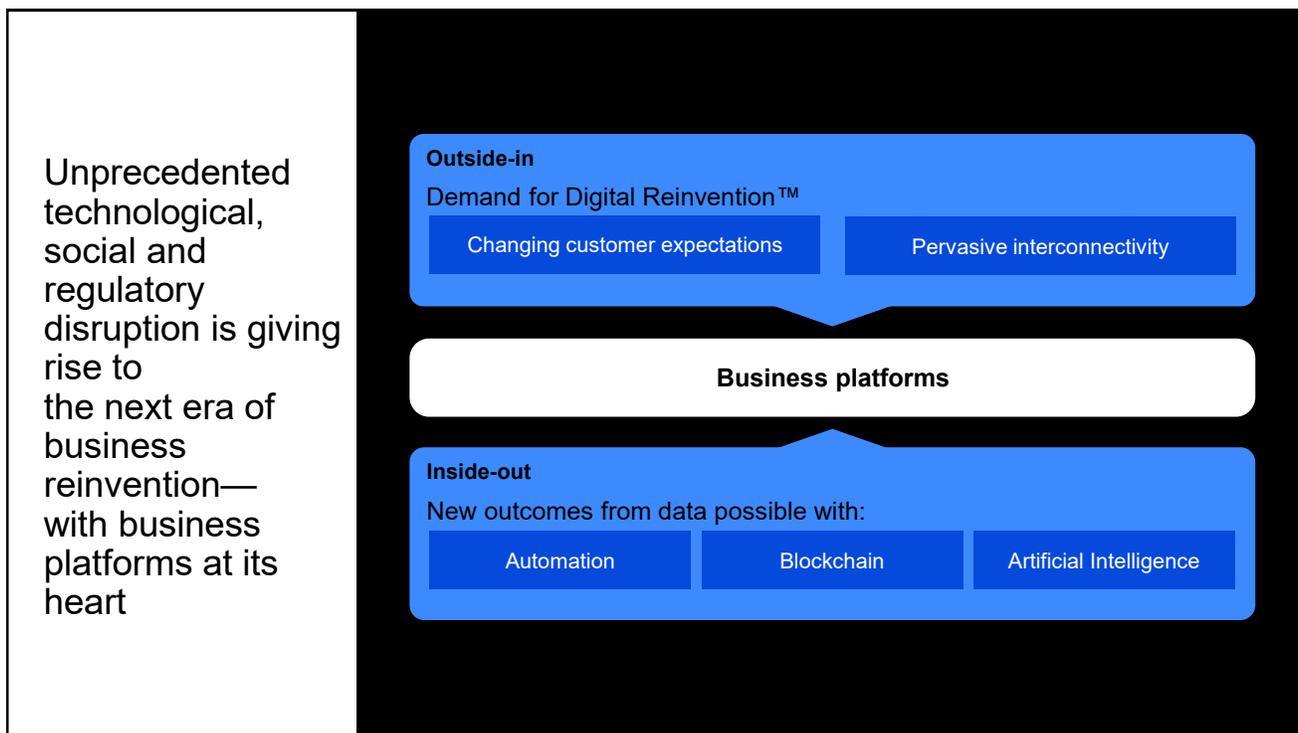
Each word signals its own series of disruptions of entire economic sectors.

There is no AI without an IA (information architecture)

*“ No amount of AI algorithmic sophistication will overcome a lack of data [architecture] ”*

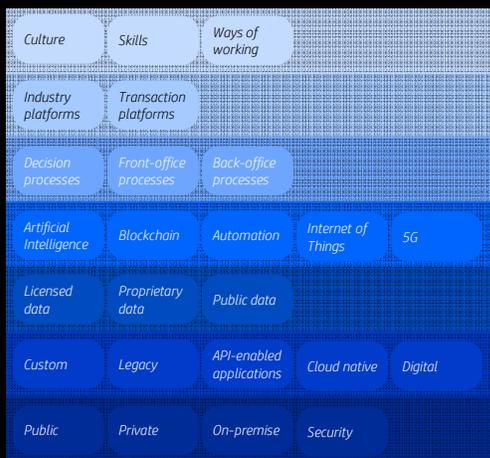


Source: MIT Sloan Management Review, Sept 2017 "Reshaping Business with Artificial Intelligence"



# Companies are placing bets around the creation of business platforms to solidify competitive advantage and differentiation

## The Cognitive Enterprise



Culture of agile innovation

...powered by an ecosystem of business platforms

...activated by cognitive-enabled enterprise workflows

...made possible with exponential technologies

...that are fueled by data

...using next-generation applications

...on a secure hybrid multi-cloud infrastructure

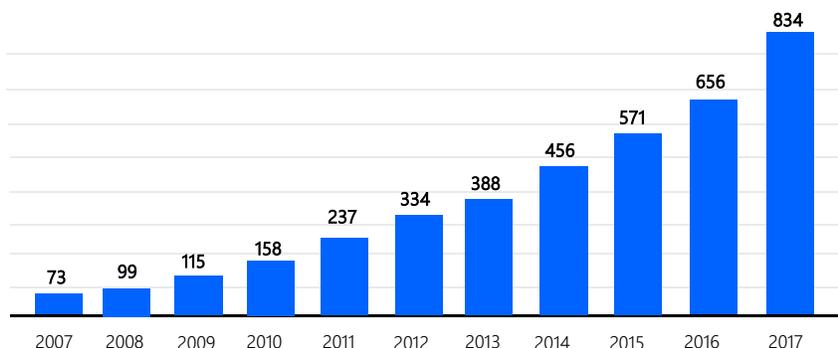
## Platform Decisions

CEOs are exploring three different kinds of platform choices:

1. To be a platform
2. To use a platform
3. To re-platform

### Platform companies are taking the world by storm:

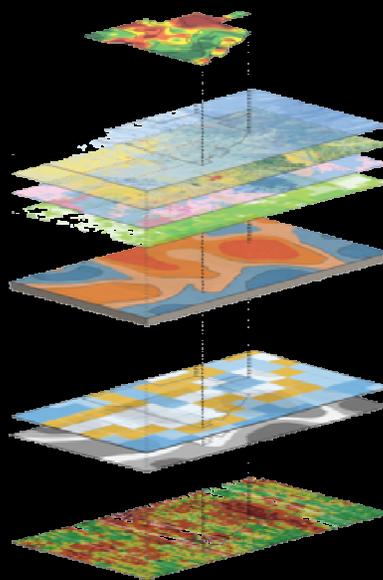
■ Top 20 platform companies revenue (USD billions)



## Oncor uses PAIRS for management and to reduce outages

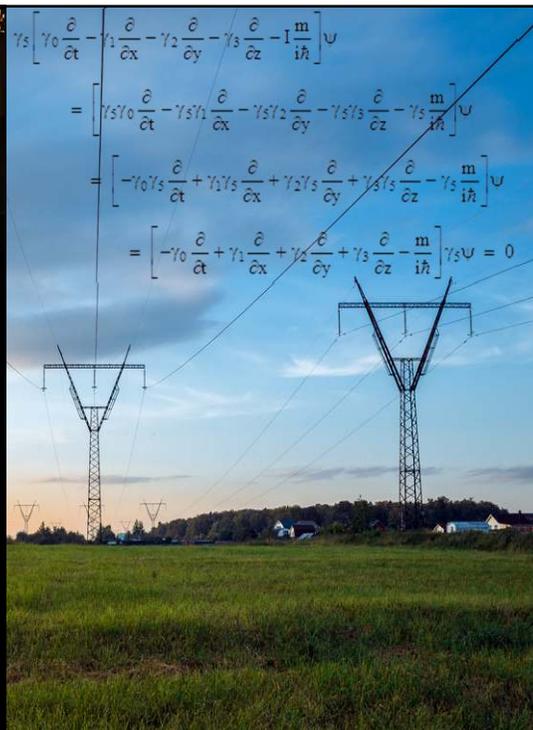
PAIRS quickly processes massive, complex geospatial and time-based datasets collected by satellites, drones, aerial flights, millions of IoT sensors and weather models accurate to within 250 meters.

PAIRS helps Oncor adjust maintenance operations to improve public safety and service reliability.



## ExxonMobil is trying to address energy challenges by pushing the boundaries of science and technology.

Advances in quantum computing could provide ExxonMobil with an ability to address computationally challenging problems across applications with the potential to improve a country's power grid.



## Summary

- Cloud, AI, IoT, and Quantum computing are the means to extract value from massive data
- Platforms will then be the means to achieve scale and agility, and create broad ecosystems
- EVERY industry is being transformed

