



The Industrial Internet: Opportunities, Disruptions and Standards

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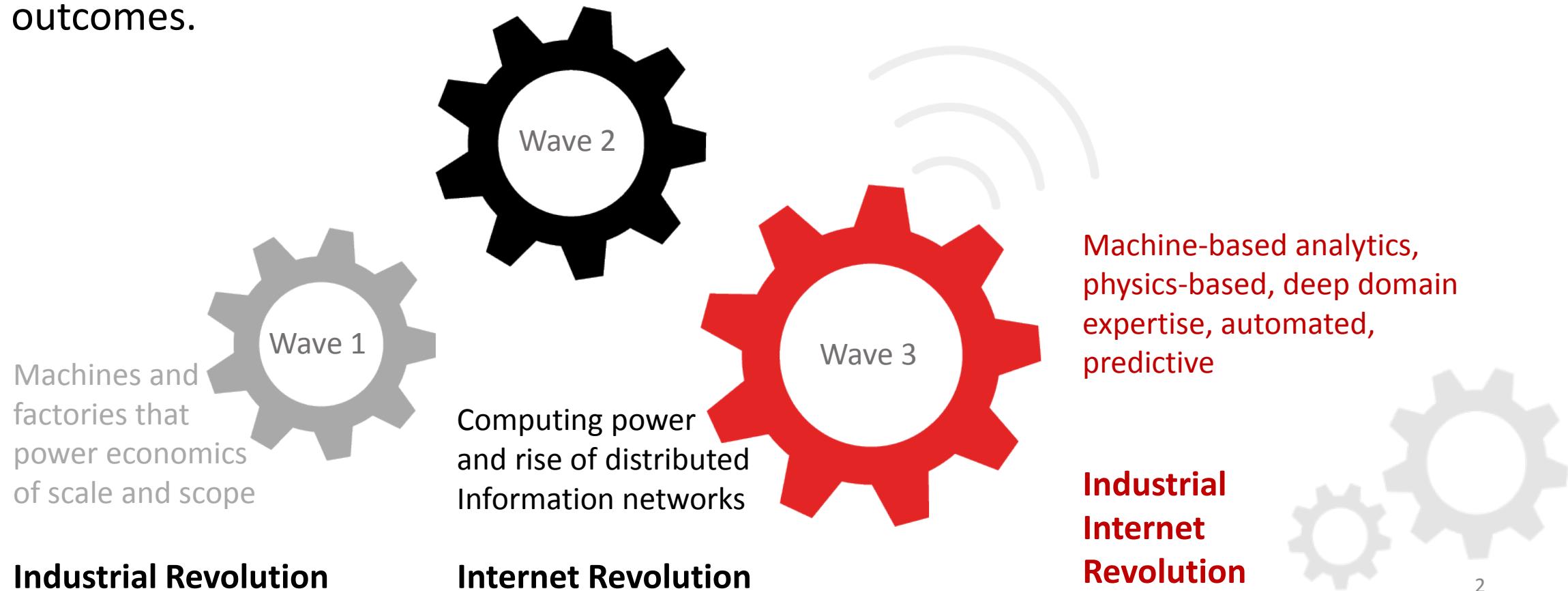
Industrial Internet Consortium





The Industrial Internet

It's an internet of things, machines, computers and people, enabling intelligent industrial operations using advanced data analytics for transformational business outcomes.

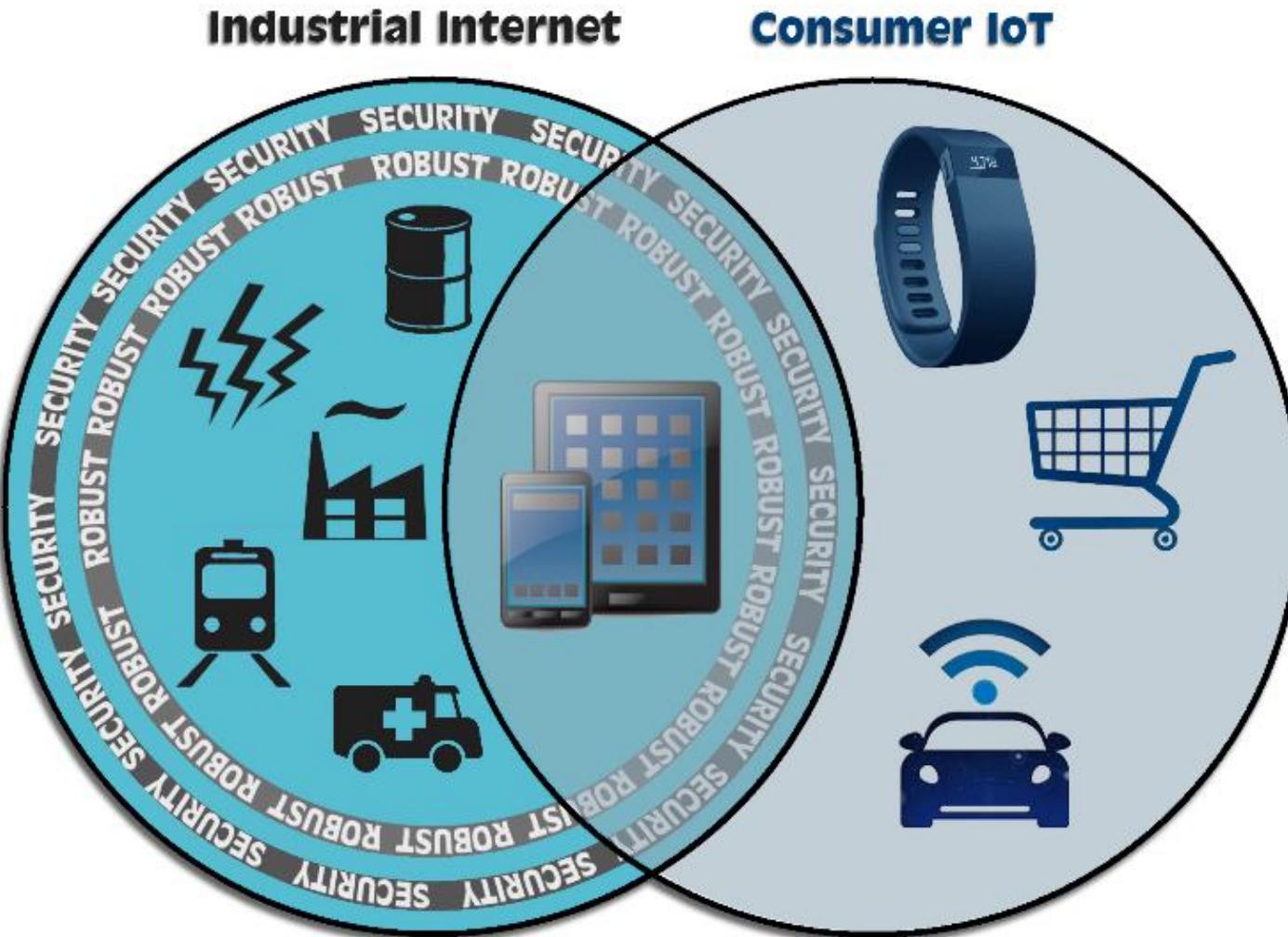




Industrial vs. Consumer Internet of Things

Similar Technology Drivers

- Small inexpensive sensors & actuators
- Low cost processing power and data storage
- Smart devices
- Connectivity



Different Business Drivers

- **Consumer**
 - Adequate Quality
 - Modest Security
 - Cost Sensitive
- **Industry**
 - QoS
 - Safety
 - Robust Security
 - ROI Sensitive
 - Efficiency
 - New Products
 - New Markets



The Measurable Outcome will be in the Trillions of Dollars

- GE: *\$32.3 trillion opportunity* representing *46% share* of GDP today.
- Cisco: Internet of Things (IoT) will *increase private sector profits 21%* and *add \$19 trillion* to the global economy by 2020
- Gartner: IoT product and service suppliers will generate *incremental revenue exceeding \$300B* in 2020.
- McKinsey Global Institute: *\$33 trillion operating costs* could be impacted by IIoT





Monetization

1% savings from efficient Industrial Internet solutions could save billions in operational costs

\$30B

fuel cost saving
in aviation
industry



\$66B

fuel cost saving
in gas powered
fleets



\$63B

productivity
improvement in
healthcare



\$90B

reduction in
Cap X in oil & gas
exploration and
development



\$27B

productivity
improvement in
rail industry





The Industrial Internet Consortium

The IIC brings together the organizations necessary to accelerate growth of the Industrial Internet by identifying, assembling and promoting best practices and technologies.

“To accelerate growth of the Industrial Internet by coordinating ecosystem initiatives to connect and integrate objects with people, processes and data using common architectures, interoperability and open standards that lead to transformational business outcomes.”

268 Member Organizations
Spanning 33 Countries

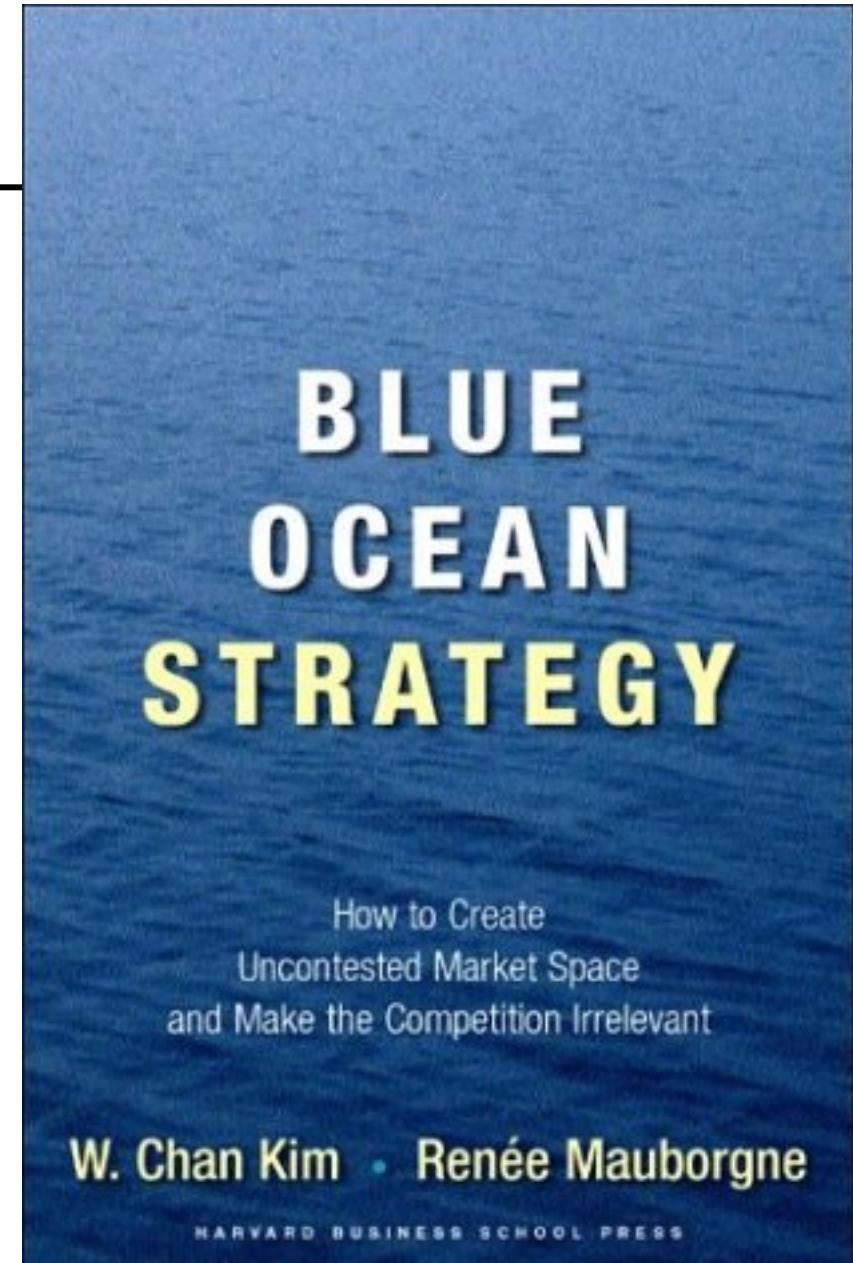




Blue Ocean

A “blue ocean” market is one where you gain more from *cooperating* with competitors to *grow* the market.

This is in contrast to fierce *competition* to *divide* the market.



Business Strategy and Solution Lifecycle



Business Strategy



Solution Lifecycle



Project Toolkit

IIRA

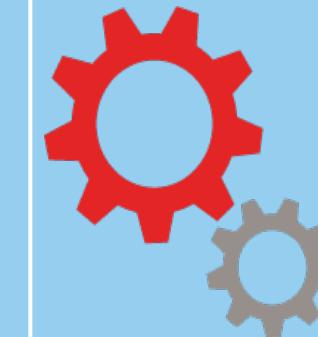
Security Framework



Requirements for Standards



Topics and Themes



Business Model,
Project Mgmt,
Practices



Project
Specifications
& Reports



Architecture
&Design



Testbeds
& Projects



The IIC and standards organizations

The IIC is not a standards organization.

The IIC will:

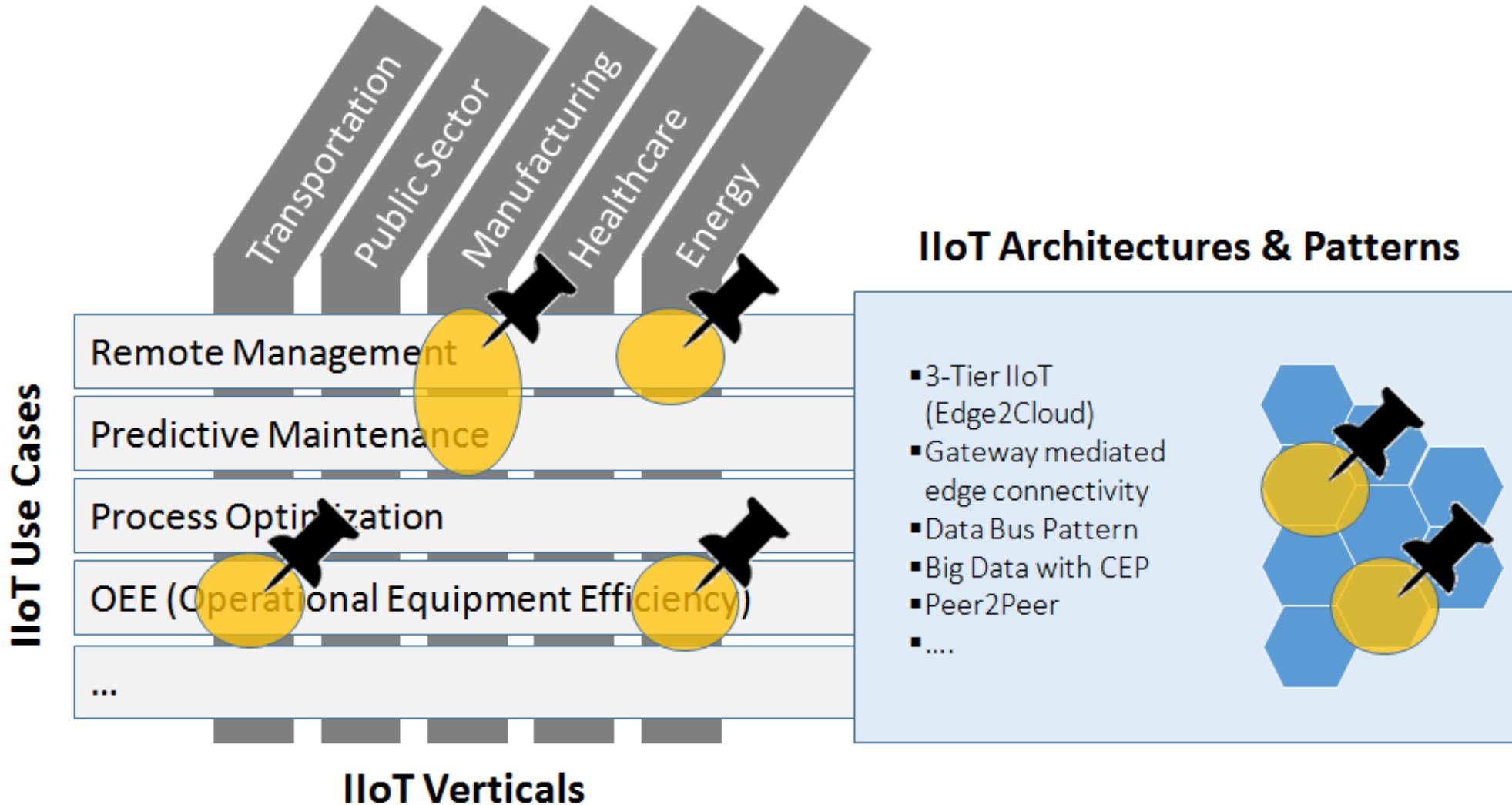
- establish a reference architecture
- evaluate existing standards against it
- identify requirements, and
- propose these requirements to standards organizations

Requirements are different for the Industrial Internet compared to consumer IoT.





Industrial Internet Interoperability Coalition (I3C)





The Future

“Industrial Internet of Things: Unleashing the Potential of Connected Products and Services”
by the World Economic Forum, with Accenture

Make specific operations more efficient:

- Asset utilization
- Operation cost reduction
- Worker productivity

Operational Efficiency

- Pay per use
- Software-based services
- Data monetization

New Products and Services

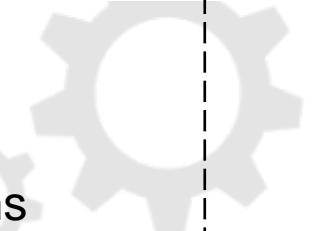
- Continuous demand-sensing
- End-to-end automation
- Resource optimization and waste reduction

Autonomous, pull economy

Outcome Economy

Shift from selling assets
to selling outcomes:

- Pay per outcome
- Connected ecosystems
- Platform-enabled marketplace





Thank you

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Things are coming together





INDUSTRIAL INTERNET CONSORTIUM

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