



Internet Of Things – IBM Point of View

The Power of Actionable Insight

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IoT offers a transformative business opportunity

Changing how business operates



1

Unlock **new revenue** from existing products and services (*connected product*)

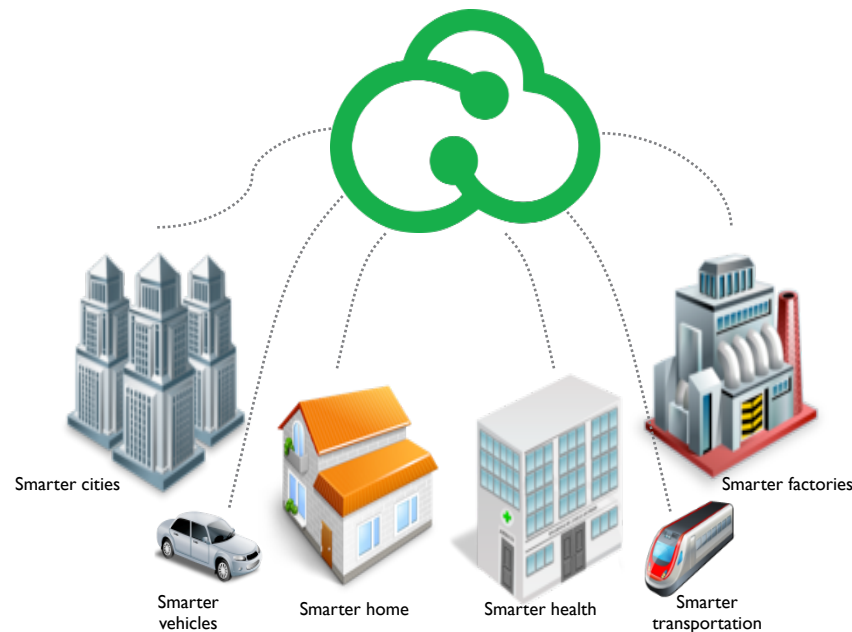
2

Inspire **new working practices or processes** (*asset maintenance*)

3

Change or create **new business models or strategies** (*insurance industry*)

More and more of the world's activity is being expressed digitally by **billions of interconnected devices**...



...providing businesses with the ability to **learn** more about their operating environment, and identify and act with the potential to **create new value**.

Today 3 technology forces are converging that are accelerating IoT



DATA

Unlocked from billions of connected devices

CLOUD

Standards based connectivity from anywhere

ENGAGEMENT

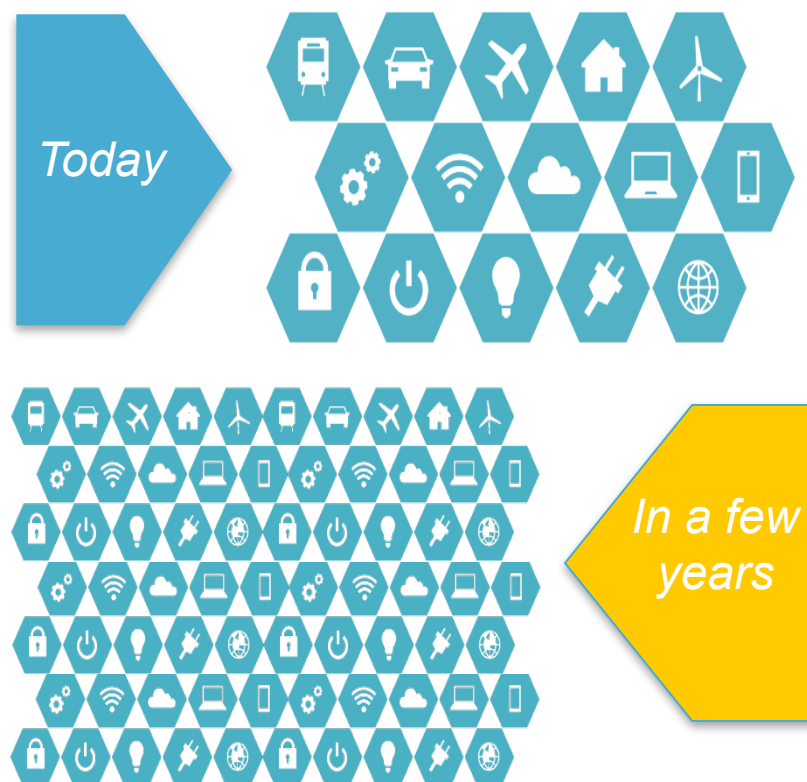
New revenue opportunities created from insights

New sources of data for business

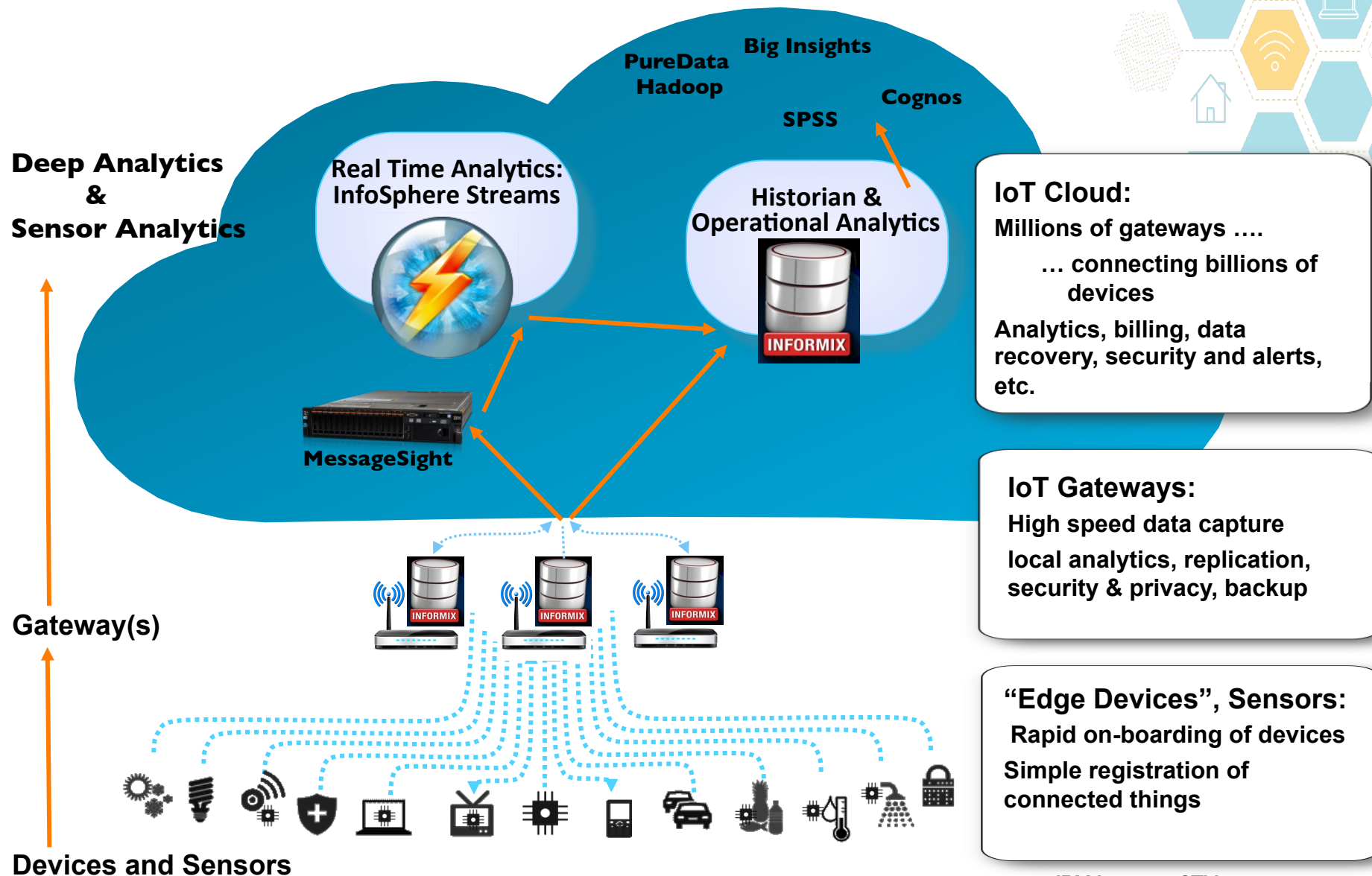
Creating systems of insight by unlocking data from billions of interconnected devices

“By 2020, Internet of Things marketplace will rise to \$7.1 trillion and nearly 50 billion devices”

Source: “IDC, Worldwide and Regional IoT 2014-2020 Forecast



Make the most of your IoT Data



The ultimate app for cloud

IoT takes computing power out of the data center



“Within the next five years, more than **90 percent** of all Internet of Things data will be hosted on service provider platforms as cloud computing reduces the complexity of supporting the Internet of Things ‘data blending.’”

Source: IDC, Dec 2014

<https://www.idc.com/getdoc.jsp?containerId=prUS25291514>

The cloud is critical for devices beyond the reach of the data center to connect and communicate from anywhere in the world through open standards.

Insights that lead to new ways to engage

Mobile and social technologies are changing expectations on engagement



Personalized and **instant** are the new expectations for engagement.



Internet of Things gives businesses access to product usage data they've **never had before**.

Personalized services designed from usage data creates opportunities for **new sources of revenue**.

IBM Internet of Things View

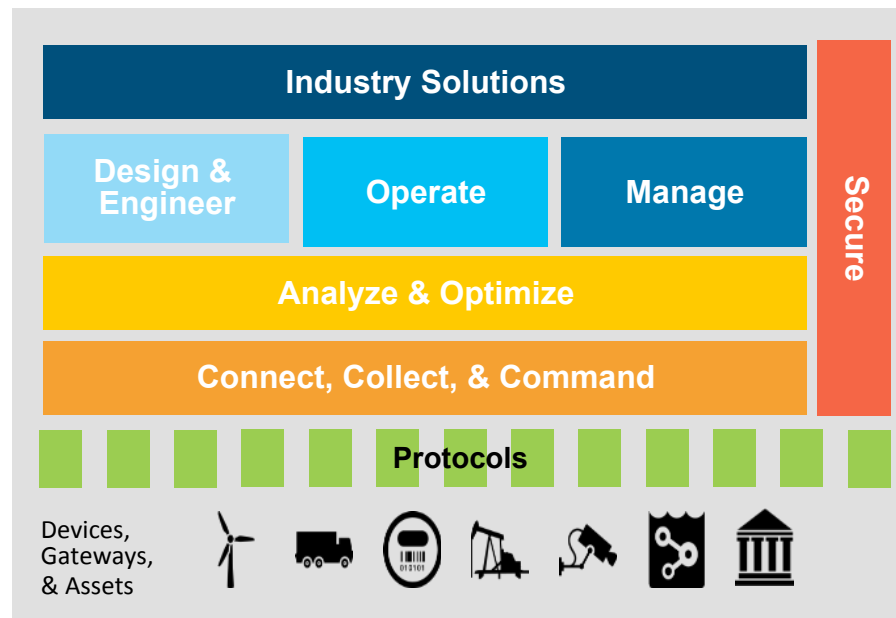
Design and Engineer
Continuous engineering of
Systems of Systems

Operate
Solution from
development
to production

Manage
The lifecycle of
Assets ensuring
safe, reliable and
predictive operations



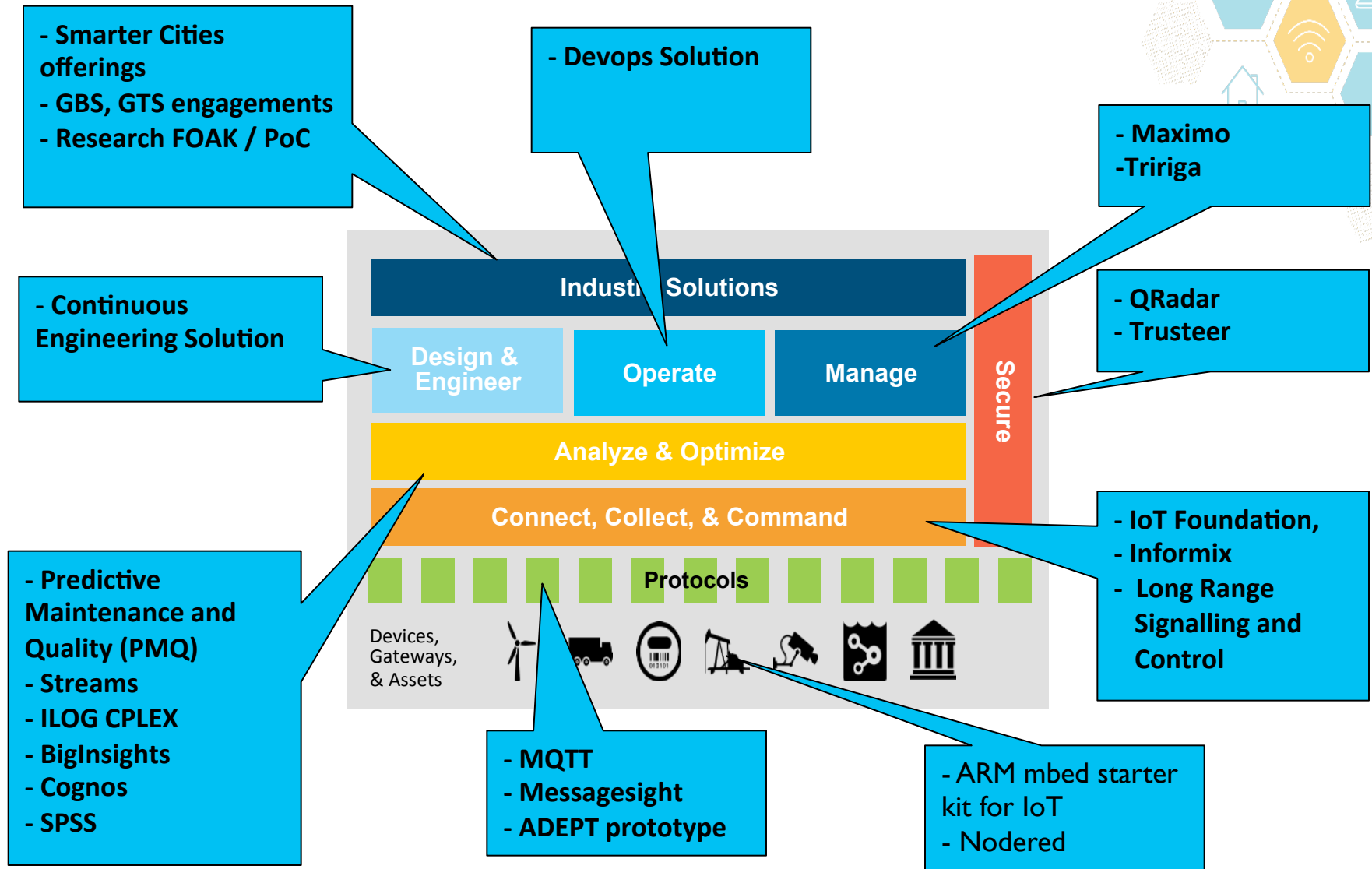
**Connect, Collect
& Command**
Connect devices
using a variety of
protocols and collect
data.



Secure
Full Lifecycle
from device till
Industry solutions

**Analyze &
Optimize**
Analytics on static or
moving data at right
level in the solution

IBM Internet of Things Solutions



IoT value is delivered in four foundational areas



Industry Transformation

Evolve new business models

Packaged offerings that include strategic consulting and business process change

Applications & Solutions

Mask complexity and reduce risks

Software and service solutions targeted at specific domains

Platforms

Build and manage IoT solutions

Engineering and programming platforms

Devices & Networks

Connect devices into platforms

Hardware, networking, and operating systems infrastructure



IBM Internet of Things

Devices and Networks includes the hardware, networking and operating infrastructure that serve as the foundation of things in IoT solutions



•Four Foundations

- Industry Transformations
- Applications & Solutions
- Platforms
- Devices & Networks >**



Expansive, scalable and secure ecosystem that drive interoperability via open source and standards bodies

- ✓ Driving convergence in IoT industry standards
- ✓ Connect devices into platforms and vendor specific IoT centric solutions seamlessly and securely

Platforms provide a foundation for building and managing IoT solutions and bridges between device manufacturers and our higher value outcomes



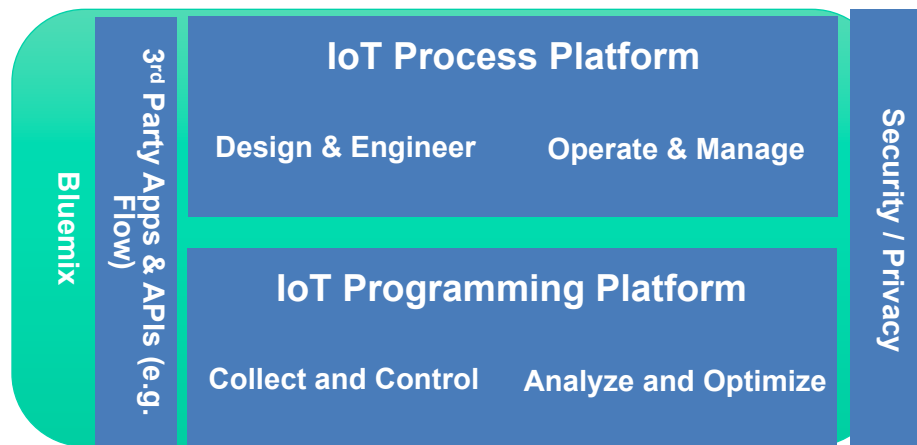
Four Foundations

Industry Transformations

Applications & Solutions

Platforms >

Devices & Networks



Product Family

Continuous Engineering

IoT Foundation Offerings:
(Connect, IM, Analytics, Risk
Management)

Global, innovative platforms to deliver high performance at cost-effective scale

- ✓ Reduce the cost while supporting innovation
- ✓ Utilize a flexible platform that provides best practices and better processes

Applications and solutions provide further differentiated value through unique capabilities, products and industry specific expertise

Four Foundations

Industry Transformations

Applications & Solutions >

Platforms

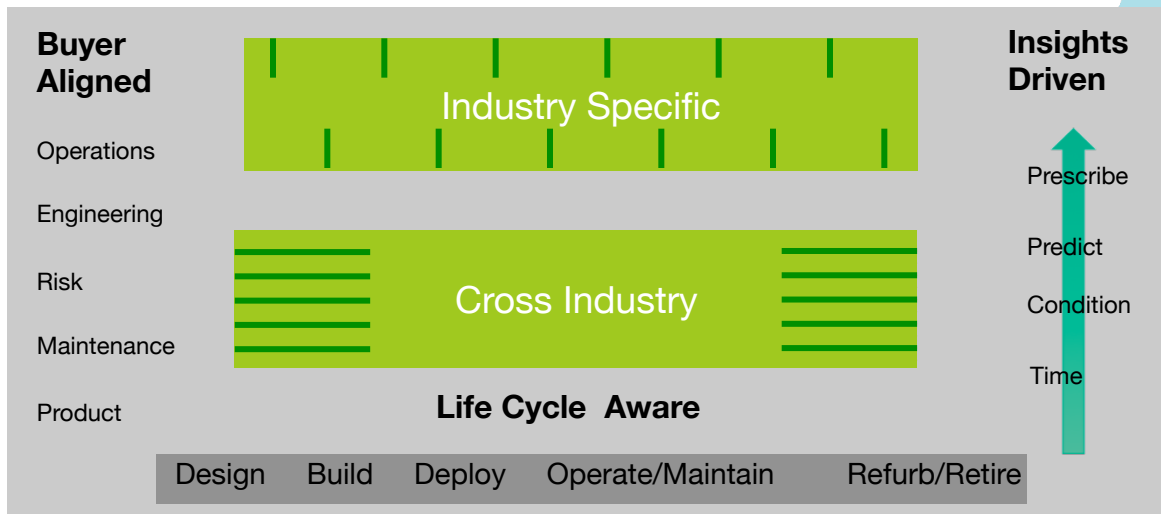
Devices & Networks

Product Family

Maximo

Tririga

PMQ



Breadth and depth of applications to uncover opportunities in all types of sources

- ✓ Maximize the value of your existing assets and investment
- ✓ Optimize your existing operations with real-time analytics and insight

Industry Specific Transformations combine service, expertise, ecosystem and scale to evolve the enterprises to create and deliver new revenue with new models

Four Foundations

Industry Transformations >

Applications & Solutions

Platforms

Devices & Networks

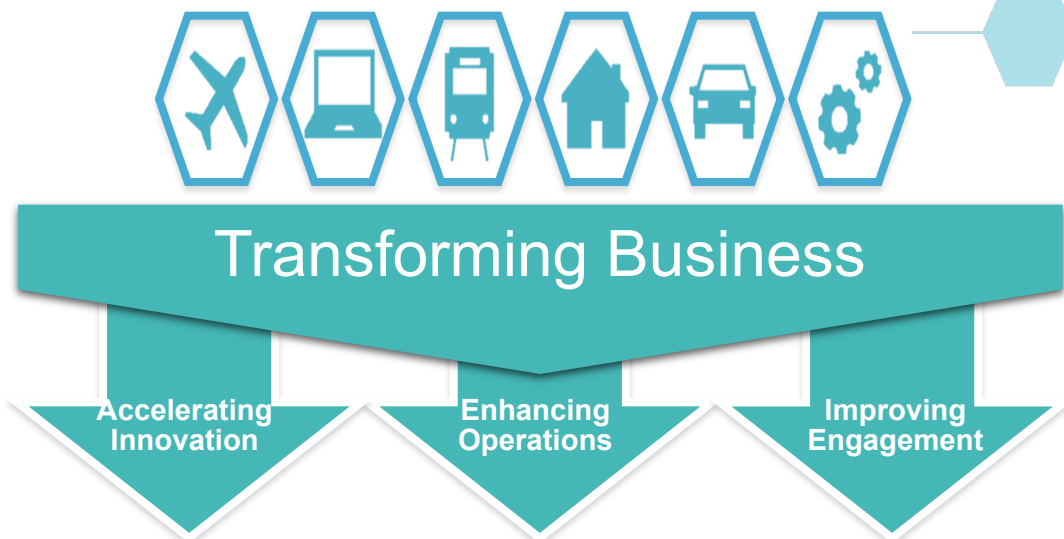
Product Family

IoT for Electronics

IoT for Auto

IoT for Insurance

IoT for Aviation



Vertical integration and industry focus to accelerate transformation with industry specificity

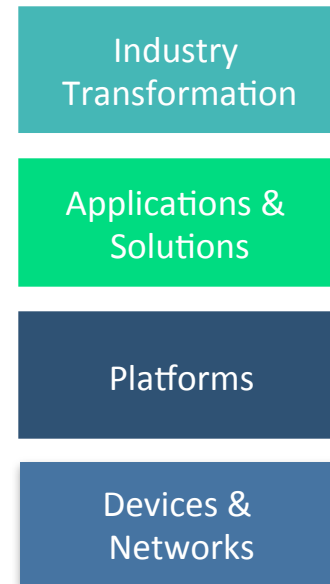
- ✓ Get you to your business objectives faster
- ✓ Apply the right technologies with the right expertise to expedite adoption

IBM – The **Only** Provider of Enterprise IoT



Only IBM delivers Enterprise IoT by enabling businesses to transform their Industry with new services, offerings and sources of revenue.

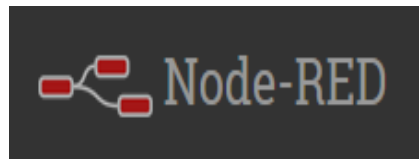
Accomplished by enabling innovators who engineer the next generation of connected devices and those who operate those devices to deliver new business outcomes through better innovation, operation, and customer engagement



End-to End
Integrated offerings
combined with
industry partnerships

IBM is a **leader** in defining IoT

Participating member in key open standards and industry initiatives



Example: Smarter Buildings

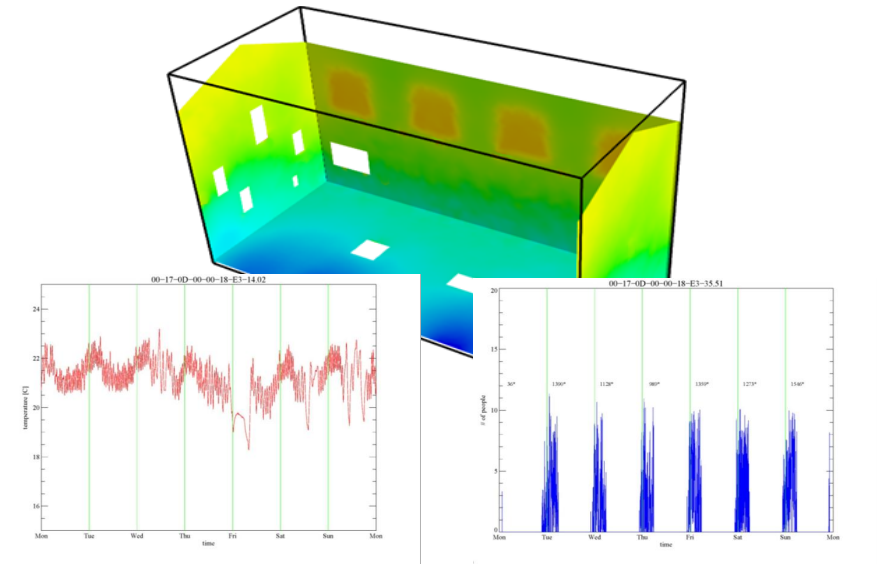
Client: Museum (National Historic Landmark) on the United States East Coast

Client Requirements

- Improve art preservation by tightly controlling micro-climatic conditions in art gallery
- Need to control temperature, humidity, corrosion contamination, light levels, air flow, pressure, people movement
- Solution should be invisible, i.e. no sensors or wires visible, non-disruptive to the business

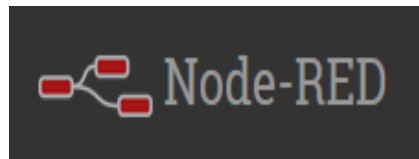
IBM Solution

- Detailed Physical Model of art gallery helped identify 3D view of micro-climate;
- Recommended placement of art work, sensor location, where to locate HVAC, and restrictions on number of visitors tightly control micro-climate
- Predictive analytics included weather forecasts and historical number of visitors to ensure HVAC changes could be made in advance
- Deployed entire IT solution on-site and integrated with Building Management System



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Less talking, More doing

Get started today

Learn more about Internet of Things from IBM

ibm.com/loT

Try out Internet of Things on IBM Bluemix

ibm.biz/try_iot

Join us in our IoT conversations
@IBMIoT





Backup slide

Software delivery is at the heart of today's top technology trends



Big Data

Insights on new products by more efficiently interpreting massive quantities of data



Cloud

Demand for apps requires fast, scalable environments for dev and test, as well as production



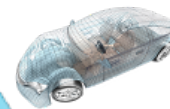
Social Business

Broader set of stakeholders collaborates to deliver continuous innovation and value



Instrumented Products

Industry requirements demand faster response to regulations and standards, with traceability and quality



Mobile

Modern workforce expects constantly updated software to connect to enterprise systems



Software delivery

Intelligent/Connected Systems

Software component in smart products driving increased value and differentiation

