

POMS College of Service Operations - "Experiential Service" :  
Orlando, Florida  
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## Creating Business Value and Intelligence in the Digital Era

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Worldwide Executive - Creating Business Value and Intelligence in the Digital Era

# The Digital era's currency is speed and innovation

1

Why?

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2

What?

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3

How?

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Author and technology prognosticator George Gilder has called today's cloud data centers 'information factories.' Since the cloud can be viewed in part as a representing **the industrialization of IT and the end of the era of artisanal boutiques**. Many of the lessons learned in the evolution of manufacturing are **being applied – consciously or not – via the cloud**.



- Adapt or perish, now as ever, is nature's inexorable imperative.
  - H. G. Wells
- If you take nothing else away from today, its that hybrid cloud is changing “Experiential Service” digitally. Will you be a disruptor or be disrupted?
- The bridge in the Digital Shift
- Taking Action



# What is happening...

Emerging networks of sensor enabled objects promise to create **new business models, improve business processes, and reduce costs and risk**

**30** BILLION  
Sensor enabled objects  
connected to networks  
by 2020



**212** BILLION

Total number of  
available sensor  
enabled objects by  
2020<sup>1</sup>

212B is **28x** the  
total population of  
the world



Source: IDC 2014

# What is driving change... requiring extraordinary performance



Increase in connected machine-to-machine devices over past 5 years<sup>3</sup>



Increase in Mobile Network connections speeds from 2013 to 2018<sup>2</sup>



Price decline in MEMS (microelectromechanical systems) sensors in last 5 years<sup>3</sup>

Source: IDC 2014

it's worth noting that major e-commerce providers have conducted experiments and determined that a few hundred milliseconds' delay in serving web pages (i.e., few tenths of second) can cause **revenues to decline by 20%**.

Ginni Rometty

“The biggest driver of  
sustained growth is the  
Client Experience”





There's no longer any real distinction between business strategy and the design of the user experience. The last best experience that anyone has anywhere, becomes the minimum expectation for the experience they want everywhere.

Bridget van Kralingen  
Senior Vice President  
IBM Global Business Services

# Will you disrupt or be disrupted?

**1/3 of the top 20** companies in every industry will be disrupted over the **next 3 years**

- IDC FutureScape, Nov 2015

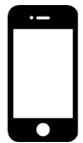
*What are we hearing as a result? “Experiential Service” is about speed and innovation*



The need for speed in rapidly changing markets



New business models from born on the cloud competitors



Consumer expectations on digital engagement models



Market pressures to reduce cost





# Value Disciplines by Joe Weinman



*"...reliable products or services at competitive prices...delivered with minimal difficulty or inconvenience."*

## **Operational Excellence**

*Processes & Resources*



*"...leading-edge products and services that consistently enhance the customer's use or application of the product..."*

## **Product Leadership**

*Products & Services*



*"...targeting markets precisely and then tailoring offerings to match exactly the demands of those niches."*

## **Customer Intimacy**

*Customer Relationships*

Cloud



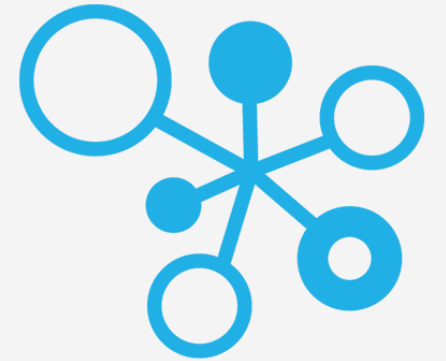
Big Data &  
Analytics



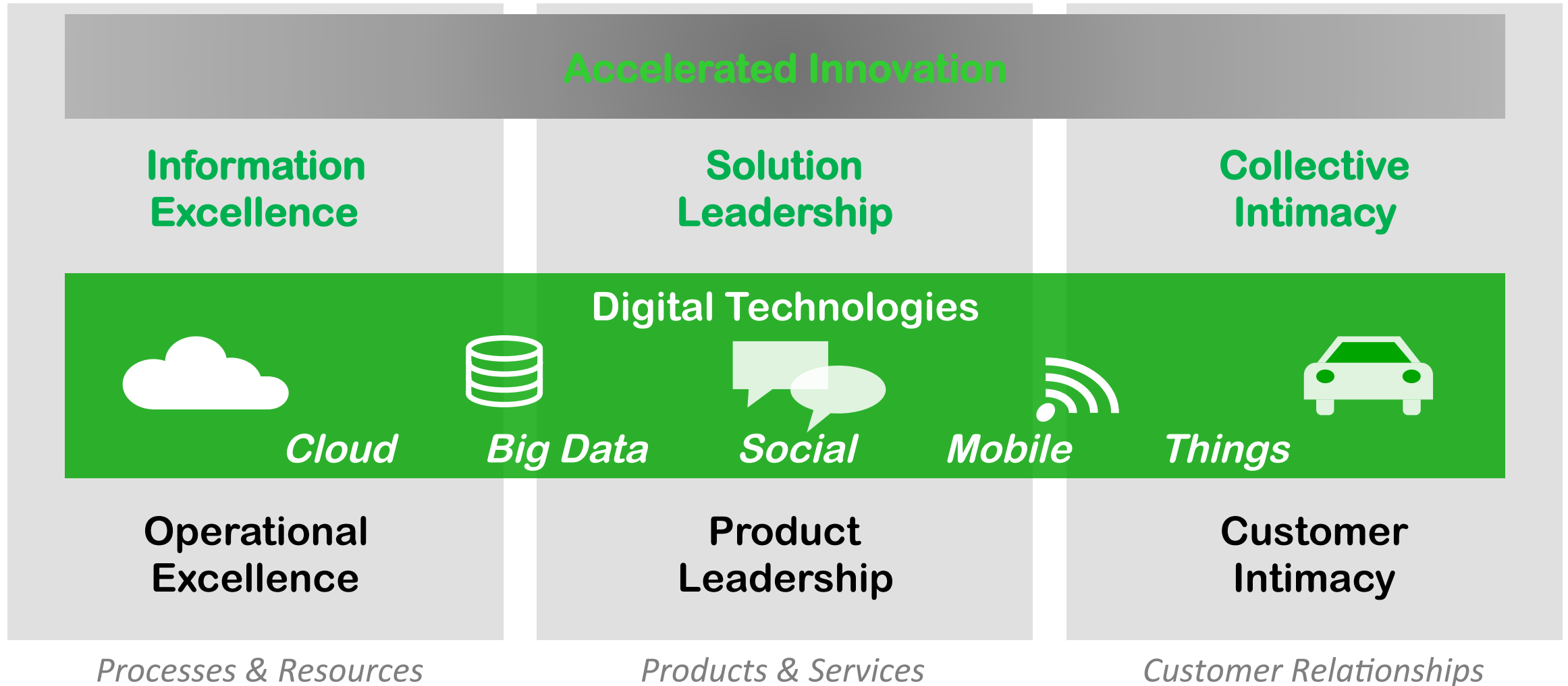
Mobile



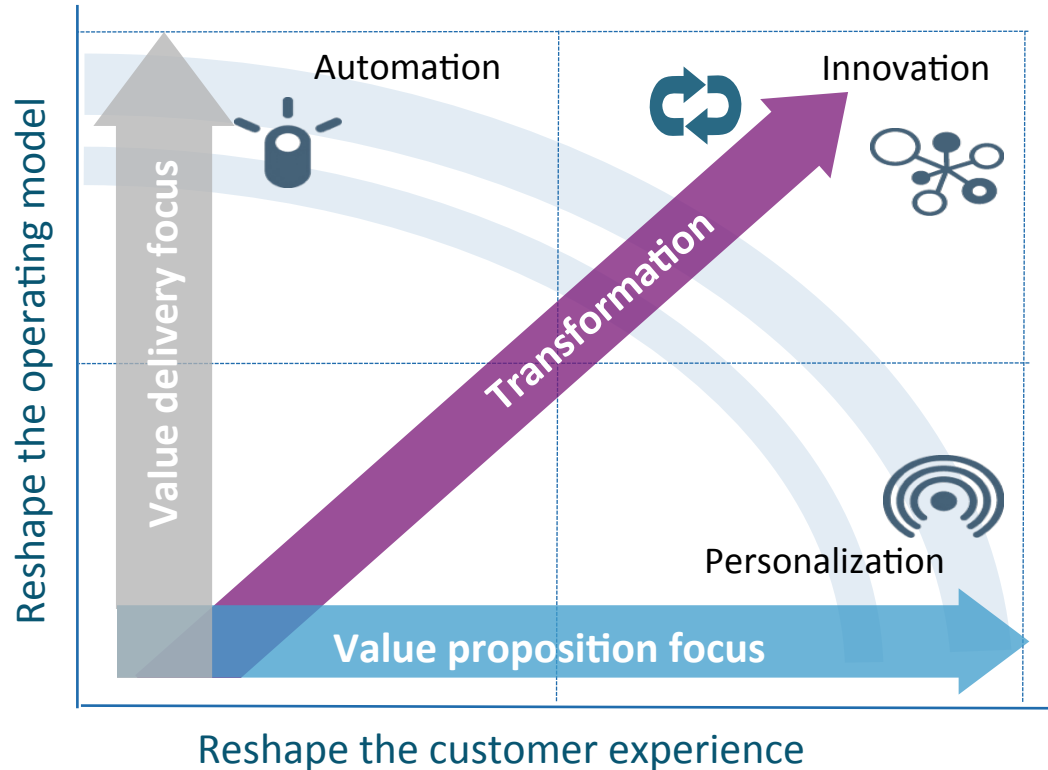
Social







# What is your strategy?



# The Digital Technologies are the bridge and what do they have.



- 
**DevOps for enterprise innovation**
- 
**Choice with consistency**
- 
**Hybrid integration**
- 
**Powerful, accessible data & analytics to Cognitive solutions**

## Performance of digital businesses vs peers

**Time to market improvement**

**6X**

**3-yr customer retention**

**+6pts**

**Share of customer wallet**

**+10pts**

Sources: 1. "Digital reinvention", IBM institute for Business Value, December 2013  
 1. "Inside the mind of Generation D", IBM Center for Applied Insights, October 2014  
 2. "Beyond Agile: Reorganizing IT for faster software delivery" McKinsey & Co, Sept 2015

# Smart, Digital, Connected



Source: Apple

# Remote Monitoring / Control



Source: Google / Nest

# Upgradability



Source: Tesla

# Outcomes





# Experiences



Source: Disney

# Transformations



Source: Nike

# Solution Ecosystem



Source: Nike, Withings



# IBM Design Thinking Framework for Clients

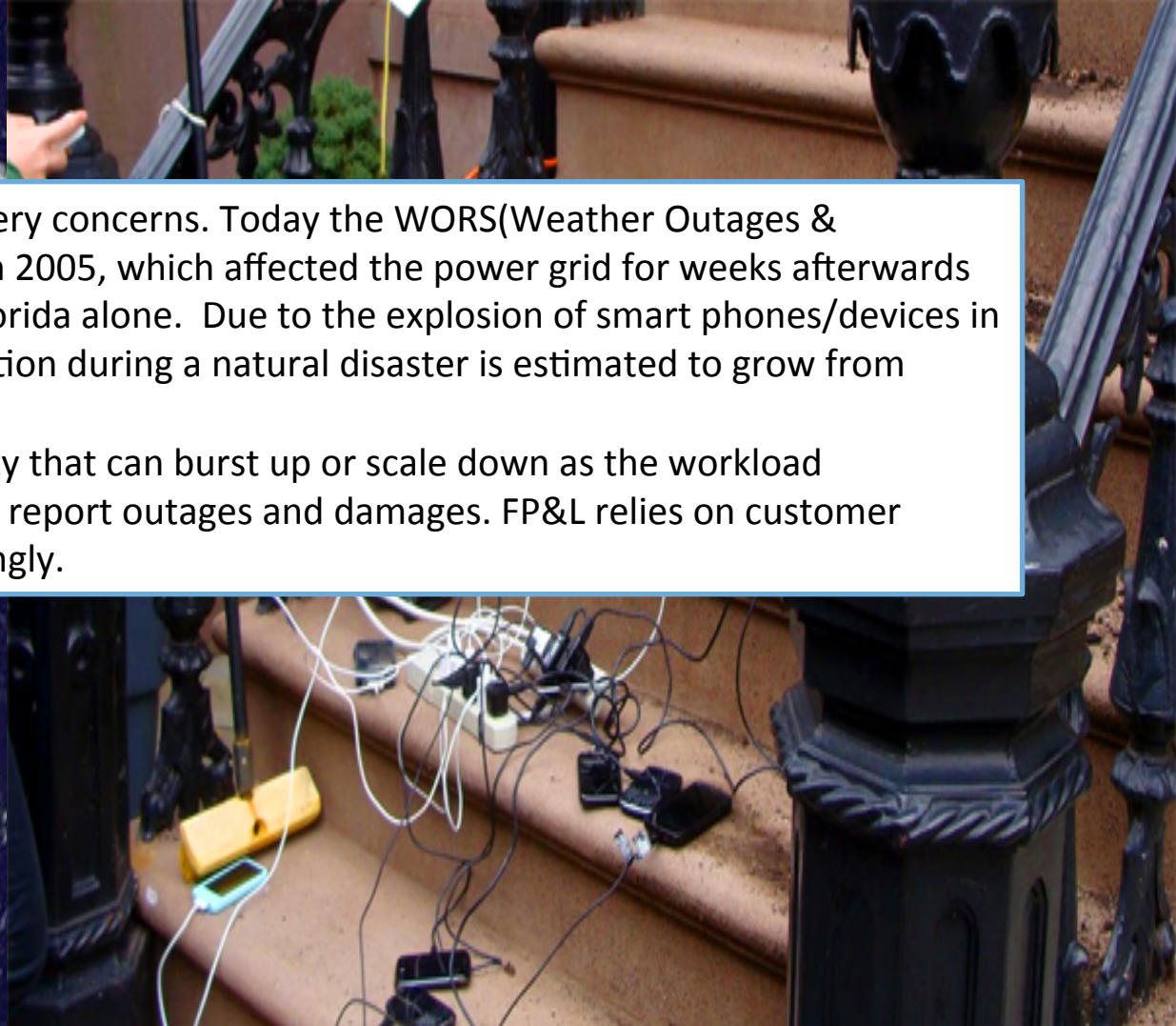
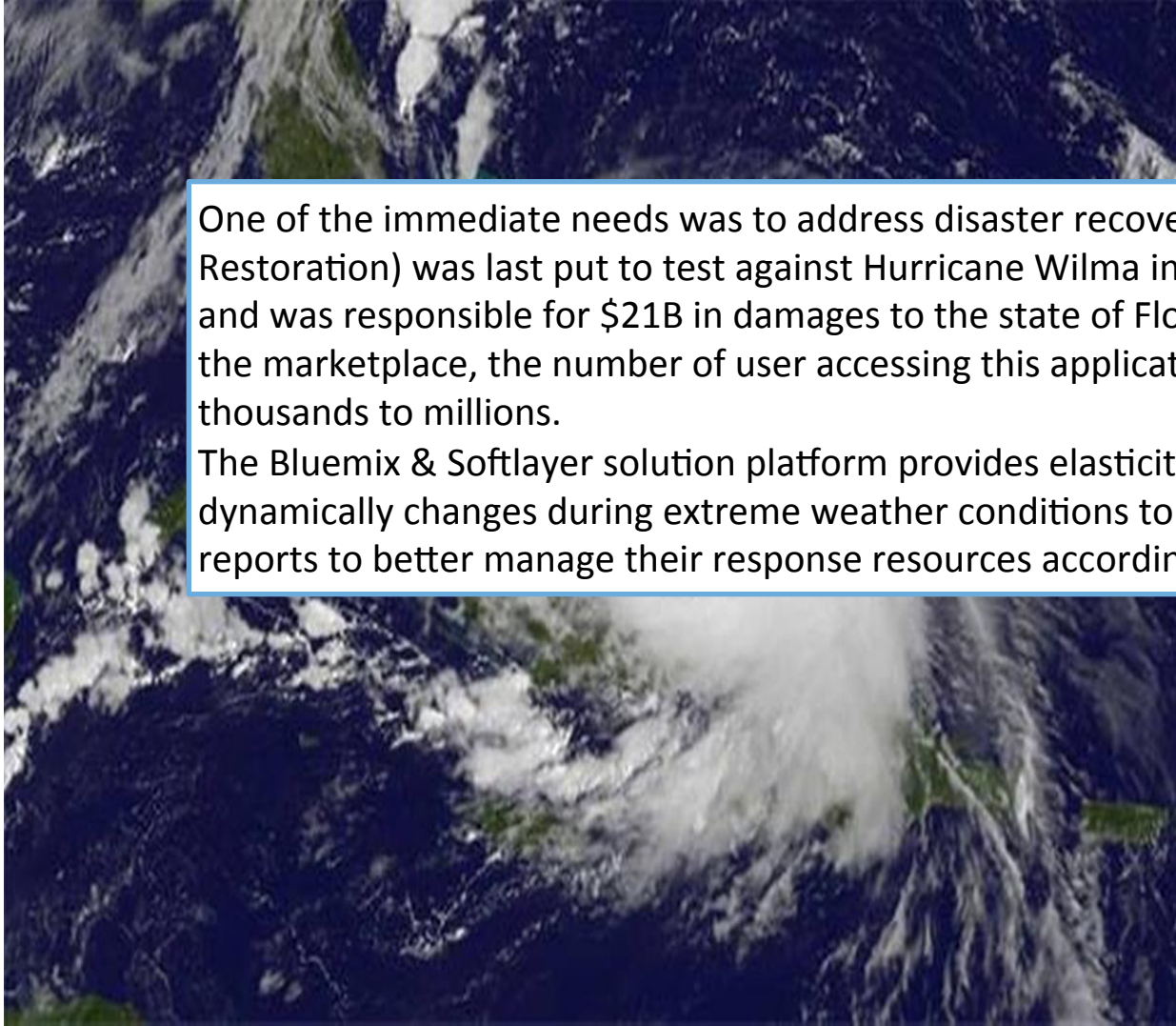


- An approach for **leaders** to guide their teams to achieve market outcomes
- An approach for **project teams** (business, design, & technology) to develop exemplary solutions
- An approach to transform **companies** into becoming client-centered

## IBM Design

IBM Interactive Experience is the client delivery team for IBM Design Thinking

IBM worked with Florida Power & Light – the principal subsidiary of NextEra Energy Inc.- to protect and serve roughly 9 million people in Florida using Cloud and Mobile technology.



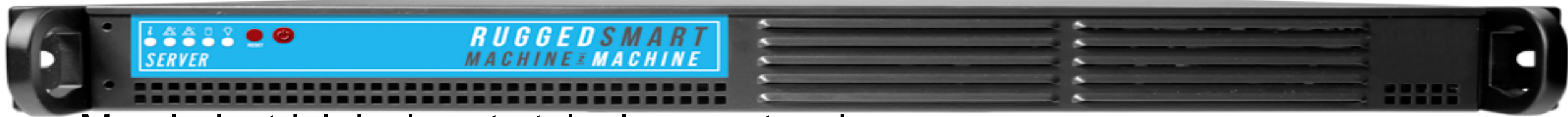
One of the immediate needs was to address disaster recovery concerns. Today the WORS(Weather Outages & Restoration) was last put to test against Hurricane Wilma in 2005, which affected the power grid for weeks afterwards and was responsible for \$21B in damages to the state of Florida alone. Due to the explosion of smart phones/devices in the marketplace, the number of user accessing this application during a natural disaster is estimated to grow from thousands to millions.

The Bluemix & Softlayer solution platform provides elasticity that can burst up or scale down as the workload dynamically changes during extreme weather conditions to report outages and damages. FP&L relies on customer reports to better manage their response resources accordingly.

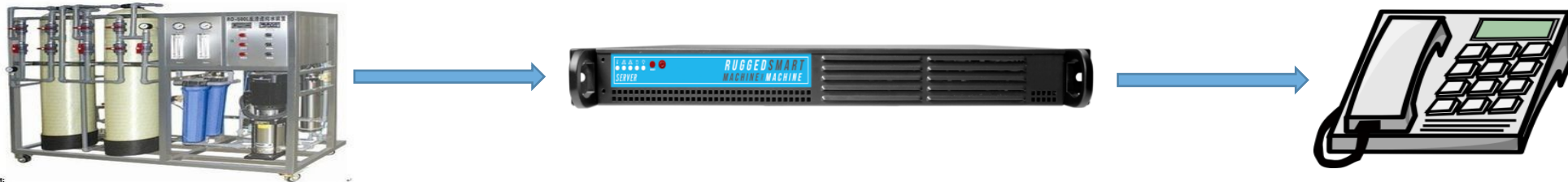
# RSM2M Server Technology

## RSM2M Server

**RUGGEDSMART**  
**MACHINE  $\bar{2}$  MACHINE**



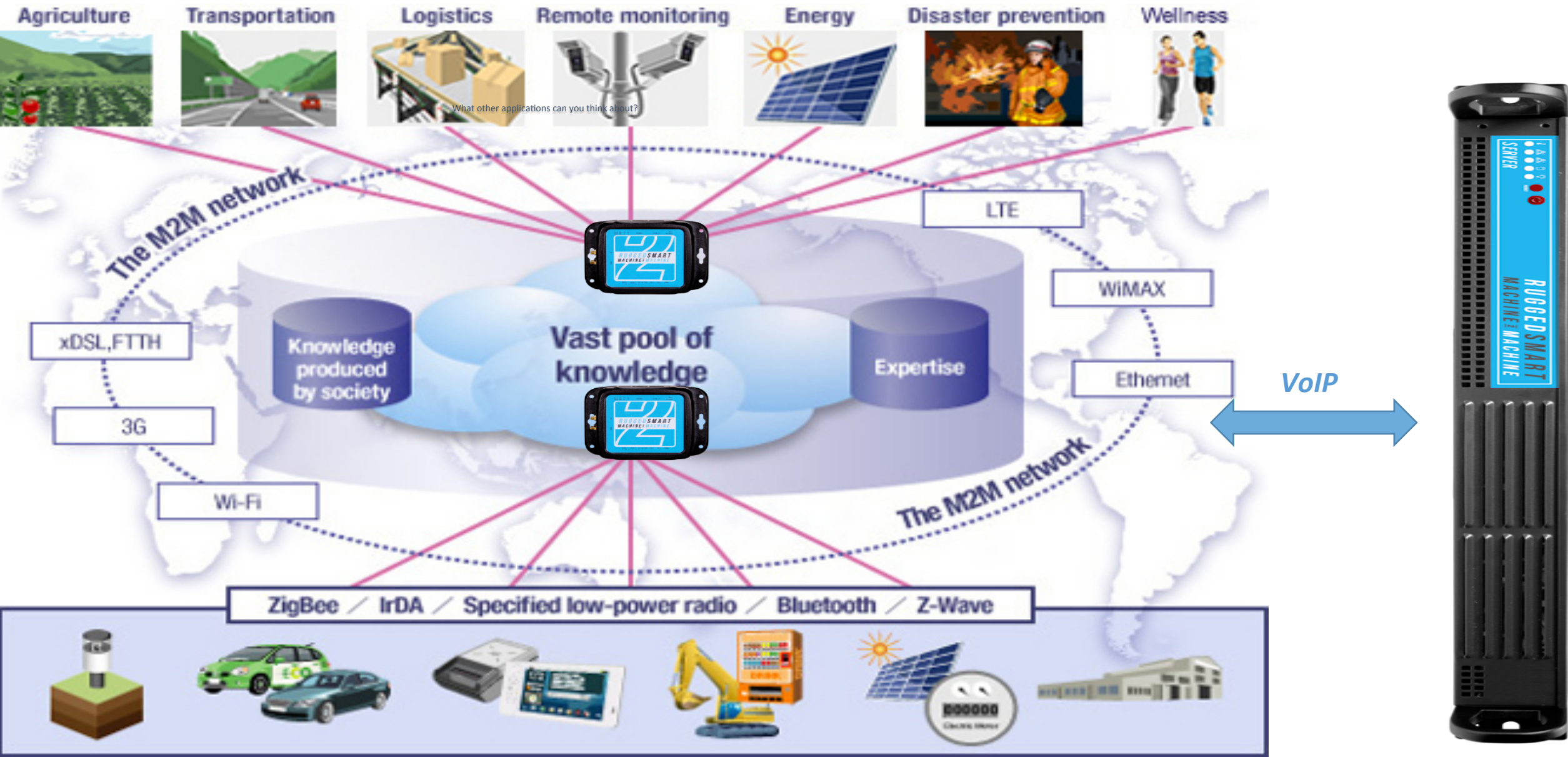
Map Industrial devices to telephone extensions



Voice calls/ Emails/ Text msg

Integration software/ cloud app keep log of events occurred and timestamps

# PLC International: More complex than expected



What other applications can you think about?



# Solution Demonstration

RSM2M Cloud

**RUGGEDSMART**  
**MACHINE  $\bar{2}$  MACHINE**

**RUGGEDSMART**  
**MACHINE  $\bar{2}$  MACHINE**



**IBM**®

PLC International: [https://www.youtube.com/watch?v=eO9m\\_qk9ILY](https://www.youtube.com/watch?v=eO9m_qk9ILY)



Demand for in-building mobile coverage is stronger than ever.....it's truly the fourth utility

In today's mobile world and explosion of mobile data usage, in-building communications infrastructure is the fourth utility



- Distributed Antenna Systems (DAS) market enters the “Enterprise Era”  
owners pay..... not the carriers
- Owners reject high price of DAS, look for lower cost alternative but with same carrier grade performance as more expensive traditional systems
- Whoop’s advanced integrated circuits support all 4 carriers, small footprint, remote monitoring, simple install at less than half the cost
- Whoop targeted the Enterprise space and created an innovative new technology to meet building owners, carriers and end-users demands.



# Empower students to innovate

*In your classroom and beyond*

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## The Academic Initiative

The IBM® Academic Initiative is a worldwide no-charge membership program for faculty/teachers/researchers at qualifying educational institutions.

Membership benefits include:

- Teaching materials, faculty guides, and other resources to build world-class curricula
- Cloud and software access to big data, analytics, Internet of Things, Watson, mobile, security and other technologies
- Real-world challenges in the classroom
- A student developer community for learning and engaging with the IBM ecosystem

For more information about the IBM Academic Initiative, visit: [ibm.com/academicinitiative](http://ibm.com/academicinitiative).

## Helping faculty build next-generation skills

With disruptors reinventing business processes and digital transformations, universities are challenged to nurture a new kind of thinker to meet the skill demands of startups and enterprises today. With industries transforming, there is a demand to develop agile, cloud, analytics, mobile, social, and security skills as well as to obtain real-world experiences. According to the *Raising the game: The IBM Business Tech Trends Report*, the skills gap persists:

- One in four enterprises still cite lack of skills as a major barrier to adoption for big data, analytics, cloud, mobile, and social.
- Only 14% of enterprises report having all of the cloud skills they need.<sup>1</sup>

You can better prepare your students for careers such as business analysts, data scientists, cyber-security professionals, software engineers, and developers by working with the IBM Academic Initiative.

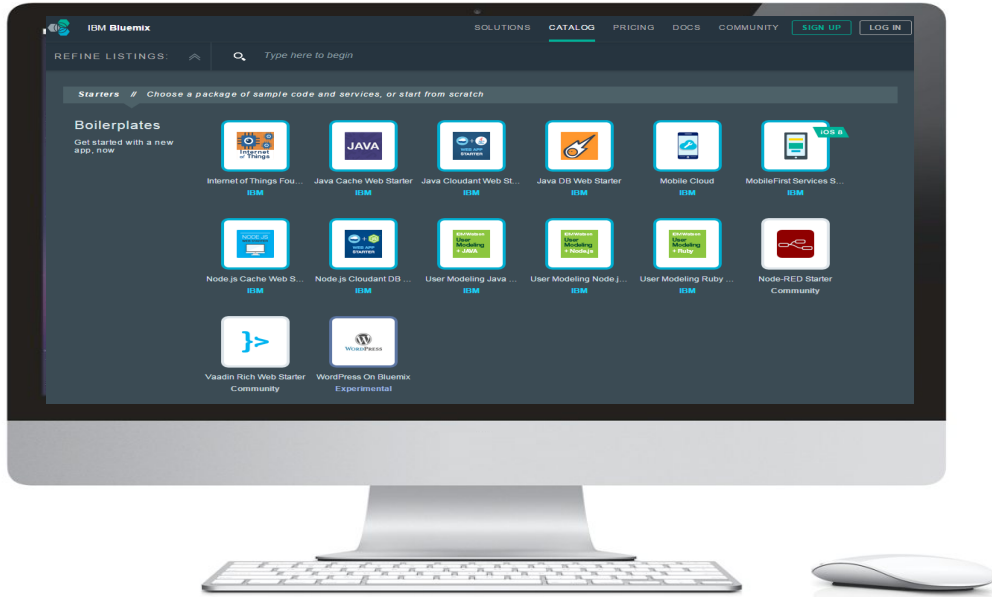
The desired outcome for IBM and an Academic Initiative member is to introduce students to concepts, technologies, and solutions that will support the development of both their foundational and critical thinking skills to prepare them to take a job or make a job.

The program has a growing membership base worldwide. Since 2004, the Academic Initiative program has helped over 50,000 faculty members from over 7,000 universities.



# IBM Bluemix as a platform

Sign up at [ibm.biz/HackBluem](http://ibm.biz/HackBluem)



<https://www.youtube.com/watch?v=OD1NP-Yk2BI>

[https://www.youtube.com/watch?v=ZR\\_jDitw0Sc](https://www.youtube.com/watch?v=ZR_jDitw0Sc)



Compose applications from a rich library of IBM, 3<sup>rd</sup> party and open source runtimes, services and APIs.



Code with confidence knowing IBM's cloud platform is built on a foundation of open standards.



Deploy and scale new applications and services with infrastructure services from IBM SoftLayer.

Services on [bluemix.net](http://bluemix.net) include:

- DevOps
- Big Data
- Mobile
- Cloud Integration
- Security
- Internet of Things
- Watson
- Data Management
- Web and Application
- Business Analytics

# 2016

## AHFE International

7th International Conference on Applied Human Factors and Ergonomics 27-31 July, 2016  
Walt Disney World® Swan and Dolphin Hotel, Florida, USA

### Walt Disney World® Resort Florida, USA

AHFE2016 will be held at the **Walt Disney World® Swan and Dolphin Hotel**, Florida, an award-winning resort with luxurious, stylish and comfortable room features, complemented with ultra-modern conference amenities and upgrades. The resort offers world-class attractions and theme parks. Take a complimentary water taxi or leisurely stroll to **Disney's Hollywood Studios®** or **Epcot®**. Continuous complimentary transportation is provided to all other **Walt Disney World®** theme parks and attractions.



### Orlando, Florida

As one of the world's busiest tourist destinations, the city of Orlando offers just about everything – spectacular shows, shopping centers and restaurants, theme park attractions, and the natural beauty of the surrounding lakes and parks.

Orlando is known as "The Theme Park Capital of the World" and in 2014 its tourist attractions and events drew more than 62 million visitors.

AHFE International  
Conference Administrator  
P.O. Box 99712  
Louisville, KY 40269, USA



**AHFE**  
International  
Applied  
Human Factors  
and Ergonomics  
Conference  
**2016**  
[www.ahfe.org](http://www.ahfe.org)

# 2016

## AHFE

Call for Participation

## International 7th International Conference on Applied Human Factors and Ergonomics

jointly with

- 1<sup>st</sup> International Conference on Design for Inclusion
- 1<sup>st</sup> International Conference on Human Factors in Management and Leadership
- 2<sup>nd</sup> International Conference on Human Factors in Cybersecurity
- 2<sup>nd</sup> International Conference on Human Factors and Systems Interaction
- 2<sup>nd</sup> International Conference on Human Factors in Robots and Unmanned Systems
- 2<sup>nd</sup> International Conference on Human Factors in Sports and Outdoor Recreation
- 2<sup>nd</sup> International Conference on Human Factors in Energy: Oil, Gas, Nuclear and Electric Power Industries
- 2<sup>nd</sup> International Symposium on Human Factors in Training, Education, and Learning Sciences
- 3<sup>rd</sup> International IBM® Symposium on Human Factors, Software, and Systems Engineering
- 3<sup>rd</sup> International Conference on Human Factors and Sustainable Infrastructure
- 3<sup>rd</sup> International Conference on Safety Management and Human Factors
- 4<sup>th</sup> International Conference on The Human Side of Service Engineering
- 4<sup>th</sup> International Conference on Affective and Pleasurable Design
- 4<sup>th</sup> International Conference on Human Factors in Transportation
- 4<sup>th</sup> International Conference on Ergonomics in Design
- 5<sup>th</sup> International Conference on Cross-Cultural Decision Making
- 5<sup>th</sup> International Conference on Human Factors and Ergonomics in Healthcare
- 5<sup>th</sup> International Conference on Applied Digital Human Modeling and Simulation
- 17<sup>th</sup> International Conference on The Human Aspects of Advanced Manufacturing (HAAMAHA): Managing Enterprise of the Future

## 27-31 July, 2016

Walt Disney World® Swan and Dolphin Hotel  
Florida, USA

[www.ahfe2016.org](http://www.ahfe2016.org)

Under the auspices of 28 distinguished  
international Boards consisting of  
583 members from 64 countries

# Take aways to keep up the momentum!

1

Understand your Role in Digital Disruption

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2

IBM's Academic Initiative – BlueMix as a Platform

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3

Provide us your thoughts and feedback

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Questions? Send email to [baamaba@us.ibm.com](mailto:baamaba@us.ibm.com)





# IBM Hybrid Integration

One cohesive offering serving all integration needs

## Create Rapidly

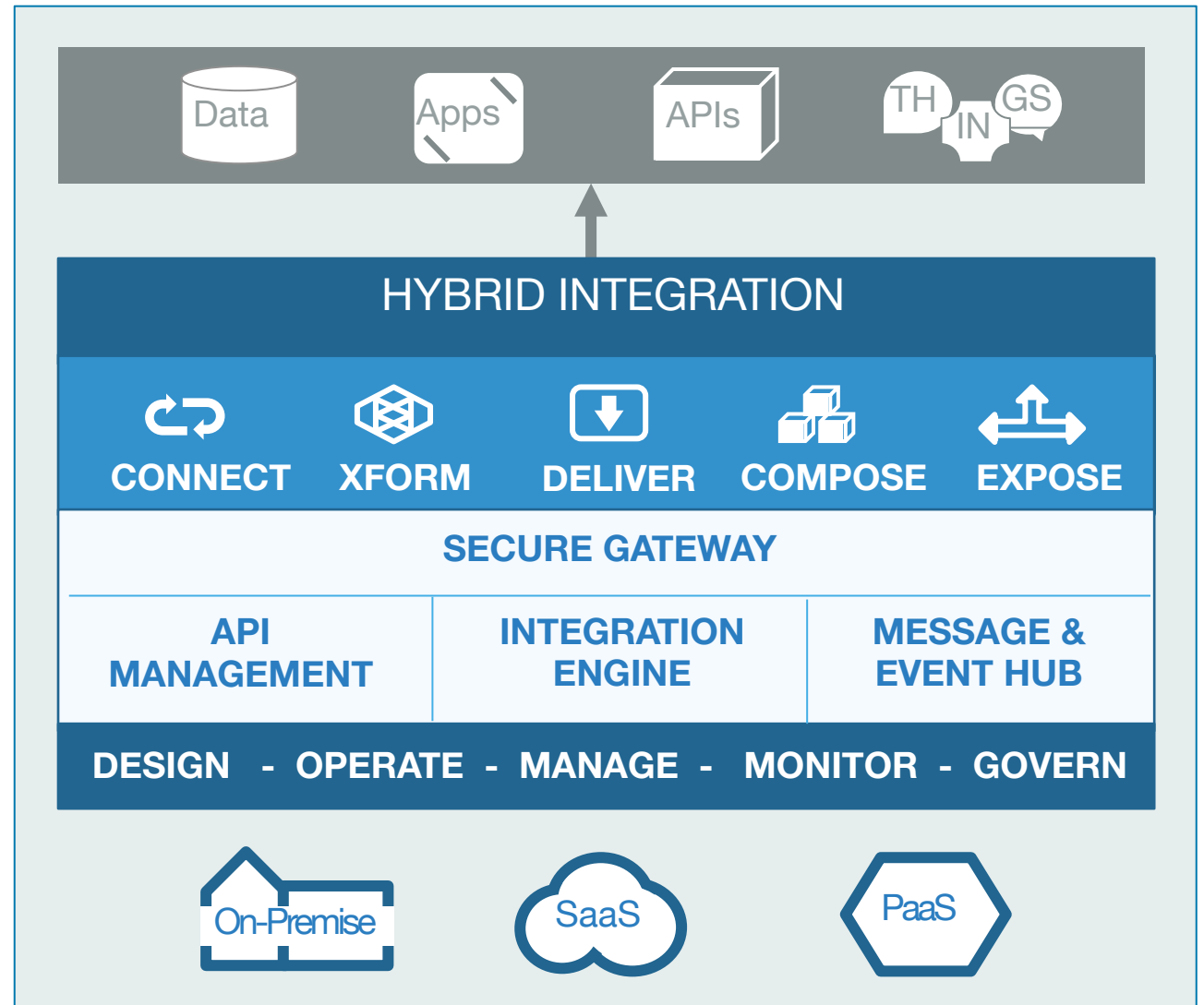
Intuitive and robust tooling to transform data to meet business needs

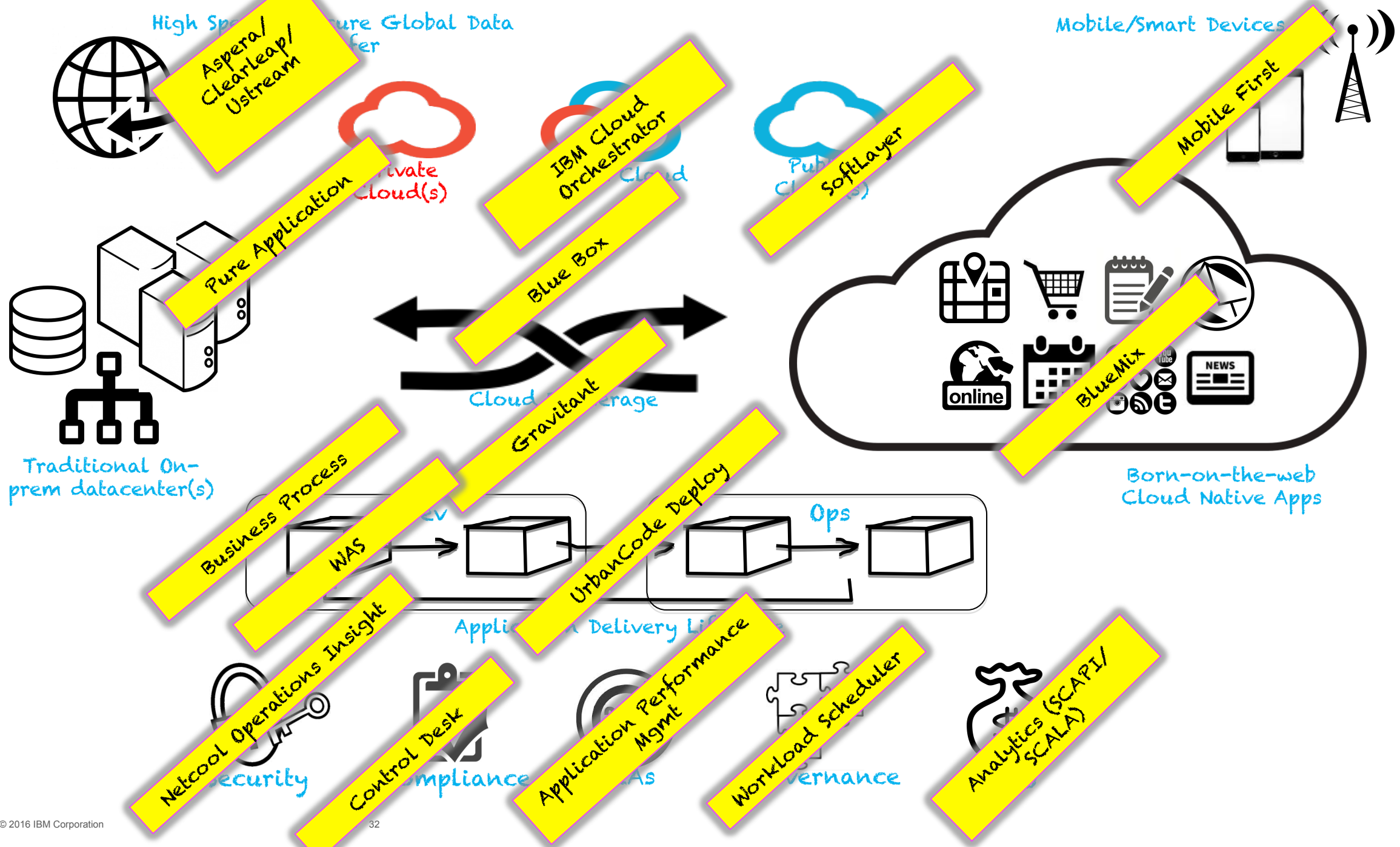
## Connect Seamlessly

Hundreds of end points to apps and data in the cloud and on premise

## Transform Efficiently

Performance and scalability to meet the SLAs of your business applications







# Improve your execution with IBM's Hybrid Cloud Portfolio

- Provide **self-service** access to environment provisioning
- Workload planning and placement assistance
- Visibility & management across multiple providers

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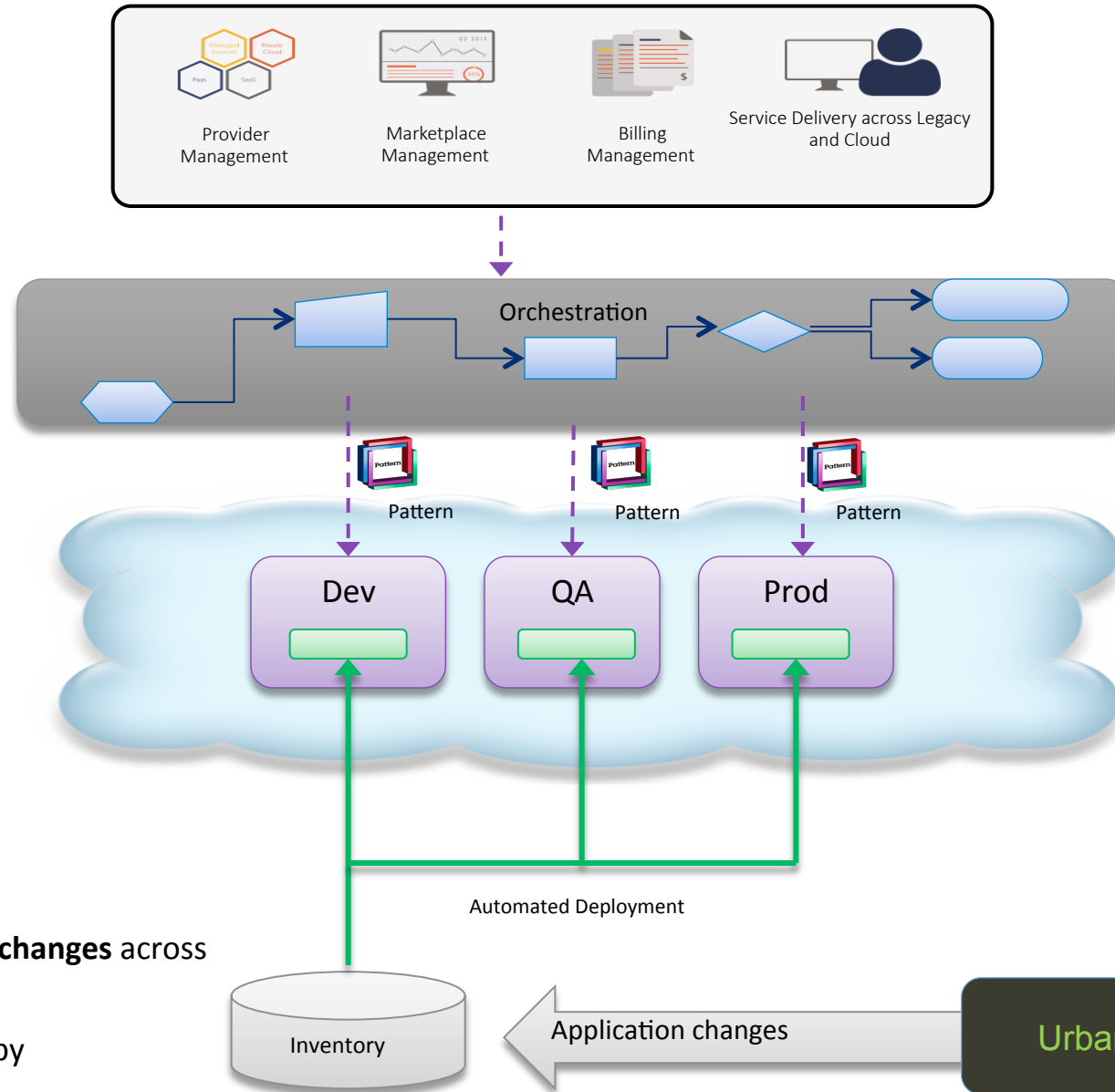
- **Orchestrate** configuration changes across all data center (or cloud) components
- Control changes with custom approval **workflows**

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- Deploy **patterns** for IBM and non-IBM software
- Adopt **hybrid cloud** with integrated systems, existing hardware (on-premise), or cloud (off-premise)

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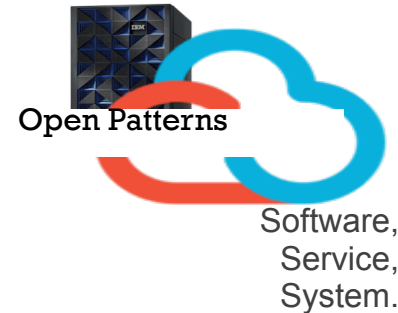
- Automate, version, and audit **application changes** across the development pipeline
- Optimize continuous delivery throughput by automating infrastructure in the cloud



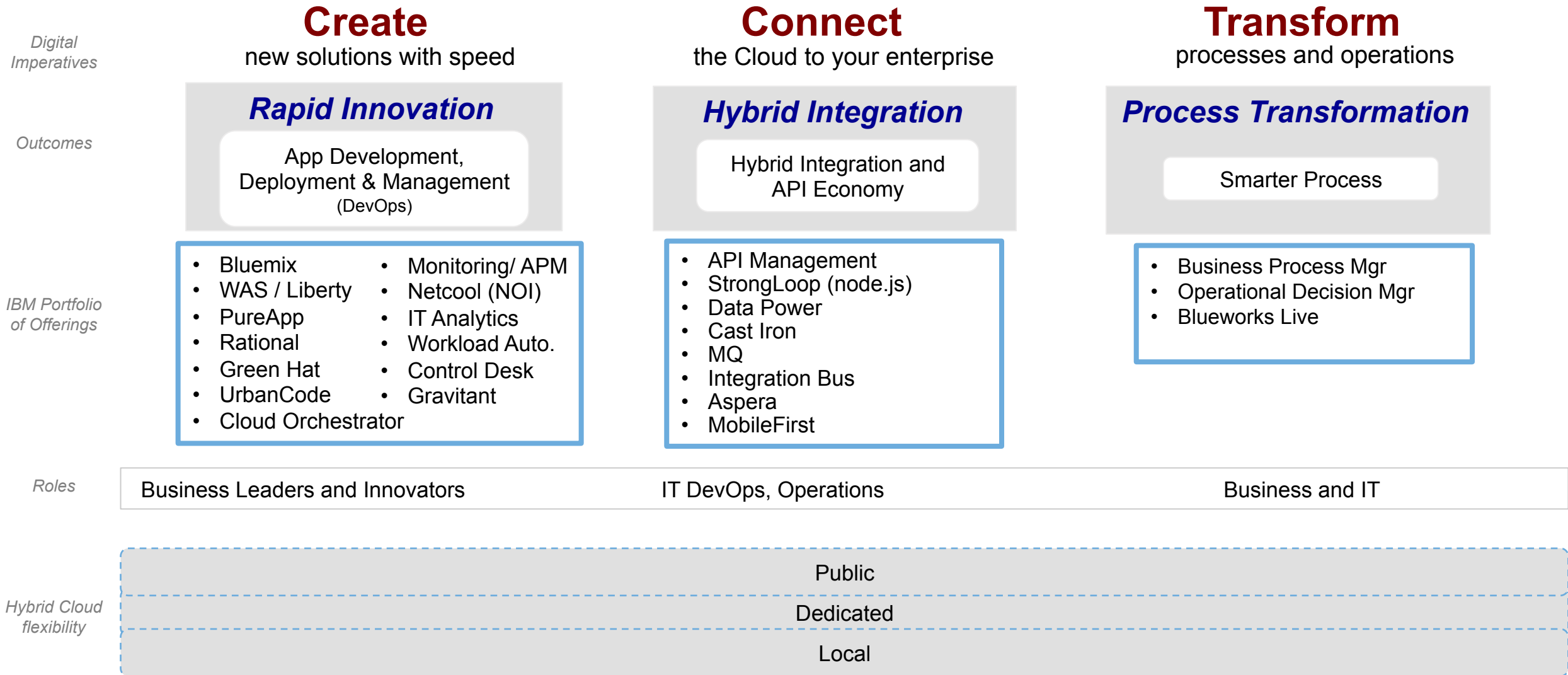
Gravitant



IBM Cloud Orchestrator



# Information Excellence, Solution Leadership and/or Collective Intimacy on an IBM Platform is important



# Cognitive Computing – A Paradigm (1)

Cognitive Computing

API Economy

User Experience

Cloud & Mobile

# Cognitive Computing – A Paradigm (2)

Cognitive Computing

API Economy

Cloud Platform (User Experience)

Cloud Infrastructure

# Cognitive Computing - Paradigm & IBM Offerings for Developers

Main Focus Areas  
for Developers  
in 2016

