



Gain Leadership in the New Era of Smart.

Forces At Play

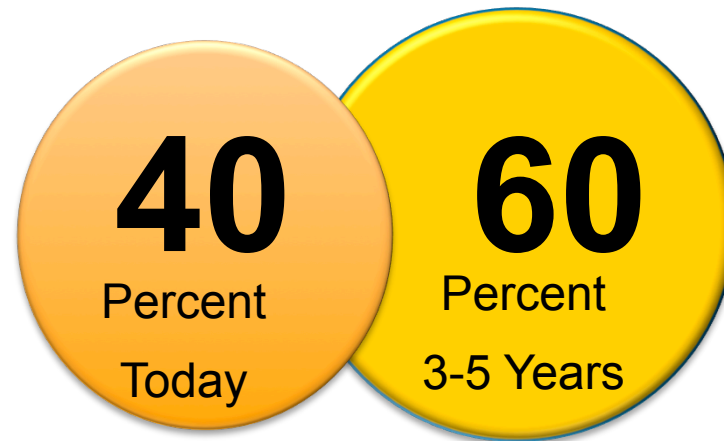
***Big Data Aanalytic, Cloud, Mobile & Social
(CAMS)***

Jervin Hew

Software Middleware Group – Technical Sales Leader
Asean, IBM SWG

Simplicity. Profitability. Growth.

C-Suite Study 2013

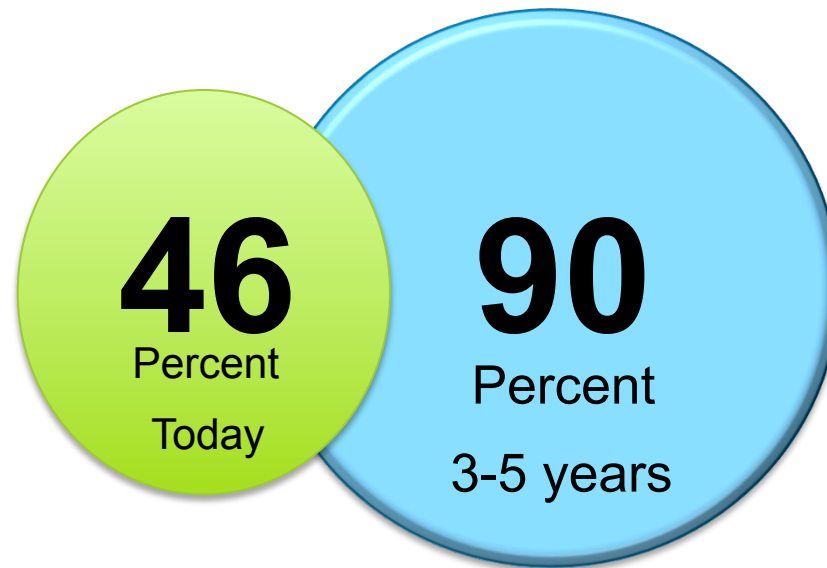


Rising Profile :

*The area in which **CEOs** expect to see **customer influence** grow most is **business strategy** development*

<http://www-935.ibm.com/services/us/en/c-suite/csuitestudy2013/>

C-Suite Study 2013

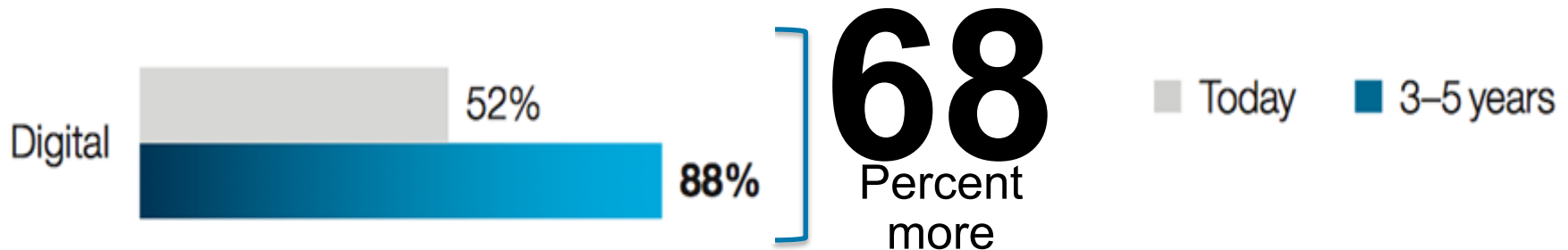


Strong links:

CxOs plan to collaborate much more extensively with customers

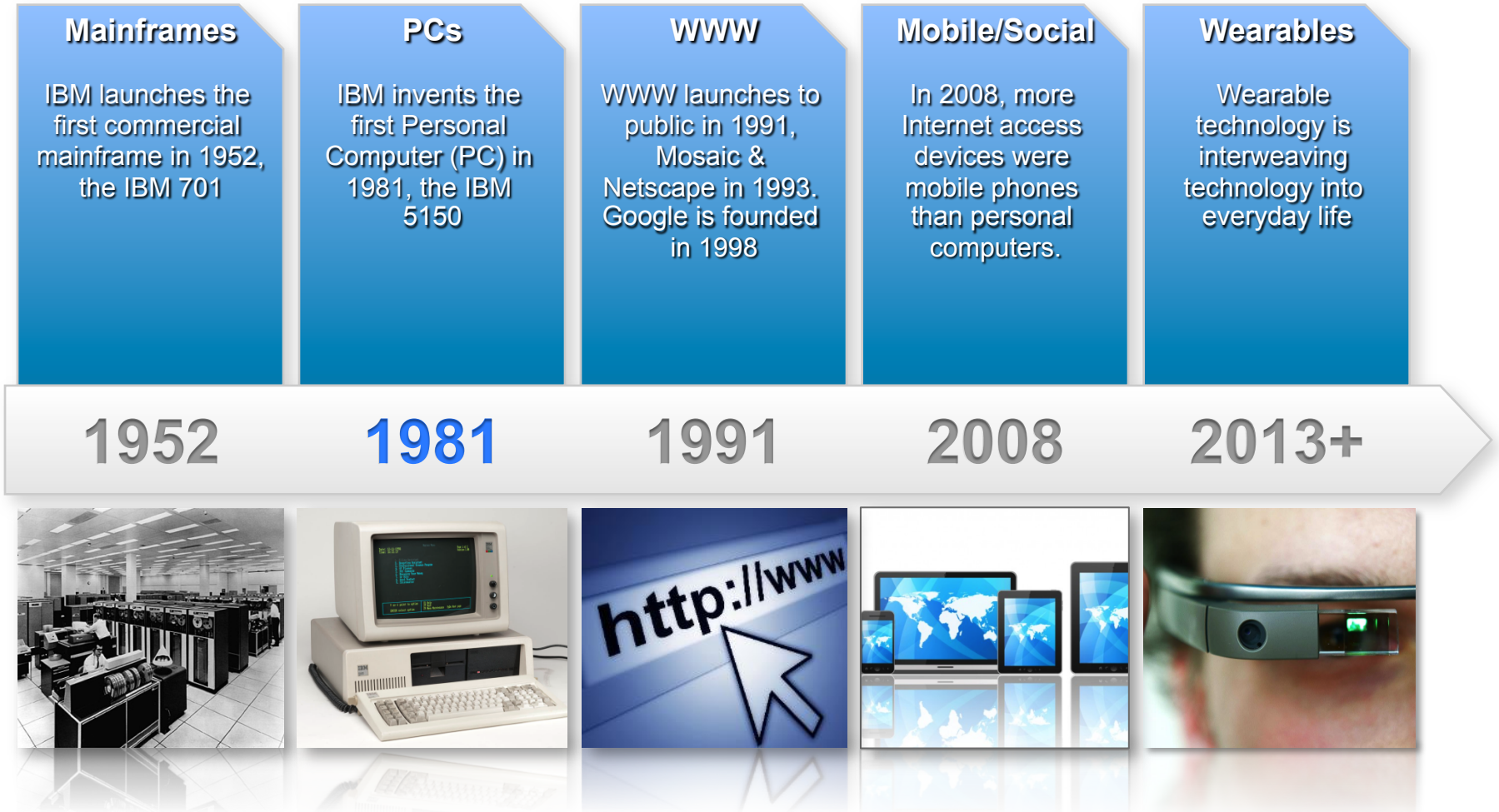
<http://www-935.ibm.com/services/us/en/c-suite/csuitestudy2013/>

C-Suite Study 2013



Changing channels:
CxOs intend interact digitally with customers to a much greater extent in the future

Technology Cycles are Accelerating – Forces Igniting Change the transformative power of computing



The CIO's challenge is to stay one step ahead!

Evidence - of this shift is everywhere

Transactions to  personalized **engagement**

Millions of PCs to  **billions** of mobile devices

Rigid infrastructure to  an **elastic** cloud

Static applications to  **dynamic** services

Structured data to  **unstructured** big data

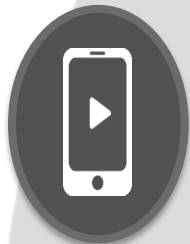
Reactive security to  **proactive** protection

These Transformative forces are fundamentally rewiring the way society works



25%

Ubiquity of social networks
of all people are on social networks



2.7 b

people online

Billions of mobile
devices



62%

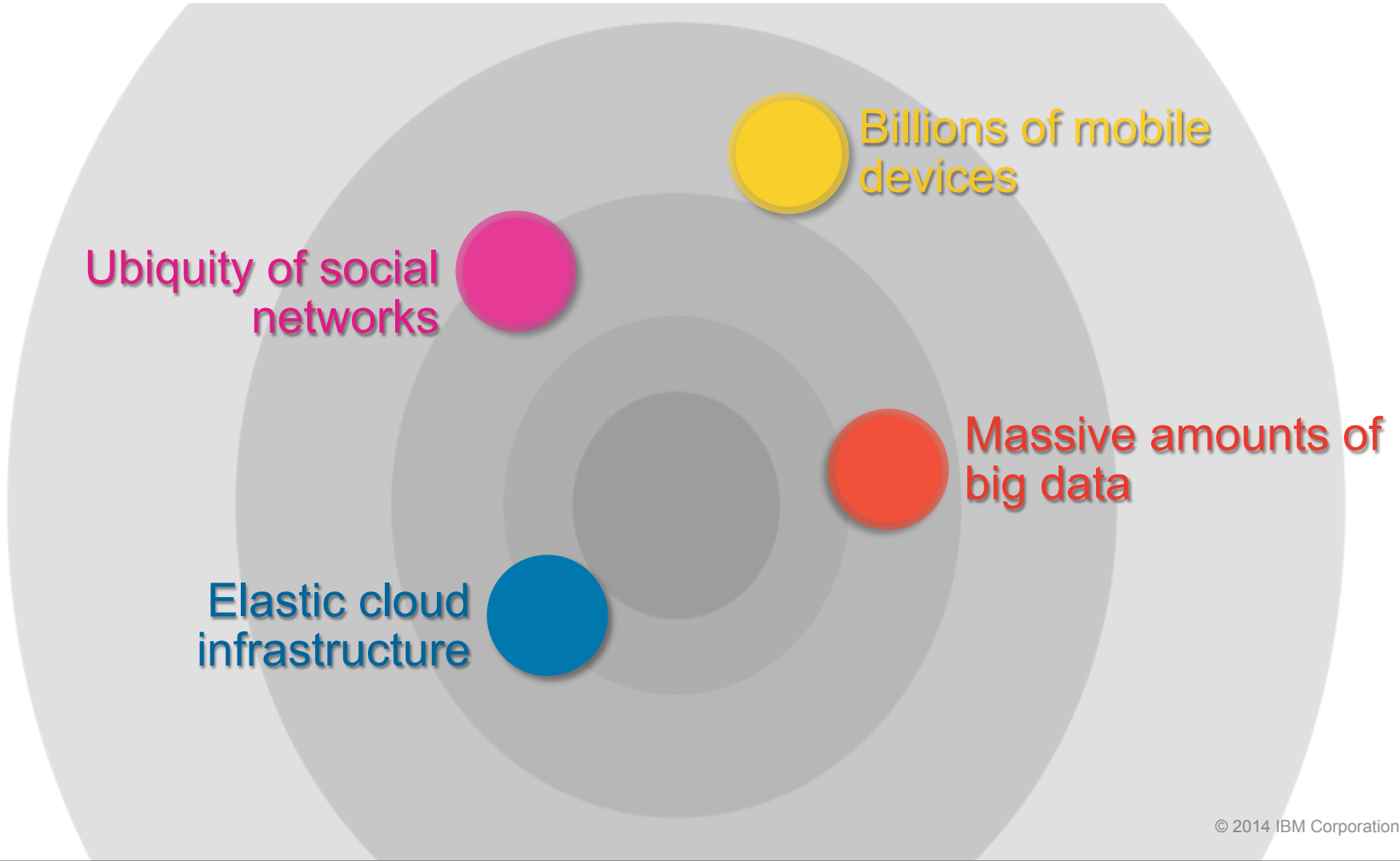
Elastic cloud infrastructure
of workloads on cloud by 2016



2.5 quintillion

Massive amounts of
big data
bytes of data created daily

Transformative forces are **fundamentally** rewiring the way **society** works



The opportunity continues to grow exponentially...

Social



Forrester expects the market for Social Business software to reach **\$6.4B by 2016**

Cloud



Forrester expects the cloud market to grow to **\$214B by 2020**

Mobile



70% of **mobile professionals** will conduct their work on personal **smart devices by 2018**

Big Data



IDC expects the **Big Data and Analytics** to grow by **29% CAGR by 2016**

Sources:
http://www.pcworld.com/article/245375/forrester_enterprise_social_software_to_become_a_64_billion_market_in_2016.html
<http://www.zdnet.com/blog/btl/cloud-computing-market-241-billion-in-2020/47702>

Gartner, Bring Your Own Device, The Facts and the Future, April 2013
 © 2014 IBM Corporation

To differentiate, leading organizations are capitalizing on...



Creating great opportunity for Business Partners



Big Data & ANALYTICS



The Myth About Big Data

- 
- Big Data Is **New**
 - Big Data Is Only About **Massive Data Volume**
 - Big Data Means **Hadoop** 
 - Big Data Need A **Data Warehouse**
 - Big Data Means **Unstructured Data**
 - Big Data Is for **Social Media & Sentiment Analysis**

Explosion of "Big" Data

12+ TBs
of tweet data
every day



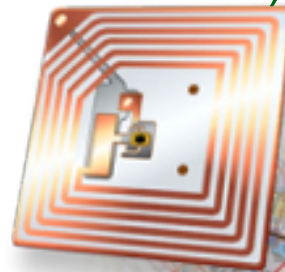
**? TBs of
data every
day**



25+ TBs
of log data
every day



30 billion RFID
tags today
(1.3B in 2005)



4.6 billion
camera
phones
world
wide



**100s of
millions
of GPS
enabled
devices
sold
annually**



76 million smart
meters in 2009...
200M by 2014



2+ billion
people
on the
Web

Big Data Is..

It is all about **better Analytic** on a **broader** spectrum of **data**, and therefore represents an **opportunity** to **create** even more **differentiation** among **industry peers**.

Harness the Power of Big Data

The IBM Big Data Platform

- Learn all about IBM's enterprise-class end-to-end Big Data platform
- Boost your Big Data IQ, starting on information and at rest analytics, data ingest/discovery/integration, and governance
- Get details surrounding the most common Big Data use cases that are transforming organizations today
- Learn how to make downstream Big Data projects faster to deploy...and less risky
- Gain confidence in your Big Data projects with an end-to-end tour of accelerators, tool sets, and samples to get you going...FAST!

Studies show that organizations competing on analytics outperform their peers

substantially outperform

220%

1.6x

Revenue
Growth

2.5x

Stock Price
Appreciation

2.0x

EBITDA
Growth

Four Characteristics Of Big Data

Volume



Data at Scale

Terabytes to petabytes of data

Variety



Data in Many Forms

Structured, unstructured, text, multimedia

Velocity



Data in Motion

Analysis of streaming data to enable decisions within fractions of a second.

Veracity



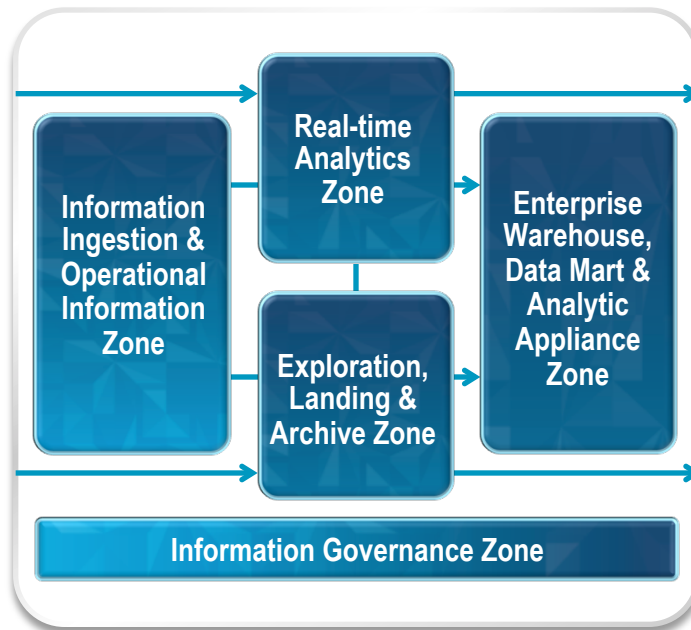
Data Uncertainty

Managing the reliability and predictability of imprecise data types.

Realize It. Invest in a Big Data & Analytics platform.

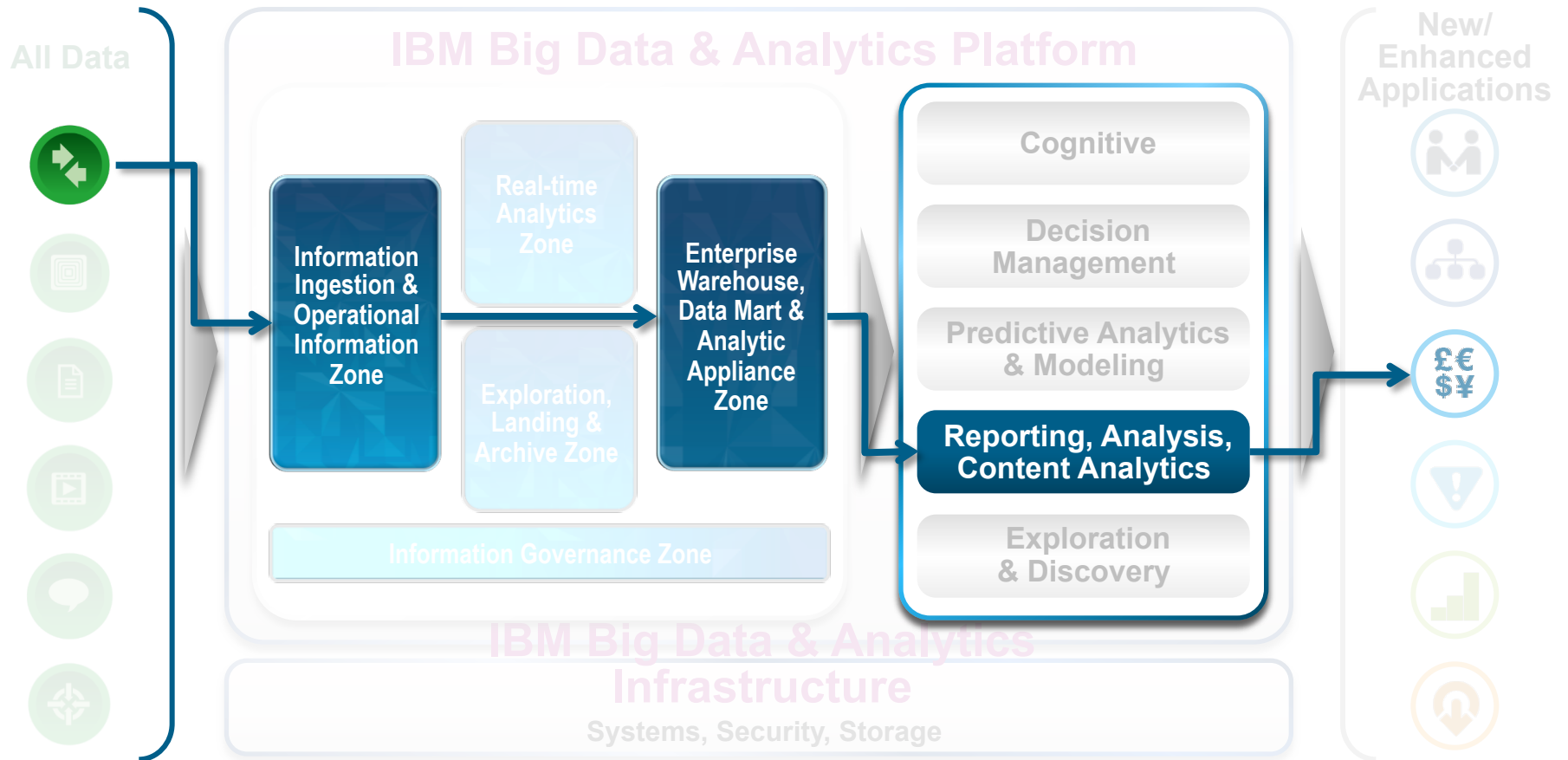
Big Data Reference Architecture

All Data

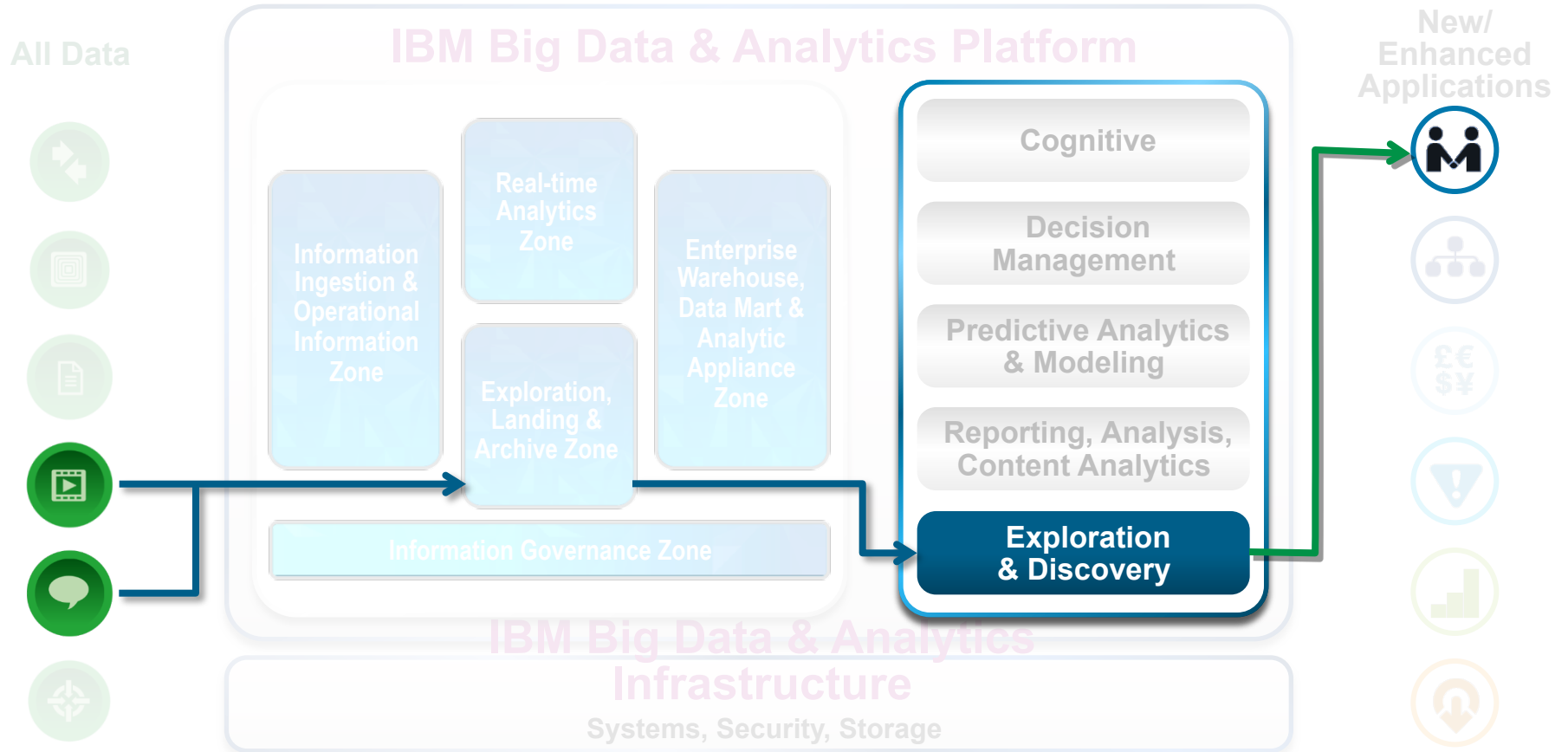


**Harness
All Data
& All
Paradigms**

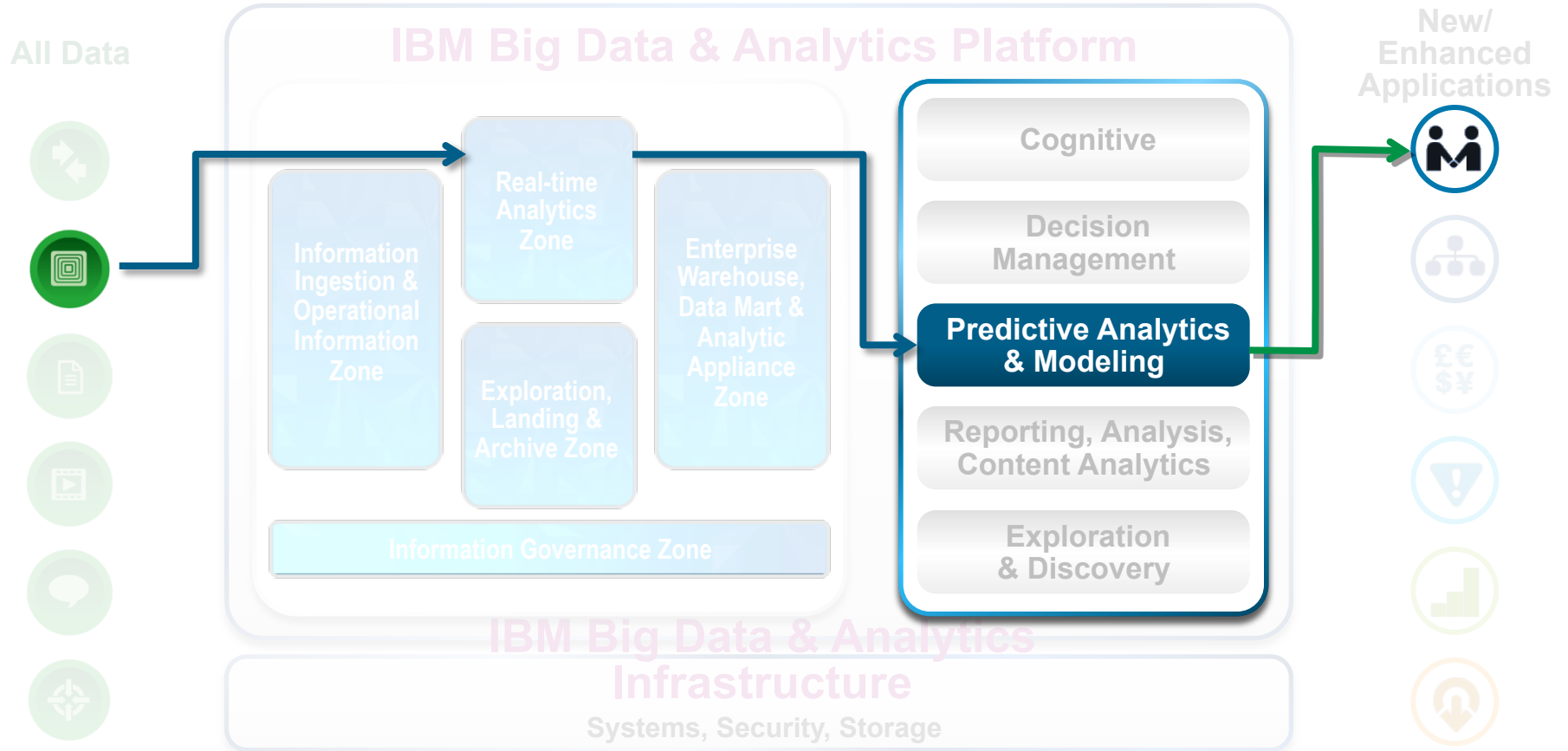
Realize It. Invest in a Big Data & Analytics platform.



Realize It. Invest in a Big Data & Analytics platform.



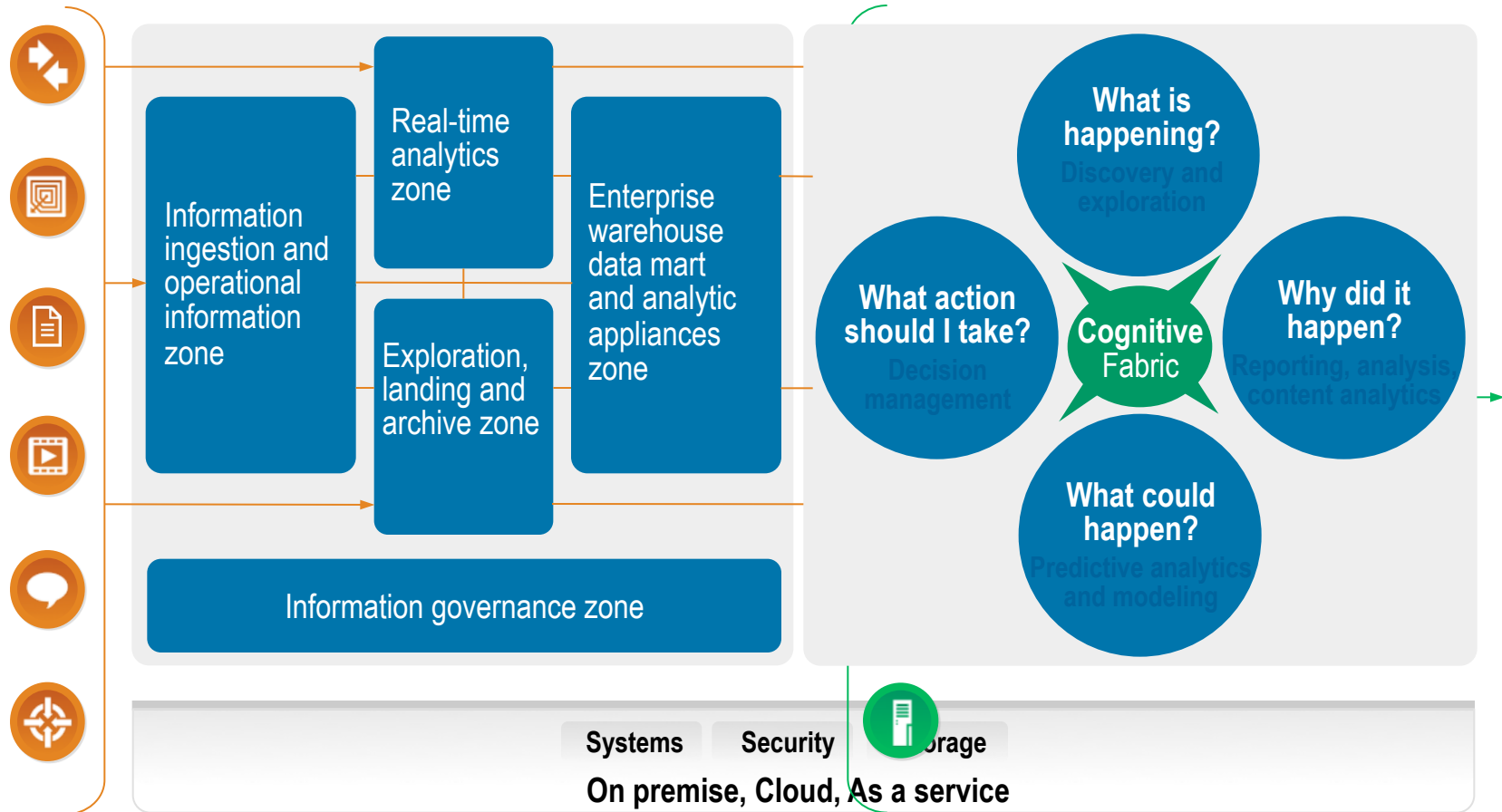
Realize It. Invest in a Big Data & Analytics platform.



Realize It. IBM Big Data & Analytics

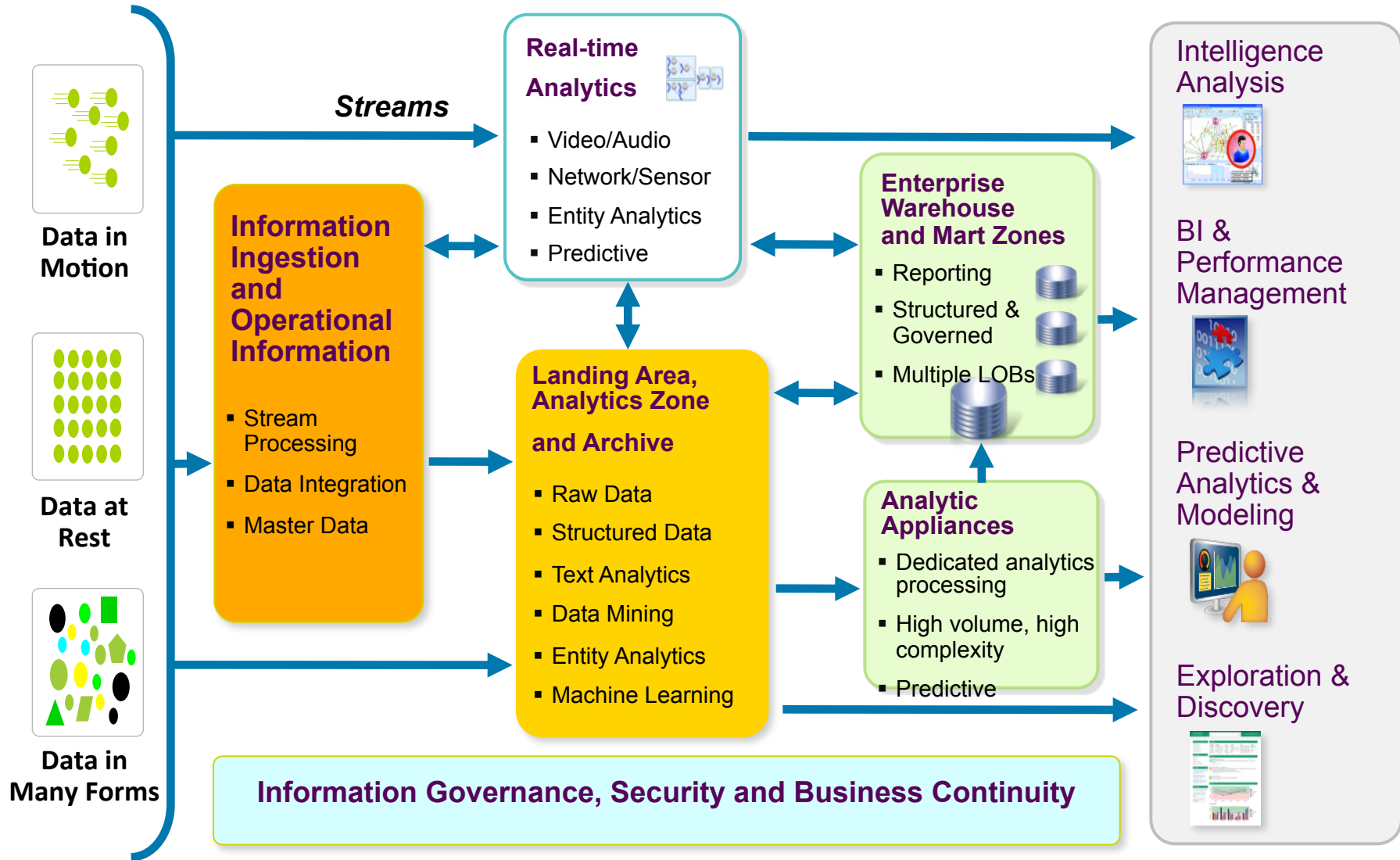
All Data

IBM Watson Foundations New/Enhanced Applications



IBM Big Data & Analytics Infrastructure

Big Data Architecture



Big data requires **new skills, new knowledge and new kinds of decision making**

*By **embedding information-based insights** into every **process, decision and action**, IBM is transforming the enterprise*

Know your customers

Providing the business a universal **view of each customer** to help grow our customer base, provide an excellent **personalized experience**, & **increase** customer satisfaction.

Manage financial performance

Transforming our **financial processes** to gain more visibility, **insight** and **control** over **performance** throughout the organization faster

Manage Risk

Gain a **holistic view** of **risk, fraud** and **compliance** information across the organization

Operational Efficiency

Providing the **insight** needed to **anticipate** and **respond** to **changes**, **better align operations** with demand, and take advantage of emerging **opportunities**



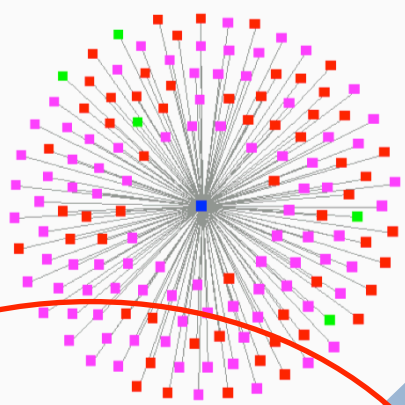
Know Your Customers (An example of .. Monetize Relationship with Our Clients)

Calling Network

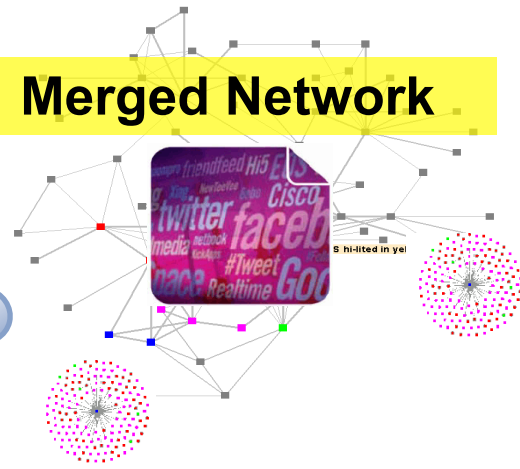


- Platinum Customer
- Regular Customer
- CDMA Competitor
- GSM Competitor

*How do we retain this customer?
(Why is she calling so many competitors?)*



Merged Network



Complete 360 Degree



Amy Bearn

**32, Married, mother of 3,
Accountant**

Telco Score: 91

CPG Score: 76

Fashion Score: 88

Telco



How valuable is Amy to my mobile phone network? How likely is she to switch carriers? How many other customers will follow

Retail



How valuable is Amy to my retail sales? Who does she influence? What do they spend?



Social Network



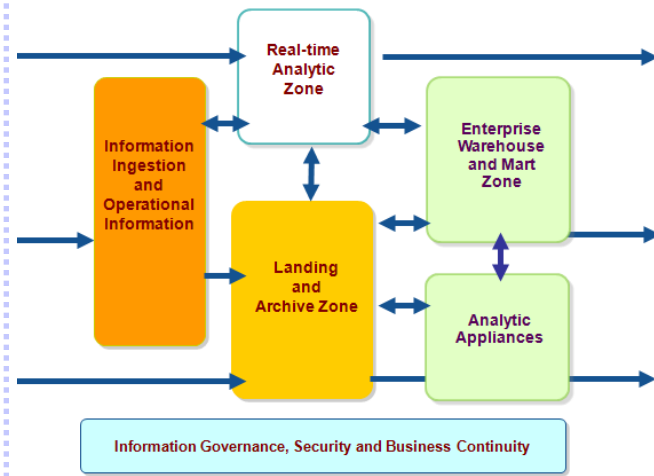
Big Data Vision

All Data Sources



Big Data Platform Capabilities

- Information Ingest
- Real Time Analytics
- Warehouse & Data Marts
- Analytic Appliances



Advanced Analytics / New Insights

- Cognitive**
Learn Dynamically?
- Prescriptive**
Best Outcomes?
- Predictive**
What Could Happen?
- Descriptive**
What Has Happened?
- Exploration and Discovery**
What Do You Have?

New / Enhanced Applications

- Watson
- Alerts
- Automated Process
- Case Management
- Analytic Applications
- Cloud Services
- ISV Solutions

IBM Big Data & Analytics portfolio

CONSULTING AND IMPLEMENTATION SERVICES

SOLUTIONS

Sales Marketing Finance Risk Operations Fraud IT HR

Industry Solutions

WATSON FOUNDATIONS

Decision Management

Content Analytics

Planning & Forecasting

Discovery & Exploration

Business Intelligence & Predictive Analytics

Data Mgmt & Warehouse

Hadoop System

Stream Computing


Content Management

Information Integration & Governance


BIG DATA & ANALYTICS INFRASTRUCTURE

**Big Data
&
Analytic
Platform**

Every industry can leverage Big Data Analytics...

 **Banking**


- Optimizing Offers and Cross-sell
- Customer Service and Call Center Efficiency

 **Insurance**

- 360° View of Domain or Subject
- Catastrophe Modeling
- Fraud & Abuse

 **Telco**


- Pro-active Call Center
- Network Analytics
- Location Based Services

 **Energy & Utilities**

- Smart Meter Analytics
- Distribution Load Forecasting/Scheduling
- Condition Based Maintenance

 **Media & Entertainment**

- Business process transformation
- Audience & Marketing Optimization

 **Retail**


- Actionable Customer Insight
- Merchandise Optimization
- Dynamic Pricing

 **Travel & Transport**

- Customer Analytics & Loyalty Marketing
- Predictive Maintenance Analytics

 **Consumer Products**

- Shelf Availability
- Promotional Spend Optimization
- Merchandising Compliance

 **Govern.**


- Civilian Services
- Defense & Intelligence
- Tax & Treasury Services

 **Healthcare**


- Measure & Act on Population Health Outcomes
- Engage Consumers in their Healthcare

 **Automotive**

- Advanced Condition Monitoring
- Data Warehouse Optimization

 **Chemical & Petroleum**

- Operational Surveillance, Analysis & Optimization
- Data Warehouse Consolidation, Integration & Augmentation

 **Aerospace & Defense**

- Uniform Information Access Platform
- Data Warehouse Optimization

 **Electronics**

- Customer/ Channel Analytics
- Advanced Condition Monitoring

 **Life Sciences**

- Increase visibility into drug safety and effectiveness



Mobile

What a difference 8 years makes...



Then...



Now...

Mobile is not simply another device...mobile is the manifestation of a much broader shift to new systems of engagement...

-- Forrester (Jan 2013)

Can you ignore the effect of mobile?

Mobile explosive growth

By the end of 2013, mobile phones will overtake PCs as the most common way to access the internet.

By 2015, 80 % of phones sold in major markets will be smartphones

Source: Gartner



Mobile is a mandatory transformation

10 Billion devices by 2020

61% of CIOs put mobile as **priority** (next 3 years)

45% increased **productivity** with mobile apps



Fundamentally changing industries

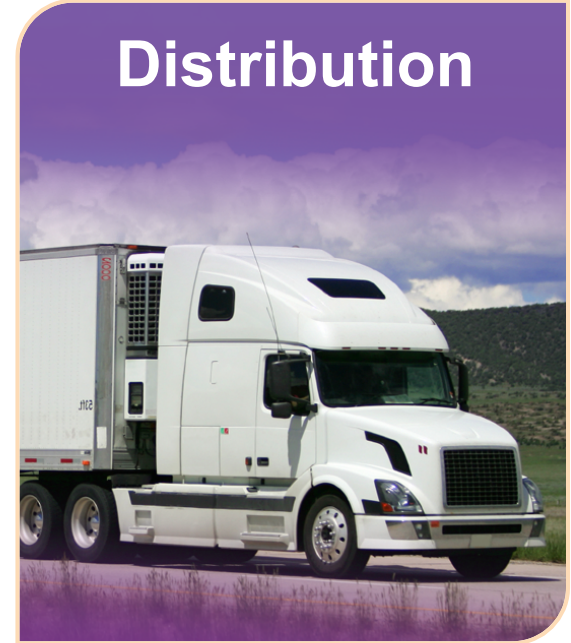
Retail



Financial Services



Distribution



Mobile banking will be the most widely used banking channel by 2020, if not sooner

Source: *Mobile banking: A catalyst for improving bank performance*, Deloitte, 2010

With enormous opportunities

Business to Enterprise



- Increase worker **productivity**
- **Improved** processing times
- **Extend** existing **applications** to mobile **workers** and **customers**
- **Increase** employee and business partner **responsiveness** and decisions
- **Resolve** internal IT issues **faster**
- **Reduce** personnel **cost** utilizing personal devices

Business to Consumer



- **Improve** customer **satisfaction**
- Deeper customer **engagement** and loyalty
- Drive **increased sales** through **personalized** offers
- **Improve** Customer service
- Competitive **differentiator**
- Improve **brand** perception
- Deeper **insight** into customer buying behavior for **up sell and cross sell**

Becoming a MobileFirst Enterprise

Mobile is the deepest most rapid transformation happening today.

At IBM, building a mobile enterprise is **not** just about the latest **smart phones or tablets**. It's about **transforming** our business and **IT infrastructure** to boost enterprise **efficiency**, and **improve** the **client experience**.

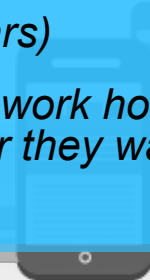
- Back office **integration** of solutions to transform the front office
- **Rebalancing** the IT **application portfolio**
- **responding** to customer requests quickly and **anticipating** their next moves even faster

- Providing the **policy, education, and applications** for a mobile enabled workforce

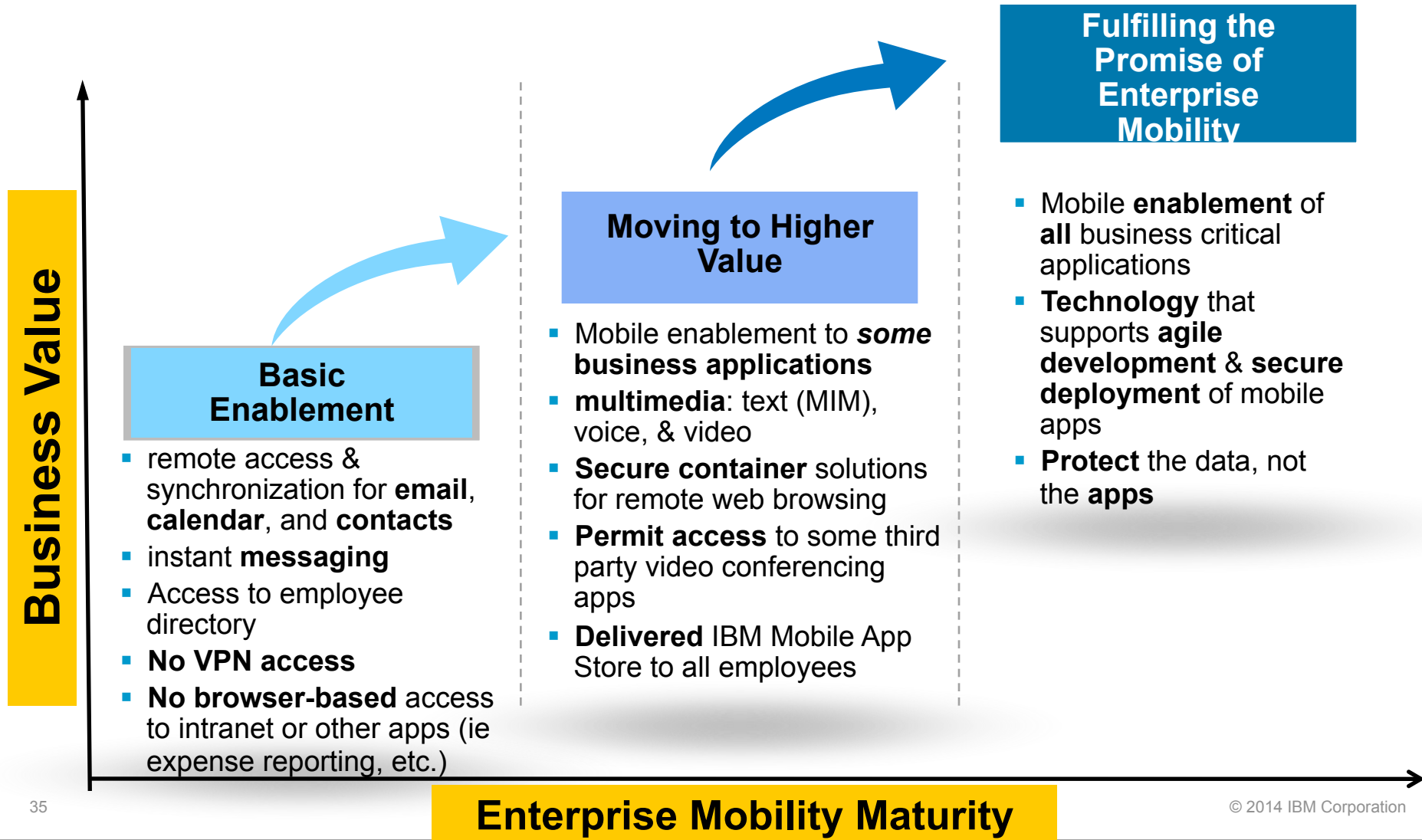
200 Million
employees BYOD

(Next 4 Years)

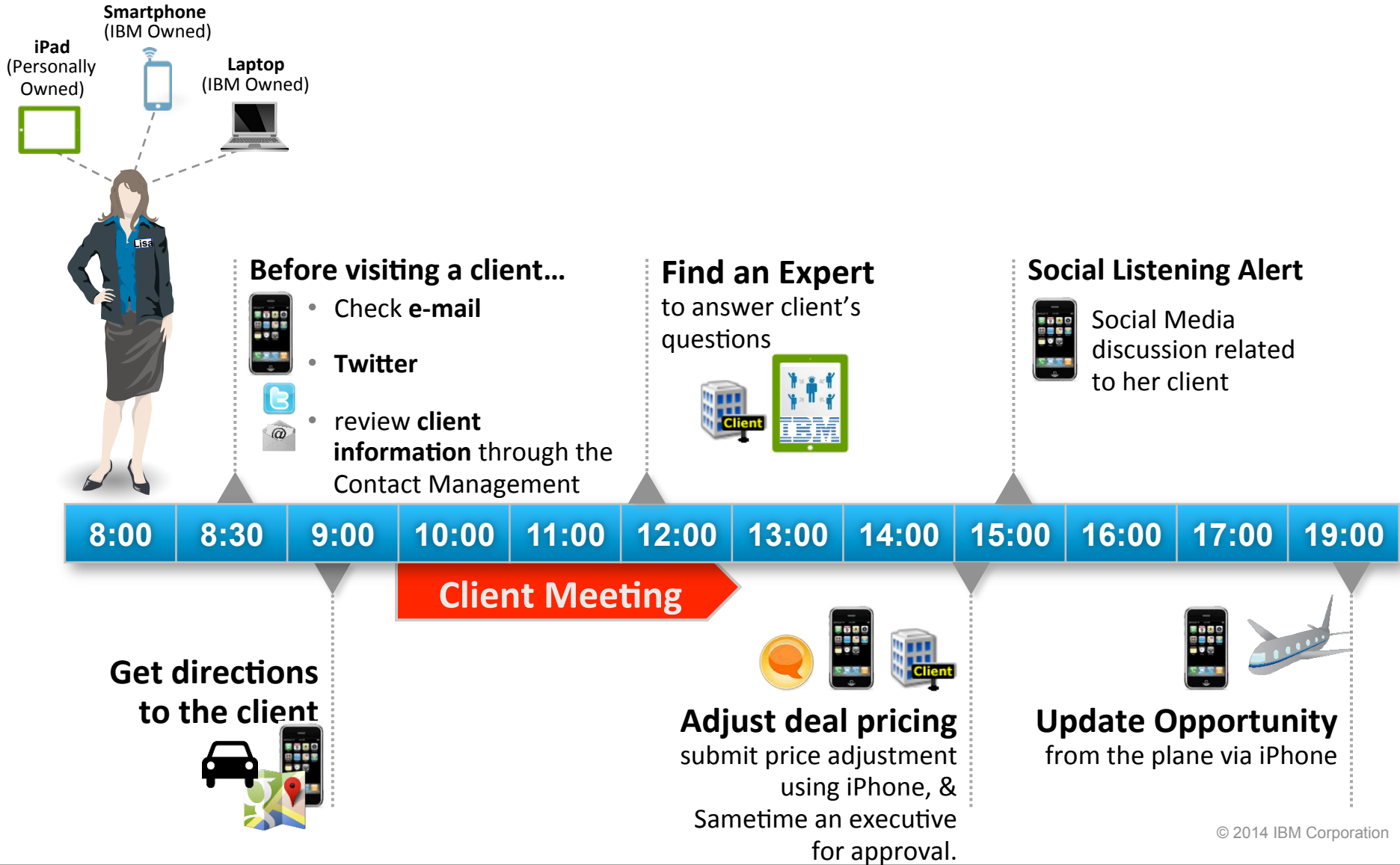
Enabling employees to work however they want, wherever they want



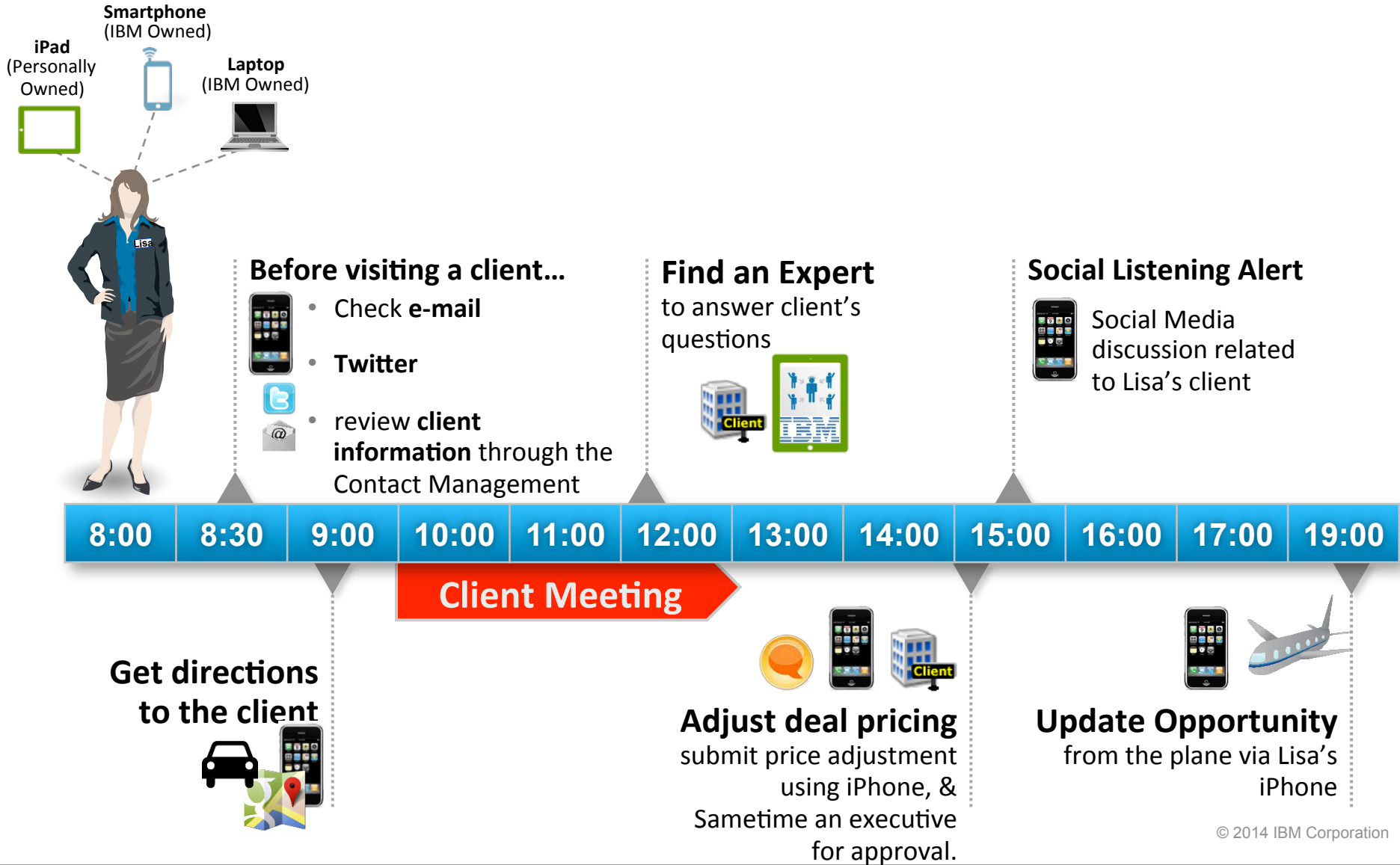
Enterprise Mobility @ IBM is a Work in Progress



A deeper look...a day in the life of an IBM seller (Rebecca)

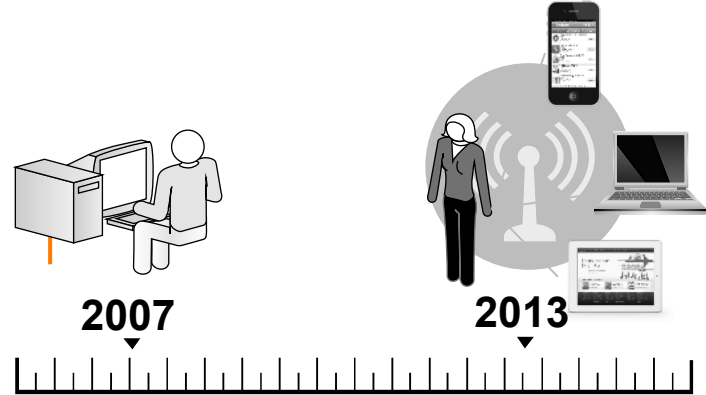
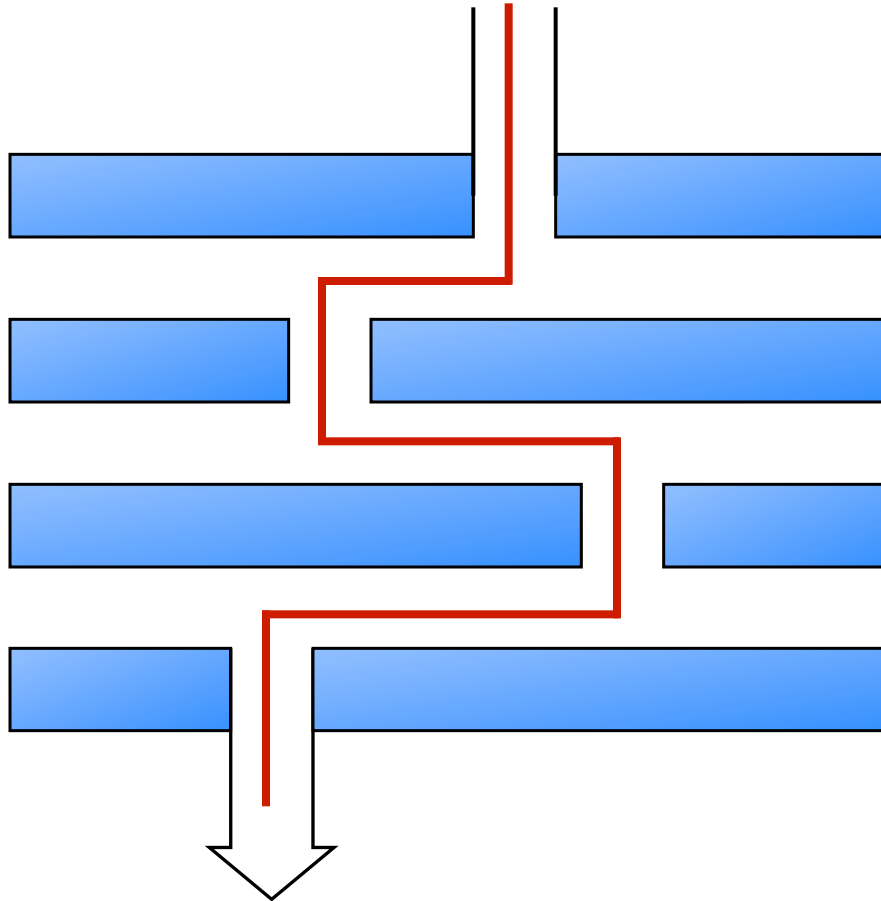


A deeper look...a day in the life of an IBM seller (Rebecca)



But there are challenges...

Cultural and technical obstacles are real, and take time to solve



59% of IBMers say they are not interested in using a personal device to access company email, IM, or the intranet.

Top Inhibitors:

- Expense
- Work/Life balance
- Privacy (IBM can see data on personal device or wipe device)
- Password requirements
- IBM security registration
- Can't access w3 applications
- Employee has to surrender device for e-Discovery

IBM's Approach to Mobility

A Three Legged Stool...

Technology

- **95% (400K+) IBM employees are issued laptops**
- Over 115,000 smartphones and tablets and growing rapidly (primarily Android OS and Apple iPhones/iPad devices)
- **16k Macintosh laptops at IBM** (majority are personally owned)
- Launched small, focused “opt-in” BYOD pilots.
- Embraced collaboration and social media tools to enable self-support through communities
- **Fiberlink - Endpoint Manager**
- **Lotus Traveler (email, calendar, contacts)**
- Apps

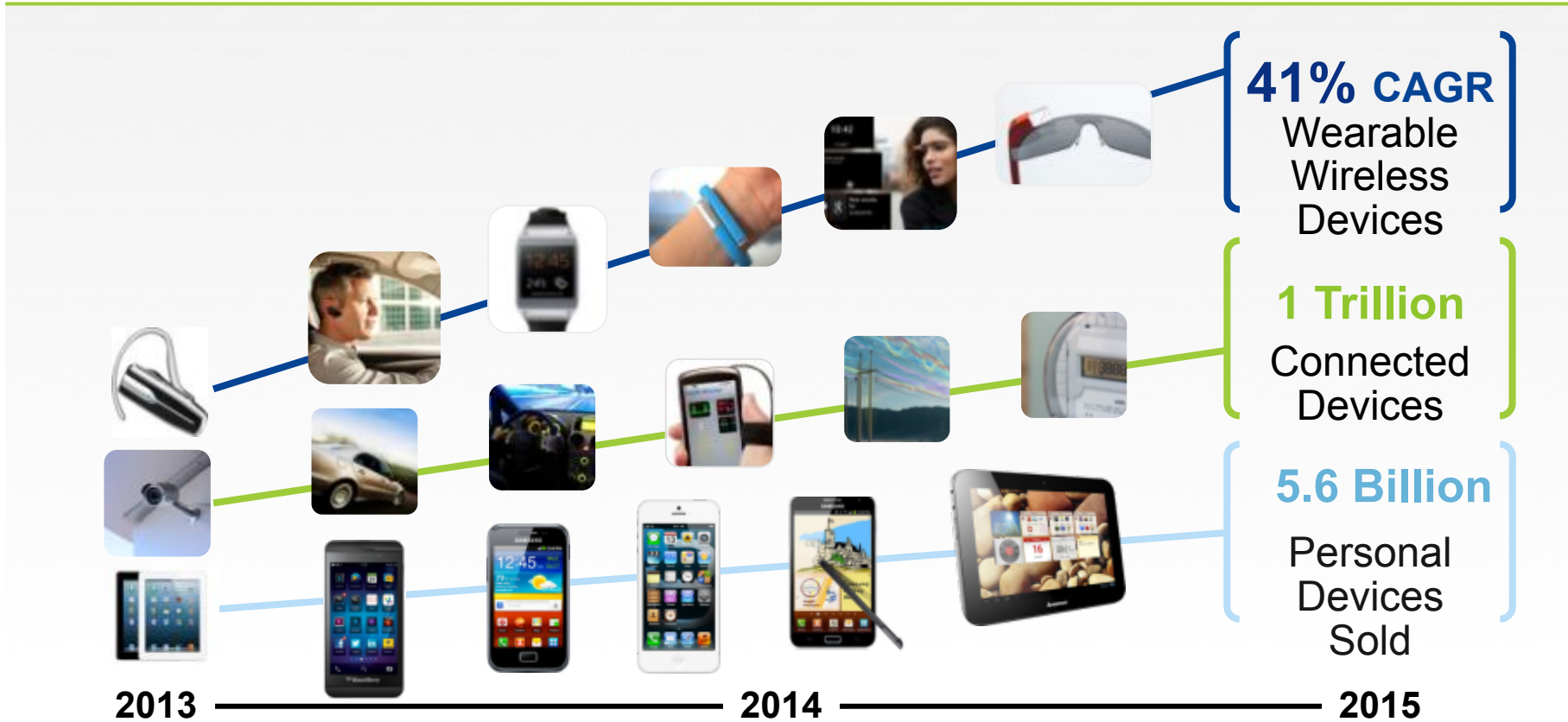
Policy

- Corporate Managed Plan (IBM pays) – roles-based eligibility
- Personally owned devices can be used for **business purposes – most employees pay for their own device/service**
- Implemented enterprise **policies** as foundation for enabling mobile employees
- Launched small, focused “opt-in” BYOD pilots. Resisted the urge to “boil the ocean”
- Embraced collaboration and social media tools to enable self-support through communities

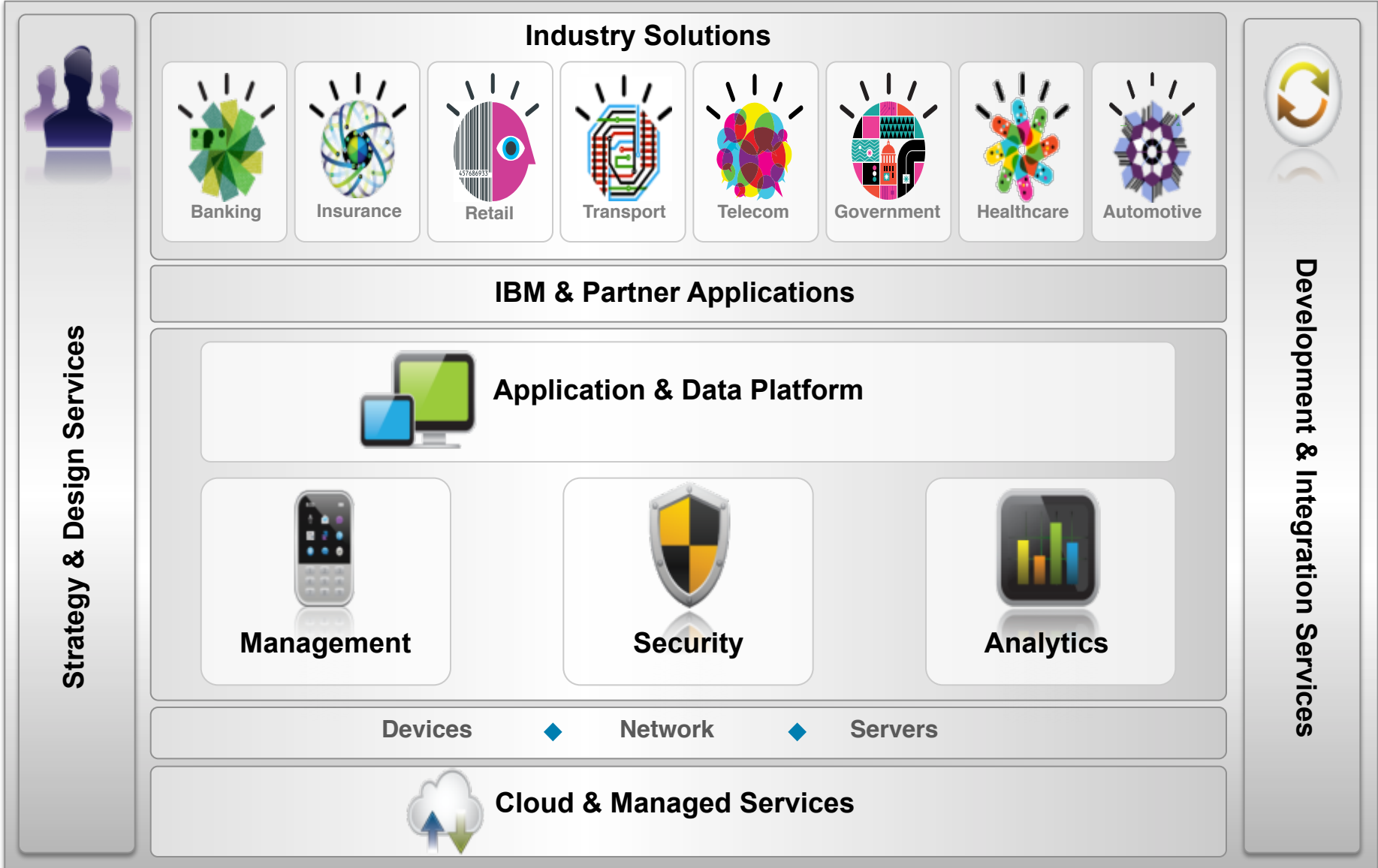
Education

- Digital IBMer training
- **BYOD** guidelines

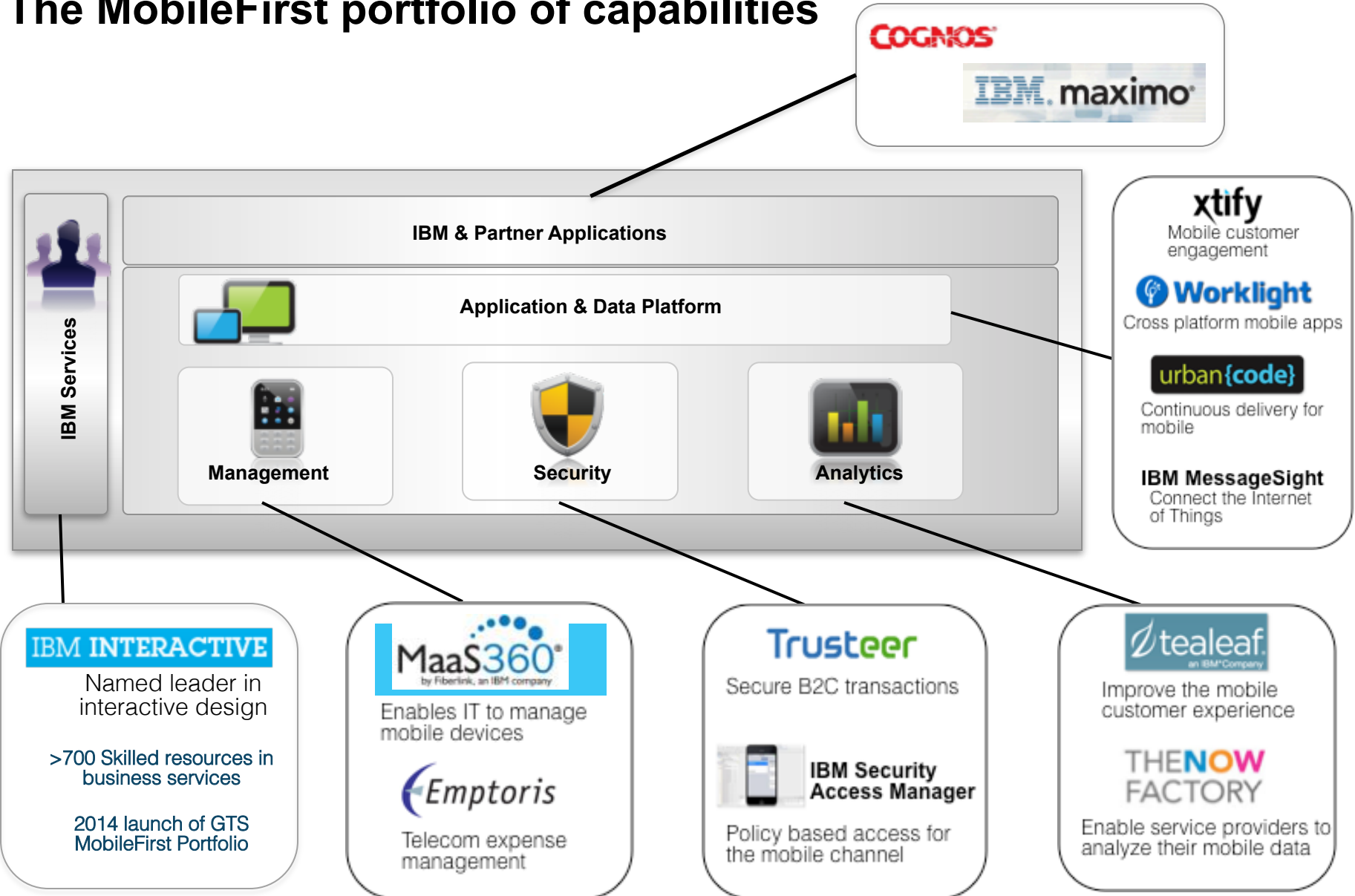
Mobile Adoption Continues to Explode



IBM **MobileFirst** Offering Portfolio



The MobileFirst portfolio of capabilities

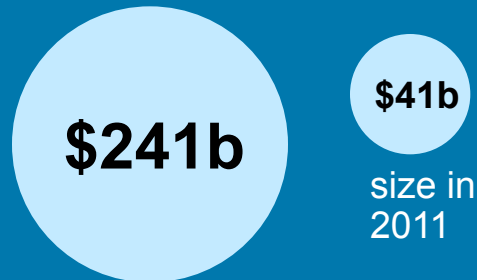


A bright blue sky filled with scattered white and grey clouds. The clouds vary in size and density, with some appearing as small, fluffy puffs and others as larger, more substantial masses. The overall scene is a clear, sunny day with a vibrant blue background.

Cloud

Cloud Computing Market

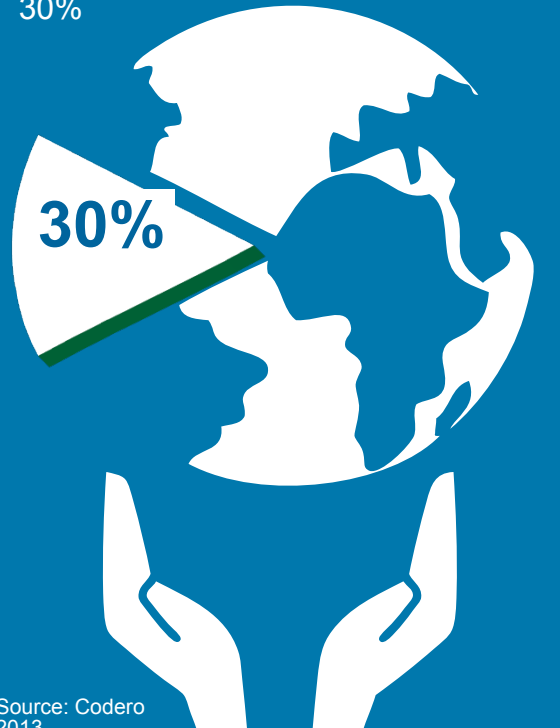
Expected size by 2020



Source: Forrester

Large companies

running applications in the cloud can reduce energy consumption by 30%



Source: Codero 2013

Cloud Computing

Cloud delivers computing resources in a pay-as-you-go, utility model

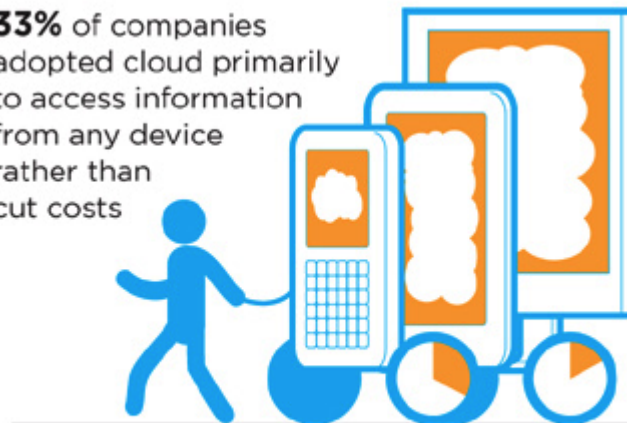
What are the different types of cloud?



76%

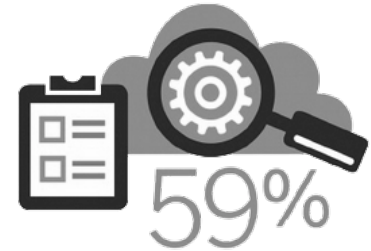
Of mobile workers feel that the ability to work outside the office, yet remain in contact has been a positive development, even though a third are now working longer hours.

33% of companies adopted cloud primarily to access information from any device rather than cut costs



Top reasons for adopting cloud computing

33%	17%
Mobility	Cost



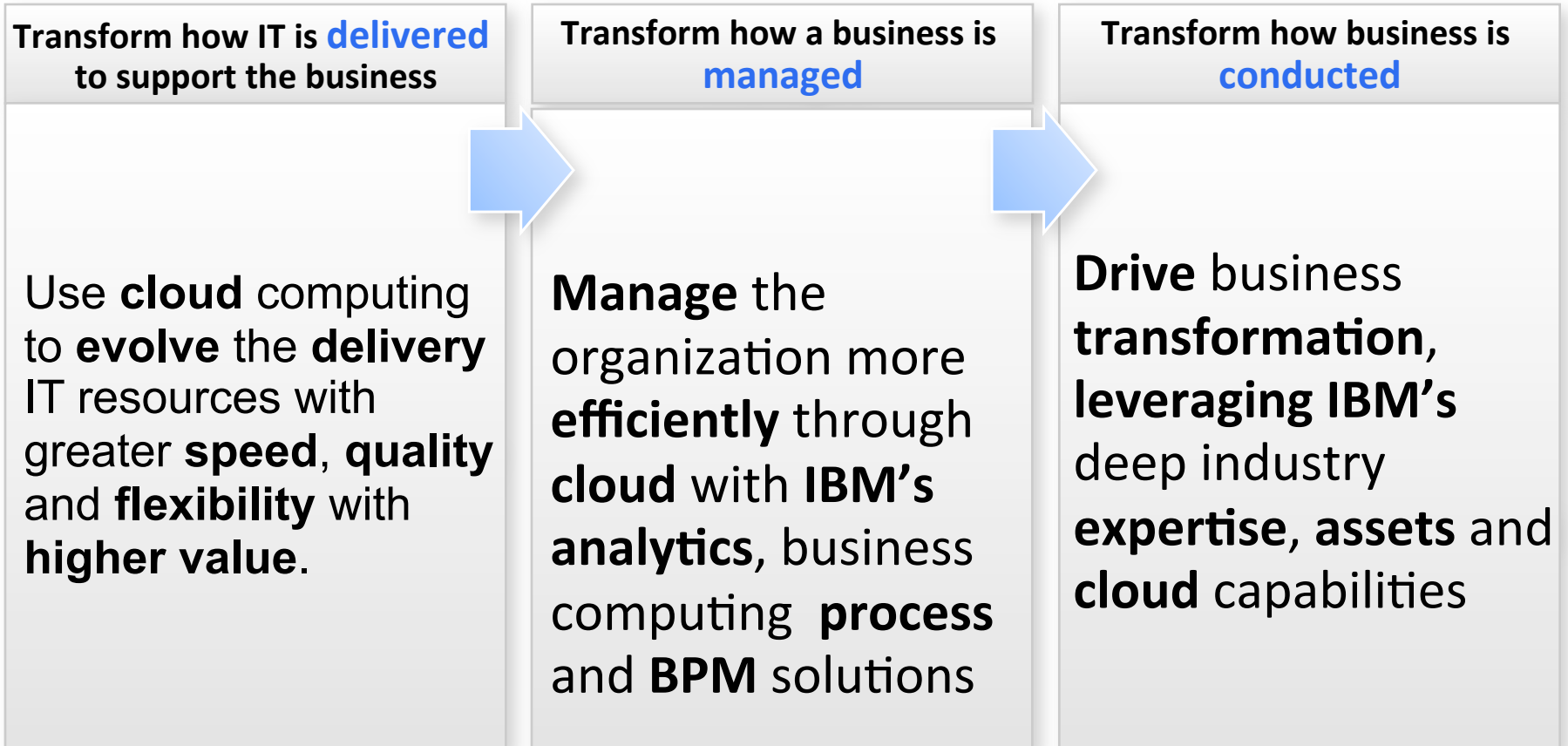
Still identifying IT operations that are candidates for Cloud

71%

Of Internet users will live mostly in the Cloud by 2020

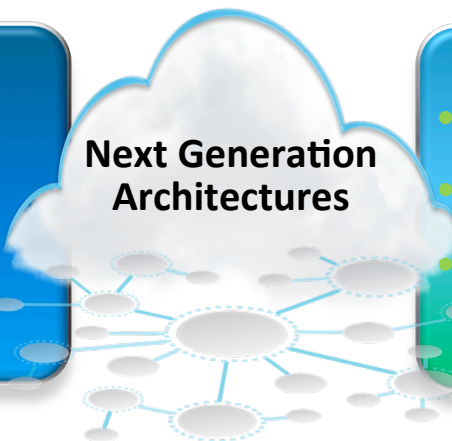
IBM's Point of View on Cloud

Transforming IT & Business



Systems of Record

- Data & Transactions
- App Infrastructure
- Virtualized Resources



(Systems Of Engagement)

- Expanding Interface Modalities
- Big Data and Analytics
- Social Networking

Data & Transaction Integrity

Smarter Devices & Assets

Focus on Operational Costs

Focus on Speed and Agility



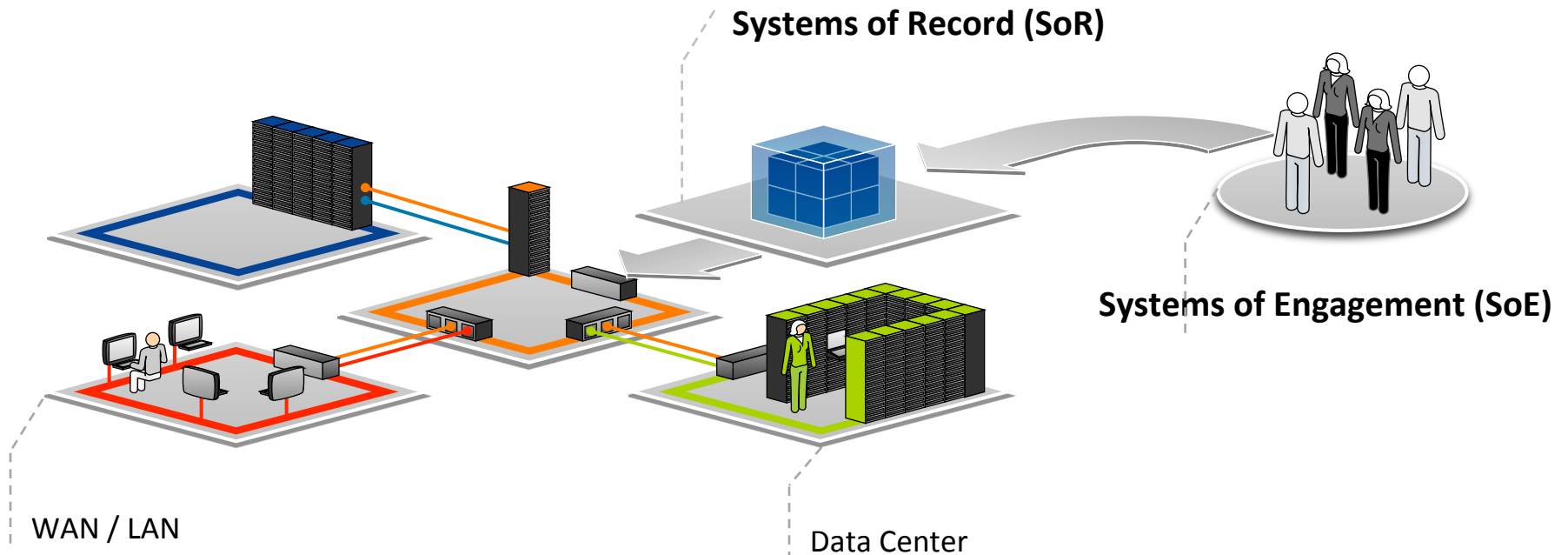
Enabling **new levels** of **innovation** and **efficiency**, **agility**, elastic **scalability**, & **low costs**

Ubiquity, convenient, on-demand network access to a **shared** pool of **configurable** computing **resources**. Cloud technology is **rapidly** provisioned and can provides a higher-value **platform** that makes it possible to strategically **bind Social, Mobile, & Analytics** together



Moving to the New World

Systems of Engagement are delivering user-centric services into the enterprise

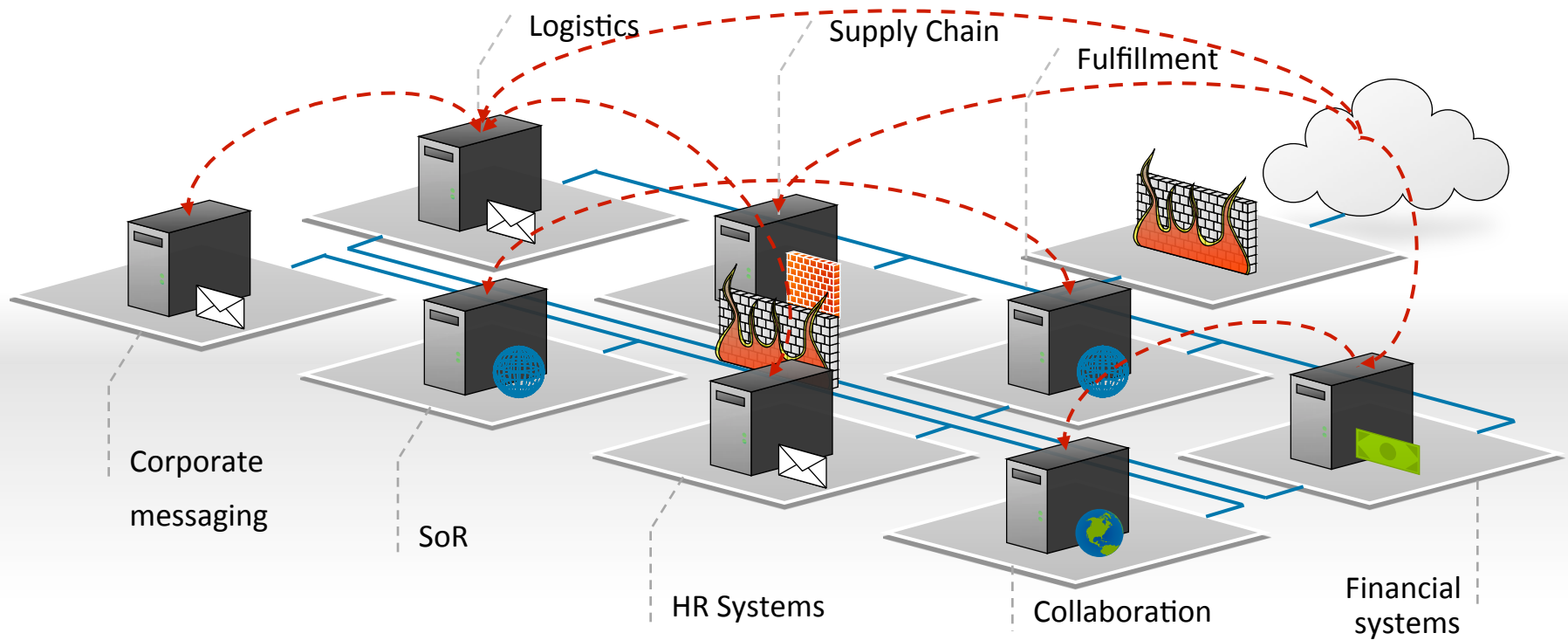


Drivers of “System Of Engagement” (SOE)

- **Social** drives agility
- **Mobile** enables a 24x7 connected, Engaged workforce
- **Analytics** enable data-driven insights for faster, **smarter** decision making

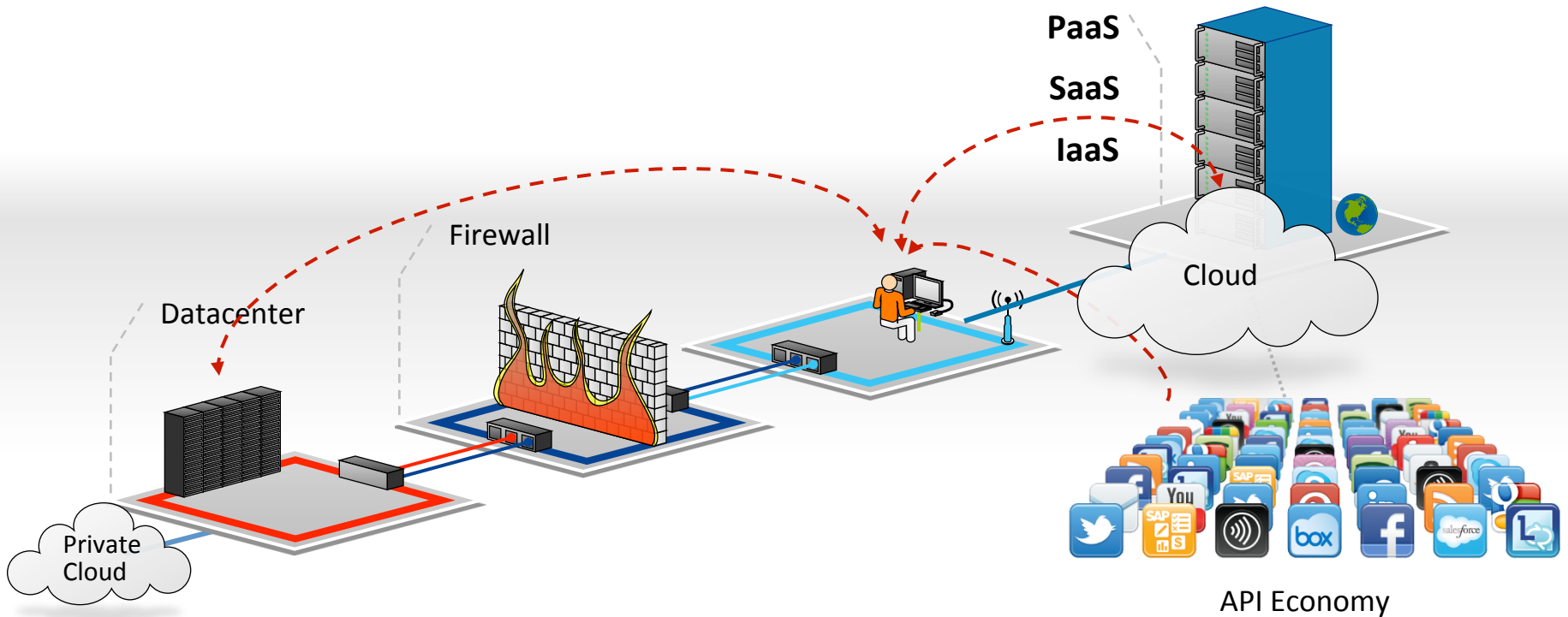
But the Reality is...

We all have legacy apps to deal with...

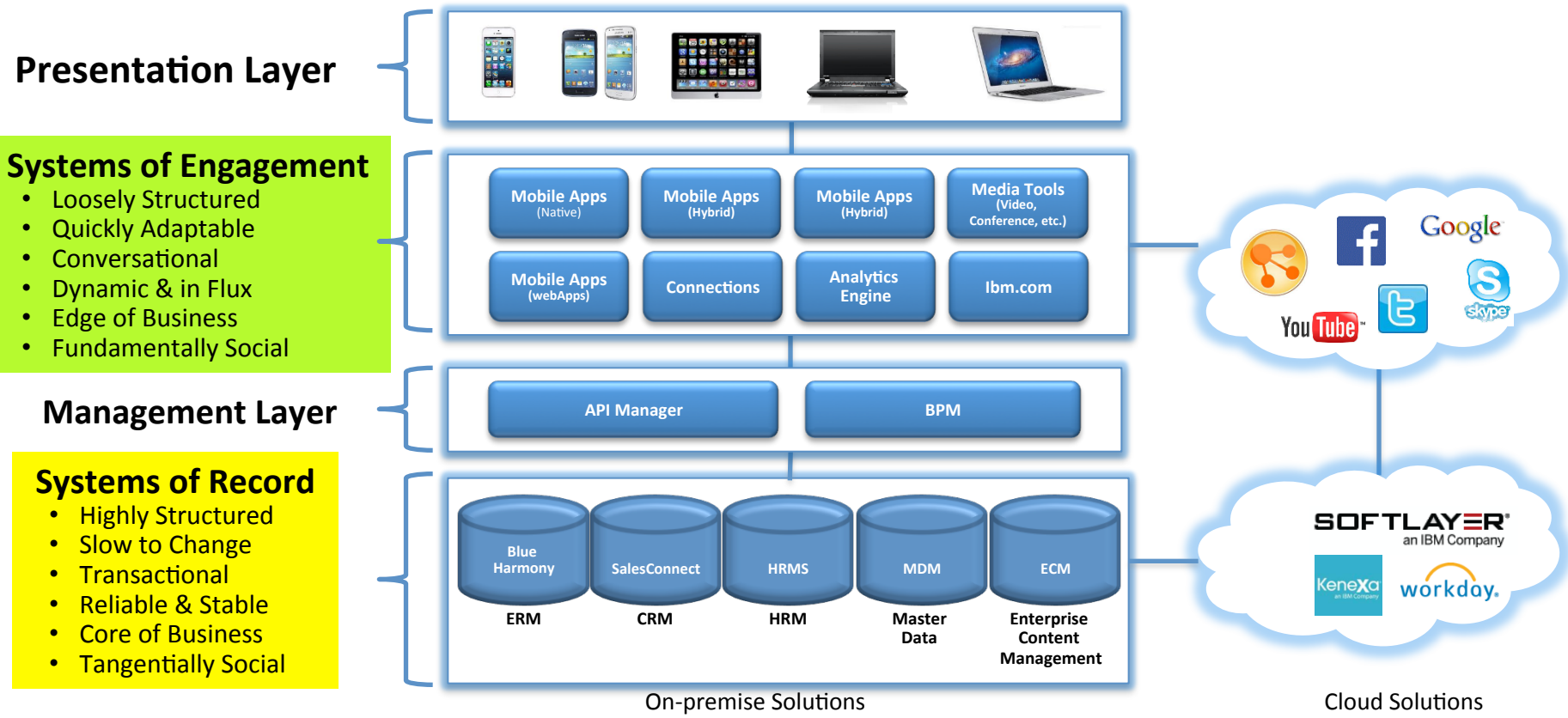


Cloud Offers A New Way To Bring In User-Centric, SoE Services

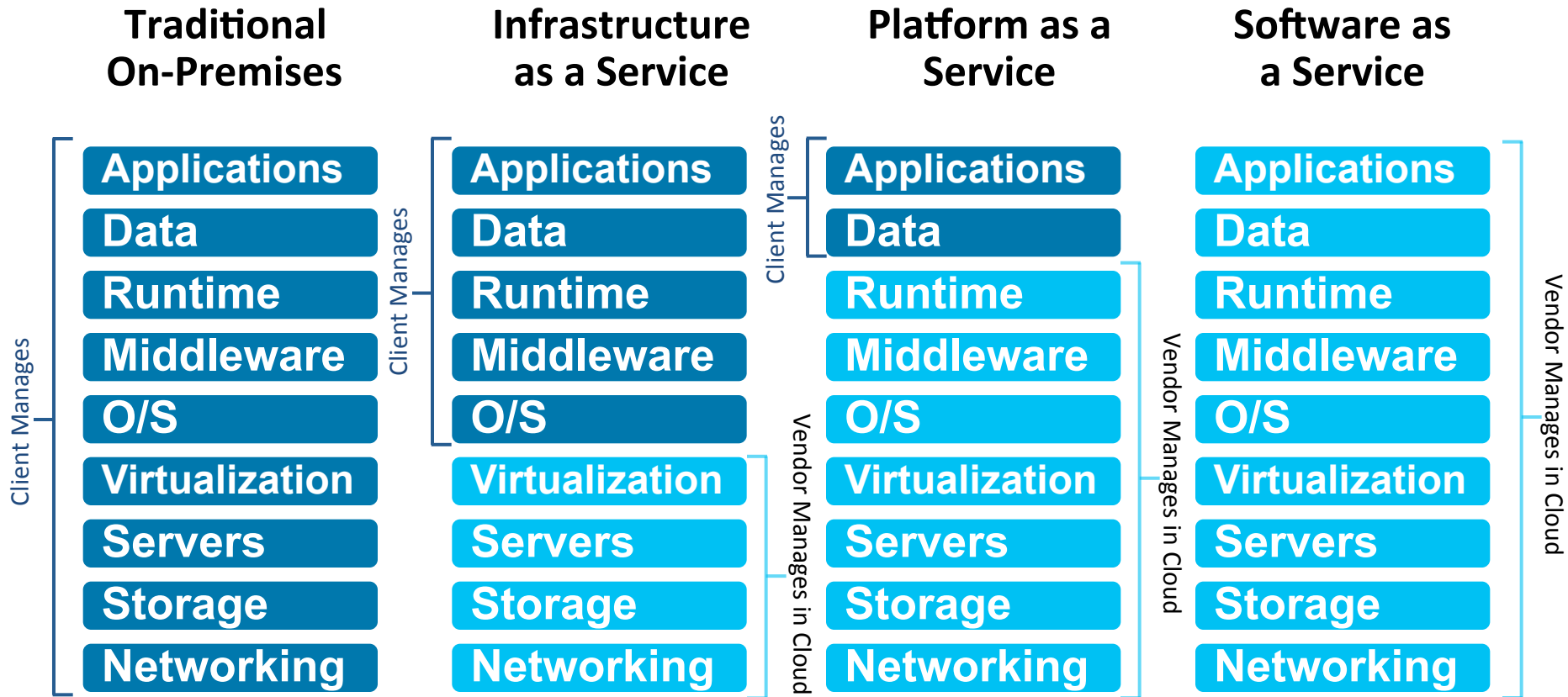
A **Cloud** Operating Environment allows us to construct apps from APIs ... **regardless** of where they reside



So we need a new architecture to support this...



Cloud service models



Customization; higher costs; slower time to value

Standardization; lower costs; faster time to value

Build a cloud that's customized for you. **Dynamic Hybrid** is the future.

Private Cloud & IT



Benefits:



- Fully customizable
- Robust management
- Secure by design

Public Cloud



Benefits:

- Low entry cost
- Pay-per-use
- Highly elastic

Dynamic Hybrid



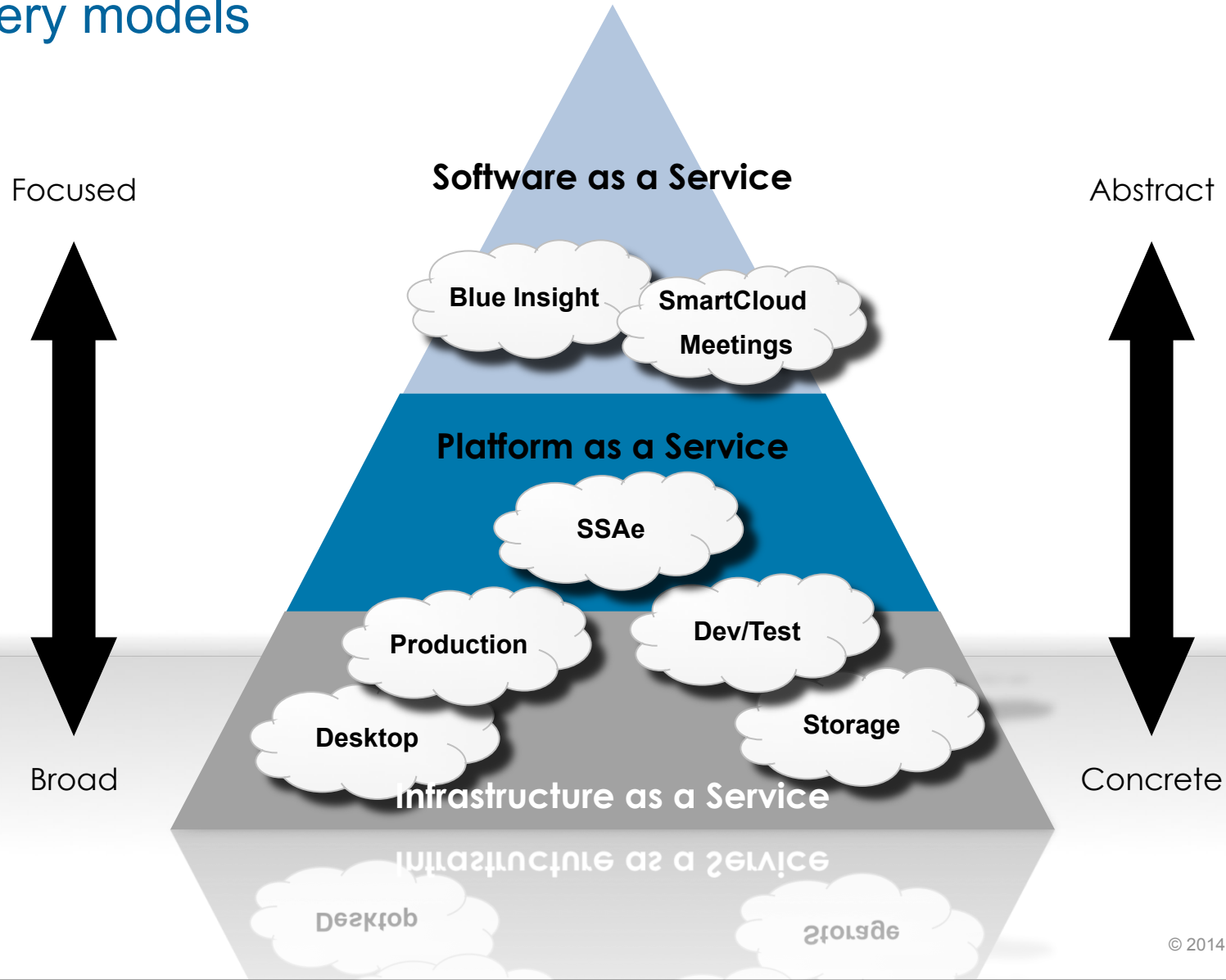
+



**Best of both worlds.
Better outcomes.**

- ✓ Maximize return on existing IT investments
- ✓ Match workloads to best-fit infrastructure
- ✓ Hit the right balance of risk to speed
- ✓ Meet seasonal capacity without CapEx
- ✓ Add new capabilities quickly

Our Cloud activities cover the spectrum of cloud service delivery models



IBM has a full breadth of cloud offerings to help you achieve those powerful business outcomes, no matter where your entry point is.

Think it. Build it. Tap into it.



Business Process as a Service

Automating Business Innovation

Business Processes

Recruiting

Procurement

Payment Processing

Help Desk

Accounting



Software as a Service

Marketplace of High Value Consumable Business Applications

Marketing

Commerce

Supply Chain

Talent Management

Analytics

Collaboration

IT Management



Platform as a Service

Rapid App Development through Composable and Integrated Platform
Built using open standards

Mobile

Security

Big Data & Analytics

Development & DevOps

Integration

Integration/ API Mgmt

Traditional Workloads



Infrastructure as a Service

Enterprise Class, Optimized Infrastructure
Built using open standards

Compute

Storage

Networking

Public. Private. Dynamic Hybrid.

Clients need an experienced partner to...

Think it.



Strategize how to use cloud to drive revenue growth and efficiencies.

Build it.



Build and run your private or hybrid cloud.

Tap into it.



Utilize cloud services delivered from IBM SmartCloud.





Social

\$19B

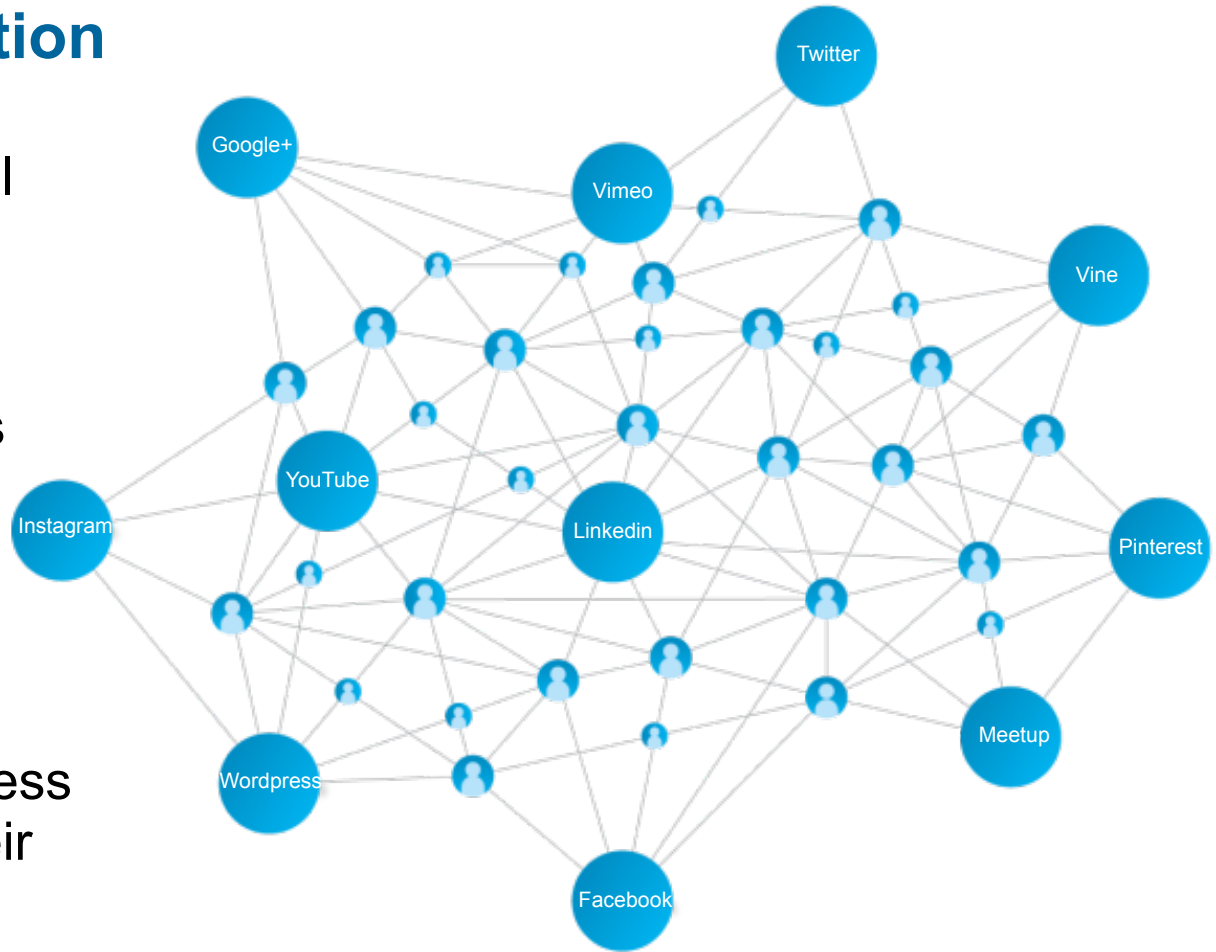
Facebook Acquires WhatsApp

Today, the social media revolution has sparked another transformation, forever changing the way people interact and share information

>1.5 billion social networking users globally

25% of search results for the world's top 20 largest brands are links to user-generated content

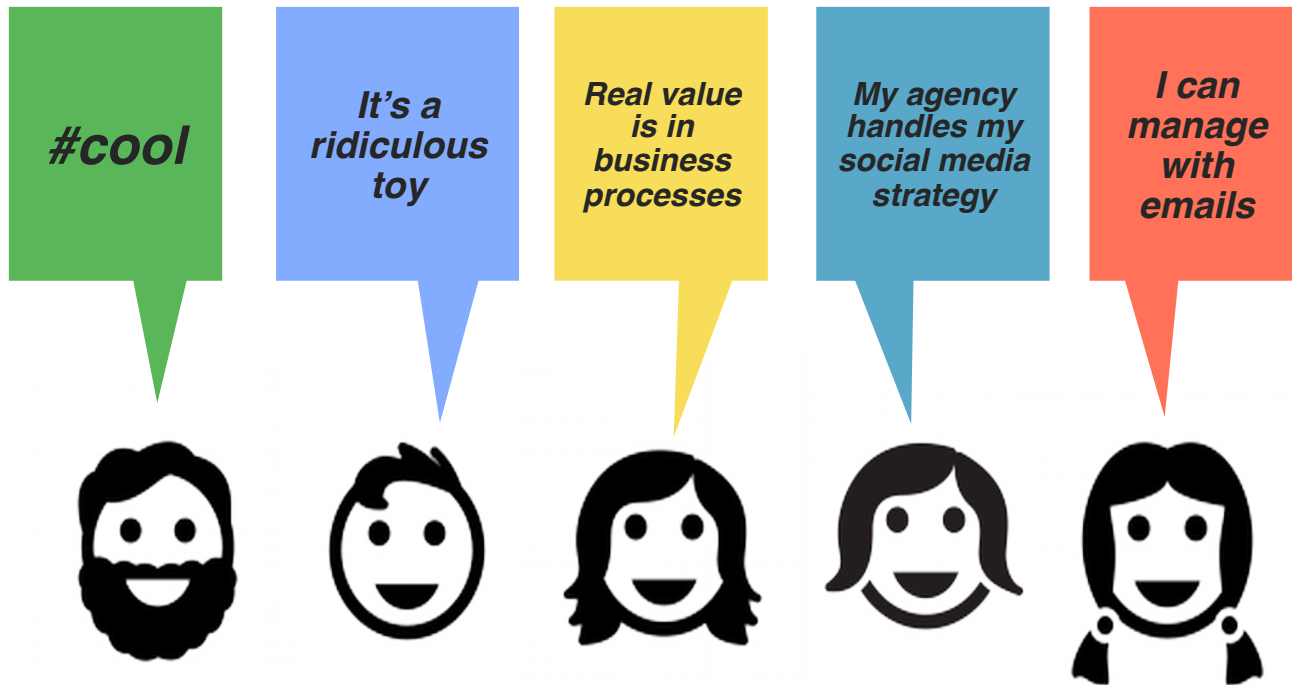
50% of users access the internet with their mobile device



Social technologies have changed how we interact & share information



What do you think of 'social'?



**What does
the CEO
think?**

1

**I need to attract, empower
and motivate very best
people.**

2

**I need my people to work
together.**

3


**I want to turn every
customer touch into an
unforgettable experience.**

4

**I want to capture and act on
every customer insight.**

The world has gone...

SOCIAL



34,722 Likes
Every Mins
Domo "Data never Sleeps"

100% of b2b customers use social media for business.

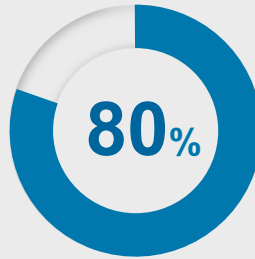
Source: Forrester Technographics® (7/2013)

Shared Content up 9x in 5 years

Global Digital information Created & Shared, 2005 – 2015E

Amount of global digital information created + shared (pictures, tweets, documents, etc.) expected to reach 9 zettabytes by 2015

Source: IDC report "Extracting Value from Chaos" 6/11



By 2014, 4 out of 5 companies plan to invest in social technology to foster internal collaboration & listen to customers.

Source: ibm.com

\$ 6.4 billion

The social-technology industry, worth \$600 million in 2010, will **grow 10x** by 2016 to \$6.4 billion.

Source: ibm.com

Facebook 52%
Google+ 25%
Twitter 22%



Social platform **active** usage (Percentage of global internet users)
Source: Global Web Index (1Q:13)

218 M

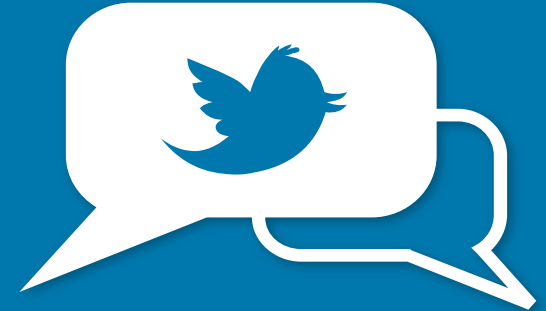
Registered LinkedIn users (1Q:13) +35% Y/Y

Source: LinkedIn

1.1B+

Global active Facebook users. 68% on mobiles. 60% log in daily.

Source: Facebook 5/13



663 M

Registered Skype users spend **2 billion** minutes per day on Skype, with **55 million** concurrent users online.
Source: Skype 7/2013

500 M

Photos uploaded & shared per day. Growth accelerating, 2X Y/Y
Source: KPCB

343 M

Active Google+ users – more than any other social network besides Facebook.
Source: Global Web Index

100 hours/minute

YouTube hours of video uploaded per minute (1Q:13)
Source: YouTube

Smarter WorkForce

Attract & Retain Talents

External

- Attract right candidates to the right roles

Internal

- Connect Talent to critical roles to optimize Org performance
- Rapid development, deploying optimized skills & Capabilities
- Recognition and Rewards

Social Tools / Analytics



Are you
Greenwell
material?

Take our Culture Fit
quiz and find out!













Take the Quiz →

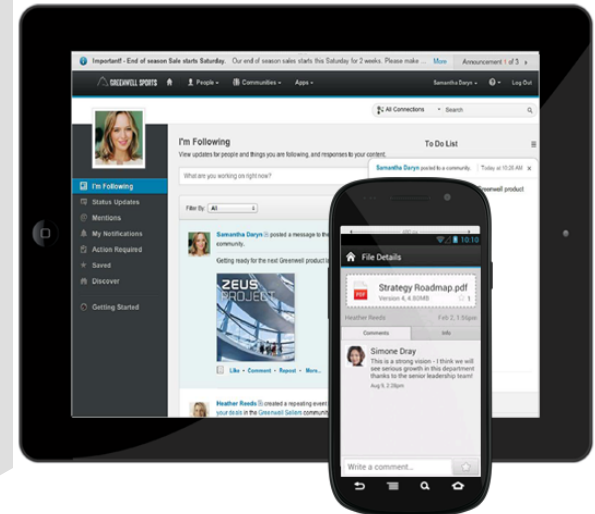
moves us
forward

With roots in rural Pennsylvania, we started as a family company infused with traditional values. Our culture has grown around these values, and every day we proudly represent our heritage to our customers.

As we grow to become the world's best multi-channel retailer of sporting gear we need talent that mirrors who we are and who we want to become.

Let Employee Engage Together

 People	 Communities
 Activities	 Files
 Meetings	 Blogs, Ideation
 Chat	 Calendar
 Wikis	 Traveler
 Email	 Docs



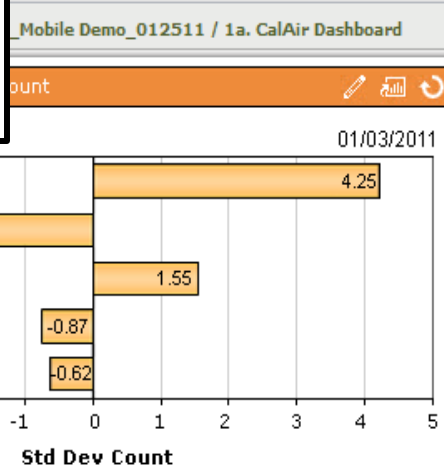
Deliver Exceptional Digital Experience

Same Content, Context and Consistency across Digital Channel

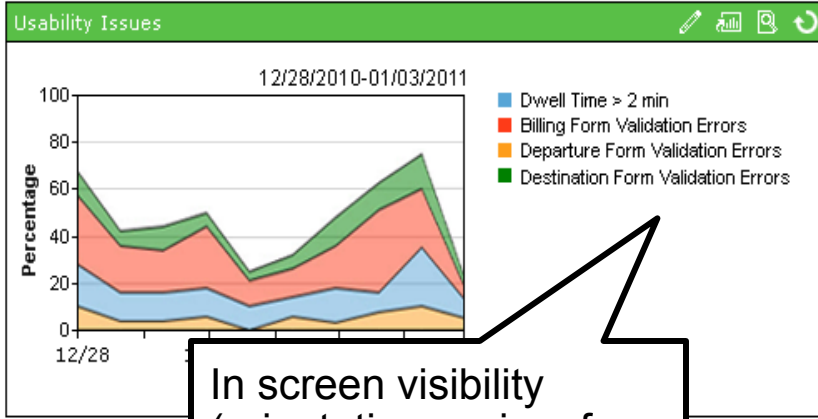
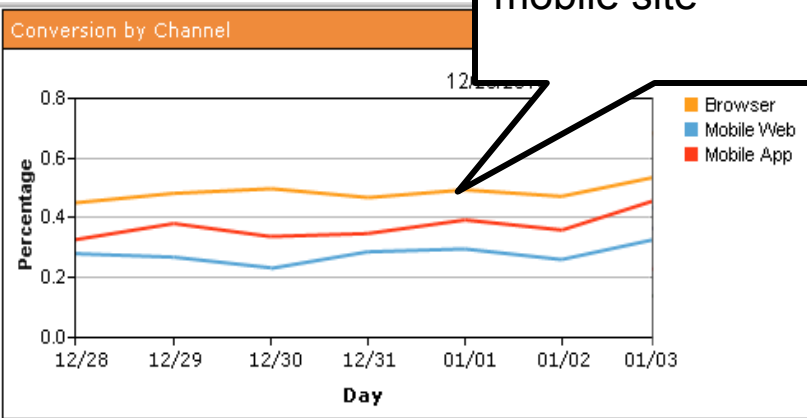


Capture, Act on every customer insights

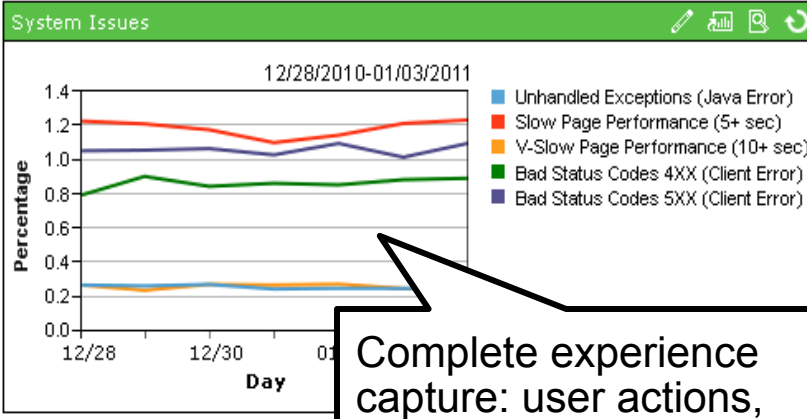
Automatic detection of mobile customer struggle



Cross channel analytics: web, app, mobile site

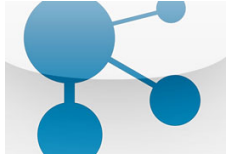


In screen visibility (orientation, swipe, form entry, clicks) to track usability issues



Complete experience capture: user actions, application, environmental and network data

The IBM social platform: IBM Connections



Deployed to all IBMers, Connections is an integrated, security-rich social platform that helps employees engage with networks of experts.



Home page

See what's happening across your social network



Communities

Work with people who share common roles and expertise



Files

Post, share, and discover documents, presentations, images, and more



Wikis

Create web content together



Activities

Organize your work and tap your professional network



Profiles

Find the people you need



Forums

Exchange ideas with, and benefit from the expertise of others



Social Analytics

Discover who and what you don't know via recommendations



Blogs

Present your own ideas, and learn from others



Bookmarks

Save, share, and discover bookmarks

86,000

Public communities & 83,000 private communities



428,000

Blog users,

74,500 blogs, and 244,000 entries



1.18M

Files shared,

44.8M downloads



7.5M

Activities entries, 655K users



Social Business at IBM: taking advantage of change

IBM is looking beyond social media to see how **social technologies** drive real **business value**. From marketing and sales to product and service innovation, social is changing the way **employees connect, share expertise, and engage** with each other & clients.

- Networks of **IBMers** and our **clients** are **connecting** in real time in global communities
- **Mobile** devices are bringing people and information **together** like never before
- Create exceptional **customer experiences**
- Create a **smarter** workforce
- Gain powerful **insight**

- Ignite **innovation**
- Achieve real value
- Increase **productivity**
- Generate more **revenue**
- Accelerate business **transformation**
- Transition from **systems of record** to **systems of engagement**

IBM has a market leading portfolio of technology and services to help clients become social businesses

SOCIAL BUSINESS SOLUTIONS



Smarter Workforce

IBM Employee Experience Suite

Kenexa Talent Management Suite

attract . empower . motivate . deliver



Exceptional Customer Experience

IBM Customer Experience Suite



IBM Platform for Social Business



Social Networking

IBM Connections

IBM Notes & Domino Social Edition

IBM Sametime



Social Analytics

IBM Social Analytics Suite



Social Content

IBM Enterprise Content Management



Social Integration

IBM WebSphere Portal

IBM Web Content Manager

IBM SmartCloud

Dedicated Private Cloud

On Premises

Hybrid

DEPLOYMENT OPTIONS

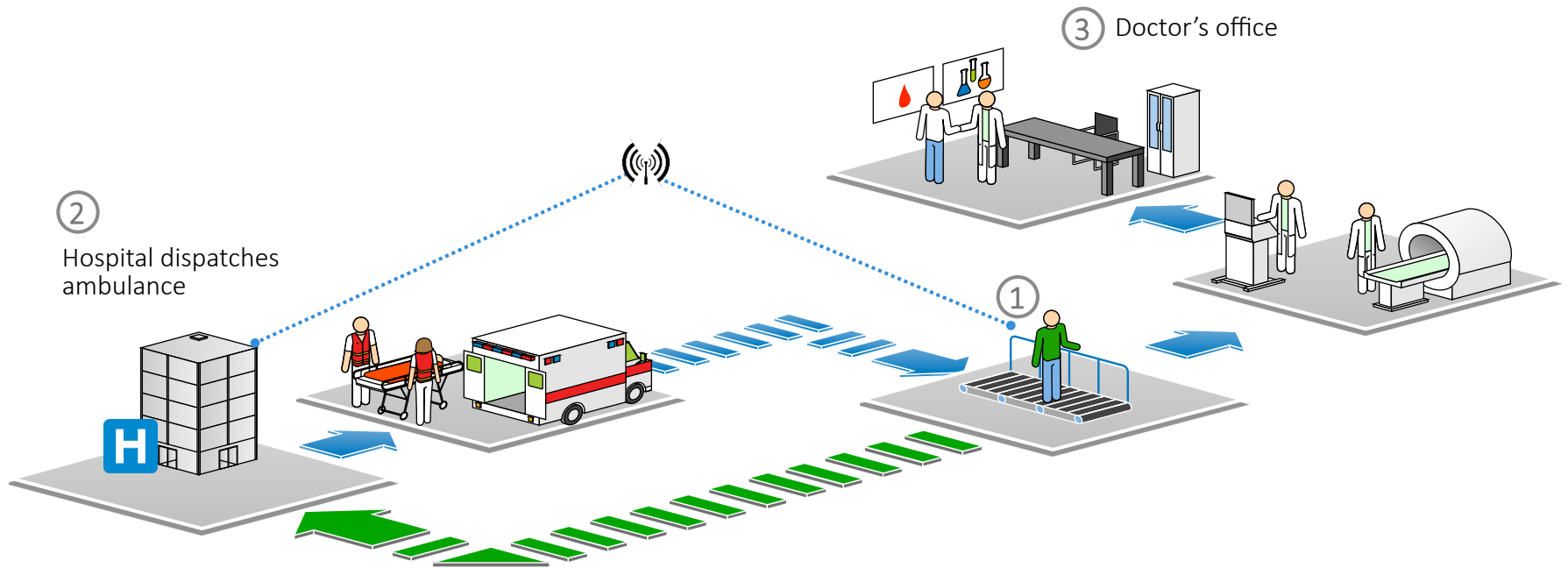
What's Next?

Changing the paradigm from reacting to anticipating



Connected Devices

A New Era of Big Data & Predictive Analytics



We are on the path to realizing the full promise of Cognitive Computing



Analyze. Adapt. Learn.



Watson for Engagement
(Answering customer questions more effectively)



Watson for Healthcare
(Cognitive Medical Decision Support Tools)



Watson for Finance
(Deep content analysis for smarter recommendations)

To succeed we need to understand these changes and to evolve our business



New Era of Computing

*Mobile, Cloud,
Big Data, Social*

New Kind Of Client

*CMO, CFO
HR, CEO*

New Type of Expertise

*Skills, Expertise
Eminence*

Where's the opportunity for you?

Treat customers, citizens
and employees as **individuals**

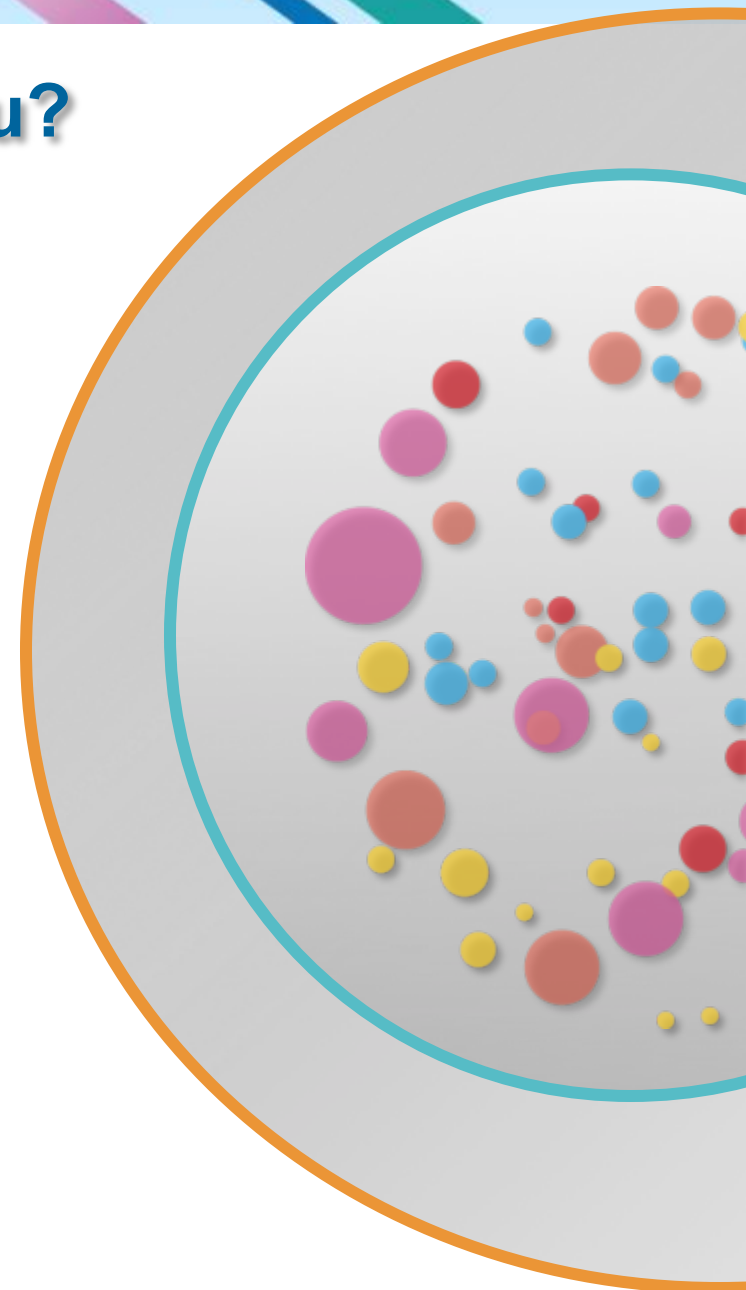
Engage anyone, anytime, anywhere

Use **cloud** to drive strategic change

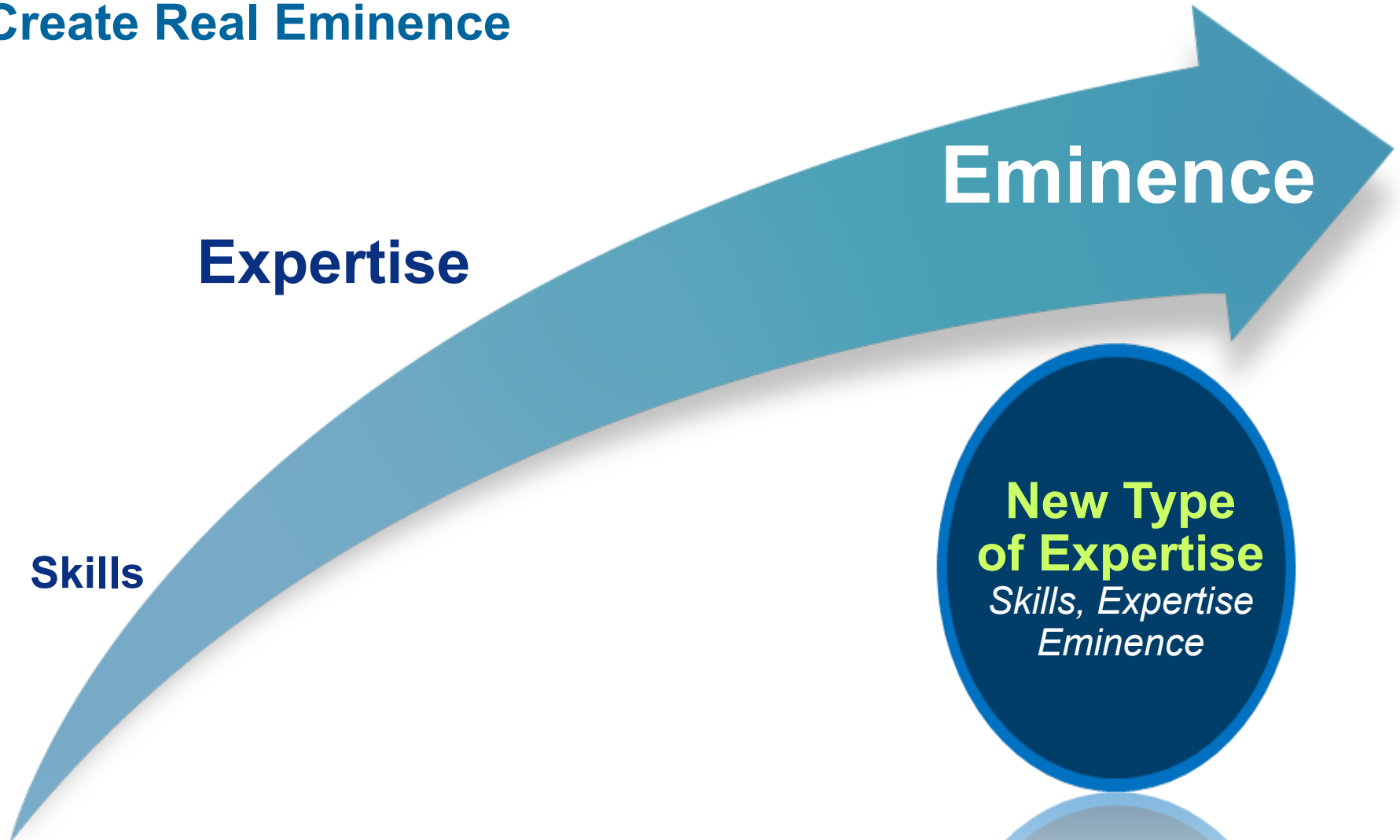
Capitalize on **big data** to know and act

Speed delivery of new products and
services

Protect the brand against
evolving threats



Business Partners need to build on Skills and Expertise to Create Real Eminence



Quiz

What Does CAMS stand for ?

A. Volume, Velocity, Variety and Veracity

THANK YOU