



Innovate2012

The Premier Event for Software and Systems Innovation



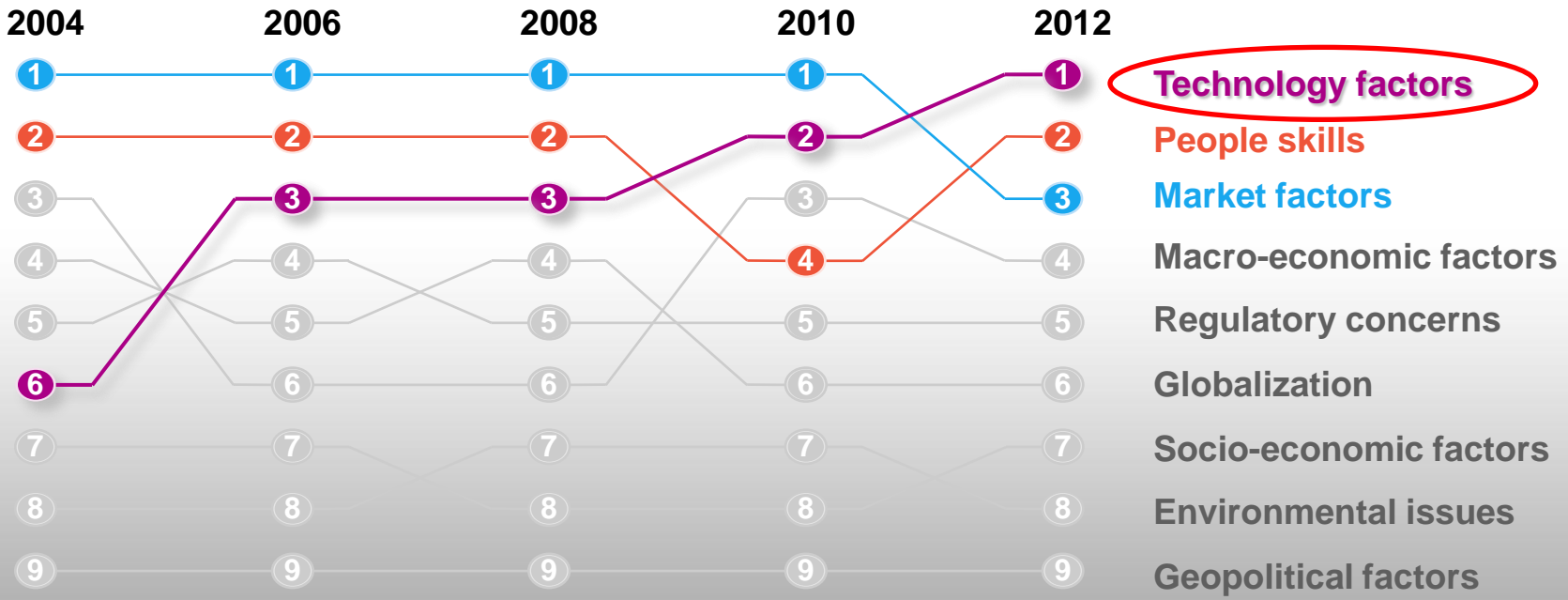
Michael Rhoads
Director, Rational Software
Asia Pacific

Smarter Software Delivery - Topics

- The Perfect Storm
- Accelerating Software Delivery
- Software Supply chain
- Announcements & Summary

For the first time, CEOs identify “technology factors” as the most important external force

External forces that will impact the organization



Technology factors

People skills

Market factors

Macro-economic factors

Regulatory concerns

Globalization

Socio-economic factors

Environmental issues

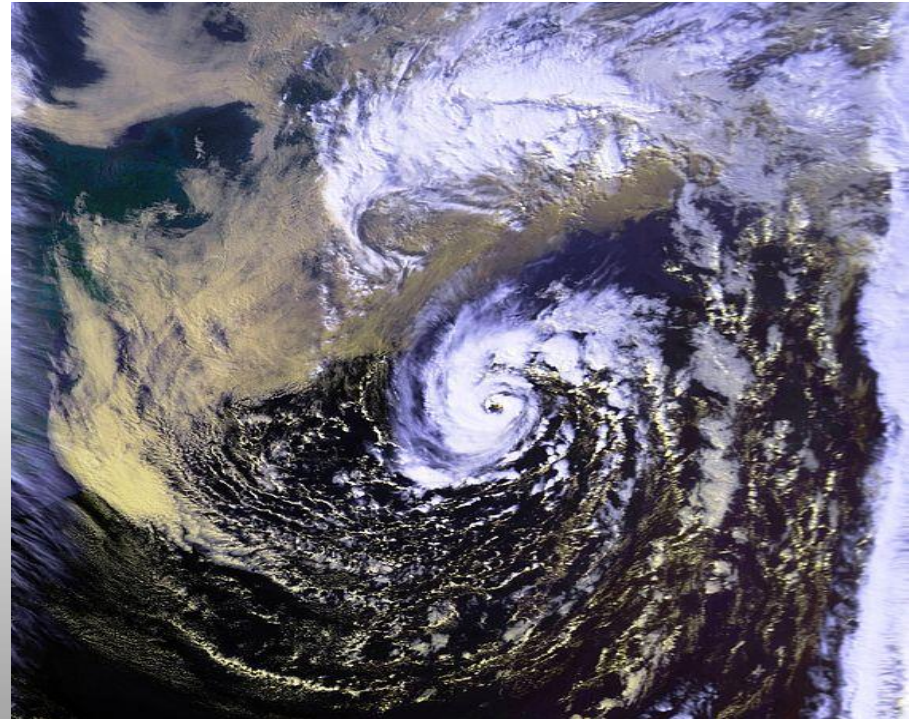
Geopolitical factors

Source: Q1 “What are the most important external forces that will impact your organization over the next 3 to 5 years?” (n=1709)

Perfect Storm is a confluence of events that drastically aggravates a situation.

Storm in 1991 October that hit the Northeast of the US and Canada. Was the result of multiple storms converging into a storm of the century. Resulted in over \$200M in damages.

(Movie starring George Clooney)





Cloud

Agile

Social

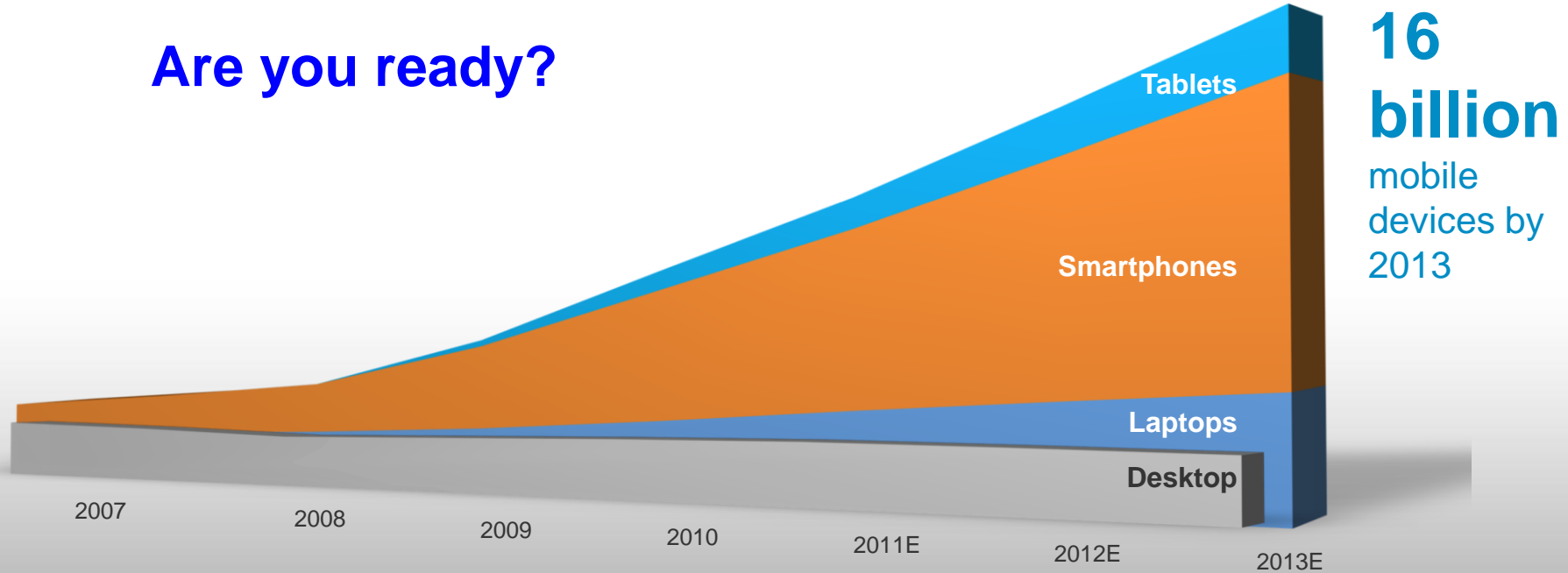
Mobile

Big Data

Analytics

Explosion of mobile devices suggest new Use Cases

Are you ready?



16 billion
mobile devices by 2013

Source: Gartner Research; Smartphone, Tablet, and PC Forecast, December 2010.

Four Key Mobile Development & Delivery Challenges

1. Multiple Mobile Platforms

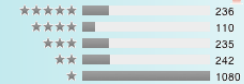


2. Consumer Expectations

Customer Ratings

• Average rating for the current version: ★★★★★ 18 Ratings

• Average rating for all versions: ★★★★★ 1903 Ratings



3. Time to Market Requirements

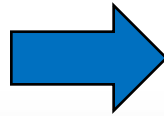


4. Connecting mobile to the enterprise



Social

The internet is evolving from network of data to people

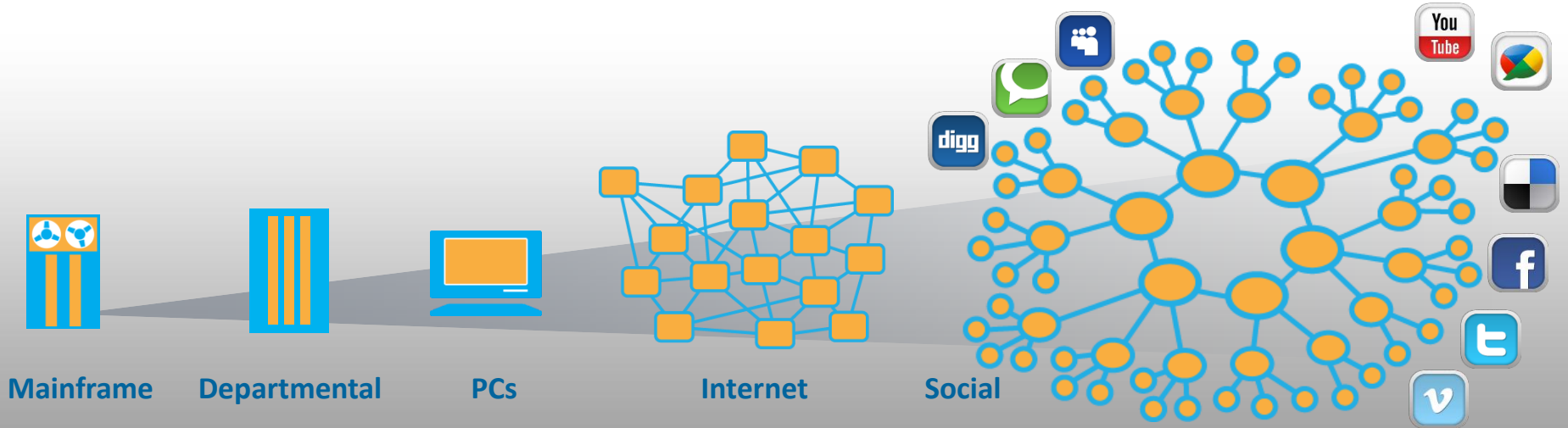


Network of Data

Network of People

Social

- 59%** use social media to **vent frustrations** about goods they have purchased
- 74%** do business with companies based on the experiences **shared by others online**
- 62%** research consumer and expert reviews on-line, before making a buying decision
- 60%** trust consumer reviews twice as much as information on a manufacturer's web site



Cloud use for Scalability, but increasingly for Agility



Large Volume & Variety of Data for “New Insights”



Multi-channel customer sentiment and experience analysis



Detect life-threatening conditions at hospitals in time to intervene



Predict weather patterns to plan optimal wind turbine usage, and optimize capital expenditure on asset placement



Make risk decisions based on real-time transactional data



Identify criminals and threats from disparate video, audio, and data feeds

Market Trends : New Technology for Business Applications

- New applications developed for mobile, social and analytics - Instagram
- Transformation of existing applications to the new model – Netflix
- Coexistence and integration of new application models with existing applications - StateFarm



Instagram
Fast beautiful photo sharing

NETFLIX



The Apache Software Foundation

foursquare



State Farm Bank

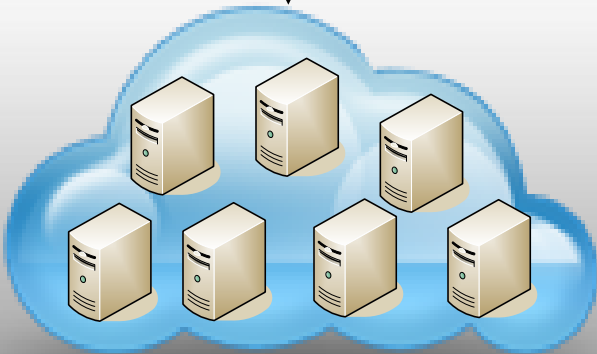
Walmart
Save money. Live better.



UBS

aetnaSM

Time Pressure Pushing to the Breaking Point



New Apps

Traditional Apps

Time-to-market

Weeks to Months

Months to Years

Frequency of updates

Once every several weeks

12-18 month cycles

Are you ready?

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Accelerated Delivery Demands a Quid Pro Quo

Engineering Practitioners

- Design, create, test
- Reuse knowledge, best practices
- Address uncertain things first
- Be adaptive to change

Embrace Measurement



The Speed Of Trust

Governance Stakeholders

- Achieve predictable outcomes
- Manage risk
- Ensure compliance
- Improve software economics
- Visibility and transparency

Enable Agility

Succeeding in The New Development Reality

**Engineering
Practitioners**

*Agility &
Responsibility*

INTEGRATE
early and continuously



**Governance
Stakeholders**

*Governance &
Empowerment*

OPTIMIZE
business outcomes

COLLABORATE
in context across
the extended lifecycle

Improving Software Economics

VOLUME OF CODE

- Quality/Performance
- Integration first
- Manage scope
- Asset-based reuse

PROCESS

- Steering
- Good practices
- Maturity
- Domain knowledge

Resources = Complexity *Agility* * Collaboration * Automation

TEAMWORK

- Synchronization
- Skills
- Experience
- Motivation

TOOLING

- Process enactment
- Measurement
- Instrumentation
- Manage complexity

Productivity Improvement Leverage

**Economic
Impacts**

**Reduce
Complexity**

Productivity:
2x – 10x
Timeframe is Years

Cost to Implement:
25%-50%
Much culture change

Organization

**Increase
Agility**

Productivity:
25-100%
Timeframe is Quarters

Cost to Implement:
10%-35%
Some culture change

Project

**Improve
Collaboration**

Productivity:
15-35%
Timeframe is Months

Cost to Implement:
5%-10%
Predictable

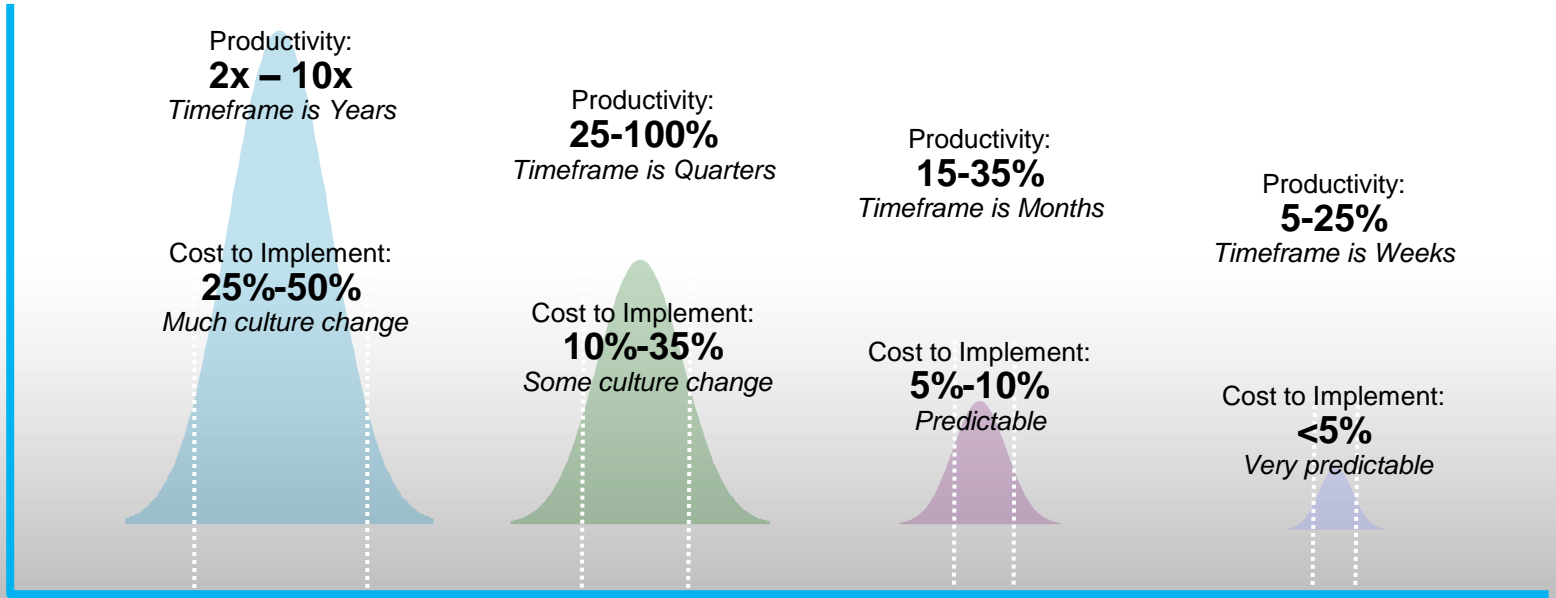
Team

**Add
Automation**

Productivity:
5-25%
Timeframe is Weeks

Cost to Implement:
<5%
Very predictable

Individual



Accelerating Overall Software Delivery



Customers



Line
of Business

Software
Development

Operations



Poor end-to-end requirements visibility

Unstructured demand management

Limited business and IT prioritization

Lack of software development process, skills & automation.

Enhance, modernize, build new, buy & customize.

Distributed in-house or outsourced teams

Limited overall release management

Poor hand-off from development to production

Unstructured build process

Accelerating Overall Software Delivery



IBM is addressing this through specific solution areas

BPA
Business Plan & Alignment

ALM
Application Lifecycle Mgmt

DevOps
Development to Operations

Three phases of solution delivery



Planning

- Understand business needs and priorities and decide where and what to invest.
- Define projects and assess resource and budget.
- Decide to build in-house or by outsourcing
- Assess risks and monitor progress for actions.
- Define and manage release plan



Implementation

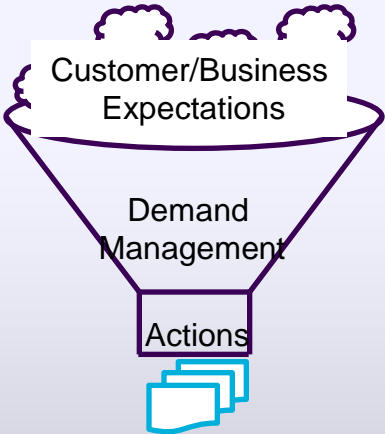
- Create project plans and execute them.
- Define and analyze requirements
- Design, implement and test.
- Produce documents
- Define and implement quality plan.



Operations

- Standardize infrastructure and configuration for deployment.
- Lower the risks of deployments, and have the ability to easily deploy an old version.
- Improve collaboration with development to reduce communication gap

Demand-Management

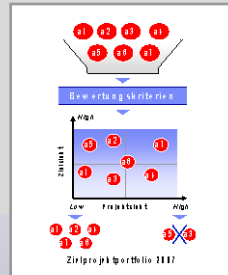


IT-Planning / Specification

Financial Planning

Project Portfolio Evaluation

Architectural and Strategic Planning



Development

Application-Lifecycle-Management

Performance Management

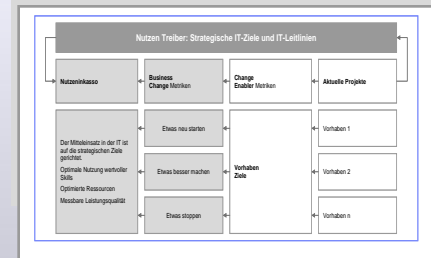


Application Lifecycle Management

Deploy/ Measure Control

Continues deployment

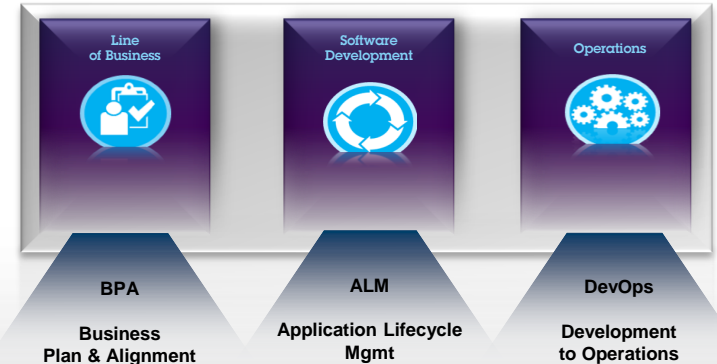
Scorecards



“Solution Sandwich” of Mobile, Social and Cloud

- The “Solution Sandwich” shows these three key solution areas are also important for new technology areas.
- Choose entry points where you can gain the most value, based on your level of maturity and business requirements. But principles of iterative adoption always apply.
- Process and Automation is critical to realizing huge benefits. Choose an entry point which makes the most sense to your business, and address it with an approach which you can reuse and expand.
- Remember the pillars of :
 - Integration
 - Collaboration
 - Optimization

IBM Enterprise Mobile Application Dev.
IBM Social Solution Enablement



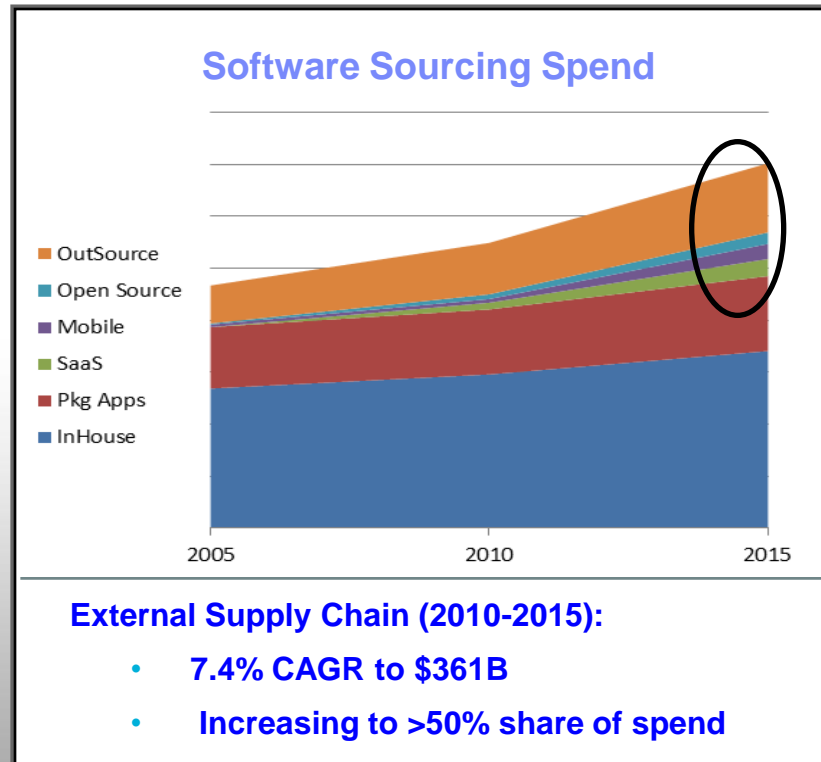
IBM Cloud Applications Solutions
For the cloud, on the cloud

Smarter Software Delivery - Topics

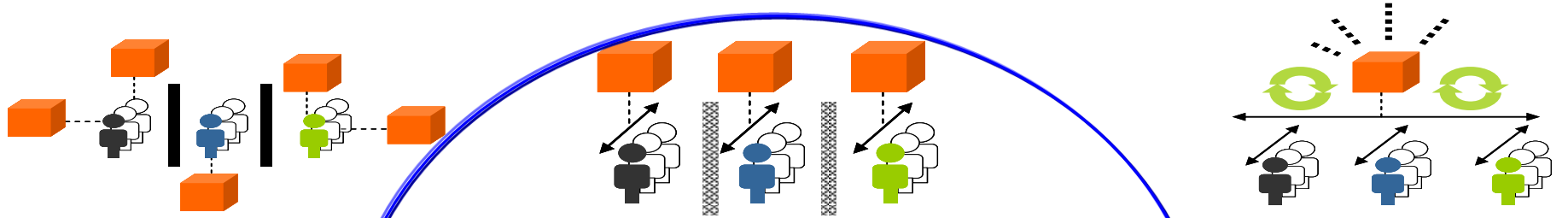
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The “Perfect Storm” of disruptive technologies is accelerating / evolving outsourcing models

- A Gartner benchmark study found that 55% of global organizations manage their sourcing activities tactically and at an operational level, failing to add a strategic management layer and invest enough in developing critical multi-sourcing competencies.
- Key challenges of multi-sourcing include:
 - Difficult to build and manage
 - Often fail to deliver expected outcomes
 - Often relationship fails to evolve
 - Improper balance between oversight and innovation



Outsourcing models evolving into complicated Software Supply Chains



- Labor arbitrage
- Outsource well defined areas
- Manage directly
- Cost focus

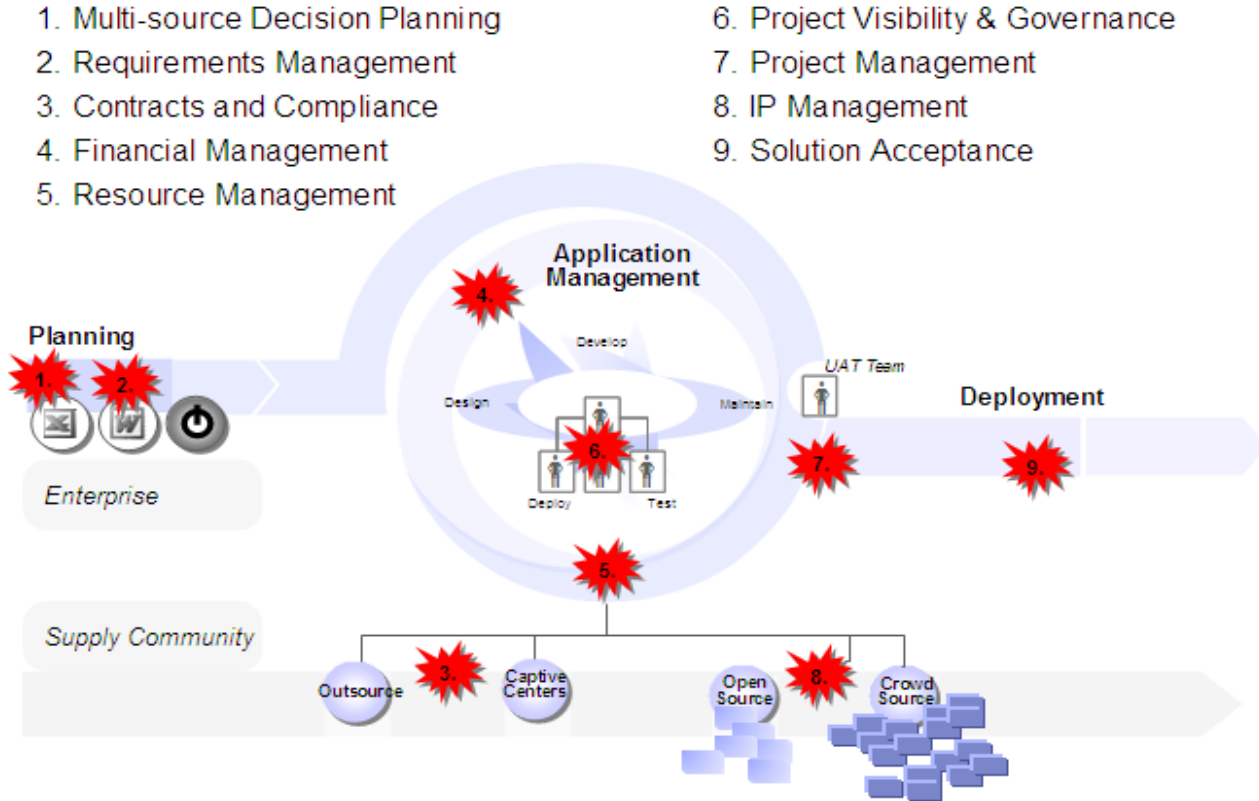
- Staff augmentation
- Outsource larger disciplines
- Manage SLAs
- Skills focused

- Core competence
- Outsource projects
- Manage outputs
- Skills and process focused

- Business agility
- Outsource multiple projects
- Manage outcomes of multiple vendors
- Process optimization

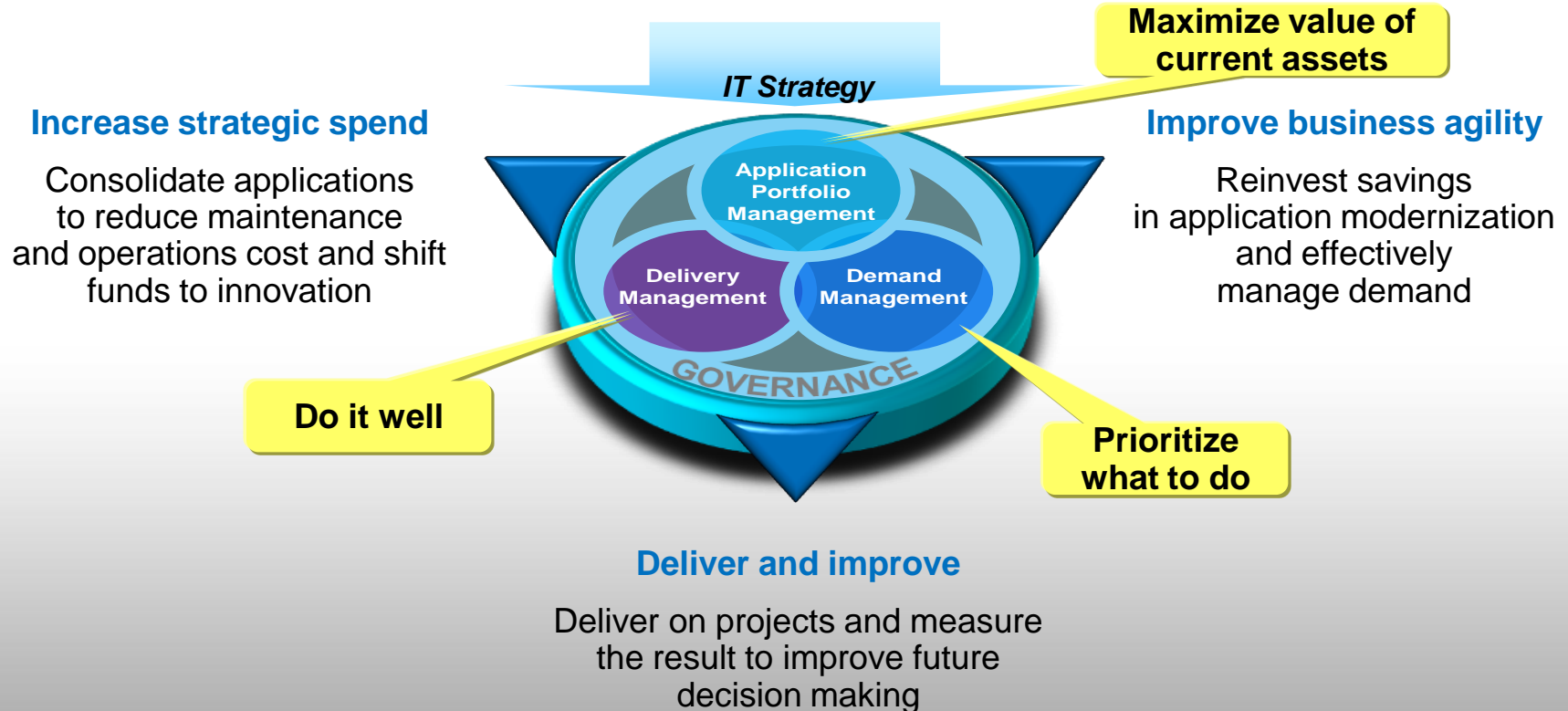
Significant challenges from weak governance of the Software Supply Chain

- Software Supply Chain currently fragmented business process like SDLC was before ALM....with many points of failure
- Solution delivery and change mgmt are not transparent, controlled, or predictable
- Lack of business process insight
- Lack of visibility into resources, contracts, SOW, vendor selection, project scoping, and requirements across the suppliers

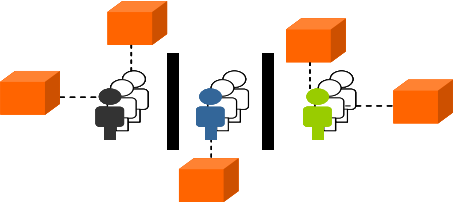
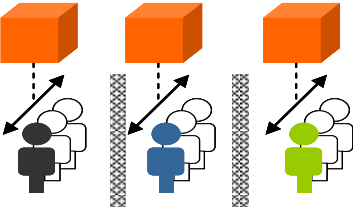
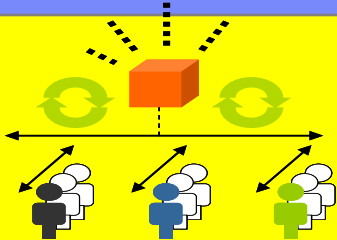


IBM Multi-sourcing Governance

Collaborative decision making



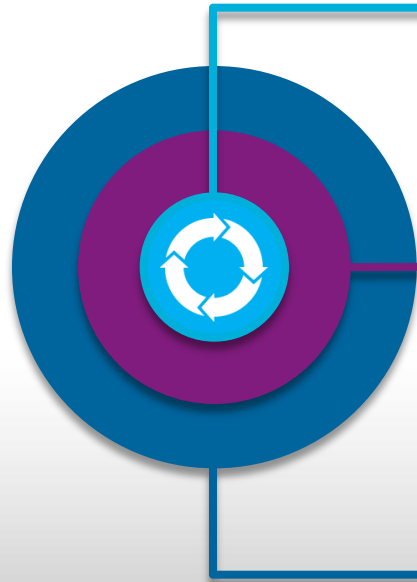
New governance model enables “Advanced Practice”

Simple Practice	Typical Practice	Advanced Practice
		
<ul style="list-style-type: none"> ▪ Country-based delivery 	<ul style="list-style-type: none"> ▪ Onshore / Offshore 	<ul style="list-style-type: none"> ▪ Networked Global Centers
<ul style="list-style-type: none"> ▪ Utilization based 	<ul style="list-style-type: none"> ▪ Deliverables based 	<ul style="list-style-type: none"> ▪ Outcome based
<ul style="list-style-type: none"> ▪ Limited collaboration 	<ul style="list-style-type: none"> ▪ Core team collaboration by project 	<ul style="list-style-type: none"> ▪ Community Collaboration across process and technology
<ul style="list-style-type: none"> ▪ No workflow management 	<ul style="list-style-type: none"> ▪ Limited workflow management 	<ul style="list-style-type: none"> ▪ Component-based workflow management
<ul style="list-style-type: none"> ▪ No reuse 	<ul style="list-style-type: none"> ▪ Ad hoc reuse 	<ul style="list-style-type: none"> ▪ Systematic reuse
<ul style="list-style-type: none"> ▪ Limited visibility 	<ul style="list-style-type: none"> ▪ Visibility of standard project metrics 	<ul style="list-style-type: none"> ▪ Pervasive transparency of all project artifacts
<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Ad hoc improvement processes 	<ul style="list-style-type: none"> ▪ Continuous improvement with Lean
Technology Platform		
<ul style="list-style-type: none"> ▪ Standalone development and project management tools 	<ul style="list-style-type: none"> ▪ Limited tool integration and collaboration capability 	<ul style="list-style-type: none"> ▪ Integrated technology platform enabling real-time collaboration and AD/M automation

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Announcements : New Capabilities in Three Key Areas





DEVELOPMENT LIFECYCLE

- Rational Solution for Collaborative Lifecycle Management
- Rational Solution for Systems and Software Engineering
- Continuous integration and testing features Green Hat technology

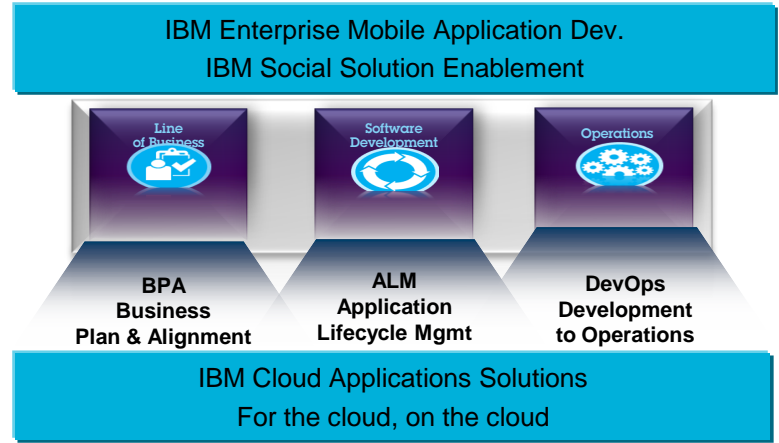
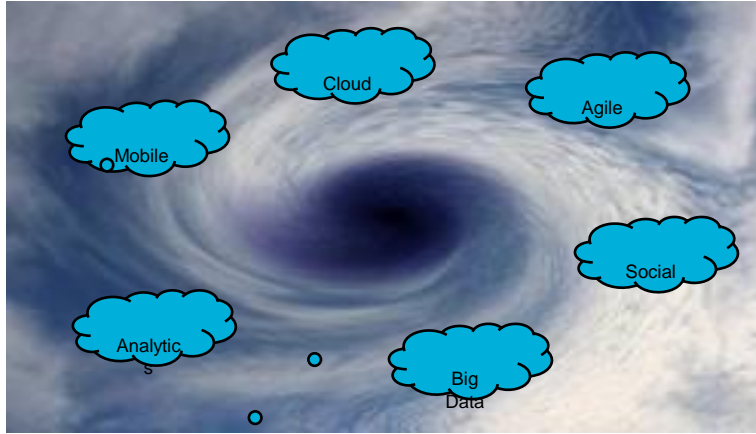
EXPANDING LIFECYCLE AND INDUSTRY FOCUS

- Integrations for Collaborative DevOps
- SmartCloud Continuous Delivery
- IBM Enterprise Mobile Development Solution
- Targeted industry-specific guidance for compliance standards

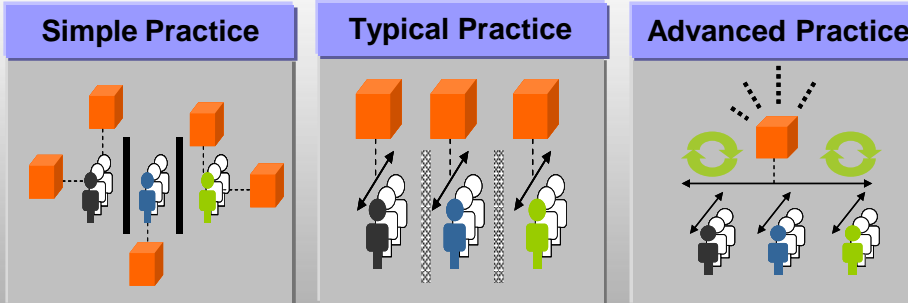
ECOSYSTEM

- New partnerships:  
- New steering committee for OSLC
- New Linked Data Workgroup within the W3C
- IBM PureSystems Trial powered by SmartCloud
- Enhancements to Jazz.net and Jazz Hub

Perfect Storm of Disruptive Technologies



Managing the “Outsource” Software Supply Chain



New Announcements

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