Innovate2012

The Premier Event for Software and Systems Innovation

Michael Rhoads
Director, Rational Software
Asia Pacific

Maybe add bridge chart….

Consider adding bridge chart from IDC findings / messages, to the IBM story.

Smarter Software Delivery - Topics

- **Software Innovation - New Development Reality**
- Accelerating Overall Software Delivery
- Business Planning and Alignment
- Application Life Cycle Management
- DevOps
- Mobile Enterprise Application Development
- Announcements
- Summary

The World We Live in…

Is Exciting for Developers!

- Globalization

- Consumerization of technology

- Cloud, mobile, big data, social business

- Increasing complexity, systems of systems

- Move faster or die

Value Creation Driven by Software in Every Industry

Banking	Automotive	Aerospace	Pharma	Medicine	Electronics	Public

SOFTWARE

Software-driven mobile banking will be the most widely used banking channel by 2020

80% of the current automotive innovation through electronics driven by Software

Almost every Business Innovation Is now driven by Software Innovation

Requirements management and model driven development with UML are "standard"

New surgical robotic system powered by 1.4 million lines of code

Implications for Software and Systems Delivery

More Speed and Agility

- Compelling user experience
- Rapid iterations
- Continuous delivery

Better Control

- Regulatory compliance
- End-to-end security
- Financial predictability

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
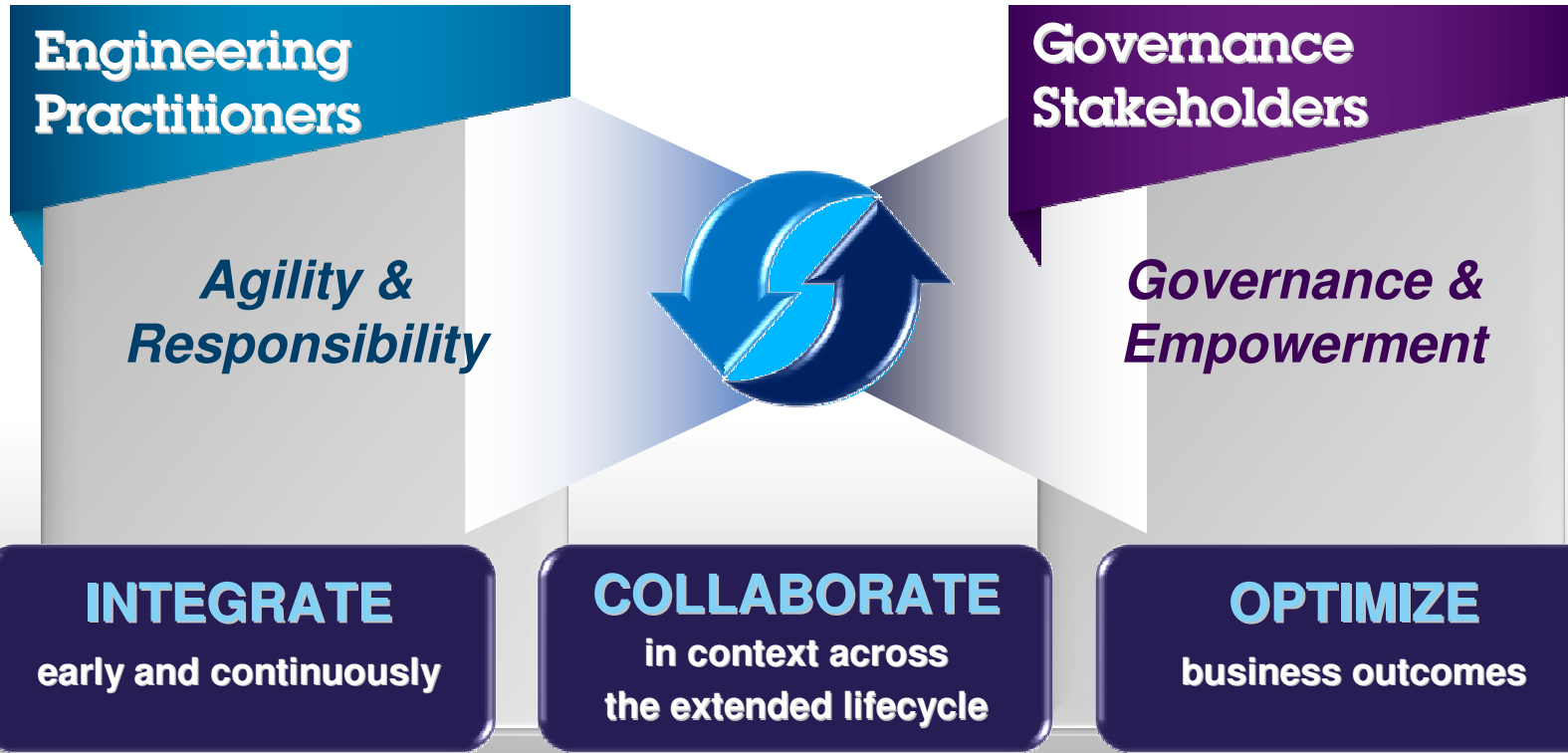
The Speed Of Trust

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

Governance Stakeholders

Governance & Empowerment

INTEGRATE
early and continuously

COLLABORATE
in context across
the extended lifecycle

OPTIMIZE
business outcomes

Succeeding in The New Development Reality

INTEGRATE
early and continuously

Connecting Process and Information
Software, data, and tools

- Common architectures
- Outside in design
- Process and tools
- Reuse
- Componentization

COLLABORATE
in context across the extended lifecycle

Unifying Teams
Projects, and organizational cultures

- Open, common platform
- Whole team shared objectives
- Vibrant communities of subject matter experts

OPTIMIZE
business outcomes

Simplifying Governance
Plans, scope, and measures

- Economic governance
- Measured improvement (revenue / headcount)
- More efficient operations
- New product investment

Smarter Software Delivery - Topics

- Software Innovation - New Development Reality
- **Accelerating Overall Software Delivery**
- Business Planning and Alignment
- Application Life Cycle Management
- DevOps
- Mobile Enterprise Application Development
- Announcements
- Summary

Accelerating Overall Software Delivery

Software Development

SW is challenging, but should not be considered in isolation

Lack of software development process, skills & automation.

Enhance, modernize, build new, buy & customize.

Distributed in-house or outsourced teams

Accelerating Overall Software Delivery

Customers

Line of Business

Software Development

Operations

Step back & look at common failure points across the broader Software Delivery Lifecycle

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

Customers

**Line of Business**

Software Development

Operations

IBM is addressing this through specific solution areas

BPA

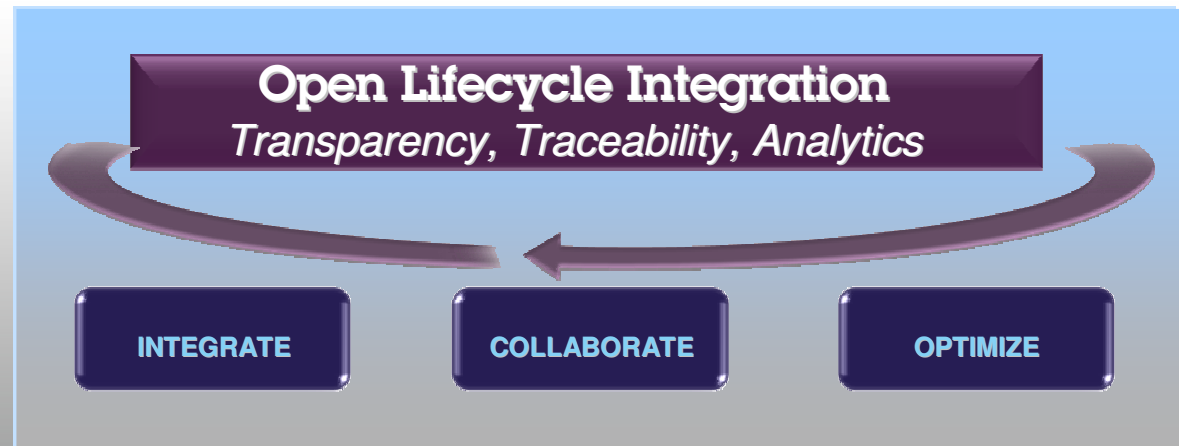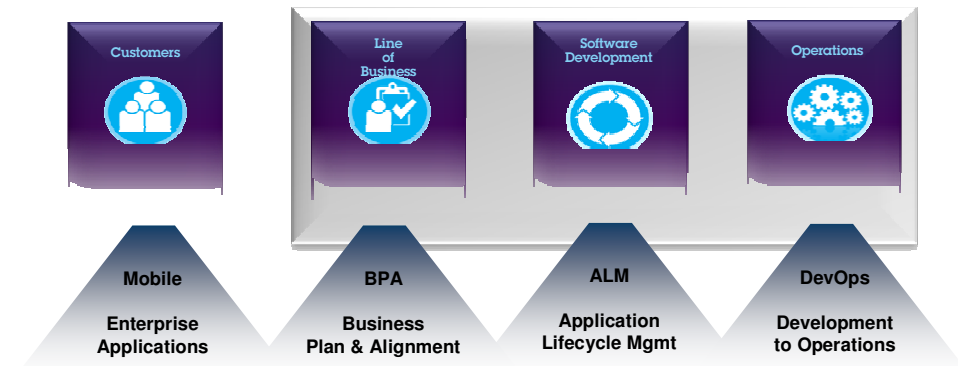**Business Plan & Alignment**

ALM

Application Lifecycle Mgmt

DevOps

Development to Operations

Accelerating Overall Software Delivery

Customers

Line of Business

Software Development

Operations

One more solution area

Mobile

Enterprise Applications

BPA

Business Plan & Alignment

ALM

Application Lifecycle Mgmt

DevOps

Development to Operations
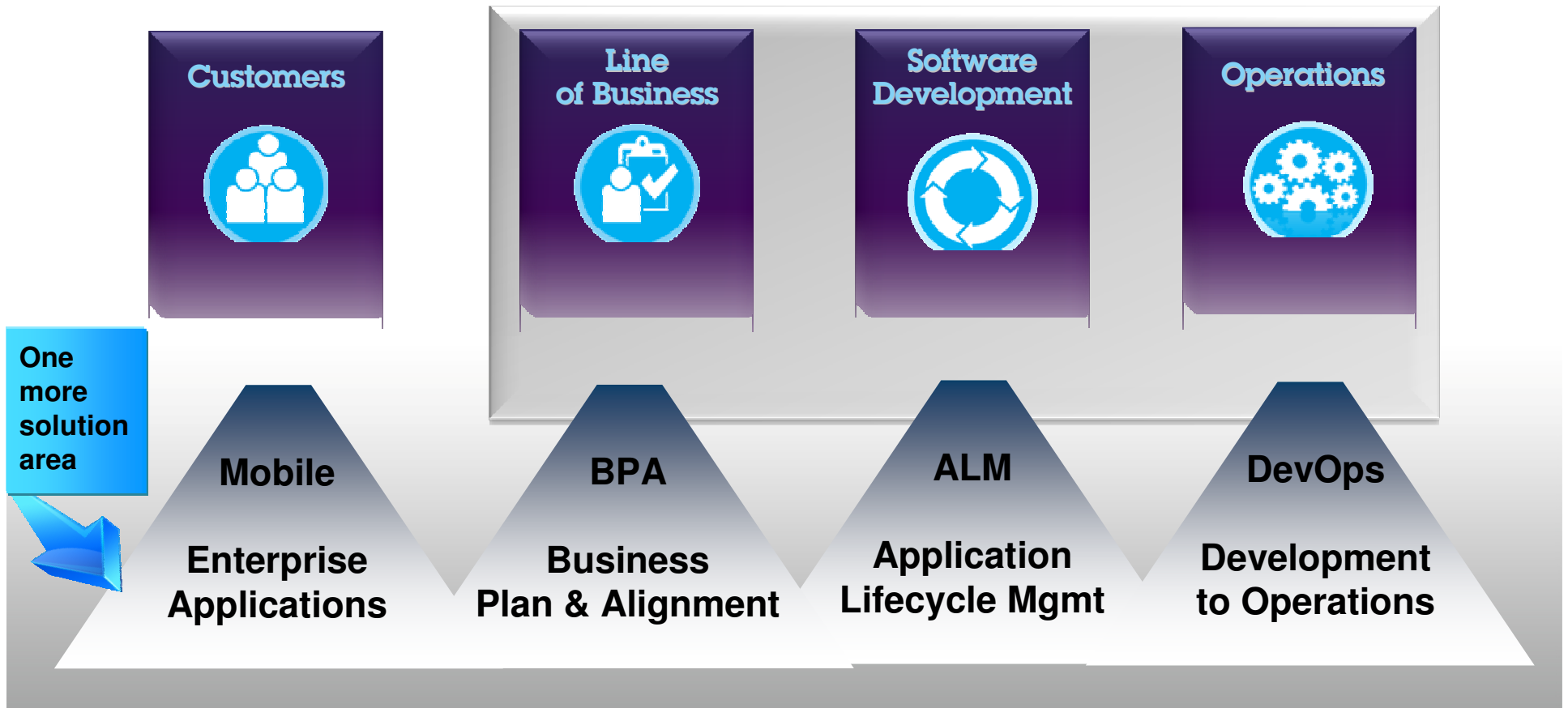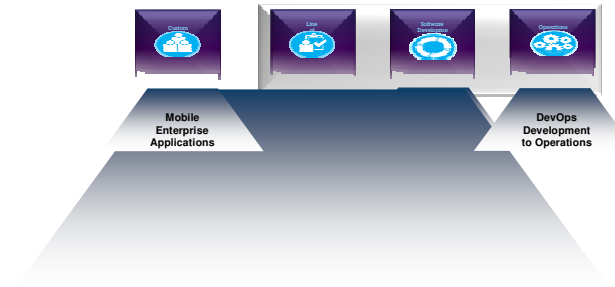
Accelerating Overall Software Delivery

- IBM provides some of the industries best automation offerings in each of the solution areas.

- IBM **Rational** has long been a leader in the ALM area and more recently emerged as the leader in the BP&A area.

- IBM **Tivoli** has long been the leader in the Operations area and now Rational / Tivoli Integrations provide the industries best DevOps solution

- Mobile applications are moving from stand-alone utilities, mash-ups and user apps, to full enterprise apps. IBM **Websphere** and Rational integrations now provide the industry's most complete solution.

- IBM is providing solutions on an Open Lifecycle Integration platform, which helps organizations "Integrate, Collaborate and Optimize", to accelerate their overall software delivery.

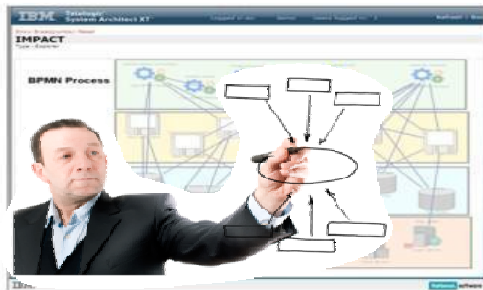# Smarter Software Delivery - Topics

- Software Innovation - New Development Reality
- Accelerating Overall Software Delivery
- Business Planning and Alignment
- Application Life Cycle Management
- DevOps
- Mobile Enterprise Application Development
- Announcements
- Summary

Business Planning and Alignment

Rational System Architect

Enterprise Architecture

- Create organizational blueprint
- Link business & IT information
- Provide key input to enterprise planning
- Provide accurate impact analysis
- Guide successful ent. transformation

Rational Focal Point

Portfolio Management

- Build or buy the right assets
- Build & deploy assets in the right way
- Maintain assets in the right way
- Retire / replace assets at the right times
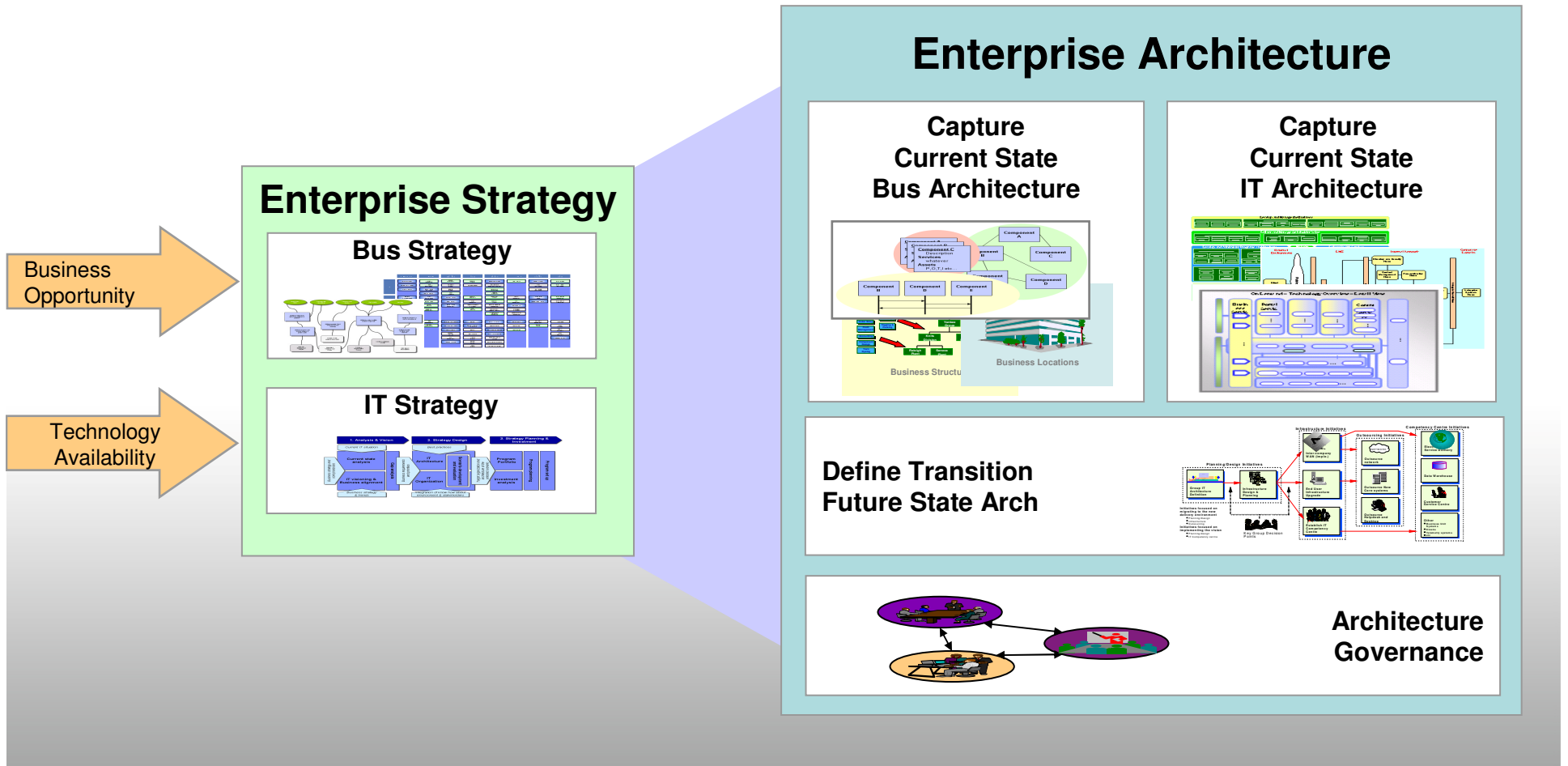
Rational Insight

Measurement & Reporting

- Measure, monitor, analyze portfolio, project and process performance
- Continual process improvement
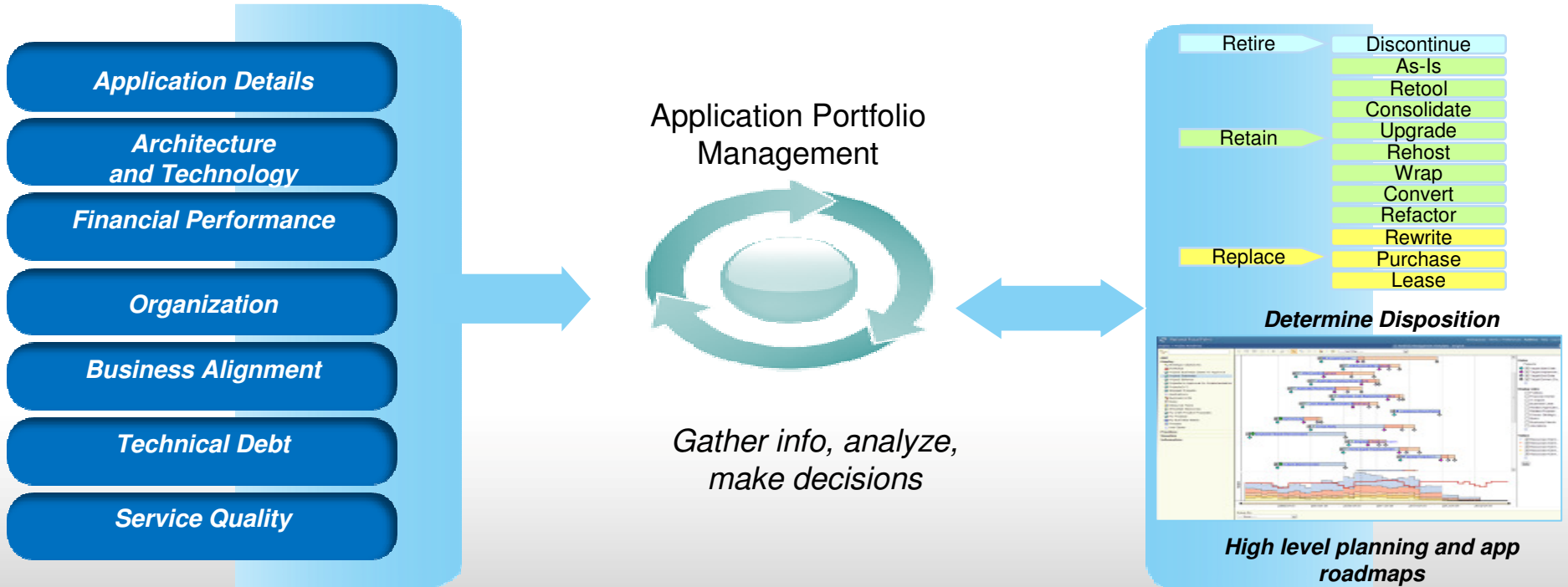- Built on best-in-class business intelligence platform from IBM Cognos

Change picture
representing INSIGHT.
Current picture just a
placeholder

Consider adding bridge
chart from IDC findings /
messages, to the IBM
story.

IBM Rational System Architect

Business Opportunity →

Technology Availability →

Enterprise Strategy

Bus Strategy

IT Strategy

Enterprise Architecture

Capture Current State Bus Architecture

Business Structure

Business Locations

Capture Current State IT Architecture

Define Transition Future State Arch

Architecture Governance

IBM Rational Focal Point

Application Details

Architecture and Technology

Financial Performance

Organization

Business Alignment

Technical Debt

Service Quality

Application Portfolio Management

Gather info, analyze, make decisions

| Retire	Discontinue
	As-Is
	Retool
	Consolidate
Retain	Upgrade
	Rehost
	Wrap
	Convert
	Refactor
	Rewrite
Replace	Purchase
	Lease

Determine Disposition

High level planning and app roadmaps

- Effectively translate business needs to executable roadmaps
- Easy to adopt, focus on analytics and execution,
- Scales to address maturing customers

Measurement and Reporting

- Real-time insights from wide variety of data sources, both Business and IT.

- Monitor portfolio, project and process performance

- Continual process improvement to improve organizational outcomes

- Built on best-in-class business intelligence platform from IBM Cognos tailored for Software Delivery.

- Create a business command center with your own Executive Dashboard
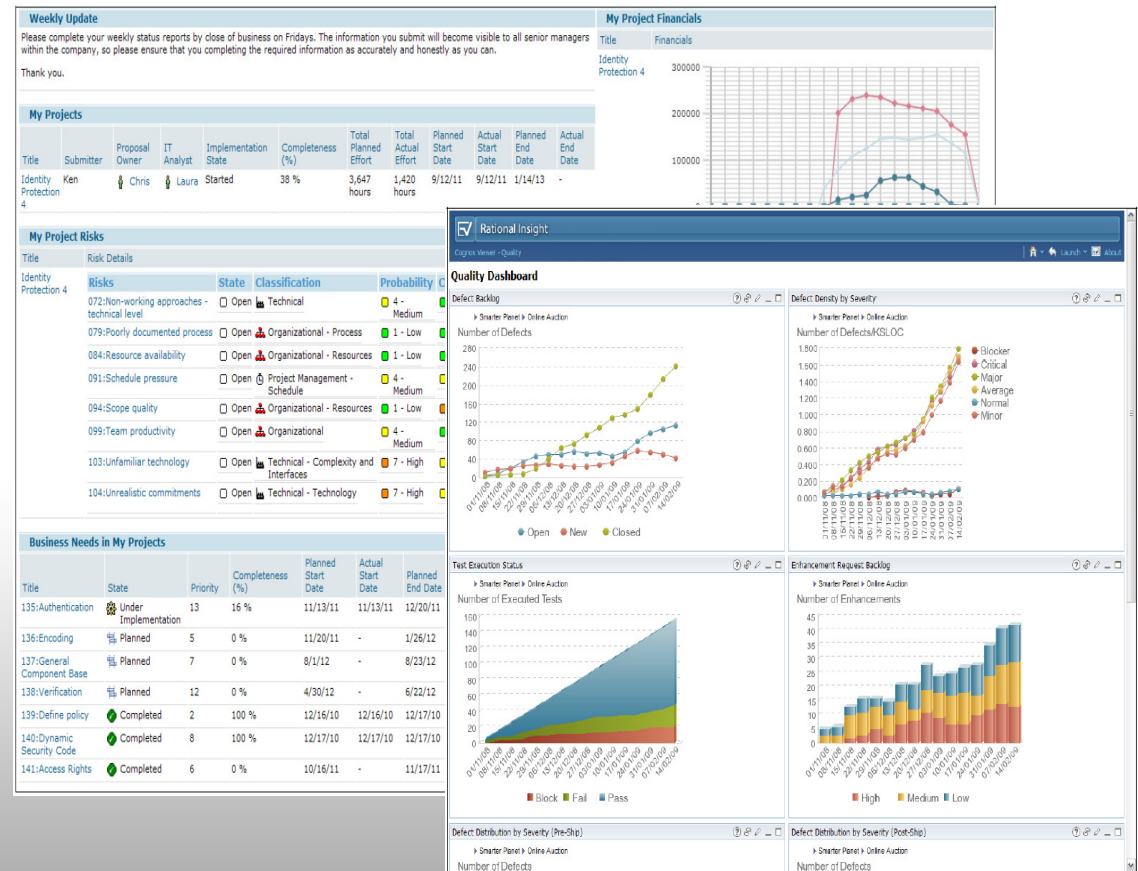
Smarter Software Delivery - Topics

- Software Innovation - New Development Reality
- Accelerating Overall Software Delivery
- Business Planning and Alignment
- Application Life Cycle Management
- DevOps
- Mobile Enterprise Application Development
- Announcements
- Summary

Add 2 slides on ALM / CLM

    - Maybe the product and capability
    - Maybe the 5 imparatives / best practices

Add 2 slides on DevOps

    - Choose from Orlando Innovate
    - However, only have PDFs not PPT from Orlando

Add 1- 2 slides on Mobile Enterprise Apps

- Add from Orlando
- Or look for presentation from Albert Ho

Smarter Software Delivery - Topics

- Software Innovation - New Development Reality
- Accelerating Overall Software Delivery
- Business Planning and Alignment
- Application Life Cycle Management
- DevOps
- Mobile Enterprise Application Development
- Announcements
- Summary

Add 2 - 3 slides on Announcements

- Use info from deck Sandra sent
- Make announcement seem MUCH more exciting
- Try to tie-in with products describe in previous section

- Also use Announcement to resonate with customers business problems

Conclusion

- Use summary slide of key points from presentation
- Also bridge to introduce next presentations (review Kedar / Adam)
- Possibly make an "offer" for some sort of workshop (check with Paul)

Innovate2012

The Premier Event for Software and Systems Innovation

Back-Up

Attaining Accelerated Delivery *NOW*
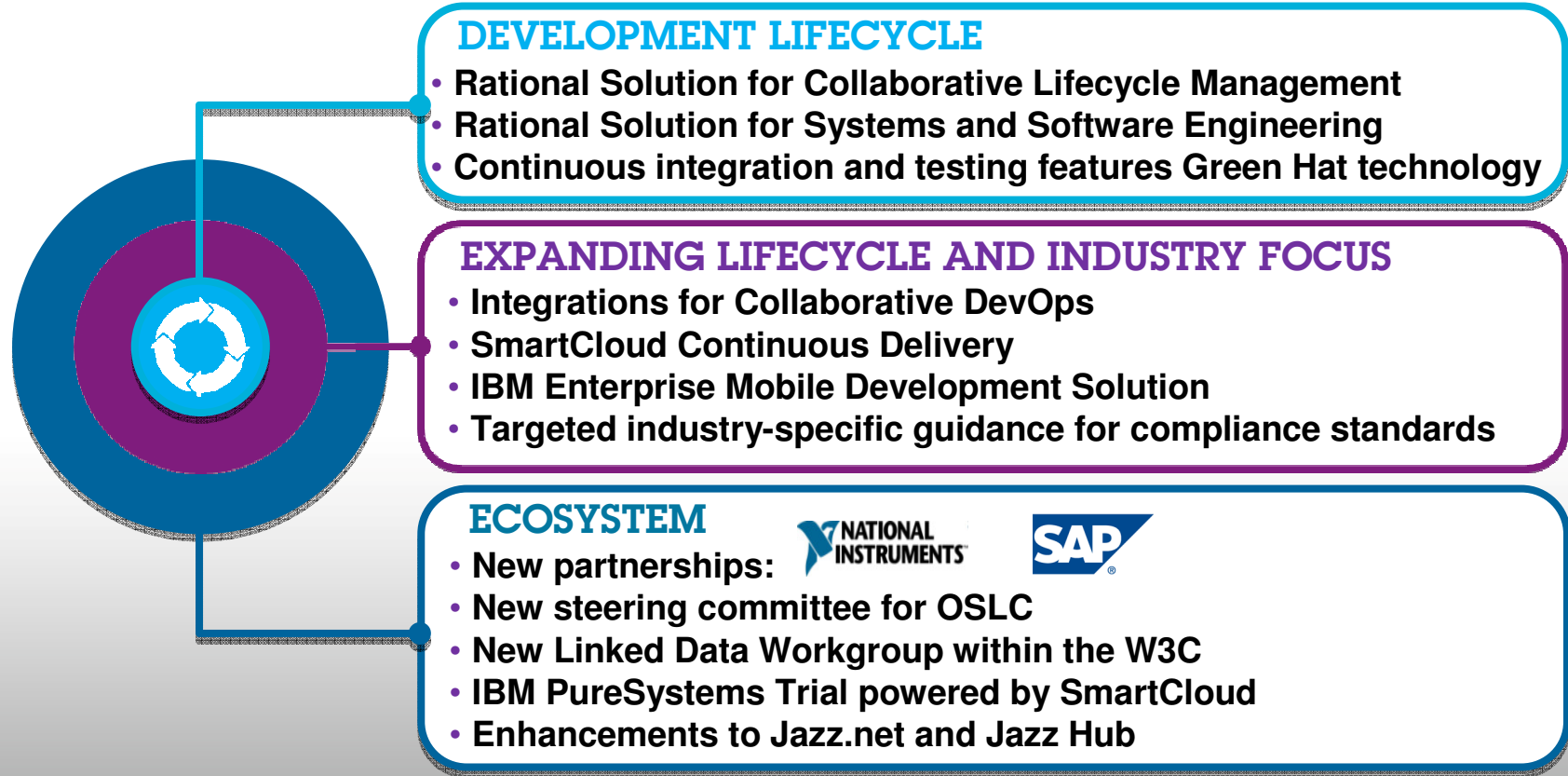
High impact entry points for IT organizations

- Elaborate user experience earlier in lifecycle

- Link requirements management to test

- Make integration, test and deployment continuous

- Scale agile to enterprise with governance and metrics

Attaining Accelerated Delivery *NOW*

High impact entry points for product and systems organizations

- Implement cross-discipline systems engineering

- Implement model-based systems engineering

- Integrate tools and data for lifecycle traceability

New Capabilities from IBM to Enable Agility with Governance

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:** NATIONAL INSTRUMENTS   SAP
- **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**

Innovate2012

The Premier Event for Software and Systems Innovation

Community Drives Everything

Community directs our vision, development, and this conference

- Jazz.net – now more than 100K members

- developerWorks – more than 4M visitors per month

- open-services.org – more than 140 member companie[s] now transforming through a new governance model

- W3C – Working group chartered on Linked Data, underpinnings of Internet style integration

- Over 500 IBM Rational authorized business and technology partners

Help us take

jazz

to the next level…

Join The Jam!
jazz.net/jam

How to Move Forward

- Act now to transform your software and systems delivery

- Start today and leverage Innovate to the maximum
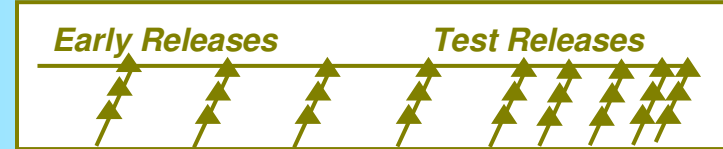
- Post Innovate: Benefit from our experience!
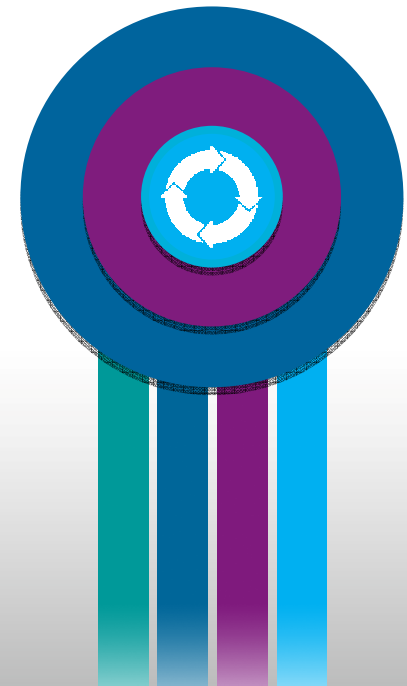
Measured Improvement: _Progress_ Econometrics

Conventional Engineering Governance

Requirements
Design
Coding
Test and Release

Late scrap and rework

Modern Economic Governance

Early Releases   Test Releases

Progressions and digressions
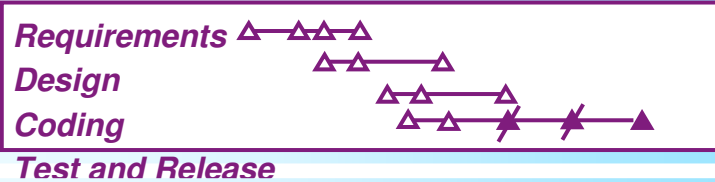
Planning Progress

Technical Progress

Economic Progress

Measured Improvement: *Quality Econometrics*

Conventional Engineering Governance		Modern Economic Governance
Unit Test Integration Operation	**Maturity** Defect Trend	*Integration Unit Test Operations*
Unit Test Integration Operation	**Modularity** Change Volume Trend	*Integration Unit Test Operations*
Unit Test Integration Operation	**Adaptability** Cost of Change Trend	*Unit Test Operations*

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
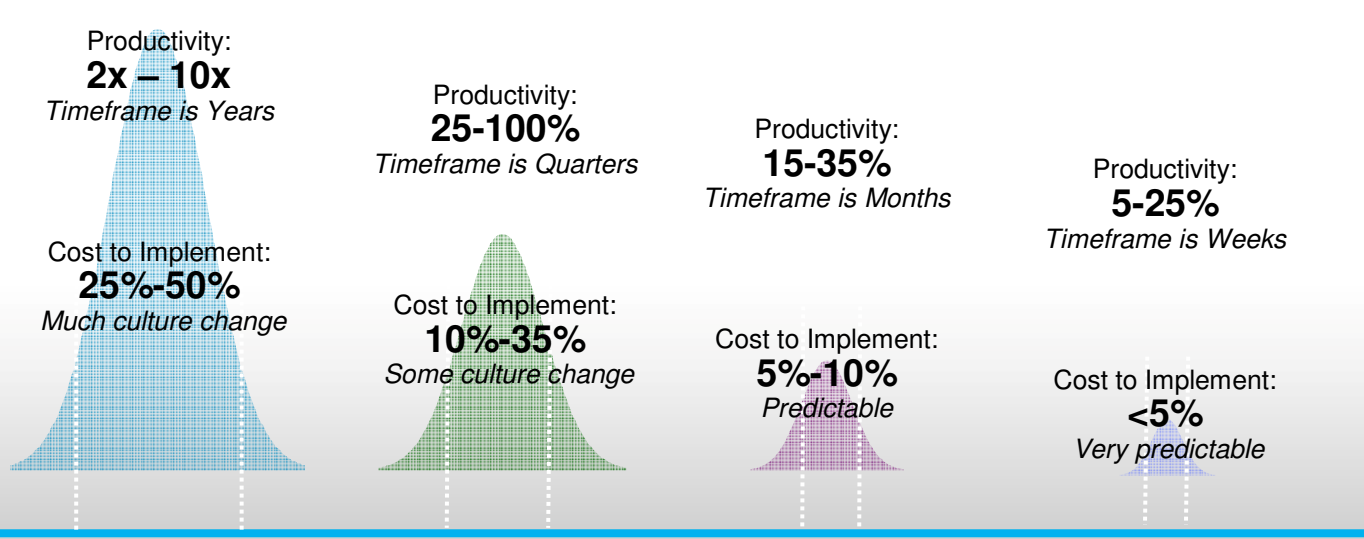
Why are they important ?

- **Cost – 80/20 budget trap**
  - Maintenance and operations consumes high % of budget
  - Limited budget remaining for new initiatives

- **Business agility**
  - Tightly coupled architectures
  - Unwarranted complexity
  - Technology proliferation

- **Strategic planning**
  - Inability to actively plan strategic initiatives
  - Cloud, Mobile, Compliance, M&A, and Divestitures

- **Risk / supportability**
  - Key skills move companies
  - People retiring
  - Aging technology
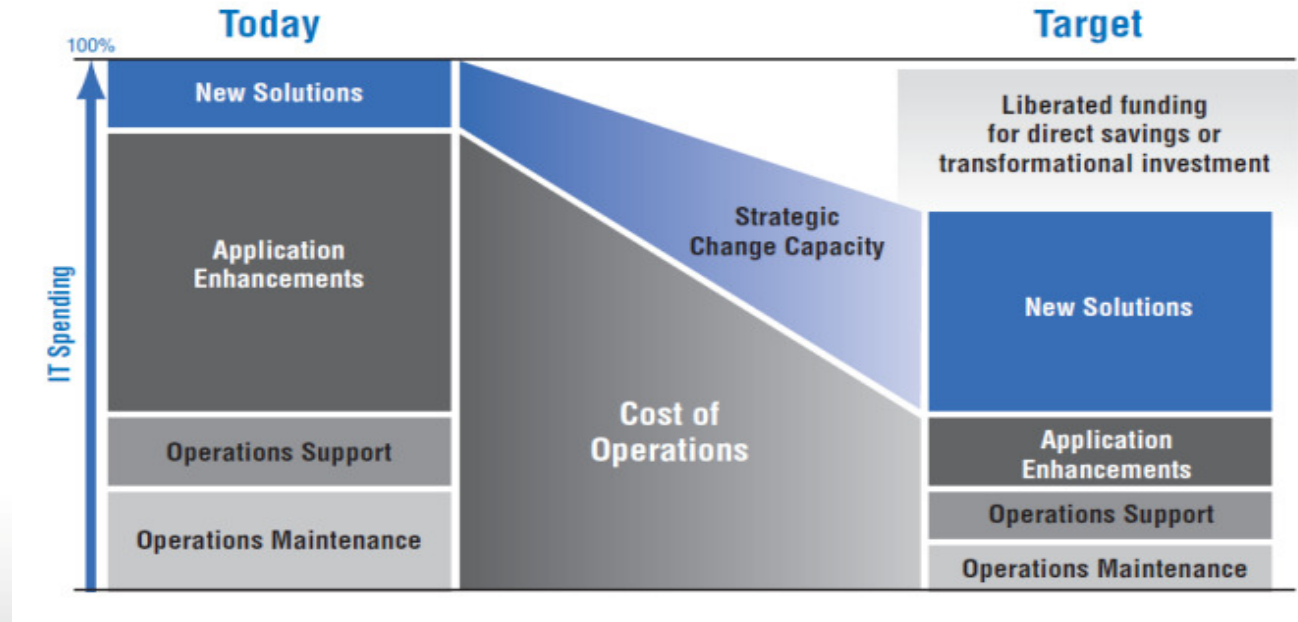
A large UK bank transformation initiative
- 90 / 10 - Started at 90% run-the-bank leaving only 10% for growth initiatives
- 40 / 60 - Shifted to 40% run-the-bank and a huge 60% for growth initiatives

Dell organizational prioritization
- 80 / 20 - Started at 80% maintenance and only 20% innovation
- 50 / 50 - Moved to 50% maintenance and 50% on innovation spending

Enterprise Architecture

Professional Blueprint

- Define strategy and vision
- Capture process, org, apps, tech
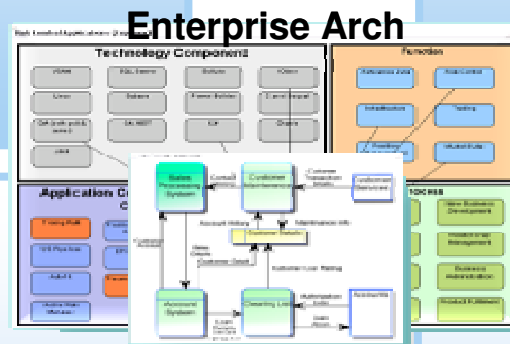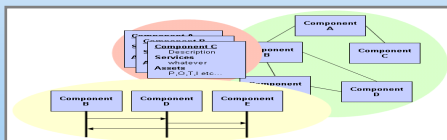- Diagrams, heat maps, relationships

Frameworks/Standards

- Support for multiple frameworks and modeling standards (TOGAF, DODAF)
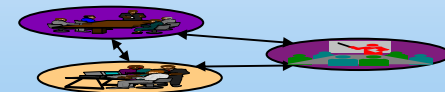- Windows and web-based clients for flexibility, productivity and access

Enterprise Arch

Impact Analysis

- Assess gaps, visualize architectural roadmaps.
- Relationships for impact analysis
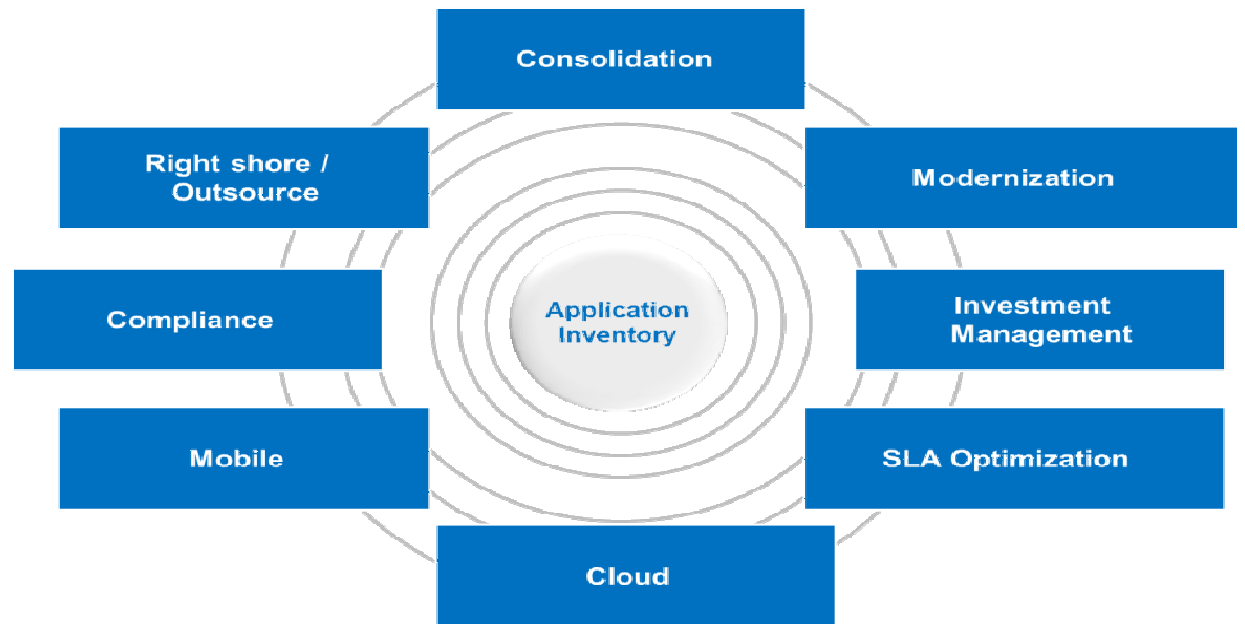- Define future state and transitions

Actionable Arch.

- Use info for Strategy and Arch Review Boards
- Integrate with application lifecycle mgmt and ent modernization

IBM Rational Focal Point

Prioritize

Consolidation

Right shore / Outsource

Modernization

Compliance

Application Inventory

Investment Management

Mobile

SLA Optimization

Cloud

Create Inventory
- Import existing spreadsheets
- Use tool to capture info
- Automatic feeds
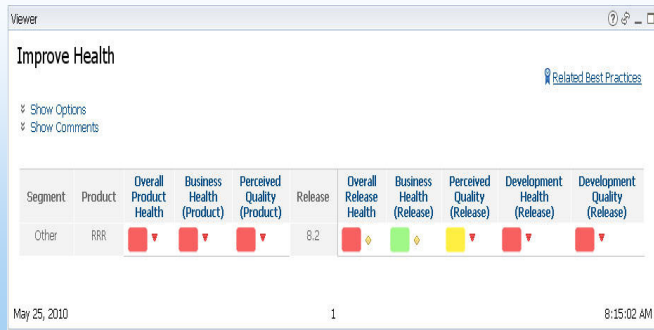- Single source of Truth

Analyze Business / IT Value
- Use pre-defined criteria
- Flexible weighting
- Additional data capture
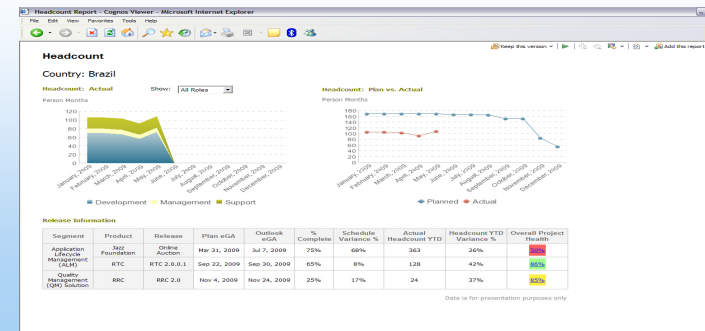- Multiple pair-wise comparisons

Recommendations
- Consolidation
- Modernization
- Cloud/Mobile
- Right-shore / Outsource
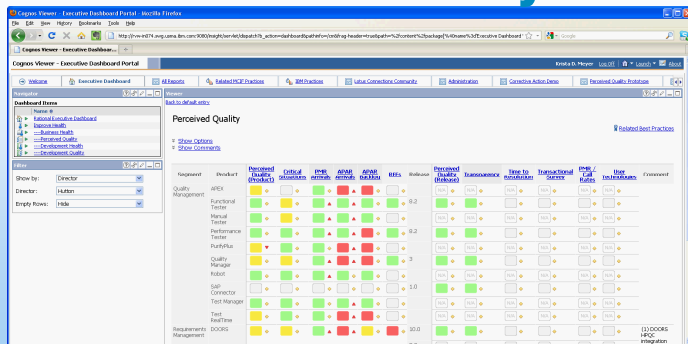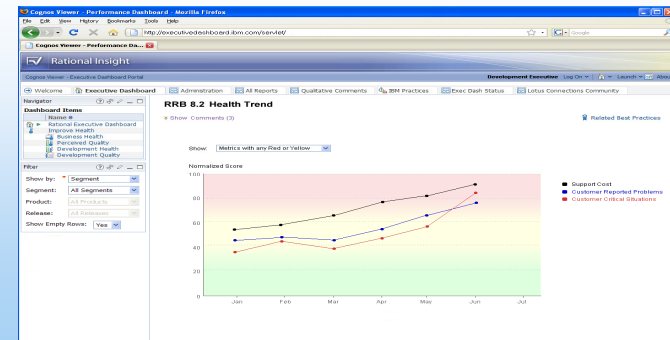
Measurement and Reporting

Project Health

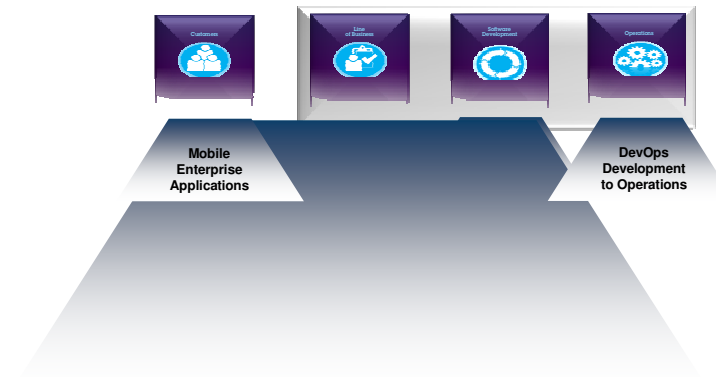## Financial (staff, funds)

Perceived Quality

Technical Debt

BPA - Business Planning and Alignment

Enterprise Architecture

- Realize business benefits from technology solutions
- Integrations to drive transformation and traceability of artifacts from business and IT strategy
- Pinpoint how and when to leverage services and technologies
- Improve efficiency and agility – change architectures to respond to business change

Portfolio Management

- Effectively translate business needs to executable roadmaps
- Align application inventory with business direction and focus resources on strategic priorities
- Simplify existing application assets. Improve quality and functional capability
- Transform the legacy portfolio to respond quickly and efficiently to business changes

Measurement and Reporting

- Get real-time insights
- Measure, monitor, analyze portfolio, project and process performance
- Continual process improvement to improve organizational outcomes
- Built on best-in-class business intelligence platform from IBM Cognos

Business Planning & Alignment Process Flow

IBM Rational System Architect

CEO & Strategy team

- Define Strategy & Vision
- Build/Update Current State Architecture
- Analyze to Define Future State of Business
- Governance and Review Board

IBM Rational System Architect

CIO & CTO, & LoB Executives, Enterprise Architects

- Capture Future State in Standard framework (TOGAF, DODAF)
- Compare to Current State, Perform Gap Analysis
- Define Key Capabilities
- Define Transition Initiatives
- Architect & Design the Prioritized Solutions

Steering Committee IT & LoB Executives, PMO

- Collect and Analyze stakeholder / financial priorities
- Analyze and prioritize Initiatives
- Define scope & roadmap initiatives

IBM Rational Focal Point

Project & Program Managers

- Project Planning
- Project Execution

Integration to Solution delivery

- Executive Dashboards
- Report on Portfolio, project and process Status
- Practitioner / Project feedback loops

IBM Rational Insight

IBM Client Successes

ANZ

30 – 35%

production increase

with no additional staff

olm SYSTEMS

77%

quality issue reduction

by leveraging agile testing

SAMSUNG

100%

on-time deliveries

with 25% increase in team satisfaction

invensys Rail DIMETRONIC

40%

reduced time-to-market

for signaling systems products

Accelerating Overall Software Delivery

Customers	Line of Business	Software Development	Operations

Step back & look at common failure points across the broader Software Delivery Lifecycle

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