Enterprise Modernization

Improving Business and IT Flexibility

January 26, 2009

Go to **IBM**

FAA computer failure slows nationwide air traffic

Only 34% of software projects are deemed successful costing over $300B annually

50% of outsourced projects are expected to under perform

IT skills shortage reaches highest level in 10 years

"*The message for IT is clear; business needs and* **expects greater agility from IT***. The current approaches to project prioritization, resourcing, agility and governance are clearly not satisfying customer needs. A* **new approach to IT delivery models and sourcing** *options is required that allows IT organizations to be* **more responsive to the needs of the business***.*"

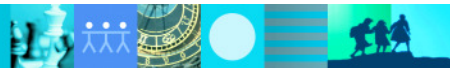– Gartner, October 14, 2008, ***"Changing the Cost Structure of IT Will Become a Business Imperative for Most CIOs"***

Only 42% of users are satisfied with project quality

Only 37% are satisfied with the speed of software development

North Carolina Jobless Claims Crash State's Web Site

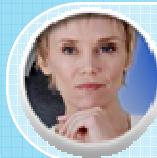**Ohio election web site shut down after being hacked**

The defining challenge
Continue to deliver and evolve Architecture while reducing total cost of ownership

"We lack understanding as to the effort, risk and impact of consolidating or modernizing our legacy software portfolio"

Our skills gap just seems to keep growing. How do we stay current with all the language and technology changes?"

"Our architecture has evolved to be too complex and convoluted– we need to be flexible and agile."

"Our development teams working on different platforms are struggling to communicate. How do we collaborate in the context of our work?

Application Challenges

- Lost application knowledge
- Architectural complexity
- Too many dependencies
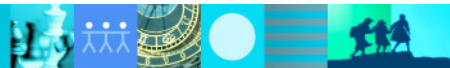- Regulatory and compliance risks
- Poor quality and performance

People Challenges

- Less people, more work
- Lack of domain expertise
- Disparate tools & technologies
- Increased learning curve
- Multiple platforms and languages
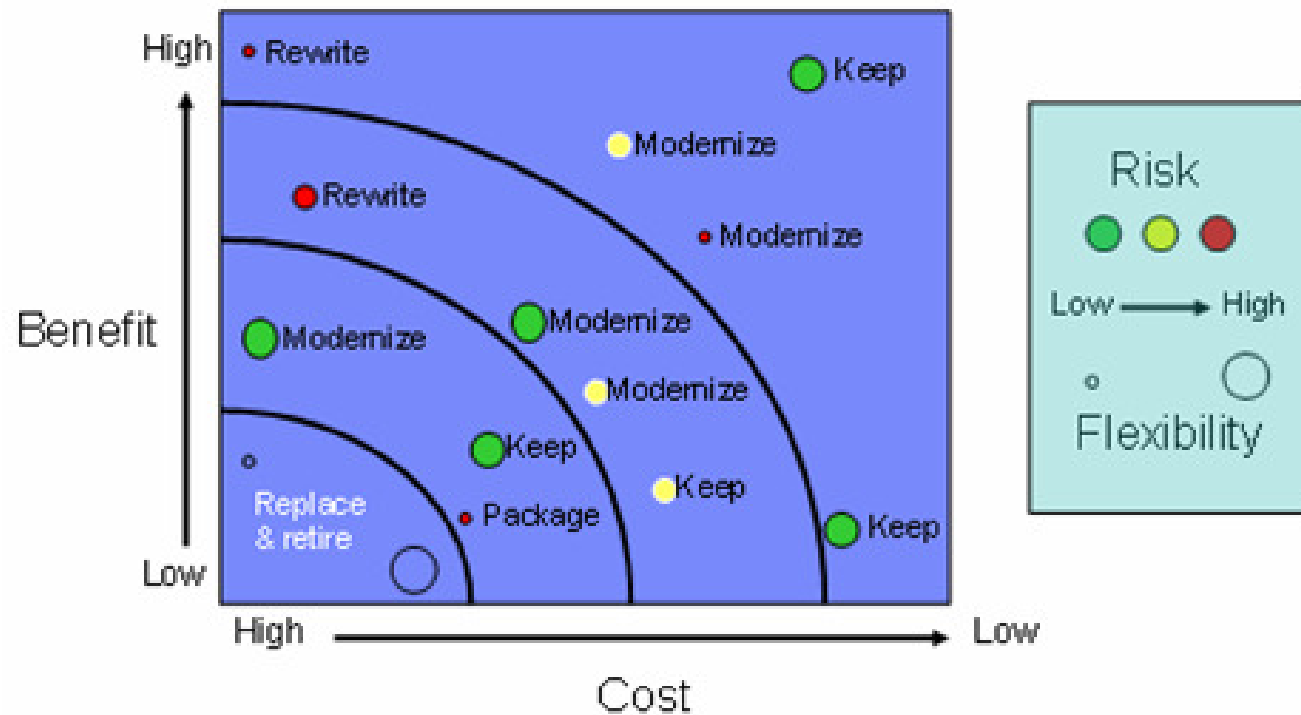
Team Challenges

- Globally dispersed teams
- Multiple software versions
- Lack of effective collaboration
- Monitoring and Control

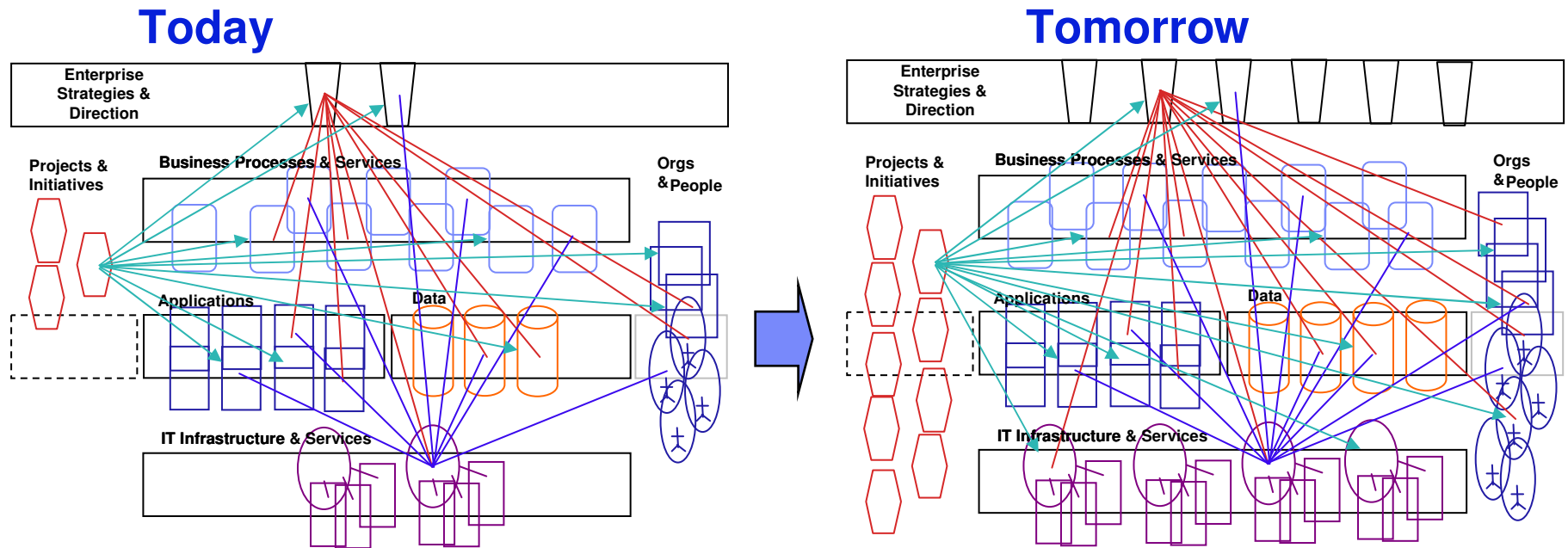**Silos of Applications, People, and Teams**

Application Portfolio Assessment

- Legacy systems create the most difficult portfolio trade-offs

- Strategies must be based on business value, business risk and benefits

- You need to assess the portfolio to understand priorities for change

Using EA tools to drive portfolio decisions

Today

Tomorrow

Enterprise Strategies & Direction

Projects & Initiatives

Business Processes & Services

Orgs &People

Applications

Data

IT Infrastructure & Services

Enterprise Architecture involves relating Business, Applications and Data with Projects, People and infrastructure and understand the impacts of change to one on the others

We can use EA tools to manage the application portfolios focusing on Alignment of Business Process, Applications, Data and the infrastructure they use.

Identify opportunities to reduce redundancy and duplication through retirement and consolidation
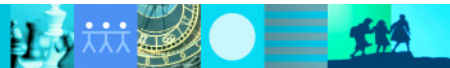
# Use Analysis tools to understand Current State and Assess Portfolios

- Conduct a analysis and discovery of applications
  - ▶ Enhance application knowledge and identify key issues, risks, and constraints
  - ▶ Understand Complexity, Interdependencies and Application Quality
- Re-document the current application architecture
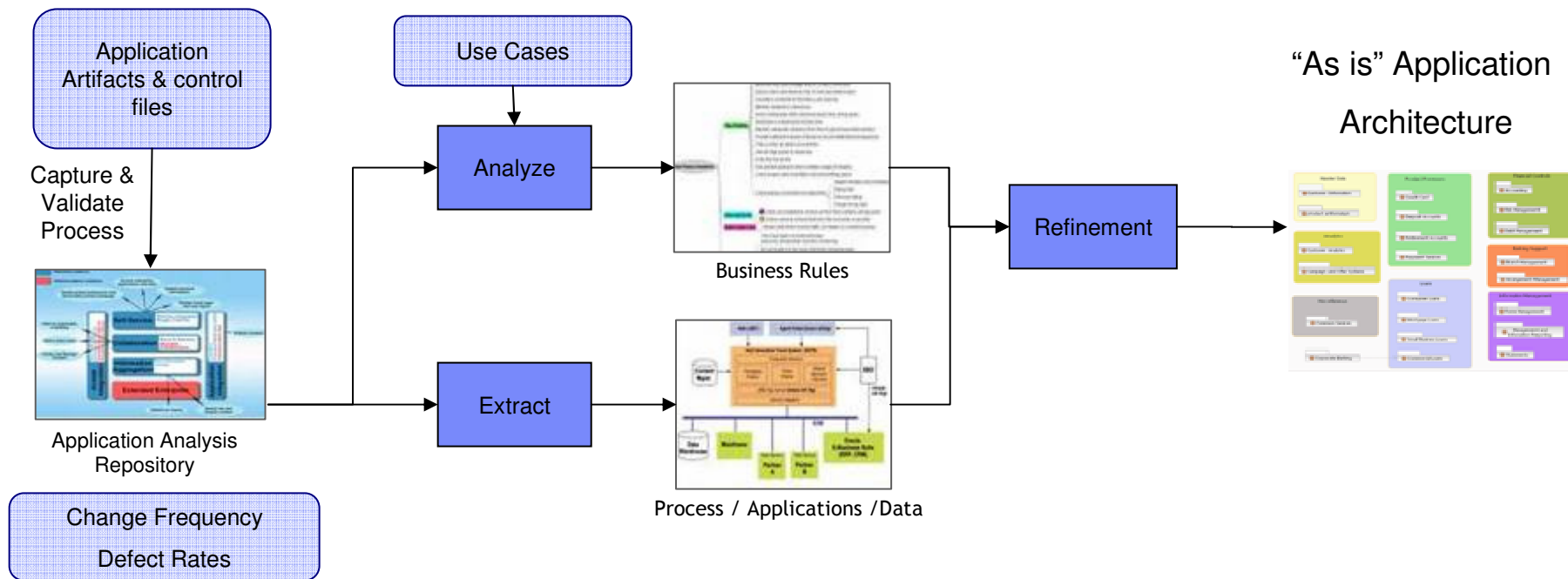
Putting the solution together

System Architect

- Current/Future State Models
- What to Change
- How to Change
- Process, Assets
- Infrastructure
- Resources

Summary data
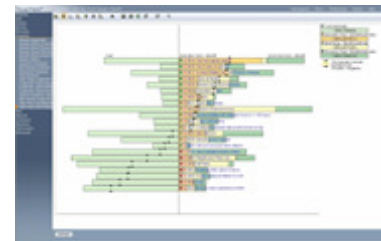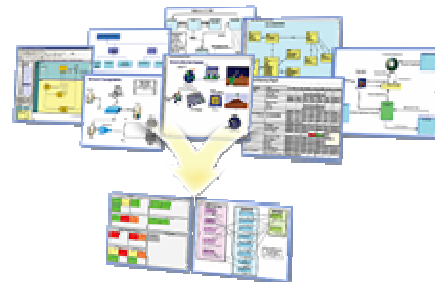
Focal Point

- Manage Trade-offs
- Prioritization
- Cost-Risk-Benefit

Rational Analysis Tools

- **Application Inventory**
- Detailed Metrics, Quality Measurement
- Interdependencies
- Interface Analysis
- Impact Analysis

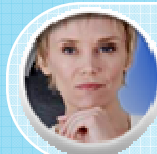# The defining challenge in optimizing value in software
Deliver solutions while reducing total cost of ownership

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Silos of Applications, People, and Teams

Cost & Responsiveness

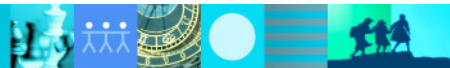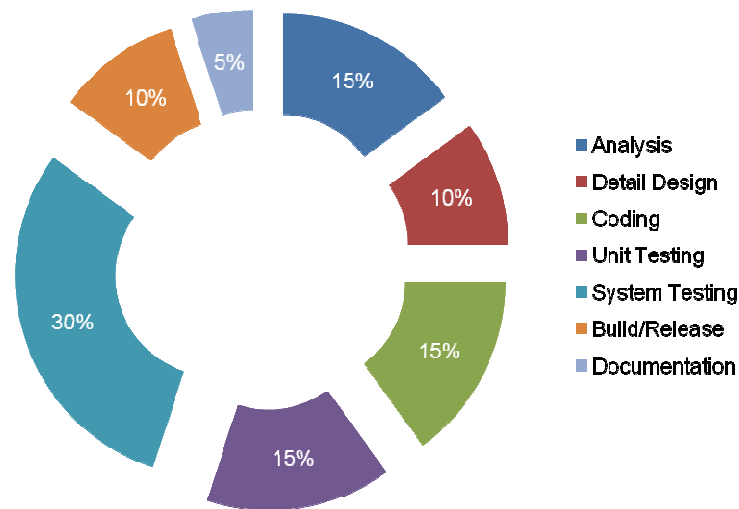### *People Challenges*

- Less people, more work
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Team Challenges

- Globally dispersed teams
- Reduced effective collaboration
- SME Bottlenecks
- Multiple software types
- Monitoring and Control

Pie chart values:
- Analysis — 15%
- Detail Design — 10%
- Coding — 15%
- Unit Testing — 15%
- System Testing — 30%
- Build/Release — 10%
- Documentation — 5%

We have outsourced, but we have lost the informal communications we had before that shared knowledge and solved issues.

We cant scale our resources to deliver more change due to the lack of accurate documentation and being dependent on our few SMEs.
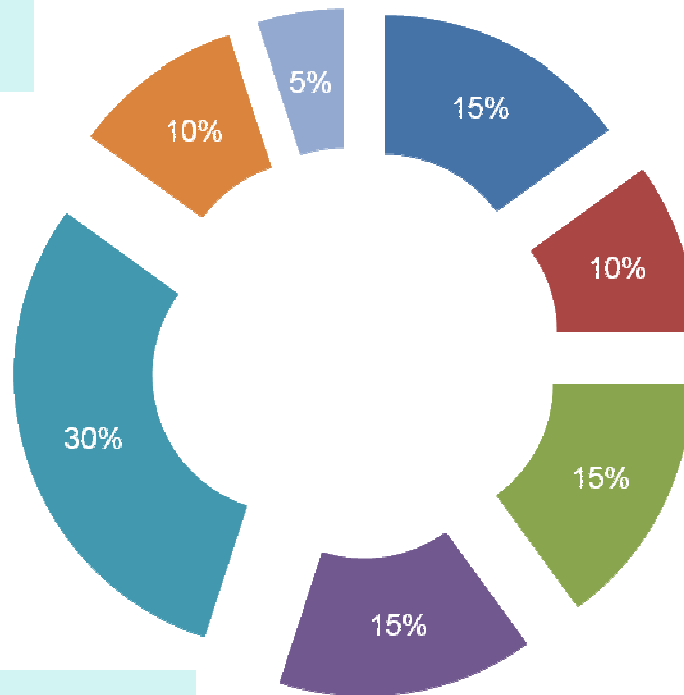
Our Mainframe developers and Java teams don't know what each other is doing but have to deliver synchronized changes.
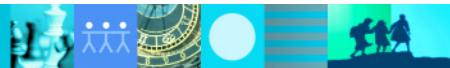
Changing the cost structure

Consolidation

Consolidate and share team development infrastructure across Silos

Minimization

Ensure defects are trapped early in the lifecycle and hence cost less to fix than hitting in production. Changes to requirements need to be propagated quickly to avoid re-work later in the cycle

- Analysis
- Detail Design
- Coding
- Unit Testing
- System Testing
- Build/Release
- Documentation

Reduction

Using Rational development tools to reduce the time and effort involved in achieving current tasks through assistance, automation and collaboration.

Adoption of agile processes to improve time to market

Reduce Training and Recruitment costs

Avoidance

Using technology to reduce complexity and reduce dependencies and reduce scope of activities so that less work needs to be done to achieve the same goals.

Use technology for Perfective Maintenance to lower the cost of dealing with a specific asset
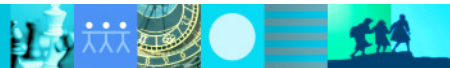
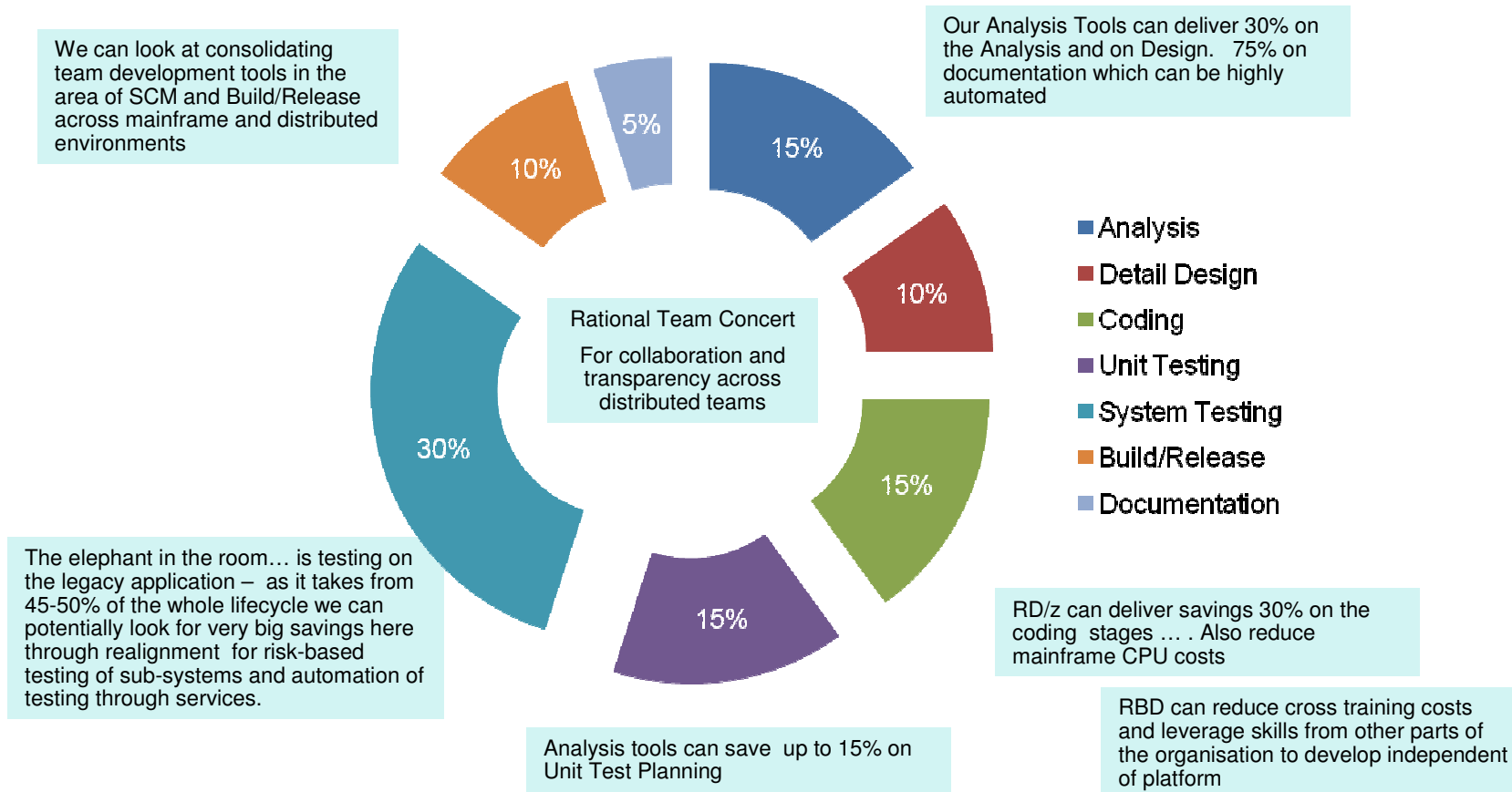Identify duplication, redundancy and obsolescence to remove code from active inventory

What are the opportunities?

We can look at consolidating team development tools in the area of SCM and Build/Release across mainframe and distributed environments

Our Analysis Tools can deliver 30% on the Analysis and on Design. 75% on documentation which can be highly automated

Rational Team Concert

For collaboration and transparency across distributed teams

Legend:
- Analysis
- Detail Design
- Coding
- Unit Testing
- System Testing
- Build/Release
- Documentation

The elephant in the room… is testing on the legacy application – as it takes from 45-50% of the whole lifecycle we can potentially look for very big savings here through realignment for risk-based testing of sub-systems and automation of testing through services.

RD/z can deliver savings 30% on the coding stages … . Also reduce mainframe CPU costs

RBD can reduce cross training costs and leverage skills from other parts of the organisation to develop independent of platform

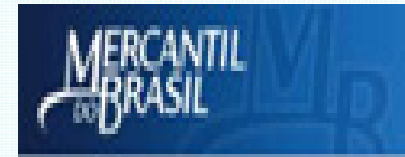Analysis tools can save up to 15% on Unit Test Planning

Rational Tools could target savings of +25% on your Application Management costs within 12 months
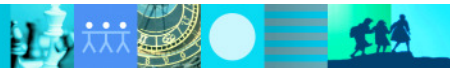
Example Customer Success

User interface modernization
✓ Decreased development cycle time
  from 11 to 6 months with HATS
✓ Sped creation of new customer services
✓ Improved operational efficiency

Enterprise portfolio Optimization
✓ Identified obsolete code within automotive
  systems, and begin "decommissioning"
✓ Performed impact analysis across massive systems
✓ Communicated impacts to affected global development teams
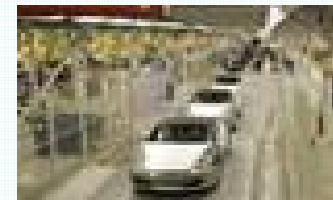
Lower Development Cost, More Rapid Development
✓ Developed new application framework
  based on IBM COBOL standard
✓ Used RDz to design new COBOL
  to provide online banking services

Unified application development
✓ Standardized on RBDe and RAD to unify
  application development across all platforms
 and transaction managers (e.g., WAS, IMS)
✓ Achieved rapid time to market

Consolidated change and release management
✓ Created highly automated cross-platform solution
  using ClearCase to manage and support the software
  lifecycle for COBOL and Java development
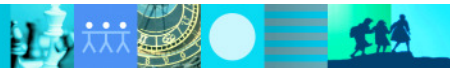
Next Steps

- Application Portfolio Assessment
  - ▶ Rational and its partners can help
  - ▶ Requires services expertise in addition to tools

- Identifying cost savings and agility improvement
  - ▶ Organisation, Existing tools/techniques
  - ▶ Where you have got to in optimising what you have
  - ▶ Where are the gaps and where do you need help
  - ▶ Rational Architect can spend some time to understand and identify the best opportunities in your particular situation.

- Build business cases for appropriate solutions
  - ▶ Trade-off benefits, cost, and risk to maximise time to value
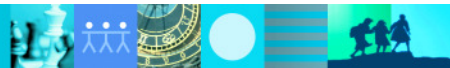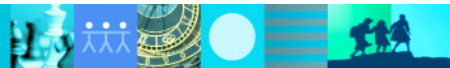
Learn more at:

- **IBM Rational software**
- **Rational launch announcements**
- **Rational Software Delivery Platform**
- **Accelerate change & delivery**
- **Deliver enduring quality**
- **Enable enterprise modernization**

- **Ensure Web security & compliance**
- **Improve project success**
- **Manage architecture**
- **Manage evolving requirements**
- **Small & midsized business**
- **Targeted solutions**

- **Rational trial downloads**
- **developerWorks Rational**
- **Leading Innovation**
- **IBM Rational TV**
- **IBM Business Partners**
- **IBM Rational Case Studies**

Execute with reduced cost and risk by modernizing applications, empowering people and unifying teams

Enterprise Modernization Solutions for System z, IBM i & Distributed platforms

July, 2008
Rational Asset Analyzer v5.5

Rational Transformation Workbench

Rational Asset Manager v7.1

Rational Software Architect v7.5

Oct, 2008
Rational Host Access Transformation Services v7.5

Nov, 2008
Rational Team Concert for z/i v1.0

Oct, 2008
Rational Developer for System z with Java/EGL v7.5

Nov, 2008
Rational ClearCase, ClearQuest v7.1

Oct, 2008
Enterprise COBOL v4.1, Enterprise PL/I v3.8

Rational Method Composer v7.5

Oct, 2008
Rational Business Developer v7.5.1

Applications

Teams   **People**

Rational Build Forge v7.1

Rational Functional Tester v8.0

Rational Performance Tester v8.0

Rational AppScan Enterprise Edition

Oct, 2008
Rational Developer for i for SOA Construction v7.5