Lower Cost and Increase Business Agility with Application Portfolio Management (APM)

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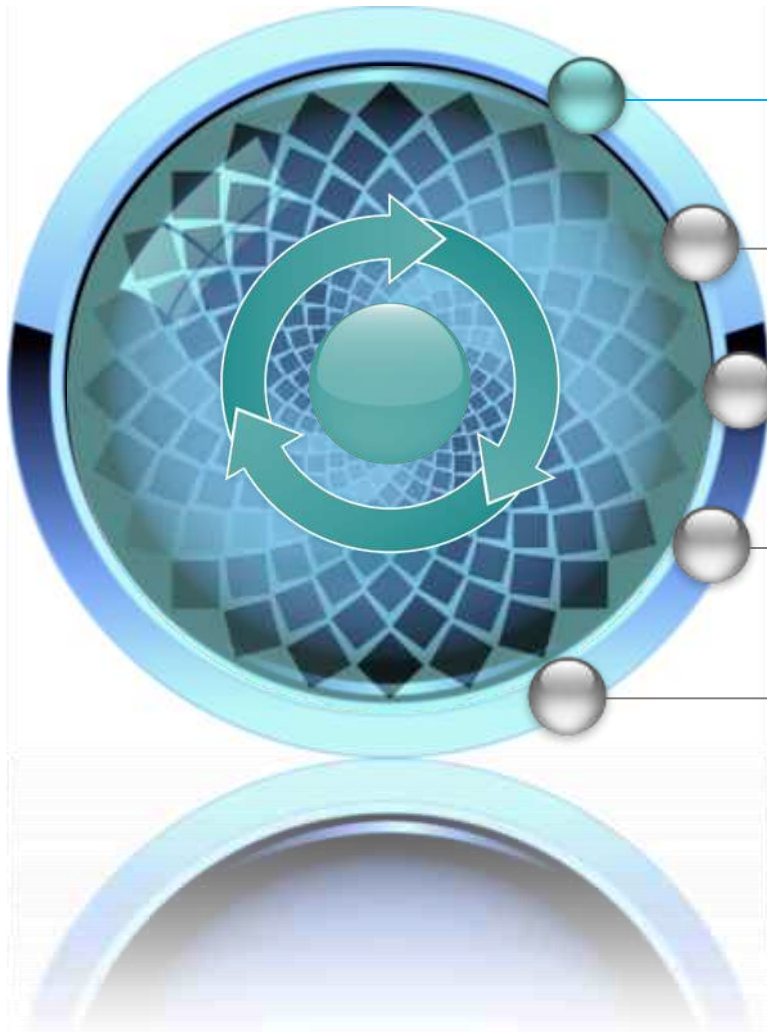victoria.bunyard@us.ibm.com

IBM Software

Innovate2012

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Agenda

Why APM right now?

What is APM?

Benefits of Adoption?

APM in action

Final thoughts

Problem: Insufficient strategic spend and lacking business agility

- **Cost – 80/20 budget trap**
  - Maintenance and operations consumes a significant % of a declining IT budget, limiting funds available for new initiatives

- **Business agility**
  - Brittle and tightly coupled architectures, unwarranted complexity, and technology proliferation

- **Risk / supportability**
  - Skills erosion, baby boomer retirements, and aging technology

- **Strategic planning**
  - Inability to actively plan strategic initiatives; Cloud, Mobile, Compliance, M&A, and Divestitures
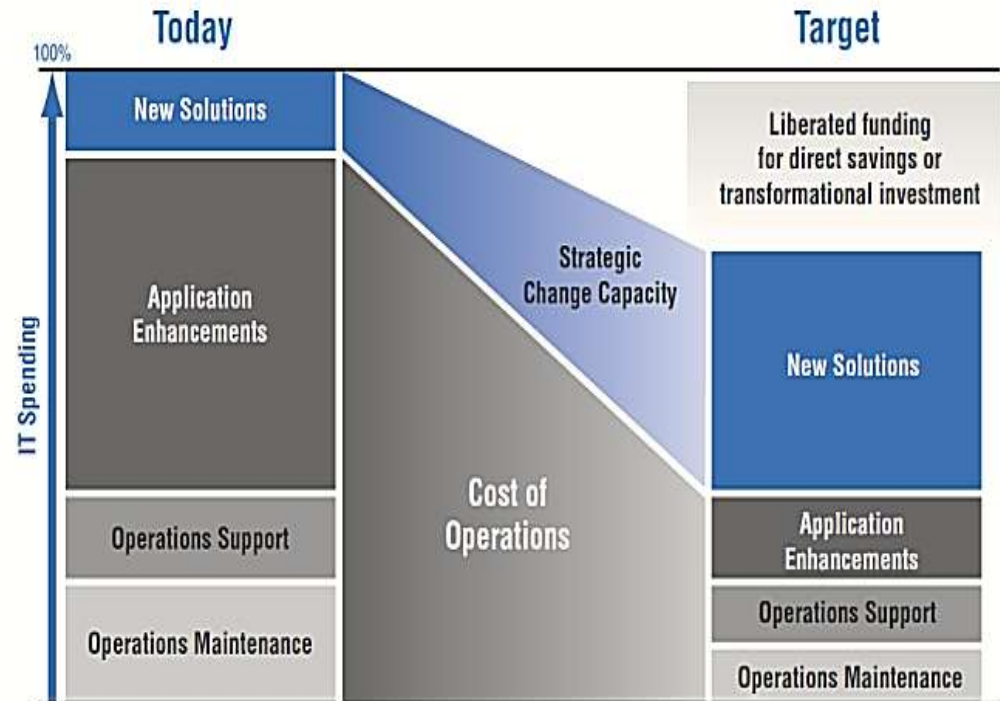
"A large UK bank initiated its APM effort to take a 90:10 ratio for run-the-bank / grow-the-bank down to a more reasonable 40:60 ratio. Dell shifted its maintenance-to-innovation ratio from 80:20 to 50:50."

– The Application Portfolio Management Landscape — Combine Process And Tools To Tame The Beast
Phil Murphy, Forrester Research, Inc. April 15, 2011

Solving the problems requires a different approach

> *"We can't solve problems by using the same kind of thinking we used when we created them."*
>
> – Albert Einstein

Addressing the problem requires an **asset (application) portfolio approach** to complement the traditional project portfolio approach

Project Portfolio Management

- Commonly used in mature companies

- Provides executives (only)

  - Control over 20% of this year's budget

  - Ability to affect this year's project proposals
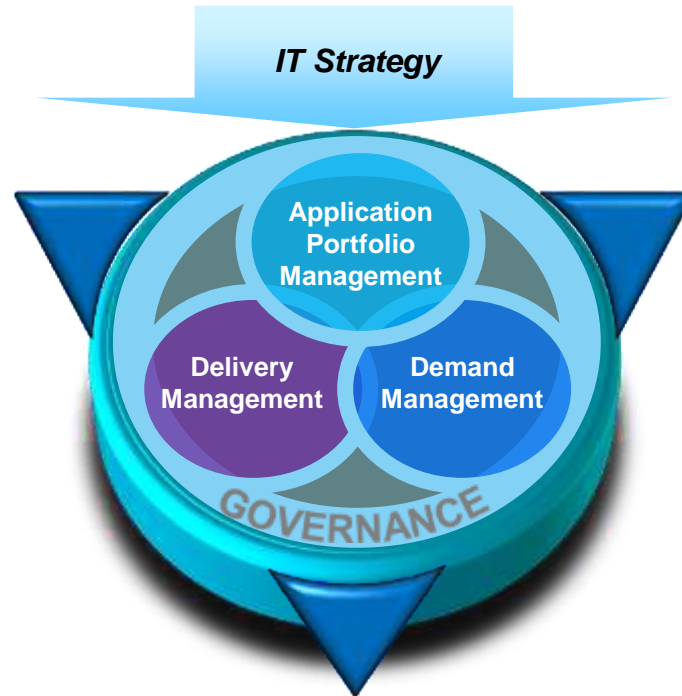
Application Portfolio Management

- Used effectively by only a few leaders

- Provides executives

  - Multi-year control over 80% of the budget
  - Ability to generate new project proposals such as structural changes to address problems

Many companies have the 80/20 rule wrong…

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Simplify IT to drive innovation and business agility
Governance and collaborative decision making


IT Strategy

Increase strategic spend
Consolidate applications
to reduce maintenance
and operations cost and shift
funds to innovation

Improve business agility
Reinvest savings
in application modernization
and effectively
manage demand

Application Portfolio Management

Delivery Management

Demand Management

GOVERNANCE

Deliver and improve
Deliver on projects and measure
the result to improve future
decision making

Agenda
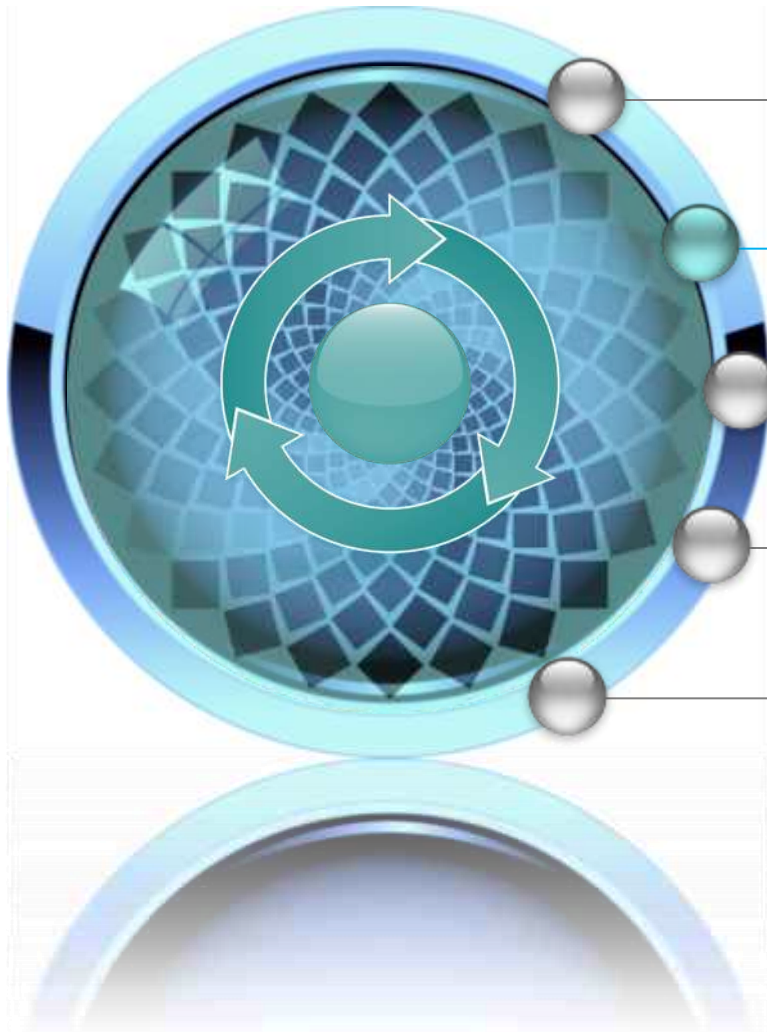
Why APM right now?

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6

A definition of Application Portfolio Management

Application portfolio management (APM) is a repeating process using information and analytics that produces objective and transparent decisions around investing, consolidating, modernizing, or replacing applications.
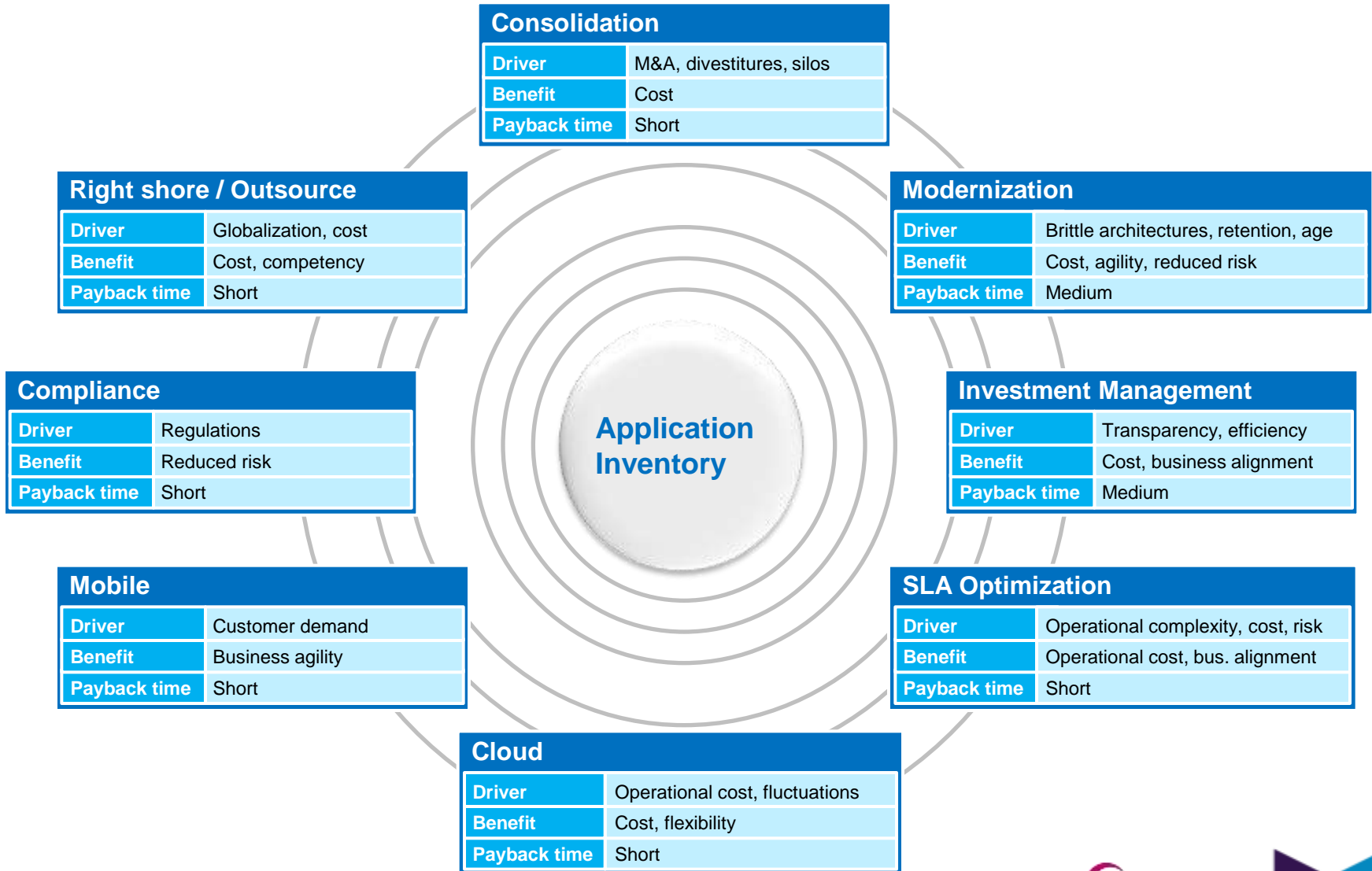
Benefits:

- Align the application portfolio with business strategies

- Reduce costs and optimize value

- Increase speed-to-deployment and speed-to-market

- Reduce risk associated with technology or resources

- Implement shared services

"Making IT resource consumption transparent and understandable to business leaders enables healthy business discussions around how to shift resources to where they will do the most good for the whole business."
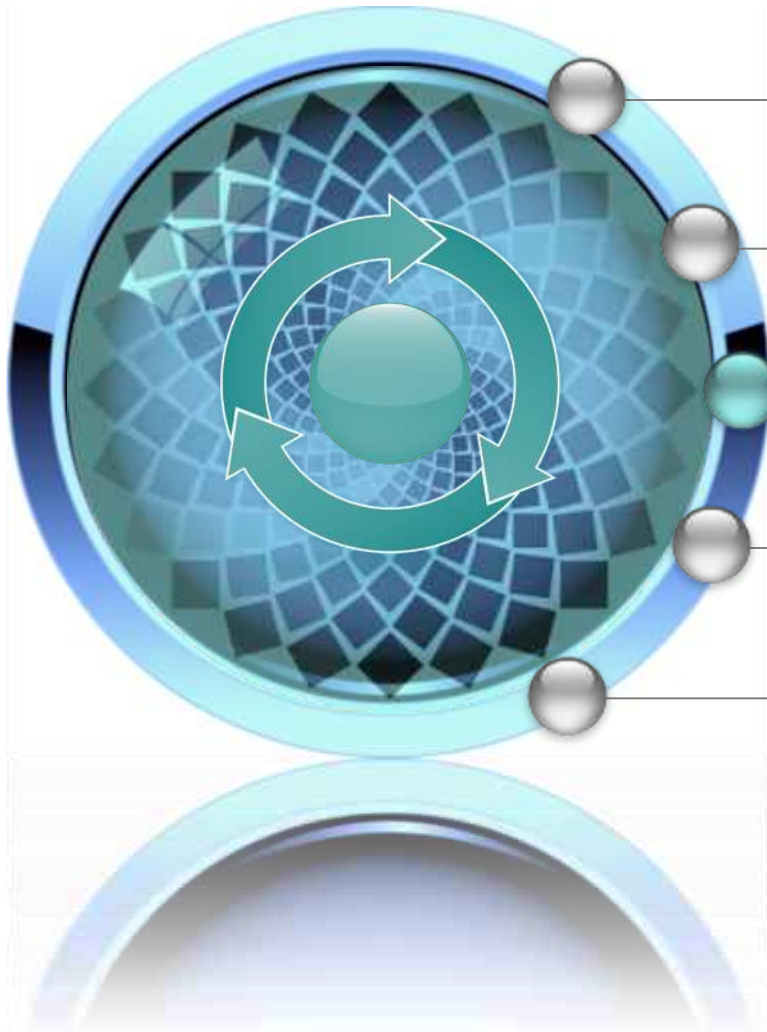
– Define "Application" Based On Your Content To Avoid False Starts In Your Rationalization Efforts, Forrester Research, Inc., January 26, 2011

IT optimization business outcomes
APM-driven scenarios

Consolidation

Driver	M&A, divestitures, silos
Benefit	Cost
Payback time	Short

Right shore / Outsource

Driver	Globalization, cost
Benefit	Cost, competency
Payback time	Short

Modernization

Driver	Brittle architectures, retention, age
Benefit	Cost, agility, reduced risk
Payback time	Medium

Compliance

Driver	Regulations
Benefit	Reduced risk
Payback time	Short

Application Inventory

Investment Management

Driver	Transparency, efficiency
Benefit	Cost, business alignment
Payback time	Medium

Mobile

Driver	Customer demand
Benefit	Business agility
Payback time	Short

SLA Optimization

Driver	Operational complexity, cost, risk
Benefit	Operational cost, bus. alignment
Payback time	Short

Cloud

Driver	Operational cost, fluctuations
Benefit	Cost, flexibility
Payback time	Short

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Measuring the Total Economic Impact

Forrester Consulting interviewed four of our clients to establish a financial model (3-year, risk-adjusted ROI) for a representative organization using the IBM Rational Integrated Solution for Application Portfolio Management.

ROI	Payback period	Total costs (PV)	Total benefits (PV)	Net present value (NPV)
101%	13 months	($1,551,280)	$3,507,306	$1,956,026

Benefits

- **Improved process efficiency — business and IT.** Reduced time and effort to collect, manage, and report on the application environment.

- **Reduced risk/improved allocation of capital.** Improved transparency around the application environment, increasing the likelihood that mission-critical applications are adequately funded.

- **Improved Time-To-Delivery On Application Initiatives.** Reduced time to decide on, and implement required changes.

- **Reduced cost.** Lower maintenance and operations cost through consolidation and rationalization. (Not quantified in report, nor included in the above model.)

Source: *Measuring The Total Economic Impact Of IBM Rational Integrated Solution for Application Portfolio Management, a commissioned study conducted by Forrester Consulting on behalf of IBM, January 2012.*

Simplify IT to improve business agility
A global conglomerate

Challenge
Cost
- Too much money spent on maintenance and operation

Solution
- Established application inventory in first month
- Assessed business value versus cost and risk
- Reduced number of local and non-strategic applications

Results
- ✓ Reduced number of applications by 45% in 18 months
- ✓ Reduced money spent on keeping lights on from 85% to 50%

Challenge
Business agility
- IT not reactive to business needs
- Business had low confidence in IT's ability to add value

Solution
- Established demand management process
- Used tools for improved business and IT collaboration
- Re-invested savings from keeping lights on into innovation

Results
- ✓ Reduced response time to business change request from 200 to 14 days
- ✓ Improved trust between Business and IT
- ✓ IT is now viewed as an enabler of innovation, rather than as a cost center

▸ **Read the full case study**

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Rationalize and optimize to align with the business
Financial institution in North America

Challenge
Complexity

- Unclear what applications exists and their value

Solution

- Built application inventory in two months, replacing previously scattered information

- Enabled portfolio management and EA teams to collaborate

Results

✓Reduced number of applications by 75% in 18 month

Challenge
Business alignment

- SLA's and application support costs not driven by business justification and priorities

Solution

- Assigned appropriate SLA level based on needs

- Streamlined organization to align with simplified SLA levels and smaller application portfolio

Results

✓Reduced number of SLA levels from 17 to 4

✓Double digit reduction in operations cost

▸ **Read the full case study**
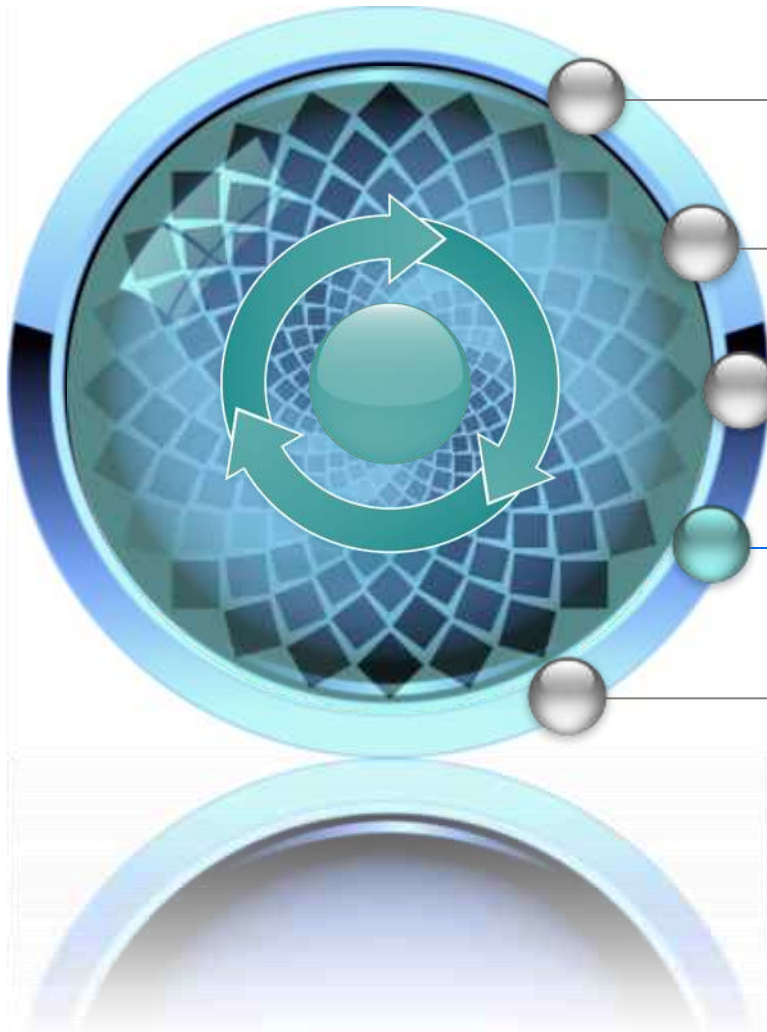
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Application Portfolio Management: *Simplified workflow*

Steering Committee

Portfolio Analyst

Enterprise Architect

Application Architect

Application Business Owner

Project Mgmt. Office

1) Define high level goals

2) Create or augment application Inventory

3) Provide application information (wide and shallow)

4) Analyze and determine investigation targets

5) Provide detailed application information (narrow and deep)

6) Analyze and set candidate dispositions

7) Recommend dispositions and rationalization projects

8) Assemble proposal for reaching goals

Goals reached?

Review / Approve

Yes

No

Yes

No

9) Plan and execute rationalization projects

1) Define High Level Goals

Steering Committee

- High level goals established

  – Example: Reduce application costs by 20% by end of 2013

- Explicit targets for accomplishing goals are established

  – Example 1: Reduce maintenance spend by 15% by end of next quarter

  – Example 2: Establish Goals for Decommissioning Applications, with the ability to track Plans and Actuals to those goals
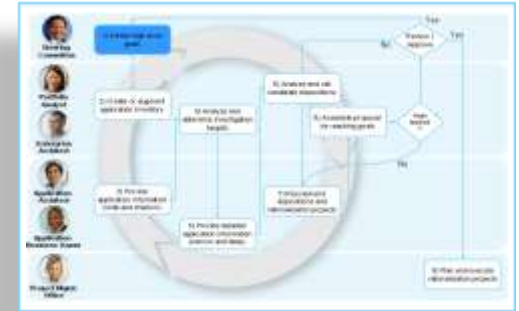
Display > Decommissioning Plan

Planning

Modules
Add
Display
- My Applications
- Application Roadmap
- Projects
- Project Roadmap
- Portfolio Investment
- Decommissioning Plan
- Weights
- Business Units
- My Applications - Per
- Change Roles

Year	Quarter	Retirement Goal	Savings Goal	Retirement Plan	Planned Savings	Actual Retired	Actual Savings
2012	Q3	5	$700,000	0	$0	0	$0
2012	Q4	5	$700,000	0	$0	0	$0
2012	Q1	4	$600,000	3	$78,500	1	$38,000
2012	Q2	6	$800,000	0	$0	0	$0
2013	Q1	5	$650,000	0	$0	0	$0
2013	Q2	7	$450,000	0	$0	0	$0

2) Create or augment application inventory

Portfolio Analyst

Enterprise Architect

- Rapidly import inventory from existing spreadsheets

- Optionally leverage role-based Web interface for additional information entry

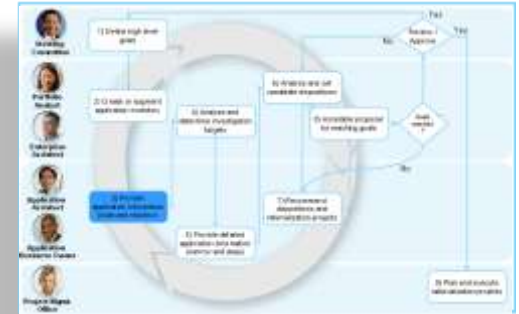# 3) Provide application information (wide and shallow)

Application Architect

Application Business Owner

- Web-based entry through role-based views

- Provide filters to make data entry trivial

- Increase data quality through choice selections and built in quality assurance steps

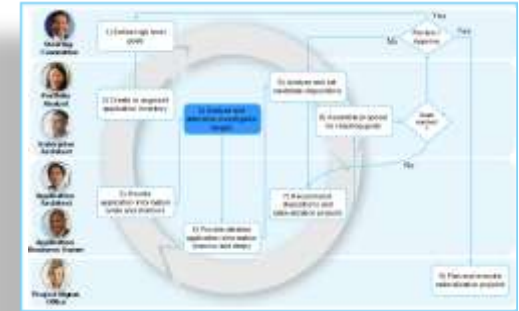# 4) Analyze and determine investigation targets
Identify applications to be further investigated

Portfolio Analyst
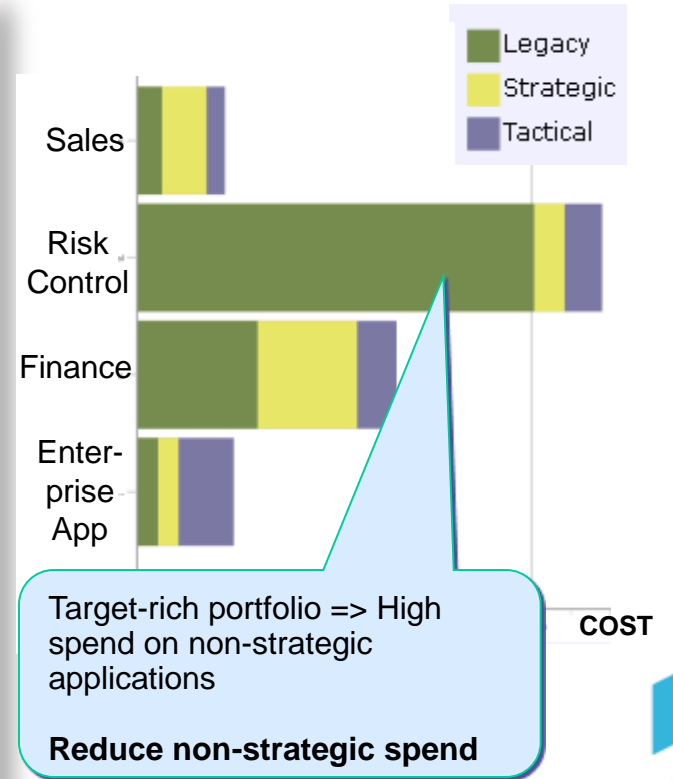
Enterprise Architect
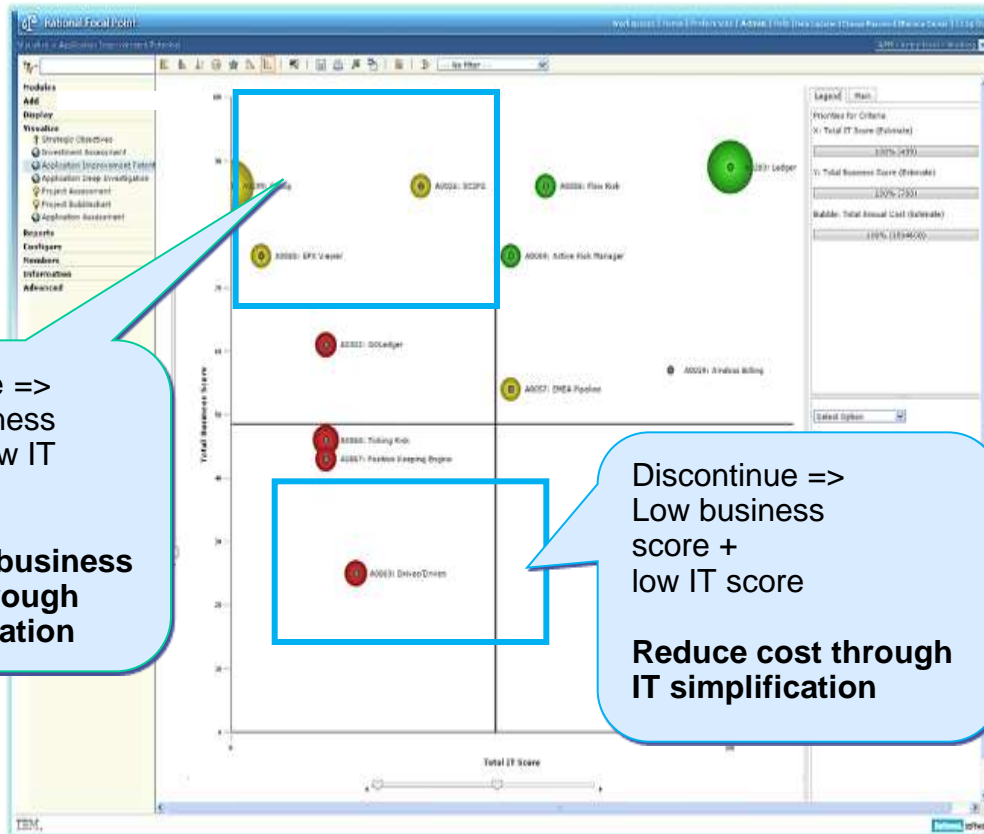
Modernize => High business score + low IT score

Increase business agility through modernization

Discontinue => Low business score + low IT score

Reduce cost through IT simplification

Legend:
- Legacy
- Strategic
- Tactical

Sales

Risk Control

Finance

Enter-prise App

Target-rich portfolio => High spend on non-strategic applications

Reduce non-strategic spend

COST

5) Provide detailed application information
Focus on four dimensions

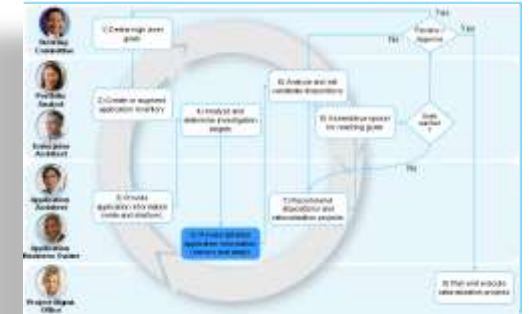**Application Architect**

Application Business Owner

Business Value
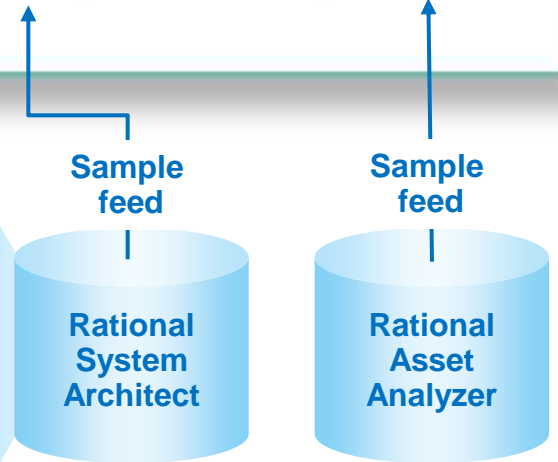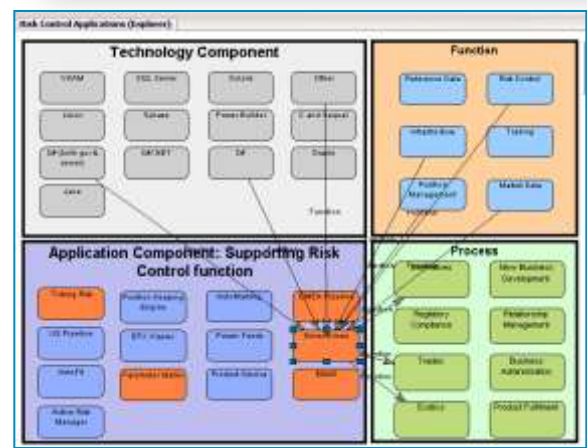Functional Quality
Strategic Value
Technical Quality

- Web-based and role based information gathering

- May optionally be informed by application analysis tools, such as IBM Rational Asset Analyzer or CAST Application Intelligence Platform

- May optionally be informed by an Enterprise Architecture tool, such as IBM Rational System Architect

Rational Focal Point

Display > My Applications

Add
Display
My Applications
Application Roadmap
Project Roadmap
Applications
Projects I submitted
Portfolios
Information

Investigate - Technical

Size	Defect Rate	Defect Density	Dependency Factor	Meet SLAs	Skills Risk	Code Complexity	Maintainability Sco
182,000	184	1.011	3 - Medium	2 - Almost	3 - Medium	3	2.8
32,000	188	5.875	4 - High	5 - Critical bre	5 - Very high	1.9	1.8
44,000	19	0.432	1 - None	3 - Partially	4 - High	1.4	2.2

Sample feed

Rational System Architect

Sample feed

Rational Asset Analyzer

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6) Analyze and set candidate dispositions
Assess Business Value vs. Strategic Value to guide maintenance spend and dispositions

Business Value

Silver services

Gold services

A0055: AutoFit

A0299: Billing

A0283: Ledger

A0042: PIMS

A0019: Amdocs Billing

A0008: APBackup

A0057: EMEA Pipeline

Blue services

A0002: Ordering

Bronze services

A0146: AMDOCS

A0040: Compass

Strategic Value

Decommission?

Gui-dance
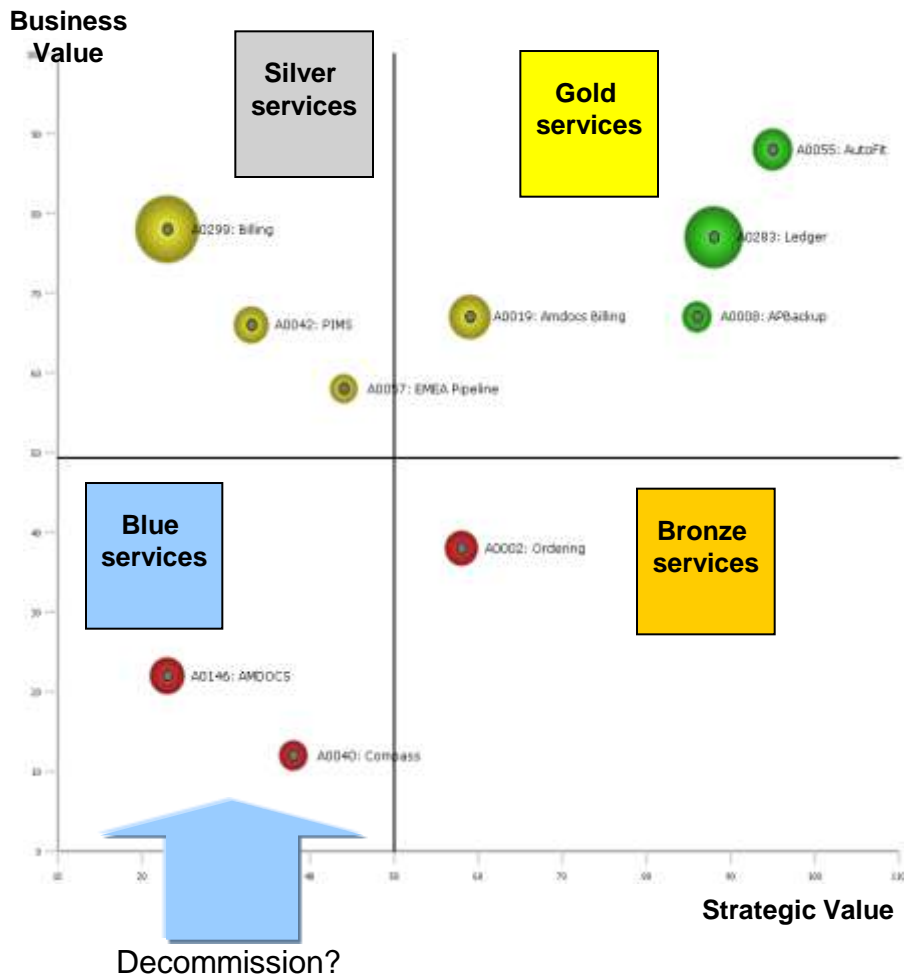
IBM Example

	Application maintenance	Application enhancements
Gold services	All errors	All enhancements
Silver services	Severity 1 and 2 errors only	Enhancements which impact revenue, profitability, customer satisfaction, or a demonstrable return on investment
Bronze services	Severity 1 errors only	Only enhancements bringing significant longterm value
Blue services	No error corrections	No enhancements

Apply Portfolio Value Management approach

Apply affordability driven demand management

20

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6) Analyze and set candidate dispositions
Assess Technical and Functional Quality to guide investments and dispositions
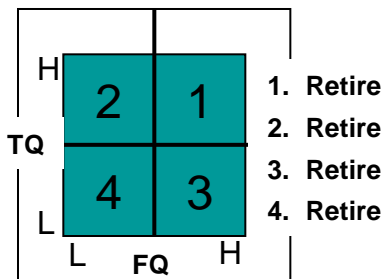
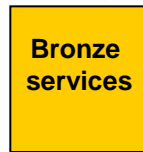**Portfolio Analyst**   **Enterprise Architect**
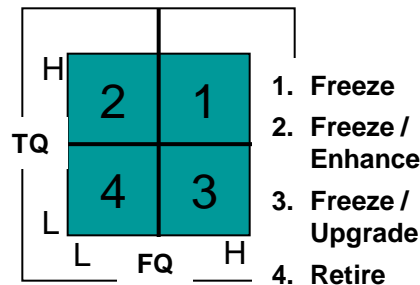
Low Business Value Low Strategic Value	Low Business Value High Strategic Value	High Business Value Low Strategic Value	High Business Value High Strategic Value
Blue services	**Bronze services**	**Silver services**	**Gold services**
Technical & Functional Quality	Technical & Functional Quality	Technical & Functional Quality	Technical & Functional Quality

Blue services

TQ: H / L, FQ: L / H — quadrants 2 1 / 4 3

1. Retire
2. Retire
3. Retire
4. Retire

Bronze services

quadrants 2 1 / 4 3

1. Freeze
2. Freeze / Enhance
3. Freeze / Upgrade
4. Retire

Silver services

quadrants 2 1 / 4 3

1. Keep
2. Freeze / Enhance
3. Freeze / Upgrade
4. Replace / Upgrade

Gold services

quadrants 2 1 / 4 3

1. Keep
2. Enhance
3. Upgrade
4. Replace
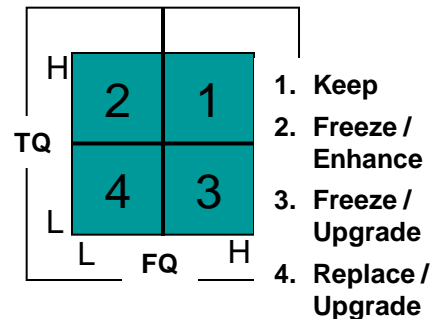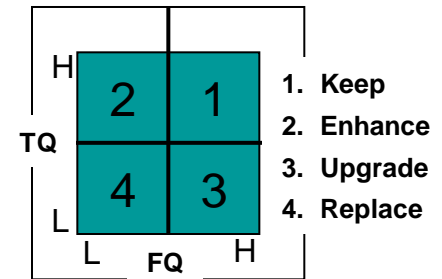
Most applications are candidates for retirements and should be frozen immediately.

Most applications should be frozen. Consider replacement to more strategic applications. Newly introduced applications could be revalidated to stay as a target application.

Most applications could be frozen temporarily - until a need to Upgrade or Enhance has been aggregated.

Many applications are likely to be in your wanted portfolio and part of your target solution.

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6) Analyze and set candidate dispositions
Propose disposition and understand savings potential

Disposition	Description	Potential % Savings based on industry benchmarks
Decommission (a.k.a. Retire)	Discontinue the application.	70% of maintenance and production infrastructure cost
Relocate	Evaluate and select alternate sourcing for application hosting, maintenance and/or development.	40% of labor (enhancement and maintenance) + 3% of production infrastructure cost
Reprioritize	Reduce spend on maintenance or operations costs.	15% of maintenance labor
Replace	Replace current application(s) with new application / packaged application.	25% of total cost
Reduce (a.k.a. Consolidate)	Rationalize multiple applications with similar function into a single application.	60% of total cost
Enhance	Add additional functionality. Improve flexibility by using new principles, e.g. SOA, Web Services.	No change -????
Modernize (a.k.a. Rustproof)	Modernize application by upgrading technology and improving architecture.	15% of labor (enhancement and maintenance)
Retain	Keep as-is.	No change

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7) Recommend dispositions and projects
Review and harden proposed dispositions

Application Architect

Application Business Owner

- Bring together key stakeholders of this applications, and review impact of proposed disposition

  - What is impact of a freeze?

  - If we replace the application with an ERP, what is the business impact?

  - What risks are associated with relocating this application?

  - Knowing the details about the application and business context, is there a more sensible disposition?

- For upgrades / modernizations => Conduct Feasibility Study

  - Drill down into details of the architecture and code base

  - Determine the appropriate modernization approach (re-factor, migrate, wrap, …)

  - Understand costs, benefits, and risks

7) Recommend dispositions and rationalization projects
Conduct feasibility study

1 **Defect and Enhancement request Analysis**

3 **Business Processes and IT alignment Analysis**
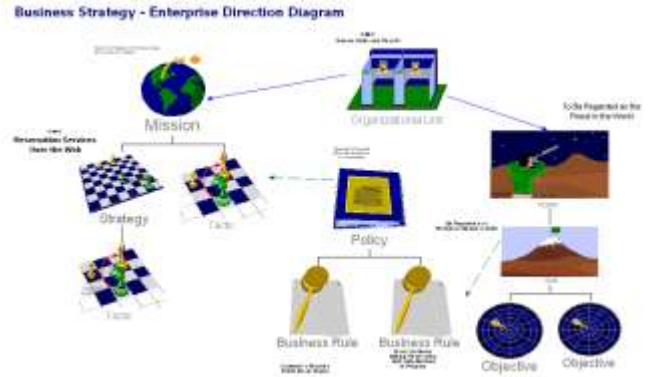
2 **Application Complexity Analysis**
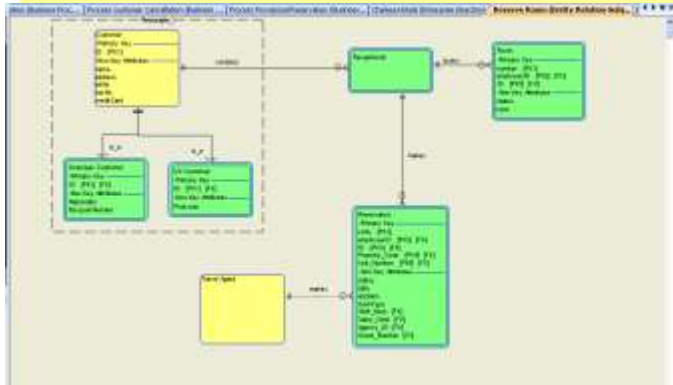
4 **Application Refactoring and Enhancement**
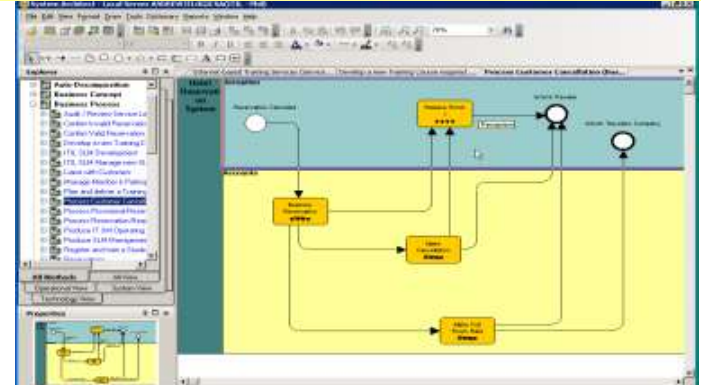
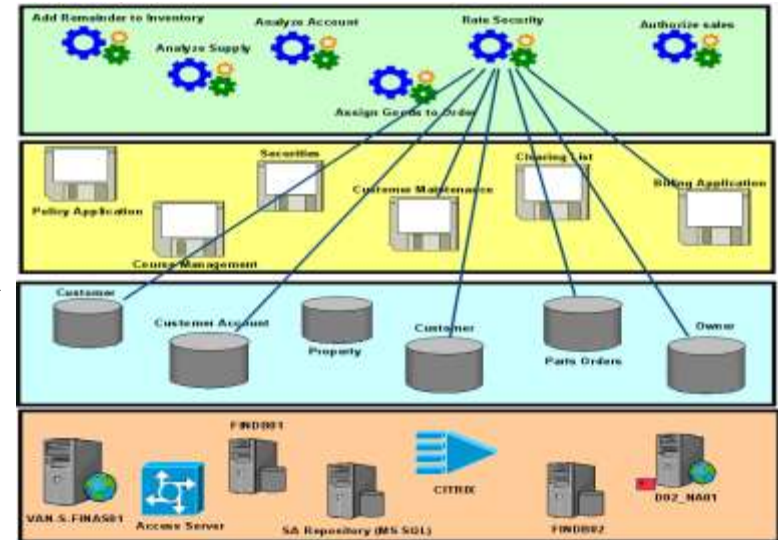# 7) Recommend dispositions and rationalization projects
Define Future State architecture (s)

Current   **Proposed**

Next NOW!
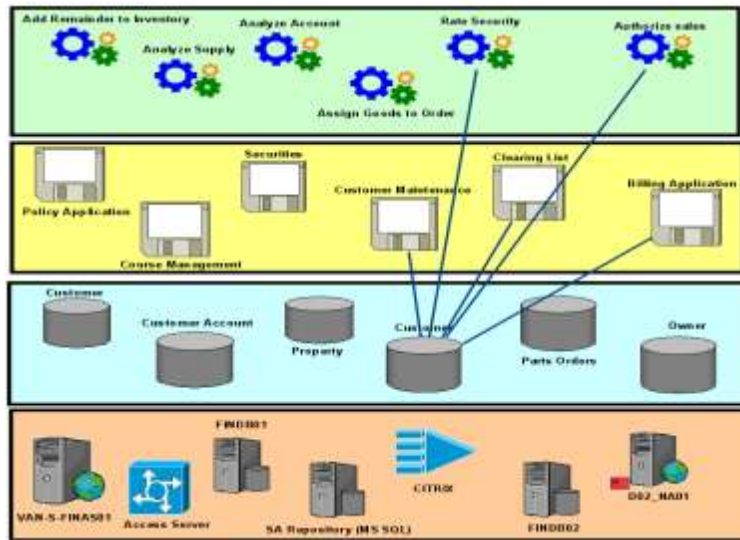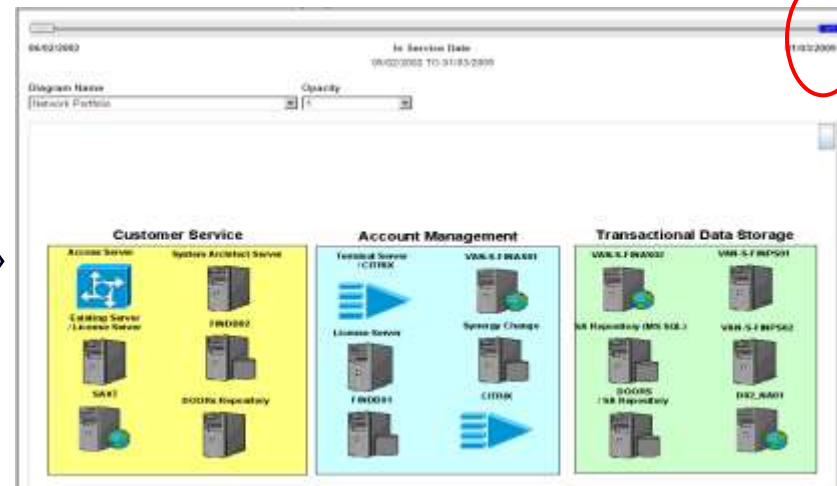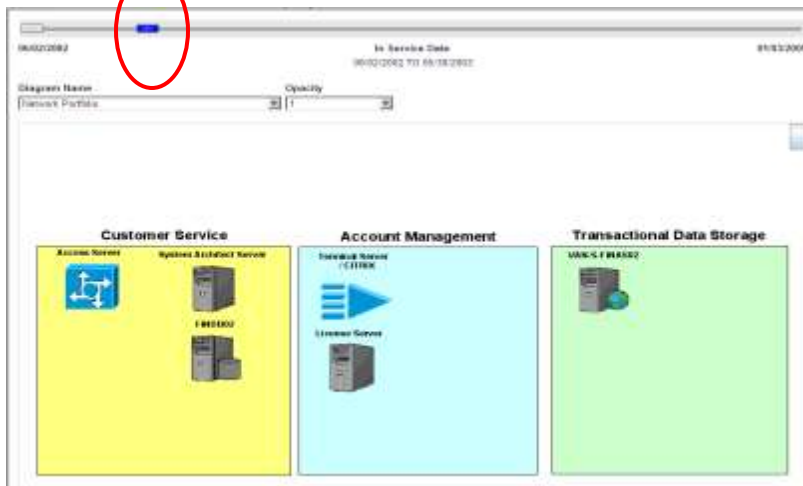
7) Recommend dispositions and rationalization projects
Produce project proposals for rationalization projects

Application Architect

Application Business Owner

Planning Data

Start Date	6/1/11
End Date	8/30/12
Benefits End Date	10/1/13
Primary Business Objective	↑ Reduce Costs by 10% over the next 2 years
Supported Business Objectives	↑ Gain 5% organic growth by Dec 2011
Related Applications	◆ A0299:Billing
	◆ A0302:GOLedger

Scorecard

Architectural Fit	🟩 5 - Very High
Strategic Alignment	🟨 4 - High
Business Value	🟩 5 - Very High
Competitive Advantage	🟨 4 - High
Total Business Value Score	1,129
Total Risks Score	71

- Link Future State architectures to project proposals

- Propose and establish business case for projects

Expected Cost: $1.4 M
Expected Benefits (accrued over 13 months after project completion: $1.9 M
Net Present Value (28 months)

Probability Distribution

0.032	
0.024	
0.016	
0.008	

10%   90%

$14,620.94 $189,407.06 $369,934.28

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8) Assemble proposal for reaching goals
Evaluate and prioritize rationalization projects

Steering Committee

Project Mgmt. Office

- Compare projects side by side using pair-wise comparison

- Visualize project priority base on defined project criteria

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8) Assemble proposal for reaching goals
Establish roadmap that enables goals to be met.
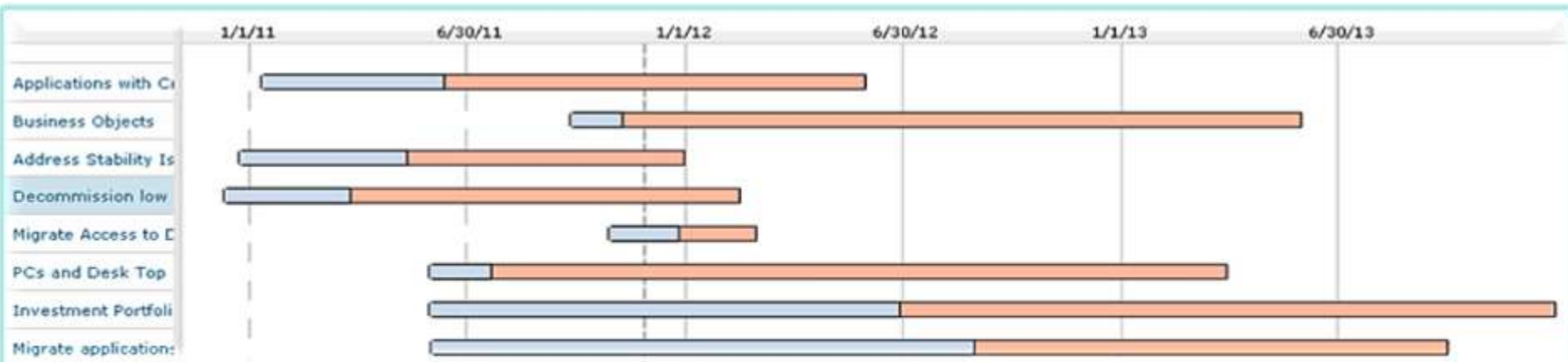*Plan and approve for execution.*

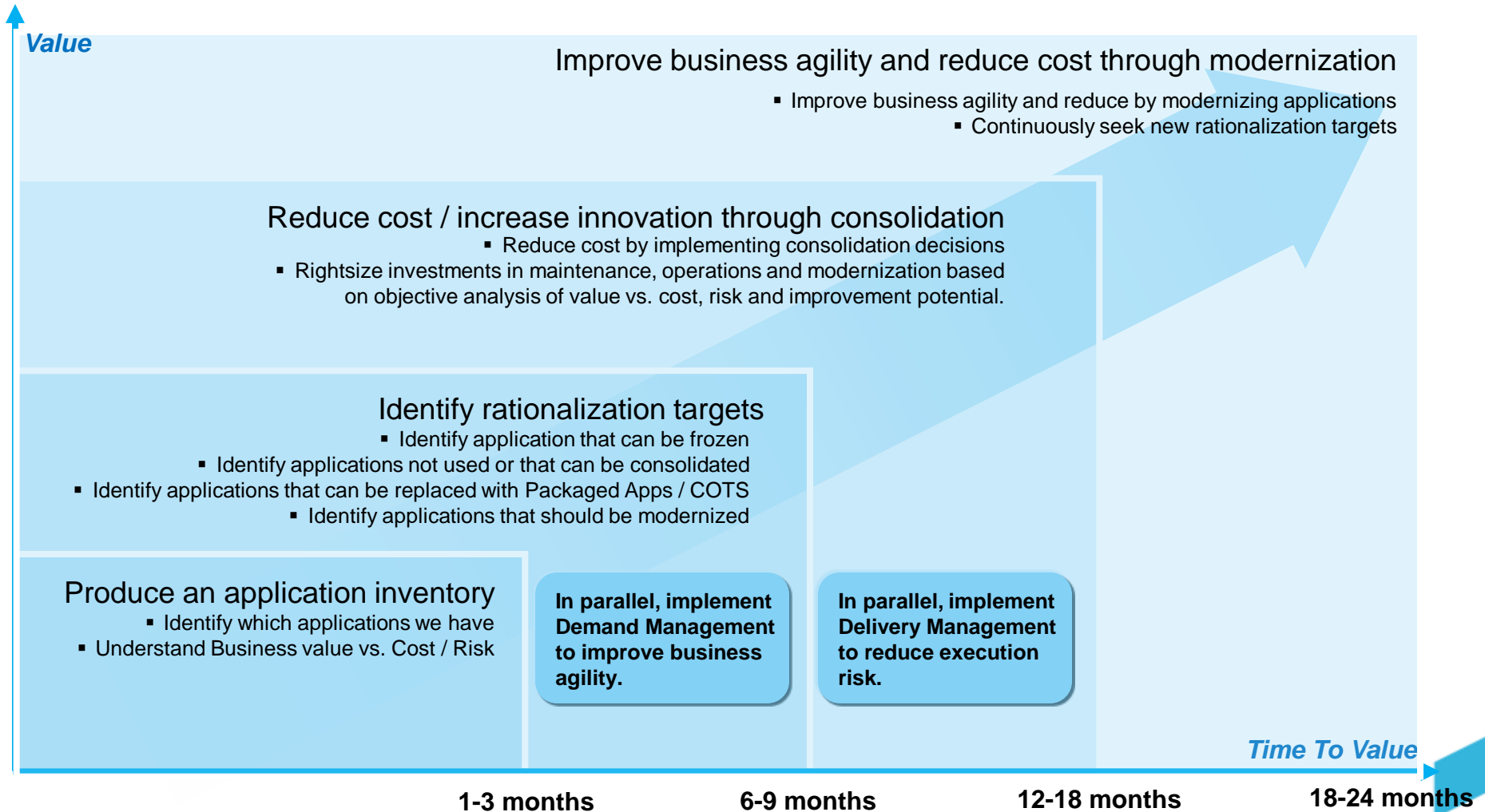**Steering Committee**

Project Mgmt. Office

- Freeze 23 applications
  - Quarterly savings of $870K

- 18 rationalization projects to be carried out over next 2 years
  - Modernization of 4 applications deemed critical
  - Consolidating 12 applications
  - Decomissioning 6 applications

- Transaction cost of $6.8M

- Expected savings by end of 2013: 22%
  - Beats goal of 20%

	1/1/11	6/30/11	1/1/12	6/30/12	1/1/13	6/30/13
Applications with Cr						
Business Objects						
Address Stability Is						
Decommission low						
Migrate Access to D						
PCs and Desk Top						
Investment Portfoli						
Migrate application:						

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Adopting APM: Shortest Route to Value
Incremental adoption with incremental value delivery

Value

Improve business agility and reduce cost through modernization
- Improve business agility and reduce by modernizing applications
- Continuously seek new rationalization targets

Reduce cost / increase innovation through consolidation
- Reduce cost by implementing consolidation decisions
- Rightsize investments in maintenance, operations and modernization based on objective analysis of value vs. cost, risk and improvement potential.

Identify rationalization targets
- Identify application that can be frozen
- Identify applications not used or that can be consolidated
- Identify applications that can be replaced with Packaged Apps / COTS
- Identify applications that should be modernized

Produce an application inventory
- Identify which applications we have
- Understand Business value vs. Cost / Risk

In parallel, implement Demand Management to improve business agility.

In parallel, implement Delivery Management to reduce execution risk.

Time To Value

| 1-3 months | 6-9 months | 12-18 months | 18-24 months |

IBM's Global integration drives benefits across all areas

	From		To
Supply Chain	• 300 local procurement centers	➤	• 3 global procurement centers
Finance	• Multiple local organizations • Non-integrated decision support	➤	• Outsourced non-core processes reduced costs 25-35% • Integrated decision-support
HR	• Local systems and management • Local resource skill-set definition	➤	• Global HR planning • Standardization
Marketing	• Product- and geo-specific marketing	➤	• 13 global standardized marketing programs leveraged locally
IT	• 128 Local CIOs • 155 local data centers • 16,000 applications	➤	• 1 global CIO • 6 global data centers • 4,500 applications
R&D	• Multiple international R&D centers • Local specialization with duplication	➤	• Fully integrated R&D • Collaboration with 50 organizations to build IP marketplace

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IBM CIO Office APM Experiences

- **Application reduction**
  - From 16,000 to 4500
  - Targeting another 50% reduction by 2015

- **Cost reductions**
  - $1,5 Billion dollar estimated savings as a result of application and data center consolidation
  - Of applications classified as "Blue", an estimated 95% savings in maintenance (due to consolidation and freeze of maintenance dollars)

- **Ongoing process**
  - APM never ends, this is the 3rd time we cut the application count by 50% or more….
  - Many other improvements besides IT cost reduction, such as business process efficiencies gained from global processes for a global company

  - For more info, see Computerworld article:
    http://www.computerworld.com/s/article/9226430/IBM_on_path_to_cut_internal_apps_by_85_

Agenda
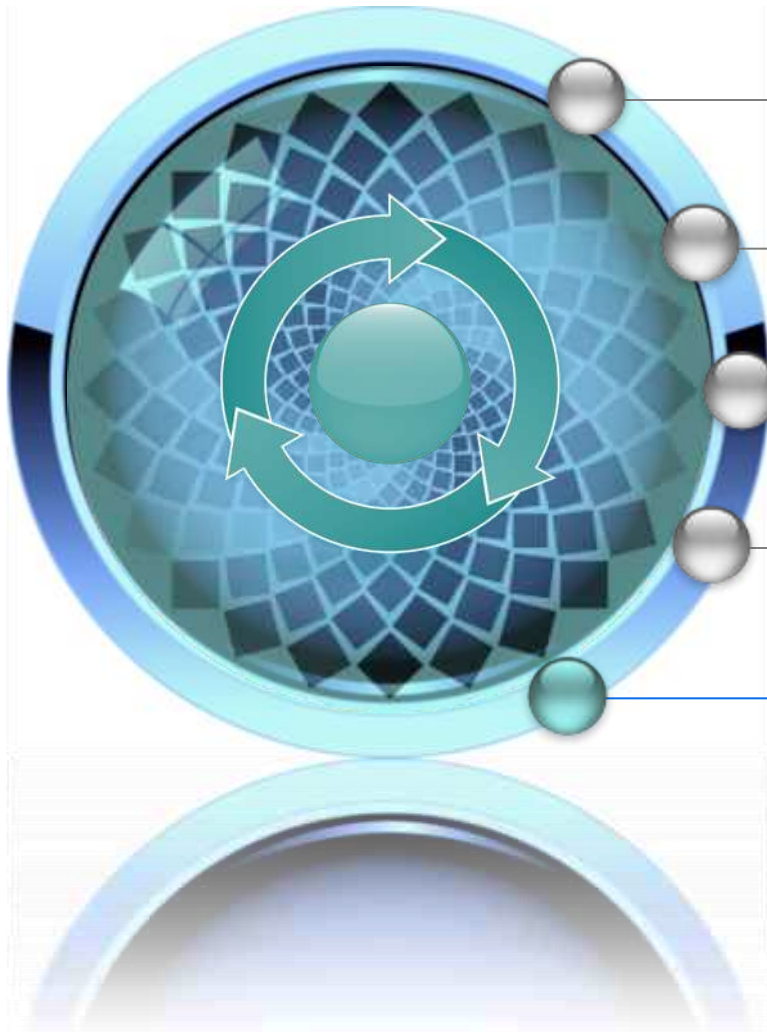
Why APM right now?

What is APM?

Benefits of Adoption?

APM in action

Final thoughts

Simplify IT to drive innovation and business agility
Governance and collaborative decision making

Increase strategic spend
Consolidate applications to reduce maintenance and operations cost and shift funds to innovation

Improve business agility
Reinvest savings in application modernization and effectively manage demand

Application Portfolio Management

Delivery Management

Demand Management

GOVERNANCE

Integrated Application Lifecycle Management Solutions

Enterprise Modernization Solutions
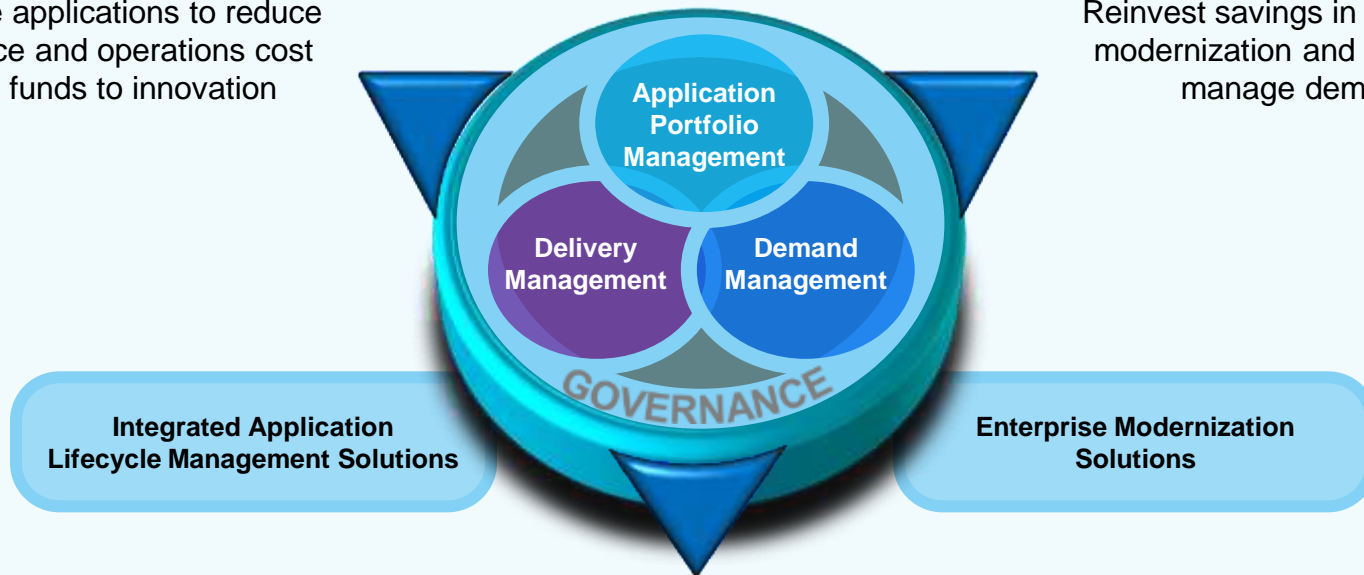
Deliver and improve
Deliver on projects and measure the result to improve future decision making

Open platform for data and tools integration and automation

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Full Solution architecture overview

Solution Support Services

- Quick Starts
- Best Practices
- Report Templates
- Configurations

Analysis, decisions, execution roadmaps

Rational Focal Point

Architectural Context

Rational System Architect
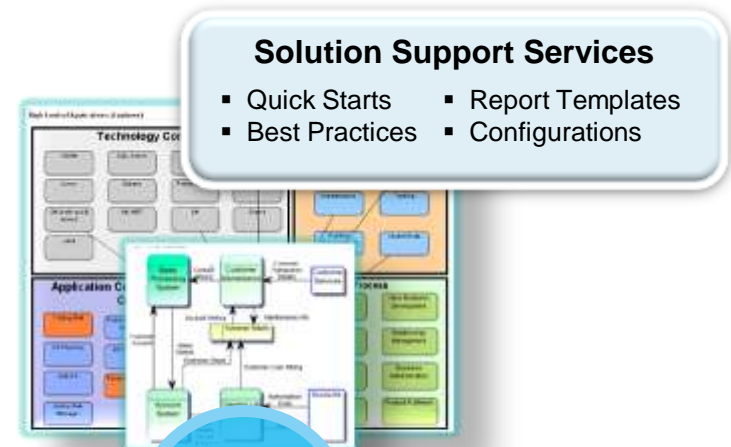
Impact analysis, architectural roadmaps, future visioning

Execution status *Execution roadmap*

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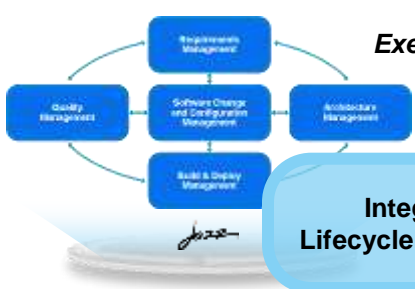
Execution

Tracked

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Project execution in collaborative team environment
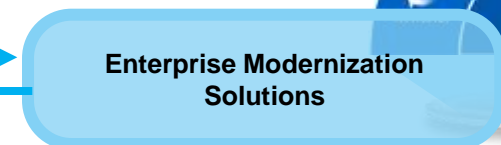
Application flexibility, individual and team productivity, and system utilization

APM decisions and plans are executed and tracked in solutions for Application Lifecycle Management and Enterprise Modernization

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In summary
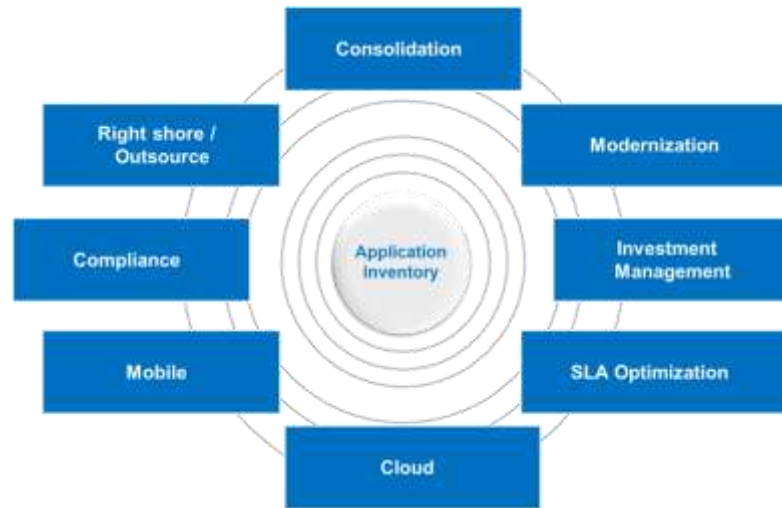
Gather info, analyze, make smart decisions

DRIVES
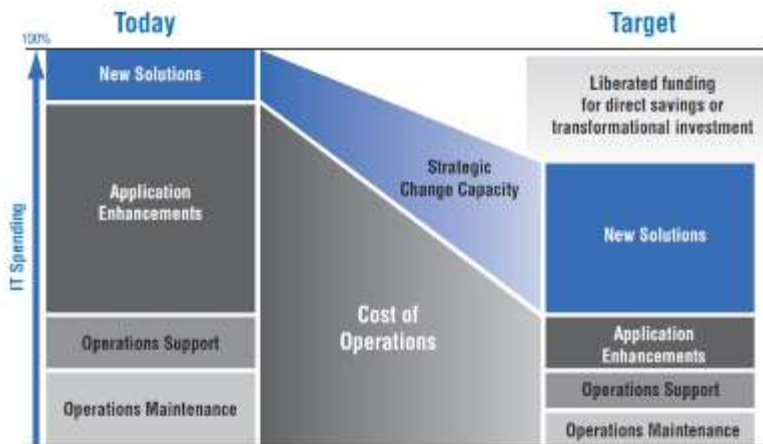
Increase in strategic spend

Strengthened business and IT collaboration

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Find out more

- POT – Brussels 19th October, Amsterdam 13th November

- APM content on ibm.com (ibm.co/apmsolution)
  - whitepapers, demo, podcast, video etc.

- APM reference stories: North American Bank , Global Conglomerate

- APM Forrester Consulting commissioned report on Total Economic Impact of the IBM Rational Integrated Solution for APM
  - Provided on request

- APM whitepaper: Empowering the CIO

- APM Content on developerWorks
  - demos, presentations, User Guides, etc.

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