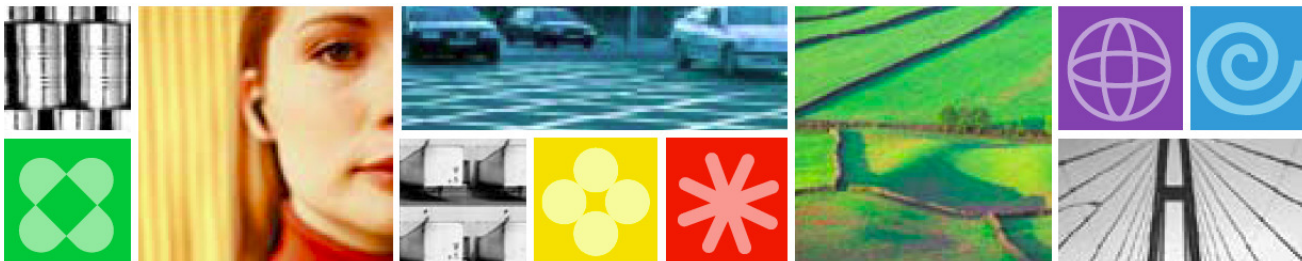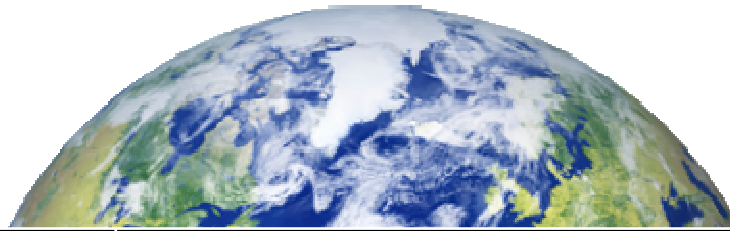# IBM CICS Explorer - The smart, new face of CICS

IBM Vision at a Glance…

Smarter Planet

- instrumented
- interconnected
- intelligent
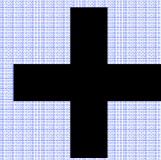
- people
- companies, institutions, industries
- man-made systems
- nature's systems

Today's Imperatives Are…

Cost Optimization

to slash operational and maintenance expense and maximize efficiency necessary for all economic climates
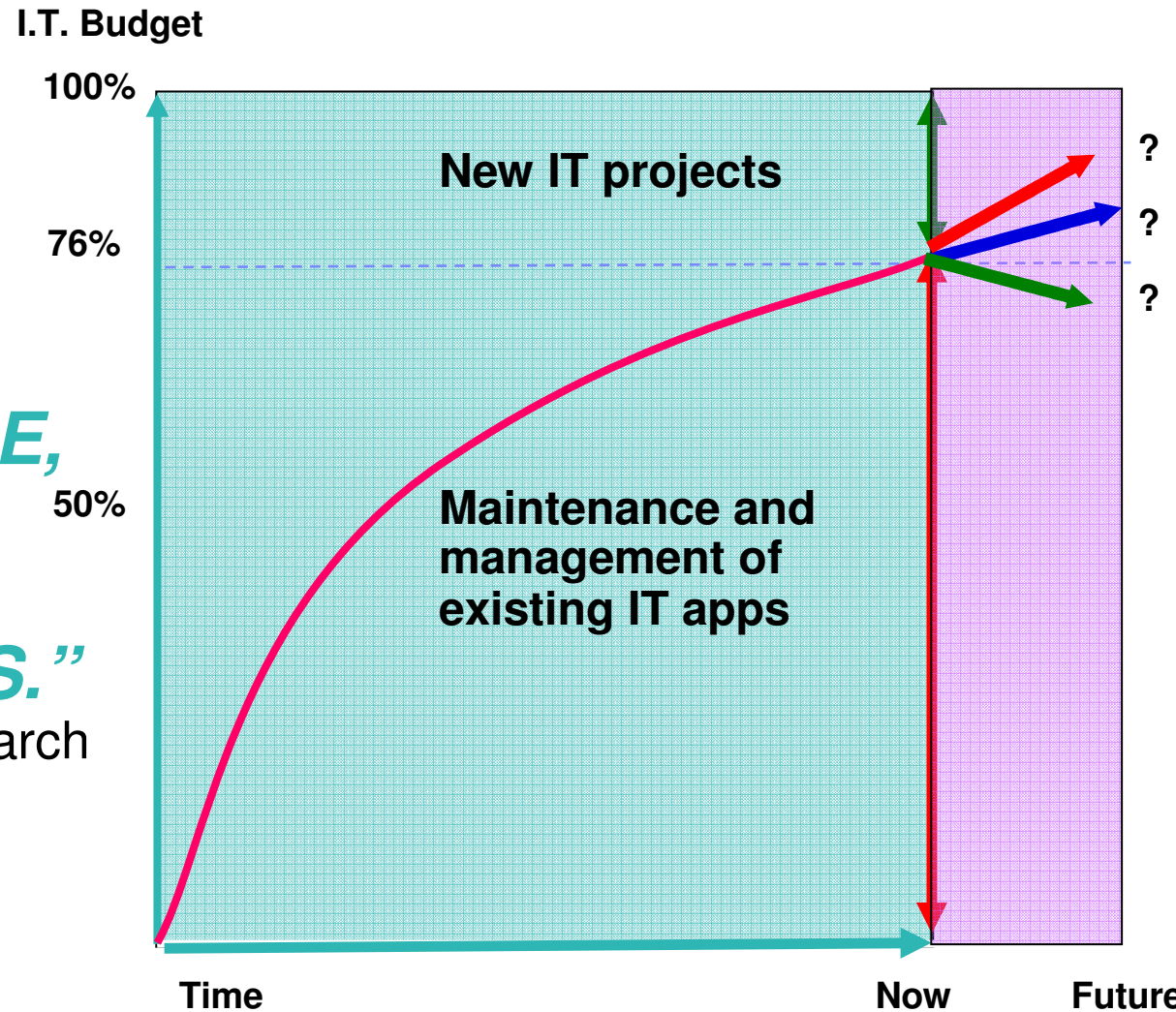
+

Agility

to take advantage of new revenue opportunities and address competitive threats

To Survive… To Succeed!

Where are IT Budgets Being Spent?

"76% of I.T budgets are spent on MAINTENANCE, leaving only 24% for NEW INVESTMENTS."
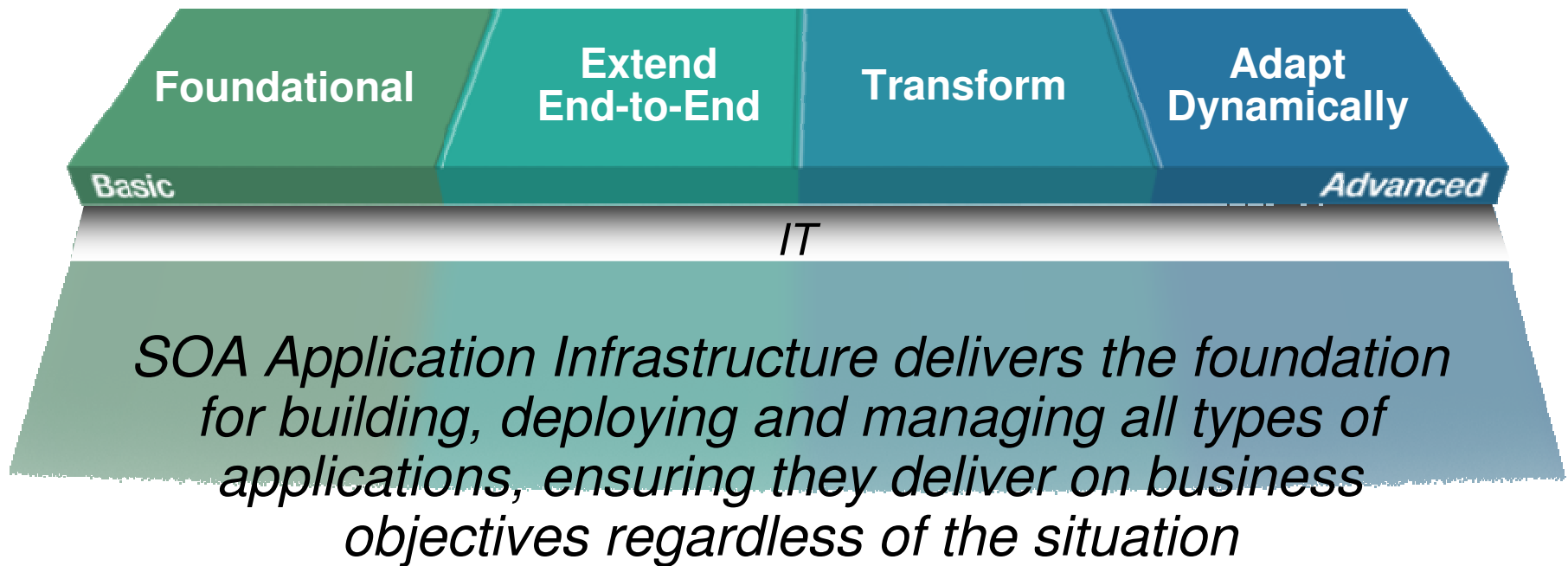--- Forrester Research

I.T. Budget

- 100%
- 76%
- 50%

New IT projects

Maintenance and management of existing IT apps

? ? ?

Time — **Now** — **Future**

IBM's Smart SOA
Powers Smarter Business Outcomes Across a Continuum

Business

Foundational	Extend End-to-End	Transform	Adapt Dynamically

Basic   *Advanced*

IT

SOA Application Infrastructure delivers the foundation for building, deploying and managing all types of applications, ensuring they deliver on business objectives regardless of the situation

The Power of a Smart SOA Application Foundation

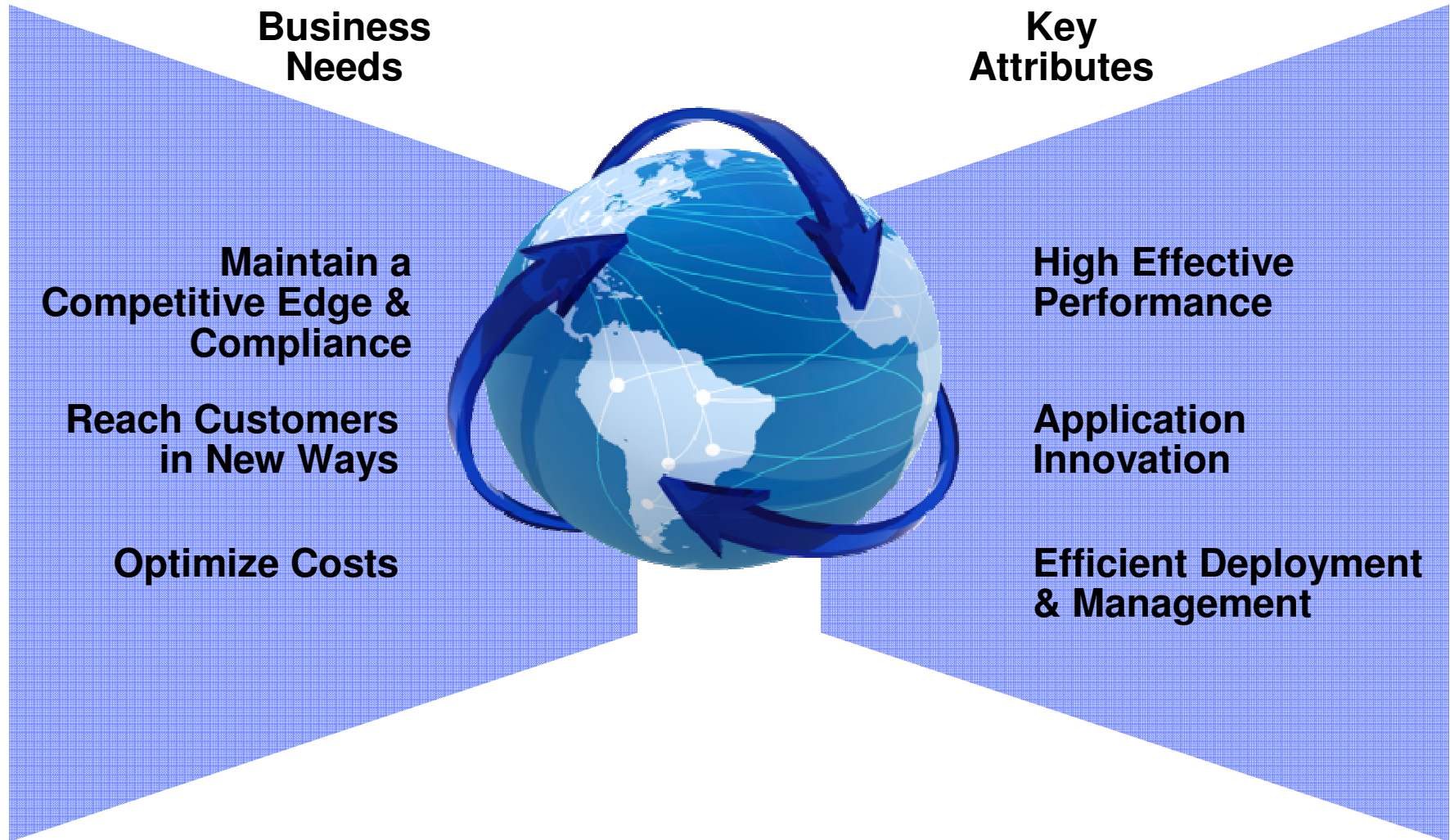|		
Modernize applications		**Expand client offerings using existing business data with Web 2.0**
Execute high volume transactions		**Reduce business risks with highly available, secure applications**
Capitalize on dynamic situations		**Timely insight with low cost situational applications**
Manage worldwide operations		**Rapidly introduce new capabilities throughout the business with centralized administration**
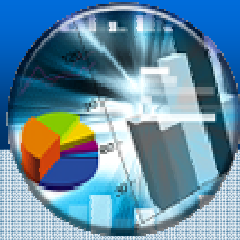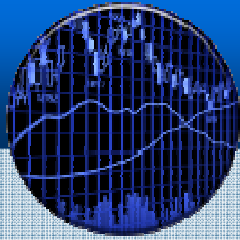
Address your critical business needs with Smart SOA Application Foundation

**Business
Needs**

**Key
Attributes**

**Maintain a
Competitive Edge &
Compliance**

**High Effective
Performance**

**Reach Customers
in New Ways**

**Application
Innovation**

Optimize Costs

**Efficient Deployment
& Management**

Maintain a Competitive Edge & Compliance

- **Applications should be available, secure, and responsive while reducing cost**

- **Customer demand needs to be met without complex IT infrastructure**

- **Customer data must be protected**

- **Get the highest performance for the lowest cost**

- **Support more business services with fewer IT resources**

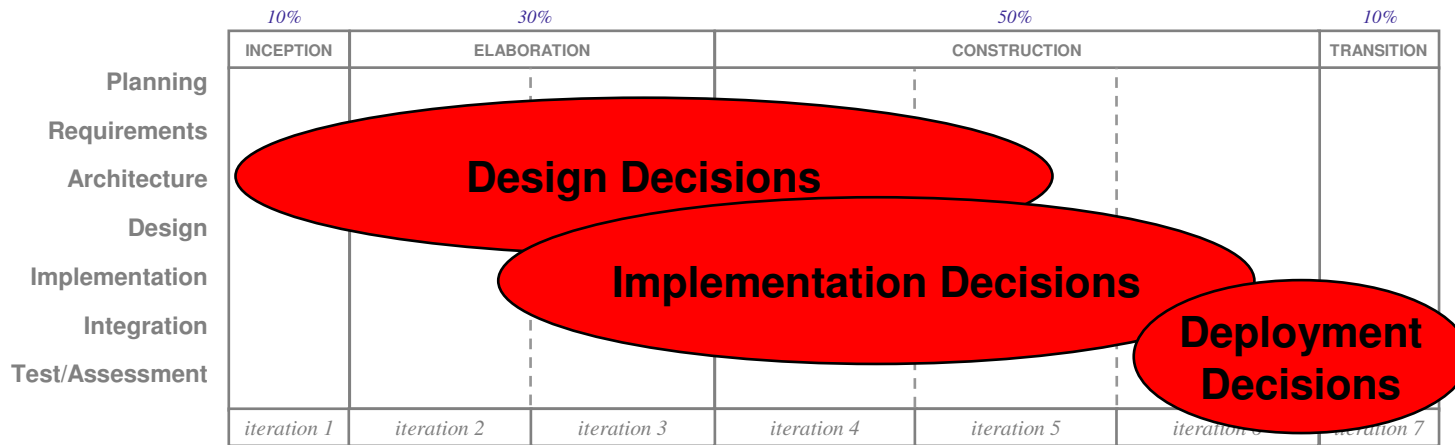- **Prevent costly compliance breaches**

Scale-up

Speed-up

Comply
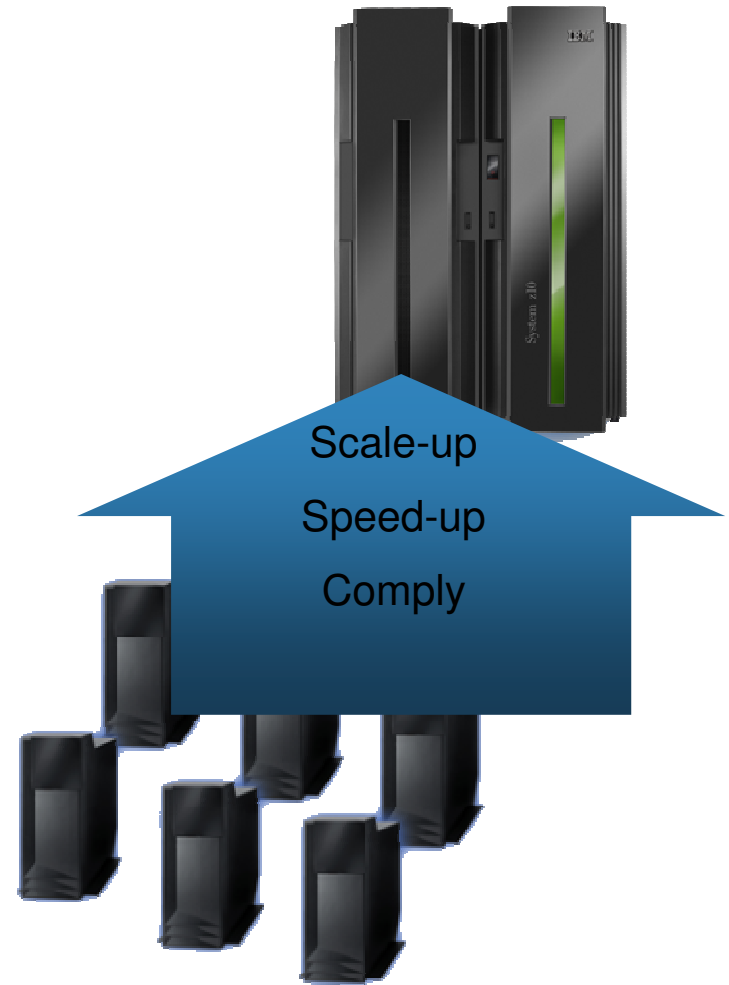
Achieve efficient application response time
CICS Performance Analyzer

|	10%	30%		50%	10%
	INCEPTION	ELABORATION	CONSTRUCTION		TRANSITION
Planning					
Requirements					
Architecture		**Design Decisions**			
Design					
Implementation			**Implementation Decisions**		
Integration				**Deployment Decisions**	
Test/Assessment					
	iteration 1	*iteration 2*	*iteration 3*	*iteration 4*	*iteration 5*	*iteration 6*	*iteration 7*

"For every phase in which a defect is left beyond the point of detection, it becomes 80 to 1,000 times more expensive to remove." Gartner
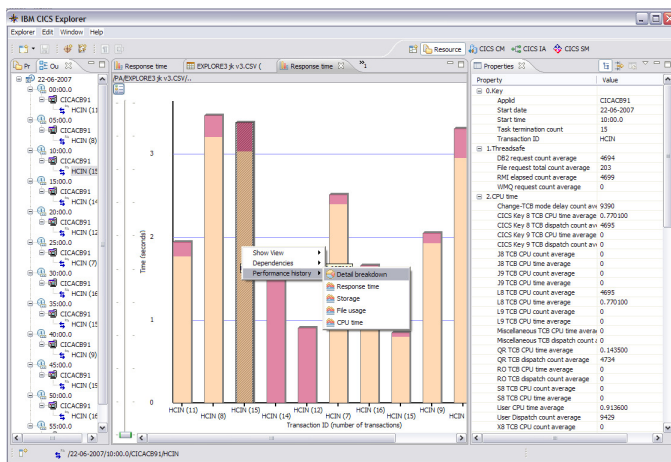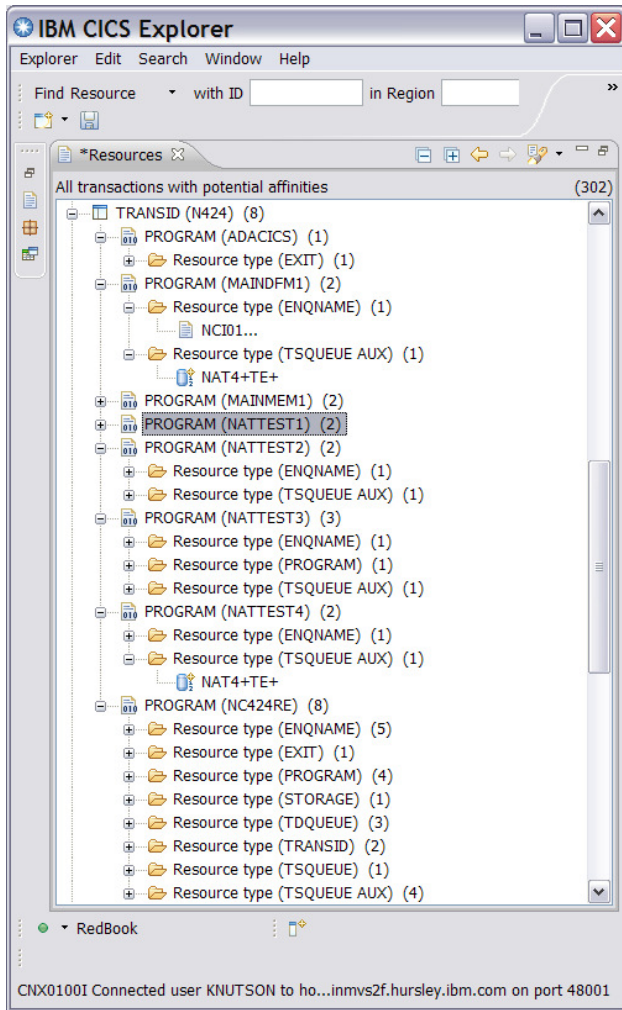

- **Look for out of line metrics**
- **Drill into performance data**
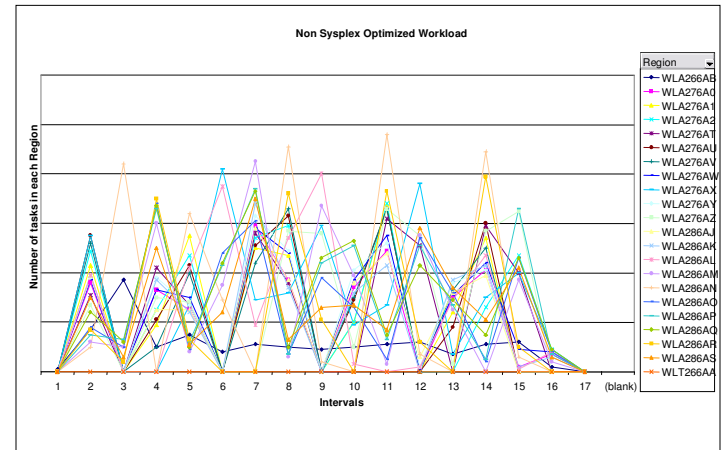- **Compare two test periods**
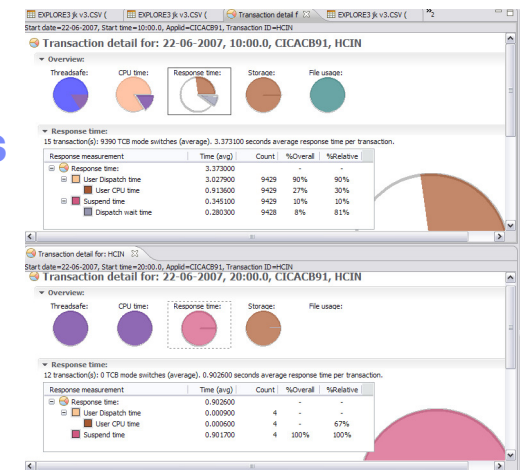
Consolidate workloads - improve throughput
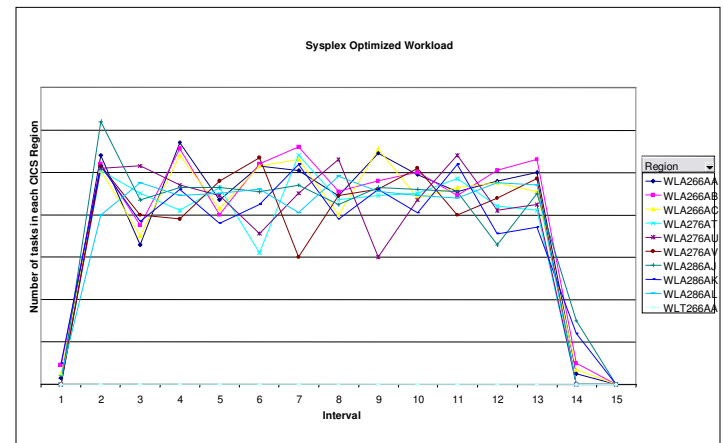## *CICSPlex SM and CICS Interdependency Analyzer*

New Optimized Routing in CICSPlex SM
smoothes work distribution for higher throughput

Non-optimized
27 CICS regions
17 seconds

Optimized
9 CICS regions
15 seconds

CICS Interdependency Analyzer identifies affinities
for removal or input to CICSPlex SM

Provide insight for more flexible business control
CICS TS V4.1 and WebSphere Business Events

CICS Business Applications

CICS TS 4.1

WebSphere Business Events

WebSphere Business Monitor

Business Leader

WebSphere Process Server

CICS TS Version 4.1

NO APPLICATION CHANGE REQUIRED with CICS V4.1

Business Professional
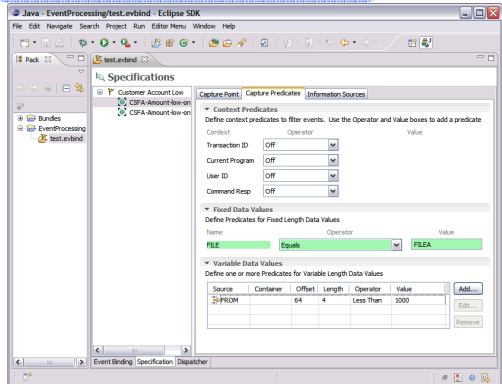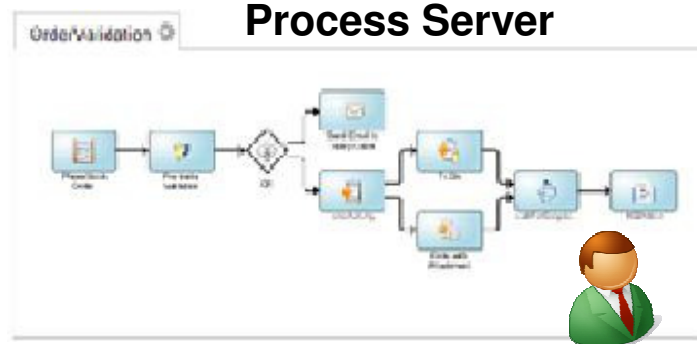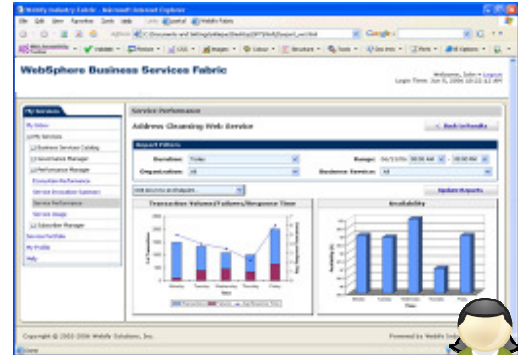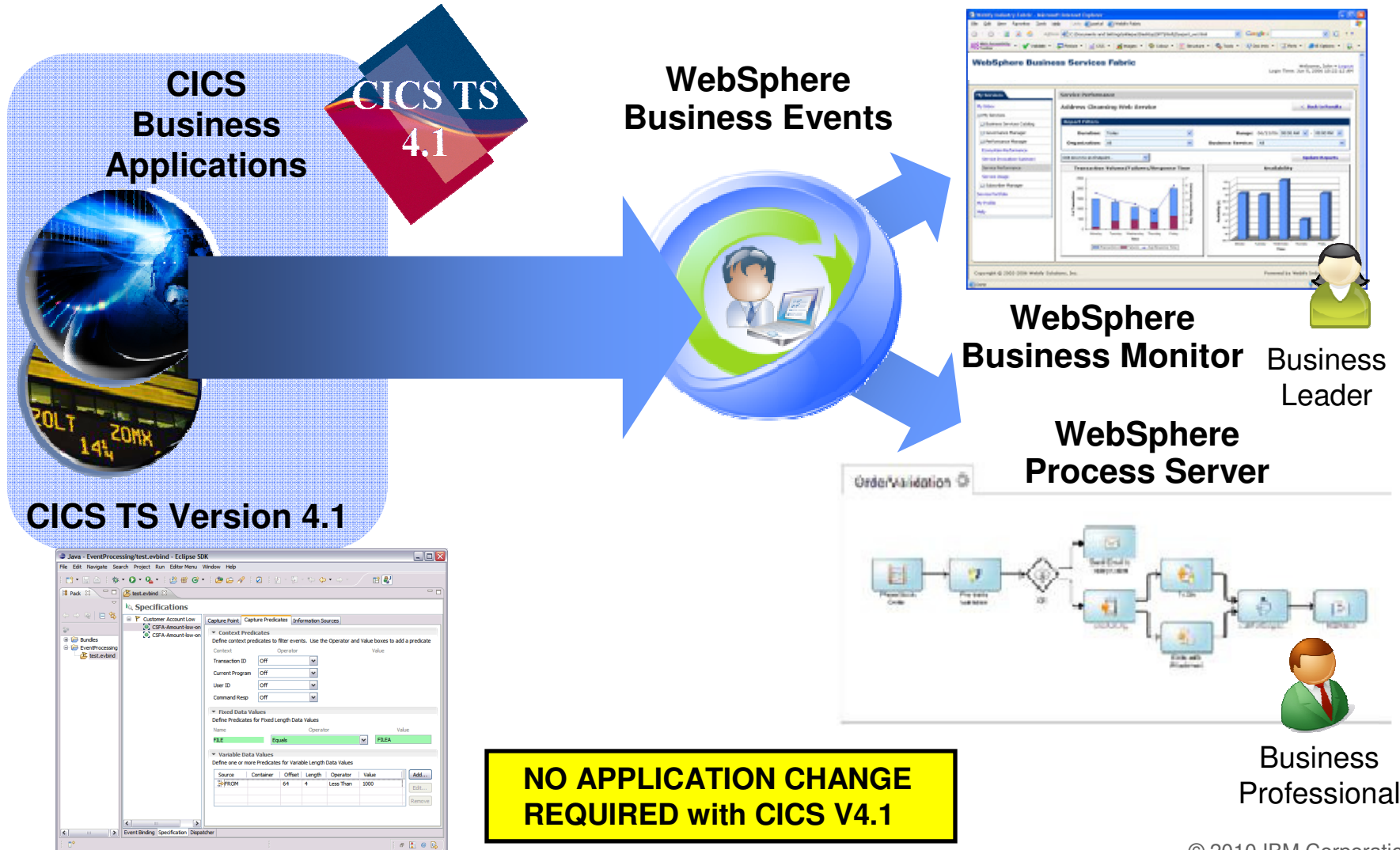
Resource Definitions for Business Events

Copy book

Event Specification
Capture Specification (**WRITEQ TS**)
Filter (**PersonnelData)**
Information Source (Data)
Adapter (TS Queue(**PersonnelEvent**))

CICS TS Queues

PersonnelEvent

PersonnelData

Event

Export

Bundle
PATH(/**events/personnel/***)

zFS

Event binding bundle
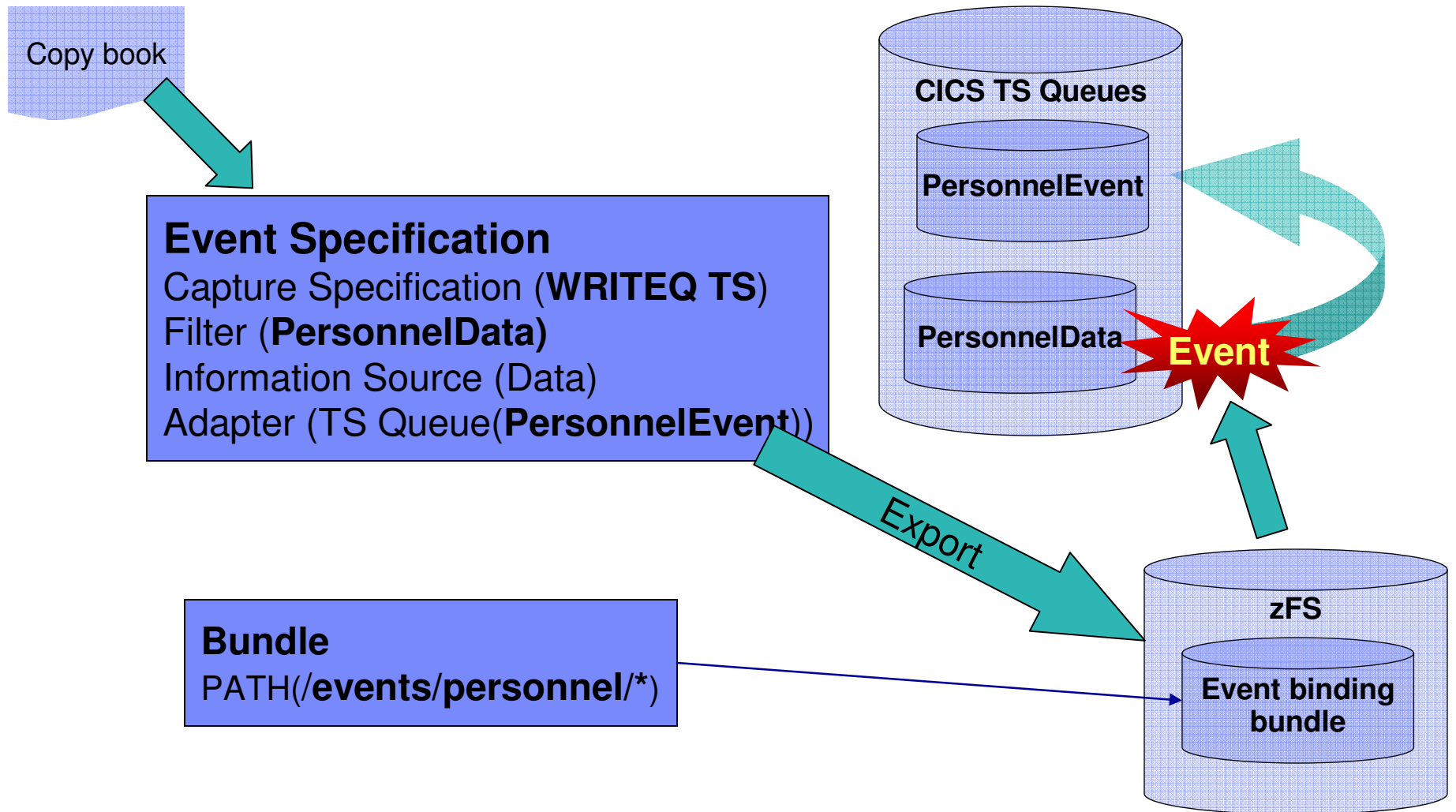
Business events - DEMO

**Click to play
CICS business events demo
from local file**

**Click to play
CICS business events demo
from YouTube**

YouTube link http://www.youtube.com/watch?v=MZHQyIwZJLQ

Address your critical business needs with Smart SOA Application Foundation

Business Needs

Key Attributes

Maintain a Competitive Edge & Compliance

High Effective Performance

Reach Customers in New Ways

Application Innovation

Optimize Costs

Efficient Deployment & Management
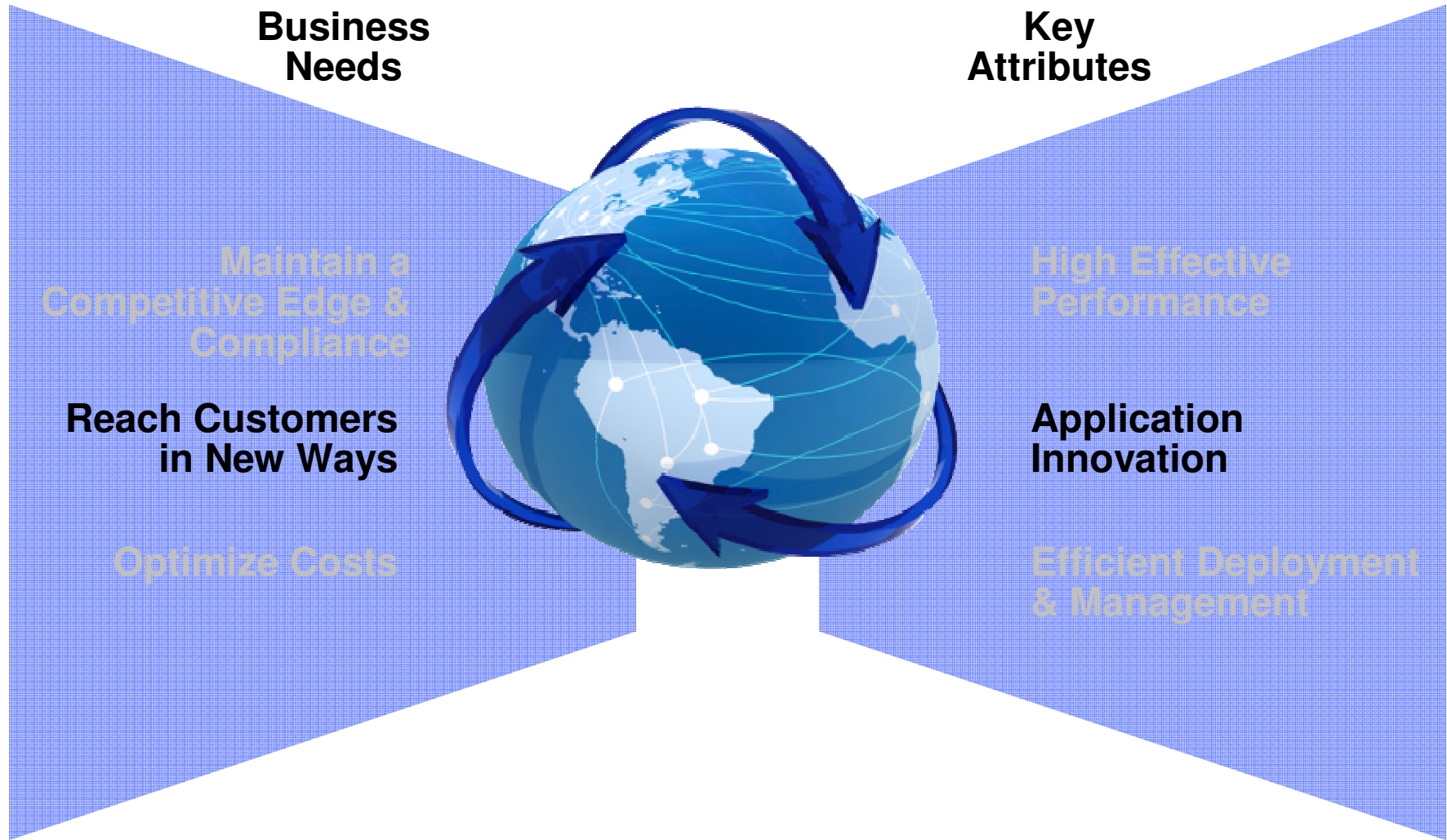
Reach Customers in New Ways

- **Difficult to stay competitive and deliver rich user experiences?**
- **New applications need to optimize use of existing applications and services?**
- **Increasing demand for situational applications?**

- **Achieve faster ROI with SOA reusing applications and services**
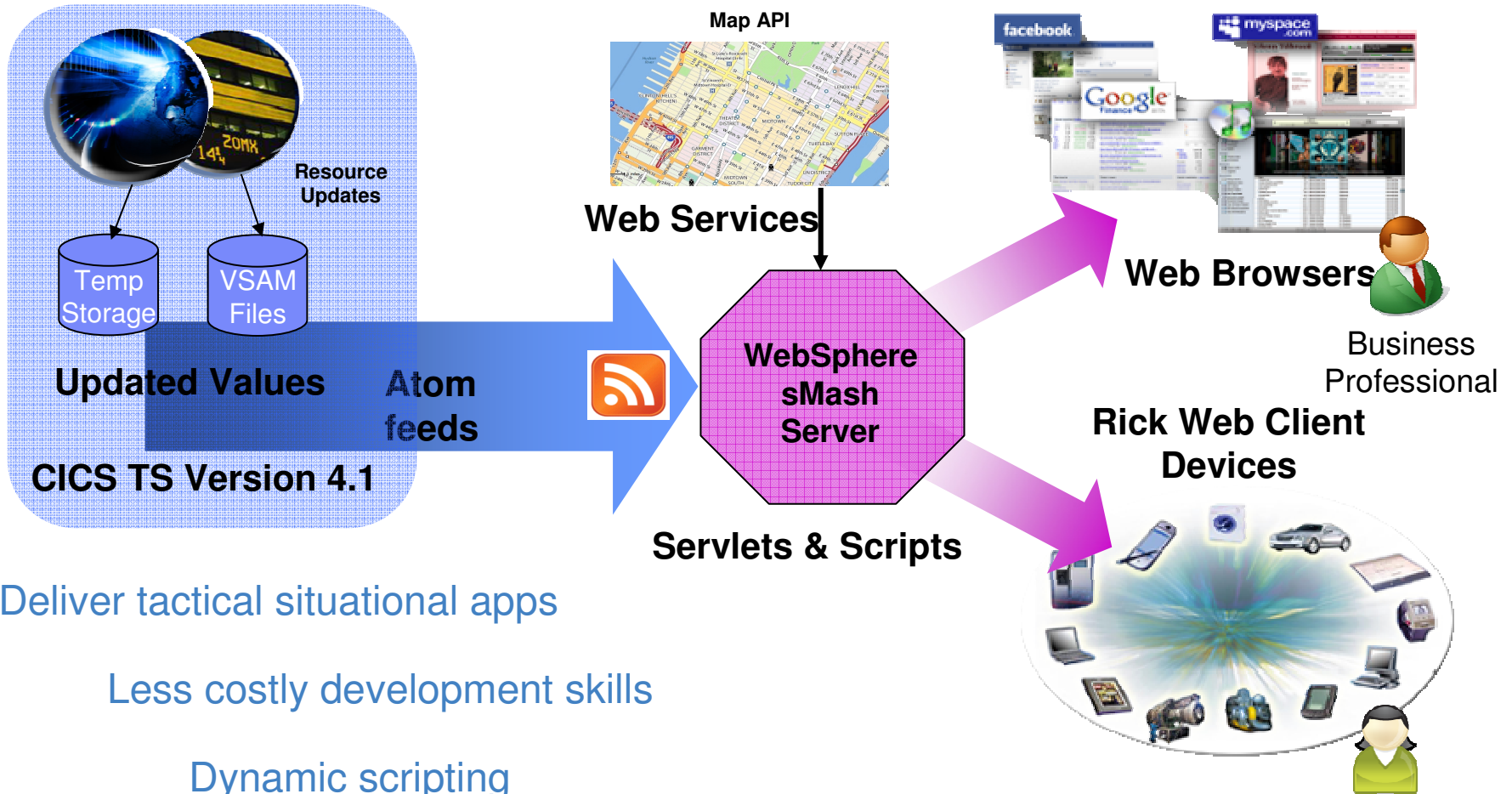- **Quickly deliver applications using Web 2.0**
- **Enable real-time access from mobile devices**

Improve customer experience with innovative communications
CICS TS V4.1 Atom feeds

Resource Updates

Temp Storage

VSAM Files

Updated Values

Atom feeds

CICS TS Version 4.1

Map API

Web Services

WebSphere sMash Server

Servlets & Scripts

Web Browsers

Business Professional

Rick Web Client Devices

Consumers

Deliver tactical situational apps

Less costly development skills

Dynamic scripting

NO APPLICATION CHANGE REQUIRED with CICS V4.1

Resource Definitions for Atom Feeds

http://winmvs2f.hursley.ibm.com:55001/atom/q/personnel/feed

Atom Feed

TCPIPSERVICE
PORT(55001)

URIMAP(PERSURIM)
PATH(/**atom**/**q**/**personnel**/*)
USAGE(ATOM)
ATOMSERVICE(**PERSATOM**)

CICS TS Queues

PersonnelData

ATOMSERVICE (PERSATOM)
ATOMTYPE(**COLLECTION**)
RESOURCETYPE(**TSQUEUE**)
RESOURCENAME(**PersonnelData**)
BINDFILE(/**web2.0**/**atom**/**dfh0w2q1.xsdbind**)
CONFIGFILE(/**web2.0**/**atom**/**dfh0w2q1.xml**)

HFS

XSDBIND file

Copy book

Config file

Resource Definitions for Atom Feeds

http://demomvs.demopkg.ibm.com:9037/atom/filea/feed

TCPIPSERVICE
PORT(9037)

URIMAP(PERSURIM)
PATH(/**atom**/**filea**/*)
USAGE(ATOM)
ATOMSERVICE(**ATOMSRVC**)

FILES

FILEA

ATOMSERVICE (ATOMSRVC)
ATOMTYPE(**COLLECTION**)
RESOURCETYPE(**FILE**)
RESOURCENAME(**FILEA**)
BINDFILE(/**web2.0/atom/filea.xsdbind**)
CONFIGFILE(/**web2.0/atom/filea.xml**)

Atom Feed

zFS

XSDBIND file

Copy book

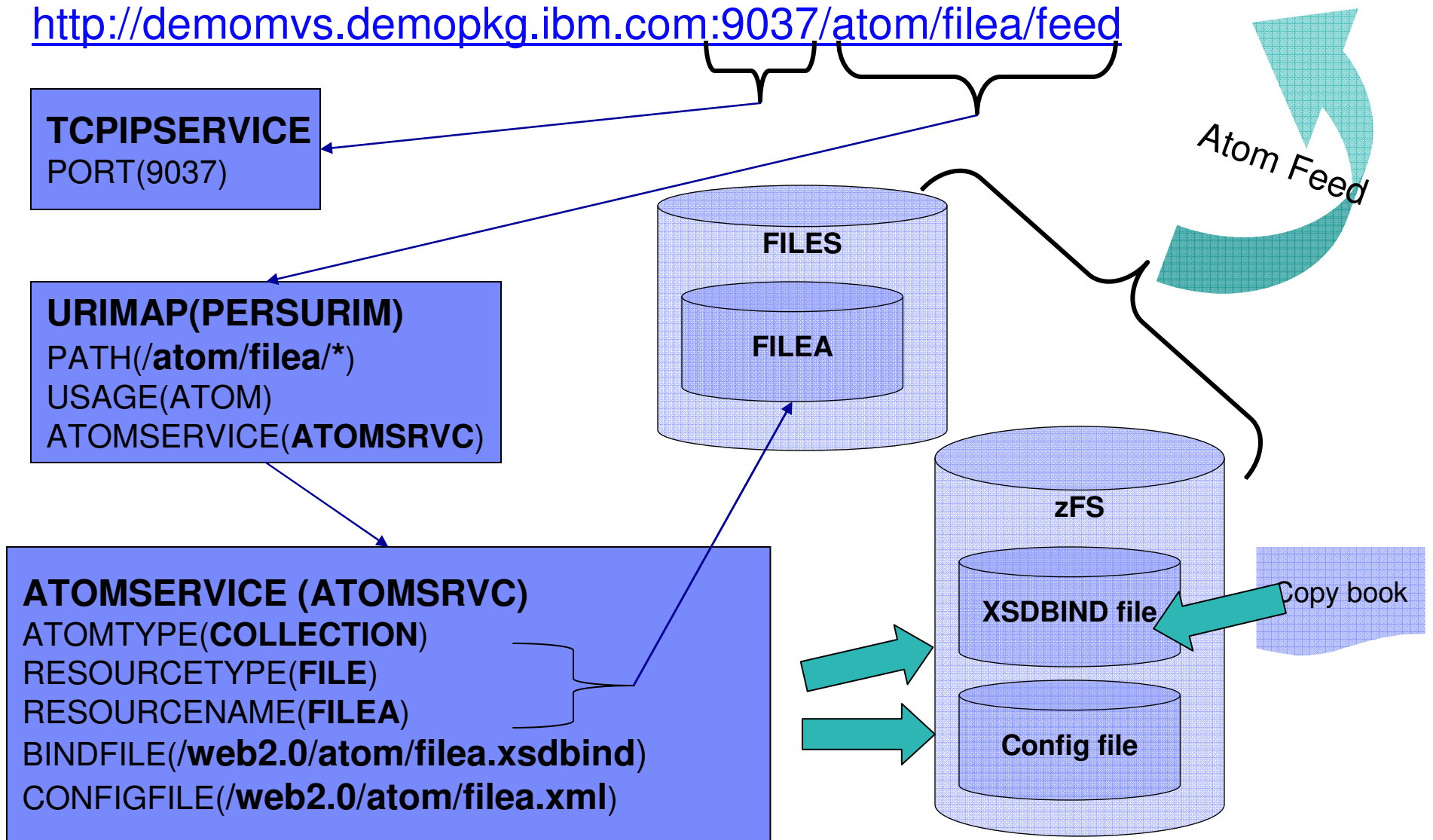**Config file**

18

To utilize CICS's ATOM support, you need five artifacts

- **TCPIPSERVICE resource definition**
  - Incoming RESTful requests will arrive via HTTP
  - TCPIPService definition with protocol HTTP
  - Specifies the port CICS on which CICS should listen

- **URIMAP resource definition**
  - URIMAP resource definition to tell CICS that if it receives a URI that starts with /atom/filea
    - CICS should take action based on the specified ATOMSERVICE resource definition

- **ATOMSERVICE resource definition**
  - An ATOMSERVICE resource definition is used to indicate the resource type and name (FILEA)
  - The type of Atom document that should be returned (feed, collection, service, or category)
  - The name of the config file (an XML file with information about the data to be returned)
  - The name of the Bindfile which contains the layout of the data on the specified resource

- **Atom Configuration file**
  - The Atom configuration file contains XML that specifies the metadata and field names for the Atom document that is returned for this resource definition

- **XML Binding file**
  - The Bindfile is created using the CICS XML assistant program DFHLS2SC
  - The Bindfile contains information about the data mapping between the resource data (a record in FILEA) and the XML encapsulated data that is returned based on the Atom request.

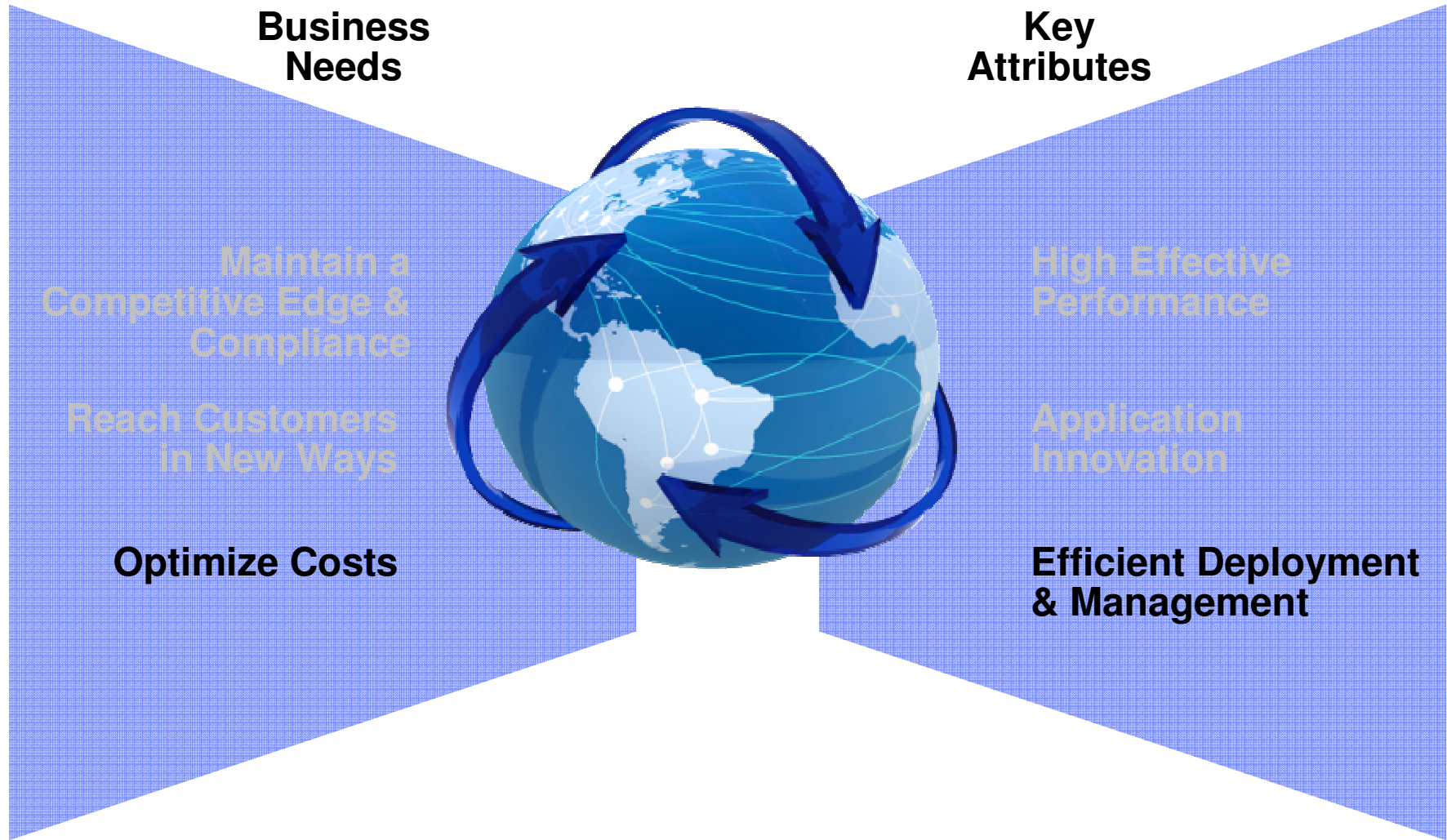- **http://demomvs.demopkg.ibm.com:9037/atom/filea/feed/000100**

CICS Atom Feed - DEMO

**Click to play
CICS Atom Feed
demo from local file**

**Click to play
CICS Atom Feed demo
from YouTube**

YouTube link http://www.youtube.com/watch?v=-c9dKu7BIgU

Address your critical business needs with Smart SOA Application Foundation

Business Needs

Key Attributes

Maintain a Competitive Edge & Compliance

High Effective Performance

Reach Customers in New Ways

Application Innovation

**Optimize Costs**

Efficient Deployment & Management

Optimize Costs Through Efficiency

- **Need to deliver new & custom applications fast?**

- **Cost of development is rising, but budgets are declining?**

- **Geographically dispersed infrastructure is costly to manage?**

- **Use less costly development skills to build web apps**
- **Be productive with integrated tools that reuse what you have**
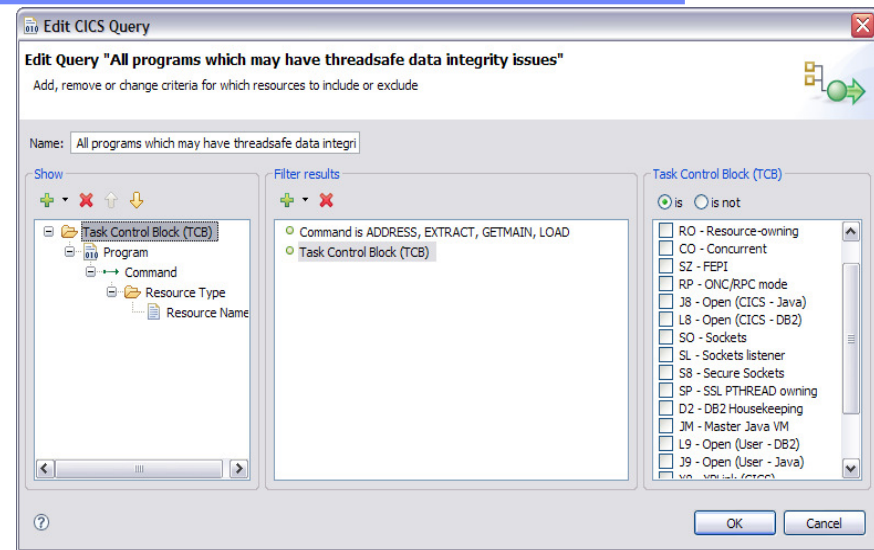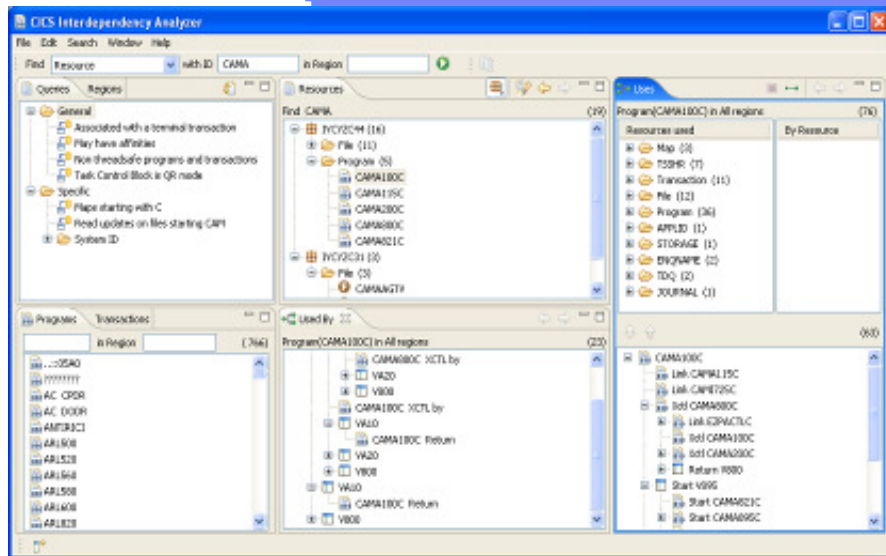- **Cut operational costs with centralized application management**
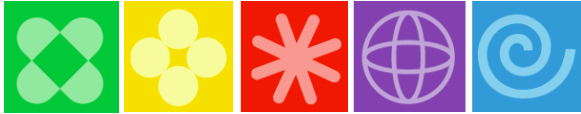
Reuse and extend legacy and packaged apps
CICS Interdependency Analyzer

Application Insight

▪**Questions**

▪**Which programs would make good Web services?**

▪**Where are my Business Event sources?**

▪**Which programs use these files, queues, tables?**

▪**Business Value:**

▪**Reduced risk of problems changing complex applications when under time pressure or without deep CICS skills**

▪**Bring new staff up to speed quickly**

▪**Deliver situational applications to broader user community**

Work smart with complex CICS configurations

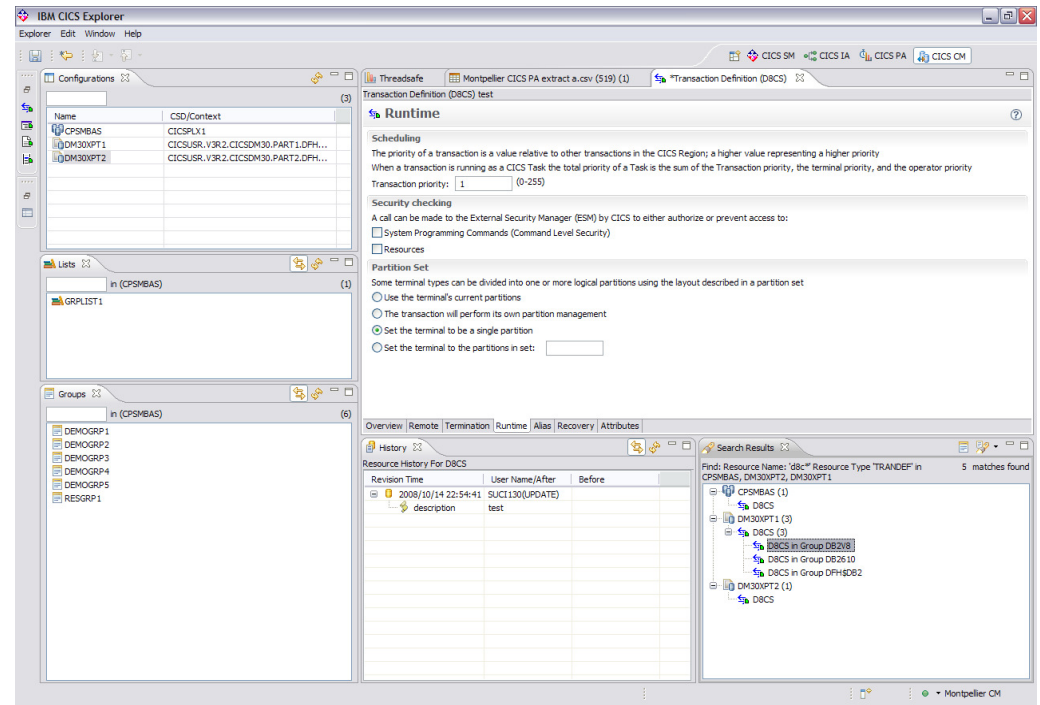*CICS Configuration Manager*

Sound like you?

- **New staff?**

- **Complex CICS resource definitions?**

- **Home-grown tooling?**

If so, you need …

- **Smart editors - no *magic values***

- **Powerful search across multiple repositories**

- **Find orphans and duplicates**

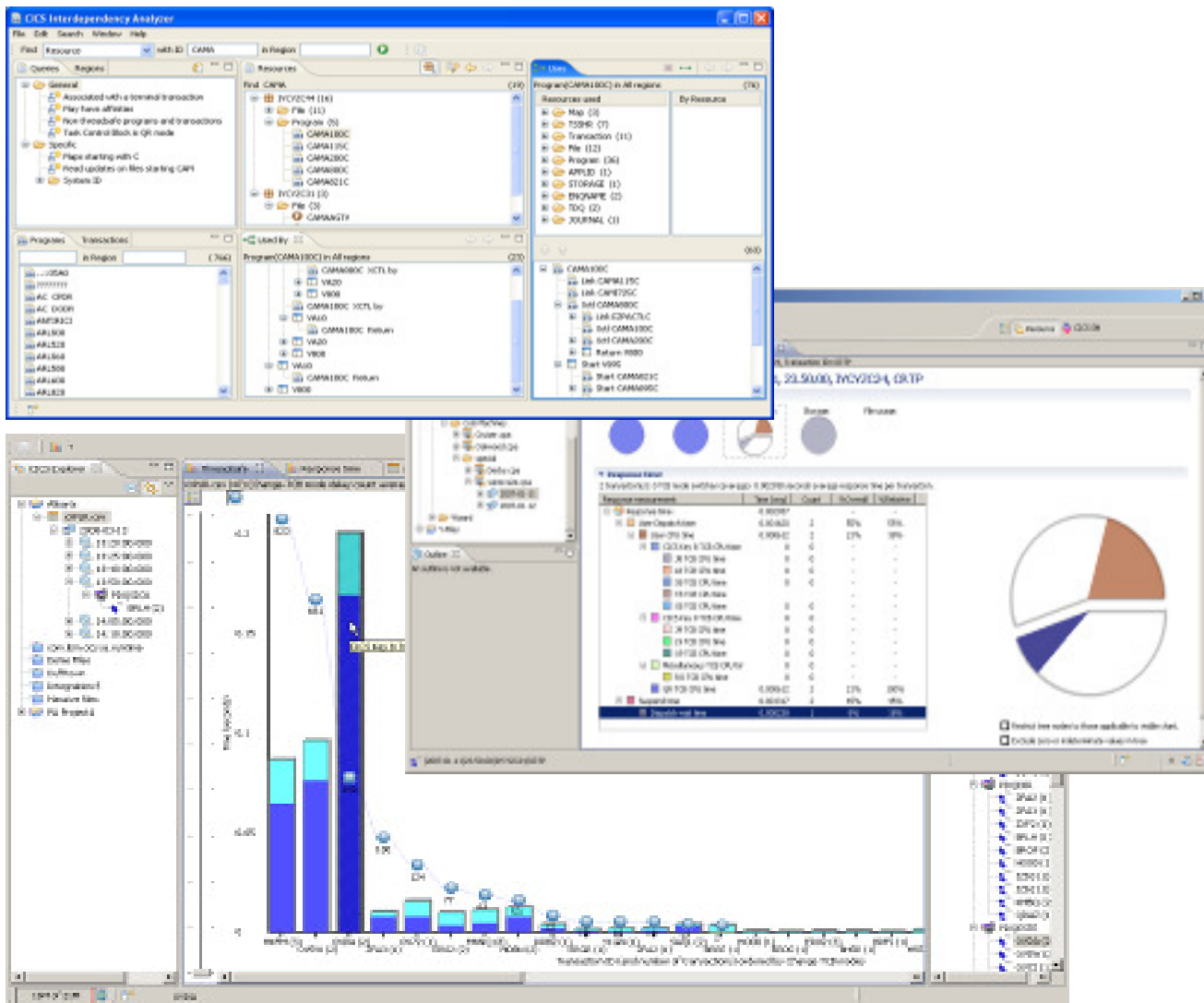- **Cleanup and cold-start analysis**

- **Reduces risk of downtime**

- **Accountability and control**

- **Reduce administration and tool maintenance costs**

Increase productivity with integrated tools
CICS Interdependency Analyzer, Configuration Manager, Performance Analyzer

- Reduced risk when changing complex applications

- Effective performance analysis saves MIPs and reduces costs

- End-to-end accountability
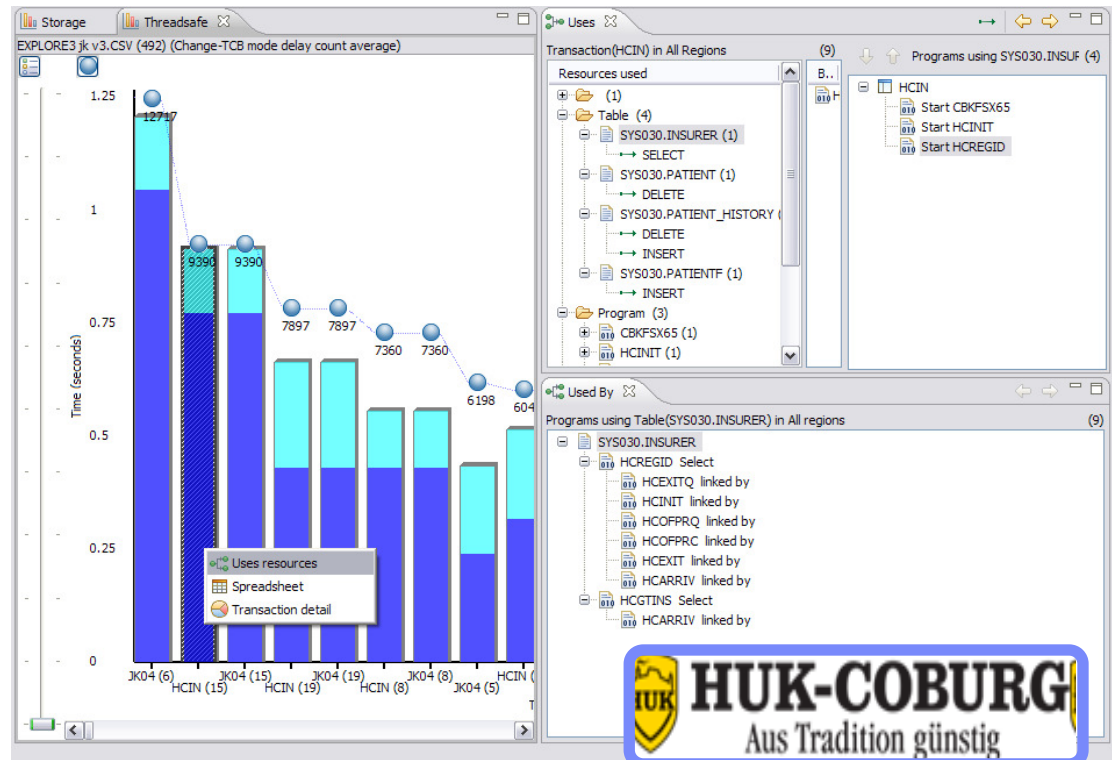
Reduce CICS CPU usage with Threadsafe
CICS Interdependency Analyzer, CICS Performance Analyzer

Problem

- **Need to access more functionality and spread out its data processing load**

- **Reduce CPU usage to cut operating costs**

Solution

- **Intuitive views**

- **Task-oriented approach, e.g. Threadsafe Analysis**

- **Drill-down into application structure**

- **Reduces CPU usage**
- **Save real money**

Threadsafe - DEMO

**Click to play
CICS Threadsafe
demo from local file**

**Click to play
CICS Threadsafe demo
from YouTube**

YouTube link http://www.youtube.com/watch?v=3srq6YW_lUw

Accelerate development with open standards
Rational Developer for System z

- **Consolidate and standardize on a single multi-language development environment for CICS**
  - Web Services
  - Service Flow Feature
  - SCA
  - COBOL and PL/I
  - Java
  - EGL
  - Debug and Fault analysis
  - File Management
  - CICS Explorer and CICS Tools
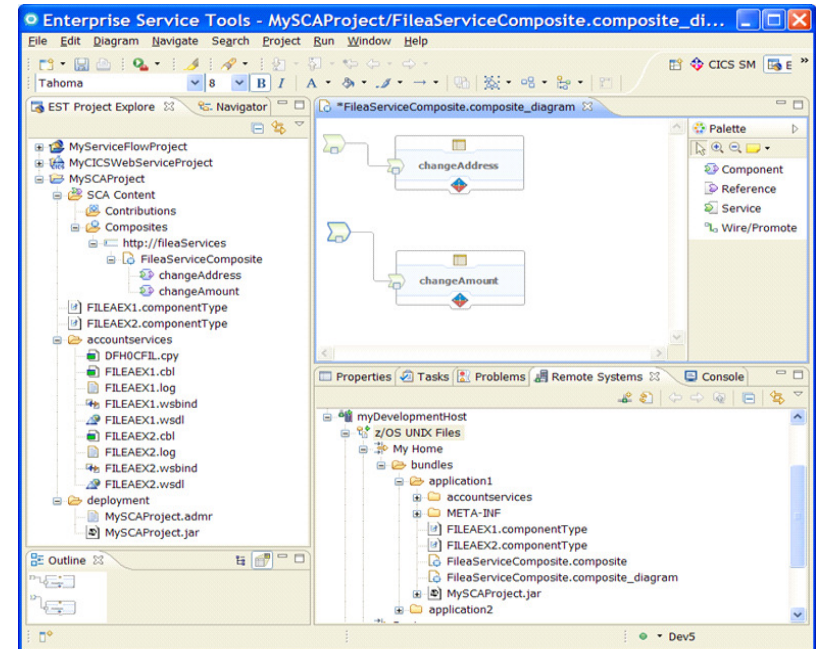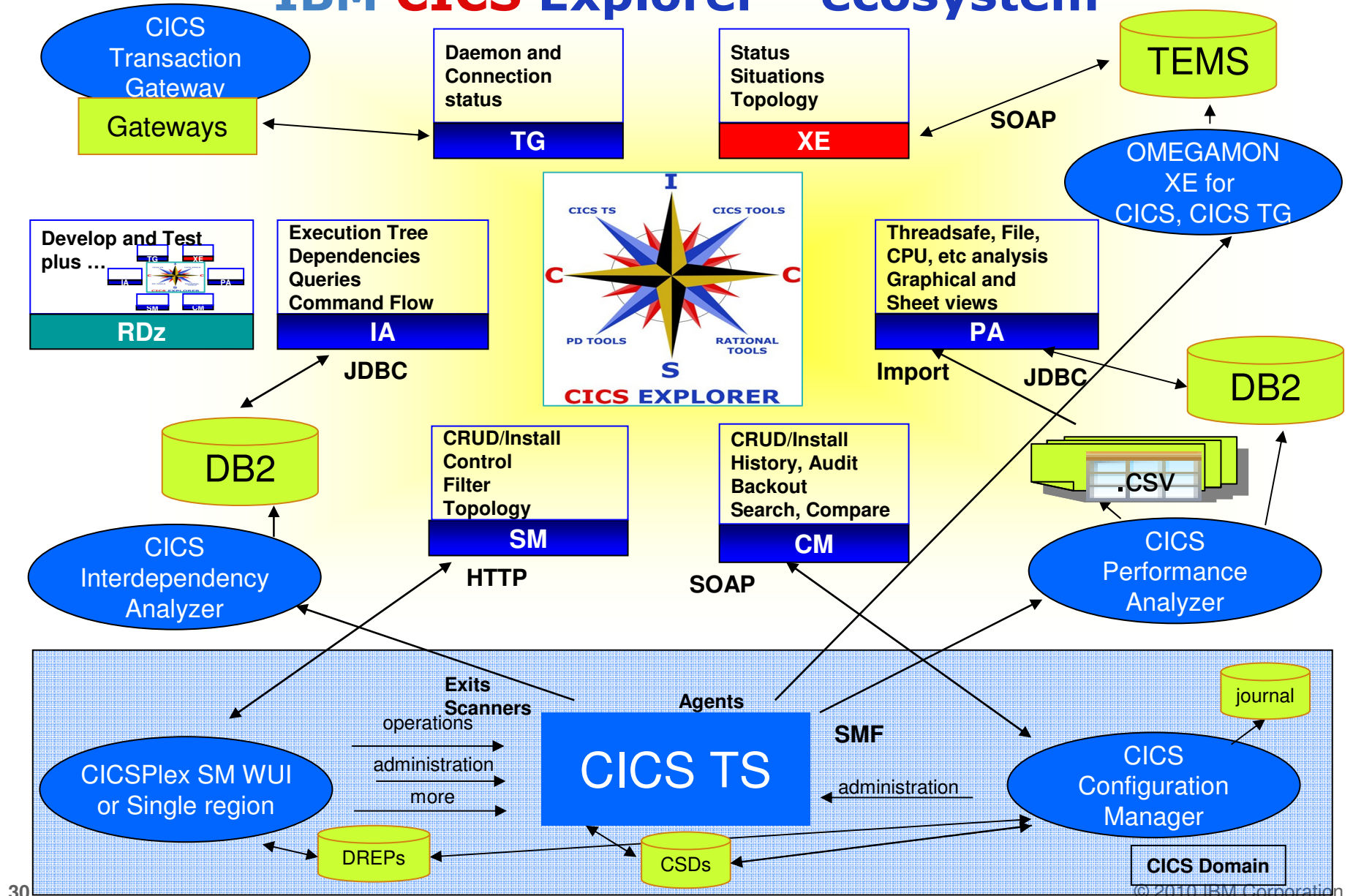
Available CICS Explorer Plug-ins

- **Base (SM)**
  - CRUD, Install, Control, Filter, Topology, Events, Bundles

- **CICS Performance Analyzer V3.1**
  - Threadsafe, File, CPU, etc analysis, Graphical and Sheet views

- **CICS Interdependency Analyzer V3.1**
  - Execution Tree, Dependencies, Queries, Command Flow, Natural & ADABAS

- **CICS Configuration Manager V2.1**
  - CRUD, Install, History, Audit, Backout, Search, Compare

- **CICS Transaction Gateway V7**
  - Daemon and Connection status

- **OMEGAMON XE for CICS V4.2**
  - Status, Situations, Topology

- **Rational Developer for System z V7.6**
  - Developer views, SCA

http://ibm.com/cics/explorer/download

29

IBM CICS Explorer™ ecosystem

CICS Transaction Gateway

Gateways

Daemon and Connection status

TG

Status Situations Topology

XE

SOAP

TEMS

OMEGAMON XE for CICS, CICS TG

Develop and Test plus ...

RDz

Execution Tree Dependencies Queries Command Flow

IA

JDBC

I
CICS TS   CICS TOOLS
C   C
PD TOOLS   RATIONAL TOOLS
S
CICS EXPLORER

Threadsafe, File, CPU, etc analysis Graphical and Sheet views

PA

Import   JDBC

DB2

DB2

CICS Interdependency Analyzer

CRUD/Install Control Filter Topology

SM

HTTP

CRUD/Install History, Audit Backout Search, Compare

CM

SOAP

.CSV

CICS Performance Analyzer

Exits Scanners

operations

administration

more

CICS TS

Agents

SMF

journal

administration

CICSPlex SM WUI or Single region

DREPs

CSDs

CICS Configuration Manager

CICS Domain

30

ibm.com/cics/tools

ibm.com/cics/explorer

ibm.com/cics/explorer/download

What else is new in CICS TS V4.1?

CICS Explorer

Enhanced CICSPlex SM workload management

New SPI commands for managing the CSD

Discovery Library Adapter

Improvements to XML parsing in CICS

Large file hosting

Performance Improvements

IPv6

IPIC Transaction Routing

MQ Group attach

Application Bundles

"Faster and easier to respond to change"

Compete

CICS TS 4.1

Control

Comply

Business event processing

Atom feeds

Web Services Addressing

WebSphere Service Registry & Repository Support

Support for distributed identities

Resource signatures

Business event processing

Atom feeds

RESTful interfaces

Service Component Architecture

Java 6

Continuous Innovation Creates Success
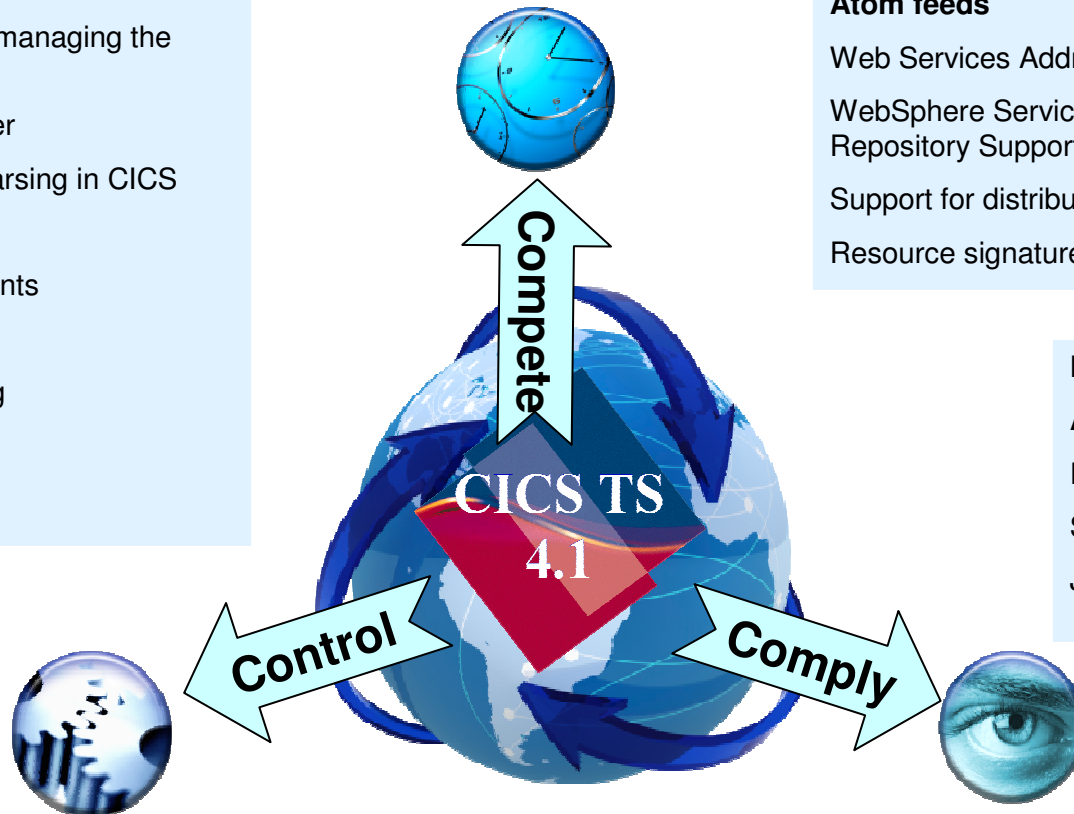
"Greater efficiency and reduced costs"

"Real-time visibility for smarter decisions and actions"

http://ibm.com/cics/tserver/v41/

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Call to Action

- **Learn more about CICS Explorer**

    – Read the New CICS Explorer Redbook - SG24-7778-00

    – Request a CICS Smart Seminar from your IBM account rep

- **Start using CICS Explorer**

    – Download from http://ibm.com/cics/explorer/download

- **Extend the value of the CICS Explorer**

    – Move to CICS TS V4.1

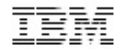   – Add CICS Tools and other plug-ins

    – Build your own plug-ins

Summary

- **Maintain Competitive Edge & Compliance**

- **Reach Customers in New Ways**

- **Optimize Costs Through Efficiency**
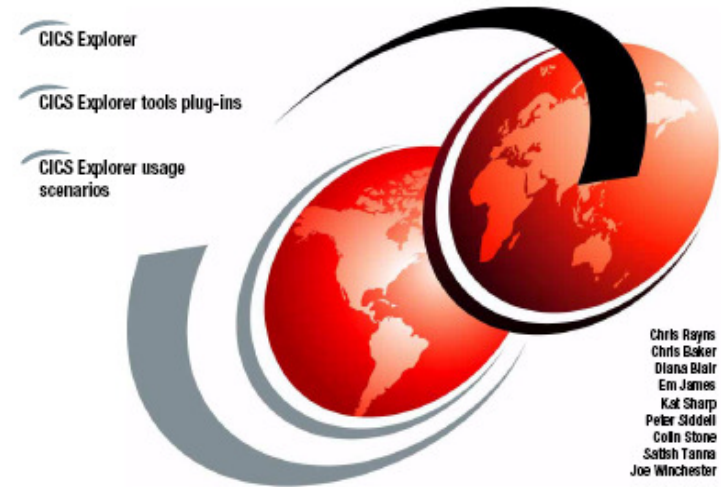
New CICS Explorer Redbook - SG24-7778-00

- This Redbook® focuses on the new CICS Explorer

- The first part of the Redbook overviews the CICS Explorer, along with all the CICS Tools plug-ins

- The second part of the Redbook focuses on different scenarios in which the CICS Explorer can be used, along with the CICS Tools plug-ins to resolve different problems

- http://www.redbooks.ibm.com/redpieces/abstracts/sg247778.html

Coming soon: New Extending the CICS Explorer Redbook

Draft Document for Review August 26, 2009 10:50 pm   SG24-7778-00

CICS Explorer

CICS Explorer

CICS Explorer tools plug-ins

CICS Explorer usage scenarios

Chris Rayns
Chris Baker
Diana Blair
Em James
Kat Sharp
Peter Siddell
Colin Stone
Satish Tanna
Joe Winchester

ibm.com/redbooks

Redbooks

"RedBooks are very good, this one is just Excelsissimus! I can't wait for the final!"
customer feedback on public review draft

CICS Communities and Information

- **CICS Transaction Server V4.1**
  - http://ibm.com/cics/tserver/v41/

- **CICS Explorer home page**
  - Remember this link ibm.com/cics/explorer

- **CICS Explorer Forum**
  - http://tinyurl.com/68bndw
  - IBM developerWorks forum with FAQs, Links and resources, ISV Contributions, etc. Ask questions, suggest improvements, report problems, chat

- **New! CICS Hub on the Rational COBOL Café**
  - http://ibm.com/software/rational/cafe/community/cobol/cics

- **Twitter**
  - Subscribe to the IBM_System_z channel to get CICS Explorer news flashes

- **CICS Blog**
  - Comment and opinion at TheMasterTerminal.com

- **CICS eNews**
  - Subscribe for news about CICS and related products

- **YouTube channels**
  - CICS Explorer - Videos, demos and other cool stuff
  - CICSFluff - Other CICS videos

Home page

CICS Explorer Public Forum

CICS Hub

Twitter

Blog

eNews

YouTube
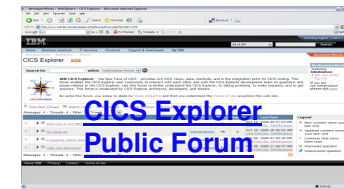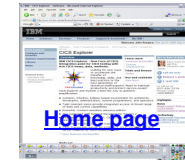
CICS Development Technical Services

Helping to solve Business Problems and exploiting new Business Opportunities

Engage the IBM Hursley CICS development team to ensure that you get the maximum value from your CICS investments.

Consultants are now available via a funded services engagement directly from CICS development providing a complete range of CICS services - no one has more experience!

- **For more information please contact: CICSTDS@uk.ibm.com**

CICS Smart Seminars

**Free customised technical agenda of CICS TS and CICS tools products**

– Web Services, Events, Web 2.0, version upgrades, tooling etc.

Targeted at AD, System Programmers and Architects at customers' own location

Demonstrates how to use the new features in the latest releases to leverage existing solutions

Can be tailored to customers interests

- **For more information please contact: cicssem@uk.ibm.com**
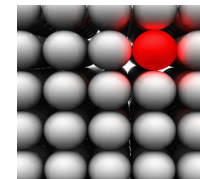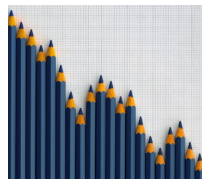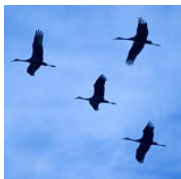
Sources of Info

- **Web**

  - CICS Tools
    - Home page ibm.com/cics/tools/
    - Trial download ibm.com/software/os/zseries/trials/cicstools/
  - CICS Explorer
    - Home page ibm.com/cics/explorer
    - Download page http://ibm.com/cics/explorer/download
  - CICS TS home page ibm.com/cics

- **Demos and animations**

  - CICS Explorer demo - featuring Threadsafe Analysis using the CICS PA and CICS IA perspectives - http://www.youtube.com/watch?v=Jk3YdvI8lno

  - CICS Explorer animation - http://www.youtube.com/watch?v=-NzWwUi5lLw

  - CICS Transaction Server in your SOA - Great source of links to more CICS ecosystem information - ftp://ftp.software.ibm.com/software/htp/cics/presentations/CICS_TS_in_your_SOA_-_Links_-_Issue_3.ppt

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