



# **Extending Your Mainframe For More Business Value**

Extend Development Team Productivity  
with Eclipse and Web 2.0

# Service Oriented Finance Needs Productive Development Tools

**We have a lot of new solutions to build. If I build them all on System z, I will have to find more System z development skills**



**Service Oriented Finance  
Development Manager**

**With modern tools from Rational, even your inexperienced programmers will be productive**



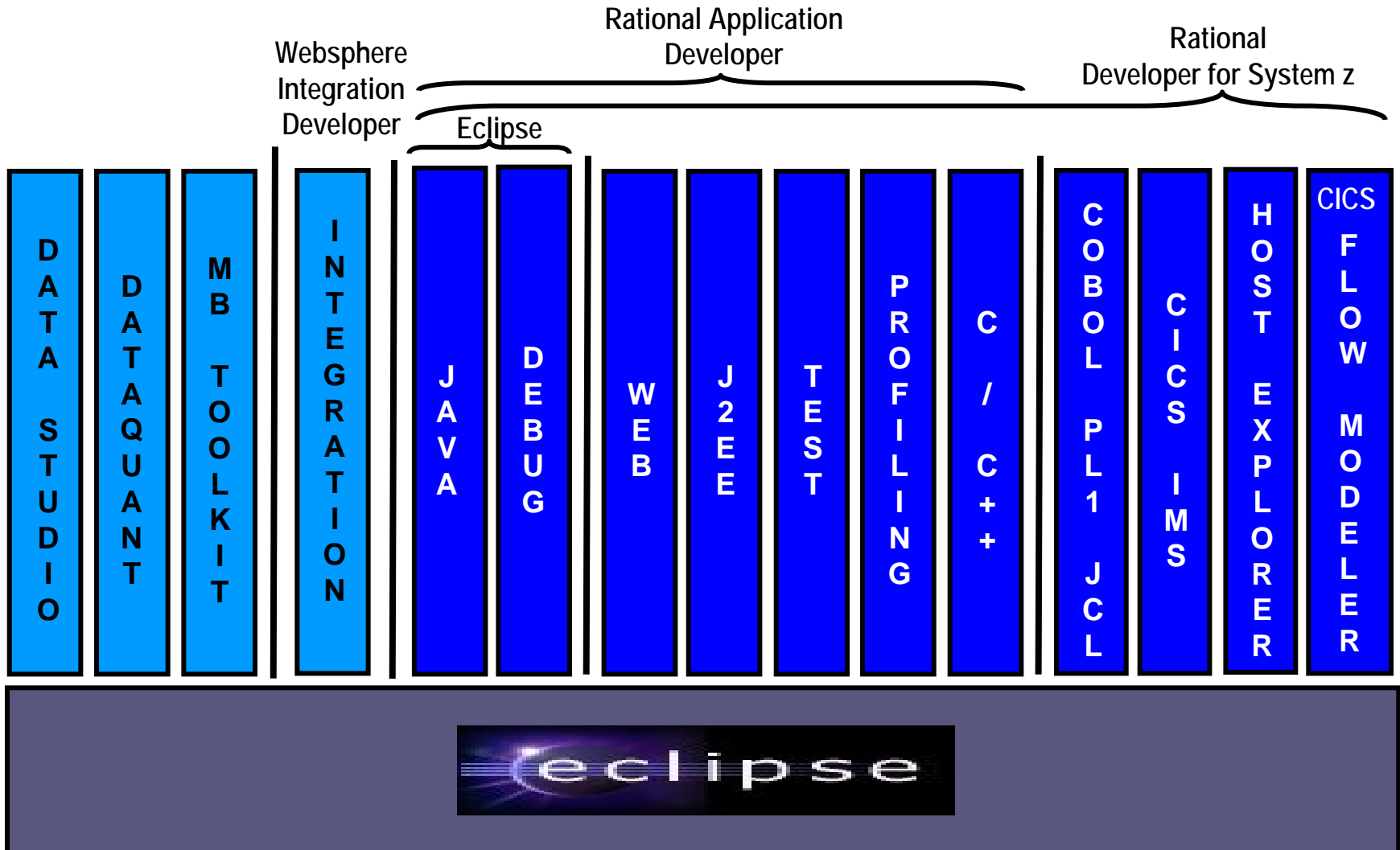
**IBM**

# Rational Developer For System z (RDz)

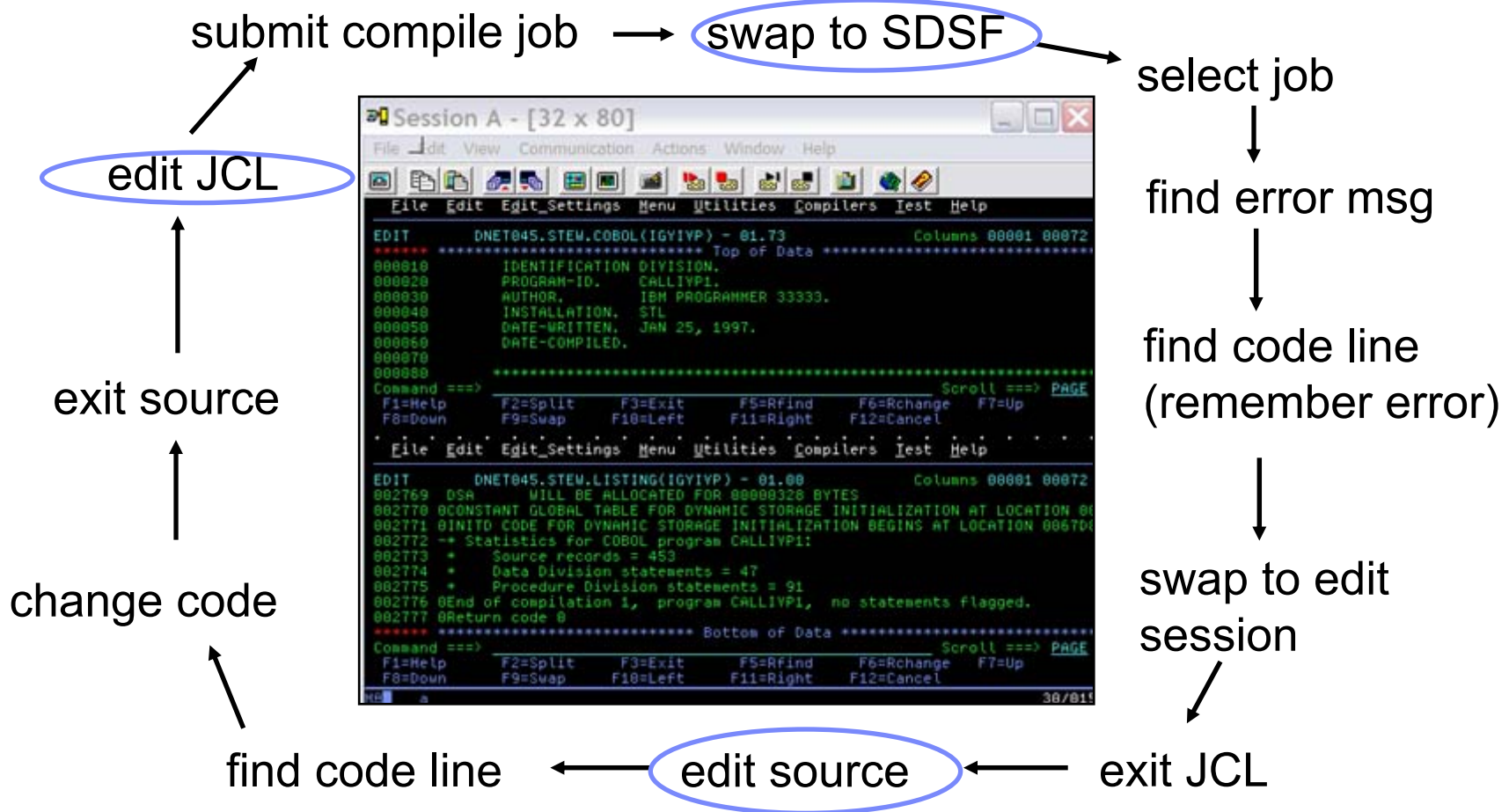
- IBM's latest tool for System z development
  - ▶ Version 7.1 shipped Sep 2007
- Single integrated tool for developing mainframe applications using both traditional and newer technologies
  - ▶ Develop traditional **COBOL/PL1/ASM/JCL/BMS/EGL** applications
  - ▶ Develop **Java/J2EE** and Web applications, including JSF and struts
- Boosts developer productivity compared to green screen tools
  - ▶ Workstation tool based on Eclipse
- Leverage existing assets in a Service Oriented Architecture
  - ▶ Quickly expose CICS, IMS and DB2 assets as native services
  - ▶ Visually wire together CICS transactions into a business flow

# IBM Development Tools Are Built On Eclipse

Function delivered as perspectives in eclipse – **blue plug-ins ship with RDz**



# ISPF: How Does Traditional “Green Screen” Development Work?



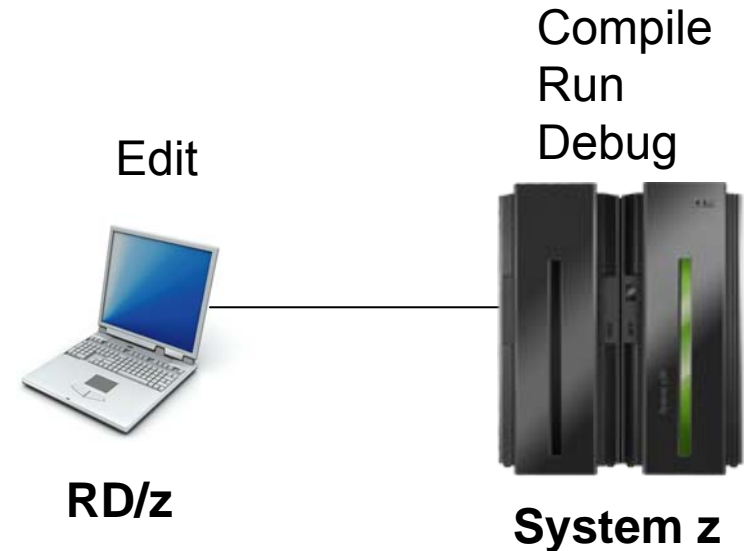
- Programmer goes through a sequence of screens in order to get the job done
  - ▶ 3.4 listings, job listings, SDSF outputs, etc.
- Programmer is constantly flipping back and forth between these ISPF screens

# RDz Highlights For Traditional Mainframe Development

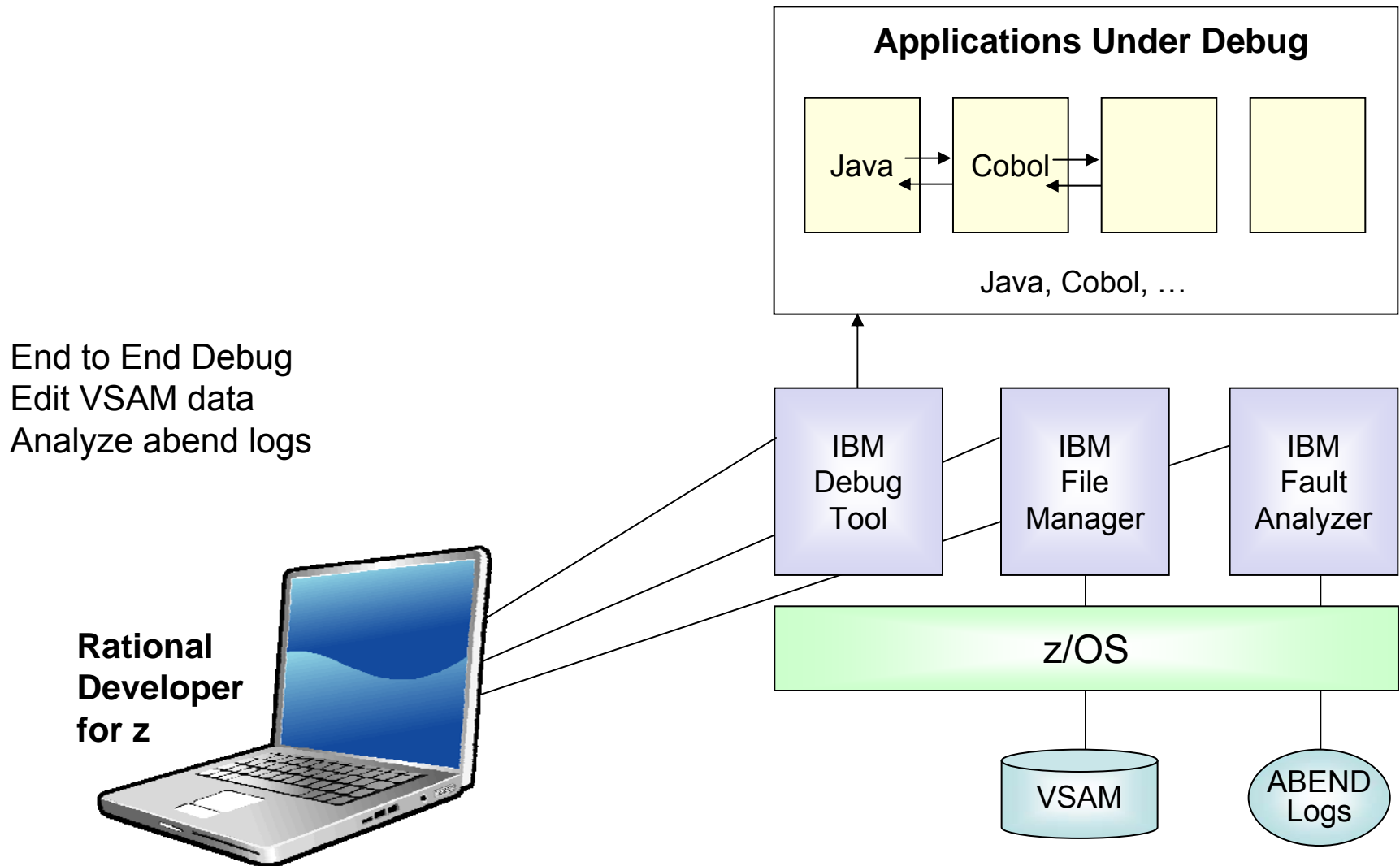
- Interactive, workstation-based environment
  - ▶ Interactive access to z/OS
  - ▶ Work with host files as though they are local
  
- Boosts developer productivity compared to “green screen” tools
  - ▶ Interactive edit/compile/debug on the workstation
    - Work offline or online
  - ▶ Interactive job generation, submission, monitoring, command execution
  - ▶ Supports different runtimes (CICS, IMS, Batch, USS, DB2, WAS)
  - ▶ Language sensitive editors
  
- Can access different host based Source Code Management systems through a unified interface
  - CARMA (Common Access Repository Manager)

# DEMO: Introducing Rational Developer For System z

- Perspectives and views
- Remote System Explorer
- Working with host datasets
- Language-sensitive COBOL editor
- Works with DB2 on z/OS
- Productivity features
- Edit/Compile/Visual Debug



# Interactive Problem Determination: RDz Integrates With Host-based PD Tools





# Inexperienced Programmers Can Be Productive

- An independent study from Branham Group concluded:
  - ▶ Using RD/z, a developer with no mainframe experience can be **just as productive** as an experienced ISPF programmer
  - ▶ In addition, the RD/z developer achieved
    - 44% productivity advantage in COBOL and PL/1 edit, compile, debug activities
    - 3 times productivity advantage in creating web services
- Workstation based edit and unit test saves mainframe cycles
  - ▶ Customers at Fiducia, Deutsche, Nationwide observed an 80% reduction in the cost of compiles

[http://www.branhamgroup.com/wdz\\_study](http://www.branhamgroup.com/wdz_study)

# Customer Example



## Background:

- ▶ German bank providing financial services to private companies across Europe
- ▶ Provider of online banking services

## Challenge:

- ▶ Upgrade teller workstations and ensure they continue to work with an existing third-party COBOL run-time environment

## Solution:

- ▶ New application framework based on **IBM COBOL**
- ▶ **RDz** to design new COBOL and other code

*“In one tool, we have a single development environment for multiple environments. I don’t have to jump between different tools to do different tasks. The tool is very complete.”*

*- Armin Schiller, transaction banking payments and cash transactions, Commerzbank AG*

# An Easier Way To Access Mainframe Information

A “**mashup**” is a lightweight web application created by combining information from more than one existing source to deliver new functions and insights

- Rapid creation (days not months)
- Reuses existing capabilities, but delivers new functions and insights
- Requires limited to no technical skills
- Often mixes internal and external sources

The screenshot displays a web application mashup with three main components:

- Search:** A form titled "Search" with the instruction "Enter shipment search criteria". It includes input fields for "ETA:", "Libelle POD:" (containing "Singapore"), and "Libelle fournisseur:". A "search" button is located to the right of the "Libelle fournisseur:" field.
- ImprovedDataViewer (Top):** A data table with columns: "ETA", "Libelle POD", and "Libelle fournisseur".

ETA	Libelle POD	Libelle fournisseur
2007-10-01	SINGAPORE	LANDBOND MARKETING (F.E.) PT
2007-10-01	SINGAPORE	LANDBOND MARKETING (F.E.) PT
- Generic Map:** A map of Southeast Asia showing the Gulf of Thailand, Andaman Sea, and Java Sea. Key locations like Medan, Ipoh, Kuala Lumpur, Singapore, Padang, Jambi, Palembang, Pekanbaru, and Port Harcourt are marked. The map includes navigation controls and a legend.
- ImprovedDataViewer (Bottom):** A more detailed data table with columns: "ETD", "ETA", "Transit Time", "POL", "Libelle POL", "POD", "Libelle POD", "Navire", "NO Voyage", "Compagnie", and "Feeder Arriv".

ETD	ETA	Transit Time	POL	Libelle POL	POD	Libelle POD	Navire	NO Voyage	Compagnie	Feeder Arriv
2007-10-05	2007-10-08 3		VNSGN	HO CHI MINH CITY THBK	BANGKOK	METHI BHUM S110			SUPPLIER CARRIER	

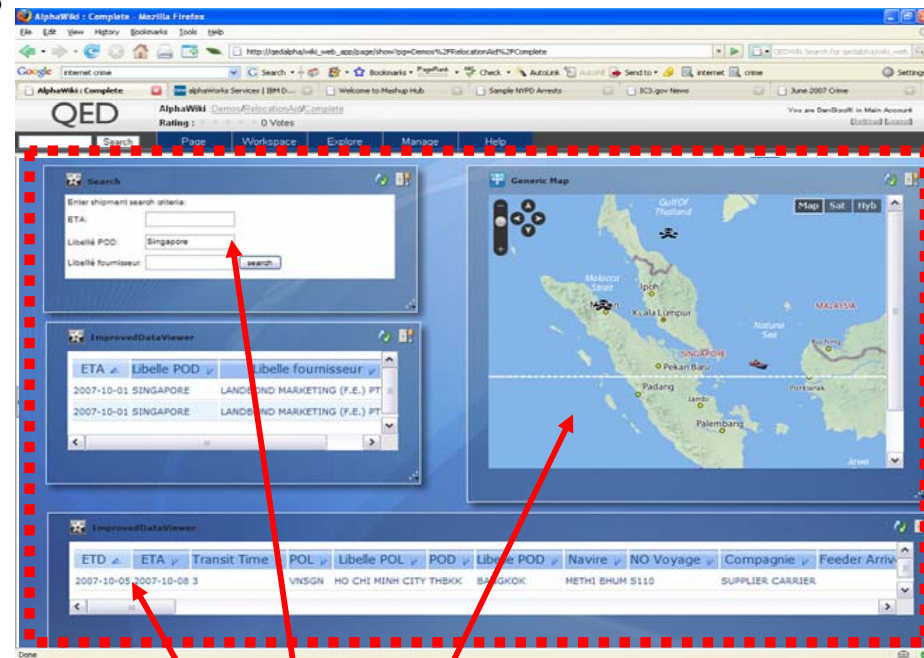
# Mashups and Widgets Enable Simple Situational Applications

## ■ Widgets

- ▶ Small browser program components that each deliver a specific service
- ▶ Also called gadgets, blocks, etc.

## ■ Mashup

- ▶ An lightweight web application assembled from widgets wired together and sharing data
- ▶ Mashups created quickly and easily by end users
  - Little to no technical skills needed
  - Used to address short-lived, ad-hoc situations



Widgets

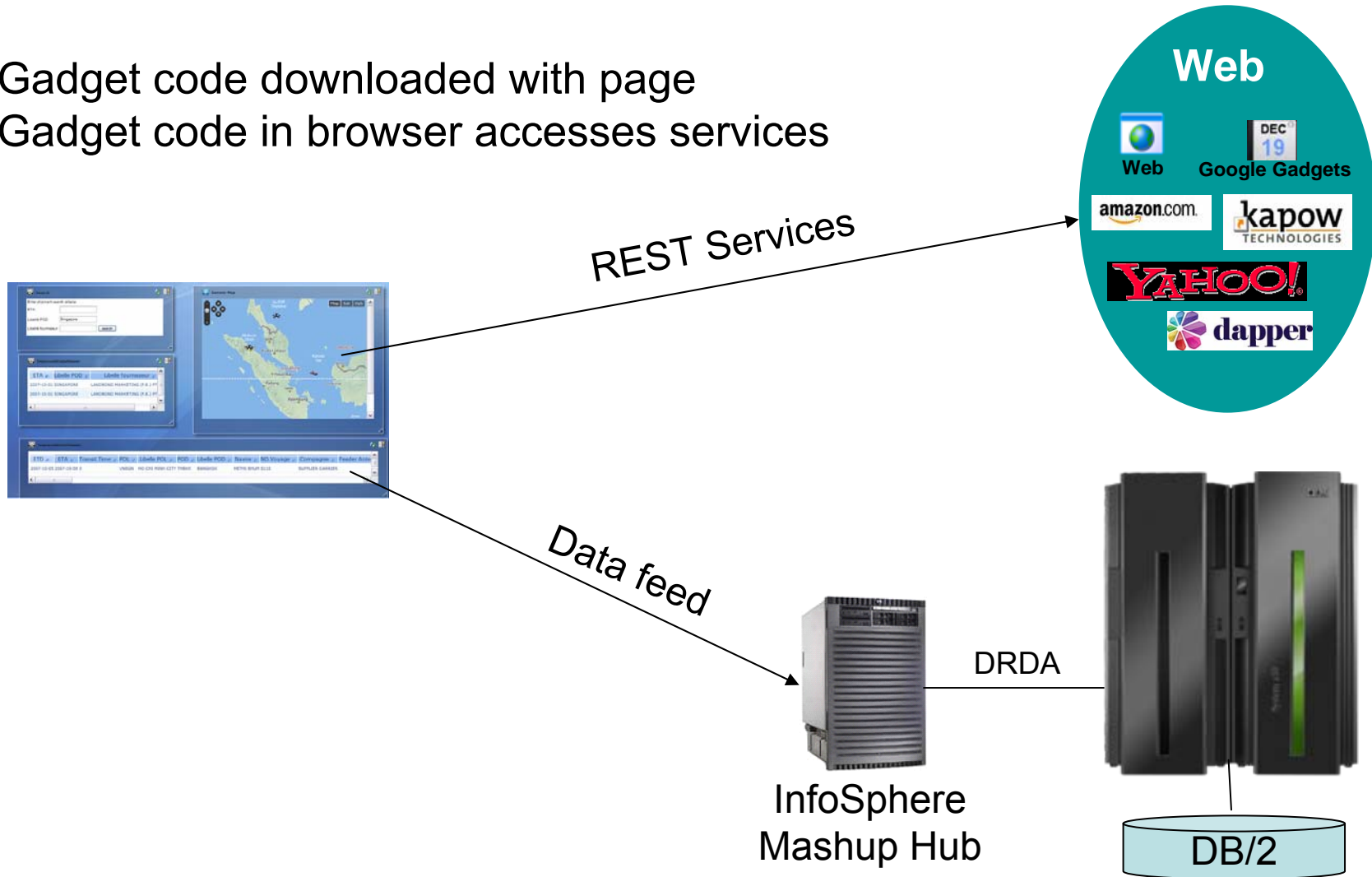
Mashup

# IBM Mashup Center Key Components: Lotus Mashups and InfoSphere Mashup Hub

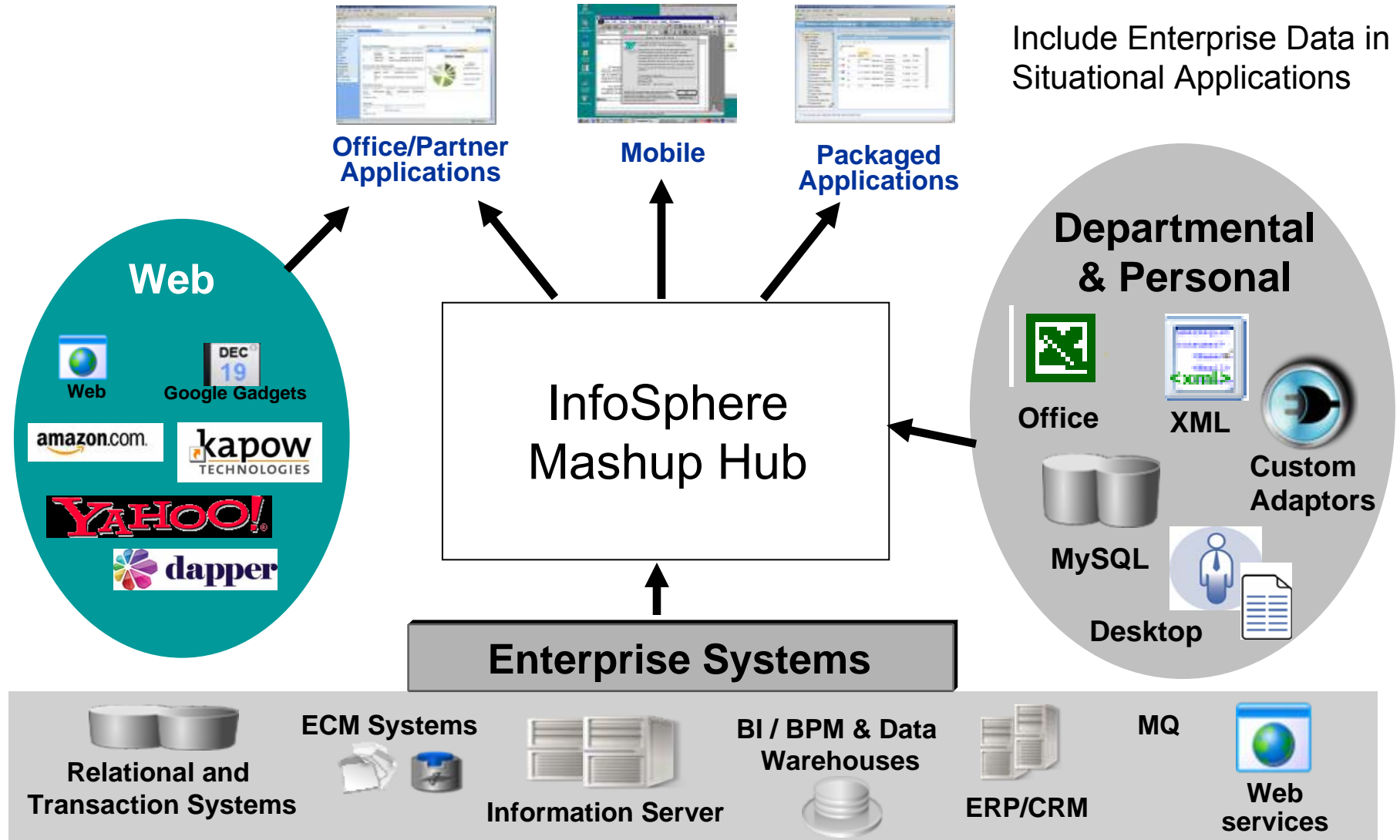
- Lotus Mashups
  - ▶ Server based tool to create mashup web applications
  - ▶ Assemble and wire gadgets on a web page
  - ▶ Wiring links run time data from one gadget to another
- InfoSphere Mashup
  - ▶ Server based tool to create data feeds from various information sources
  - ▶ Also provides run time environment for the created data feeds
- Common Catalog
  - ▶ Stores gadgets and feeds for development use
- Installed together
  - ▶ Access with a browser

# Example – Mashup Application Combines Web And Enterprise Information

- Gadget code downloaded with page
- Gadget code in browser accesses services



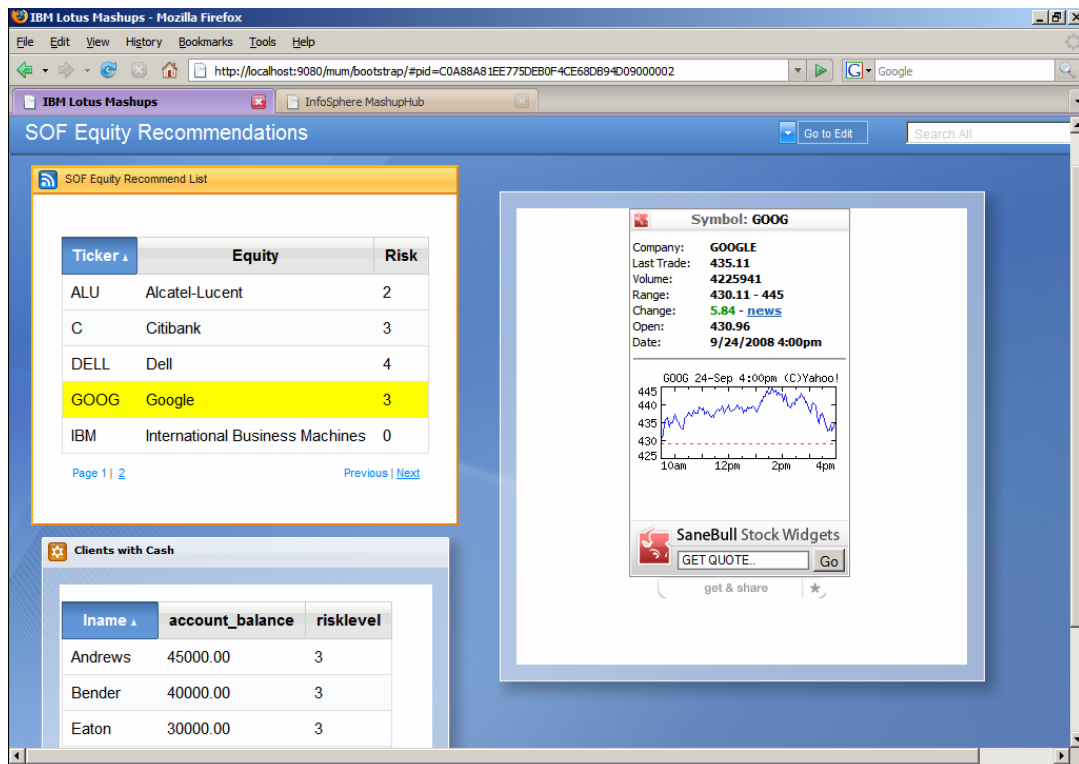
# Competitive Advantage - IBM Offers The Best Mashup Connectivity To Enterprise Data



# DEMO: Create A Mashup For Easy Access To Mainframe Data

A securities broker:

- Uses a list of equities with their current risk estimates from his/her personal Excel spreadsheet
- Matches this information with the customer stock risk preferences stored in DB2 on System z ...
- Mashs this up with the current stock trend and other financial information from Internet services on the same page



*The result is a mashup application that delivers an insight for equity sale recommendations.*



# Summary

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- Improve the productivity of mainframe application developers with **Rational Developer for System z**
- Improve the quality of applications with **Rational Functional Tester, Rational Performance Tester, and IBM Workload Simulator**
- It's even easier to unlock enterprise data using **IBM Mashup Center**

