



# **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**



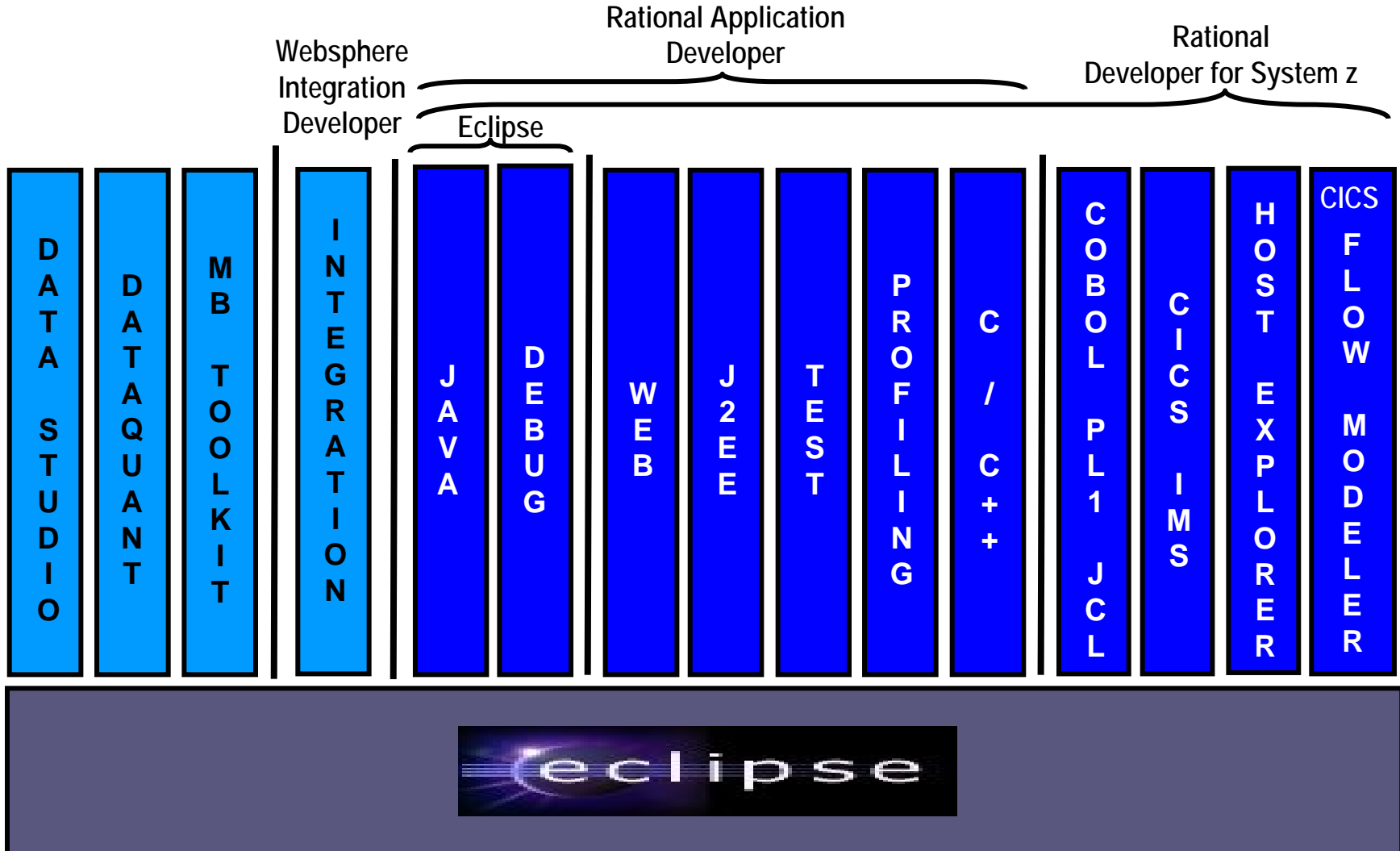
**IBM**

# Rational Developer For System z (RDz)

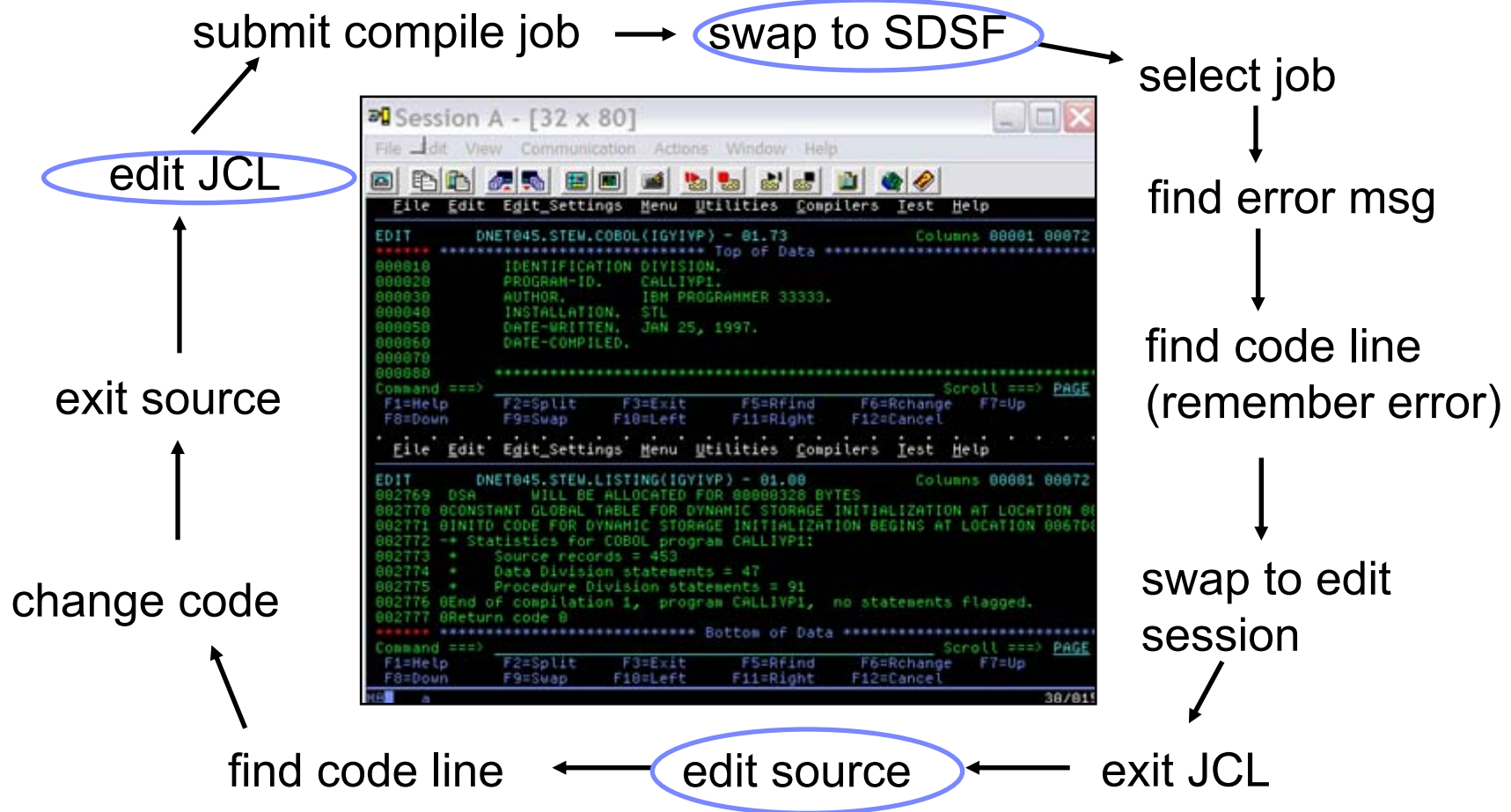
- IBM's latest tool for System z development
  - ▶ Version 7.1 shipped Sep 2007
- Single integrated tool for developing mainframe applications using both traditional and newer technologies
  - ▶ Develop traditional **COBOL/PL1/ASM/JCL/BMS/EGL** applications
  - ▶ Develop **Java/J2EE** and Web applications, 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?



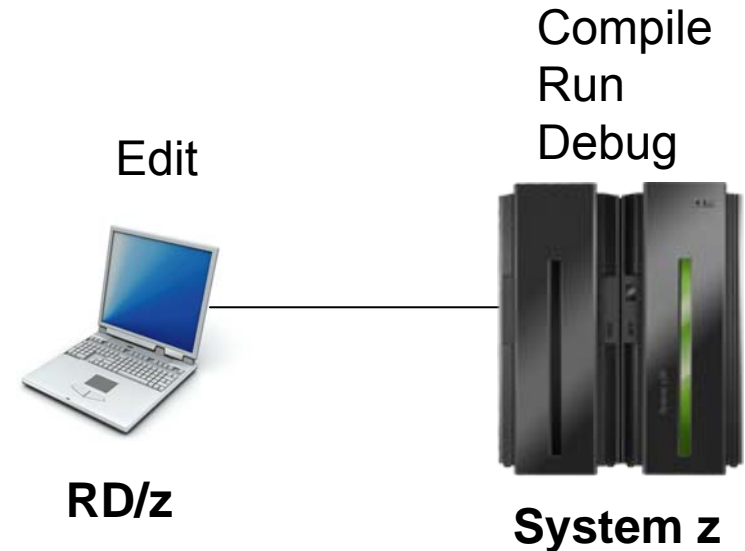
- Programmer goes through a sequence of screens in order to get the job done
  - ▶ 3.4 listings, job listings, SDSF outputs, etc.
- Programmer is constantly flipping back and forth between these ISPF screens

# RDz Highlights For Traditional Mainframe Development

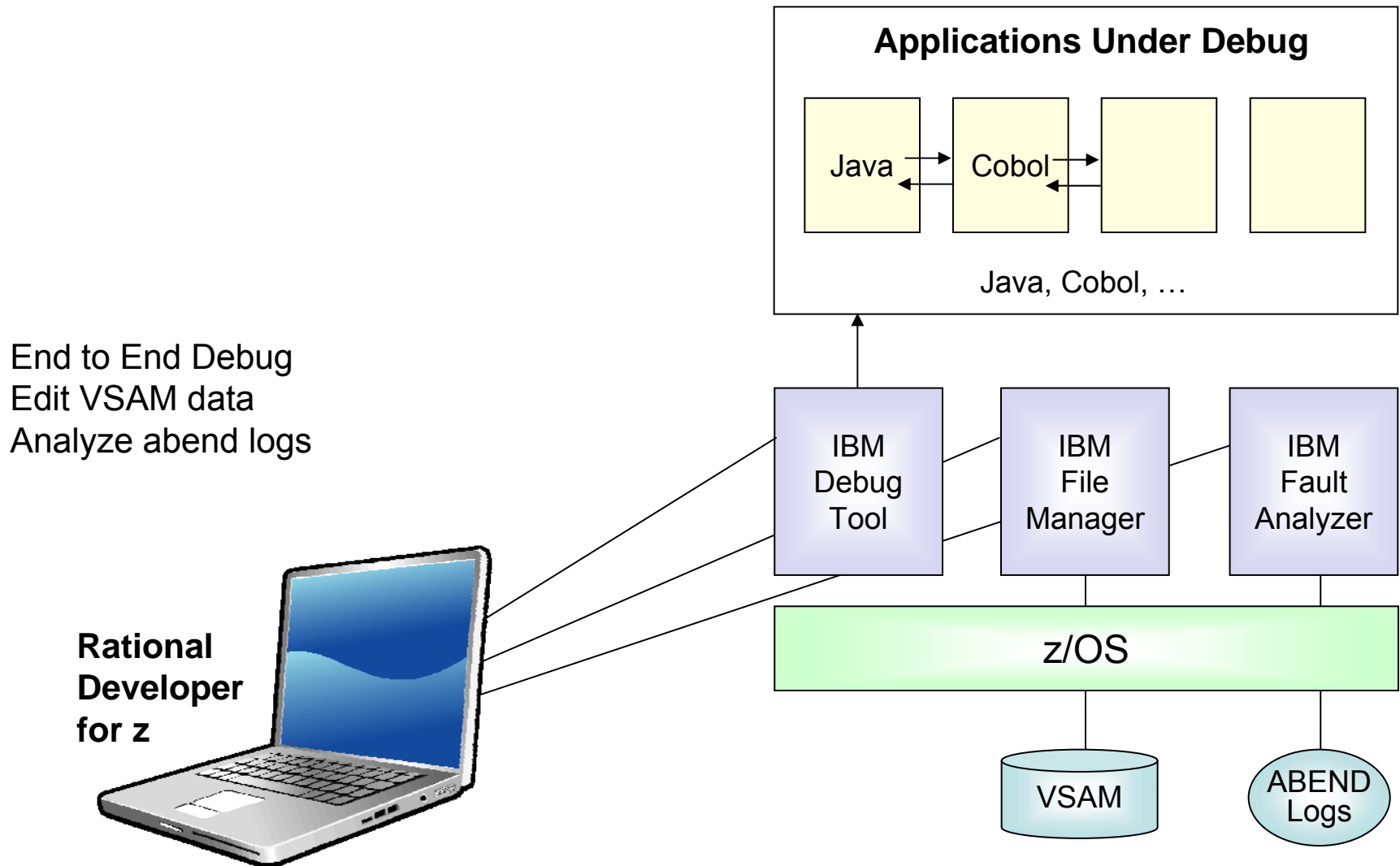
- Interactive, workstation-based environment
  - ▶ Interactive access to z/OS
  - ▶ Work with host files as though they are local
  
- Boosts developer productivity compared to “green screen” tools
  - ▶ Interactive edit/compile/debug on the workstation
    - Work offline or online
  - ▶ Interactive 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*

# Service Oriented Finance Employees Want To Create Simple Solutions Quickly

I can imagine a simple application that would solve a short-term problem, but IT says it would take too long to create it.



**Service Oriented Finance  
Business Analyst**

With IBM Mashup Center, you can give your users the power to innovate – by creating applications quickly and easily, mixing enterprise or external information.



**IBM**

# 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
- Can mix internal and external sources

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

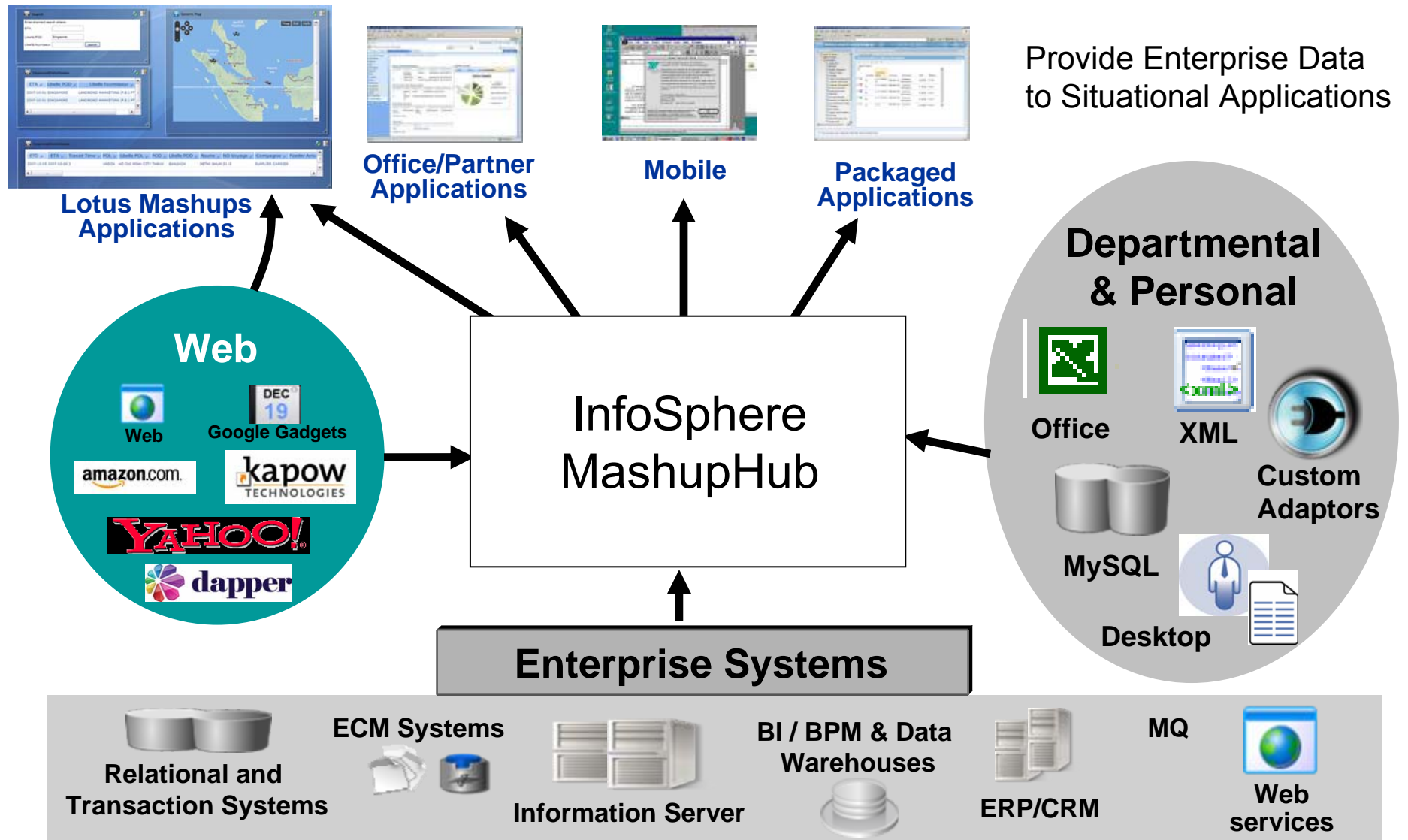
- Search:** A form titled "Search" with the instruction "Enter shipment search criteria". It includes input fields for "ETA:", "Libelle POD:" (containing "Singapore"), and "Libelle fournisseur:". A "search" button is located to the right of the "Libelle fournisseur:" field.
- ImprovedDataViewer:** A data table with columns "ETA", "Libelle POD", and "Libelle fournisseur". It displays two rows of data: "2007-10-01 SINGAPORE LANDBOND MARKETING (F.E.) PT".
- Generic Map:** A map of Southeast Asia showing the Gulf of Thailand, Andaman Sea, and Malay Peninsula. Key locations like Medan, Ipoh, Kuala Lumpur, Padang, and Palembang are marked. A search icon is visible in the top left corner of the map.

Below these components is another "ImprovedDataViewer" table with a more complex set of columns: "ETD", "ETA", "Transit Time", "POL", "Libelle POL", "POD", "Libelle POD", "Navire", "NO Voyage", "Compagnie", and "Feeder Arriv". It displays one row of data: "2007-10-05 2007-10-08 3 VNSGN HO CHI MINH CITY THBK BANGKOK METHI BHUM S110 SUPPLIER CARRIER".

# IBM Mashup Center – Key Components

- Lotus Mashups
  - ▶ A browser-based tool to create mashups
  - ▶ Assemble pages from wired-together widgets in the browser. Wiring sends data from one widget to another at runtime.
- ▶ InfoSphere MashupHub
  - ▶ A browser-based tool to create data feeds from various information sources
  - ▶ Provides the runtime environment for data feeds
- Lotus Mashups and InfoSphere MashupHub share a common catalog
  - ▶ Widgets, pages and feed definitions are stored in the catalog so they can be easily shared, searched, annotated, rated, and tagged

# 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 ...
- Mashes this up with the current stock trend and other financial information from Internet services on the same page

The screenshot shows a web browser window titled 'IBM Lotus Mashups - Mozilla Firefox'. The address bar shows a local host URL. The main content area is titled 'SOF Equity Recommendations' and contains several widgets:

- SOF Equity Recommend List:** A table with columns 'Ticker', 'Equity', and 'Risk'. The data is as follows:

Ticker	Equity	Risk
ALU	Alcatel-Lucent	2
C	Citibank	3
DELL	Dell	4
GOOG	Google	3
IBM	International Business Machines	0
- Clients with Cash:** A table with columns 'Iname', 'account\_balance', and 'risklevel'. The data is as follows:

Iname	account_balance	risklevel
Andrews	45000.00	3
Bender	40000.00	3
Eaton	30000.00	3
- GOOG Detail View:** A widget showing details for Google (GOOG), including company name, last trade price (435.11), volume (4225941), range (430.11 - 445), change (5.84 - news), open price (430.96), and date (9/24/2008 4:00pm). It also includes a line chart showing the stock price trend from 10am to 4pm.
- SaneBull Stock Widgets:** A widget with a 'GET QUOTE...' button and a 'Go' button.

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

# Summary

---

- 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**



