

# 如何利用 WebSphere Portal 集成企业后台应用



# 议程

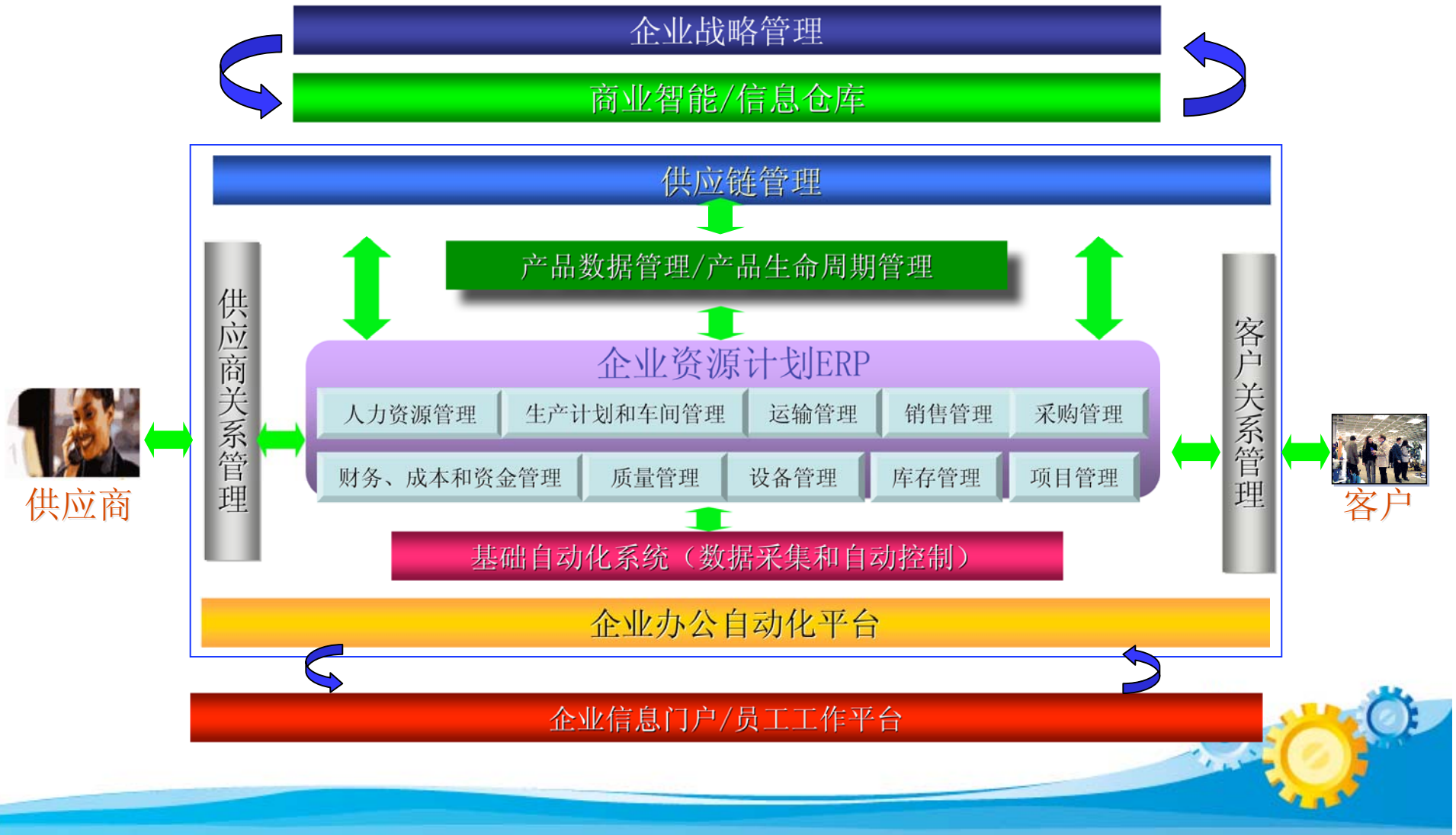
为什么需要门户系统与后端应用系统集成

WebSphere Portal 与后端应用集成的方法

应用举例



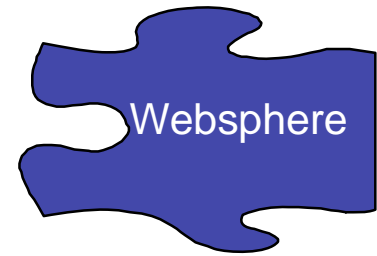
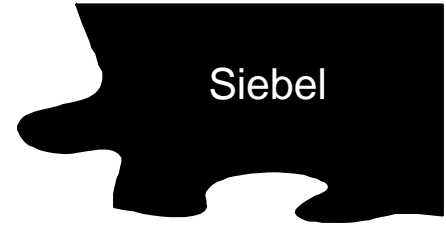
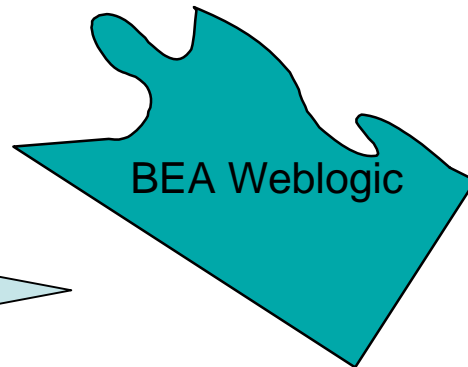
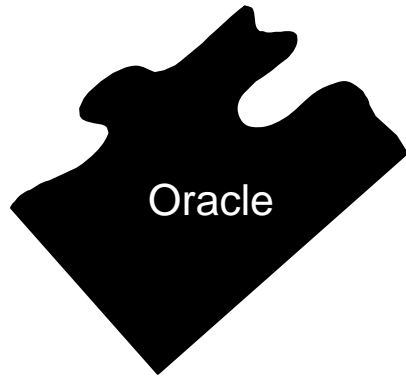
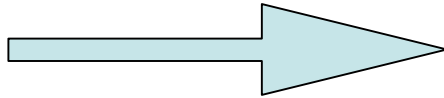
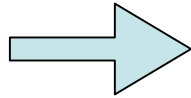
# 企业信息化建架构



# 2007 IBM 协作创新深潜营



!



高层管理者:IT投资就是黑洞!没有效益,想要做一个决策所需要的数据,需要投入相当长人力物力去收集

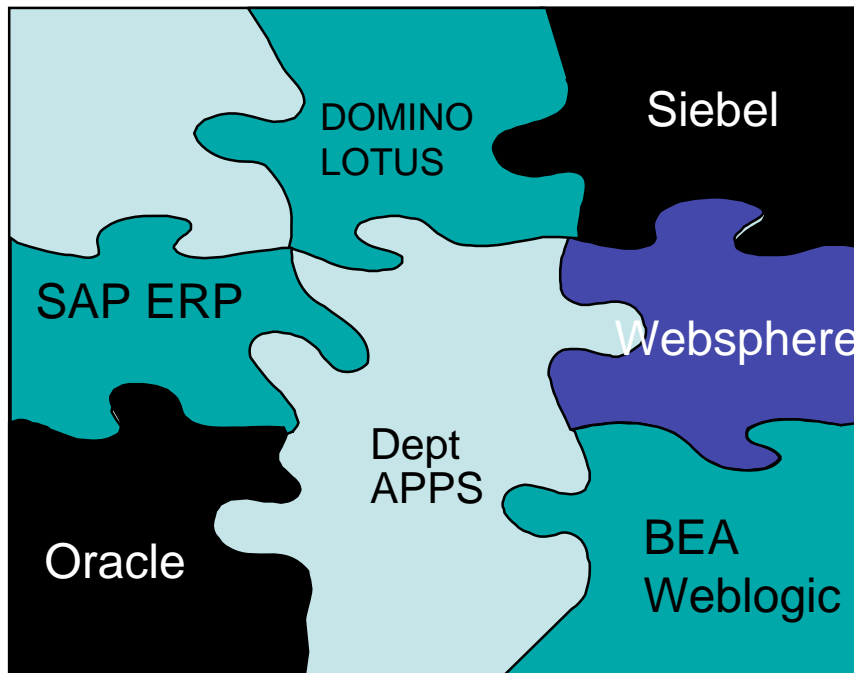
执行者:应用入口太多了,处理一个业务,需要切换不同的系统,录入很多次登陆用户名和密码,效率低下

IT人员:应用越来越多,无法整合,数据需要维护多个复本,IT架构无法统一,维护成本居高不下,维护难度增加



# 我们的解决方案

用户单一入口访问不同的系统



外部客户

合作伙伴

经理

内部员工



单一登录

与协作管理系统集成，增强流程管理



# 议程

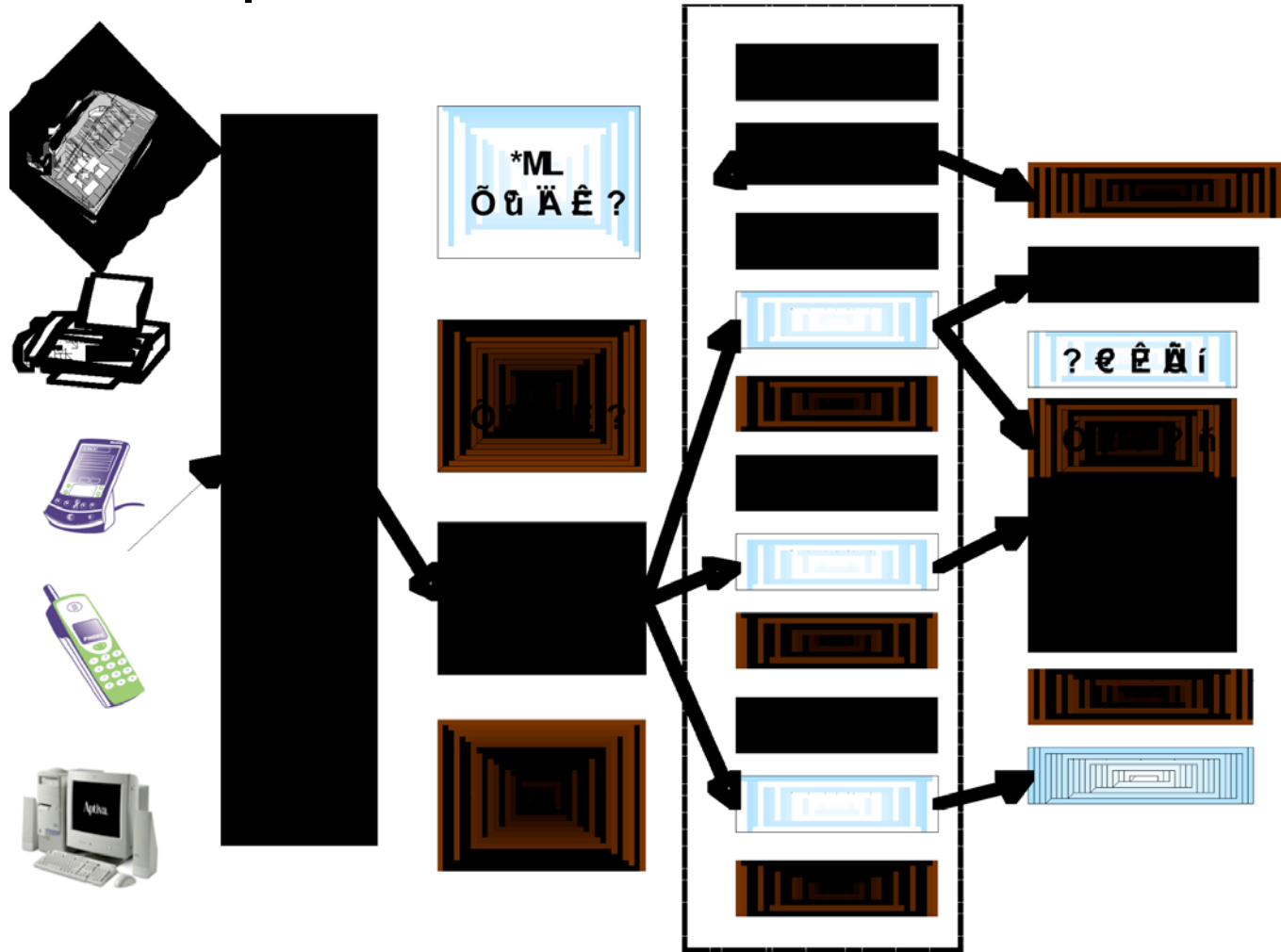
为什么需要门户系统与后端应用系统集成

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应用举例



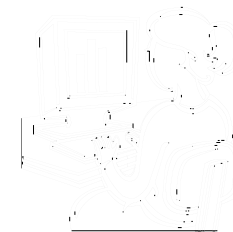
# WebSphere Portal 与 后端应用的整合



## 后端应用的分类

- 按应用类型分
  - 成型应用
  - 自定义/开发的应用
- 按应用的访问方式分
  - 浏览器/服务器
  - 客户端/服务器

Lotus. software





## 门户应用集成的分类

- 业务流程的集成
- 企业信息系统的集成
- Client-Server 应用的集成
- Legacy (mainframe) 应用的集成
- 用户自定制的 Web 应用的集成
- Domino 应用的集成

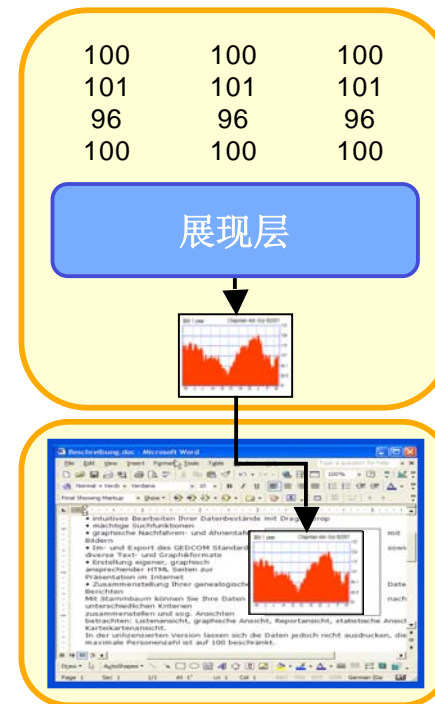


# 门户应用集成的分类

## 面向业务/数据层的集成

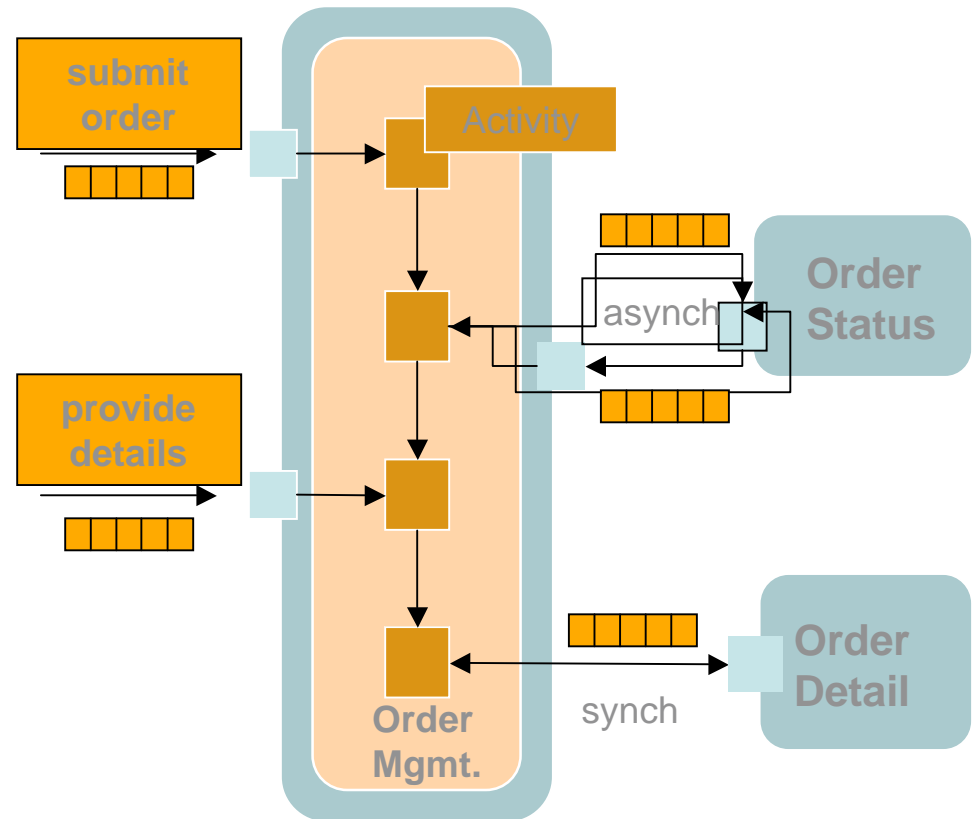


## 面向展现层的集成



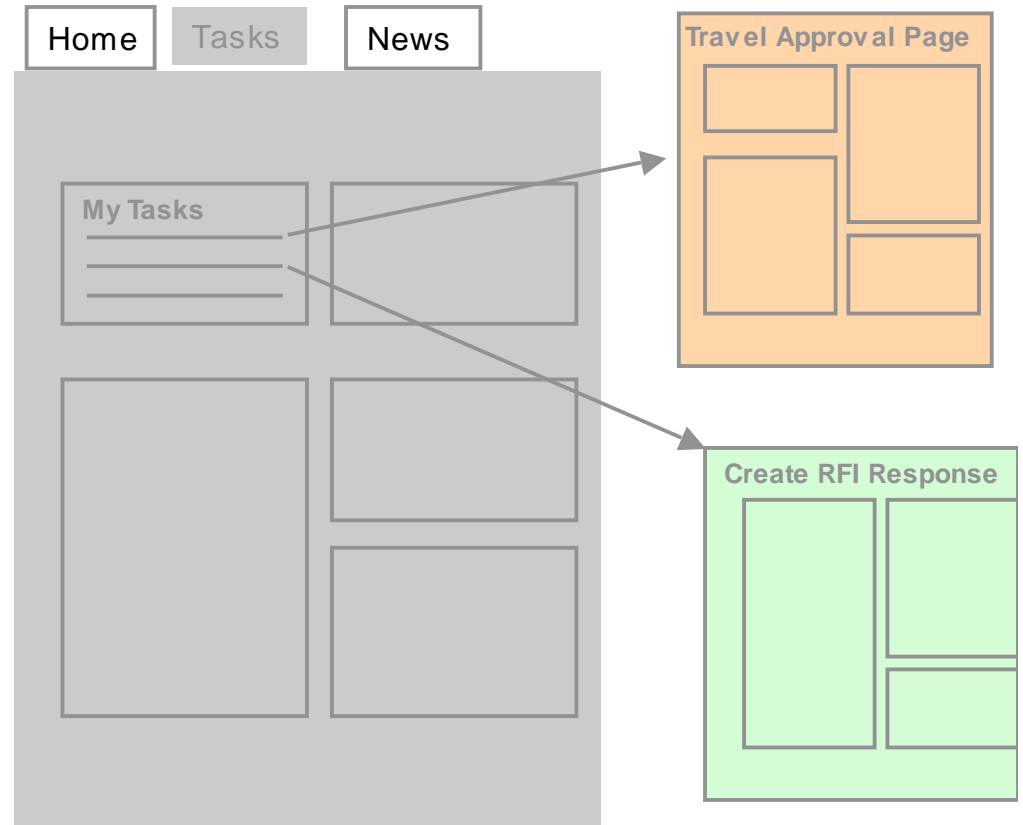
## BPEL流程集成

- 业务流程本质是一组按一定次序执行的活动(Activity)
- 服务(Services)可以被编排用以实现流程
  - 流程中的每一步或每一项活动都可通过服务来实现
- 业务流程本身也是一种服务
- 服务编排通过业务流程执行语言 BPEL 来描述
- 服务编排提供：
  - 人与应用组合的流程
  - 交易 及补偿
  - 对流程数据的操作



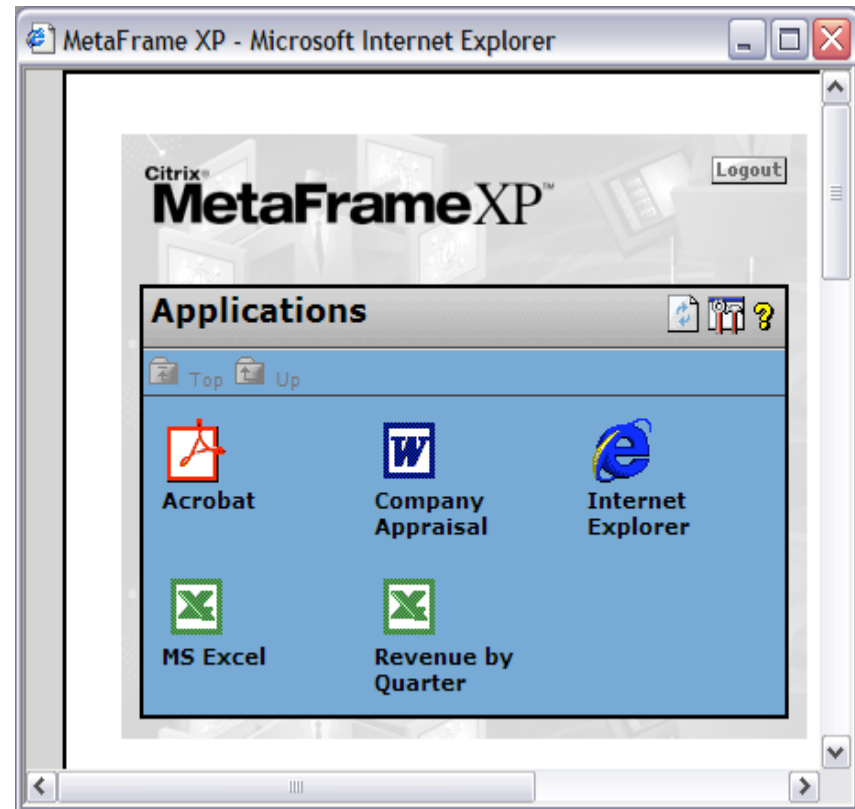
# 业务流程集成

- 我的任务 Portlets 可以让用户声明和处理 WebSphere Process Choreographer 中的任务
- 对每一个被选中待处理的任務，都会启动相应的页面应用实例
  - 同一类型的任务可以启动多个页面
  - 正被处理特定任务的上下文场景会被传递到页面应用中
  - 任务完成后页面关闭
- Portal's 导航中也可有待办任务的提醒



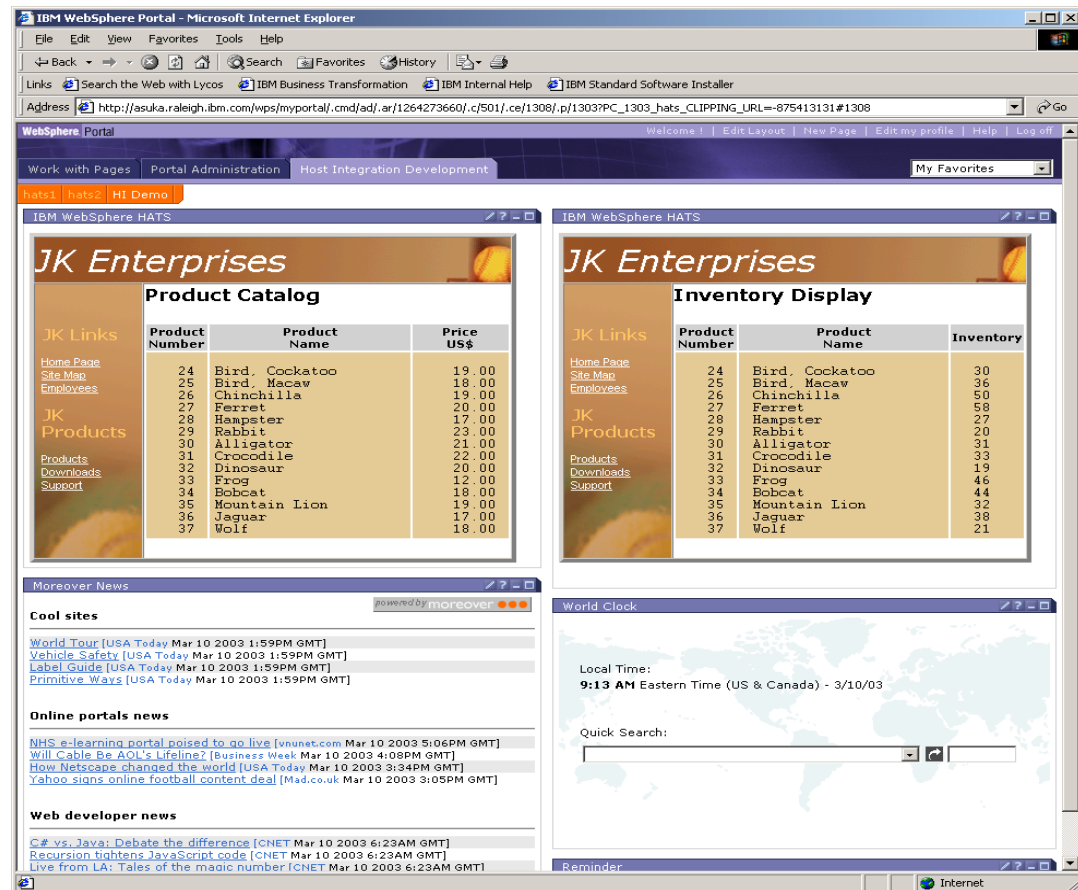
## Client/Server 应用的集成

- Citrix 及 Citrix portlets
- 利用 WebSphere Portlet Factory 开发常用功能的 Portlets
- Applet 调用本地Client



## Mainframe 应用的集成

- HATS (Host Access Transformation Server) 可将终端应用转成 Portlets 或 Web 应用
- HATS 提供开放、灵活的环境创建 Portlets, 支持:
  - Click-to-Action
  - 协作 Portlets
  - Credential Vault
  - Single Sign-On



The screenshot shows the IBM WebSphere Portal interface in Microsoft Internet Explorer. The main content area displays two portlets for 'JK Enterprises':

**Product Catalog**

Product Number	Product Name	Price US\$
24	Bird, Cockatoo	19.00
25	Bird, Macaw	18.00
26	Chinchilla	19.00
27	Ferret	20.00
28	Hampster	17.00
29	Rabbit	23.00
30	Alligator	21.00
31	Crocodile	22.00
32	Dinosaur	20.00
33	Frog	12.00
34	Bobcat	18.00
35	Mountain Lion	19.00
36	Jaguar	17.00
37	Wolf	18.00

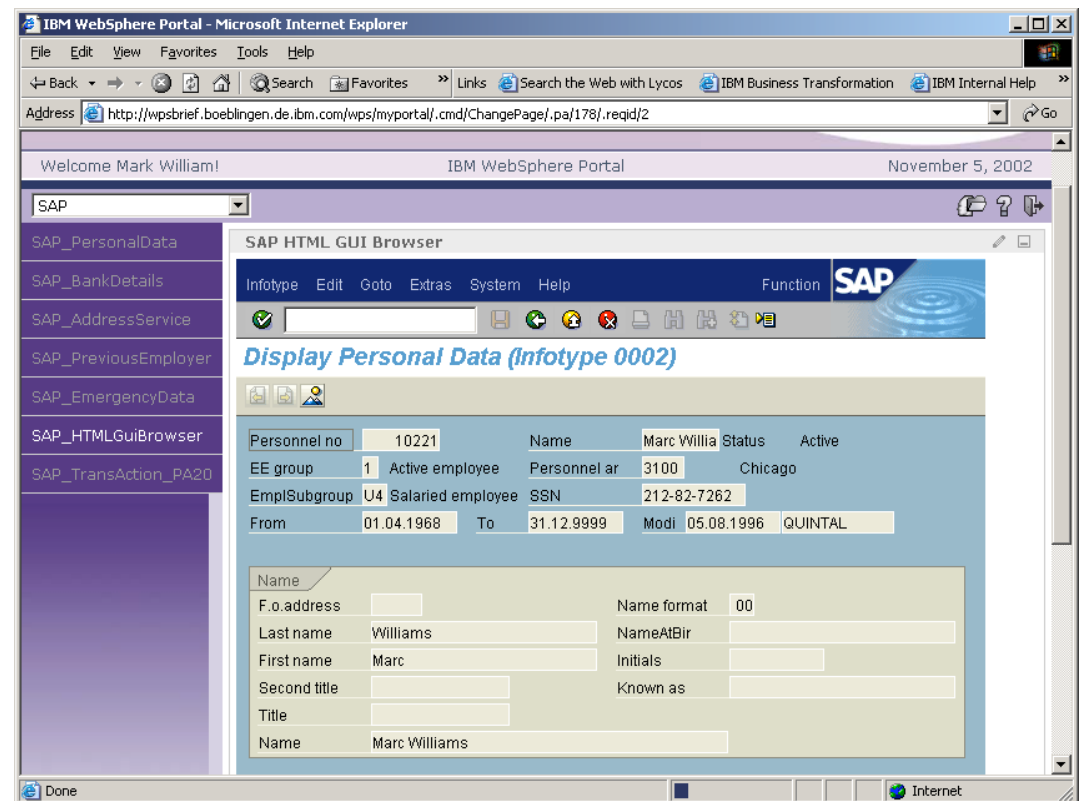
**Inventory Display**

Product Number	Product Name	Inventory
24	Bird, Cockatoo	30
25	Bird, Macaw	36
26	Chinchilla	50
27	Ferret	58
28	Hampster	27
29	Rabbit	20
30	Alligator	31
31	Crocodile	33
32	Dinosaur	19
33	Frog	46
34	Bobcat	44
35	Mountain Lion	32
36	Jaguar	38
37	Wolf	21

Other visible portlets include 'Cool sites', 'Online portals news', 'Web developer news', and 'World Clock'.

## B/S 应用整合方法

- 以 **Portal** 为导航
  - 将 Web 应用的链接直接挂接到 Portal 的 Navigation 中
  - Quick Links/My Favorite Portlet
- **Web Page Portlet**
  - 采用浏览器技术 (HTML iFrame tag)
- **Web Clipping Portlet**
  - Portal Server 作为 Web 页面的代理



## 内容集成

- Portal 文档管理
- Web 内容管理
- RSS Portlet
- WebClipping
- 搜索

The screenshot displays a web application interface with several components:

- Documents Window:** Shows a file explorer view with the path `My Documents > PortalMarket > CompanyNews`. It includes buttons for `Save`, `Done`, and `Edit Properties`.
- Scorecard Window:** Displays a document titled `Scorecard` with a `Scorecard.doc` file name.
- IBM Presentation - Microsoft Internet Explorer:** The main browser window shows a slide titled `American Currency` with a gold coin icon.
- Purchase Order Form:** A detailed form for a purchase order from `My Company Name`. It includes contact information, order details, and a table of items.
- Table:** A table listing items with columns for `QUANTITY`, `UNIT`, `DESCRIPTION`, `UNIT PRICE`, and `AMOUNT`.
- Summary:** A summary section showing `SUBTOTAL`, `TAX`, `FREIGHT`, and `TOTAL` amounts.
- Legend:** A legend for a pie chart showing categories: `Personal and Printing Systems`, `Technology`, `Software`, `Global Financing`, and `Enterprise Investments`.

QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
4	433	Widget 123	\$10,000.00	\$40,000.00
10	222	Widget 124	\$15,000.00	\$150,000.00
			<b>SUBTOTAL</b>	<b>\$190,000.00</b>
			<b>TAX</b>	<b>\$9,500.00</b>
			<b>FREIGHT</b>	<b>\$254.00</b>
			<b>TOTAL</b>	<b>\$199,754.00</b>



# Domino及相关产品的整合

The screenshot displays the Lotus Domino web interface with the following components:

- Navigation:** Top bar with "Welcome", "My Work", "My Team", and "My Databases" tabs. A search bar shows "All Sources" and a "Log Out" link.
- Lotus Notes View:** A table listing documents with columns for "Topic" and "Date".

Topic	Date
<input checked="" type="checkbox"/> CPP Draft Lab for Review (Gianluigi Marchetti)	04/21/2006
<input type="checkbox"/> Author Profile for Gianluigi Marchetti/ibm (Gianluigi Marchetti)	04/21/2006
<input type="checkbox"/> 060 - DEPP & CPP (Merideth Norris)	04/21/2006
<input type="checkbox"/> Author Profile for Merideth Norris/ibm (Merideth Norris)	04/21/2006
<input type="checkbox"/> DAP Infocenter zip File Available (wpsadmin)	04/21/2006
<input type="checkbox"/> Author Profile for wpsadmin/ibm (wpsadmin)	04/21/2006
<input type="checkbox"/> DEPP Problems (Domino Admin)	04/21/2006
<input type="checkbox"/> Install Portal 6 Problems (Domino Admin)	04/21/2006
- Lotus Document Viewer:** Shows a document titled "Discussion" with subject "CPP Draft Lab for Review" and category "CPP, DRAFT, LAB". It includes a "Main Topic" section with author "Gianluigi Marchetti/ibm" and date "04/21/2006 04:48 PM". The content is "Draft of the CPP Lab for review." and a file attachment "WP60\_beta\_Labs\_CPP.doc" with type "application/msword".
- Sametime Contact List:** Shows a list of contacts under "Work", including "wpsadmin", "Gianluigi Marchetti", "Merideth Norris", and "Phil Kregor". A "Who Is Here" section shows "wpsadmin".
- People Finder:** Displays a profile for "Gianluigi Marchetti" with a photo and email "gigi@ibm.com". Below it is a "Reporting Structure" section showing "Gianluigi Marchetti" with a note: "No direct reports were found."



## DEPP – Domino 及扩展产品的 Portlets

### – WebSphere Portal 6 中含有多个开箱即用 Portlets

- Sametime Contact List
- Who Is Here
- Lotus Web Conferencing
- Lotus Document Viewer
- Lotus Notes View
- Domino Web Access
- Inline QuickPlace
- My Lotus QuickPlaces
- Domino Document Manager
- People Finder
- Domino Application

Domino Integration > Welcome >

Welcome | My Work | My Team | My Databases | Testing

### Welcome to Domino Integration

View Domino Documents, Lotus Sametime, QuickPlaces, and Web Conferences.

**Need Help?**  
Go to the IBM Information Center. The information center has complete and in-depth product information.

**Try IBM developerWorks.** developerWorks features articles about various topics related to IBM WebSphere Portal.

**Need Support?**  
IBM Software Support  
IBM Newsgroups

**Need More Information?**  
Get additional information and product news. Visit the IBM WebSphere Portal home page

**Other Links**  
IBM.com  
IBM Software Home Page  
IBM WebSphere  
IBM Software Support  
WebSphere Portal Zone  
Partner World  
Linux at IBM

1 Lotus Document Viewer. Use the viewer to display content from another application, such as Lotus Notes View or My Lotus QuickPlaces, that is on the same page.

2 My Lotus QuickPlaces. Find, work in, create, and request new Lotus QuickPlaces. View QuickPlace details.

3 Sametime Contact List. Chat with Sametime users throughout your organization. Display only online names in the list, sort the list, modify your status message, and modify groups.

4 Who Is Here. From any page, see who is online and start a chat.

5 Lotus Web Conferencing. Find, attend, and schedule e-meetings. View meeting details.

6 Domino Document Manager. Organize, manage, and store documents. Make documents accessible to users who are inside or outside of your organization.

IBM WebSphere Portal provides additional portlets that you can use to integrate messaging (mail and calendar capabilities) into your site. [To learn more about Messaging options, go to the Messaging page.](#)

Home Administration Documents Web Content Messaging Site Map

## 通过现有 Portlet 整合后台应用

- 产品自带开箱即用的两百多个 Portlets
  - 通用模板 Portlets: WebPage, CSV, JSP/Servlet Invoker, JDBC
  - 针对特定应用的Portlets: Domino 及相关产品
  - 位于<portal\_server\_root>/installableApps 目录
- IBM WebSphere Portal Catalog 网站下载的 Portlets
  - <http://www.ibm.com/software/webservers/portal/portlet/catalog>
- JSR 168 Portlets



## Websphere Portal 企业应用 Portlets

### SAP

- SAP Builders in Portlet Factory
- iView Builder (SAP Enterprise Portal)
- SAP Enterprise Portlets
- SAP Business Information Warehouse Integration
- SAP Enterprise Mobile Application
- SAP HTML GUI integration

### PeopleSoft

- PeopleSoft Builders in Portlet Factory
- PeopleSoft Enterprise Portlets

### Siebel

- Websphere Portlet Factory
- Siebel Builder
- Siebel Enterprise Portlets
- Siebel Portlets for Websphere Everyplace Access

### Oracle

- WebSphere Portlet Factory
- Oracle Builder

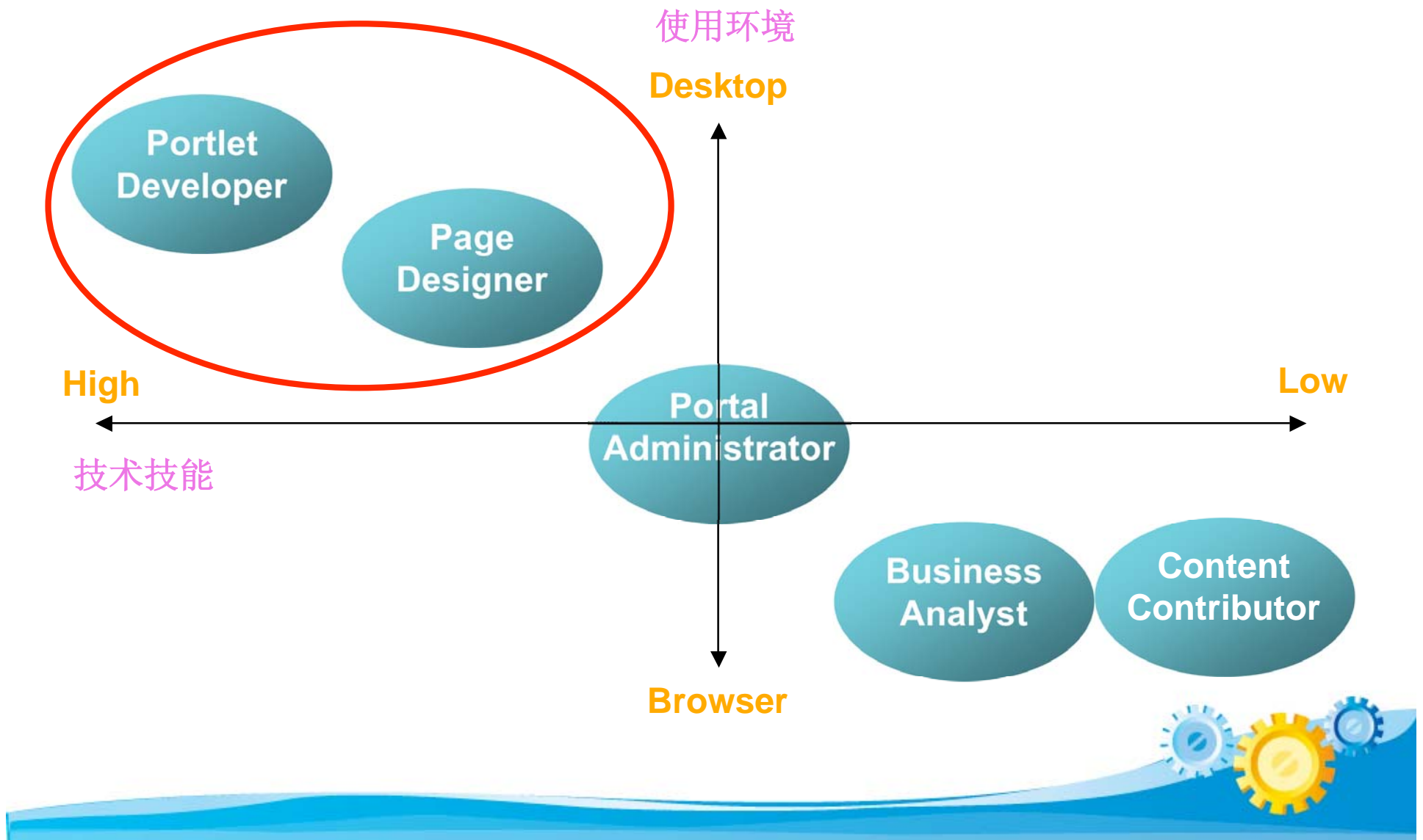


## Portal 开发工具

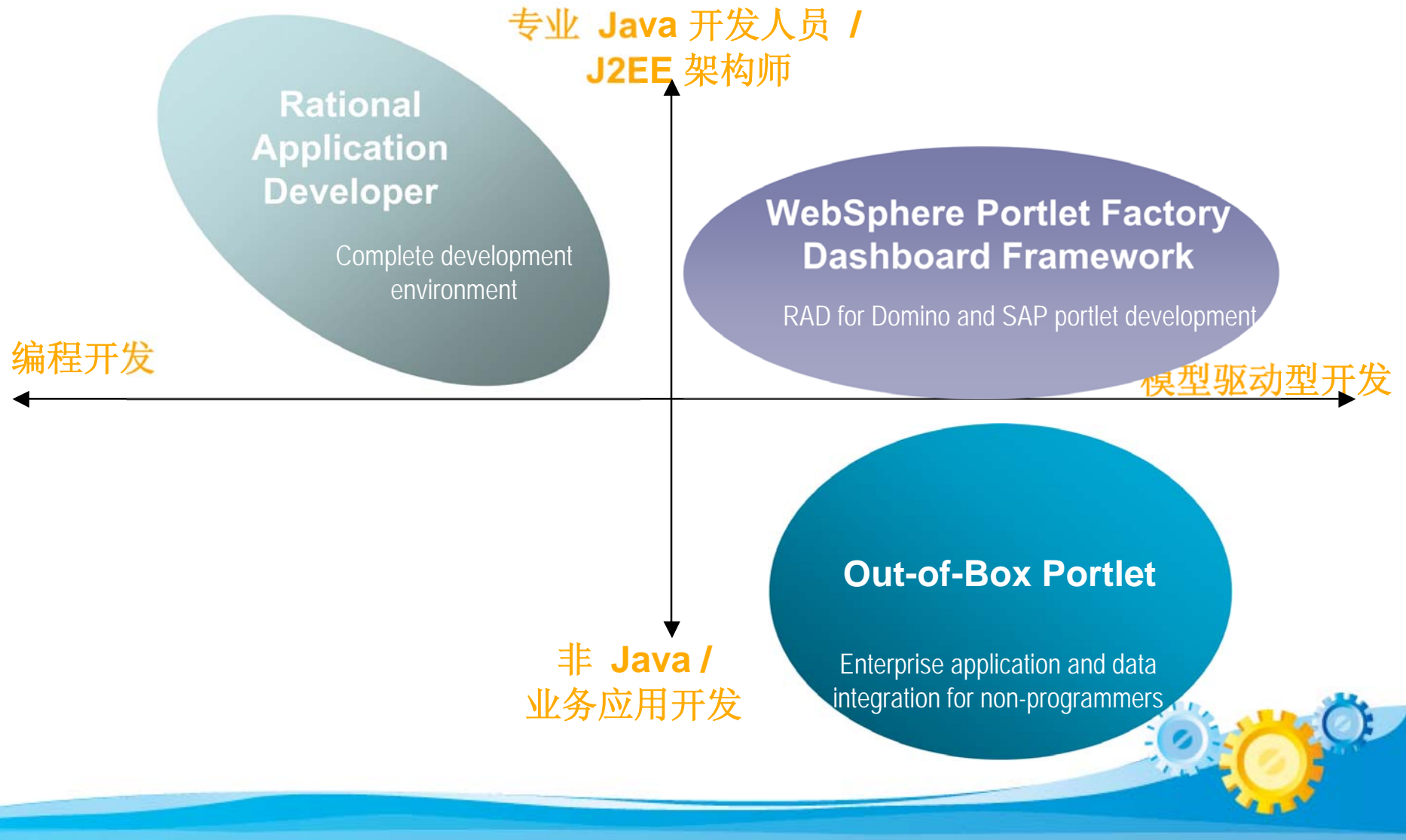
- 为门户开发的各个阶段提供端到端的解决方案
- 减少开发企业门户的时间和费用
- 为构建门户的用户提供多种工具满足不同的需求
- 使到门户开发的转变尽可能平滑
- 对现有开发过程的补充



# Portal 开发中的角色



# IBM Software Portal 与开发相关的产品



## Portlet 开发环境

- 必需的 portlet 开发工具
  - Java JDK 1.4
  - Java Source Editor
  - HTML/JSP Editor
- 添加必需的和可选的 JAR 文件到 Java CLASSPATH
- <WAS-HOME>/lib/app
  - portlet-api.jar – Portlet API 接口、类
  - wps.jar – Portal base interfaces and classes
  - wpsportlets.jar – Generic & Helper Portlets
- <WAS-HOME>/lib
  - j2ee.jar – Servlet API and J2EE interfaces and classes
  - websphere.jar – for Cacheable portlet

*provided by: Rational Application Developer (RAD) and Portal Tools*

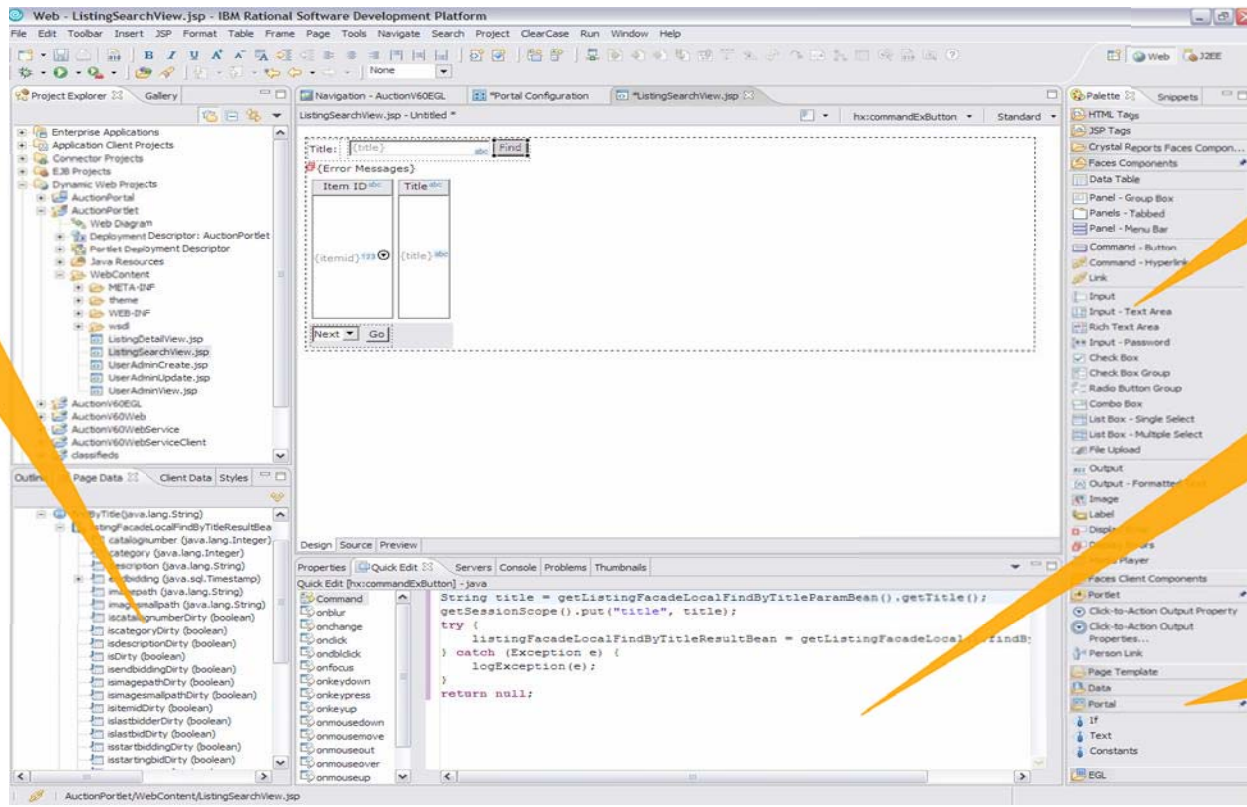




## 可视化的开发环境- Rational Application Developer

- 通过可视的编程方式加速 Portlet 开发
- 经验不多的开发人员也能创建 portlets

The Data View 可以配置、拖拽数据对象自动生成带 UI 的 SDO 数据单元, 无需编写代码



从可定制的面板中托拽 web 组件创建页面

Quick Edit 视图可以编写 Java 或 JavaScript, 提供代码辅助提示功能。

拖拽的方式即可添加 C2A 和人员感知功能

- 设计、部署、调试、测试及预览 Portlets
  - Portlet 向导用于创建基本 portlets, JSF portlets, 以及 Struts portlets
  - Portlet project 支持 IBM portlet API 和 JSR 168 portlet API

- 用 SDO 支持访问 SAP、Seibel 的 Portlet 开发
- 采用远程的 Portal 服务器或者本地 Portal 测试环境测试、单步调试
- Click-to-Action, Person Tag



## 可视化的开发环境-

WebSphere Portlet Factory 与 WebSphere Dashboard Framework

无需编码实现多页面、功能复杂的 **Portlet**

所有的开发人员无论水平如何，均能使用 **WPF** 不用编写代码快速开发出多页面、复杂的 **Portlets** (实现搜索、创建、更新和删除等功能)

Date	Submitter	Approver	Status	Total
09/08/2004	Jerry Douglas	Bela Fleck	Submitted	188.5
09/08/2004	Jerry Douglas	Bela Fleck	Submitted	2250
09/08/2004	Jerry Douglas	Bela Fleck	Submitted	120
09/08/2004	Jerry Douglas	Bela Fleck	Submitted	222.38
09/08/2004	Jerry Douglas	Bela Fleck	Submitted	562.35



# 2007 IBM 协作创新深潜营



通过 **WebSphere Portlet Factory**, 可以快速开发**Portlet**, 与 **SAP**等系统进行数据集成。在**WebSphere Portal**搭建的门户系统中, 原来需要复杂的**SAP**客户端才能完成的数据查询或录入工作, 在浏览器中通过门户系统就可以实现。

同时 **WebSphere Portlet Factory for WebSphere** 还支持更多的数据源, 可轻松与**Portal**系统集成, 其中也包括**Lotus Domino**, **Peoplesoft**, **Siebel**, **RDB** 等。



JSR 168  
Portlet  
Specification

**JAVASERVER PAGES™**  
DYNAMICALLY GENERATED WEB CONTENT

Enterprise JavaBeans

JDBC™ Data Access API

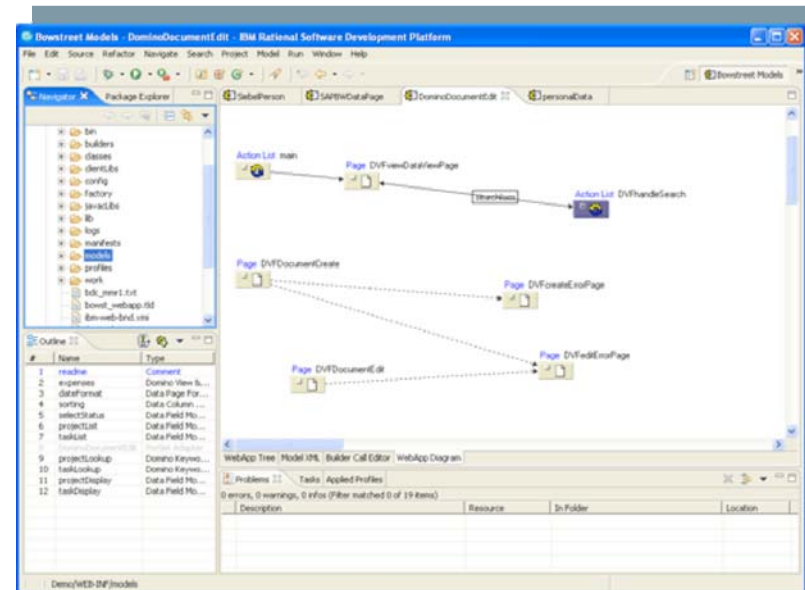


WSRP



# WebSphere Portlet Factory / WebSphere Dashboard Framework 的主要特点

- 与 WebSphere Portal 紧密集成（自动部署 portlets, 点击即动功能, 人员感知, SSO）
- Rational Application Developer plug-in
- 无需编码，实现多页面、复杂的 Portlets
- 强大的集成能力
- 可自由定制 - 无需大量的维护工作
- 业务用户进行配置
- 快速迭代设计与变更
- 代码自动生成
- 灵活的部署选项
- CPS 的坚强基石



*“Using Bowstreet saved Allmerica over **\$1 million** in development costs, and enabled Allmerica to build the portal in four months, whereas using other methods would have taken about 16 months”*

**Mike Clifton, Vice President of IT  
Allmerica Insurance**

## 强大的集成能力

从各个分离系统中抽取数据构建成复合的仪表盘解决方案，预置多个用于整合 SAP, PeopleSoft, Domino, Siebel, databases, web services, 等系统构建器

**SAP BW**

**财务系统**

**Remedy 资产管理**

**本月销售累计与上月同期比较**

■ 警告 ■ 正常 ■ 奖励

23%

促销促销品  
 家居护理产品  
 个人护理产品  
 美容化妆品  
 营养保健食品

优先级	文本	创建日期
高	Frank Xu 的固定资产转移等待您的处理	2006年8月28日 上午12时00分00秒
高	Frank Xu 的固定资产转移等待您的处理	2006年8月28日 上午12时00分00秒
高	Wing Xiao 的产品反馈报告等待您的处理	2006年8月28日 上午12时00分00秒
高	Wing Xiao 的产品反馈报告等待您的处理	2006年8月28日 上午12时00分00秒
高	Apple Lin 的固定资产报废申请表等待您的处理	2006年8月28日 上午12时00分00秒
高	Apple Lin 的固定资产报废申请表等待您的处理	2006年8月28日 上午12时00分00秒

显示类别 所有类别

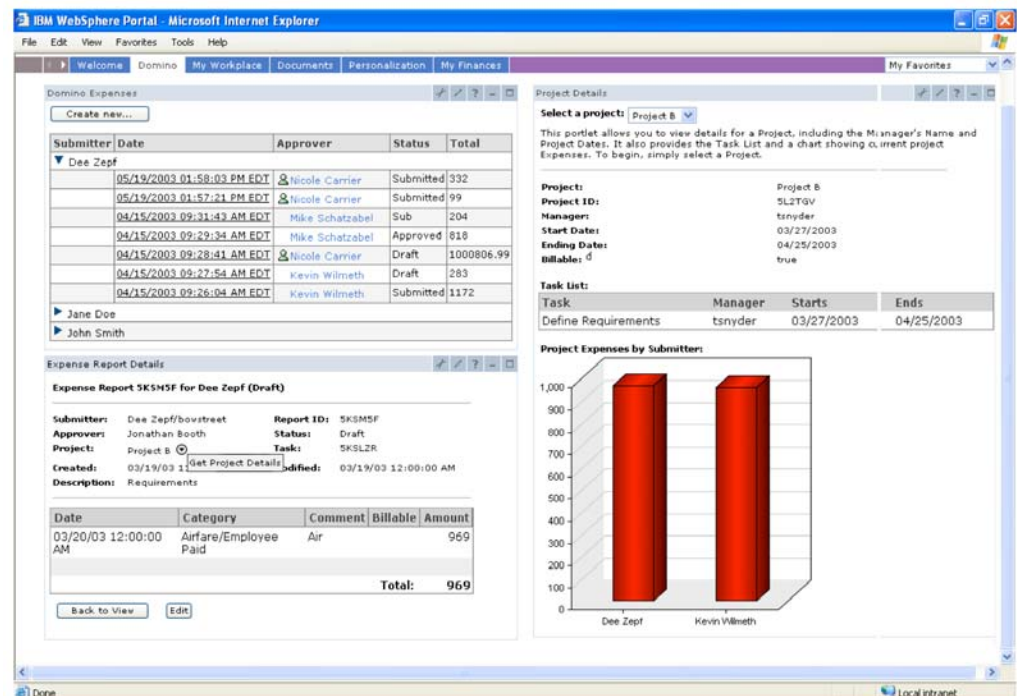
**TODOPortlet**

DESCRIPTION	DETAIL	STARTER_NAME
▶ 现金申请表		
▶ 电脑资讯部服务申请		
▶ 固定资产报废申请表		
▶ 产品反馈报告		
▶ 电脑资讯部服务申请		
▶ 公共关系活动		
▶ 店铺营运物品申请		
▶ 产品反馈报告		
▶ 固定资产报废申请表		
▶ 产品反馈报告		
▶ 现金申请表		
▶ 电脑资讯部服务申请		
▶ 固定资产报废申请表		
▶ 电脑资讯部服务申请		
▶ 固定资产报废申请表		
▶ 电脑资讯部服务申请		
▶ 公共关系活动		
▶ 电脑资讯部服务申请		
▶ 固定资产报废申请表		

# 与 Portal 基础架构无缝集成

## WebSphere Portal

- ▶ 协同工作 (人员感知)
- ▶ 单点登陆 (凭证保险库)
- ▶ Portlet 间通信 (Click-to-Action & Portlet Wiring)
- ▶ WebSphere Portal Groups
- ▶ WebSphere Portal Modes
- ▶ 自动部署



## 可重用设计组件库

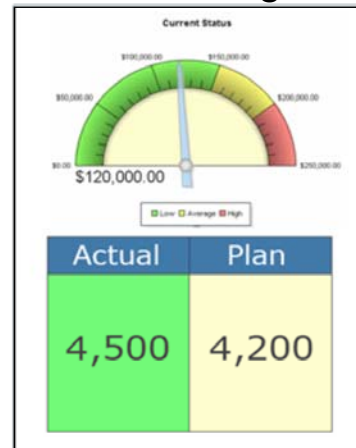
Reusable components (Builders) capture dashboard design patterns, speeding creation of custom portlets.

### Hierarchy Drill Down

Status	Office	Office Manager	Actual	Plan	Difference	% of Plan
●	Miami	Marcus San Antonio	\$210,060	\$220,000	-\$9,940	95.48
●	Dallas	Jane Johannsen	\$269,522	\$354,000	-\$84,478	76.14
●	Atlanta	Helena Krack	\$133,773	\$177,000	-\$43,227	75.58
●	Houston	Robert Roland	\$211,939	\$429,000	-\$217,061	49.4

● = Excellent (Above 90.0%) ● = On Track (Between 70.0 - 90.0%) ● = Warning (Below 70.0%)

### Status Page



### Summary & Drilldown



### Summary Row

Opportunity	Amount	Stage	Committed	Days at Stage	Days Old
Boston Industries HR Connection	25,300	5	Y	29	162
Boston Industries HR Connection	28,434	5	Y	40	221
Corp Network Upgrades	30,000	5	N	49	149
Intech PR Project	28,434	5	Y	40	175
MachineTec Install	18,300	5	Y	39	158
MachineTec Upgrades	48,300	5	Y	39	158
P.A. Network Center	43,000	5	N	29	145
T&T Server Upgrades	13,500	5	Y	38	158
Williams and Company HR Pilot	38,434	5	Y	29	205
<b>9 Opportunities</b>	<b>273,782</b>		<b>7 of 9</b>	<b>37</b>	<b>170</b>

< Back to Chart \* Red = opportunities at stage over 30 days

### Query Filter

Region	Office	Rep
Southeast US	Houston	Fred Carrier

### Record List & Detail

Opportunity Name	Rep	Amount	Stage	Committed	Initiated	Forecast Date
T&T Support Contract	Fred Carrier	\$35,500	1	N	12/01/04	03/31/05
AlcaTec server upgrades	Fred Carrier	\$25,500	2	N	09/01/04	03/31/05
AlcaTec.com Next Rev	Fred Carrier	\$25,000	1	N	10/01/04	05/31/05
AlcaTec services contract	Fred Carrier	\$19,000	3	N	10/01/04	03/31/05
T&T New Architecture	Fred Carrier	\$15,000	2	N	10/01/04	03/31/05
T&T Server Upgrades	Fred Carrier	\$13,500	5	Y	09/01/04	12/01/04

### Status Indicator

	2003	2004	Change
YTD Operating Profit	32,202	31,942	-0.81%
YTD ROE	24.94%	23.97%	-3.89%
YTD Sales	1,120,783	1,220,060	8.86%
YTD Gross Margin	258,927	282,078	8.94%
YTD Loss Absorption	14.10%	20.40%	44.68%
Average Company Size	2,700	2,870	6.30%



# 议程

为什么需要门户系统与后端应用系统集成

WebSphere Portal 与后端应用集成的方法

应用举例





## 客户面临的挑战

对**SAP**数据的查询，简单数据交互工作，是企业内大部分用户面对**SAP**系统的主要工作。

这些用户如果使用**SAP**客户端访问系统，培训、维护和客户端**License**是一笔很大的投入。

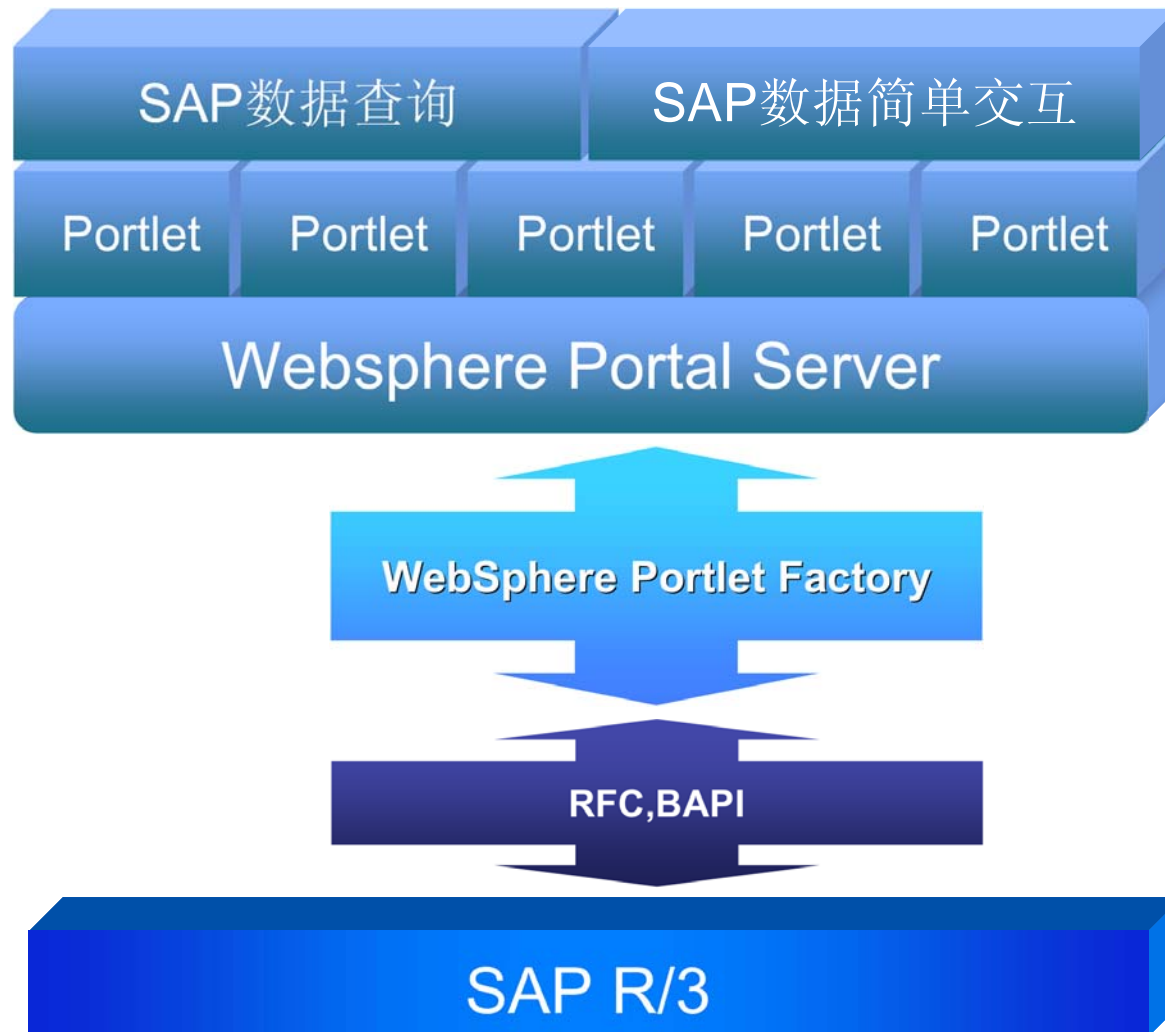
如果这些用户能够使用简单的浏览器界面和方便的操作就能完成以上的工作，将为推动**SAP**系统在内部的使用、推广带来极大的作用。



Websphere Portal门户系统与SAP系统集成



# 建议解决办法



# 八成普通用户

采用 WPF 中的 SAP 相关的 Builders 创建 Portlet, 部署到门户中

## SAP Portlet

http://ncarrier04/bowstreet5/webengine/SAP/FlightsDemo/Action!getFlights\_ShowResults - Microsoft Internet Explorer provided by

File Edit View Favorites Tools Help Links IBM WebSphere Portal Basic Service OrdersService EmpService

All flights matching your selection criteria:

Departure Date and Time: <a href="#">2003-03-16</a> 13:30:00	Arrival Time: 16:31:00	Price: 513.69
Airline: AA	Type of Plane: 747-400	
Departure Date and Time: <a href="#">2003-05-25</a> 13:30:00	Arrival Time: 16:31:00	Price: 513.69
Airline: AA	Type of Plane: 747-400	
Departure Date and Time: <a href="#">2003-07-27</a> 13:30:00	Arrival Time: 16:31:00	Price: 513.69
Airline: AA	Type of Plane: 747-400	
Departure Date and Time: <a href="#">2003-09-21</a> 13:30:00	Arrival Time: 16:31:00	Price: 513.69
Airline: AA	Type of Plane: 747-400	
Departure Date and Time: <a href="#">2003-11-09</a> 13:30:00	Arrival Time: 16:31:00	Price: 513.69
Airline: AA	Type of Plane: 747-400	

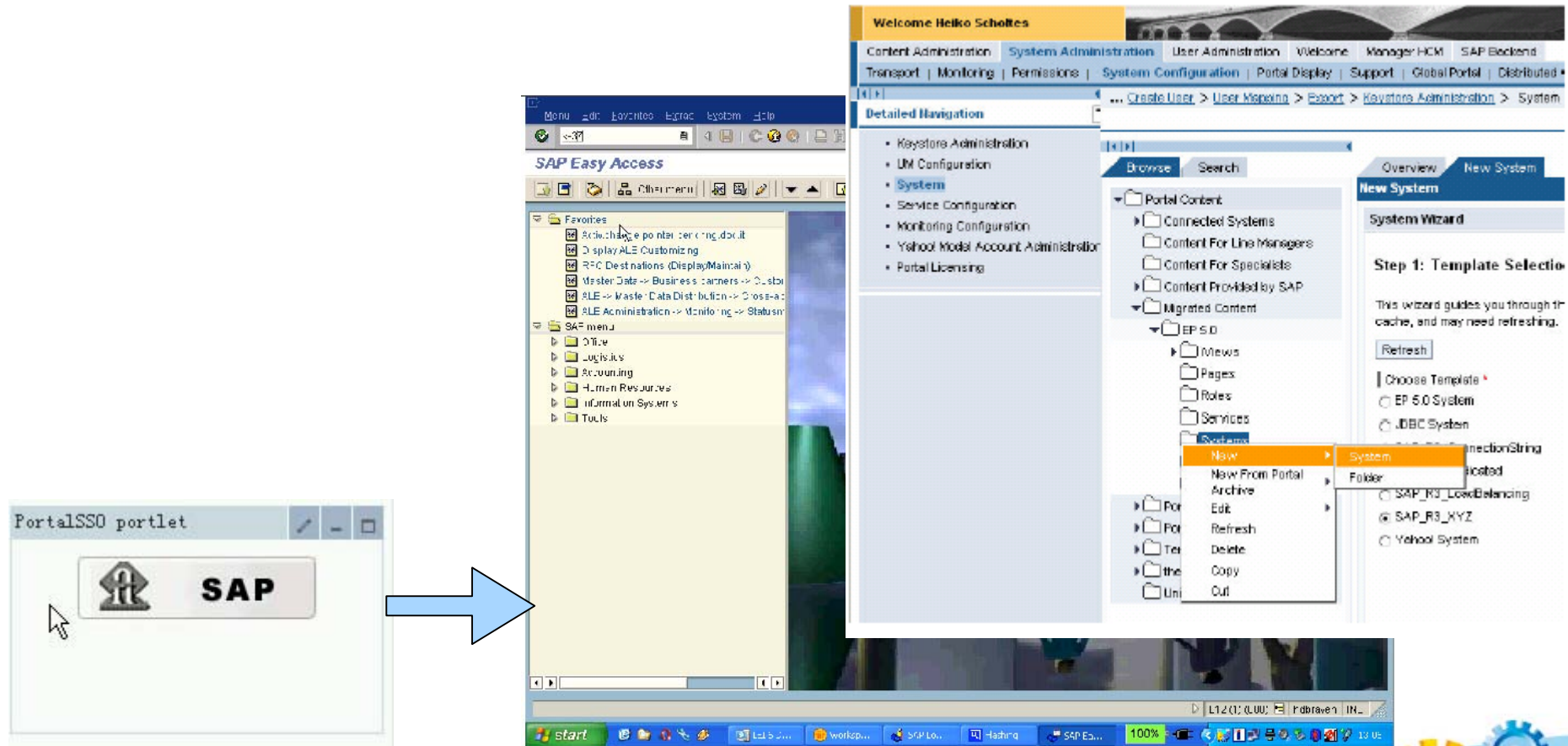
1 - 5 of 35

[Search Again](#)

Done Local intranet

## 二成专业用户

开发可配置的 Portlet，利用 Applet 调用本地 Client 端进行专业操作





谢谢!

