

# Adding Value with the Script Portlet

Thomas Stober | STSM, Lead Architect WebSphere Portal Foundation

**Meet the Lab**  
**04. - 05. Juni 2014**  
**IBM Labor Boeblingen**



# Please Note

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion.

Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision.

The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.

## Three Powerful Tools

Javascript Portlet



DDC

Web Application Bridge

# Agenda

- Introduction
- Goals
- Value proposition
- Demo
- Script Portlet v/s RAD/WEF portlets
- Resources



# Script Portlet

- The Script portlet is a great tool to start writing UI components using only:
  - Javascript, HTML and CSS
  - No J2EE skills and knowledge
- Augment Javascript with portal concepts like portlet preferences, sharing render parameters
- Basic idea
  - Knowledgeable IT-People have constructed lots of services
  - Using Javascript those services can be harvested to build quickly a variety of applications
  - Using Javascript powerful user interface components can be created to enrich a web site
  - The Javascript is stored in WCM and benefit from WCM approval workflows and publishing
  - Simple “inline” development environment, including a “Live” preview while editing
- In summary:
  - Ad-hoc creation of UI components as a addition to classic J2EE development and deployment



# Goals

- Enable the Line of Business to implement application independently and self-contained
  - A small team of Javascript 'Programmers' can make powerful customization of web sites quickly and easily
- Enable customers and partners to write re-usable UI components, which behave like Portlets, but are not full J2EE implementations
  - Proof of Concepts and prototypes
  - Widget-like UI components, with reduced requirements concerning security and quality of service
- Provide a programming model that can be used for application development on the cloud
  - Tenants can author applications in their SaaS/PaaS instance themselves, rather than deploying code as a privileged administrator
  - Individually harvest a variety of common Cloud based services



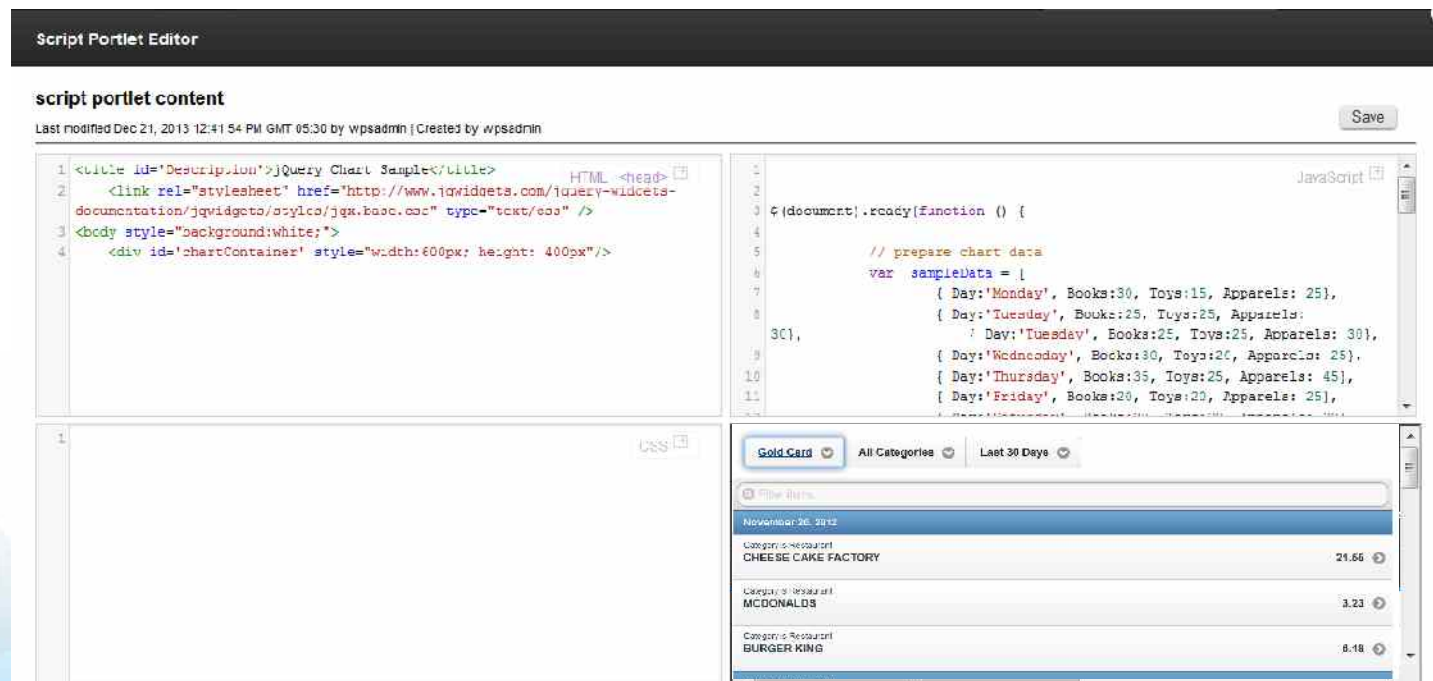
# Roles

- Power Users of the Business can ...
  - take what they get from central IT and change the user experience via HTML, CSS and Script
  - take scripts they find on other sites and bring them into their sites by cut&paste
  - make these changes within a WCM project and preview in context before publishing
- IT can ...
  - check what is being published for security and other issues before it goes live via WCM workflow approval



# The Javascript Editor (as Authoring Template)

- Syntax highlighting
- Auto indentation and outdent
- Handles huge documents (hundreds of thousands of lines) without trouble
- Customizable key bindings including Vi and Emacs modes
- A wide range of language modes
- Add-ons for autocompletion, code folding, integrated linting
- A broad programming API

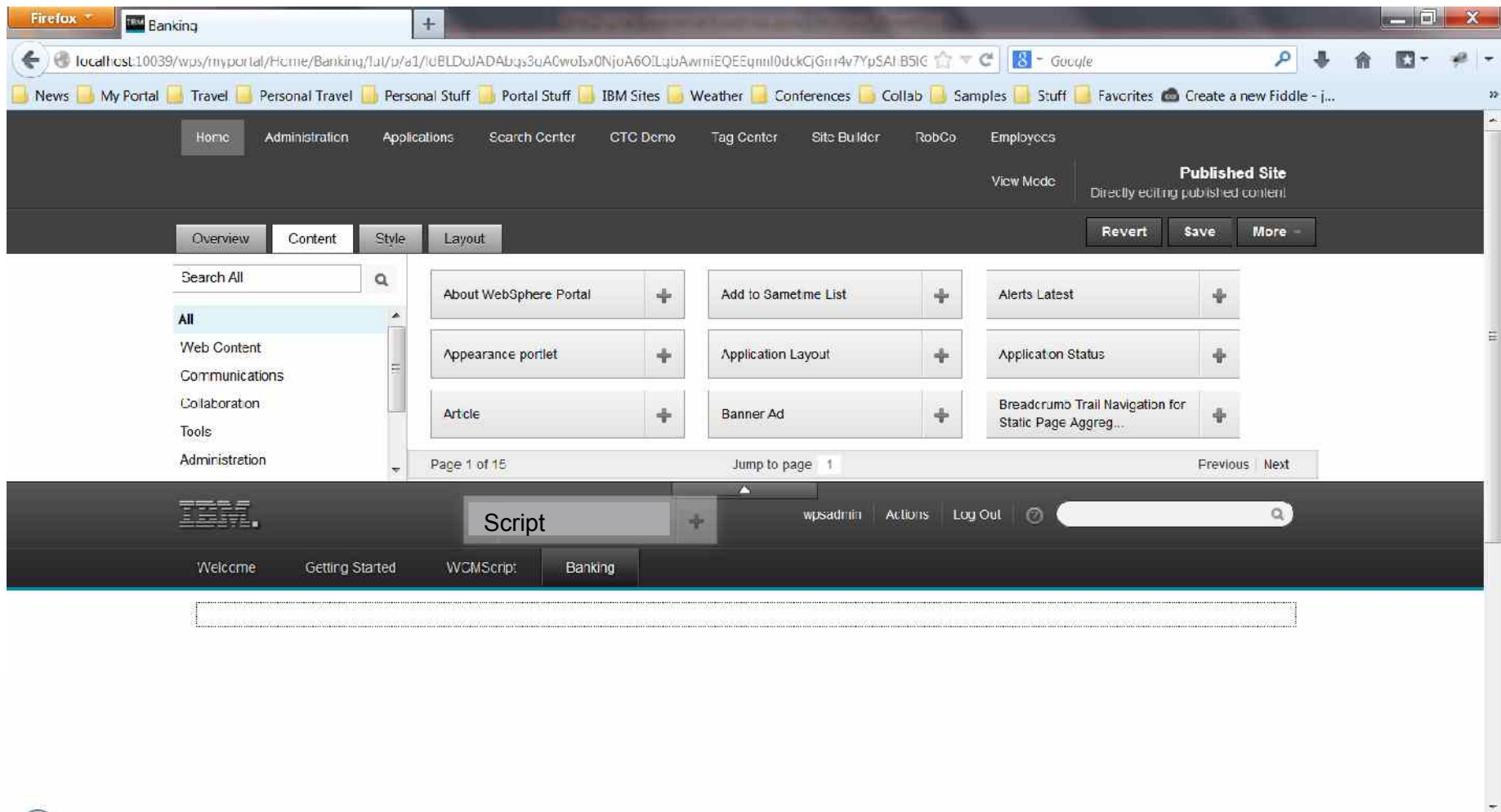


# Some Features you can use when programming your Script

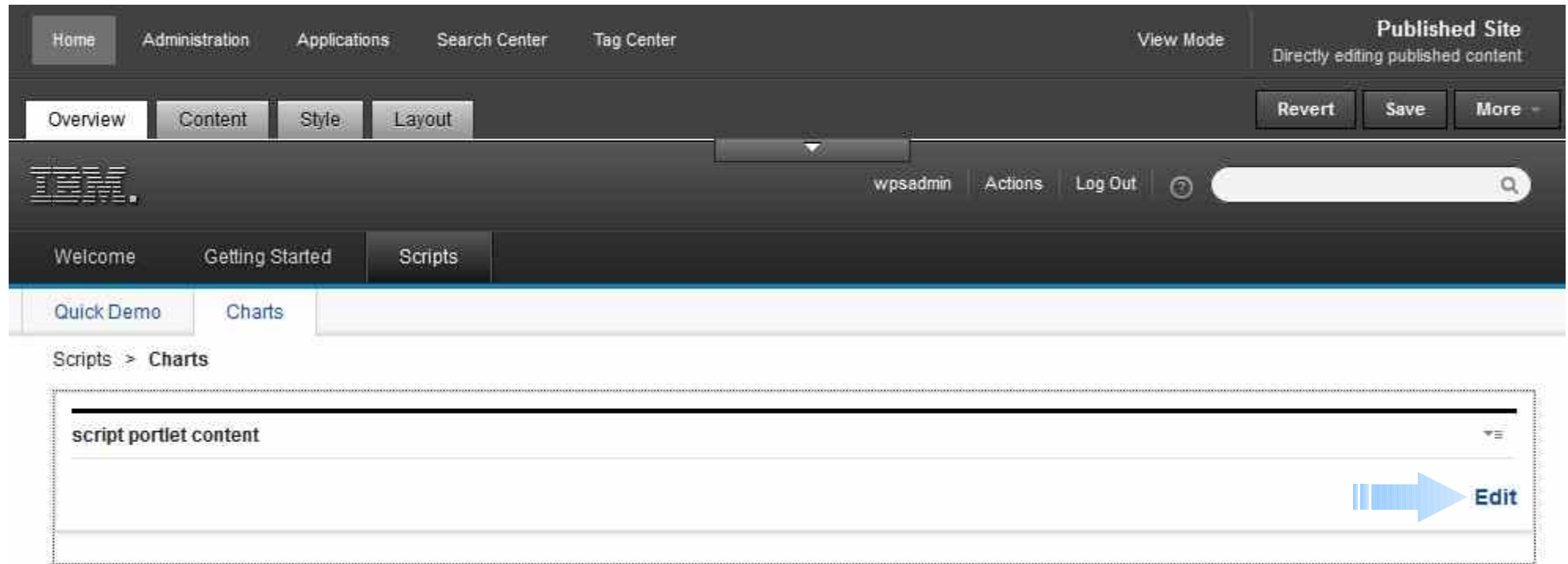
- Inter portlet communications
- Portlet preferences
- Responsive Design and Adaptive Design (conditional rendering)
- Live Text
- Process integration
- Mix and match with existing and new portlets written in RAD or WEF on a page and share context between them
- WEF data builders - these can emit XML or JSON already, so i can leverage all the existing WEF data builders for enterprise integration
- Content targeting
- Create libraries of data, CSS, script and mark up snippets and easily link to them from within the WCM UI
- Projects and approval
  - Code reviews and checks in place by subject matter experts
  - modify the script and test it live without breaking anyone else
  - business and/or IT for approval before it goes live



# A UI Component like any other ..



# Go into Edit mode



The screenshot displays the IBM Social Business administration interface. The top navigation bar includes links for Home, Administration, Applications, Search Center, and Tag Center. A 'View Mode' dropdown is set to 'Published Site', with a subtitle 'Directly editing published content'. Below this, a secondary navigation bar shows 'Overview', 'Content', 'Style', and 'Layout' tabs. The main content area features the IBM logo, a user profile for 'wpsadmin', and links for 'Actions' and 'Log Out'. A search bar is also present. The left sidebar contains a 'Scripts' section with 'Quick Demo' and 'Charts' links. The main content area shows a breadcrumb trail 'Scripts > Charts' and a 'script portlet content' area. A large blue arrow points to an 'Edit' button, indicating the next step to enter edit mode.

## Script Portlet Editor

## script portlet content

Last modified Dec 21, 2013 12:41:54 PM GMT 05:30 by wpsadmin | Created by wpsadmin

HTML

```
1 <title id='Description'>jQuery Chart Sample</title>
2 <link rel="stylesheet" href="http://www.jqwidgets.com/jquery-widgets-
  documentation/jqwidgets/styles/jqx.base.css" type="text/css" />
3 <body style="background:white;">
4 <div id='chartContainer' style="width:600px; height: 400px"/>
```

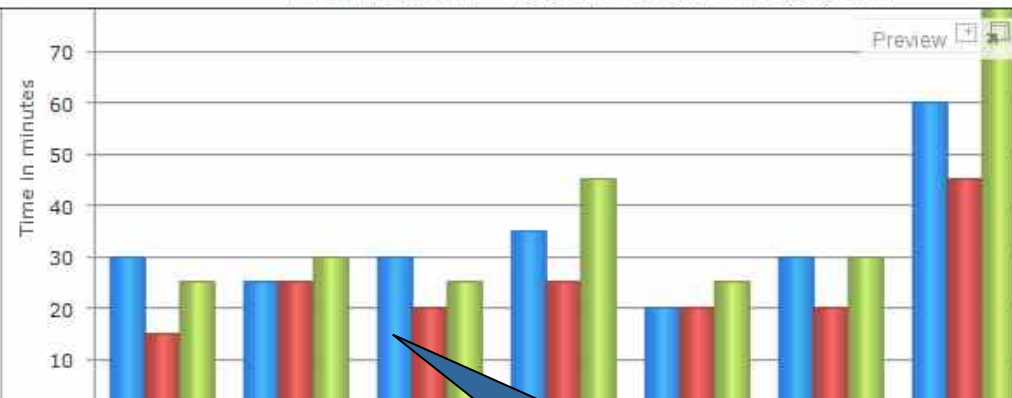
JavaScript

```
1
2
3 $(document).ready(function () {
4
5     // prepare chart data
6     var sampleData = [
7         { Day:'Monday', Books:30, Toys:15, Apparels: 25},
8         { Day:'Tuesday', Books:25, Toys:25, Apparels:
9           30},
10        { Day:'Wednesday', Books:30, Toys:20, Apparels: 25},
11        { Day:'Thursday', Books:35, Toys:25, Apparels: 45},
12        { Day:'Friday', Books:20, Toys:20, Apparels: 25},
13        { Day:'Saturday', Books:30, Toys:20, Apparels: 30},
14        { Day:'Sunday', Books:30, Toys:20, Apparels: 30}
```

CSS

CSS

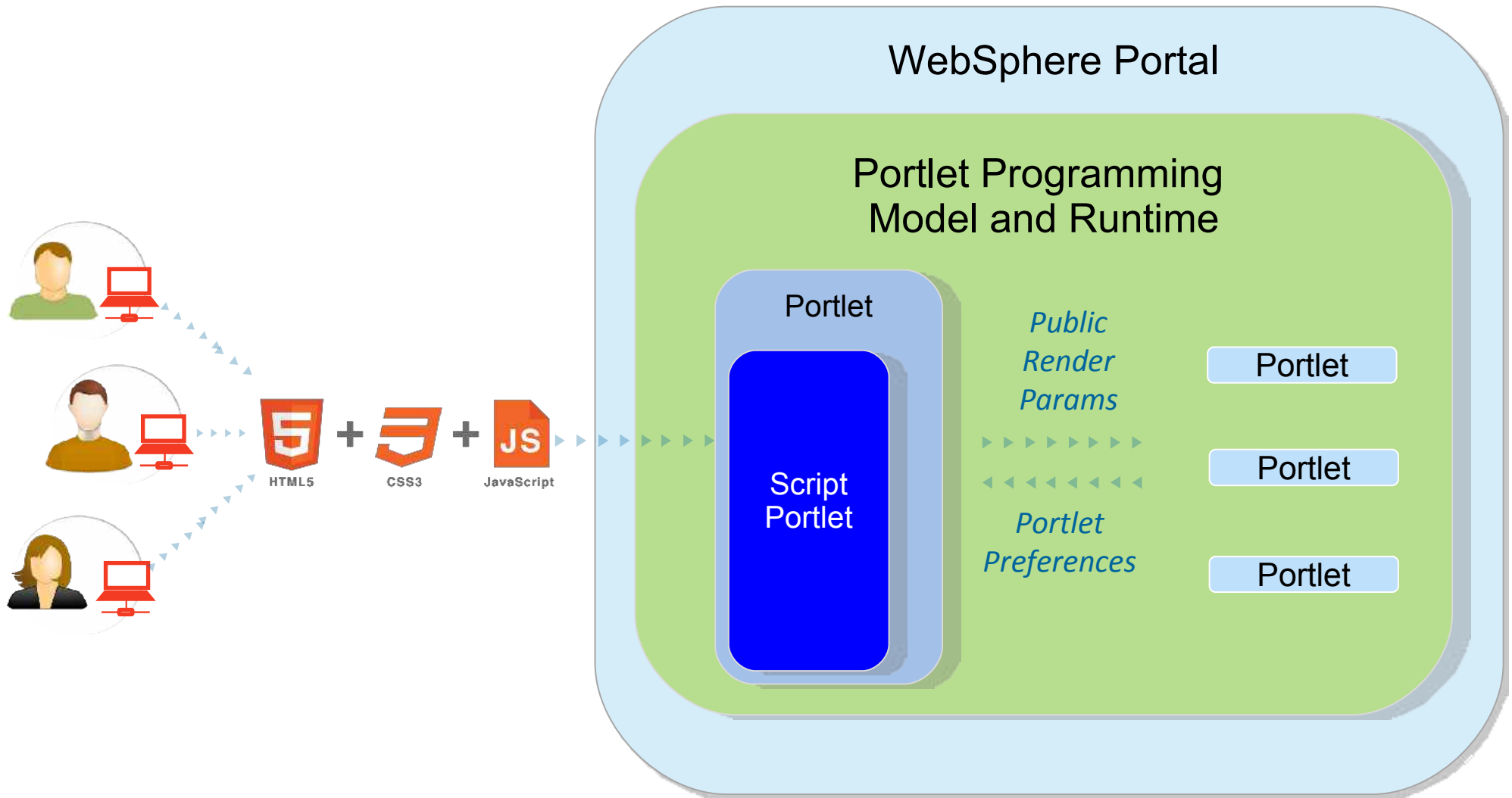
Preview



Preview

# The Result





**Web  
Development**

*Abstraction*

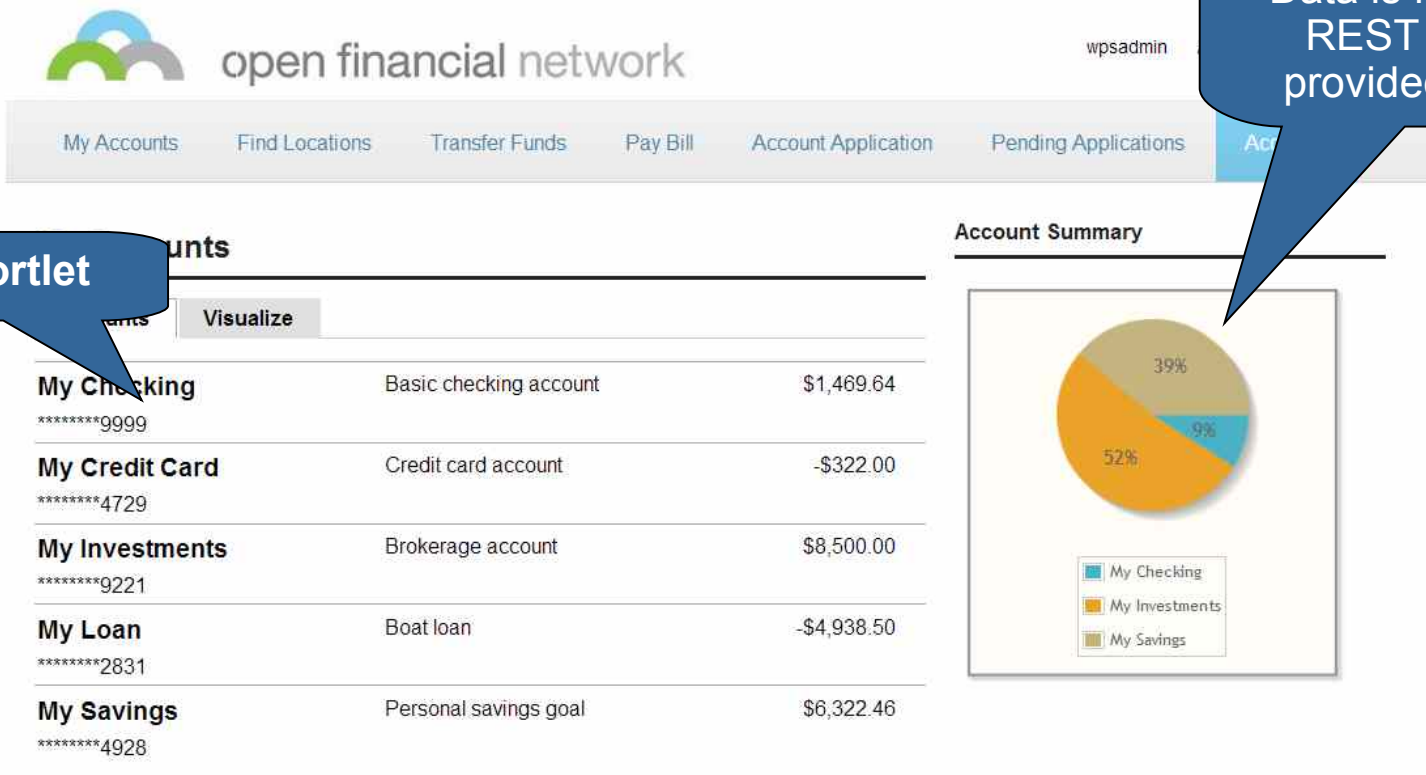
**Portal  
Runtime**

# Demo



# Script Portlets are first-class Portal citizens and play well with others

- Your Portal site can combine Script Portlets with any other portlets built with WEF, RAD, or other tools
- Portlets can communicate (e.g., with Public Render Parameters or JS/jQuery events) and share styling



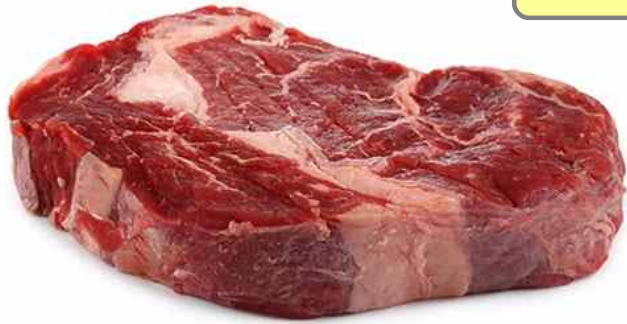
## How Script Portlet fits with WEF and RAD tools

- The Script Portlet Editor does not replace WEF and RAD!
  - It is complementary to those IDE-based tools
- With the Script Portlet you get the unique benefits of cloud-based development and WCM management of ad-hoc “UI Components” on a Portal page
- With RAD or WEF you get the unique benefits those frameworks provide:
  - WEF uses a model-based code generation approach using “builders,” for rapid development and multiple variations from a single model
  - RAD includes a very rich set of capabilities for JEE development like JSF, with WYSIWYG and drag/drop tools for UI development



# Why we need two kinds of Programming Approaches

J2EE



## Core Functionality:

Essential customer value (“Signature Feature”)

- Main purpose of this web site
- Produced and managed by IT (developed and staged)
- Developed in multiple steps by multiple teams
- Classic Coding, J2EE/JSR286, Eclipse, RAD, WEF
- Quality of Service, certified
- Expensive, but long lasting

*“Cooking” skills needed. Keep in mind:  
it takes a while to turn a cow into a steak*

XDX



## Additional Features:

Key creative value (“Exceptional digital experience”)

- Distinguishing, competitive differentiator
- Created and added on the fly by line of business (authoring)
- Prepared instantly by instantiating IT assets (portlets) and adding self-created add-ons (content, widgets, ...)
- Authoring, Wysiwyg, inline editing, drag&drop, rules, scripting, HTML, FEB, HTML, CSS,
- [DDC](#), [WAB](#), [Javascript Portlet](#), [Rendering Portlet](#)...
- Cost effective, highly dynamic and adaptive
- Easy to change frequently
- Contextual, aggregated, and targeted to individual customer

*Prepared rather than cooked. This is the fine “art”  
of fresh and individual composition*



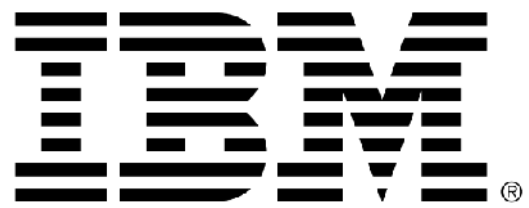
## What about server-side portlets and all the existing tools?

- Script Portlets are powerful additions to your web site
- But: Server-side portlets are not going away!
- They work very well and will continue to be used by many, many customers
- The tools and frameworks for server-side portlets are very rich and mature, and continue to be enhanced
- WEF and RAD roadmaps include continued enhancements for server-side applications, and for combining server-side with JavaScript in various ways



# Resources

- Download from Greenhouse Solution Catalog here
  - <https://greenhouse.lotus.com/plugins/plugincatalog.nsf/assetDetails.xsp?action=editDocument&documentId=DDB5C467D991413285257C67002476E0>
- Script Portlet community on w3: <http://ibmurl.hursley.ibm.com/47QC>
- Charts, demos etc are posted in this community



**Legal Disclaimer**

IBM Corporation 2013. All Rights Reserved.

The information contained in this publication is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this publication, it is provided AS IS without warranty of any kind, express or implied. In addition, this information is based on IBM's current product plans and strategy, which are subject to change by IBM without notice. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this publication or any other materials. Nothing contained in this publication is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software.

References in this presentation to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in this presentation may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. Nothing contained in these materials is intended to, nor shall have the effect of, stating or implying that any activities undertaken by you will result in any specific sales, revenue growth or other results.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.

All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics may vary by customer.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both. Other company, product, or service names may be trademarks or service marks of others.

All references to Open Financial Network refer to a fictitious company and are used for illustration purposes only.

All references to Your City refer to a fictitious government and are used for illustration purposes only.

