

# 5 Pillars of a Successful Java Web Application

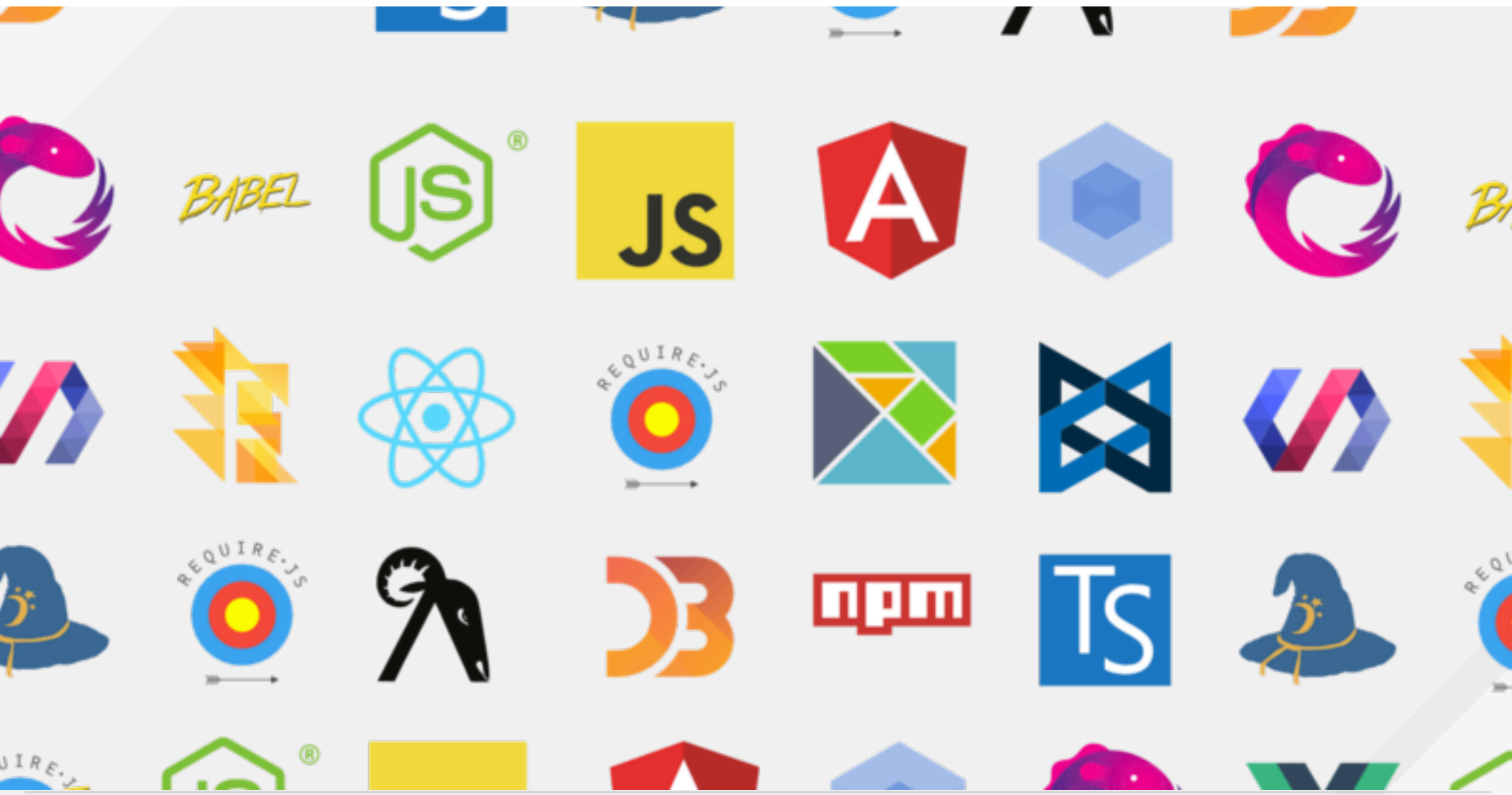
Eder Ignatowicz  
Sr. Software Engineer @ Red Hat

Alex Porcelli  
Principal Software Engineer @ Red Hat



**Which backend architecture?**

And what about front-end?



# Javascript Development is complex

Web Javascript  
development is complex

Web development  
will stay complex



# Shadow DOM v0 - WD

Global 69.05%  
unprefixed: 63.57%

Method of establishing and maintaining functional boundaries between DOM trees and how these trees interact with each other within a document, thus enabling better functional encapsulation within the DOM.

Current aligned	Usage relative	Date relative	Show all	IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Chrome for Android
							49						
							55			9.3		4.4	
	14	1			51	56	10	43	10.2			4.4.4	
11	15	1			52	57	10.1	44	10.3	all		56	57
		1			53	58	TP	45					
		1			54	59		46					
		1			55	60							



# KIE Group

Open source projects for business systems automation and management.



Drools 5 introduces the **Business Logic integration Platform** which provides a unified and integrated platform for **Rules, Workflow and Event Processing**. It's been designed from the ground up so that each aspect is a first class citizen, with no compromises.

Drools team



**jBPM is a flexible Business Process Management (BPM) Suite**. A business process allows you to model your business goals by describing the steps that need to be executed to achieve those goals, and the order of those goals are depicted using a flow chart...

jBPM team



**OptaPlanner optimizes business resource usage**. Every organization faces planning problems: provide products or services with a limited set of constrained resources. OptaPlanner optimizes such planning to do more business with less resources...

Optaplanner team



**UberFire is a web based workbench framework inspired by Eclipse Rich Client Platform**. This is a very strategic project for Drools & jBPM team, once this is the base technology for our next generation of web tooling.



**Dashbuilder is a full featured web application for the visual composition of custom business dashboards**. Data comes from heterogeneous sources of information such as JDBC databases or regular text files and can be displayed using different charting libraries.

# Which web stack?

Which web architecture  
best fits for this problem?

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years Life-Span

Interoperability

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years Life-Span

Interoperability

# Large Scale Application

1mi+ lines of web code

5 projects

~150 subprojects

~30 devs

Code base of 7+ years



# Large Scale Application

## Static Typing

# Large Scale Application

## Refactoring

# Large Scale Application

The screenshot shows an IDE window with the following components:

- Project Structure:** A tree view on the left showing a project named 'uberfire' with sub-projects 'uberfire-extensions' and 'uberfire-apps'. Under 'uberfire-apps', there is 'uberfire-apps-client' containing 'src', 'main', 'java', and 'org'. The 'org' folder contains 'uberfire', 'ext', 'apps', 'client', and 'home'. The 'home' folder contains 'AppsHomePresenter'.
- Code Editor:** The main window displays 'PlaceManager.java' with the following code:

```
41 //**  
42 * A Workbench-centric abstraction over the browser's history mechanism. Allows the application to initiate  
43 * to any displayable thing: a {@link WorkbenchPerspective}, a {@link WorkbenchScreen}, a {@link WorkbenchPo  
44 * {@link WorkbenchEditor}, a {@link WorkbenchPart} within a screen or editor, or the editor associated with  
45 * located at a particular {@link Path}.  
46 */  
47 @JsType  
48 public interface PlaceManager {  
49  
50     @JsMethod(name = "goToId")  
51     void goTo(final String identifier);  
52  
53     @JsMethod(name = "goToPlace")  
54     void goTo(final PlaceRequest place);  
55  
56     @JsMethod(name = "goToPath")  
57     void goTo(final Path path);  
58  
59     @JsMethod(name = "goToPathAndPlace")  
60     void goTo(final Path path,  
61     ...
```
- Find Usages:** A panel at the bottom shows the results of a search for 'goTo(String)'. It lists 'Found usages (4 usages)' under 'Method'. The first usage is '(162: 30) placeManager.goTo(parameter);' in 'uberfire-preferences-ui-client (1 usage)'. Other usages are in 'uberfire-apps-client' and 'uberfire-ext.apps.client.home'.
- Status Bar:** At the bottom, it shows 'Compilation completed successfully with 20 warnings in 16s 389ms (today 15:34)'. On the right, it shows '4 chars', '51:12', 'LF', 'UTF-8', 'Git: master', and 'Event Log'.

# Large Scale Application

## JavaScript Transpilers

# Large Scale Application

← → ↻ GitHub, Inc. [US] <https://github.com/jashkenas/coffeescript/wiki/List-of-languages-that-compile-to-JS> 🔍 ☆ 🌙 🗂️ 🔄 🏠 🌐 📄 ⋮

[Dojo Secure](#) Framework for building secure mashups.

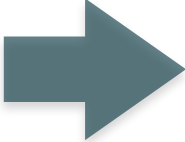
### Static typing

**NOTE:** Some of the projects listed below are also statically typed, such as `mobl`, `GWT`, `JSIL`, `NS Basic`, and `Haxe`.

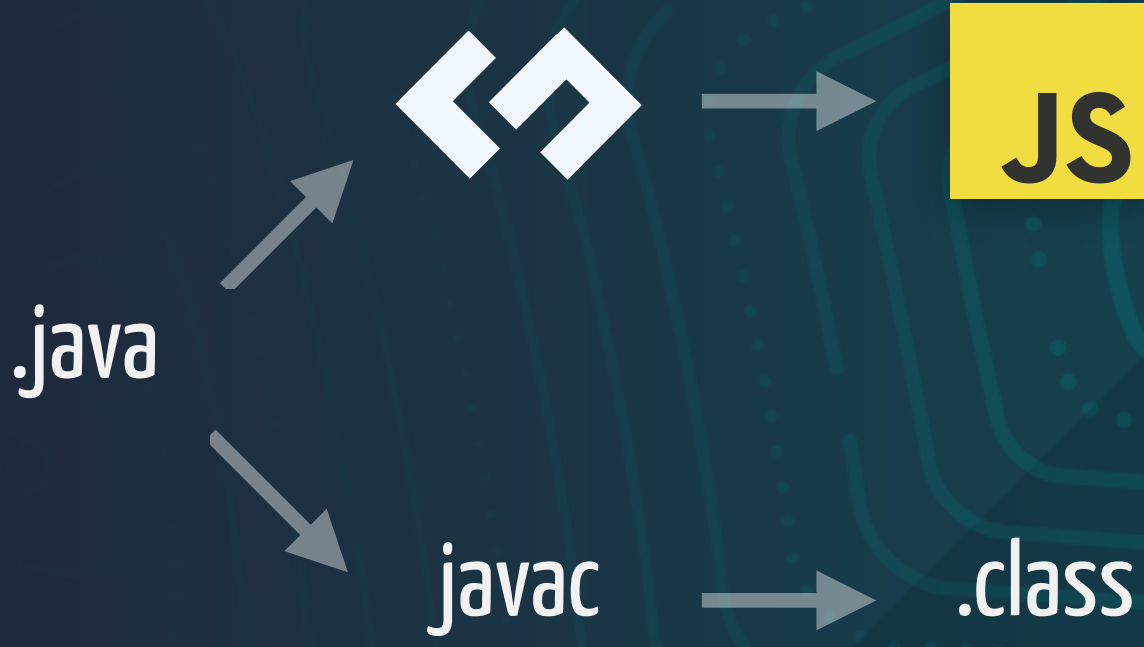
Name	Description
<a href="#">Dart</a>	C/Java-like syntax with optional typing by Google.
<a href="#">TypeScript</a>	Typed superset of JavaScript by Microsoft.
<a href="#">TeJaS</a>	From Brown PLT. Types for JavaScript (itself).
<a href="#">asm.js</a>	Subset of JavaScript that can be used as a low-level, efficient target language for compilers. Now included in Firefox.
<a href="#">JavaScript++</a>	JavaScript superset with classes, type checking, among other features
<a href="#">Mascara</a>	[commercial] Enhances JavaScript with powerful features like classes, namespaces and type-checking.
<a href="#">Roy</a>	Tries to meld JavaScript semantics with some features common in static functional languages
<a href="#">Elm</a>	Type-safe functional language that compiles to HTML, CSS, and JavaScript.
<a href="#">Swym</a>	Statically typed, with type inference and generics
<a href="#">Typecast.js</a>	JavaScript platform for statically typed variables without a custom compiler.
<a href="#">PureScript</a>	A small, strongly typed programming language that compiles to JavaScript and C++, featuring extensible records and effects, and type classes.
<a href="#">Flow</a>	Static type checker for JavaScript, supports optional types and null checks by Facebook.
<a href="#">ActionScript</a>	With Apache FlexJS - Based on ECMAScript 4, ActionScript provides typing and can be compiled to JavaScript.

### Synchronous to Asynchronous JavaScript Compilers (CPS)

Name	Description
<a href="#">Streamline.js</a>	Uses underscore ( <code>_</code> ) to stand for callbacks. This <a href="#">fork</a> preserves line numbers for debugging.



# Large Scale Application





**GWT**



Google Web Toolkit especialmente para o QC

Presented by **HOT** Errai **HOT** Uberfire **HOT** App Former

http://redhat.com

Submit

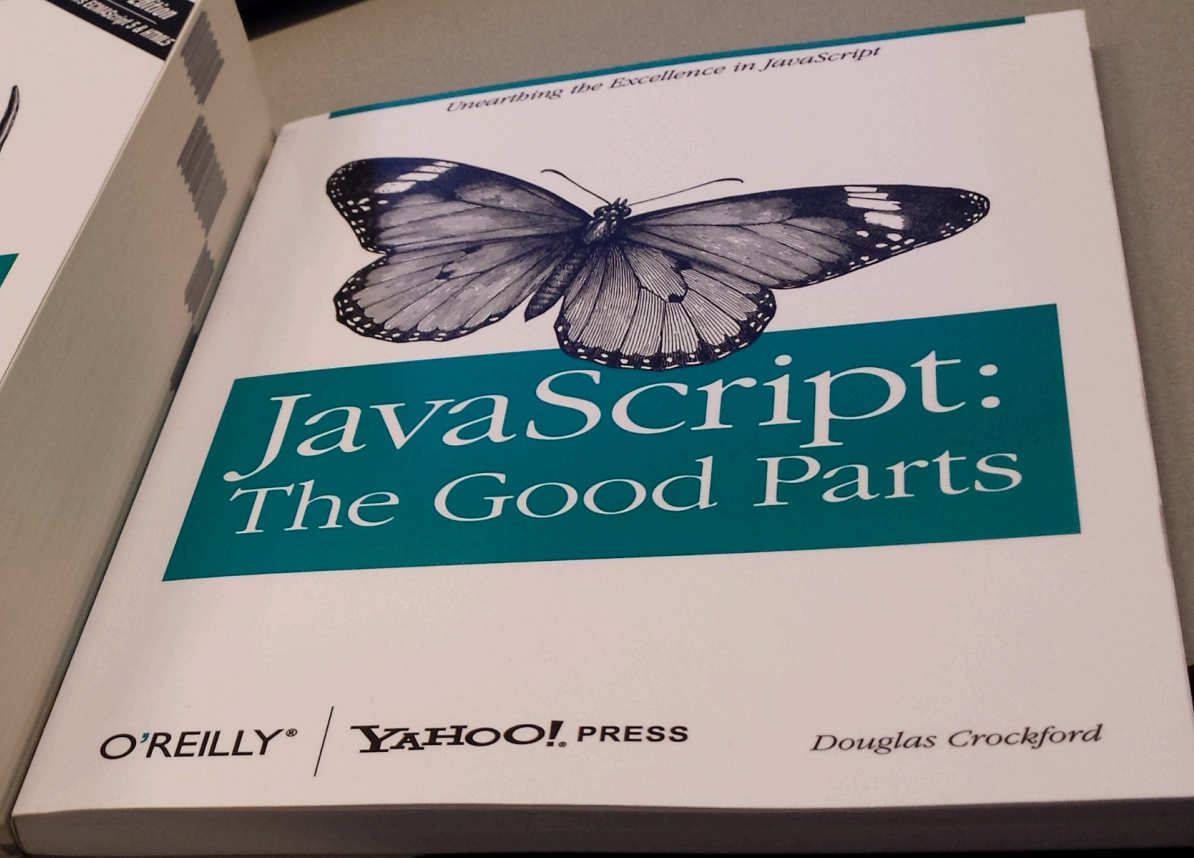
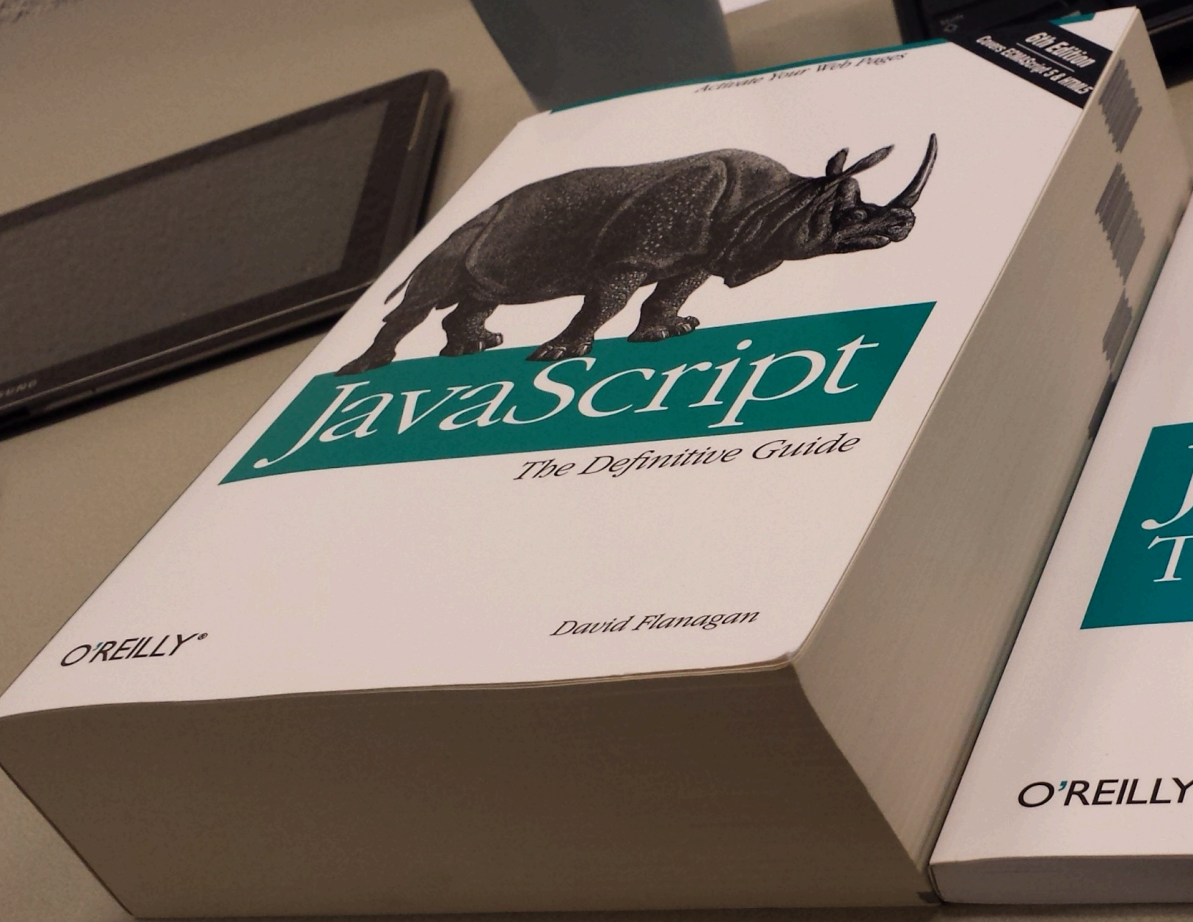
Some pages may work very slowly or not all. Many webapps are just too advanced for GWT.

Created by [Eder Ignatowicz](#)

Have a problem? [Contact us](#)











**GWT**

---

# The Good Parts

# GWT • Good Parts

## Java to JavaScript

# GWT • Good Parts

java.\* emulation

# GWT • Good Parts

JS Interop

## Java

```
@JsType(isNative = true)
public abstract class JQuery {

    @JsMethod(namespace=GLOBAL)
    public native static JQuery $(String selector);

    public native JQuery css(String prop, String val);

    public native JQuery attr(String name, String val);
}
```

## Java

```
import static jquery.JQuery.$;
// ...
$("ul > li").css("color", "red").attr("data-level", "first");
```

## Java

```
package foo;

@JsType
public class Dora {
    public boolean late = true;
    public Dora() {}
    public String auAu() { return "Hello QCon!";}
}
```

## JavaScript

```
var dora = new foo.Dora();
if (dora.late) {
    alert(dora.auAu());
}
```



# Large Scale Application

## Refactoring

# 5 pillars:

Large scale application

**Full stack Developers**

UX Integration

5~10 years Life-Span

Interoperability

# Devs Full Stack

## Shared Programming Model

# Devs Full Stack

“Java EE” in browser

# Devs Full Stack

## CDI-Lite



# CDI @ Browser

```
@ApplicationScoped  
public class ProjectsView {  
  
    @Inject  
    Document document;  
  
    @Inject  
    @DataField( "projects-view" )  
    Div view;  
  
    @Inject  
    @DataField( "new-project" )  
    Button newProject;  
  
    @Inject  
    @DataField( "projects-list" )  
    UnorderedList projectsList;  
  
    @Inject  
    Instance<ProjectItem> projects;  
}
```



# CDI no Browser

```
if (!filter.doFilter(event)) {  
    ...  
    if (event.kind().equals(StandardWatchEventKind.ENTRY_ADD)) {  
        resourceAddedEvent.fire(buildEvent(ResourceAddedEvent.class,  
            event).getK2());  
    }  
    ...  
}
```

# CDI no Browser

```
public void onNewFile(@Observes ResourceAddedEvent event) {  
    Window.alert("ResourceAddedEvent:" +  
        event.getPath().toURI() +  
        " [" + event.getMessage() + "]);  
}
```

# CDI no Browser

127.0.0.1:8888/index.html#Perspective%20Editor?path\_uri=default://master@plugins/Afdfd/perspective\_layout.plugin&file\_name=perspective\_layout.plugin&has\_version\_support=true&name=Afdfd

Paused in debugger

New Perspective Layout Plugin...

Name: QConPerspective

+ Ok Cancel

Plugin Explorer

- PERPECTIVE PLUGIN
- △
- AA
- AAf
- AdminPagePerspective
- Afdfd
- AppsPerspective
- Dashboard
- Home
- PluginAuthoringPerspective

Elements Console Sources Network Timeline Profiles Application Security Audits SnappySnippet AdBlock

PlaceManagerImpl.java PerspectiveEdit...Presenter.java PluginAuthoring...rspective.java x

```
65  
66 private PerspectiveDefinition buildPerspective() {  
67     final PerspectiveDefinitionImpl perspective = new PerspectiveDefinitionImpl(  
68         MultiListWorkbenchPanelPresenter.class.getName());  
69     perspective.setName("Plugin Authoring");  
70     return perspective;  
71 }  
72  
73 public void onNewFile(@Observes ResourceAddedEvent event) {  
74     Window.alert("ResourceAddedEvent:" + event.getPath().toURI() +  
75         "[" + event.getMessage() + "];");  
76 }  
77  
78 }
```

{ } Line 74, Column 1

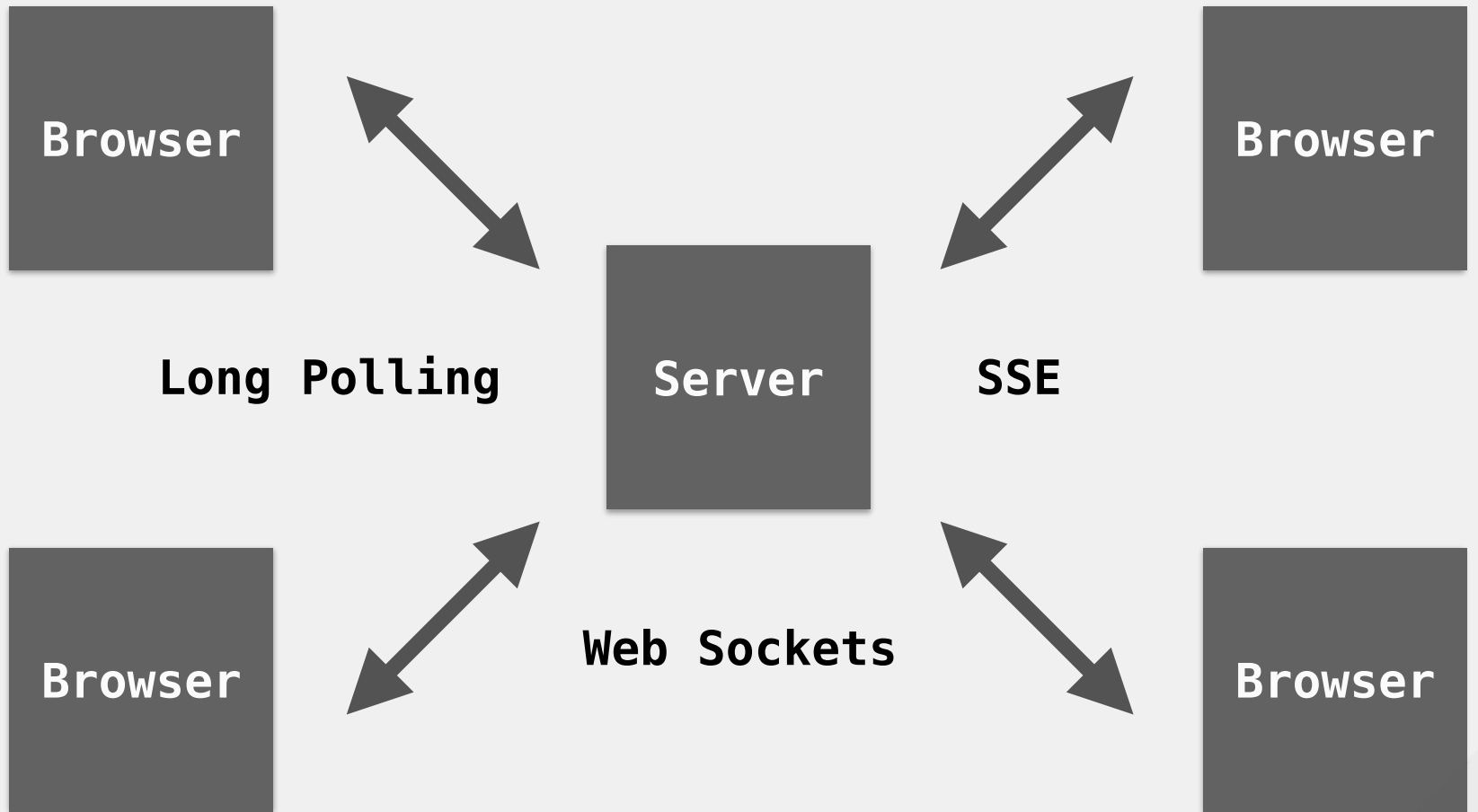
Paused on breakpoint

Watch

Call Stack

- OOt\_g\$ PluginAuthoring...ective.java:74
- MOt\_g\$ Type\_factory\_o...fault.java:121
- LOt\_g\$ Type\_factory\_o...fault.java:119
- t\$j\_g\$ AbstractCDIEven...llback.java:60
- u0j\_g\$ CDI.java:329
- k0j\_g\$ CDI.java:317
- q0j\_g\$ CDI.java:302
- K0j\_g\$ CDI.java:85

# ERRAI BUS



# Devs Full Stack

## Shared Programming Model

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years Life-Span

Interoperability

```

<form action="orderResult.jsp" method="POST">
  <h3>Pizza Types</h3>
  <div>
    <ul>
      <% for ( Pizza pizza : pizzaTypes ) { %>
      <li>
        <input type="radio" name="pizzaTypeOptions" value="<%=pizza.getName()%" checked />
        <span class="pizzaType"><%=pizza.getName()%></span>
        <span class="pizzaPrice"><%=pizza.getPrice()%>$</span>
      </li>
      <% } %>
    </ul>
  </div>
  <h3>Size</h3>
  <h3>Extra Toppings</h3>
  <div class="section group">
    <% for ( int j = 0; j < 3; j++ ) { %>
    <div class="col span_1_of_3">
      <ul class="ul_2">
        <% for ( int i = sliceSize * j; i < ( j + 1 ) * sliceSize; i++ ) { %>
        <li class="li_2">
          <input type="checkbox" name="pizzaToppings" value="<%=pizzaToppings.get( i )%>"/>
          <%=pizzaToppings.get( i )%>
        </li>
        <% }
        if ( j == 0 && remainder > 0 ) {
          %>
          <li class="li_2">
            <input type="checkbox" name="pizzaToppings" value="<%=pizzaToppings.get( pizzaToppings.size() - 2 )%>"/>
            <%=pizzaToppings.get( pizzaToppings.size() - 2 )
          </li>
          <% } else if ( j == 1 && remainder > 1 ) { %>
          <li class="li_2">
            <input type="checkbox" name="pizzaToppings" value="<%=pizzaToppings.get( pizzaToppings.size() - 1 )%>"/>
            <%=pizzaToppings.get( pizzaToppings.size() - 1 )%>
          </li>
          <% } %>
        </ul>
      </div>
      <% } %>
    </div>
    <h4>Each extra topping is 0.65$</h4>
    <input type="submit" value="Order"/>
  </form>

```

```
<h1>{{title}}</h1>
<h2>My favorite hero is: {{myHero}}</h2>
<p>Heroes:</p>
<ul>
  <li *ngFor="let hero of heroes">
    {{ hero }}
  </li>
</ul>
```



```
<div>
  <ul class="list-group" data-field="projects-list">
  </ul>
  <button type="button" class="btn" data-field="new-project">
    <i class="fa fa-plus"></i> New Project
  </button>
</div>
```

```
@Dependent
@Templated
public class ProjectsView {

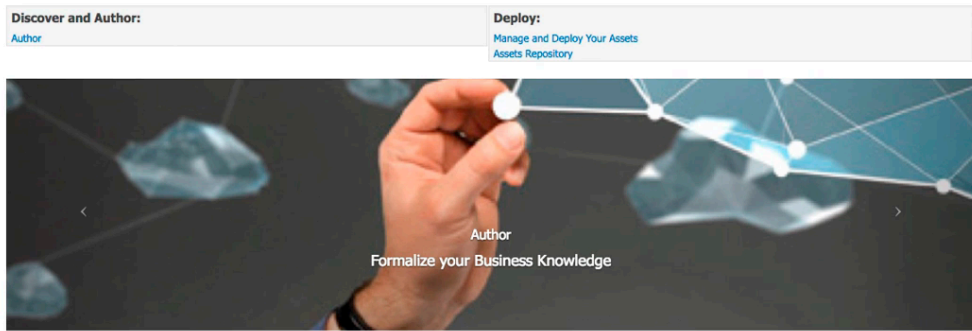
    @Inject
    @DataField( "projects-view" )
    Div view;

    @Inject
    @DataField( "new-project" )
    Button newProject;

    @Inject
    @DataField( "projects-list" )
    UnorderedList projectsList;

}
```

### The KIE Knowledge Development Cycle



```

<!-- Masthead -->
<nav class="navbar navbar-default navbar-pf ">
  <div class="navbar-header ">
    <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse-2">
      <span class="sr-only">Toggle navigation</span>
      <span class="icon-bar"></span>
      <span class="icon-bar"></span>
      <span class="icon-bar"></span>
    </button>
    <a href="/" class="navbar-brand">
      
    </a>
  </div>

  <div class="collapse navbar-collapse navbar-collapse-2">


    <ul class="nav navbar-nav "><!-- navbar-ionic -->
      <li class="dropdown">
        <a class="dropdown-toggle nav-item-ionic" id="dropdownMenu2" data-toggle="dropdown" aria-haspopup="true" aria-expanded="true">
          Home
          <span class="caret"></span>
        </a>
        <ul class="dropdown-menu" aria-labelledby="dropdownMenu2">
          <li><a href="#">Design</a></li>
          <li><a href="#">Processes & Tasks</a></li>
          <li><a href="#">Runtime</a></li>
          <li><a href="#">Settings</a></li>
        </ul>
      </li>
    </ul>

    <ul class="nav navbar-nav navbar-right">
      <li class="dropdown">
        <a class="dropdown-toggle nav-item-ionic" id="notifications" data-toggle="dropdown" aria-haspopup="true" aria-expanded="true">
          <span title="Notifications" class="fa pficon-warning-triangle-o"></span>
          Messages: 0
        </a>
        <div class="dropdown-menu infotip bottom-right">
          <div class="arrow"></div>
          <ul class="list-group">
            <li class="list-group-item">
              <span class="i pficon pficon-info"></span> Modified Datasources ExampleDS
            </li>
            <li class="list-group-item">
              <span class="i pficon pficon-info"></span> Error: System Failure
            </li>
          </ul>
          <div class="footer">
            <a>Clear Messages</a>
          </div>
        </div>
      </li>
      <li class="dropdown">
        <a class="dropdown-toggle nav-item-ionic" id="dropdownMenu2" data-toggle="dropdown" aria-haspopup="true" aria-expanded="true">
          <span title="Username" class="fa pficon-user"></span>
          Brian Johnson
          <span class="caret"></span>
        </a>
        <ul class="dropdown-menu" aria-labelledby="dropdownMenu2">

```

...

← → 127.0.0.1:8888/drools-wb.html#HomePerspective%7Corg.kie.workbench.common.screens.home.client.HomePresenter

KIE IDE  Menu ▾ ? ⚙️ 📄 👤 admin ▾

## Welcome to KIE Workbench

KIE Workbench offers a set of flexible tools, that support the way you need to work. Select a tool below to get started.

### Design

Create and modify [projects](#) and [dashboards](#).

### DevOps

Administer [deployments](#) and [servers](#).

# UX Integration

Leave the HTML/CSS in peace

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years Life-Span

Interoperability





# Architecture

Hexagonal Architecture - Alistair Cockburn

Onion Architecture - Jeffrey Palermo

DCI - James Coplien e Trygve Reenskaug.

BCE - Ivar Jacobson

Clean Architecture - Robert C. Martin

# Principles

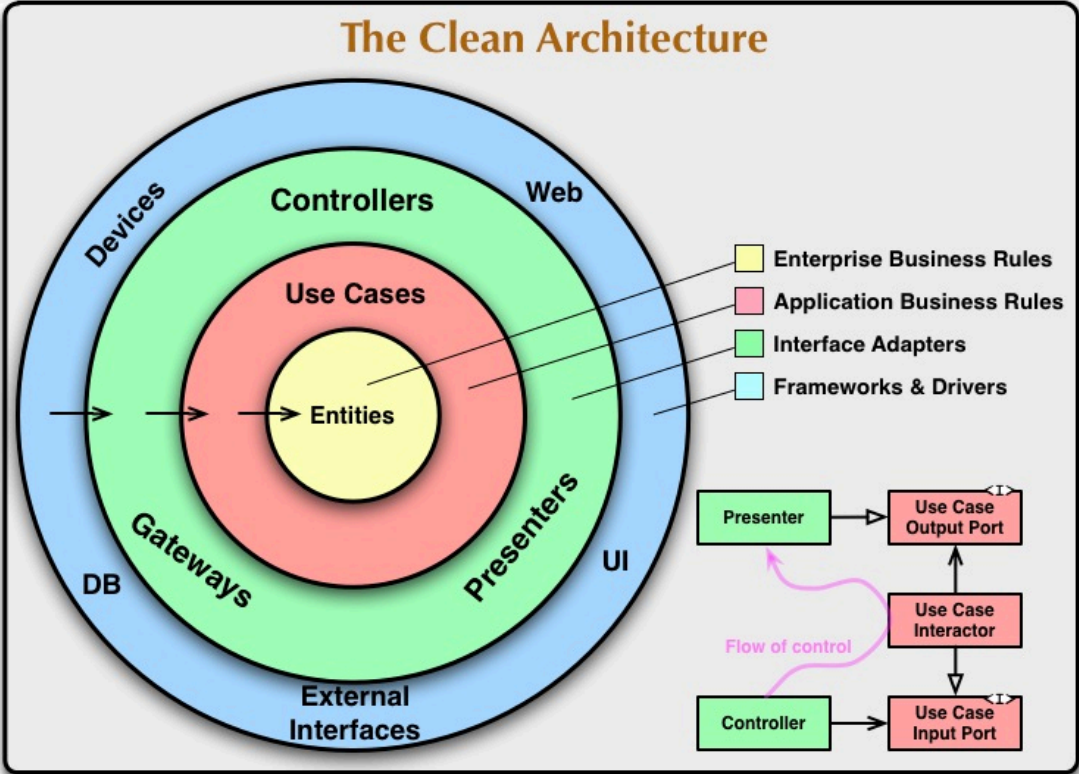
Decoupled from Frameworks

Testable

Decoupled from UI

Decoupled from Database

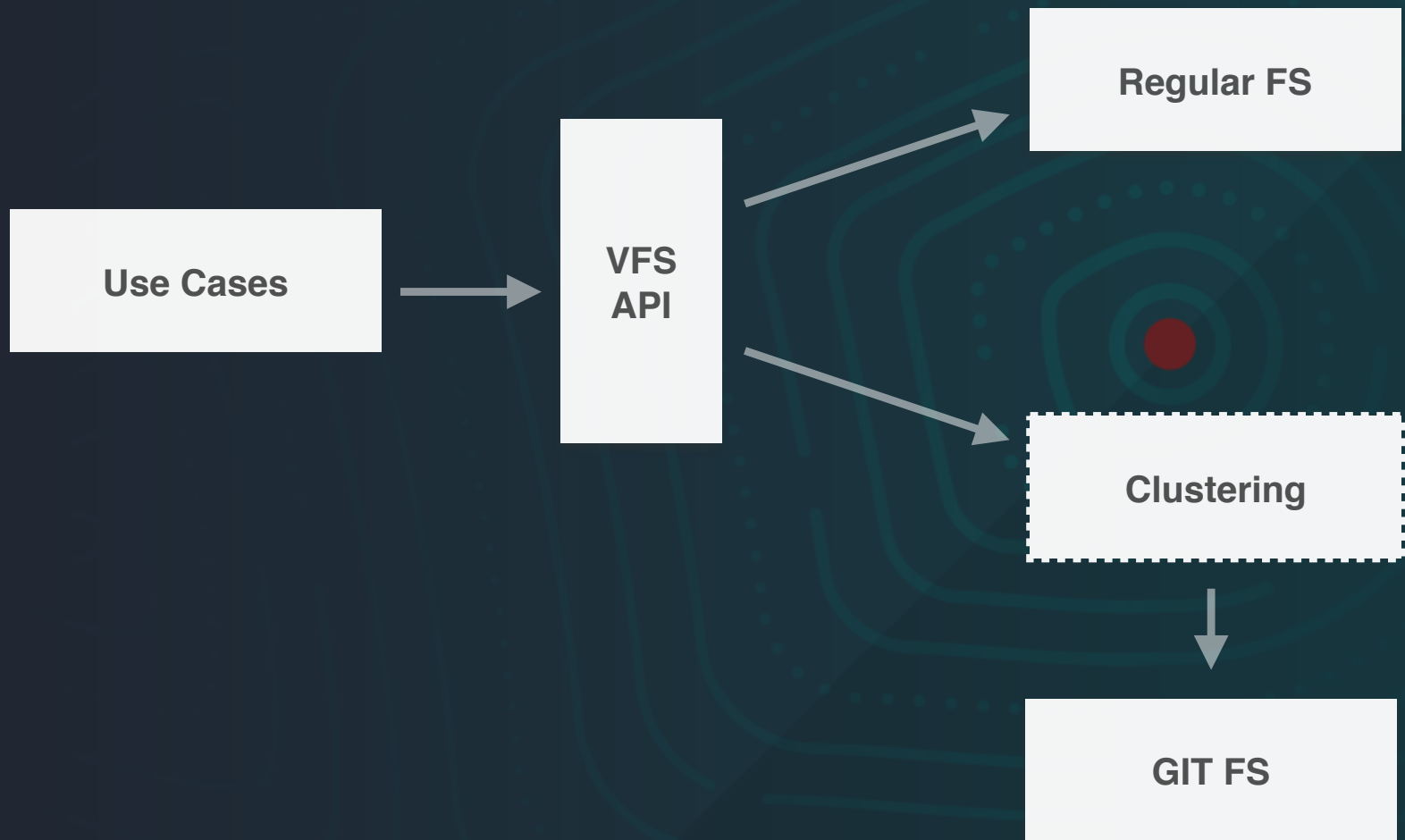
Independent of external systems



“Architecture is about intent.  
We have made it about  
frameworks and details”

Robert C. Martin

# APPFORMER VFS





Project Explorer

<default> > mortgages > mortgages

DRL

DATA OBJECTS

DOMAIN SPECIFIC LANGUAGE DEFINITIONS

ENUMERATION DEFINITIONS

GUIDED DECISION TABLES

Pricing loans

GUIDED RULES

GUIDED RULES (WITH DSL)

TEST SCENARIOS

Pricing loans.gdst - Guided Decision Tables

Save Delete Rename Copy Validate Edit View Insert Latest Version

Editor Overview Source Data Objects

Add Column Edit Columns

Pricing loans		application : LoanApplication				ome : IncomeSou	application		
#	Description	amount min	amount max	period	deposit max	income	Loan approved	LMI	rate
1		131000	200000	20	20000	Job	true	0	2
2		10000	100000	20	2000	Job	true	0	4
3		100001	130000	20	3000	Job	false	5	6
4		100001	130000	20	3000	Job	true	5	6

Which web framework  
should I use?

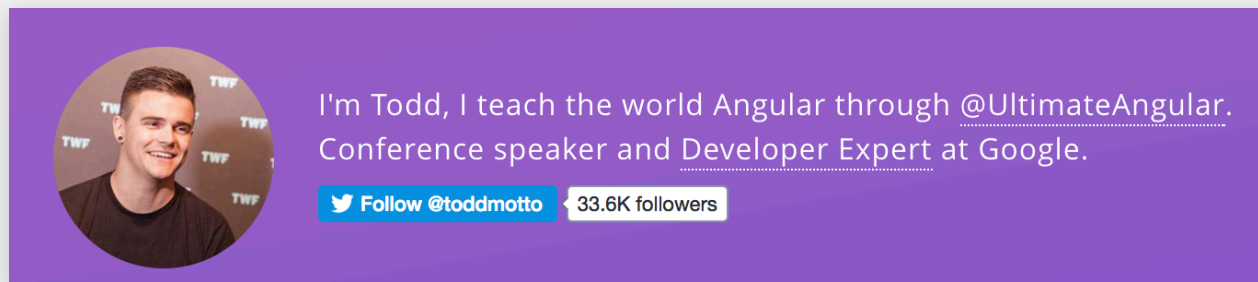
Which JS framework?





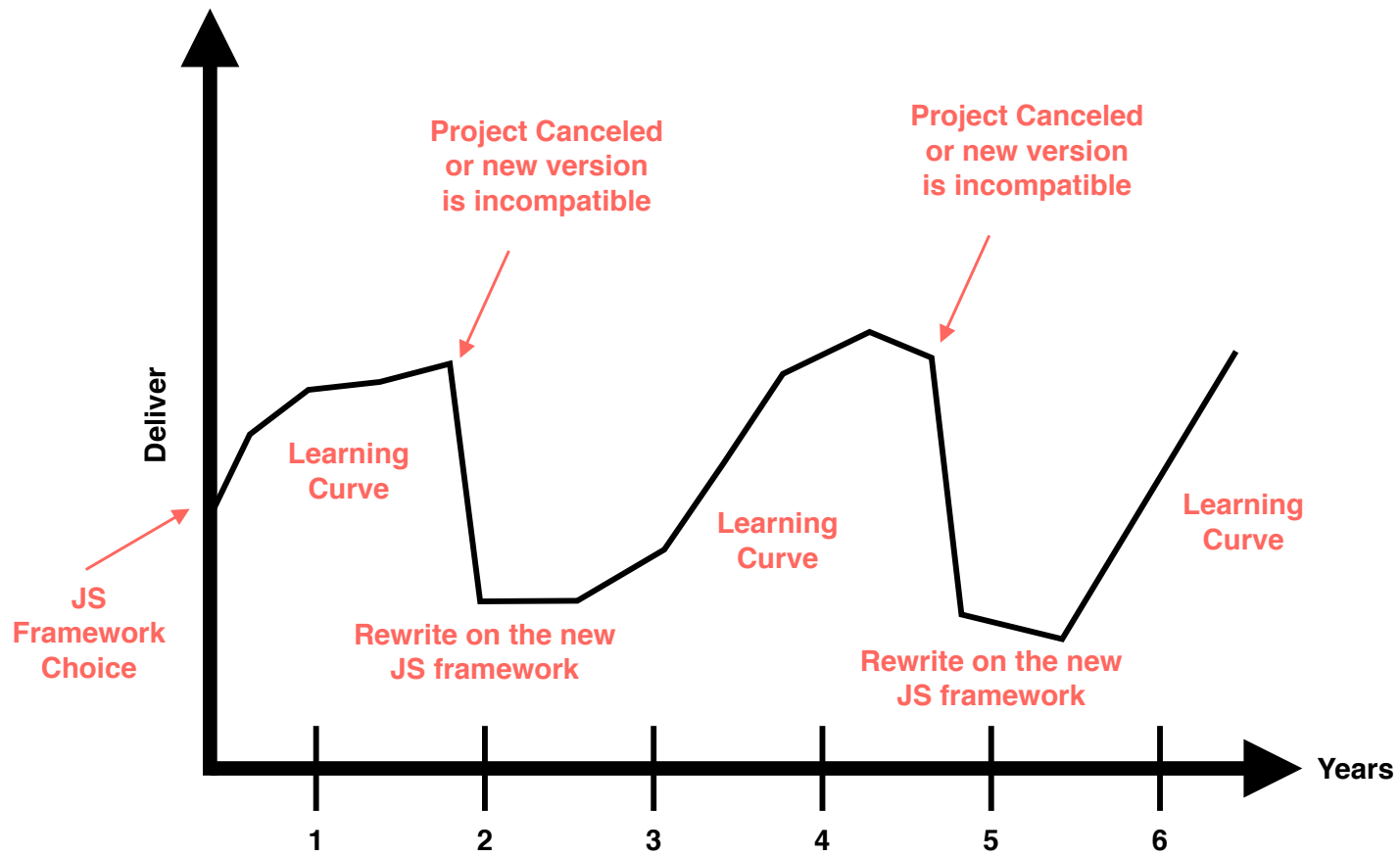
What's next for Angular 1.x?

“In all honesty, no one really knows what will happen”



A Twitter profile card for @toddmotto. It features a circular profile picture of a man with short brown hair and a black t-shirt, smiling. The background of the card is purple. To the right of the profile picture, the text reads: "I'm Todd, I teach the world Angular through @UltimateAngular. Conference speaker and Developer Expert at Google." Below this text is a blue "Follow @toddmotto" button and a white box with a black border containing the text "33.6K followers".

<https://toddmotto.com/future-of-angular-1-x>



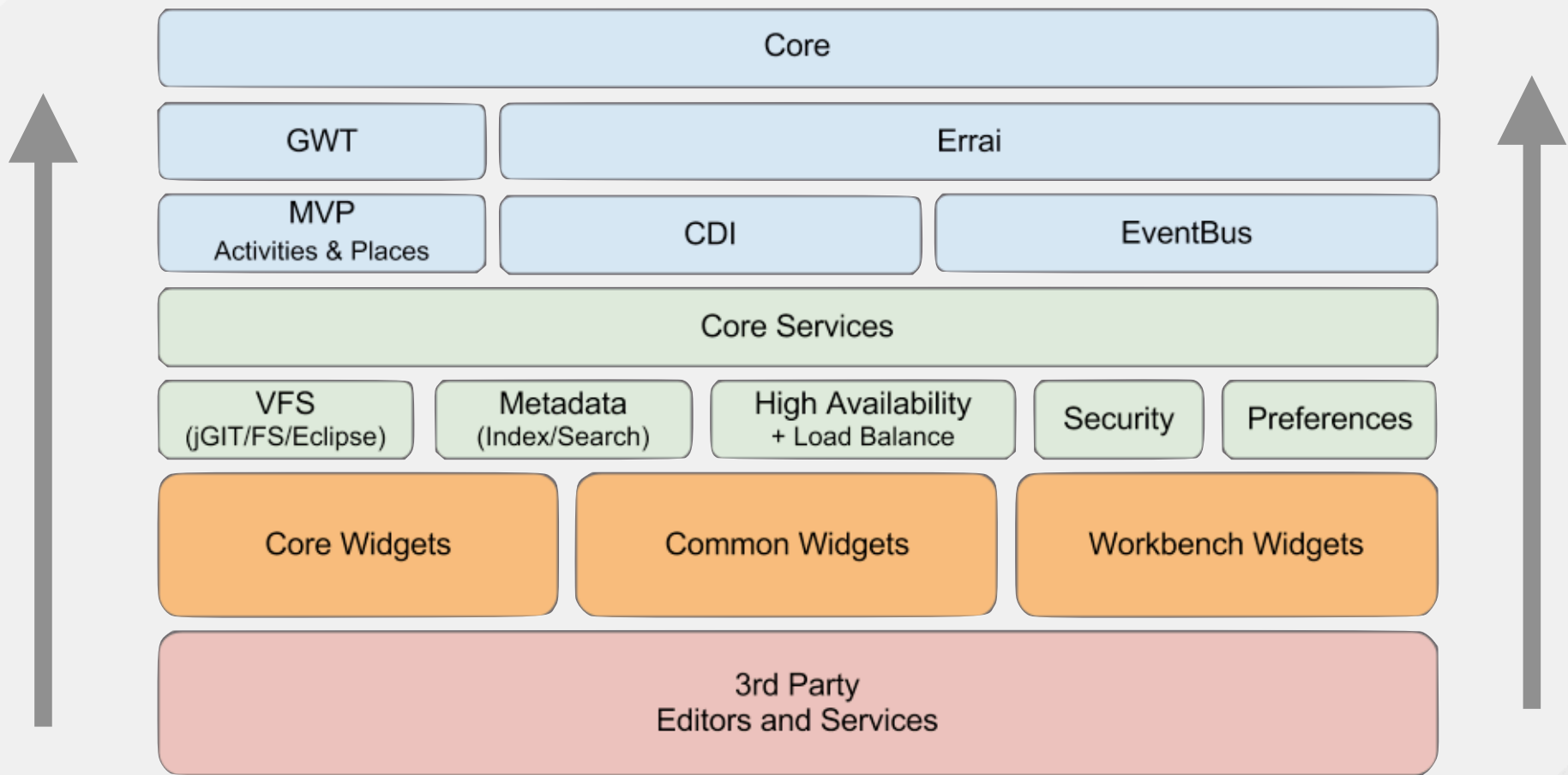
“A good architecture allows  
volatile decisions to be  
easily changed”

Robert C. Martin

What if I dealt with the volatility of JS frameworks as a fact?

The logo consists of a dark blue stylized 'A' shape with two yellow dots to its right, followed by the text 'AppFormer' in a bold sans-serif font. 'App' is dark blue and 'Former' is yellow.

**AppFormer**



# Programming Model

## Component Model:

- Screen
- Editors
- Perspectives
- Popups



# Programming Model

LifeCycle:

- OnStart
- OnSave
- IsDirty
- OnClose

...

# Perspective

The screenshot shows the Drools Workbench interface with a perspective view. The interface is divided into three main panels:

- Project Explorer (left):** A sidebar showing a tree view of the project structure. It includes folders for DRL, DATA OBJECTS, DOMAIN SPECIFIC LANGUAGE DEFINITIONS, ENUMERATION DEFINITIONS, GUIDED DECISION TABLES (containing 'Pricing loans'), GUIDED RULES, GUIDED RULES (WITH DSL), and TEST SCENARIOS.
- Editor (center):** The main workspace for editing the 'Pricing loans.gdst - Guided Decision Tables'. It features a toolbar with options like Save, Delete, Rename, Copy, Validate, Edit, View, Insert, and Latest Version. Below the toolbar is a 'Decision table' section with a dropdown menu. The main area contains a table titled 'Pricing loans' with columns for #, Description, application: LoanApplication (sub-columns: amount min, amount max, period, deposit max), ome: IncomeSou, income, Loan approved, LMI, and rate. The table has four rows, with rows 3 and 4 highlighted in orange.
- Analysis (right):** A panel titled 'Analysis' showing the results of an analysis. It indicates 'Analysis complete' and lists 'Subsumptant rows' as '- 3, 4 - Subsumptant rows'. Below this, it lists 'Affected rows: 3, 4' and provides a detailed explanation of subsumption: 'Subsumption exists when one row does the same thing as another, with a sub set of the values/facts of an another rule. These rules might insert duplicate facts into the working memory or execute functions twice. If this is not expected behaviour please remove the subsumptant row or make it more strict.'

Screen

Editor

Screen

# Programming Model

Screen

→ Interface WorkbenchScreenActivity

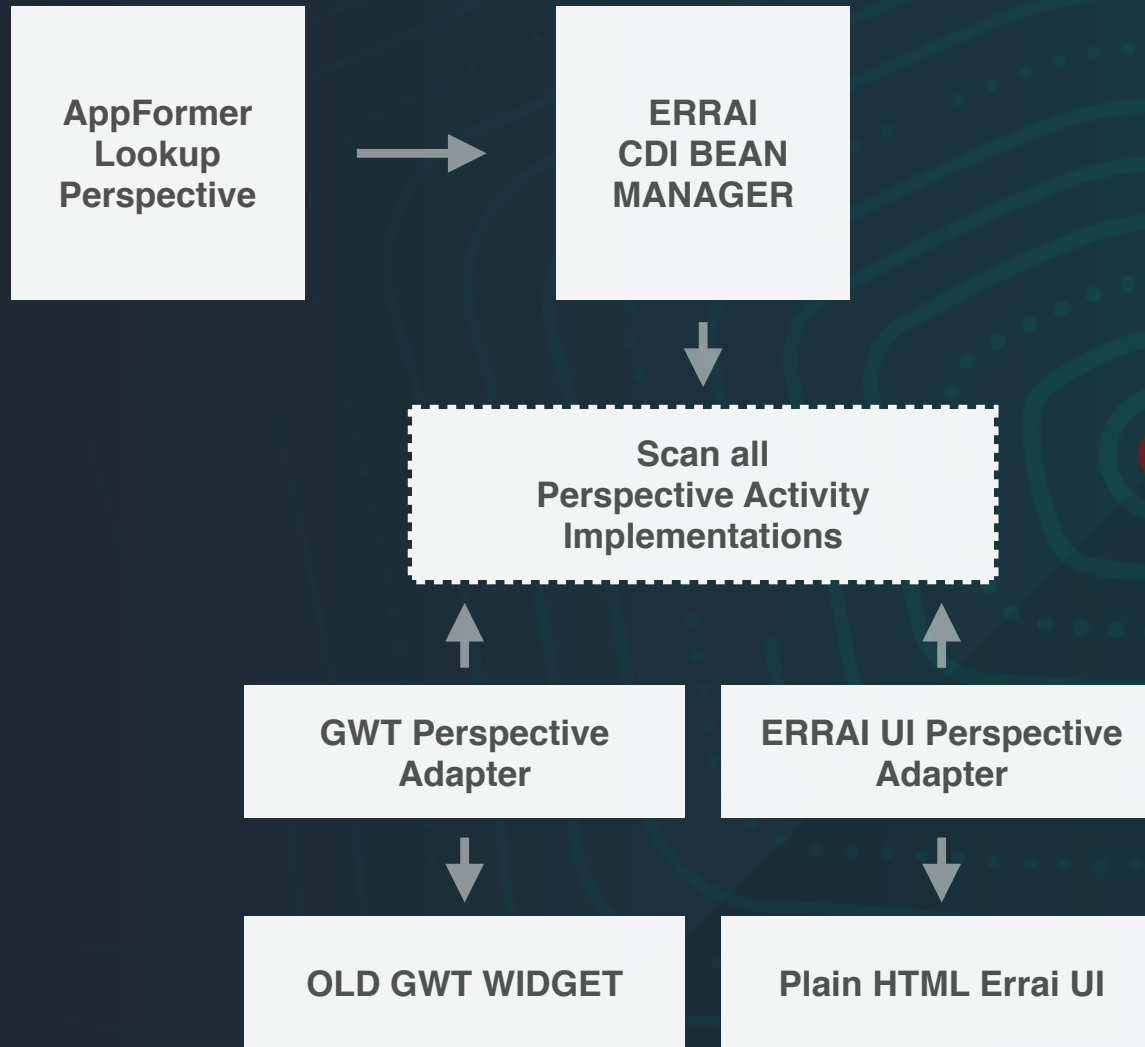
Editor

→ Interface WorkbenchEditorActivity

Perspective

→ Interface PerspectiveActivity

# Perspectives Lookup



localhost:8080/kie-wb/kie-wb.jsp#GuidedDecisionTableEditor?path\_uri=default://master@uf-playground/mortgages/src/main/resources/org/mortgages/Pricing%252520loans.gdst&file\_name=Pricing%2520loans.gdst&has\_version\_support=true

**KIE Workbench** Home Authoring Deploy Process Management Tasks Dashboards Extensions Search admin

Explore New Item Repository Messages Asset Search

Project Explorer demo > uf-playground > mortgages

DRDL DATA OBJECTS DOMAIN SPECIFIC LANGUAGE DEFINITIONS ENUMERATION DEFINITIONS GUIDED DECISION TABLES Pricing loans GUIDED RULES GUIDED RULES (WITH DSL) TEST SCENARIOS

Pricing loans.gdst - Guided Decision Tables Save Delete Rename Copy Validate Latest Version

Editor Overview Source Data Objects

All the rules inherit: None selected

Decision table

Add row... Otherwise Audit log

#	Description	amount min	amount max	period	deposit max	income	Loan approved	LMI	rate
1		131000	200000	30	20000	Asset	true	0	2
2		10000	100000	20	2000	Job	true	0	4
3		100001	130000	20	3000	Job	true	10	6

Messages Clear

**7+ years old code with "old school" GWT**

Teams > myteam > mortgages > Pricing loans

Project Explorer

<default> > mortgages > mortgages

- DRL
- DATA OBJECTS
- DOMAIN SPECIFIC LANGUAGE DEFINITIONS
- ENUMERATION DEFINITIONS
- GUIDED DECISION TABLES
- Pricing loans
- GUIDED RULES
- GUIDED RULES (WITH DSL)
- TEST SCENARIOS

Pricing loans.gdst - Guided Decision Tables

Save Delete Rename Copy Validate Edit View Insert Latest Version

Editor Overview Source Data Objects

Add Column Edit Columns

Pricing loans		application : LoanApplication				ome : IncomeSou	application		
#	Description	amount min	amount max	period	deposit max	income	Loan approved	LMI	rate
1		131000	200000	20	20000	Job	true	0	2
2		10000	100000	20	2000	Job	true	0	4
3		100001	130000	20	3000	Job	false	5	6
4		100001	130000	20	3000	Job	true	5	6

HTML 5 canvas  
fresh code

## 5~10 years Life-Span

The Web architecture should be treated with the same respect as you treat your backend.

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years Life-Span

**Interoperability**



```
@WorkbenchPerspective(identifier = "HomePerspective", isDefault = true)
@Templated
public class HomePerspective implements IsElement {
```

```
    @Inject
    @DataField
    @WorkbenchPanel(parts = "MoodScreen?uber=fire&uber1=fire1")
    Div moodScreen;
```

```
    @Inject
    @DataField
    @WorkbenchPanel(parts = "HomeScreen?uber=fire")
    Div homeScreen;
```

```
    @Inject
    @DataField
    @WorkbenchPanel(parts = "AnotherScreen")
    Div anotherScreen;
```

```
}
```



```
@JsType
public interface PerspectiveActivity{

    PerspectiveDefinition getDefaultPerspectiveLayout();

    @Override
    default String getName() {
        return getDefaultPerspectiveLayout().getName();
    }

    boolean isDefault();

    Menus getMenus();

    ToolBar getToolBar();
}
```



```

function TodoCtrl($scope) {
    $scope.placeText = "MiscellaneousFeatures";

    $scope.todos = [
        {text: 'learn angular', done: true},
        {text: 'build an angular app', done: false}
    ];

    $scope.addTodo = function () {
        $scope.todos.push({text: $scope.todoText, done: false});
        $scope.todoText = '';
    };

    $scope.remaining = function () {
        var count = 0;
        angular.forEach($scope.todos, function (todo) {
            count += todo.done ? 0 : 1;
        });
        return count;
    };

    $scope.archive = function () {
        var oldTodos = $scope.todos;
        $scope.todos = [];
        angular.forEach(oldTodos, function (todo) {
            if (!todo.done) {
                $scope.todos.push(todo);
            }
        });
    };

    $scope["goto"] = function () {
        $goToPlace($scope.placeText);
    };
}

```

```

<div class="container-fluid" ng-controller="TodoCtrl">
  <div class="row">
    <div class="col-md-12">
      <p class="pull-right" style="margin-top: 10px;">{{remaining()}} of {{todos.length}} remaining [
        <a href="" ng-click="archive()">archive</a> ]
      </p>
      <h4>Todos</h4>
      <ul class="list-group">
        <li class="list-group-item" ng-repeat="todo in todos">
          <span class="done-{{todo.done}}">{{todo.text}}</span>
          <input class="pull-right" type="checkbox" ng-model="todo.done">
        </li>
      </ul>
    </div>
  </div>
  <div class="row">
    <div class="col-md-6">
      <form class="form-inline" ng-submit="goto()">
        <div class="form-group">
          <input type="text" ng-model="placeText" size="30" class="form-control" placeholder="place to go">
          <input class="btn btn-primary" type="submit" value="GoTo">
        </div>
      </form>
    </div>
    <div class="col-md-6">
      <form class="form-inline pull-right" ng-submit="addTodo()">
        <div class="form-group">
          <input type="text" ng-model="todoText" size="30" class="form-control" placeholder="add new todo here">
          <input class="btn btn-primary" type="submit" value="Add">
        </div>
      </form>
    </div>
  </div>
</div>

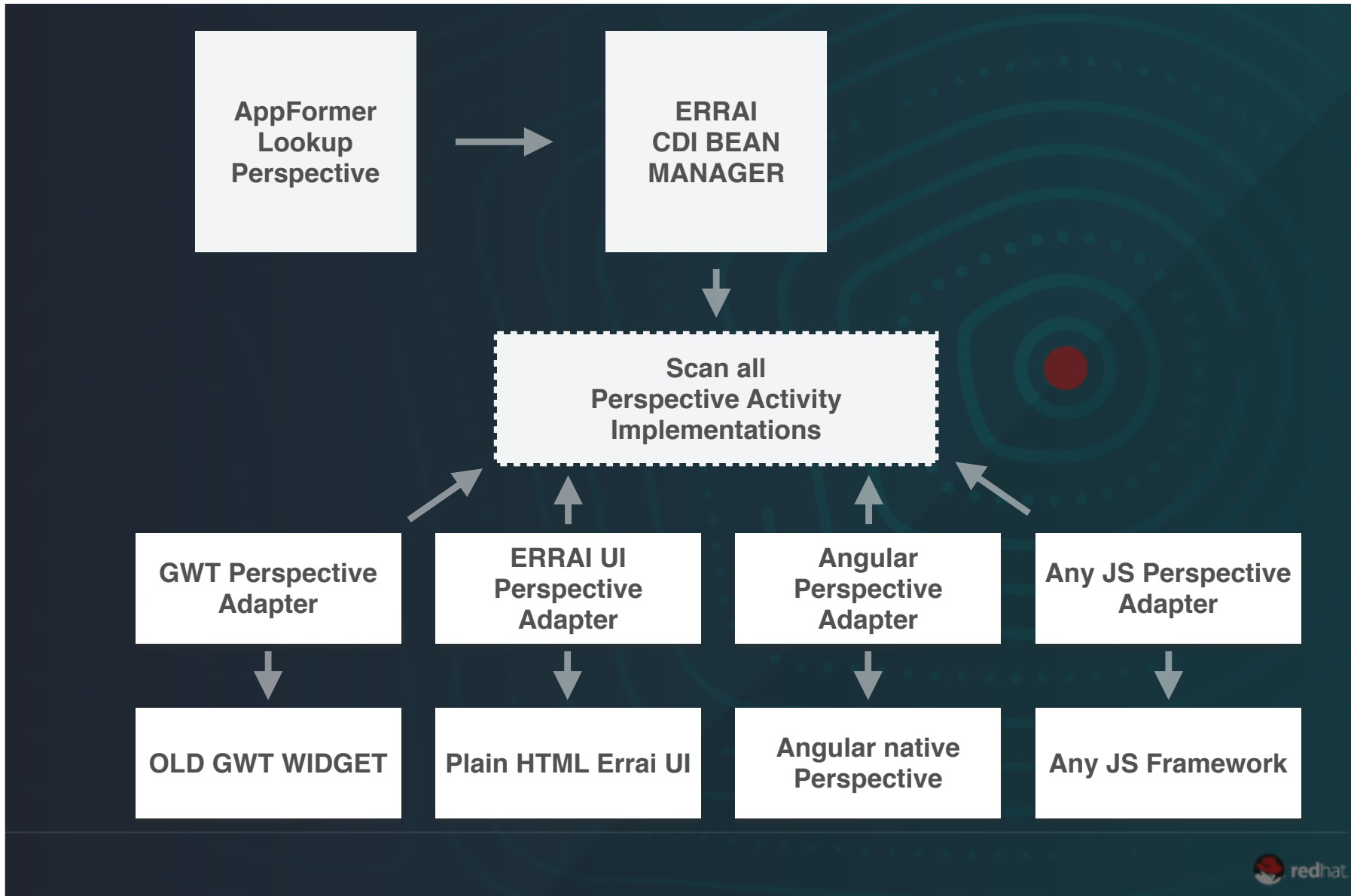
```

```

$registerPlugin({
    id: "my_angular_js",
    type: "angularjs",
    templateUrl: "angular.sample.html",
    title: function () {
        return "angular " + Math.floor(Math.random() * 10);
    },
    on_close: function () {
        alert("this is a pure JS alert!");
    }
});

```

# Perspectives



Home Perspectives Screens

angular 2

Todos 1 of 3 remaining [ archive ]

- learn angular
- build an angular app
- Talk at QCon

MiscellaneousFeatures **GoTo**  **Add**

Quick Tour  
A quick tour that shows UberFire cool features.  
**Play**

Sample App  
Here a good example of an application build on top of UberFire.  
**Play**

Todo List **Save Delete Edit**

### UberFire Todo List

UberFire is an amazing project, with a bright future, but as an Alpha version we know that it needs **some** improvements. Here are some things in our todo list:

- Improve Look & Feel
- Implement Themes
- Grid/Tile layout manager
- ...

### Links

- [Source @ GitHub](#)
- [UberFire User List](#)
- [UberFire Dev List](#)
- [Drools Project](#)
- [JBPM Project](#)

### Contribution

If you were looking for a fun project, to get involved with some cool tech. It doesn't get much better than contribute to UberFire :).

**Angular JS Screen**

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years Life-Span

Interoperability

Web development  
is complex

Web applications are  
important pieces of  
our architecture



# Principles

Decoupled from Frameworks

Testable

Decoupled from UI

Decoupled from Database

Independent of external systems

Software architecture  
is trade-offs exercise

# 5 pillars:

Large scale application

Full stack Developers

UX Integration

5~10 years life-span

Interoperability

# Thank you.

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