Sightly Component Development

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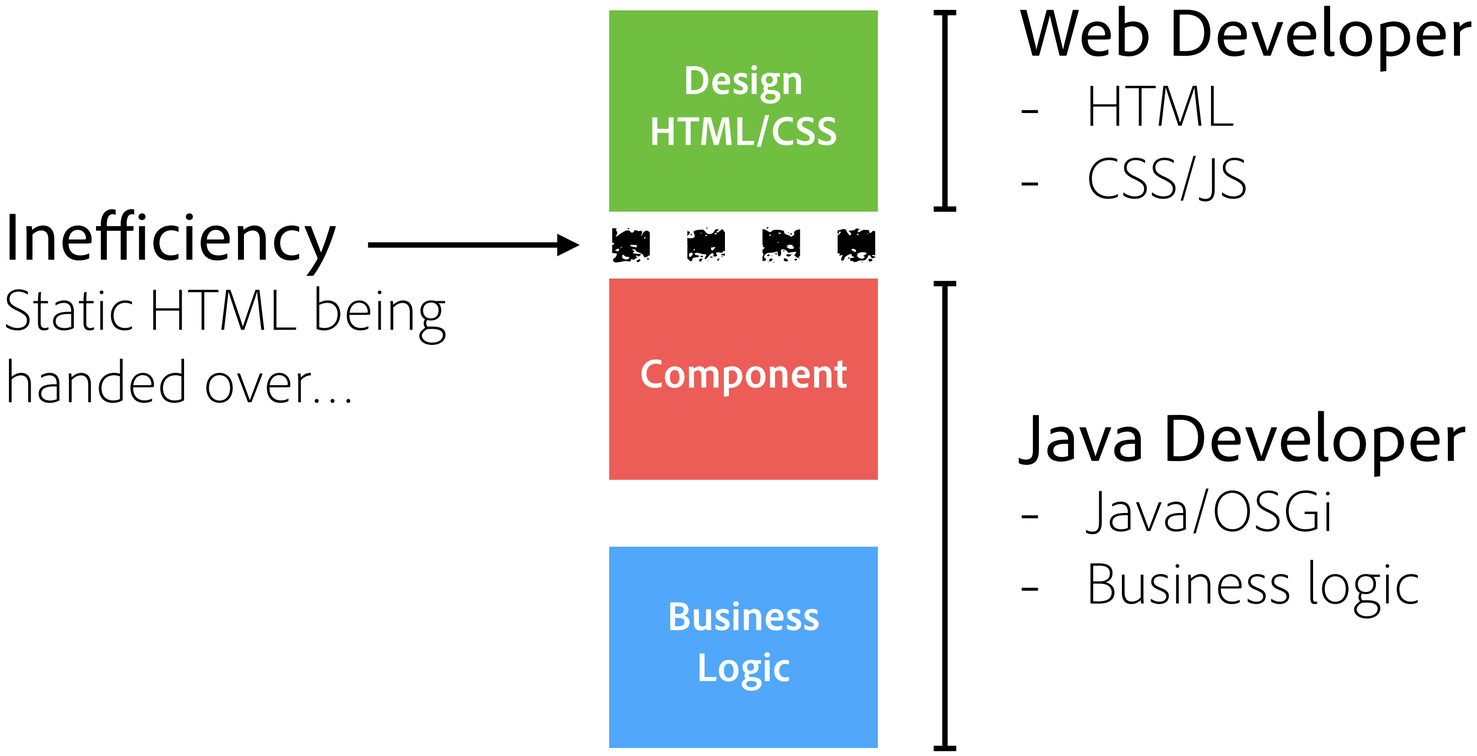
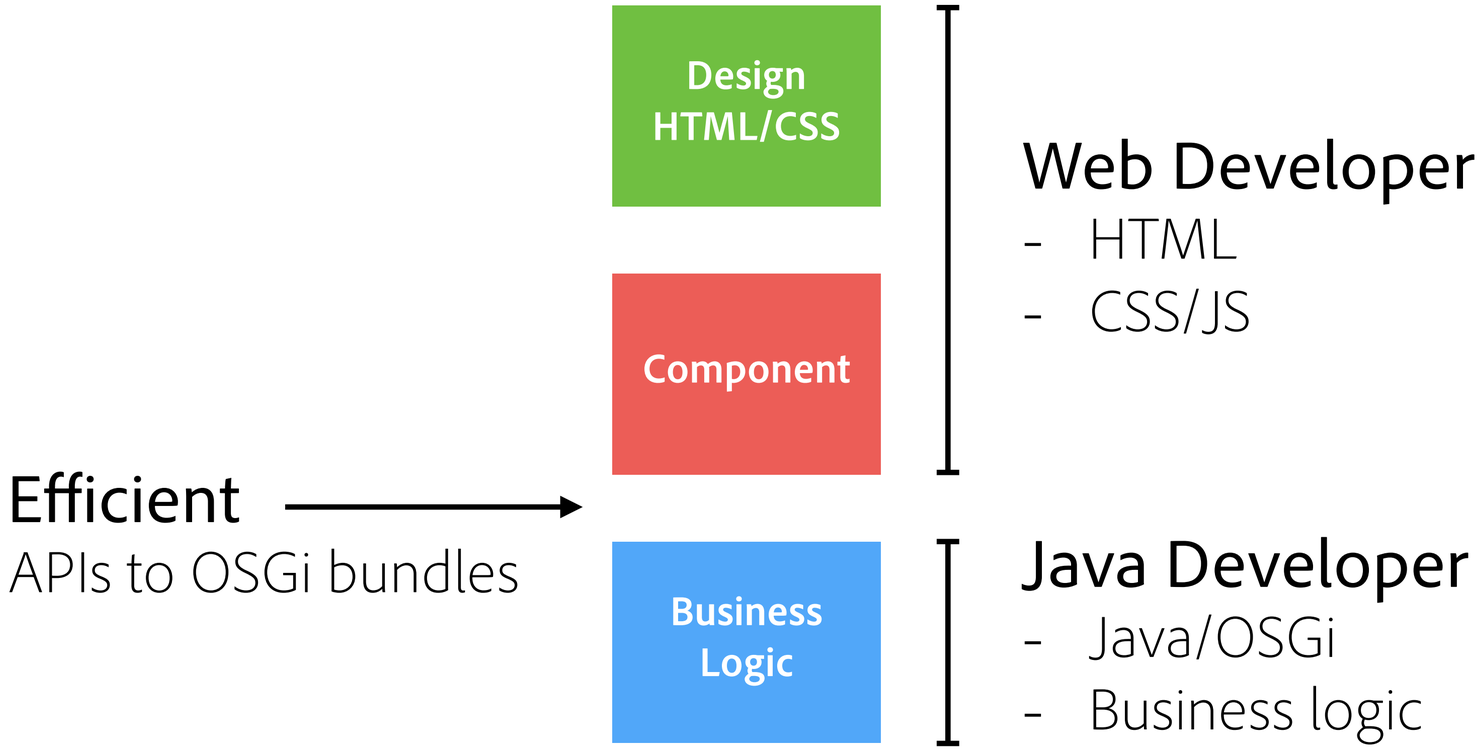
Development Workflow



Development Workflow



Development Workflow

Component

Can be edited by Web Developer:

× **JSP** (HTML markup & component logic)

✓ **Client Libraries** (CSS & JS)

Development Workflow

Component

Can be edited by Web Developer:

- ✓ **HTML markup** (Sightly template)
- ✓ **Component logic** (server-side JS)
- × ~~**JSP** (HTML markup & component logic)~~
- ✓ **Client Libraries** (CSS & JS)


sightly
BEAUTIFUL MARKUP

Sightly

Lightweight

No dependencies, fast and lean

Secure

Automatic contextual XSS protection and URL externalization

Code-less

Enforce separation of concerns between logic and markup

Powerful

Straight-forward API for logic, allowing to do virtually anything

Intuitive

Clear, simple & restricted feature set

Sightly vs JSP

Sightly

```
<a href="${properties.link || '#'}" title="${properties.jcr:title}">
   ${properties.jcr:description}
</a>
```

JSP

```
<a href="<%= xssAPI.getValidHref(properties.get("link", "#")) %>" <%
   String title = properties.get("jcr:title", "");
   if (title.length() > 0) {
      %>title="<%= xssAPI.encodeForHTMLAttr(title) %>"<%
   } %>>
   <%= xssAPI.encodeForHTML(properties.get("jcr:description", "")) %>
</a>
```

Building Blocks

Expression Language

```
${properties.myProperty}
```

Block Statements

```
<p data-sly-test="${isVisible}">${text}</p>
```

Use-API

```
<p data-sly-use.obj="script.js">${obj.text}</p>
```

Expressions

Literals

```
${42}
${true}
${'Hello World'}
${[1, 2, 3]}
```

Variables

```
${myVar}
${properties.propName}
${properties.jcr:title}
${properties['my property']}
${properties[myVar]}
```

Expression Operators

Logical operations

```
${!myVar}
${conditionOne || conditionTwo}
${conditionOne && conditionTwo}
${properties.jcr:title || conditionTwo}
```

Equality / Inequality (only for same types)

```
${varOne == varTwo}    ${varOne != varTwo}
```

Comparison (only for integers)

```
${varOne < varTwo}     ${varOne > varTwo}
${varOne <= varTwo}    ${varOne >= varTwo}
```

Expression Operators

Conditional

```
${myChoice ? varOne : varTwo}
```

Grouping

```
${varOne && (varTwo || varThree)}
```

Expression Options

Everything after the @ is an option

```
${myVar @ optOne, optTwo}
${myVar @ optOne='value', optTwo=[1, 2, 3]}
```

Parametric expression, containing only options

```
${@ optOne='value', optTwo=[1, 2, 3]}
```

Expression Options

String formatting

```
${'Page {0} of {1}' @ format=[current, total]}
```

Internationalization

```
${'Page' @ i18n}
${'Page' @ i18n, hint='Translation Hint'}
${'Page' @ i18n, source='user'}
${'Page' @ i18n, locale='en-US'}
```

Array Join

```
${['one', 'two'] @ join='; '}
```

Display Context Option

Offers control over escaping and XSS protection

Allowing some HTML markup (will apply XSSAPI.filterHTML)

```
<div>${properties.jcr:description @ context='html'}</div>
```

Adding URI XSS protection to other fields than `src` or `href`

```
<p data-link="${link @ context='uri'}">text</p>
```

In script or style contexts, the `context` option is mandatory

```
<script>trackId="${id @ context='scriptString'}";</script>
```

Use Statement

Initializes a helper object

```
<div data-sly-use.nav="navigation.js">${nav.foo}</div>
```

Output

```
<div>Hello World</div>
```

Server-side JavaScript logic

```
<!--/* template.html */-->
<div data-sly-use.nav="navigation.js">${nav.foo}</div>

<!--/* navigation.js */-->
use(function () {
    return {
        foo: "Hello World"
    };
});
```

Java logic

```
<!--/* template.html */-->
<div data-sly-use.nav="Navigation">${nav.foo}</div>

<!--/* Navigation.java */-->
package apps.site_name.component_name;
import com.adobe.cq.sightly.WCMUse;

public class Component extends WCMUse {
    private String foo;

    @Override
    public void activate() throws Exception {
        foo = "Hello World";
    }

    public String getFoo() {
        return foo;
    }
}
```

Server-side Java-Script vs Java

Server-side JavaScript

- Can easily be edited by web developers

Java

- Fast
- Easy to debug
- Can be located in the component folder, or in an OSGi bundle

We are working on improving that for server-side JavaScript

Unwrap Statement

Removes the host element while retaining its content

```
<div data-sly-use.nav="navigation.js" data-sly-unwrap>
${nav.foo}</div>
```

Output

```
Hello World
```

Use unwrap with care, the template should correspond as much as possible to the output.

Text, Attr & Elem Statements

Replaces the content, attribute or element name

```
<div class="active" title="Lorem ipsum"
     data-sly-element="${elementName}"
     data-sly-attribute.title="${className}"
     data-sly-text="${content}">Lorem ipsum</div>
```

Output

```
<span class="active" title="Hi!">Hello World</span>
```

Use element with care, it can make the template confusing when the element name gets changed.

Test Statement

Conditionally removes the element and it's content

```
<p data-sly-test="${properties.showText}">text</p>

<p data-sly-test.abc="${a || b || c}">is true</p>
<p data-sly-test="${!abc}">or not</p>
```

Output

```
<p>text</p>

<p>is true</p>
```

List Statement

Repeats the content for each enumerable property

```
<ol data-sly-list="${currentPage.listChildren}">
    <li>${item.title}</li>
</ol>
```

Output

```
<ol>
    <li>Triangle Page</li>
    <li>Square Page</li>
</ol>
```

Resource Statement

Includes the result of the indicated resource

```
<article data-sly-resource="path/to/resource"></article>
```

Output

```
<article><!-- Result of the rendered resource --></article>
```

Resource Statement Options

Manipulating selectors (selectors, addSelectors, removeSelectors)

```
<article data-sly-resource="${'path/to/resource' @
selectors='mobile'}"></article>
```

Overriding the resourceType

```
<article data-sly-resource="${'path/to/resource' @
resourceType='my/resource/type'}"></article>
```

Changing WCM mode

```
<article data-sly-resource="${'path/to/resource' @
wcmmode='disabled'}"></article>
```

Include Statement

Includes the rendering of the indicated template (Sightly, JSP, ESP, etc.)

```
<section data-sly-include="path/to/template.html"></section>
```

Output

```
<section><!-- Result of the rendered resource --></section>
```

Template & Call Statement

```
<!--/* template.html */-->
<template data-sly-template.one="${@ class, text}">
   <span class="${class}">${text}</span>
</template>

<!--/* other-file.html */-->
<div data-sly-use.tmpl="template.html"
     data-sly-call="${tmpl.one @ class='example',
                                 text='Hi!'}"></div>
```

Output

```
<div><span class="example">Hi!</span></div>
```

Sightly FAQ

Why didn't you choose an existing template language?

- We want it to be coding language agnostic (also client/server agnostic)
- We want it to have just the right feature set (with a strong focus on security)
- We want it to naturally lead developers towards best practice

Do I need to migrate my components to Sightly?

- No, we want Sightly to help you to be more efficient on the new components you build, not loose time on migrating components that already work.

Can I still use JSP, or will JSP get deprecated?

- Sightly and JSP can very well be mixed, even within the same component
- Today, we have no plan to deprecate JSP-based components

Development Workflow

Two developer roles

Web Developer

Java Developer

Development Workflow

An IDE plugin for each developer role

Brackets plugin

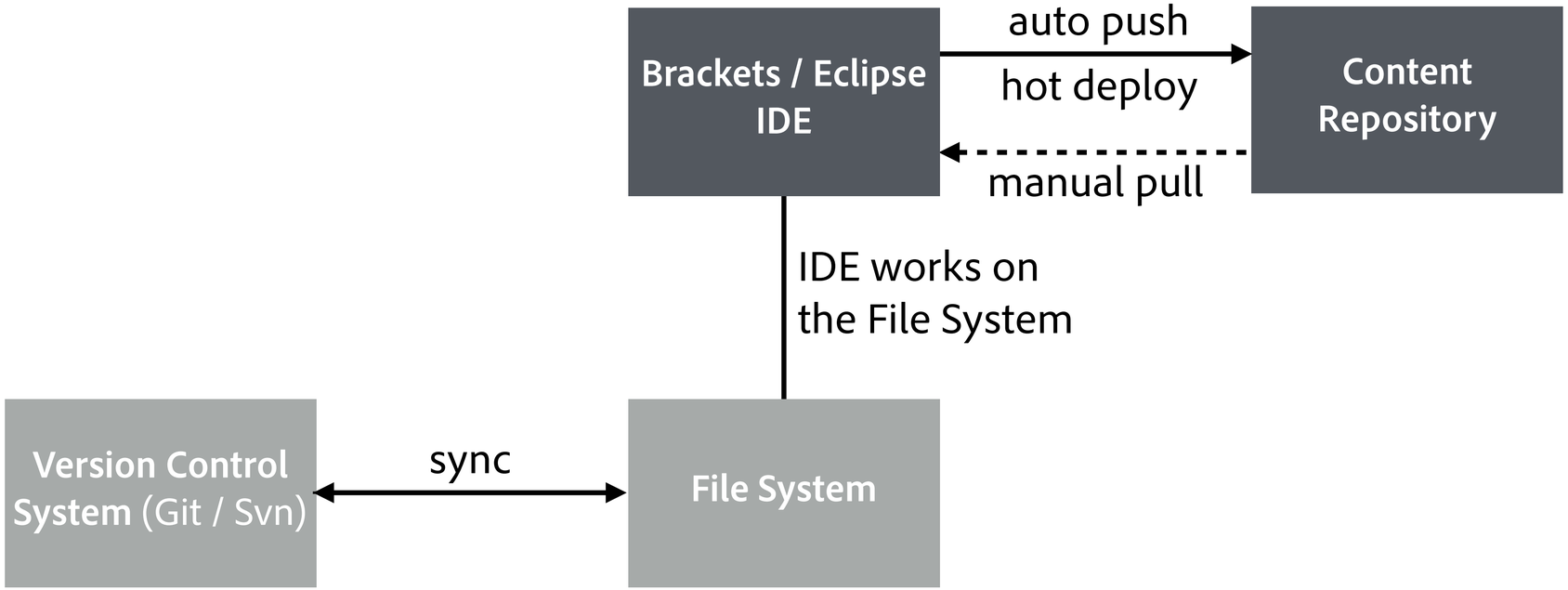
- Sightly code completion & syntax highlighting
- Content nodes & properties manipulation

Eclipse plugin

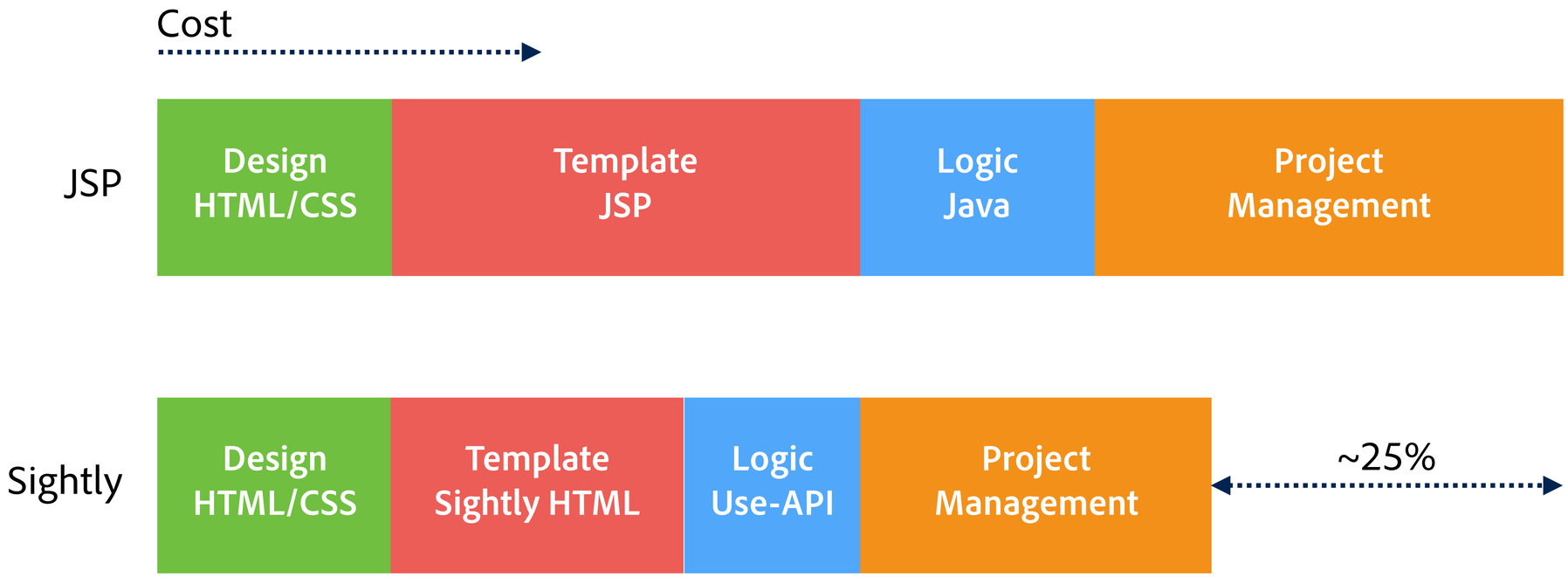
- Content nodes & properties manipulation
- Bundle development & hot deployment

IDE Sync

Work on file system + transparent sync & content editing



Component Development



Resources

Documentation

http://dev.day.com/content/docs/en/aem/6-0/develop/sightly.html

Java Docs

http://docs.adobe.com/content/docs/en/aem/6-0/develop/ref/javadoc/index.html?com/adobe/cq/sightly/WCMUse.html

Experience Delivers blog posts (http://experiencedelivers.adobe.com/)

- Sightly intro part 1
- Sightly intro part 2
- Sightly intro part 3
- Sightly intro part 4
- Sightly intro part 5: FAQ