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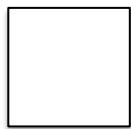
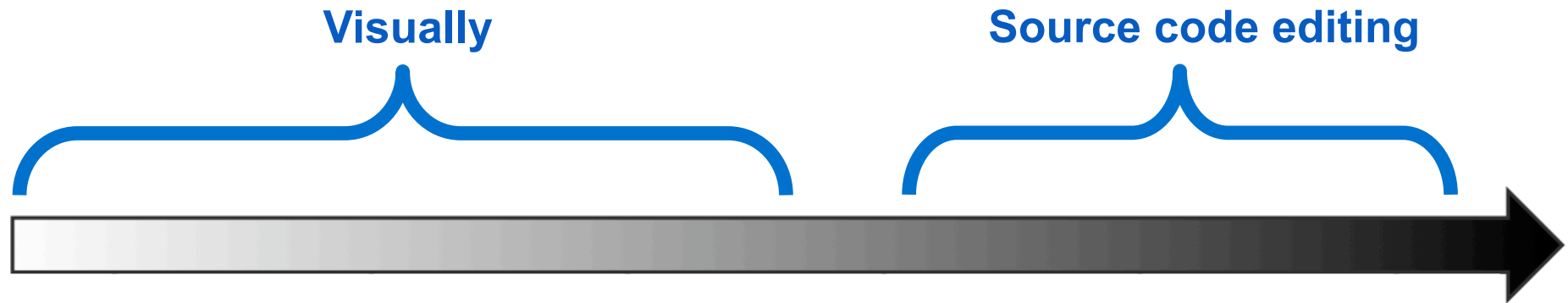
# XIDE: Expanding End-User Web Development

Evgenia Litvinova, Markku Laine and Petri Vuorimaa

Aalto University, Finland

# End users vs. Developers

# End users vs. Developers

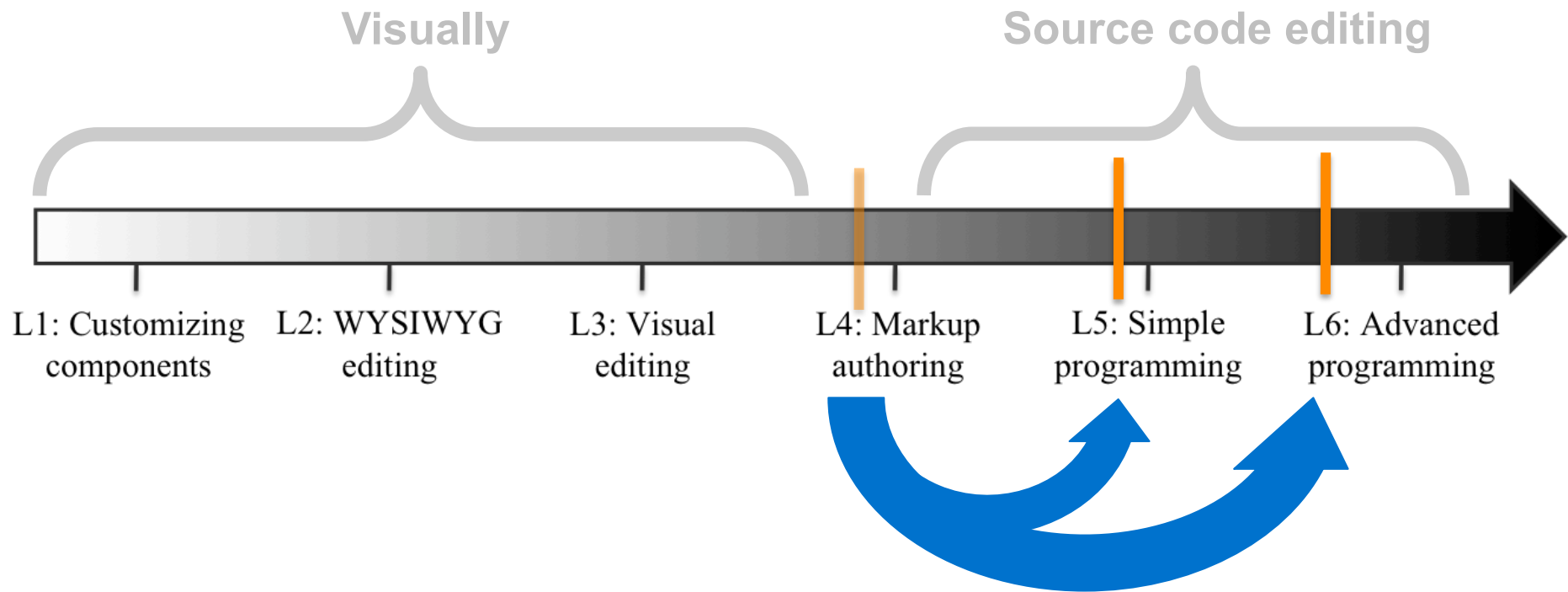


Web surfing

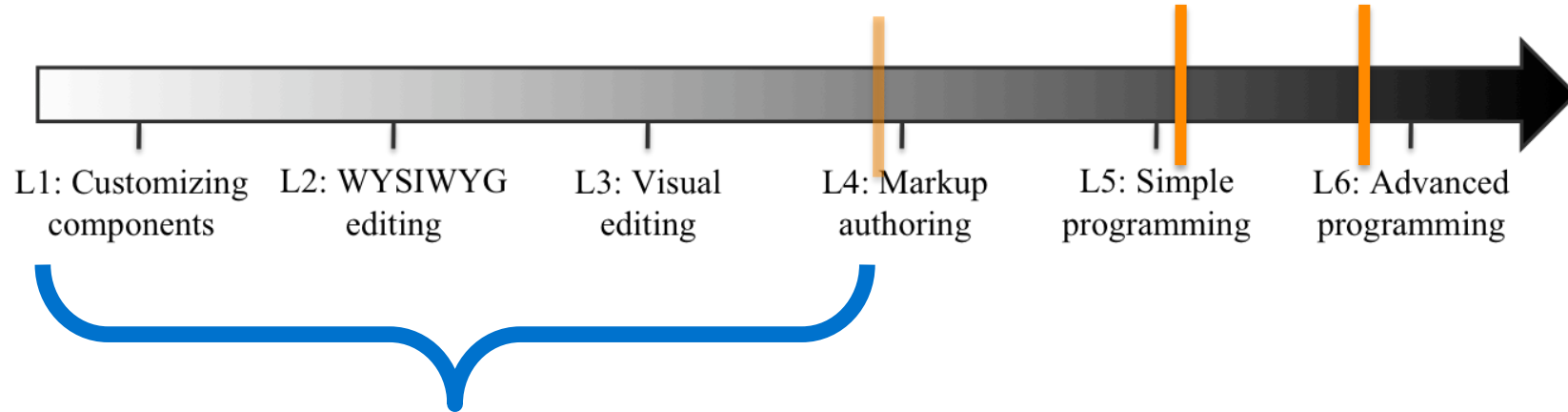


Professional development

# Problem Statement



# Our approach



- Component-based
- Familiar technology
- Unified technology



- XIDE
- XFormsDB

# XFormsDB

- XForms
- Markup-based
- Unified

```
15
16 <template:meta name="id">tpl_news_widget</template:meta>
17 <template:meta name="title">Component: News Widget</template:meta>
18 <template:meta name="description">Component for news widget..</templa
19 <template:meta name="tags">component public self-sufficient news_widg
20
21 <template:param name="pRSSFeedURL" type="binding" description="RSS
22 <link rel="stylesheet" type="text/css" href="css/tpl_news_widget/ba
23 <xforms:model>
24 <!-- XForms instances -->
25 <!-- RSS feed instance -->
26 <xforms:instance id="tpl_news_widget_-_rss_feed_instance" src="$p
27 <dummy xmlns="" />
28 </xforms:instance>
29 </xforms:model>
30 </template:head>
31 <template:body>
32 <div id="tpl_news_widget_-_body">
33 <div id="tpl_news_widget_-_header">
34 <h1><xforms:output ref="instance( 'tpl_news_widget_-_rss_feed_i
35 </div>
36 <div id="tpl_news_widget_-_main">
37 <h3>Top Stories</h3>
38 <xforms:repeat nodeset="instance( 'tpl_news_widget_-_rss_feed_i
39 <div class="news">
40 <div class="title">
41 <xforms:trigger appearance="minimal">
42 <xforms:label><xforms:output ref="title" /></xforms:lab
43 <xforms:action ev:event="DOMActivate">
44 <xforms:label ref="title" class="news" />
```

# XIDE

The screenshot displays the XIDE web development environment. At the top, the user is logged in as Evgenia Samochadina. The interface includes a design canvas with two 'Top Stories' widgets, each containing a placeholder image and text. A right-hand panel lists various components such as 'Simple login component', 'Login component with email', 'Simple survey', and 'Yes/No question'. Below the design canvas, there are tabs for 'Properties', 'Parameters', 'Queries', 'DIs', 'Initial Data', 'CSS', 'Source code', and 'Files'. The 'Source code' tab is active, showing XML code for a 'news\_widget' component.

```
19 <template:meta name="tags">component public self-sufficient news_widget</template:meta>
20
21 <template:param name="pRSSFeedURL" type="binding" description="RSS feed address"> http://rss.cnn.com/rss/edition.rss</template:param>
22 <link rel="stylesheet" type="text/css" href="css/tpl_news_widget/base.css" media="all" />
23 <xforms:model>
24 <!-- XForms instances -->
25 <!-- RSS feed instance -->
26 <xforms:instance id="tpl_news_widget_-_rss_feed_instance" src="$pRSSFeedURL">
27 <dummy xmlns="" />
28 </xforms:instance>
```

# XIDE

The screenshot displays the XIDE web development environment. At the top, the user is logged in as Evgenia Samochadina, with links for Logout, Home, and My applications. The main workspace is divided into a Design view on the left and a Component Library on the right. The Design view shows two 'Top Stories' widgets, each containing a smaller widget and the text 'Some text here'. The Component Library on the right lists several components: 'Simple login component', 'Login component with email', 'Simple survey', and 'Yes/No question'. Below the Design view, there are tabs for Properties, Parameters, Queries, DIs, Initial Data, CSS, Source code, and Files. The Source code tab is active, showing the XML code for the 'tpl\_news\_widget.xml' file.

```
19 <template:meta name="tags">component public self-sufficient news_widget</template:meta>
20
21 <template:param name="pRSSFeedURL" type="binding" description="RSS feed address"> http://rss.cnn.com/rss/edition.rss</template:param>
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27 <dummy xmlns="" />
28 </xforms:instance>
```



# XIDE

The screenshot displays the XIDE web development environment. At the top, the user is logged in as Evgenia Samochadina. The interface is divided into several sections:

- Design View:** Shows a page layout with two 'Top Stories' widgets. Each widget contains a small icon and the text 'Some text here'.
- Component Library:** A sidebar on the right lists various components with descriptions:
  - Simple login component:** This is simple login component which offers user to enter his/her login and password. Authentication query is included.
  - Login component with email:** This is advanced login component which offers user to enter his/her login, password and e-mail. Query is not included.
  - Simple survey:** This is a simple survey component which has a slot for adding questions and a commit button to commit the survey answers. Require query modification!!! Basic Query is included.
  - Yes/No question:** Simple question with 2 variants of answer. Question and answers texts are designed as parameters.
- Code Editor:** At the bottom, the source code for 'tpl\_news\_widget.xml' is visible, showing XML tags for template meta, parameters, and XForms instances.

# XIDE

The screenshot displays the XIDE web development environment. At the top, the user is logged in as Evgenia Samochadina. The interface includes a design canvas with two 'Top Stories' widgets, each containing a placeholder image and text. A search bar and a list of components are visible on the right. The component list includes:

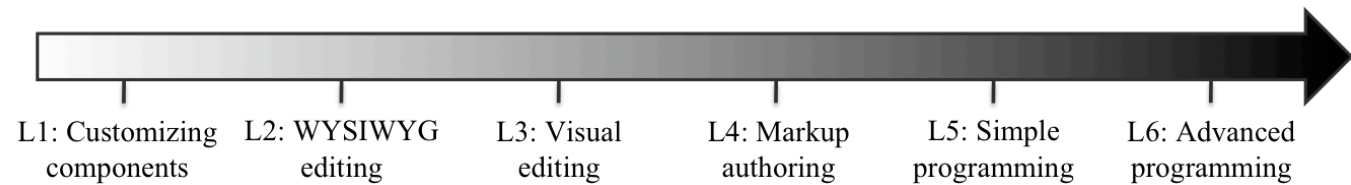
- Simple login component: This is simple login component which offers user to enter his/her login and password. Authentication query is included
- Login component with email: This is advanced login component which offers user to enter his/her login, password and e-mail. Query is not included
- Simple survey: This is a simple survey component which has a slot for adding questions and a commit button to commit the survey answers. Require query modification!!! Basic Query is included
- Yes/No question: Simple question with 2 variants of answer. Question and answers texts are designed as parameters

At the bottom, the source code editor shows the XML structure for the 'tpl\_news\_widget.xml' file:

```
19 <template:meta name="tags">component public self-sufficient news_widget</template:meta>
20
21 <template:param name="pRSSFeedURL" type="binding" description="RSS feed address"> http://rss.cnn.com/rss/edition.rss</template:param>
22 <link rel="stylesheet" type="text/css" href="css/tpl_news_widget/base.css" media="all" />
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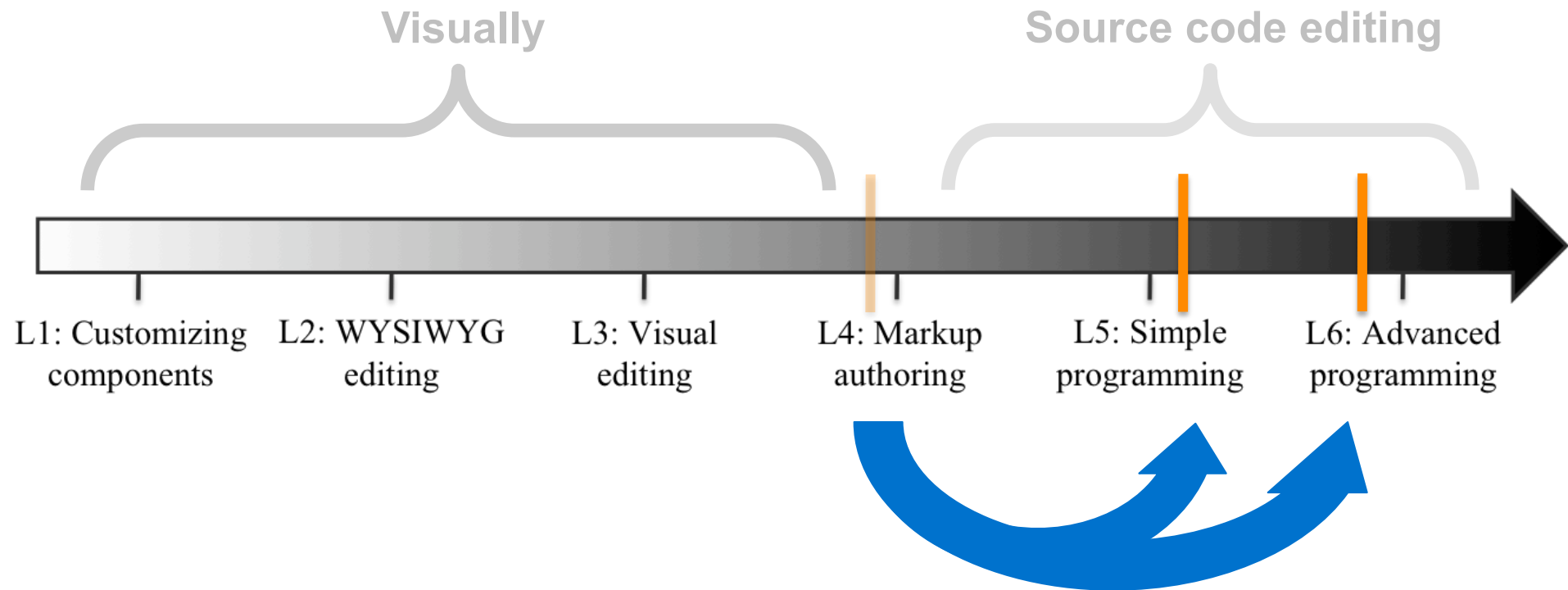
# User studies

- 9 users
- 10 tasks



- Opportunistic approach
- Code reading
- Copy-paste

# Conclusions

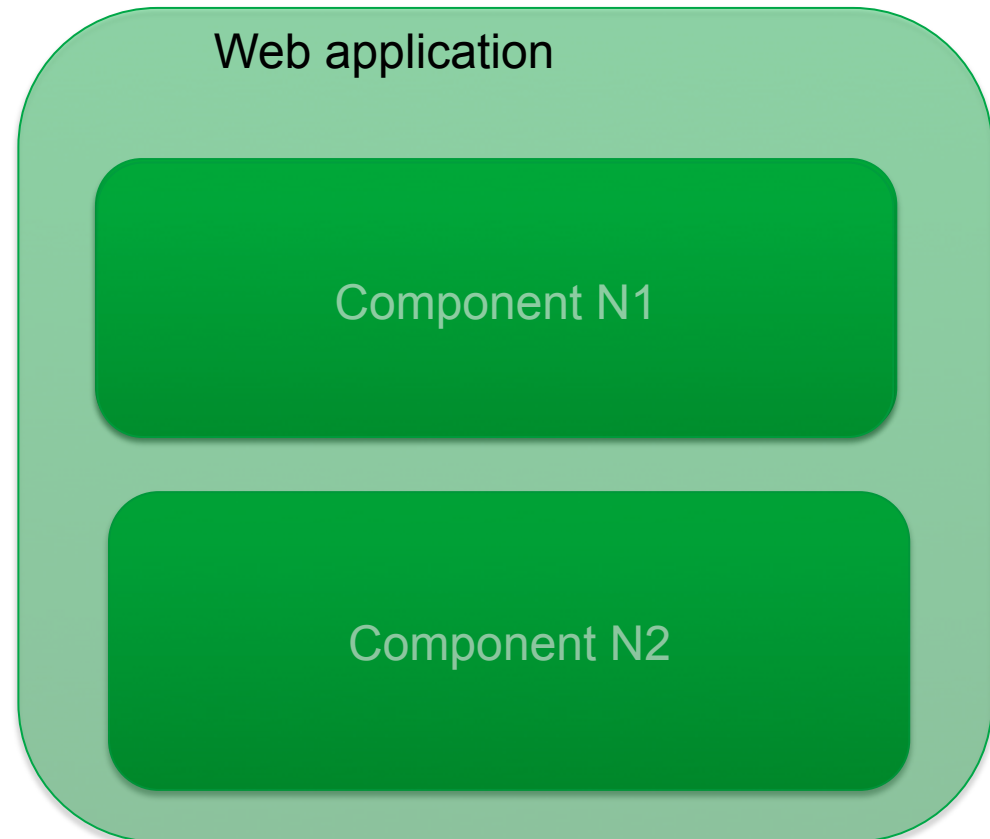


**Thank you!**

**Questions?**

# Our approach:

- Edit the source code
- Existing knowledge
- Component-based
- Familiar technology
- Simple architecture



# Agenda

- End-user Web development
- Problem statement
- Our proposal
- Evaluation
- Conclusions