# *Web Pontoon*
# A Method for Reflective Web Applications

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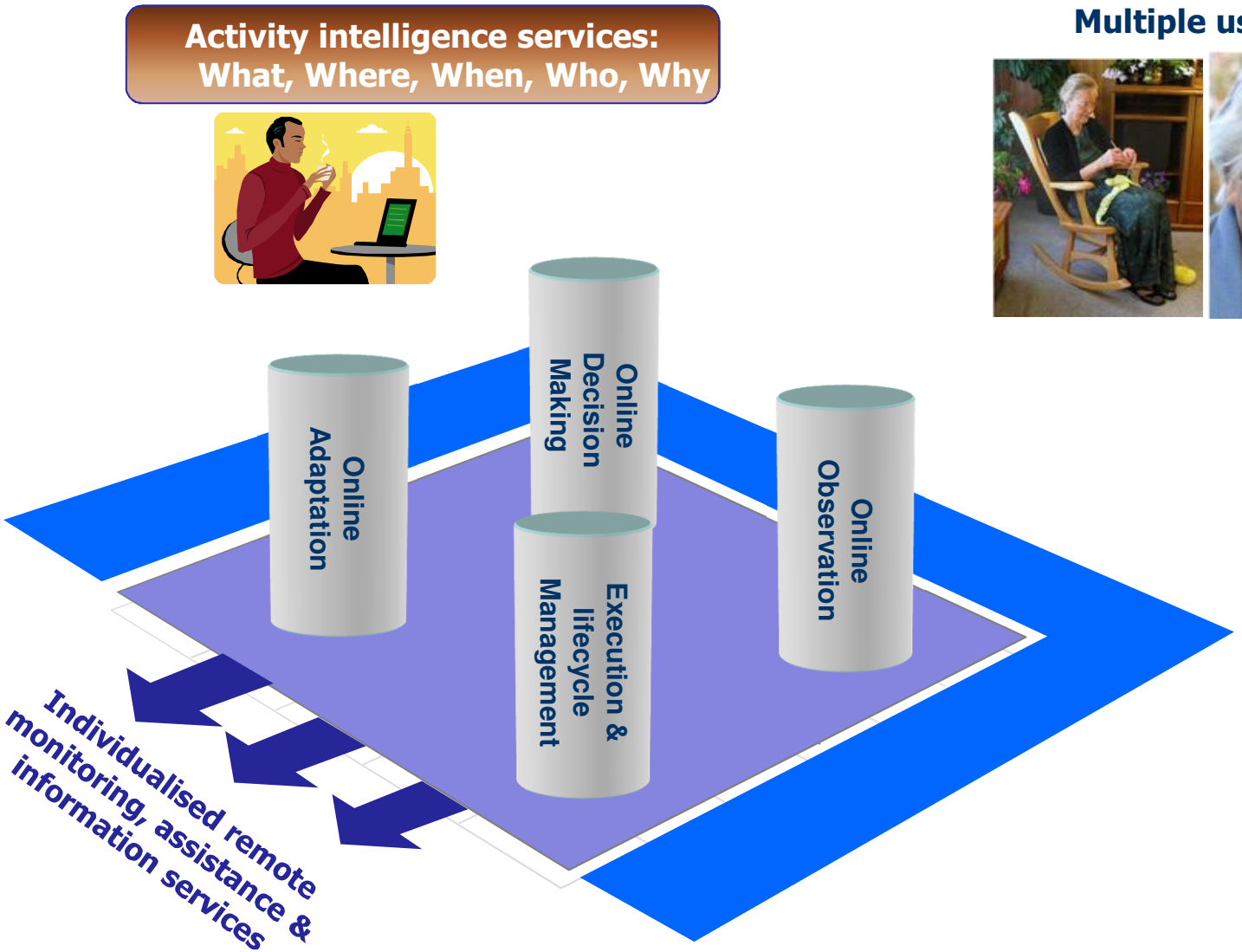
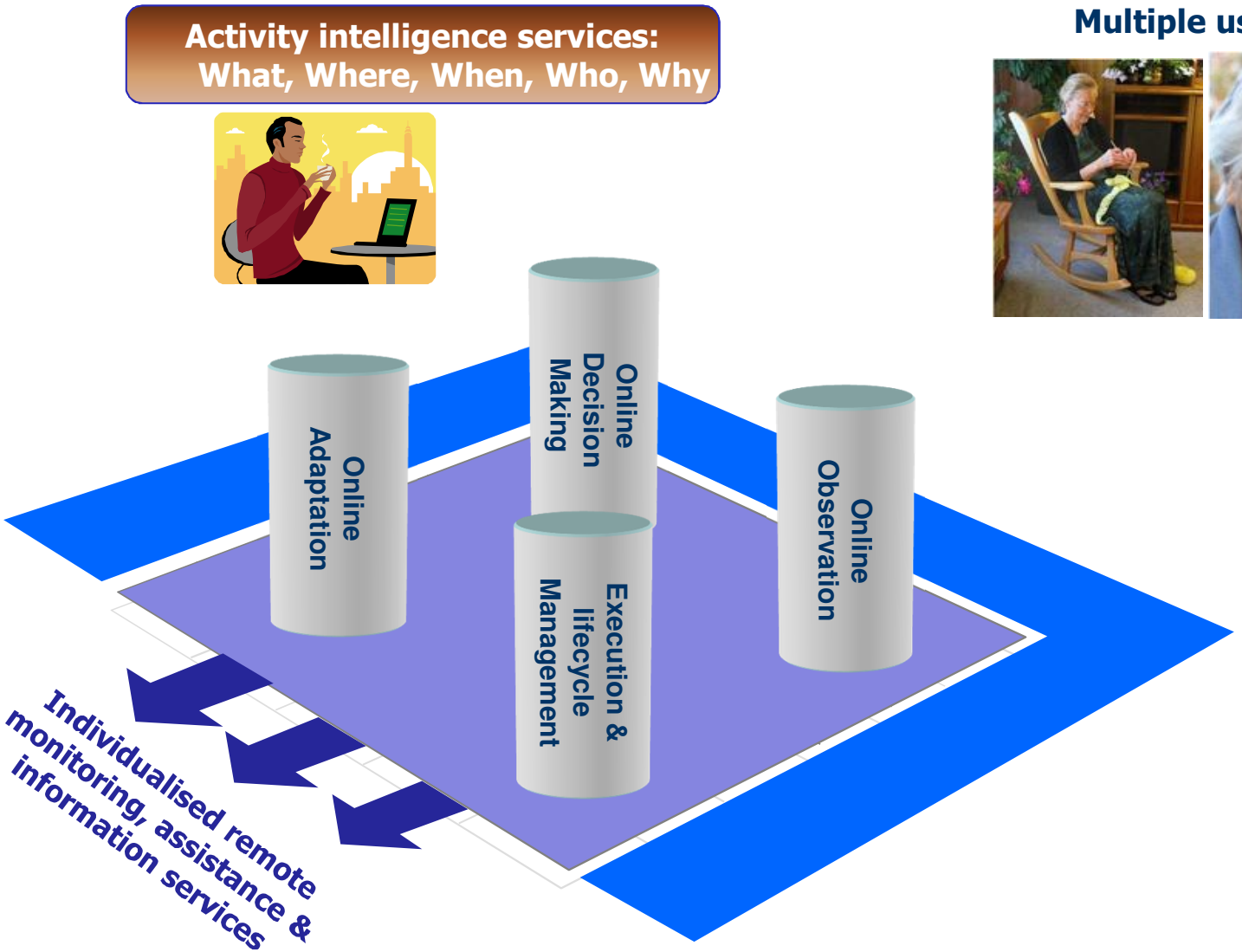
- **Not a webapp, but a method for developing webapps**
- **Online programming by non-professional programmers**
- **Managing the functionality of your webapp as *content***
- **When diverse & changing control flows**
- **Provision of individualised services to senior citizens**
- **Reengineering & architectural innovation of legacy apps**
- **Web, OO, AOM, SOA, EUP and DDD**
- **Pure Smalltalk + Seaside generated JavaScripts for GUI**
- **Seaside Pier Magritte + Dart**
- **Large scale deployments (100 000 servers for 2015)**
- **Commercial product**

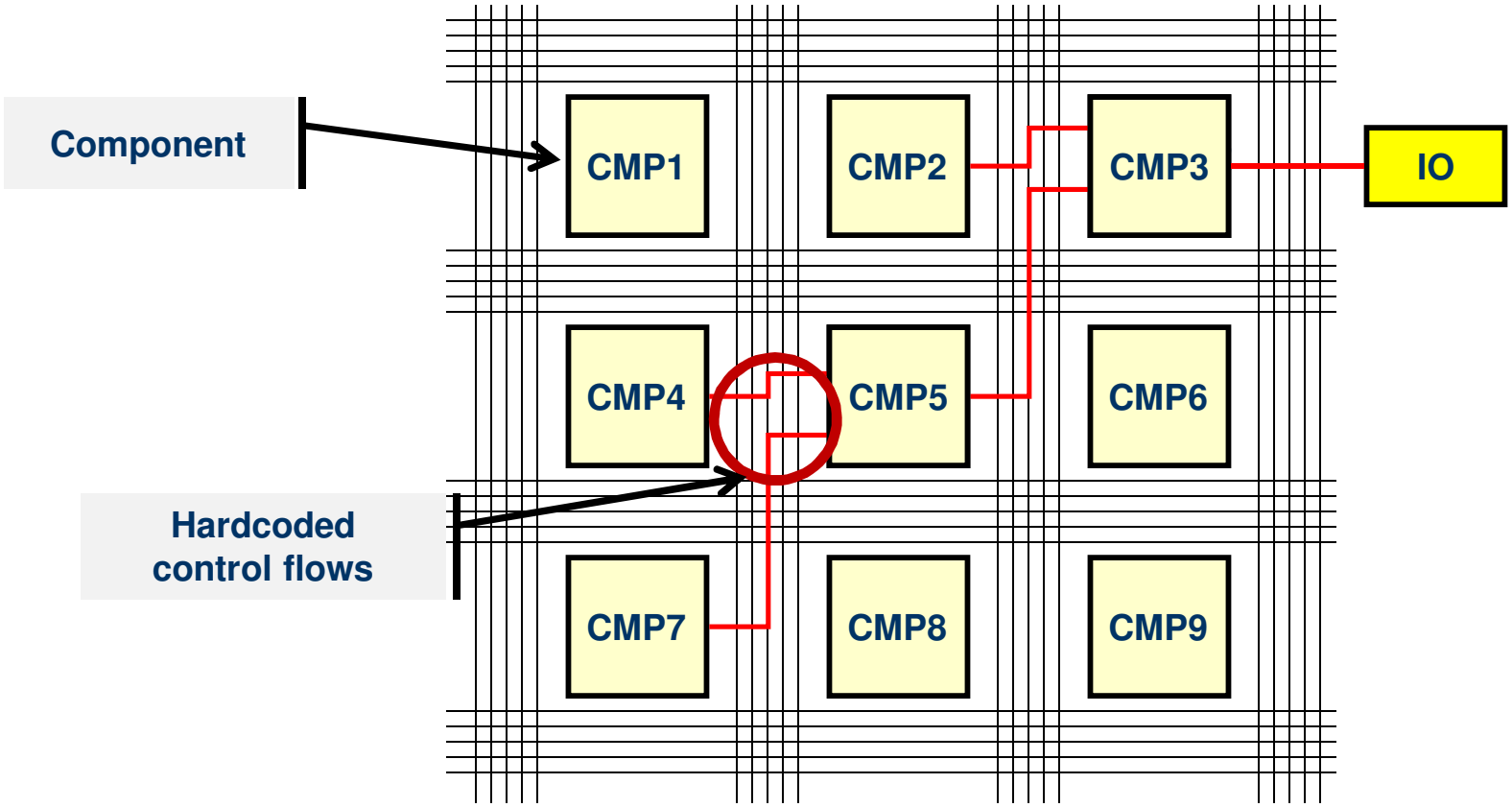
# Context: Architecture for Ambient Systems



# Context: Architecture for Ambient Systems

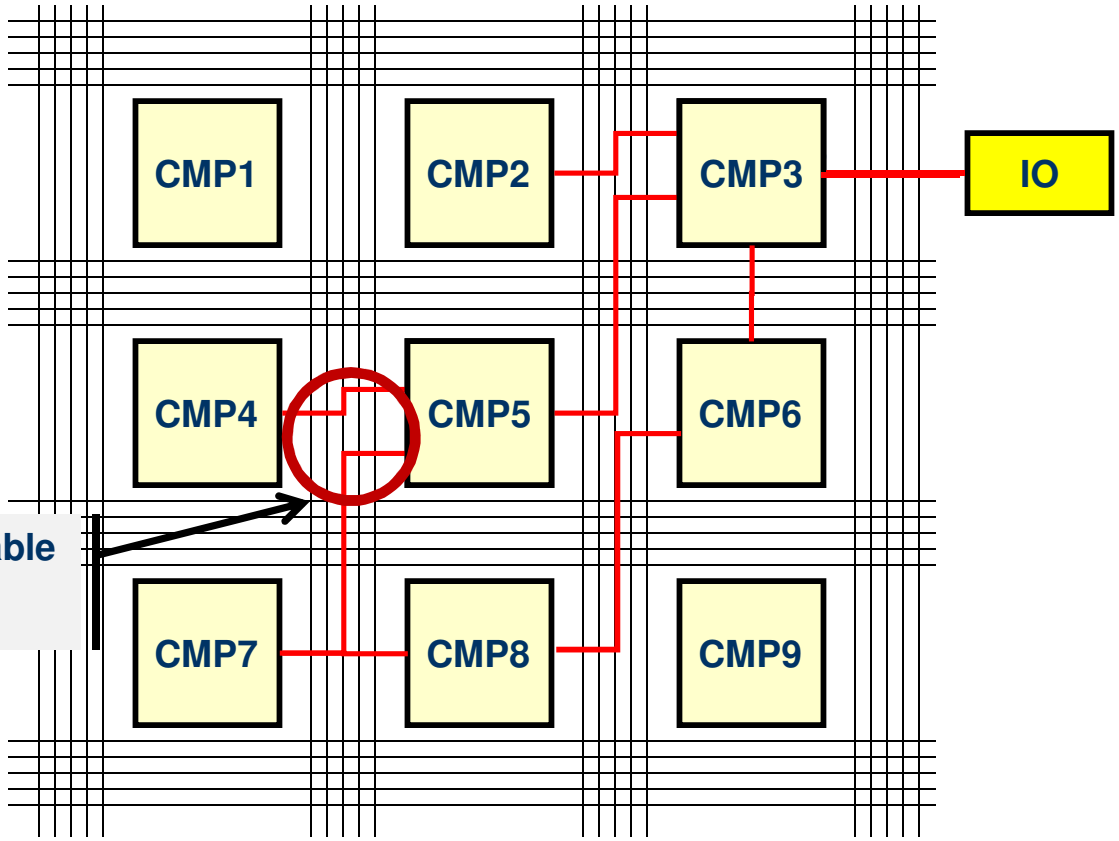


# Component-based web application development in Seaside




Matrix of components adopted from Damien Picard and Loic Lagadec ESUG 2009

# Objective: On-line end-user programmable control flows

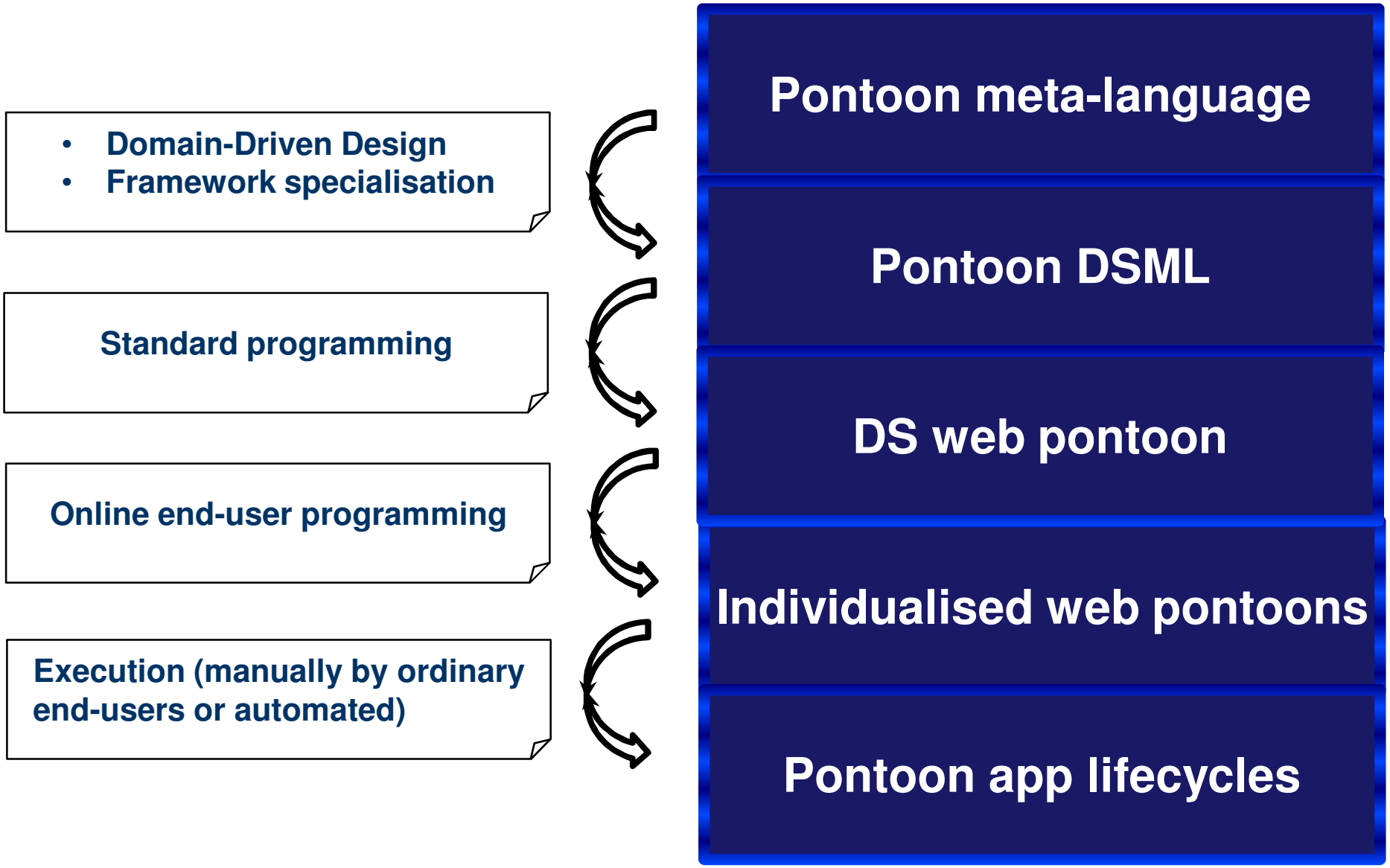



- Change online the output with predictable results
+ Situated lifecycle management

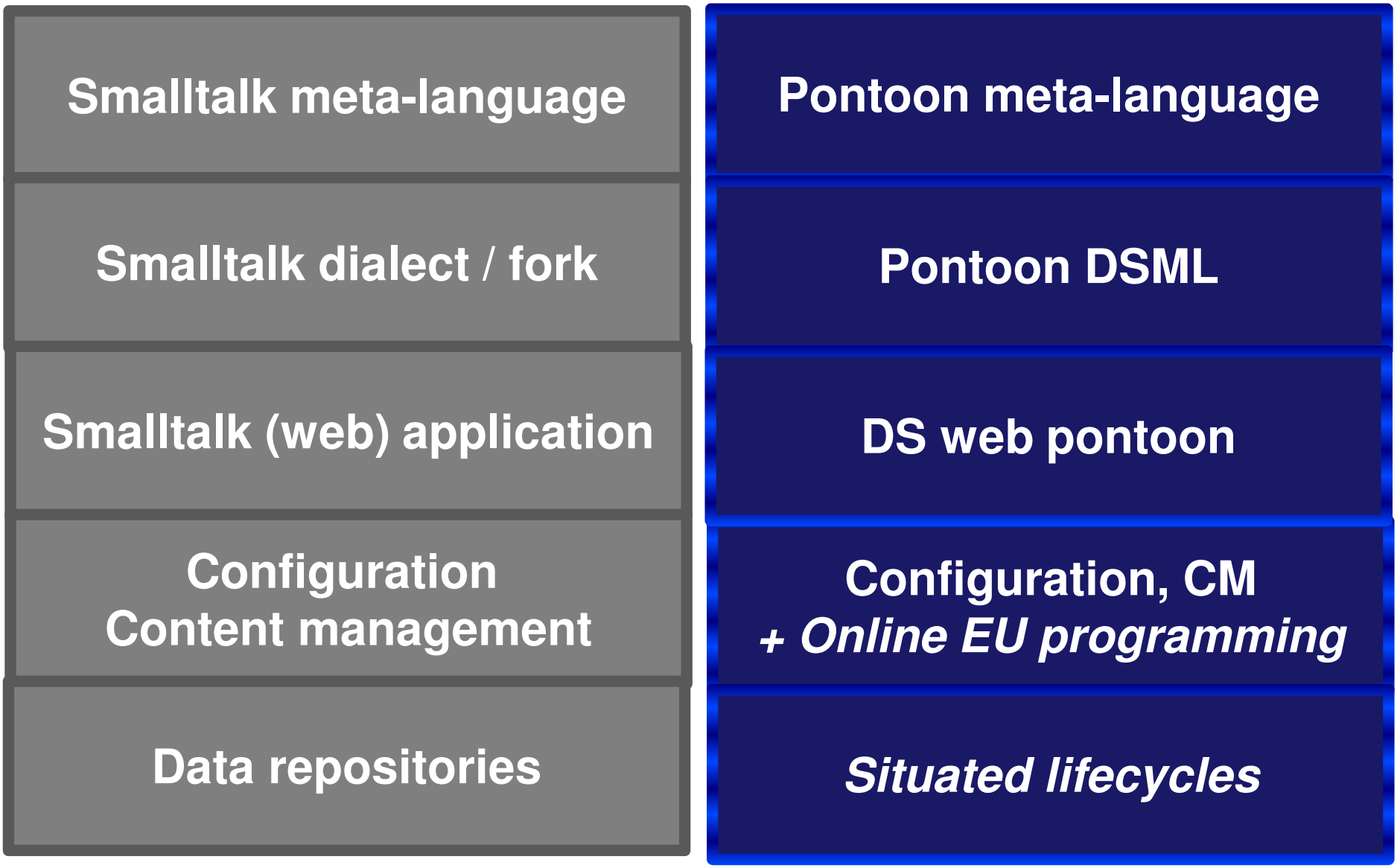
# Solution approach

- Enable online & controlled programmability of webapps by embedding a DSML
- Address diversity of domains and requirements by a meta-language framework approach
- Address the identification of changing aspects and DSML requirements by Domain-Driven Design
- Address smart behaviour requirements by situated lifecycle management

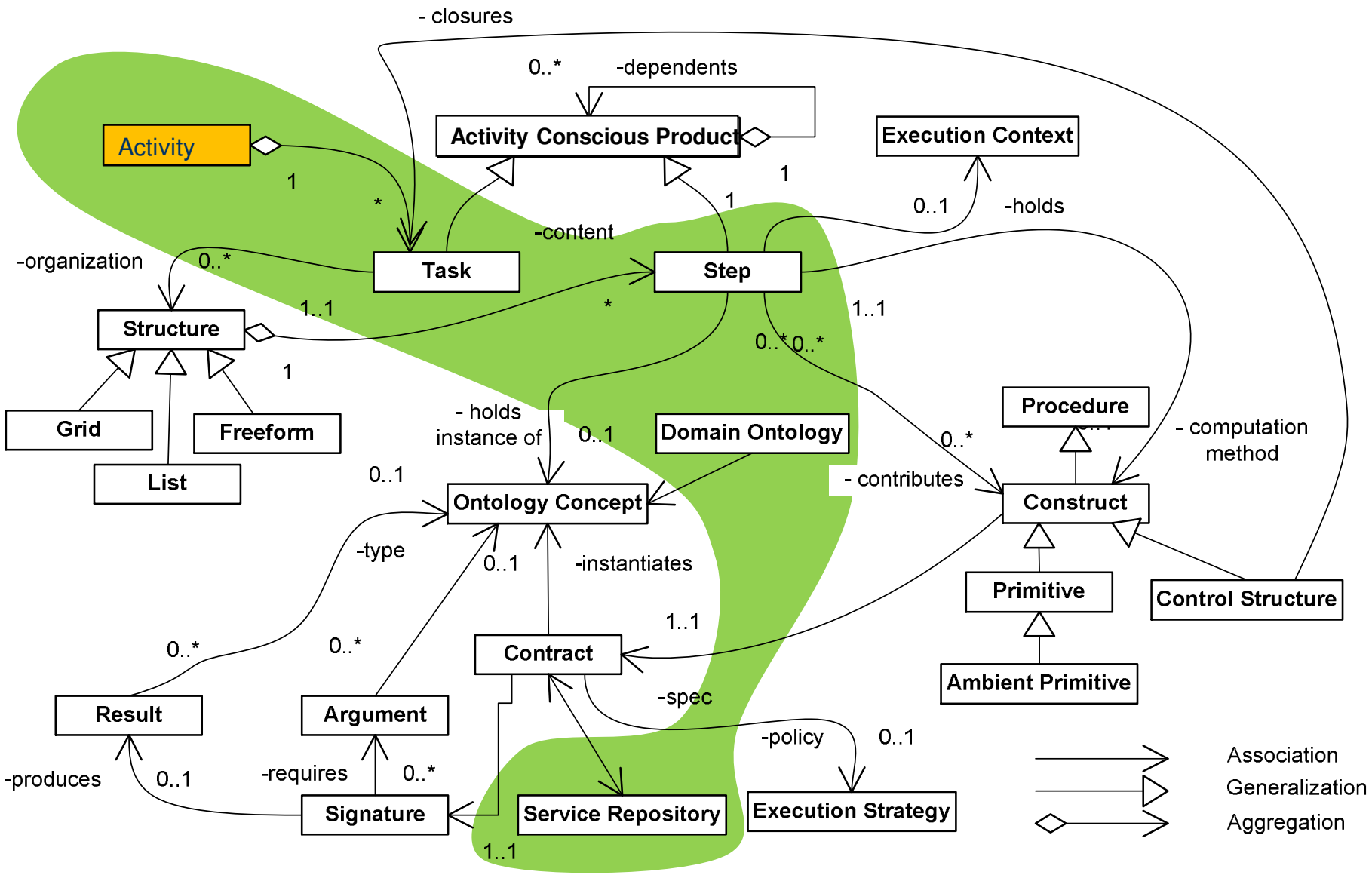
# Creating DSML by extending of a meta-language framework



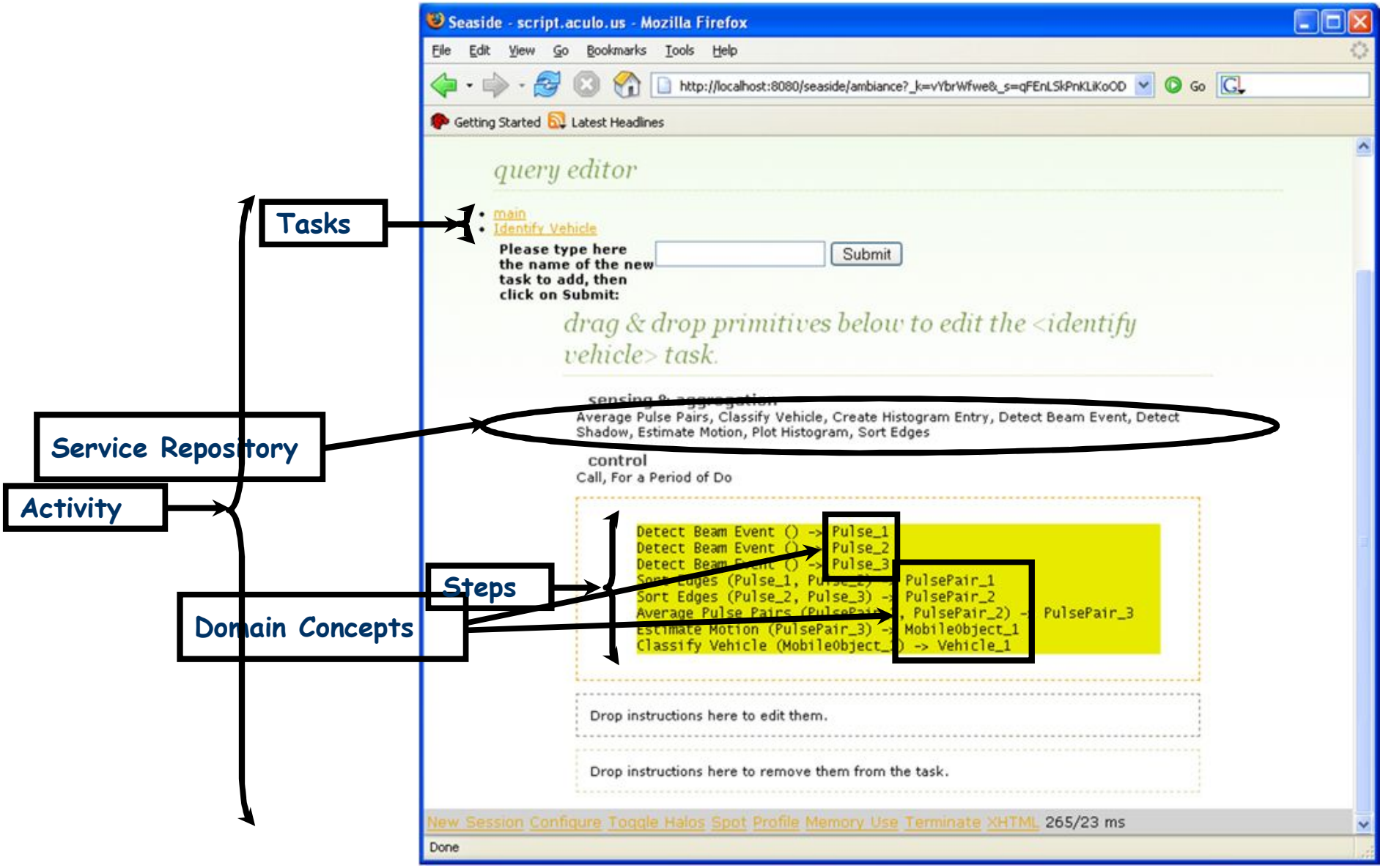
# Standard Smalltalk (web) application development practices



# Dart : Meta-language framework design



# Background: Ambiance project (2005-2006), UL




http://osl.cs.uiuc.edu/people?user=razavi

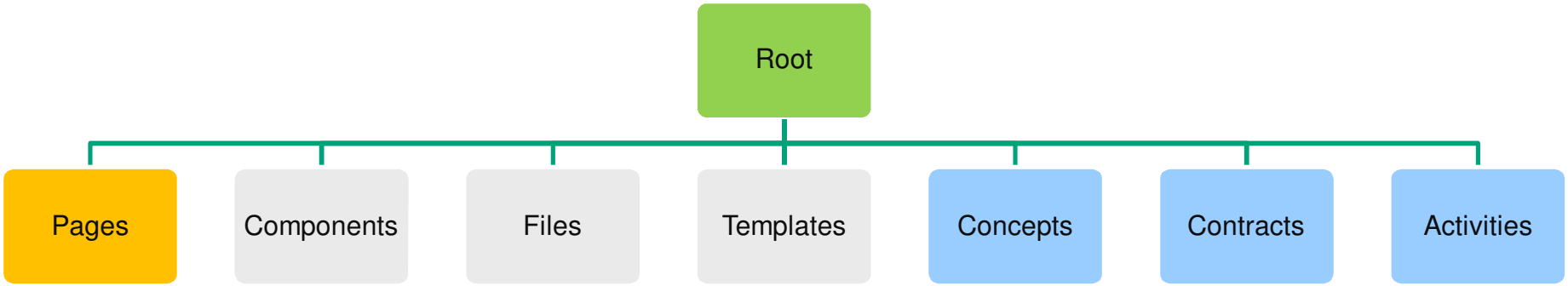
# Assumptions

- Changing content & functionality
- Changes are unpredictable, by their patterns aren't
- Patterns of change may be "wrapped" into a DSML
- End-user are motivated to program using that DSML

## Managing flows & lifecycles as content

- Systematic tree structure of pontoon web apps, both at the operational & knowledge level
- Seaside JQuery-based viewers

# Webapp as a tree of operational- & knowledge-level nodes



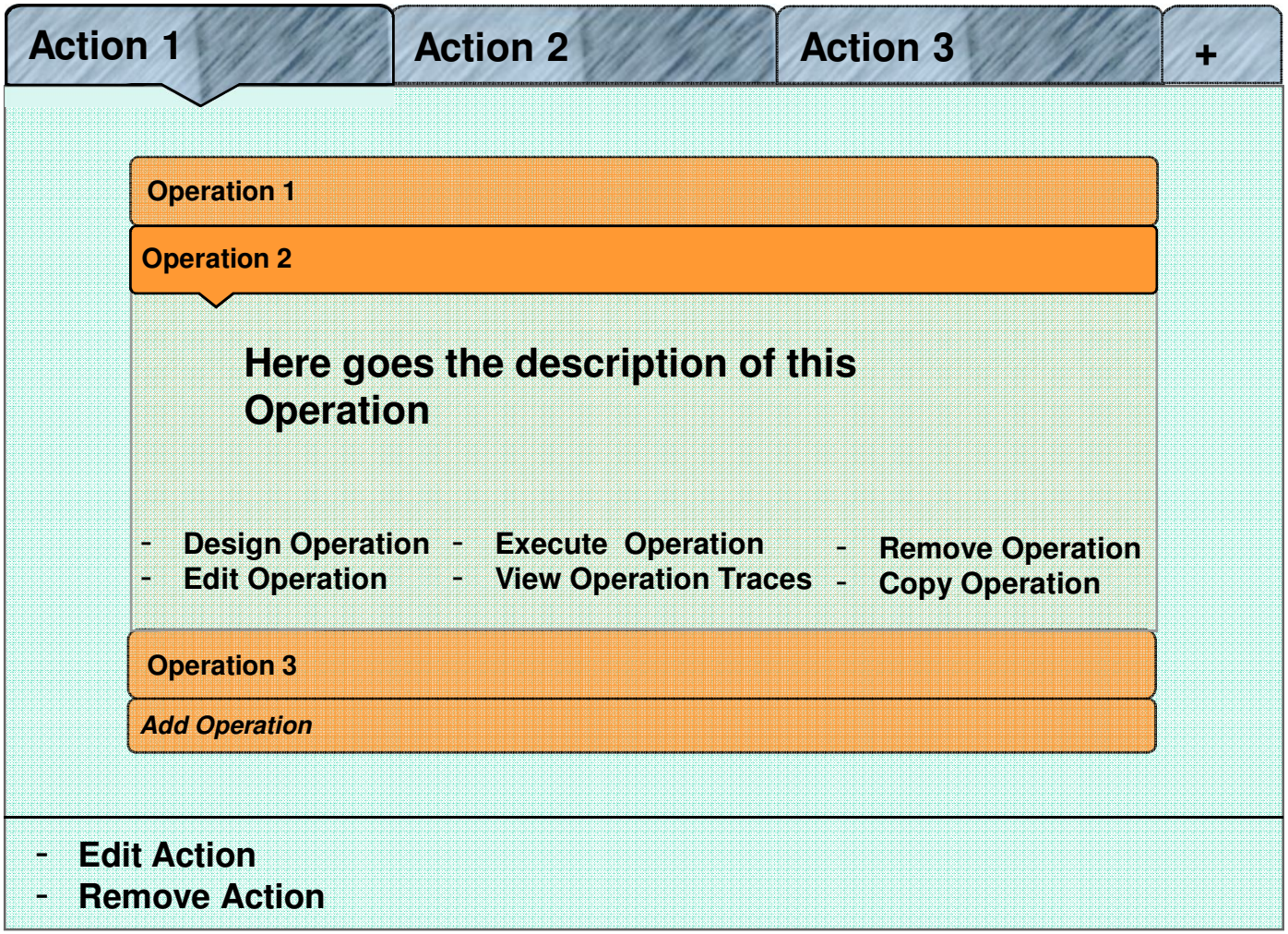
# Implementation




# Seaside JQuery-based viewers / editors

- Based on a framework for hierarchical viewers / editors
  - Implemented in a couple of weeks
  - Via extensive refactoring
- Seaside JQuery examples as starting point
  - Without any previous knowledge of JQuery
  - Without any line of JavaScript ever written

# Illustration: Activity editor




- Execute Activity
- View Activity Traces
- Edit Activity
- Remove Activity

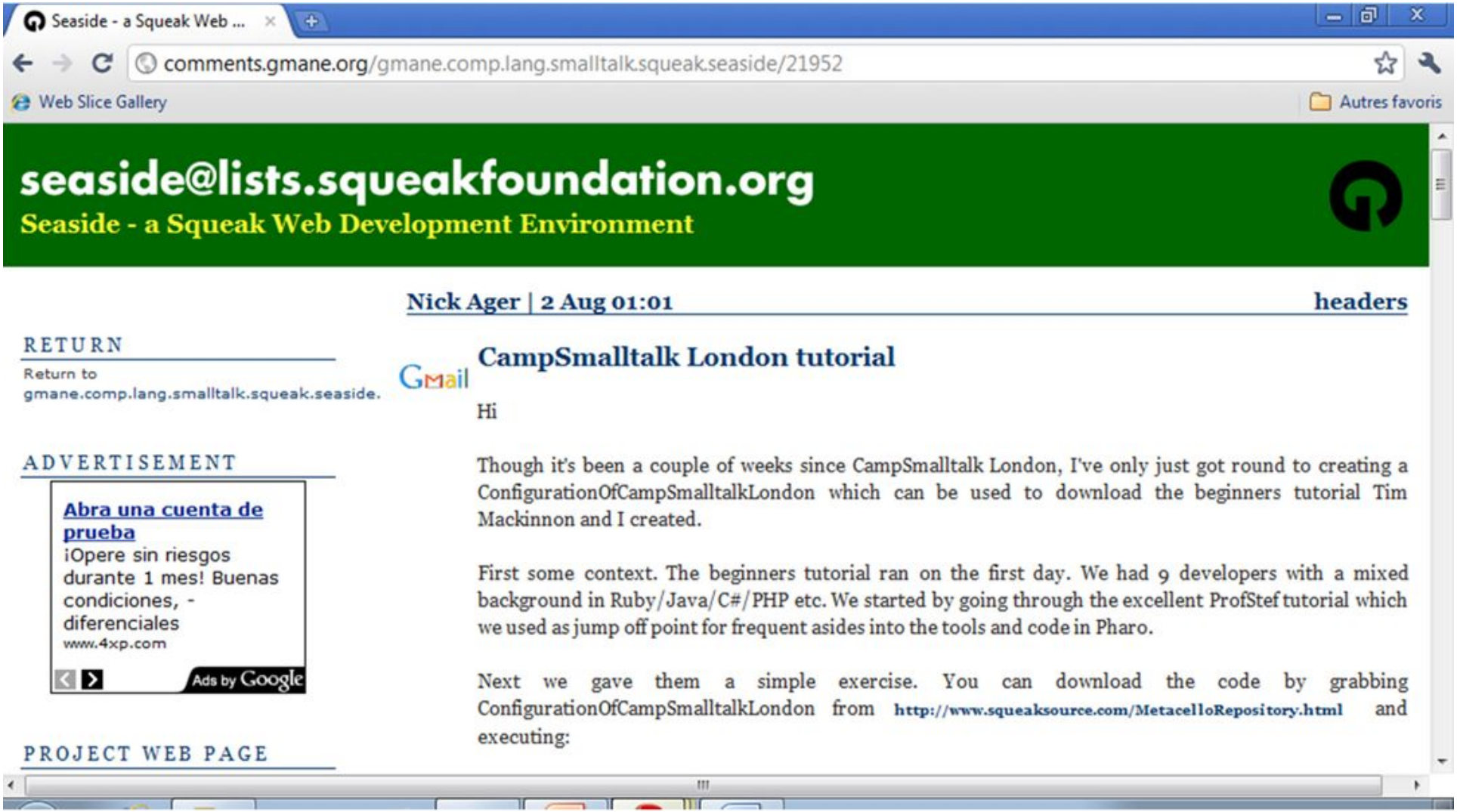
# Illustration

# Twitter – traffic info example

- Two levels of programming in pontoon webapps
- Reusability of existing components
  - Atomic services / Contracts
- Accessibility of on-line data streams (& web services)
- Accessibility of on-line communication media
  - Social networking
- Relative ease of use
- Expressivity

- Case designed for a short but yet representative demo
  - Real-life usefulness not necessarily a goal


[squeak-dev] OAuth/Twi...
lists.squeakfoundation.org/pipermail/squeak-dev/2010-August/152408.html
Web Slice Gallery
Autres favoris
[squeak-dev] OAuth/Twitter demo in Squeak
Andreas Raab andreas.raab at gmx.de
Fri Aug 13 03:50:54 UTC 2010
Previous message: [squeak-dev] Daily Commit Log
Next message: [squeak-dev] Re: [Seaside-dev] OAuth/Twitter demo in Squeak
Messages sorted by: [ date ] [ thread ] [ subject ] [ author ]
Hi -
I was playing with OAuth authentication and in the process decided to test it against Twitter and since it's kind of fun, I thought I'd share it with the rest of the world. You can run the (very simple) demo here:
http://ardemo.seasidehosting.st/seaside/twitter
All it does is after you log in via Twitter it shows you the account info that Twitter shares with the app and allows you to tweet a little.


Seaside - a Squeak Web ...
comments.gmane.org/gmane.comp.lang.smalltalk.squeak.seaside/21952
Web Slice Gallery
Autres favoris
seaside@lists.squeakfoundation.org
Seaside - a Squeak Web Development Environment
Nick Ager | 2 Aug 01:01
headers
RETURN
Return to gmane.comp.lang.smalltalk.squeak.seaside.
Gmail
CampSmalltalk London tutorial
Hi
Though it's been a couple of weeks since CampSmalltalk London, I've only just got round to creating a ConfigurationOfCampSmalltalkLondon which can be used to download the beginners tutorial Tim Mackinnon and I created.
First some context. The beginners tutorial ran on the first day. We had 9 developers with a mixed background in Ruby/Java/C#/PHP etc. We started by going through the excellent ProfStef tutorial which we used as jump off point for frequent asides into the tools and code in Pharo.
Next we gave them a simple exercise. You can download the code by grabbing ConfigurationOfCampSmalltalkLondon from http://www.squeaksource.com/MetacelloRepository.html and executing:
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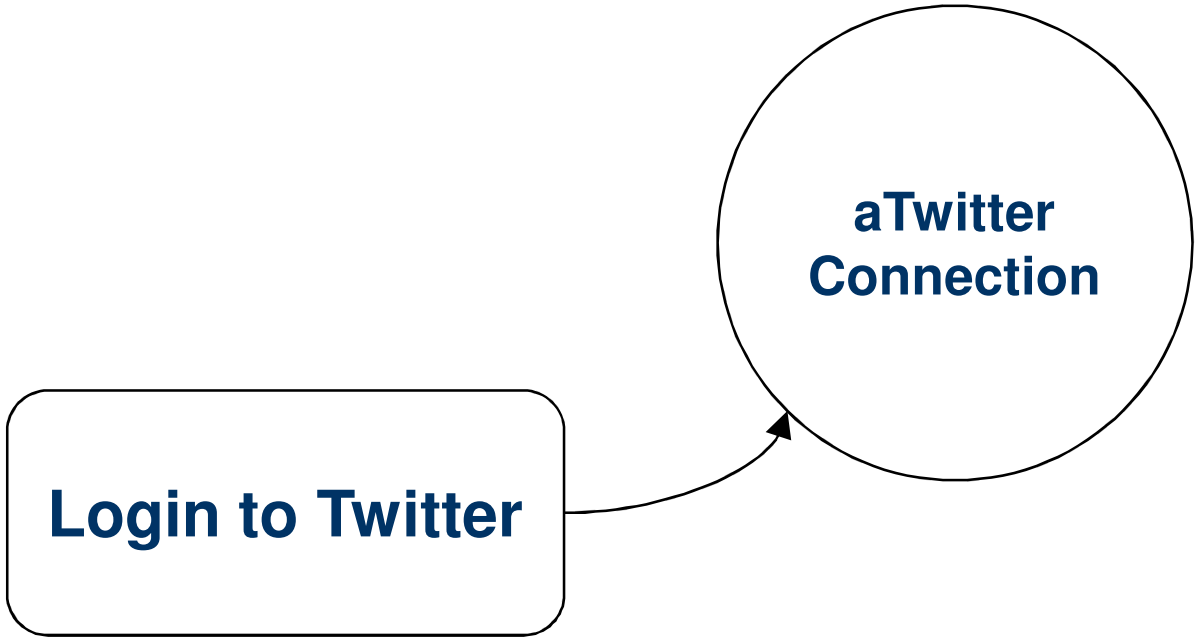
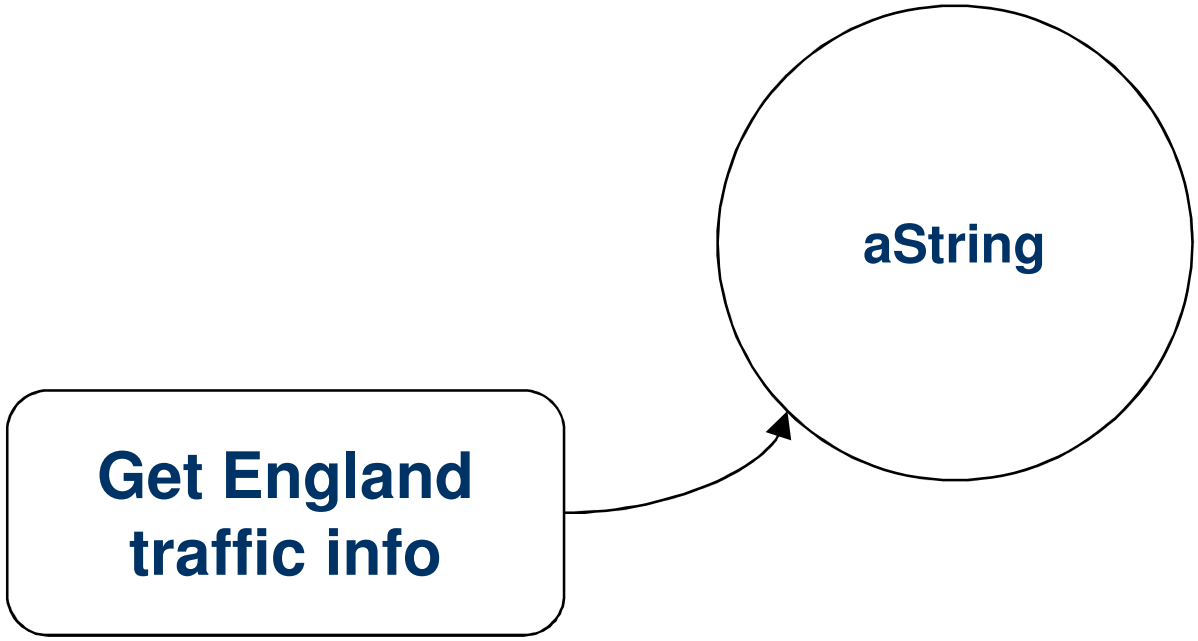
PROJECT WEB PAGE

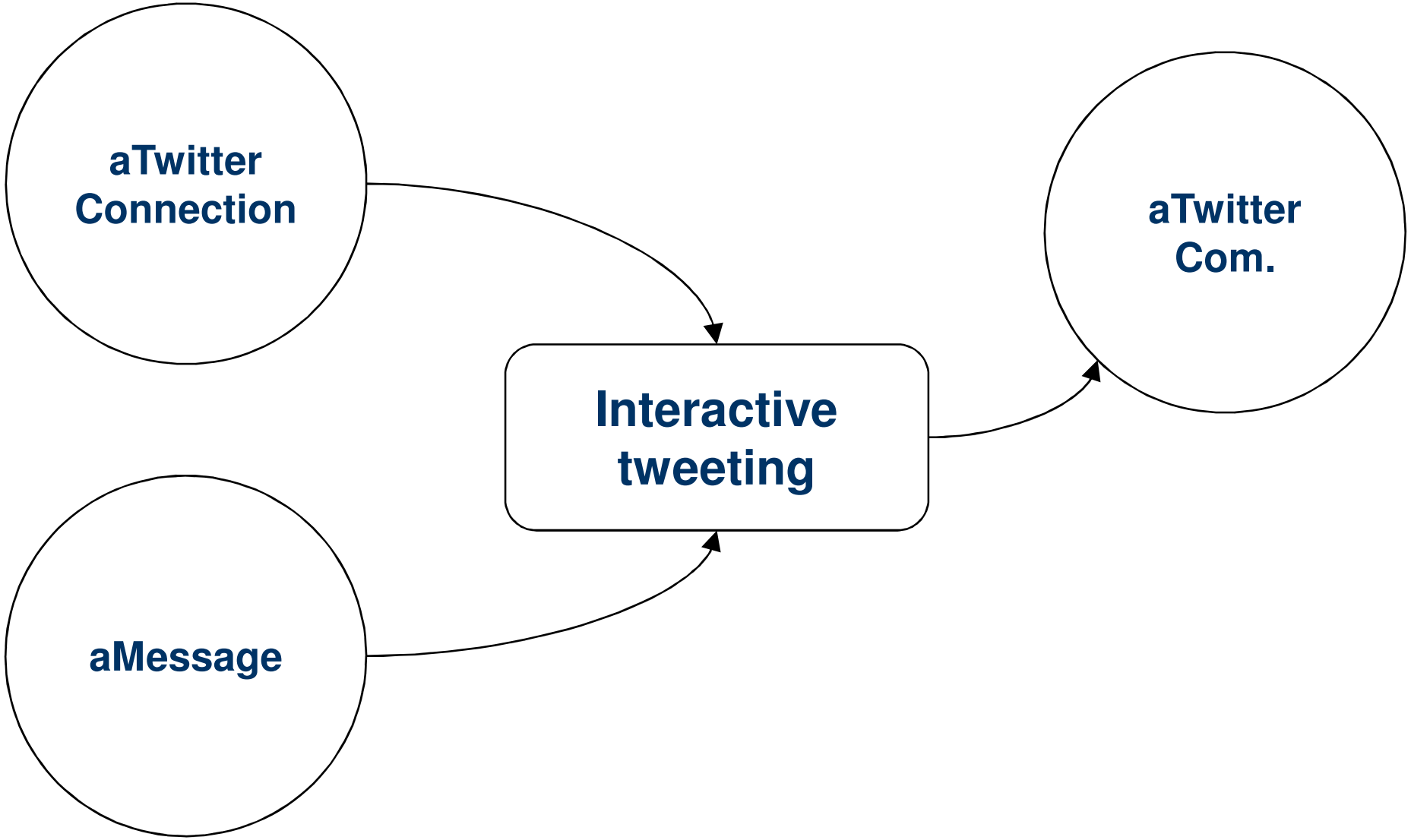
# *Login to Twitter* atomic service



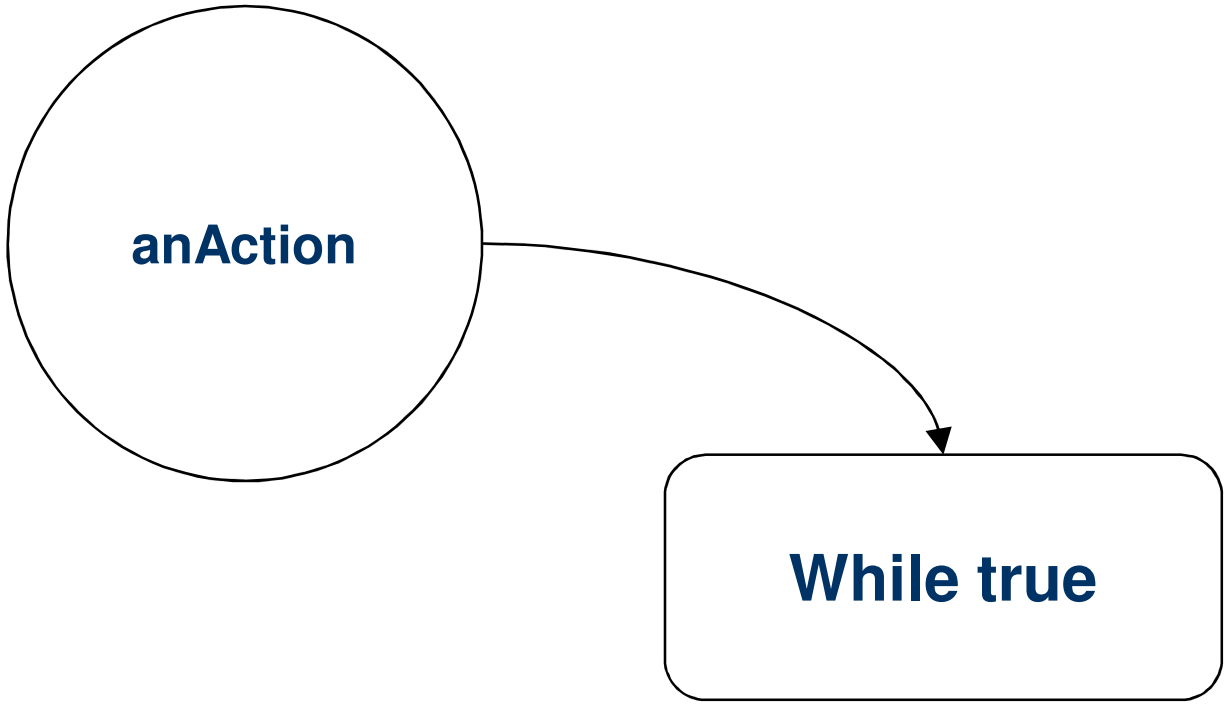
# *Get England traffic info* atomic service

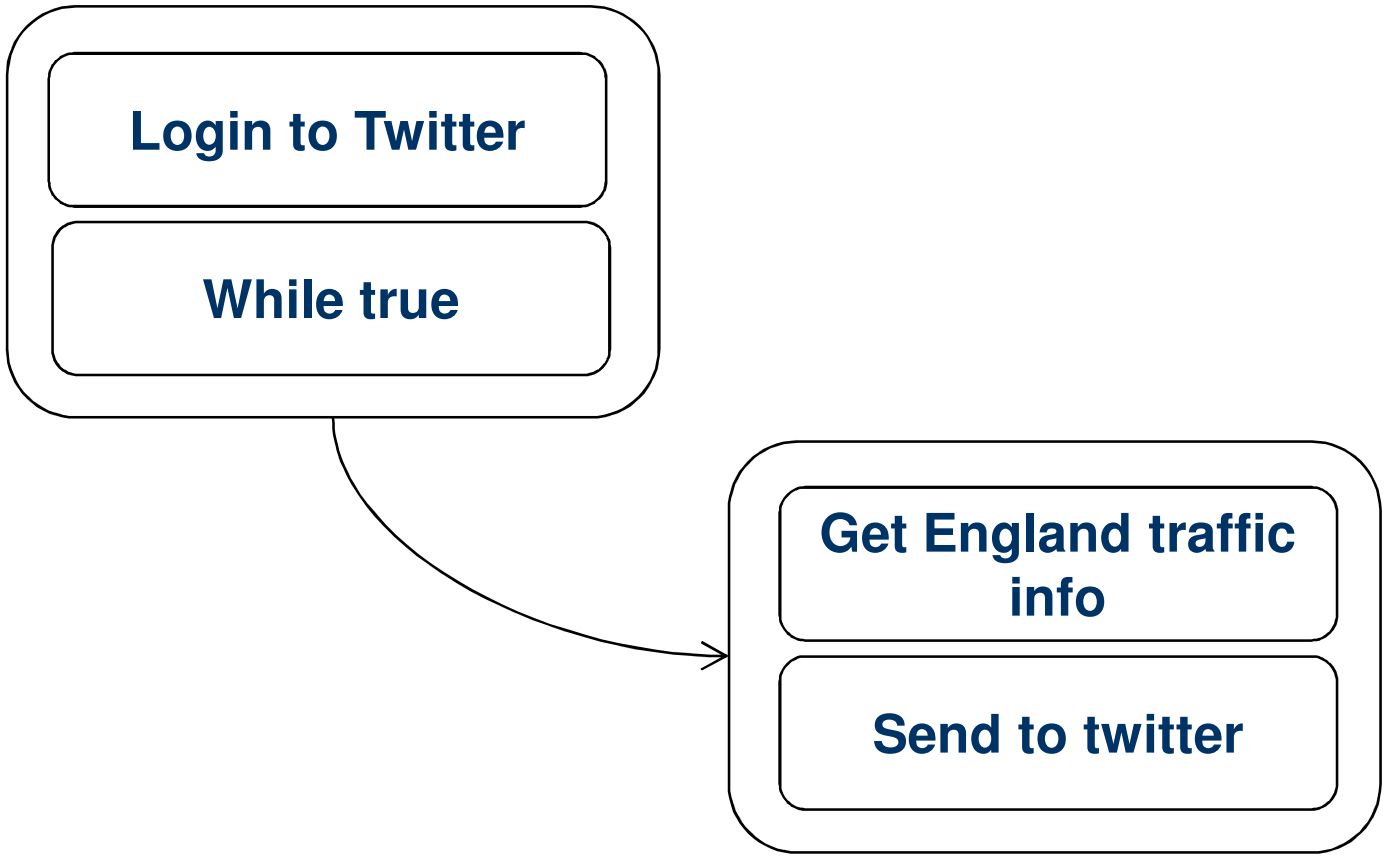


# *Interactive tweeting* service



# *While true* atomic service






```
WATwitterTask >> go
    aTwitter := self call: TwitterLoginService new.
    [itemColl := CSLTransportInfo new results atRandom.
     InteractiveTweetingService
              on: aTwitter
              tweet: anItem description]
                    whileTrue
```

# Live demo

- Programming on-line the above example
  - As an end-user programmers
  - Via http://www.afacms.com
- Executing the above end-user program
  - As a final end-user
- Inspecting execution lifecycles
  - As a manager

# Application perspectives – ICT-based support to the elderly

## Delegate to care providers the management of diversity & unpredictable changeability

# Application perspectives – Business applications

**Delegate to domain experts the description & validation of application-level business logic via executable models**

# Other application perspectives

- Web-based model authoring and execution systems
- Architectural innovation of legacy applications
- Self-documenting web applications
- Extending *Service-Serve* possibilities
- On-line store for situational services
  - Community project http://pontoonity.com

# Research perspectives

**Activity intelligence services:**
**What, Where, When, Who, Why**

**Multiple users**

Internet

Wifi

ZigBee

Online Adaptation

Online Decision Making

Execution & lifecycle Management

Online Observation

Individualised remote monitoring, assistance & information services

Detection of Significant Events

# Call for collaboration

- Independent start-up company
- Hosted by the Ministry of Economy and Foreign Commerce in Luxembourg
- Background in industrial software development (Prelude Inspection) & academic research (Paris 6 & Univ. Luxembourg)
- Welcomes industrial and academic Partners, Sponsors and Early Adopters

# Contact

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**Web technology meets dynamics of changing economy**

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