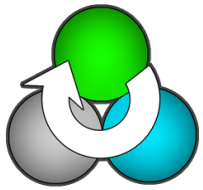


EasySOA

« Service Integration Goes Social »

Java Developer Track – Sept. 23rd – Open World Forum 2011

Speakers

Marc Dutoo

- Head of R&D at Open Wide
- EasySOA project leader

Alain Boulze

- EasiFab Partner & Manager
- 25 years experience in IT for business

Cédric Carbone

- Talend CTO
- OW2 & Eclipse Board member

Agenda

I. **EasySOA in a nutshell**
II. **Why collaborative (platform) ?**
   - Reaching out to business users
   - Reaching out to developers & IT staff
III. **EasySOA-aware development / EasiFab**
IV. **EasySOA-compatible ESB / Talend**
V. **Roadmap - Questions**

EasySOA - Factsheet

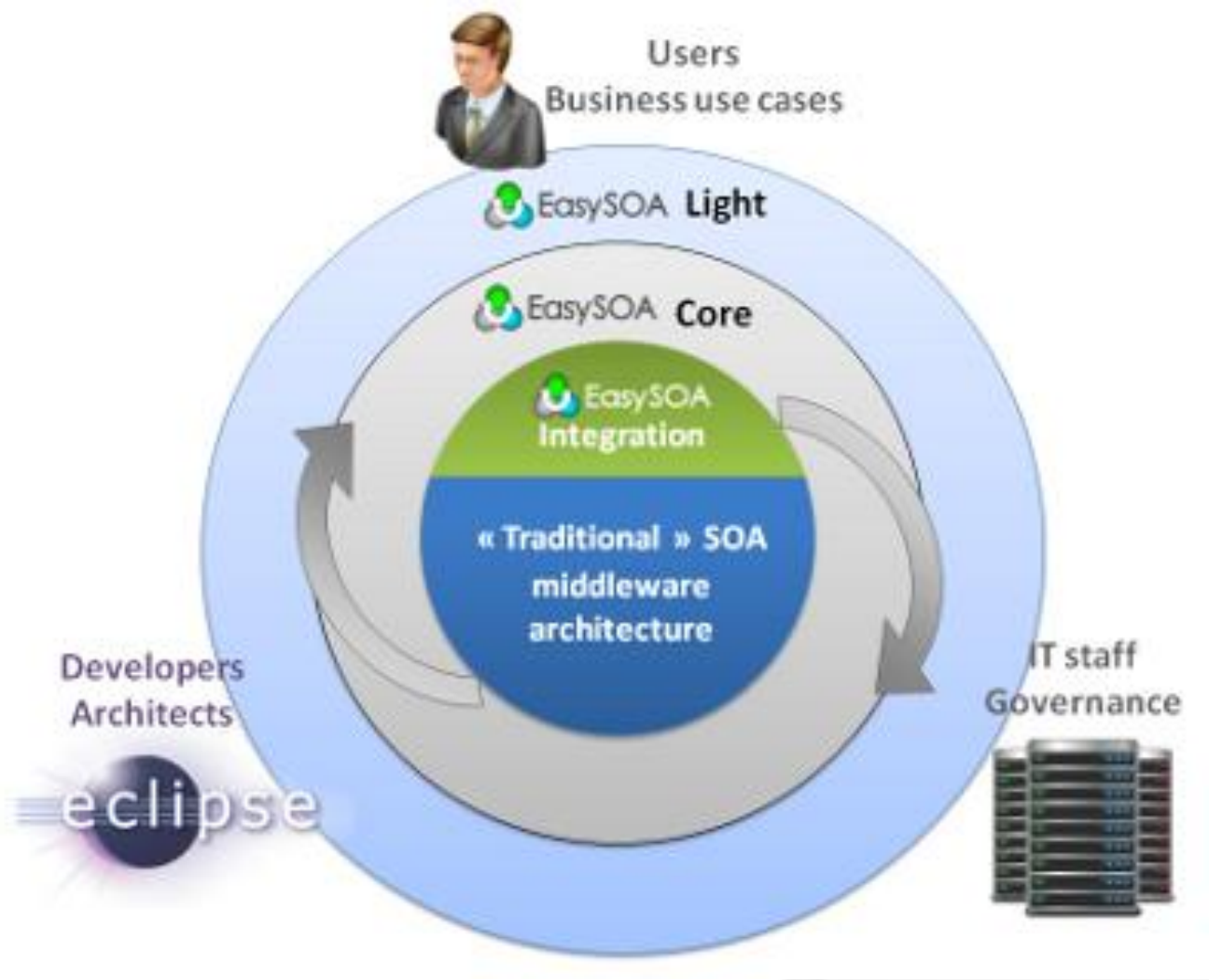
EasySOA Facts

- 5 partners
- 2 years, started nov. 2010
- 4m€ budget
- System@tic label
- And an ambitious aim…

Making Service Oriented Architectures (SOA) simple to use

- Business use, development, production use, monitoring
- And **throttling up** the SOA engine in the entreprise !

EasySOA - Goal



EasySOA - Goal

- Add a lighter, agile SOA layer around “traditional” SOA
  - thanks to an online, social and collaborative approach, involving all actors of the SOA process
    - business users, SOA architects and developers, IT staff
  - Enabling
    - ex nihilo service **discovery, cartography and documentation**, all collaboratively
    - **sanitization** and protection of existing SOAs by tracking changes of outside services
    - help gathering and **fast-prototyping** business needs on top of existing applications, without hurting them
    - **reuse** requirements, architectural shell, tests and mockups to ease the transition to final implementations within the existing SOA solution

EasySOA – Consortium

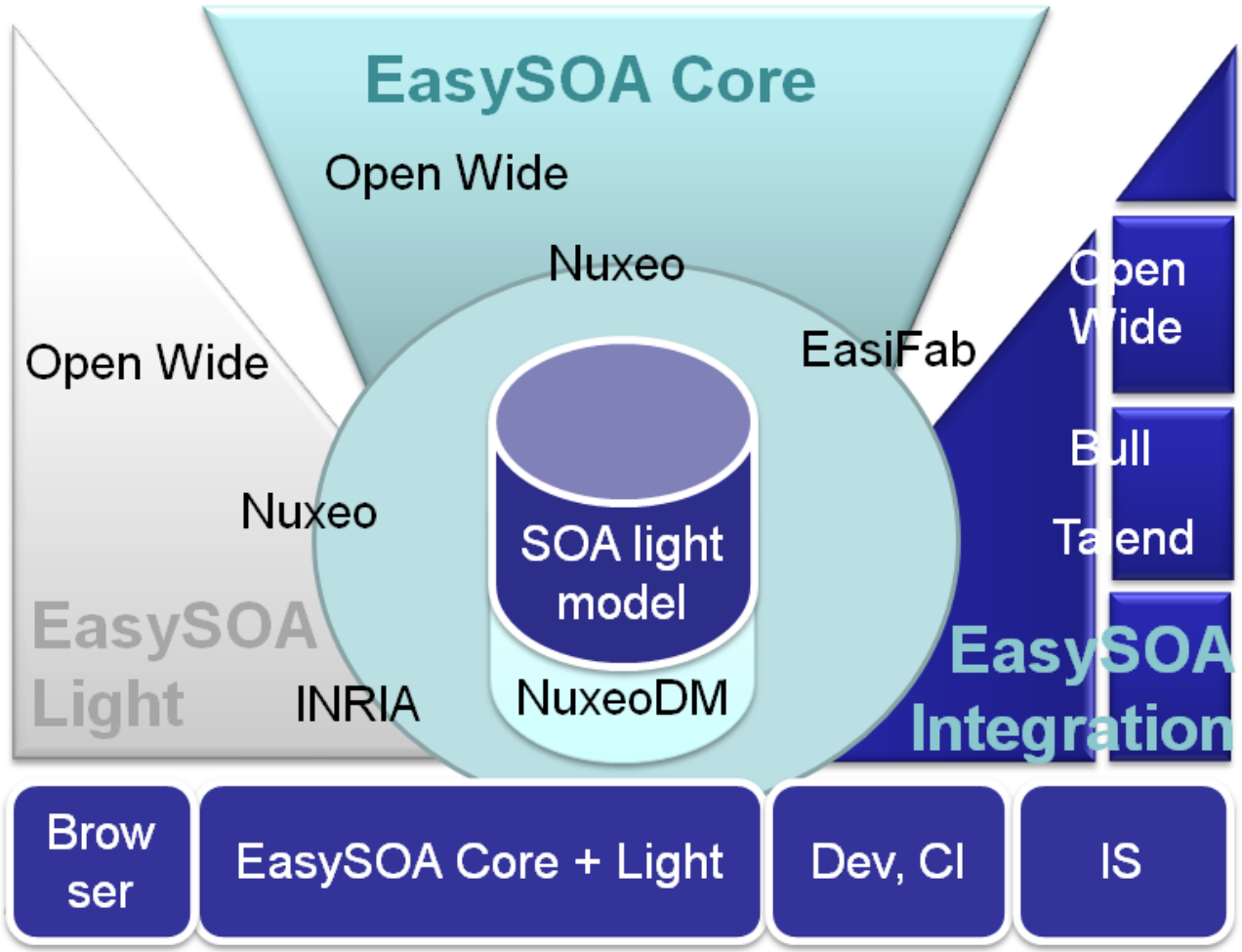
Behind, French partners but also worldwide leaders

- **INRIA labs** : service engine (OW2 FraSCAti)
- **EasiFab** : SOA Modeling (Eclipse SOA), monitoring (Galaxy)
- **Talend** (ETL/ESB) : SOA and data connectors to connect to existing business – but also Data Quality and MDM
- **Nuxeo** (ECM) : document management platform, to manage the SOA model, documents and artifacts
- **Bull** (service provider and middleware) : SOA administration with OW2 Jasmine and use case
- **Open Wide** : leader, global architecture and integration, BPM (with Eclipse JWT / OW2 Scarbo), use case

EasySOA – Architecture

EasySOA Core :
SOA collaborative management and governance

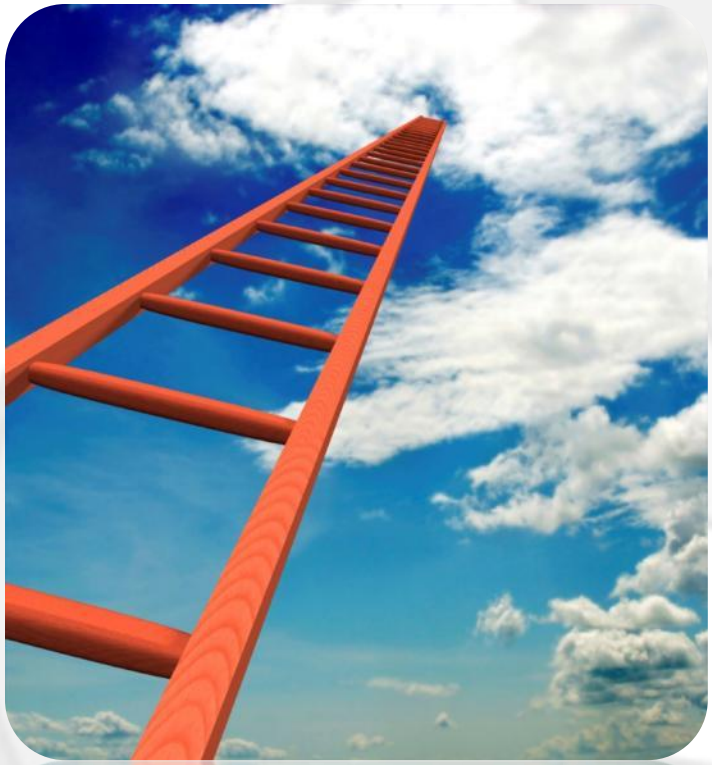
EasySOA Light :
Scripted or Point-and-Click rapid application development



EasySOA Integration :
Ecosystem of compatible SOA solutions and compatibility extensions

Scaling up SOA to IT challenges

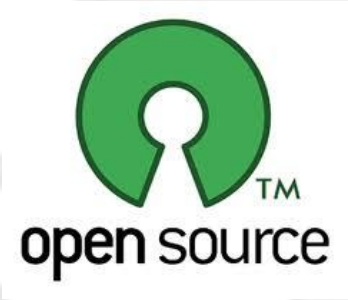
- New IT challenges require an efficient entreprise SOA process more than ever
  - Cloud
  - agility,
  - business relevant IT,
  - mobile,
  - green IT



- …how to scale up ?

How ?

- We bet on :
  - **open** source & open approach
    - For Information System heterogeneity, against vendor lock-in
  - the **web**
    - The main drive of computer science democratization for the last 10 years
    - to get closer to end users - a.k.a. "normal" people
  - **Collaborative**…



Why collaborative, isn't SOA an architect thing ?

SOA, development & business

- SOA = how to avoid the integration "**noodle plate**" problem at protocol and data format levels
- with SOA, integrating a new application with existing ones becomes making it talk with the right
  - protocol(s) : “connecting the lanes” (binding)
  - & data format : “translating the vocabulary” (mapping)
    - This requires **business knowledge** !
- Actually, architects and developers already need business users when changing features
  - To describe requirements, and ~~sometimes~~ often to make decisions on the functional perimeter (cost-driven…)

Reaching out to business users

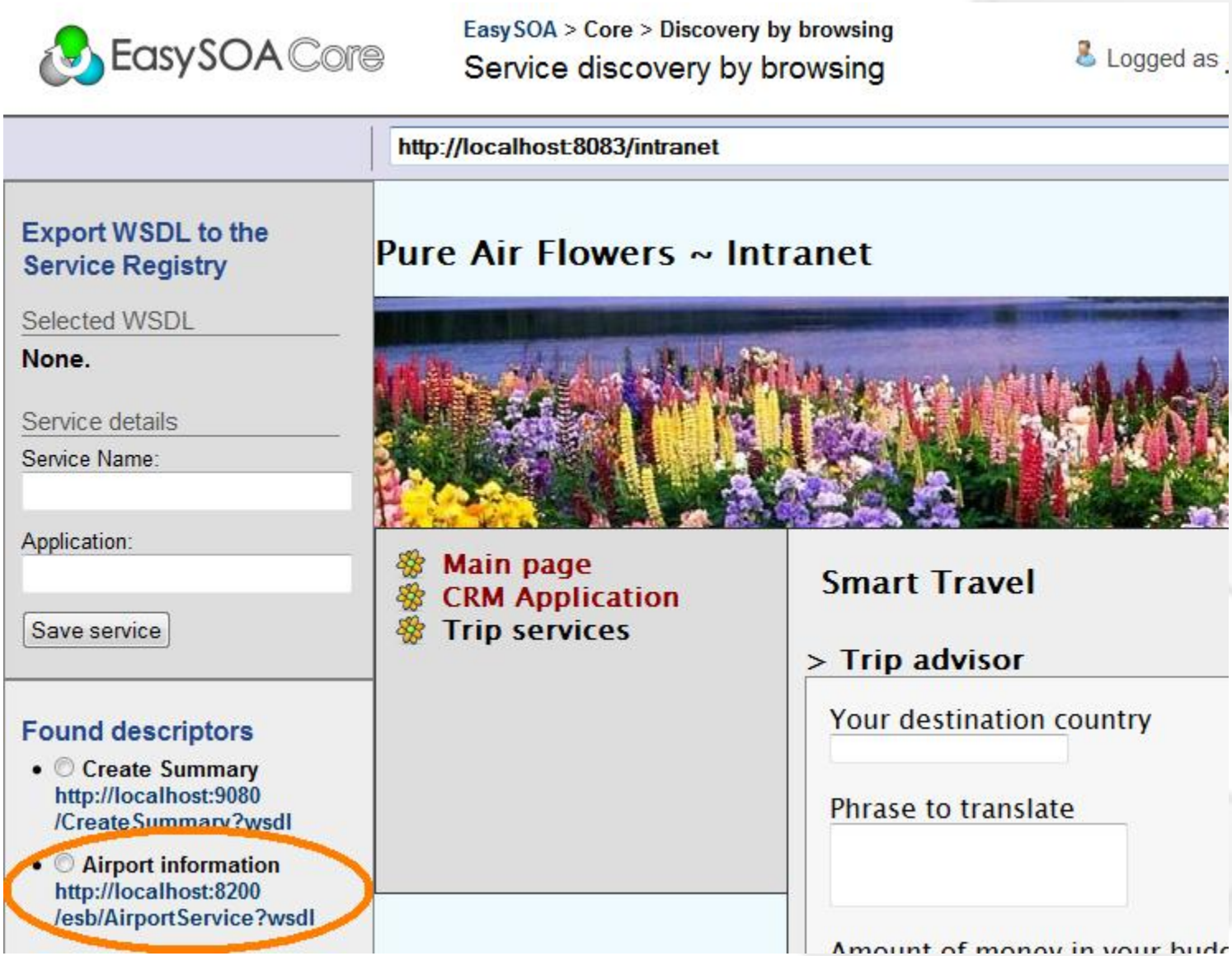
so we need them in an soa development process

- (this need also justifies business architecture)

but how and where to get them ?

- Rather than a formal, constrained, heavy process, provide the tools for **informal, social collaboration**
- Principle : to each his own…
  - Knowledge - point of view - tools
- so look for business users at the place of their business : their **business applications** !
  - 5' demo : service discovery – business user

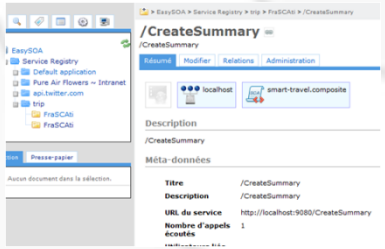
Reaching out to business users - demo



Reaching out to developers & IT staff

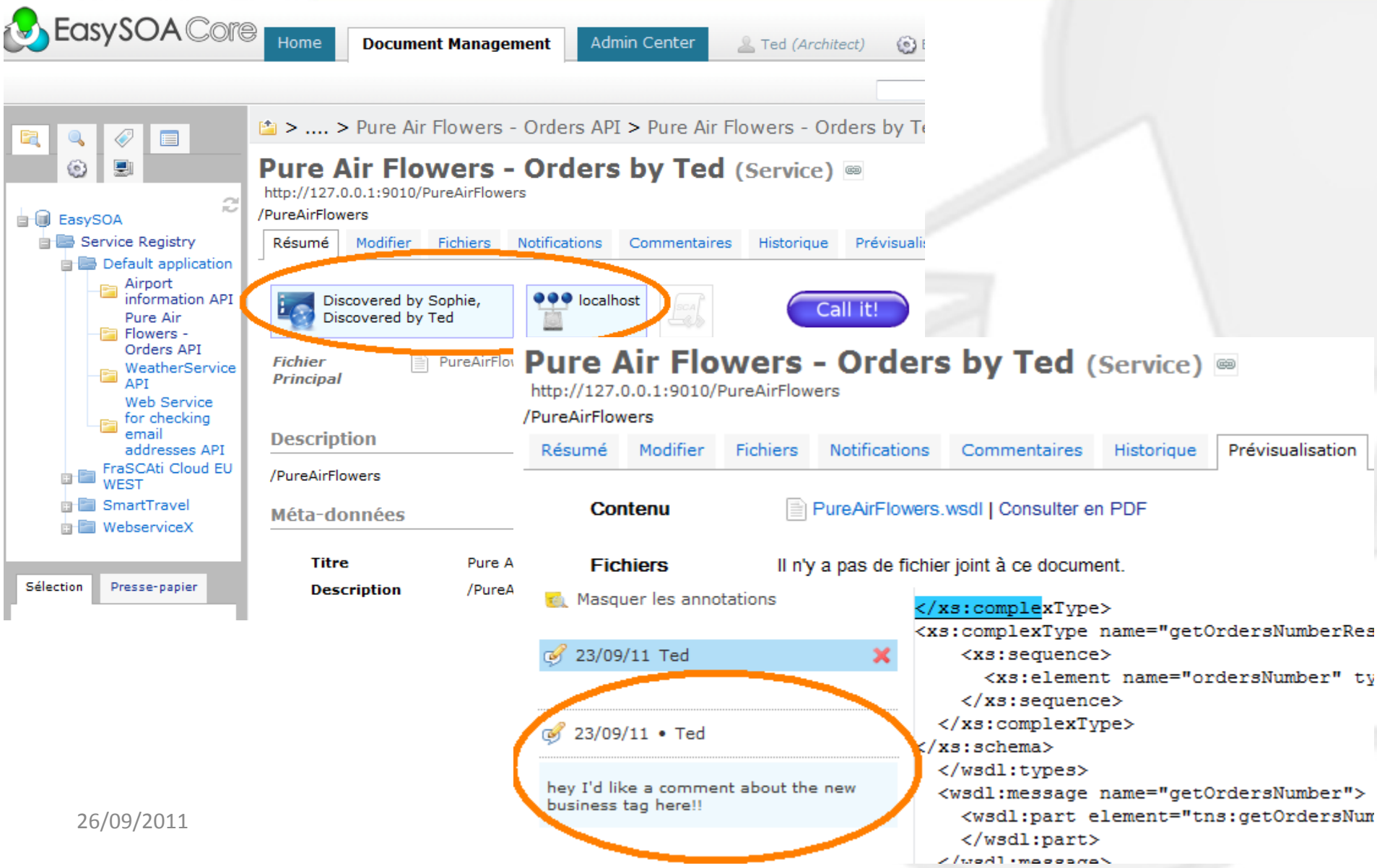
Getting in also the other actors, just the same :

- Architects & developers
  - using their own knowledge : technical architecture
  - For that : Service Component Architecture (SCA)
    - an OASIS standard that describes services and **dependencies** between them - kinda like remote service injection / DI
- IT staff
  - using what they manage : network



- 5' demo – collaborative discovery : archi & IT

Reaching out to developers & IT staff



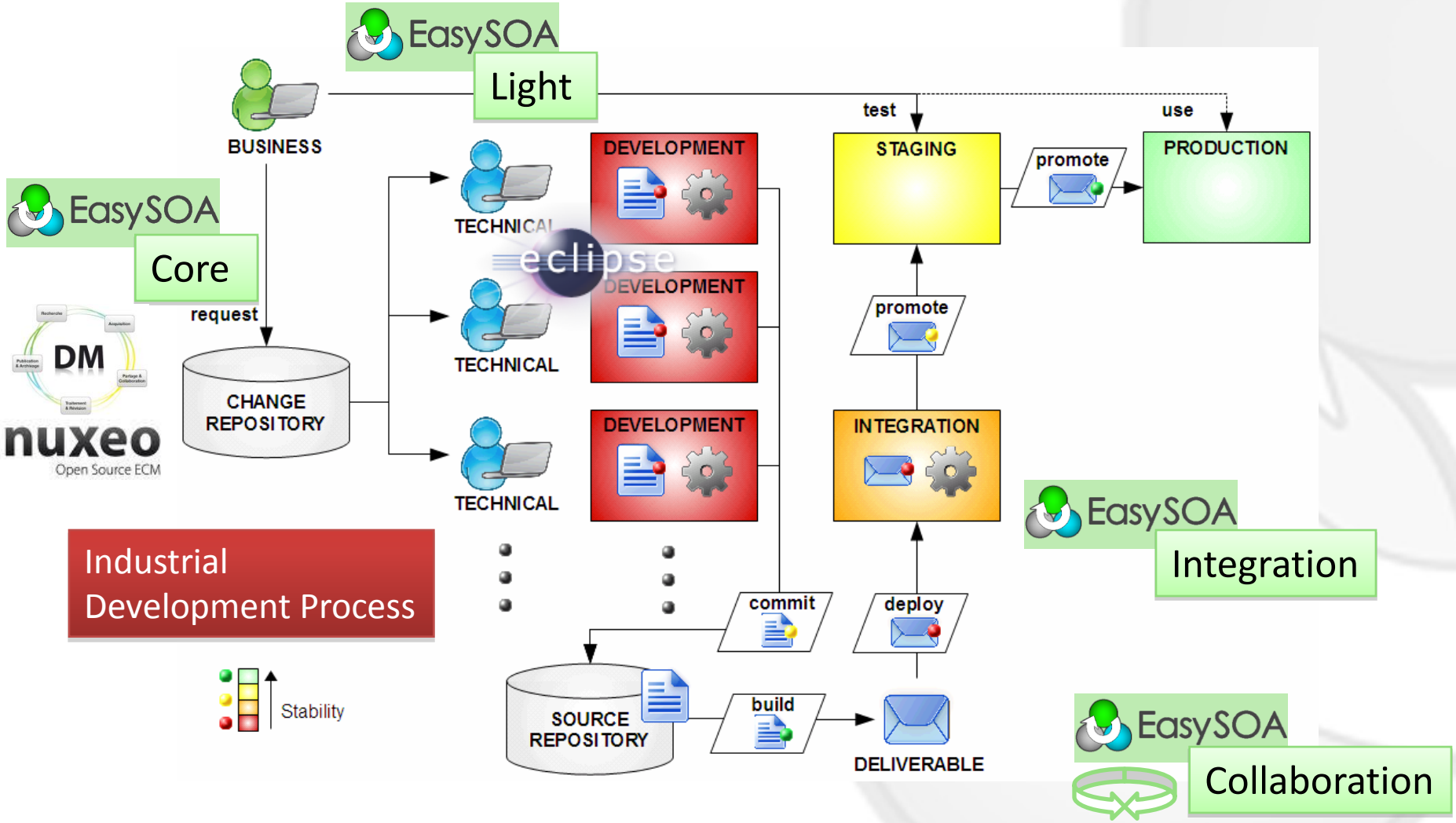
Earlier discovery ?

- So that's collaborative service discovery allright
- It can further support
  - Documents (specifications…),
  - Comments & commentable WSDLs,
  - Notifications (service info changed),
  - Etc. (workspaces, channels…)
- To fully benefit of all that, the earliest services are discovered and known the better
  - Could we detect them even before they're live ?!

Development time discovery

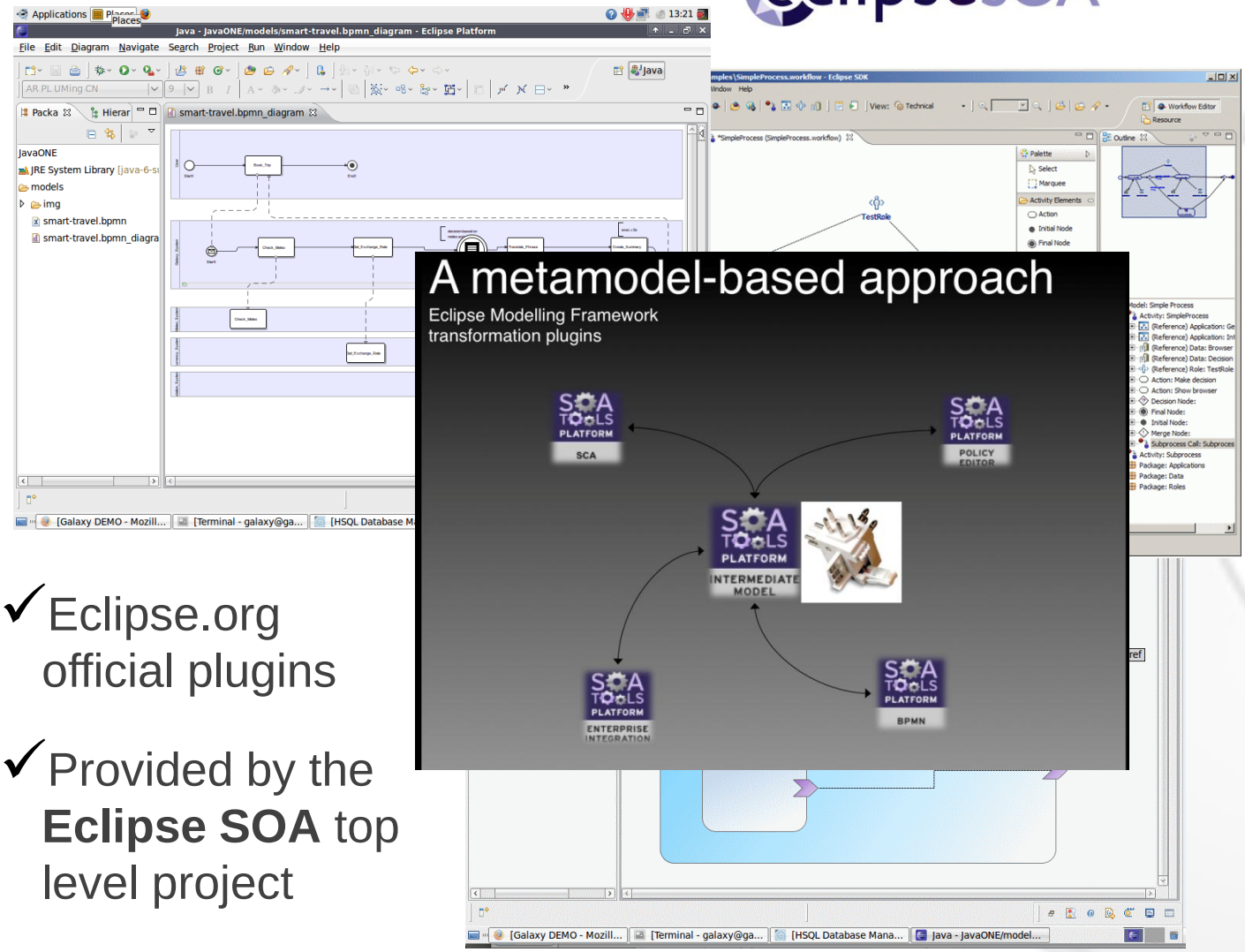
- You've noted that the architecture has been known by archis before service were in operation
  - services didn't appear out of nothing in operation !
  - rather before they were before in the SOA process,
  - i.e. in development, or even earlier in architecture
- How to detect them at development time ?
  - Again, we have to look for them in the right place
  - i.e. development tools ! ex. Eclipse SOA
- and before ? Business design!
  - are actually business stuff… so back in easysoa

EasySOA – Towards a collaborative SOA process !



EasySOA – The SOA tooling environment

eclipseSOA



- ✓ Eclipse.org official plugins
- ✓ Provided by the **Eclipse SOA** top level project

- ✓ **BPMN** for business process design
- ✓ **JWT** for implementation and execution of workflows
- ✓ **SCA** for assembling the service architecture
- ✓ and **Mangrove** as a glue around it all

EasySOA

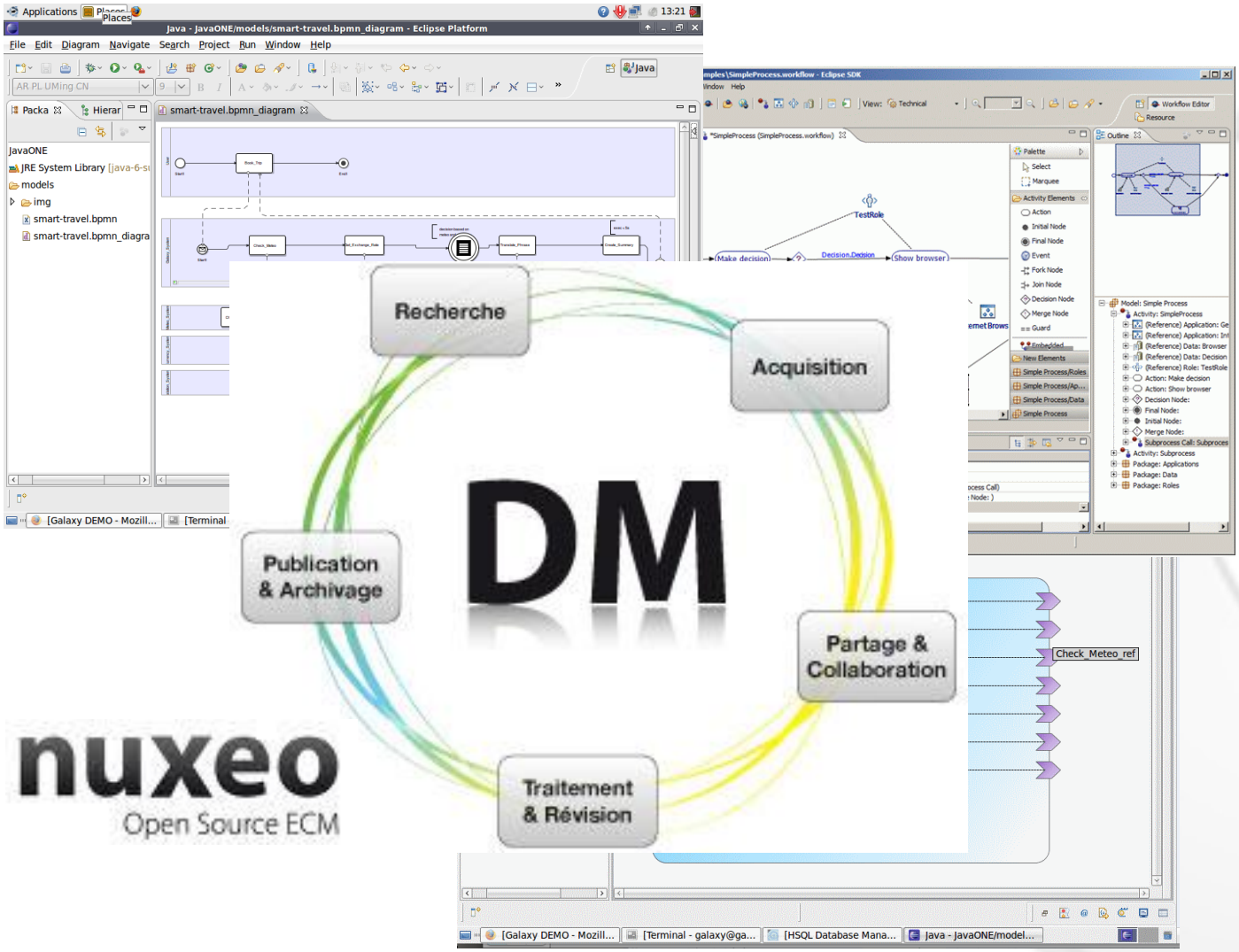
EasySOA – The missing link

- ✓ They give a pretty good picture of what is **assembled** in the target service oriented applications.
- ➢ However, they are not about the application that business users **actually see and use everyday**, and IT staff monitors
  - They are rather about its models in the development environment
  - Then about the live, executed architecture where the services live and strive

Too bad, these people are an important piece of the SOA puzzle !

- ✓ …that's the place EasySOA Core expects to be in.

EasySOA – EasySOA Core case study



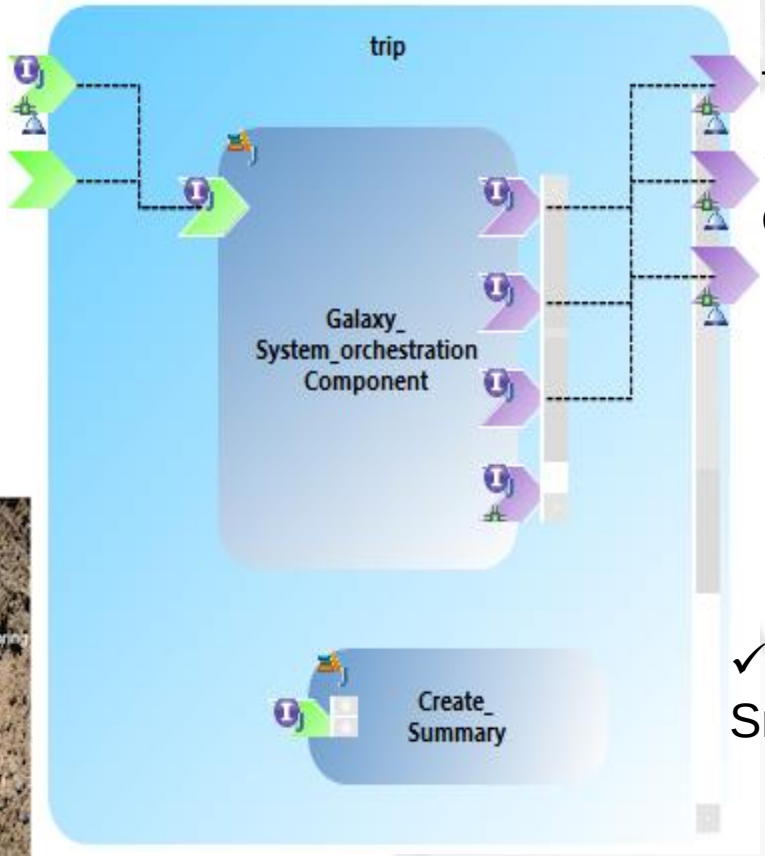
- ✓ EasySOA Core extends the collaboration from the Eclipse SOA Modelling / Mangrove design environment
- ✓ **A shared repository with added value features**
  - ✓ **Business & Application Domain**
  - ✓ **Life Cycle Status**
  - ✓ **Authoring Info**
- ✓ **Multiple enrichment and customization capabilities**

EasySOA – EasySOA Core business case

"**SmartTravel**"

Helping US people making a trip to a French city ☺

INRIA ***galaxy*** project
http://galaxy.inria.fr



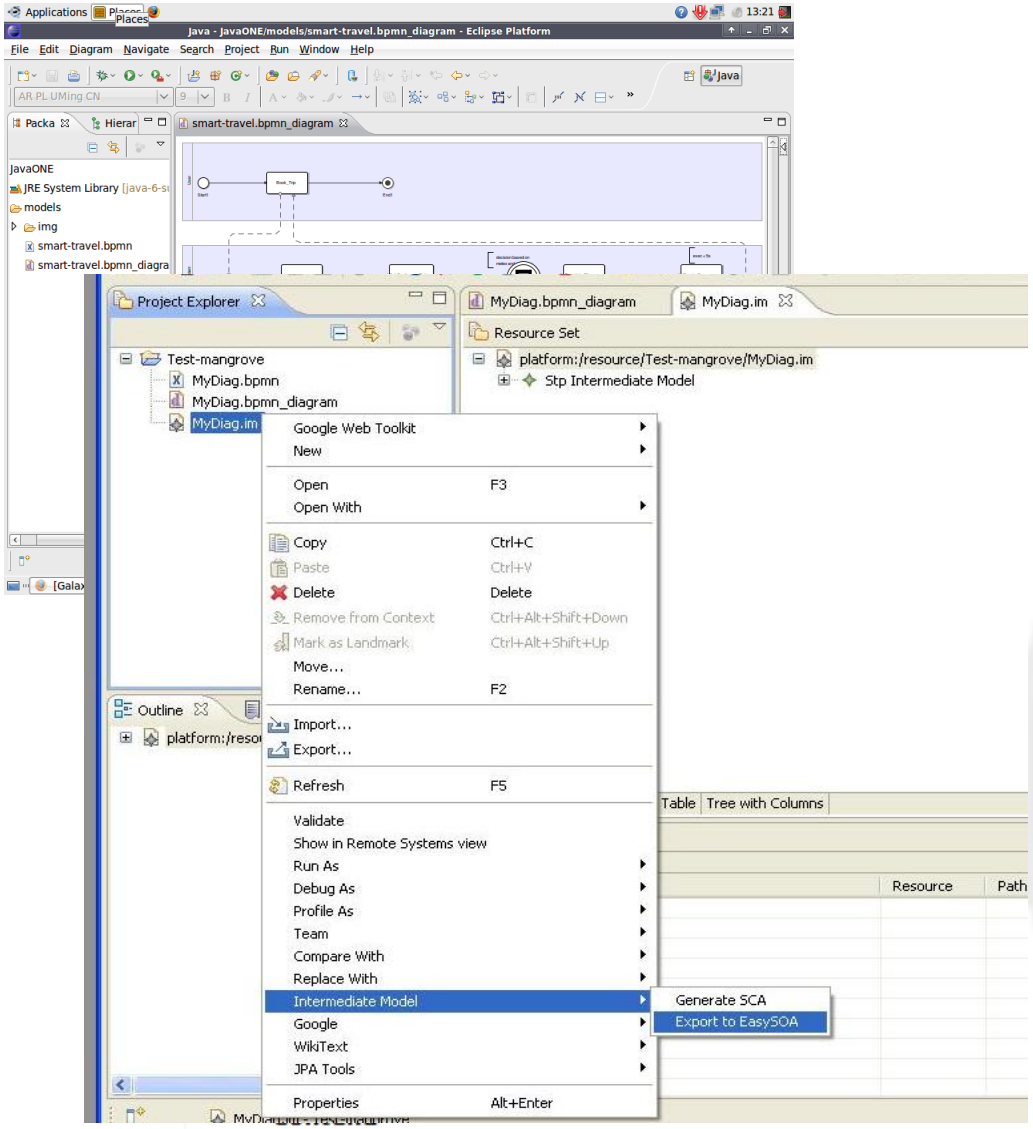
✓Get weather forecast

✓Get current currency rate

✓Translate visitor's advice

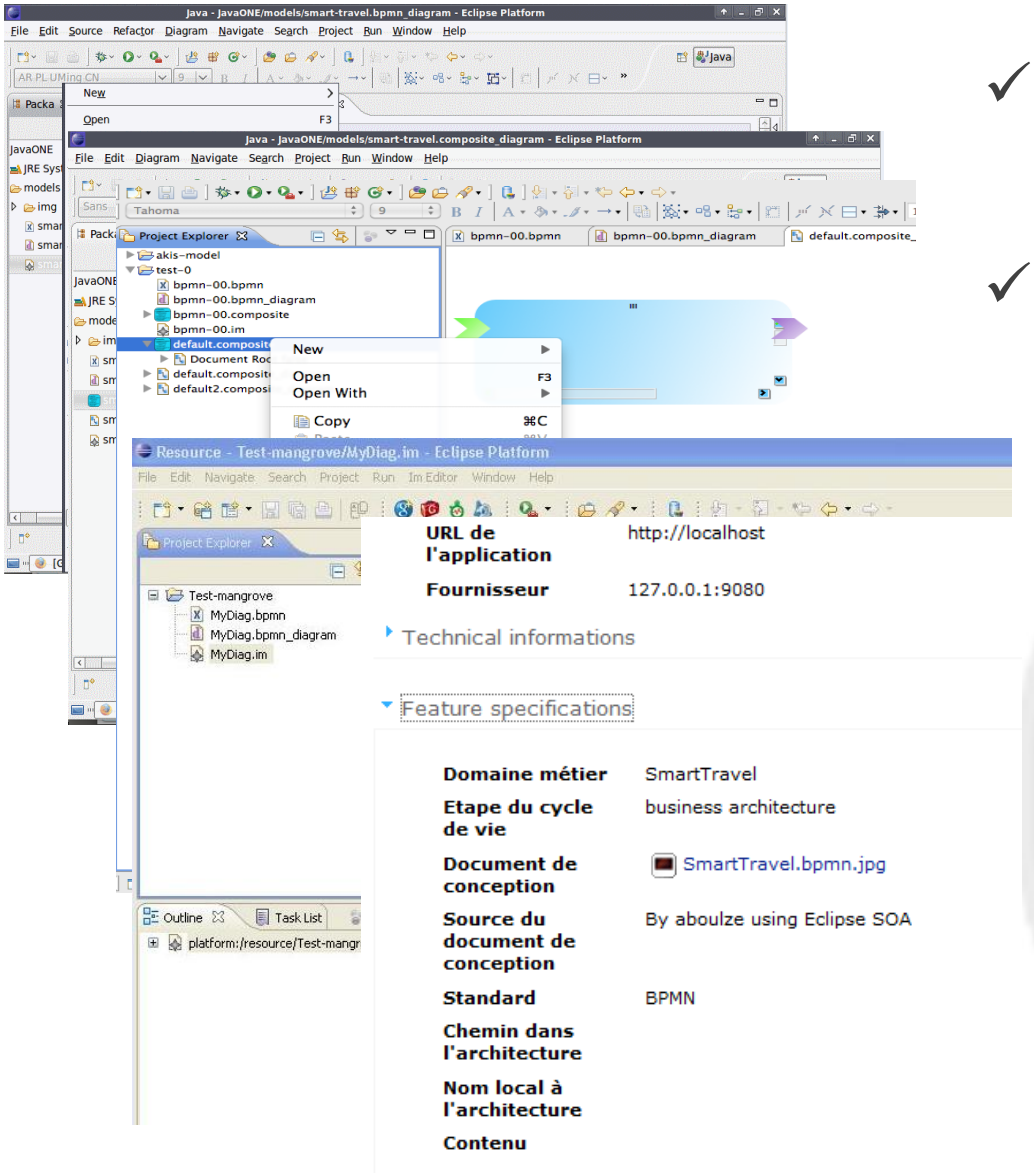
✓Build the SmartTravel program

EasySOA – EasySOA Core: share Business Architecture features



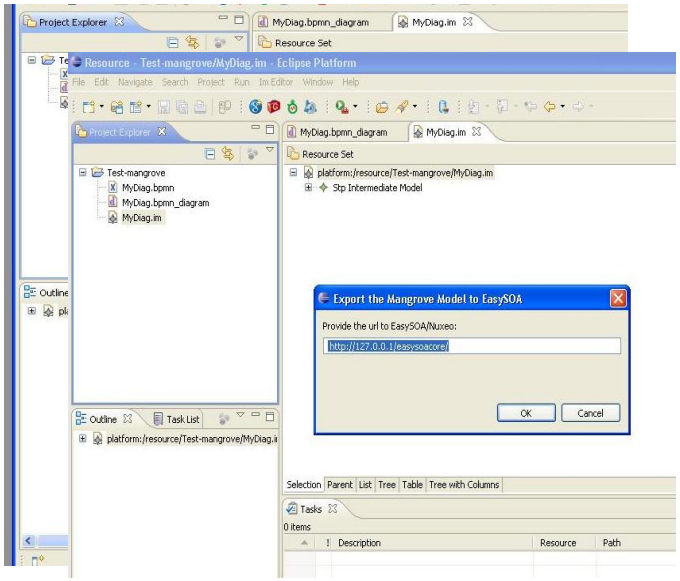
- ✓ Eclipse BPMN Editor
  - « Smart Travel » Business Domain
  - « Business Architecture » phase
  - « Business Architect » author
- ✓ Eclipse BPMN Editor
  - Export to Mangrove
- ✓ EasySOA Core ECM
  - Web shared b/w Actors
  - Access rights & collaboration rules
  - Multiple views
    - Information (Enrich)
    - Documents (Diagrams)
  - Business artefacts

EasySOA – EasySOA Core: share System Architecture features



- ✓ Eclipse BPMN Editor
  - From Mangrove generate SCA
- ✓ Eclipse SCA Editor
  - Graphical rearrangement
  - Refine technical aspects
  - Export to Mangrove
- ✓ EasySOA Core ECM
  - « Smart Travel Orchestration » Application Domain
  - « System Architecture » phase
  - « System Architect » author
  - System artefacts (services, components)

EasySOA – Eclipse Mangrove to EasySOA Core



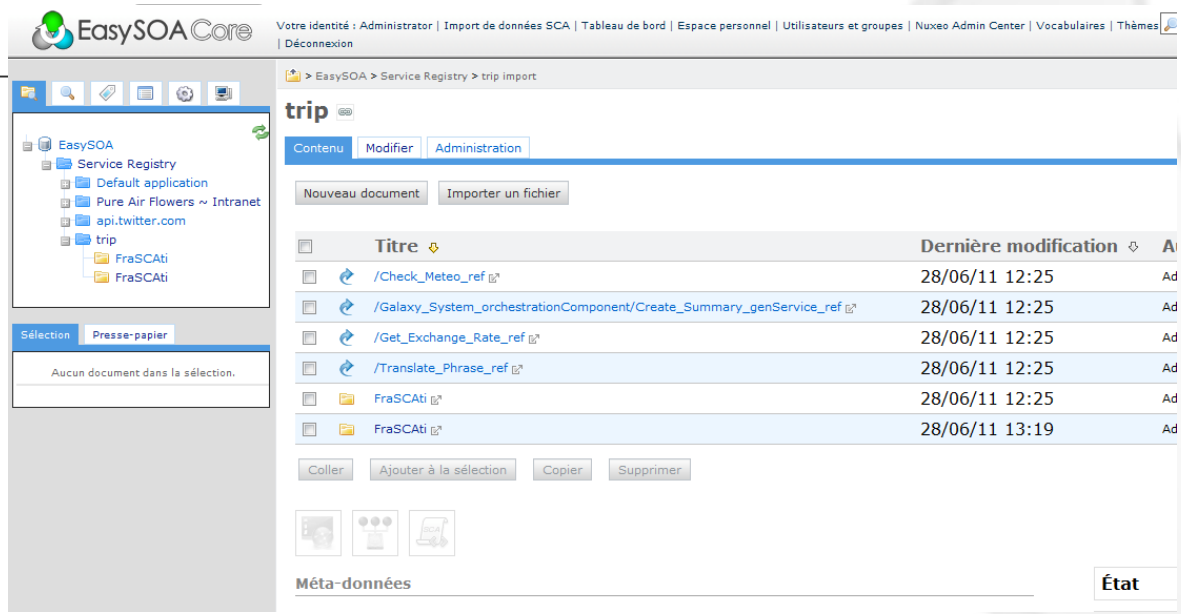
Export2EasySOA Mangrove plug-in

Use/Specialization

Mangrove plug-in

- ✓ Eclipse workspace
  - Menu/click to Export to EasySOA Core
  - Enter EasySOA Core URL
  - Triggering an Eclipse Mangrove plug-in
- ✓ Export2EasySOA plug-in
  - Parsing Mangrove scheme
    - Relevant elements, element per element
  - Validation of EasySOA Core (NUXEO) structure
  - Interface with EasySOA Core (NUEXO) by invoking REST
  - Improvement of Mangrove plugin

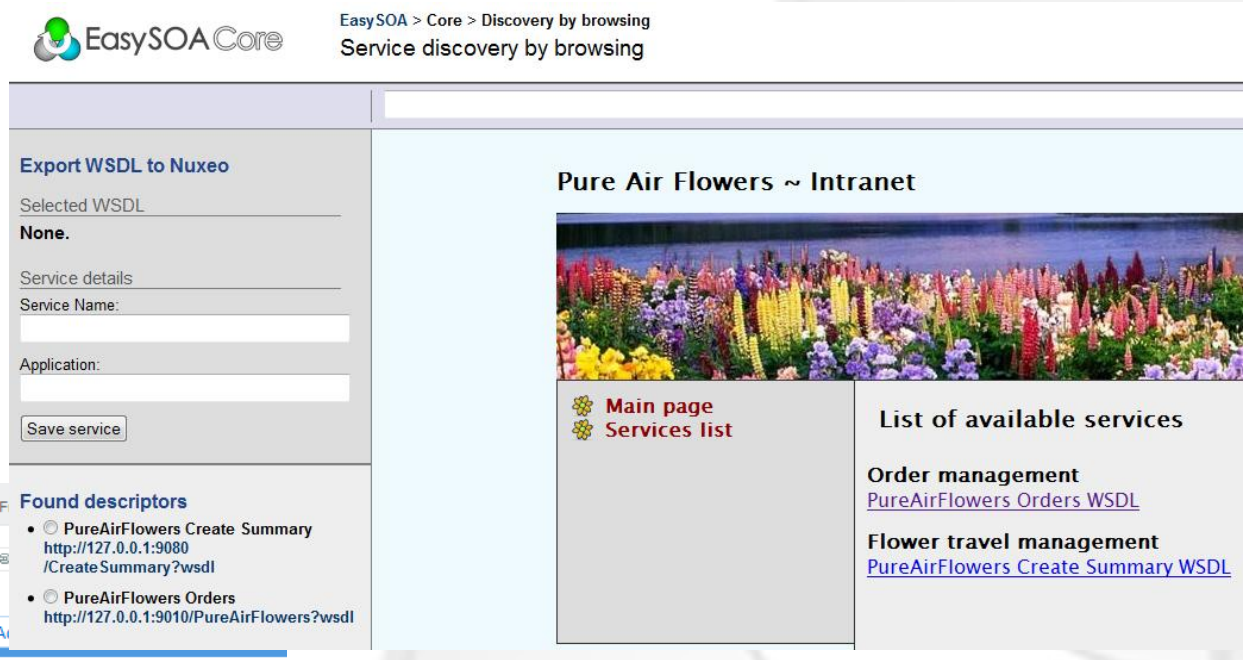
EasySOA – EasySOA Core: sync with SCA evolving

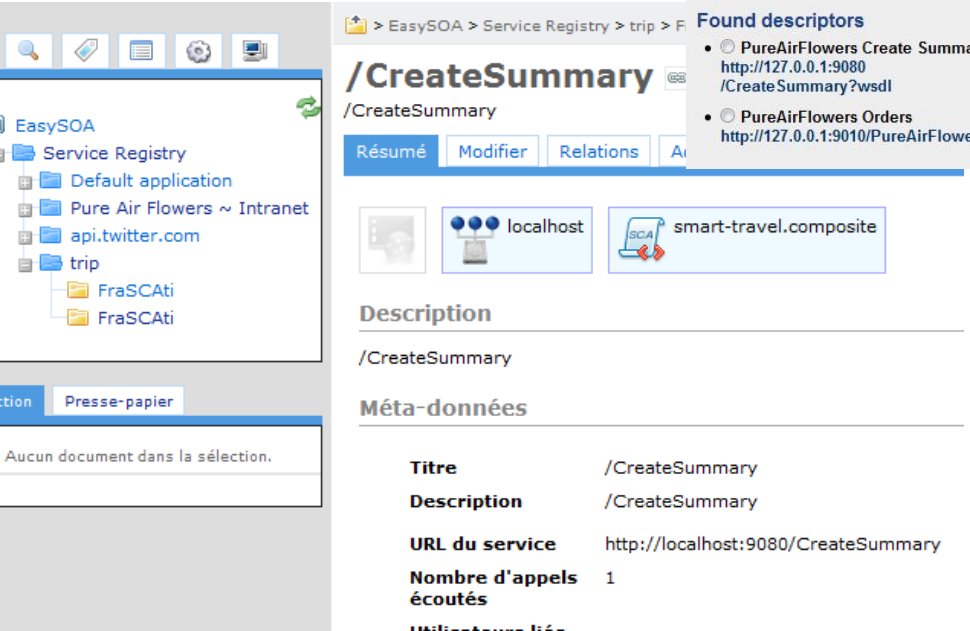


- ✓ EasySOA Core
  - Import SCA (from file, SCM...)

EasySOA – Correlate with service discovery (Core) & monitoring (Integration) in the live application

- ✓ EasySOA Core
  - Service Discovery by browsing





- ✓ EasySOA Integration
  - Service Discovery by monitoring

And down to runtime

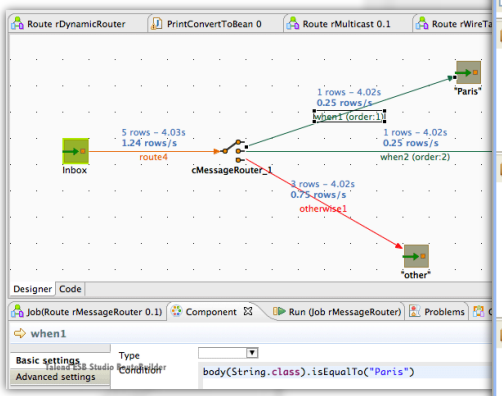
- We've seen development tools integrated with EasySOA, but what about runtimes ?
- Enter **Talend**, a real world SOA solution & ESB, with incidentally a business & data story
- Demo
  - 10' Talend ESB presentation & Airport demo
  - 3' Talend Airport in EasySOA
- … and when on the other side EasySOA-discovered service will be available as endpoints in Talend Studio, the circle will be complete

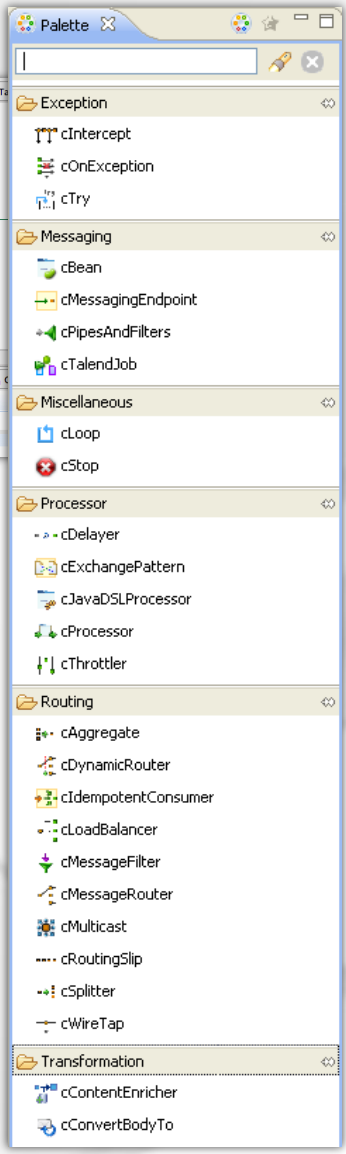
EasySOA

Talend ESB

Easily integrate distributed systems

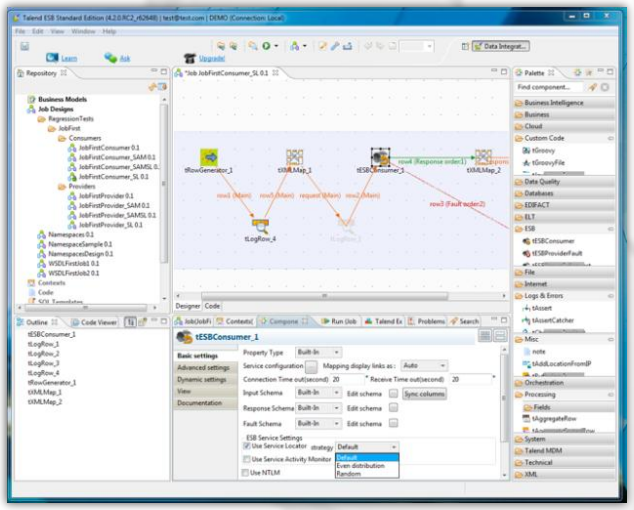
- Standards-based connectivity layer to integrate distributed systems
- Powered by Apache CXF, Camel, Karaf and ActiveMQ
- Includes messaging, Web services, intelligent routing, failover, monitoring and security



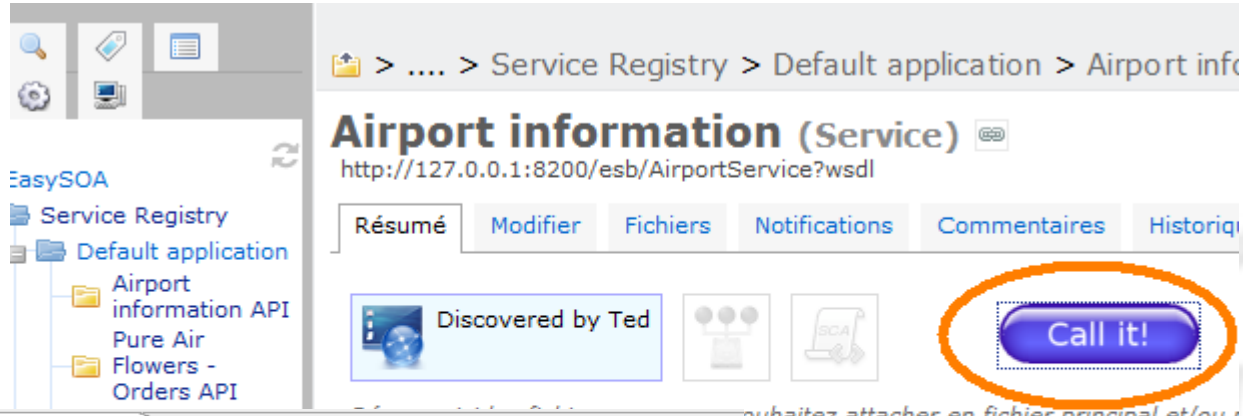


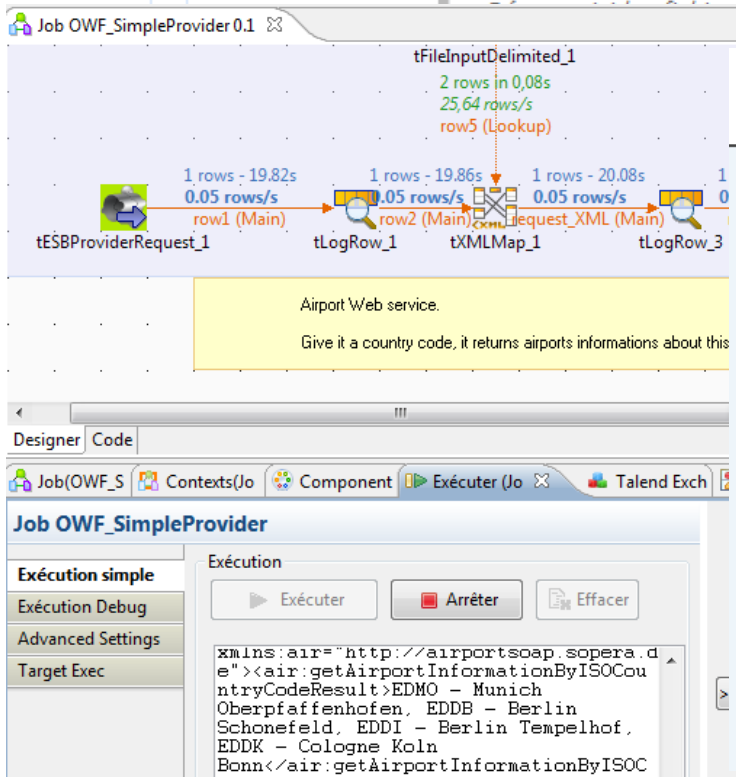
Talend ESB Studio

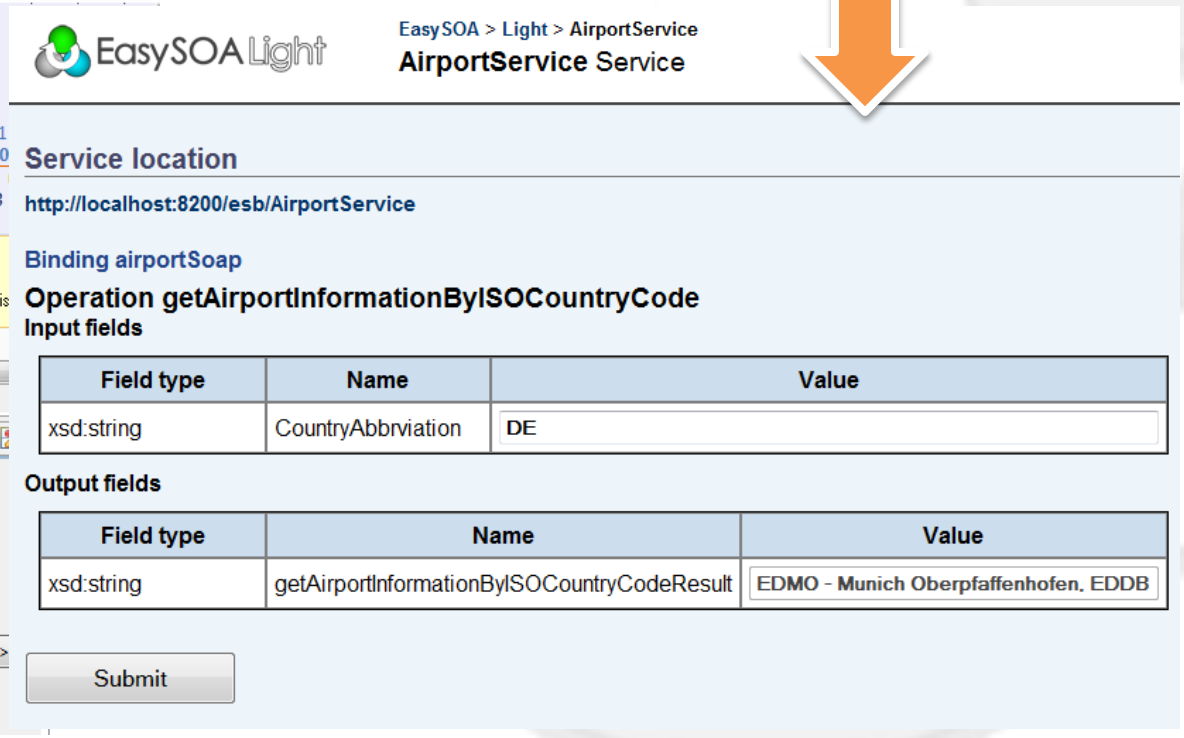
- Quickly and easily create data services and complex message routes without coding
- Leverage existing skillsets with Eclipse-based UI
- Drag-and-drop message routes using Enterprise Integration Patterns (EIPs)



Talend ESB with EasySOA Core & Light







Roadmap - Now

- Up to now :
  - Mar. 2011 – Started coding
  - May 2011 - **Linux Solutions** – business user demo
  - Jun. 2011 – **Eclipse DemoCamp** architect & IT demo
  - Sept. 2011 – **Open World Forum** – collaborative, talend
- finally, is it usable right now ?
  - Mostly prototype, however…
  - We seek to deliver ASAP features useful in the real world, and we've got a clue
- … by asking real world people about them

EasySOA – Entreprise Partner Program

A « from the trenches », « guerilla » approach

- To help gather recurring use cases and needs, around the project core, at our clients', our communities
- People we know, who trust us, that we ask to share their SOA issues

The idea : reciprocal sharing

- Share your issues with us,
- We'll enrich EasySOA to address the most promising and useful ones, and share our developments back in Open Source

Pay only custom work

- If you want some : install, config, custom devs

Roadmap - Next

- Ex. Audit of an SOA use case (Partner X) :
  - use service discovery, then export wsdls
  - this can be useful to you right now, it has been for me !
  - 2' WSDL export demo

- Next :
  - API change detection (Partner X)
  - SOA documentation (Partner Y)
  - light cloud application platform (Partner Z)
  - BPM with OW2 Scarbo, monitoring with OW2 Jasmine

EasySOA – Get involved

www.easysoa.org

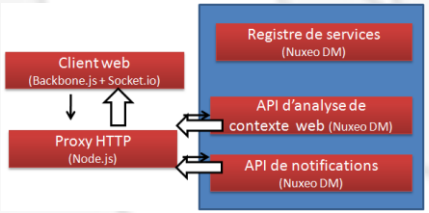
github.com/easysoa

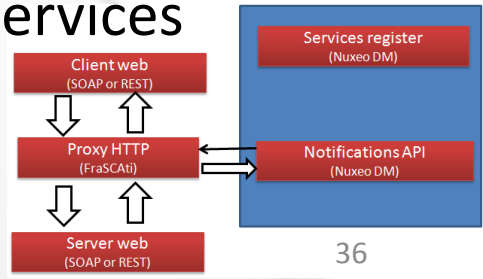
easysoa-dev@googlegroups.com

BONUS

Behind the curtain

- About the Service Registry…
  - aren't there already ESB registries, UDDI etc. ?
    - ESB registries' actual goal is to provide service resolution to their ESB runtime. And when they are provided as an application they show they're very **tied to their solution**
  - There are others : *as detected - as should be - as made*…
- Discovery by browsing
  - Web browser proxy + WSDL scraper
- Discovery by monitoring
  - HTTP proxy + Esper correlation on APIs / services
- Discovery by SCA architecture import
  - XML parsing of SCA composite file





EasySOA Open Ecosystem

- EasySOA branches out to an “on demand” Open Source ecosystem of compatible solutions
  - Starting with an SOA framework really simple to use
  - branching out to an on-demand Open Source solution
- Thanks to EasySOA Core plugins, integrating them
  - on : design, development (« SOA sandbox », continuous integration, functional testing & Q/A), monitoring, Business Process Management (BPM) and Cloud
- Built on best-of-breed Open Source components
  - Supported by EasySOA partners : Apache CXF & Camel, Nuxeo DM, Talend Data Integration, OW2 Jasmine, OW2 Frascati, OW2 Scarbo, Eclipse SOA et JWT

EasySOA

Up in the clouds

- we even plan an embedded SOA platform: EasySOA Light, building on full web technologies
  - To democratize access and call of existing entreprise services
  - With the web as light, universal, end-user friendly service standard : REST(ful), javascript, JSON…
  - Provided to web developers : by scripted mashups, SOA scaffolding (“the Ruby on Rails of SOA”) or composition
  - but also business users : by point and click programming - or even Excel-driven...
- Yep, it goes way beyond the Service Scaffolder !

The buzz cloud

- cool things we're playing with :
  - node.js / backbone / connect / express / antinode
  - REST(ful) SOA, CXF
  - CEP / Esper
  - OSGi, SCA, FraSCAti - and all together
  - And eclipse, velocity, SOAPUI, sonar…
- and hope to get to play with :
  - weka, maven, OAuth, mongodb, SPoRE, restfulie