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## D10.6.1. Industrial Showcase

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<b>PP</b>	Restricted to other programme participants (including the Commission)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission)	

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## Glossary of Acronyms

Acronym	Definition
C2C	Consumer to Consumer
D	Deliverable
EC	European Commission
ICT	Information and communications technology
KPIs	Key Performance Indicators
R&D	Research and Development
SME	Small and Medium Enterprise
SOA	Service oriented Architecture
SOWER	Sweet is nOt a Wsdl EditoR
SPICES	Semantic Platform for the Interaction and Consumption of Enriched Services
SW	Software
SWEET	Semantic Web sErvice Editing Tool
WP	Work Package
WSDL	Web Services Description Language

## Executive summary

SOA4All project results include a set of tutorial videos and demonstrators created to help the uptake of the tools developed and demonstrate the possibilities of technology available. All this material and other commercial-based work has been gathered and displayed in a form of Industrial Showcase, enabling future dissemination and exploitation of the project results.

In total, there are fourteen videos classified in five main categories of material:

1. SOA4All in the Future of Internet of Services video
2. Background tutorial videos
3. Tools and Technologies videos
4. Industrial videos
5. Promotional Material

All the material is already available on: <http://www.soa4all.eu/showcase.html>

The target audience goes from researchers to public sector, large enterprises or SMEs that want to setup a SOA infrastructure. The general and the background tutorials are aimed especially at beginners and interested outsiders (including persons such as journalists), so they can learn about the research area in which SOA4All was operating. The technology and tool videos show concrete languages and components developed in the project. There are aimed at potential adopters. The Industrial videos are particularly targeted to industrial partners to see concrete examples in the Public Sector, Telecom and eCommerce sectors.

# 1. Introduction

## 1.1 Introductory explanation of the deliverable

As the R&D phase of the SOA4All project has finished, the results produced include a set of tutorial videos and demonstrators. The aim of demonstrators is to show the possibilities of technology available, while tutorials are created to help the uptake of the tools developed. This deliverable gathers all those available materials into one repository, explaining the use for each of them. The Industrial Showcase created is available on the SOA4All website enabling future dissemination and exploitation of the project results. All the material is available on: <http://www.soa4all.eu/showcase.html>

## 1.2 Purpose and Scope

The purpose of this deliverable is to gather all available tutorials and demonstrators into a coherent repository and present those on the SOA4All website. The deliverable itself is the content already available in the website; this document is only to describe what you can find.

## 1.3 Structure of the document

Besides the executive summary and the introduction, the document is organised as follows:

- Chapter 2 describes the Industrial Showcase, its available material and targeted audience
- Chapter 3 contains the videos available about:
  - SOA4All in the Future of Internet of Services;
  - Background tutorial videos:
    - Semantics;
    - Linked Data;
    - Services;
  - Tools and Technologies videos:
    - Semantic models;
    - SOA4All Dashboard;
    - SWEET Annotation;
    - SOWER Annotation;
    - Storage and Query (iServe);
    - Composition;
    - Consumption;
    - Human tasks and process/service monitoring;
- Chapter 4 contains the Industrial videos from the use cases:
  - End-user Integrated Enterprise Service Delivery Platform;
  - W21C BT Infrastructure;
  - C2C Service eCommerce;
- Chapter 5 presents the promotional materials:
  - Brochure;
  - Banner;
  - Flyer;
  - Poster;
- Chapter 6 draws conclusions about the overall result.

## 2. Industrial Showcase

### 2.1 Description

The aim of the Industrial Showcase is to provide a single point of contact for all industrial oriented materials, such as tutorials and demonstrators developed in the project.

Industrial Showcase is structured as a separate section of the website <http://www.soa4all.eu/showcase.html>.

### 2.2 Available Material

This section gives a brief description of the content available in the Industrial Showcase.

In total, there are fourteen videos classified in five main categories of material:

1. SOA4All in the Future of Internet of Services video
2. Background tutorial videos
3. Tools and Technologies videos
4. Industrial videos
5. Promotional Material

### 2.3 Targeted Audience

For all the videos, the intended audience are researchers and practitioners that want to learn about the results of the SOA4All project. The general and the background tutorials are aimed especially at beginners and interested outsiders (including persons such as journalists), so they can learn about the research area in which SOA4All was operating. The technology and tool videos show concrete languages and components developed in the project. There are aimed for potential adopters. The use case videos describe the three main use cases investigated in the project.

The expected audience for this material is:

- Large industrial organizations or government agencies that want to setup new generation open-source SOA infrastructure;
- Virtual organizations that want to connect large scale heterogeneous service parks coming from different enterprises;
- Services Providers;
- Companies and institutions that are having a SOA infrastructure and/or provide Web services to business partners/end users, and that want to provide discovery and ranking functionalities on top of these services;
- Business Process analysts and modelers with no ICT background who are usually involved on the design and implementation of company processes, large companies and also SME;
- Enterprises: Business Process Management environment;
- Entrepreneurs;
- Public Sector;
- Developers;
- Researchers/Students;



## 3. SOA4All videos

### 3.1 SOA4All in the Future Internet of Services

This video describes the current trends in the Future Internet of services and the Web of Data. The project SOA4All considers resources to be services usable via the Service Web. In order to address the current limitations of service computing at Web scale and to lower the entry barrier for the average Web service workers, SOA4all combines Web principles, Web 2.0 technology, context management and semantics into a novel service delivery platform. The applicability of such a platform is manifold, and industrial partners such as SAP, BT and TIE have already demonstrated the benefits of SOA4All technology in the Public Sector, Telecommunications and eCommerce.

The video is available on <http://www.soa4all.eu/showcase.html>, here it is shown a screenshot.

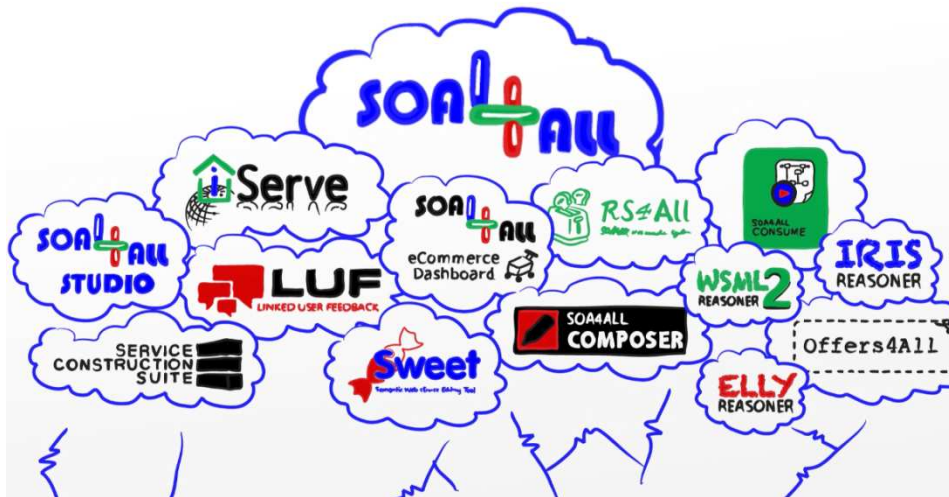


Figure 1: SOA4All in the Future of Internet screenshot

### 3.2 Background tutorial videos

These three videos serve as a gentle introduction into the general area of semantics and services. They will be particularly useful to beginners and interested outsiders, to learn about the research area in which SOA4All was operating.

All videos are available on the web (<http://www.soa4all.eu/showcase.html#background>).

1. **Semantics:** This video presents some general ideas of semantics and semantic annotations, and introduction of the RDF as the simplest form of representing the semantic information by John Domingue (OU).

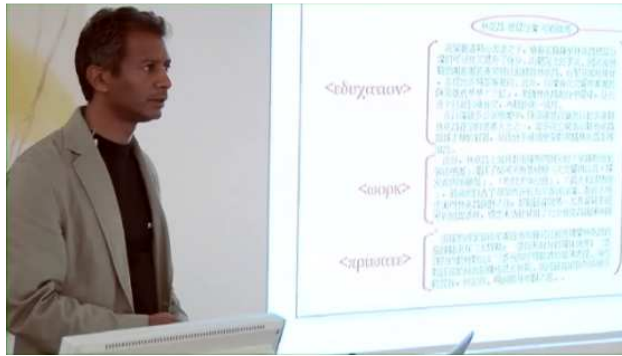


Figure 2: Semantics screenshot

- 2. Linked Data:** The Linked Data video contains the description of the key ideas and principles of Linked Data. Linked Data is a movement for making governmental and other public data available in a semantic form where multiple data sources are highly interlinked. The video also shows examples of Linked Data datasets.

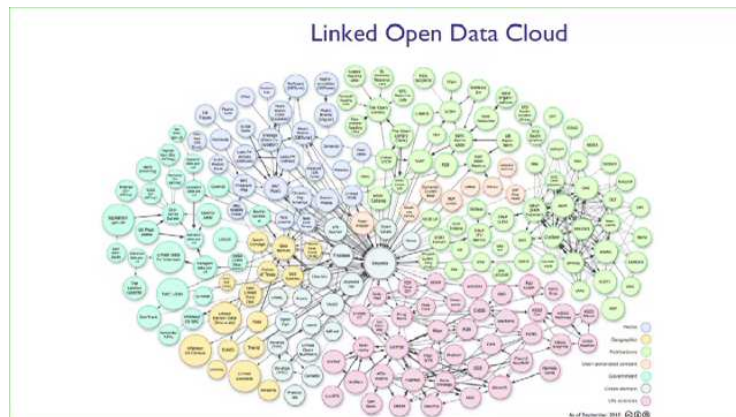


Figure 3: Linked Data screenshot

- 3. Services:** Introduction video about services, both in an economic sense, and in a computational sense, and the discussion how semantics can help with the discovery and use of services on the Web, by John Domingue (OU)

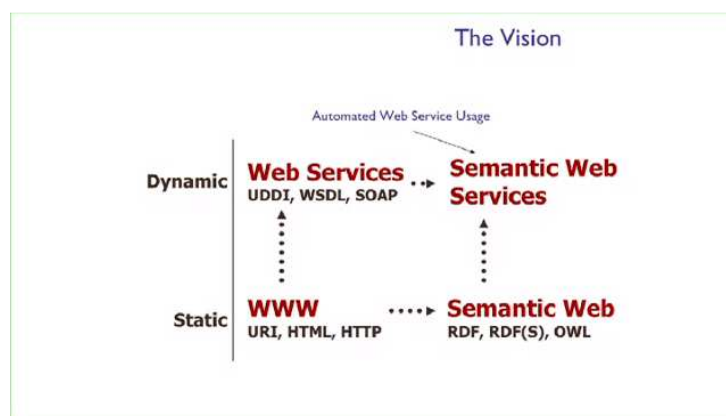


Figure 4: Services screenshot

### 3.3 Tools and Technologies videos

The technology and tool videos show concrete languages and components developed in the project (<http://www.soa4all.eu/showcase.html#toolstech>).

1. **Semantic Models:** Explains the languages and models that SOA4All has developed for semantic description of services.

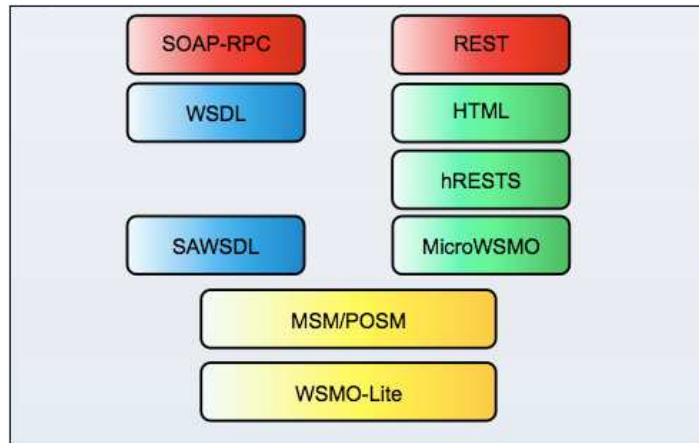


Figure 5: Semantic Models Screenshot

2. **SOA4All Dashboard:** Introduces the main entry point of the integrated SOA4All tools, so that newcomers know where to look for various components.



Figure 6: SOA4All Dashboard Screenshot

3. **A) SWEET Annotation:** Demonstrates how RESTful services and Web APIs are annotated semantically with SWEET.
- B) SOWER Annotation:** Demonstrates how WSDL-based business Web services are annotated semantically with SOWER.
4. **Storage and Query (iServe):** Provides a brief guide through the service registry iServe and some of its query capabilities.
5. **Composition:** Introduces the SOA4All service composition tool, with a non-trivial example and several advanced features.

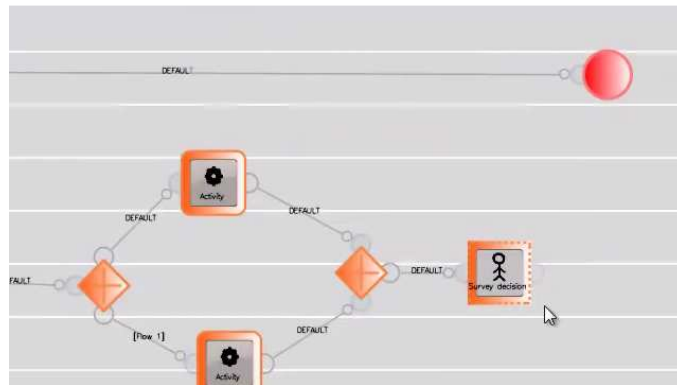


Figure 7: Composition Screenshot

6. **Consumption:** Shows how the SPICES tool can be used to invoke Web services and APIs available through SOA4All. The Semantic Platform for the Interaction and Consumption of Enriched Services (SPICES) is a Web-based tool where end-users can interact with (semantically annotated) services (both WSDL and RESTful) and invoke them in a lightweight manner. More information on <http://soa4all.isoco.net/spices/about/>

Figure 8: SPICES Screenshot

## 7. Human tasks and process/service monitoring:

The video aims to show:

- The Execution Engine, in particular the possibility of executing processes including both Web Services and human tasks
- The Process Monitoring Dashboard

The scenario implemented supports civil servants in handling typical administrative processes. They can model, execute and monitor such processes using SAP enterprise services that provide rich business functionality.

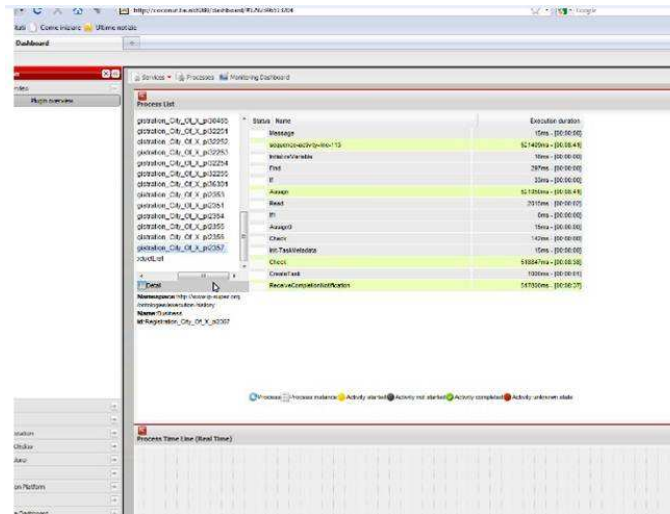


Figure 9: Monitoring screenshot

## 4. Industrial videos

The industrial videos describe the three main use cases investigated in the project: Public Sector, Telecom and eCommerce (<http://www.soa4all.eu/showcase.html#usecases>).

### 4.1 End-user Integrated Enterprise Service Delivery Platform

In the video, it is shown how SOA4All technology can support civil servants to model administrative processes: starting from the SOA4All composer, civil servants (and other business users) can model and execute administrative procedures (and other business processes) based on semantic Web services. In our example, the civil servant wants to handle a survey among selected citizens in order to gather feedback for a planned road construction. But when modelling such a process, civil servants are primarily not interested in

Scenario: Conduct Survey for Small City

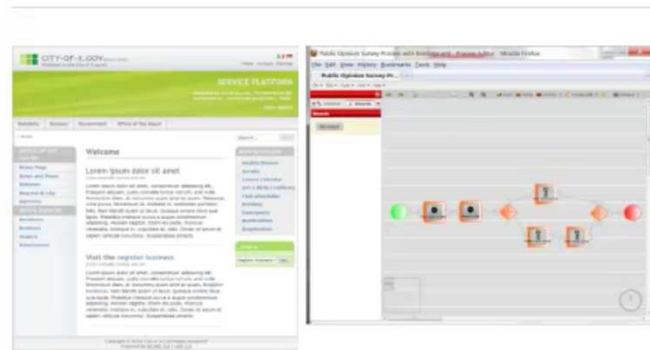


Figure 10: Public Sector Screenshot

the technical details of certain Web services such as the interface definition with parameters and data types. Rather, for such users the business aspects associated with a certain service are relevant, e.g., its pricing model, service quality, or security level. Thus, we have developed a modeling wizard that allows the civil servant to specify such business requirements in the form of Key Performance Indicators (KPIs) for the business process at hand. Then, the best Web services with respect to these KPIs are selected automatically by SOA4All so that the overall process is optimal.

#### Specific Target Audience

- Public sector (i.e., public administrations such as city halls or tax offices).

### 4.2 W21C BT Infrastructure

This video is a demonstrator of the Offers4All scenario, the service that allows companies e.g. retail organisations, entertainment providers, travel/hotel companies to advertise offers to subscribers of the service. These offers might be “last-minute” travel or entertainment deals or predefined campaign offers from retail organisations. The Offers4All service allows an offer provider to create a new offer by describing what the offer is and who and how many people it wants to target with the offer. An appropriate set of subscribers are then chosen and are made aware of the offer via a communication channel. Offer providers pay to use the service (several possible charging models) but subscribers do not.

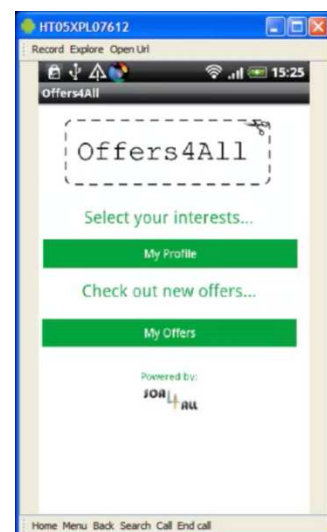


Figure 11: W21C BT

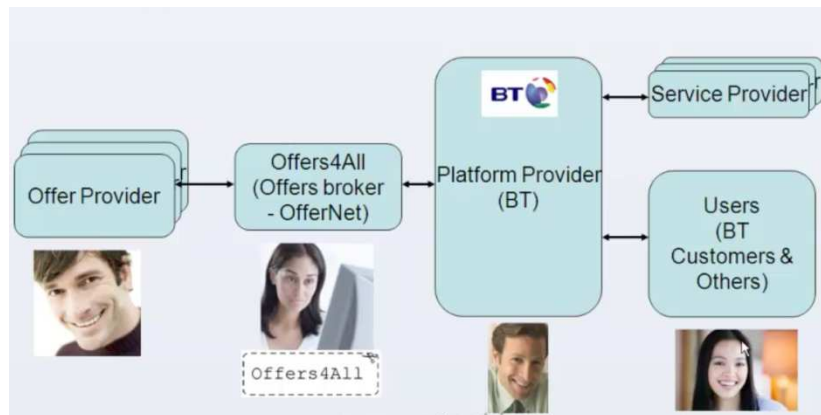


Figure 12: W21C BT Infrastructure scenario

### Specific Target Audience

- End users who are interested in the possibility of creating web applications and mash-ups using Telco services, for personal use or to share with friends;
- Business focused users who see the opportunity to either resell BTs services, or integrate online Telco features into a current business;
- Telcos (to use the platform as their own);
- Service providers.

### 4.3 C2C Service eCommerce

This demo will demonstrate how SOA4All can help with empowering eCommerce processes and with integrating various services into eCommerce processes. It will provide an insight of the SOA4All tools and the eCommerce Dashboard. The SOA4All eCommerce solutions allow webshop providers to combine offers from many different vendors on the fly.



Figure 13: C2C Service eCommerce screenshot

This means that sellers can integrate products from many business partners easily without having to care about importing and exporting issues.

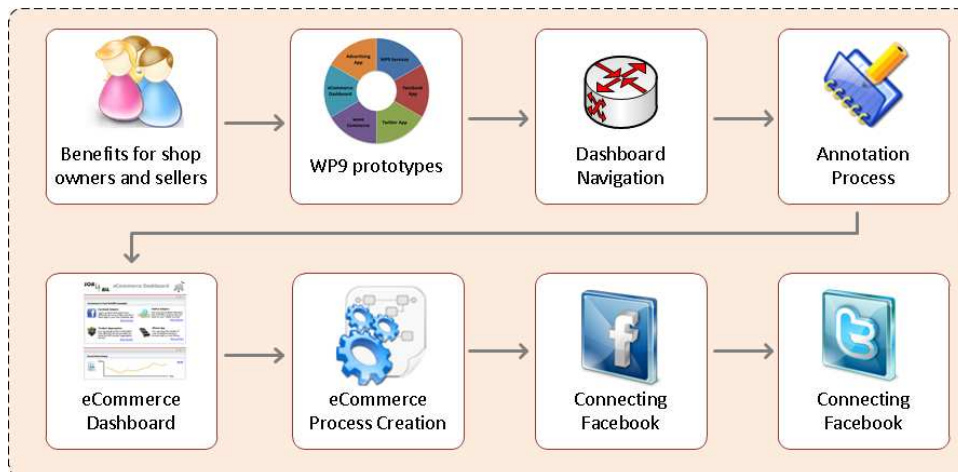


Figure 14: eCommerce Workflow

### Specific Target Audience

- All companies that are interested in e-Commerce with a special focus on SMEs;
- Webshop providers and resellers;
- eCommerce application developers.



## 5. Promotional materials

The Industrial Showcase page is a single point of contact for interested persons to know about SOA4All results. For this reason, the link to the promotional materials developed for the project is included, which includes a brochure, banner, flyer and poster (<http://www.soa4all.eu/file-upload.html?func=select&id=3>).

**SOA4All Architecture**

The SOA4All framework supports a world where a massive number of parties expose and consume services by realizing a coherent and domain independent platform. The reference architecture of the SOA4All framework is composed of the following components.

**SOA4All Studio**  
A rich Web platform that provides users with a unified view covering the whole lifecycle of services, including design-time, run-time and post-mortem analysis.

**SOA4All Platform Services**  
The group of services that provide the basic SOA4All functionality and activities, such as Service Ranking and Selection, Service Discovery, Service Adaptation, Service Composition, Service Execution, and the Reasoning Engine.

**SOA4All Distributed Service Bus**  
The infrastructural backbone around which all the SOA4All components communicate and collaborate by combining Semantic Spaces and Enterprise Service Bus.

**Third-Party Business Services**  
The actual services provided by final users. The SOA4All framework will be as technology agnostic and less intrusive as possible.

**SOA4All Use Cases**

SOA4All aims at empowering ordinary end users to work with services rather than experts: it envisages an open, dynamic, and ad-hoc service environment where high numbers of actors expose, compose, and consume large numbers of services in a lightweight manner.

**Service Platform for the Public Sector**  
Our service delivery platform for public administrations supports civil servants in handling typical administrative processes, e.g., a permit approval process. They can model and execute such processes using SAP enterprise services that provide rich business functionality. Thus, the platform leverages the knowledge of all users in a public administration and allows fast adaptations to new challenges and requirements.

**Web21c Futures**  
Web21c is part of British Telecom's larger 21st century network initiative, an IP-based, multi-service network. SOA4All supports this initiatives by providing a semantically enhanced and expanded version of that infrastructure where the process of discovering, integrating, using and sharing services can be done much more effectively.

**eCommerce Leveraged**  
SOA4All aims at providing an easy way for end users to use third party services offered through the framework, enabling them to build eCommerce applications in order to market and sell their own products.

Figure 15: SOA4All Brochure inside

**Members**

**SOA4All Principles**  
SOA4All relies on the integration of SOA with four complementary state-of-the-art technical advances.

**Incorporating Web Principles into SOA**  
SOA4All transforms service-oriented environments into architectures of billion of services. With this purpose it integrates the principles which made the Web such a successful platform for the worldwide sharing of content, so that everybody is able to participate either as a provider or a consumer of information beyond the boundaries of enterprises.

**Incorporating Semantic Web into SOA**  
Service operations such as discovery, selection, composition and invocation need technologies for coping with complexity and heterogeneity. SOA4All uses Semantic Web technologies to formally model and manage the knowledge related to services, so that machines can deal with their complexity and heterogeneity.

**Incorporating Context into SOA**  
SOA4All incorporates context in SOA as a means to customize service usage and provisioning on a worldwide scale. The mix of semantic and context technologies in the SOA4All infrastructure will be a key enabler of dynamic adaptation of services to their context of use.

**Incorporating Web 2.0 into SOA**  
SOA4All exploits Web 2.0 technology as means to proper include human interaction and cooperation to provide solution to certain tasks, such as creating semantic descriptions, ranking services and mediation that remain otherwise unfeasible at Web scale. SOA4All Studio aims to demonstrate that Web 2.0 technologies and human computing approaches can prove the potential of proper balancing services provided by humans and services provided by automated reasoning.

**Project Facts**  
**SOA4All (Service Oriented Architectures for All)** is a Large-Scale Integrating Project funded by the European Seventh Framework Programme, under the ICT-2007.1.2 Service and Software Architectures, Infrastructures and Engineering research area. SOA4All is a strategic project of the Networked European Software and Services Initiative (NESSI).  
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Funding: 9.47 million Euro

**Enabling a Web of billions of services**

www.soa4all.eu      www.nessi-europe.eu      www.soa4all.eu

Figure 16: SOA4All Brochure outside



Figure 17: SOA4All banner



Figure 18: SOA4All flyer

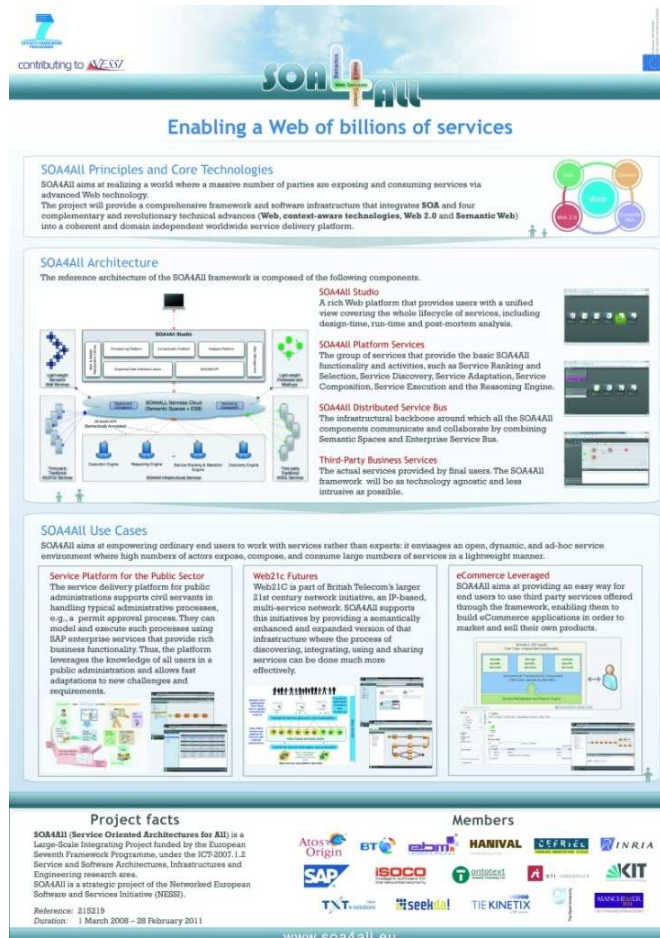


Figure 19: SOA4All poster

## 6. Conclusions

This deliverable has produced a single point of contact for all promotional materials, tutorials and demonstrators developed in the project. Everybody interested in the SOA4All results can access a single page to gain general knowledge of the SOA4All assets and how to use them. It contains from background semantic and linked data videos to how to use concrete tools developed in the project and thus it is addressed to wide spectrum of audience.

The materials have been produced in a high-quality format and are accessible in different formats. It is already available for all target users interested in the SOA4All solution on the web: <http://www.soa4all.eu/showcase.html>