



## SLAs Empowering a Dependable Service Economy



**SLA@SOI is a European Commission funded research project committed to deliver and showcase an innovative open Service Level Agreement (SLA) Management Framework that provides holistic support for service level objectives - enabling an open, dynamic, SLA-aware market for European service providers.**

### Motivation

The rapidly growing service-oriented economy has highlighted key challenges in IT-supported service provisioning. **Service consumers** are frustrated by the lack of formal, negotiable, readily enforceable SLAs. **Service providers** find it impractical to create personalised offerings, translate business requirements into technical manifestations, and optimise internal deployments whilst maintaining all individual SLAs.

### Project Goals

SLA@SOI will address these challenges by providing 3 major benefits:

- **Predictability & Dependability:** The quality characteristics of service can be predicted and enforced at run-time.
- **Transparent SLA Management:** Service level agreements (SLAs) defining the exact conditions under which services are provided/consumed can be transparently managed across the whole business and IT stack.
- **Automation:** The whole process of negotiating SLAs and provisioning, delivery and monitoring of services will be automated allowing for highly dynamic and scalable service consumption

### SLA@SOI at a Glance

- An FP7 ICT 2007 Call 1 Integrated Project addressing Objective ICT-2007.1.2: Service and Software Architectures, Infrastructures and Engineering
- A NESSI strategic project realizing one core pillar of the overall NESSI vision - <http://www.nessi-europe.com>
- 3 Year Project Duration, commenced in June 2008
- 12 Partners from 7 European countries: Austria, Ireland, Italy, Germany, Slovenia, Spain, United Kingdom
- Coordinated by SAP Research
- A Budget of €15.2 Million, with approx. €9.6 Million funded by the European Commission
- Grant Agreement FP7-216556
- Website: <http://www.sla-at-soi.eu>

## Use Case Driven

SLA@SOI research is grounded by four diverse industry-led use-cases:

**ERP Hosting** is investigating the practicalities and benefits of holistic SLA planning and management when offering hosted ERP solutions for SMEs.

**Enterprise IT** focuses on SLA-aware provisioning of compute platforms, managing decisions at provisioning time and runtime, as well as informing business planning.

**Service Aggregation** demonstrates the aggregation of SLA-aware telecommunication and third party web-based services: how multi-party, multi-domain SLAs for aggregated services can best be offered to customers.

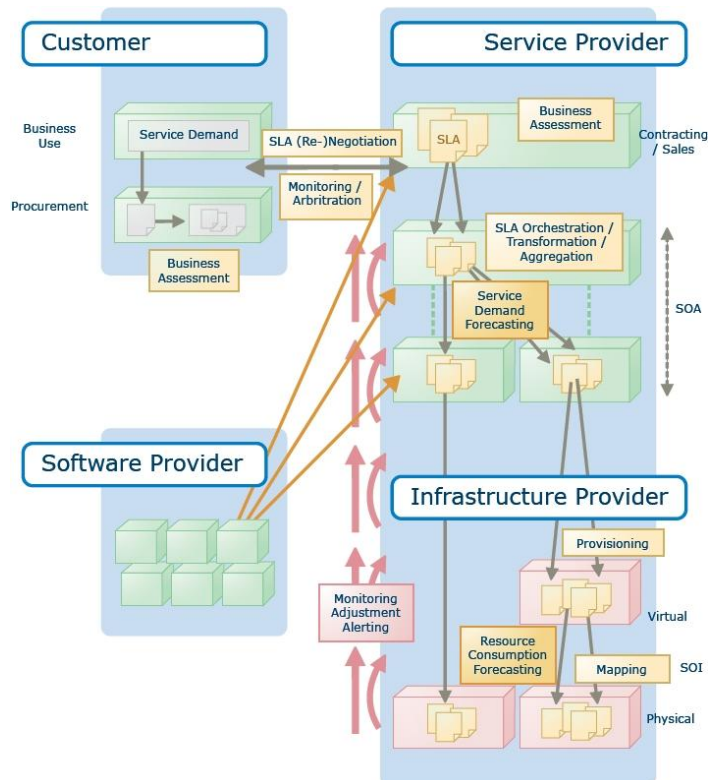
**eGovernment** validates the integration of human-based services with those that are technology-based, showcasing the automated, dynamic SLA-driven selection, monitoring and adjustment of third-party provisioned services.

## Technical Approach

SLA@SOI is defining a holistic view for the management of service level agreements (SLAs), implementing an SLA management framework that can be easily integrated into a service-oriented infrastructure (SOI). The main innovative features of the project are

- an automated e-contracting framework
- systematic grounding of SLAs from the business level down to the infrastructure
- exploitation of virtualization technologies at infrastructure level for SLA enforcement
- advanced engineering methodologies for creation of predictable and manageable services

The accompanying figure illustrates the anticipated SLA management activities throughout the Business/IT stack.



## Planned Results

SLA@SOI results are targeted at the technical, scientific and business domains.

- A comprehensive open-source SLA management framework will be released. It will include reference models and plug-in implementations for common deployment scenarios.
- New and enhanced algorithms and models will be published, with contributions submitted to open standards such as WS-Agreement, OGF's OCCI, and DMTF's OVF.
- A comprehensive example scenario will be provided, domain specific templates, plug-ins and adoption guidelines will be made available, and an overall project evaluation report including an in-depth business analysis of the four use cases will be published.

## Further Information

For more information and the latest project results, please see <http://www.sla-at-soi.eu>.