Although SLAs have been tackled by many research projects and commercial products, SLAs are typically treated as domain-specific add-ons. However, SLAs can only be consistently managed if all the different stakeholder perspectives and service layers are consistently interlinked and managed. Holistic SLAs are at the core of SLA@SOI. Some of the key advances provided include:

- A machine readable, domain-independent and highly extensible model in which arbitrary SLAs can be comprehensively described.
- A consistent interlinking of SLA models across service hierarchies and with other information models (such as business, software, and infrastructure models).
- A comprehensive open-source SLA management framework automating negotiation, provisioning, monitoring and other operations throughout the service lifecycle.
- A harmonized open-source SLA-aware virtualized infrastructure.

**Positioning in global context**
SLA@SOI continues to be unique in its SLA-centric perspective, and is attracting growing interest from international analyst groups, governments and standards organizations. Industry players small and large are adopting results of SLA@SOI to develop new products.

**Contribution to standardization and interoperability issues**
SLA@SOI has made significant contributions to standardization bodies.
- The Open Grid Forum’s (OGF) Open Cloud Computing Interface (OCCI) standard has been...
co-chaired and shaped by SLA@SOI to create a generic interface to cloud computing infrastructure through which SLA parameters can be communicated.

- SLA@SOI has also enhanced the SLA negotiation protocol as specified by OGF’s WS-Agreement standard, introducing multi-round negotiation capabilities.
- Researchers from SLA@SOI have also contributed a dedicated SLA module to the Unified Service Description Language (USDL), a standard proposed to the W3C.

**Target users / sectors in business and society**

The SLA@SOI framework supports

- **Software and Application Developers** in engineering predictable services that can be operated under an SLA.
- **Service Providers and Aggregators** to offer, aggregate and operate services under well-defined, personalised, SLAs.
- **Sales Managers** to understand the conditions, constraints and tradeoffs of possible IT-supported services.
- **Service Consumers** by enabling automatic negotiation and personalised SLAs.

**Overall Benefits for business and society**

The usage of the SLA@SOI management framework improves service offerings in the following dimensions:

- Service provisioning becomes more **dynamic** due to reduced preparation / setup times.
- Services become more **dependable**: the SLAs are machine readable and enforceable.
- Service management gets more automated and thus cost **efficient**.
- Service landscapes get more **flexible** due to simplified adjustment or reprovisioning.
- Service provisioning gets more **transparent** due to precise understanding of the tradeoff between cost drivers and service qualities.

**Examples of use cases**

The SLA@SOI framework has been successfully adopted and evaluated in four complementary industrial use cases. **ERP Hosting** realizes dynamic provisioning of business application services and demonstrates major business benefits in both dynamic service provisioning and cost reduction. **Enterprise IT** has SLA-enabled internal infrastructure clouds, demonstrating increased agility and dependability. **Service Aggregator** demonstrates SLAs for aggregated telco services, delivering improved customer satisfaction and availability. **eGovernment** applies SLAs to health services, demonstrating increased compliance with governmental regulations. These four use cases prove the relevance of the framework to a broad range of both IT and human-based services.

**Achievements**

The SLA@SOI project delivered a comprehensive set of technical results and supporting materials which allow both business and IT-related stakeholders to set up a proper SLA-driven management process for their service offerings. Key technical results include:

- A common machine-readable **SLA model** that can express arbitrary business rules, guarantees, actions and artefacts related to the delivery conditions of a service.
- A **reference architecture** for multi-layer, multi-domain SLA management.
- An **open-source reference implementation** of the SLA@SOI architecture (see http://sourceforge.net/projects/sla-at-soi/).

The project has also delivered

- Guidelines, tutorials and lessons learned in order for IT stakeholders to understand how to set up an SLA-driven service business.
- A complete open reference demonstrator that shows the SLA@SOI framework ‘at work’ and allows the replay, modification and extension of the demonstration.
- Business evaluations, guidelines and lessons learned that explain the business value that can be achieved through proper SLA management in different domains.

All technical and scientific results have been published in high ranked international journals and conference proceedings. A dedicated book summarizing the most relevant results has also been published.