

SOA Maturity Assessment Exercise

The Oracle Level 5 SOA Maturity Model is designed to help organizations realize the extent of their SOA capabilities, identify appropriate projects to undertake, and understand what benefits to expect. Incorporated into the model are multiple capability dimensions of SOA (e.g. governance, infrastructure, and organizations). Assessing the maturity of an organization requires evaluating its capabilities in each of these dimensions. Oracle provides a cheatsheet to help with this task that describes the attributes of each dimension at every level. To practice making SOA maturity assessments, Oracle also provides sample case studies such as this one.

This case study exercise describes a fictitious company in need of an SOA assessment. Read the case study, and using the Oracle Level 5 SOA Maturity Model cheatsheet assess the company's SOA capabilities. To find the Oracle Level 5 SOA Maturity Model cheatsheet, go to www.oracle.com/soa and access the Oracle SOA Resource Center.

Guidelines

1. Assess the SOA maturity level of the company described in this case study. You should refer to the Oracle Level 5 SOA Maturity Model cheatsheet to do this.
2. It's a good idea to start at Level 1 for each dimension, review the criteria at that level and work your way up.
3. Assign a level for each SOA capability dimension (Architecture, Infrastructure, Organization, etc.) found in the Oracle Level 5 SOA Maturity Model. You may assign a partial score (e.g. 2+) if you feel the company deserves partial credit for a particular level of capability, e.g. you could assign 1+ for Architecture if you feel that company has some, but not all the capabilities for Level 2 Architecture.
4. Note the minimum level of maturity you can assign for any capability dimension is 1.
5. The maturity level for each capability dimension is more important and relevant to the organization than the overall, aggregate maturity level across all dimensions. The former provides a more specific gap analysis of where an organization should focus to improve.
6. Note that similar to most organizations today, our case studies do not reflect companies at extremely high levels of SOA maturity.
7. Consider what you would do if you were an enterprise architect who is tasked with helping this particular company.

Put the Criminals in Jail – Genovian Justice Department

The Justice Department in Genovia, (European Union), has 20,000 employees covering 40 local police districts with 87 police stations and 400 sub-districts, courts, criminal care, prosecuting authorities, prison and probation services. Genovia is a part of Schengen.¹ The size of the departmental bureaucracy is increasing, and they are looking to effectively handle this growth and make business processes more efficient, both within the organization and with external entities. Historically they have had a lot of different technologies and lacked standardization. In addition their data models were not consistent. This has led to silo'd systems which have made it very difficult to have process driven applications across value chains; and, created a lot of manual work in getting information to flow between systems.

Since June 2003, the Genovian National Police Computing and Material Service has been working on a new technological infrastructure and architecture for the entire Justice and Police Sector in Genovia. They started with an Enterprise Architecture initiative with involvement from the business owners. The result of this was an architectural vision for the Justice sector in Genovia based on shared services and SOA; and, a SOA Roadmap. The SOA Roadmap included aspects such as the coordinated purchase and implementation of common software and infrastructure across the Justice sector; the identification of several projects and initiatives that would also help to build their SOA infrastructure; the formation of a project group that to lead the SOA Roadmap implementation program; and, the enactment of a governance committee to govern the execution of the SOA Roadmap and the SOA journey. The governance committee charged the EA group to perform an architectural audit, put together architectural standards and policies, provide guidelines on an operational model for shared services, and, development models for SOA (agile). The governance committee itself set about building policies on service ownership and funding, organizational changes and SOA roles and responsibilities, etc.

The EA group put together a methodology for executing SOA Projects based on Oracle's SOA Project Methodology and IBM's SOMA. The methodology included best practices for service identification – for example, in order to identify suitable services, they adopted a top-down, process-driven model that they married with domain identification. They also included a taxonomy for services (WSDLs) and are now creating taxonomies for common data types (XSDs). Services are to be sourced from existing systems, delivered using adapters, built by wrapping, or built from scratch (In Java). They also put best practices in place around the use of business rules engines to implement some service logic (capturing business policies that were subject to frequent change).

A Reference Architecture for SOA was defined as part of the first project. The goal was to cover focus on standards, reliability, security and messaging. Standards and infrastructures leveraged included: J2EE, JMS, ESB, BPEL, WS-Security, etc. Security was a key consideration and declarative policy definition and central enforcement was to be implemented using a Web Service Management solution. The reference architecture was implemented, but only documented on a technical level due to time constraints. A UDDI Registry was introduced quite early and was used during development in the initial projects, although it was decided not to use the registry at runtime. They also built an information model, but did not spend significant amounts of time on data ownership or enabling analytics.

The first project on the Roadmap, called Schengen Information System II, is a strategic and visible project to cross check visa information from the Schengen system with criminal records from the courts. The system allows law enforcement officials to do comprehensive criminal searches across national and Schengen systems. It also implements tracking of stolen goods

¹ Schengen Agreement is an agreement among European states that allows for common policy on the temporary entry of persons (including the Schengen visa) and the harmonisation of external border controls. Border posts and checks have been removed between Schengen countries and a common 'Schengen visa' allows tourist or visitor access to the area.

such as cars, boats, art works, etc. This project consists of several applications/services, some with a user interface, others without. The project was not technically complicated, but involved pulling systems and people together from different departments and jurisdictions. Luckily, the governance committee had addressed the people and organizational issues that cross-domain projects run into ahead of time. From a services perspective, the first project was focused on building services that were to be shared with groups and departments based on the initial service identification work that they did. Based on the success of the first project, a new project has recently been initiated as outlined in the SOA Roadmap. Transferring key resources to this project and facilitating knowledge transfer solved the initial issue of the lack of decent documentation from the first project. The new project is using the same infrastructure as the first project. Some of the services from the first project are also being reused (as anticipated in the initial planning process). Followup projects include a project to address money laundering, a project to migrate off a large mainframe solution onto a standards-based SOA solution, and a national identity project backed with technologies such as encryption and Oracle Data Vault. These projects were all part of the original SOA Roadmap!

Long lives the SOA Roadmap!