



IBM SOA Technology Summit

Moving Ahead With SOA

Business services specification with SOMA : customer experiences feedback

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SOA on your terms and our expertise



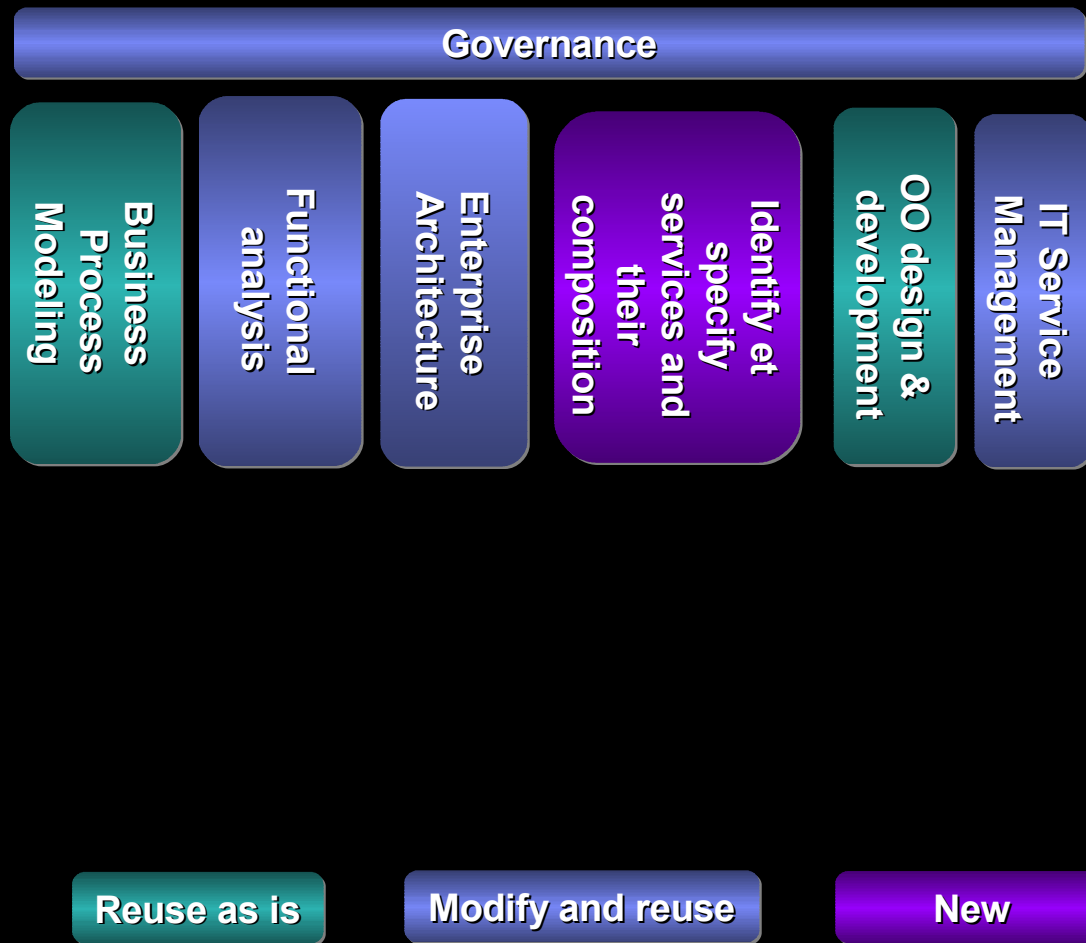
Agenda

- **A quick overview of SOMA purpose**
- **Using SOMA in different contexts**
- **Lessons learned & Key success factors**

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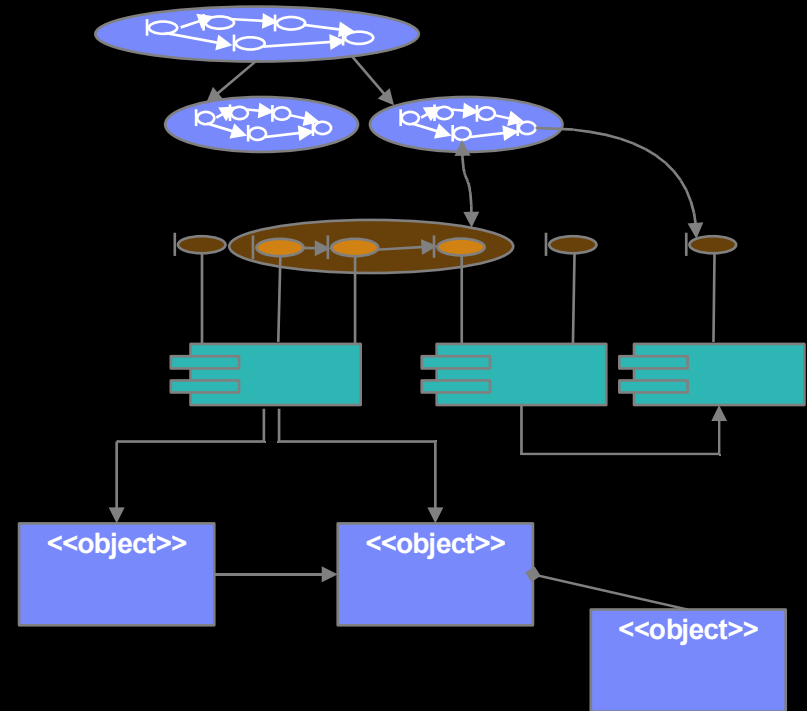
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SOMA addresses an uncovered part of SOA methodologies



Identifying and specifying services is a matter of alignment between services, components, and processes

- Business Processes (or consumers use cases)
- Services
- Components

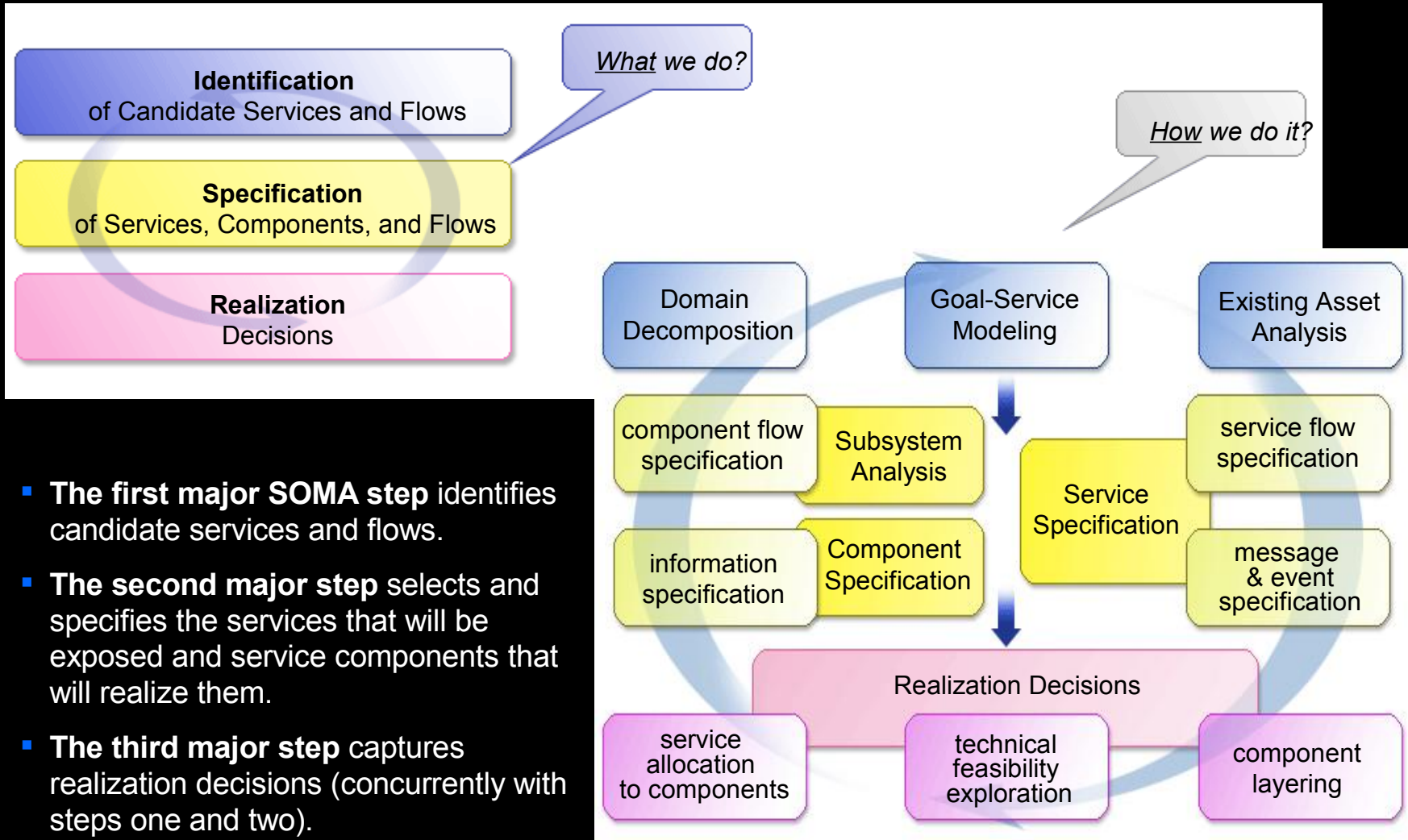


- The functions required by business activities exist as services in the IS
- Their scope and quality of service fits the needs of their consumers
- Services are exposed by components aligned with the functional map of the IS

The purpose of SOMA

- Identify relevant functions to be exposed as SOA business services
 - Within a functional domain
 - To support a business process
 - Within a new application project
- Specify their scope and non-functional requirements (QoS)
- Make a decision for their realization
- Create the Service Model including the Service Portfolio

Review of SOMA main steps



- **The first major SOMA step** identifies candidate services and flows.
- **The second major step** selects and specifies the services that will be exposed and service components that will realize them.
- **The third major step** captures realization decisions (concurrently with steps one and two).

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Most examples in SOMA literature show large scope engagements

- Addressing a large functional domain over which the service identification will occur
- Several engagements of this type have actually been done
 - Hundreds of candidates services
 - Tens of specified services
 - Effort of hundreds of man days

But SOMA can also be applied on smaller engagements for very different purposes

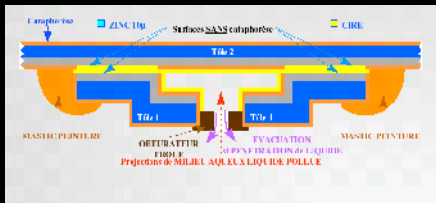
- Help identify Business Reusable Services in new application projects
- Optimize **one** business process
- Help in the validation of functional specification of a new system based on BPM (Are the business process defined at the relevant level for identifying services ?)
- Help build evolution scenarios for the IS, and their impacts on the most important business processes



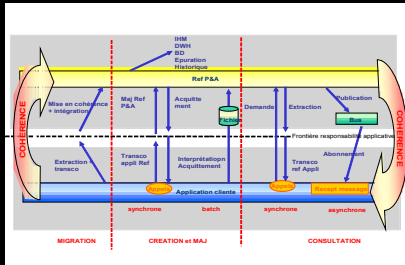
SOMA at Renault : small projects covered by short workshops

Day 1

Workshop 4j



Day 1



Workshop 4j

Project 1 : Docking management

Project 2 : Parts and Accessories management

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Services identification will occur through targeted SOA projects

SOMA application on a full functional domain will be rare. It will rather be applied on :

- Business based SOA projects :
 - Service integration
 - Opening a legacy system to new channels
 - Inter-partner exchange platform
 - Business process optimization

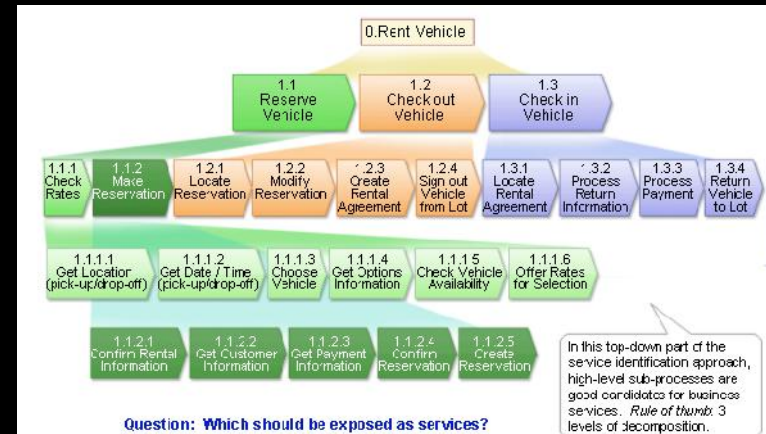
- New application component projects :
 - Expose services from a new application
 - Identify services from a new package

What about services identification in each case ?

| Project type | Decomposition | Business goals | Existing systems |
|---------------------------|---------------------------------------|----------------|---|
| Service integration | Application exchanges use case | Business Goals | Service provider application |
| Opening a legacy | Consumers business processes | Business Goals | Legacy application |
| Inter-partners platform | Consumers business processes | Business Goals | Service provider application |
| Business process | Business process | Business Goals | Applications involved in the BP functional domain |
| New application component | Users or services consumers use cases | Business Goals | Replaced applications |

Process decomposition good practices

- Choose an actual business process
 - Starts on a business event
 - Let the IS in a consistent state after completion
 - Is not a life cycle
 - Not related to existing applications
- Follow the process decomposition disciplines rules
 - Unit task
 - Single actor
 - For a single organization (single functional domain)
 - Must be completed before next task
- Other required criteria to be a good service candidate
 - No link with applications neither technology (avoid tasks such as « input data in screen 3 of application A »)
 - At least on exchange with the IS
 - Stateless / Consistent

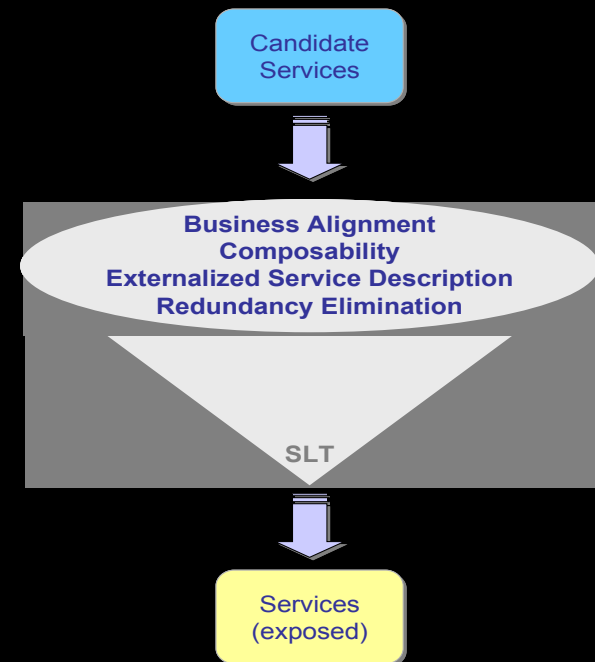


Where do business goals services come from ?

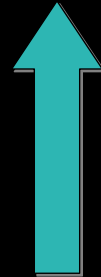
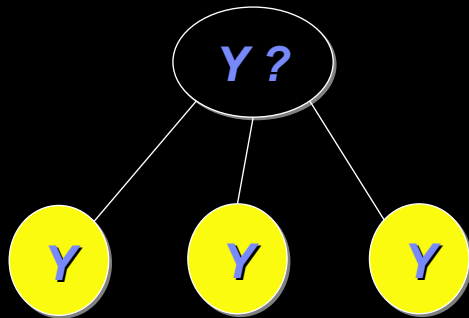
- Every new project may come with business goals
- Services required by new ways of practicing (up sell / cross sell)
 - Might not be identified by business analyst
 - Might not come from the existing system analysis
- Services required to check that goals are reached
 - KPI measurement
 - Required by Business Analysis Monitoring

Making the exposure decision : The Litmus test

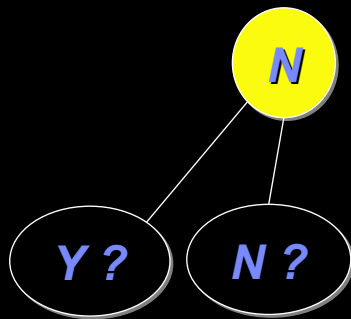
1. Is it a business function ?
 - Get rid of « technical » operation, or existing system component
3. Is it a single and synchronous interaction with the IS ?
 - Dependency on the envisioned implementation
5. Encapsulation :
 - Is it bound to a single business component ?
 - What happens if this service is to be provided outside ?
7. Is it reusable ?
 - What if not ?
9. Highest level of granularity ?



Granularity aspects



- Going up with the 5th question
- What will stop going up ?
 - Useless service
 - Not any more a single interaction
 - Violation of encapsulation rule



- If a candidate is not a single interaction, can it be divided in several tasks limited to one interaction

Which IS components are likely to expose services ?

| Project type | Application « landscape » for exposure |
|---------------------------|---|
| Service integration | Set of providers applications |
| Opening a legacy | Legacy application |
| Inter-partners platform | Platform application Providers partners applications |
| Business process | Set of involved applications |
| New application component | New application component |

Frequently asked questions...

- **A set of Web Services already exists in the Information System...**
 - Use them for candidates as existing systems functions
 - Take them into account for realization decisions
- **Some services are required but might not be, at this time, reusable**
 - They will be developed in the system and available as a function
 - The choice to let them be Web Services is only a technical choice
 - If the application architecture uses a good pattern, the exposure decision can be taken later
- **Some services defined in the business process seem both technical and business oriented (printing, archiving,...)**
 - Business services use business objects : printing an invoice can be a business service if it is part of a business process
 - This kind of business services rely on technical services : printing, archiving a file, ...
- **What if no implementation can be found for a required service ?**
 - SOMA is an iterative approach – review business processes requirements
- **What if the technical solution and the business goals for my projects appear to be not consistent ?**
 - SOMA is an iterative approach – You would not have found that without SOMA

Governance issues that can raise while using SOMA

- **At one time or another, you will hear one of these sentences**
 - Why do we spend time running SOMA on my project ?
 - Who will pay for complementary services development ?
 - Who will allow the delay caused by the larger scope of functions required by the services ?
 - Who will decide if service consumers do not agree on the service to expose ?
 - Who will own the services ?
 - The work products of our method do not take services into account...
- **SOMA requires**
 - **SOA Sponsorship**
 - The foundation for an SOA governance organization
 - At least the funding process for shared services

Key success factors for succeeding with SOMA



Start small on a targeted scope

Build a team of a few specialists

Set up a strong sponsorship and a the foundation for an SOA governance organization

Think of where SOMA work products will fit in your own methodology

Think iterative rather than waterfall

Thank you