SMART-AF Interview Guide

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SMART-AF Interview Guide

The SMART-AF Interview Guide (SMIG) is an instrument that guides the discussions with stakeholders and developers in the first five activities of the SMART-AF process:

* Establish Context
* Analyze Business Intent
* Analyze Technical Intent
* Review Current Technology
* Establish Success Criteria

Answers to these questions will help organizations establish the feasibility of adopting a service-oriented architecture (SOA) environment. The use of this instrument assures broad coverage and consistent rationale behind the feasibility decision, and if the conclusions of the investigation are positive, a high level strategy for moving forward.

Organizational participation will vary based on the questions being asked. Suggested participants are included with the descriptions of the SMART-AF activities.

Information gathered during the interviews is captured in artifacts used throughout the process:

* Stakeholder information is captured in the **Stakeholder List**
* Concerns that must be addressed during the adoption process are captured in the **Adoption Issues List**
* Potential business processes for SOA adoption are captured in the **Candidate Business Process List**
* Mapping between key business processes and elements of the organization that perform them is captured in the **Business Process - Organization Mapping**
* Mapping between key business processes of the organization and software systems that support the is captured in the **Business Process - Software System Mapping**

The subsections will contain details about artifacts affected.

# Establish Context

This activity develops an understanding of the overall structure and mission of the organization and the issues and problems that suggested adopting a new technology. It identifies the high-level goals and expected benefits of SOA adoption and the current role of SOA within the organization. Stakeholders, SOA adoption Issues and key deadlines and deliverables are identified. The mapping of business processes to software and organizations is initiated during this activity. Viewpoints elicited during this activity with top managers will be compared in later SMART-AF activities with the viewpoints of lower-level personnel.

The essential thrust of this information-gathering activity is to get the “big picture,” which will later be refined by the other SMART-AF activities.

The organizational participants should include high-level decision-makers such as CTO’s, COO’s, and the head of IT. They should be able to answer the following questions:

* What is the high-level structure of both the organization and its software asset base? Do these two structures map to each other?
* What are the expected benefits of adopting SOA and the source of that expectation?
* Are there any existing uses of SOA, or other initiatives, within the organization aimed at SOA adoption?

The **Stakeholder List, Adoption Issues List, Business Process - Organization Mapping**, and **Business Process - Software System Mapping** artifacts are created in this activity.

## Establish Context

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| **Discussion Topic** | **Questions** |
| General Information about the Organization | * What are the major business functions carried out by the organization? * What are the top four organizational processes that occupy the majority of your time? * Can you provide a capsule description of organizational structure, size of major personnel groups, etc.? * What proportions of your major business functions are entirely (or primarily) software-based? * How do you get your software (i.e., do you acquire/develop/buy/none/all of the above)? * How much do the organization’s software systems interact with external software systems? * What is the age of your software asset base? * What is the size of the internal IT department? * What is the proportion of hardware personnel, software personnel, developers, installers, etc.)? * How closely does the organizational structure map to the IT architecture? * Is there a perceived need to alter the relationship between organizational structure and IT architecture? |

## Establish Context

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| **Discussion Topic** | **Questions** |
| Goals and Expectations about Moving to a SOA Environment | * What issues or problems exist that suggest adopting a new technology like SOA? * Who determined the need to move to a SOA environment? * Has there been a cost/benefit study about SOA adoption in your organization? * Who identified the cost/benefits of moving to a SOA environment? * What are four business processes that would most benefit from moving to a SOA environment? * Is there any formal statement of the anticipated benefits of moving to a SOA environment? * Are the anticipated benefits of moving to a SOA environment consistent with any other SOA projects in your organization? * Is there any expectation at this point whether you will be a service provider, consumer, or both? * Has the IT department participated in any of the discussions about moving to a SOA environment? * Does the IT department support the potential move to a SOA environment? |

## Establish Context

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| **Discussion Topic** | **Questions** |
| Current Role of SOA within the Organization | * Where does your potential move to a SOA environment fit within the overall organization? * Are there any SOA-related technologies in-house? * Is this engagement part of a larger SOA adoption effort? * Is this engagement a formal project or simply a preliminary fact finding initiative? * Who is the project sponsor? What are the expectations and constraints? * Who is the technical champion? What are the expectations and constraints? * What is the technical champion's skill and background in SOA? * What are the key deadlines and deliverables? * If there is no project, who is the SOA champion? * Have you (or any elements within the organization) received any training or courses related to SOA? From whom, and for which personnel? * If there is a move to a SOA environment, who do you expect will accomplish it? |

# Analyze Business Intent

This activity gathers information about the business motivations and drivers for moving the organization’s software assets to a SOA environment. Specifically, it builds on the business strategy and business factors related to moving to a SOA environment from Establish Adoption Context.

The organizational participants should include tactical decision-makers of the organization, such as line managers, team leads, and VPs for various areas considering SOA adoption. They should be able to answer the following questions:

* What business problems exist for which SOA adoption is seen as the remedy?
* Is the move to a SOA environment motivated by the need for process improvement?
* Are cost savings (or any other cost-related factors) the motivation for moving to a SOA environment?
* What are the perceived risks mitigated by a move to a SOA environment?
* Are there any outside/external factors motivating the move to a SOA environment?
* Do you already have a business processes selected as candidates for SOA adoption?

The **Stakeholder List, Adoption Issues List, Business Process - Organization Mapping**, and **Business Process - Software System Mapping** are updated in this activity.

The **Candidate Business Process List** artifact is created in this activity.

## Analyze Business Intent

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| **Discussion Topic** | **Questions** |
| Business Drivers | * What are the business drivers for moving to a SOA environment? * Have any studies been conducted to verify these business drivers? * If no studies have been conducted, what is the business-related reason that seems to indicate a move to a SOA environment would be beneficial? * What examples can you provide of users' needs that are not met by the current IT systems? * How frequently are the business drivers or needs changing? * What are example scenarios of these changing business needs? * How much time does it take the IT department to respond to these changes? * What business scenarios are not currently satisfied by the existing systems? * What inefficiencies arise because of incapacity of the systems to scale? |
| Process Factors | * What experience exists within the organization about large-scale process reengineering? * How much of the move toward a SOA environment will involve process re-engineering? * Does the organization have an internal process improvement team? * Are the existing business processes documented? |

## Analyze Business Intent

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| **Discussion Topic** | **Questions** |
| Cost Factors | * What is the current cost of maintaining and enhancing the current IT asset base? * What are the expected financial ramifications of SOA adoption? * What increase in software cost is expected when moving to a SOA environment? * Is there budget to cover additional software cost? * Will moving towards a SOA environment demand a different notion of overall budgeting for the organization? * What internal costing processes are expected to change? |
| Risk Factors | * What are the identified business risks involved in a move toward a SOA environment? * Have you compared the risk in moving to a SOA environment vs. staying with the present IT environment? |
| External Factors | * What are the external factors influencing or forcing you to offer or move towards service orientation? |
| Business Processes Known to be SOA Candidates | * Has any planning focused on any specific processes that would be service-enabled? * Why were these processes considered as candidates? * Are these processes presently implemented using IT systems? * Are there any pressing business priorities that drive these choices? * Are these candidates related in any way? |

# Analyze Technical Intent

This activity gathers information about the technical motivations and drivers for moving the organization’s software assets to a SOA environment. It attempts to uncover the limitations of the current software systems and the organizations expected impact of SOA adoption. Specifically, this activity builds on the parts of Establish Context relating to technical strategy, and technical factors related to moving to SOA environments.

The organizational participants should include high- and mid-level technical personnel, such as CTO’s, the head of IT, and database administrators. They should be able to answer the following questions:

* Are your current software capabilities insufficient for the organization’s business needs? How is SOA adoption expected to remedy these insufficiencies?
* What are the technical drivers for SOA adoption?
* Does your IT staff understand the advantages and limitations of SOA adoption? Are they aware of the business drivers for moving to SOA environments?

All of the existing artifacts are updated in this activity: **Stakeholder List,** **Adoption Issues List,** **Business Process - Organization Mapping,** **Business Process - Software System Mapping,** and **Candidate Business Process List**.

## Analyze Technical Intent

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| **Discussion Topic** | **Questions** |
| Limitations of the Current Software Systems | * What are the technical drivers for SOA adoption? * Has any detailed analysis been conducted to verify these technical drivers? * How do your major processes and workflows map to organizational or geographical boundaries? * How do they map to existing systems? * What are any known limitations of the current systems? * For any of the above limitations, is there any hard data about how much they are costing (whether in money or other resources)? * If no data exists, then how will it be possible to determine that a move to a SOA environment will be cost-effective? * How is SOA adoption expected to remedy these limitations? * What business goals will be met if a SOA technical approach remedies these limitations? |
| Expected Impact of SOA | * To what extent does the IT staff understand what SOA is, its advantages and limitations? * To what extent is IT aware of the business drivers for moving to a SOA environment? * To what extent is the IT department in agreement with this decision? * What impact would you expect on end users (e.g., account managers)? |

# Review Current Technology

This activity gathers data about the state of the software and hardware systems used by the organization, and the state of internal IT software expertise. Legacy system assets, the current IT architecture, and governance are all addressed. Review Current Technology State builds on the parts of Establish Context relating to the condition of software systems, details on the IT architecture, and integration of internal systems.

The organizational participants should include technical personnel from all levels, including technical management (e.g., Head of IT, DB administrator) and technical staff (e.g., programmers, test personnel, anyone that deals with any aspect of COTS products). They should be able to answer the following questions:

* What are the major software systems used by the organization?
* Are legacy systems expected to be migrated to a SOA environment? Can you identify these systems?
* Is the current IT architecture able to accommodate changes to business models and processes?
* Do you have formal governance policies over your IT assets and practices?

All of the existing artifacts are updated in this activity: **Stakeholder List,** **Adoption Issues List,** **Business Process - Organization Mapping,** **Business Process - Software System Mapping,** and **Candidate Business Process List**.

## Review Current Technology

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| **Discussion Topic** | **Questions** |
| Legacy System Assets | * At a high level, can you assess the quality of the legacy technology base? * Is there an up-to-date inventory of IT and other legacy software assets? * Are there legacy systems that are expected to be migrated to a SOA environment? Which systems are they? * If no legacy systems are to be migrated to a SOA environment, what alternatives are being considered? * Do you have any experience with the alternatives being considered? * For the legacy systems being considered for migration, who were the developers? * For the COTS assets, what proportion is still supported by their vendors? * For the assets developed in-house or by external contractors, what artifacts are available? * What is the quality of those artifacts? * What is the relative level of activity needed to maintain the legacy technology base? * How much of this activity is done in house? * How large is the in-house maintenance staff? * How much is done by external contractors? * Is there a technology retirement strategy in place for the legacy systems? If so, what are the criteria for retirement or replacement? |

## Review Current Technology

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| **Discussion Topic** | **Questions** |
| Current IT Architecture | * What are the {strong, weak} aspects of the existing IT architecture? * What degree of point-to-point integration exists between systems? * How easily can the integration mechanisms accommodate change? * Is the current architecture able to accommodate changes to business models and processes? * If not, are the shortcomings documented? * Can you estimate what is the business impact caused by these shortcomings? |
| Governance | * Do you have any formal governance policies over your IT assets and practices? * Is there a single authority that can resolve differences between internal organizational entities? * If not, has any consideration been given to how differences can be resolved? |

# Establish Success Criteria

This activity gathers information on the criteria that define business and technological success and how the criteria can be applied to determine success. The aim is to get a very high-level sense of how the organization deals with its self-improvement initiatives, i.e., whether

* + it understands that success criteria are as important as other elements of business improvement
  + personnel at all levels will be part of “owning” success
  + all levels of personnel are empowered

This is the final phase of the information-gathering part of SMART-AF

The key stakeholders required for this phase should include representatives from all of the personnel that have been interviewed up to this point.

All of the existing artifacts are updated in this activity: **Stakeholder List,** **Adoption Issues List,** **Business Process - Organization Mapping,** **Business Process - Software System Mapping,** and **Candidate Business Process List**.

## Establish Success Criteria

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| **Discussion Topic** | **Questions** |
| Defining Criteria | * Will success be defined by factors primarily related to business processes? Or technological factors? Or both? * What are examples of criteria that will represent business success? * What are examples of criteria that will represent technological success? * What roles will define various success criteria? * Who will define the success criteria? |
| Applying Criteria | * What considerations have been made in terms of conflicting success criteria? * What sort of tradeoff mechanisms could be used to resolve such a conflict? * What specific assessment procedures will determine that the criteria have (or have not) been met? * What is the expected time scale to be used (i.e., how long will the “break-in” period be before success is determined to exist or not)? * Who determines success? |

# Next Steps

At this point, the SMART-AF Team enters into the final SMART-AF activity: Review and Corroborate Findings. The team analyzes the information gathered in response to the SMIG-AF; verifies that the information on the **Stakeholder List** and **Adoption Issues List** is correct and complete; determines whether the information on the **Candidate Business Process List** is in general agreement; identifies gaps in the Business Process mappings; and prepares a high-level recommendation either for or against SOA adoption, the rationale for that recommendation, and a strategy to move forward.

The output of the SMART-AF process is a report that comprises two elements:

* + Assessment for SOA Adoption Feasibility
  + Strategy for SOA Adoption