

Guidelines And Tools Mapped To Artifacts

The Business Analysis Body Of Knowledge version 3 (BABOK) is a comprehensive set of guidelines for conducting business analysis. It lays out these guidelines in a functionally structured manner, with knowledge areas containing tasks. Guidelines/tools, artifacts and stakeholders are described in terms of their relationship to these tasks.

I created an object-oriented model of the BABOK that focuses on the artifacts. It captures their relationships with other artifacts, guidelines and tools, stakeholders and techniques.

This article is one in a series of reports containing information from my model of the BABOK. It shows the mapping between artifacts and the guidelines/tools, which are specified in the BABOK.

Artifacts

An artifact is identified as an input or output of a BABOK task. Artifact descriptions can be found in the Inputs and Outputs sections of each task description. All artifacts referenced by the BABOK are shown in Figure 1.

An artifact is represented with the UML class icon.

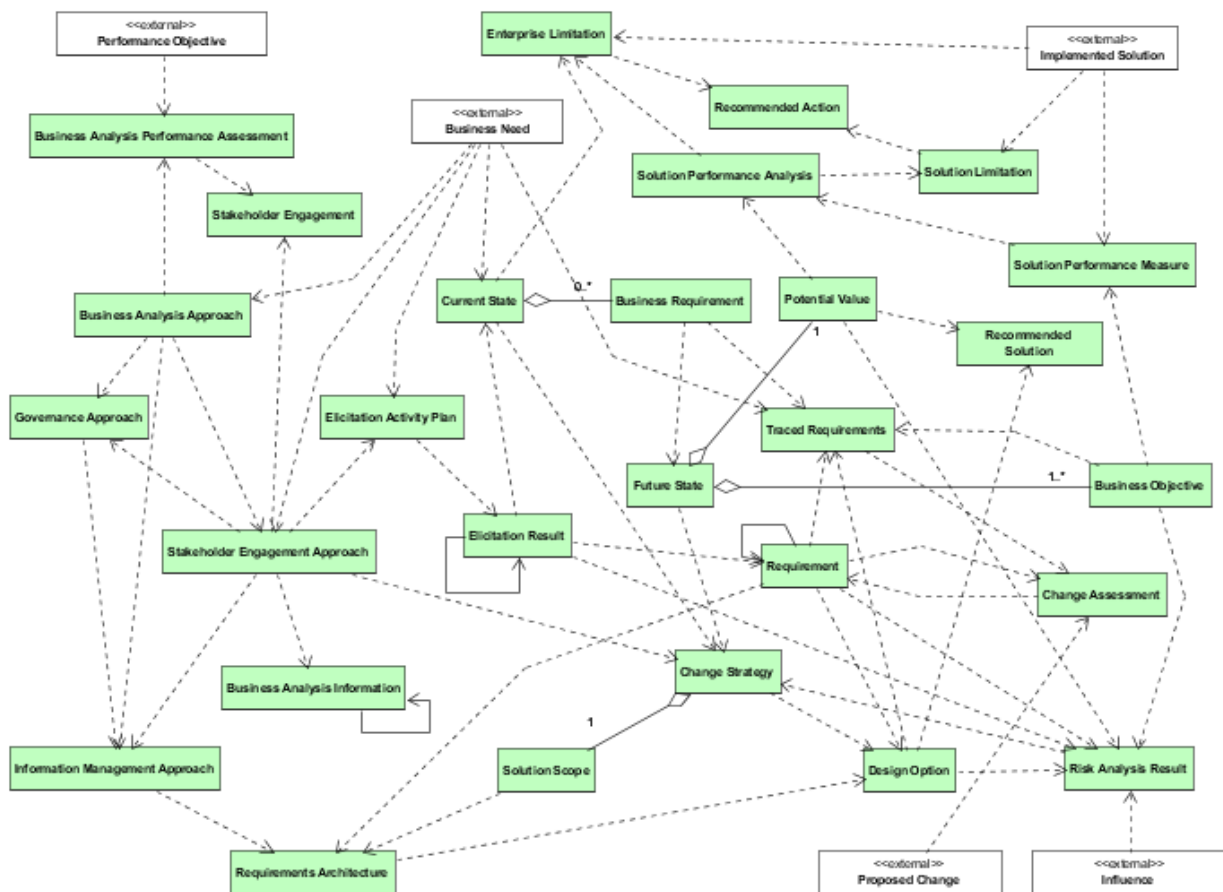


Figure 1: BABOK Artifacts

Artifacts are divided into 2 groups:

- Shaded White – These are inputs to the BABOK from external sources.
- Shaded Green – These are artifacts produced by the business analysis discipline and used by business analysts or delivered to external stakeholders.

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- ◆ The BABOK Design artifact has been combined with the Requirement artifact. I.e. Requirements may be considered 'Requirements and Designs'. This is consistent with the Rational Unified Process.
 - ◆ The Traced Requirements artifact is derived from the Trace Requirements task. This artifact is not shown in the BABOK; instead it is described by a relationship between requirements. This artifact captures the two requirements in that relationship, the type of traceability and the level of formality of the relationship.
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Guidelines And Tools

Guidelines and tools are used to provide guidance on the creation of artifacts. Input artifacts contain information that is manipulated by a task to create a different artifact (or update the same artifact). Artifacts may also be used as guidelines. This is the definition of a Guideline or Tool from the BABOK – 'Guidelines and Tools are required to transform the input into an output. A guideline provides instructions or descriptions on why or how to undertake a task. A tool is something used to undertake a task. Guidelines and tools can include outputs of other tasks.'

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- ◆ When shown as an input to a task, it is not always clear what the difference is between a guideline and an input. My interpretation is that guidelines are instructional text that guides the analyst. In this case guidelines (and tools) are not 'required'. Guidelines are useful. Inputs are required (when they exist).
 - ◆ Examples of the Requirement artifact inputs, guidelines and tools:
 Input – Elicitation Results contain information that is translated into requirements.
 Guideline – The Solution Scope guides the analyst in determining whether elicitation result information is in scope.
 Tool – A Requirements Management Repository contains requirements.
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In summary – my understanding is that:

- Guidelines are instructions for performing a task.
- A tool is an optional piece of software used to create or house the output artifacts.
- Input artifacts are containers of information that is manipulated by the task.
- An output artifact is either created or updated by a task using input information, guidelines, tools and techniques.

There is no Guidelines and Tools section of the BABOK. Therefore, where a guideline is not also an artifact, I have provided my own best guess at the guideline definition.

Guidelines and tools are represented by the class symbol. 0Figure 2 shows the BABOK guidelines and tools that are not artifacts.

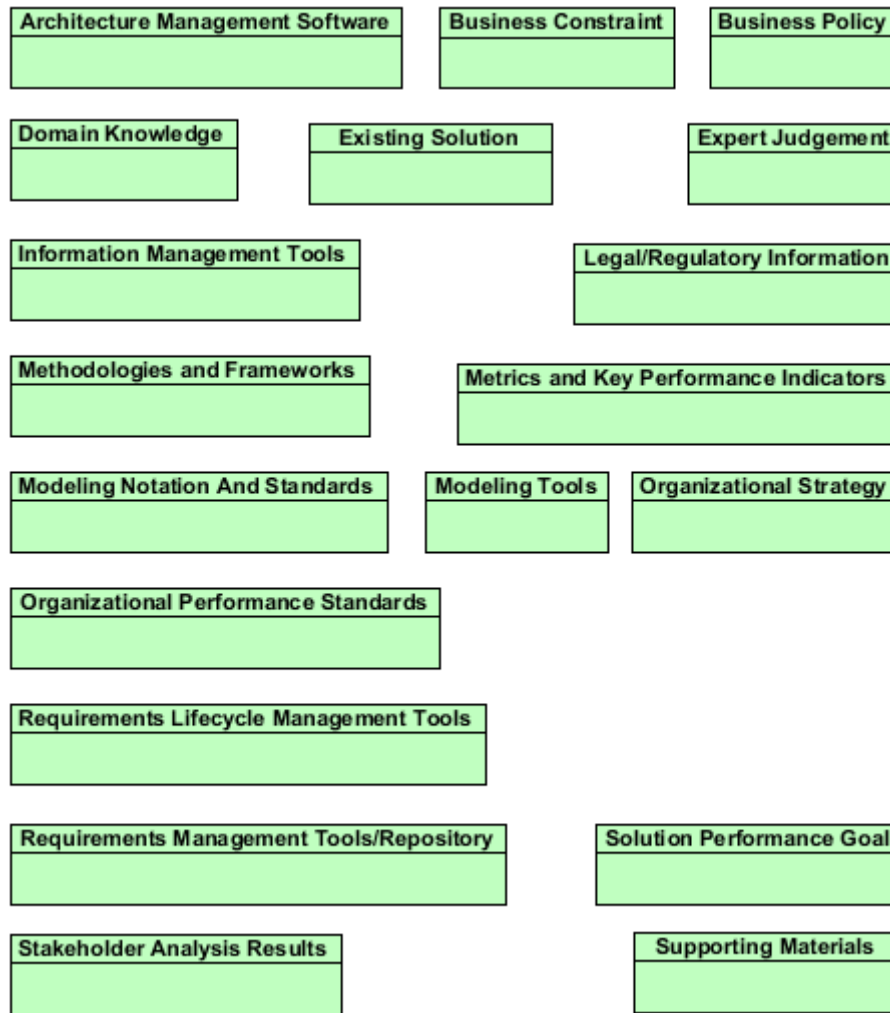


Figure 2: Guidelines And Tools

Figure 3 shows the BABOK artifacts that are also guidelines and tools.

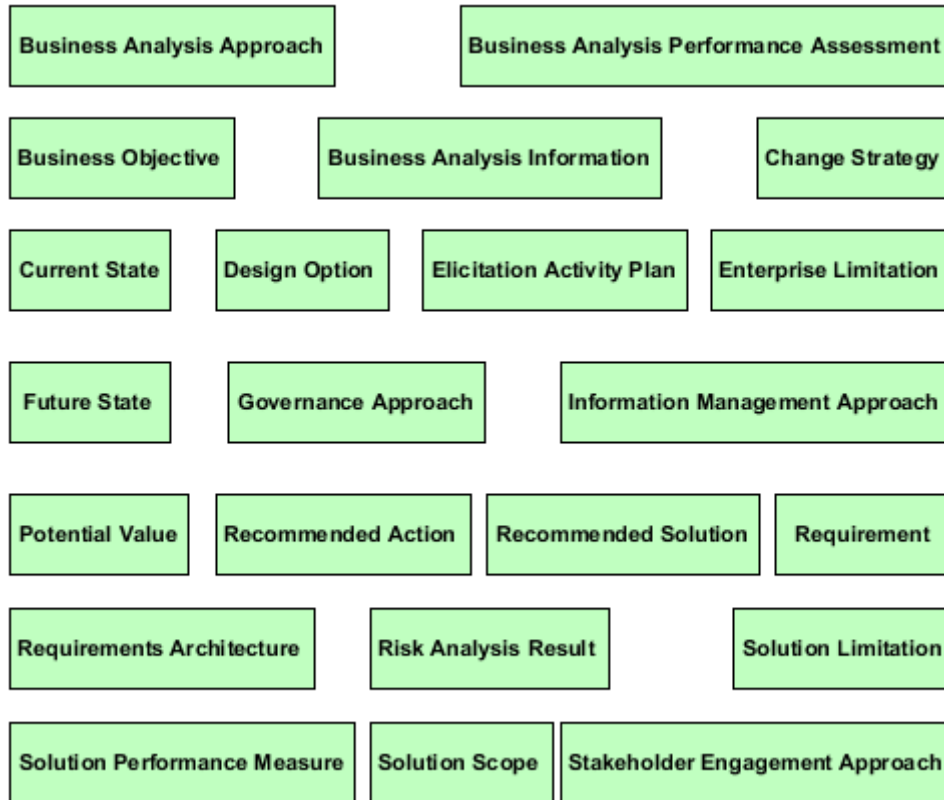


Figure 3: Artifacts Used As Guidelines

Guidelines and tools are documented wherever they are related to a task, in the task ‘Guidelines and Tools’ section. I refer the reader to the BABOK for a description of these relationships.

In the following diagrams, guidelines and tools are represented by a UML class symbol. The guideline or tool (shaded green) is connected to the artifact (shaded blue) that it influences, by an association that indicates whether it is a guideline or a tool.

♦ Sometimes it is difficult to distinguish between when information is an input and when it is an instruction. Below, I make a note when the difference may not be obvious.

1) Architecture Management Software

Architecture management software can be used to house requirements and related elements. Modelling applications can be structured to aid in the organization and management of analysis components, help minimize the complexity of component relationships and perform version control. Examples include: Sparx Enterprise Architect, Visual Paradigm and Rational Software Architect.

Other non-modelling tools that can be configured to house an architecture for requirements management include Atlassian Jira/Confluence or Microsoft DevOps/SharePoint.

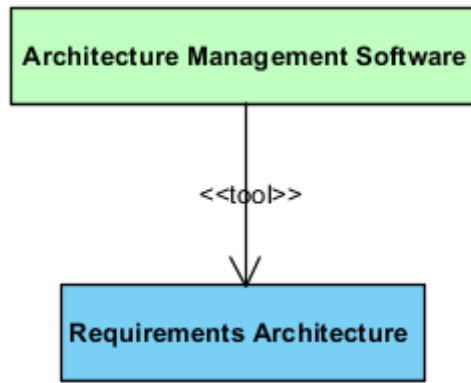


Figure 4: Artifacts Using Architecture Management Software Guidelines

Figure 4 shows that architecture management software may be used as a tool for creating the Requirements Architecture.

2) Business Analysis Approach

The business analysis approach is the set of processes, rules, guidelines, heuristics, and activities that are used to perform business analysis.

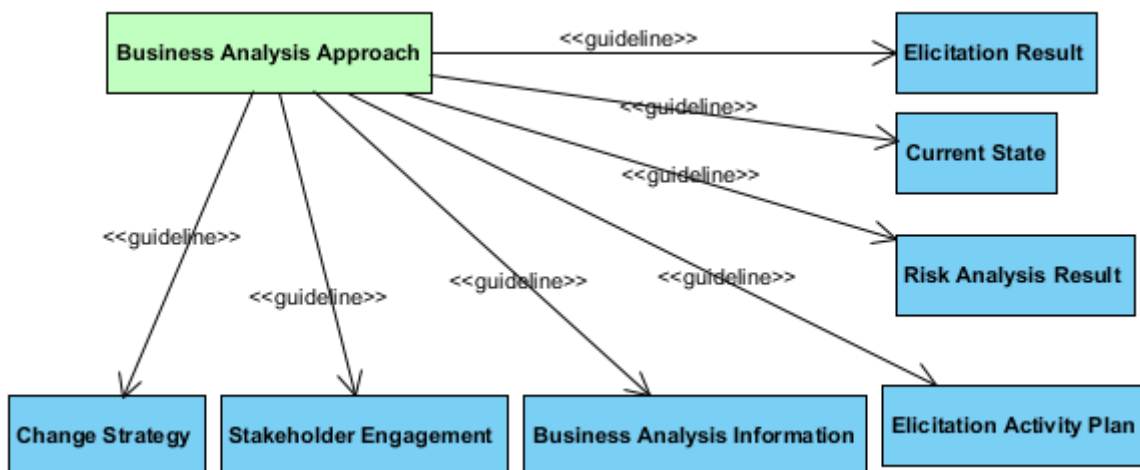


Figure 5: Artifacts Using Business Analysis Approach Guidelines

Figure 5 shows that the business analysis approach may be used as a guideline for Elicitation Results, the Current State, Risk analysis Results, Elicitation Activity Plan, Business analysis Information, Stakeholder Engagement and the Change Strategy.

3) Business Analysis Information

Business analysis information is any information used as an input or output of business analysis work, or delivered to stakeholders.

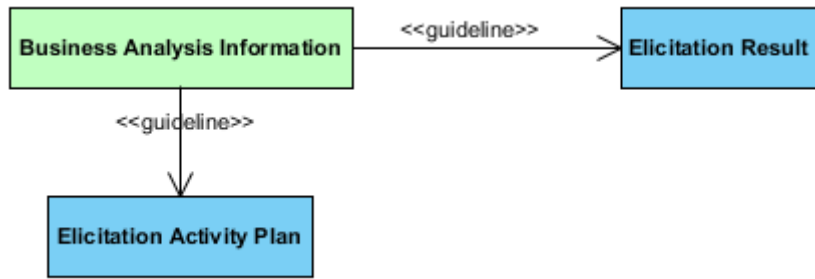


Figure 6: Artifacts Using Business Analysis Information Guidelines

Figure 6 shows that business analysis information may be used as a guideline for Elicitation Results and the Elicitation Activity Plan.

4) Business Analysis Performance Assessment

A Business analysis performance assessment contains a comparison of expected versus actual performance of the system.

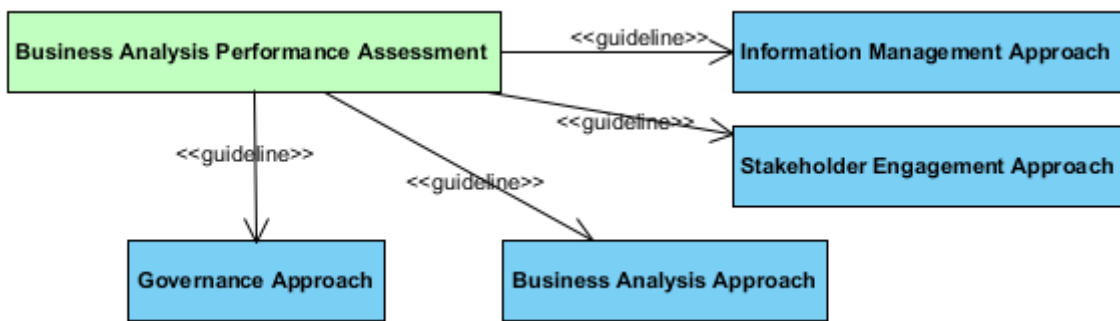


Figure 7: Artifacts Using Business Analysis Performance Assessment Guidelines

Figure 7 shows that the business analysis performance assessment may be used as a guideline for the Information Management Approach, Stakeholder Engagement Approach, Business Analysis Approach and Governance Approach.

5) Business Constraint

A business constraint is a contractual obligation or company policy that impacts requirements.

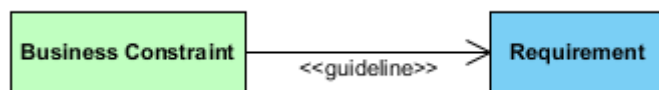


Figure 8: Artifacts Using Business Constraint Guidelines

Figure 8 shows that a business constraint may be used as a guideline for Requirements.

6) Business Objective

A business objective is a measurable result that indicates if a business goal has been achieved.

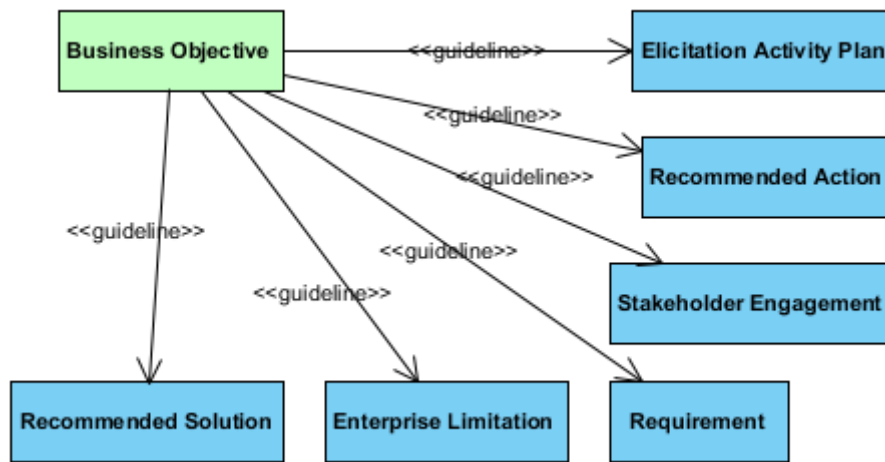


Figure 9: Artifacts Using Business Objective Guidelines

Figure 9 shows that business objectives may be used as a guideline for the Elicitation Activity Plan, Recommended Actions, the Stakeholder Engagement, Requirements, Enterprise Limitations and the Recommended Solution.

7) Business Policy

A business policy defines the limits within which decisions must be made. They may be described by regulations, contracts, agreements, deals, warranties, certifications, or other legal obligations.

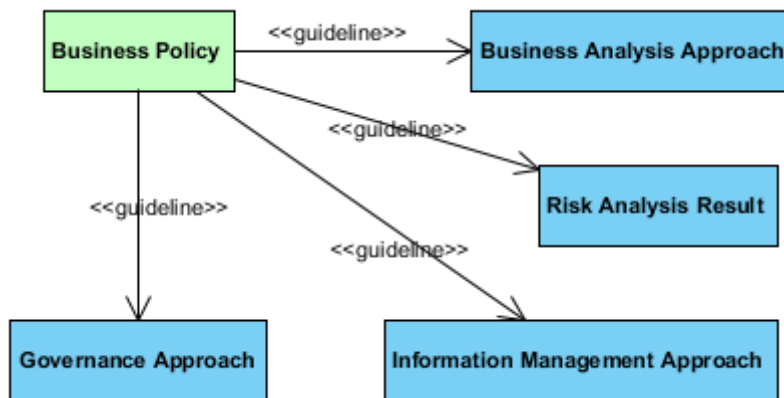


Figure 10: Artifacts Using Business Policy Guidelines

Figure 10 shows that business policies may be used as a guideline for Business Analysis Approach, Risk Analysis Results, Information Management Approach and Governance Approach.

8) Change Strategy

The change strategy is a plan to transform the current state into the desired future state.

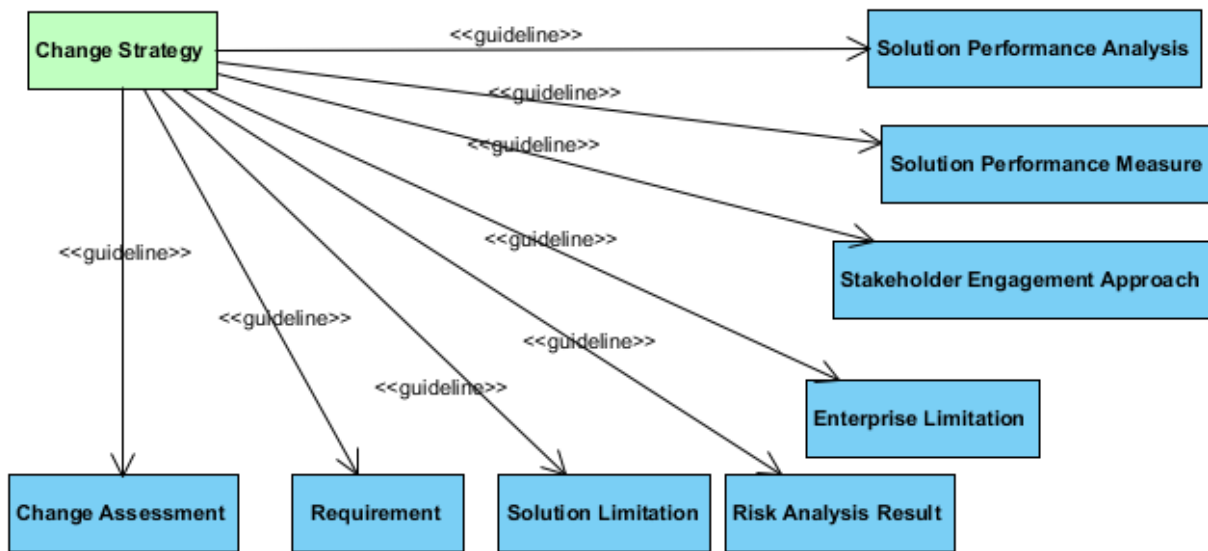


Figure 11: Artifacts Using Change Strategy Guidelines

Figure 11 shows that the change strategy may be used as a guideline for Solution Performance Analysis, Solution Performance Measures, Stakeholder Engagement Approach, Enterprise Limitations, Risk Analysis Results, Solution Limitations, Requirements and Change Assessments.

9) Current State

The current state describes the scope, capabilities, resources, performance, culture, dependencies, infrastructure, external influences, and significant relationships between project significant enterprise elements.

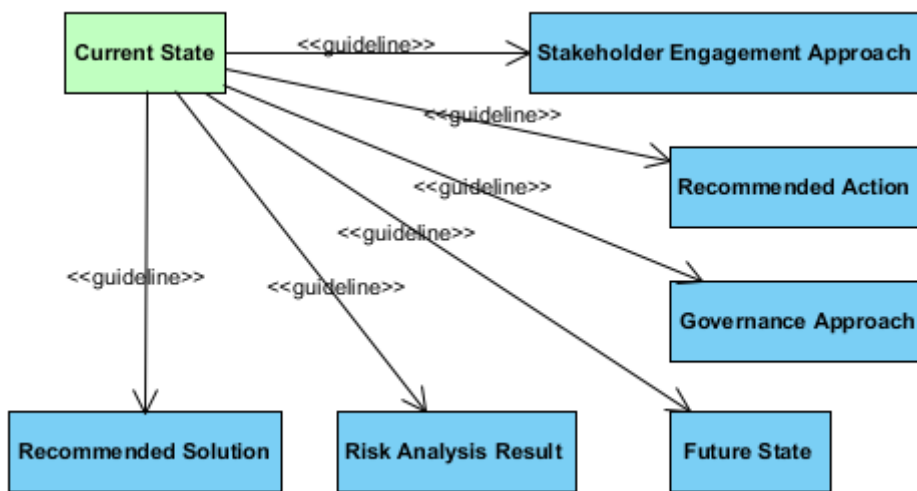


Figure 12: Artifacts Using Current State Guidelines

Figure 12 shows that the current state may be used as a guideline for Stakeholder Engagement Approach, Recommended Actions, Governance Approach, Future State, Risk Analysis Results and Recommended Actions.

10) Design Option

A design option describes a ways to satisfy one or more requirements.

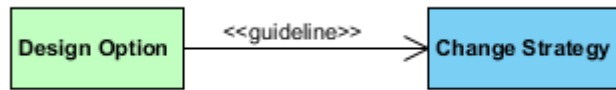


Figure 13: Artifacts Using Design Option Guidelines

Figure 13 shows that a design option may be used as a guideline for the Change Strategy.

11) Domain Knowledge

Domain knowledge is the expertise in the business domain.

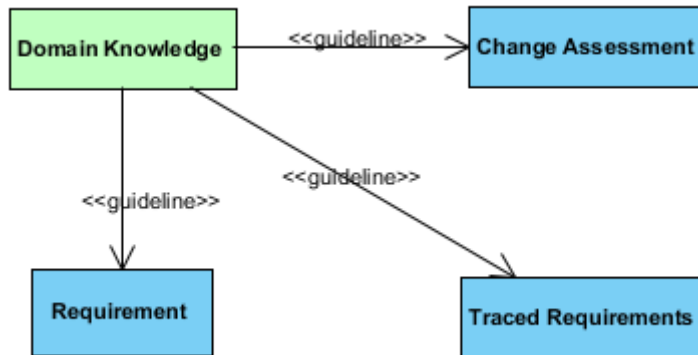


Figure 14: Artifacts Using Domain Knowledge Guidelines

Figure 14 shows that domain knowledge may be used as a guideline for Change Assessments, Traced Requirements and Requirements.

12) Elicitation Activity Plan

The elicitation activity plan contains the logistics, scope, techniques and supporting material used in elicitation.

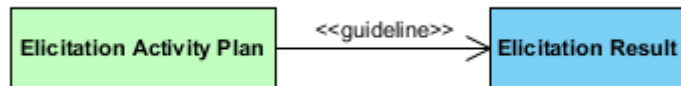


Figure 15: Artifacts Using Elicitation Activity Plan Guidelines

Figure 15 shows that the elicitation activity plan may be used as a guideline for deriving Elicitation Results.

13) Enterprise Limitation

An enterprise limitation is a description of solution performance that is impacting the enterprise.

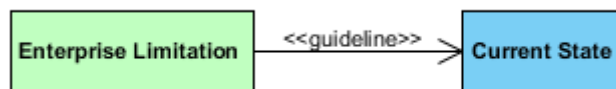


Figure 16: Artifacts Using Enterprise Limitation Guidelines

Figure 16 shows that enterprise limitations may be used as guidelines when describing the Current State.

14) Existing Solution

Existing solutions are products or services that may be considered as components of a design option.

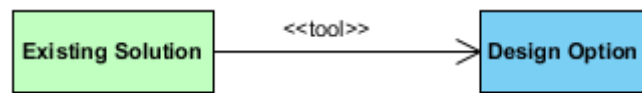


Figure 17: Artifacts Using Existing Solution Tools

Figure 17 shows that an existing solution may be used as guidelines for a Design Option.

15) Expert Judgment

Expert judgment leverages the knowledge of individuals when estimating work.

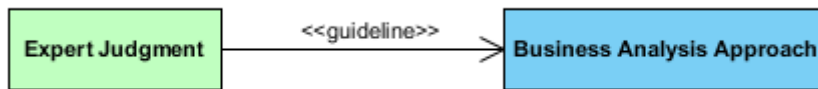


Figure 18: Artifacts Using Expert Judgment Guidelines

Figure 18 shows that expert judgment may provide guidelines for creation of the Business Analysis Approach.

16) Future State

The future state describes the scope, capabilities, resources, performance, culture, dependencies, infrastructure, external influences, and significant relationships between enterprise elements.

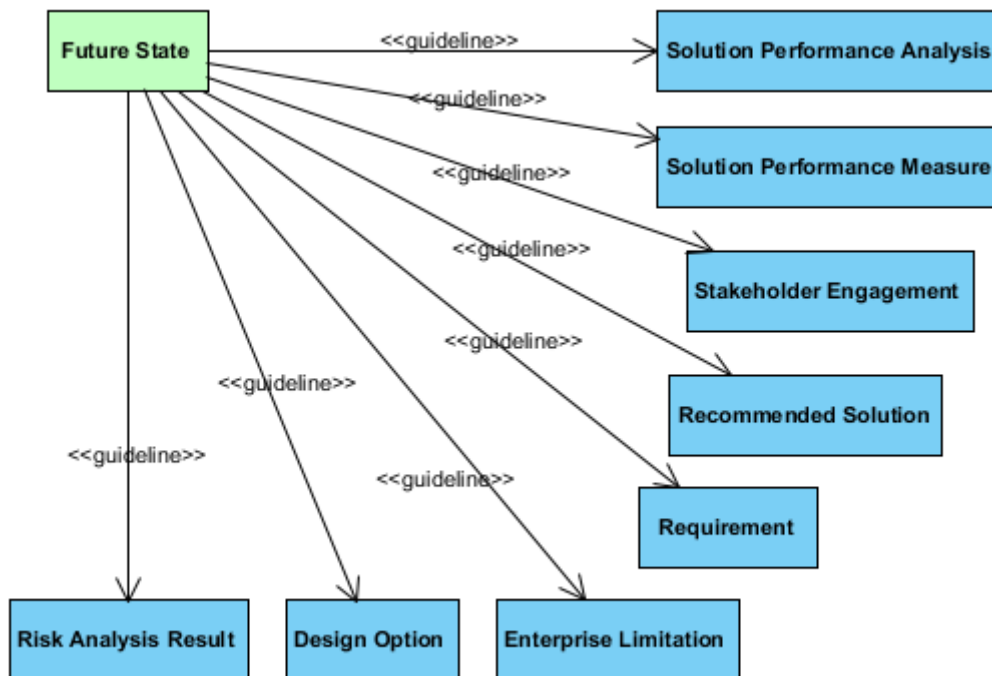


Figure 19: Artifacts Using Future State Guidelines

Figure 19 shows that the future state may be used as a guideline for Solution Performance Analysis, Solution Performance Measures, Stakeholder Engagement, Recommended Solution, Requirements, Enterprise Limitations, Design Options and Risk analysis Results.

17) Governance Approach

A governance approach identifies the stakeholders who will have the responsibility and authority to make decisions about business analysis work including who will be responsible for setting priorities and who will approve changes to business analysis information.

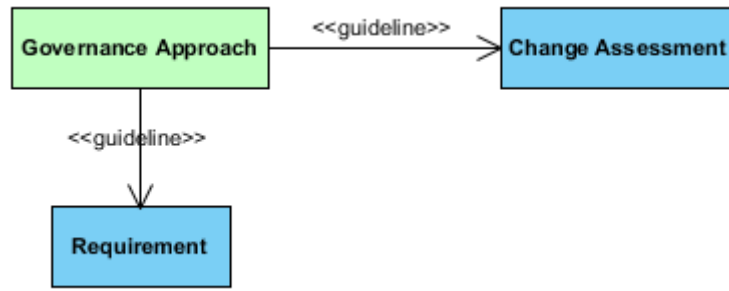


Figure 20: Artifacts Using Governance Approach Guidelines

Figure 20 shows that the governance approach may be used as a guideline for Change Assessments and Requirements.

18) Identified Risk

For the purpose of this article, an identified risk is a risk, which is the same as a risk analysis result.

♦ The attributes of a risk analysis result are the same as that for a typical risk.

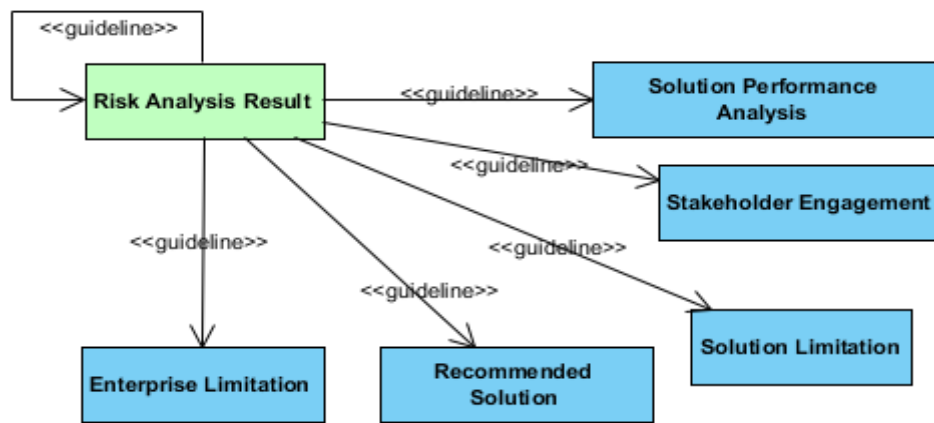


Figure 21: Artifacts Using Risk Analysis Result Guidelines

Figure 21 shows that risks may be used as a guideline for Solution Performance Analysis, Stakeholder Engagement, Solution Limitations, Enterprise Limitations and the Recommended Solution.

19) Information Management Tools

Information management tools are used to manage business analysis information. Tools (such as SharePoint or Confluence) may provide guidelines for the Information Management Approach.

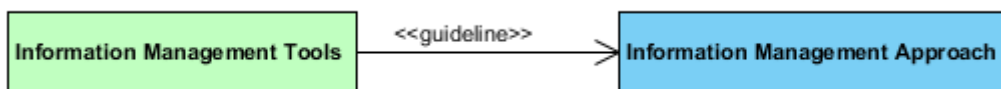


Figure 22: Artifacts Using Information Management Tools

Figure 22 shows that information management tools may be used as a guideline for the Information Management Approach.

20) Information Management Approach

The information management approach describes how business analysis information will be stored, accessed, and managed.

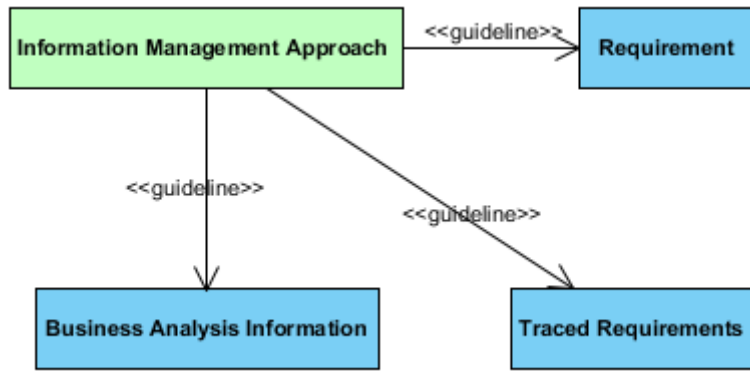


Figure 23: Artifacts Using Information Management Approach Guidelines

Figure 23 shows that the information management approach may be used as a guideline for Requirements, Traced Requirements and Business Analysis Information.

21) Legal/Regulatory Information

Legal/Regulatory Information are rules or regulations that apply to the project.

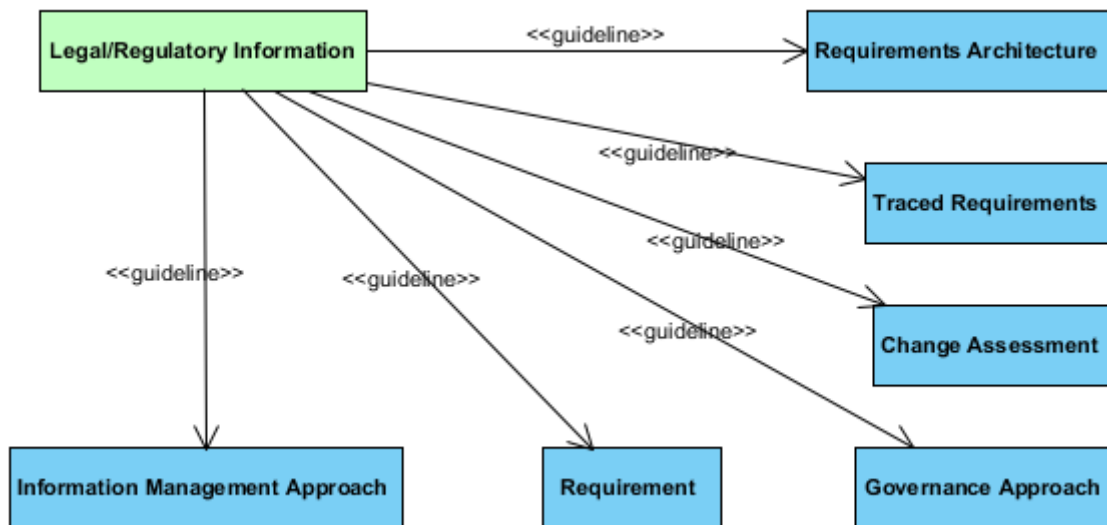


Figure 24: Artifacts Using Legal/Regulatory Information Guidelines

Figure 24 shows that legal/regulatory information may be used as guidelines for the Requirements Architecture, Traced Requirements, Change Assessments, the Governance Approach, Requirements and Information Management Approach.

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- ◆ The BABOK states that they provide guidelines for contractual or standards-based constraints that may need to be considered in the Requirements Architecture and they provide contractual or standards-based constraints for traceability rules.
 - ◆ I am unable to think of any reason why the requirements architecture or traceability rules would need to be influenced by legal regulations.
-

22) Methodologies and Frameworks

Methodologies and frameworks are guidelines and tools providing structure, methods, techniques, procedures, working concepts, and rules.

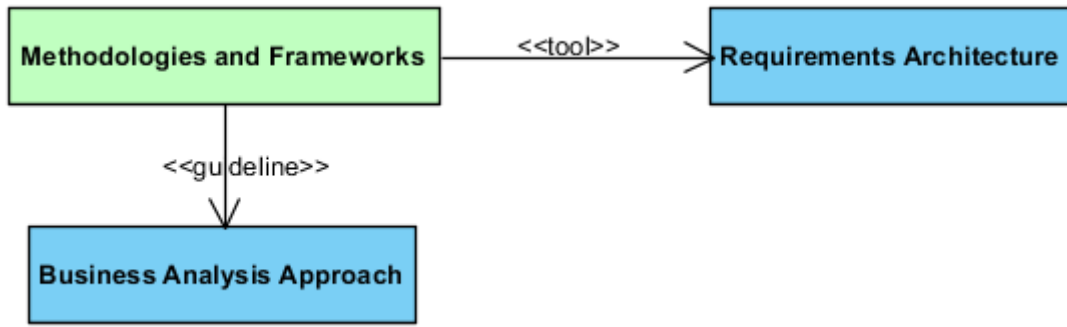


Figure 25: Artifacts Using Methodologies And Frameworks Guidelines

Figure 25 shows that methodologies and frameworks may be used as a guideline for the Requirements Architecture and Business Analysis Approach.

23) Metrics and Key Performance Indicators

The purpose of key performance indicators and metrics is to determine whether the desired future state has been achieved.

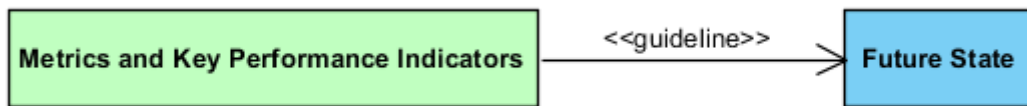


Figure 26: Artifacts Using Metrics And Key Performance Indicators Guidelines

Figure 26 shows that metrics and key performance indicators may be used as a guideline for the Future State.

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- ◆ Metrics and KPIs are a BABOK technique, used to determine if desired future state has been achieved. If the technique satisfies this question, I do not understand why guidelines are also required.
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24) Modelling Notation And Standards

Modelling notations and standards provide guidelines and rules for elements that may be presented on diagrams, and the relationships and structure between them. Examples are BPMN, DFD and UML. They may provide guidelines for modelling Requirements.



Figure 27: Artifacts Using Modelling Notation And Standards

Figure 27 shows that the modeling notation and standards may be used as a guideline for Requirements.

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- ◆ The modelling notation may also determine Design Options, Recommended Solution, the Requirements Architecture, the Current State and the Future State.
 UML – includes notations and standards for modelling designs and solutions.
 BPMN – is often used to model the current and future states.
 Any Notation – provides structure guidelines for the model components, which will affect the architecture of the requirements.
-

25) Modelling Tools

A modelling tool is a diagramming application that is also used to organize, specify and relate components of the artifact being captured.

- ◆ Similar to modelling notations, a modelling tool may also be used to manage the Requirements Architecture, Design Options, Solutions and the Current and Future States.

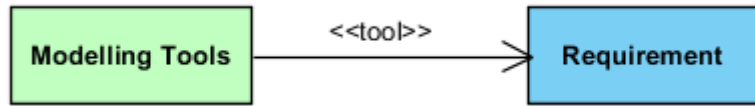


Figure 28: Artifacts Using Modelling Tools

Figure 28 shows that modelling tools may be used for managing Requirements.

26) Potential Value

A potential value describes a benefit of implementing the proposed future state.

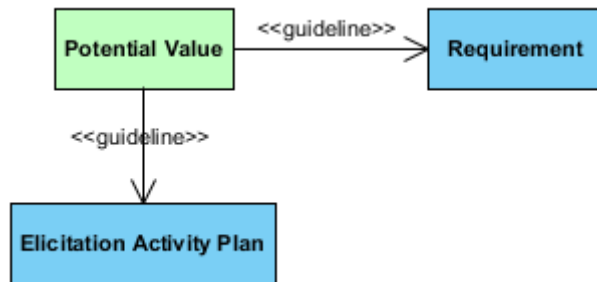


Figure 29: Artifacts Using Potential Value Guidelines

Figure 29 shows that potential value may be used as a guideline for Requirements and the Elicitation Plan.

27) Organizational Performance Standards

Organizational Performance Standards are metrics or expectations mandated by the organization...

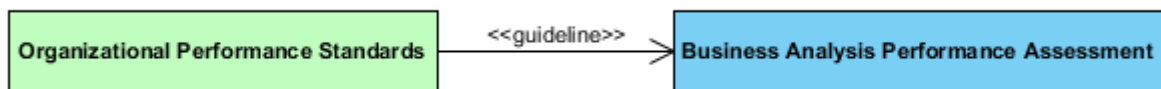


Figure 30: Artifacts Using Organizational Performance Standards Guidelines

Figure 30 shows that organizational performance standards may include guidelines for the Business Analysis Performance Assessment.

- ◆ I have never encountered (nor heard of) an artifact represented by the business analysis performance assessment, prior to reading the BABOK.

28) Organizational Strategy

An organizational strategy describes the organizational approach to reach the desired future state.

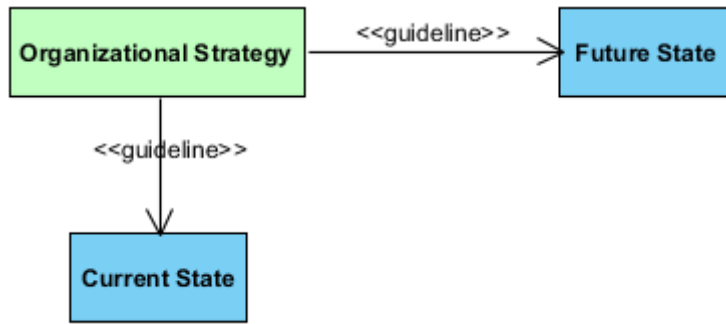


Figure 31: Artifacts Using Organizational Strategy Guidelines

Figure 31 shows that the organizational strategy may be used as a guideline for the Future State and Current State.

29) Recommended Actions

Recommended actions are proposed acts for improving a solution.

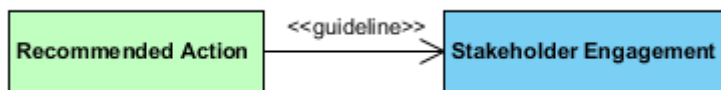


Figure 32: Artifacts Using Recommended Action Guidelines

Figure 32 shows that recommended actions may be communicated as guidelines for Stakeholder Engagement.

30) Recommended Solution

The recommended solution identifies the appropriate solution based on evaluation defined design options.

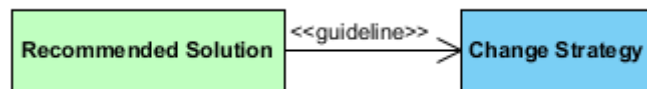


Figure 33: Artifacts Using Recommended Solution Guidelines

Figure 33 shows that the recommended solution may be used as a guideline for the Change Strategy.

31) Requirements

Requirements describe capabilities that satisfy the stakeholder needs for the desired future state.

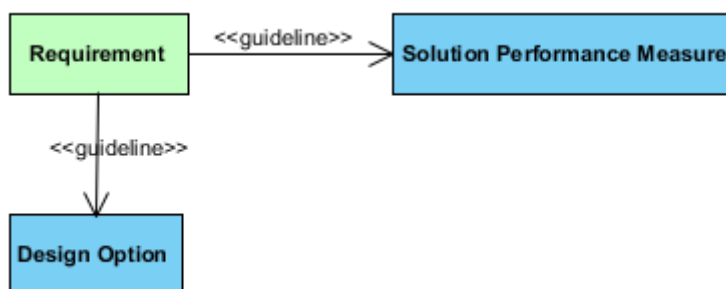


Figure 34: Artifacts Using Requirements As Guidelines

Figure 34 shows that requirements may be used as a guideline for Solution Performance Measures and Design Options.

- ◆ Requirements are also an input to Design Options.
- ◆ The BABOK does not explain why Requirements are a guideline and not an input Solution Performance Measures.

32) Requirements Architecture

The requirements architecture is a framework for the organization and structure of requirements...

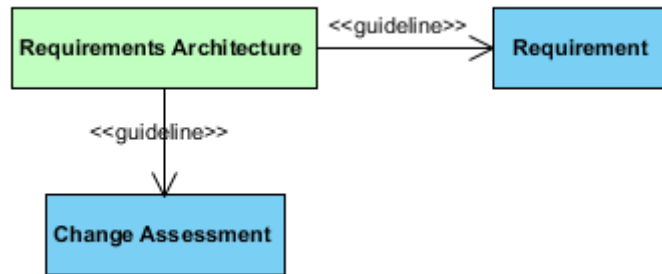


Figure 35: Artifacts Using Requirements Architecture Guidelines

Figure 35 shows that the requirements architecture may be used to guide the relationships between Requirements and guidelines for tracing requirements to Change Assessments.

33) Requirements Lifecycle Management Tools

Requirements lifecycle management tools are products that encourage version control and lifecycle management of requirements.

- ◆ Requirements lifecycle management is often built into the requirements management tool. I have used modelling tools that use an add-on to manage requirement versioning and life cycles.



Figure 36: Artifacts Using Requirements Lifecycle Management Tools

Figure 36 shows that requirements lifecycle management tools may be used as tools for managing Requirements.

34) Requirements Management Tools/Repository

Requirements management tools provide a repository for Requirement attributes and encourage Traceability between requirements.

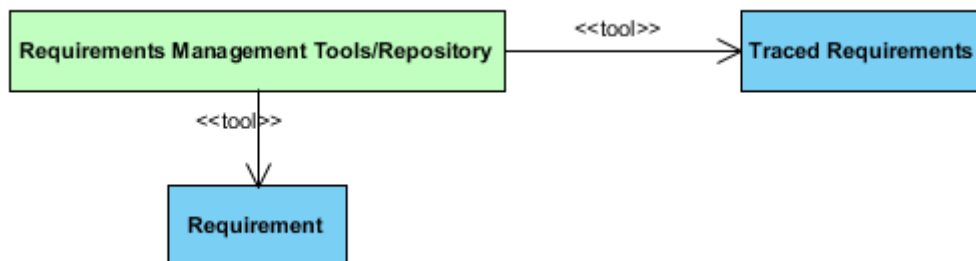


Figure 37: Artifacts Using Requirements Management Tools And Repositories

Figure 37 shows that requirements management tools and repositories may be used as tools for managing Requirements and their Traceability.

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- ◆ Requirements repository tools often include traceability, lifecycle management, version control and requirements architecture. They may also include methodology and framework guidelines and rules.
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35) Risk Analysis Results

See section 18), Identified Risk.

36) Solution Limitation

A solution limitation describes potential improvements for a current solution, including constraints and defects.



Figure 38: Artifacts Using Solution Limitation Guidelines

Figure 38 shows that solution limitations may be used as guidelines for describing the Current State.

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- ◆ Why would solution limitations not be an input to the Current State?
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37) Solution Performance Goal

Solution performance goals set performance expectations for the future state.

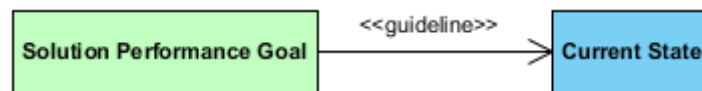


Figure 39: Artifacts Using Solution Performance Goals As Guidelines

Figure 39 shows that solution performance goals may be used as guidelines for defining the Current State.

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- ◆ The BABOK states that solution performance goals serve as a baseline for setting future state goals and measuring improvement. The current state is used by solution performance goals. Figure 39 should show that solution performance goals are guidelines for the Future State.
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38) Solution Performance Measures

Solution performance measures describe how the current solution is performing.

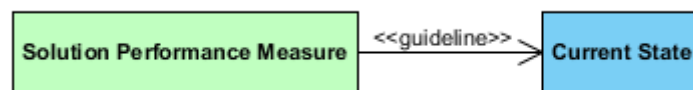


Figure 40: Artifacts Using Solution Performance Measures As Guidelines

Figure 40 shows that solution performance measures may be used as guidelines for defining the Current state.

39) Solution Scope

The set of capabilities a solution must deliver in order to meet the business need. The solution scope identifies the boundaries of the problem.

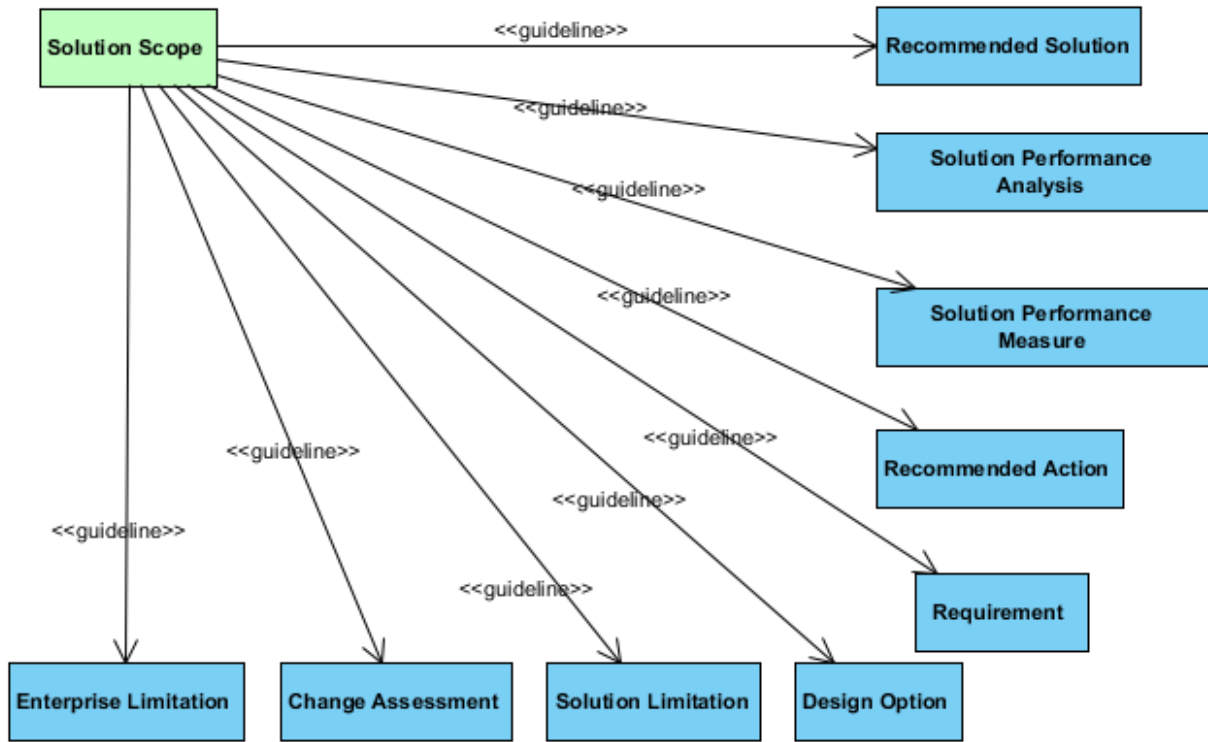


Figure 41: Artifacts Using Solution Scope Guidelines

Figure 41 shows that the solution scope may be used as a guideline for defining the boundaries of the Recommended Solution, Solution Performance Analysis, Solution Performance Measures, Recommended Actions, Requirements, Design Options, Solution Limitations, Change Assessments and Enterprise Limitations.

40) Stakeholder Analysis Results

Stakeholder analysis results identify the stakeholders who may be impacted by the changes and their impact, participation, and needs throughout business analysis.



Figure 42: Artifacts Using Stakeholder Analysis Results As Guidelines

Figure 42 shows that stakeholder analysis results may be used as guidelines for the Current state.

41) Stakeholder Engagement Approach

The stakeholder engagement approach describes the collaboration approaches used by the BA, to communicate with stakeholders during analysis.

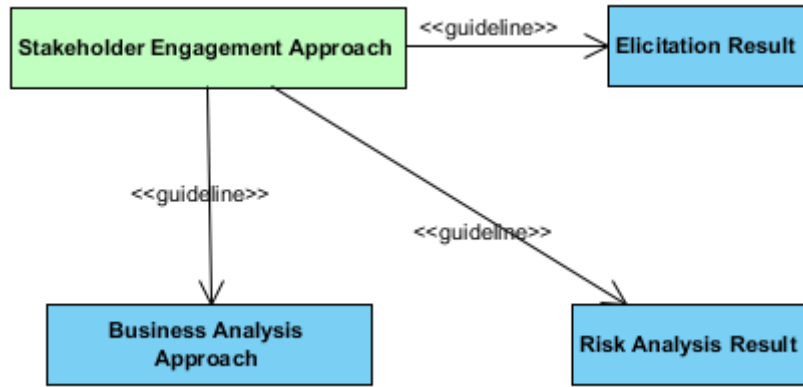


Figure 43: Artifacts Using Stakeholder Engagement Approach Guidelines

Figure 43 shows that the stakeholder engagement approach may be used as a guideline for deriving Elicitation Results, Risks and the Business Analysis Approach.

42) Supporting Materials

Supporting material is any information, tools, or equipment that maybe used during elicitation or delivered to stakeholders at any time.

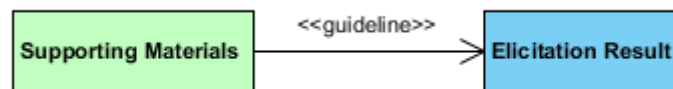


Figure 44: Artifacts Using Supporting Materials As Guidelines

Figure 44 show that supporting material may be used as guidelines for creation of Elicitation Results.

Summary

This article shows which artifacts may use the guidelines and tools described in the BABOK. For each guideline or tool, the applicable artifacts are shown on a diagram. In this manner the business analyst is able to identify where the available guidelines and tools may be used during the analysis activity.

The BABOK does not include descriptions for tools or for guidelines that are not artifacts. This article included a best guess at the definitions for these guidelines and tools. It also questioned the purpose of a guideline where the BABOK was not clear as to it influence on production of an artifact.