The Guide to the Business Analysis Body of Knowledge (BABOK)™ Version 3.0 Framework

Author: Joseph Lapuz, CBAP, CSM
Wellington, New Zealand
Date Created: December 2016
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Email: josephlapuz@gmail.com

1. INTRODUCTION

DESCRIPTION

A Guide to the Business Analysis Body of Knowledge® (BABOK® Guide) is the globally recognised standard for the practice of business analysis. The BABOK® Guide describes business analysis knowledge areas, tasks, underlying competencies, techniques and perspectives on how to approach business analysis.

PURPOSE

The primary purpose of the BABOK® Guide is to define the profession of business analysis and provide a set of commonly accepted practices. It helps practitioners discuss and define the skills necessary to effectively perform business analysis work. The BABOK® Guide also helps people who work with and employ business analysts to understand the skills and knowledge they should expect from a skilled practitioner.

KNOWLEDGE AREAS

Knowledge areas represent areas of specific business analysis expertise that encompass several tasks.
The six knowledge areas are:

1. **Business Analysis Planning and Monitoring:** describes the tasks that business analysts perform to organise and coordinate the efforts of business analysts and stakeholders. These tasks produce outputs that are used as key inputs and guidelines for the other tasks throughout the BABOK® Guide.

2. **Elicitation and Collaboration:** describes the tasks that business analysts perform to prepare for and conduct elicitation activities and confirm the results obtained. It also describes the communication with stakeholders once the business analysis information is assembled and the ongoing collaboration with them throughout the business analysis activities.

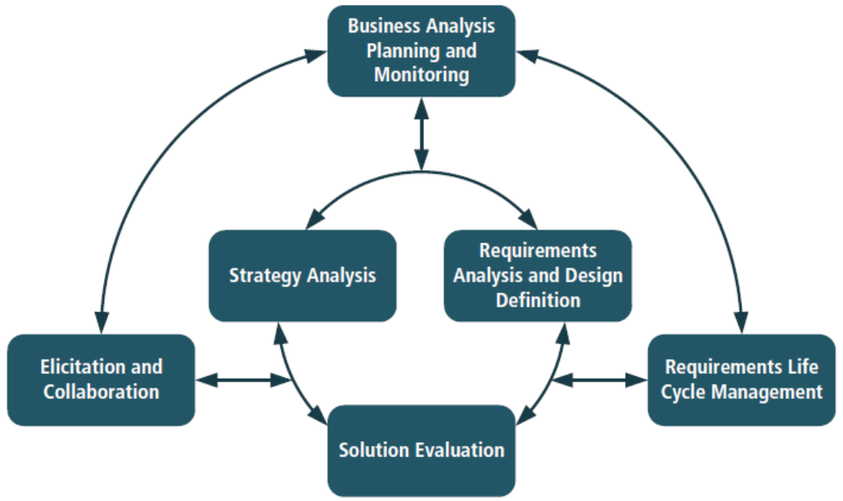
3. **Requirements Life Cycle Management:** describes the tasks that business analysts perform in order to manage and maintain requirements and design information from inception to retirement. These tasks describe establishing meaningful relationships between related requirements and designs, and assessing, analyzing and gaining consensus on proposed changes to requirements and designs.

4. **Strategy Analysis:** describes the business analysis work that must be performed to collaborate with stakeholders in order to identify a need of strategic or tactical importance (the business need), enable the enterprise to address that need, and align the resulting strategy for the change with higher- and lower-level strategies.

5. **Requirements Analysis and Design Definition:** describes the tasks that business analysts perform to structure and organise requirements discovered during elicitation activities, specify and model requirements and designs, validate and verify information, identify solution options that meet business needs, and estimate the potential value that could be realised for each solution option. This knowledge area covers the incremental and iterative activities ranging from the initial concept and exploration of the need through the transformation of those needs into a particular recommended solution.

6. **Solution Evaluation:** describes the tasks that business analysts perform to assess the performance of and value delivered by a solution in use by the enterprise, and to recommend removal of barriers or constraints that prevent the full realization of the value.

DIAGRAM



STRUCTURE OF THE BABOK GUIDE

The core content of the BABOK® Guide is composed of business analysis tasks organized into knowledge areas. Knowledge areas are a collection of logically (but not sequentially) related tasks. These tasks describe specific activities that accomplish the purpose of their associated knowledge area. The Business Analysis Key Concepts, Underlying Competencies, Techniques, and Perspectives sections form the extended content in the BABOK® Guide that helps guide business analysts to better perform business analysis tasks.

- **Business Analysis Key Concepts:** define the key terms needed to understand all other content, concepts, and ideas within the BABOK® Guide.
- **Underlying Competencies:** provide a description of the behaviours, characteristics, knowledge, and personal qualities that support the effective practice of business analysis.
- **Techniques:** provide a means to perform business analysis tasks. The techniques described in the BABOK® Guide are intended to cover the most common and widespread techniques practiced within the business analysis community.
- **Perspectives:** describe various views of business analysis. Perspectives help business analysts working from various points of view to better perform business analysis tasks, given the context of the initiative.

Each task in the BABOK® Guide is presented in the following format:
- Purpose
- Description
- Inputs
- Elements
- Guidelines/Tools
- Techniques
- Stakeholders
- Outputs

2. BUSINESS ANALYSIS KEY CONCEPTS

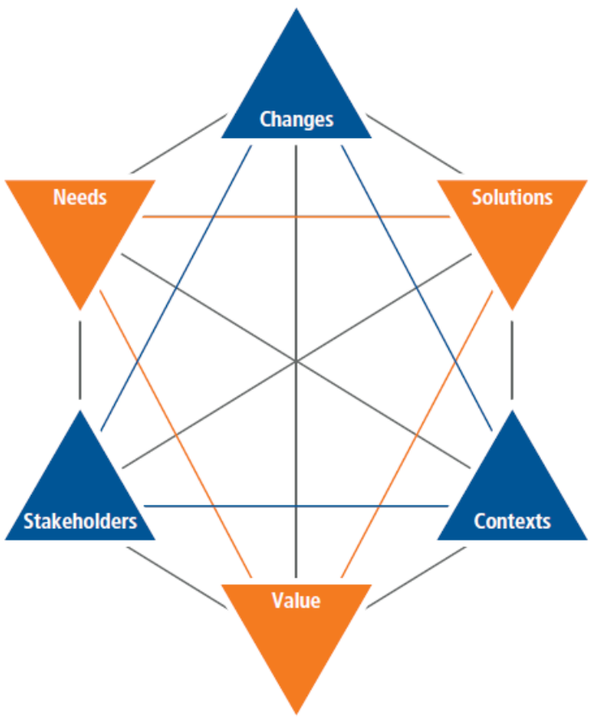
DESCRIPTION

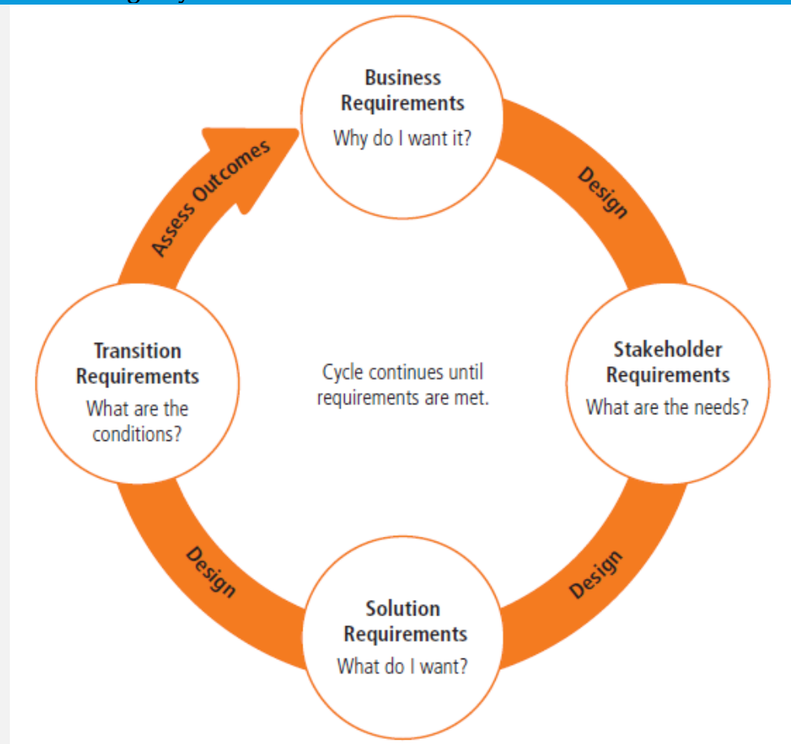
The Business Analysis Key Concepts chapter includes information that provides a foundation for all other content, concepts, and ideas within the *BABOK® Guide*. It provides business analysts with a basic understanding of the central ideas necessary for understanding and employing the *BABOK® Guide* in their daily practice of business analysis.

COMPOSITION

Business Analysis Core Concept Model™ (BACCM™): defines a conceptual framework for the business analysis profession.
- **Key Terms**: provides definitions of essential concepts, which are highlighted because of their importance to the *BABOK® Guide*.
- **Requirements Classification Schema**: identifies levels or types of requirements that assist the business analyst and other stakeholders in categorizing requirements.
- **Stakeholders**: defines roles, and characteristics of groups or individuals participating in or affected by the business analysis activities within a change.
- **Requirements and Designs**: describes the distinction between—and the importance of—requirements and designs as they relate to business analysis.

BACM DIAGRAM



	Requirements Classification Schema	Requirements and Design Cycle
1	**Business requirements** Statements of goals, objectives, and outcomes that describe why a change has been initiated. They can apply to the whole of an enterprise, a business area, or a specific initiative.	
2	**Stakeholder requirements** Describe the needs of stakeholders that must be met in order to achieve the business requirements. They may serve as a bridge between business and solution requirements.	
3	**Solution requirements** Describe the capabilities and qualities of a solution that meets the stakeholder requirements. They provide the appropriate level of detail to allow for the development and implementation of the solution. Solution requirements can be divided into two sub-categories: • **Functional requirements**: describe the capabilities that a solution must have in terms of the behaviour and information that the solution will manage, and • **Non-functional requirements or quality of service requirements**: do not relate directly to the behaviour of functionality of the solution, but rather describe conditions under which a solution must remain effective or qualities that a solution must have.	
4	**Transition requirements**: describe the capabilities that the solution must have and the conditions the solution must meet to facilitate transition from the current state to the future state, but which are not needed once the change is complete. They are differentiated from other requirements types because they are of a temporary nature. Transition requirements address topics such as data conversion, training, and business continuity.	

BUSINESS ANALYSIS TASKS BY KNOWLEDGE AREA

3. BUSINESS ANALYSIS PLANNING AND MONITORING	4. ELICITATION AND COLLABORATION	5. REQUIREMENTS LIFE CYCLE MANAGEMENT	6. STRATEGY ANALYSIS	7. REQUIREMENTS ANALYSIS AND DESIGN DEFINITION	8. SOLUTION EVALUATION
3.1 Plan Business Analysis Approach	4.1 Prepare for Elicitation	5.1 Trace Requirements	6.1 Analyse Current State	7.1 Specify and Model Requirements	8.1 Measure Solution Performance
3.2 Plan Stakeholder Management	4.2 Conduct Elicitation	5.2 Maintain Requirements	6.2 Define Future State	7.2 Verify Requirements	8.2 Analyse Performance Measure
3.3 Plan Business Analysis Governance	4.3 Confirm Elicitation Results	5.3 Prioritise Requirements	6.3 Assess Risks	7.3 Validate Requirements	8.3 Assess Solution Limitations
3.4 Plan Business Analysis Management	4.4 Communicate Business Analysis Information	5.4 Assess Requirements Changes	6.4 Define Change Strategy	7.4 Define Requirements Architecture	8.4 Assess Enterprise Limitations
3.5 Identify Business Analysis Performance Improvements	4.5 Manage Stakeholder Collaboration	5.5 Approve Requirements		7.5 Define Design Options	8.5 Recommend Actions to Increase Solution Value
				7.6 Analyse Potential Value and Recommend Solution	

3. BUSINESS ANALYSIS PLANNING AND MONITORING (BAPM)

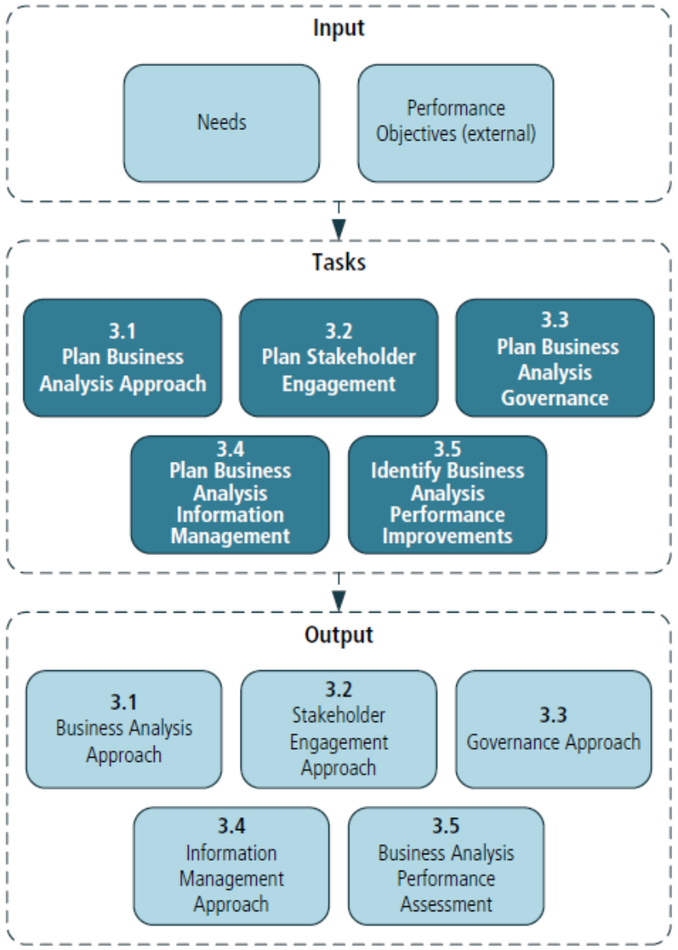
DESCRIPTION

Business Analysis Planning and Monitoring describes how to determine which activities are necessary to perform in order to complete a business analysis effort. It covers identification of stakeholders, selection of business analysis techniques, the process we will use to manage our requirements, and how we assess the progress of the work in order to make the necessary changes in the work effort.

PURPOSE

- Plan the execution of business analysis tasks
- Update or change the approach to business analysis as required
- Assess effectiveness of and continually improve business analysis practices

INPUT/OUTPUT DIAGRAM



	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
A	**Plan Business Analysis Approach** *Describes the planning of business analysis work from creation or selection of a methodology to planning the individual activities, tasks, and deliverables.*	• Needs	• Planning Approach • Formality and Level of Detail of BA Deliverables • BA Activities • Timing of BA Work • Complexity and Risk • Acceptance	• Brainstorming • Business Cases • Document Analysis • Estimation • Financial Analysis • Functional Decomposition • Interviews • Item Tracking • Lessons Learned • Process Modelling • Reviews • Risk Analysis and Management • Scope Modelling • Survey/Questionnaire • Workshops	• Domain SME • Project Manager • Regulator • Sponsor	• BA Approach
S	**Plan Stakeholder Engagement** *Describes understanding which stakeholders are relevant to the change, what business analysts need from them, what they need from business analysts, and the best way to collaborate.*	• Needs • Business Analysis Approach	• Perform Stakeholder Analysis • Define Stakeholder Collaboration • Stakeholder Communication Needs	• Brainstorming • Business Rules Analysis • Document Analysis • Interviews • Lessons Learned • Mind Mapping • Organisational Modelling • Process Modelling • Risk Analysis and Management • Scope Modelling • Stakeholder List, Map or Personas • Survey or Questionnaire • Workshops	• Customers • Domain SME • End User • Project Manager • Regulator • Sponsor • Supplier	• Stakeholder Engagement Approach
G	**Plan Business Analysis Governance** *Defines the components of business analysis that are used to support the governance function of the organisation. It helps ensure that decisions are made properly and consistently, and follows a process that ensures decision makers have the information they need. Examples of this include requirements management, business analysis risk management, and allocation of business analysis resources.*	• Needs • Stakeholder Engagement Approach	• Decision Making • Change Control Process • Plan Prioritisation Approach • Plan for Approvals	• Brainstorming • Document Analysis • Interviews • Item Tracking • Lessons Learned • Organisational Modelling • Process Modelling • Reviews • Survey or Questionnaire • Workshops	• Domain SME • Project Manager • Regulator • Sponsor	• Governance Approach
M	**Plan Business Analysis Information Management** *Defines how information developed by business analysts (including requirements and designs) is captured, stored, and integrated with other information for long-term use.*	• BA Approach • Governance Approach • Stakeholder Engagement Approach	• Organisation of Business Analysis Information • Level of Abstraction • Plan Traceability Approach • Plan for Requirements Reuse • Storage and Access • Requirements Attributes	• Brainstorming • Interviews • Item Tracking • Lessons Learned • Mind Mapping • Processing Modelling • Survey or Questionnaire • Workshops	• Domain SME • Regulator • Sponsor	• Information Management Approach

	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
P	**Identify Business Analysis Performance Improvements** *Describes managing and monitoring how business analysis work is performed to ensure that commitments are met and continuous learning and improvement opportunities are realised.*	• Business Analysis Approach • Performance Objectives (external)	• Performance Analysis • Assessment Measures • Analyse Results • Recommend Actions for Improvement	• Brainstorming • Interviews • Lessons Learned • Metrics and KPIs • Observation • Process Analysis • Process Modelling • Reviews • Risk Analysis and Management • Root Cause Analysis • Survey or Questionnaire • Workshops	• Domain SME • Project Manager • Sponsor	• Business Analysis Performance Assessment

4. ELICITATION AND COLLABORATION (EC)

DESCRIPTION

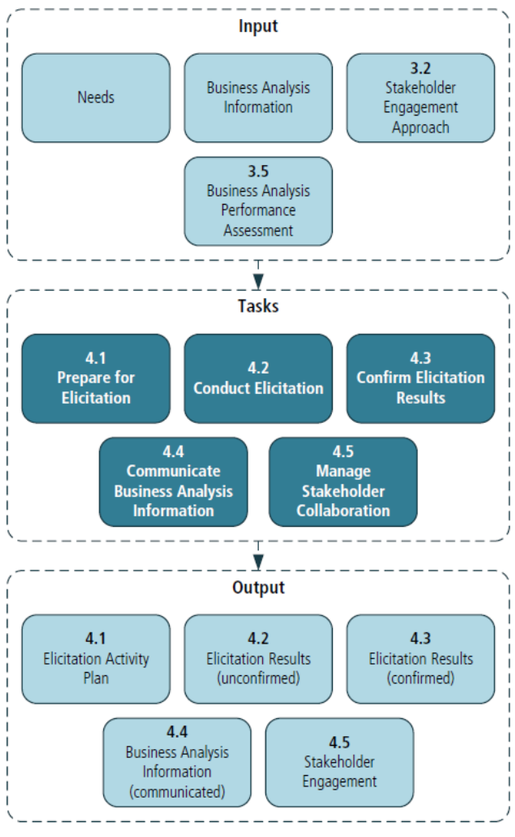
The Elicitation and Collaboration knowledge area describes the tasks that business analysts perform to obtain information from stakeholders and confirm the results. It also describes the communication with stakeholders once the business analysis information is assembled. Elicitation is the drawing forth or receiving of information from stakeholders or other sources. It is the main path to discovering requirements and design information, and might involve talking with stakeholders directly, researching topics, experimenting, or simply being handed information. Collaboration is the act of two or more people working together towards a common goal. The Elicitation and Collaboration knowledge area describes how business analysts identify and reach agreement on the mutual understanding of all types of business analysis information. Elicitation and collaboration work is never a 'phase' in business analysis; rather, it is ongoing as long as business analysis work is occurring.

Elicitation and collaboration can be planned, unplanned, or both. Planned activities such as workshops, experiments, and/or surveys can be structured and organised in advance. Unplanned activities happen in the moment without notice, such as last-minute or 'just in time' collaboration or conversations. Business analysis information derived from an unplanned activity may require deeper exploration through a planned activity.

PURPOSE

- Explore, identify and document stakeholder needs.

INPUT/OUTPUT DIAGRAM



	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
P	**Prepare for Elicitation** *The purpose of Prepare for Elicitation is to understand the scope of the elicitation activity, select appropriate techniques, and plan for (or procure) appropriate supporting materials and resources.*	• Needs • Stakeholder Engagement Approach	• Understand the Scope of Elicitation • Select Elicitation Techniques • Setup Logistics • Secure Supporting Material • Prepare Stakeholders	• Brainstorming • Data Mining • Document Analysis • Estimation • Interviews • Mind Mapping • Risk Analysis and Management • Stakeholder List, Map and Personas	• Domain SME • Project Manager • Sponsor	• Elicitation Activity Plan
C	**Conduct Elicitation** The purpose of Conduct Elicitation is to draw out, explore, and identify information relevant to the change.	• Elicitation Activity Plan	• Guide Elicitation Activity • Capture Elicitation Outcomes	• Benchmark and Market Analysis • Brainstorming • Business Rules Analysis • Collaborative Games • Concept Modelling • Data Mining • Data Modelling • Document Analysis • Focus Groups • Interface Analysis • Interviews • Mind Mapping • Observation • Process Analysis • Processing Modelling • Prototyping • Survey or Questionnaire • Workshops	• Customers • Domain SME • End User • Implementation SME • Sponsor • Any Stakeholders	• Elicitation Results (unconfirmed)
C	**Confirm Elicitation Results** *The purpose of Confirm Elicitation Results is to check the information gathered during an elicitation session for accuracy and consistency with other information.*	• Elicitation Results (unconfirmed)	• Compare Elicitation Results Against Source Information • Compare Elicitation Results Against Other Elicitation Results	• Document Analysis • Interviews • Reviews • Workshops	• Domain SME • Any Stakeholders	• Elicitation Results (confirmed)
C	**Communicate Business Analysis Information** *The purpose of Communicate Business Analysis Information is to ensure stakeholders have a shared understanding of business analysis information.*	• BA Information • Stakeholder Engagement Approach	• Determine Objectives and Format of Communication • Communicate Business Analysis Package	• Interviews • Reviews • Workshops	• End User • Customer • Domain SME • Implementation SME • Tester • Any Stakeholder	• Business Analysis Information (communicated)
C	**Manager Stakeholder Collaboration** *The purpose of Manage Stakeholder Collaboration is to encourage stakeholders to work towards a common goal.*	• Stakeholder Engagement Approach • Business Analysis Performance Assessment	• Gain Agreement on Commitments • Monitor Stakeholder Engagement • Collaboration	• Collaborative Games • Lessons Learned • Risk Analysis and Management • Stakeholder List, Map, or Personas	• All Stakeholders	• Stakeholder Engagement

5. REQUIREMENTS LIFE CYCLE MANAGEMENT (RLCM)

DESCRIPTION

The Requirements Life Cycle Management knowledge area describes the tasks that business analysts perform in order to manage and maintain requirements and design information from inception to retirement. These tasks describe establishing meaningful relationships between related requirements and designs, assessing changes to requirements and designs when changes are proposed, and analysing and gaining consensus on changes. The purpose of requirements life cycle management is to ensure that business, stakeholder, and solution requirements and designs are aligned to one another and that the solution implements them. It involves a level of control over requirements and over how requirements will be implemented in the actual solution to be constructed and delivered. It also helps to ensure that business analysis information is available for future use.

PURPOSE

The requirements life cycle:

- begins with the representation of a business need as a requirement,
- continues through the development of a solution, and
- ends when a solution and the requirements that represent it are retired.

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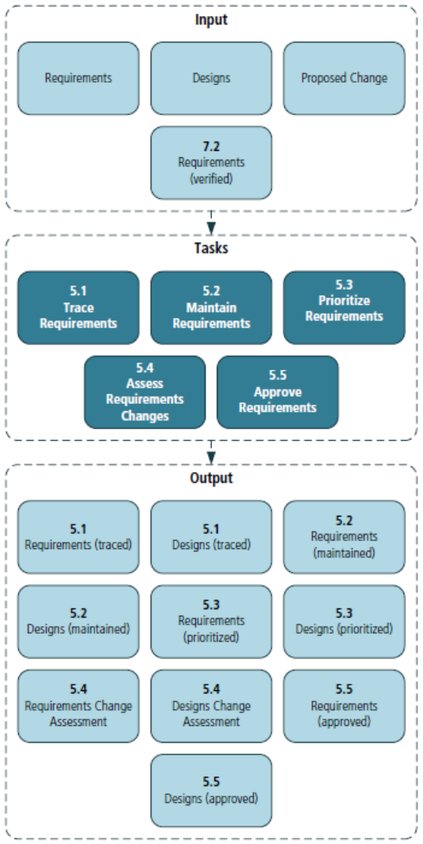


	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
T	**Trace Requirements** *The purpose of Trace Requirements is to ensure that requirements and designs at different levels are aligned to one another, and to manage the effects of change to one level on related requirements.*	• Requirements • Designs	• Level of Formality • Relationships • Traceability Repository	• Business Rules Analysis • Functional Decomposition • Process Modelling • Scope Modelling	• Customers • Domain SME • End User • Implementation SME • Operational Support • Project Manager • Sponsor • Supplier • Tester	• Requirements (traced) • Designs (traced)
M	**Maintain Requirements** *The purpose of Maintain Requirements is to retain requirement accuracy and consistency throughout and beyond the change during the entire requirements life cycle, and to support reuse of requirements in other solutions.*	• Requirements • Designs	• Maintain Requirements • Maintain Attributes • Reusing Requirements	• Business Rules Analysis • Functional Decomposition • Process Modelling • Use Cases and Scenarios • User Stories	• Domain SME • Implementation SME • Operational Support • Regulator • Tester	• Requirements (maintained) • Designs (maintained)
P	**Prioritise Requirements** *The purpose of Prioritize Requirements is to rank requirements in the order of relative importance.*	• Requirements • Designs	• Basis for Prioritisation • Challenges for Prioritisation • Continual Prioritisation	• Backlog Management • Business Cases • Decision Analysis • Estimation • Financial Analysis • Interviews • Item Tracking • Prioritisation • Risk Analysis and Management • Workshops	• Customer • End user • Implementation SME • Project Manager • Regulator • Sponsor	• Requirements (prioritised) • Designs (prioritised)
A	**Assessment Requirement Changes** *The purpose of Assess Requirements Changes is to evaluate the implications of proposed changes to requirements and designs.*	• Proposed change • Requirements • Designs	• Assessment Formality • Impact Analysis • Impact Resolution	• Business Cases • Business Rules Analysis • Decision Analysis • Document Analysis • Estimation • Financial Analysis • Interviews • Item Tracking • Risk Analysis and Management • Workshops	• Customer • Domain SME • End User • Operational Support • Project Manager • Regulator • Sponsor • Tester	• Requirements Change Assessment • Designs Change Assessment
A	**Approve Requirements** *The purpose of Approve Requirements is to obtain agreement on and approval of requirements and designs for business analysis work to continue and/or solution construction to proceed.*	• Requirements (verified) • Designs	• Understand Stakeholder Roles • Conflict and Issue Management • Gain Consensus • Track and Communicate Approval	• Acceptance and Evaluation Criteria • Decision Analysis • Item Tracking • Reviews • Workshops	• Customer • Domain SME • End User • Operational Support • Project Manager • Regulator • Sponsor • Tester	• Requirements (approved) • Designs (approved)

6. STRATEGY ANALYSIS (SA)

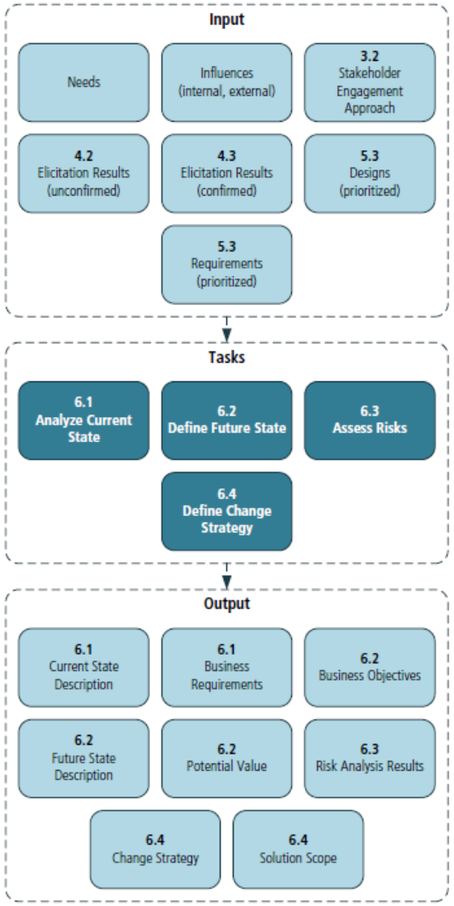
DESCRIPTION

Strategy defines the most effective way to apply the capabilities of an enterprise in order to reach a desired set of goals and objectives. Strategies may exist for the entire enterprise, for a division, department or region, and for a product, project, or iteration. The Strategy Analysis knowledge area describes the business analysis work that must be performed to collaborate with stakeholders in order to identify a need of strategic or tactical importance (the *business need*), enable the enterprise to address that need, and align the resulting strategy for the change with higher and lower-level strategies. Strategy analysis focuses on defining the future and transition states needed to address the business need, and the work required is defined both by that need and the scope of the solution space. It covers strategic thinking in business analysis, as well as the discovery or imagining of possible solutions that will enable the enterprise to create greater value for stakeholders, and/or capture more value for itself. Strategy analysis provides context to requirements analysis and design definition for a given change. Strategy analysis should be performed as a business need is identified.

PURPOSE

Allows stakeholders to make the determination of whether to address that need or not. Strategy analysis is an ongoing activity that assesses any changes in that need, in its context, or any new information that may indicate that an adjustment to the change strategy may be required.

INPUT/OUTPUT DIAGRAM



	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
A	**Analyse Current State** *The purpose of Analyse Current State is to understand the reasons why an enterprise needs to change some aspect of how it operates and what would be directly or indirectly affected by the change.*	• Elicitation Results • Needs	• Business Needs • Organisational Structure and Culture • Capabilities and Processes • Technology and Infrastructure • Policies • Business Architecture • Internal Assets • External Influencers	• Benchmarking and Market Analysis • Business Capability Analysis • Business Model Canvas • Business Cases • Concept Modelling • Data Mining • Document Analysis • Financial Analysis • Focus Groups • Functional Decomposition • Interviews • Item Tracking • Lessons Learned • Metrics and KPIs • Mind Mapping • Observation • Organisational Modelling • Process Analysis • Process Modelling • Risk Analysis and Management • Root Cause Analysis • Scope Modelling • Survey or Questionnaire • SWOT Analysis • Vendor Assessment • Workshops	• Customers • Domain SME • End User • Implementation SME • Operational Support • Project Manager • Regulator • Sponsor • Supplier • Tester	• Current State Description • Business Requirements
D	**Define Future State** *The purpose of Define Future State is to determine the set of necessary conditions to meet the business need.*	• Business Requirements	• Business Goals and Objectives • Scope of Solution Space • Constraints • Organisational Structure and Culture • Capabilities and Processes • Technology and Infrastructure • Policies • Business Architecture • Internal Assets • Identify Assumptions • Potential Value	• Acceptance and Evaluation Criteria • Balanced Scorecard • Benchmarking and Market Analysis • Brainstorming • Business Capability Analysis • Business Cases • Business Model Canvas • Decision Analysis • Decision Modelling • Financial Analysis • Functional Decomposition • Interviews • Lessons Learned • Metrics and KPIs • Mind Mapping • Organisational Modelling • Process Modelling • Prototyping • Scope Modelling • Survey or Questionnaire • SWOT Analysis • Vendor Assessment	• Customers • Domain SME • End User • Implementation SME • Operational Support • Project Manager • Regulator • Sponsor • Supplier • Tester	• Business Objectives • Future State Description • Potential Value

	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
				• Workshops		
A	**Assess Risks** *The purpose of Assess Risks is to understand the undesirable consequences of internal and external forces on the enterprise during a transition to, or once in, the future state. An understanding of the potential impact of those forces can be used to make a recommendation about a course of action.*	• Business Objectives • Elicitation Results (confirmed) • Influences • Potential Value • Requirements (Prioritised)	• Unknowns • Constraints, Assumptions and Dependencies • Negative Impact to Value • Risk Tolerance • Recommendation	• Brainstorming • Business Cases • Decision Analysis • Document Analysis • Financial Analysis • Interviews • Lessons Learned • Mind Mapping • Risk Analysis and Management • Root Cause Analysis • Survey or Questionnaire • Workshops	• Domain SME • Implementation SME • Operational Support • Project Manager • Regulator • Sponsor • Supplier • Tester	• Risks Analysis Results
D	**Define Change Strategy** *The purpose of Define Change Strategy is to develop and assess alternative approaches to the change, and then select the recommended approach.*	• Current State Description • Future State Description • Risk Analysis Results • Stakeholder Engagement Approach	• Solution Scope • Gap Analysis • Enterprise Readiness Assessment • Change Strategy • Transition State and Release Planning	• Balanced Scorecard • Benchmarking and Market Analysis • Brainstorming • Business Capability Analysis • Business Cases • Business Model Canvas • Decision Analysis • Estimation • Financial Analysis • Focus Groups • Functional Decomposition • Interviews • Lessons Learned • Mind Mapping • Organisational Modelling • Process Modelling • Scope Modelling • SWOT Analysis • Vendor Assessment • Workshops	• Customer • Domain SME • End User • Implementation SME • Operational Support • Project Manager • Regulator • Sponsor • Supplier • Tester	• Change Strategy • Solution Scope

7. REQUIREMENTS ANALYSIS AND DESIGN DEFINITION (RADD)

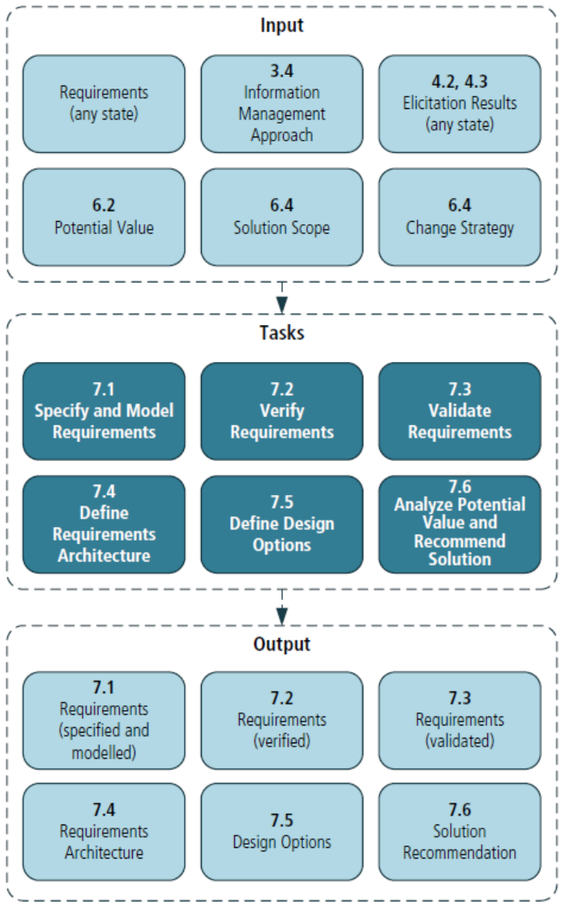
DESCRIPTION

The Requirements Analysis and Design Definition knowledge area describes the tasks that business analysts perform to structure and Organise requirements discovered during elicitation activities, specify and model requirements and designs, validate and verify information, identify solution options that meet business needs, and estimate the potential value that could be realised for each solution option. This knowledge area covers the incremental and iterative activities ranging from the initial concept and exploration of the need through the transformation of those needs into a particular recommended solution. Both requirements and designs are important tools used by business analysts to define and guide change. The main difference between requirements and designs is in how they are used and by whom. One person's designs may be another person's requirements. Requirements and designs may be either high-level or very detailed based upon what is appropriate to those consuming the information.

PURPOSE

The business analyst's role in modelling needs, requirements, designs, and solutions is instrumental in conducting thorough analysis and communicating with other stakeholders. The form, level of detail, and what is being modelled are all dependent on the context, audience, and purpose. Business analysts analyse the potential value of both requirements and designs. In collaboration with implementation subject matter experts, business analysts define solution options that can be evaluated in order to recommend the best solution option that meets the need and brings the most value.

INPUT/OUTPUT DIAGRAM



	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
S	**Specify and Model Requirements** *The purpose of Specify and Model Requirements is to analyse, synthesize, and refine elicitation results into requirements and designs.*	• Elicitation Results (any state)	• Model Requirements • Analyse Requirements • Represent Requirements and Attributes • Implement the Appropriate Level of Abstraction	• Acceptance and Evaluation Criteria • Business Capability Analysis • Business Model Canvas • Business Rules Analysis • Concept Modelling • Data Dictionary • Data Flow Diagrams • Data Modelling • Decision Modelling • Functional Decomposition • Glossary • Interface Analysis • Non-Functional Requirements Analysis • Organisational Modelling • Process Modelling • Prototyping • Roles and Permissions Matrix • Root Cause Analysis • Scope Modelling • Sequence Diagrams • Stakeholder List, Map, or Personas • State Modelling • Use Cases and Scenarios • User Stories	• Any Stakeholder	• Requirements (Specified and Modelled)
V	**Verify Requirements** *The purpose of Verify Requirements is to ensure that requirements and designs specifications and models meet quality standards and are usable for the purpose they serve.*	• Requirements (Specified and Modelled)	• Characteristics of Requirements and Designs Quality • Verification Activities • Checklists	• Acceptance and Evaluation Criteria • Item Tracking • Metrics and KPIs • Reviews	• All Stakeholders	• Requirements (Verified)
V	**Validate Requirements** *The purpose of Validate Requirements is to ensure that all requirements and designs align to the business requirements and support the delivery of needed value.*	• Requirements (Specified and Modelled)	• Identify Assumptions • Define Measurable Evaluation Criteria • Evaluate Alignment with Solution Scope	• Acceptance and Evaluation Criteria • Document Analysis • Financial Analysis • Item Tracking • Metrics and KPIs • Reviews • Risks Analysis and Management	• All Stakeholders	• Requirements (Validated)
A	**Define Requirements Architecture** *The purpose of Define Requirements Architecture is to ensure that the requirements collectively support one another to fully achieve the objectives.*	• Information Management Approach • Requirements (any state) • Solution Scope	• Requirements Viewpoints and Views • Template Architectures • Completeness • Relate and Verify Requirements Relationships • Business Analysis Information Architecture	• Data Modelling • Functional Decomposition • Interviews • Organisational Modelling • Scope Modelling • Workshops	• Domain Subject Matter Expert, Implementation Subject Matter Expert, Project Manager, Sponsor, Tester • Any Stakeholder	• Requirements Architecture
O	**Define Design Options**	• Change Strategy	• Define Solution	• Benchmarking and Market Analysis	• Domain SME	• Design Options

	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
	The purpose of Define Design Options is to define the solution approach, identify opportunities to improve the business, allocate requirements across solution components, and represent design options that achieve the desired future state.	• Requirements (Validated, Prioritised) • Requirements Architecture	Approaches • Identify Improvement Opportunities • Describe Design Options	• Brainstorming • Document Analysis • Interviews • Lessons Learned • Mind Mapping • Root Cause Analysis • Surveys or Questionnaire • Vendor Assessment • Workshops	• Implementation SME • Operational Support • Project Manager • Supplier	
V	**Analyse Potential Value and Recommend Solution** *The purpose of Analyse Potential Value and Recommend Solution is to estimate the potential value for each design option and to establish which one is most appropriate to meet the enterprise's requirements.*	• Potential Value • Design Options	• Expected Benefits • Expected Costs • Determine Value • Assess Design Options and Recommend Solution	• Acceptance and Evaluation Criteria • Backlog Management • Brainstorming • Business Cases • Business Model Canvas • Decision Analysis • Estimation • Financial Analysis • Focus Groups • Interviews • Metrics and KPIs • Risk Analysis and Management • Survey or Questionnaire • SWOT Analysis • Workshops	• Customer • Domain SME • End User • Implementation SME • Project Manager • Regulator • Sponsor	• Solution Recommendation

8. SOLUTION EVALUATION (SE)

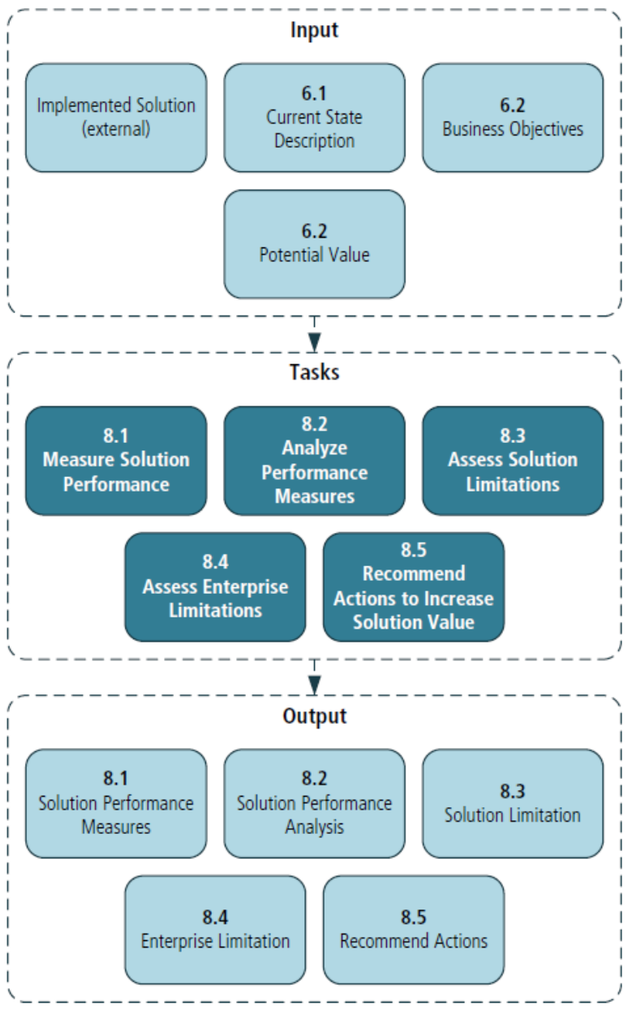
DESCRIPTION

Describes the tasks that business analysts perform to assess the performance of and value delivered by a solution in use by the enterprise, and to recommend removal of barriers or constraints that prevent the full realization of the value.

PURPOSE

Solution Evaluation describes tasks that analyse the actual value being delivered, identifies limitations which may be preventing value from being realised, and makes recommendations to increase the value of the solution. It may include any combination of performance assessments, tests, and experiments, and may combine both objective and subjective assessments of value. Solution Evaluation generally focuses on a component of an enterprise rather than the entire enterprise.

INPUT/OUTPUT DIAGRAM



	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
M	**Measure Solution Performance** *The purpose of Measure Solution Performance is to define performance measures and use the data collected to evaluate the effectiveness of a solution in relation to the value it brings.*	• Business Objectives • Implemented Solution (external)	• Define Solution Performance Measures • Validate Performance Measures • Collect Performance Measures	• Acceptance and Evaluation Criteria • Benchmarking and Market Analysis • Business Cases • Data Mining • Decision Analysis • Focus Groups • Metrics and Key Performance Indicators (KPIs) • Non-Functional Requirements Analysis • Observation • Prototyping • Survey or Questionnaire • Use Cases and Scenarios • Vendor Assessment	• Customer • Domain SME • End User • Project Manager • Sponsor • Regulator	• Solution Performance Measures
A	**Analyse Performance Measure** *The purpose of Analyse Performance Measures is to provide insights into the performance of a solution in relation to the value it brings.*	• Potential Value • Solution Performance Measures	• Solution Performance versus Desired Value • Risks • Trends • Accuracy • Performance Variances	• Acceptance and Evaluation Criteria • Benchmarking and Market Analysis • Data Mining • Interviews • Metrics and Key Performance Indicators (KPIs) • Observation • Risks Analysis and Management • Root Case Analysis • Survey or Questionnaire	• Domain SME • Project Manager • Sponsor	• Solution Performance Analysis
L	**Assess Solution Limitations** *The purpose of Assess Solution Limitations is to determine the factors internal to the solution that restrict the full realization of value.*	• Implemented Solution (external) • Solution Performance Analysis	• Identify Internal Solution Component Dependencies • Investigate Solution Problems • Impact Assessment	• Acceptance and Evaluation Criteria • Benchmarking and Market Analysis • Business Rules Analysis • Data Mining • Decision Analysis • Interviews • Item Tracking • Lessons Learned • Risks Analysis and Management • Root Cause Analysis • Survey or Questionnaire	• Customer • Domain SME • End User • Regulator • Sponsor • Tester	• Solution Limitation
E	**Assess Enterprise Limitations** *The purpose of Assess Enterprise Limitations is to determine how factors external to the solution are restricting value realization.*	• Current State Description • Implemented (or Constructed) Solution (external) • Solution Performance Analysis	• Enterprise Culture Assessment • Stakeholder Impact Analysis • Organisational Structure Changes • Operational Assessment	• Benchmarking and Market Analysis • Data Mining • Brainstorming • Decision Analysis • Document Analysis • Interviews • Item Tracking • Lessons Learned • Observation • Organisational Modelling • Process Analysis • Process Modelling	• Customer • Domain SME • End User • Regulator • Sponsor	• Enterprise Limitation

	Tasks	Inputs	Elements	Techniques	Stakeholders	Outputs
				• Risks Analysis and Management • Roles and Permission Matrix • Root Cause Analysis • SWOT Analysis • Workshops		
R	**Recommend Actions to Increase Solution Value** *The purpose of Recommend Actions to Increase Solution Value is to understand the factors that create differences between potential value and actual value, and to recommend a course of action to align them.*	• Enterprise Limitation • Solution Limitation	• **Adjust Solution Performance Measures** • **Recommendations**	• Data Mining • Decision Analysis • Financial Analysis • Focus Groups • Organisational Modelling • Prioritisation • Process Analysis • Risk Analysis and Management • Survey or Questionnaire	• Customer • Domain SME • End User • Regulator • Sponsor	• Recommended Actions

8. UNDERLYING COMPETENCIES (UC)

DESCRIPTION

The Underlying Competencies chapter provides a description of the behaviours, characteristics, knowledge, and personal qualities that support the practice of business analysis. The underlying competencies described here are not unique to business analysis. They are described here to ensure readers are aware of the range of fundamental skills required and provide a basis for them to further investigate the skills and knowledge that will enable them to be accomplished and adaptable business analysts.

These competencies are grouped into six categories:

- Analytical Thinking and Problem Solving,
- Behavioural Characteristics,
- Business Knowledge,
- Communication Skills,
- Interaction Skills, and
- Tools and Technology

Each underlying competency is defined with a purpose, definition, and effectiveness measures.

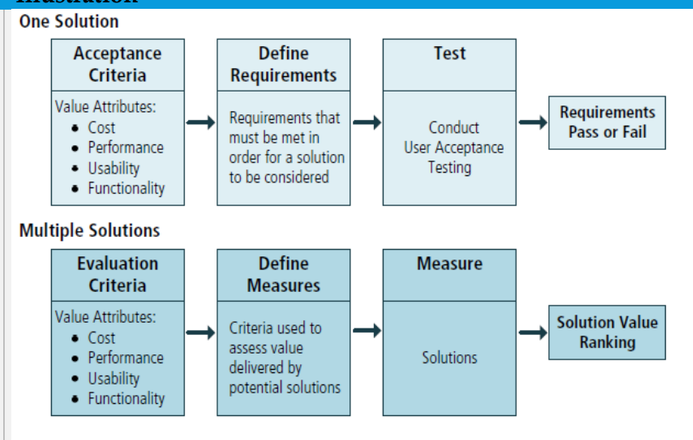
	Competency Name	Components
1	**Analytical Thinking and Problem Solving** *Analytical thinking and problem solving skills are required for business analysts to analyse problems and opportunities effectively, identify which changes may deliver the most value, and work with stakeholders to understand the impact of those changes.*	• Creative Thinking, • Decision Making, • Learning, • Problem Solving, • Systems Thinking, • Conceptual Thinking, and • Visual Thinking
2	**Behavioural characteristics** *Behavioural characteristics are not unique to business analysis but they have been found to increase personal effectiveness in the practice of business analysis. These characteristics exist at the core of every business analyst's skill set. Each of the behavioural characteristics described here can impact the outcome of the practitioner's efforts.*	• Ethics • Personal Accountability • Trustworthiness • Organisation and Time Management • Adaptability
3	**Business Knowledge** *Business knowledge is required for the business analyst to perform effectively within their business, industry, organisation, solution, and methodology. Business knowledge enables the business analyst to better understand the overarching concepts that govern the structure, benefits, and value of the situation as it relates to a change or a need.*	• Business Acumen • Industry Knowledge • Organisation Knowledge • Solution Knowledge • Methodology Knowledge
4	**Communication Skills** *Communication is the act of a sender conveying information to a receiver in a method which delivers the meaning the sender intended. Active listening skills help to deepen understanding and trust between the sender and the receiver. Effective communication benefits all stakeholders.*	• Verbal • Non-Verbal • Written • Listening
5	**Interaction Skills** *Interaction skills are represented by the business analyst's ability to relate,*	• Facilitation • Leadership and Influencing • Teamwork

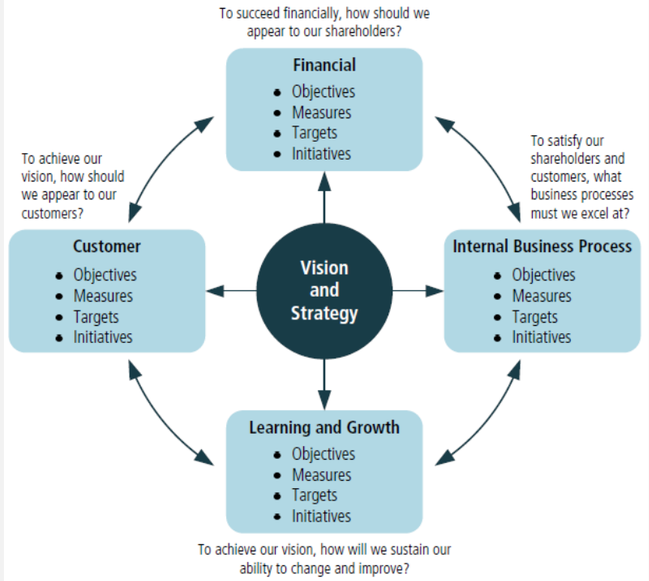
	Competency Name	Components
	cooperate, and communicate with different kinds of people including executives, sponsors, colleagues, team members, developers, vendors, learning and development professionals, end users, customers, and subject matter experts (SMEs).	• Negotiation and Conflict Resolution • Teaching
6	**Tools and Technology** *Business analysts use a variety of software applications to support communication and collaboration, create and maintain requirements artefacts, model concepts, track issues, and increase overall productivity.*	• Office Productivity and Technology • Business Analysis Tools and Technology • Communications Tools and Technology

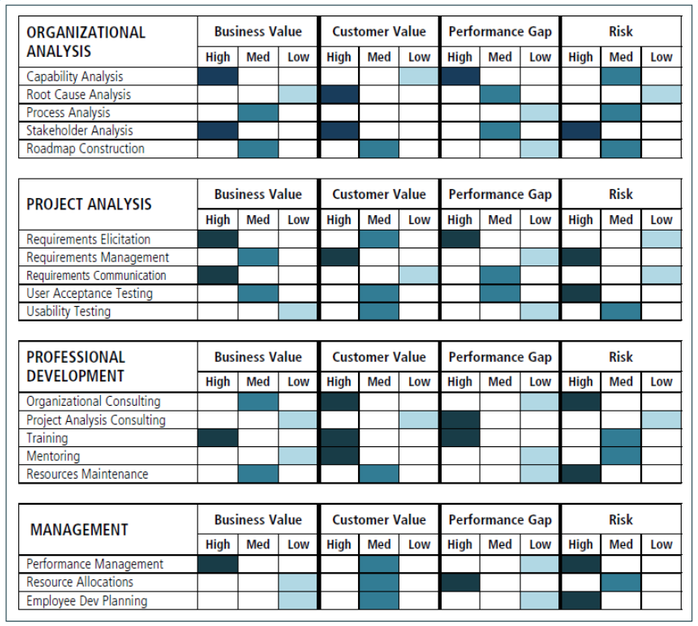
8. TECHNIQUES

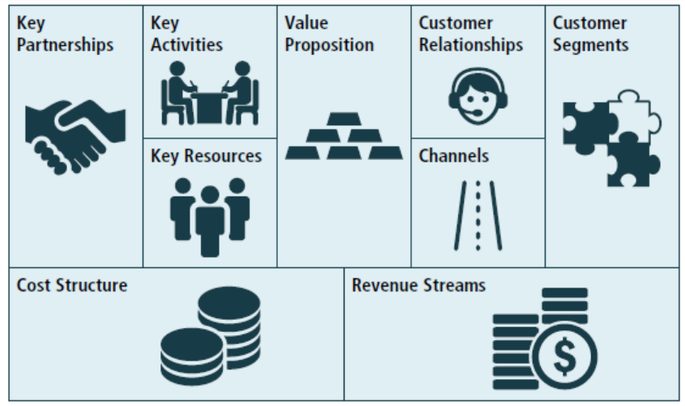
DESCRIPTION

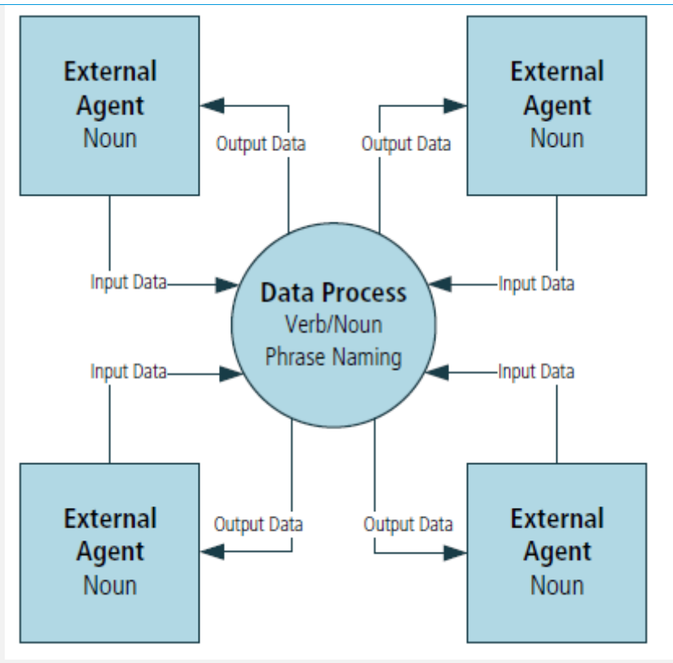
The Techniques chapter provides a high-level overview of the techniques referenced in the Knowledge Areas of the *BABOK® Guide*. Techniques are methods business analysts use to perform business analysis tasks. The techniques described in the *BABOK® Guide* are intended to cover the most common and widespread techniques practiced within the business analysis community. Business analysts apply their experience and judgment in determining which techniques are appropriate to a given situation and how to apply each technique. This may include techniques that are not described in the *BABOK® Guide*. As the practice of business analysis evolves, techniques will be added, changed, or removed from future iterations of the *BABOK® Guide*. In a number of cases, a set of conceptually similar approaches have been grouped into a single technique. Any approach within a technique may be used individually or in combination to accomplish the technique's purpose.

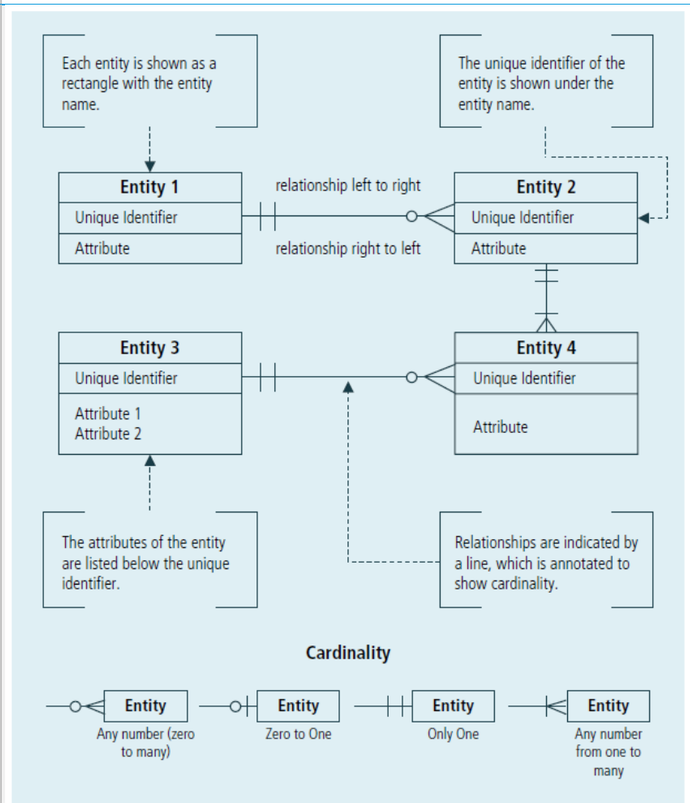
	Description	Elements	Strengths	Limitations	Illustration
1	**Acceptance and Evaluation Criteria** *Acceptance criteria are used to define the requirements, outcomes, or conditions that must be met in order for a solution to be considered acceptable to key stakeholders. Evaluation criteria are the measures used to assess a set of requirements in order to choose between multiple solutions.*	• Value Attributes • Assessment	• Agile methodologies may require that all requirements be expressed in the form of testable acceptance criteria. • Acceptance criteria are necessary when the requirements express contractual obligations. • Acceptance criteria provide the ability to assess requirements based on agreed upon criteria. • Evaluation criteria provide the ability to assess diverse needs based on agreed upon criteria, such as features, common indicators, local or global benchmarks, and agreed ratios. • Evaluation criteria assist in the delivery of expected return on investment (ROI) or otherwise specified potential value. • Evaluation criteria helps in defining priorities.	• Acceptance criteria may express contractual obligations and as such may be difficult to change for legal or political reasons. • Achieving agreement on evaluation criteria for different needs among diverse stakeholders can be challenging.	
2	**Backlog Management** *The backlog is used to record, track, and prioritise remaining work items.* *Items in the Backlog:* • *use cases,* • *user stories,* • *functional requirements,* • *non-functional requirements,* • *designs,* • *customer orders,* • *risk items,* • *change requests,*	• Items in the Backlog • Prioritisation • Estimation • Managing Changes to the Backlog	• An effective approach to responding to changing stakeholder needs and priorities because the next work items selected from the backlog are always aligned with current stakeholder priorities. • Only items near the top of the backlog are elaborated and estimated in detail; items near the bottom of the backlog reflect lower priorities and receive less attention and effort. • Can be an effective communication vehicle because stakeholders can understand what items are about	• Large backlogs may become cumbersome and difficult to manage. • It takes experience to be able to break down the work to be done into enough detail for accurate estimation. • A lack of detail in the items in the backlog can result in lost information over time.	na

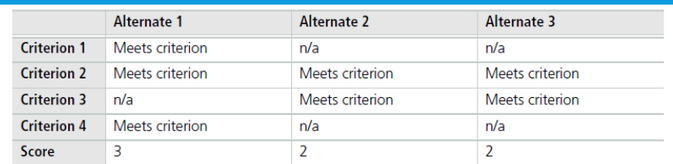
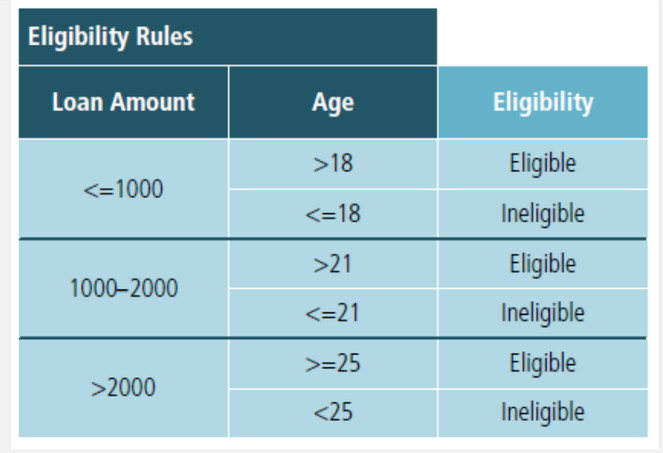
	Description	Elements	Strengths	Limitations	Illustration
	• *defects,* • *planned rework,* • *maintenance,* • *conducting a presentation, or* • *completing a document.*		to be worked on, what items are scheduled farther out, and which ones may not be worked on for some time.		
3	**Balanced Scorecard** *The balanced scorecard is used to manage performance in any business model, organisational structure, or business process.*	• Learning and Growth Dimension • Business Process Dimension • Customer Dimension • Financial Dimension • Measures or Indicators	• Facilitates holistic and balanced planning and thinking. • Short-, medium-, and long-term goals can be harmonised into programs with incremental success measures. • Strategic, tactical, and operational teams are more easily aligned in their work. • Encourages forward thinking and competitiveness.	• A lack of a clear strategy makes aligning the dimensions difficult. • Can be seen as the single tool for strategic planning rather than just one tool to be used in a suite of strategic planning tools. • Can be misinterpreted as a replacement for strategic planning, execution, and measurement.	
4	**Benchmarking and Market Analysis** *Benchmarking and market analysis are conducted to improve organisational operations, increase customer satisfaction, and increase value to stakeholders.*	• Benchmarking • Market Analysis	• Benchmarking provides organisations with information about new and different methods, ideas, and tools to improve organisational performance. • An organisation may use benchmarking to identify best practices by its competitors in order to meet or exceed its competition. • Benchmarking identifies why similar companies are successful and what processes they used to become successful. • Market analysis can target specific groups and can be tailored to answer specific questions. • Market analysis may expose weaknesses within a certain company or industry. • Market analysis may identify differences in product offerings and services that are available from a competitor.	• Benchmarking is time-consuming; organisations may not have the expertise to conduct the analysis and interpret useful information. • Benchmarking cannot produce innovative solutions or solutions that will produce a sustainable competitive advantage because it involves assessing solutions that have been shown to work elsewhere with the goal of reproducing them. • Market analysis can be time-consuming and expensive, and the results may not be immediately available. • Without market segmentation, market analysis may not produce the expected results or may provide incorrect data about a competitor's products or services.	Na

	Description	Elements	Strengths	Limitations	Illustration
5	**Brainstorming** *Brainstorming is an excellent way to foster creative thinking about a problem. The aim of brainstorming is to produce numerous new ideas, and to derive from them themes for further analysis.*	• Preparation • Session • Wrap-up	• Ability to elicit many ideas in a short time period. • Non-judgmental environment enables creative thinking. • Can be useful during a workshop to reduce tension between participants.	• Participation is dependent on individual creativity and willingness to participate. • Organisational and interpersonal politics may limit overall participation. • Group participants must agree to avoid debating the ideas raised during brainstorming.	
6	**Business Capability Analysis** *Business capability analysis provides a framework for scoping and planning by generating a shared understanding of outcomes, identifying alignment with strategy, and providing a scope and Prioritisation filter.*	• Capabilities • Using Capabilities • Performance Expectations • Risk Model • Strategic Planning • Capability Maps	• Provides a shared articulation of outcomes, strategy, and performance, which help create very focused and aligned initiatives. • Helps align business initiatives across multiple aspects of the organisation. • Useful when assessing the ability of an organisation to offer new products and services.	• Requires an organisation to agree to collaborate on this model. • When created unilaterally or in a vacuum it fails to deliver on the goals of alignment and shared understanding. • Requires a broad, cross–functional collaboration in defining the capability model and the value framework.	
7	**Business Cases** *A business case provides a justification for a course of action based on the benefits to be realised by using the proposed solution, as compared to the cost, effort, and other considerations to acquire and live with that*	• Need Assessment • Desired Outcomes • Assess Alternatives • Recommended Solution	• Provides an amalgamation of the complex facts, issues, and analysis required to make decisions regarding change. • Provides a detailed financial analysis of cost and benefits. • Provides guidance for ongoing decision making throughout the	• May be subject to the biases of authors. • Frequently not updated once funding for the initiative is secured. • Contains assumptions regarding costs and benefits that may prove invalid upon further investigation.	Na

	Description	Elements	Strengths	Limitations	Illustration
	solution.		initiative.		
8	**Business Model Canvas** *A business model canvas describes how an enterprise creates, delivers, and captures value for and from its customers.*	• Key Partnerships • Key Activities • Key Resources • Value Proposition • Customer Relationships • Channels • Customer Segments • Cost Structure • Revenue Streams	• It is a widely used and effective framework that can be used to understand and optimise business models. • It is simple to use and easy to understand.	• Does not account for alternative measures of value such as social and environmental impacts. • The primary focus on value propositions does not provide a holistic insight for business strategy. • Does not include the strategic purpose of the enterprise within the canvas.	
9	**Business Rules Analysis** *Business rules analysis is used to identify, express, validate, refine, and Organise the rules that shape day-to-day business behaviour and guide operational business decision making.*	• Definitional Rules • Behavioural Rules	• When enforced and managed by a single enterprise-wide engine, changes to business rules can be implemented quickly. • A centralized repository creates the ability to reuse business rules across an Organisation. • Business rules provide structure to govern business behaviours. • Clearly defining and managing business rules allows Organisations to make changes to policy without altering processes or systems.	• Organisations may produce lengthy lists of ambiguous business rules. • Business rules can contradict one another or produce unanticipated results when combined unless validated against one another. • If available vocabulary is insufficiently rich, not business-friendly, or poorly defined and Organised, resulting business rules will be inaccurate or contradictory.	Na
10	**Collaborative Games** *Collaborative games encourage participants in an elicitation activity to collaborate in building a joint understanding of a problem or a solution.*	• Game Purpose • Process • Outcome • Examples of Collaborative Games	• May reveal hidden assumptions or differences of opinion. • Encourages creative thinking by stimulating alternative mental processes. • Challenges participants who are normally quiet or reserved to take a more active role in team activities. • Some collaborative games can be useful in exposing business needs that aren't being met.	• The playful nature of the games may be perceived as silly and make participants with reserved personalities or cultural norms uncomfortable. • Games can be time-consuming and may be perceived as unproductive, especially if the objectives or outcomes are unclear. • Group participation can lead to a false sense of confidence in the conclusions reached.	Na
11	**Concept Modelling** *A concept model is used to organise the business vocabulary needed to consistently and thoroughly communicate the knowledge of a domain.*	• Noun Concepts • Verb Concepts • Other Connections	• Provide a business-friendly way to communicate with stakeholders about precise meanings and subtle distinctions. • Is independent of data design biases and the often limited business vocabulary coverage of data models. • Proves highly useful for white-collar, knowledge-rich, decision-laden business processes.	• May set expectations too high about how much integration based on business semantics can be achieved on relatively short notice. • Requires a specialized skill set based on the ability to think abstractly and non-procedurally about know-how and knowledge. • The knowledge-and-rule focus may be foreign to stakeholders.	Na

	Description	Elements	Strengths	Limitations	Illustration
			• Helps ensure that large numbers of business rules and complex decision tables are free of ambiguity and fit together cohesively.	• Requires tooling to actively support real-time use of standard business terminology in writing business rules, requirements, and other forms of business communication.	
12	**Data Dictionary** *A data dictionary is used to standardise a definition of a data element and enable a common interpretation of data elements.*	• Data Elements • Primitive Data Elements • Composite Elements	• Provides all stakeholders with a shared understanding of the format and content of relevant information. • A single repository of corporate metadata promotes the use of data throughout the Organisation in a consistent manner.	• Requires regular maintenance, otherwise the metadata could become obsolete or incorrect. • All maintenance is required to be completed in a consistent manner in order to ensure that stakeholders can quickly and easily retrieve the information they need. This requires time and effort on the part of the stewards responsible for the accuracy and completeness of the data dictionary. • Unless care is taken to consider the metadata required by multiple scenarios, it may have limited value across the enterprise.	<table><tr><th>Primitive Data Elements</th><th>Data Element 1</th><th>Data Element 2</th><th>Data Element 3</th></tr><tr><td>Name Name referenced by data elements</td><td>First Name</td><td>Middle Name</td><td>Last Name</td></tr><tr><td>Alias Alternate name referenced by stakeholders</td><td>Given Name</td><td>Middle Name</td><td>Surname</td></tr><tr><td>Values/Meanings Enumerated list or description of data element</td><td>Minimum 2 characters</td><td>Can be omitted</td><td>Minimum 2 characters</td></tr><tr><td>Description Definition</td><td>First Name</td><td>Middle Name</td><td>Family Name</td></tr><tr><td>Composite</td><td colspan="3">Customer Name = First Name + Middle Name + Family Name</td></tr></table>
13	**Data Flow Diagrams** *Data flow diagrams show where data comes from, which activities process the data, and if the output results are stored or utilized by another activity or external entity.*	• Externals (Entity, Source, Sink) • Data Store • Process • Data Flow	• May be used as a discovery technique for processes and data or as a Technique for the verification of functional decompositions or data models. • Are excellent ways to define the scope of a system and all of the systems, interfaces, and user interfaces that attach to it. Allows for estimation of the effort needed to study the work. • Most users find these data flow diagrams relatively easy to understand. • Helps to identify duplicated data elements or misapplied data elements. • Illustrates connections to other systems. • Helps define the boundaries of a system. • Can be used as part of system documentation. • Helps to explain the logic behind the data flow within a system.	• Using data flow diagrams for large-scale systems can become complex and difficult for stakeholders to understand. • Different methods of notation with different symbols could create challenges pertaining to documentation. • Does not illustrate a sequence of activities. • Data transformations (processes) say little about the process or stakeholder.	
14	**Data Mining**	• Requirements	• Reveal hidden patterns and create	• Applying some techniques without	Na

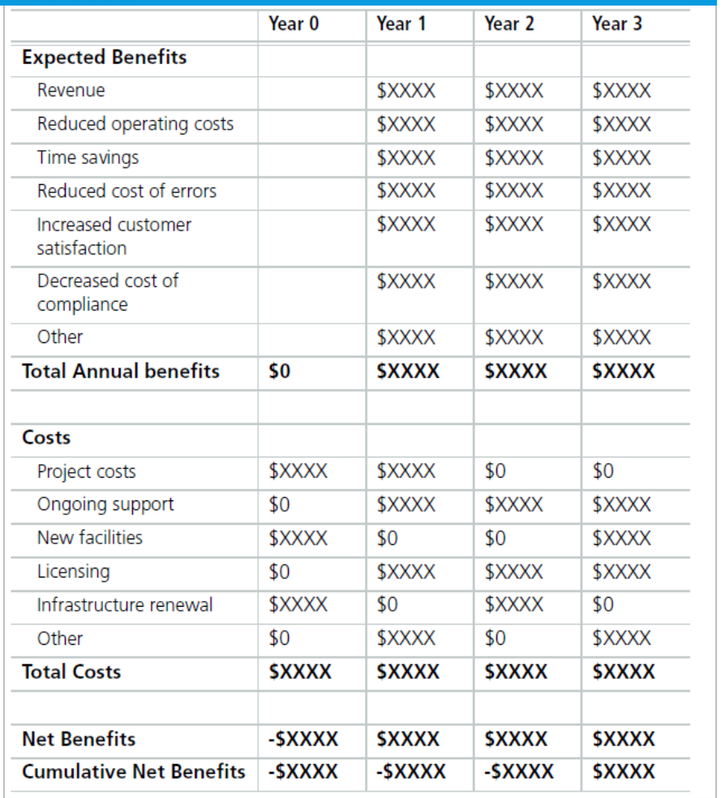
	Description	Elements	Strengths	Limitations	Illustration
	Data mining is used to improve decision making by finding useful patterns and insights from data.	Elicitation • Data Preparation: Analytical Dataset • Data Analysis • Modelling Techniques • Deployment	useful insight during analysis – helping determine what data might be useful to capture or how many people might be impacted by specific suggestions. • Can be integrated into a system design to increase the accuracy of the data. • Can be used to eliminate or reduce human bias by using the data to determine the facts.	an understanding of how they work can result in erroneous correlations and misapplied insight. • Access to big data and to sophisticated data mining tool sets and software may lead to accidental misuse. • Many techniques and tools require specialist knowledge to work with. • Some techniques use advanced math in the background and some stakeholders may not have direct insights into the results. A perceived lack of transparency can cause resistance from some stakeholders. • Data mining results may be hard to deploy if the decision making they are intended to influence is poorly understood.	
15	**Data Modelling** *A data model describes the entities, classes or data objects relevant to a domain, the attributes that are used to describe them, and the relationships among them to provide a common set of semantics for analysis and implementation.*	• Entity or Class • Attribute • Relationship or Association • Diagrams	• Can be used to define and communicate a consistent vocabulary used by domain subject matter experts and implementation subject matter experts. • Review of a logical data model helps to ensure that the logical design of persistent data correctly represents the business need. • Provides a consistent approach to analysing and documenting data and its relationships. • Offers the flexibility of different levels of detail, which provides just enough information for the respective audience. • Formal modelling of the information held by the business may expose new requirements as inconsistencies are identified.	• Following data modelling standards too rigorously may lead to models that are unfamiliar to people without a background in IT. • May extend across multiple functional areas of the Organisation, and so beyond the business knowledge base of individual stakeholders.	

	Description	Elements	Strengths	Limitations	Illustration
16	**Decision Analysis** *Decision analysis formally assesses a problem and possible decisions in order to determine the value of alternate outcomes under conditions of uncertainty.*	• Components of Decision Analysis • Decision Matrices • Decision Trees • Trade-offs	• Provides business analysts with a prescriptive approach for determining alternate options, especially in complex or uncertain situations. • Helps stakeholders who are under pressure to assess options based on criteria, thus reducing decisions based on descriptive information and emotions. • Requires stakeholders to honestly assess the importance they place on different alternate outcomes in order to help avoid false assumptions. • Enables business analysts to construct appropriate metrics or introduce relative rankings for outcome evaluation in order to directly compare both the financial and non-financial outcome evaluation criteria.	• The information to conduct proper decision analysis may not be available in time to make the decision. • Many decisions must be made immediately, without the luxury of employing a formal or even informal decision analysis process. • The decision maker must provide input to the process and understand the assumptions and model limitations. Otherwise, they may perceive the results provided by the business analyst as more certain than they are. • Analysis paralysis can occur when too much dependence is placed on the decision analysis and in determining probabilistic values. • Some decision analysis models require specialized knowledge (for example, mathematical knowledge in probability and strong skills with decision analysis tools).	
17	**Decision Modelling** *Decision modelling shows how repeatable business decisions are made.*	• Types of Models and Notations	• Decision models are easy to share with stakeholders, facilitate a shared understanding, and support impact analysis. • Multiple perspectives can be shared and combined, especially when a diagram is used. • Simplifies complex decision making by removing business rules management from the process. • Assists with managing large numbers of rules in decision tables by grouping rules by decision. This also helps with reuse. • These models work for rules-based automation, data mining, and predictive analytics, as well as for manual decisions or business intelligence projects.	• Adds a second diagram style when modelling business processes that contain decisions. This may add unnecessary complexity if the decision is simple and tightly coupled with the process. • May limit rules to those required by known decisions and so limit the capture of rules not related to a known decision. • Defining decision models may allow an Organisation to think it has a standard way of making decisions when it does not. May lock an Organisation into a current-state decision-making approach. • Cuts across Organisational boundaries, which can make it difficult to acquire any necessary sign-off. • May not address behavioural business rules in a direct fashion. • Business terminology must be clearly defined and shared definitions developed to avoid data quality issues affecting automated	

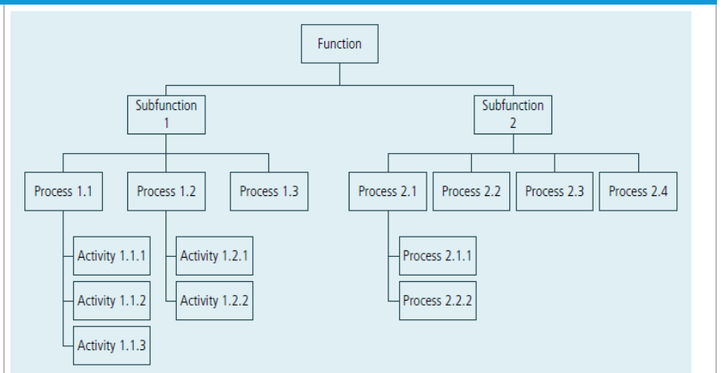
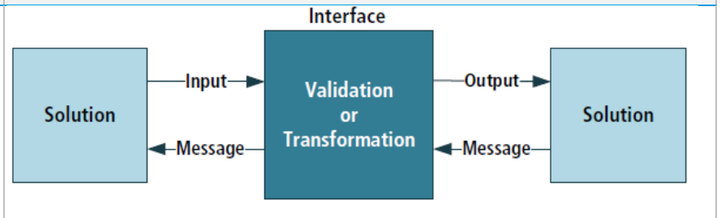
	Alternate 1	Alternate 2	Alternate 3
Criterion 1	Meets criterion	n/a	n/a
Criterion 2	Meets criterion	Meets criterion	Meets criterion
Criterion 3	n/a	Meets criterion	Meets criterion
Criterion 4	Meets criterion	n/a	n/a
Score	3	2	2

Eligibility Rules		
Loan Amount	**Age**	**Eligibility**
<=1000	>18	Eligible
	<=18	Ineligible
1000–2000	>21	Eligible
	<=21	Ineligible
>2000	>=25	Eligible
	<25	Ineligible

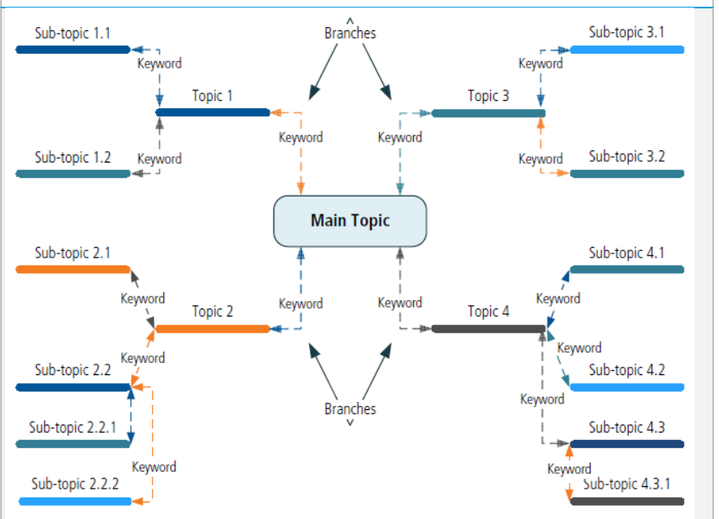
	Description	Elements	Strengths	Limitations	Illustration
				decisions.	
18	**Document Analysis** *Document analysis is used to elicit business analysis information, including contextual understanding and requirements, by examining available materials that describe either the business environment or existing Organisational assets.*	• Preparation • Document Review and Analysis • Record Findings	• Existing source material may be used as a basis for analysis. • The business analyst does not need to create content. • Existing sources, although possibly outdated, can be used as a point of reference to determine what is current and what has changed. • Results can be used to validate against the results of other requirements elicitation techniques. • Findings can be presented in formats that permit ease of review and reuse.	• Existing documentation may be out of date or invalid (incorrect, missing information, unreadable, un-reviewed or unapproved). • Authors may not be available for questions. • Primarily helpful only for evaluating the current state, via review of as-is documentation. • If there is a wide range of sources, the effort may be very time-consuming and lead to information overload and confusion.	Na
19	**Estimation** *Estimation is used by business analysts and other stakeholders to forecast the cost and effort involved in pursuing a course of action.*	• Methods (top-down, bottom up, parametric, rough order of magnitude, rolling wave, Delphi, PERT), • Accuracy of the Estimate • Sources of Information (analogous, org. history, expert judgment) • Precision and Reliability of Estimates • Contributors to Estimates	• Estimates provide a rationale for an assigned budget, time frame, or size of a set of elements. • Without an estimate, teams making a change may be provided an unrealistic budget or schedule for their work. • Having a small team of knowledgeable individuals provide an estimate by following a defined technique generally results in a closer predictor of the actual value than if an estimate was made by one individual. • Updating an estimate throughout a work cycle, in which the estimated elements are refined over time, incorporates knowledge and helps ensure success.	• Estimates are only as accurate as the level of knowledge about the elements being estimated. Without Organisation or local knowledge, estimates can vary widely from the actual values determined later. • Using just one estimation method may lead stakeholders to have unrealistic expectations.	Na

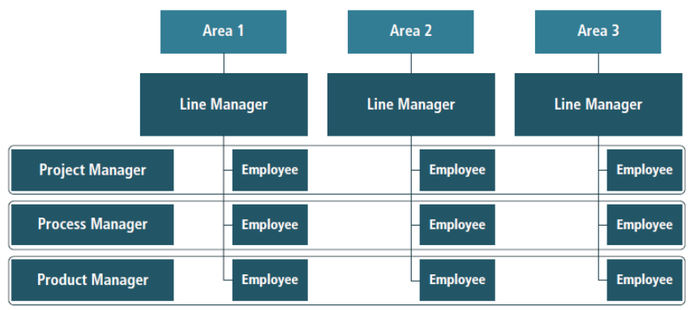
	Description	Elements	Strengths	Limitations	Illustration
20	**Financial Analysis** *Financial analysis is used to understand the financial aspects of an investment, a solution, or a solution approach.*	• Cost of the Change • Total Cost of Ownership (TCO) • Value Realization • Cost-Benefit Analysis • Financial Calculations	• Financial analysis allows executive decision makers to objectively compare very different investments from different perspectives. • Assumptions and estimates built into the benefits and costs, and into the financial calculations, are clearly stated so that they may be challenged or approved. • It reduces the uncertainty of a change or solution by requiring the identification and analysis of factors that will influence the investment. • If the context, business need, or stakeholder needs change during a change initiative, it allows the business analyst to objectively re-evaluate the recommended solution.	• Some costs and benefits are difficult to quantify financially. • Because financial analysis is forward looking, there will always be some uncertainty about expected costs and benefits • Positive financial numbers may give a false sense of security—they may not provide all the information required to understand an initiative.	
21	**Focus Groups** *A focus group is a means to elicit ideas and opinions about a specific product, service, or opportunity in an interactive group environment. The participants, guided by a moderator, share their impressions, preferences, and needs.*	• Focus Group Objective • Focus Group Plan • Participants • Discussion Guide • Assign a Moderator and Recorder • Conduct the Focus Group • After the Focus Group	• The ability to elicit data from a group of people in a single session saves both time and costs as compared to conducting individual interviews with the same number of people. • Effective for learning people's attitudes, experiences, and desires. • Active discussion and the ability to ask others questions creates an environment in which participants can consider their personal view in relation to other perspectives. • An online focus group is useful when travel budgets are limited and participants are distributed geographically. • Online focus group sessions can be recorded easily for playback.	• In a group setting, participants may be concerned about issues of trust or may be unwilling to discuss sensitive or personal topics. • Data collected about what people say may not be consistent with how people actually behave. • If the group is too homogeneous their responses may not represent the complete set of requirements. • A skilled moderator is needed to manage group interactions and discussions. • It may be difficult to schedule the group for the same date and time. • Online focus groups limit interaction between participants. • It is difficult for the moderator of an online focus group to determine attitudes without being able to read body language. • One vocal participant could sway the results of the focus group.	Na

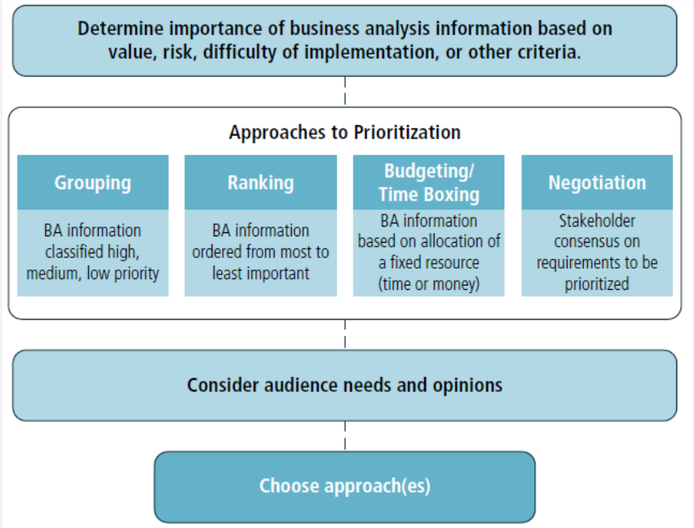
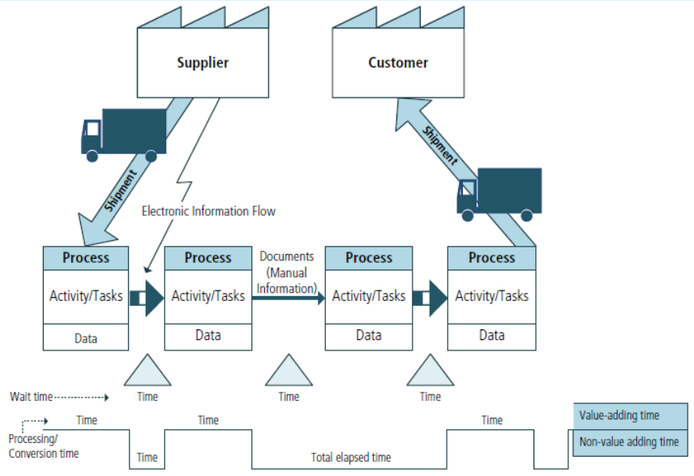
	Year 0	Year 1	Year 2	Year 3
Expected Benefits				
Revenue		$XXXX	$XXXX	$XXXX
Reduced operating costs		$XXXX	$XXXX	$XXXX
Time savings		$XXXX	$XXXX	$XXXX
Reduced cost of errors		$XXXX	$XXXX	$XXXX
Increased customer satisfaction		$XXXX	$XXXX	$XXXX
Decreased cost of compliance		$XXXX	$XXXX	$XXXX
Other		$XXXX	$XXXX	$XXXX
Total Annual benefits	**$0**	**$XXXX**	**$XXXX**	**$XXXX**
Costs				
Project costs	$XXXX	$XXXX	$0	$0
Ongoing support	$0	$XXXX	$XXXX	$XXXX
New facilities	$XXXX	$0	$0	$XXXX
Licensing	$0	$XXXX	$XXXX	$XXXX
Infrastructure renewal	$XXXX	$0	$XXXX	$0
Other	$0	$XXXX	$0	$XXXX
Total Costs	**$XXXX**	**$XXXX**	**$XXXX**	**$XXXX**
Net Benefits	**-$XXXX**	**$XXXX**	**$XXXX**	**$XXXX**
Cumulative Net Benefits	**-$XXXX**	**-$XXXX**	**-$XXXX**	**$XXXX**

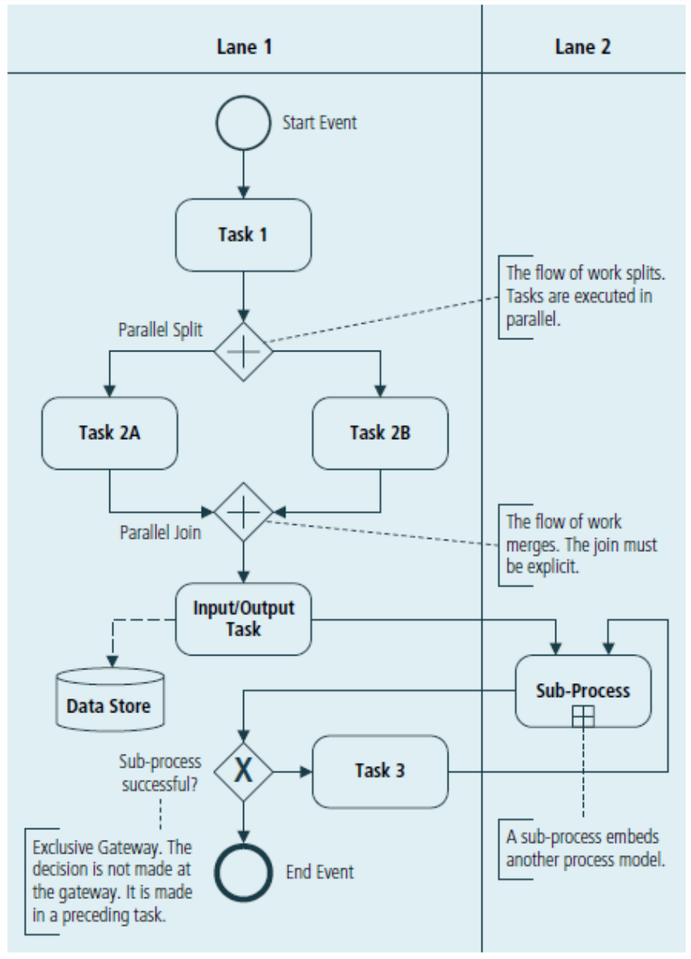
	Description	Elements	Strengths	Limitations	Illustration
22	**Functional Decomposition** *Functional decomposition helps manage complexity and reduce uncertainty by breaking down processes, systems, functional areas, or deliverables into their simpler constituent parts and allowing each part to be analysed independently.*	• Decomposition Objectives • Subjects of Decomposition • Level of Decomposition • Representation of Decomposition Results	• Makes complex endeavours possible by breaking down complex problems into feasible parts. • Provides a structured approach to building a shared understanding of complex matters among a diverse group of stakeholders. • Simplifies measurement and estimation of the amount of work involved in pursuing a course of action, defining scope of work, and defining process metrics and indicators.	• Missing or incorrect information at the time decomposition is performed may later cause a need to revise the results of decomposition partially or entirely. • Many systems cannot be fully represented by simple hierarchical relationships between components because the interactions between components cause emergent characteristics and behaviours. • Every complex subject allows multiple alternative decompositions. Exploring all alternatives can be a challenging and time-consuming task, while sticking with a single alternative may disregard important opportunities and result in a suboptimal solution. • Performing functional decomposition may involve deep knowledge of the subject and extensive collaboration with diverse stakeholders.	
23	**Glossary** *A glossary defines key terms relevant to a business domain.*	A term is included in the glossary when: • the term is unique to a domain, • there are multiple definitions for the term, • the definition implied is outside of the term's common use, or • there is a reasonable chance of misunderstanding.	• A glossary promotes common understanding of the business domain and better communication among all stakeholders. • Capturing the definitions as part of an enterprise's documentation provides a single reference and encourages consistency. • Simplifies the writing and maintenance of other business analysis information including but not limited to requirements, business rules, and change strategy.	• A glossary requires an owner to perform timely maintenance, otherwise it becomes outdated and may be ignored. • It may be challenging for different stakeholders to agree on a single definition for a term.	Na
24	**Interface Analysis** *Interface analysis is used to identify where, what, why, when, how, and for whom information is exchanged between solution components or across solution boundaries.*	• Preparing for Identification • Conduct Interface Identification • Define Interfaces	• By engaging in interface analysis early on, increased functional coverage is provided. • Clear specification of the interfaces provides a structured means of allocating requirements, business rules, and constraints to the solution. • Due to its broad application, it avoids over analysis of fine detail.	• Does not provide insight into other aspects of the solution since the analysis does not assess the internal components.	
25	**Interviews** *An interview is a systematic approach designed to elicit*	• Interview Goal • Potential Interviewees • Interview Questions	• Encourages participation by and establishes rapport with stakeholders. • Simple, direct technique that can be used in a variety of situations.	• Significant time is required to plan for and conduct interviews. • Requires considerable commitment and involvement of the participants.	Na

	Description	Elements	Strengths	Limitations	Illustration
	business analysis information from a person or group of people by talking to the interviewee(s), asking relevant questions, and documenting the responses. The interview can also be used for establishing relationships and building trust between business analysts and stakeholders in order to increase stakeholder involvement or build support for a proposed solution.	• Interview Logistics • Interview Flow • Interview Follow-Up	• Allows the interviewer and participant to have full discussions and explanations of the questions and answers. • Enables observations of non-verbal behaviour. • The interviewer can ask follow-up and probing questions to confirm their own understanding. • Maintains focus through the use of clear objectives for the interview that are agreed upon by all participants and can be met in the time allotted. • Allows interviewees to express opinions in private that they may be reluctant to express in public, especially when interview results are kept confidential.	• Training is required to conduct effective interviews. • Based on the level of clarity provided during the interview, the resulting documentation may be subject to the interviewer's interpretation. • There is a risk of unintentionally leading the interviewee.	
26	**Item Tracking** *Item tracking is used to capture and assign responsibility for issues and stakeholder concerns that pose an impact to the solution.*	• Item Record • Item Management • Metrics	• Ensures concerns around stakeholder requirements are captured, tracked, and resolved to the stakeholder's satisfaction. • Allows stakeholders to rank the importance of outstanding items.	• If not careful, the copious recording of data about items may outweigh any benefits realised. • It may use time that could be better spent on other efforts and stakeholders could become mired in details and statistics.	Na
27	**Lessons Learned** *The purpose of the lessons learned process is to compile and document successes, opportunities for improvement, failures, and recommendations for improving the performance of future projects or project phases.*	Sessions can include a review of: • business analysis activities or deliverables, • the final solution, service, or product, • automation or technology that was introduced or eliminated, • impact to Organisational processes, • performance expectations and results, • positive or negative variances, • root causes impacting performance results, and • recommendations for behavioural approaches.	• Useful in identifying opportunities or areas of improvement. • Assists in building team morale after a difficult period. • Reinforces positive experiences and successes. • Reduces risks for future actions. • Provides tangible value or metrics as a result of the effort. • Recognises strengths or shortcomings with the project structure, methodology, or tools that were used.	• Honest discussion may not occur if participants try to assign blame during these sessions. • Participants may be reluctant to document and discuss problems. • Proactive facilitation may be required to ensure that the discussions remain focused on solutions and improvement opportunities.	Na
28	**Metrics and Key Performance Indicators (KPIs)** *Metrics and key performance*	• Indicators • Metrics • Structure • Reporting	• Establishing a monitoring and evaluation system allows stakeholders to understand the extent to which a solution meets an objective, as well as	• Gathering excessive amounts of data beyond what is needed will result in unnecessary expense in collecting, analysing, and reporting.	Na

	Description	Elements	Strengths	Limitations	Illustration
	indicators measure the performance of solutions, solution components, and other matters of interest to stakeholders.		how effective the inputs and activities of developing the solution (outputs) were. • Indicators, metrics, and reporting also facilitate Organisational alignment, linking goals to objectives, supporting solutions, underlying tasks, and resources.	It will also distract project members from other responsibilities. On Agile projects, this will be particularly relevant. • A bureaucratic metrics program fails from collecting too much data and not generating useful reports that will allow timely action. Those charged with collecting metric data must be given feedback to understand how their actions are affecting the quality of the project results. • When metrics are used to assess performance, the individuals being measured are likely to act to increase their performance on those metrics, even if this causes sub-optimal performance on other activities.	
29	**Mind Mapping** *Mind mapping is used to articulate and capture thoughts, ideas, and information.*	• Main Topic • Topics • Sub-topics • Branches • Keywords • Colour • Images	• Can be used as an effective collaboration and communication tool. • Summarizes complex thoughts, ideas, and information in a way that shows the overall structure. • Associations and sub-topics facilitate understanding and decision making. • Enable creative problem solving by articulating associations and generating new associations. • Can be helpful in preparing and delivering presentations.	• Can be misused as a brainstorming tool, and the related documenting of ideas and creating associations may inhibit idea generation. • A shared understanding of a mind map can be difficult to communicate.	
30	**Non-Functional Requirements Analysis** *Non-functional requirements analysis examines the requirements for a solution that define how well the functional requirements must perform. It specifies criteria that can be used to judge the operation of a system rather than specific behaviours (which are referred to as the functional requirements).*	• Categories of Non-Functional Requirements • Measurement of Non-Functional Requirements • Measurement of Non-Functional Requirements	• Clearly states the constraints that apply to a set of functional requirements. • Provides measurable expressions of how well the functional requirements must perform, leaving it to the functional requirements to express what the solution must do or how it must behave. This will also have a strong influence on whether the solution is accepted by the users.	• The clarity and usefulness of a non-functional requirement depends on what the stakeholders know about the needs for the solution and how well they can express those needs. • Expectations of multiple users may be quite different, and getting agreement on quality attributes may be difficult because of the users' subjective perception of quality. For example, what might be 'too fast' to one user might be 'too slow' to another.	Na

	Description	Elements	Strengths	Limitations	Illustration
				• A set of non-functional requirements may have inherent conflicts and require negotiation. For example, some security requirements may require compromises on performance requirements. • Overly strict requirements or constraints can add more time and cost to the solution, which may have negative impacts and weaken adoption by users. • Many non-functional requirements are qualitative and therefore may be difficult to be measured on a scale, and may garner a degree of subjectivity by the users as to how they believe the particular requirements ultimately meet their needs.	
31	**Observation** *Observation is used to elicit information by viewing and understanding activities and their context. It is used as a basis for identifying needs and opportunities, understanding a business process, setting performance standards, evaluating solution performance, or supporting training and development.*	• Observation Objectives • Prepare for Observation • Conduct the Observation Session • Confirm and Present Observation Results	• Observers can gain realistic and practical insight about the activities and their tasks within an overall process. • Instances of informally performed tasks as well as any workarounds can be identified. • Productivity can be viewed first-hand and realistically compared against any established performance standards or metrics. • Recommendations for improvement are supported by objective and quantitative evidence.	• May be disruptive to the performance of the participant and the overall Organisation. • Can be threatening and intrusive to the person being observed. • While being observed, a participant may alter their work practices. • Significant time is required to plan for and conduct observations. • Not suitable for evaluating knowledge-based activities since these are not directly observable.	Na
32	**Organisational Modelling** *Organisational modelling is used to describe the roles, responsibilities, and reporting structures that exist within an Organisation and to align those structures with the Organisation's goals.*	• Types of Organisational Models • Roles • Interfaces • Organisational Charts • Influencers	• Organisational models are common in most Organisations. • Including an Organisational model in business analysis information allows team members to provide support. Future projects may benefit from knowing who was involved in this project and what their role entailed.	• Organisational models are sometimes out of date. • Informal lines of authority, influence, and communication not reflected in the org chart are more difficult to identify and may conflict with the Organisational chart.	

	Description	Elements	Strengths	Limitations	Illustration
33	**Prioritisation** *Prioritisation provides a framework for business analysts to facilitate stakeholder decisions and to understand the relative importance of business analysis information.*	• Grouping • Ranking • Time Boxing/Budgeting • Negotiation	• Facilitates consensus building and trade-offs and ensures that solution value is realised and initiative timelines are met.	• Some stakeholders may attempt to avoid difficult choices and fail to recognise the necessity for making trade-offs. • The solution team may intentionally or unintentionally try to influence the result of the Prioritisation process by overestimating the difficulty or complexity of implementing certain requirements. • Metrics and key performance indicators are often not available when prioritizing business analysis information; therefore, a stakeholder's perspective of the importance may be subjective.	
34	**Process Analysis** *Process analysis assesses a process for its efficiency and effectiveness, as well as its ability to identify opportunities for change.*	• Identify Gaps and Areas to Improve • Identify Root Cause • Generate and Evaluate Options • Common Methods	• Ensures solutions address the right issues, minimizing waste. • Many different techniques and methodologies can be used and provide teams with great flexibility in approach.	• Can be time-consuming. • There are many techniques and methodologies in process analysis. It can be challenging to decipher which to use and how rigorously to follow them, given the scope and purpose. • May prove ineffective at process improvement in knowledge or decision intensive processes.	

	Description	Elements	Strengths	Limitations	Illustration
35	**Process Modelling** *Process modelling is a standardized graphical model used to show how work is carried out and is a foundation for process analysis.*	• Types of Process Models and Notations	• Appeals to the basic human understanding of sequential activities. • Most stakeholders are comfortable with the concepts and basic elements of a process model. • The use of levels can accommodate the different perspectives of various stakeholder groups. • Effective at showing how to handle a large number of scenarios and parallel branches. • Can help identify any stakeholder groups that may have otherwise been overlooked. • Facilitates the identification of potential improvements by highlighting "pain points" in the process structure (i.e. process visualisation). • Likely to have value in its own right. They provide documentation for compliance purposes and can be used by business stakeholders for training and coordination of activities. • Can be used as a baseline for continuous improvement. • Ensures labelling consistency across artefacts. • Provides transparency and clarity to process owners and participants on activity responsibilities, sequence and hand-overs.	• To many people in IT, a formal process model tends to reflect an older and more document-heavy approach to software development. Therefore, project time is not allocated to developing a process model, especially of the current state or problem domain. • Can become extremely complex and unwieldy if not structured carefully. This is especially true if business rules and decisions are not managed separately from the process. • Complex processes can involve many activities and roles; this can make them almost impossible for a single individual to understand and 'sign off'. • Problems in a process cannot always be identified by looking at a high-level model. A more detailed model with reference to metadata (such as path frequency, cost, and time factors) is usually required. It is often necessary to engage with stakeholders directly to find the operational problems they have encountered while working with a process. • In a highly dynamic environment where things change quickly, process models can become obsolete. • May prove difficult to maintain if the process model only serves as documentation, as stakeholders may alter the process to meet their needs without updating the model.	
36	**Prototyping** *Prototyping is used to elicit and validate stakeholder needs through an iterative process that creates a model or design of requirements. It is also used to optimize user experience, to evaluate design options, and as a basis for development of the final business solution.*	• Prototyping Approach (throw away, evolutionary) • Prototyping Examples • Prototyping Methods	• Provides a visual representation for the future state. • Allows for stakeholders to provide input and feedback early in the design process. • When using throw-away or paper prototyping methods, users may feel more comfortable being critical of the mock-up because it is not polished and release-ready. • A narrow yet deep vertical prototype can be used for technical	• If the system or process is highly complex, the prototyping process may become bogged down with discussion of 'how' rather than 'what', which can make the process take considerable time, effort, and facilitation skill. • Underlying technology may need to be understood or assumed in order to initiate prototyping. • If the prototype is deeply elaborate and detailed, stakeholders may	Na

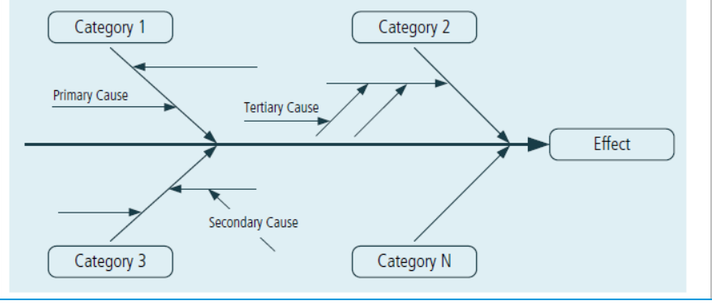
	Description	Elements	Strengths	Limitations	Illustration
			feasibility studies, proof of concept efforts, or to uncover technology and process gaps.	develop unrealistic expectations for the final solution. These can range from assumed completion dates to higher expectations of performance, reliability, and usability. • Stakeholders may focus on the design specifications of the solution rather than the requirements that any solution must address. This can, in turn, constrain the solution design. Developers may believe that they must provide a user interface that precisely matches the prototype, even if more elegant technology and interface approaches exist.	
37	**Reviews** *Reviews are used to evaluate the content of a work product.*	• Objectives • Techniques • Participants	• Can help identify defects early in the work product life cycle, eliminating the need for expensive removal of defects discovered later in the life cycle. • All parties involved in a review become engaged with the final outcome; they have a vested interest in a quality result. • Desk checks and pass around reviews can be performed by a reviewer at a convenient time, rather than interrupting work in progress to attend a meeting.	• Rigorous team reviews take time and effort. Thus, only the most critical work products might be reviewed using inspection or formal walkthrough techniques. • Informal reviews by one or two reviewers are practical in terms of the effort required, but they provide less assurance of removing all significant defects than using a larger team and more formal process. • For desk checks and pass around reviews it may be difficult for the author to validate that an independent review was done by each participant. • If review comments are shared and discussed via e-mail there may be many messages to process, which makes it difficult for the author to resolve disagreements or differences in suggested changes.	

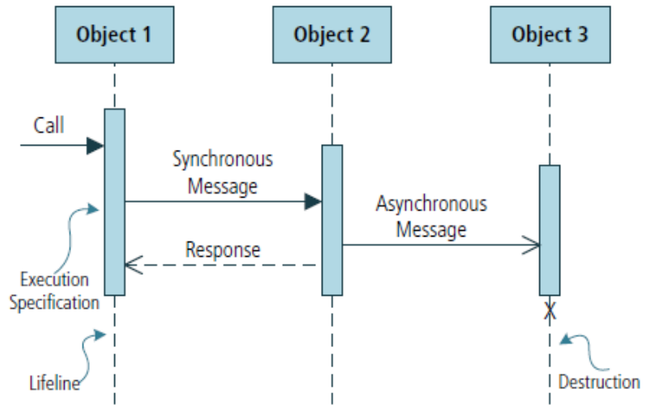
Role	Description	Responsibility	Applicable Techniques
Author	Author of the work product.	Answers questions about the work product and listens to suggestions and comments. Incorporates changes into the work product after the review.	All
Reviewer	A peer or stakeholder.	Examines the work product according to the review objectives. For defect detection reviews, the reviewer examines the work product prior to a review session and keeps track of both defects found and suggestions for improvement.	All
Facilitator	A neutral facilitator (should not be the author in order to avoid compromising the review).	Facilitates the review session, keeps participants focused on the objectives of the review and ensures that each relevant section of the work product is covered. Validates that reviewers have examined the work product before the session begins and ensures that all reviewers participate in the review session.	• Inspection • Formal walkthrough • May be helpful for single issue review
Scribe	A neutral participant with strong communication skills.	Documents all defects, suggestions, comments, issues, concerns, and outstanding questions that are raised during a review session. Familiarity with the subject matter enables the scribe to capture items clearly.	• Inspection • Formal and informal walkthrough

	Description	Elements	Strengths	Limitations	Illustration
38	**Risk Analysis and Management** *Risk analysis and management identifies areas of uncertainty that could negatively affect value, analyses and evaluates those uncertainties, and develops and manages ways of dealing with the risks.*	• Risk Identification • Analysis • Evaluation • Treatment	• Can be applied to strategic risks which affect long-term value of the enterprise, tactical risks which affect the value of a change, and operational risks which affect the value of a solution once the change is made. • An Organisation typically faces similar challenges on many of its initiatives. The successful risk responses on one initiative can be useful lessons learned for other initiatives. • The risk level of a change or of a solution could vary over time. Ongoing risk management helps to recognise that variation, and to re-evaluate the risks and the suitability of the planned responses.	• The number of possible risks to most initiatives can easily become unmanageably large. It may only be possible to manage a subset of potential risks. • There is the possibility that significant risks are not identified.	
39	**Roles and Permissions Matrix** *A roles and permissions matrix is used to ensure coverage of activities by denoting responsibility, to identify roles, to discover missing roles, and to communicate results of a planned change.*	• Identifying Roles • Identifying Activities • Identifying Authorities • Refinements	• Provides procedural checks and balances, as well as data security, by restricting individuals from performing certain actions. • Promotes improved review of transaction history, in that audit logs can capture details about any assigned authorities at the time. • Provides documented roles and responsibilities for activities.	• Need to recognise the required level of detail for a specific initiative or activity; too much detail can be time-consuming and not provide value, too little detail can exclude necessary roles or responsibilities.	
40	**Root Cause Analysis** *Root cause analysis is used to identify and evaluate the underlying causes of a problem.*	• The Fishbone Diagram • The Five Whys	• Helps to maintain an objective perspective when performing cause-and-effect analysis. • Enables stakeholders to specify an effective solution at the appropriate points for corrective action.	• Works best when the business analyst has formal training to ensure the root causes, not just symptoms of the problem, are identified. • May be difficult with complex problems; the potential exists to lead to a false trail and/or dead–end conclusion.	

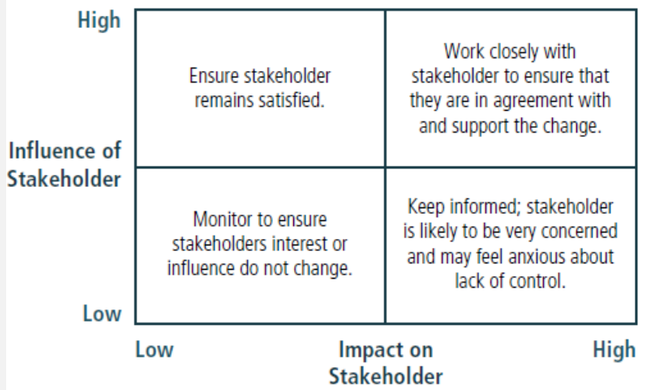
#	Risk Event or Condition	Consequence	Probability	Impact	Risk Level	Risk Modification Plan	Risk Owner	Residual Risk		
								Probability	Impact	Risk Level
1	If the union does not agree with changes to job descriptions	then planned staff changes will not be able to occur	Medium	Medium	Medium	Begin consultations with the union no later than next month	Marta	Low	Low	Low
2	If subject matter experts are not available for requirements elicitation	then scope and quality will be reduced, and the delivery date will be pushed back	Medium	High	High	Develop a plan for when the SME's are required, hold on-site workshops and obtain agreement from the sponsor about their participation	Deepak	Low	Medium	Low
3	If an insufficient number of customers reply to our survey	then we will not have a representative sample of customer requirements	Medium	High	High	Contract with a firm that specializes in survey management to develop and run the survey	François	Low	Medium	Low
4	If the organizational structure does not adjust to the new business processes	then the enterprise will not be able to achieve the planned efficiencies and the business need will not be met	High	High	High	The business sponsor must approve the organizational changes prior to deployment, and the changes must occur prior to deployment	Jiahui	Medium	Low	Medium

Roles and Permissions Matrix	Role Group 1			Role Group 2		
Activity		Administrator	Manager		Sales	Customer
Create new account		X	X			X
Modify account		X	X			X
Create order		X	X		X	X
View reports		X	X		X	
Create reports		X	X		X	

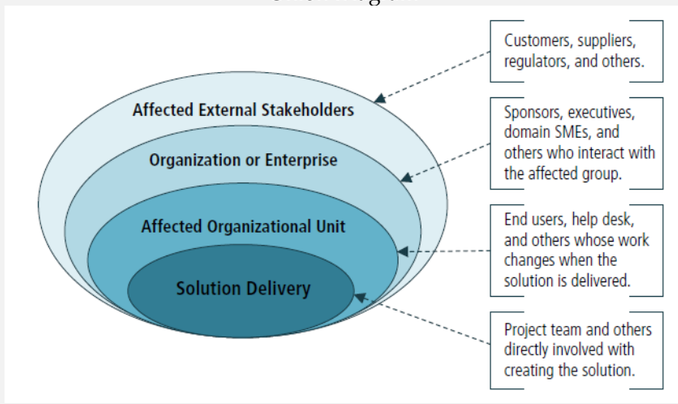


	Description	Elements	Strengths	Limitations	Illustration
41	**Scope Modelling** *Scope models define the nature of one or more limits or boundaries and place elements inside or outside those boundaries.*	• Objectives • Scope of Change and Context • Level of Detail • Relationships • Assumptions • Scope Modelling Results	• A scope model facilitates agreement as a basis for: • defining contractual obligations, • estimating the project effort, • justifying in-scope/out-of-scope decisions in requirements analysis, and • assessing the completeness and impact of solutions.	• An initial, high-level model can lack a sufficient level of granularity, particularly for boundary elements, that is needed to ensure clear scope identification. • Once a scope is defined, changing it may be difficult due to political reasons and contractual obligations. Meanwhile, many factors can affect the scope validity before the targets are achieved. Such factors as wrong initial assumptions, situation change, evolution of stakeholder needs, or technology innovations may cause a need for revising the scope partially or entirely. • Traditional scope models cannot address common complex boundaries, such as a horizon (a boundary that is completely dependent on the position of the stakeholder).	Na
42	**Sequence Diagrams** *Sequence diagrams are used to model the logic of usage scenarios by showing the information passed between objects in the system through the execution of the scenario.*	• Lifeline • Activation Box • Message	• Shows the interaction between the objects of a system in the chronological order that the interactions occur. • Shows the interaction between the objects in a visual manner that allows the logic to be validated by stakeholders with relative ease. • Use cases can be refined into one or more sequence diagrams in order to provide added detail and a more in-depth understanding of a business process.	• Time and effort can be wasted creating a complete set of sequence diagrams for each use case of a system, which may not be necessary. • Have historically been used for modelling system flows and may be considered too technical in other circumstances.	
43	**Stakeholder List, Map, or Personas** *Stakeholder lists, maps, and personas assist the business analyst in analysing stakeholders and their characteristics. This analysis is important in ensuring that the business analyst identifies all possible sources of requirements and that the stakeholder is fully understood so decisions made regarding stakeholder engagement,*	• Stakeholder Lists • Stakeholder Map • Responsibility (RACI) Matrix • Personas - *A persona is defined as a fictional character or archetype that exemplifies the way a typical user interacts with a product. Personas are helpful when there is a desire to understand*	• Identifies the specific people who must be engaged in requirements elicitation activities. • Helps the business analyst plan collaboration, communication, and facilitation activities to engage all stakeholder groups. • Useful to understand changes in impacted groups over time.	• Business analysts who are continuously working with the same teams may not utilize the stakeholder analysis and management technique because they perceive change as minimal within their respective groups. • Assessing information about a specific stakeholder representative, such as influence and interest, can be complicated and may feel politically risky.	Stakeholder Matrix

Description	Elements	Strengths	Limitations	Illustration
collaboration, and communication are the best choices for the stakeholder and for the success of the initiative.	*the needs held by a group or class of users.*			



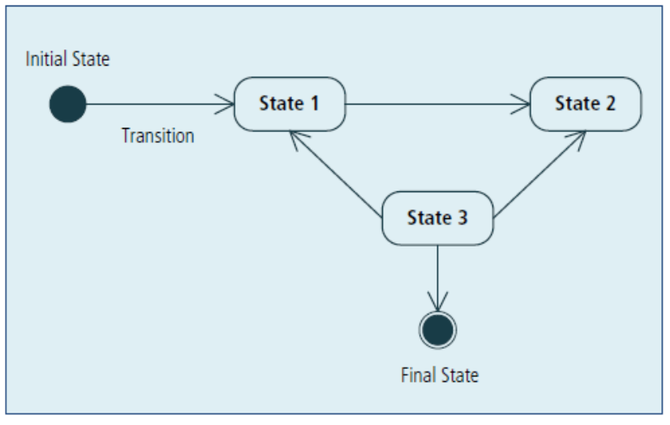
Onion Diagram



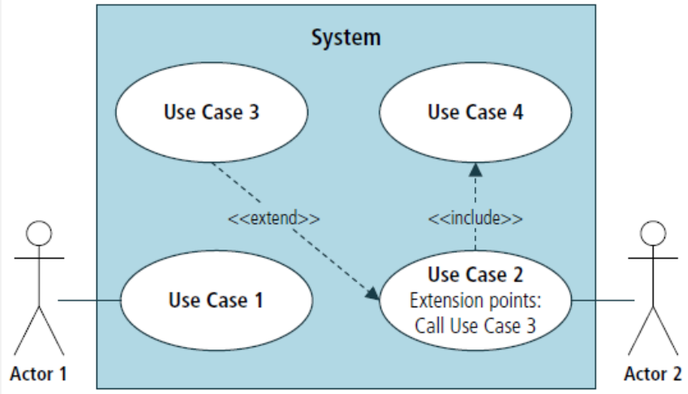
RACI

	Description	Elements	Strengths	Limitations	Illustration
					

Change Request Process	RACI
Executive Sponsor	A
Business Analyst	R
Project Manager	C
Developer	C
Tester	I
Trainer	I
Application Architect	C
Data Modeller	C
Database Analyst (DBA)	C
Infrastructure Analyst	C
Business Architect	R
Information Architect	C
Solution Owner	C
Subject Matter Expert (SME)	C
Other Stakeholders	R C I (varies)

44	**State Modelling** *State modelling is used to describe and analyse the different possible states of an entity within a system, how that entity changes from one state to another, and what can happen to the entity when it is in each state.*	• State • State Transition • State Diagram • State Tables	• Identifies business rules and information attributes that apply to the entity being modelled. • Identifies and describes the activities that apply to the entity at different states of the entity. • Is a more effective documentation and communication tool than plain text, especially if the entity being described has more than a few states, transitions, and conditions governing those transitions.	• Is usually only used to understand and communicate about information entities that are perceived to be complex; simple entities may be understood without the time and effort required to build a state model. • Building a state model appears simple at the start, but achieving a consensus among domain SMEs about the details required by the model can be difficult and time-consuming. • A high degree of precision about states and transitions is required to build a state diagram; some domain SMEs and business analysis practitioners are uncomfortable	

	Description	Elements	Strengths	Limitations	Illustration
				trying to describe such a level of detail.	
45	**Survey or Questionnaire** *A survey or questionnaire is used to elicit business analysis information – including information about customers, products, work practices, and attitudes – from a group of people in a structured way and in a relatively short period of time.*	• Prepare • Distribute the Survey or Questionnaire • Document the Results	• Quick and relatively inexpensive to administer. • Easier to collect information from a larger audience than other techniques such as interviews. • Does not typically require significant time from the respondents. • Effective and efficient when stakeholders are geographically dispersed. • When using closed-ended questions, surveys can be effective for obtaining quantitative data for use in statistical analysis. • When using open-ended questions, survey results may yield insights and opinions not easily obtained through other elicitation techniques.	• To achieve unbiased results, specialized skills in statistical sampling methods are needed when surveying a subset of potential respondents. • The response rates may be too low for statistical significance. • Use of open-ended questions requires more analysis. • Ambiguous questions may be left unanswered or answered incorrectly. • May require follow-up questions or more survey iterations depending on the answers provided.	Na
46	**SWOT Analysis** *SWOT analysis is a simple yet effective tool used to evaluate an Organisation's strengths, weaknesses, opportunities, and threats to both internal and external conditions.*	Na	• Is a valuable tool to aid in understanding the Organisation, product, process, or stakeholders. • Enables business analysts to direct the stakeholders' focus to the factors that are important to the business.	• The results of a SWOT analysis provide a high-level view; more detailed analysis is often needed. • Unless a clear context is defined for the SWOT analysis the result may be unfocused and contain factors which are not relevant to the current situation.	

	Description	Elements	Strengths	Limitations	Illustration
47	**Use Cases and Scenarios** *Use cases and scenarios describe how a person or system interacts with the solution being modelled to achieve a goal.*	• Use Case Diagram • Use Case Description	• Use case diagrams can clarify scope and provide a high-level understanding of requirements. • Use case descriptions are easily understood by stakeholders due to their narrative flow. • The inclusion of a desired goal or outcome ensures that the business value of the use case is articulated. • Use case descriptions articulate the functional behaviour of a system.	• The flexibility of the use case description format may lead to information being embedded that would be better captured using other techniques such as user interface interactions, non-functional requirements, and business rules. • Decisions and the business rules that define them should not be recorded directly in use cases, but managed separately and linked from the appropriate step. • The flexible format of use cases may result in capturing inappropriate or unnecessary detail in the attempt to show every step or interaction. • Use cases intentionally do not relate to the design of the solution and as a result, significant effort may be required in development to map use case steps to software architecture.	
48	**User Stories** *A user story represents a small, concise statement of functionality or quality needed to deliver value to a specific stakeholder.*	• Title (optional) • Statement of Value • Conversation • Acceptance Criteria	• Easily understandable by stakeholders. • Can be developed through a variety of elicitation techniques. • Focuses on value to stakeholders. • A shared understanding of the business domain is enhanced through collaboration on defining and exploring user stories. • Tied to small, implementable, and testable slices of functionality, which facilitates rapid delivery and frequent customer feedback.	In general, user stories are intended as a tool for short-term capture and Prioritisation of requirements and not for long-term knowledge retention or to provide a detailed analysis. Neglecting this principle can lead to the following issues: • This conversational approach can challenge the team since they do not have all the answers and detailed specifications upfront. • Requires context and visibility; the team can lose sight of the big picture if stories are not traced back through validation or supplemented with higher level analysis and visual artefacts. • May not provide enough documentation to meet the need for governance, a baseline for future work, or stakeholder expectations. Additional documentation may be required.	Na
49	**Vendor Assessment** *A vendor assessment assesses the*	• Knowledge and Expertise • Licensing and	• Increases the chances of the Organisation to develop a productive and fair relationship with a suitable	• May be consuming in regards to time and resources. • Does not prevent risk of failure as	Na

	Description	Elements	Strengths	Limitations	Illustration
	ability of a vendor to meet commitments regarding the delivery and the consistent provision of a product or service.	Pricing Models • Vendor Market Position • Terms and Conditions • Vendor Experience, Reputation, and Stability	and reliable vendor, and to improve long-term satisfaction with the decision.	the partnership evolves. • Subjectivity may bias the evaluation outcome.	
50	**Workshops** *Workshops bring stakeholders together in order to collaborate on achieving a predefined goal.*	• Prepare for the Workshop • Workshop Roles • Conduct the Workshop • Post Workshop Wrap-up	• Can be a means to achieve agreement in a relatively short period of time. • Provides a means for stakeholders to collaborate, make decisions, and gain a mutual understanding. • Costs are often lower than the cost of performing multiple interviews. • Feedback on the issues or decisions can be provided immediately by the participants.	• Stakeholder availability may make it difficult to schedule the workshop. • The success of the workshop is highly dependent on the expertise of the facilitator and knowledge of the participants. • Workshops that involve too many participants can slow down the workshop process. Conversely, collecting input from too few participants can lead to the overlooking of needs or issues that are important to some stakeholders, or to the arrival at decisions that don't represent the needs of the majority of the stakeholders.	Na

9. PERSPECTIVES

DESCRIPTION

Perspectives are used within business analysis work to provide focus to tasks and techniques specific to the context of the initiative. Most initiatives are likely to engage one or more perspectives.

The perspectives included in the BABOK® Guide are:

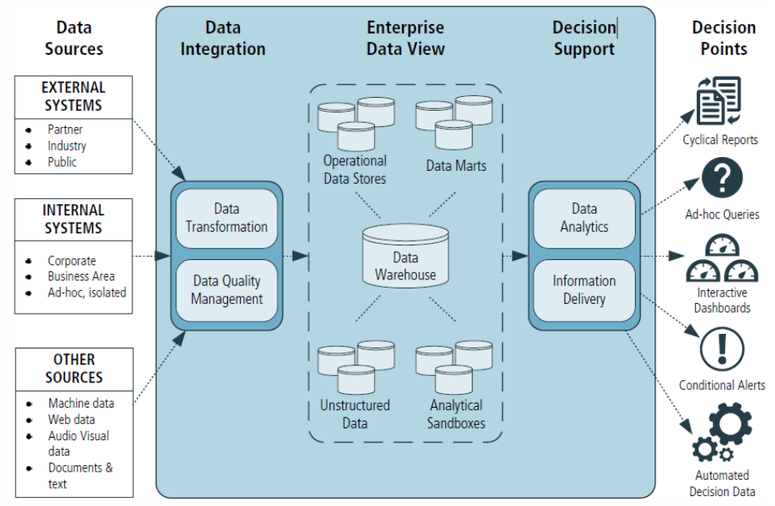
- Agile,
- Business Intelligence,
- Information Technology,
- Business Architecture, and
- Business Process Management.

These perspectives do not presume to represent all the possible perspectives from which business analysis is practiced. The perspectives discussed in the BABOK® Guide represent some of the most common views of business analysis at the time of writing.

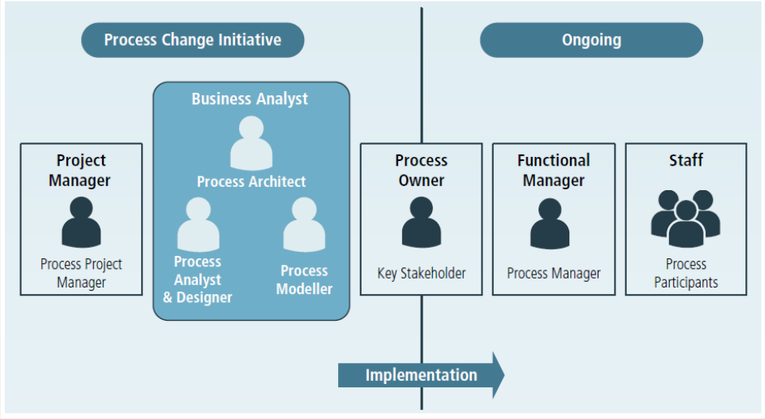
While the business analysis tasks detailed in the BABOK® Guide are intended to be applicable across all areas of business analysis, they are also pertinent to each specific business analysis perspective. Perspectives provide ways to approach business analysis work in a more focused manner suitable to the context. The perspectives help interpret and understand the knowledge areas and tasks in the BABOK® Guide from the lens in which one is currently working. Each perspective follows a common structure:

- Change Scope,
- Business Analysis Scope,
- Methodologies, Approaches, and Techniques,
- Underlying Competencies, and
- Impact on Knowledge Areas.

	Perspective	Change Scope		Methodologies, Approaches and Reference Models/Techniques	Illustration
		Breadth of Change	**Depth of Change**		
1	**Agile** *The Agile Perspective highlights the unique characteristics of business analysis when practiced in the context of agile environments. Agile is about having a flexible mindset, embodied in a set of values and principles and exhibited by a variety of complementary practices. Agile initiatives involve constant change. Business analysts working on agile initiatives continually reassess, adapt, and adjust their efforts and tactics. Business analysts conduct analysis and deliver work products at the last responsible moment to continually allow flexibility for change; detailed analysis work is not done ahead of time, but just in time to be effectively*	Agile approaches are used to address a variety of needs in an enterprise. The most common use of agile practices is in software development projects. However, many organisations have started to apply agile principles to non-software related change such as process engineering and business improvement. Initiatives using agile approaches can be undertaken within a single department or can span across	Agile principles and practices are often successfully applied in initiatives where: • there is a clear commitment from the customer and engagement by empowered subject matter experts (SMEs), • the business need or proposed solution is complex or complicated, and • business needs are changing or unknown and are still emerging.	• Crystal Clear • Disciplined Agile Delivery (DAD) • Dynamic Systems Development Method (DSDM) • Evolutionary Project Management (Evo) • Extreme Programming (XP) • Feature Driven Development (FDD) • Kanban • Scaled Agile Framework® (SAFe™) • Scrum • Behaviour Driven Development (BDD) • Kano Analysis • Lightweight Documentation • MoSCoW Prioritisation • Personas	Na

	Perspective	Change Scope		Methodologies, Approaches and Reference Models/Techniques	Illustration
		Breadth of Change	Depth of Change		
	utilized by the agile team. *Agile business analysis ensures that information is available to the agile team at the right level of detail at the right time.* *Business analysts help agile teams answer these questions:* *• What need are we trying to satisfy?* *• Is that need worth satisfying?* *• Should we deliver something to satisfy that need?* *• What is the right thing to do to deliver that need?*	multiple teams, departments, and divisions of an organisation.		• Planning Workshop • Purpose Alignment Model • Real Options • Relative Estimation • Retrospectives • Story Decomposition • Story Mapping • Storyboarding • Value Stream Mapping	
2	**The Business Intelligence Perspective** *The Business Intelligence Perspective highlights the unique characteristics of business analysis when practiced in the context of transforming, integrating, and enhancing data.* *The focus of business intelligence is the transformation of data into value-added information: where to source it, how to integrate it, and how to enhance and deliver it as analytic insight to support business decision making.* *Business intelligence initiatives apply data-centric system architectures as well as technologies and tools to deliver reliable, consistent, high-quality information that enables stakeholders to better manage strategic, tactical, and operational performance.*	A key objective of a business intelligence system is the consistent definition and usage of information throughout an organisation by establishing a 'single point of truth' for diverse business data.	• Executive level • Management level • Process level	• Descriptive analytics • Predictive analytics • Prescriptive analytics	
3	**The Information Technology Perspective** *The Information Technology Perspective highlights the characteristics of business analysis when undertaken from the point of view of the impact of the change on information technology systems.* *When working in the information technology (IT) discipline, business analysts deal with a wide range of complexity and scope of activities.*	• Create a new organisational capability • Achieve an organisational objective by enhancing an existing capability • Facilitate an operational improvement • Maintain an existing	The nature of business analysis activities in an IT environment depend on a variety of solution impact factors: • What happens to the business if this system shuts down? • What happens if the system performance degrades? • What business capabilities and processes	• Predictive • Adaptive	Na

	Perspective	Change Scope		Methodologies, Approaches and Reference Models/Techniques	Illustration
		Breadth of Change	**Depth of Change**		
	Initiatives may be as small as minor bug fixes and enhancements, or as large as re-engineering the entire information technology infrastructure for an extended enterprise. Business analysts are called upon to work with this diverse level of knowledge and skills among stakeholders to deliver valuable solutions to their IT needs. *Business analysts working in an information technology environment consider their tasks in light of three key factors:* *• Solution impact: the value and risk of the solution to the business.* *• Organisational maturity: the formality and flexibility of the organisational change processes.* *• Change scope: the breadth, depth, complexity, and context for the proposed change.*	information technology system • Repair a broken information technology system	depend on the IT system? • Who contributes to those capabilities and processes? • Who uses those capabilities and processes?		
4	**The Business Architecture Perspective** *The Business Architecture Perspective highlights the unique characteristics of business analysis when practiced in the context of business architecture.* *Business architecture models the enterprise in order to show how strategic concerns of key stakeholders are met and to support ongoing business transformation efforts. Business architecture provides architectural descriptions and views, referred to as blueprints, to provide a common understanding of the organisation for the purpose of aligning strategic objectives with tactical demands. The discipline of business architecture applies analytical thinking and architectural principles to the enterprise level. The solutions may include changes in the business model, operating model, organisational structure, or drive other initiatives.*	Business architecture may be performed: • across the enterprise as a whole, • across a single line of business within the enterprise (defining the architecture of one of the enterprise's business models), or • across a single functional division.	A business architecture effort may focus on the executive level of the enterprise to support strategic decision making, or on the management level to support the execution of initiatives. While business architecture provides important context, it does not usually operate at the operational decision or process level; instead, it assesses processes at the level of the value stream.	Reference Models: • Association for Cooperative Operations Research and Development (ACORD) • Business Motivation Model (BMM) • Control Objectives for IT (COBIT) • eTOM and FRAMEWORX • Federal Enterprise Architecture Service Reference Model (FEA SRM) • Information Technology Infrastructure Library (ITIL®) • Process Classification Framework (PCF) • Supply Chain Operations Reference (SCOR) • Value Reference Model (VRM) Techniques: • Archimate® • Business Motivation Model (BMM) • Business Process Architecture	Na

	Perspective	Change Scope		Methodologies, Approaches and Reference Models/Techniques	Illustration
		Breadth of Change	Depth of Change		
				• Capability Map • Customer Journey Map • Enterprise Core Diagram • Information Map • Organisational Map • Project Portfolio Analysis • Roadmap • Service-Oriented Analysis • The Open Group Architecture Framework (TOGAF®) • Value Mapping • Zachman Framework	
5	**The Business Process Management Perspective** *The Business Process Management Perspective highlights the unique characteristics of business analysis when practiced in the context of developing or improving business processes.* *Business Process Management (BPM) is a management discipline and a set of enabling technologies that:* *• focuses on how the organisation performs work to deliver value across multiple functional areas to customers and stakeholders,* *• aims for a view of value delivery that spans the entire organisation, and* *• views the organisation through a process-centric lens.*	• Designing • Modelling • Execution and Monitoring • Optimizing	Business analysts use BPM frameworks to facilitate the analysis and deep understanding of the organisation's processes. BPM frameworks are sets or descriptions of processes for a generic organisation, specific industry, professional area, or type of value stream. BPM frameworks define particular levels of processes throughout the organisation's process architecture.	Framework: • ACCORD • Enhanced Telecommunications Operations Map (eTOM) • Governments Strategic Reference Model (GSRM) • Model based and Integrated Process Improvement (MIPI) • Process Classification Framework(PCF) Methodologies: • Adaptive Case Management (ACM) • Business Process Reengineering (BPR) • Continuous Improvement (CI) • Lean • Six Sigma • Theory Of Constraints (TOC) • Total Quality Management (TQM) Techniques: • Cost Analysis • Critical to Quality (CTQ) • Cycle-time Analysis • Define Measure Analyze Design Verify (DMADV) • Define Measure Analyze Improve Control (DMAIC) • Drum-Buffer-Rope (DBR) • Failure Mode and Effect Analysis (FMEA)	

Perspective		Change Scope		Methodologies, Approaches and Reference Models/Techniques	Illustration
		Breadth of Change	Depth of Change		
				• House of Quality/ Voice of Customer • Inputs, Guide, Outputs, Enablers (IGOE) • Kaizen Event • Process Simulation • Suppliers Inputs Process Outputs Customers (SIPOC) • Theory of Constraints (TOC) Thinking Processes • Value Added Analysis • Value Stream Analysis • Who What When Where Why (5Ws)	

CONTENT REVIEWERS

The following individuals reviewed and proof read the contents in this document:

1. Tia Rameka, CBAP (New Zealand)
2. Dave Hosking, CBAP (New Zealand)
3. Robert Fall, CBAP (New Zealand)
4. Yvonne Bishop, BA Capability Practitioner (New Zealand)
5. Leah Lapuz, Senior Business Analyst, Spark New Zealand