Defining Good Requirements for Business Process Improvement

Joan Pournara CBAP®

orbus software

t. +44 (0) 870 991 1851
f. +44 (0) 870 011 6412
e. enquiries@orbussoftware.com

Agenda

- Introduction
- What is a Requirement?
- Characteristics of a ‘Good’ Requirement
- The Project Team
- Questions

About the Presenter

Joan Pournara

Joan has specialised in business analysis for more than 25 years and is currently involved in Enterprise Business Architecture.

She was the first South African to qualify as a CBAP® (Certified Business Analysis Professional) and has also trained in TOGAF and Zachman Frameworks.

Joan is the Director of Education on the Board of the IIBA®-SA Chapter that she co-founded.

Joan lectures in Business Analysis for ESI-International (an IIBA™ Endorsed Education Provider) and is an Executive Consultant in Business Architecture and Analysis, consulting to organisations at a strategic level and providing mentoring and coaching at a tactical level.

Joan is an accredited practitioner of the NBI Profile instruments which she uses when assessing business analysis skills and behaviours.

What is a Requirement?

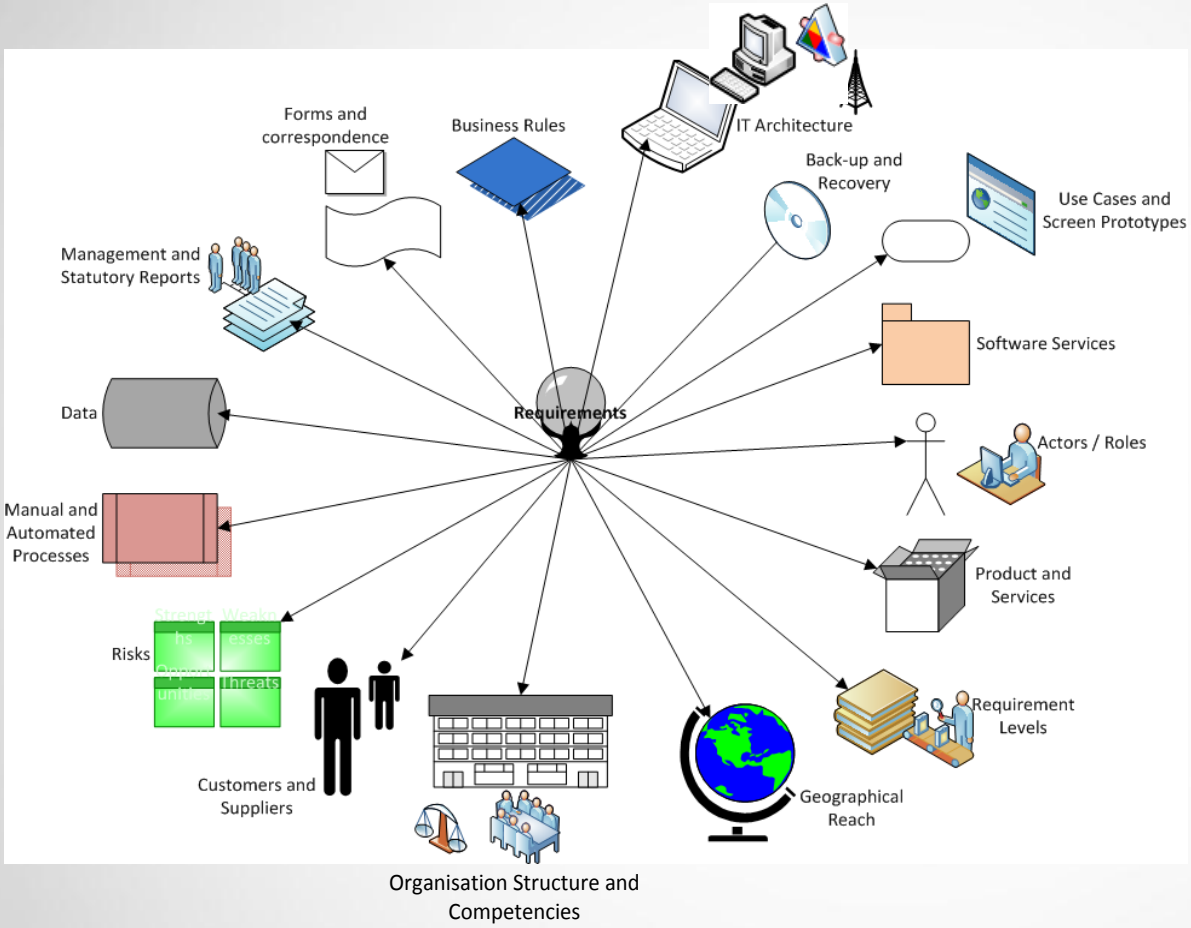
- "The Guide to the Business Analysis Body of Knowledge® (IIBA) defines a requirement as: "A condition or capability needed by a stakeholder to solve a problem or achieve an objective.

- A condition or capability that must be met or possessed by a solution or solution component to satisfy a contract, standard, specification or other formally imposed documents.

- A documented representation of a condition or capability as in (1) or (2).

This definition is based on *IEEE 610.12-1990: IEEE Standard Glossary of Software Engineering Terminology.*

Scoping Requirements



Requirements do not describe only what is expected of an information technology system that has been selected to solve a business problem, but must consider all other elements internal and external to the organisation.

Requirements for Different Initiatives

Examples Only!

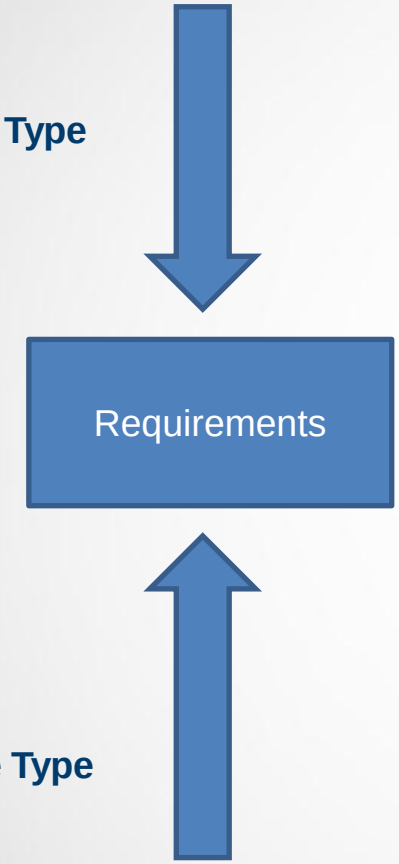
Request for Proposal (RFP) requirements cover a broader description and understanding of the current state of the organisation and to which the vendor solution must comply including the IT environment.

A BPM initiative, requirements may describe the business processes currently in use in the organisation. Processes must include all elements including measurements.

On projects, requirements may describe the features a solution must have to enable an Actor to perform his/her job.

The Business Analyst engaged on a project must have a clear understanding of the project type and focus to ensure a holistic view and understanding of the requirements that are to be elicited, analysed and assessed to the correct level of detail necessary.

Levels of Requirements



Top-Down Innovation Type Project

Bottom-Up – Maintenance Type Project

Requirements Levels

- Statutory Requirements
- Business Requirements
- User Requirements
- System Requirements

Requirements Types

- Functional Requirements
- Non-functional Requirements
- Transition Requirements

Requirement Risks

- Reputational Risks
- Stakeholder Risks
- Project Team Risks
- Solution Risks
- Implementation Risks
- Technology Risks

Characteristics of 'Good' Requirements

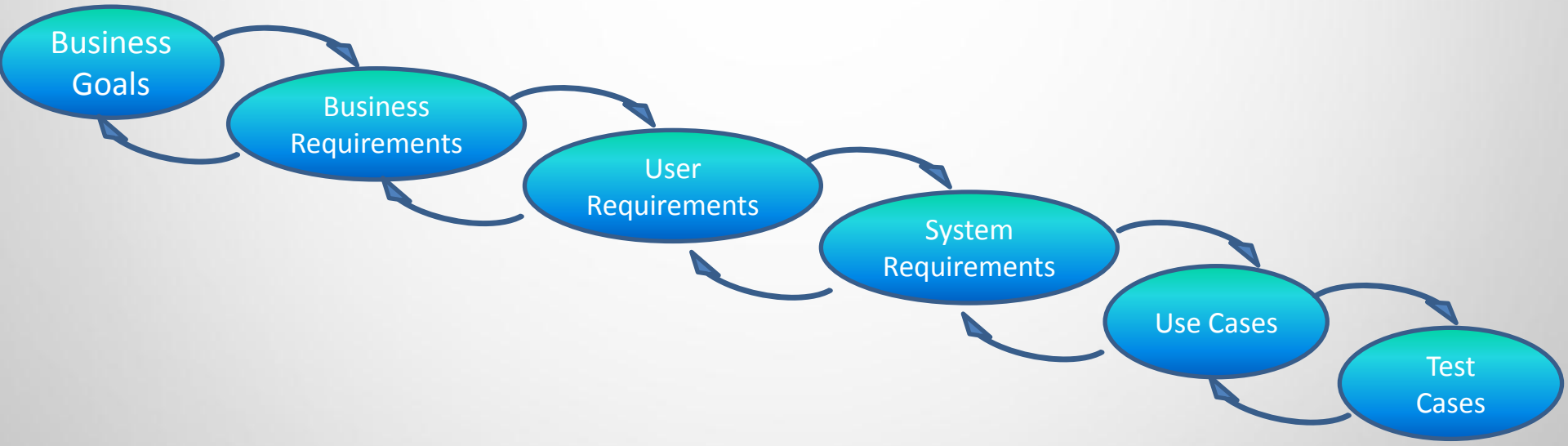
1. Requirements must be contained within the boundaries of the solution.

Analysts should use known techniques for scoping.

- Diagramming techniques
- Facilitated techniques – such as Focus Group sessions and JAD sessions

2. Requirements must be Traceable

Requirements must trace back to business goals.
Traceability is bi-directional and requirements must be traced throughout the SDLC.



Characteristics of 'Good' Requirements

3. Requirements must be SMART

- Specific - clear, concise, unambiguous and free from bias and personal interpretation.
- Measurable - ensure each statement is measurable, i.e. reduce customer complaints by 10% by end of 2012.
- Assignable – requirements must have an 'owner'.
- Relative – A cohesive set of requirements relates to only one thing such as a business process, use case, business rule, etc.
- Testable – there must be a way to prove the requirements have been fulfilled.

Further Considerations:

- Who is impacted by the business problem?
- How are they impacted by the business problem?
- When are they impacted by the business problem?
- What are the impacts presented by the business problem? To the Customer. To technology.
- Where is the business problem manifesting itself? (Locations, processes, etc.)?
- Why should the business problem be fixed?
- What will happen if the business problem is not fixed?

Characteristics of 'Good' Requirements

4. Requirements must reflect business rules (validation rules)

- Business Rules are independent to technology or business units that enforce them.
- Business Rule example: "All passengers travelling on international flights must provide a valid passport."
- Validation Rules example: The attribute "Date of Birth" [DOB] must use format = dd/mm/yyyy.

5. Requirements must be categorised, organised and prioritised

- Non-discretionary – requirements that must be implemented to meet regulatory, legal, financial, health and safety or policy needs and usually take precedence over other requirements.
- Business Value – the most valuable requirements are targeted for development first.
- Urgency – time sensitivity.
- Business or Technical Risk – the requirements that present the highest risk to project failure.
- Implementation difficulty – the requirements that are easiest to implement.
- Stakeholder consensus – of the requirements that are most useful or valuable to the organisation.
- Categorizing requirements based on the way stakeholders will use them
- Prioritise requirements using simple techniques of high, medium, low to ensure the most important requirements are delivered first – obtain consensus across stakeholder groups.
- Organize the requirements to be most useful to the most important stakeholders.

If you have a software based requirements management repository, you can group requirements based on what is suitable for each stakeholder.

Characteristics of 'Good' Requirements

6. Requirements must be complete and self-contained without any missing information

A 'Good' requirement set must include

- Model/s (behaviour and structure models)
- Textual descriptions
- Screen prototypes (Data lists, validation rules)
- Input (Triggers)
- Outputs (Reports, correspondence, etc.)
- Business Rules

7. Requirements must be consistent

Analysts should

- Use terms, naming and numbering conventions consistently and provide a consistent level of detail)
- Ensure requirements do not contradict each other or describe the same requirement using different wording.
- Ensure the level of detail in a model or requirement pack should be the same.

Characteristics of 'Good' Requirements

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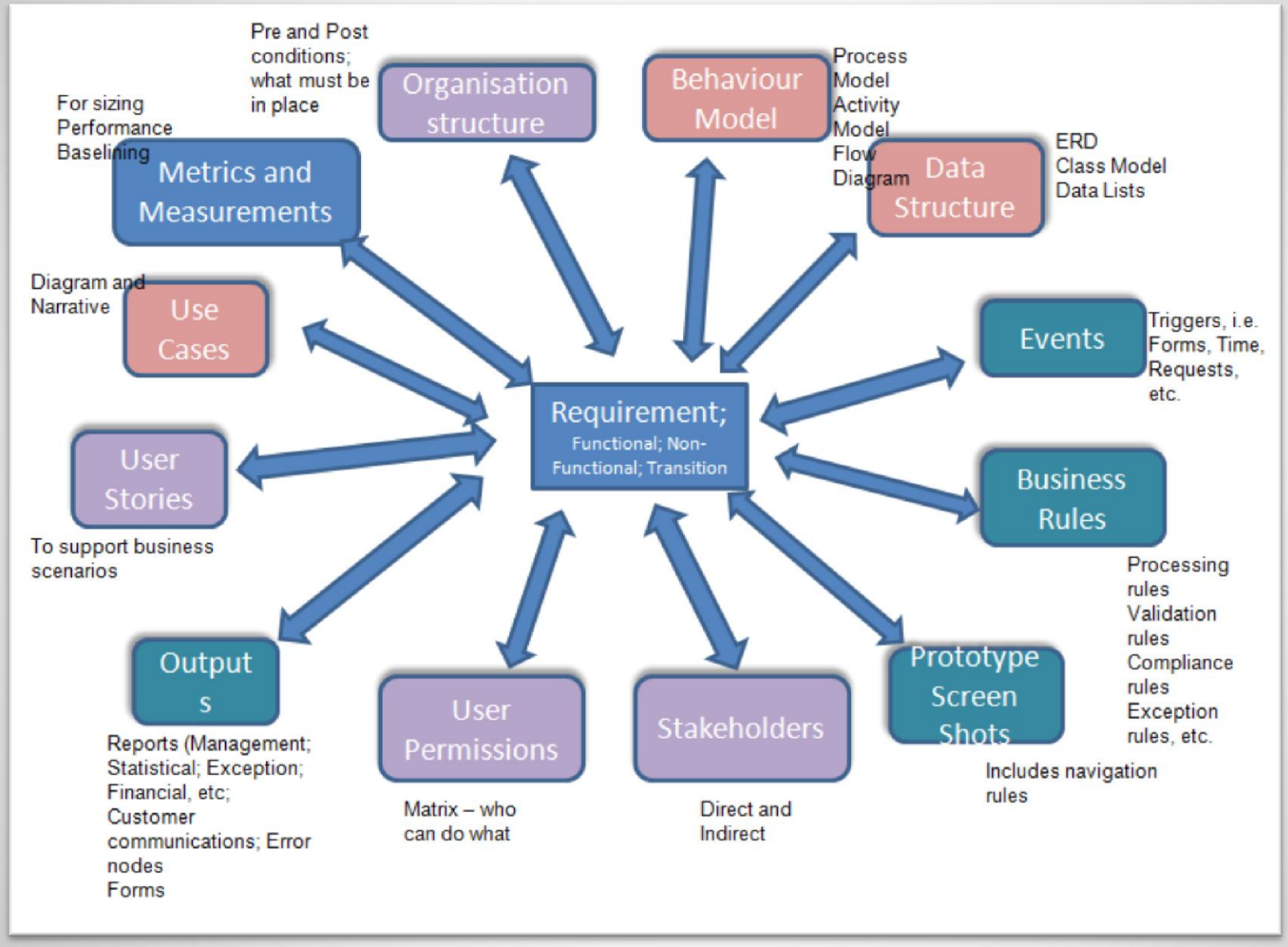
8. Requirements must be feasible

Requirements must be implementable within the constraints of the existing technology, existing budget, timeline and resources available to the project team.

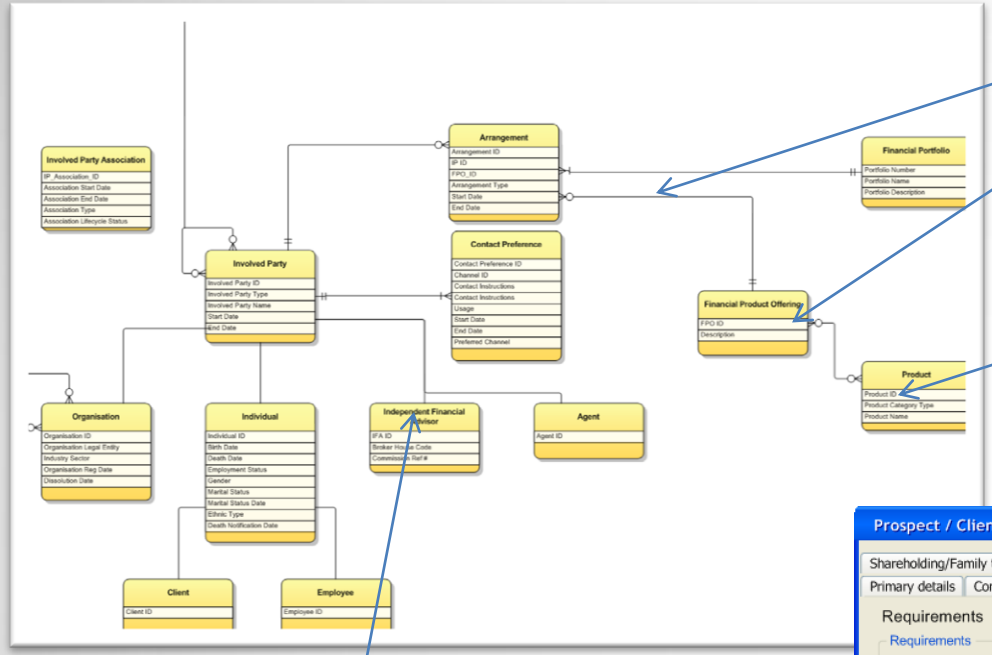
9. Requirements must be described from a business perspective and must not imply technology

Requirements must be stated in terms that is technology agnostic. Data Models and screen prototypes do not imply technology. They are necessary to define requirements at a low level of granularity.

Elements Needed for Requirements



Documenting Requirements



Defines fundamental business rules in relationships between entities.

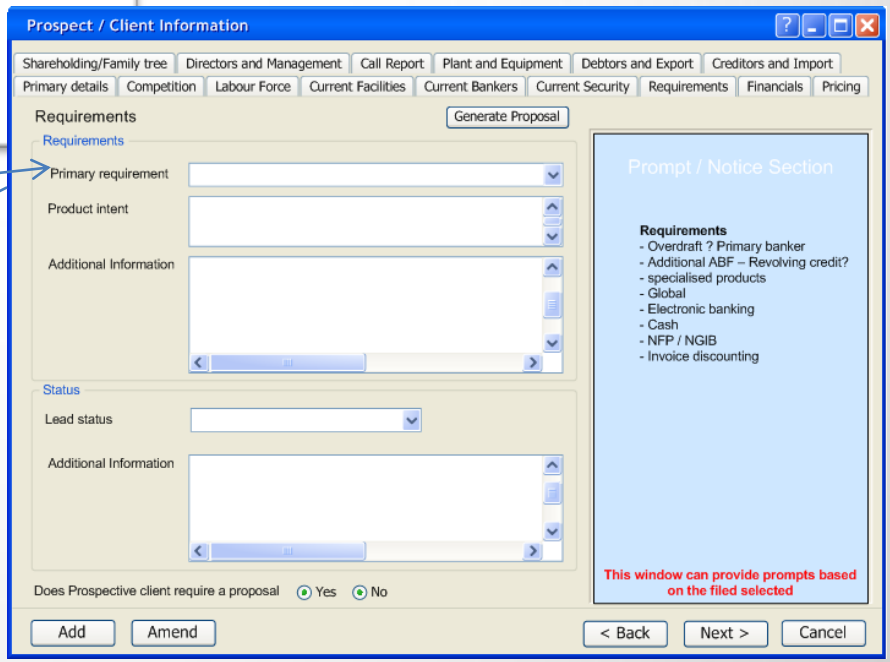
Defines business constraints in cardinalities

Defines attributes needed by the business. One fact one place

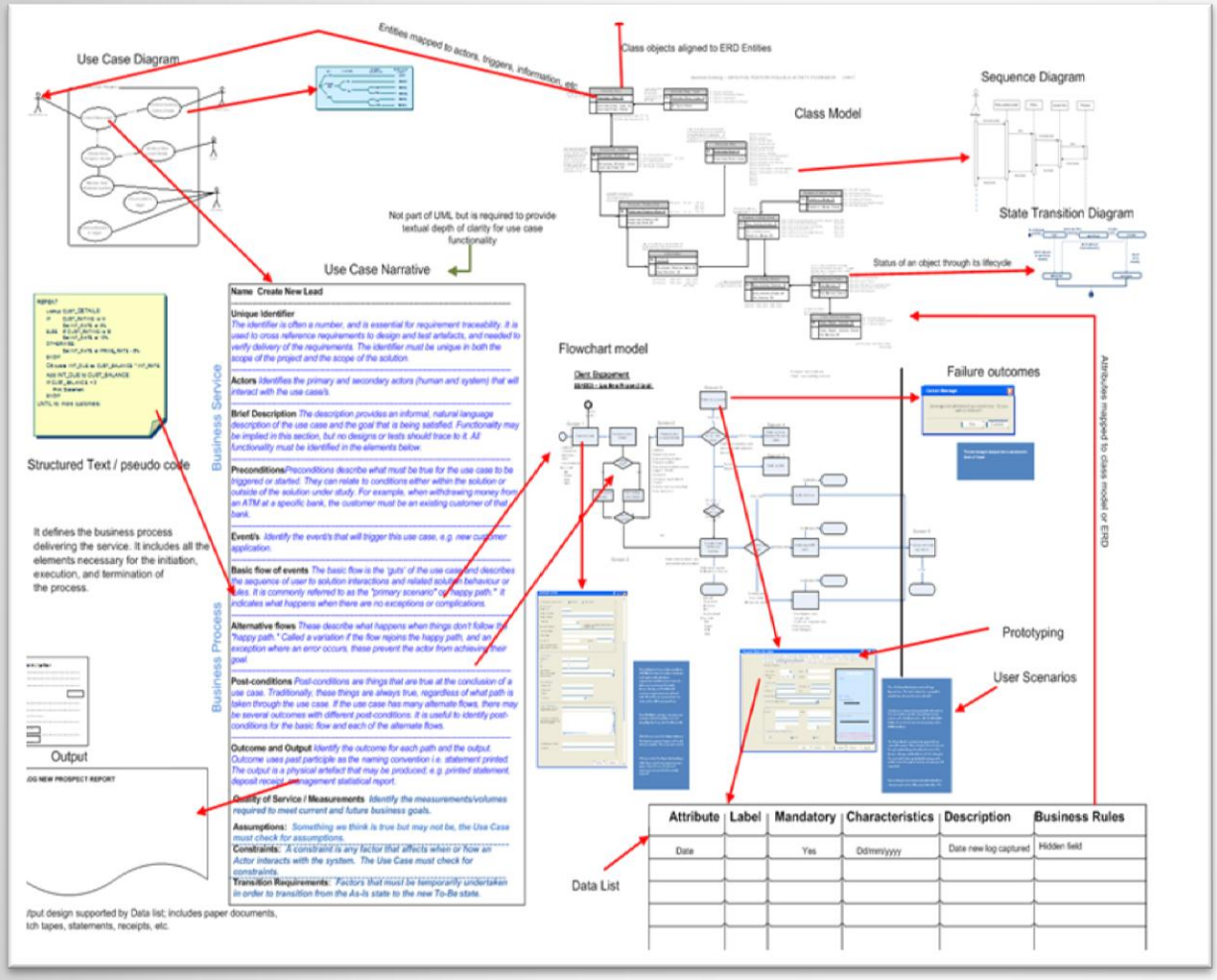
Defines how business needs to use the data. Data input must be according to ease of User input.

Attributes that appear on screen prototypes must be stored in the data model (if not derived). Data lists tie back to the data model and support screen prototypes, business rules are validated.

Attribute	Label	Mandatory	Characteristics	Description	Business Rules



A Requirements Set



The red arrows in the view indicate consistency and accuracy checks between the different analysis techniques and requirement elements.

The elements are a set of requirements to realize one requirement use case.

The set of requirements is supported with a Stakeholder list of Roles and Responsibilities defining which stakeholders were involved in the creation, reviewing and approval of the requirements. A roles and permission matrix defines Actors and their responsibilities.

Tips to Eliciting Requirements

Eliciting requirements is highly dependent on the knowledge of the stakeholders, their willingness to participate in defining requirements and the ability of the analyst to assist the stakeholders to reach consensus.

Throughout the requirements elicitation and analysis phases, the analyst must build relationships and trust with the stakeholders. The more interaction there is between the analyst and stakeholder groups, the greater the chance of uncovering requirements that were not explicitly identified in the early stage of the requirements process.

Effective communication of requirements helps to bring the stakeholders to a common understanding of the requirements. Because stakeholders usually represent people from different backgrounds, business domains and authority levels, communication can be challenging and critical to the success of the project.

Remember the Business Sponsor is the final decision-maker and approver of requirements and must be included in validation review sessions.

Finally ..... About the Project team

The larger the team the greater the chance of failure, organizations should focus on building highly skilled project teams.

Business Analysts should be smart leaders who have earned the respect of stakeholders and have the ability to maneuver between different levels of stakeholders effectively.

Requirements must be validated using different validation techniques – the more defects found during Requirement Documentation the fewer defects will be found during development and testing. Project costs are heavily impacted by development rework and testing.

Questions

Do you have any questions?

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