Foundation of Business Analysis

Module #4

Requirements and Business rules

Objectives

- By the end of this module, we will be able to -
  - Define the type of requirements
  - Define business rules
  - Explain the difference between feature, requirements, business rules and specification
  - Define risk
  - How best practices in business analysis help manage risk

What is a Requirement?

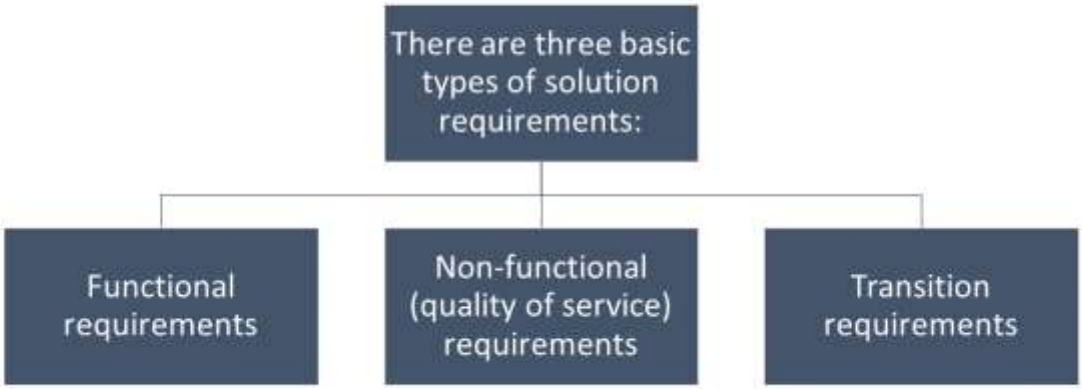
What is a Requirement?

- Capability needed by a stakeholder to solve problem or achieve an objective
- Capability needed by a user
- Condition or capability that a project must meet of possess
- Reflects business needs
- Do not specify a technology that should be used to design and develop
- BA translate feature in to requirement
  - BA will expand the documented feature(from vision & scope document) into detailed solution requirements.

Levels of Requirement

Levels of Requirement	Description
Regulatory	• Mandated by a third party. • May be internal or external • Typically non-negotiable
Business	• Business Goals that expected to be achieved • What value the completed project is expected to bring to the organization
User	• Needed by stakeholder to solve problem or achieve an objective
Solution	• Describe the technology-independent behaviors and information needed by the solution

Types of Requirements



Examples of Requirements

Type of Requirement	Example
Functional	The system must allow users to check their account balance prior to withdrawing
Nonfunctional (Quality of Service)	System response must be sub second of all transactions.
Transition	Existing ATMs must continue to operate while the new ATM network is being implemented

Functional vs. Non-Functional Requirements

Functional	Non-Functional
Characteristics of the deliverables described in ordinary, non-technical language understandable to the customer.	Account constraints and external interfaces with which a system or solution may interact

Non-Functional (Quality of Service) Requirements (continued)

Performance	Have a sub-second response time
Availability	Be available at least 95% of the time
Capacity	Be capable of increasing the number of users from 100-1000 users
Security	Enforce access rules and store transaction record history
Data Retention	Keep files up to 7 years
Backups	Perform daily midnight backups with a 4-hr. restore time
Disaster Recovery	Have off-site service and a 48-hour recovery time
Training	Develop 30min. Training sessions for novice users
Documentation	Provide detailed instructions for all end-user features

Transition Requirements

- Needs for ensuring the implementation and transition of a solution into an organization.
- Typically include-
  - Generation of production data
  - Conversion and migration of production data
- Transitional requirements are often overlooked

What are Specifications?

- A specification is defined as the "description of the technology-specific details for a material, product, or service, including the criteria for determining that the requirements have been met.
- Business Analyst identifies and documents requirements, and system analyst develop the specification from the requirements

Solution Requirements	Specifications
Define the technology-dependent behaviors and information needed by the solution	Define the method (design) used to provide the solution

Requirements v/s Specifications

Requirement	Specification
Answers who, what, where, when, how often, and how much is needed to solve the problem (or pursue the opportunity)	Answers how we solve the problem (or pursue the opportunity)
Describes performance; no mention of possible technology	Describes technical solution
Concerned with processes and behavior	Concerned with physical architecture and infrastructure
Example: An integrated administrative system to track project expenses	Example: A three-tier Web solution using ASP over an Oracle back end

What are Business Rules? (1/3)

Business rules are –

"Obligations concerning actions, process, and procedures that define, and possibly constrain, some aspect of the business."

Business Rules may be–
• Definitions • Relationships • Calculations • Authorizations • Conditions • States • Ranges • Triggers

Sample Business Rules (3/3)

- All timesheets must be signed by a manager prior to submission to the payroll office.
- A sales tax of 7.5% must be added to all purchase except food and prescription medicines.
- All passenger must have a valid passport before boarding an international flight.

Business Rules vs. Requirements

Business Rules	Requirements
• Business rules exist independently of the proposed solution or opportunity. • In general, business rules constrain processes and drive requirements.	• Requirements are characteristics of the solution and describe it directly.

What is Risk?

- A risk is any possible, future event that may affect the project in some way.
- Risk can be either positive (opportunity) or negative (a threat).
- Risk consists of three factors:
  - Risk Event
  - Probability, or likelihood, that the risk occur
  - Impact on the project if the risk does occur

What is Risk Management?

- Risk management is the practice of controlling risk.
- It consists of processes, techniques, and tools for managing risks on the project.
- Requirements risk management is a subset of overall project risk management and involves –
  - Identifying requirements risks.
  - Assessing the probability and impact of requirements risks
  - Planning and implementing requirements risk response strategies.

Common Requirements Risks

- Insufficient level of user involvement in identifying and analyzing requirements
- Ambiguous requirements – not enough detail in the requirements
- Missing, incorrect, or conflicting requirements.
- Key player changes (management, elicitation team, and so on)
- Priority changes
- Scope creep
- Changes to project constraint

Risk Response Strategies

Threats	Opportunities
Avoid	Exploit
Transfer	Share
Mitigate	Enhance
Accept	Accept

Sources of Risks

Assumptions	The legacy system is a good requirements baseline	**Threat**: Requirements elicitation uncovers needs far beyond the legacy system's capabilities
	Resource will be available to complete planned tasks	**Threat**: Not enough resources available **Opportunity**: Resources more talented than originally anticipated
Constraints	Solution must conform to government standards	**Threat**: Government standards may become more strict **Opportunity**: Government may relax standards
	Analysis must be completed in 3 months	**Threat**: Resources are not available to complete analysis. **Opportunity**: Analysis takes less time than anticipated
Dependency	The business requirements document cannot be written until all user groups have been interviewed	**Threat**: Some users are not available for scheduled interview
	Analysis cannot continue until the business sponsor has signed the requirements work plan	**Threat**: The business sponsor does not approve requirements work plan, thereby delaying requirements elicitation.

Business Analysis Best Practices

- Following best practices during the requirements process can significantly reduce threats and enhance opportunities.
- For example –

Risk	Best Practices
Users forget to tell the team everything they need. Issues are often identified while the system is being designed	Iteration - taking what is known and using successive cycles of refinement and validation to determine whether more information is needed.
Misunderstanding in systems development resulting from a lack of specifics	Measurability – quantity as many aspects of the process as you can (for example, goals, tasks, process, outcomes, and system behavior)

Module Summary

- A requirement is –
  - "Capability needed by a user."
  - "Condition or capability that a project must meet of possess."
  - A documented representation of a condition or capability as in above
- There are four levels of requirements: regulatory, business, user, and solution requirements.
- There are three types of solution requirements: functional, nonfunctional, and transition requirements.

Module Summary

- Requirements define the functions and characteristics of the solution, and specifications define the method(design) used to provide the solution.
- Business rules are obligations concerning actions, processes, and procedures that define, and possibly constrain, some aspect of the business.
- A risk is any possible future event that may affect the project in some way. Risk can be either positive(an opportunity) or negative(a threat).