

Requirement Management & the role of the BA in Waterfall and Agile

By Daniel Rahhal

Overview

Part I: Requirement management

- What is a requirement
- Types of requirements
- How to manage a requirement set

Part II: Waterfall vs Agile

- What is waterfall
- What is agile
- The BA role in waterfall and agile

Part I: Requirement management

What is a requirement

*A condition or capability needed by a user to solve a problem or
achieve an objective*

- How is a requirement different from a need or a want?
- All requirements are needs but not all needs are requirements
- A want is something that is desired but not needed or required

Requirement types

- Business Requirements
 - Business objectives as stated by the customer*
- Stakeholder Requirements
 - Requirements of individual stakeholders*
- Solution Requirements
 - Features and characteristics of the solution*
- Transition Requirements
 - What is needed to successfully implement the solution*

Business Requirements

Defined as:

*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.*

Example:

We would like to automate our customer relationship management system so that we can offer better customer services in order to improve customer response time by 70% over the next 6 months.

It is important for Business Requirements to state the overall objectives of what the business needs



Stakeholder Requirements

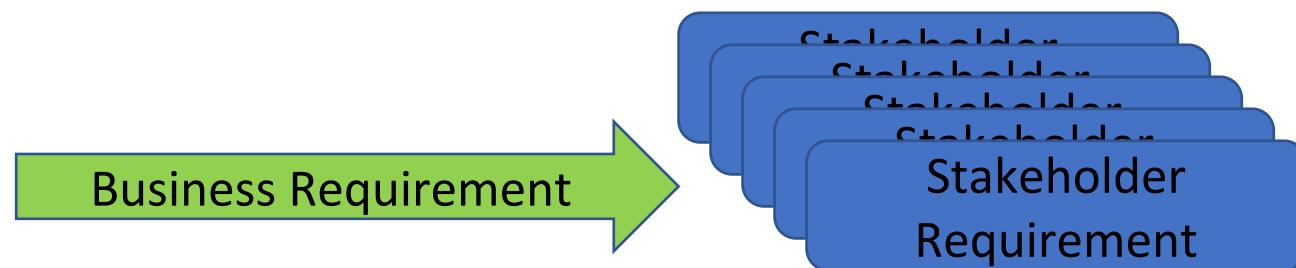
Defined as:

needs of stakeholders that must be met in order to achieve the business requirements.

Example:

Management would like to have a mechanism to monitor the response time for each and every customer support request on a daily basis.

This mechanism should allow management to produce a report daily, monthly or on-demand.



Stakeholder Requirements

Defined as:

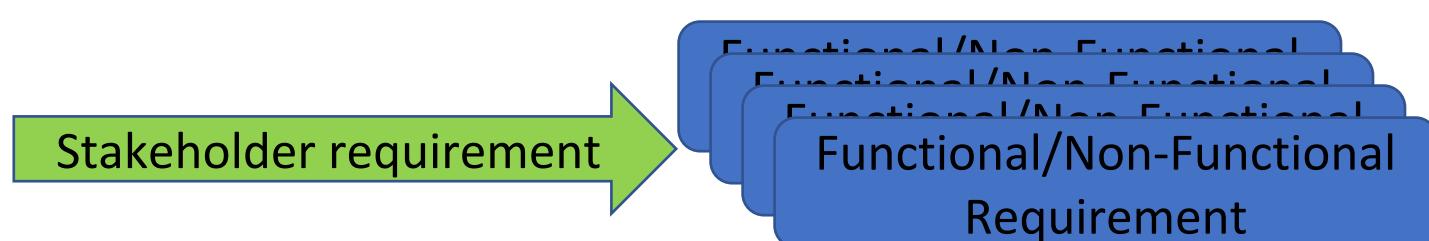
capabilities and qualities of a solution that meets the stakeholder requirements. They provide the appropriate level of detail to allow for the development and implementation of the solution.

Functional requirements:

Are the expected features of the system. Features like registering a user, making an online purchase, printing a report, ...

Non-Functional requirements:

Are the requirements which are related to the behaviour of the system. Every page should load within 5 seconds, backgrounds for all screens should be light blue, ...



Transition Requirements

Defined as:

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.

Example:

The users must be trained to be able to use the system effectively

Previous years data must be migrated to the new system to generate comparative report

How to manage a requirement set

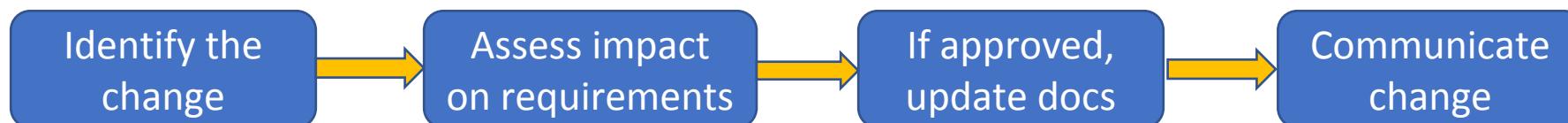
The changing nature of requirements

What are some reasons that may lead to changes in requirements?

- Stakeholders change their minds
 - Political changes
 - New standards
- Technical challenges
 - Competitive pressure
 - Economical changes (i.e. budget cuts)

BAs play a major role in requirement management

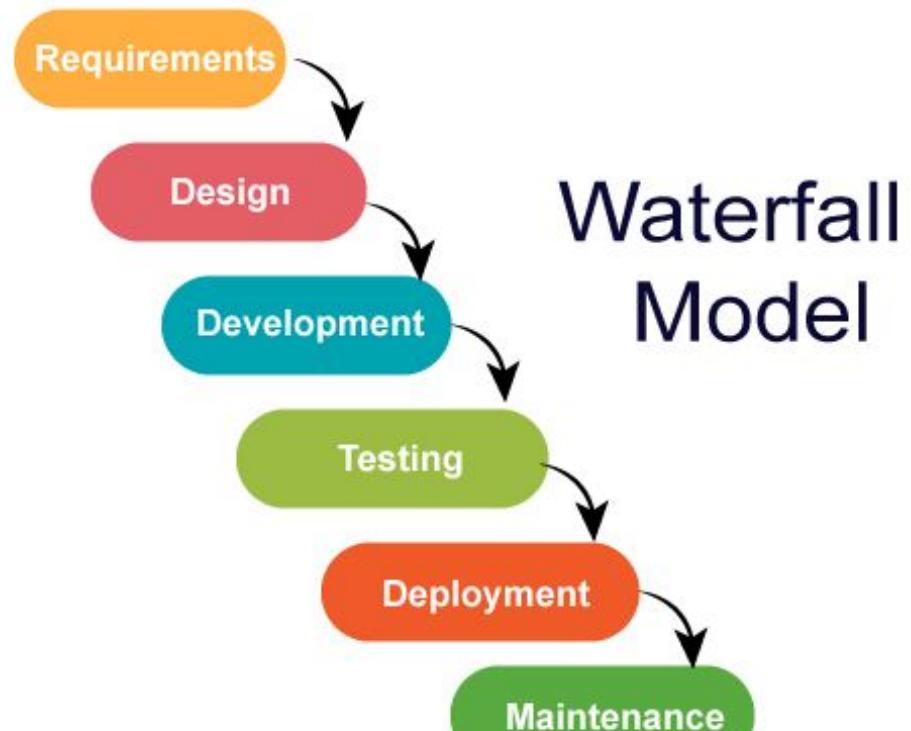
Business Analysts are responsible to maintain the requirement documents current and up-to-date at all times through the change control process



Part II: Waterfall vs Agile

Waterfall life cycle

a classical model used in system development life cycles to create a system with a linear and sequential approach where requirements are gathered at the beginning of the project, and then a project plan is created to accommodate those requirements.



Waterfall life cycle

Where is it mostly used

Any project where the requirements must be defined upfront and where major and frequent changes to project scope is not readily welcomed:

- Military projects
- projects where the design needs to be frozen in advance
- Projects that require advance planning
- Projects that follow policies and strict quality standard guidelines
- Projects with known and understood technology



Advantages & Disadvantages of Waterfall

Advantages:

- Simple and easy to understand
- This model is easy to manage due to it's rigidity – each phase has specific deliverables and a review process
- Phases do not overlap, they are processed and completed one at a time

Disadvantages:

- Once the project is in it's later phases, it is very costly and time consuming to go back and change earlier phases
- Not a good model for complex and object-oriented projects.
- Not suitable for the projects where requirements are at a moderate to high risk of changing.

The BA role in Waterfall

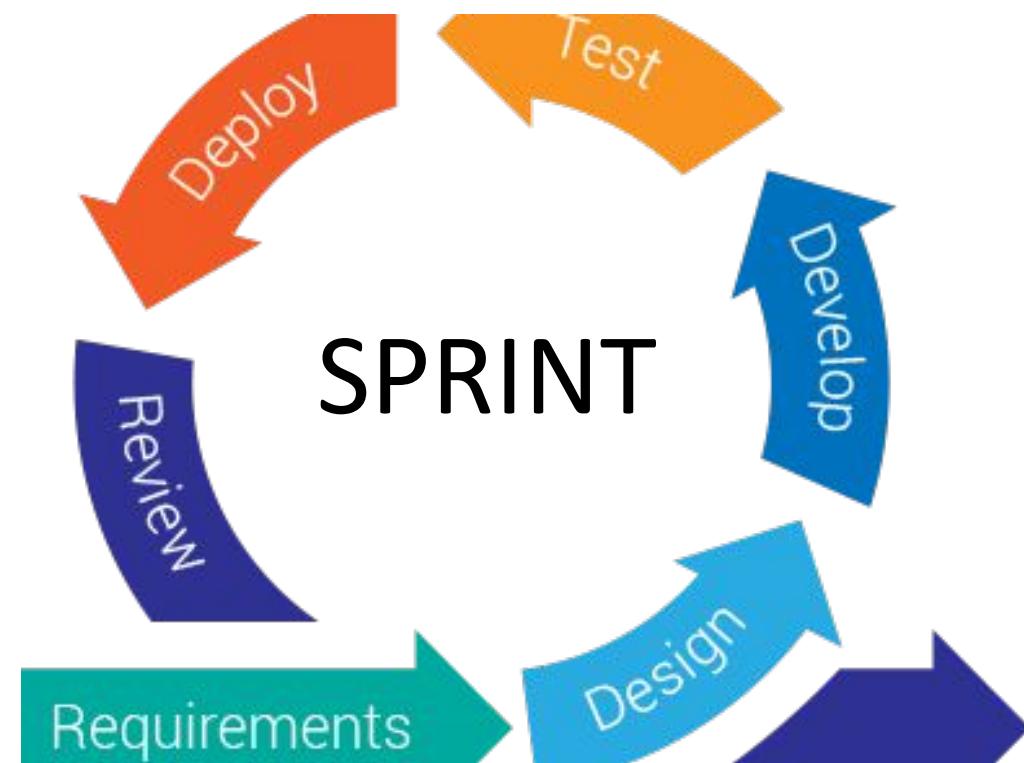
BA role in waterfall according to the BABOK guide:

- Business Analysis Planning and Monitoring
- Elicitation
- Requirements Management and Communication
- Enterprise Analysis
- Requirements Analysis
- Solution Assessment and Validation

Agile life cycle

Is a type of Incremental model. Software is developed in incremental, rapid cycles.

This results in small incremental releases with each release building on previous functionality. Each release is thoroughly tested to ensure software quality is maintained.



The Agile Manifesto

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Agile methodology

Where is it mostly used

It is mostly used for time critical applications and where all the requirements are not and can not be defined early in the project.

Requirement/scope flexibility is one of the main reasons why companies choose Agile over Waterfall.

Advantages & Disadvantages of Agile

Advantages:

- Is a very realistic approach to software development
- Promotes teamwork and cross training
- Delivers early partial working solutions
- Gives flexibility to developers
- Even late changes in requirements are welcomed
- Close, daily cooperation between business people and developers

Disadvantages:

- There is little emphasis on necessary designing and documentation
- It is difficult to assess the effort required at the beginning of the project
- Can be chaotic if the stakeholder does not know what they want

Agile frameworks

There are many Agile project management frameworks in use, Scrum, Kanban, and Extreme Programming just to name a few.

Today I will discuss the BA role as it related to the Scrum project management framework

The BA role in the SCRUM framework

Scrum Business Analysts deliver a bit of their work during every Sprint, rather than up front like on Waterfall projects

They are heavily involved in Solution Design and they support Development and Testing

They sit with the Scrum team day in and day out, and are on hand to provide any support necessary

Scrum BAs take on a lot of the System Analysis responsibilities, and provide an end-to-end perspective of the project and its requirements

The BA role in waterfall and agile

Key BA Skills for Agile Projects

A high performing business analysis professional on the team increases the likelihood that the resulting product meets true business needs and fits in well with the current business environment. Key business analysis skills that an agile project needs:

- Understanding of the project business area
- Expertise in conceptual modeling; ability to see the big picture and envision possible solutions
- Outstanding communication skills
- Good facilitator to reach team consensus on scope and design decisions
- Ability to ask strong questions to help the team see areas that may lead to problems
- Ability to properly document requirements
- Understanding of agile & scrum framework
- Familiarity with requirements techniques such as, user stories, use cases, and modeling.

The END

Any question ?