Business Analysis for IT Projects

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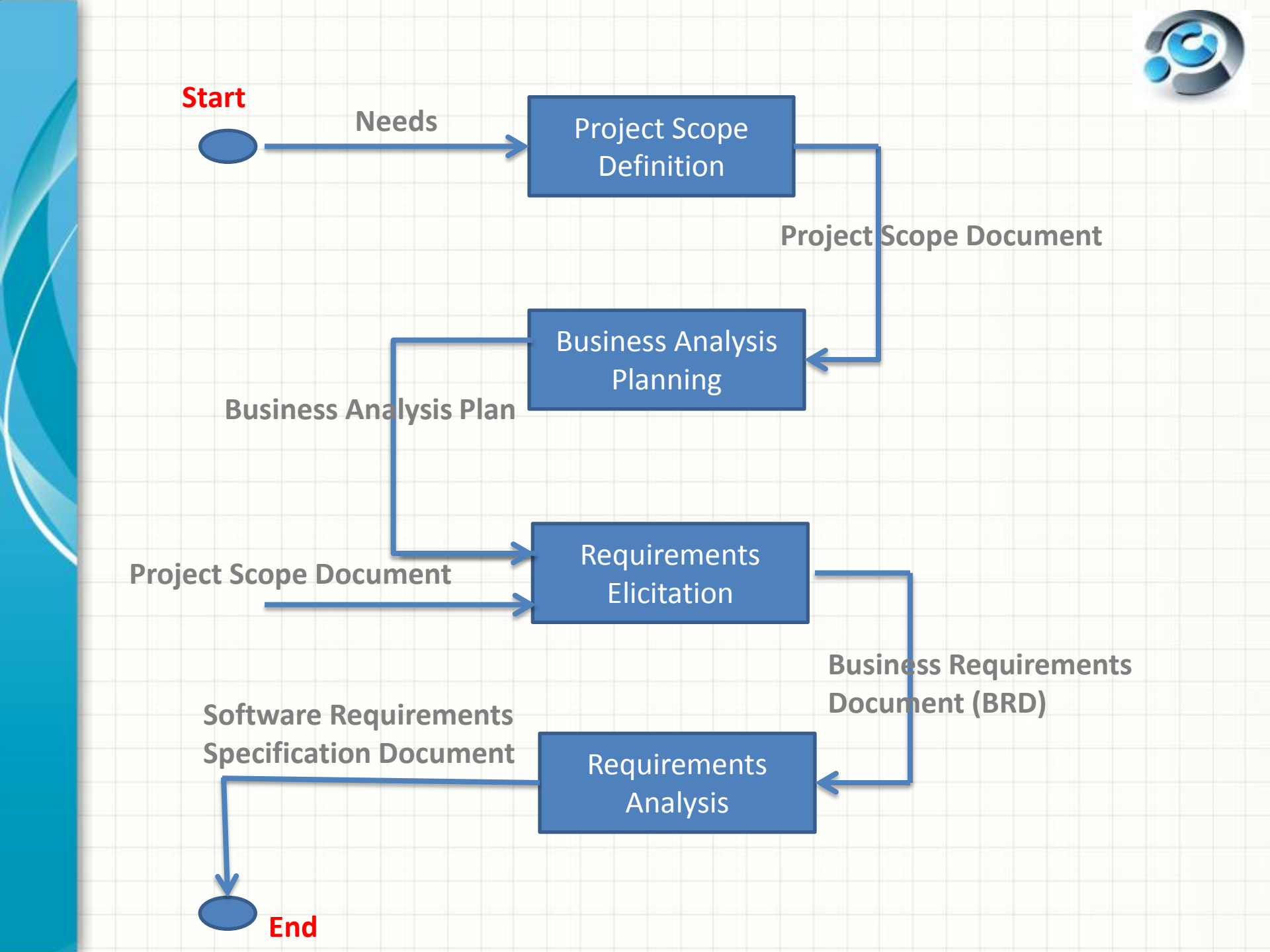
Breaks

- From **12:00** to **12:30**
- From **2:30** to **3:00**

Agenda

1- Introduction to Business Analysis
2- Project Scope Definition
3- Business Analysis Planning
4- Requirements Elicitation
5- Business Requirements Document
6- Requirements Analysis
7- Software Requirements Specification Document
8- Requirements Management & Communication
   - Requirements Verification & Validation
   - Requirements Traceability
9- Business Analyst Required Competencies


Start
Needs
Project Scope Definition
Project Scope Document
Business Analysis Planning
Business Analysis Plan
Project Scope Document
Requirements Elicitation
Business Requirements Document (BRD)
Software Requirements Specification Document
Requirements Analysis
End

1. Introduction to Business Analysis

1.1 What is Business Analysis

1.2 Who is the Business Analyst

1.3 Business Analyst Roles

1.4 BA Importance

1.5 BA Challenges

1.6 SDLC Models

1.7 BA Role in SDLC

1.1 What is Business Analysis

Business analysis is the discipline of identifying solutions for business problems.

Business Analysis is the set of tasks, knowledge and techniques required to identify business needs and determine solutions to business problems.

Solution often include a system development component , but it may also contain process improvement , organizational change , strategic planning or policy development.

1.1 What is Business Analysis

Business Analysis Involves:

- Identification of business problems and opportunities
- Elicitation of needs and constraints from stakeholders
- Analysis of stakeholder needs to define requirements for a solution
- Assessment and validation of potential and actual solutions
- Management of the "product" or requirements scope

1.2 Who is Business Analyst

Business analyst works as a liaison among stakeholders in order to elicit , analyze , document , communicate and validate requirements for changes in business processes , policies and information systems.

In other words, the Business Analyst acts as a bridge between business Subject Matter Experts (SME's) who have a business problem or opportunity and technology people who know how to create solutions for business problems.

1.2 Who is Business Analyst

BA is a person who can speak to the users, business people, development team, testers and architects each with their own language to bridge the gap between all stakeholders.

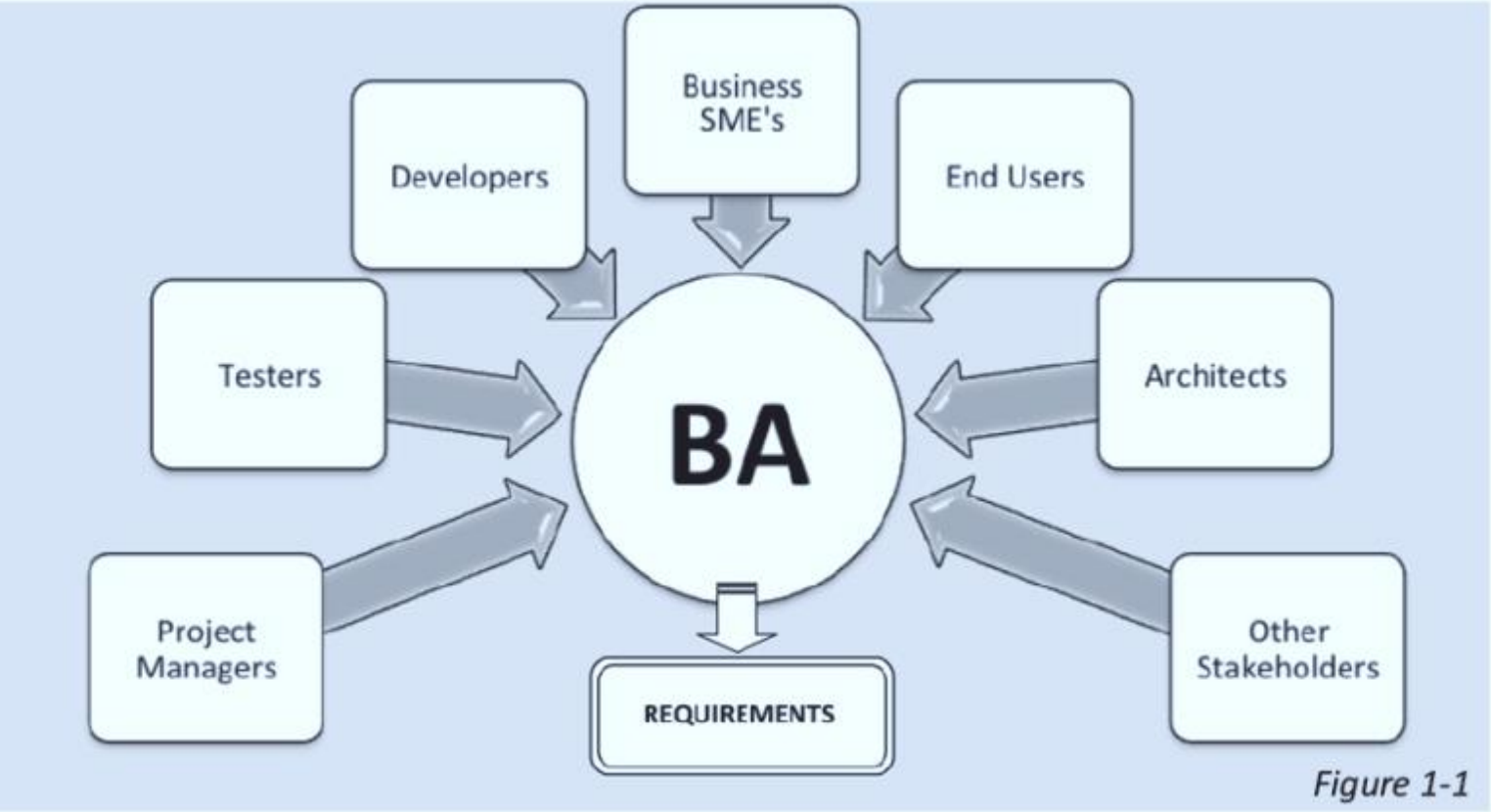


Figure 1-1

1.3 Business Analyst Roles

- Business Analyst
- Business Process Analyst
- IT Business Analyst
- Requirements Engineer
- Business Systems Analyst
- System Analyst
- Data Analyst
- Functional Architect
- Usability/UX Analyst

1.3.1 Business Analyst

- Business focused
- Domain specific knowledge
- Solves operational problems
- Solves business process problems

1.3.2 IT Business Analyst

- Focused on requirements
- Solves problems with IT solutions
- Bridge between business and IT
- Performs requirements analysis

1.3.3 Systems Analyst

- Takes requirements as inputs
- Creates functional specifications
- Specifies "how" a system will do the "what“
- Interfaces directly with the developers

1.3.4 Our Analyst

BA Vs. PM

Role of Project Manager

- Usually the first person assigned to a project
- Responsible for planning the project and ensuring the team follows the plan
- Manages changes, handles problems, and keeps the project moving
- Manages people, money, risk, and project scope
- Chief communicator of good or bad news to the sponsor and management
- Helps clear obstacles

Role of Business Analyst

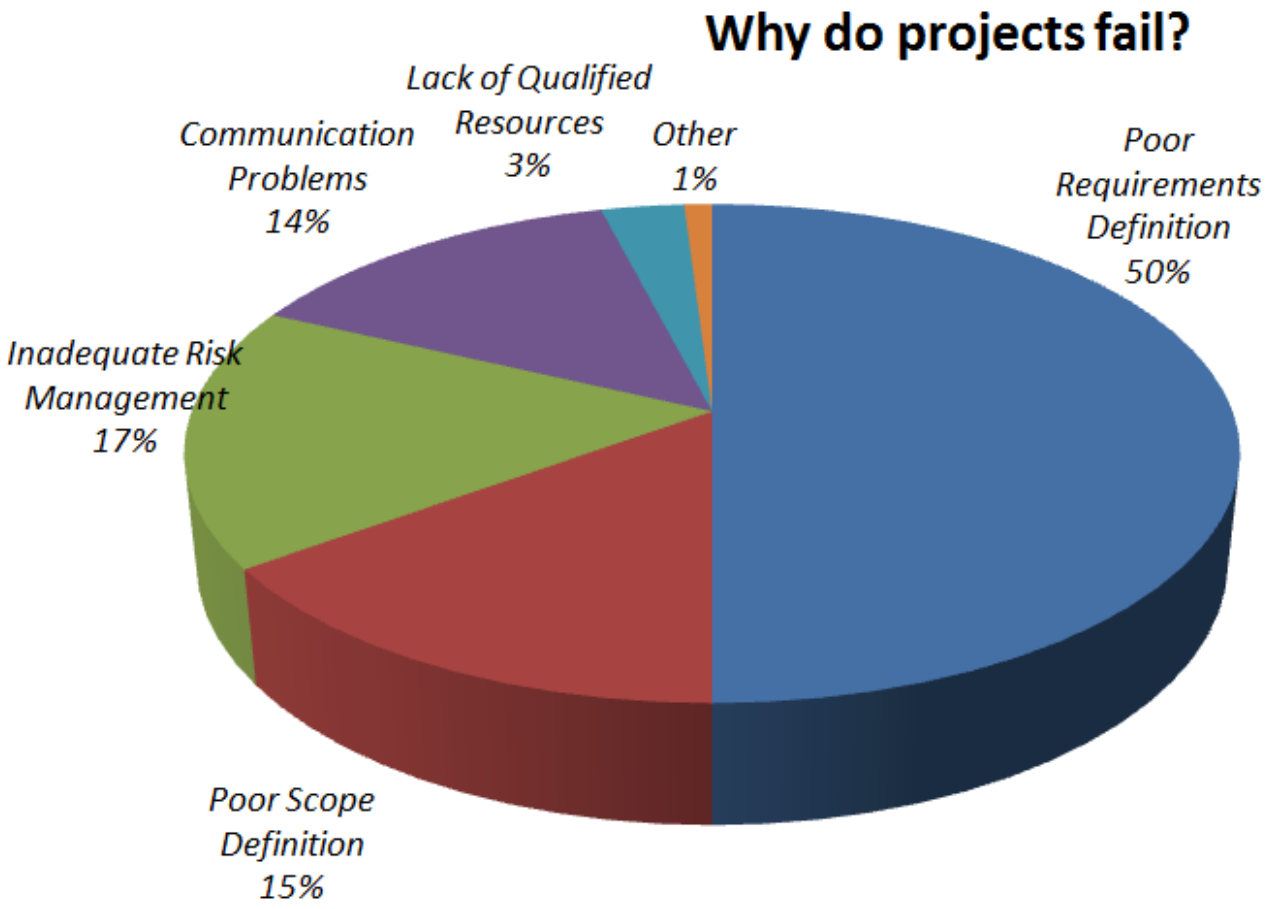
- Usually assigned to a project after it has started
- Responsible for bridging the gap between the business and IT
- Learn the business needs and environment in detail
- Essentially the architect of effective business systems

Discussion

Most project failures are due to incomplete/inaccurate requirements

What do you think are the other main causes of project failure?

Why Projects Fail



Source: ESI International survey of 2000 business professionals, 2005

1.4 BA Importance

Key Benefits:

- **Implement solution that meets business needs**
- **Increase the ability of business to adapt quickly to change**
- **Align business and IT**
- **Present one face to the business (customer)**
- **Increase business value**
- **Reduce risk , complexity , redundancy & support complexity**

1.5 Business Analysis Challenges

A poor requirements process is a project risk

– If customers/end-users are not involved you will deliver the wrong product

– If development are not monitored you will receive the wrong product

– Uncontrolled change (“feature creep”) produces schedule slippage and brittle software with low quality

– Ambiguous or vague requirements lead to rework, or inconsistent code that will break when the customer uses it

1.5 Business Analysis Challenges

- Lack of advance planning for projects and initiatives
- Lack of formal training for business analysts
- Inconsistent approach to business analysis
- Impatience with the analysis/design/planning process
- Gap between what business analysts are assigned to do and what they should be assigned to do

1.5 Successful BA Should:

- Ask the right questions to understand the process before committing to a solution
- Ask more questions until you reach the root cause
- Communicate effectively and efficiently
- Apply new techniques, methods, and processes to perform your job
- Suggest new approaches of executing business processes in the organization
- Analyze instead of accept
- See the big picture to add value to the organization as a whole

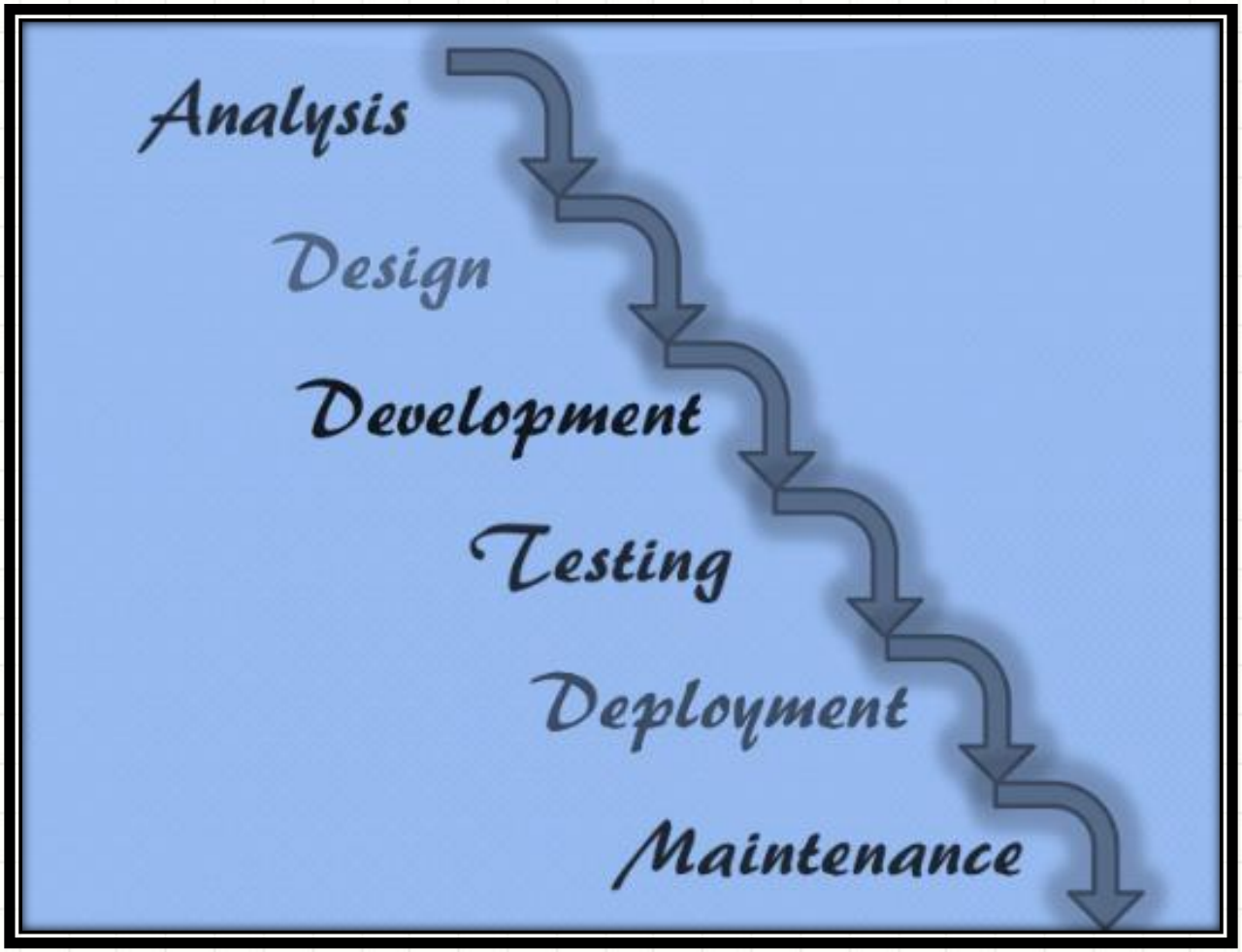
1.5 What Makes a Great BA

- Be an outstanding communicator
- Understand general business concepts and be able to advocate for the business
- Have an understanding of technology
- Enjoy very detailed research and recording
- Be skilled at organizing and managing large amounts of information in various formats
- Be flexible, be naturally curious, and enjoy learning new business domains
- Understand the software development process
- Be able to work through complex business problems and determine the root cause of a problem
- Come prepared with a tool kit of techniques to elicit, analyze, and present excellent requirements

1.6 Common SDLC Models

- Waterfall
- Spiral/Iterative
- Agile

1.6 Waterfall Model



1.6 Waterfall Model

- Oldest and most well-known SDLC model
- Follows a sequential step-by-step process from requirements analysis to maintenance.
- Systems that have well-defined and understood requirements are a good fit for the Waterfall Model

1.6 Waterfall Model Strengths

- Easy to understand, easy to use
- Provides structure to inexperienced staff
- Milestones are well understood
- Sets requirements stability
- Good for management control (plan, staff, track)
- Works well when quality is more important than cost or schedule

1.6 Waterfall Model Weaknesses

- All requirements must be fully specified upfront
- Deliverables created for each phase are considered frozen – inhibits flexibility
- Can give a false impression of progress
- Does not reflect problem-solving nature of software development – iterations of phases
- Integration is one big bang at the end
- Little opportunity for customer to preview the system (until it may be too late)

1.6 When to Use Waterfall Model

- Requirements are very well known
- Product definition is stable
- Technology is understood
- New version of an existing product
- Porting an existing product to a new platform.

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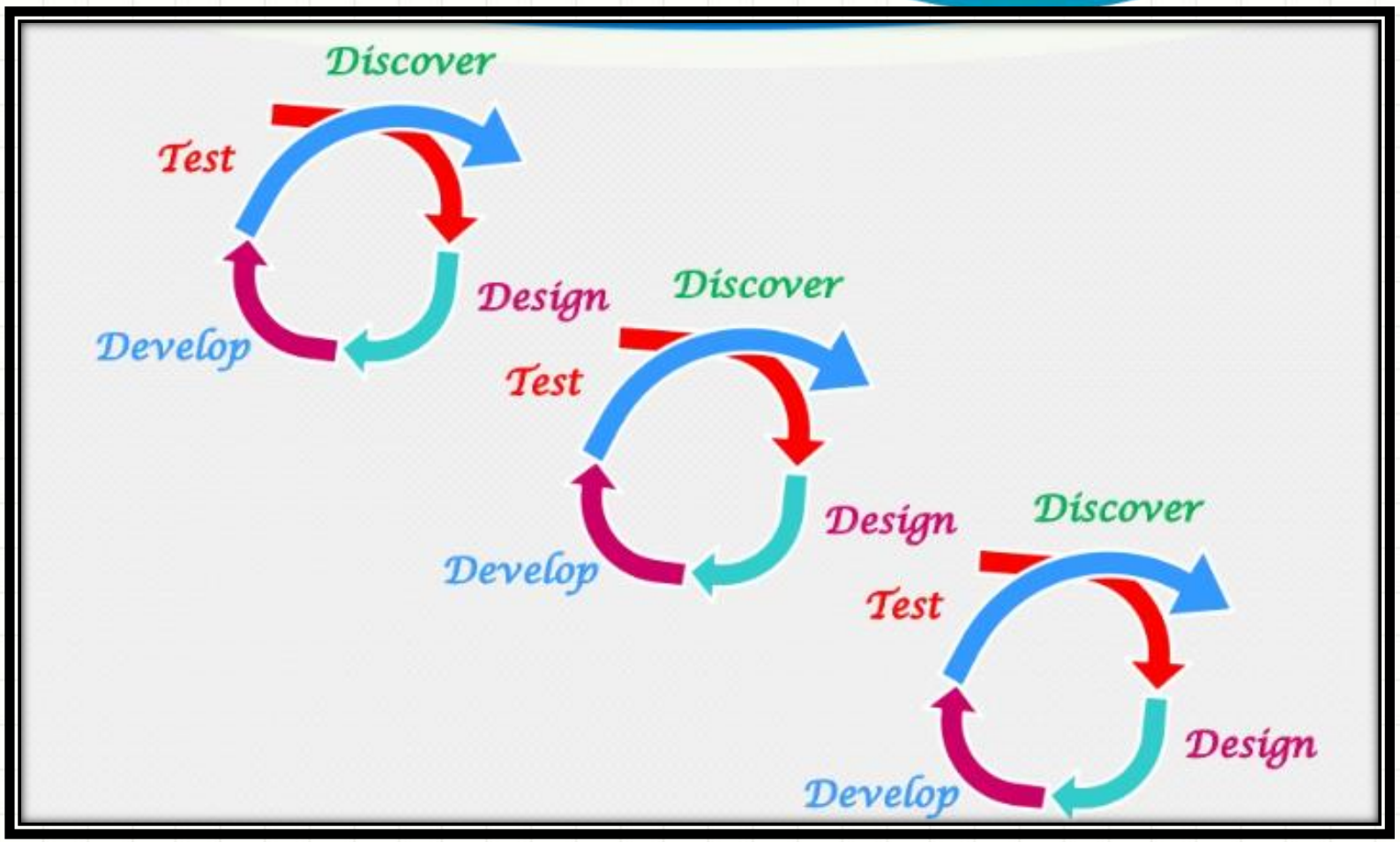


1.6 Agile Model

- Speed up or bypass one or more life cycle phases
- Usually less formal and reduced scope
- Used for time-critical applications
- Used in organizations that employ disciplined methods

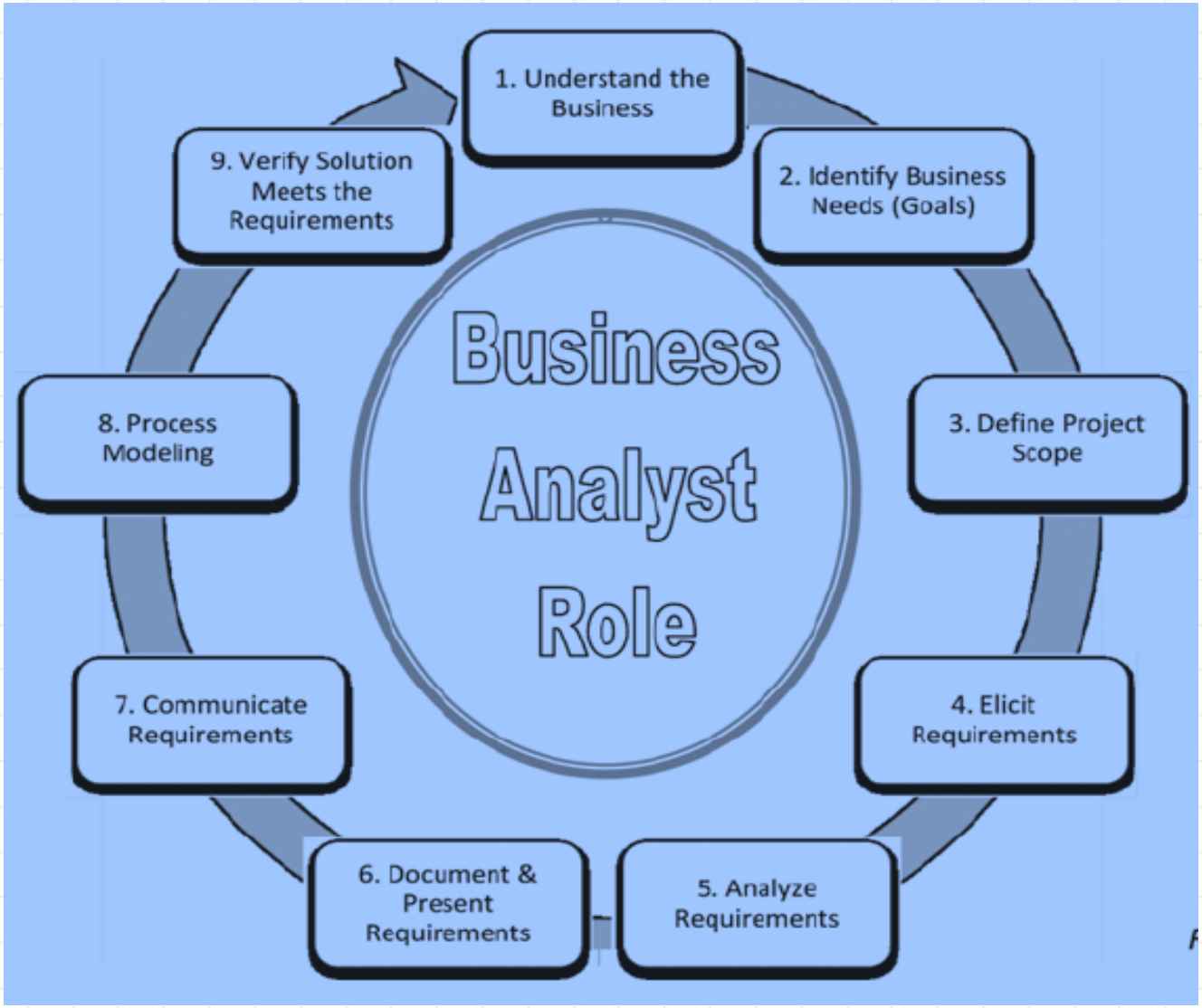
1.6 Agile Model Strengths

- Deliver a working product faster than conventional linear development model
- Customer feedback at every stage ensures that the end deliverable satisfies their expectations
- No guesswork between the development team and the customer, as there is face to face communication and continuous inputs from the client

1.6 Agile Model Weaknesses

- For larger projects, it is difficult to judge the efforts and the time required for the project in the SDLC.
- Since the requirements are ever changing, there is hardly any emphasis, which is laid on designing and documentation. Therefore, chances of the project going off the track easily are much more

1.6 BA Role is SDLC



1.6 BA Role is SDLC 2

1.6.1 Understand the Business

1.6.2 Define the Business Need

1.6.3 Define the Project Scope

1.6.4 Elicit Requirements

1.6.5 Analyze Requirements

1.6.6 Process Modeling

1.6.7 Document & Present Requirements

1.6.8 Requirements Communication

1.6.9 Requirements Verification

1.6.1 Understand the Business

- **This is the first step in delivering a solution to business problem .**
- **It involves studying the products or services provided by the organization.**

1.6.2 Identify the Business Needs

- **The Business needs are the goals and objectives of the project.**
- **In this process the BA communicates with the customers and end users to gather their needs and understand why they want this projects**

1.6.3 Define the Project Scope

- **Before the BA can begin to elicit the actual requirements , he/she needs to ensure that the high level scope of the project Is clear and complete**

- **Project Scope includes high-level description of the project goals , risks, budget , schedule ,assumptions ,business processes included in the scope & high level system features**

1.6.4 Elicit Requirements

This process is the main role of a business analyst.

It is absolutely critical that the BA elicits the business requirements accurately to define a software solution.

"60%-80% of project failures can be attributed directly to poor requirements gathering, analysis and management"
(Meta Group)

1.6.5 Analyze Requirements

- After requirements are gathered , they need to be organized , verified , detailed and validated using an iterative approach
- As each requirement is analyzed , it generally leads to further questions
- This requires the analyst to probe further until all relevant issues are cleared

1.6.6 Process Modeling

- It is creating diagrammatic flows of the system that can be used to visualize and document the system components

- Process modeling promotes better understanding of the requirements and it is a very effective way of communicating with stakeholders

- There are various types of UML Diagrams that the BA creates in a project such as :
    - Use case diagrams
    - Sequence diagrams
    - Activity diagrams

1.6.7 Document & Present Requirement

- Now that the requirements have been obtained and analyzed
- The BA had to document this data in an standard and consistent manner that is easily and clearly understood by stakeholders .
- The information is them presented to the business SME's for review and sign off.
- Requirements can be documented and presented in many formats , such as:
    - Requirement Management Plan
    - Business Requirements Document
    - User Cases & Process Flows
    - Detailed Software Requirements Specification Document

1.6.8 Requirements Communicatio

Once the requirements are clearly elicited , analyzed , documented and approved (by customer) , they need to be communicated effectively to the concerned stakeholders (developers , testers, UI Designers , Technical Writers,..)

1.6.9 Requirements Verification

After the project handoff to the technical team , the business analyst continues to remain involved in order to ensure that the developed software meets the project goals and the product passes quality assurance tests and user acceptance