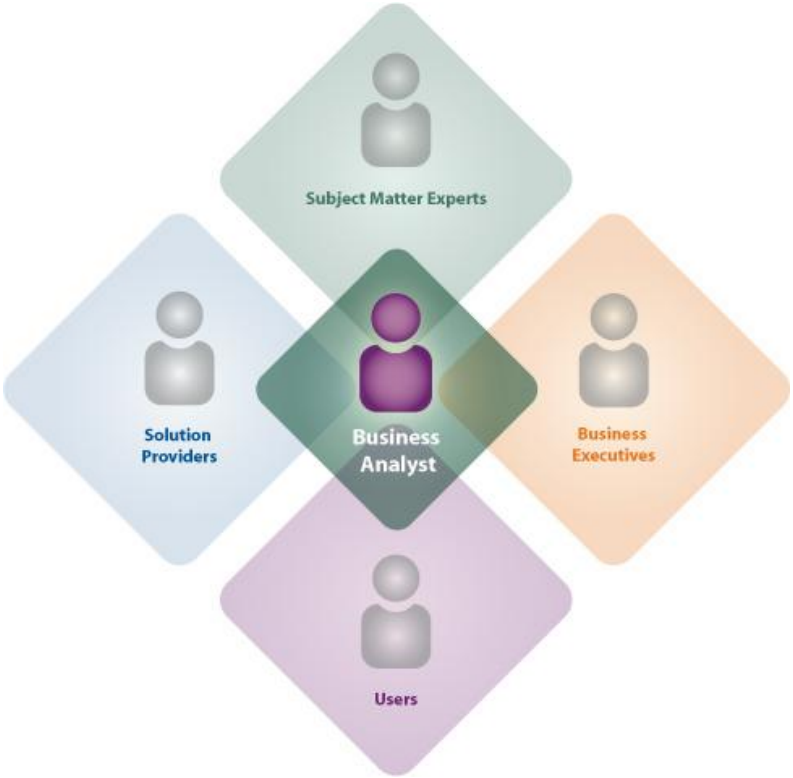
Basics of Business Analysis



A two day course

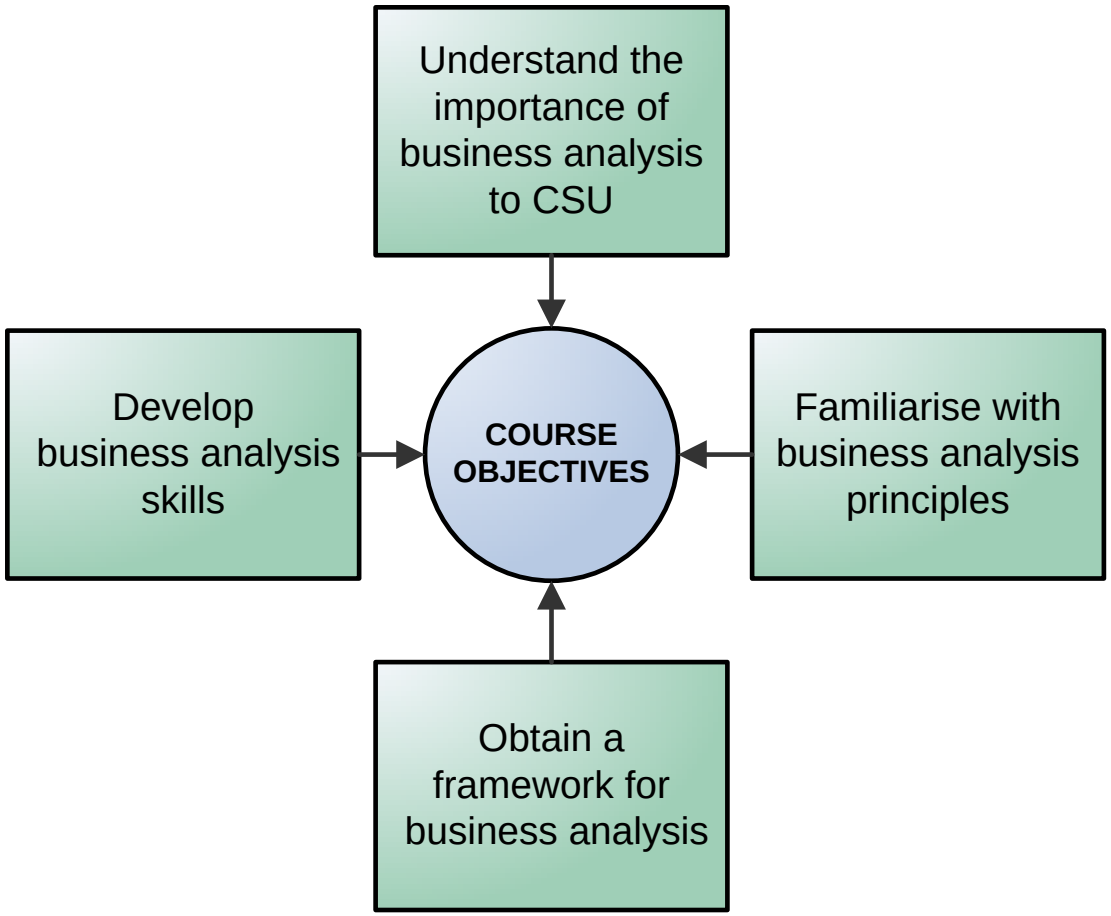
presented by

Haydn Thomas and Lauren Healey

CSU Project Service Centre

April 2008

Course Objectives



Day 1

A/ Introduction – Business Analysis & You

B/ Business Analysis and the CSU Context

C/ Project or Improvement Control

1/ Understanding the Business Need & Strategic Direction

2/ Planning & Coordinating the Requirements development process

3/ Collecting Requirements

4/ Formulating Requirements

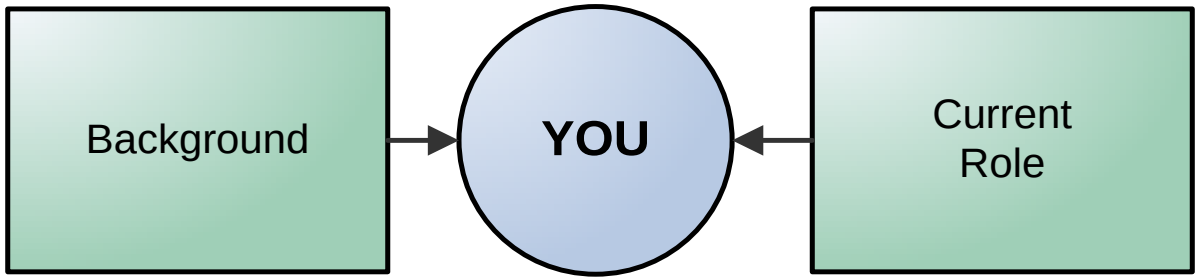
5/ Ensuring Shared Understanding of Requirements

D/ Review & Improve

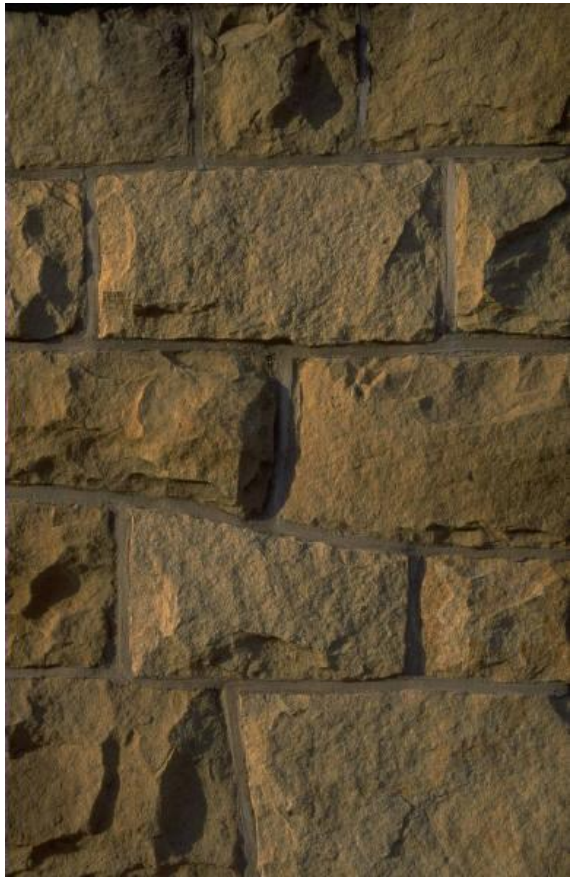
Business Analysis V Business Expertise

- ★ Not required to have expertise in any area
- ★ Lateral thinking – involving the bigger picture
- ★ Apply structured processes
- ★ Subject matter expertise in specific business areas
- ★ Operational focus rather than big picture thinking

Introductions & Expectations



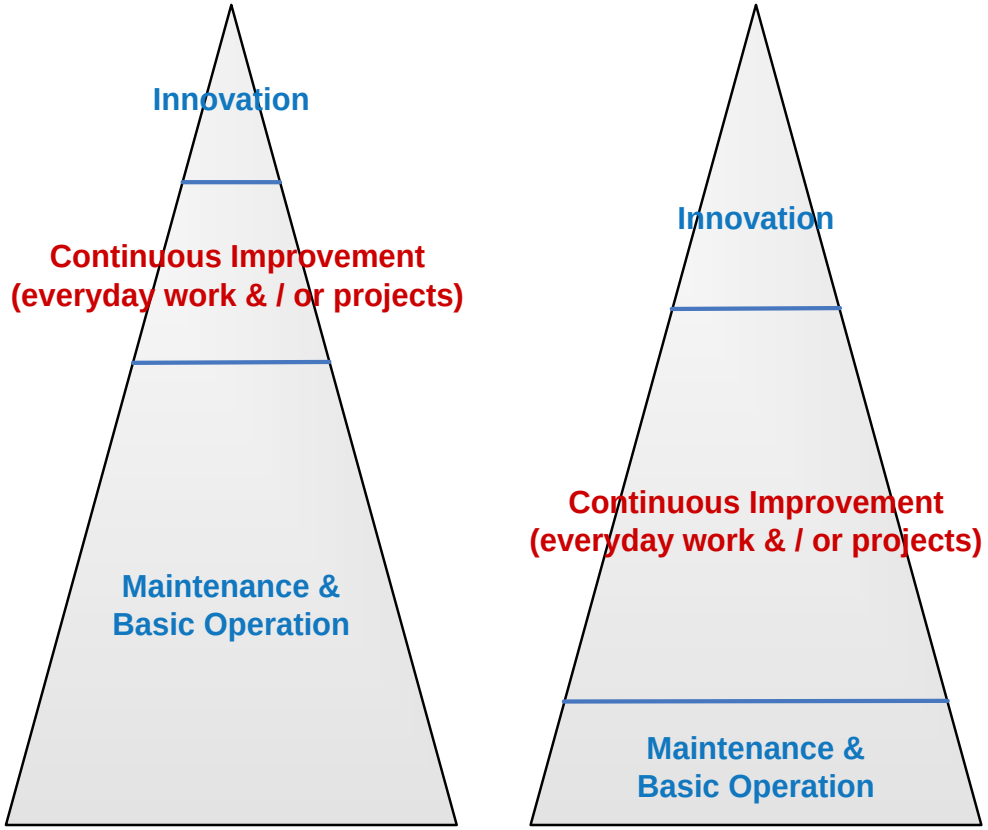
Exercise



1. Business Analysis and the CSU context

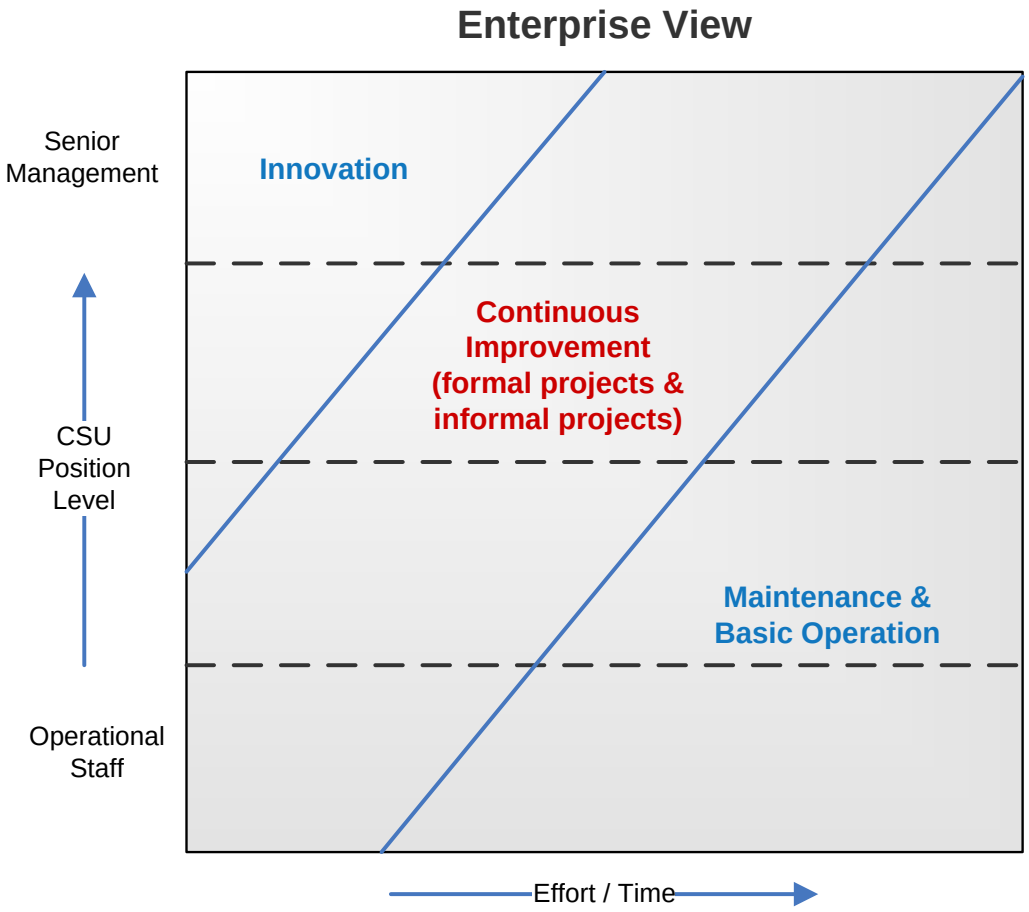
Continuous Improvement at CSU

Examples of individual views



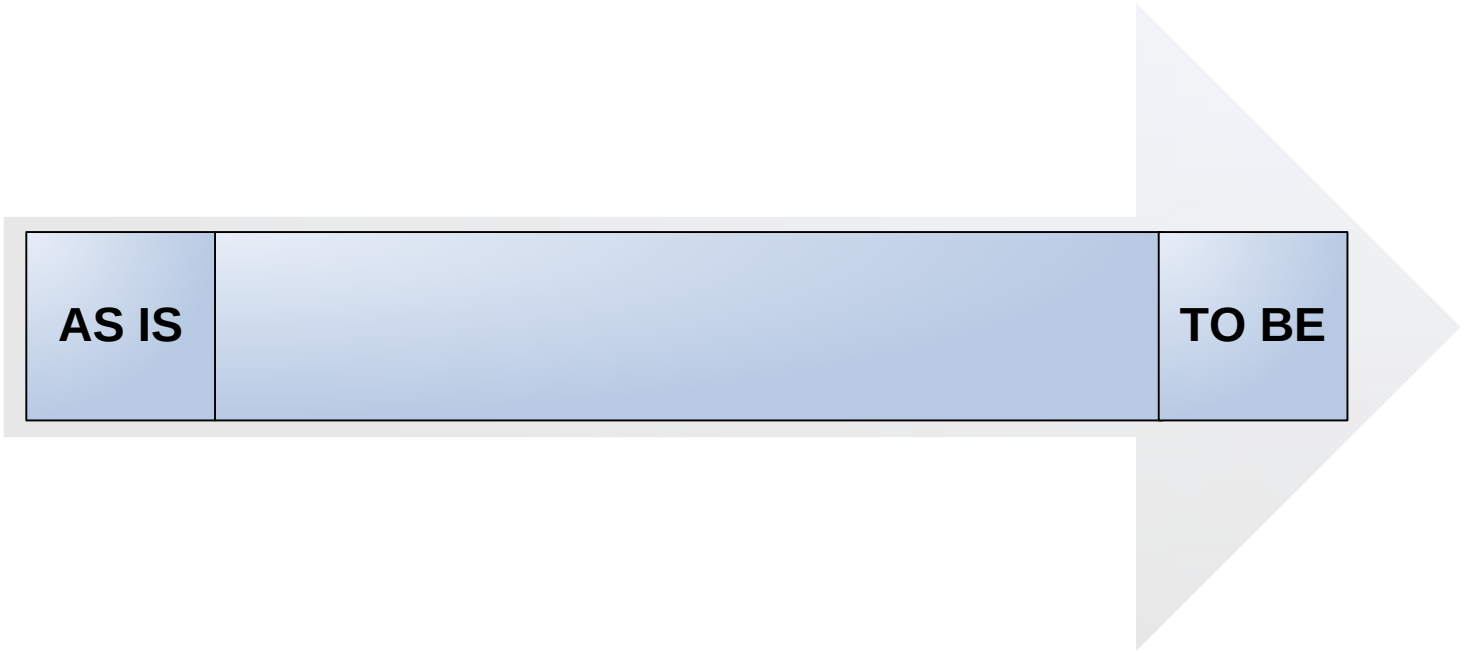
Continuous Improvement at CSU

Example of an enterprise view



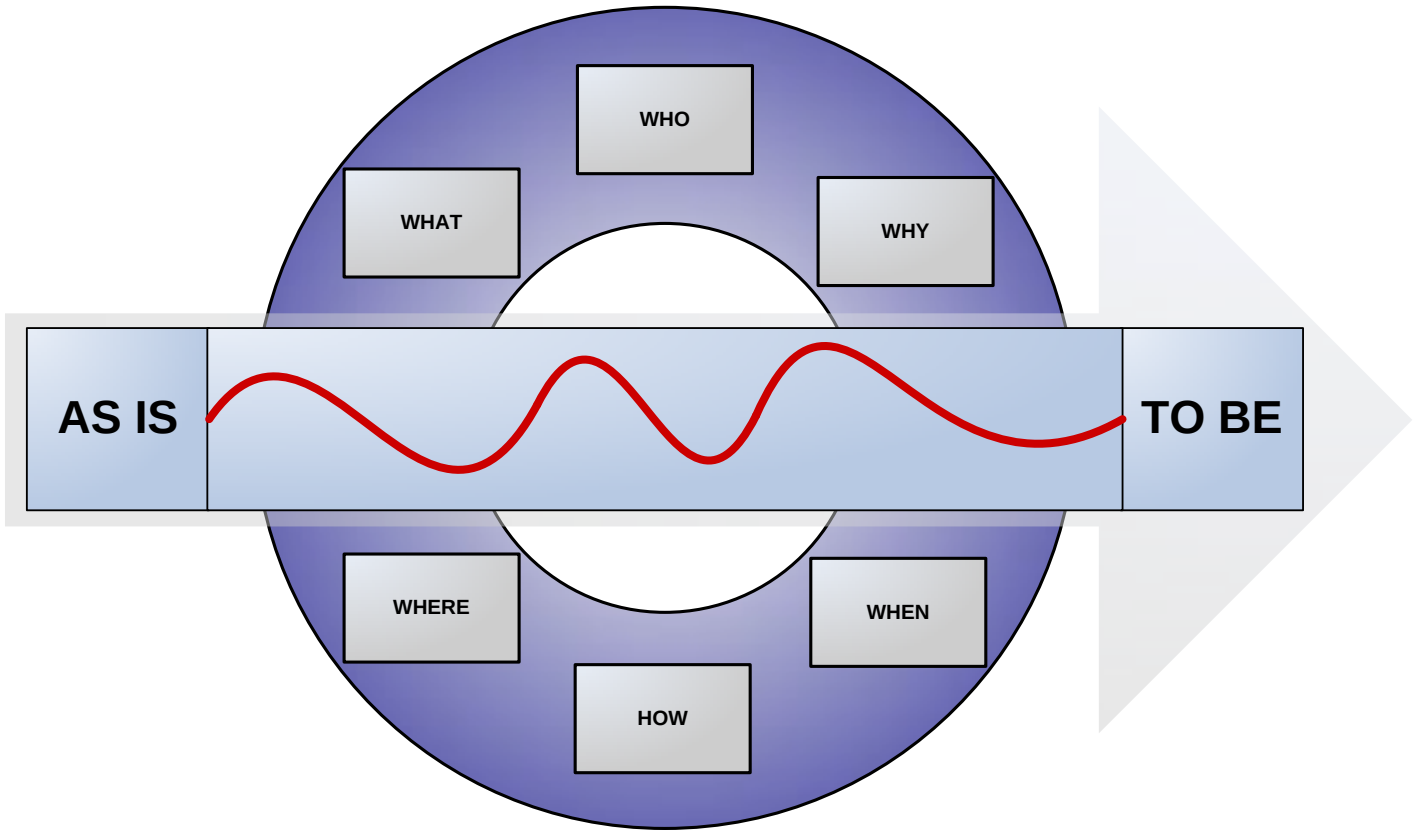
Continuous Improvement at CSU

We all have to get from ‘AS IS’ > ‘TO BE’ somehow...



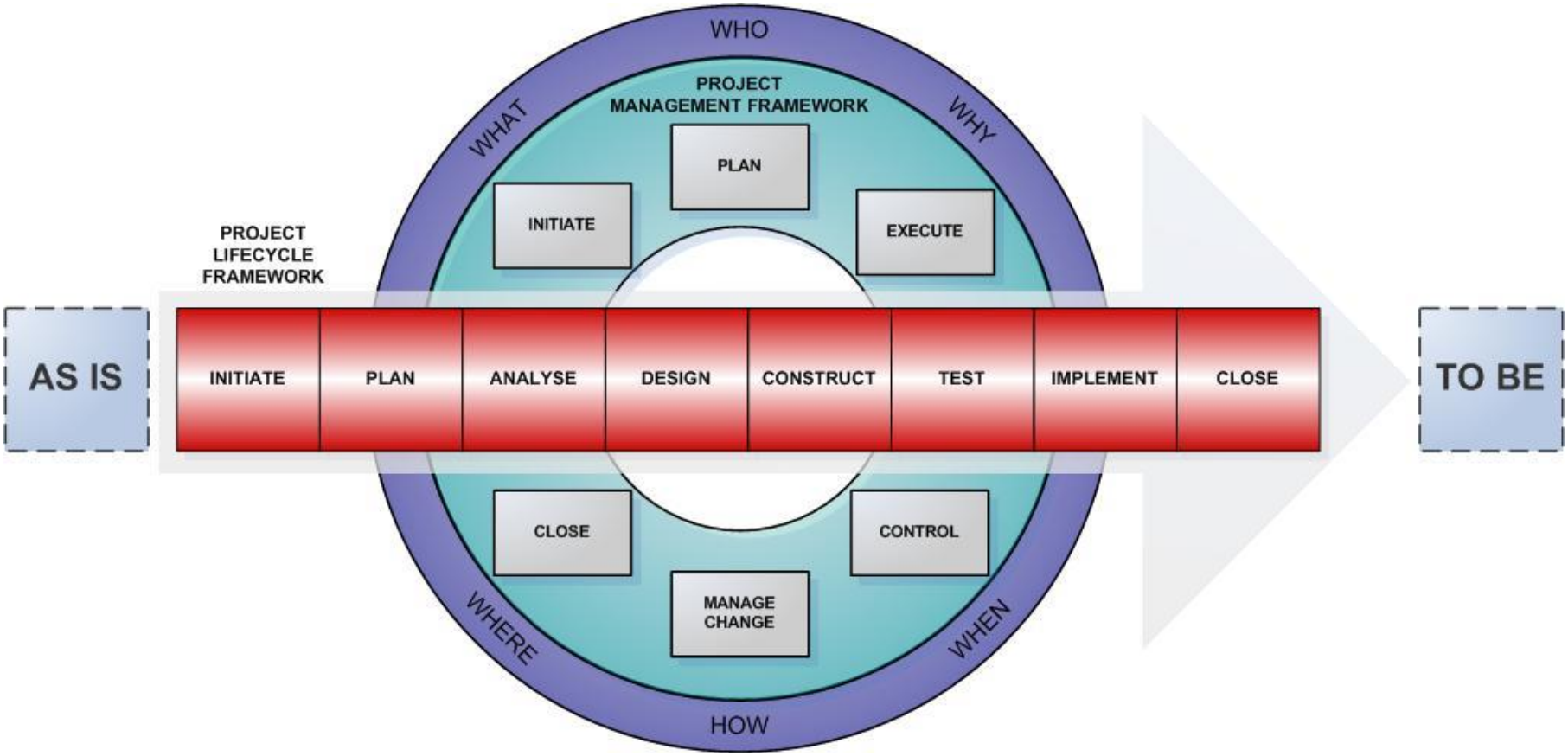
Continuous Improvement at CSU

...and we all need to think about the same things...what, who, why, etc...
...but which path will maximise the quality of the 'TO BE' situation...?

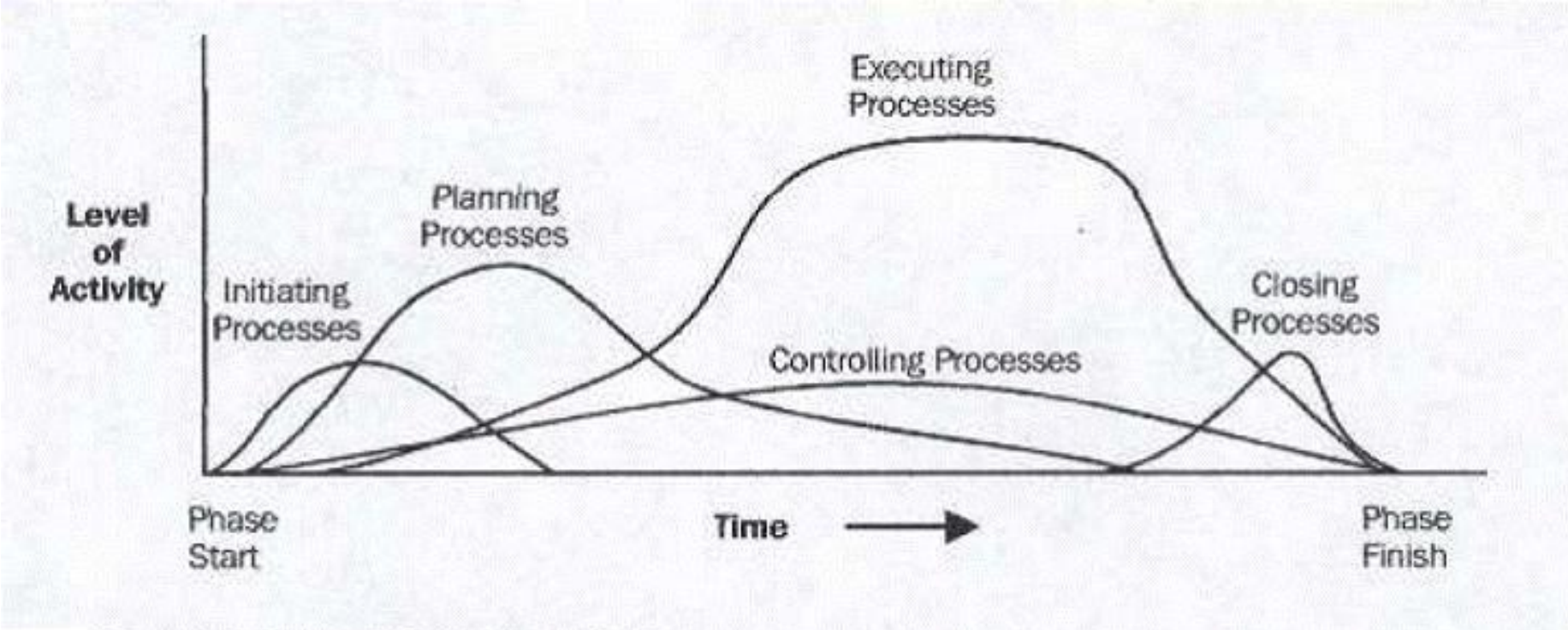


Continuous Improvement at CSU

The CSU Project Service Centre Project Lifecycle / Project Management Framework is an example of a project path to improvement



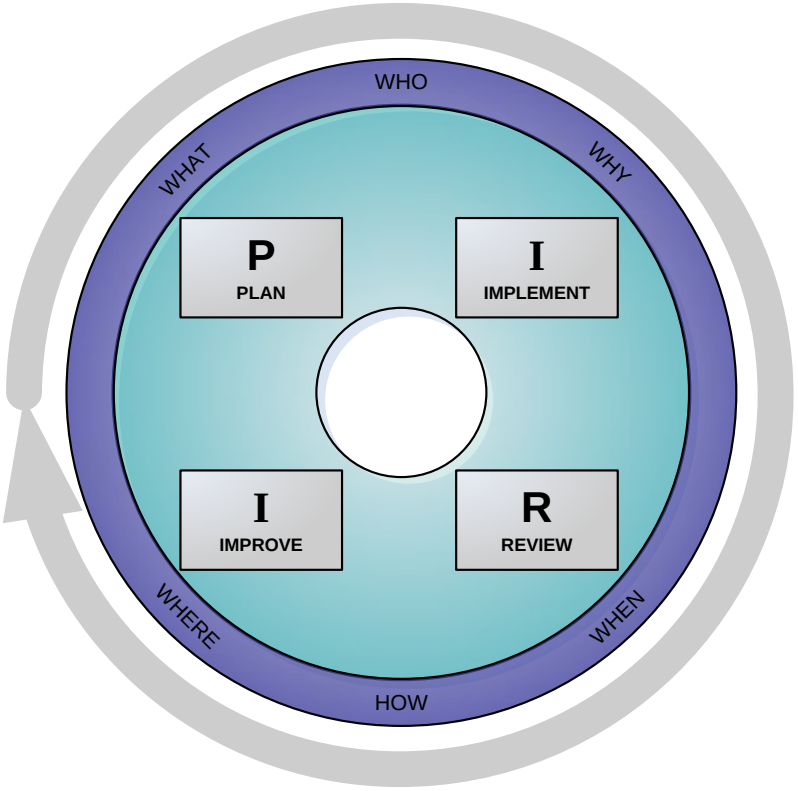
Project Phases & Effort



Overlap of Process Groups in a Phase

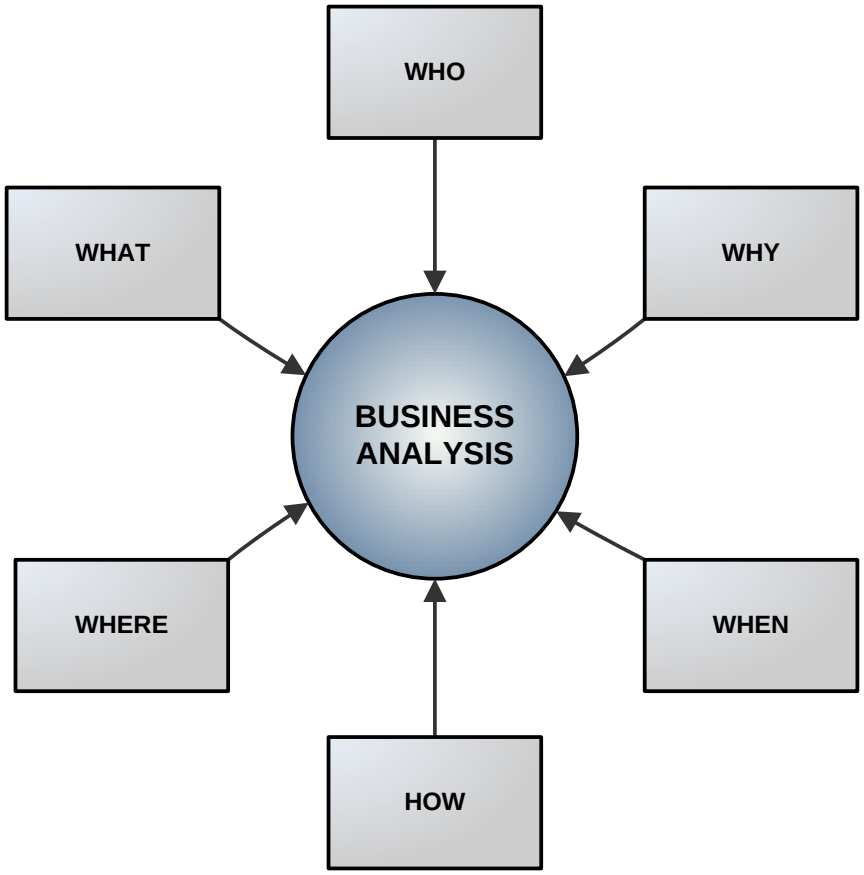
Continuous Improvement at CSU

The Plan Implement Review Improve (PIRI) Cycle is based on a continuous improvement approach to AS IS > TO BE



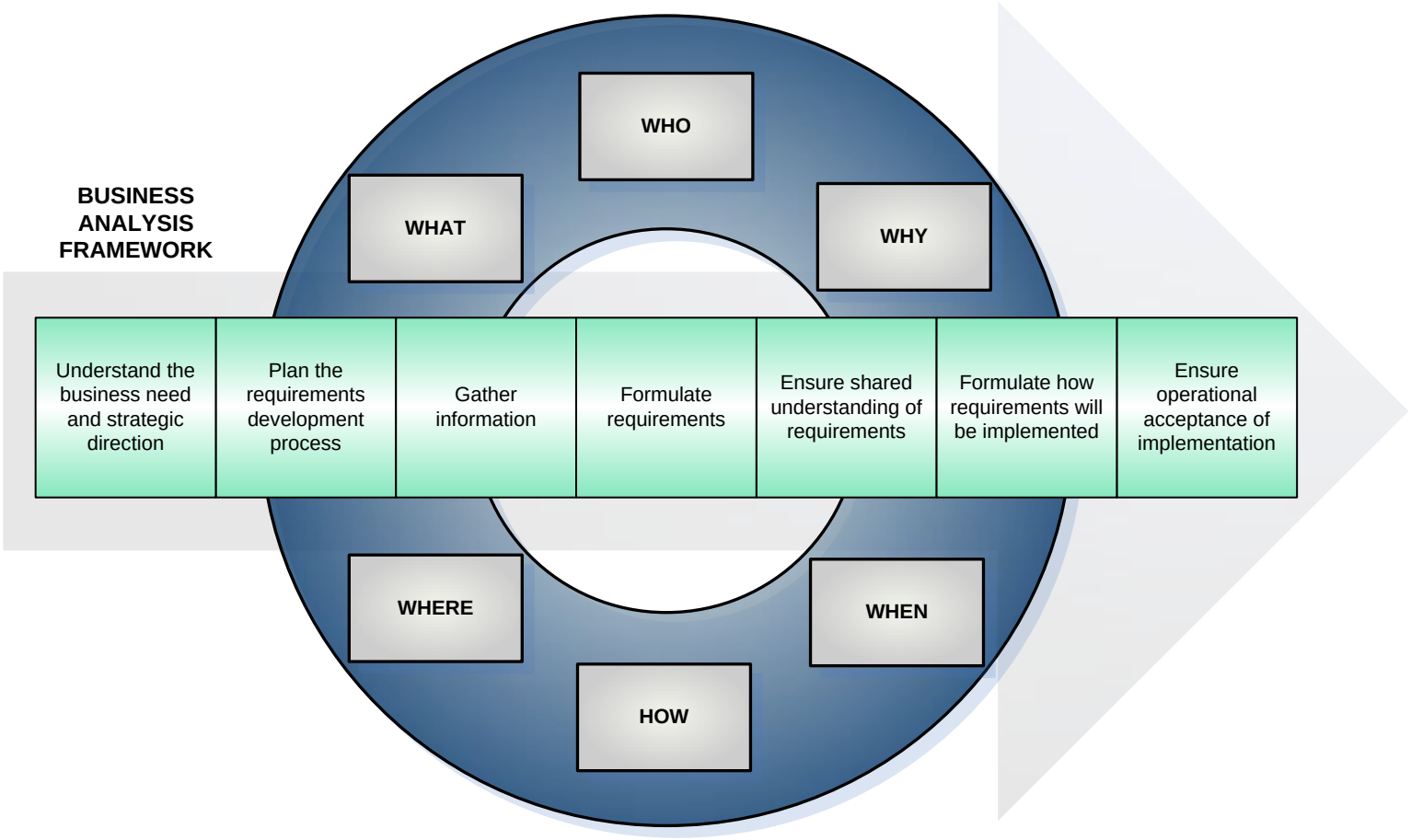
Business Analysis & Continuous Improvement

Business analysis is a mindset that focuses on...

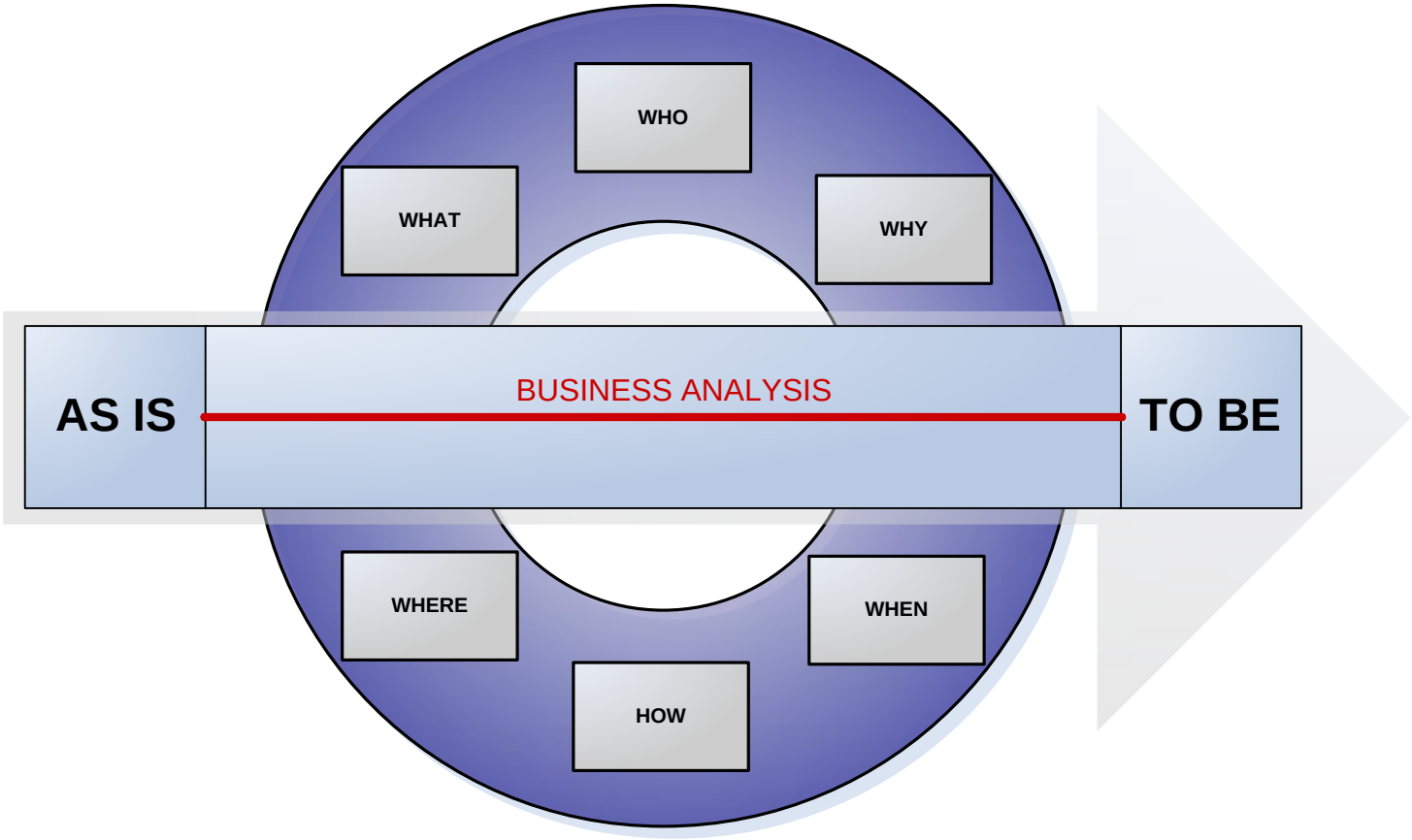


A Business Analysis Framework

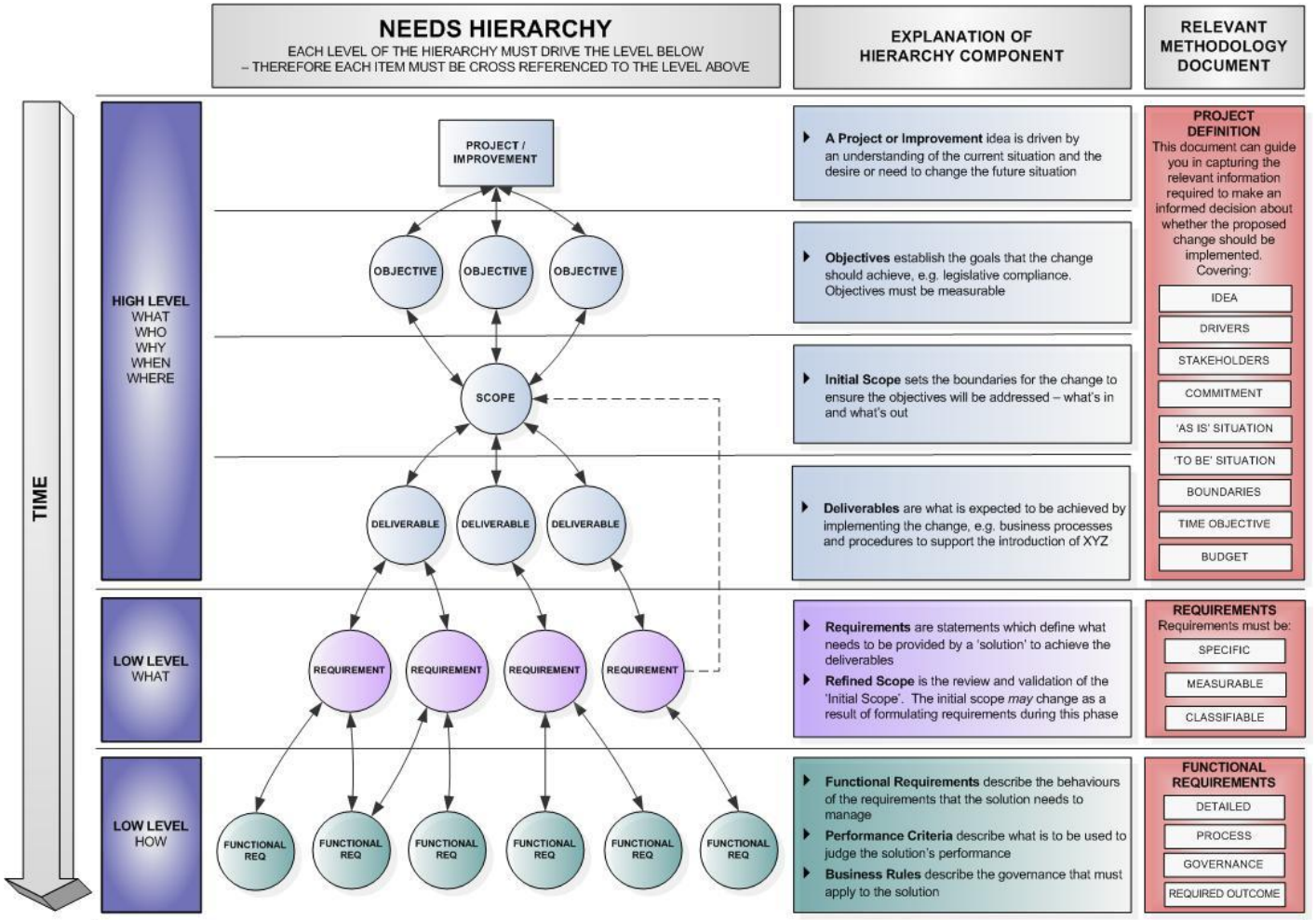
...and involves a set of activities designed to achieve a quality outcome.



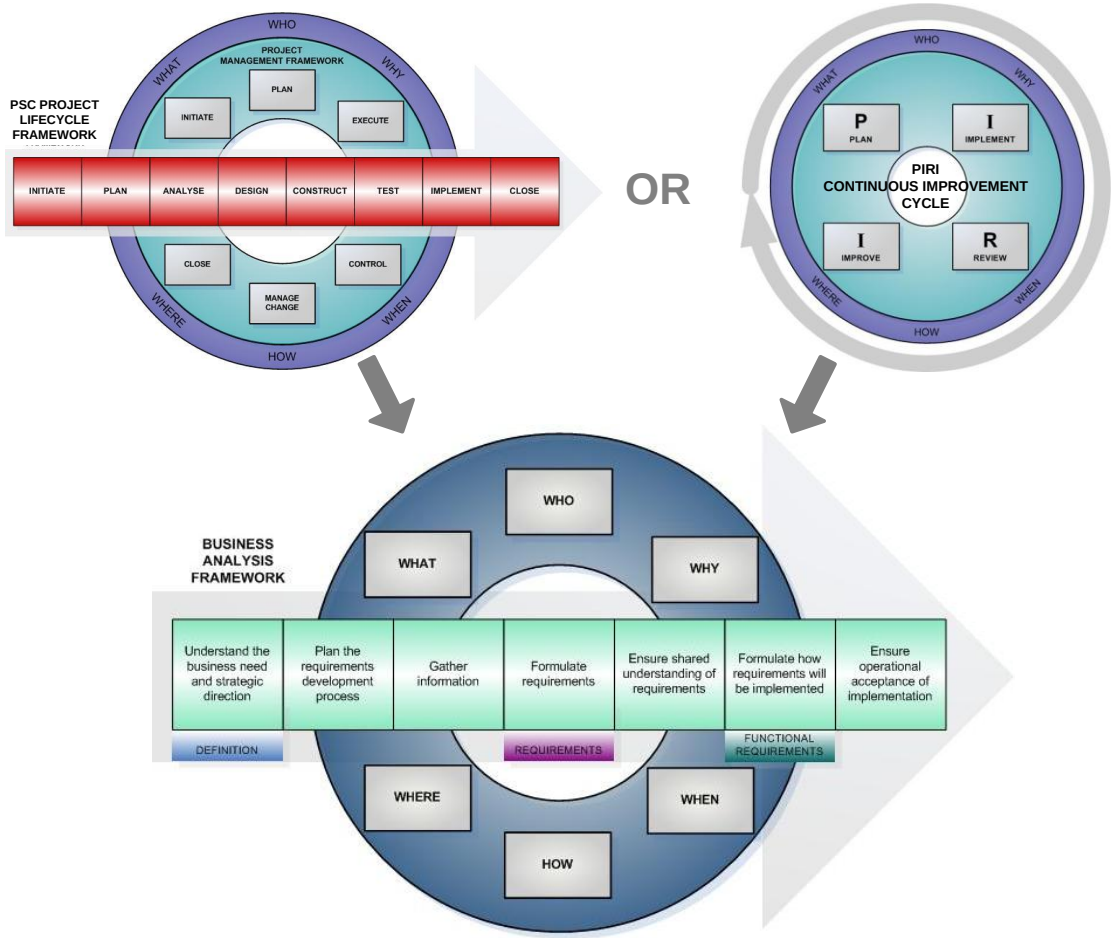
So - in short… Business analysis is the conduit between the requested outputs of a project / improvement and the solution created to address the identified need.



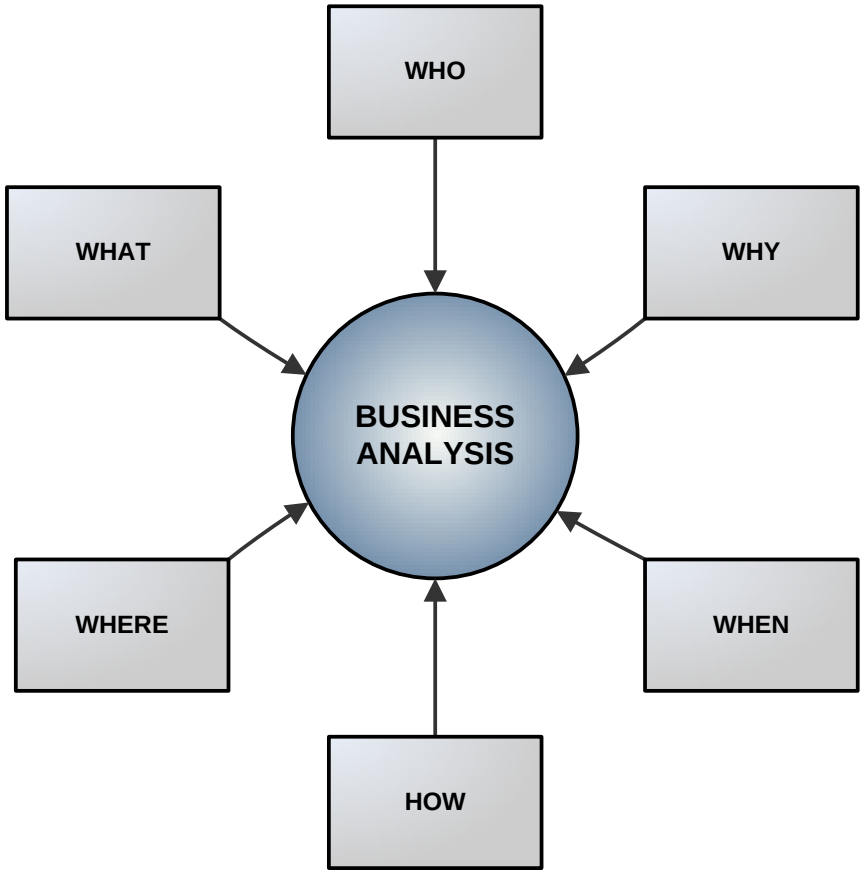
The PSC Needs Hierarchy depicts the relationship between the business needs which business analysis addresses



So – whether a project framework or continuous improvement cycle is used to achieve 'TO BE', it is important that business analysis is undertaken to maximise the quality of the 'TO BE' situation.

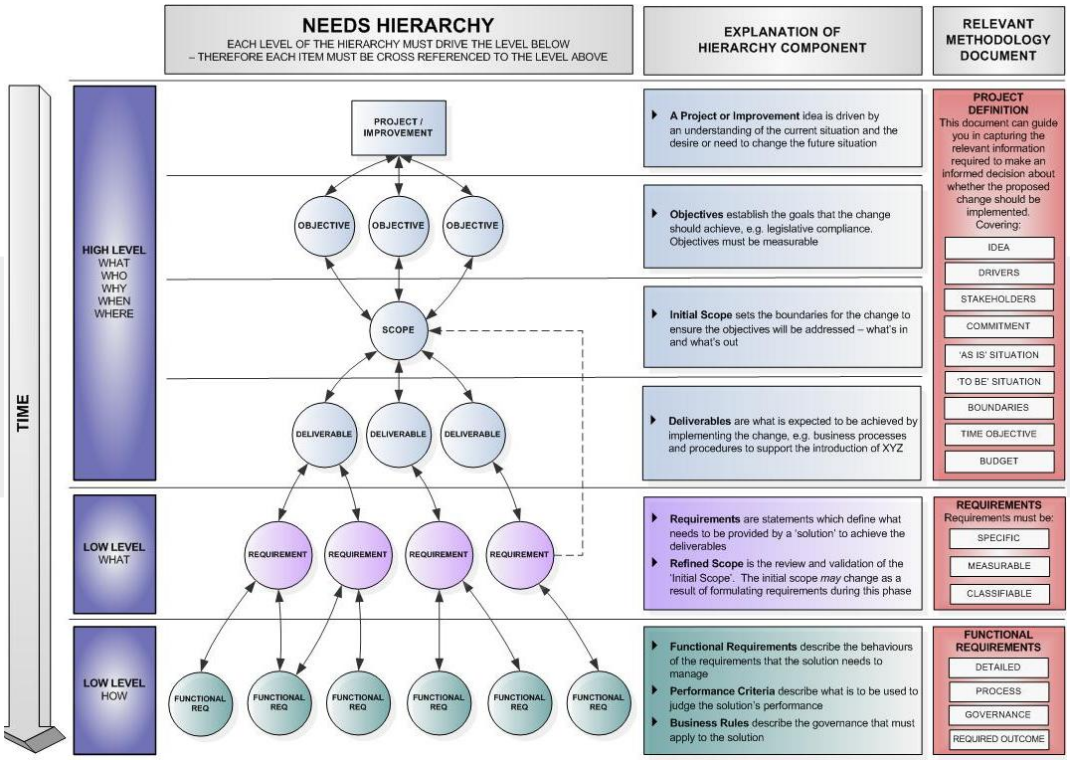


WHAT



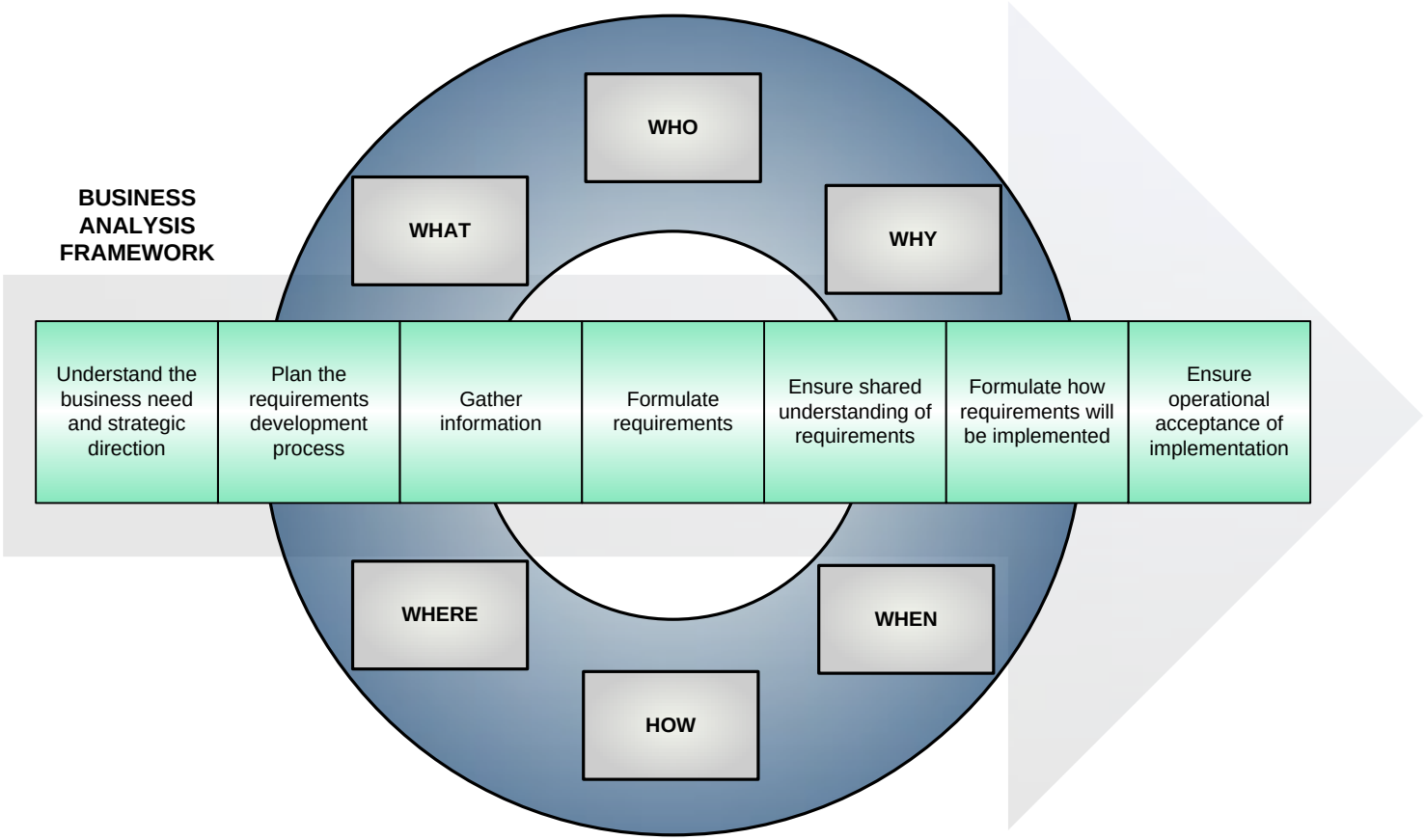
WHY

AS IS



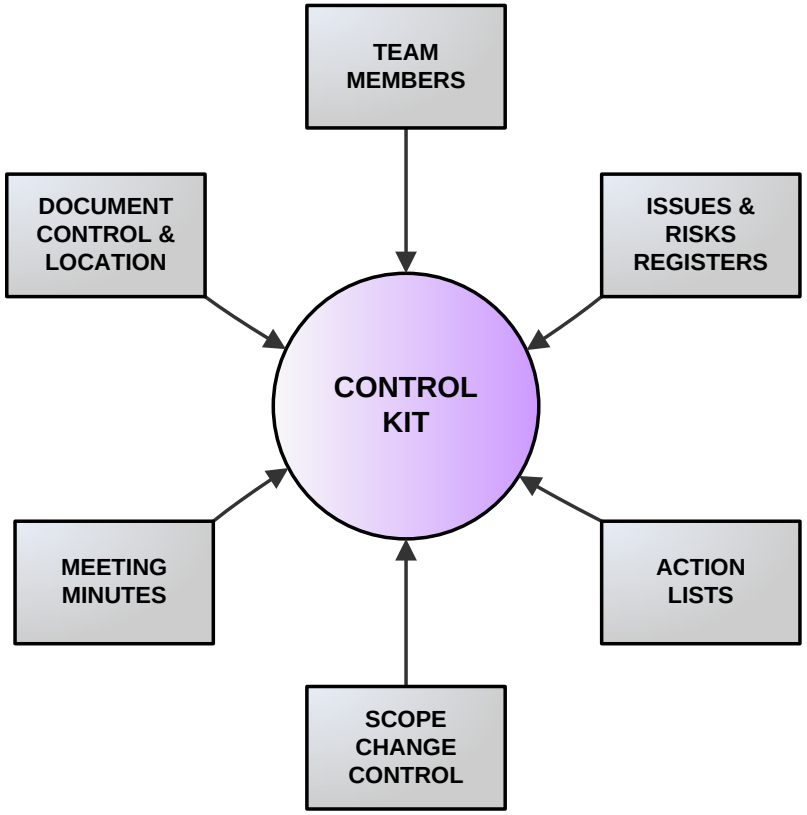
TO BE

HOW


BUSINESS ANALYSIS FRAMEWORK
WHO
WHAT
WHY
Understand the business need and strategic direction
Plan the requirements development process
Gather information
Formulate requirements
Ensure shared understanding of requirements
Formulate how requirements will be implemented
Ensure operational acceptance of implementation
WHERE
WHEN
HOW

B/ Project or Improvement Control

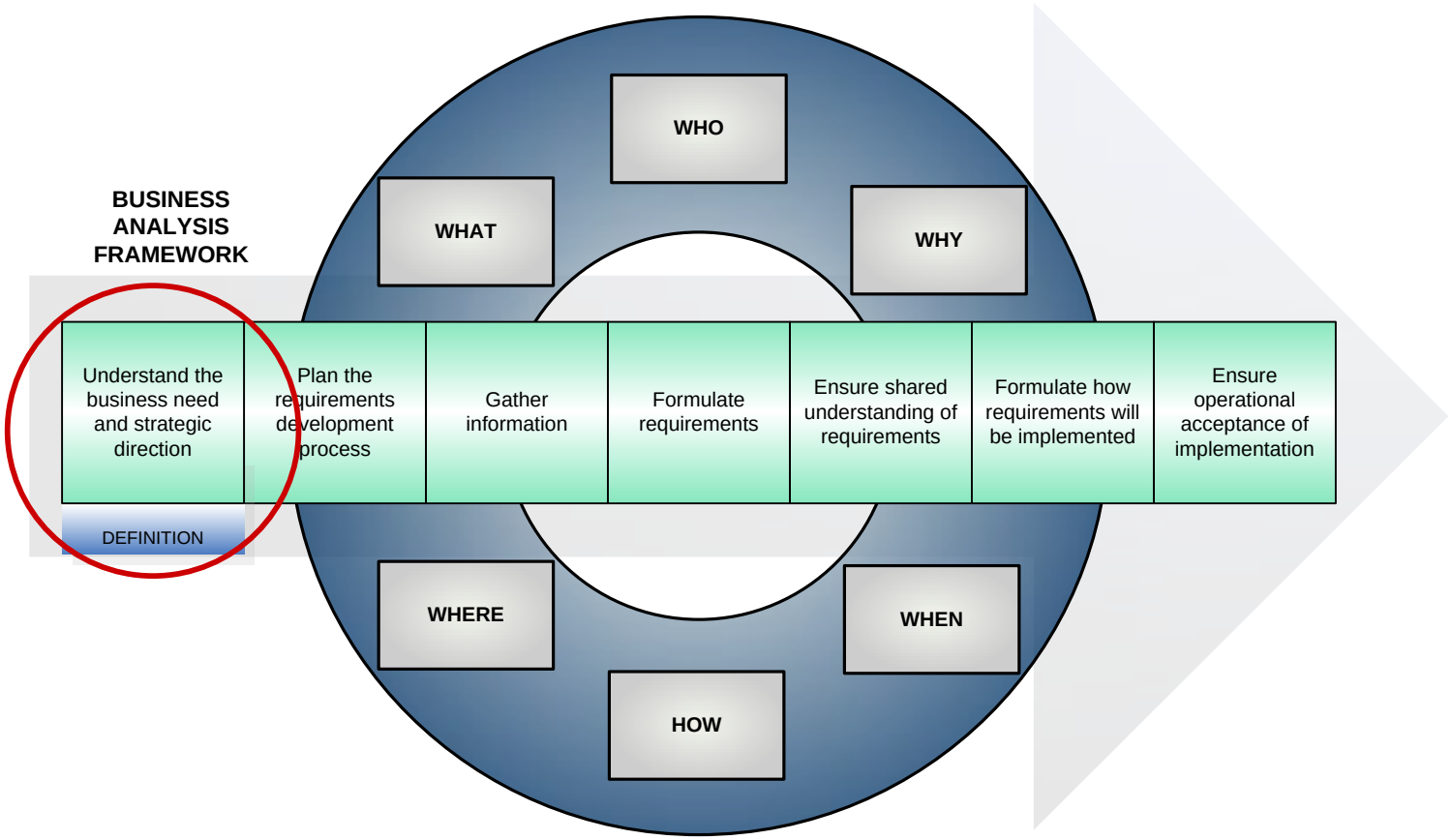
- The Control Kit provides a means of managing the project / improvement
- It also provides team members with a one-stop shop for information



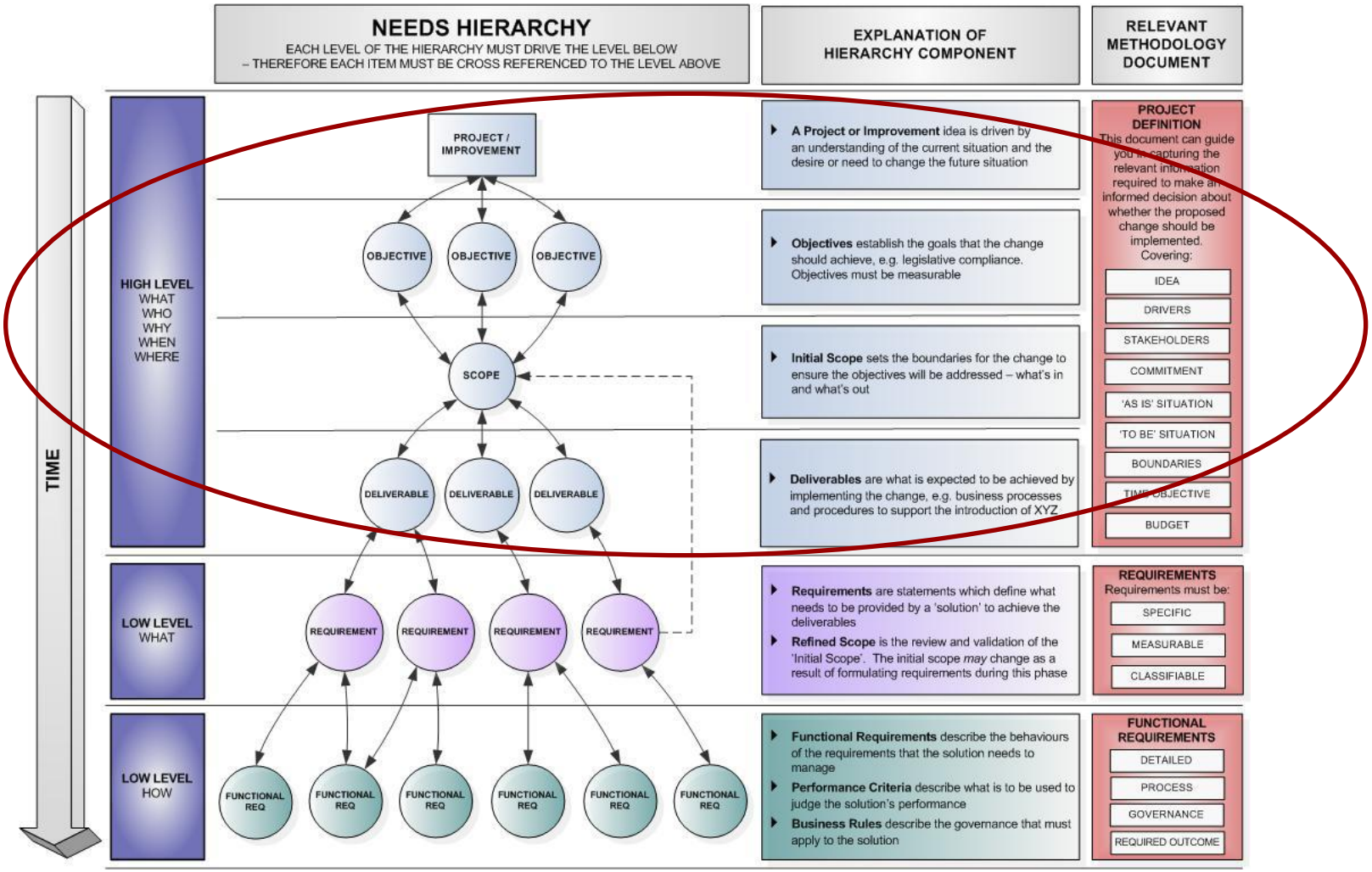
An ISSUE is something that HAS happened AND NEEDS TO BE ADDRESSED

A RISK is something that MAY happen

1/ Understanding the business need and strategic direction

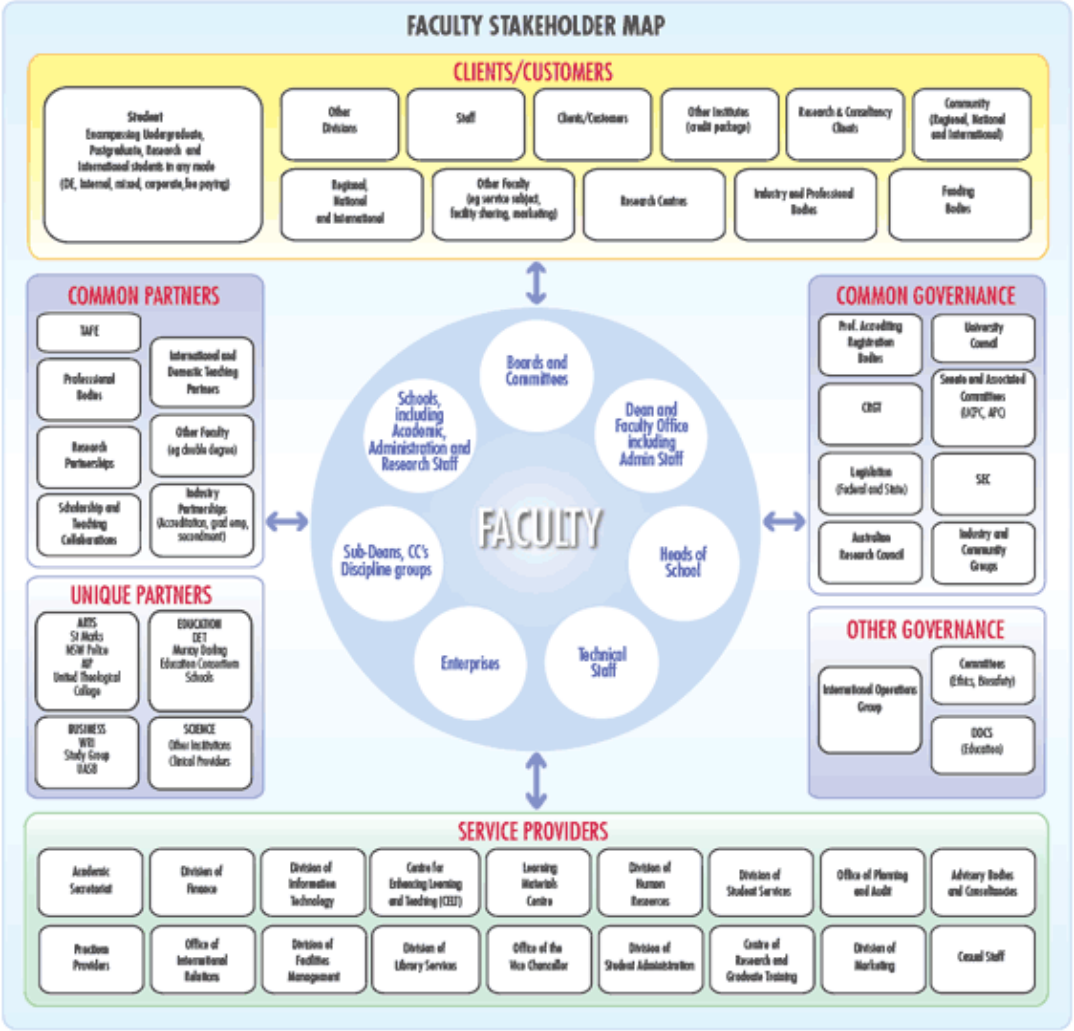


The Needs Hierarchy | Business Need Definition



WHO | Stakeholders

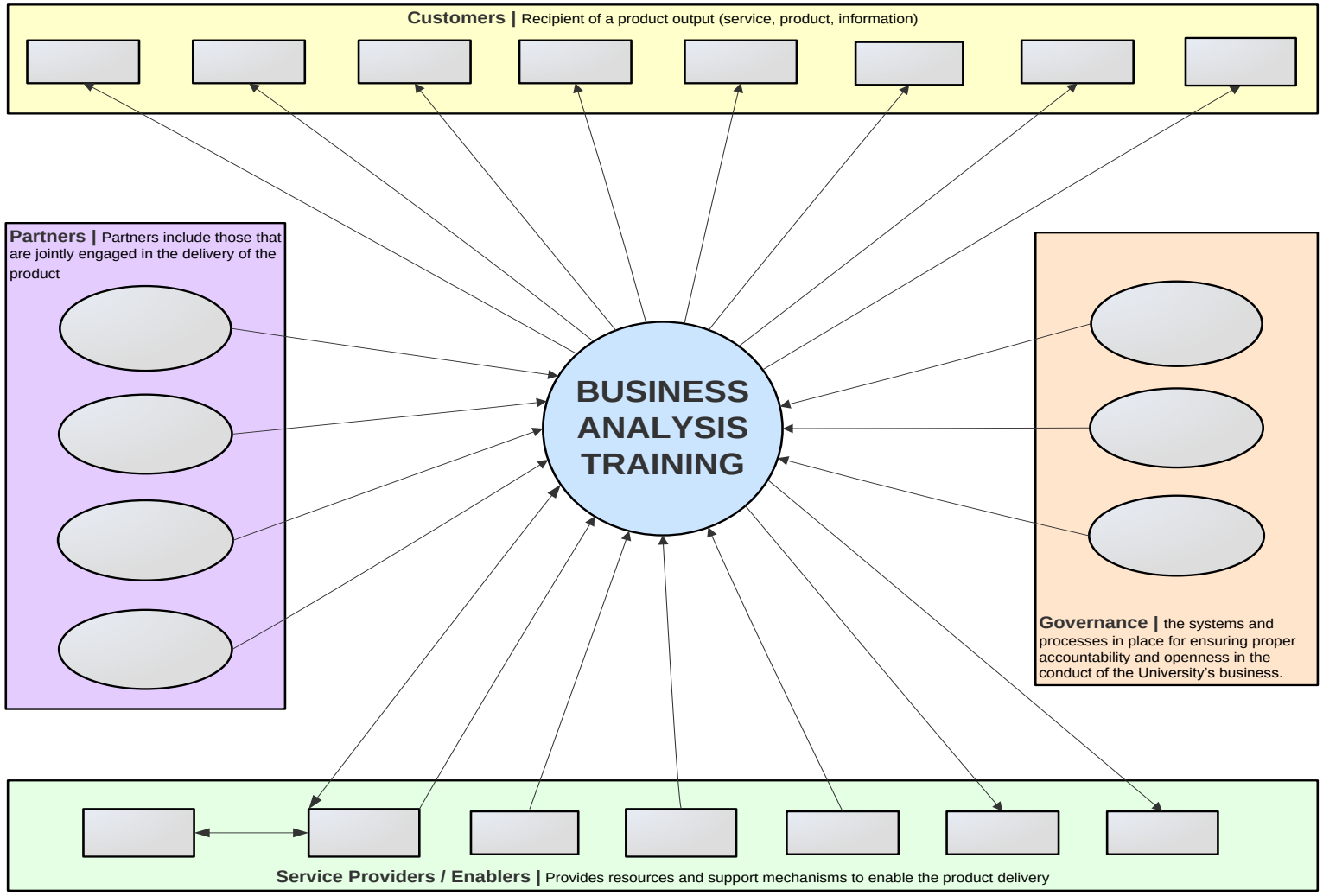
- Stakeholder Maps are a simple method to identify who needs to be involved in a project or improvement
- It is a living diagram which should be revisited throughout the life of the project or improvement



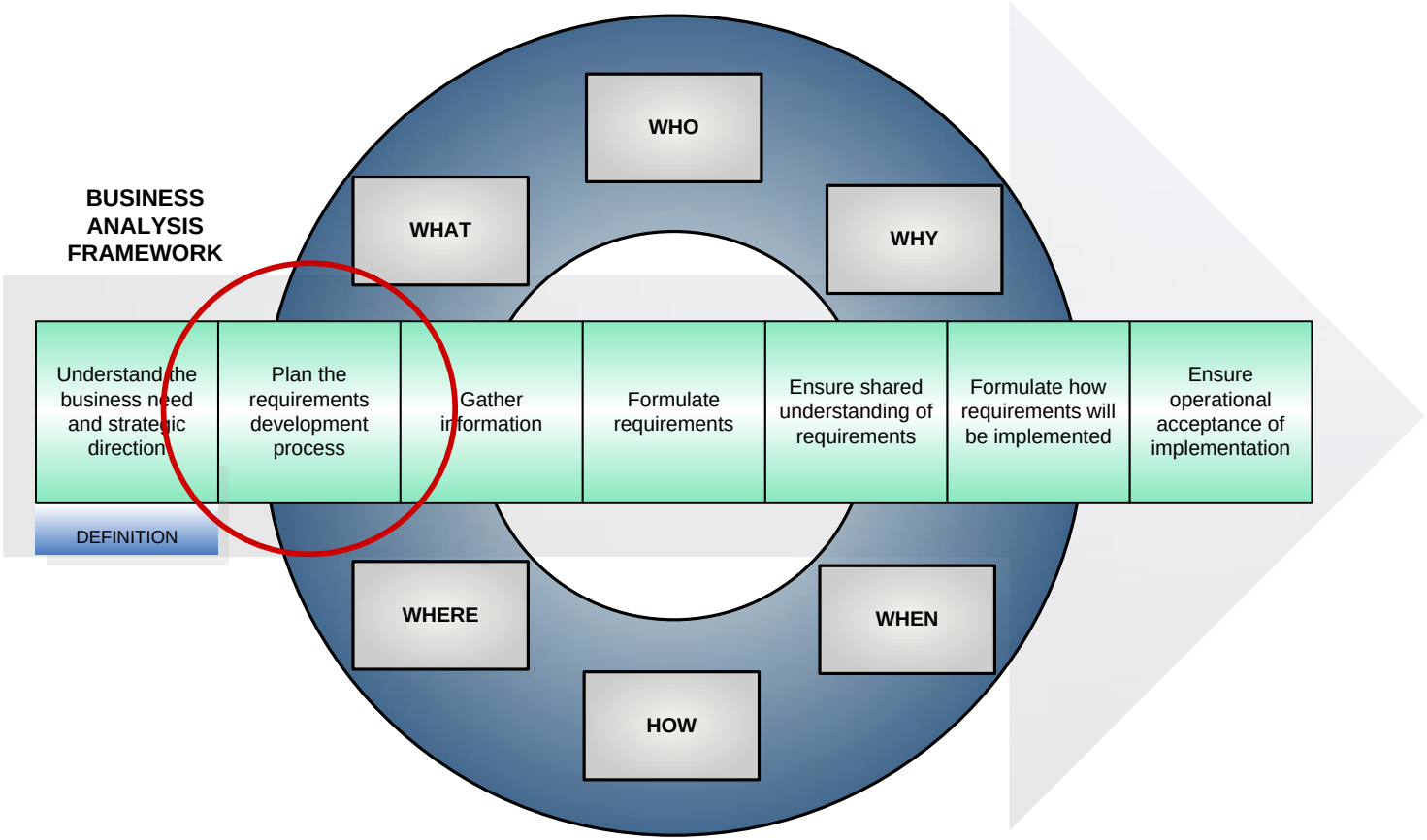
MORE INFO yourCSU

http://www.csu.edu.au/staff/yourcsu/who_stakeholders.html

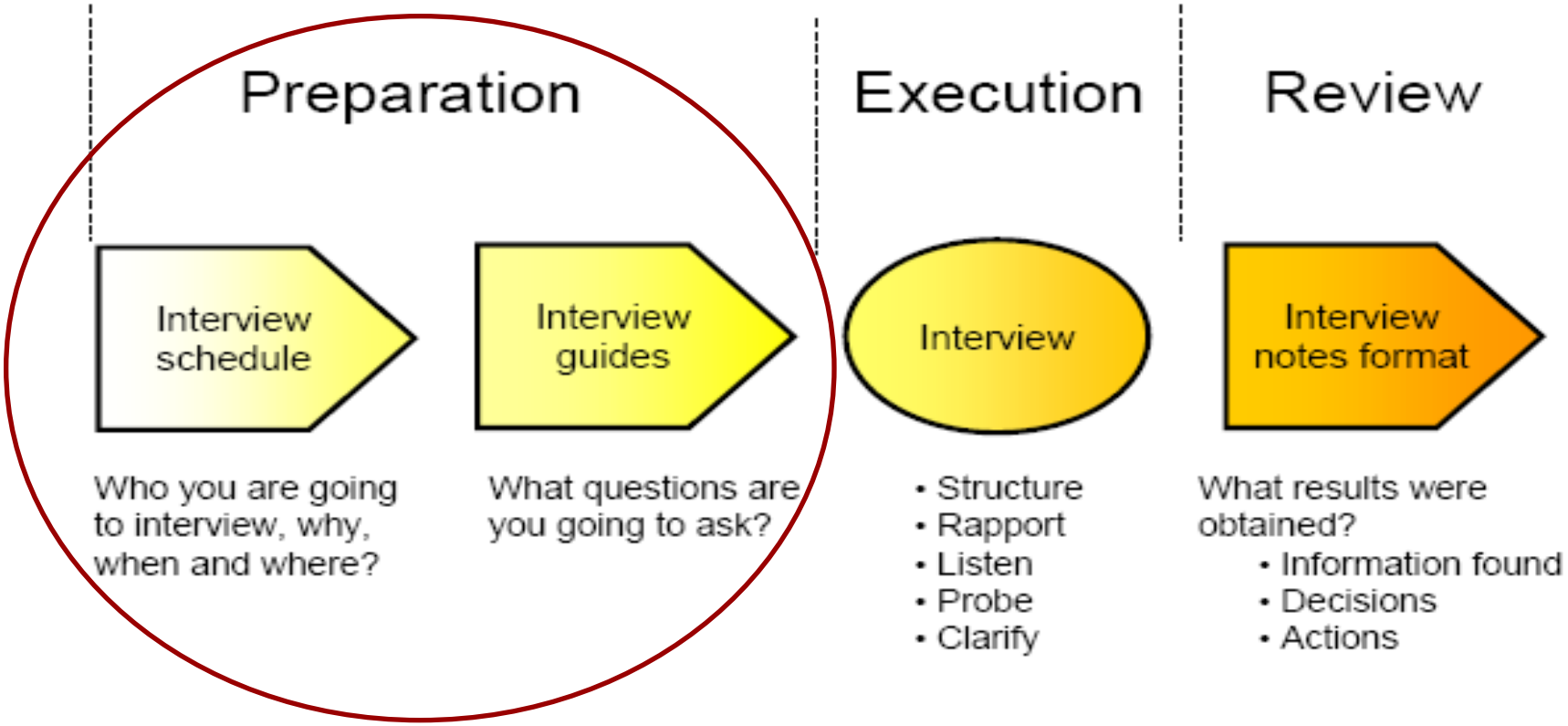
Exercise


Customers | Recipient of a product output (service, product, information)
Partners | Partners include those that are jointly engaged in the delivery of the product
BUSINESS ANALYSIS TRAINING
Governance | the systems and processes in place for ensuring proper accountability and openness in the conduct of the University's business.
Service Providers / Enablers | Provides resources and support mechanisms to enable the product delivery

2/ Plan the Requirements Development Process



Steps in the Interview Process



WHY

Why is it so important to plan the requirements development process?

- Requirements are the basis on which potential solutions are assessed

SO –

- If requirement specifications are inaccurate or incomplete there is little chance the solution will be what the business needed

HOW

Based on the information contained in the ‘definition’, plan how you will gather the information you will need to specify the requirements that a solution must satisfy.

WHAT | Interview or Workshop?

Interview when:

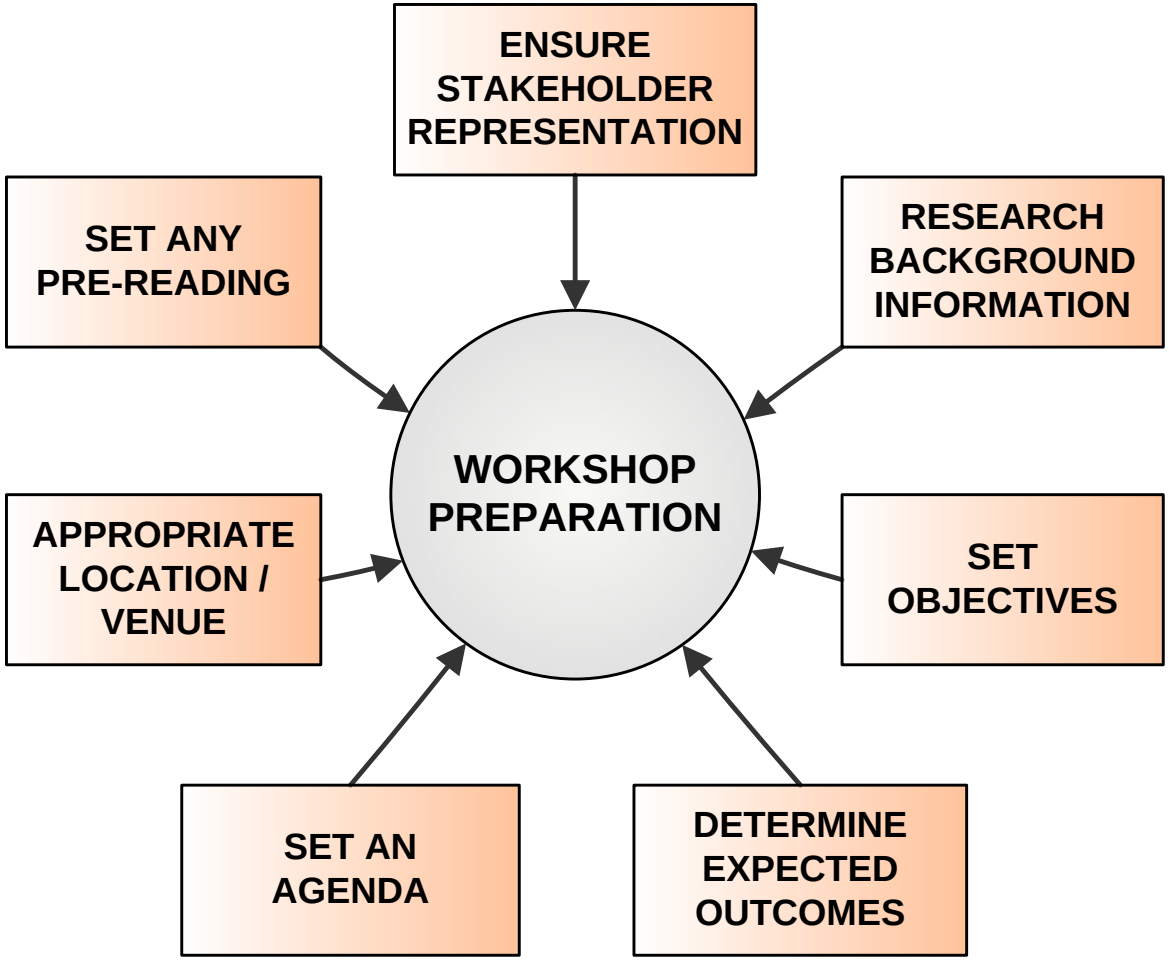
- requirements are detailed
- requirements cover many areas of knowledge that have specific individuals who are the experts
- differing opinions are likely or are sought

Workshop when:

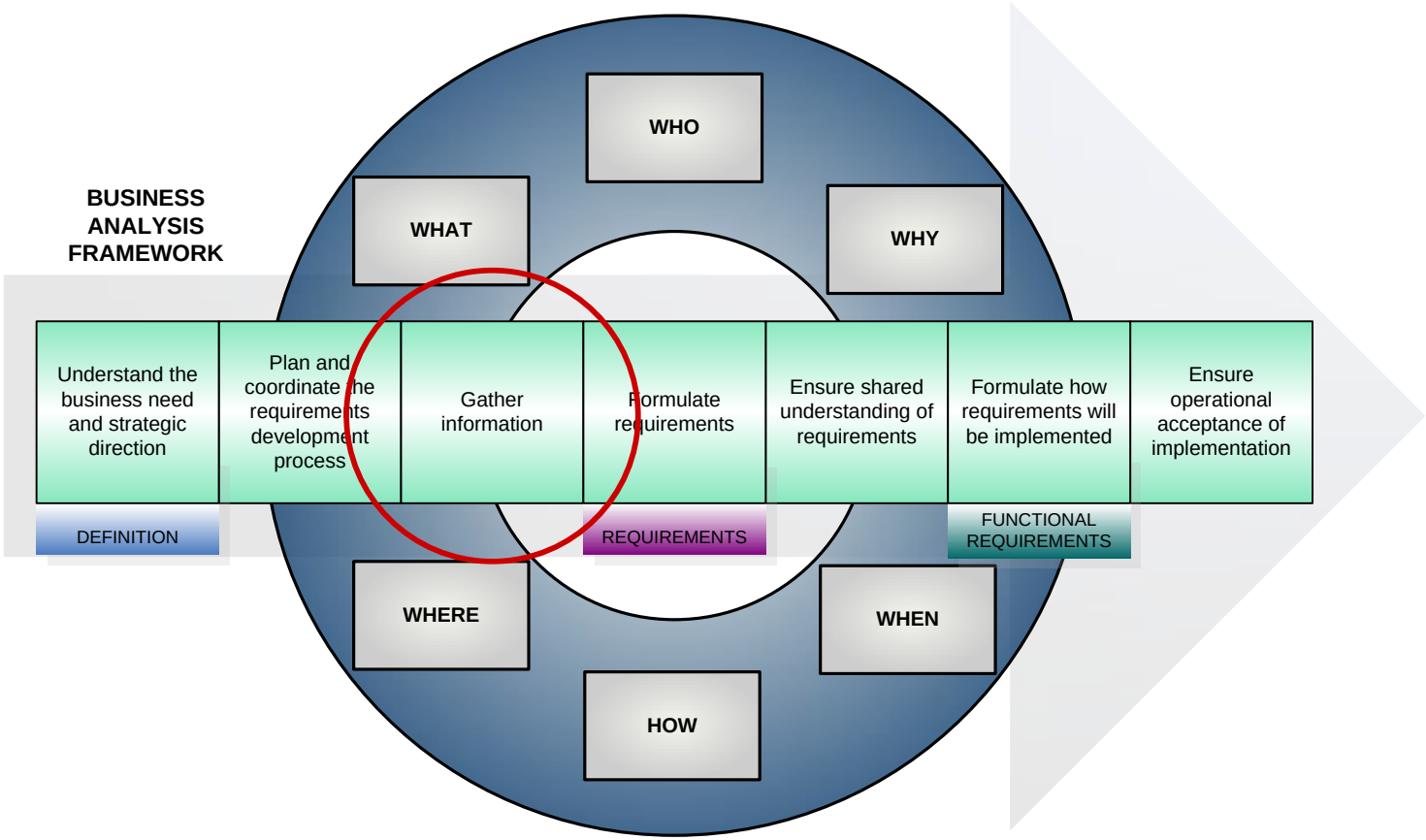
- requirements are high level
- requirements are focused on one area of business in which the participants have knowledge
- consensus is being sought
- All stakeholders are available

Remember –
be aware of your objectives

Workshop Preparation

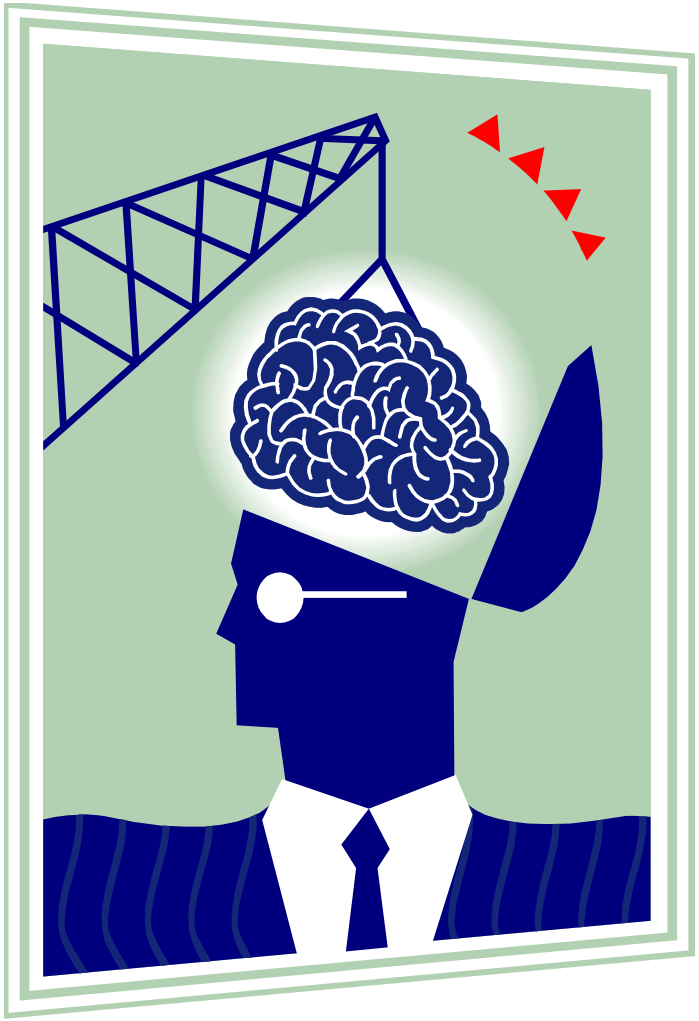


3/ Gather Information

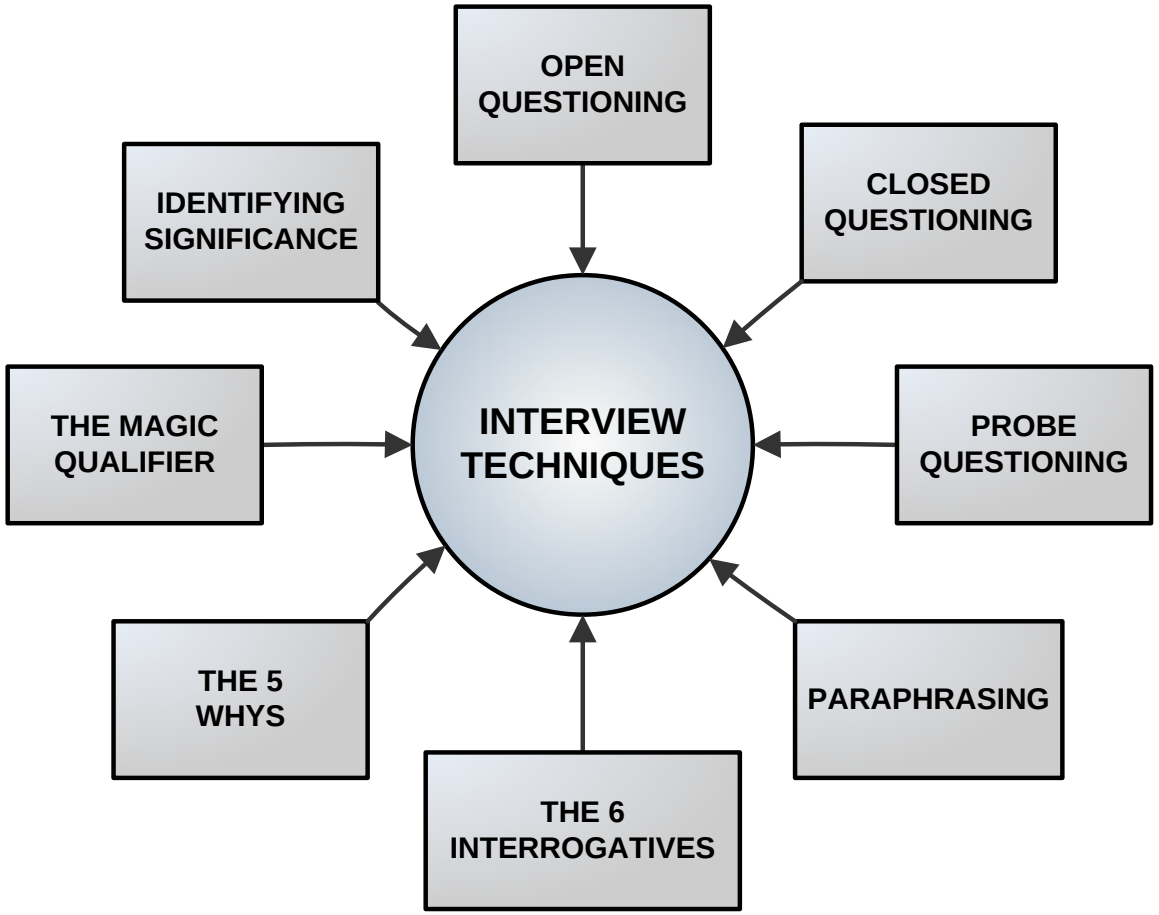


Steps in the Interview Process

Exercise



Interview Techniques



Open Questioning

- To initiate discussion on a broad subject and to encourage a comprehensive explanation use clear, direct phrasing that asks a single question
- ask **how**, **what** or **when**

So what do you enjoy about the role?

Are there any other issues I should be aware of?

Advantages

- Puts interviewee at ease
- Interesting for interviewee
- Provides depth of detail
- Reveals other areas of enquiry

Disadvantages

- You may lose control
- May use up too much time
- Interviewer may appear unprepared
- Harder to analyse later
- Lower reliability of data

Closed questioning

Use a closed-ended question to elicit a specific reply such as yes/no, a simple piece of information or a selection from multiple choices.

Is the new form better or worse than the old form?

Is it Mary or Jane who enter the application details?

Advantages

- Efficient use of time
- Easy to compare interviews
- Higher reliability of data
- Less interviewing skill needed
- Focuses interviewee

Disadvantages

- Can be boring for interviewees
- Doesn't provide the opportunity to qualify answers
- You may miss other areas

Probe questioning

- Probe questioning involves asking for more detailed information to clarify a vague state phrase such as ‘quite high’ or ‘often late’.
- Probe questioning needs to be balanced with open and closed questioning to avoid the interview seeming like an interrogation.

How frequently does that happen?

How did that change impact your division?

Advantages

- ❑ Provides data on new aspects
- ❑ Supplies detail in context
- ❑ Shows interest in conversation

Disadvantages

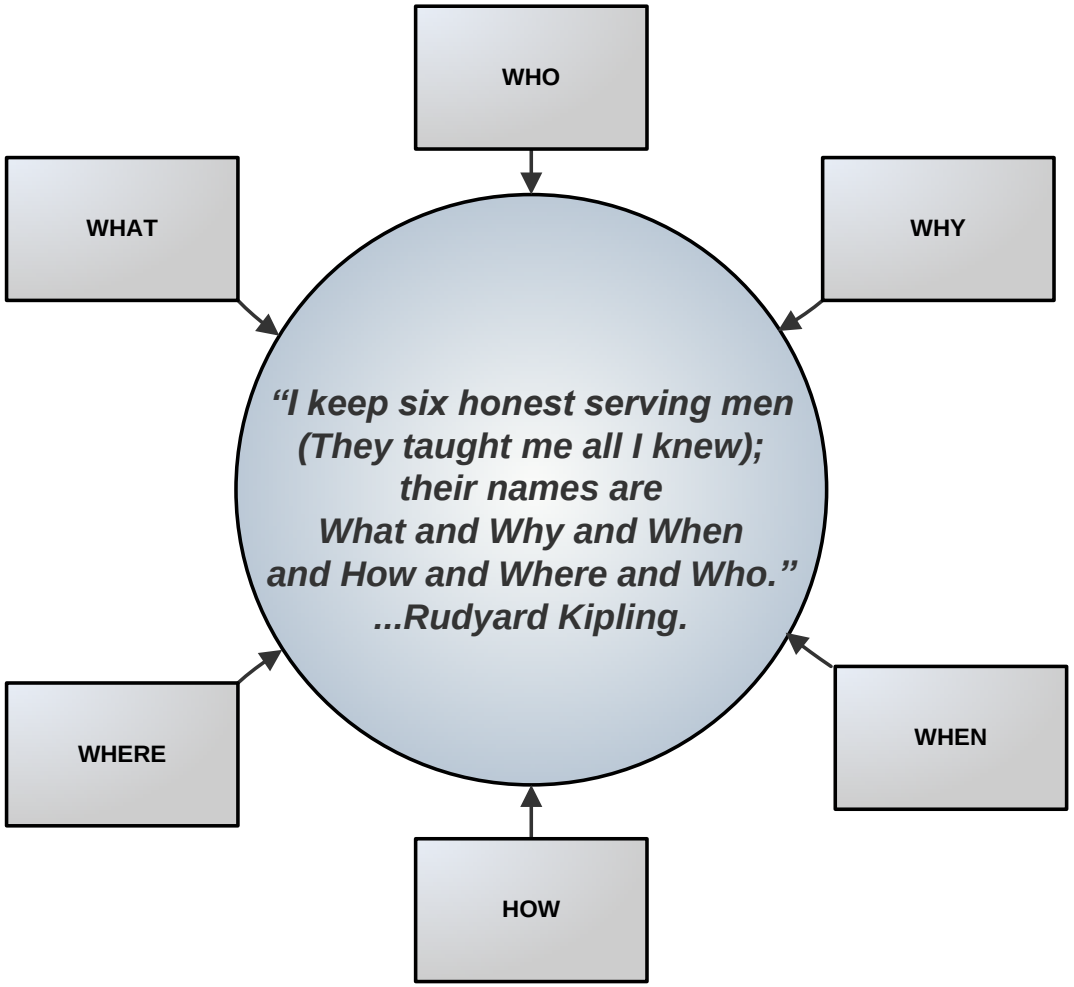
- ❑ Can appear threatening

Paraphrasing

Paraphrasing is a technique used to confirm or clarify something the interviewee has said or implied.

Executed properly it can also build rapport by showing you in alignment with their thoughts and feelings.

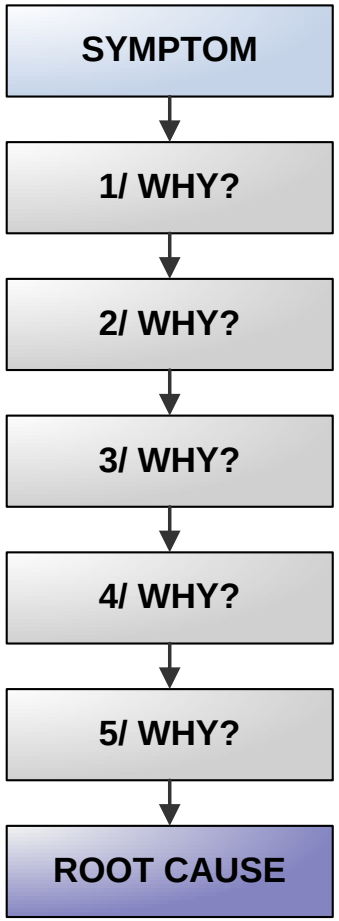
The 6 Interrogators



The 5 Whys

Moving from symptom through to root cause

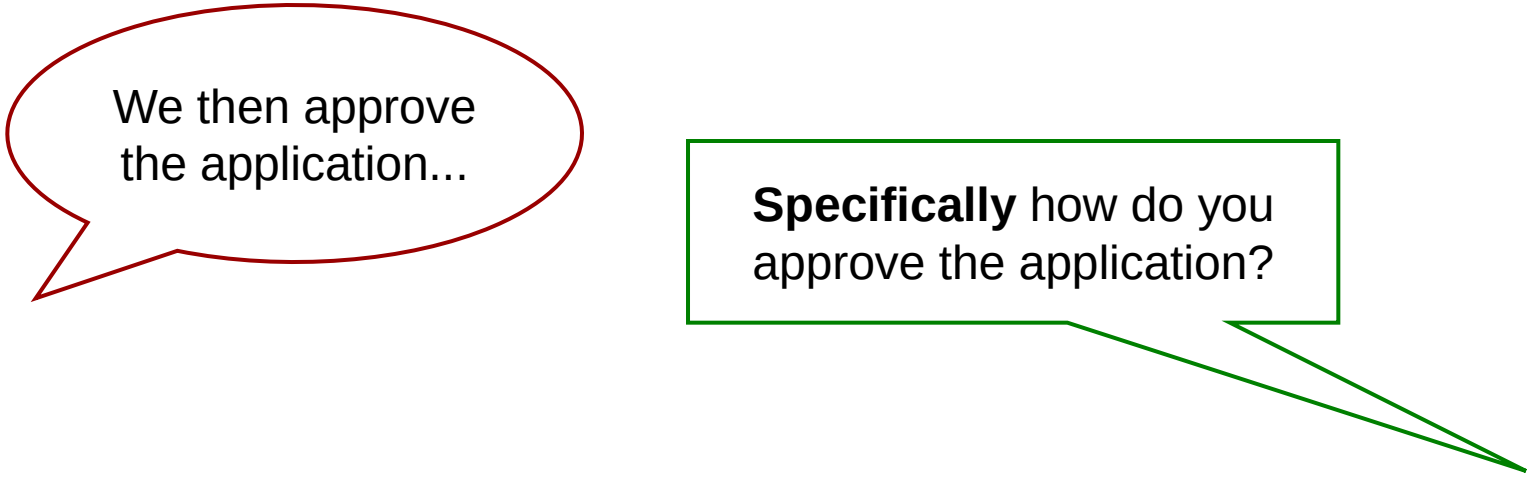
The goal of applying “The 5 Whys” method is to get to the cause / effect relationships underlying a particular problem



The Magic Qualifier

Specifically…

To elicit better quality information add this word to the question.



Identifying Significance

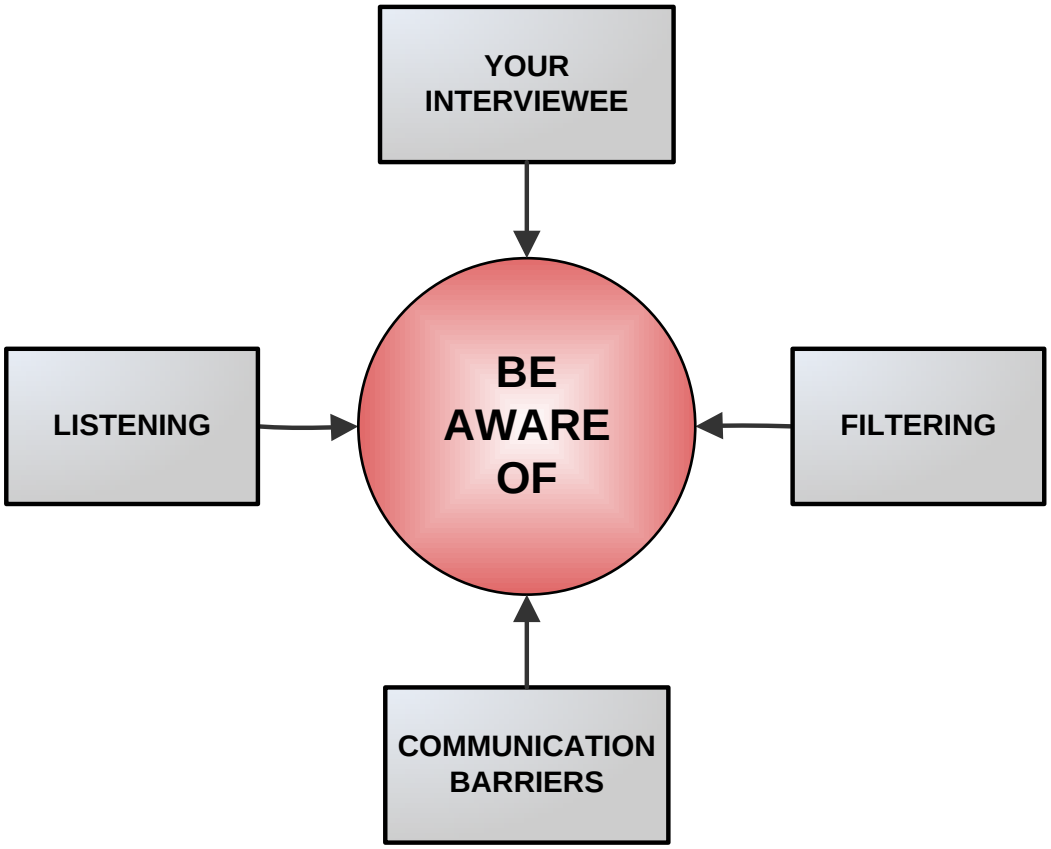
To determine **overall** significance:

Ask **what** is important to you in ABC?

To determine **relative** significance:

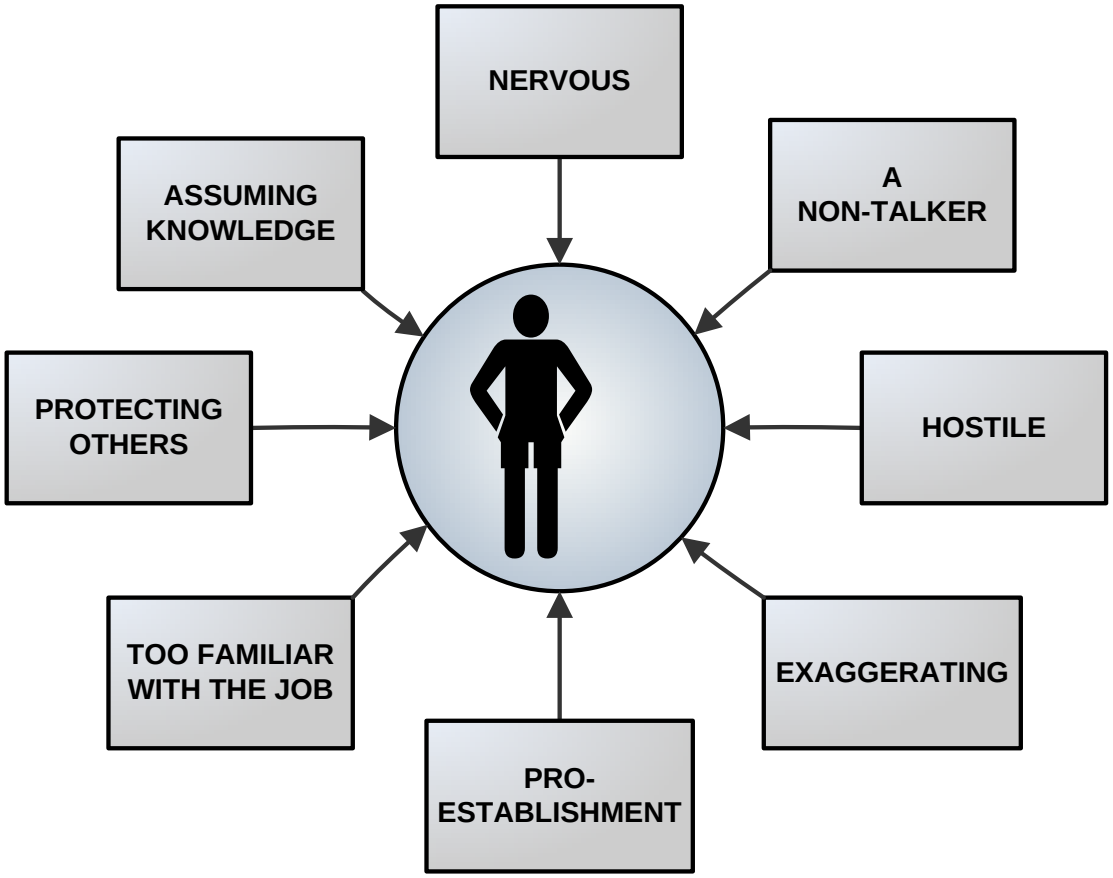
Ask **which** is more important to you –
X, Y or Z?

Be aware of...



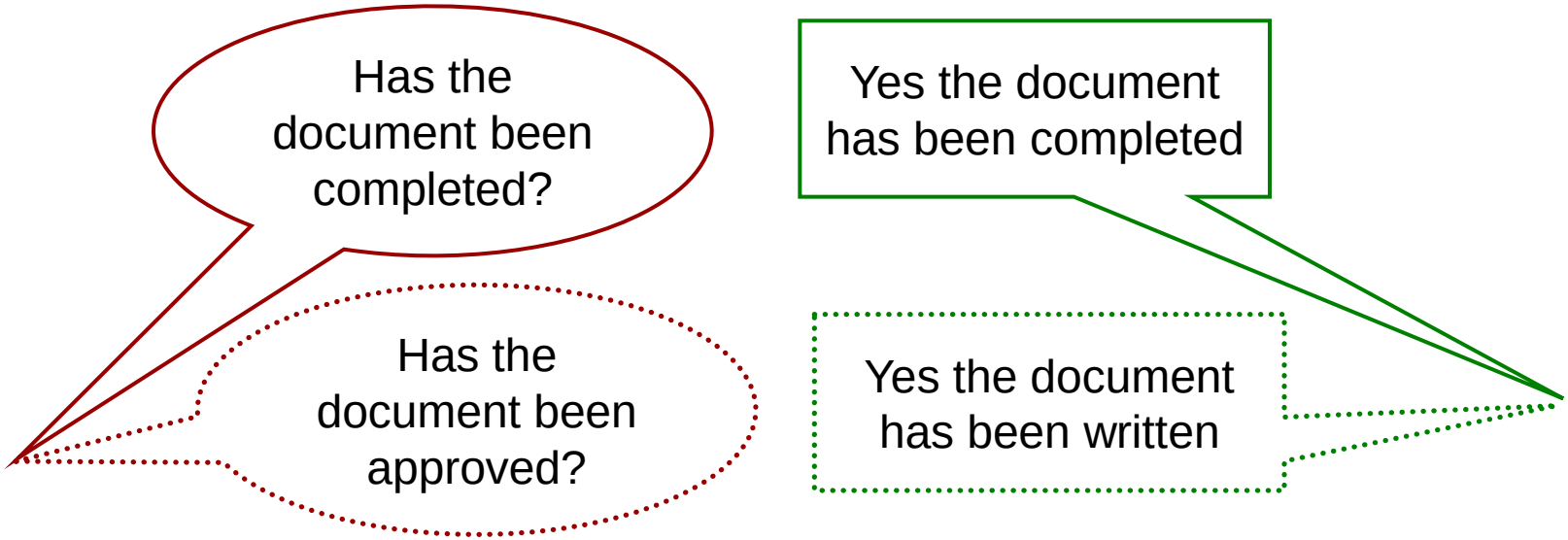
...to ensure information is captured accurately and completely

Be aware of your interviewee & adjust your style



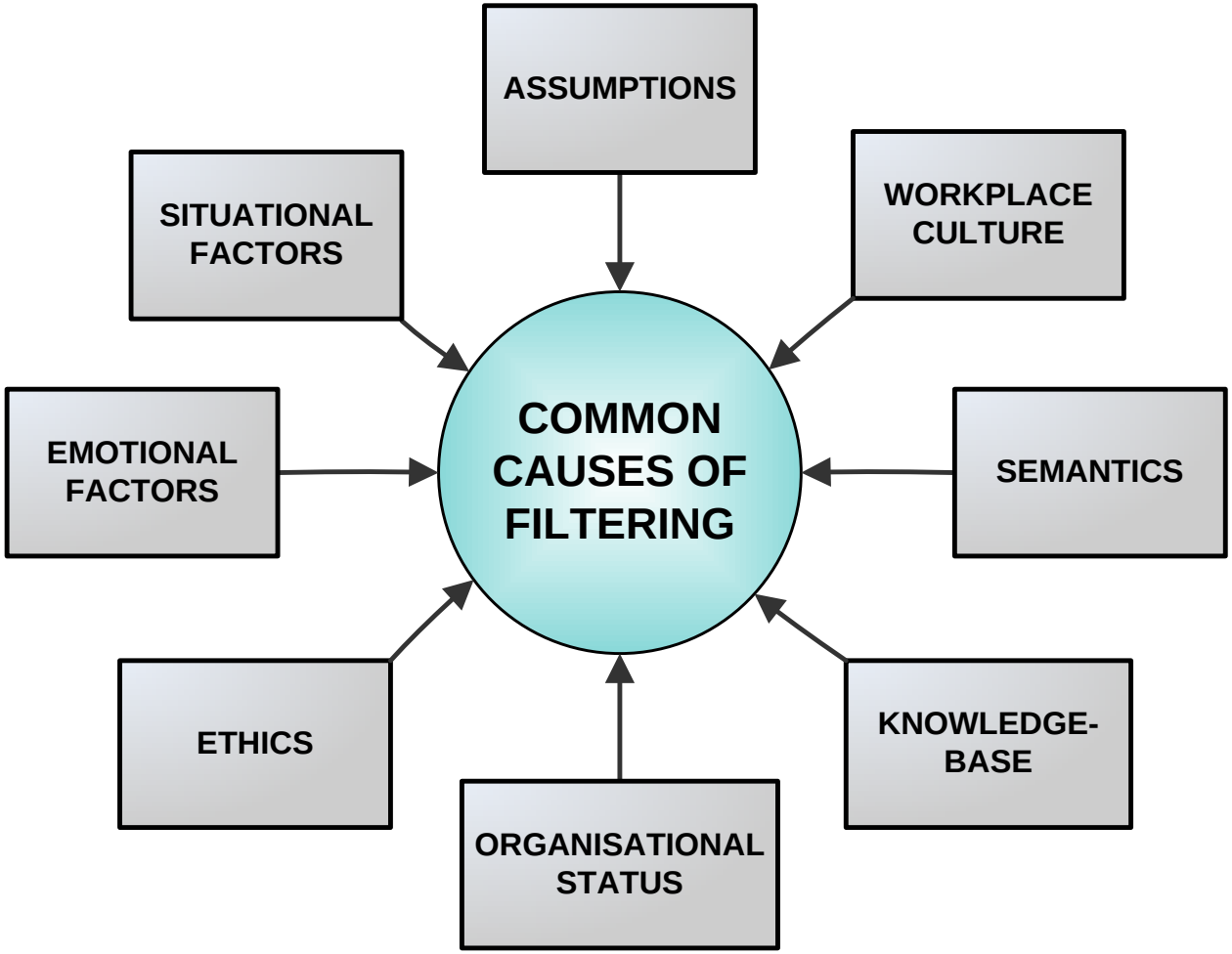
Be aware of filtering

- Filtering occurs when the receiver of a message alters its interpretation by applying certain influences or biases.
- The consequence of filtering is misunderstanding which can lead to an unexpected response.
- Be aware that just because a message has been sent does not mean it has been received and interpreted as expected.



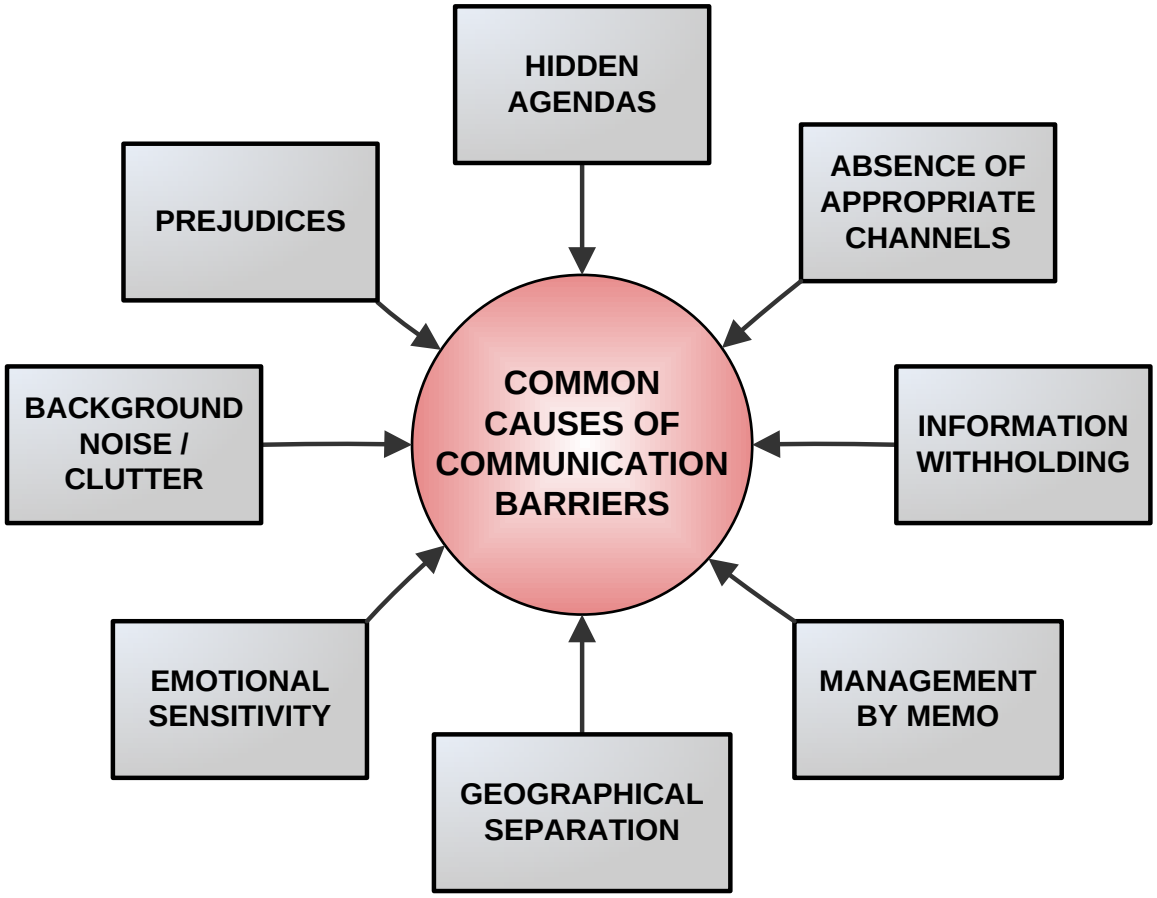
Exercise

Common Areas Which Cause Filtering



Be aware of communication barriers

i.e. obstacles that restrict effective communication



Exercise

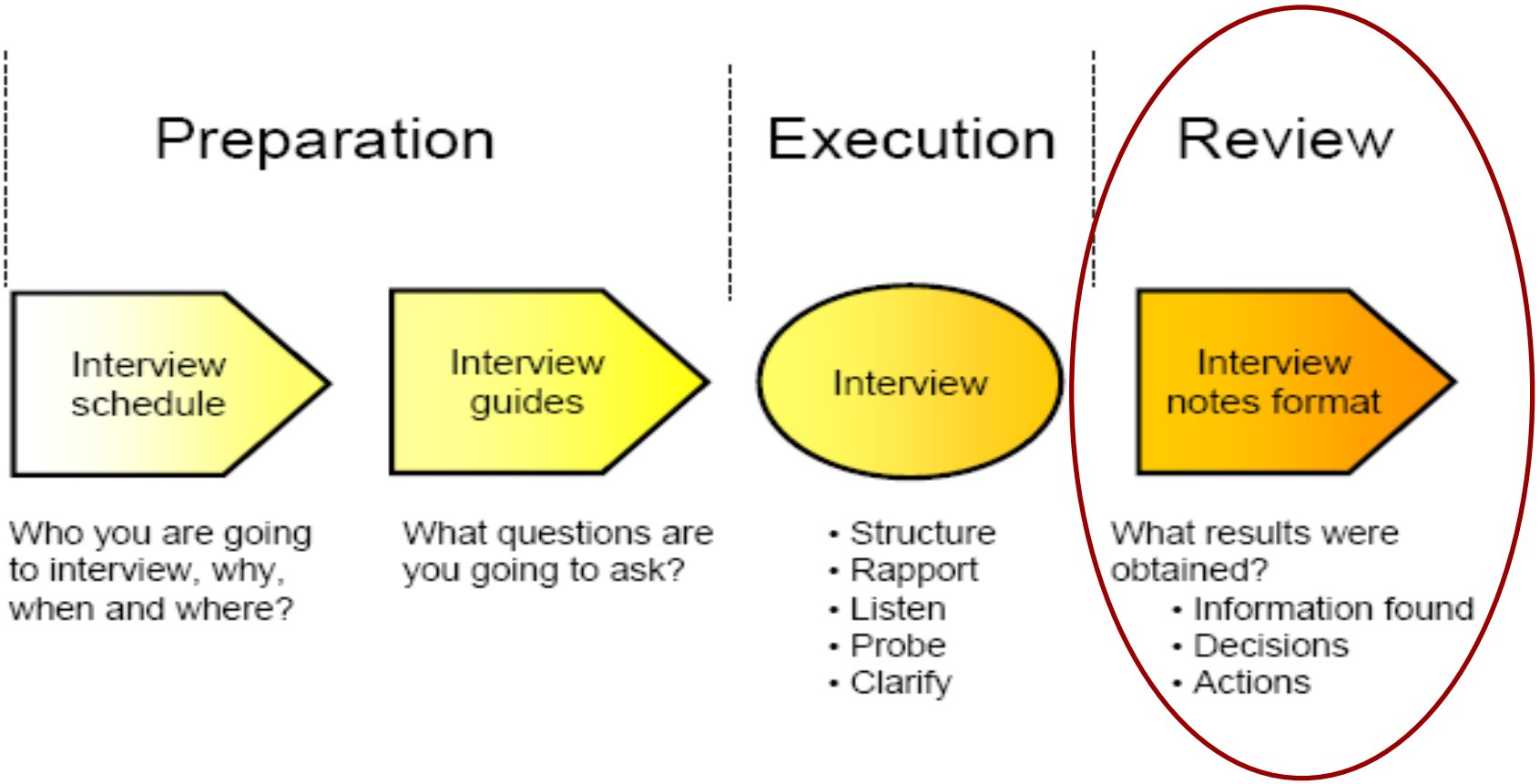
Be aware of listening

True listening involves mutual understanding

The goal of **active listening** is to improve mutual understanding.

- Use non-verbal cues such as head nods to show you are listening.
- Do not internally prepare the next question while the interviewee is speaking
- Listen for emotions and attitudes as well as facts
- Do not interrupt unless you sense avoidance or the interviewee has drifted
- Request clarification, paraphrase and ask follow on questions

Steps in the Interview Process

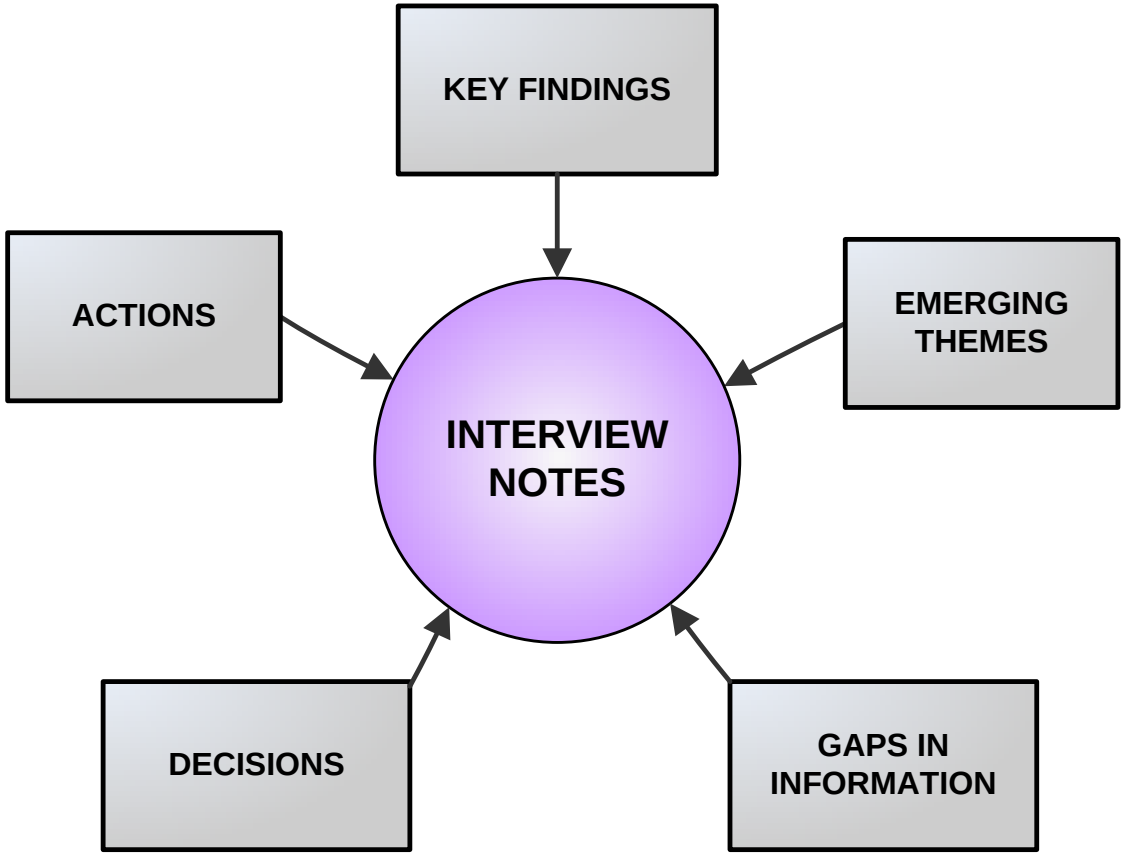


Interview Execution

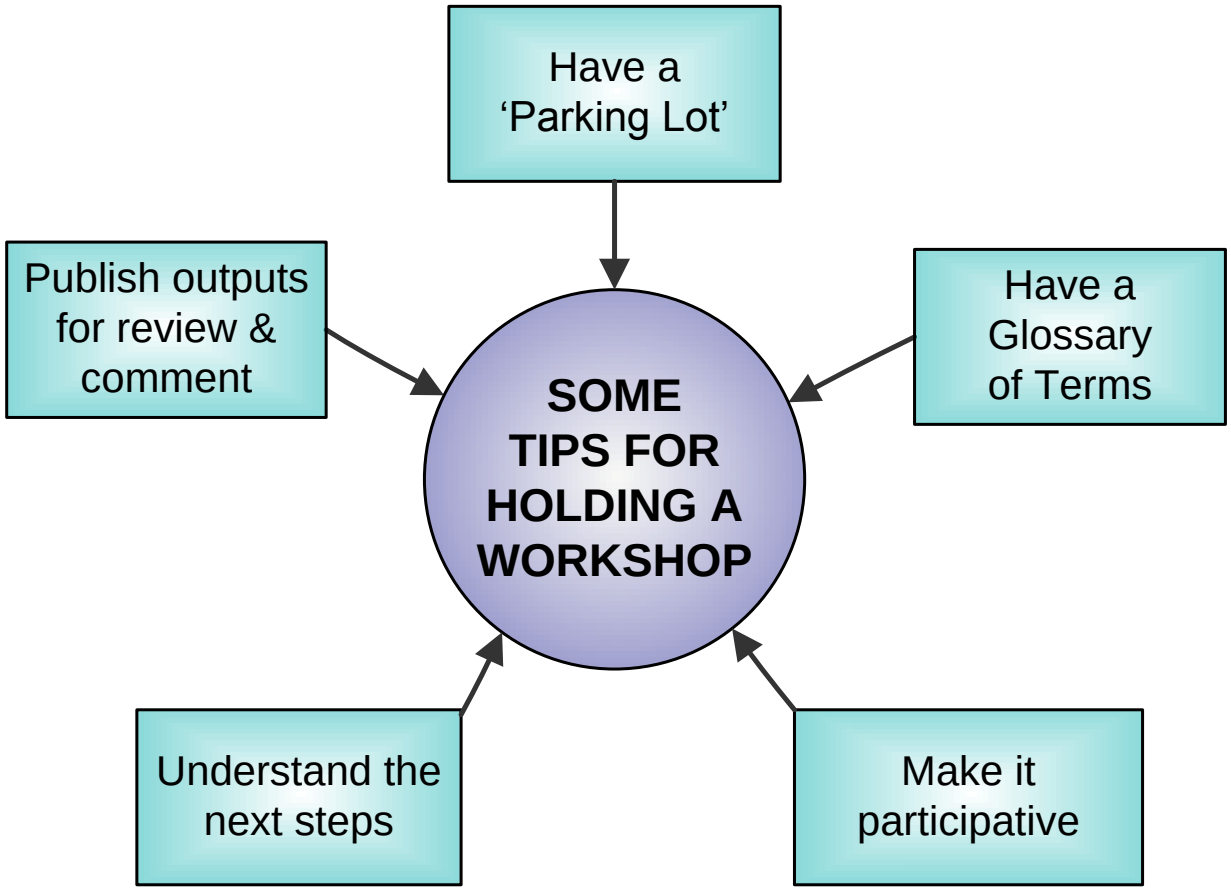
Interviews are exceptionally rich sources of information. However, no two interviewees are alike: some tend to ramble, others are suspicious and curt, some will need only the slightest encouragement to speak their minds, while others will have to be guided along. The interviewer's job is to conduct the interview to gather the information required, which takes skill, practice and structure. Once you have concluded your interviews, they must be summarised to yield the 'big picture'. Your questions should therefore allow for valid comparison and summarisation of your interviewee's viewpoints.

Interview Review

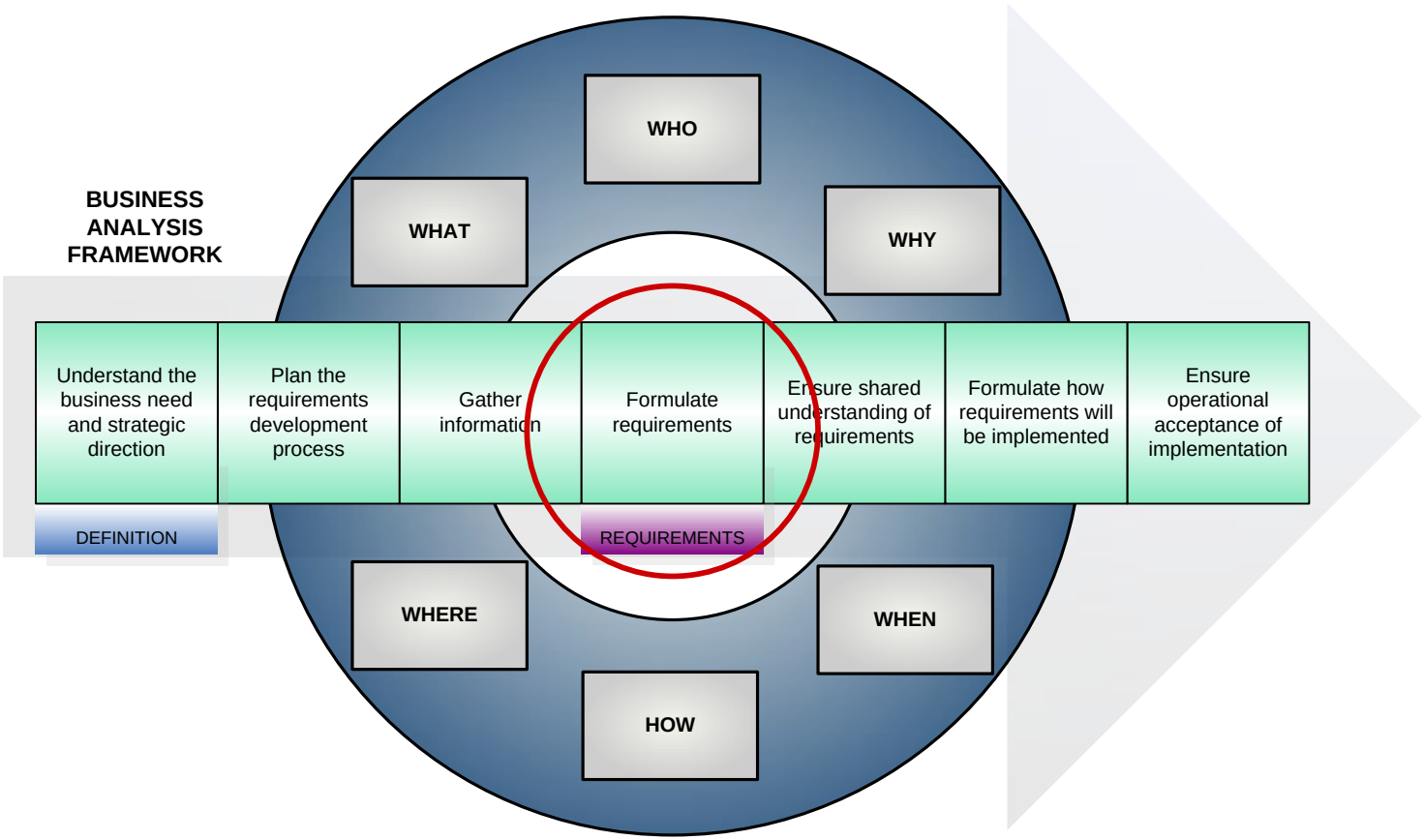
Write up notes as soon as possible after the interview



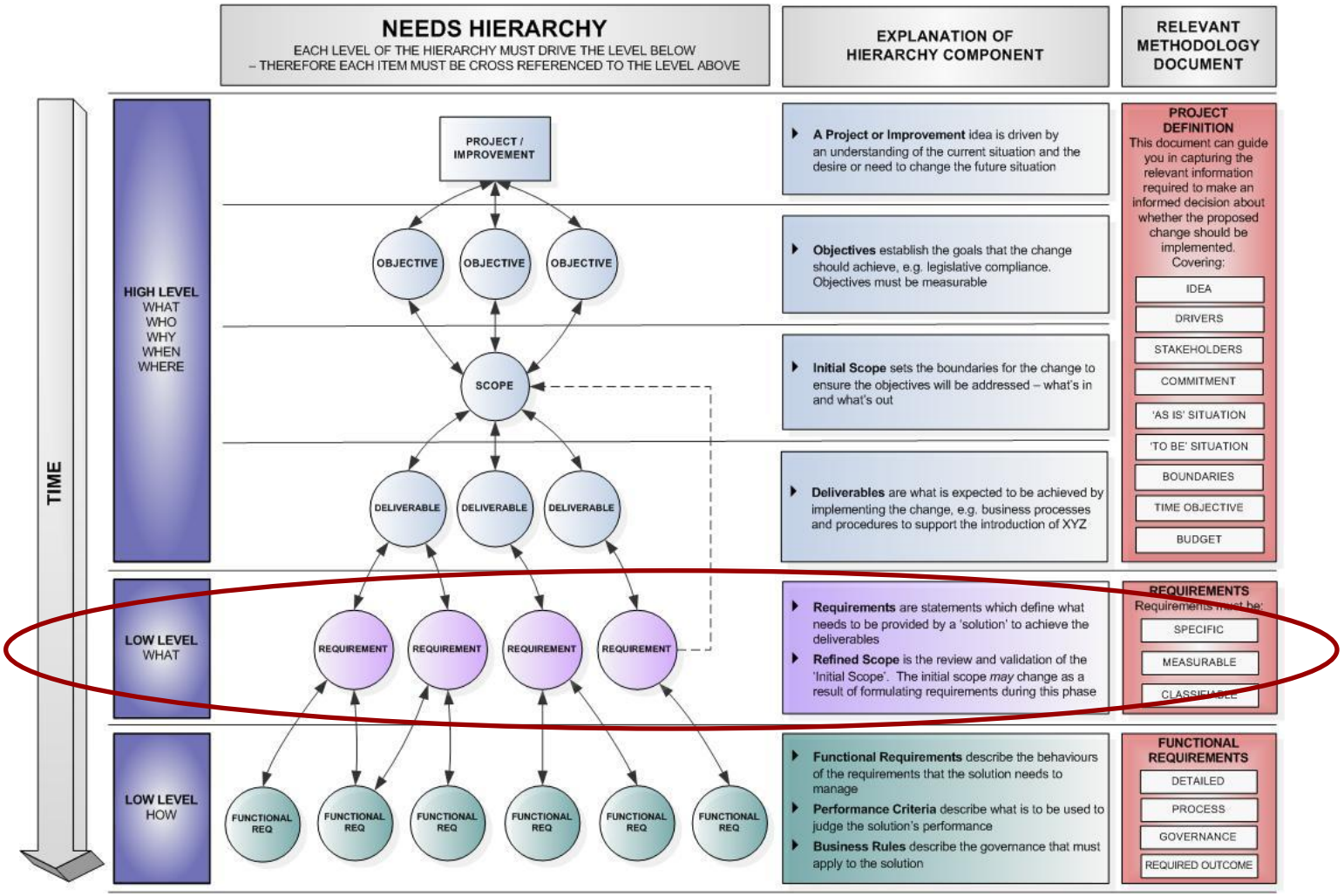
Workshop Execution



4/ Formulate Requirements

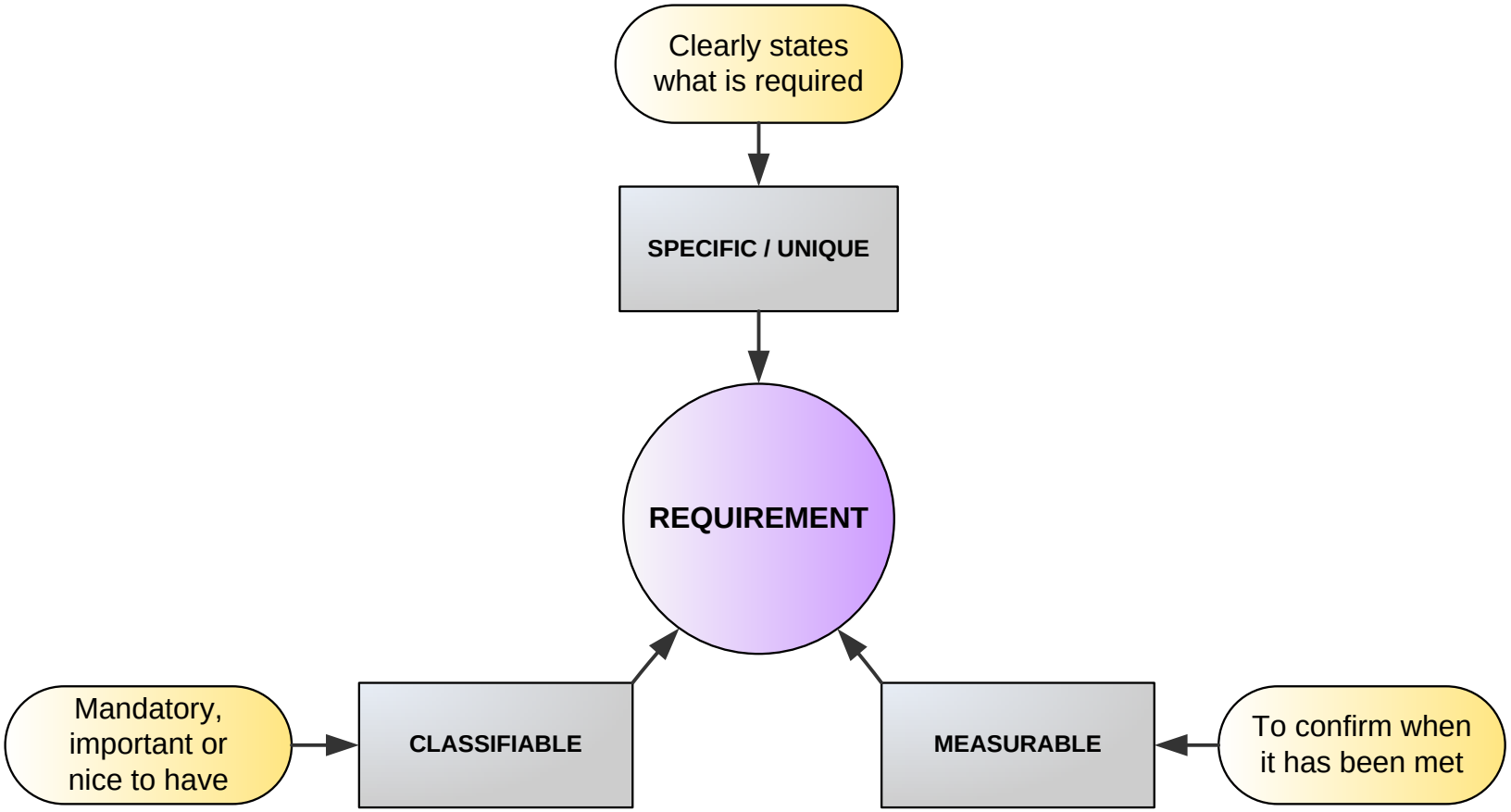


The Needs Hierarchy | Requirements



Requirement Criteria

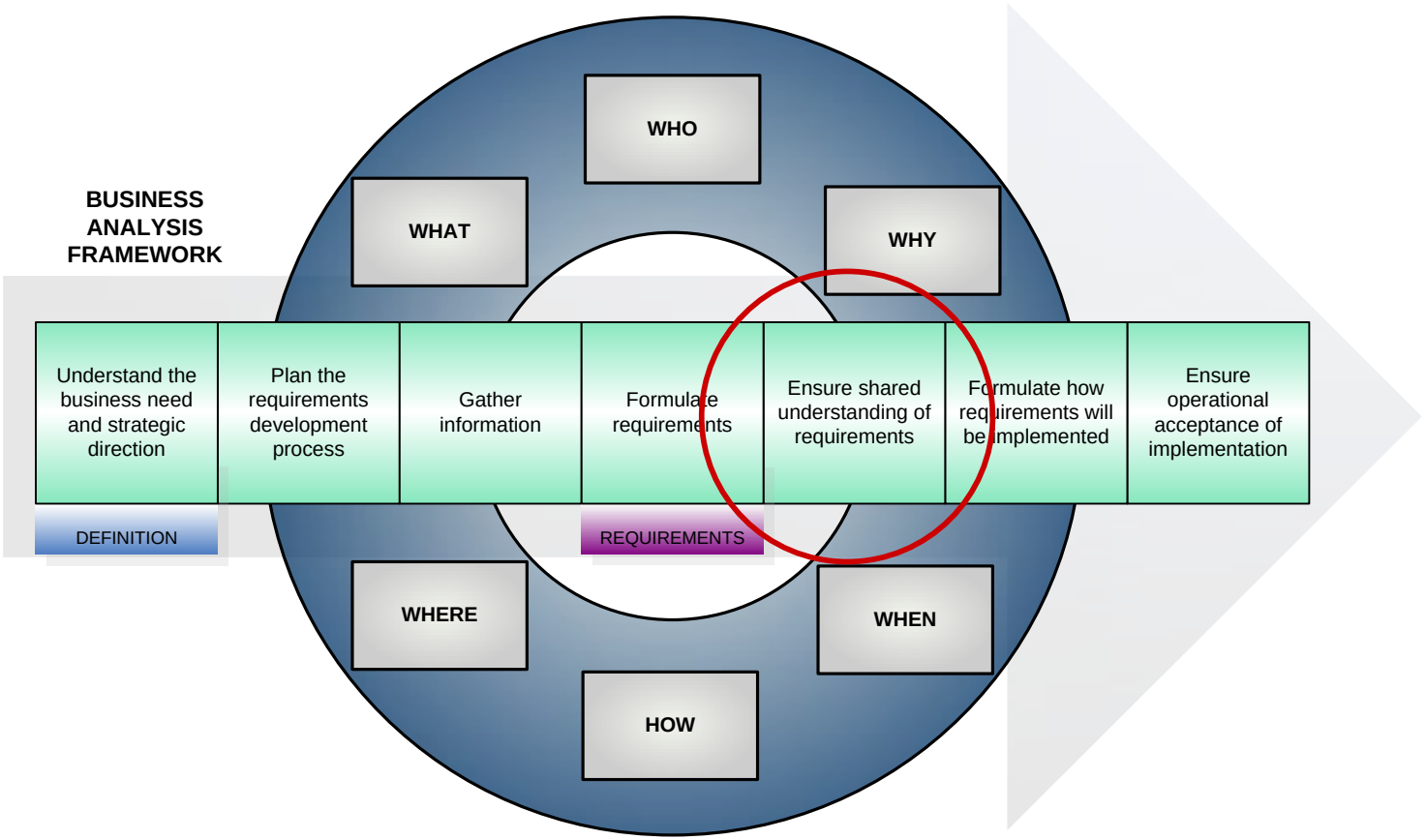
If requirements do not fulfil these criteria further information must be sought



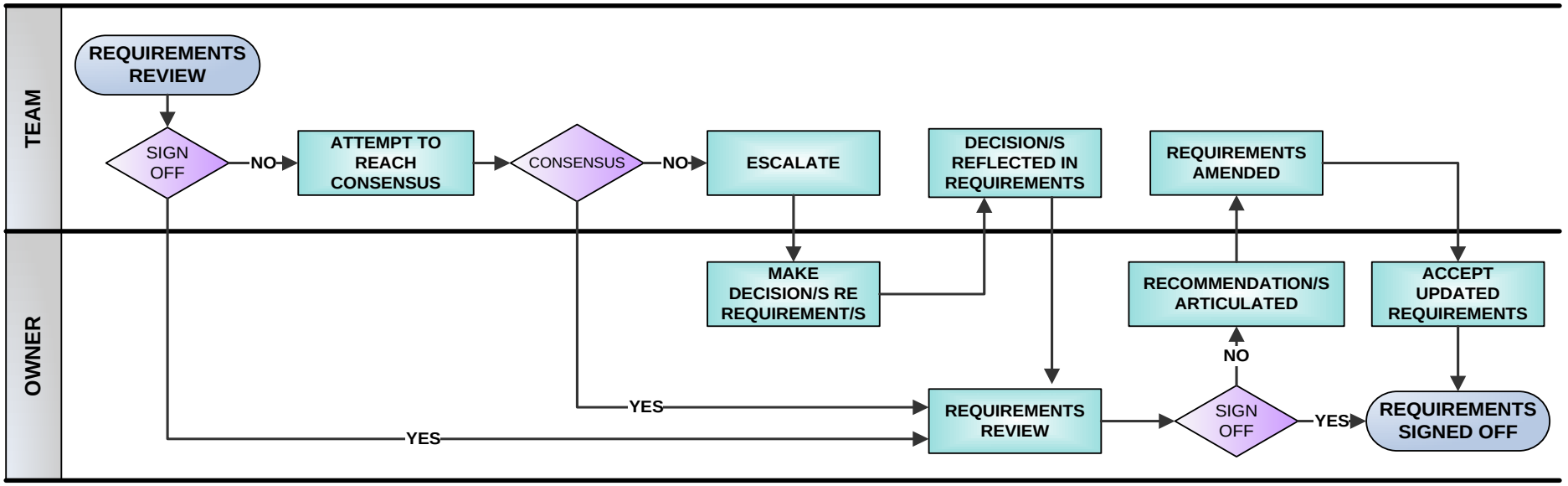
What should be included in a requirement?

ID #	Project Requirement Title	Description	Areas Impacted	Level of Importance Mandatory, Important or Nice to have	Verification	Objective
1.	Card deactivation	Be able to deactivate lost/stolen security cards.	Security	Mandatory	Deactivate a test card and then test that a transaction cannot be completed with the card.	3.Security
2.	…	…	…	…	…	…

5/ Ensure Shared Understanding of Requirements



Process for Agreeing Requirements & Sign Off



Reaching Consensus

1/ IDENTIFY AREAS OF AGREEMENT & CLEARLY STATE DIFFERENCES

- State positions and perspectives as neutrally as possible
- Document a summary of concerns

2/ FULLY EXPLORE DIFFERENCES

- Explore each perspective and clarify
- Involve everyone in the discussion – avoid one-on-one debates
- Identify common ground and attempt to develop a compromise

3/ REACH CLOSURE AND ARTICULATE THE DECISION

- Ensure all team members have expressed their perspective
- Detect when the team is approaching consensus
- Ask each member if they agree and will they support the decision
- Document the decision

Review & Improve – Wrap Up Day 1

- Review Objectives
- Feedback
- What's in store for Day 2?

Day 1

A/ Introduction – Business Analysis & You

B/ Business Analysis and the CSU Context

C/ Project or Improvement Control

1/ Understanding the Business Need & Strategic Direction

2/ Planning & Coordinating the Requirements development process

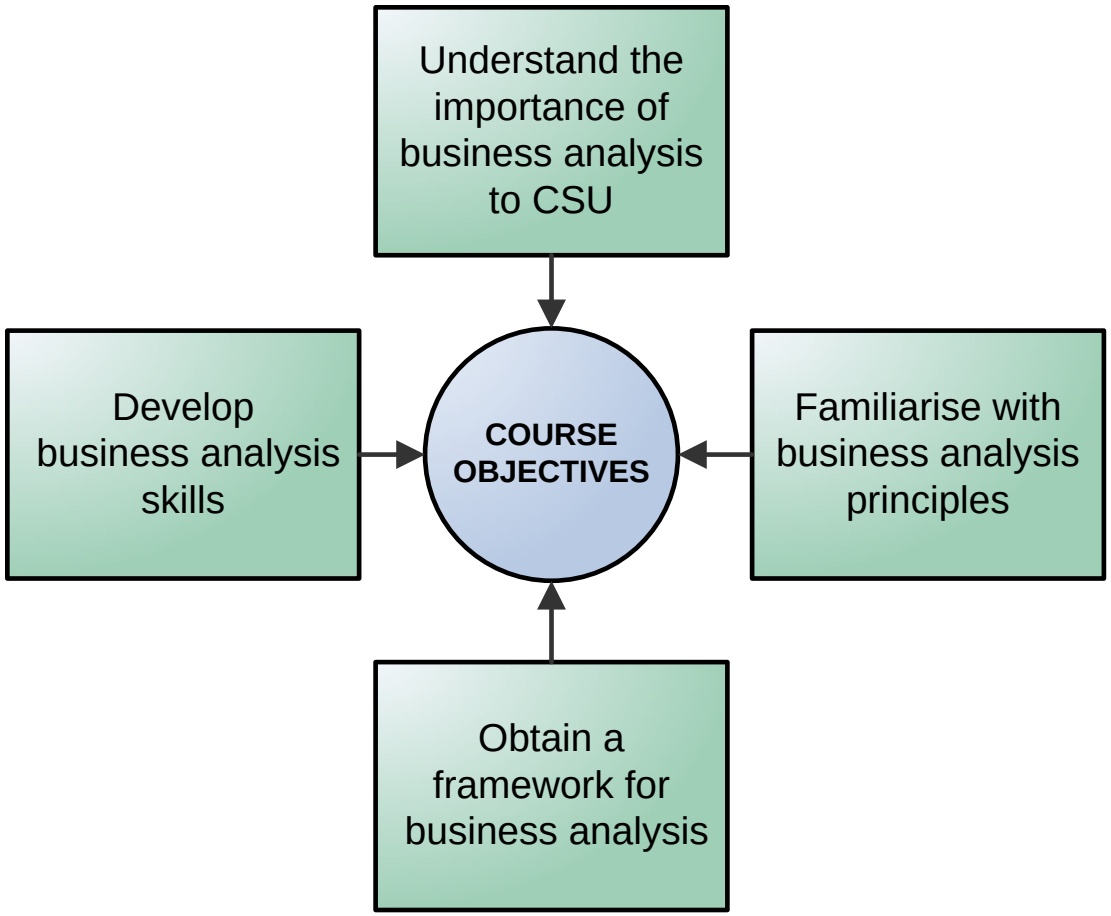
3/ Collecting Requirements

4/ Formulating Requirements

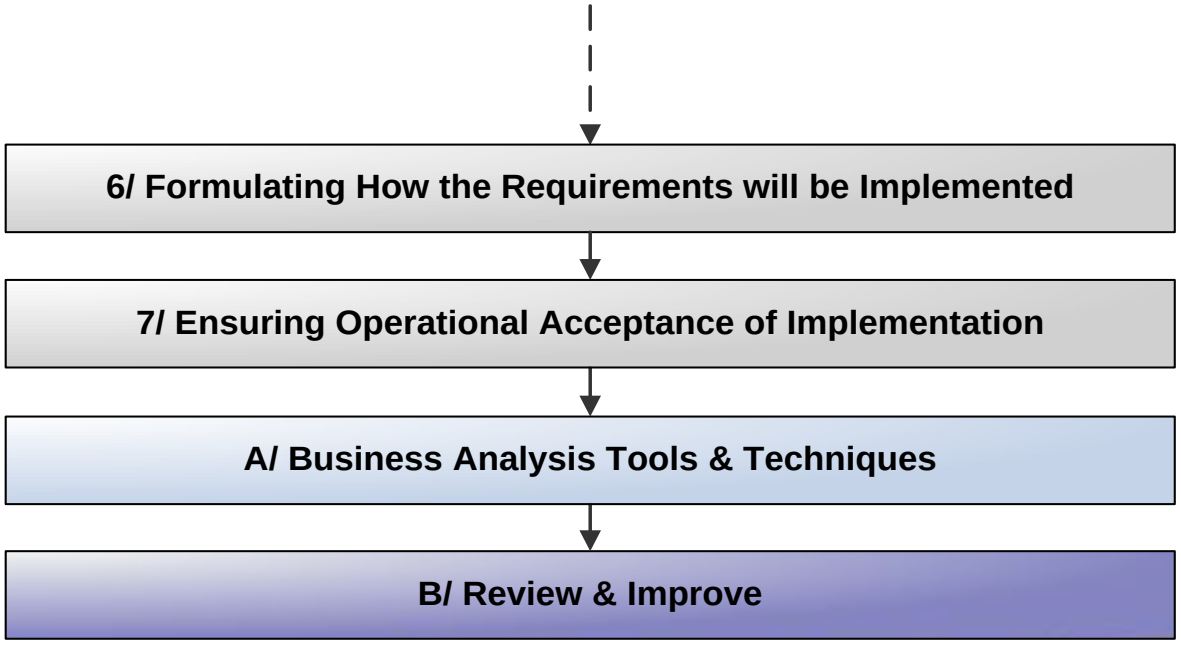
5/ Ensuring Shared Understanding of Requirements

D/ Review & Improve

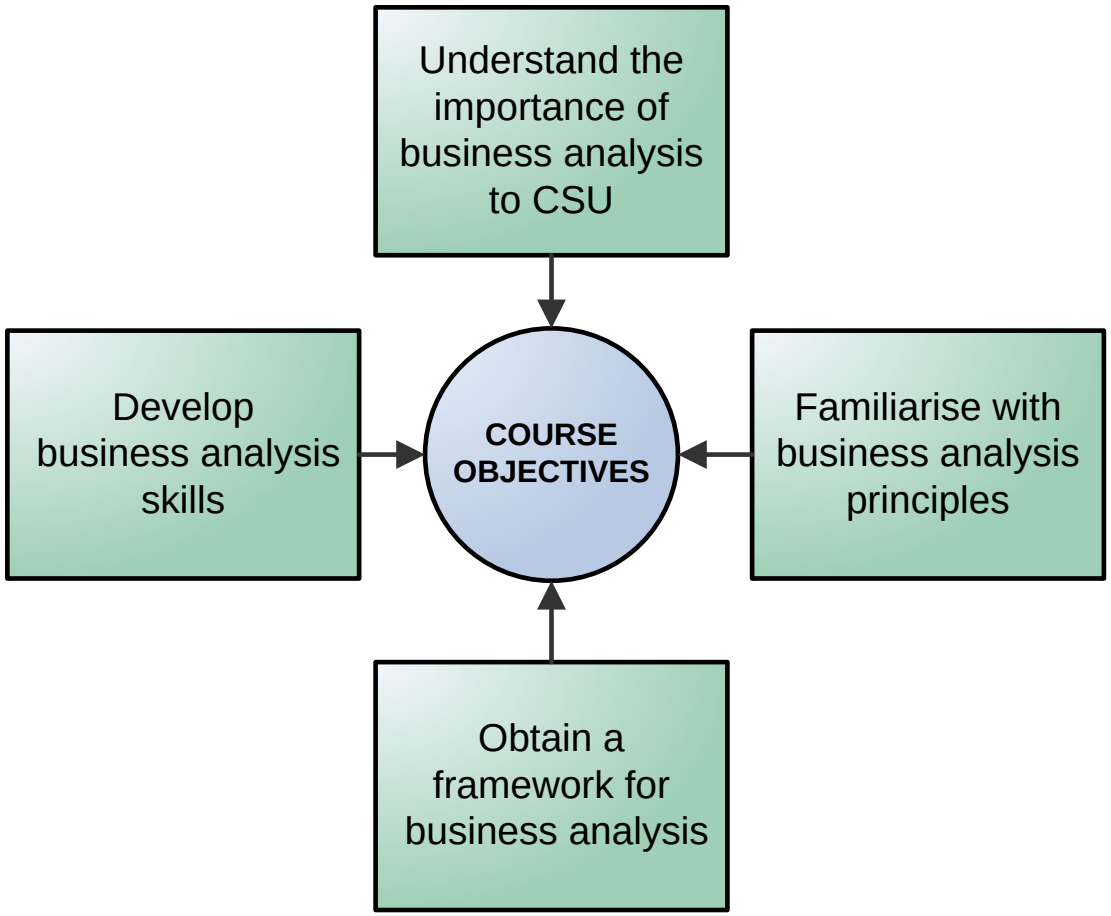
Course Objectives



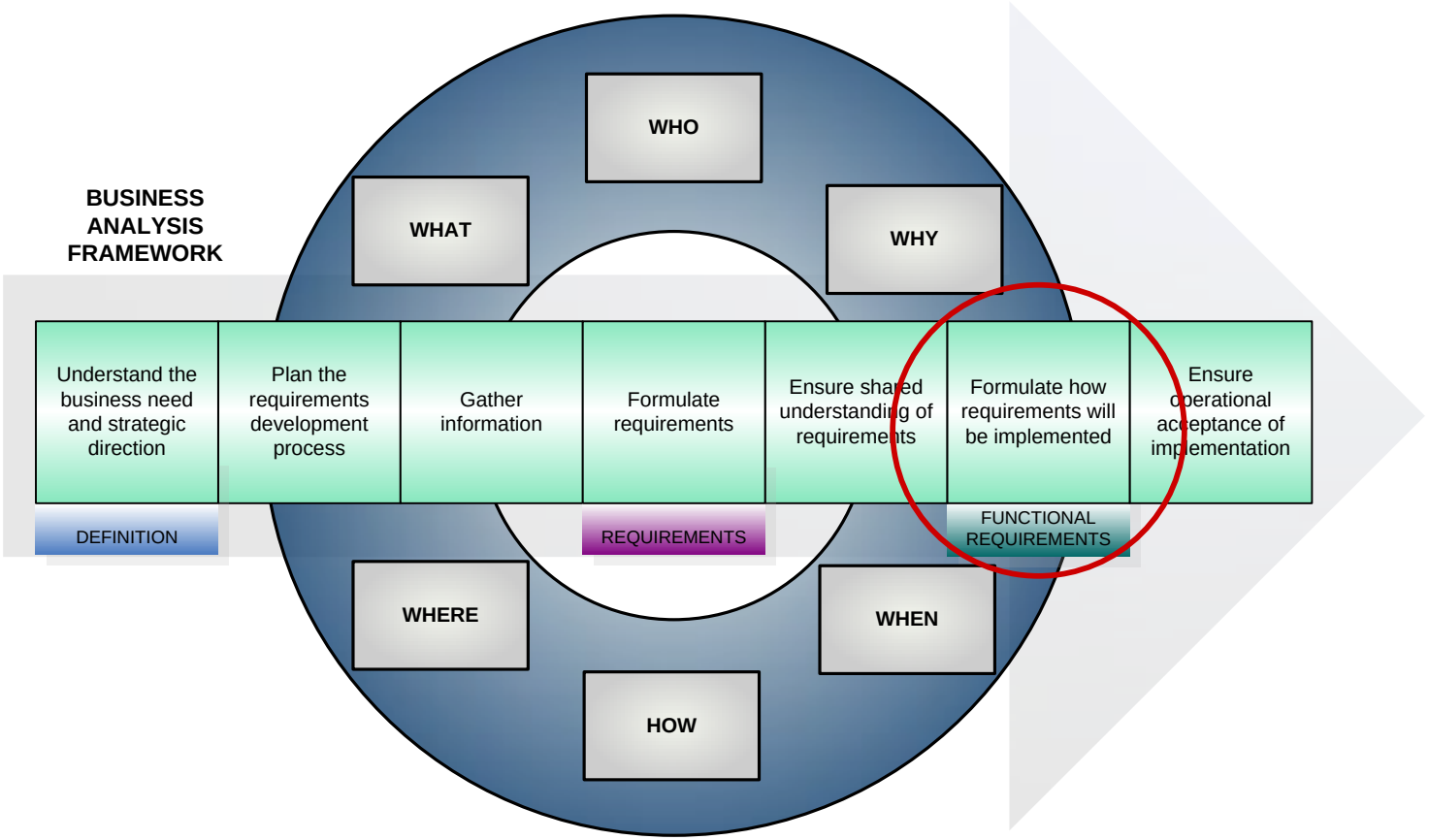
Day 2


6/ Formulating How the Requirements will be Implemented
7/ Ensuring Operational Acceptance of Implementation
A/ Business Analysis Tools & Techniques
B/ Review & Improve

Course Objectives



6/ Formulate how requirements will be implemented



Defining the solution

- There is always more than one solution that can potentially meet the requirements
- Hence it is important to assess the alternatives to determine the best solution

The Solution Process

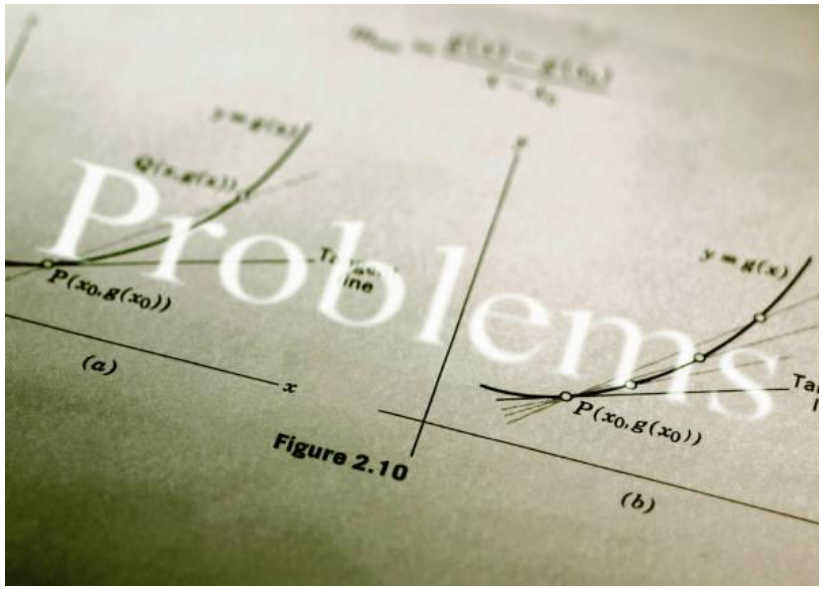
A solution process could involve one or many of the following:

- Build your own
- Predefined solution
- Investigation of others
- Request for Information (RFI)
- Request for Proposal (RFP)

Problem Solving Techniques

Can be used for:

- **identifying and developing a solution recommendation based on the business requirements**
- resolving issues
- addressing risks
- general problem solving



Solution Identification

1/ IDENTIFY POSSIBLE SOLUTIONS

- Generate multiple possible solutions, e.g. brainstorm
- Do not filter out potential solutions

Then:

- consider/refine each idea to see how it could meet requirements

2/ ASSESS THE POTENTIAL SOLUTIONS

- Shortlist the feasible potential solutions
- Determine the criteria to be used to assess the solutions incl. impact on other areas of the business and level of risk
- Apply weightings to the criteria
- Rate each solution against the weighted criteria

The Do and Don't of Problem Solving

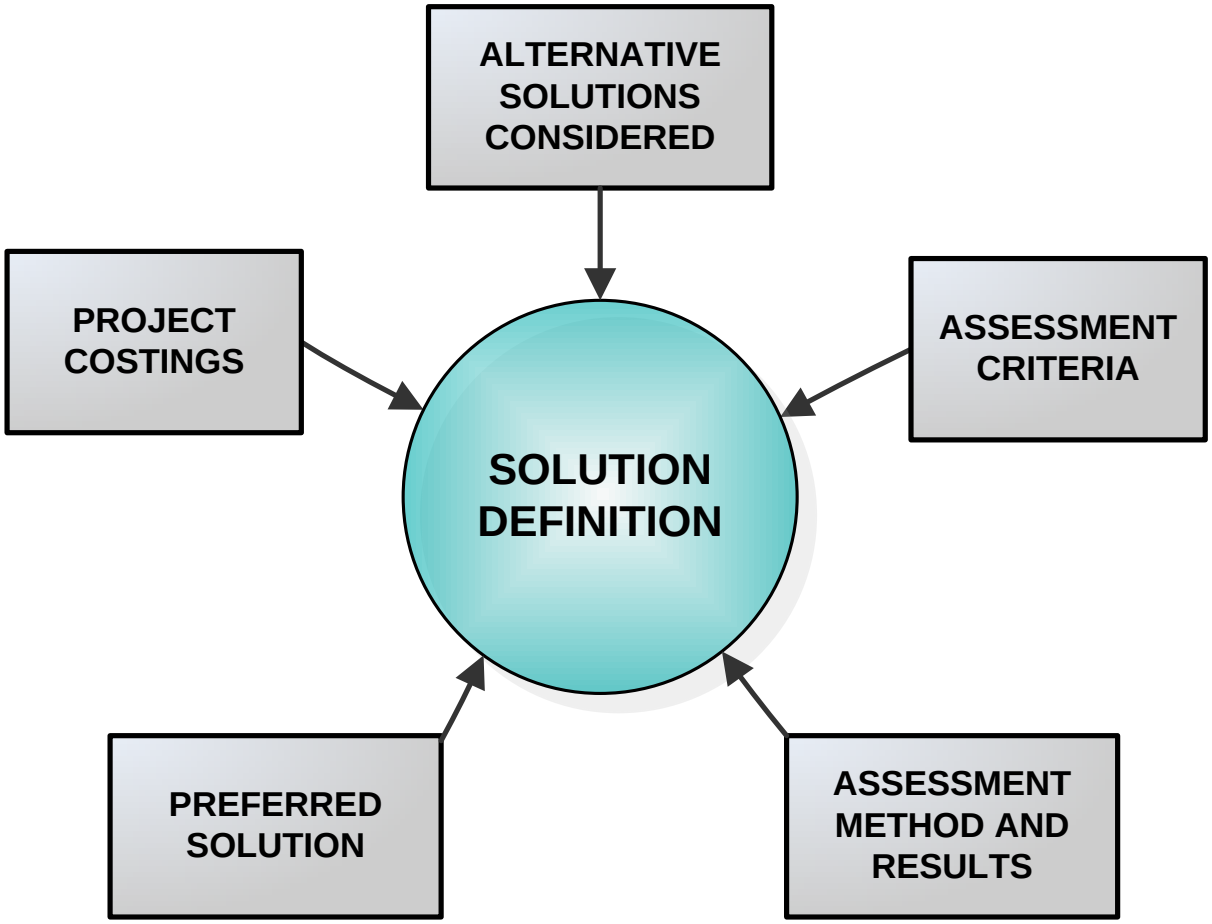
Do:

- ✓ Clearly state the problem
- ✓ Identify several solutions
- ✓ Assess potential solutions based on real or agreed requirements
- ✓ Ensure that business users accept the proposed solution
- ✓ Consider the big picture and the context

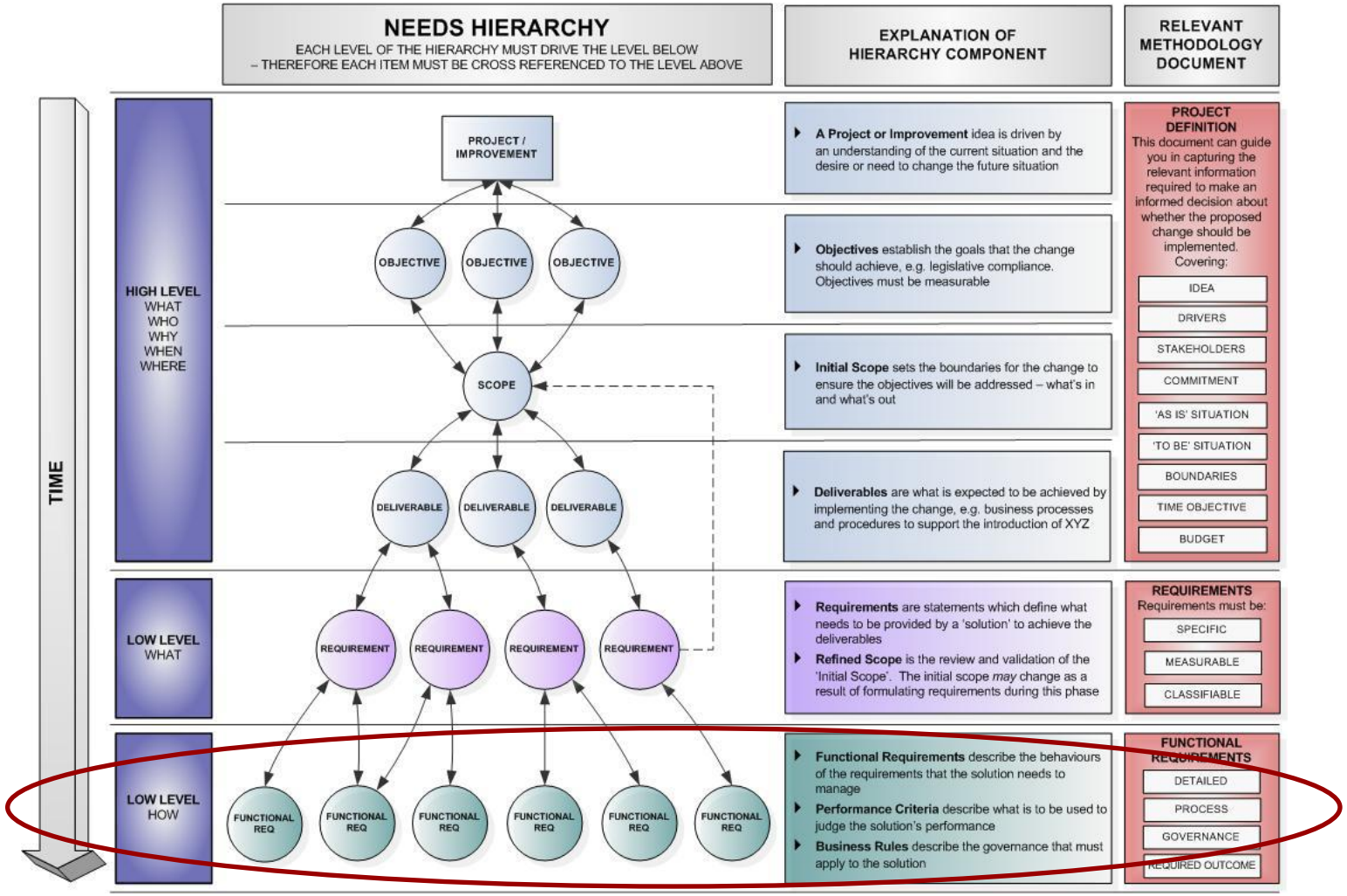
Don't:

- × Make assumptions
- × Jump to conclusions
- × Promote one solution without evaluation
- × Allow a group with one specific area of expertise to propose solutions
- × Attempt to solve the problem in isolation

Solution Recommendation

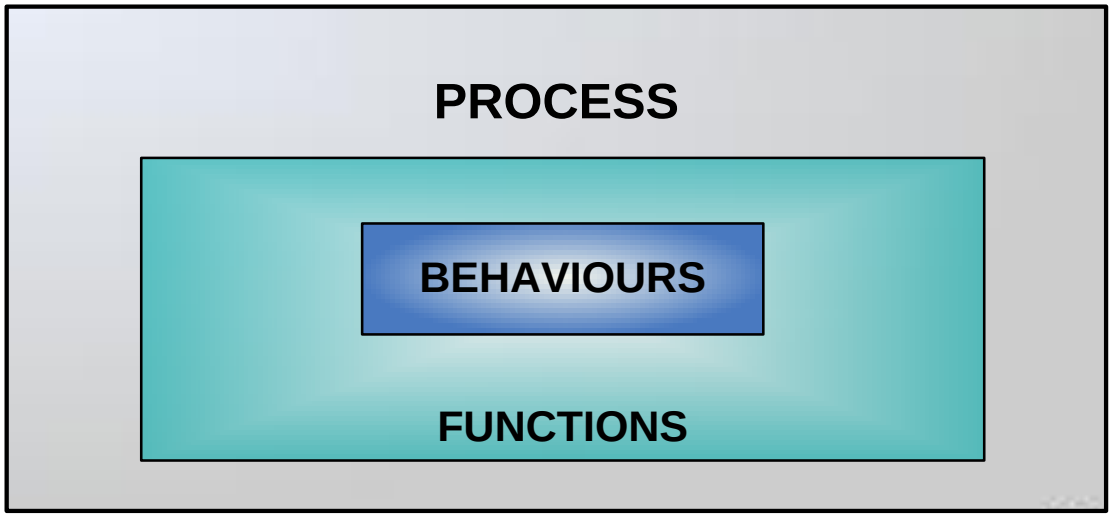


The Needs Hierarchy | Functional Requirements



Functional Requirements

Translating requirements into specifications for the solution



WHO

Who should develop functional requirements?

- The team plus input from stakeholders and process owners

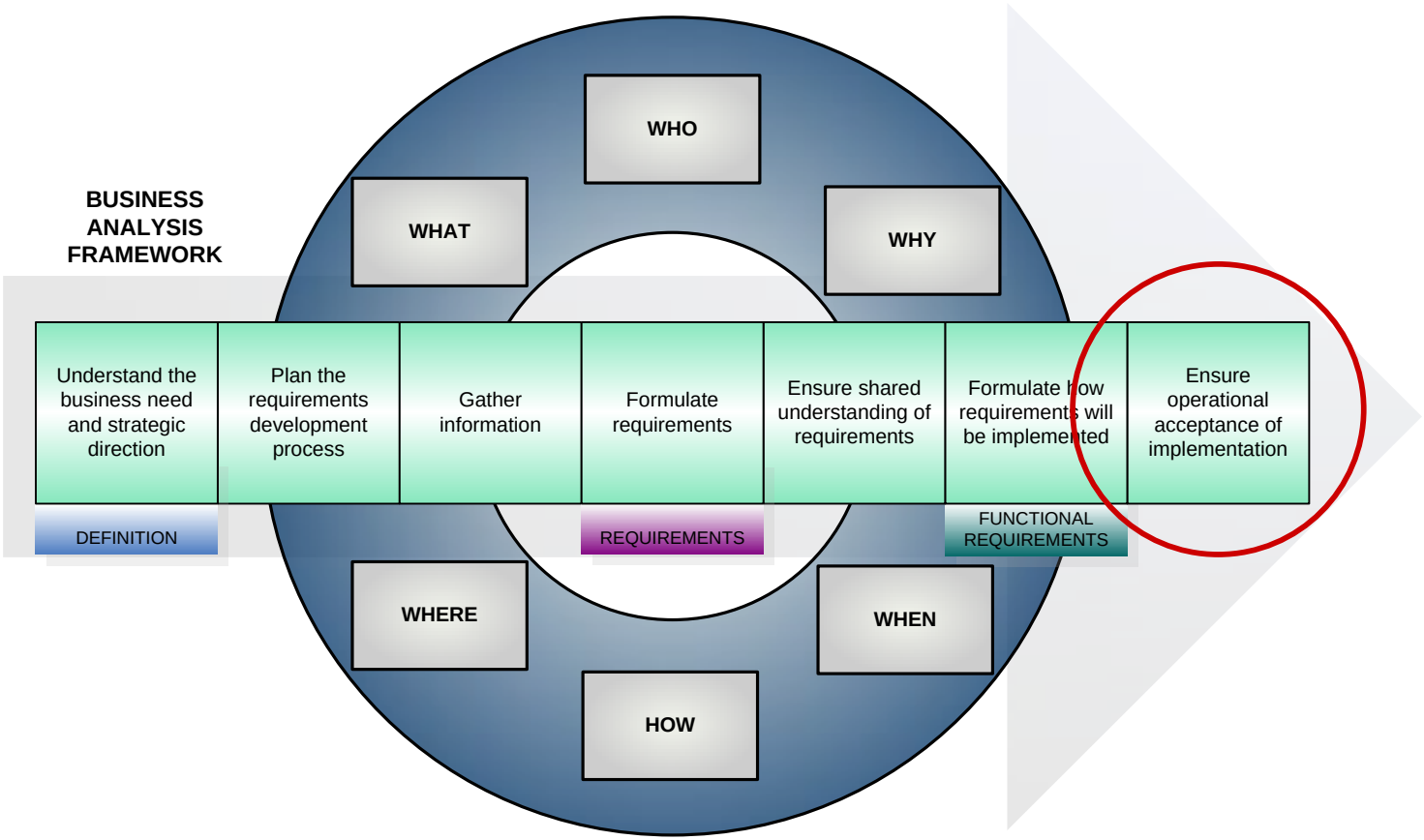
Who uses functional requirement information?

- All stakeholders with a responsibility for building, developing, delivering and/or maintaining the solution including external vendors

A Typical Functional Requirement

Functional Requirement 1	
Requirement Cross Reference: cross-references / describes which requirement/s this functional requirement addresses	
Business Rule Cross Reference: cross-references / describes which business rule/s constrain this functional requirement	
Name	Name of the functional requirement
Detail Definition	Definition of the functional requirement
Preconditions	List conditions that must exist or be established before the functional requirement can occur
Inputs	List inputs required for this functional requirement
Outputs	List outputs required for this functional requirement
Formulas	List formulas and calculations required
Triggers/Interfaces	List internal/external triggers and interfaces and their data requirements
Volume/Frequency	Describe anticipated volume for all interfaces, e.g. approx. number of users, critical time periods
Printing Requirements	List printing requirements (if any) by volume, type, time and period
Main Scenario – Tasks / Sub Functions	List step by step the necessary main tasks and sub-functions
Extensions	List the necessary sub-functions outside of the main scenario, i.e. *if* ABC occurs, XYZ must occur
Test Verification	How the functional requirements will be verified

7/ Ensuring operational acceptance of implementation



Business Analysis | Testing Activities

Business analysis can assist in:

- Determining how the solution will be tested by its users to attain their acceptance of it, e.g. take early screen design concepts back to users for feedback
- Developing complete and detailed user acceptance tests (UATs) which reflect the Functional Requirements
- Helping users to understand the needs of UAT and their responsibilities in the UAT process
- Ensuring user acceptance testing is completed satisfactorily prior to implementation including resolving UAT issues

Testing | WHY, WHEN & WHAT

WHY test?

- To ensure that a project delivers what is expected and has been agreed
- Is a means of identifying defects introduced during the development lifecycle

WHEN does testing happen?

- From the beginning of the construction phase to the end of testing (refer to PSC Project Lifecycle)

WHAT are some types of testing?

- Unit
- Systems
- Regression
- Integration
- User Acceptance
- Destructive

Business Analysis | Training Activities

Training should be provided to users of the solution as necessary to facilitate the implementation of the change.

Business analysis assists in training activities by:

- Producing the training strategy to determine how the users of the solution will be trained
- Facilitating training preparation & delivery (but not necessarily providing the actual training)
- Ensuring training is provided
- Measure training effectiveness

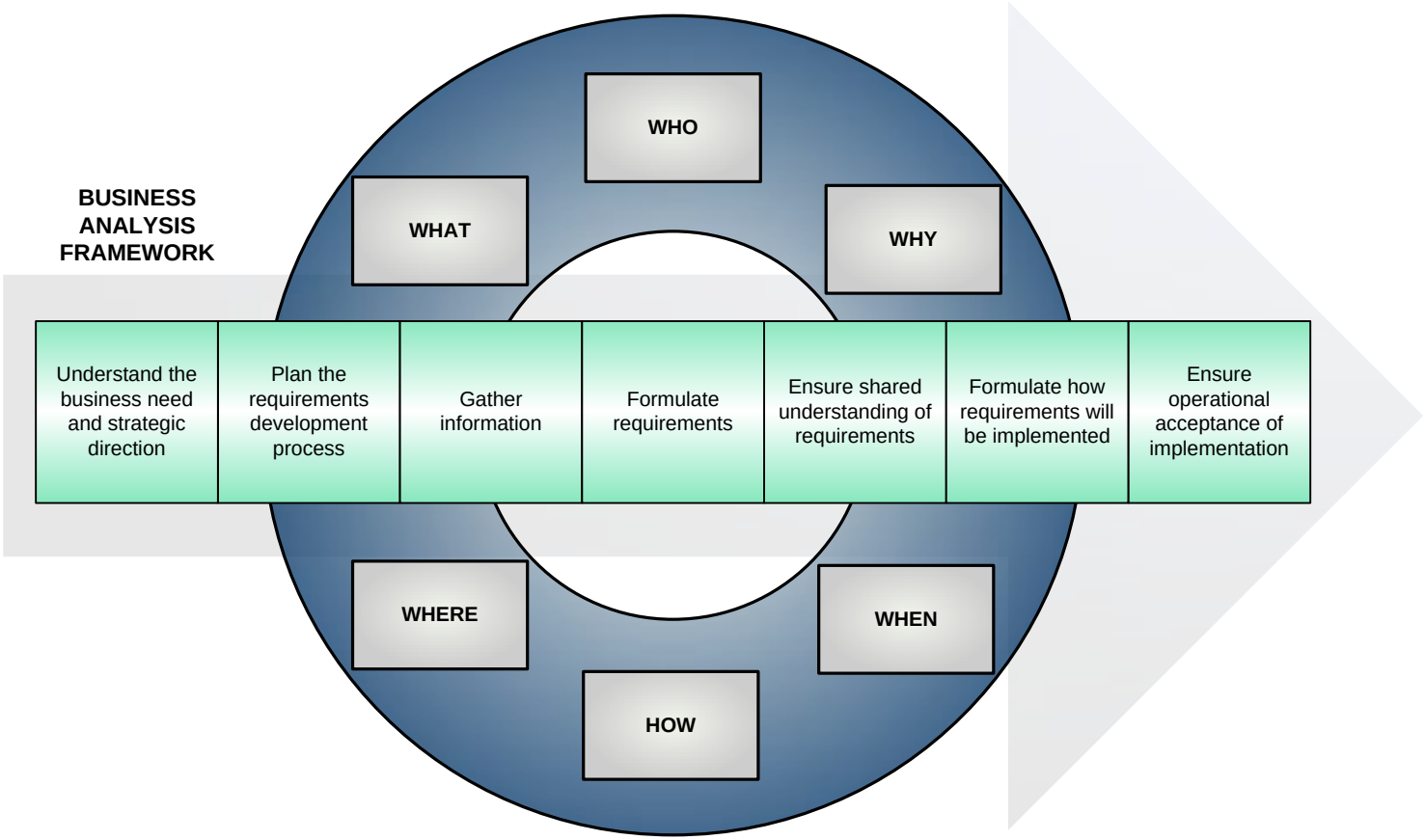
Business Analysis | Implementation

Business analysis can assist in implementation to ensure that the solution is handed over to the operational area/s successfully and disruption to the existing business during implementation is minimised.

Business analysis can assist in developing:

- Implementation strategy
- Implementation schedule
- Post Implementation Review (PIR)

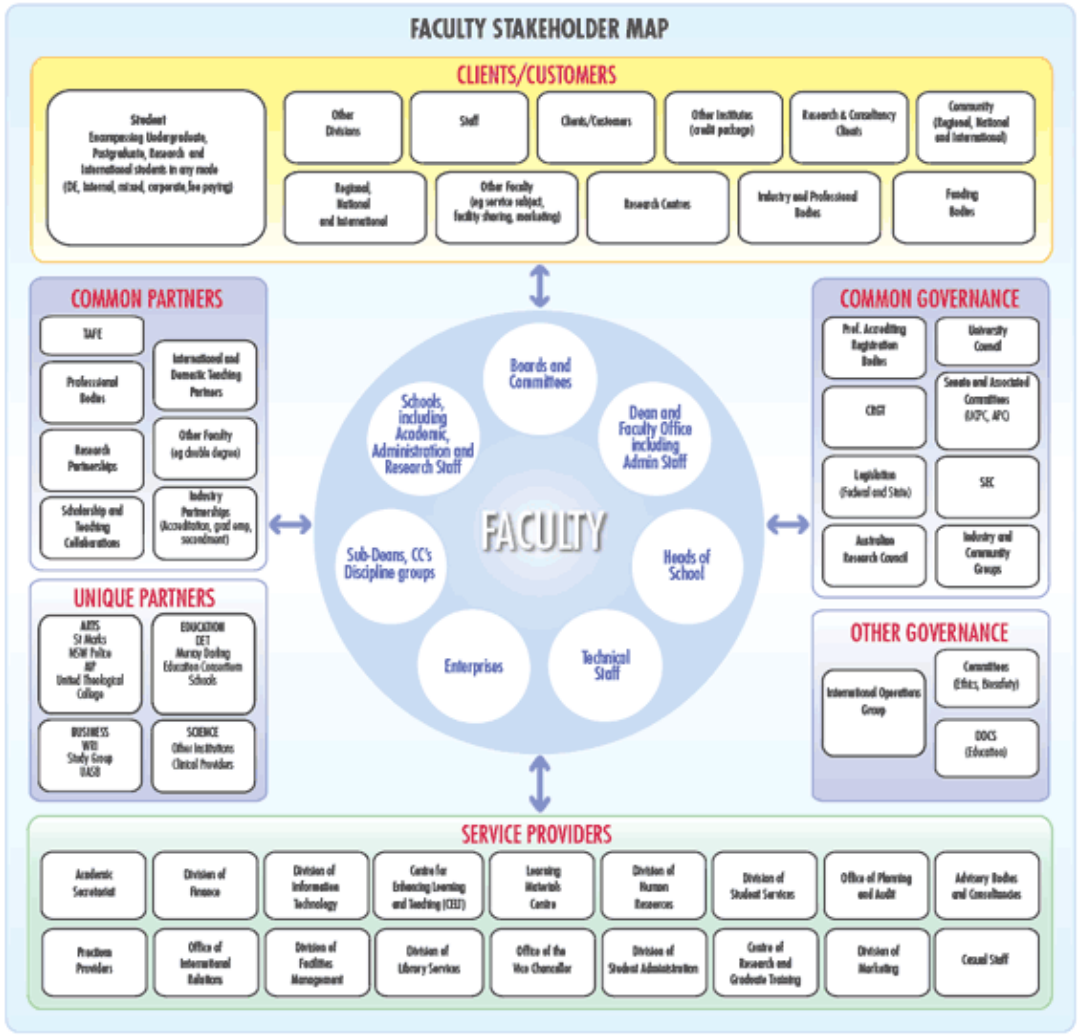
Business Analysis Tools & Techniques



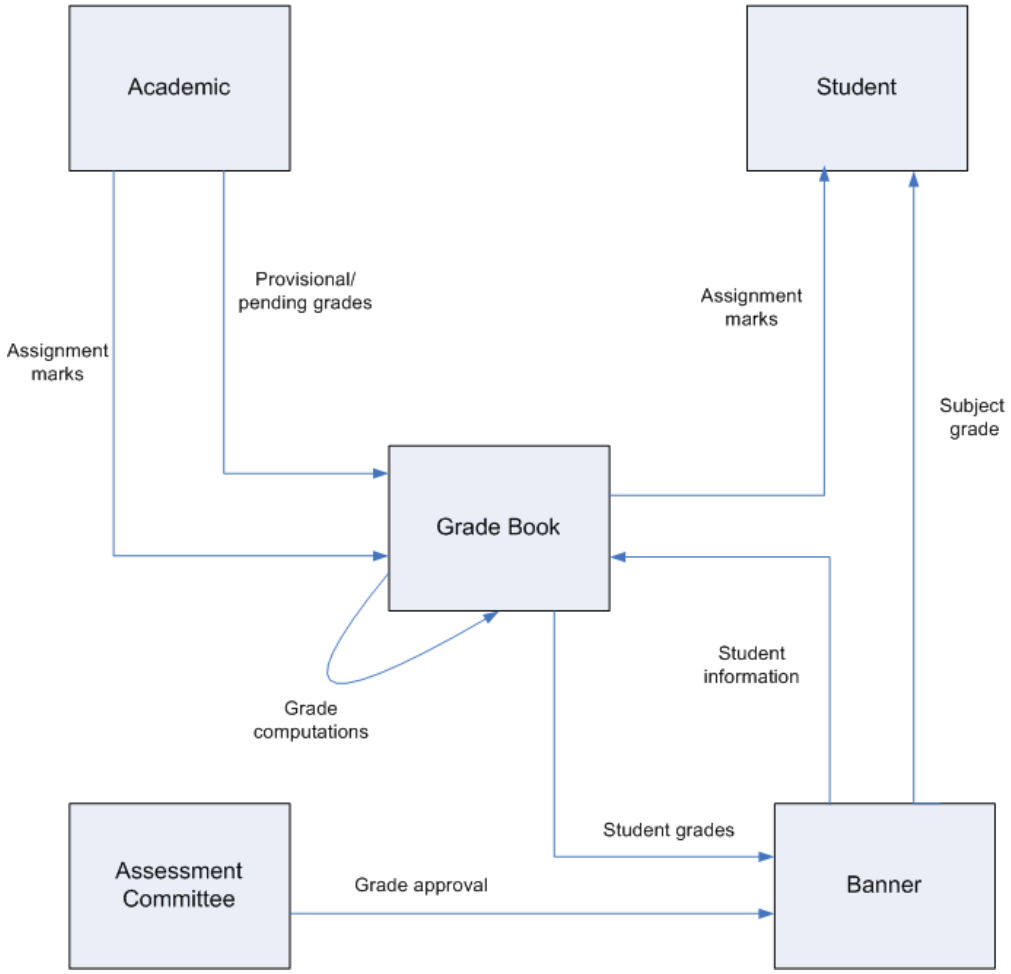
Context Modelling

- Context diagrams are used during the business need ‘definition’ stage to provide a high-level visual model of the project / improvement
- It serves as a view of the business solution to be built, and identifies the entities that will interface with the solution
- They assist in understanding / agreeing the scope under review

Stakeholder Context



Project Context Diagram



Business Systems Context Diagram

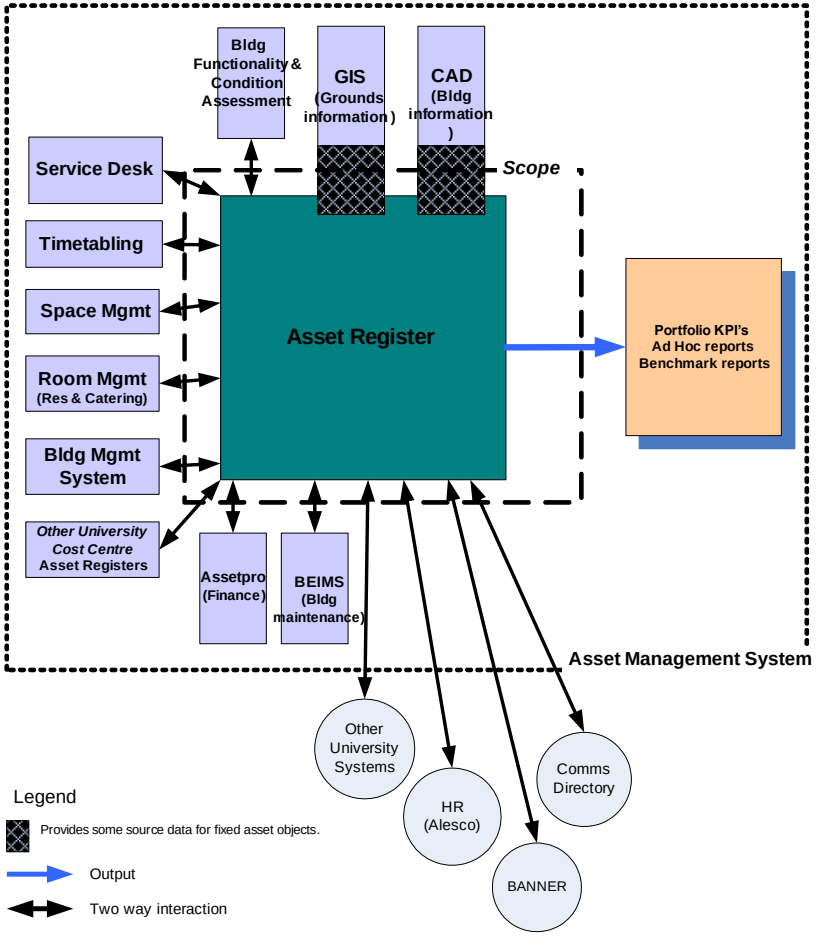
Appendix C
Asset Management Project - Business View

The Asset Register:

*** its relationship within an Asset Management System ; and**

*** how it will Interact with other CSU Applications .**

Project Idea/Goal: Identify a suitable Asset Register software solution .



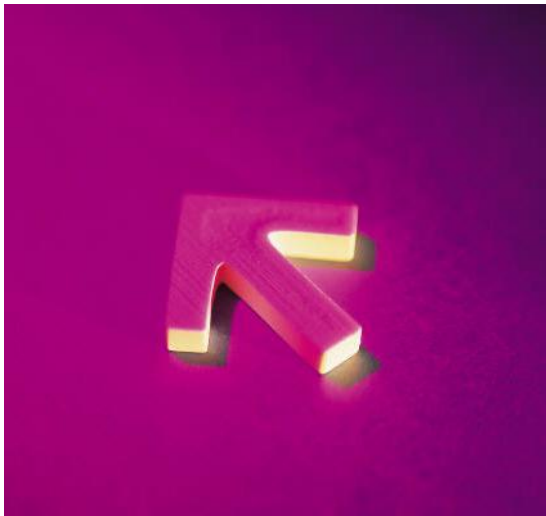
Exercise

Business Processes

Business process modelling (BPM) is a means of representing the steps, participants and decision logic in a business process.

The goal of BPM is to articulate a business process to assist understanding and to potentially:

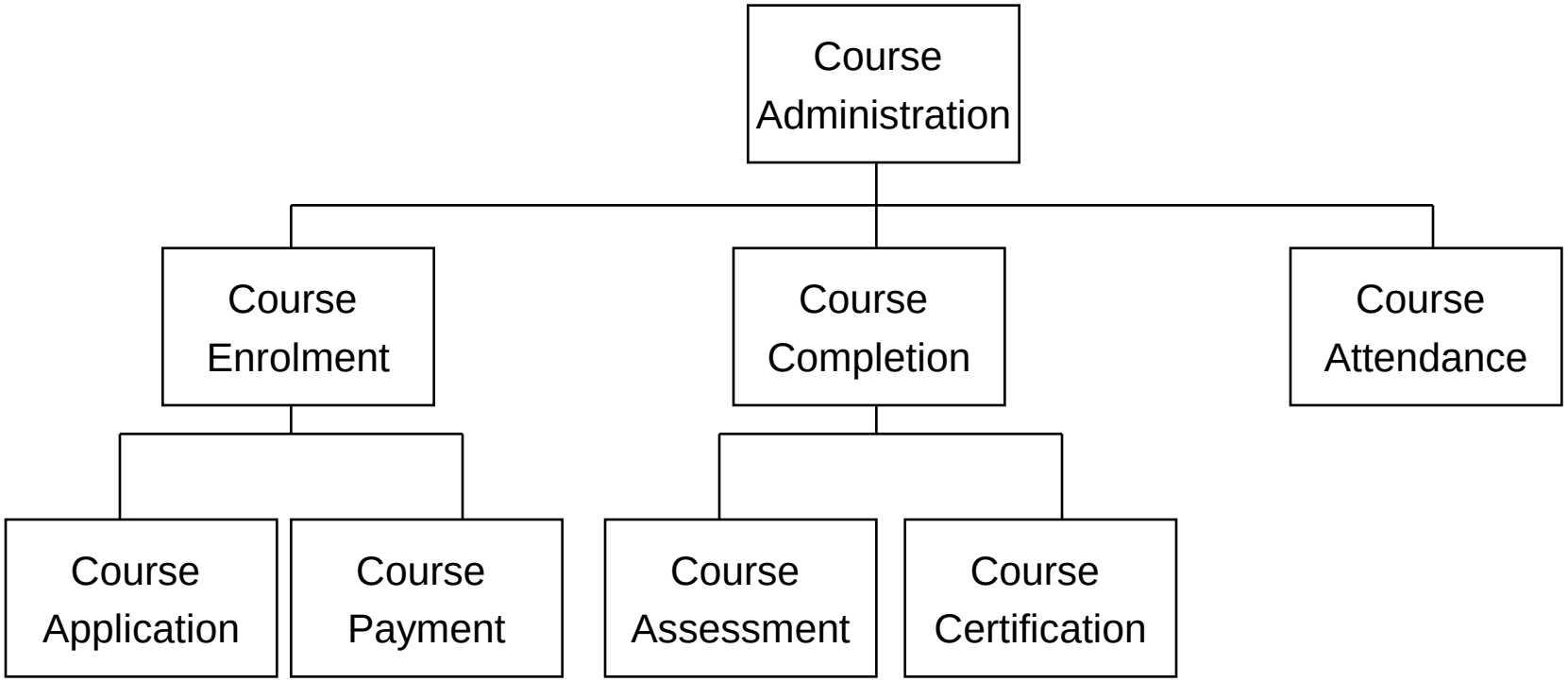
- Improve business processes
- Re-engineer the business
- Automate an existing business process



Business Operation Modelling | WHAT

- Business operation models are a business analysis technique for breaking down a high level operation and dividing entities into smaller and smaller related parts – or ‘functional components’
- A business operation model shows a hierarchical organisation of the business processes that comprise the business operation
- A business operation model is distinct from a process flow diagram which shows the sequence of events of a business process

Business Operation Model | WHAT



Business Operation Model | WHY

- A large or complex operation is more easily understood when broken down into smaller processes.
- It therefore facilitates understanding of the business operation and hence is a useful tool in conducting analysis and design.

Business Operation Model | WHEN

- Business operation modelling is used in determining and defining the functional requirements of a solution
- It can be used to break up a large or complex business process into smaller components prior to developing process flow diagrams
- It can also be used during the planning, analysis and design phases to assist in understanding business operations

Business Operation Modelling | HOW

1/ Identify the boundaries – which business operation is to be broken down

↓

2/ Consult with business experts – the people managing / working with the operation

↓

3/ For the operation identify the high level processes which comprise it

↓

4/ Continue to break each process down to lower levels until sufficient meaningful level of detail is achieved

↓

5/ Determine the purpose of each function and record for subsequent process flow models

↓

6/ Draft the business operation model

↓

7/ Review with the experts to ensure completeness

↓

8/ Refine and finalise

Process Mapping | WHAT

- Process mapping is a technique of diagrammatical modelling.
- The diagram represents a series of processes and how they are related.
- Process mapping provides a visual representation of who does what and in what order.

Process Mapping | WHY & WHEN

WHY | Process mapping helps to clarify the steps involved in a particular process.

WHEN | Use process mapping to:

- understand the current process
- clarify responsibilities
- identify process inefficiencies
- design new procedures
- assist in training

Process Mapping | HOW

1/ Identify the boundaries – the process beginning and end

↓

2/ Consult with business experts – the people managing/working with the project

↓

3/ Identify the participants – the roles involved in the process

↓

4/ Identify the steps – what is done in which sequence by who

↓

5/ Identify the decision points and the alternate paths

↓

6/ Draft the process flow

↓

7/ Review with the experts to ensure completeness

↓

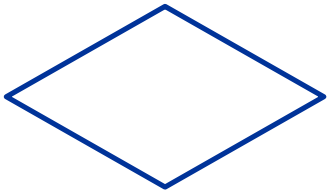
8/ Refine and finalise

Process Mapping | HOW

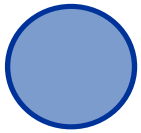
Which shapes to use

Terminator/Initiator
Marks the start and end of a process

Process
Describes the action

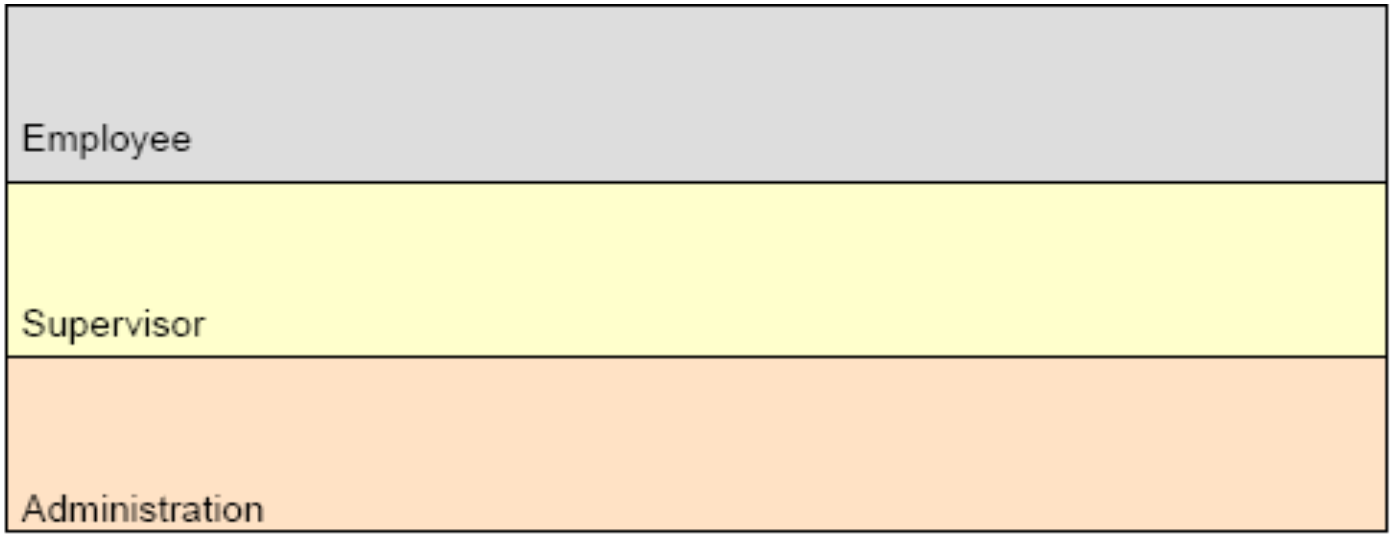


Decision Point
Always has yes and no streams



Related Process
Does not detail the process but refers to it

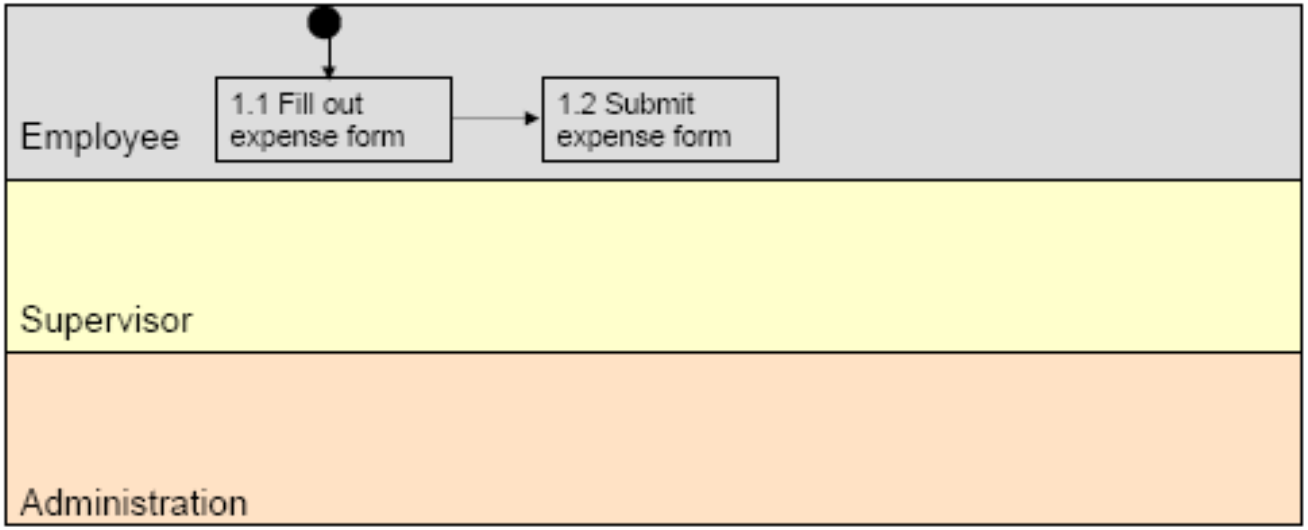
Swim Lane Diagrams | WHAT & WHY



WHAT | Each swim lane represents the area of involvement of each participant who has a role in the process being mapped.

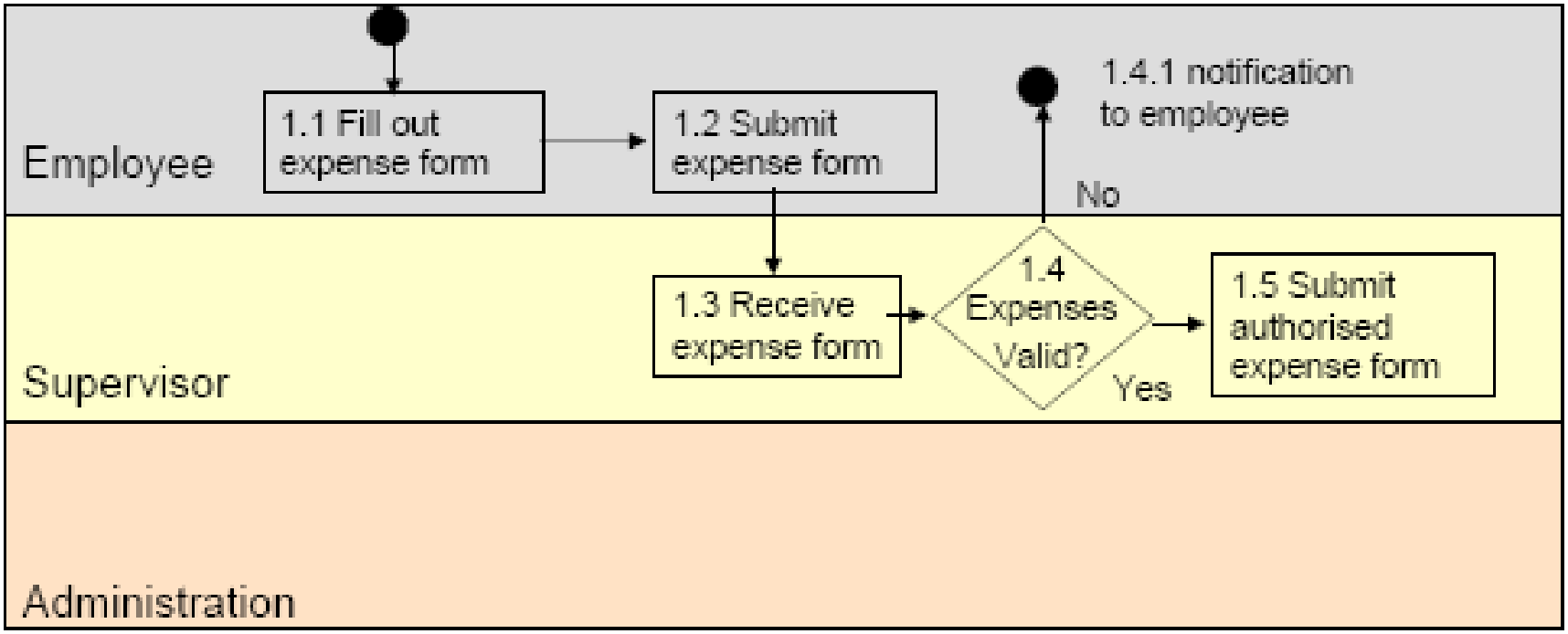
WHY | Swim lane diagrams assist in identifying all participants involved in the process. 'Participants' may be an individual, a team, a division/section or an organisation.

Swim Lane Diagrams | HOW



- Starting at top left with the start symbol
- Draw each step along the swim lane and use arrows to represent the sequence
- Each step should start with a verb
- A number may be assigned to each step

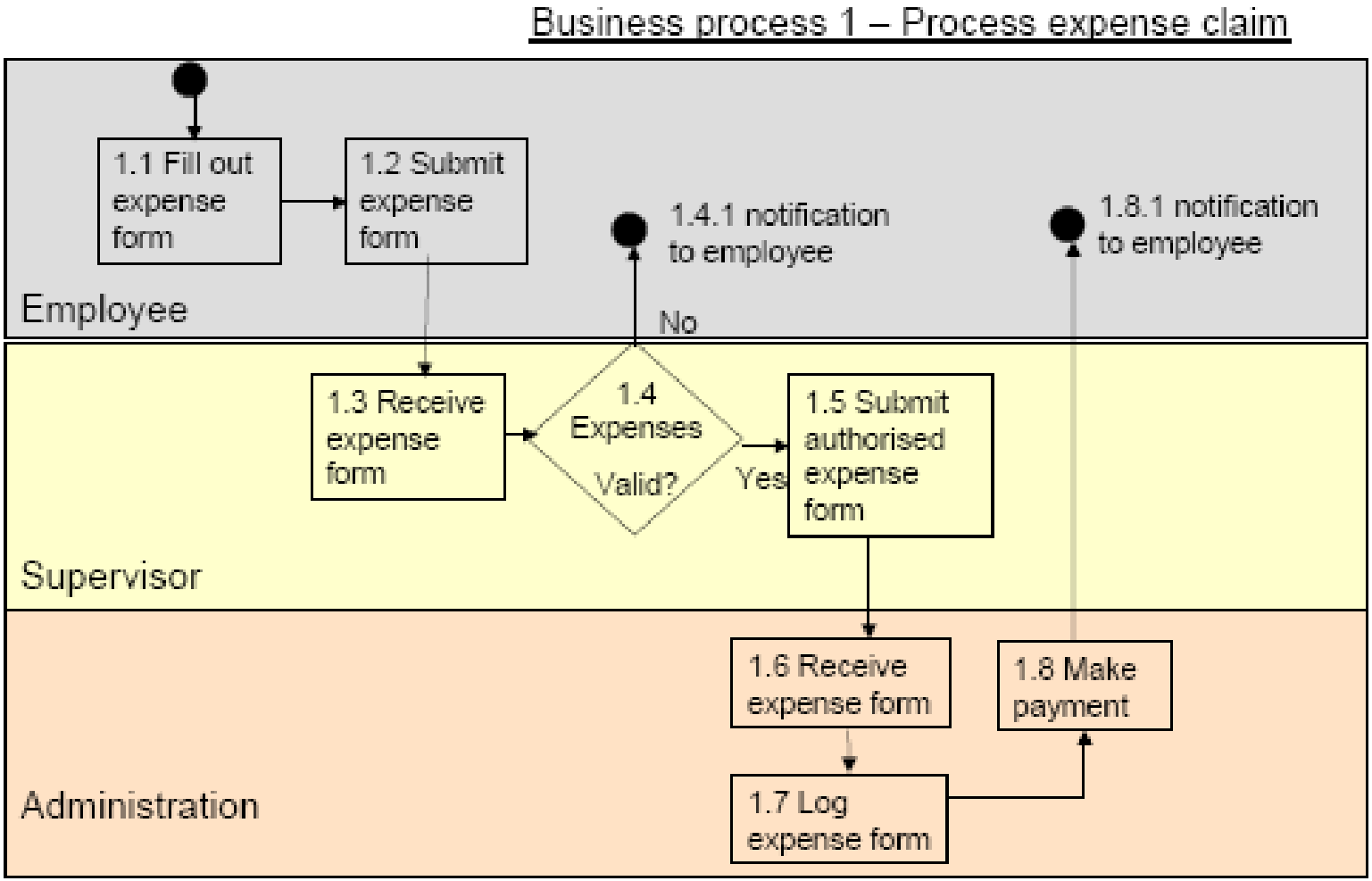
Swim Lane Diagrams | HOW



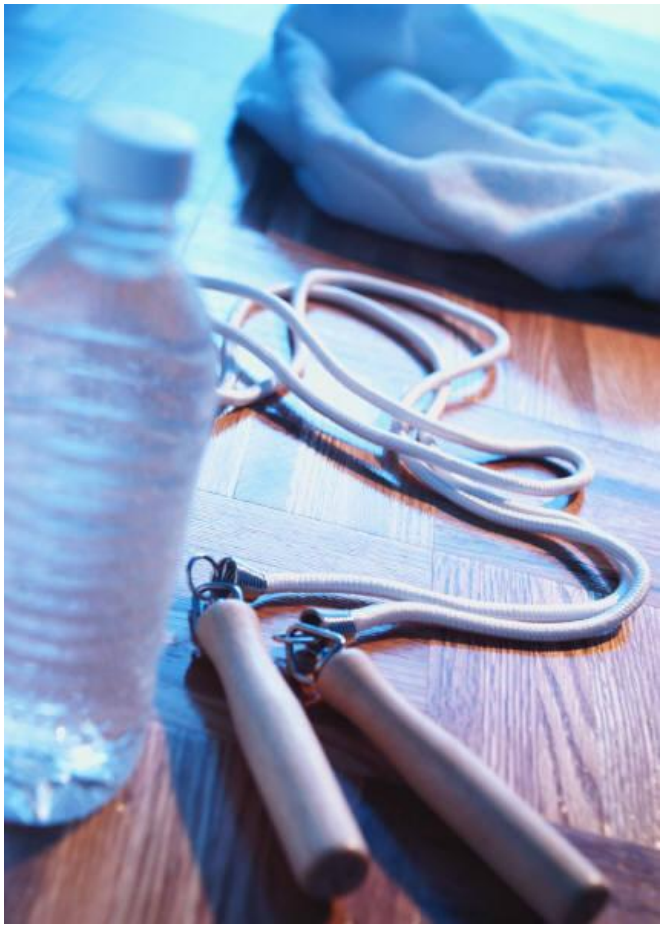
- When a step is performed by a different participant switch lanes
- If the next step depends on a decision show this as in the example above, labelling the alternatives and showing the steps that follow

Swim Lane Diagram

Completed example



Wrap Up Exercise



Review & Improve – Wrap Up Day 2

- Review objectives
- What will you take away?
- Feedback

- Further information sources

www.csu.edu.au/division/psc/

www.csu.edu.au/staff/yourcsu/

www.theiiba.org

Day 1

A/ Introduction – Business Analysis & You

B/ Business Analysis and the CSU Context

C/ Project or Improvement Control

1/ Understanding the Business Need & Strategic Direction

2/ Planning & Coordinating the Requirements development process

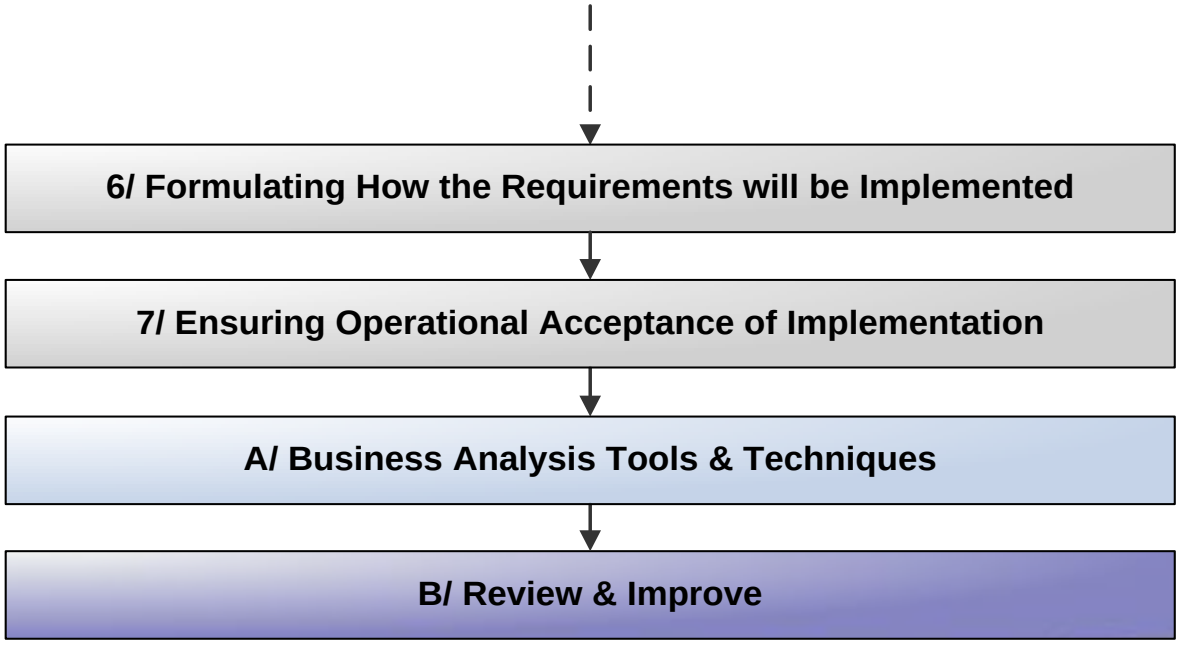
3/ Collecting Requirements

4/ Formulating Requirements

5/ Ensuring Shared Understanding of Requirements

D/ Review & Improve

Day 2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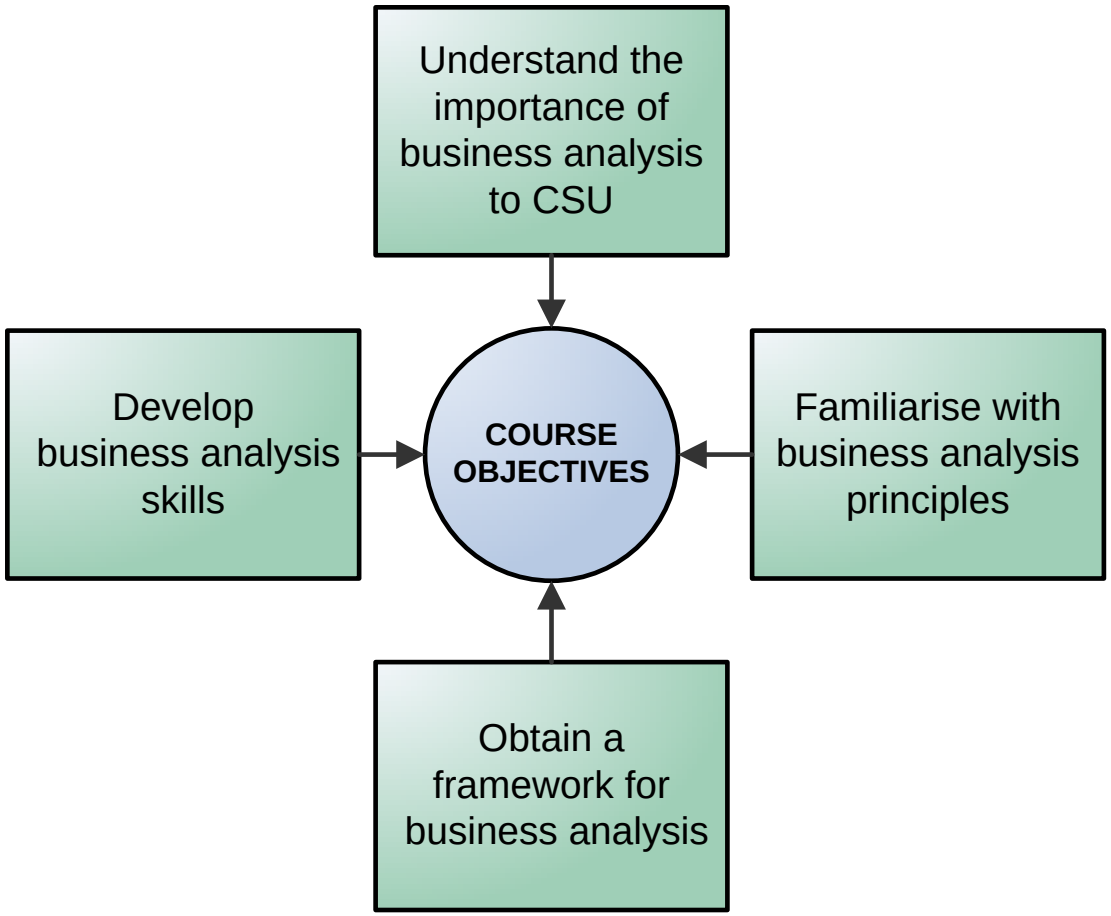

Review & Improve – Wrap Up Day 2

- Review objectives
- What will you take away?
- Feedback

- Further information sources

www.csu.edu.au/division/psc/

www.csu.edu.au/staff/yourcsu/

www.theiiba.org