

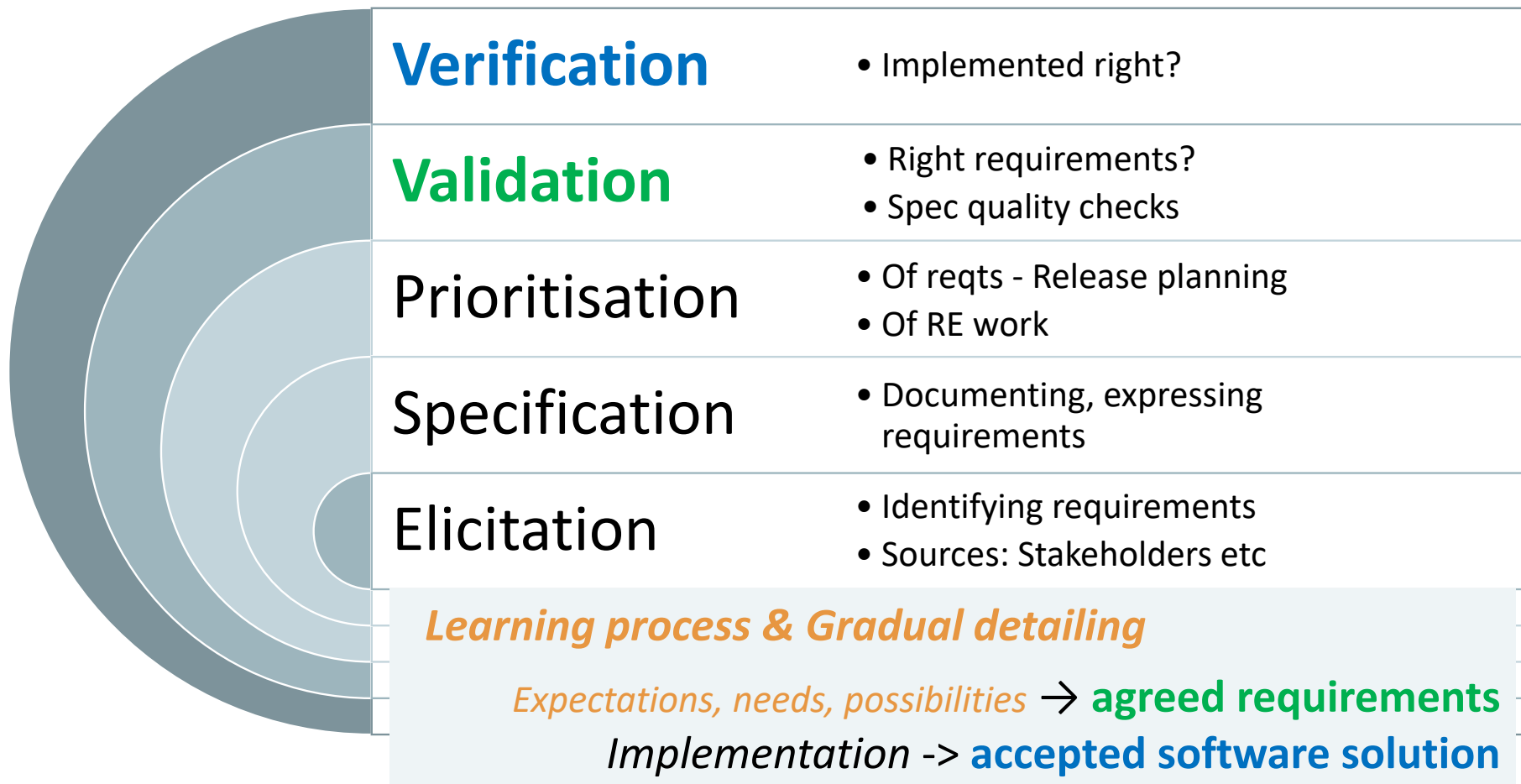
ETSN15: Exercise 2

Elicitation & Data requirements

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In context of RE process [Lau ch 7]



Elicitation: Stakeholder Analysis [Lau 8.3, p 350-]

Identify

- **Sources** – **who** are the stakeholders?
- **Motivations**
 - what are their **goals** with system / participation?
 - what **rewards** do they expect?
- **Risks** and **costs**
- **Imagined** solutions, suppliers and resources

User perspective

Business & Strategy

Technical aspects

Things to elicit [Lau 8.1.2, p 336]

- Present work
- Present problems
- Goals and key issues
- Future system ideas
- Realistic possibilities - constraints
- Consequences & risks
- Commitment
- Conflict resolution
- Requirements – e.g. formal, regulatory, absolute needs
- Priorities
- Completeness

Elicitation techniques

[Lau 8.2, p 338-]

	Present work	Present problems Goals & key issues	Future system ideas Realistic possibilities Consequences &	Commitment Conflict resolution	Requirements Priorities Completeness
Stakeholder analysis					
(Group) interview					
Observation					
Task demo					
Document studies					
Questionnaires					
Brainstorm					
Focus groups					
Domain workshops					
Design workshops					
Prototyping					
Pilot experiments					
Similar companies					
Ask suppliers					
Negotiation					
Risk analysis					
Cost / benefit					
Goal-domain analysis					
Domain-reqs analysis					

Elicitation barriers [Lau 8.1]

- **Cannot** express needs
- **Cannot** explain what and why tasks are performed
- Solution oriented, instead of specifying demand / need
- Lack of imagination – new ways, consequences
- **Conflicting** views
- **Resistance** to change
- “Nice to have” – **luxury** demands
- **Changing** demands over time

Tips & Hints for Eliciting the **Real Requirements**

Ask questions! Avoid nasty surprises later on

- Make sure you understand **CONTEXT**
 - **Why** is this required?
 - **How** is it to be used?
 - **Who/what** is the user?
 - **When**, in which situations, will it be used?
- Make sure you get the **FULL PICTURE**
 - What **quality** aspects are required?
 - Should this be **configurable** for products?
 - Should **other users/actors** be able to access this data?
 - Should this functionality **interact with other** functionality? Run in parallel?

→ Better chance to find good technical solutions/design



Data requirements techniques – Summary

[Lau ch 4]

■ Data model (E/R-diagr.)

- ◆ Block diagram describing data inside and outside the product
- ◆ Precise and insensitive to abstraction level
- ◆ Excellent for experts – difficult for users; takes time to learn
- ◆ Easy to verify by experts that the data is handled by the product
- ◆ Difficult to decide how much detail should be included in the model

■ Data dictionary

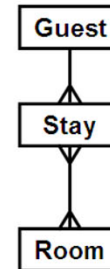
- ◆ Textual description of data inside and outside the product
- ◆ Structured and systematic descriptions using verbal text
- ◆ Very expressive, can be used for all levels of detail and special cases
- ◆ Easy to validate by experts and non-experts
- ◆ Takes long time to write; when is it good enough? (Start with difficult parts!!)

■ Data expressions (regular expressions)

- ◆ Compact formulas for describing data sequences
- ◆ Useful for composite data and message protocols
- ◆ Excellent for experts, acceptable for many users
- ◆ No visual overview

■ Virtual windows

- ◆ Simplified screens with graphics and realistic data, but no buttons and menus
- ◆ Excellent for both experts and users
- ◆ Easy to validate and verify
- ◆ Risk of overdoing it and start designing the user interface



Class: Guest [Notes a, b ... refer to guideline]

The guest is the person or company who has to stay records. A company may have none [b, c]. In the database we only use "guest" [a]. The person called guests, but are not guests in database terminology.

Examples

1. A guest who stays one night.
2. A company with employees staying now and record where his name is recorded [d].
3. A guest with several rooms within the same

Attributes

name: Text, 50 chars [h]
The name stated by the guest [f]. For the bill is sent there [g]. Longer name registration time than at print out time

passport: Text, 12 chars [h]
Recorded for guests who are obvious reports in case the guest doesn't pass

passport number = letter + {digit}*8
room state = { free | booked | occupied | repair }
account data = transfer + {account record}* + done

Stay#: 714

Guest
Name: John Simpson
Address: 456 Orange Grove
Victoria 3745
Payment: Visa

Item	#pers	
7/8 Room 12, sgl	1	600
8/8 Breakf. rest	1	40
8/8 Room 11, dbl	2	800
9/8 Breakf. room	2	120
9/8 Room 11, dbl	2	800

Today's exercises

- Specification techniques: Data requirements
 - 1b) Data dictionary
 - 1c) Virtual window
- Elicitation barriers & techniques - 2a
- Stakeholder analysis – 3a
- What to elicit? – 3b + 3c barriers + 3d techniques



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