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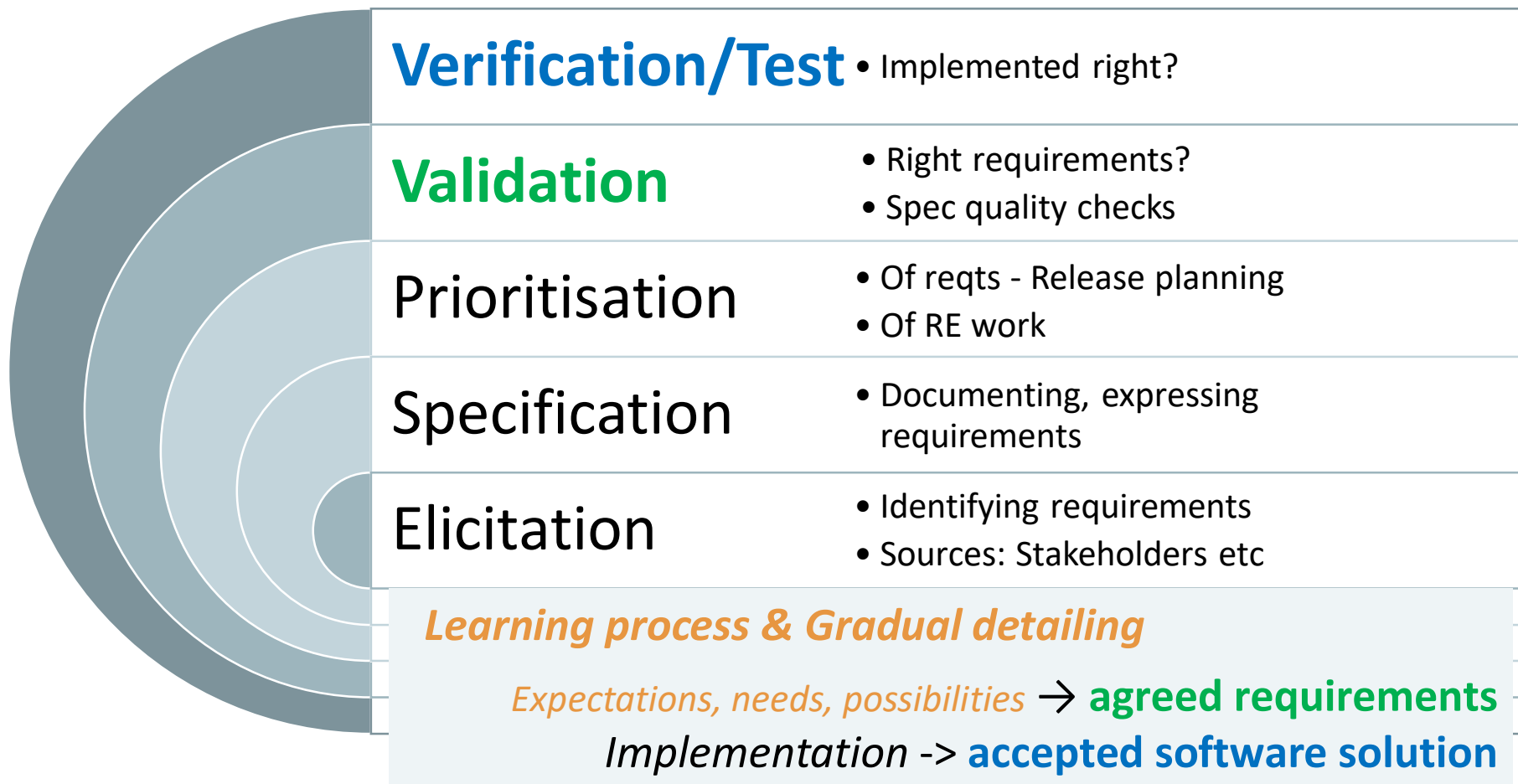
ETSN15: Exercise 2

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

Consider **user** aspects, but also **business** and **strategy** aspects, and **technical** aspects.

Who?

- Sponsor
- Daily users
- Users' managers
- Those affected by changed operations, e.g. customers, business partners
- Authorities, e.g. safety inspectors, auditors. May pose regulatory requirements
- Development project and roles
- Resource providers to dev project (line managers)
- Suppliers, competitors (if collaborating, e.g. around an open standard)

How?

- Brainstorming meeting or More structured focus group
- All stakeholders (to gain mutual view) or grouped (e.g. to avoid conflicts). Scheduling may be a challenge.

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 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 **other users/actors** be able to access this data?
 - Should this functionality **interact with other** functionality? Run in parallel?
 - Should this be **configurable** for products?

→ 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

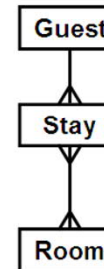
- ◆ Textual description of data inside and outside the product
- ◆ Structured and systematic descriptions using verbal text
- ◆ Very expressive, can be used for all levels of detail and special cases
- ◆ Easy to validate by experts and non-experts
- ◆ Takes long time to write; when is it good enough? (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 per-called guests, but are not guests in database terms.

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]. From 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

Guest		Stay#: 714
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 “things to elicit” + 3c barriers + 3d techniques



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