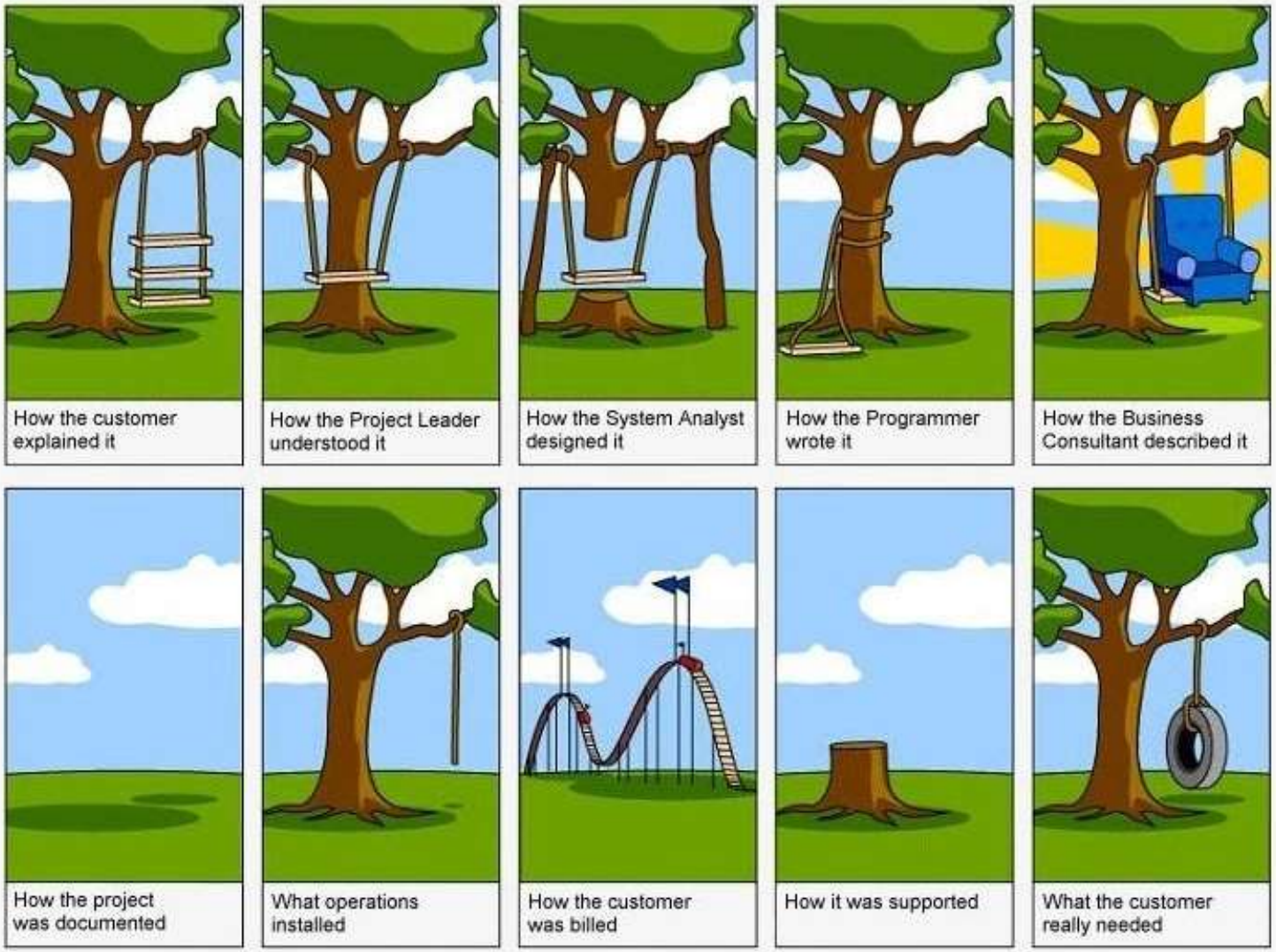


REQUIREMENTS ENGINEERING 2/2

Prof. Dr. Norbert Frick

ORGANIZATIONAL REMARKS

Exam: 13.08., 13:00

INTERNATIONAL REQUIREMENTS ENGINEERING BOARD

Source: https://www.compliance-technologies.com/DS/ireb-cpre-handbook-for-requirements-management-advanced-level-en-v1.1.pdf, Last access: 06.06.2025

WORK PRODUCTS IN RE

Work product	Purpose: The work product specifies /provides	Size*
Single requirements		
Individual requirement	A single requirement, typically in textual form	S
User story	A function or behavior from a stakeholder's perspective	S
Coherent sets of requirements		
Use case	A system function from an actor's or user's perspective	S-M
Graphic model	Various aspects, for example, context, function, behavior (see Section 3.4)	M
Task description	A task that a system shall perform	S-M
External interface description	The information exchanged between a system and an actor in the system context	M
Epic	A high-level view of a stakeholder need	M
Feature	A distinguishing characteristic of a system	S-M
Documents or documentation structures		
System requirements specification**	A comprehensive requirements document	L-XL
Product and sprint backlog	A list of work items, including requirements	M-L
Story map	A visual arrangement of user stories	M
Vision	A conceptual imagination of a future system	M
Other work products		
Glossary	Unambiguous and agreed common terminology	M
Textual note or graphic sketch	A memo for communication and understanding	S
Prototype	A specification by example, particularly for understanding, validating, and negotiating about requirements	S-L

*: S: Small, M: Medium, L: Large, XL: Very large

**: Other examples are: business requirements specification, domain requirements specification, stakeholder/user requirements specification or software requirements specification

Glinz et al. (2020)

EXAMPLE: TEXT VS MODEL

Textual requirements

REQ001: The customer places an order

REQ002: The customer pays for the order

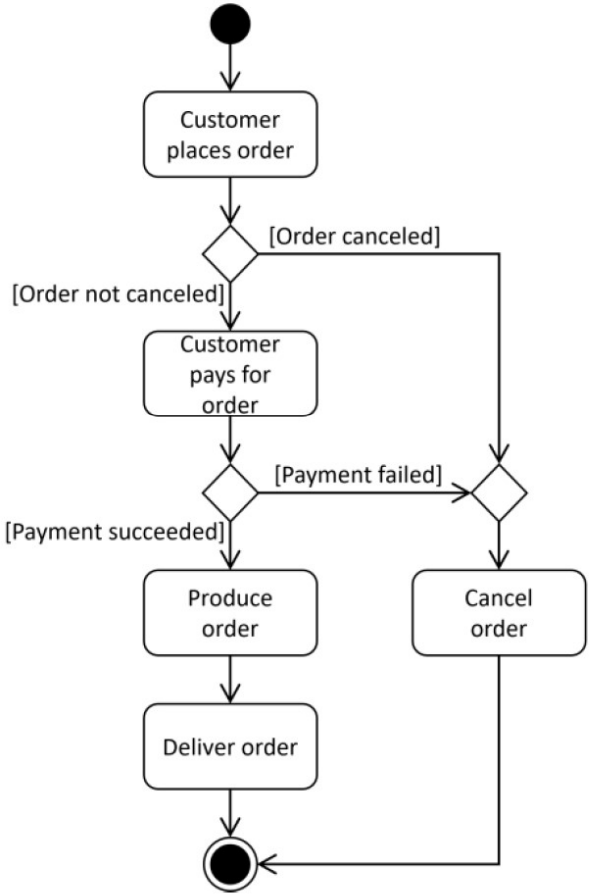
REQ003: If the payment succeeded, then the order is produced

REQ004: If the payment failed, then the order is canceled

REQ005: After the order is produced it is delivered to the customer

REQ006: The customer can cancel the order before payment

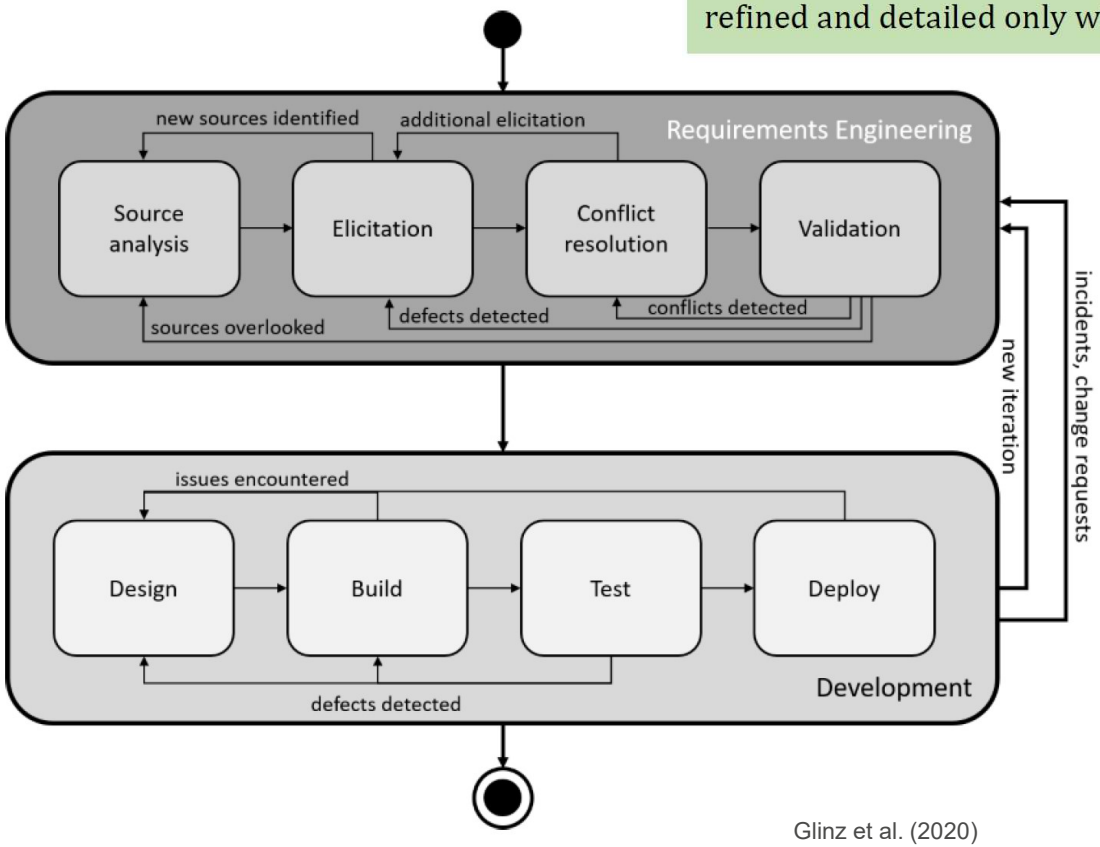
Modelled requirements



Glinz et al. (2020)

RE PROCESS

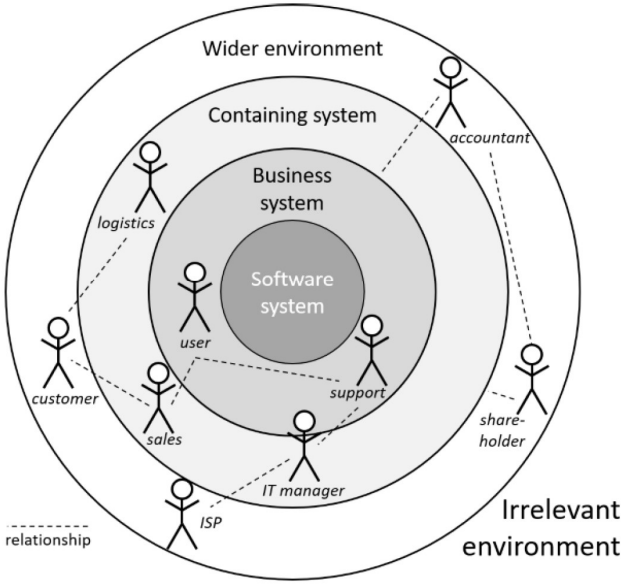
In agile projects, iterative and incremental Requirements Engineering and system development go hand in hand, with requirements being elaborated just before the development of a new system increment. In such projects, you will often see that a project starts with a limited product backlog of high-level requirements that are refined and detailed only when they are candidates for the next iteration.



Glinz et al. (2020)

SOURCES FOR REQUIREMENTS

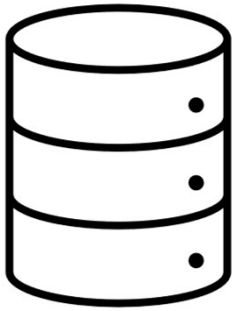
Stakeholders



Alexander (2005)

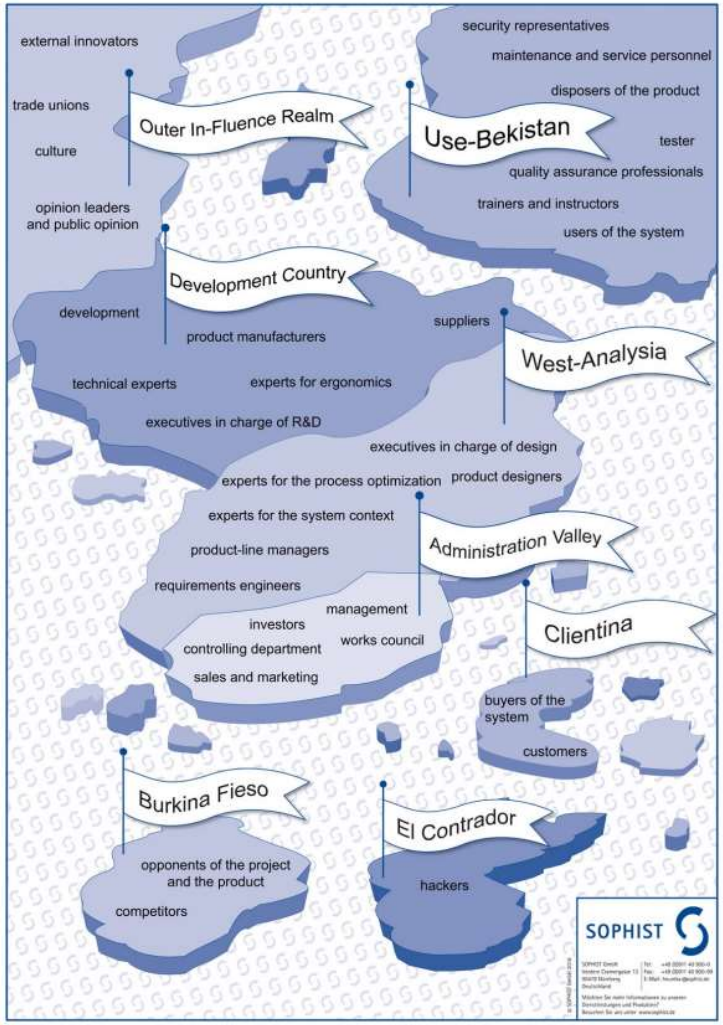
Documents

Other systems



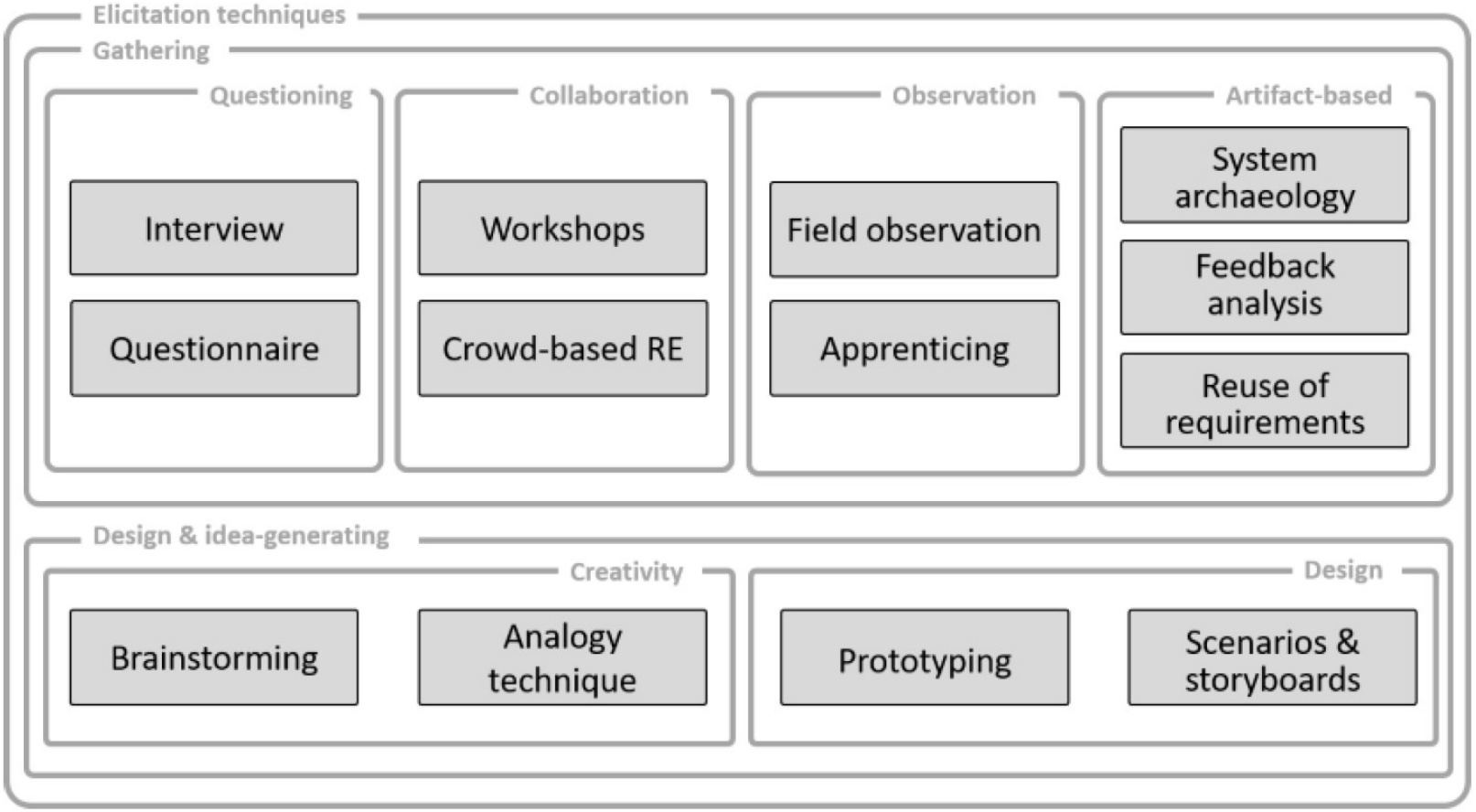
Glinz et al. (2020)

SOPHISTEN – STAKEHOLDER MAP



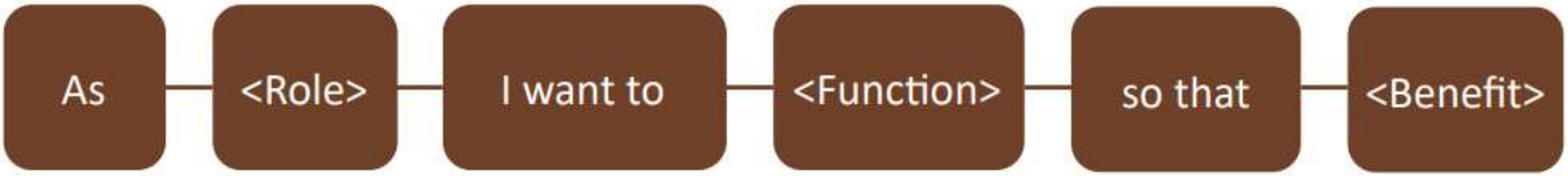
Source:
https://www.sophist.de/fileadmin/user_upload/Bilder_zu_Seiten/Publikationen/Wissen_for_free/SOPHIST_Poster_A0_Steakholder-English_2opt.pdf

RE: GATHERING TECHNIQUES



Glinz et al. (2020)

USER STORY TEMPLATE



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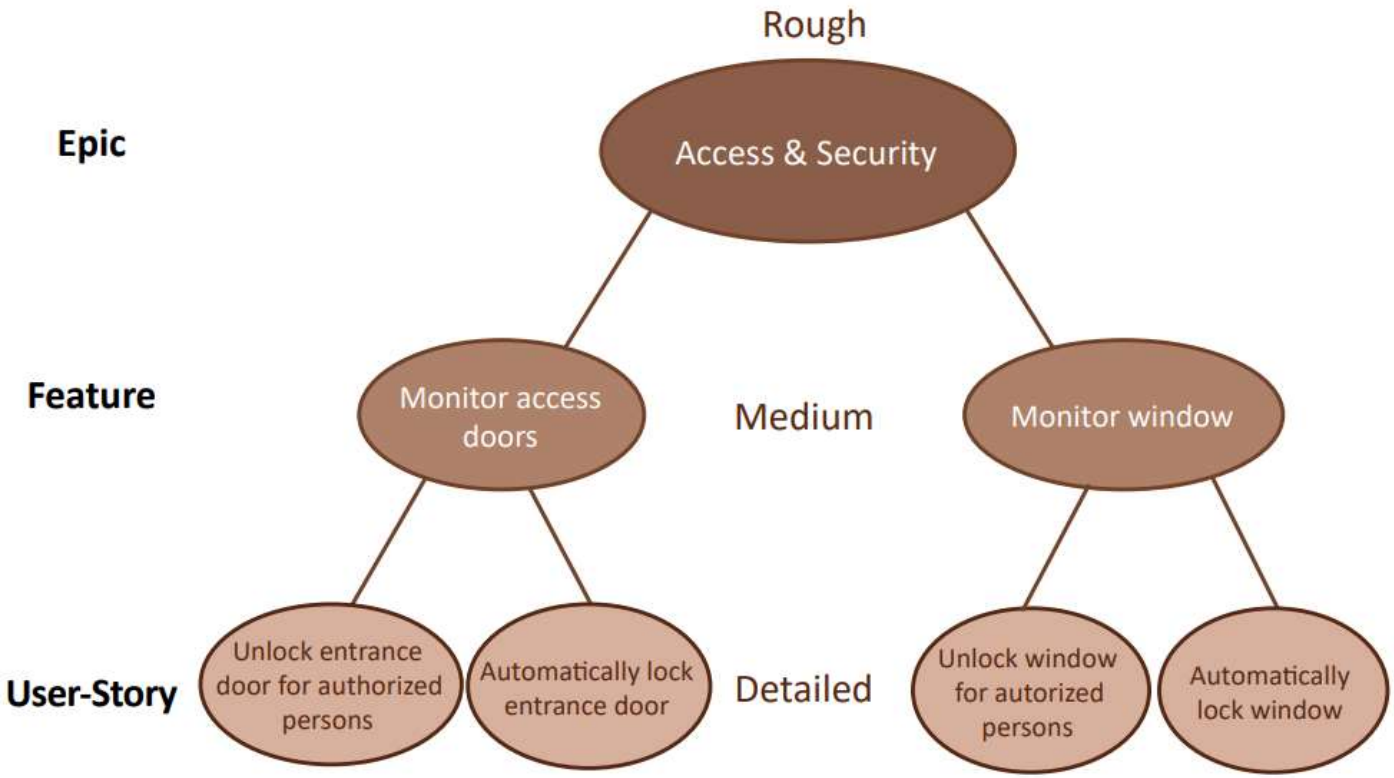
ELICITING REQUIREMENTS IN THE PRODUCT BACKLOG



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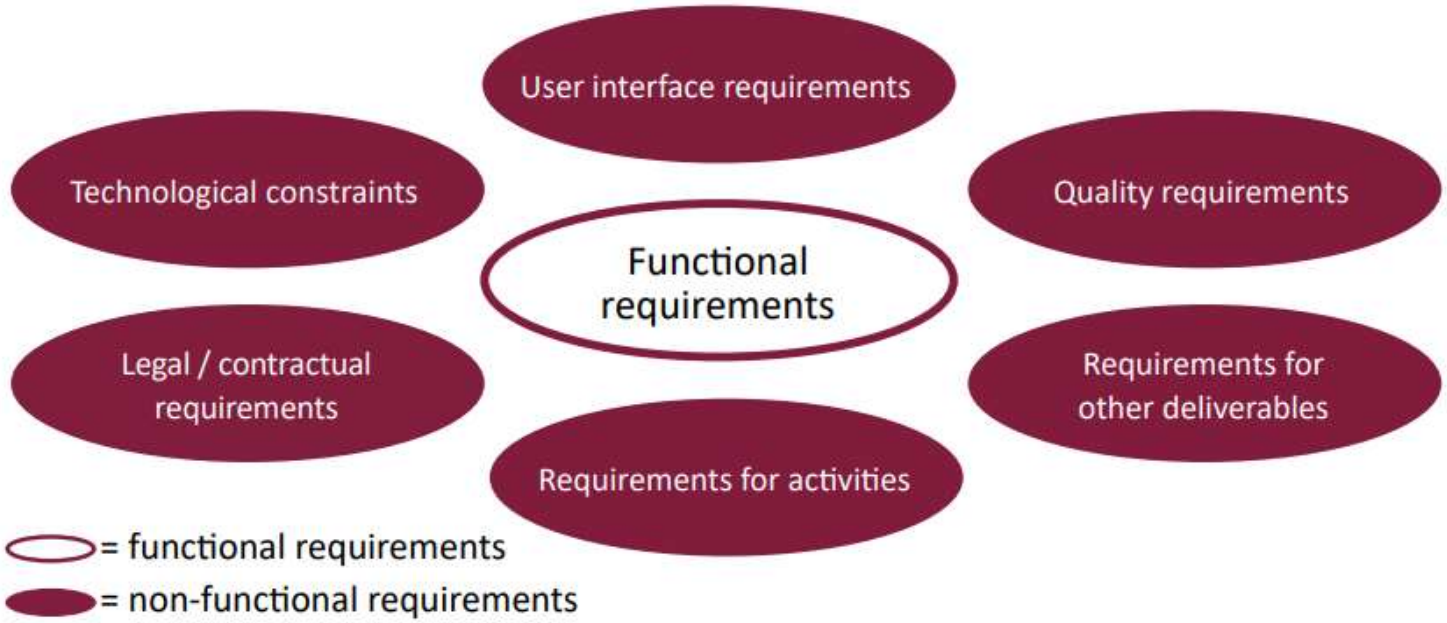
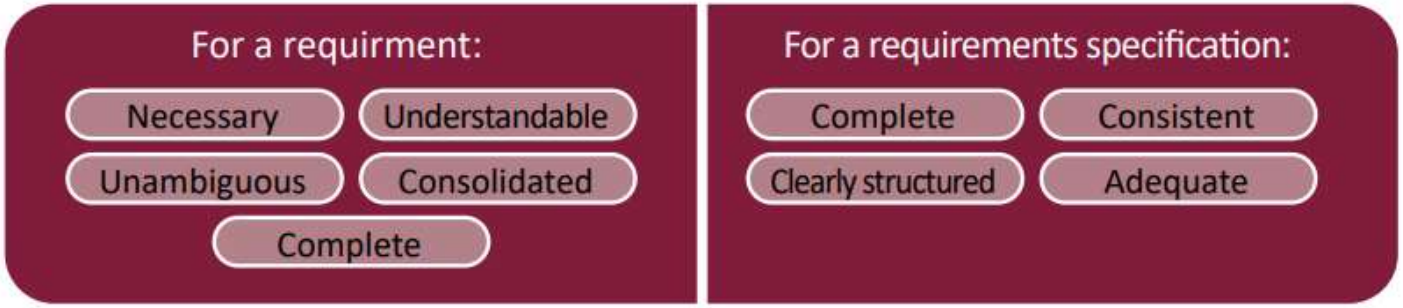
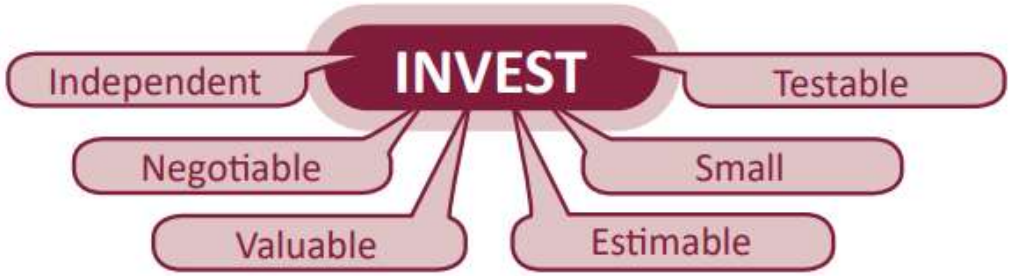
CLASSIFICATION OF REQUIREMENTS



Source:
https://www.sophist.de/fileadmin/user_upload/Bilder_zu_Seiten/Publikationen/Wissen_for_free/RE-Primer_Int/RE_Primer_Eng.pdf

CHARACTERISTICS OF REQUIREMENTS

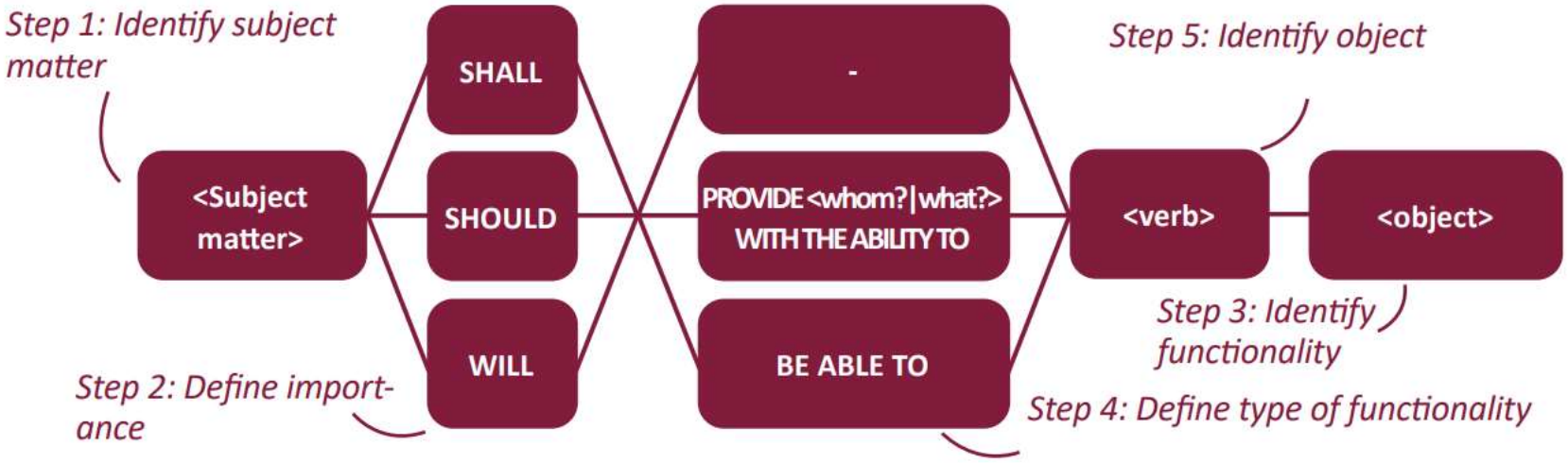




Source:
https://www.sophist.de/fileadmin/user_upload/Bilder_zu_Seiten/Publikationen/Wissen_for_free/RE-Primer_Int/RE_Primer_Eng.pdf

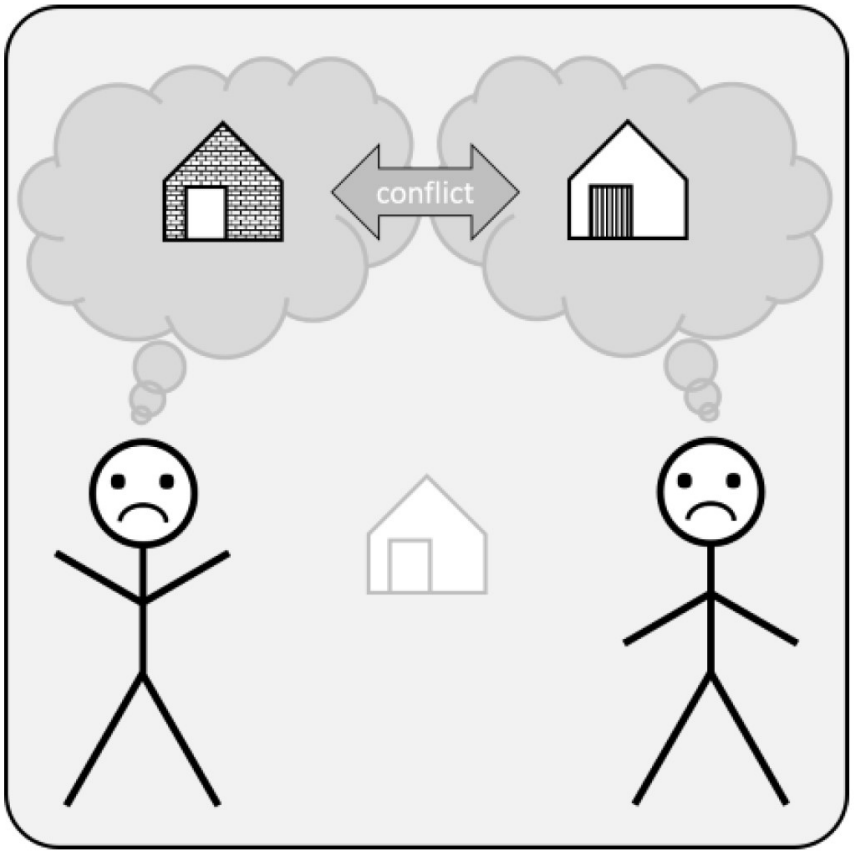
FUNCTIONAL MASTER (NATURAL LANGUAGE)

Legal obligation	English keyword
Obligation	Shall
Wish	Should
Intention	Will



Source: https://www.sophist.de/fileadmin/user_upload/Bilder_zu_Seiten/Publikationen/Wissen_for_free/RE-Primer_Int/RE_Primer_Eng.pdf

REQUIREMENTS CONFLICT



Subject matter conflict

Data conflict

Interest conflict

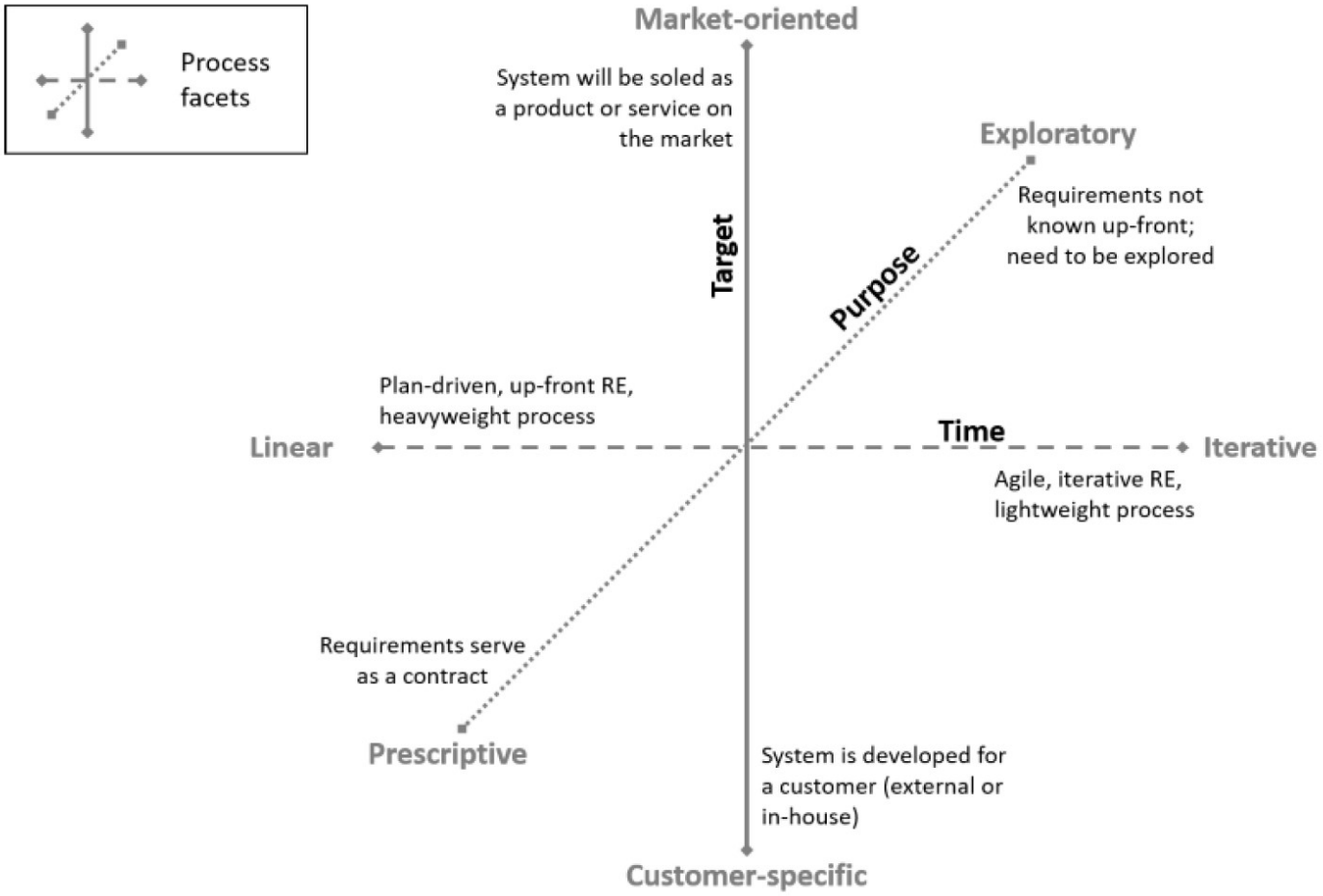
Value conflict

Relationship conflict

Structural conflict

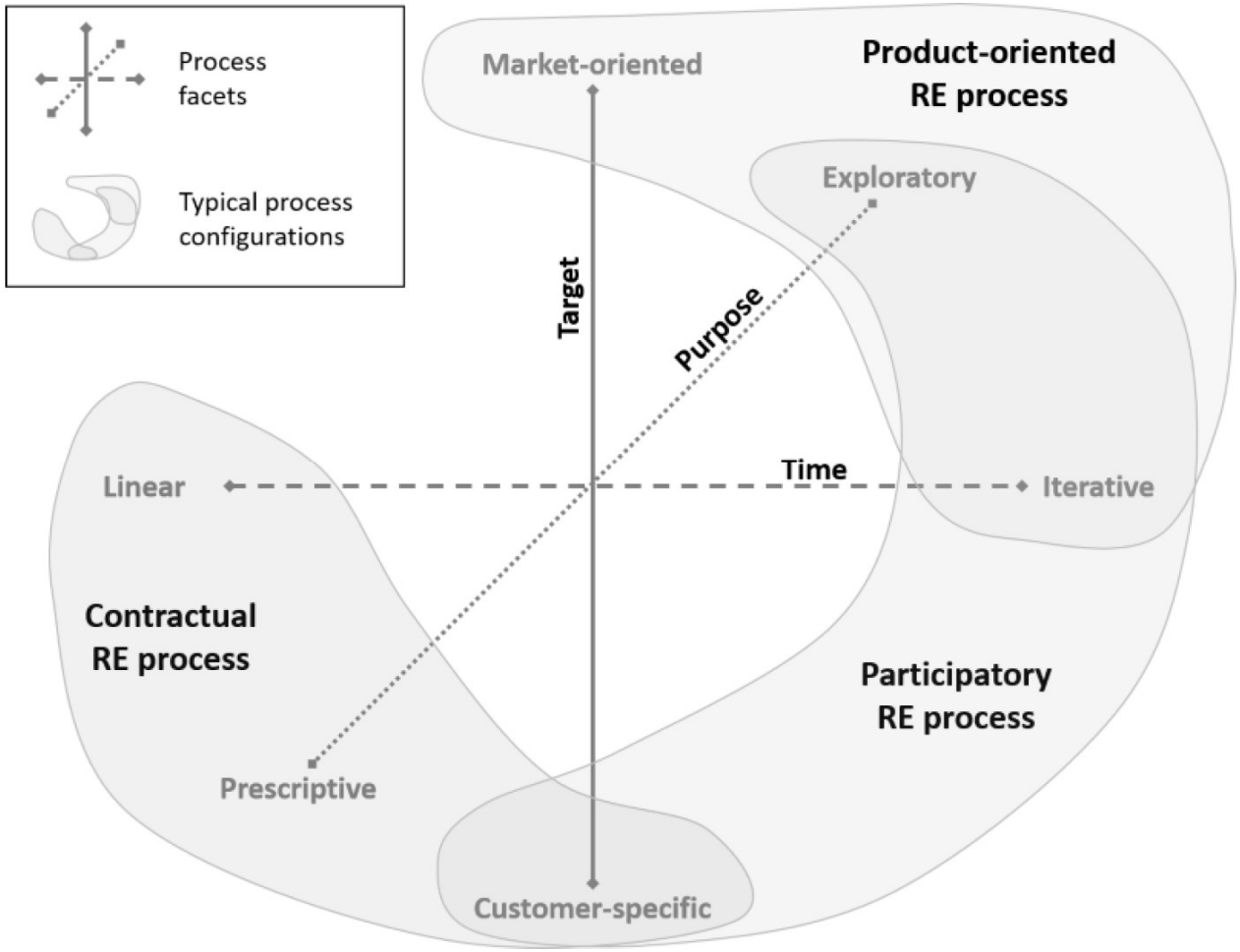
Glinz et al. (2020)

RE PROCESS FACETS



Glinz et al. (2020)

RE PROCESS FACETS CONFIGURATIONS

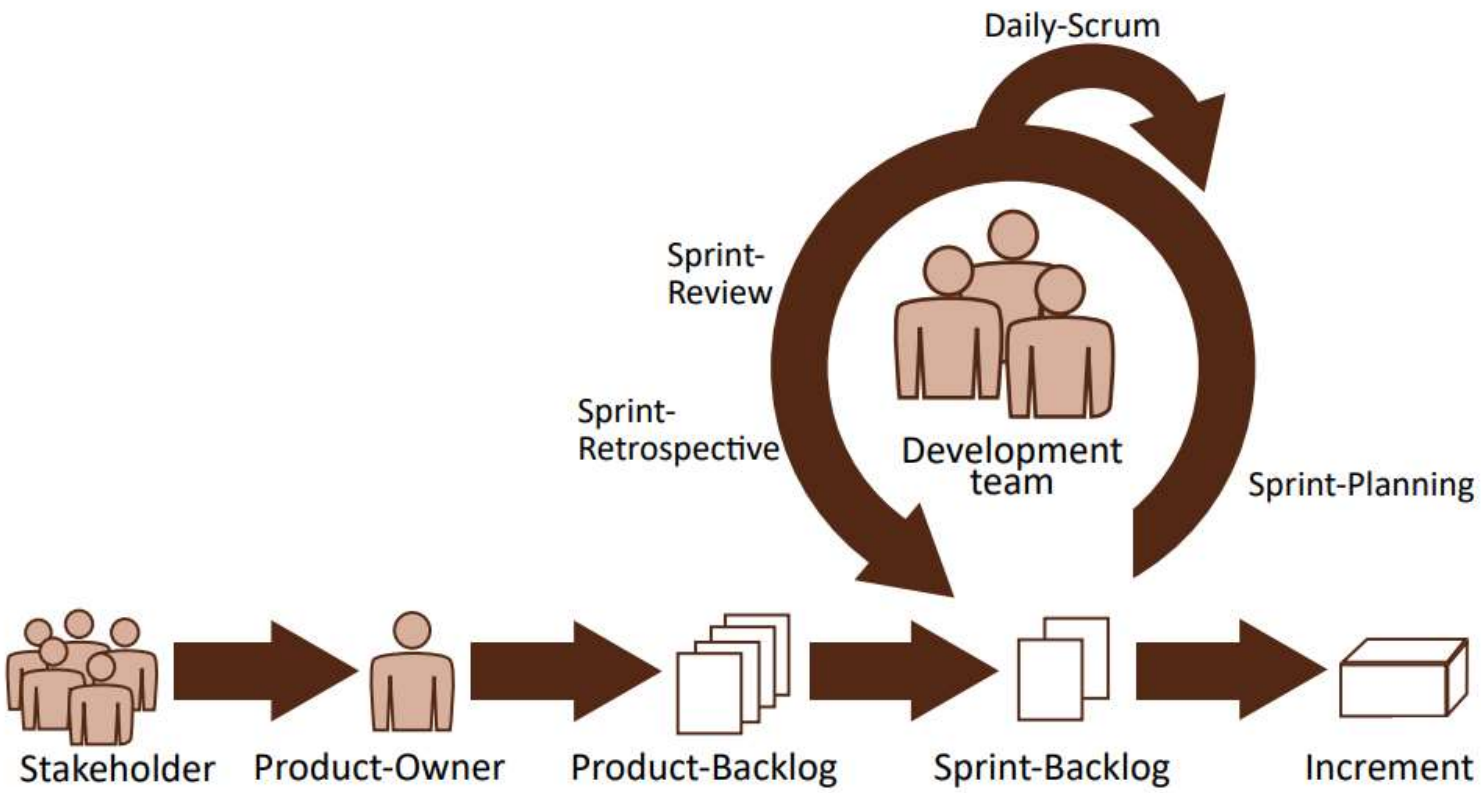


Glinz et al. (2020)

AGILE RE

Source:
https://www.sophist.de/fileadmin/user_upload/Bilder_zu_Seiten/Publikationen/Wissen_for_free/Agility_Brochure_Int/Broshure_Agility_Interactive.pdf

AGILE RE



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LITERATURE

- Ian F. Alexander: A Taxonomy of Stakeholders – Human Roles in System Development. International Journal of Technology and Human Interaction 2005, 1(1), 23–59.
- Glinz, M., van Loenhoud, H., Staal, S., & Bühne, S. (2020). Handbook for the CPRE Foundation Level according to the IREB Standard. International Requirements Engineering Board.