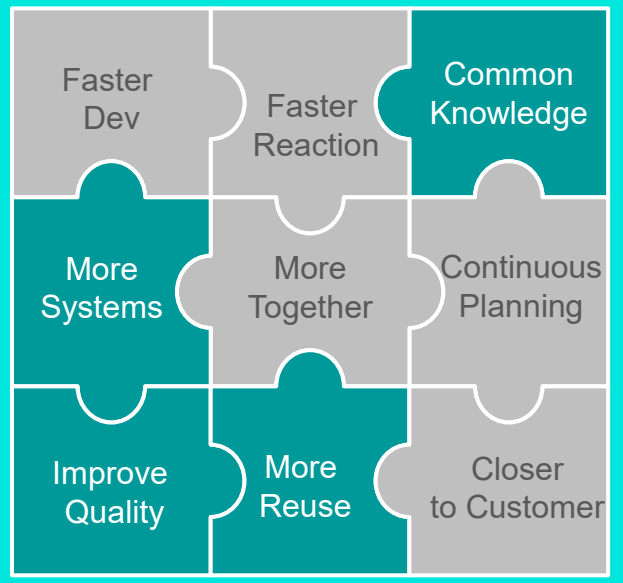

Traceability

How are we supposed to know what depends on what?

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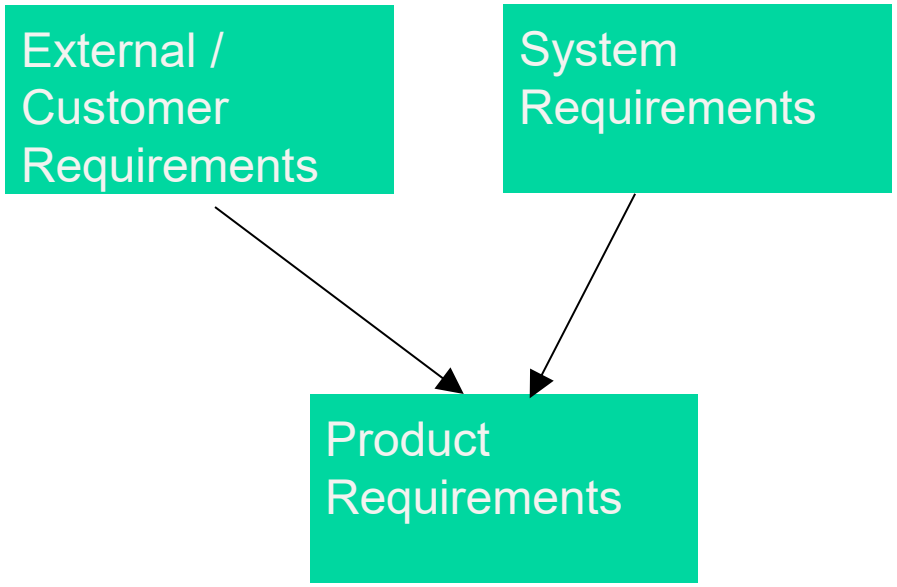
Documentation of relationships and dependencies of projects and requirements



Quality characteristics:
Traceable

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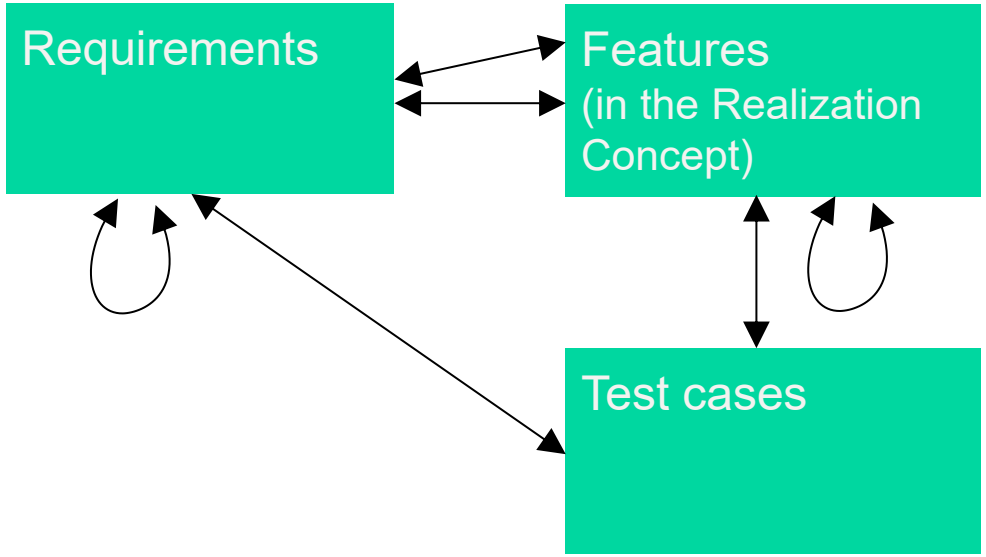
Ability to follow links between related items inside the project



Forward traceability:
Where is this requirement implemented?

Backward traceability:
Why was this implemented?

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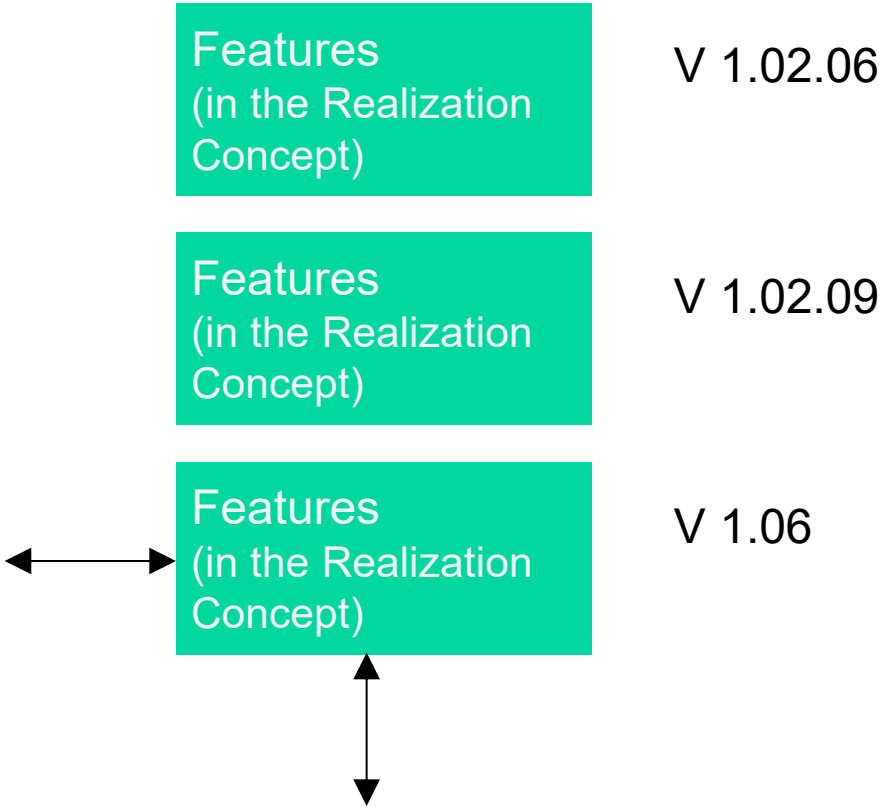
Tracking changes and their impacts



Support of:
Impact analysis of changes

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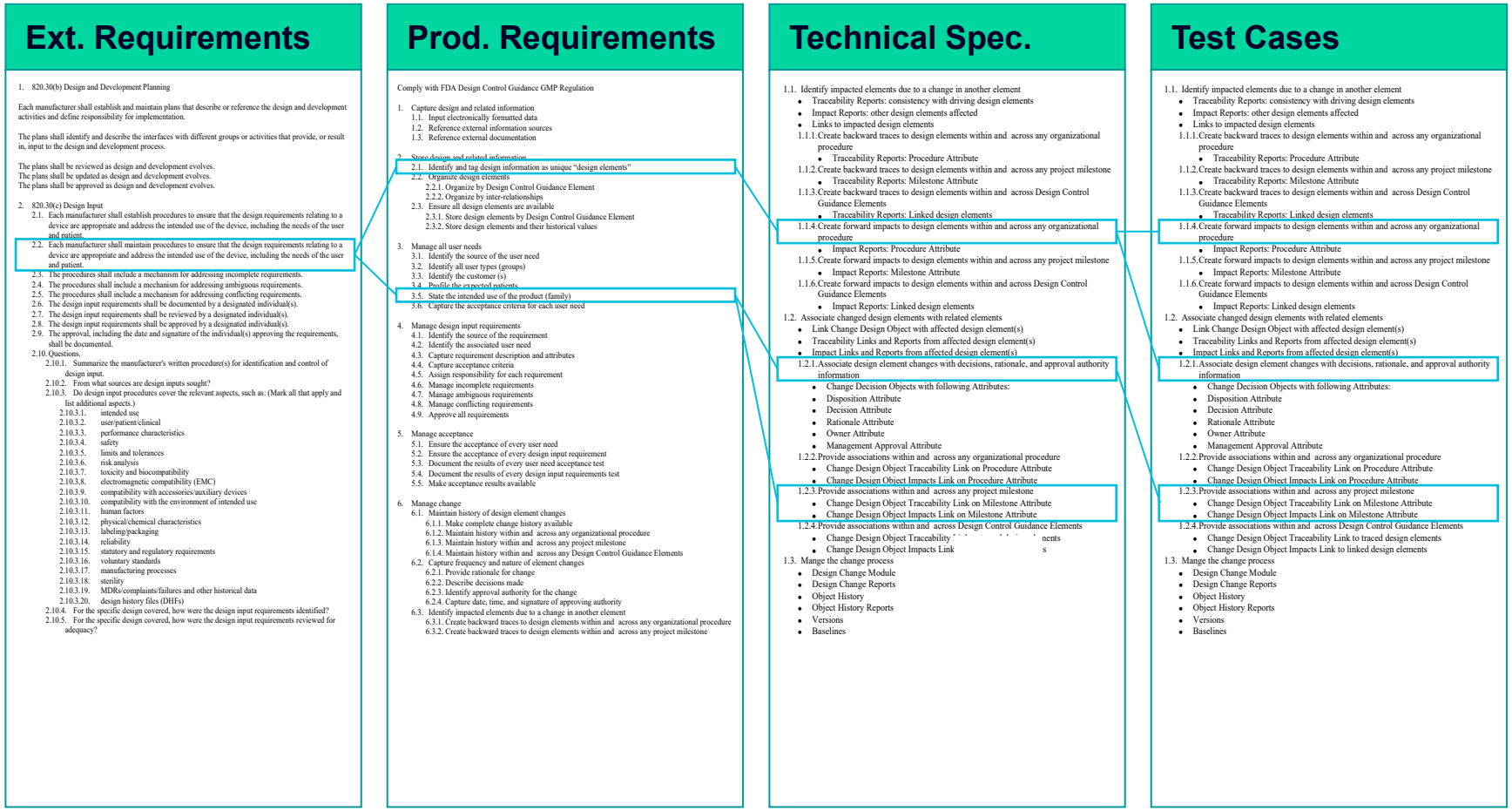
Traceability view



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Why should we apply traceability?

1. Customer Satisfaction
2. Quality Assurance
3. Regulatory Compliance
4. Efficient Problem Solving
5. Improved Communication
6. Cost Reduction
7. Continuous Improvement

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Scenarios that are better supported by traceability?

1. **Customer Satisfaction**
   I want to identify the customer who requested a product improvement so that I can ask detailed questions or confirm the generalized requirements.

2. **Quality Assurance**
   I can check the completeness of the RS, means that all requirements are covered by solution concepts / feature descriptions.
   Same for system test cases.

3. **Regulatory Compliance**
   I can generate simpler reports that demonstrate compliance with specific regulations of some industries like F&B, pharmaceuticals, aerospace, …
   I get a better support for audits and certificates.

4. **Efficient Problem Solving**
   I can easier check which of my products contain a module / solution that is identified to cause problems

5. **Improved Communication**
   I can easily compare different document versions of RS or technical documents.
   I can register for notifications in case of changes.

6. **Cost Reduction**
   When issues occur, I can simpler pinpoint the source of the problem.

7. **Continuous Improvement**
   When issues occur, I can extend the related test cases, but also all related technical specifications and requirements.
   Improvements of one product can easier transferred to other products.

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Most frequent examples

Traceability helps to know,

- which requirements are contained in which product version ,
- which functions fulfill this requirements ,
- how requirements and other specifications change and,
- how the fulfillment of the requirements is ensured through tests.

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Definition Quiz

Traceability hilft mir…?

- ❑ A Änderungen seit der letzten Freigabe zu finden
- ❑ B die Quelle einer Anforderung zu finden
- ❑ C Produktvarianten zu finden, die von einer Funktionsänderung betroffen sind
- ❑ D die Anforderung zu finden, die zu meinem Testfall gehört
- ❑ E die Vollständigkeit der Testfälle zu verbessern

Mehrere richtige Antworten möglich

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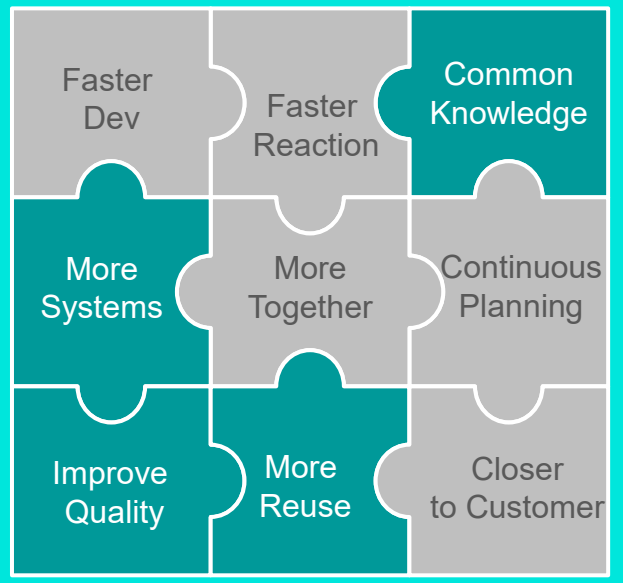

Traceability

How are we supposed to know what depends on what?

Q&A

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