Reconstructing thalia.de with self-contained systems

microXchg 2018

Benjamin Leenen Dennis Schneider

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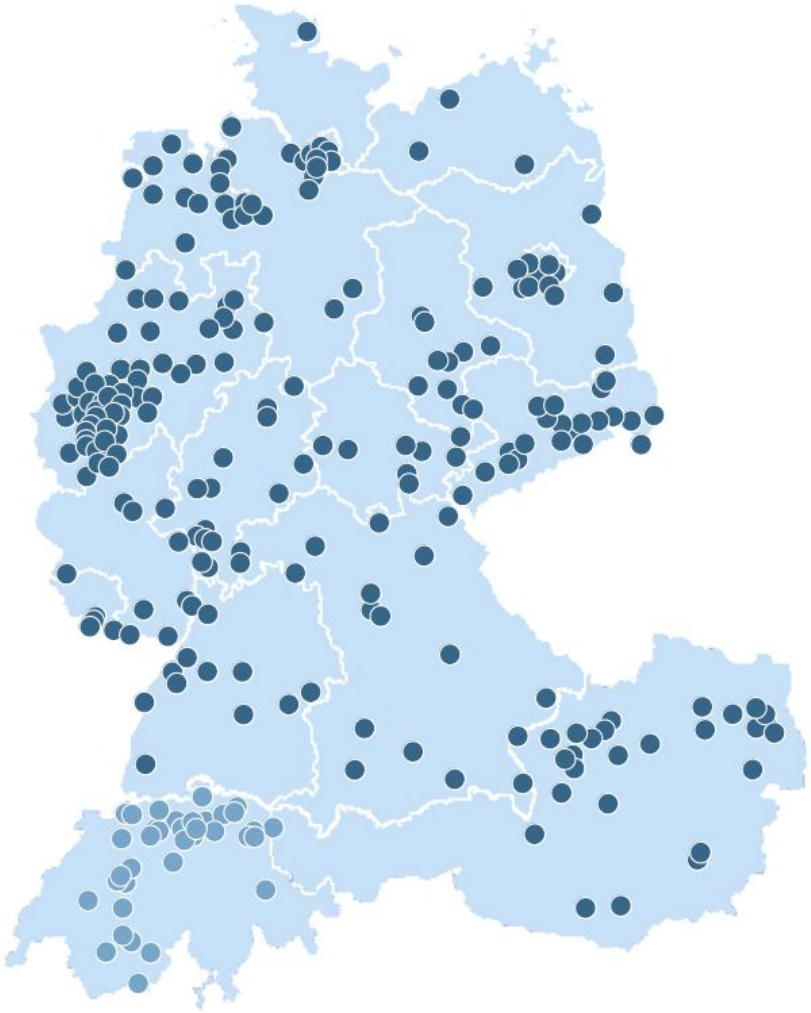
Thalia

- Over **280** stores in DE, AT, CH
- About **4.000** employees
- Offers
  - (e)books / audio books
  - eReaders / tablets
  - films
  - software
  - games
  - toys
- **Omnichannel** services



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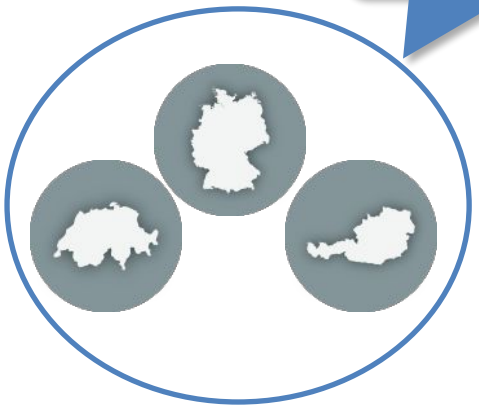
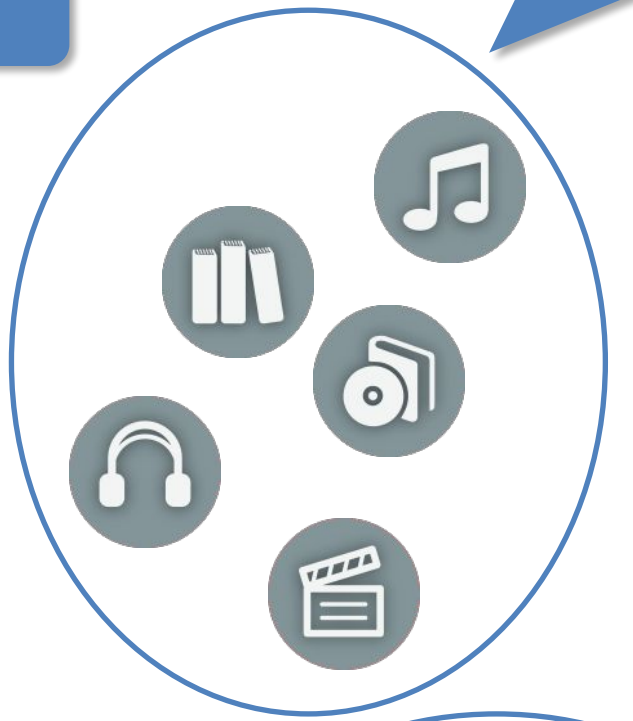
Thalia's e-commerce ecosystem

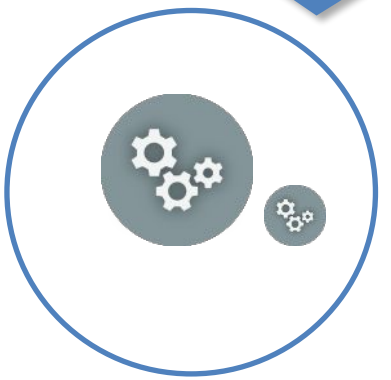
3 countries



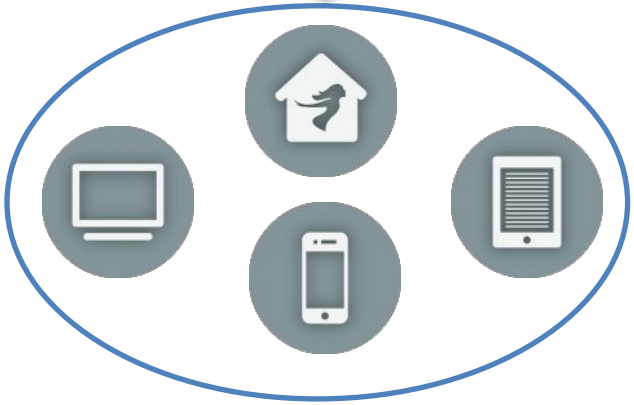
Wide range of goods



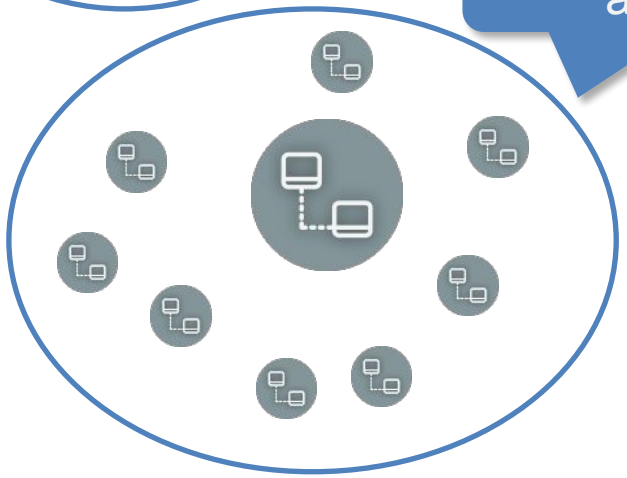
2 ERP systems



Channels / Touchpoints



Legacy webshop application



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Issues in 2016

- releases once a month only
- hardly maintainable monolithic legacy webshop
- projects instead of continuous development

⇒ We have to get faster, more flexible and innovative!

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We had to
take a break
….
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Approach

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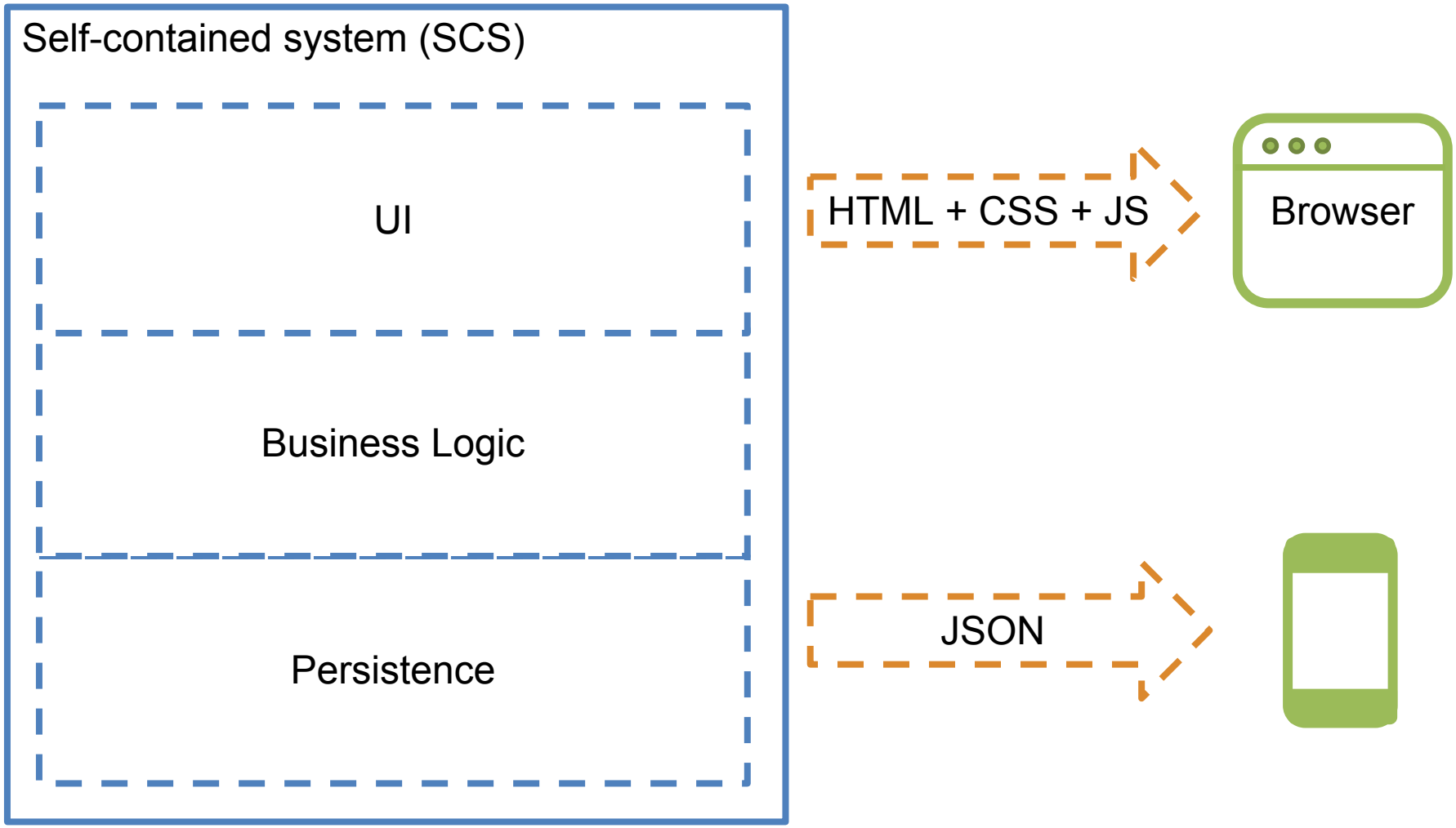
Approach



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Approach

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Approach

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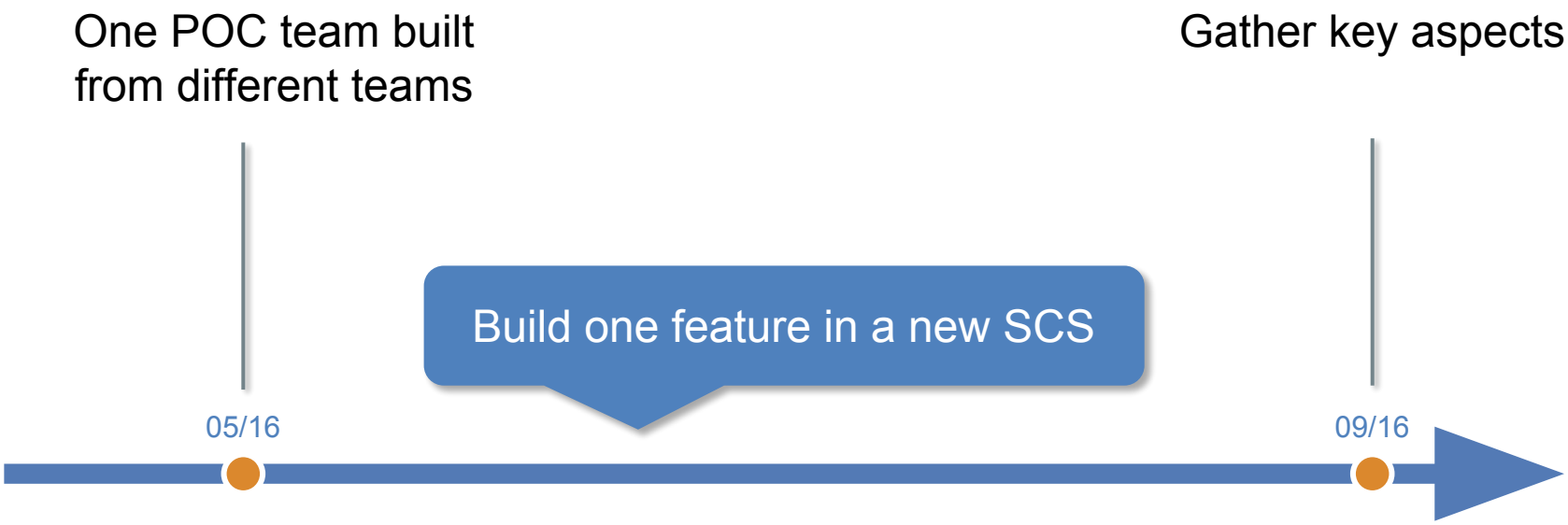
Proof of concept

Steps



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Proof of concept

Key aspects

- Faster
- More flexible
- Release subway instead of release train works
- Continuous quality assurance needed
- 1 product owner per team is needed
- We need a pattern library for a common look & feel

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Initiation

Kickoff product teams

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Initiation

General conditions

- Transfer responsibilities
- Fill roles
- Keep working on existing projects
- QA includes integration with touchpoint

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Initiation

Technical conditions

- Target architecture → SCS
- Artifacts need to pass all stages successfully
- Transparent, unbounded deployments
- Development inside of monolithic system requires permit
- Monthly regression testing

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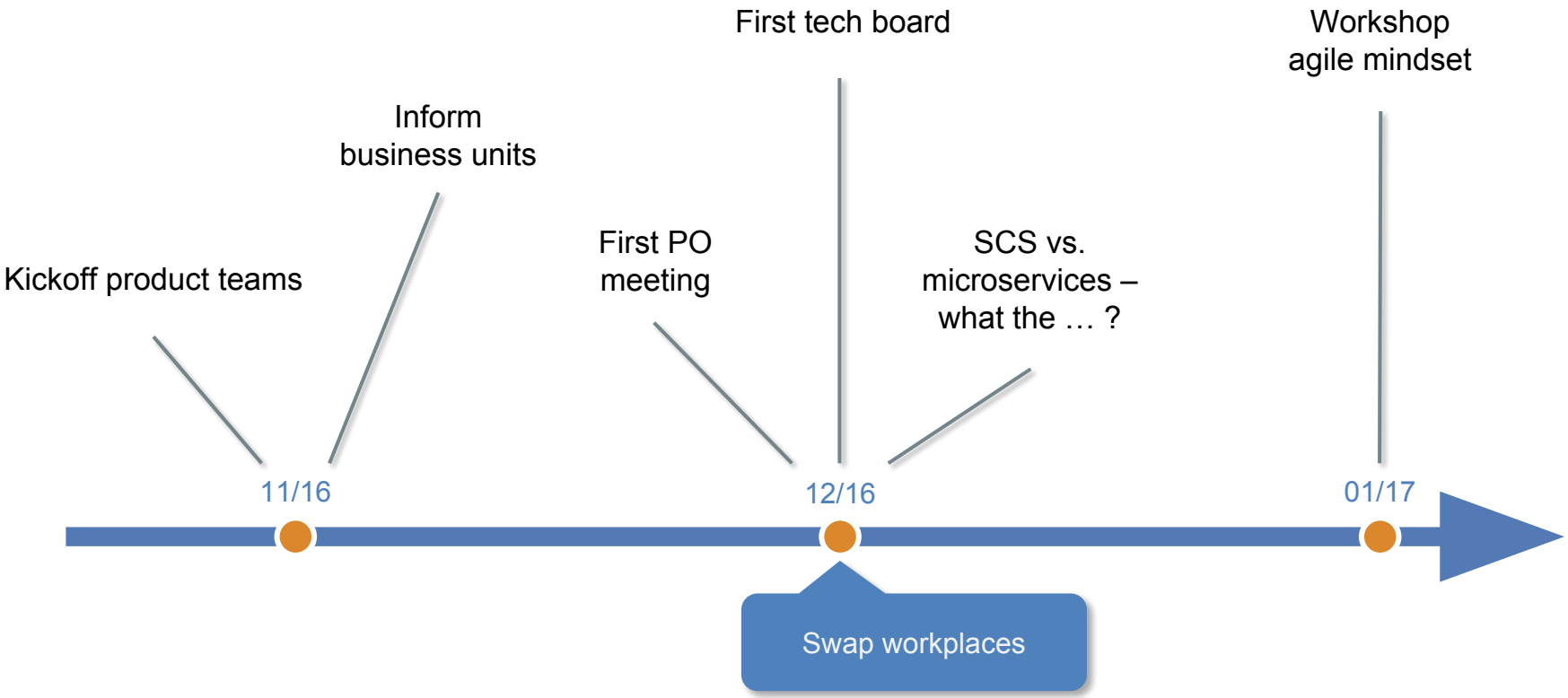
Initiation

Outline next steps



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Initiation

Expectations for the next 4 months

- Recurring meetings
- Product vision & placement in between other products
- Transition plan
- Business requirements

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Initiation

Not being mentioned explicitly so far …

- How to SCS?
- How to integrate into a monolithic system?
- How to brownfield?
- How to become cross-functional?

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How do we attempt to answer those questions?

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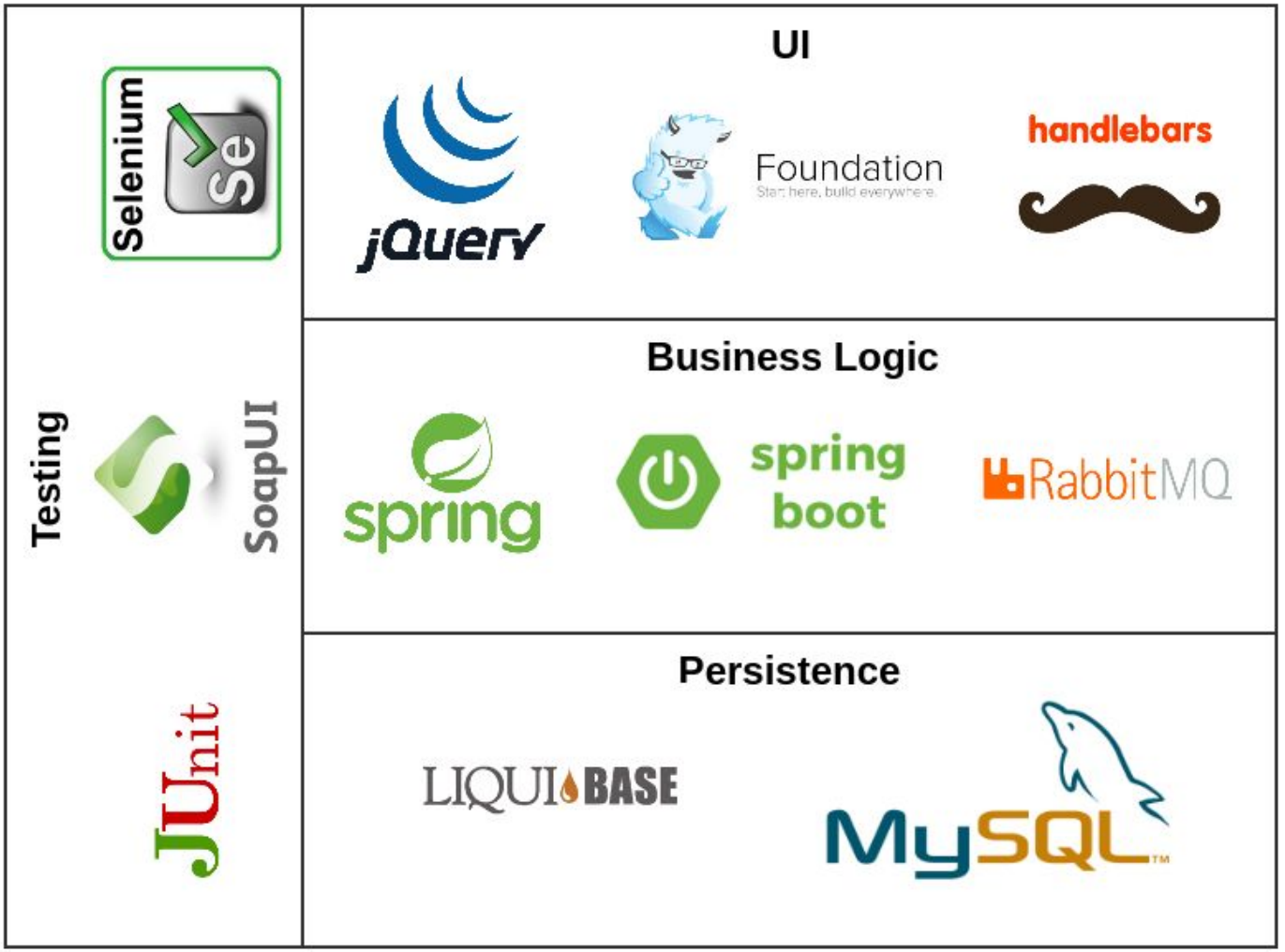
How to SCS?



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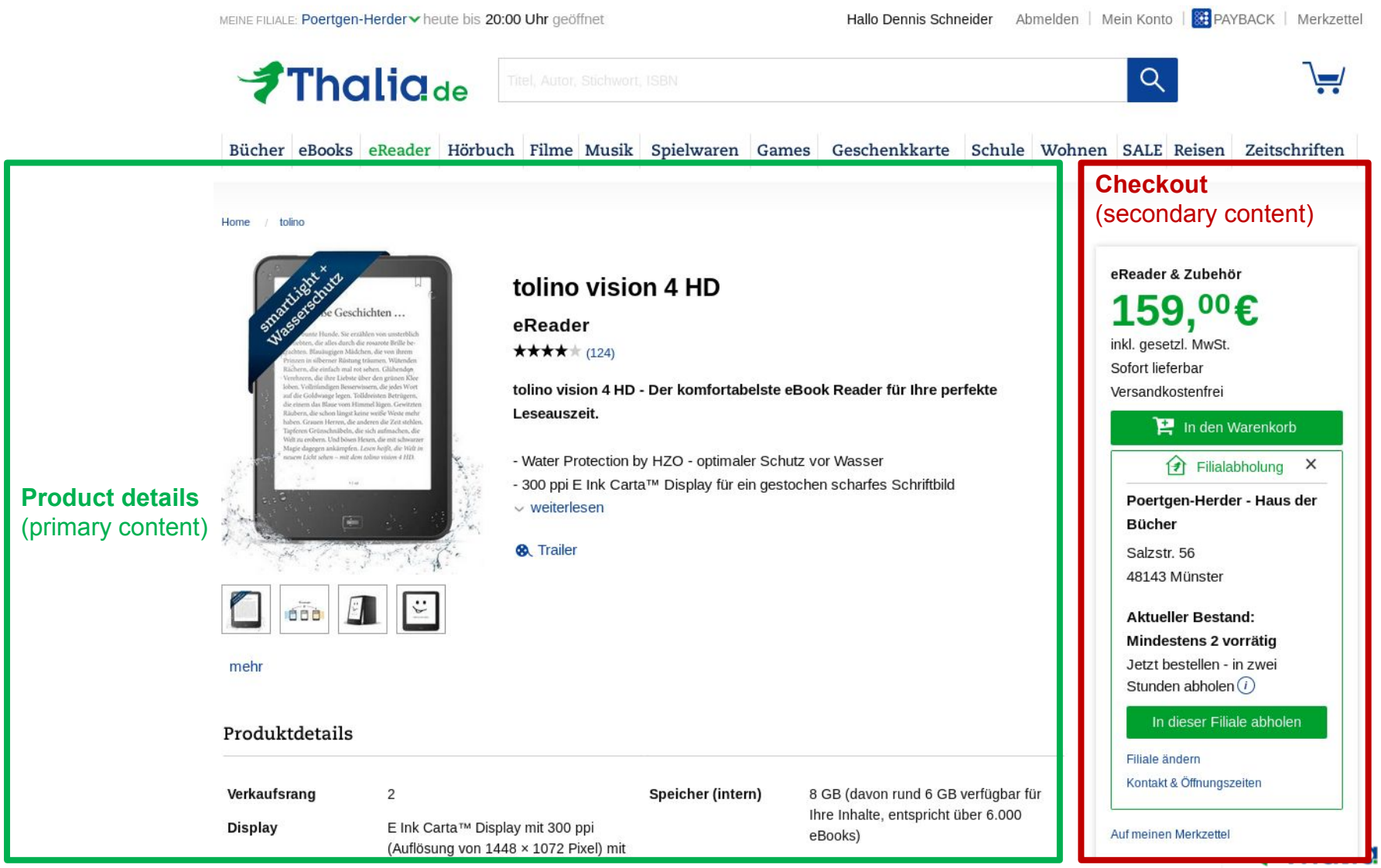
How to integrate into a monolithic system?



How to integrate into a monolithic system?

Two ways of serving content

Primary content	• Serves main content of the page • Includes secondary content & page frame (e.g. header/footer) via Ajax, SSI or ESI
Secondary content	• Can be included as snippet • Requires a certain amount of space • Should assume as little as possible in regard of what its parent has to serve

… and the monolithic system?

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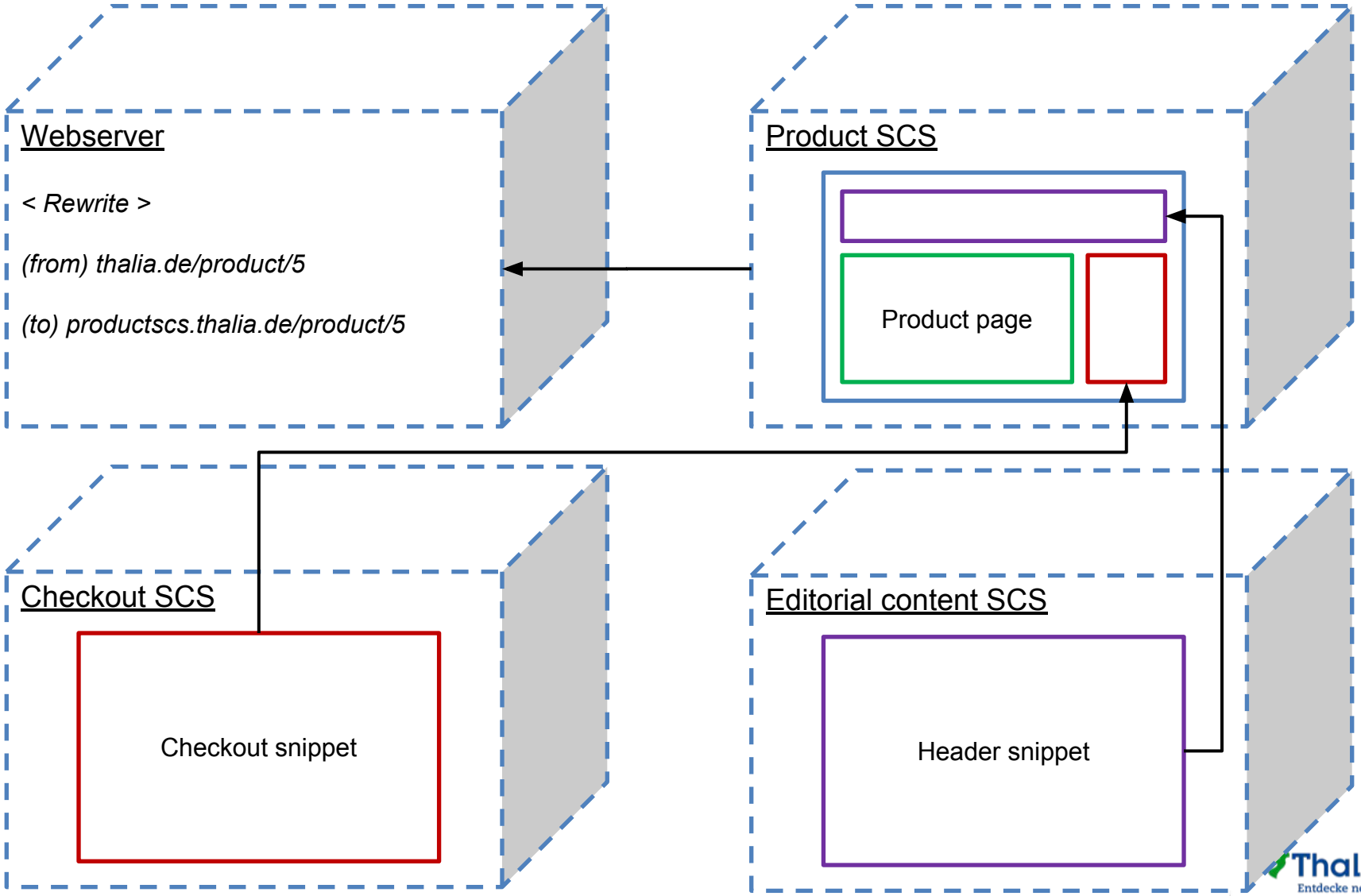
How to integrate into a monolithic system?



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How to brownfield?

- Cut old twigs. Do greenfield.

  Eliminate inefficient customer flows

  Simplify efficient customer flows

  Automate processes & configuration by replacing custom code with standard solutions

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How to brownfield?

- Little big bangs

  Create development- & deployment-process for pre-productive time

  Develop, build & test MVP upto testing stage

  Create migration strategy for go-live

  Organize & perform migration

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How to brownfield?

- Bidirectional data synchronization
  - Develop synchronization process
  - Evaluate dedicated performance & data integrity tests
  - Create & perform migration strategy for go-live
  - Develop actual business requirements in an iterative incremental way

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How to brownfield?

- What did we do?

	Login	Payment	?
Cut old twigs	✓	✓	
Little big bangs		✓	✓
Bidirectional data sync	✓		✓

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How to brownfield?

- Some indicators

	Data & process sovereignity is being seperated	Many dependencies	MVP is discussible	Early feedback needed
Cut old twigs		⊖	⊕	
Little big bangs		⊕	⊖	⊖
Bidirectional data sync	⊕	⊕		⊕

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How to become cross-functional?

How to get it started?

- Agile mindset
- Share knowledge
- Broaden skills
- Share responsibilities

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How to become cross-functional?

IT Operations

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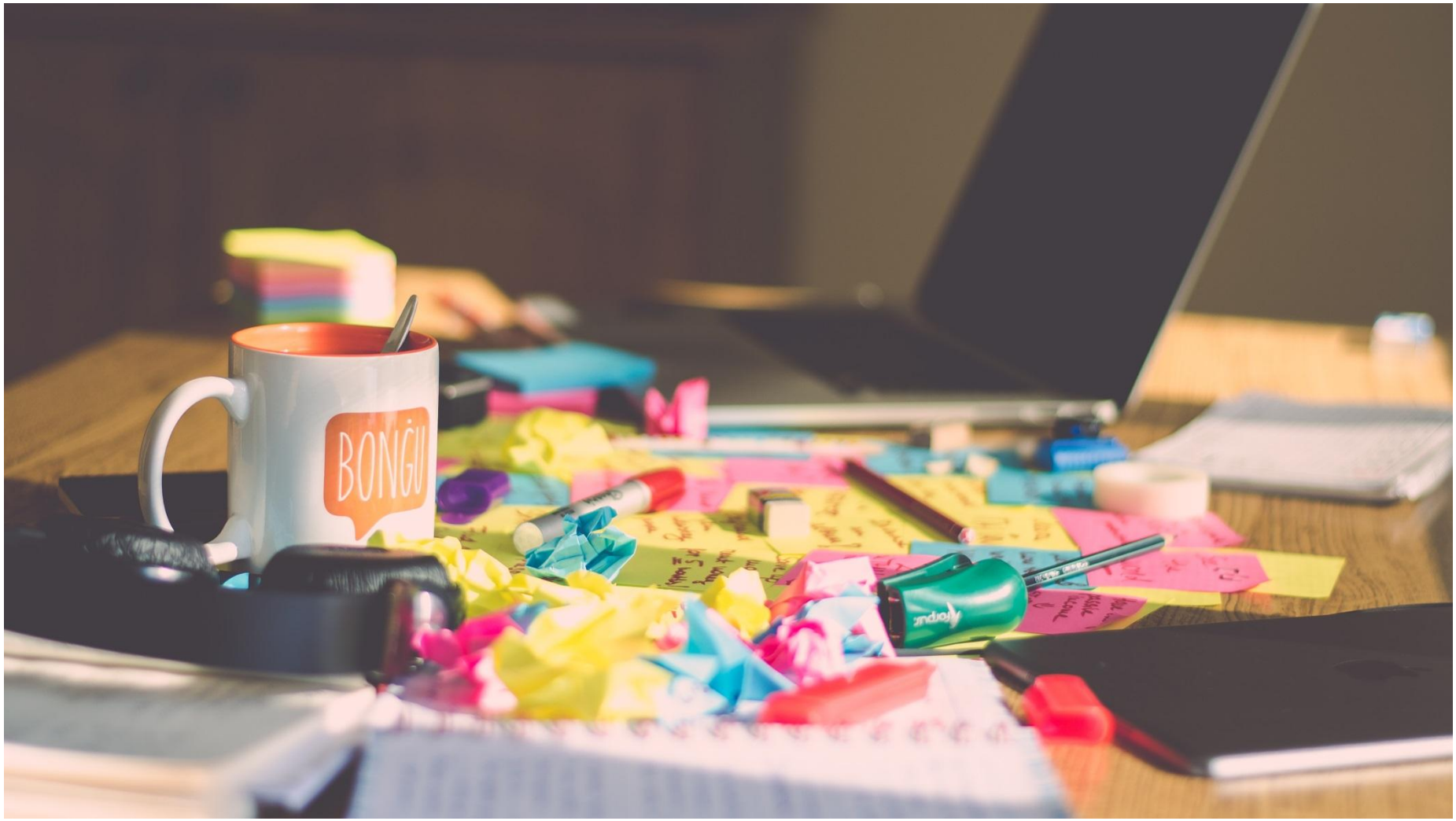
How to become cross-functional?

Business Requirements



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How to become cross-functional?

Quality Assurance (QA)

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What did we see so far?
What‘s coming next?

Summary

- Organisational & technical independency achievable through self-containment
  - well defined domains incl. borders
  - data & process sovereignity inside those borders
- A sample setup for being self-contained
  - full stack applications
  - build & deployment strategies for green- or brownfield
  - integration into legacy infrastructure
  - cross-functional teams

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