

CREATING INNOVATIVE SURVEY INSTRUMENTS AND DESIGNING WEB QUESTIONNAIRES IN A TRADITIONAL PROJECT ENVIRONMENT: AGILE DEVELOPMENT IS NOT JUST “WATERFALL IN SPRINTS”

Andrea Schulze, Christian Friedrich

German Centre for Higher Education Research and Science Studies

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DZHW

German Centre for Higher Education Research
and Science Studies ■

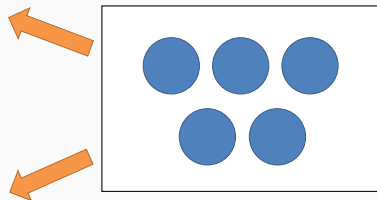
Service

offer inhouse services to research projects regarding web surveys (consulting, programming, support).

Development

host, maintain and develop the self developed survey system "Zofar"

research projects within DZHW



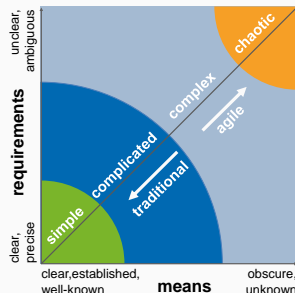
SERVICE VS. SOFTWARE DEVELOPMENT

Service

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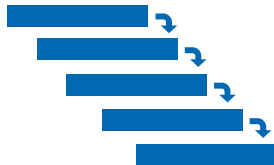
Development

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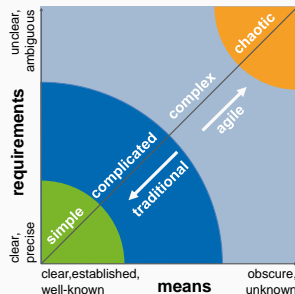
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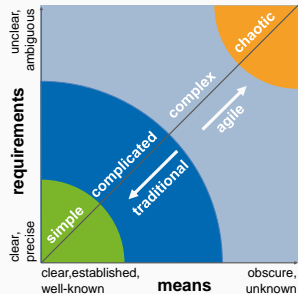


SERVICE VS. SOFTWARE DEVELOPMENT

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Development



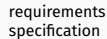
pencil and paper

[illegible]

pencil and paper static LHC

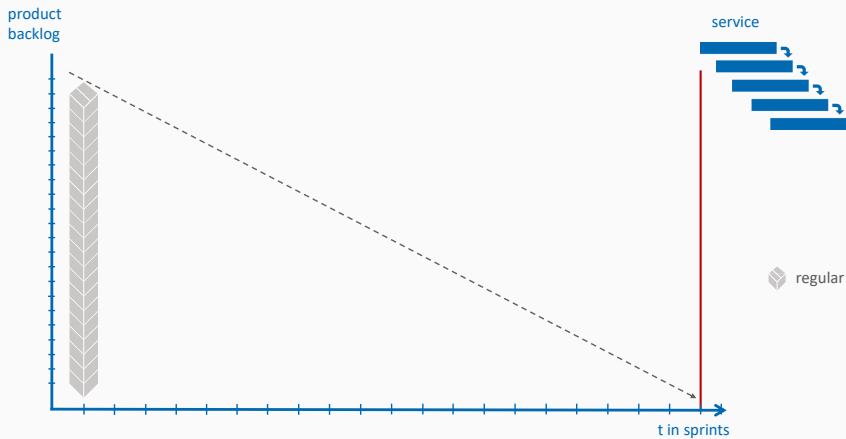
[illegible]

Um Ihren Werdegang seit dem Abschluss Ihrer Promotion weiter nachvollziehen zu können, bitten wir Sie, Ihren Lebenslauf seit Abschluss der Promotion in in den folgenden Kalender einzutragen.



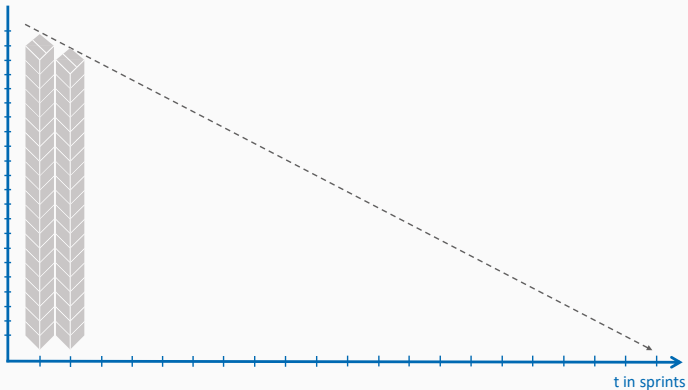
- data
- algorithms
- user interface

DEVELOPMENT PROCESS



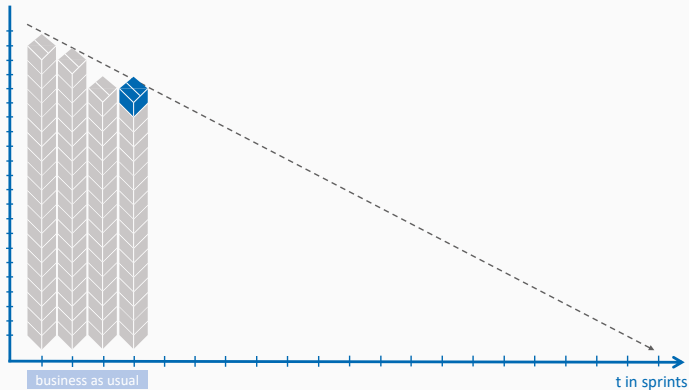
DEVELOPMENT PROCESS

product
backlog



DEVELOPMENT PROCESS

product
backlog



business as usual

t in sprints

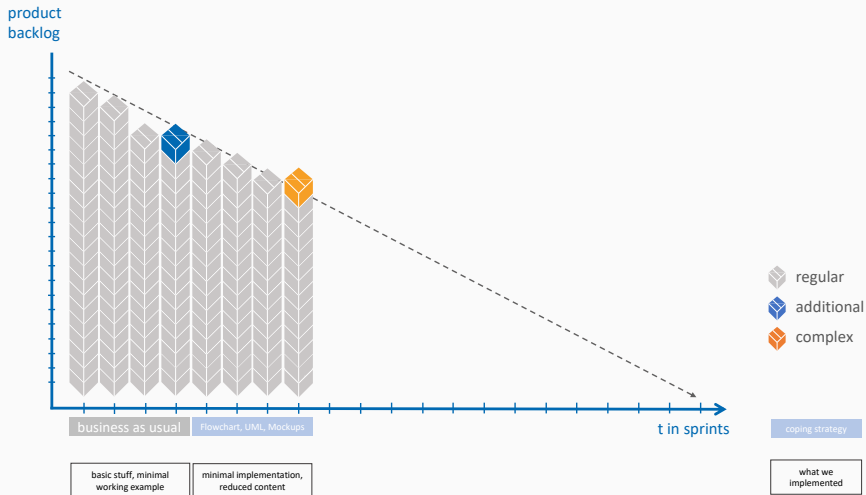
regular
additional

coping strategy

basic stuff, minimal
working example

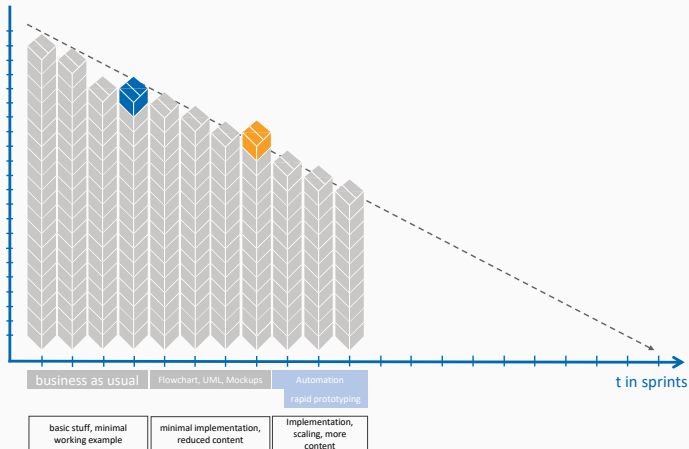
what we
implemented

DEVELOPMENT PROCESS



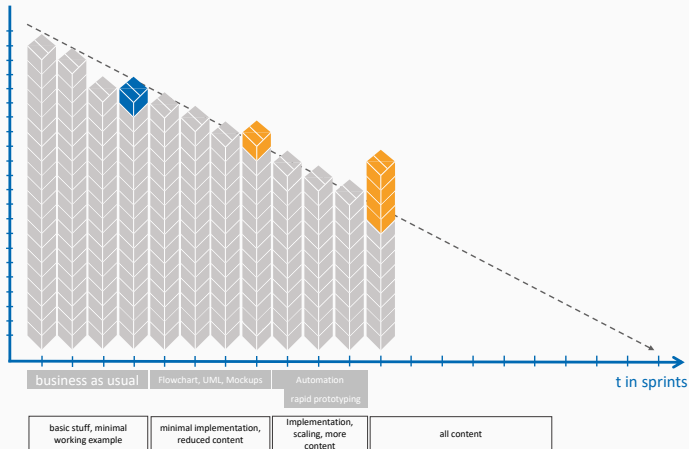
DEVELOPMENT PROCESS

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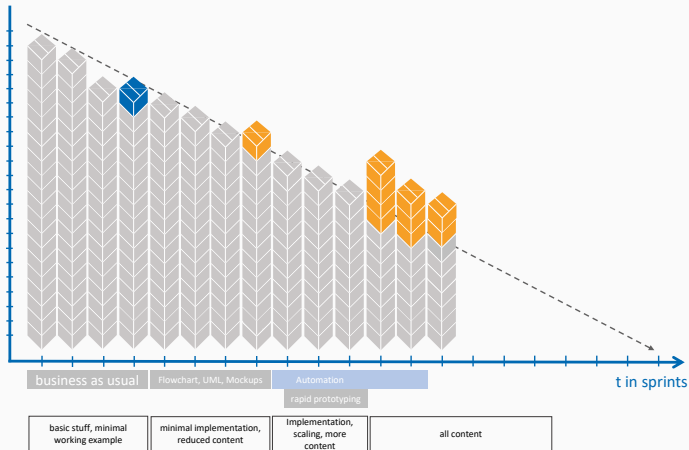
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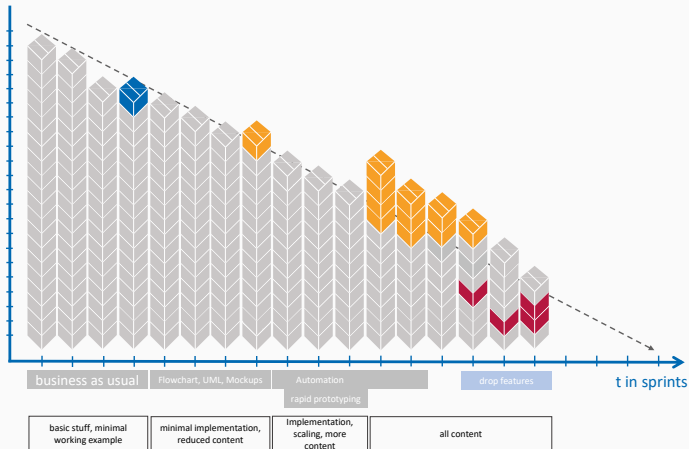
DEVELOPMENT PROCESS

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The difficulties we had:

- misunderstandings
- tricky dependencies and communication dilemmas
 - we incrementally implemented in each sprint as much as we understood
 - project was waiting for our implementation to see what could technically be accomplished

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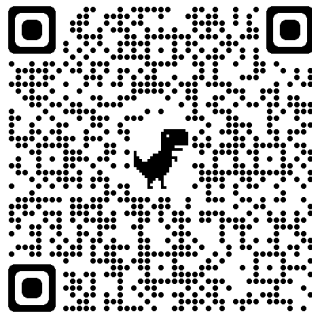
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Our coping strategies:

- refinements
- flowcharts
- mock-ups
- UML diagrams
- rapid prototyping
- automation of code generation
- unit testing
- behavioural / integration testing

- know your complexity
- start simple and scale up your complexity early
- do an extensive kick off meeting with all stakeholders to formulate user stories
- when you start with Scrum, it is helpful to have a Scrum training as a team
- helpful tools:
 - mock-ups
 - rapid prototyping
 - early proof of concept
 - derive test cases from it
 - UML diagrams
 - GitHub

Thank you for your attention!



Andrea Schulze

✉ a-schulze@posteo.de

🐙 github.com/andreaschu

Christian Friedrich

✉ mail-esra@chr-fr.net

🐙 github.com/christian-fr