

dqualizer: Domain-centric runtime quality analysis of business-critical application systems

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FUNDED BY



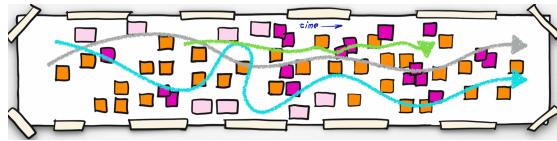
Federal Ministry
of Education
and Research

Runtime quality analyses are mostly technical

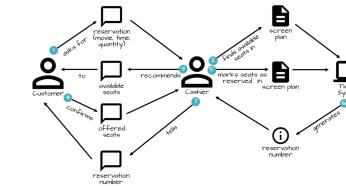
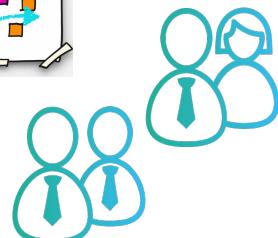


Domain first in architecture and design

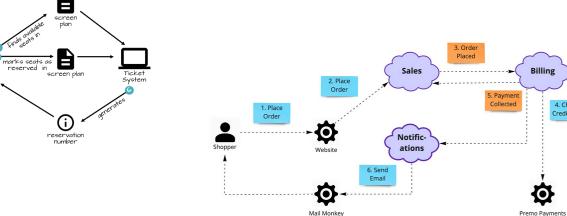
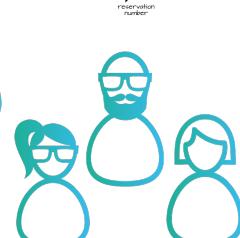
Exploration and Analysis



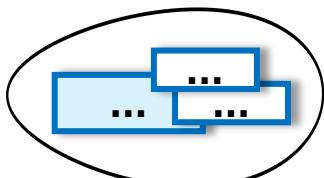
Strategic Design



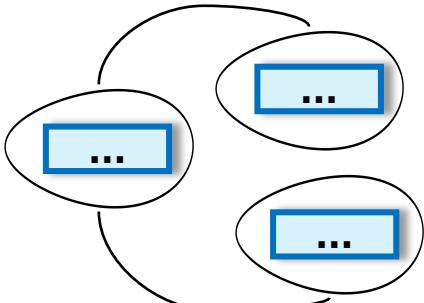
Tactical Design



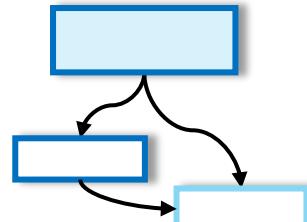
Ubiquitous Language & Bounded Context



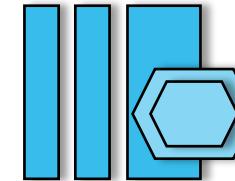
Context Mapping



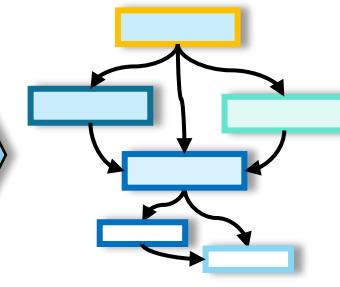
Aggregate



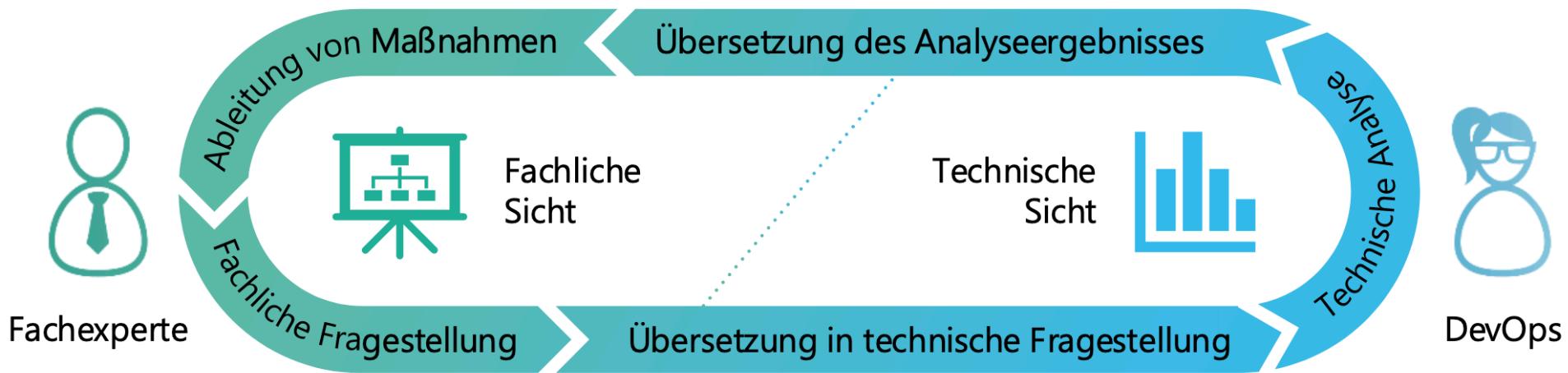
Software Architecture



Building Blocks

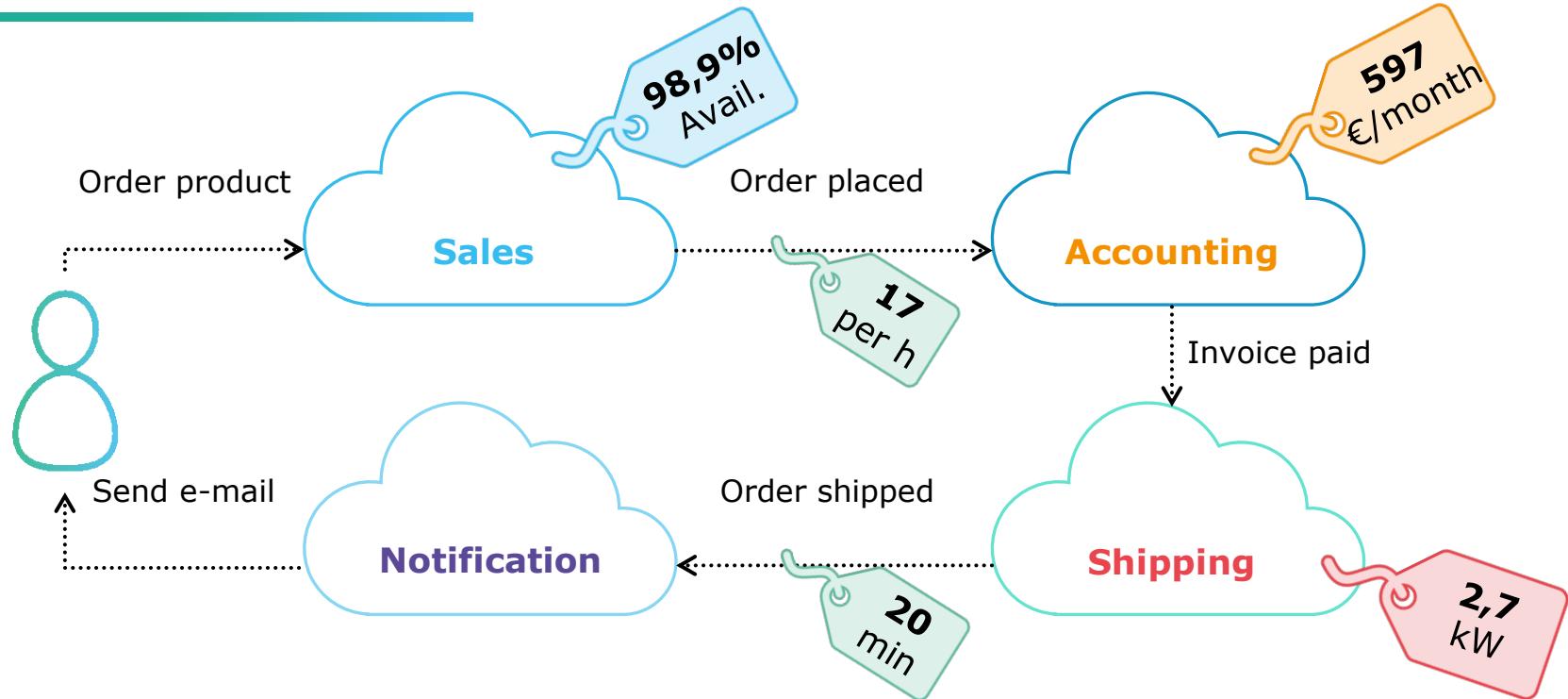


Collaboration with the dqualizer approach



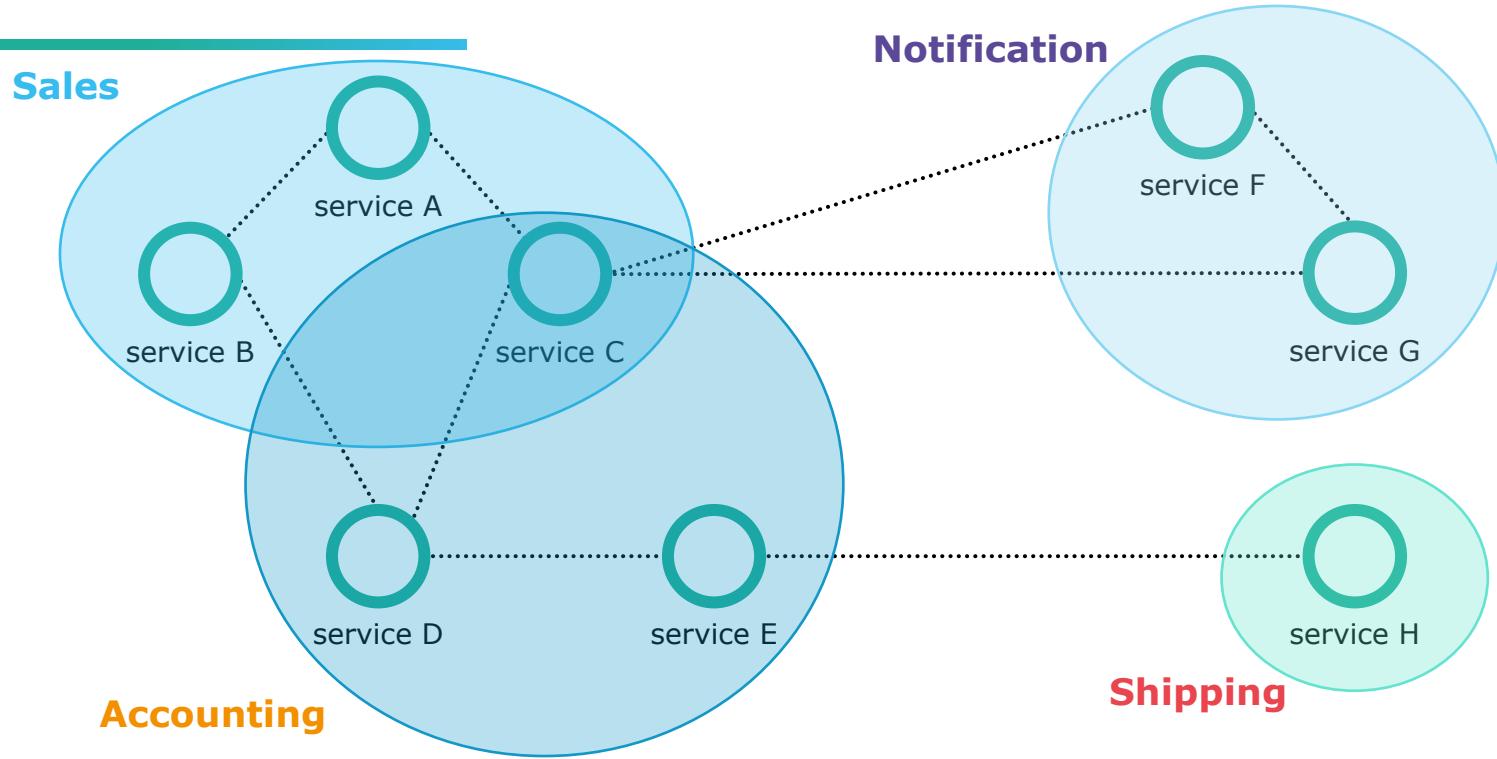


Quality attributes of the domain

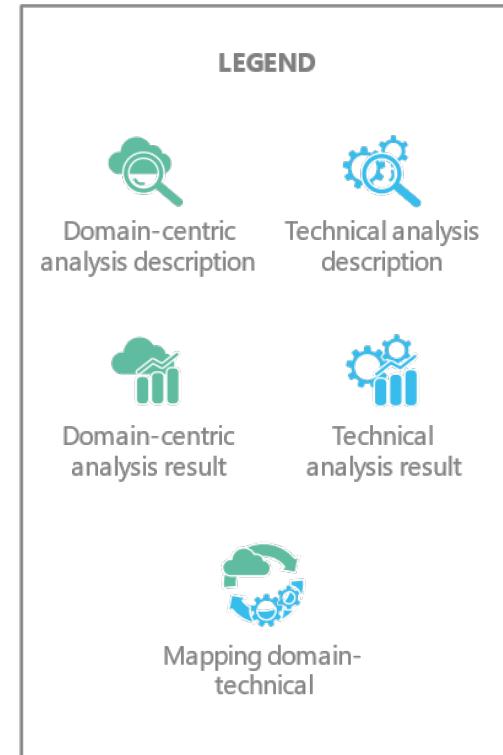
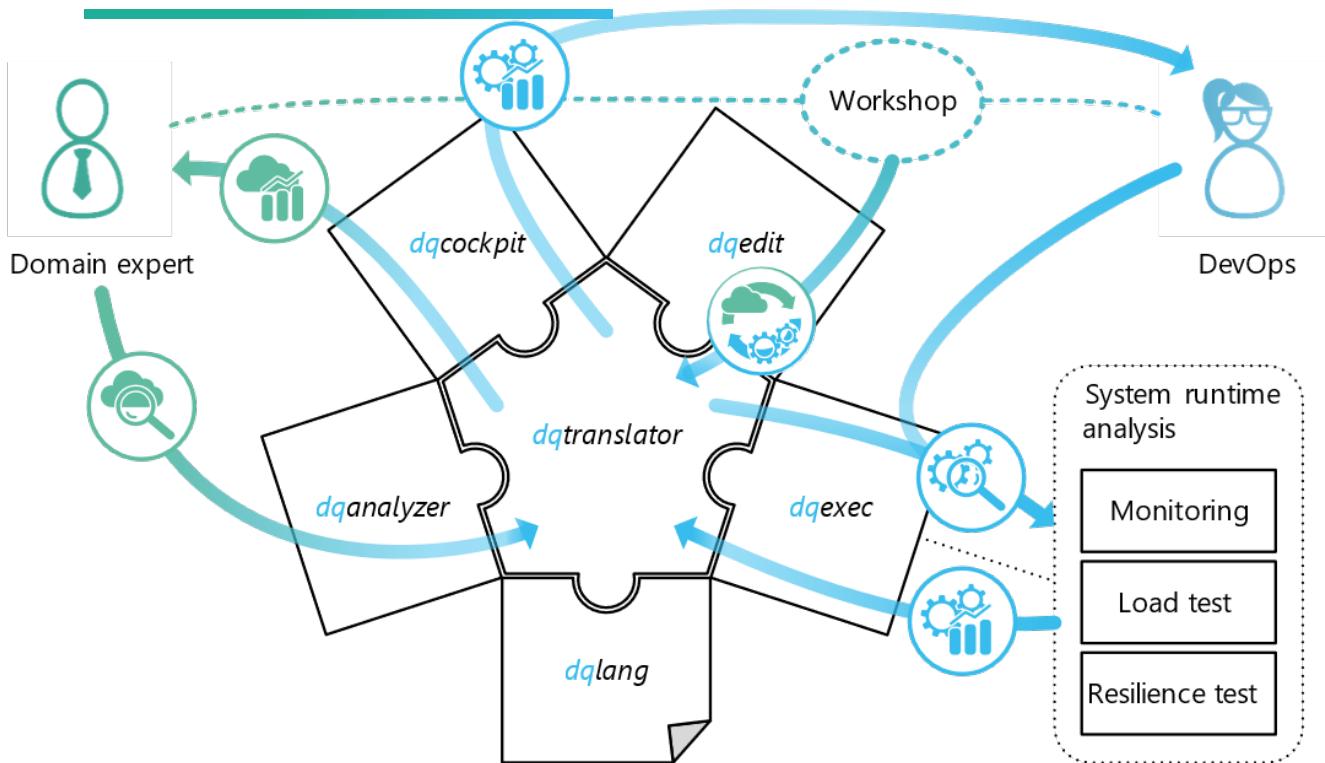




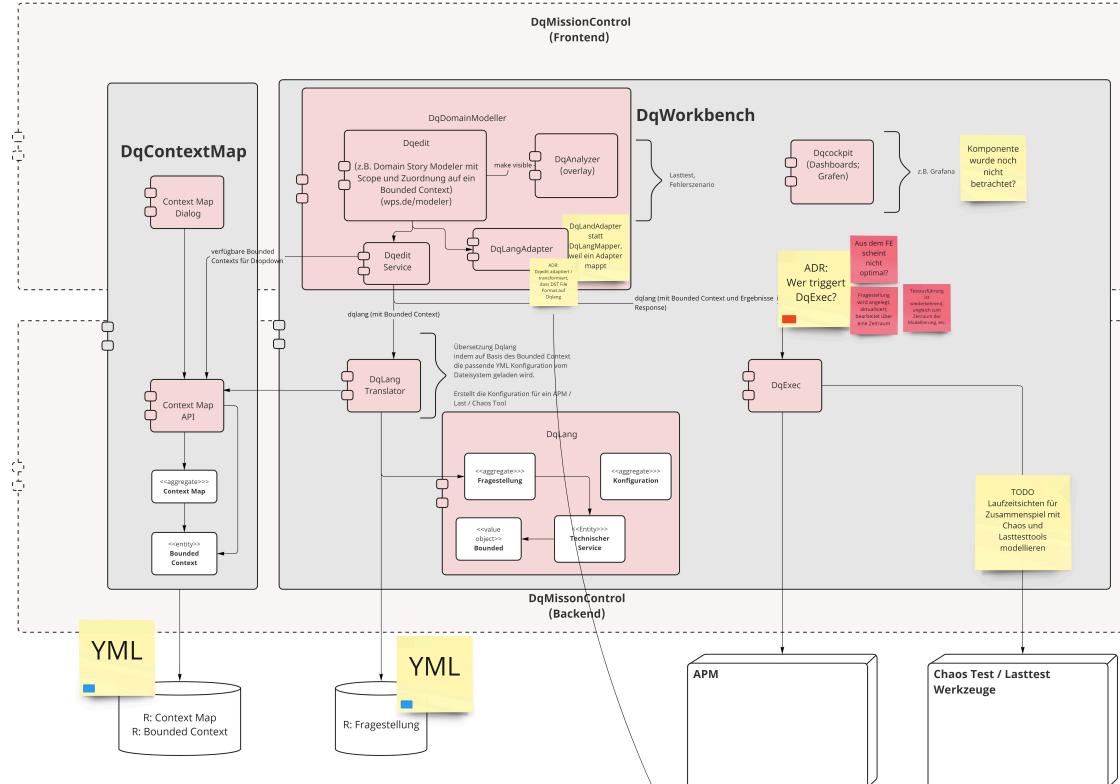
Enriching the technical monitoring with business domain



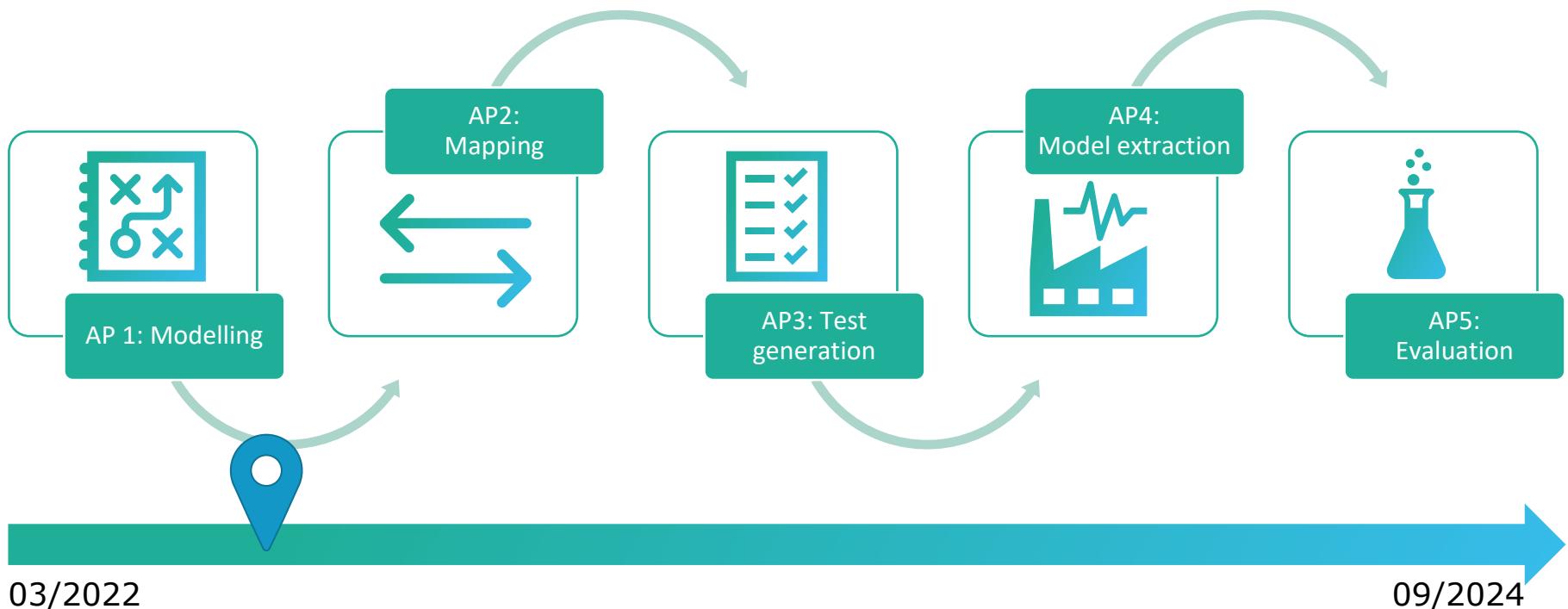
dqualizer approach – architecture



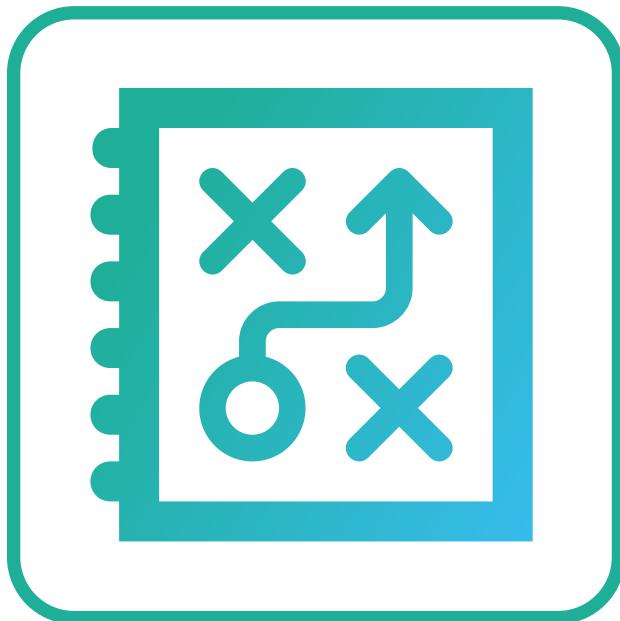
dqualizer approach – architecture



Schedule and working packages



AP 1 – Modelling of the business domain and quality attributes



1.1 - DDD und quality attributes?



1.2 – DDD-modeling language



1.3 – Enriching with quality scenarios
and annotations

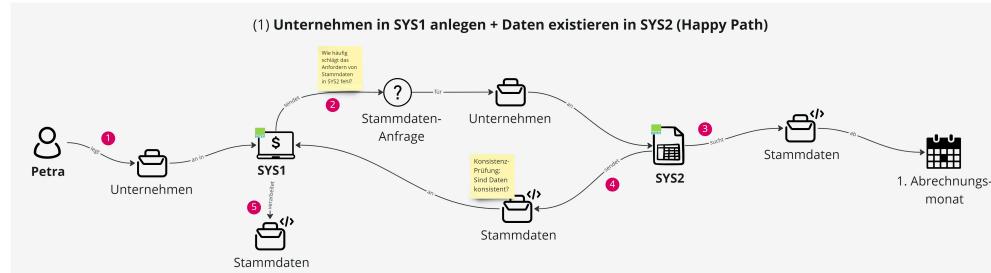


1.4 - Editor und persistance for the
modeling

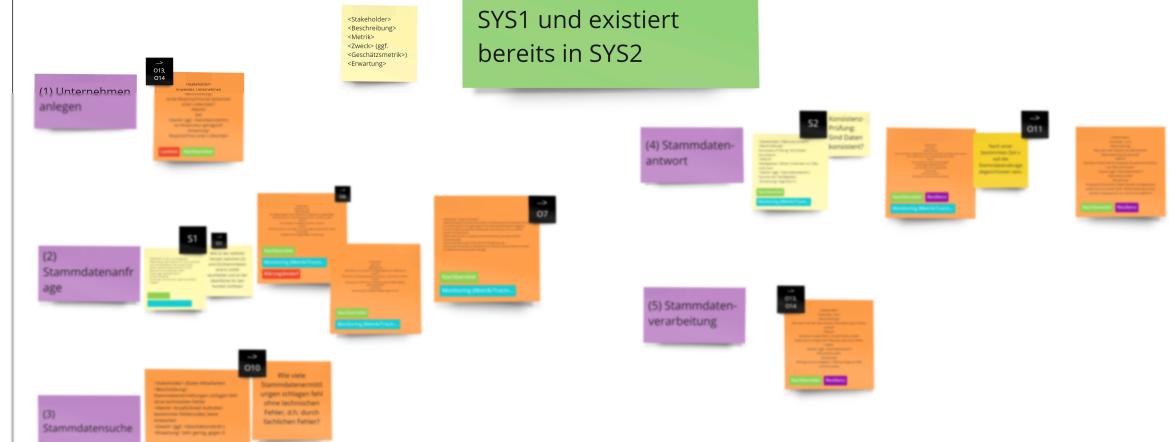


AP 1/5 – Workshops

Fragestellung Storming 2



<Story>
Neues Unternehmen in
SYS1 und existiert
bereits in SYS2



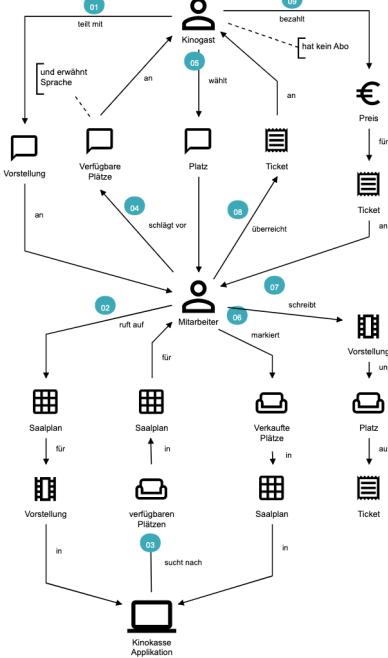
AP 1 – dqDomainModeler – first prototype

Beispiel 4 - Ticketverkauf Happy Path (digital)



Annahmen: Happy Path; Kinobesucher hat kein Abo
Domain: Metropolis

Context: default



weya.de

AP 1 – dqDomainModeler – first prototype

Beispiel 4 - Ticketverkauf Happy Path (digital)

Annahmen: Happy Path: Kinobesucher hat kein Abonnement.

Domain: M

Resilience Scenario

Artifact: Kinokasse Applikation

Stimulus (*): Failed request

Accuracy of Results (*): 100%

Response Measure (*):

- Recovery time: Satisfied, Tolerated, Frustrated
- Response time: Satisfied, Tolerated, Frustrated
- Error rates: None, Low, Medium, High

How often does the stimulus occur? (*): Once

Do you want your users to notice the stimulus? (*): No

Select a time slot for your scenario:

- Office Hours 08:00 am to 16:00 pm: checked
- Off Schedule after 16:00 pm: unchecked
- Use existing loadtests: checked

Show loadtests

Save Close

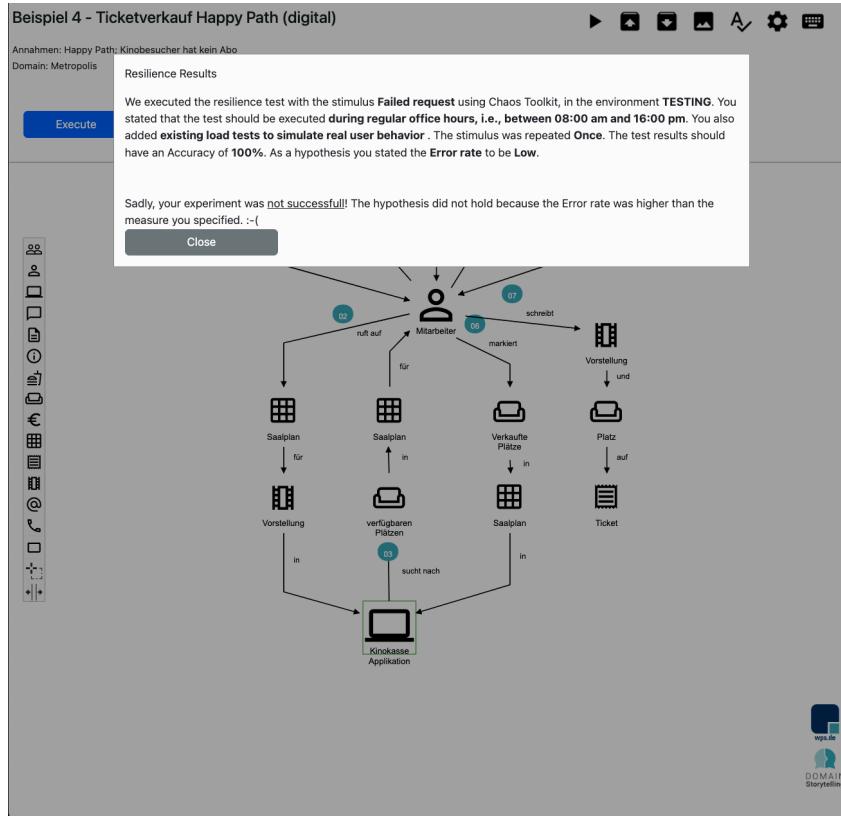
Diagram illustrating the ticketing process:

```
graph TD; Saalplan --> Vorstellung; Saalplan --> verfuegbarenPlaetzen[verfuegbaren Plaetzen]; verfuegbarenPlaetzen --> 03[03]; 03 --> suchtNach[sucht nach]; suchtNach --> KinokasseApplikation[Kinokasse Applikation]; Saalplan --> Platz; Platz --> Ticket;
```

WPS.de DOMAIN Storytelling

NOVATEC

AP 1 – dqDomainModeler – first prototype



AP 5 – (Continuous) Evaluation



5.1 – Laboratory studies



5.2 – User tests



5.3 – Case study DATEV eG



5.4 – Case study VHV
solutions GmbH



AP 5 – Evaluation – First insights



Workshops using **domain-centric approaches** (e.g., Domain Storytelling) are feasible



Workshops turned out to be **enabler** for the domain experts to „ask the right questions“



there are domain-centric questions covering all our investigated fields (monitoring, load, resilience)



It is **hard to engage** with the employees if they do not see an immediate benefit

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<https://dqualizer.github.io/>



<https://github.com/dqualizer>



@dqualizer_proj



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