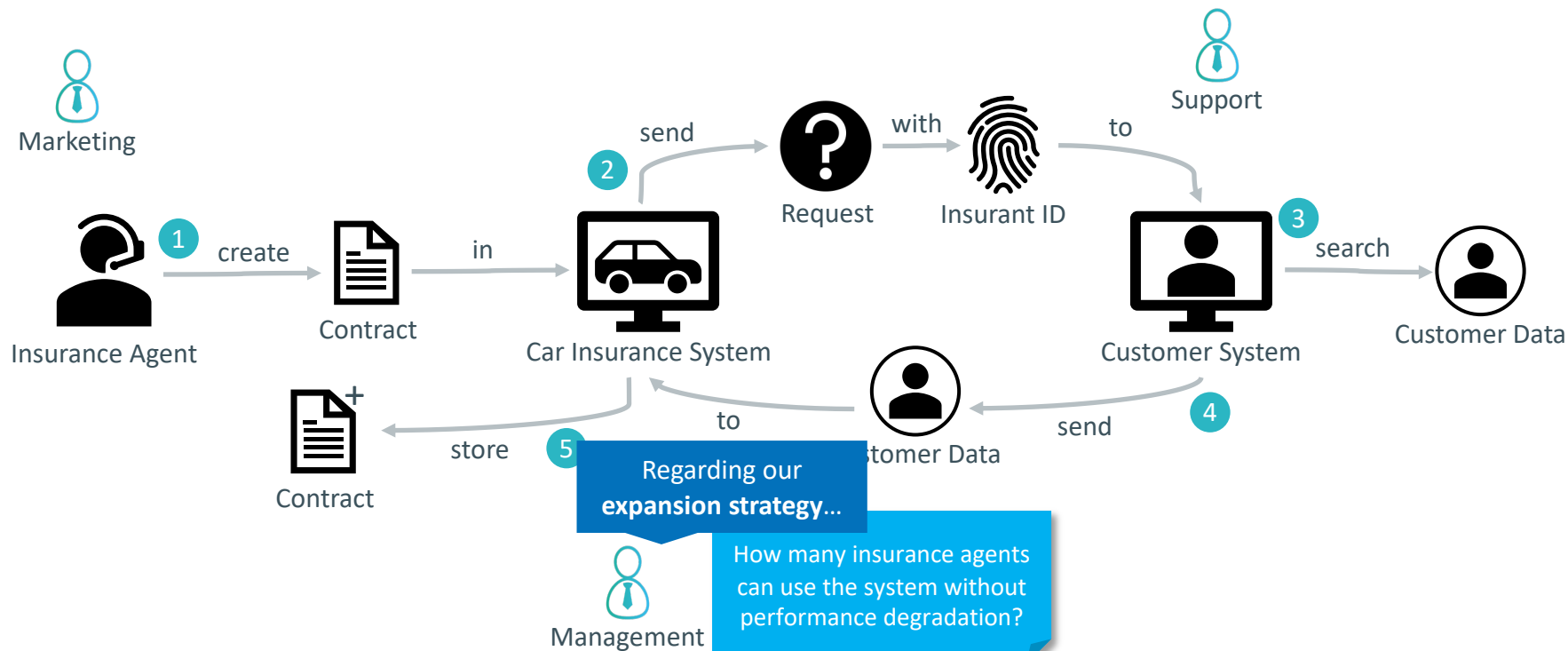**Sebastian Frank**, **Julian Brott**, Levin Kerschberger, Eduard Schander, Ariane Kraus, Jens Plüddemann, Georgia König, Paul Möhring, Matthias Haeussler, Georg Rekas, André van Hoorn

CONDUCTING RUNTIME QUALITY ANALYSES USING DOMAIN STORYTELLING
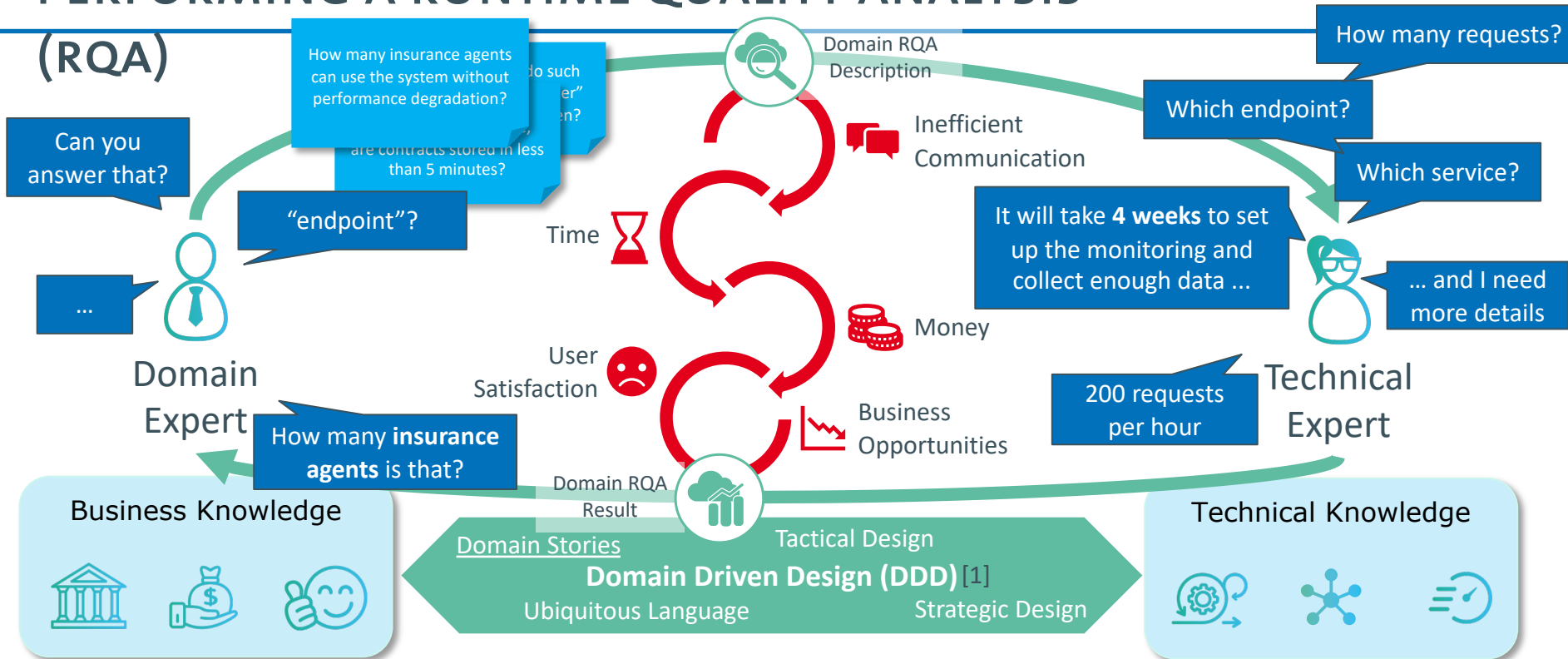
INSURECO: A DOMAIN STORY

CONDUCTING RUNTIME QUALITY ANALYSES USING DOMAIN STORYTELLING — S. FRANK, J. BROTT ET AL.

[1] *Vaughn Vernon. 2016. Domain-driven design distilled. Addison-Wesley.*

dqualizer

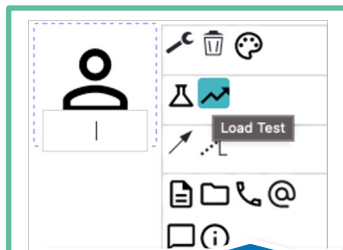# PERFORMING A RUNTIME QUALITY ANALYSIS (RQA)

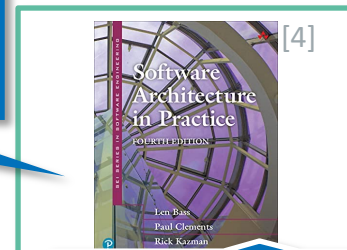[3] *Apdex Users Group 2023. Apdex Performance Index. https://www.apdex.org.*

[4] *Len Bass, Paul Clements, and Rick Kazman. 2021. Software Architecture in Practice (4 ed.). Addison-Wesley Longman Publishing Co., Inc., USA.*
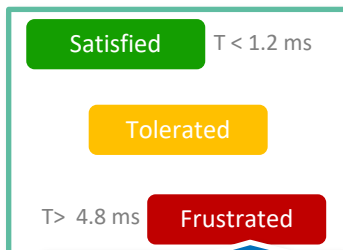
DQANALYZER: CONCEPT

Annotations

Scenario Format

Apdex Levels

Alt. Terminology

Chaos Toolkit	Alt. Terminology
target-service	artifact
fault repetition	occurrence
…	…
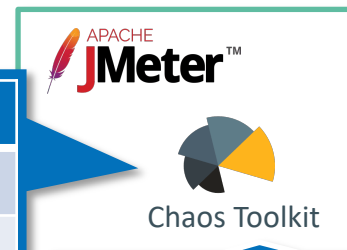
EXPERT USER STUDY: SELECTED RESULTS

Not missed input fields
(resilience test)

Understood every
information requested
(resilience test)

Representation
of RQA results was
understandable

CONDUCTING RUNTIME QUALITY ANALYSES USING DOMAIN STORYTELLING − S. FRANK, J. BROTT ET AL.
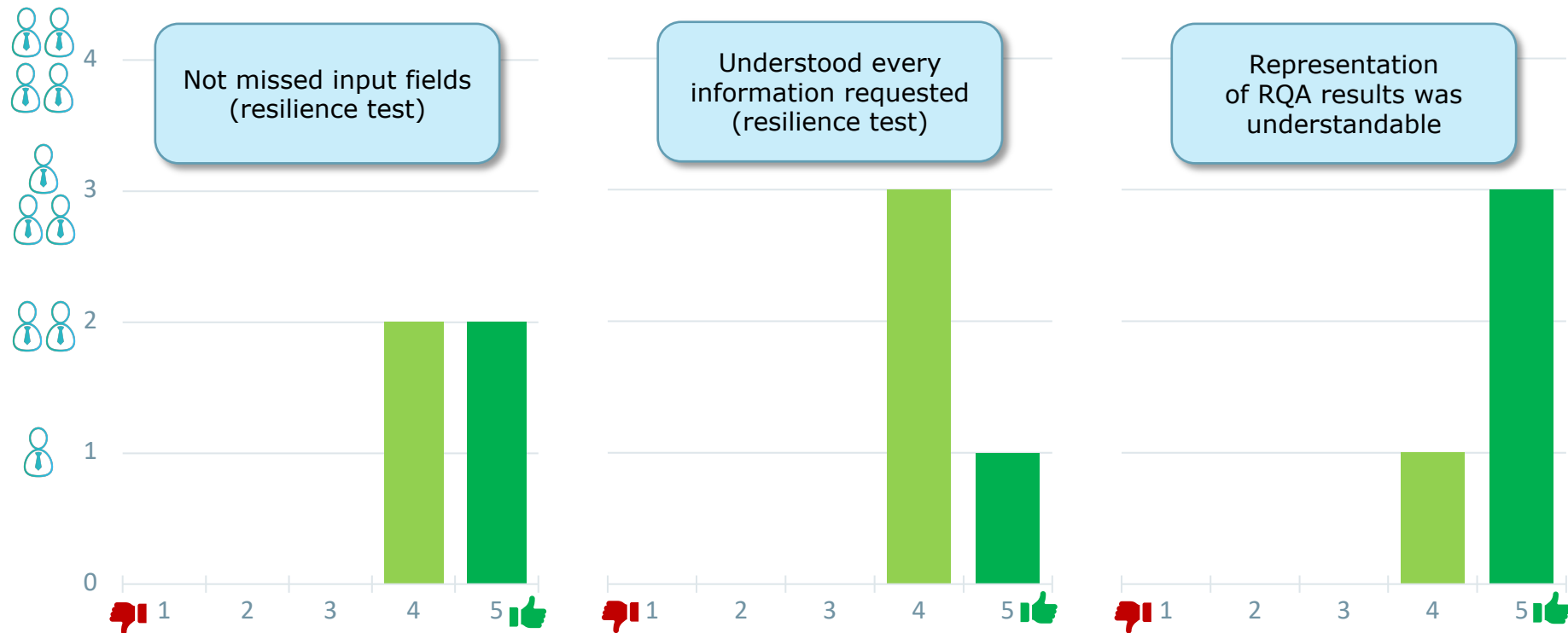
EXPERT USER STUDY: LESSONS LEARNED

Domain experts can model their business questions easily and understand the representation of the RQA results, but…

Information Fields

Accompany Apdex ratings with **actual reference values**

Difficult to **understand** some fields
(load peak design, …)

Result Presentation

More **facts** regarding test runs

More **compact** representation
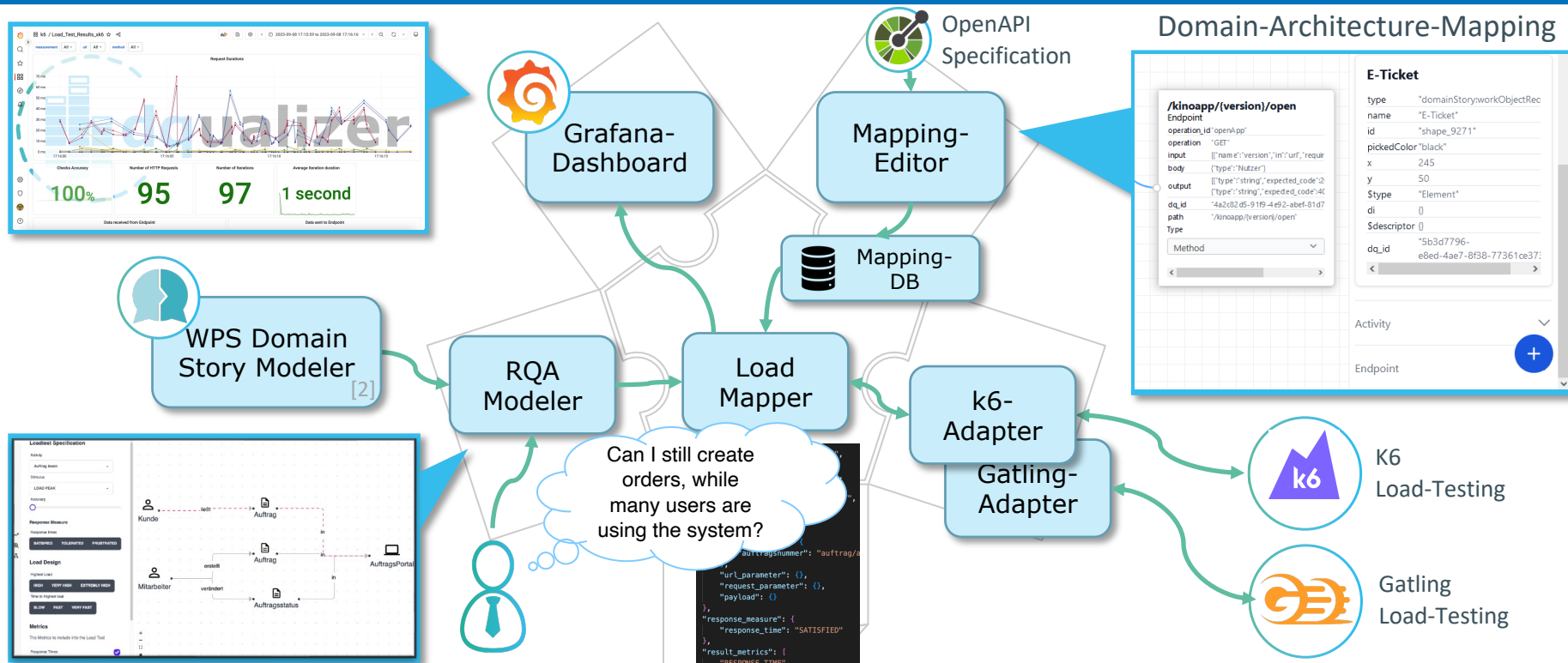
Summary suggests **interpretation**

Limitations

Putting RQA on **single element** of domain story

Limitations of Domain Story Modeler

[2] *https://egon.io/*

dqualizer

DQUALIZER: CURRENT STATE

OpenAPI Specification

Domain-Architecture-Mapping

Grafana-Dashboard

Mapping-Editor

Mapping-DB

WPS Domain Story Modeler [2]

RQA Modeler

Load Mapper

k6-Adapter

Gatling-Adapter

K6 Load-Testing

Gatling Load-Testing

Can I still create orders, while many users are using the system?

CONDUCTING RUNTIME QUALITY ANALYSES USING DOMAIN STORYTELLING – S. FRANK, J. BROTT ET AL.

[2] https://egon.io/

dqualizer

CONCLUSION

Domain-Architecture-Mapping

CONDUCTING RUNTIME QUALITY ANALYSES USING DOMAIN STORYTELLING – S. FRANK, J. BROTT ET AL.

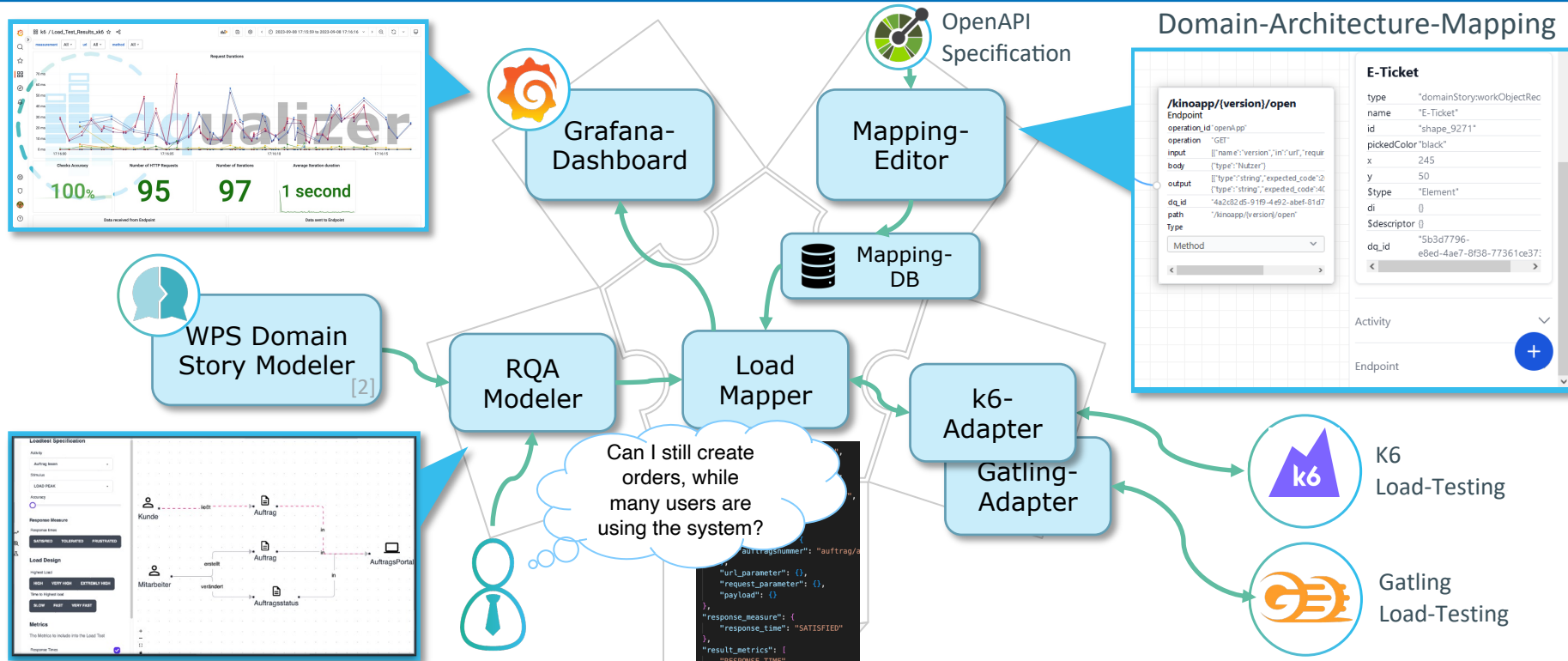**dqualizer**

FUTURE WORK

Just Completed / Work In Progress

- **Suggestions** for Quality Scenarios
- Reengineering of the WPS **DomainStory-Modeler**
- Generate **Monitoring** from Domain Stories
- **Presenting** Monitoring data to Domain Experts
- Executable **Case Study** based on real Domain Stories and System

wps

**VHV///
VERSICHERUNGEN**

DATEV

Scheduled

- Complex and flexible **Quality Scenarios**
- Integration of **Resilience Testing and Monitoring tooling**
- …