The challenge to use graphQL for an evolution to microservice architecture.

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Introduction

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Roles	Fields of Interest
Managing Director	Agile Organization
	Development excellence
Head of Software Development	Clean Architecture
	DevOps
Cloud Services	Continuous Deployment
	Microservice Architecture
Group IT Services	Cyber Physical Systems

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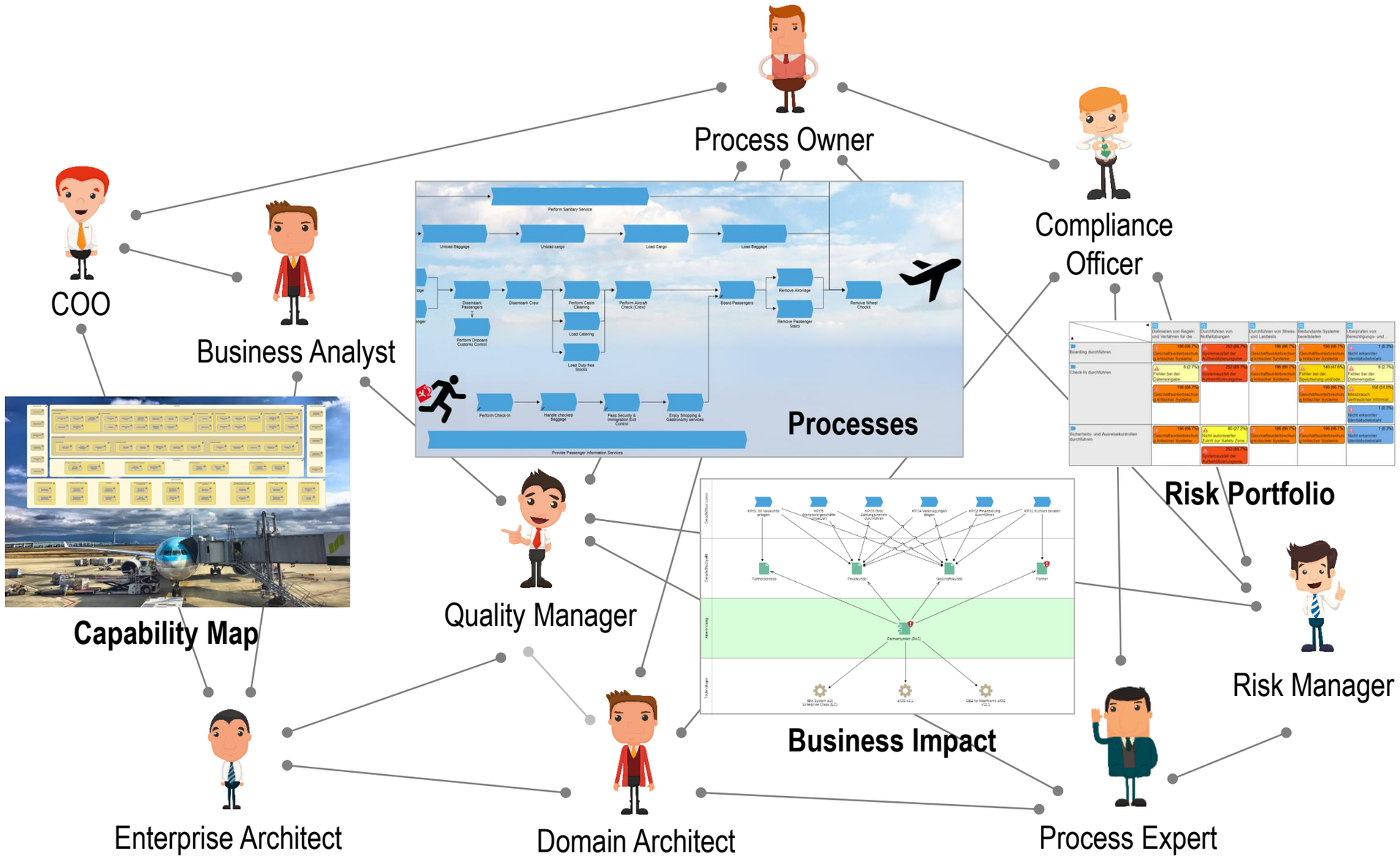
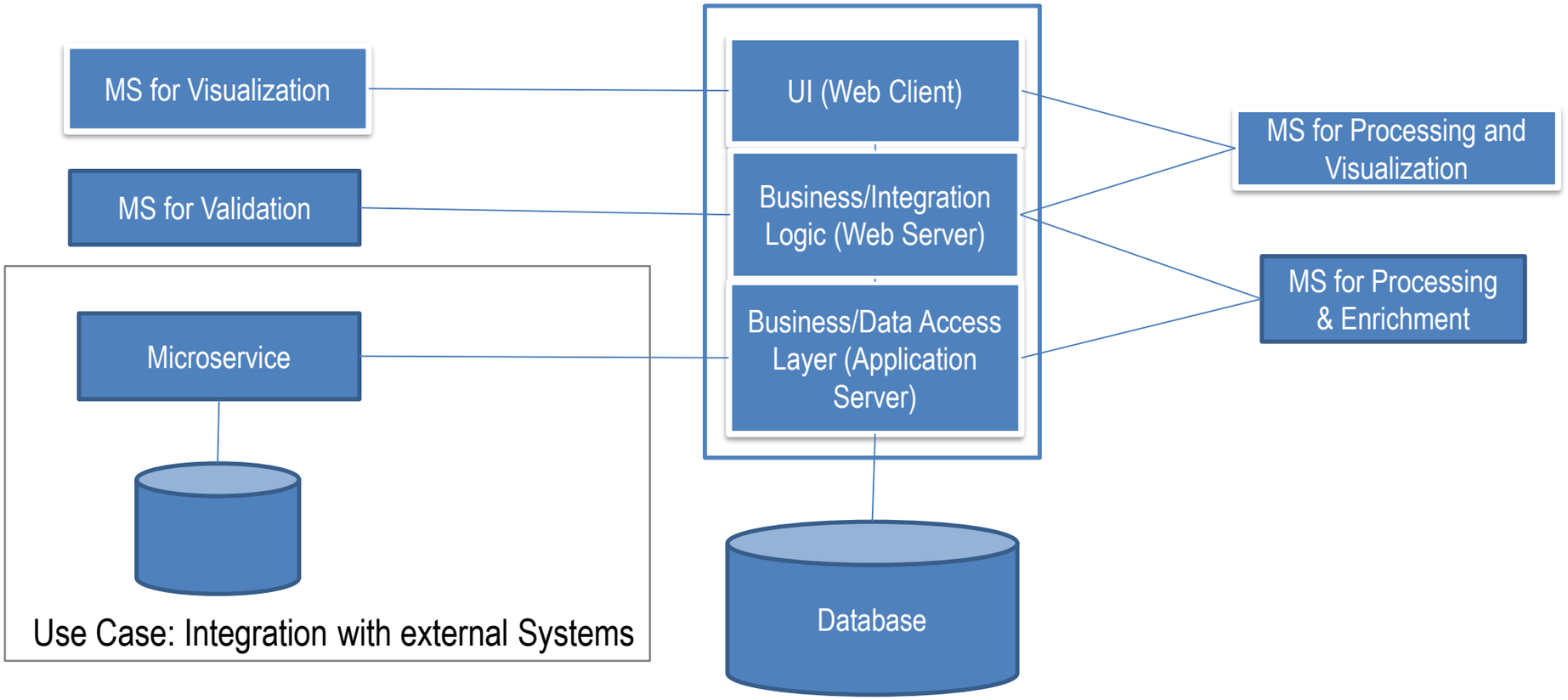
Agenda

- Application Domain
- Motivation to adopt MS & GraphQL
- Target Architecture
- Experience

Integrated Management Systems



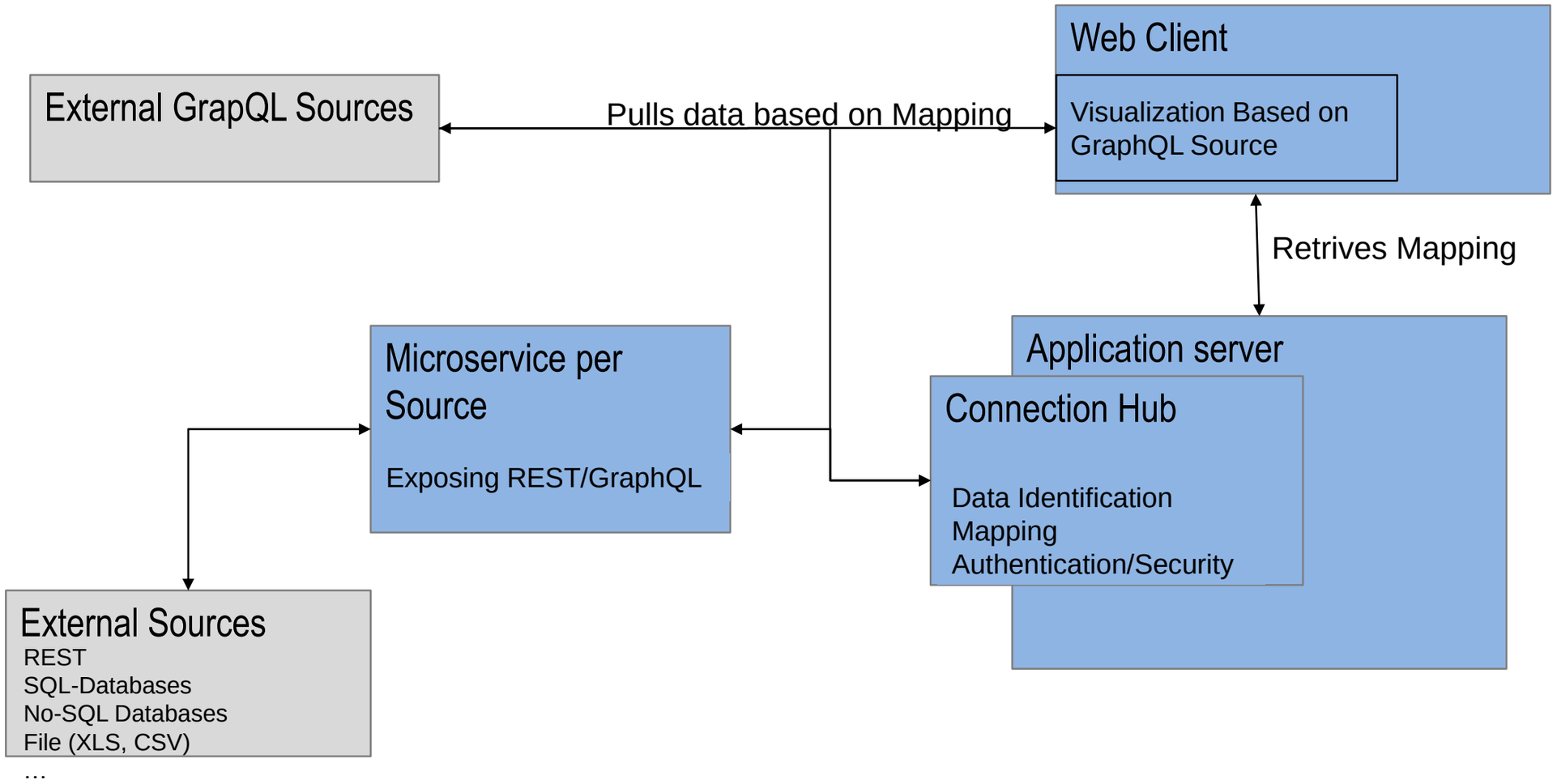
Architecture Evolution to Openness



The challenges to consider

- API Contract: The API/Implementation will change over time
- Transformation: The source system data needs to comply fully to the target data model.
- Data Duplication: Which system is the golden source for the information?
- Scaling: What happens if you integrate with one tool but from multiple variants/deployment?

Target Architecture for Integration



What we Learned

Benefits

- Discussing the relevant data is the GraphQL Schema notation
- The integration hub contract is stable
- Changing Details of the integration is configuration
- Versioning/Compatibility chaos resolved

Challenges

- The effort is in understanding the source systems structure
- The identification mapping is not always an automatic process
- Multiple integrations map to one element
- Building performant transformations
  - Non-Blocking & Request based Resource Caching

The next challenges

- Integrating multiple schemas into one view (schema stitching)
- Integrating on data intensive operations (e.g. search)
- Handling of mutation