



Enterprise Architecture Management at Munich Airport – An Experience Report



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- 3** Why Enterprise Architecture Management (EAM)
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- 6** Lessons learned & conclusion

Short profile Bernhard Steckenbiller & Sebastian Hanschke



Bernhard Steckenbiller

Company: Flughafen München GmbH

Position: Head of Central and Commercial Solution

Professional background: working for Munich Airport for more than 30 years

Short Description:

Responsible for the areas

- Enterprise application integration
- Databases
- IT Service Management
- Identity and access management
- System monitoring
- Enterprise architecture management



Sebastian Hanschke

Company: Flughafen München GmbH

Position: Chief Enterprise Architect

Professional background: working in the field of EAM, ISM, IT strategy development & digital transformation for more than 8 years. Of which more than 5 years for Munich Airport (partly as external).

Short Description:

Responsible for

- Management & further development of EAM method as well as further development of ISMS
- Overall consolidation & quality assurance of the entire development
- Further development of the IT cluster strategy & driving forward the digital transformation
- Development, coordination & definition of the IT architecture, among other things

The airport fascinating and diverse (figures: 2019)

Munich Airport - a city to take off.

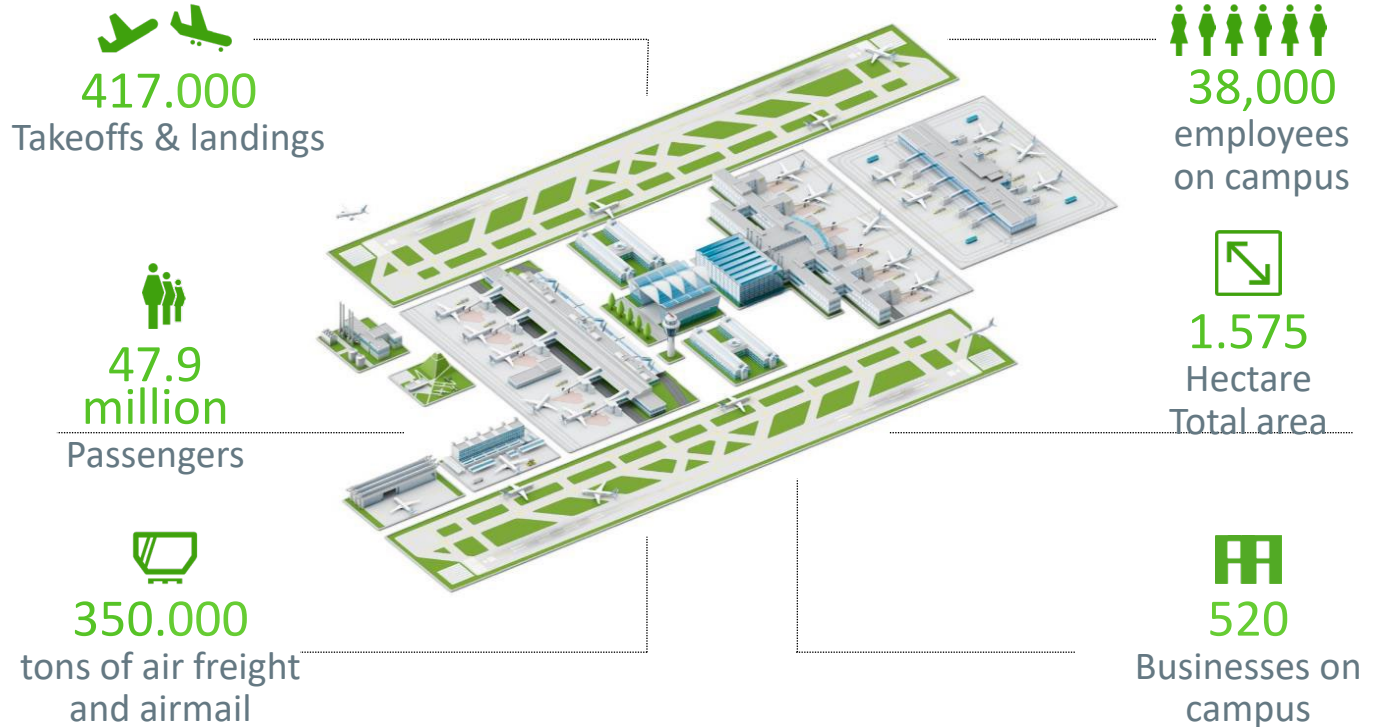
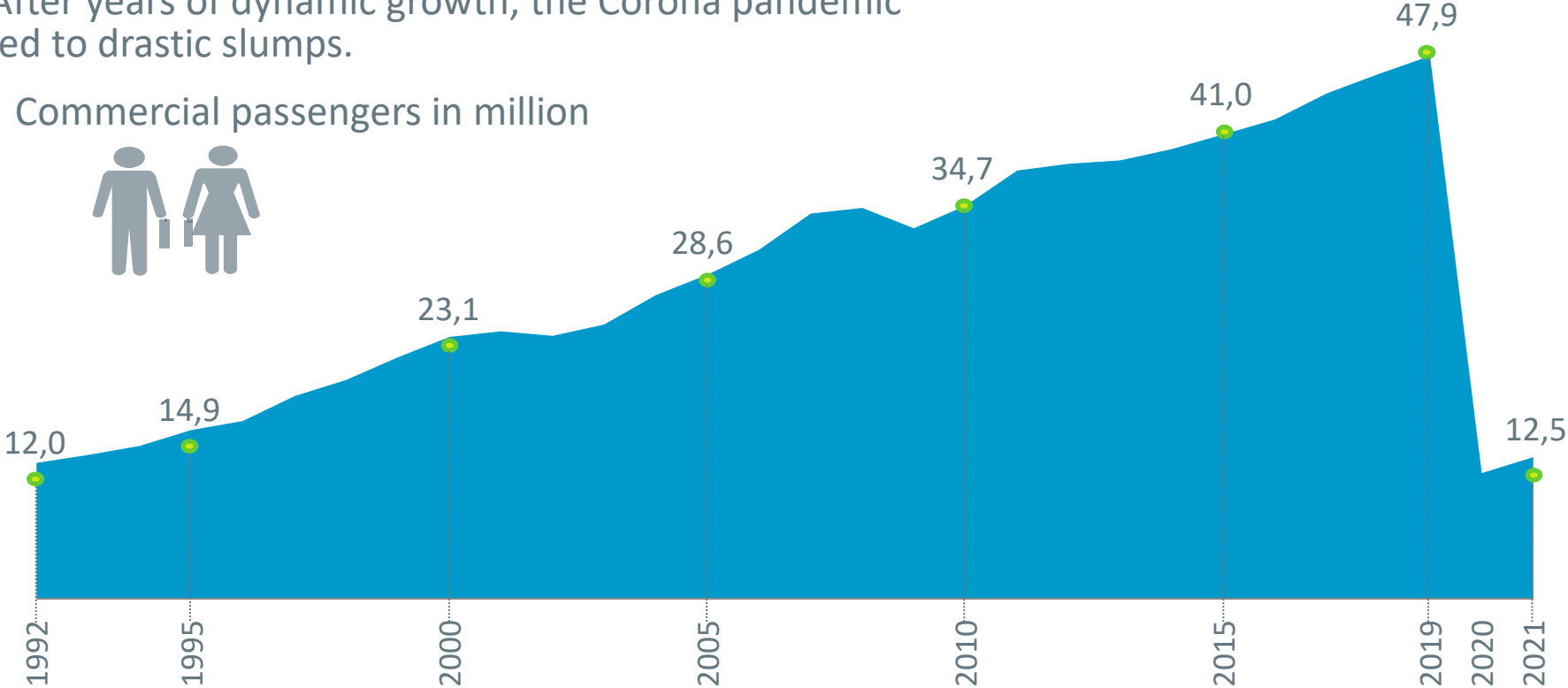
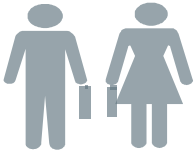


Illustration not true to scale and position

Passenger development at Munich Airport over the years

After years of dynamic growth, the Corona pandemic led to drastic slumps.

Commercial passengers in million



Good. Better. Excellent.

Munich Airport is the first five-star airport in Europe. For the 13th time in the last 15 years, passengers again voted it the best airport in Europe in 2020 (World Airport Awards).



First five-star
airport in Europe



Best airport in Europe



Best employer
in the transport and logistics sector

Colourful diversity

With its 22 subsidiaries and associated companies, the Munich Airport Group covers a broad portfolio of services. In addition to its core business at Munich Airport, the Group also offers consulting and management services worldwide.



- Check-in, baggage and aircraft handling
- Guarding and security services
- Air cargo handling
- Manoeuvring and de-icing of aircraft
- Passenger and information services
- Hotel and catering establishments
- Operation of retail stores
- Company medical service and operation of the AirportClinic M
- Facility management and much more

Why EAM at Munich Airport?

Transparency about the initial situation



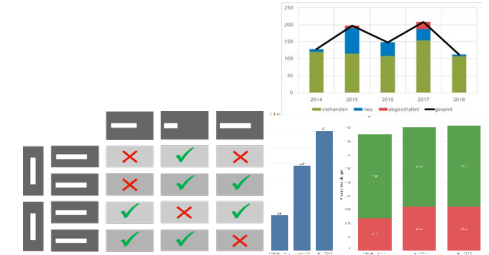
- Overview of business architecture, IT landscape & Business-IT alignment
- Identification of need for action & optimization potential

Strategic planning of further development



- Holistic planning according to business needs and technological challenges
- Target picture & roadmap for implementation at all levels

Effective management of the digital transformation



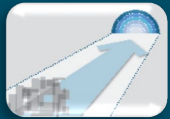
- Making dependencies and effects transparent
- Identify the need for decision-making and alternative solutions
- Effective control

What are the tasks and the vision of Enterprise Architecture Management (EAM) at Munich Airport?

Vision Enterprise Architecture Management

Enterprise Architecture Management (EAM) at Munich Airport provides an overarching, systematic and holistic set of tools for understanding, communicating, designing and planning the functional and technical structures throughout the FMG Group.

Essential tasks of Enterprise Architecture Management



Strategic & Tactical
EA- Development
Planning



Operational EA
development
& EA Governance

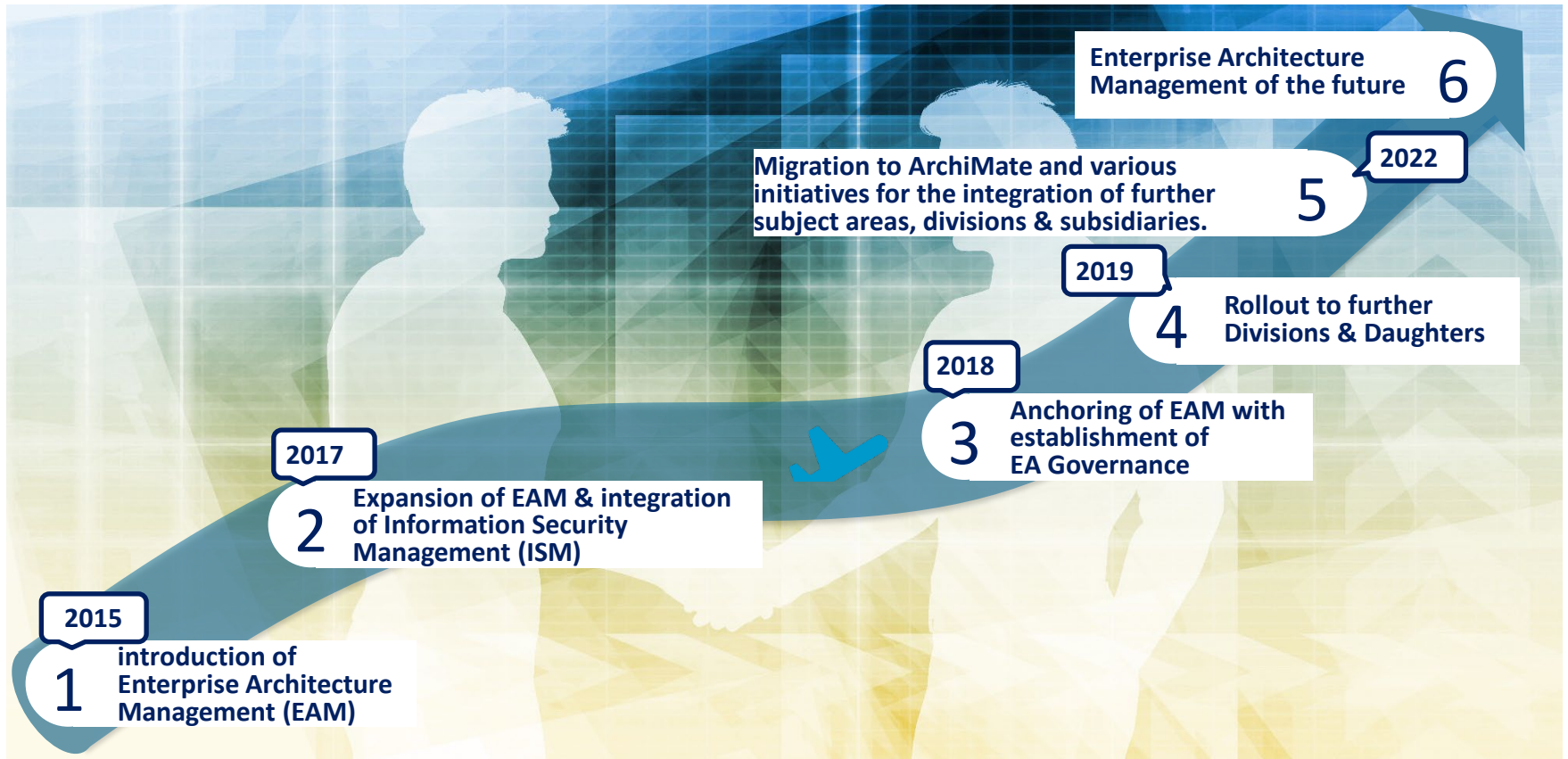


Information Security
and data
protection support



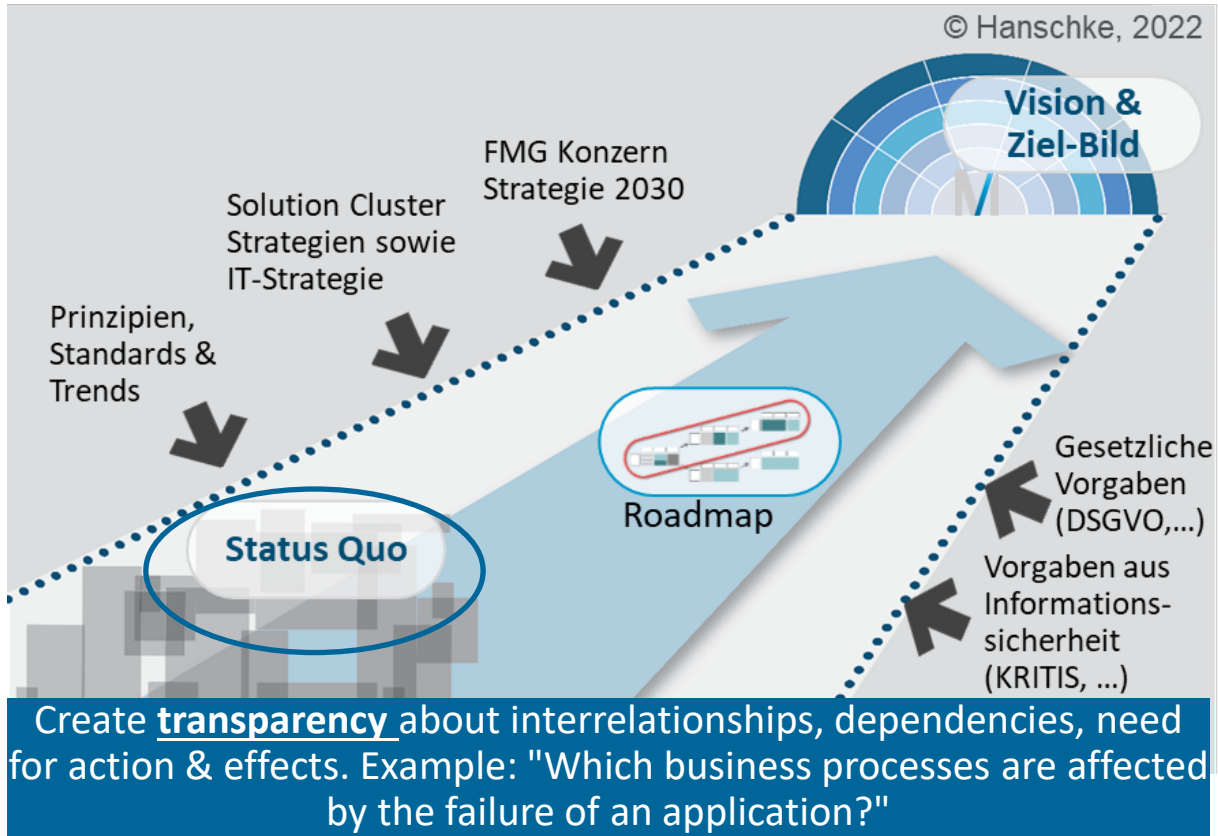
Provision of
Information Services,
Views & Dashboards

Enterprise Architecture Management Journey at Munich Airport



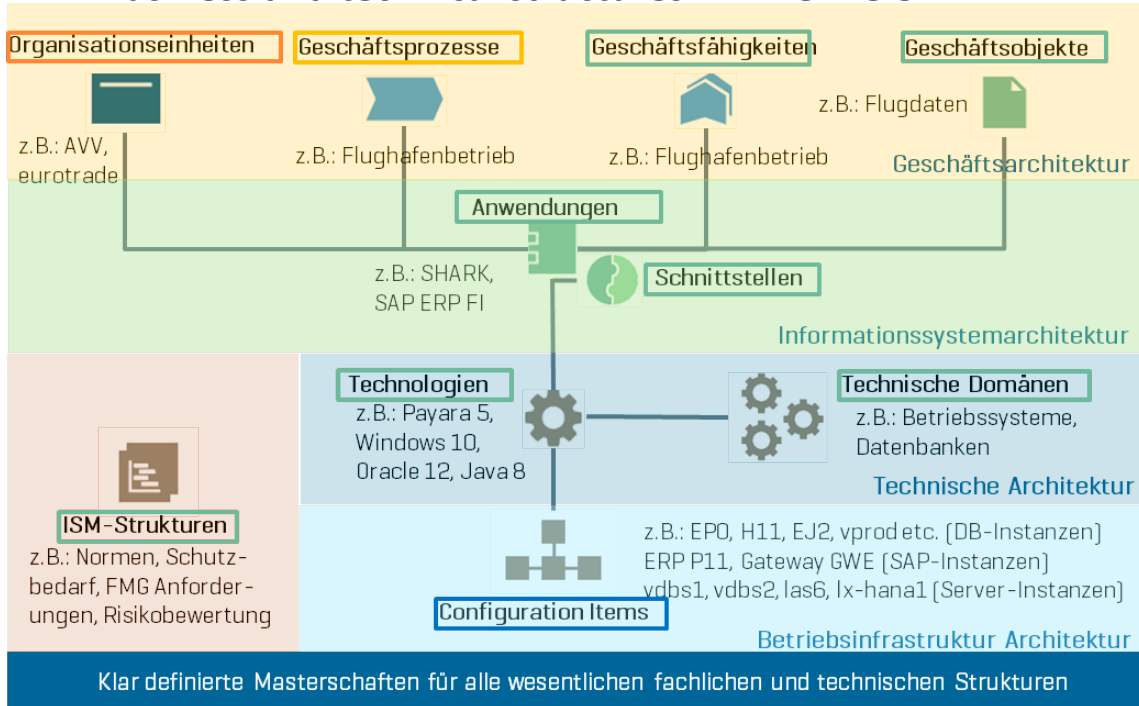
Introduction of Enterprise Architecture Management (EAM)

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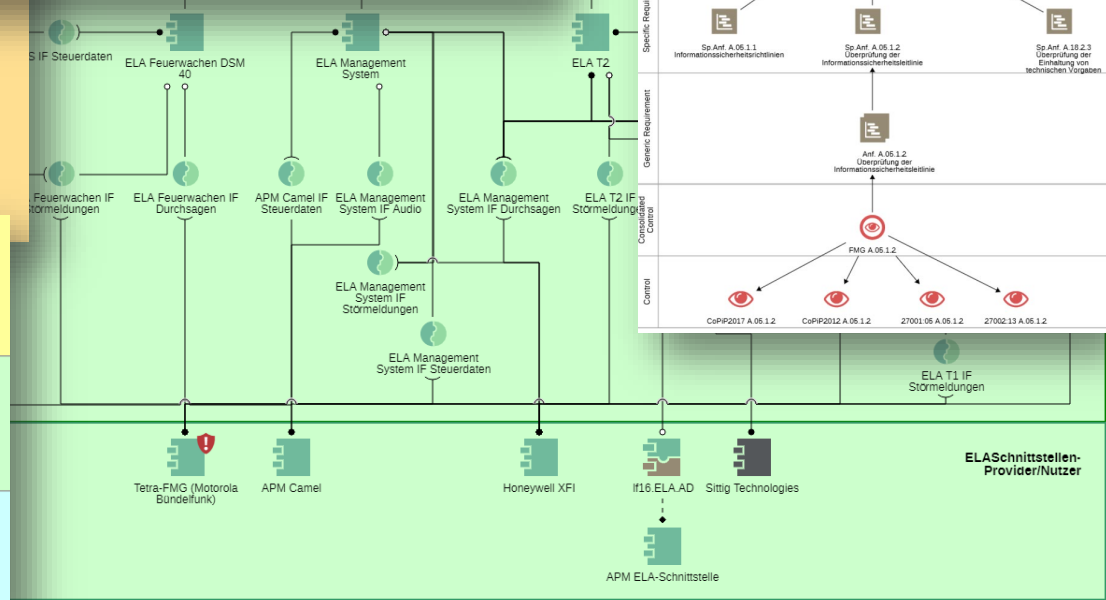
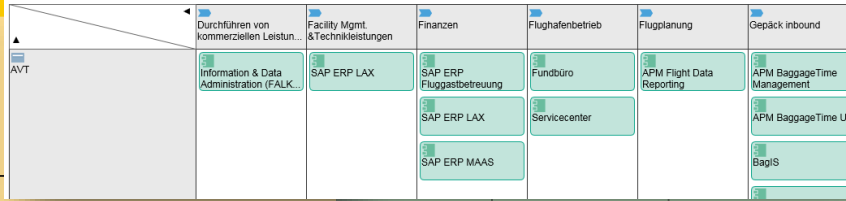
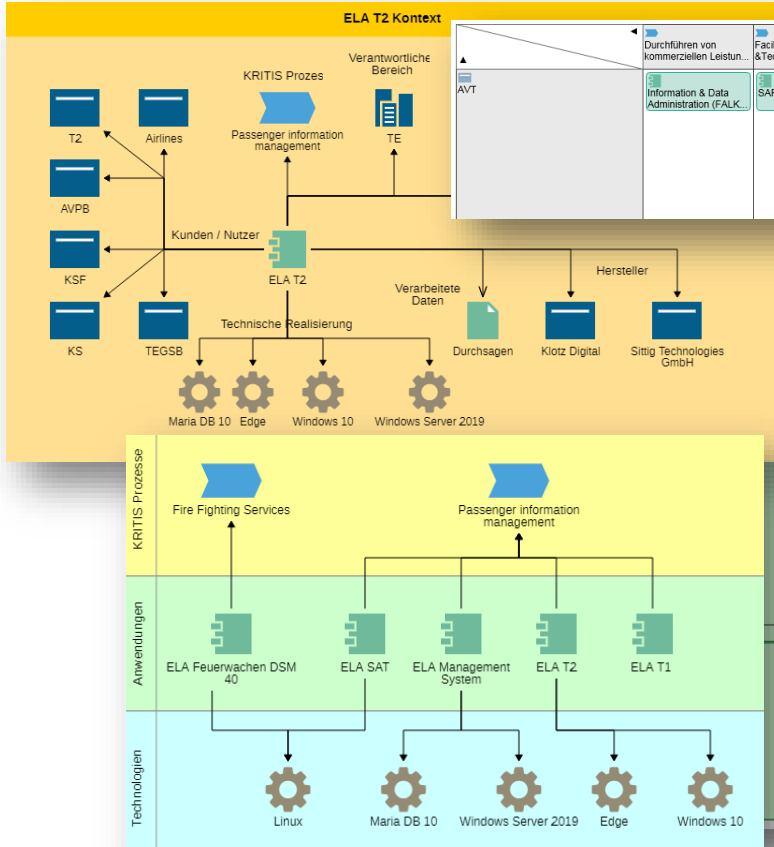
Expansion of EAM & integration of Information Security Management (ISM)

Business and technical structures in ADOIT 8.5.1



ADOIT ITSM tool BPM tool SAP

Example visualizations ADOIT



Questions that can be answered with ADOIT (excerpt)

Which applications at the airport (group) are currently planned and which are in the process of being replaced?

Which applications and which processes are affected in the event of a server failure or an attack on the IT infrastructure? What impact can be expected for the business? What is the approximate probability of such a case occurring?

Which data is exchanged via the interfaces?

Which user groups/ organisational units use which application?

Which applications are currently available at the airport (group)?

Which contact persons does an application have?

Which applications support the business (business processes, business capabilities)?

Which applications are KRITIS-relevant?

Who is responsible for which technical domain (application server, databases, integration / middleware / protocols, ...)?

Which Solution Cluster is responsible for which applications & technologies?

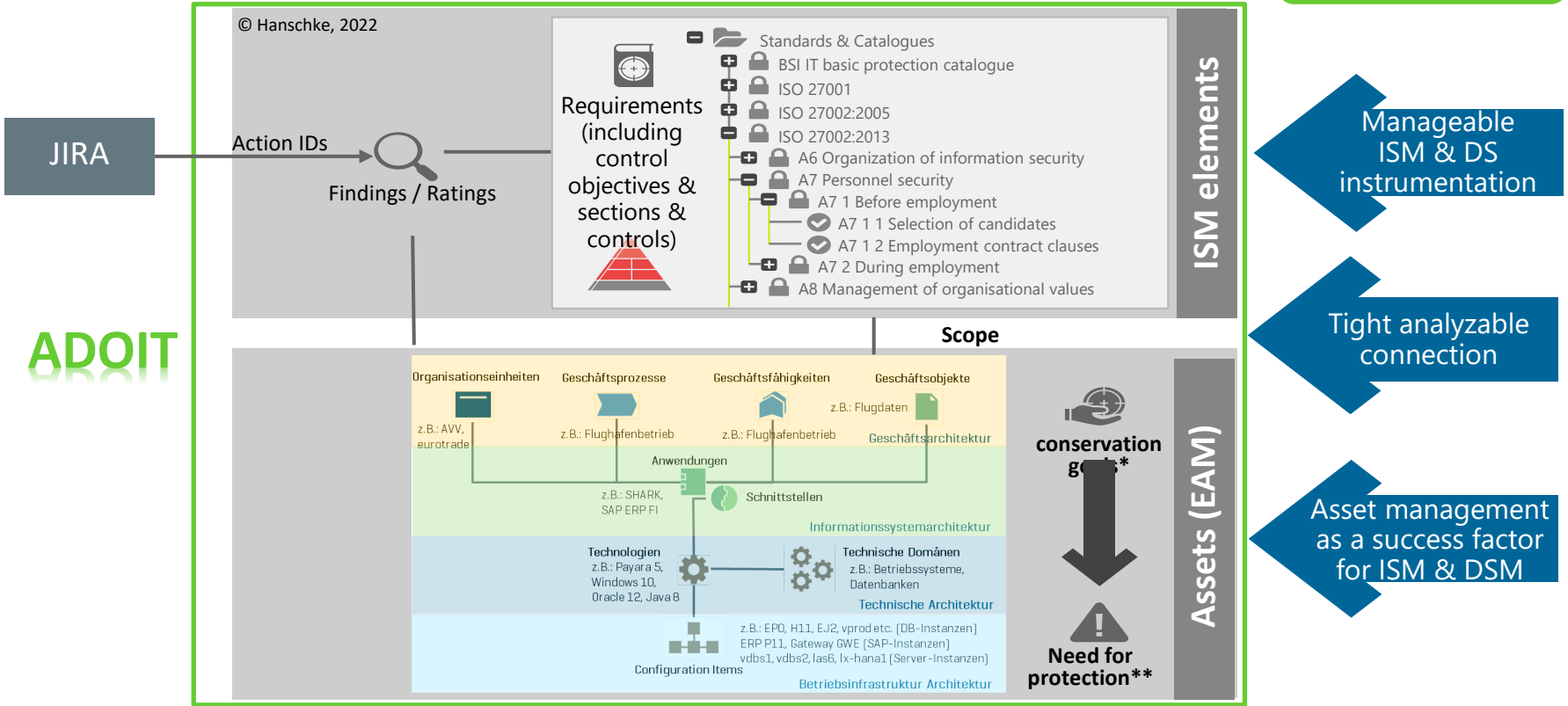


And many more

On which specific application server and which server operating system does a KRITIS application run?

What does the protection needs assessment of the KRITIS applications look like?

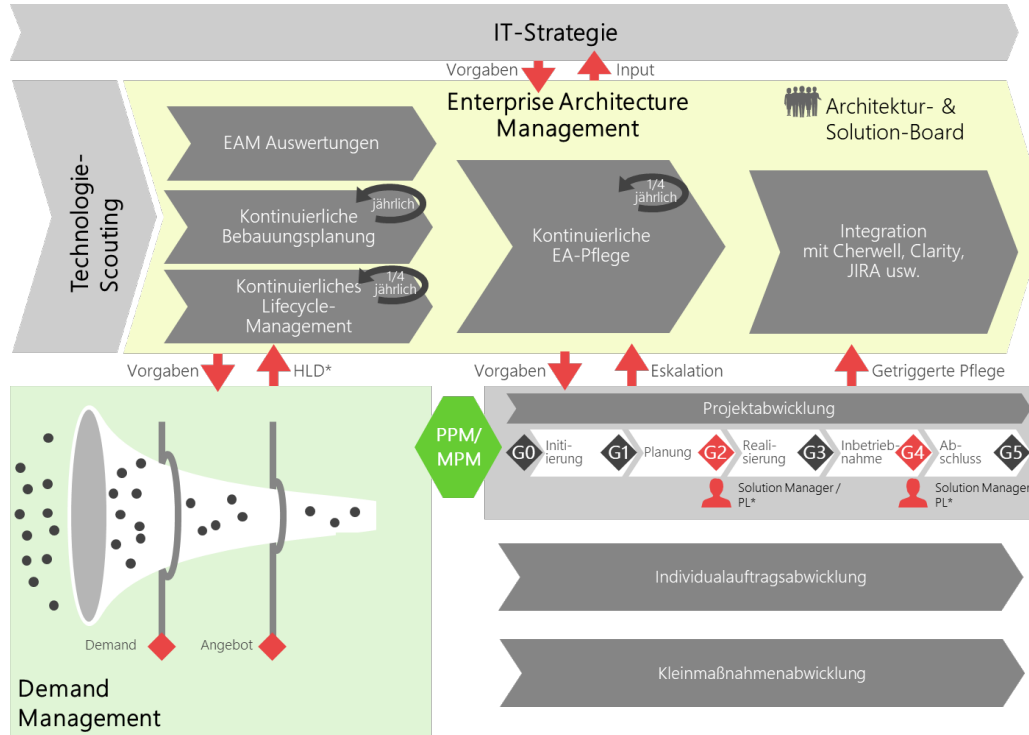
ISM extension of ADOIT

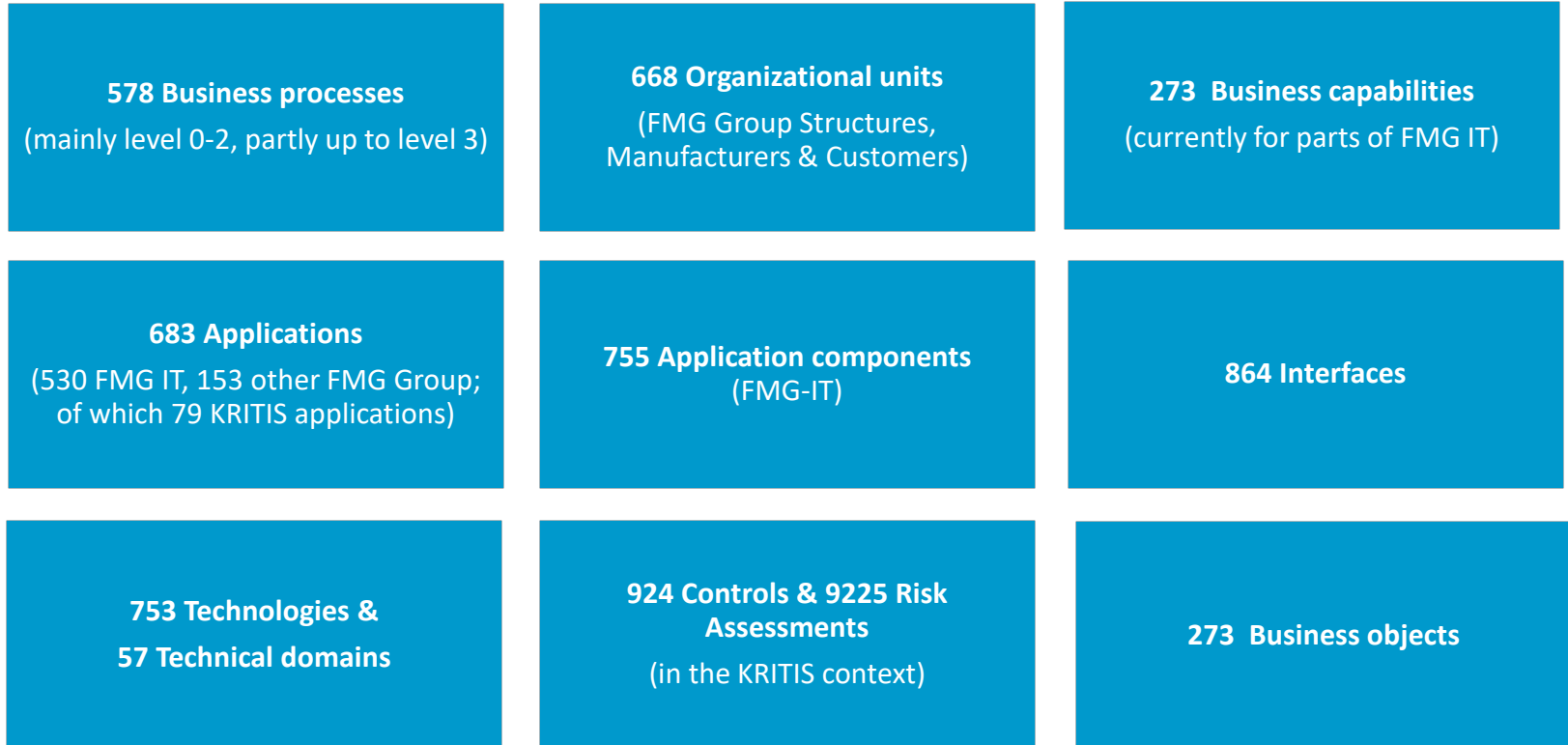


*Protection goals: Availability, Confidentiality, Integrity, Authenticity **Maximum expression from the protection goals

Anchoring of EAM with establishment of EA Governance and rollout to other areas & subsidiaries

3 & 4

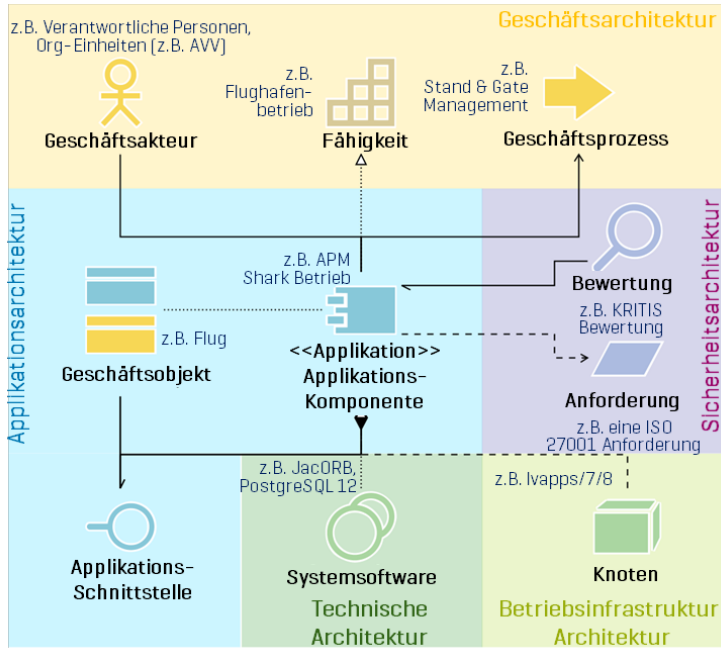




Migration to ArchiMate and various initiatives for the integration of further topics, areas & subsidiaries

5

Functional and technical structures in ADOIT 15



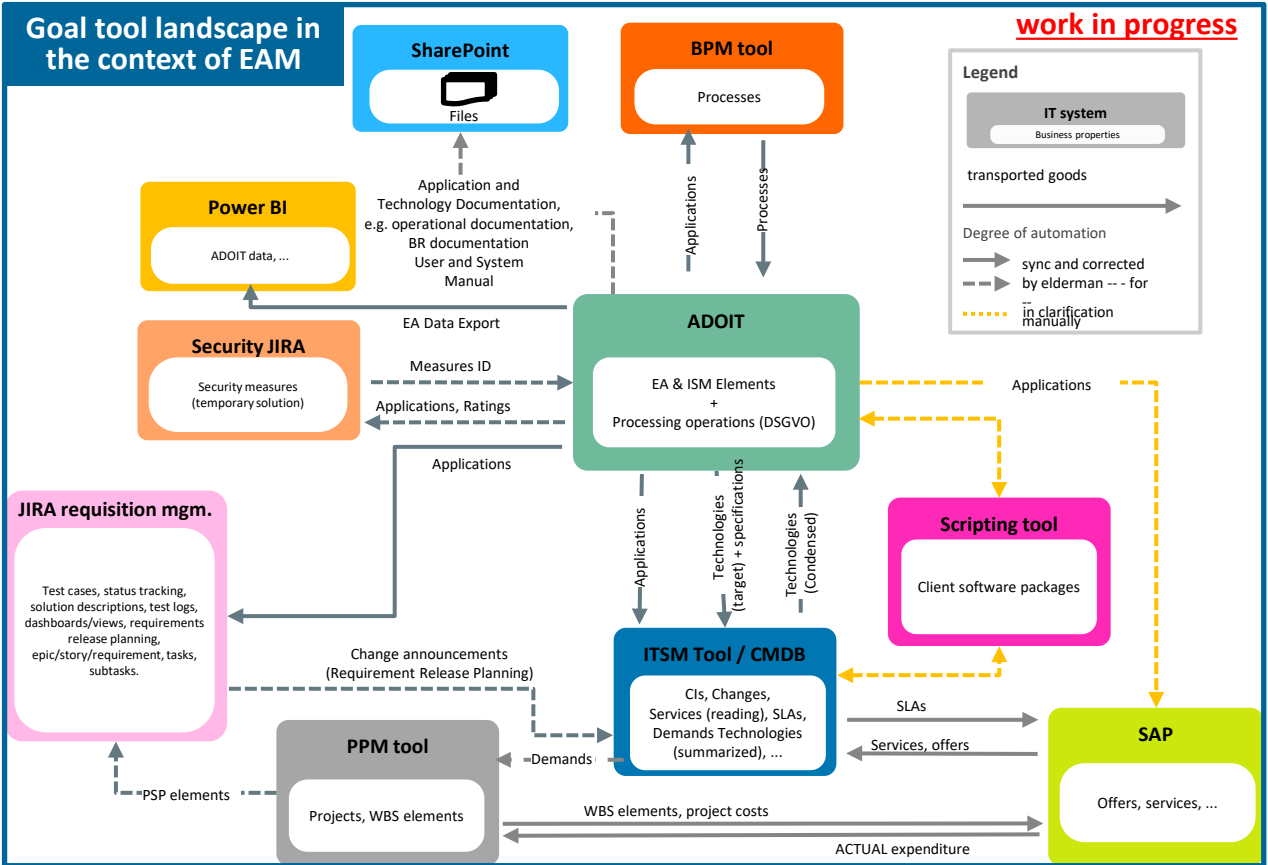
Results (excerpt):

As part of the **migration from ADOIT 8.5.1 to ADOIT 15**, mapping of the metamodel and EA data with (e.g.)

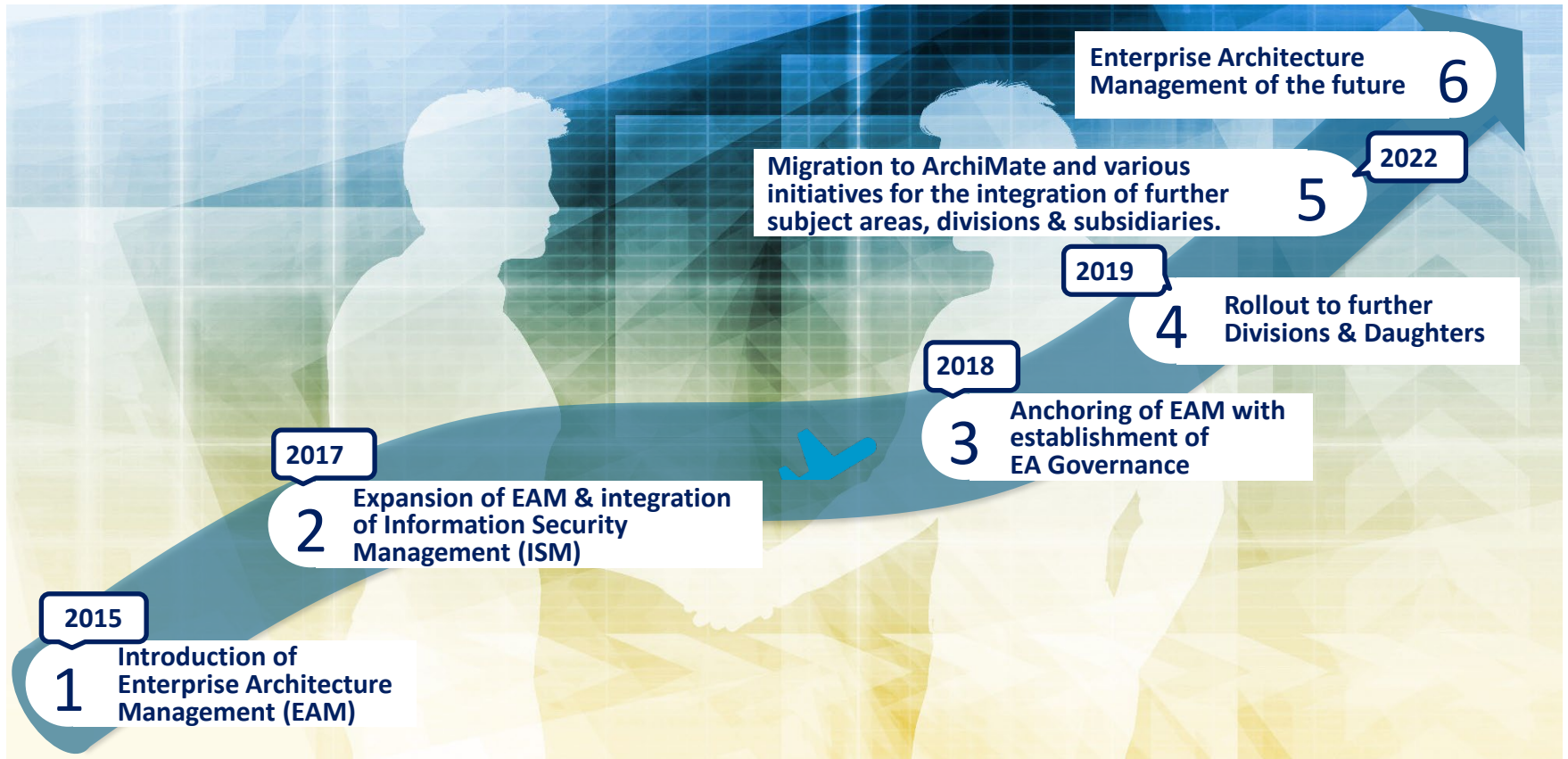
- Definition of fmg-specific relationships for comprehensive coverage of requirements and avoidance of data loss during migration
- Adaptation of existing ArchiMate relationships in such a way that they are "speaking" and can be used for predominantly single-variety evaluations
- Definition of additional attributes
- Adaptation of the standard ADOIT attributes
- Adaptation of the notebook chapters to ensure sufficient usability
- ✓ Addition of open-minded specialist departments and iterative integration of further subsidiaries
- ✓ Creation of conception interface ITSM-Tool <-> ADOIT

Excerpt of planned activities in the context of EAM of the future:

- Expansion of ADOIT ISM functionalities
- Expansion of strategic & tactical EA development planning in ADOIT
- Connection of ITSM-Tool / CMDB, BPM-Tool as well as MS Power BI
- Rollout to remaining Divisions & Daughters
- Revision / update of modelling guidelines
- Expansion of data collection within the FMG Group
- Extension of ADOIT to include data protection aspects with processing, among other things



Enterprise Architecture Management Journey at Munich Airport



Lessons learned

Implementing EAM and ISM is more complex than expected, originally it was not easy to get the funds for it.

Key success factors are:
Methodology, lived processes, data maintenance, tool, willingness to cooperate among colleagues/knowledgeable people.

The maintenance effort should not to be underestimated and must be accompanied intensively

The topics of EAM, ISM, data protection (and BPM) must be considered together, as they are very closely interrelated

There are hardly any tools on the market that fully support the integration of EAM and ISM, which meant that more adjustments were originally required than planned.

As soon as the first reliable information was available and the benefit was seen, it was used intensively.

An iterative approach to the introduction of EAM in conjunction with information security has proven its worth

Growing maturity of EAM increases demand from business units

A working EAM and ISM is the basis for fulfilling our tasks (IT governance, DSGVO, information security, ...)

What about you?

What does your Enterprise Architecture Management Journey look like?

Thank you very much



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