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IT-Referat

Measuring and Implementing Digital Sovereignty in the City of Munich

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Digital.

Outline

1. How do we measure Digital Sovereignty?
2. How do we implement Digital Sovereignty?
3. What practical examples already exist?

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How do we measure Digital Sovereignty?

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Digital Sovereignty Score



Full sovereign

Largly sovereign

Sufficiently sovereign

Insufficiently sovereign

Non-sovereign

	Checkliste & Calculation	Yes	No
0	Is there a real alternative for the respective software?	5	5
1	Is the provider's headquarters located in the EU?	- 1	0
2	Is it Open Source Software?	- 1	0
3	Is support for security updates guaranteed by the provider?	- 1	0
4	Does the software exclusively use standardized interfaces?	- 1	0
5	Does the software exclusively use standardized file formats?	- 1	0
	Digital Sovereignty Score		

Procedure

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Starting Point

2500 IT-Services

Assessment

Assessment of the Digital Sovereignty Score for each business-critical IT-Service

Focus

194 business-critical IT-Services

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Results

- 74% of the analyzed IT service portfolio of the IT Department (Level 1, 2, and 3) are digitally sovereign, as there is no vendor lock-in and further criteria for digital sovereignty are met.
- The services in the non-sovereign Level 5 (21%) are from major American vendors, as well as German vendors (e.g., for administration-specific software).

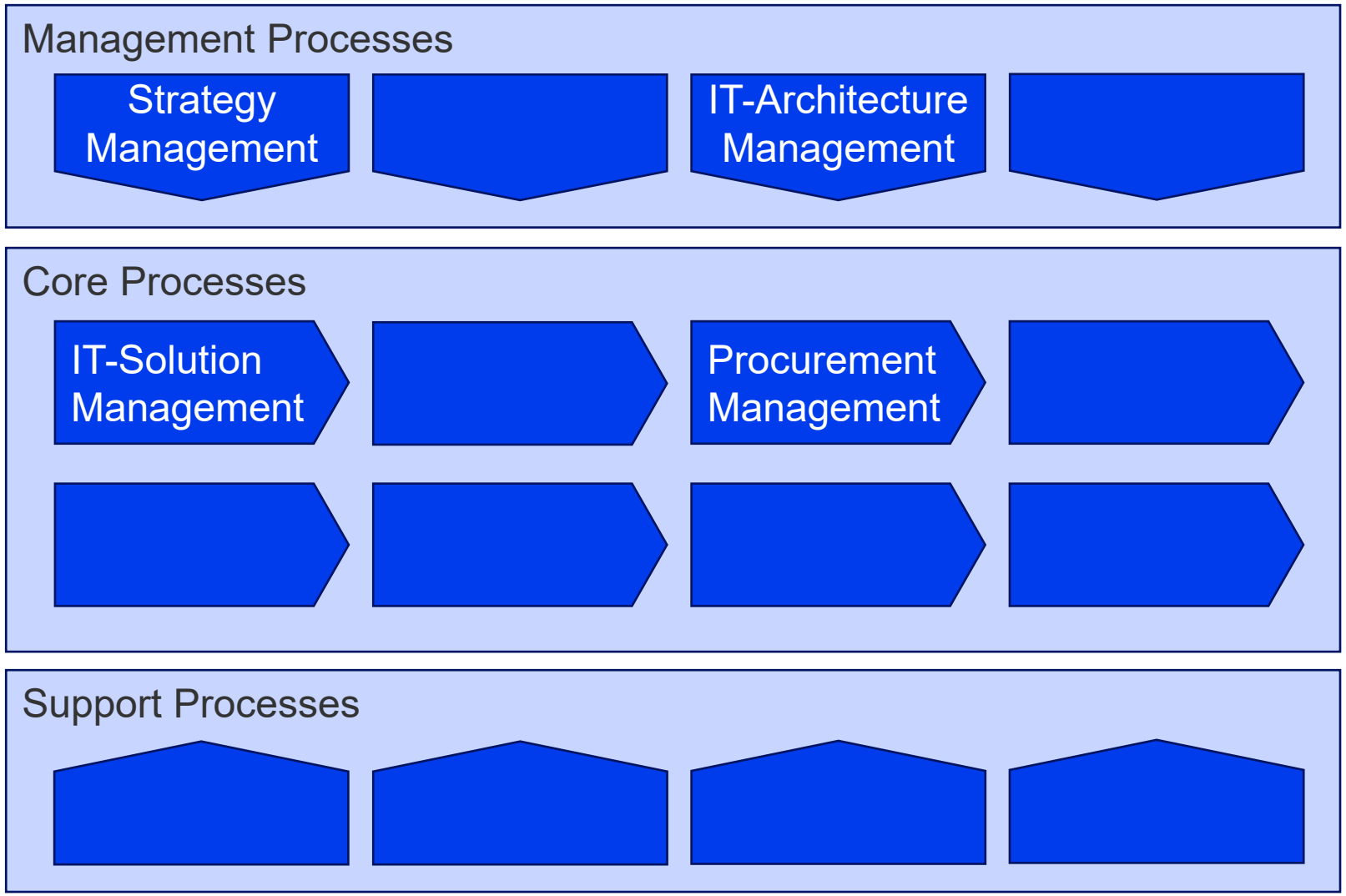


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How do we implement Digital Sovereignty?

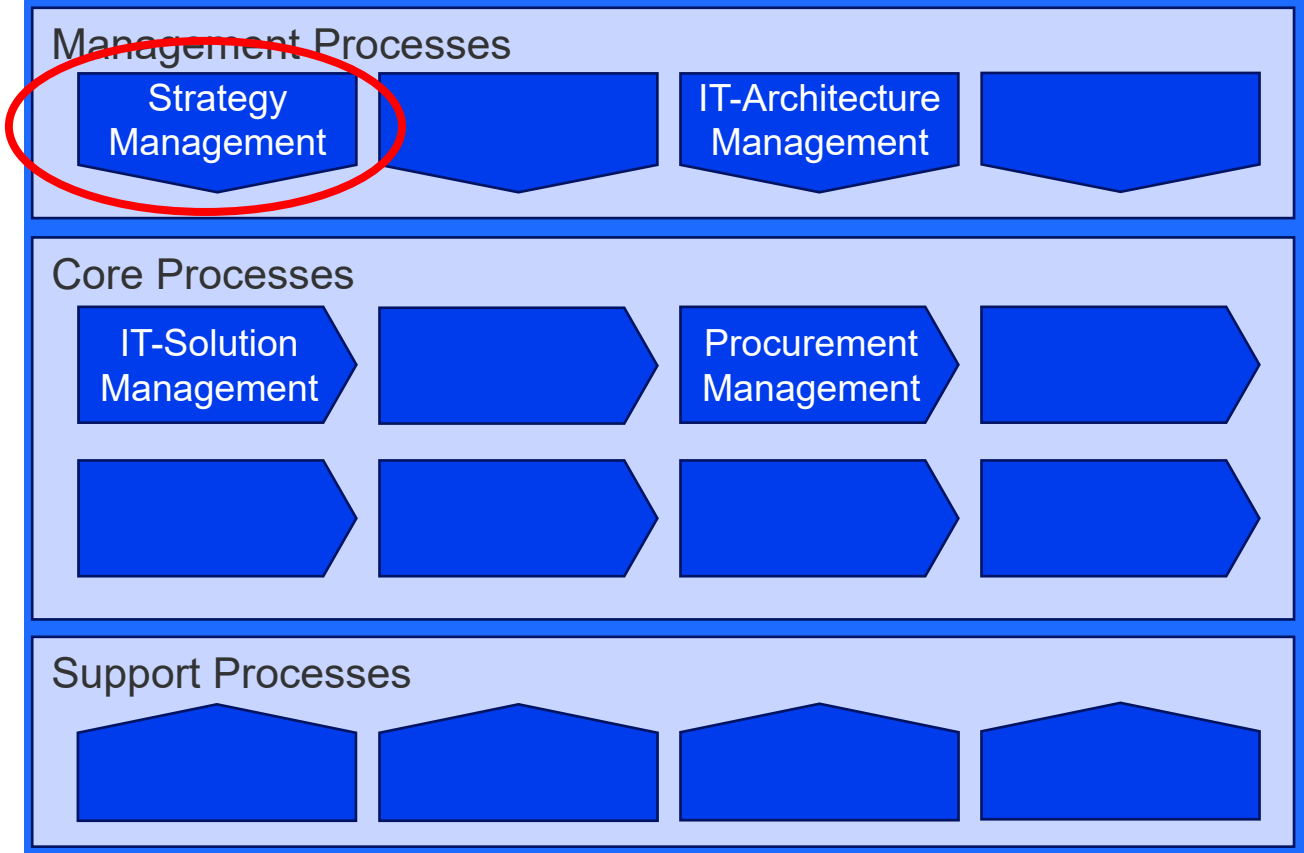
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Relevant Processes



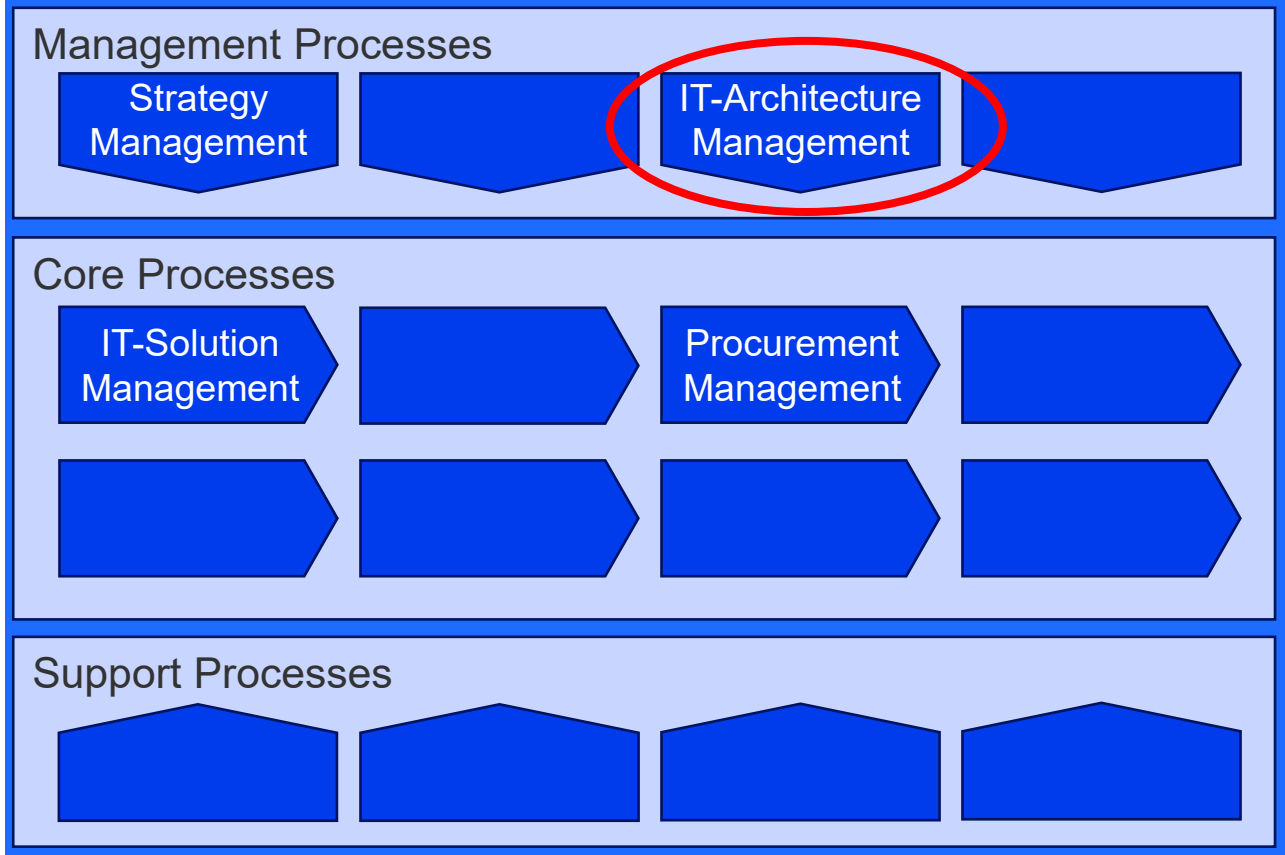
Strategy Management

1. Digital Sovereignty as an action field in the overall strategy
2. Concrete targets for Digital Sovereignty in domain-specific strategies
3. Management reporting on all targets and measures related to Digital Sovereignty



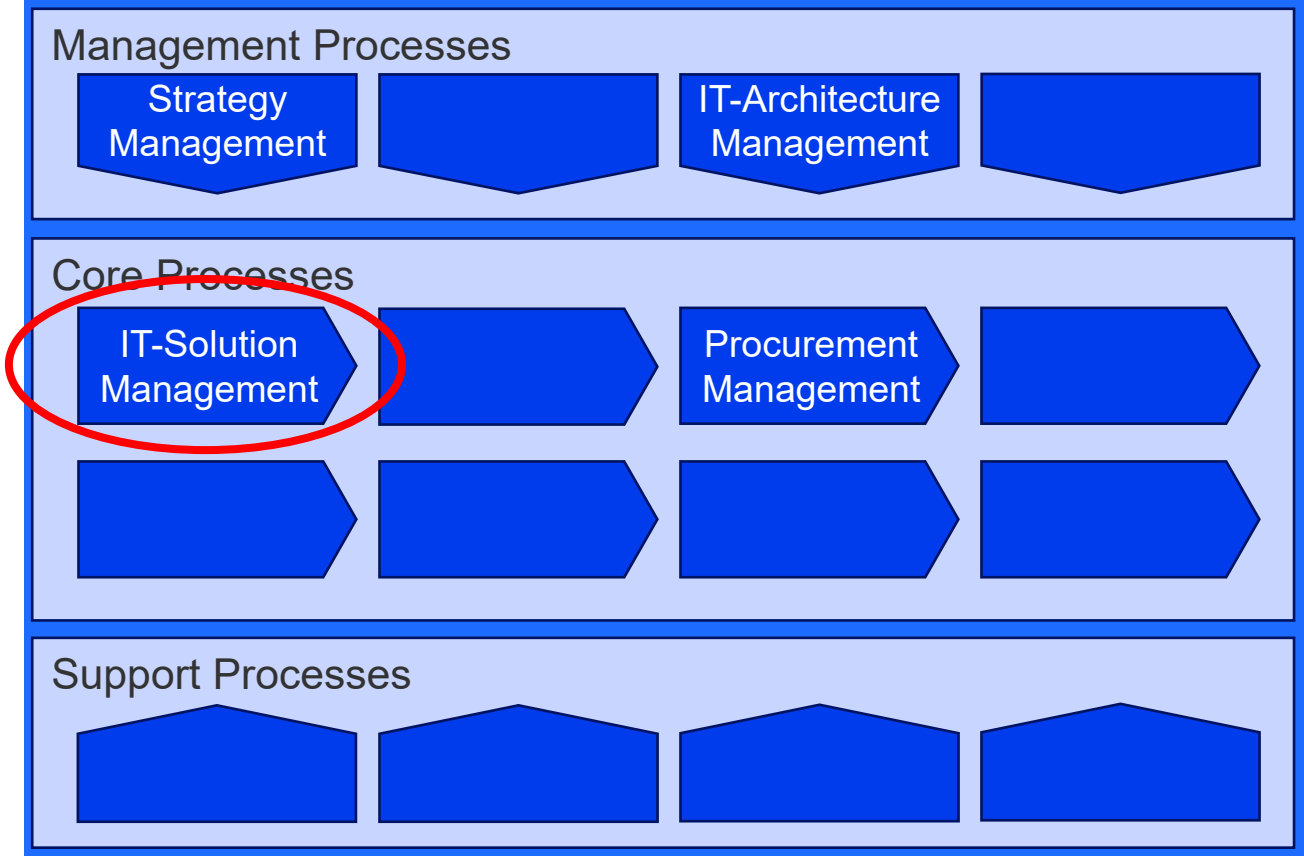
IT-Architecture Management

1. Development guidelines to restrict proprietary solutions
2. Architecture requirements to ensure switchability / vendor independence



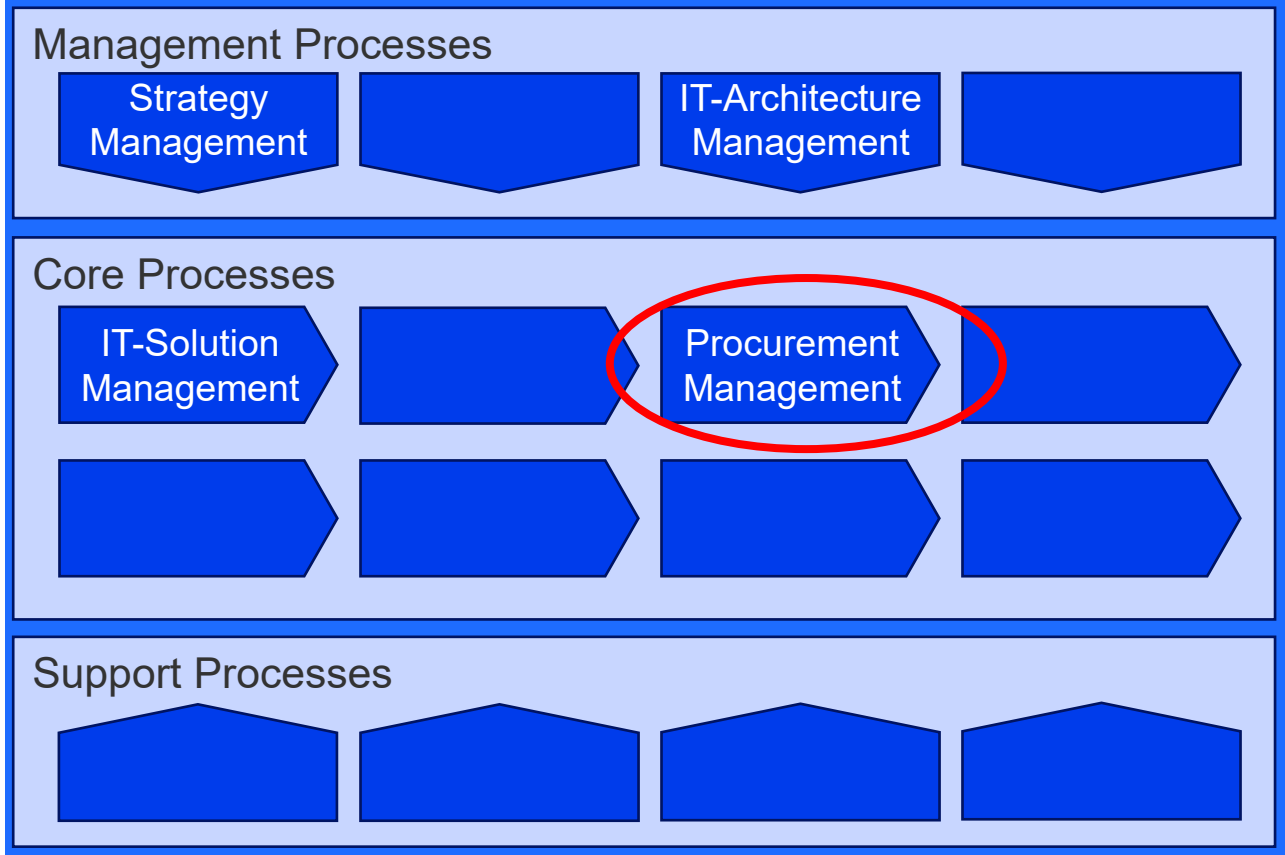
IT-Solution Management

1. The Digital Sovereignty Score must be determined for every potential solution
2. Digital Sovereignty as an evaluation criterion alongside functionality, cost-effectiveness, IT security, and data protection
3. Ensuring that OSS (Open Source Software) solutions are considered



Procurement Management

1. Procurement criteria to promote Digital Sovereignty, such as open interfaces or Open Source Software
2. Selection of criteria applied per procurement procedure



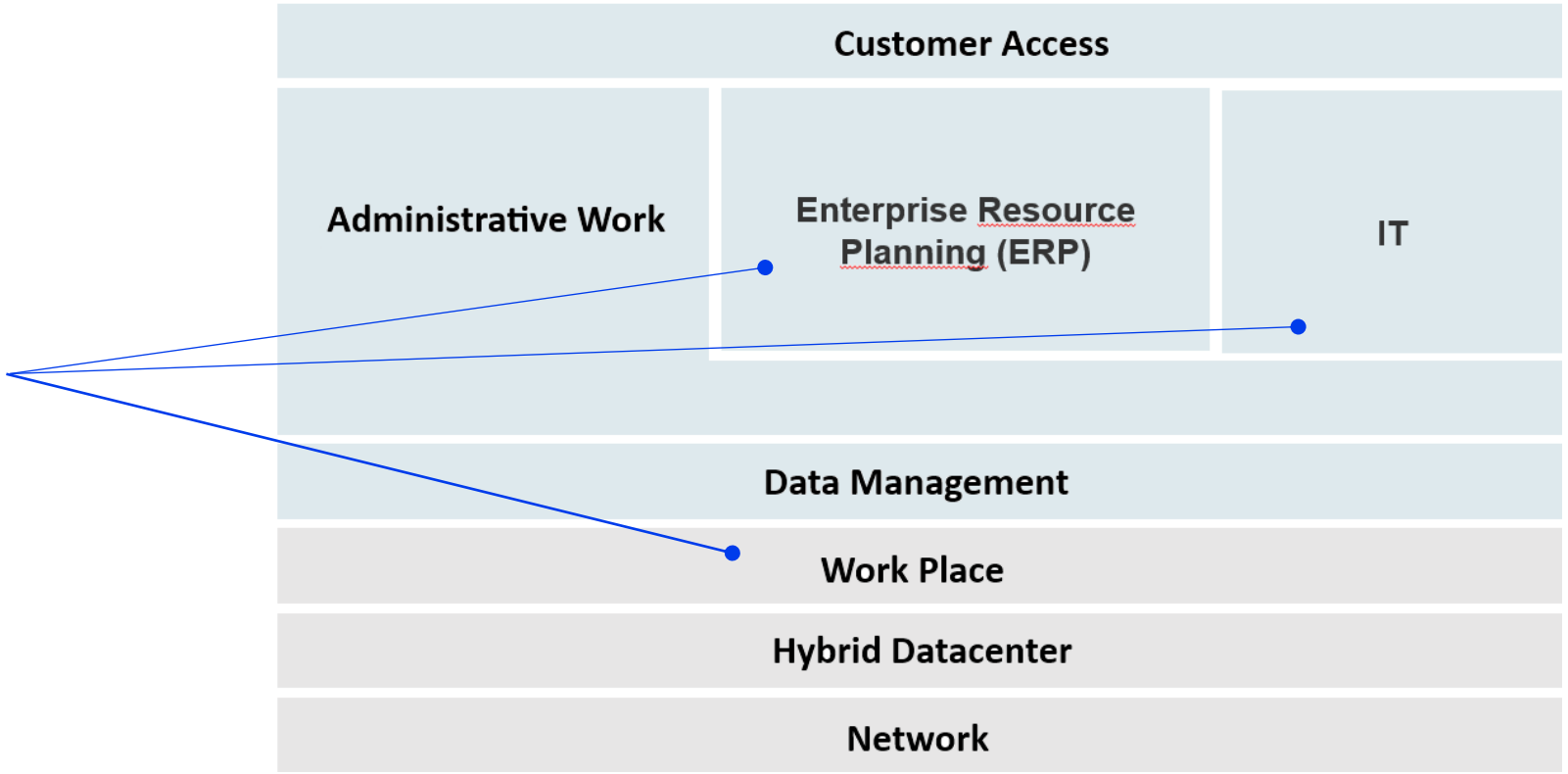
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What practical examples already exist?

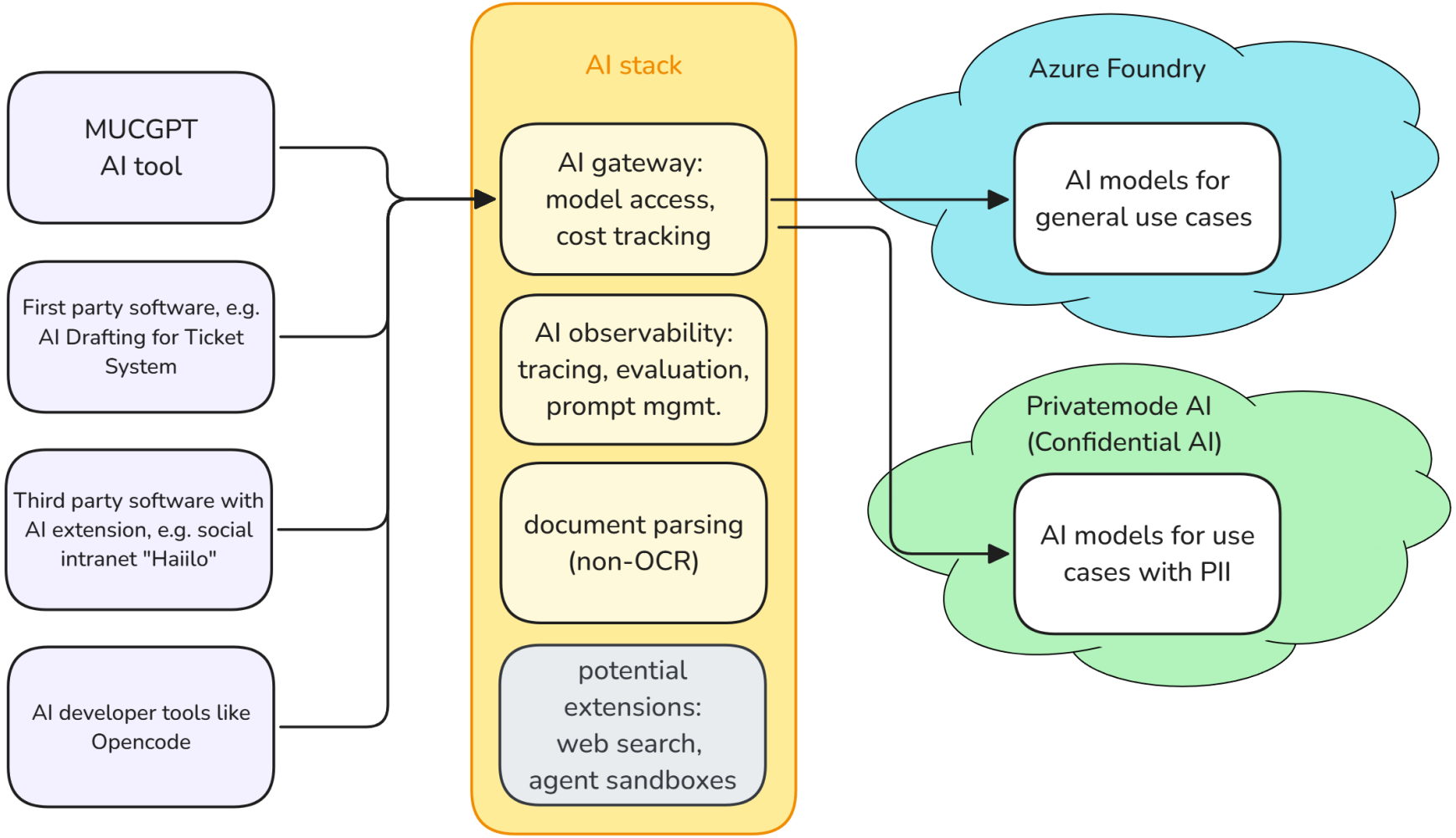
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Governance via Domains

Policy: Guidelines for restricting specific platforms to individual domains



AI-Gateway


MUCGPT
AI tool
First party software, e.g. AI Drafting for Ticket System
Third party software with AI extension, e.g. social intranet "Haiilo"
AI developer tools like Opencode
AI stack
AI gateway: model access, cost tracking
AI observability: tracing, evaluation, prompt mgmt.
document parsing (non-OCR)
potential extensions: web search, agent sandboxes
Azure Foundry
AI models for general use cases
Privatemode AI (Confidential AI)
AI models for use cases with PII

Enhancing FOSS

Sponsoring

- Consul
- Vue.js
- Vuetify
- OpenAPI Generator
- NVDA
- Robot Framework

Contributions

- LiteLLM
- Langfuse
- CollectiveAccess
- KERN UX-Standard

OS-Sabbatical

1. Chatbot for the Integreat-App
2. Solid Pods for library visitors
3. Security-Issues in the C library libexpat

Feature Funding

- Winscp
- CollectiveAccess
- Zammad

Public Money?
Public Code!

We also develop software in-house:

- < 20% of our applications
- Almost all interfaces are open-source based
- Publication on GitHub and OpenCoDE



Our Open Source Stack

Programming Language: TypeScript	JavaScript Framework: Vue.js, Vuetify	Programming Language: OpenJDK
Java Framework: spring boot	Software Development: GitLab	Search Engine: elasticsearch
Identity & Access Management: KEYCLOAK	Event Streaming Platform: Apache Kafka	Issue Tracker: Zammad
Container Platform: RED HAT OPENSHIFT Container Platform	Database Management System: PostgreSQL	Server Operating System: redhat

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Thank You!

Unsere Kanäle



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