

Chances & Challenges

HAHN
AUTOMATION GROUP

10 Years Open Source Strategy in a Midsize Company

Agenda

Introduction

On the Bridge

Lighthouse

Varieties

Platforms

Outlook

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We are HAHN



> 1.500
employees



> 20
locations
worldwide



> 30
destination
countries



> 3.600
lines in
operation



> 900
customers



Frank Benke Head of IT

Computer Science
University Tübingen

Since 1994 in IT Business
Entire Supply Chain

- Hewlett-Packard - HPe (1994)
- Certification & Training
- Supplier & System Integrator
- Magenta Service Provider
- Finally End Customer (2014)



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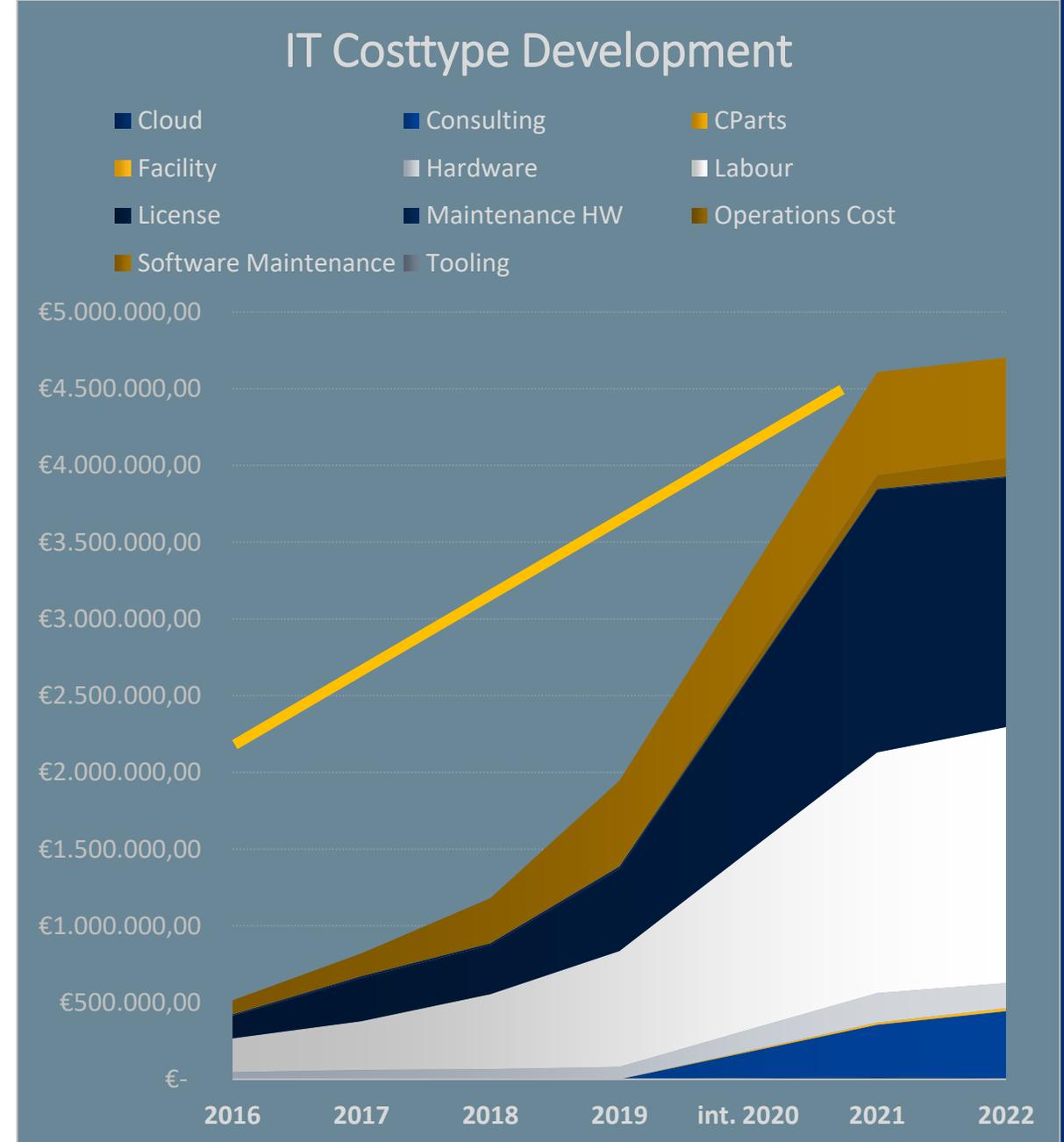
Outlook

On The Bridge Motivation



Analyze Cost Development

- Organic & inorganic growth
- Cost transparency
 - Change in metrics & reporting (yl)
 - Service catalog development
- Hardware cost decreases
- Labor cost increases
- Software cost increases
 - Smears differentiation to cloud

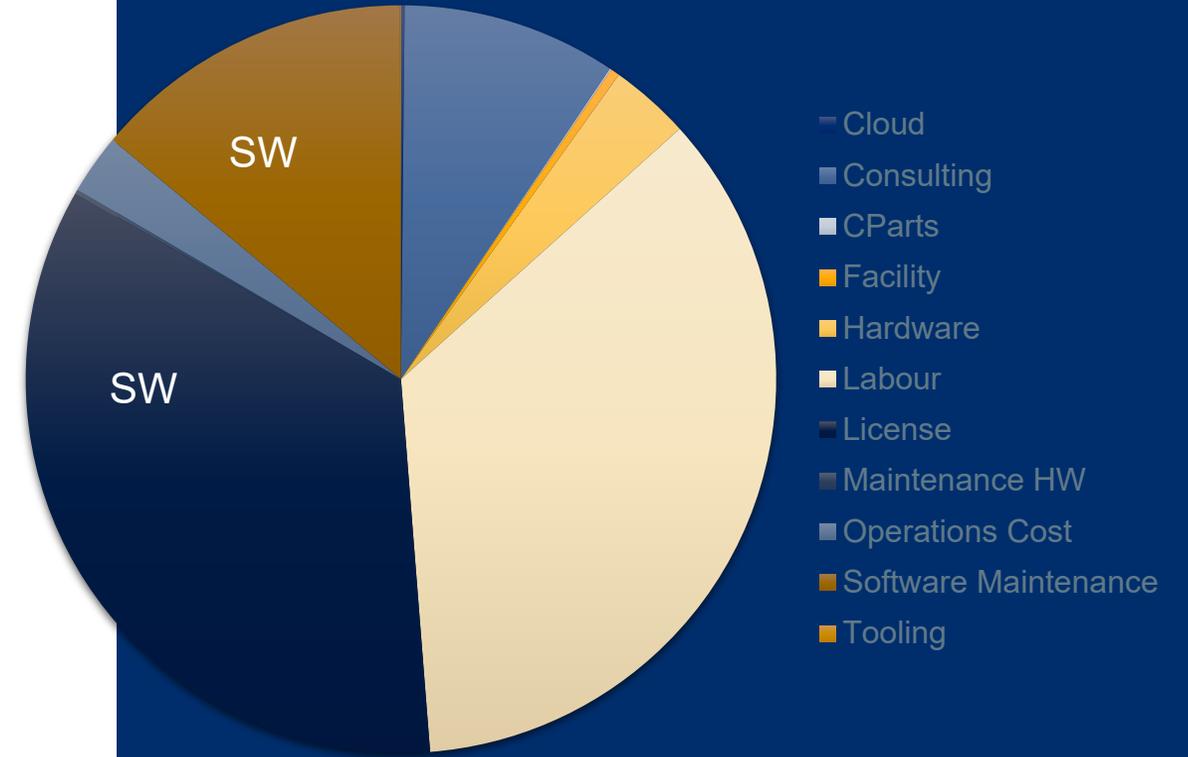


Reviewed Budget 2022

- Budget analyzed 4.7 MEUR
- Reflected in service catalog

- Software related expense 49%
- Internal labor 35%

- Mitigation
 - Operations automation
 - Change software strategy

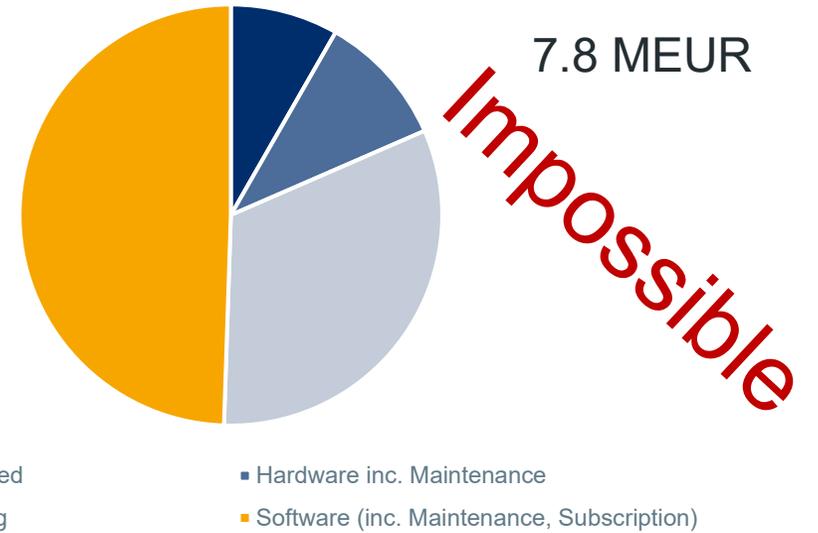


2025 Budget Challenges & Actions

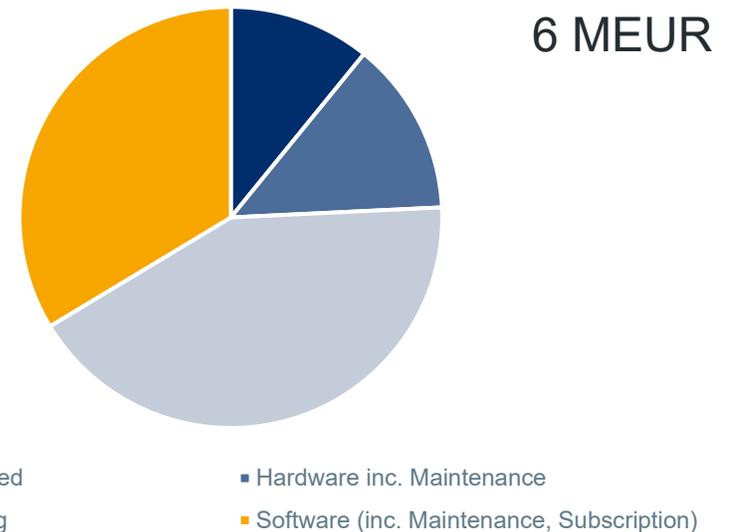
- Predicted cost increase impossible
- Cover building extensions
- Cover exploding consulting needs
 - E.g. TISAX, NIS2, CRA & Security
- Software supplier demands

- Extegrate Teamviewer & Thales
- Cut CAD support
- Freeze Microsoft licensing
- Expand open source in infrastructure

2025 - projected



2025 - as is



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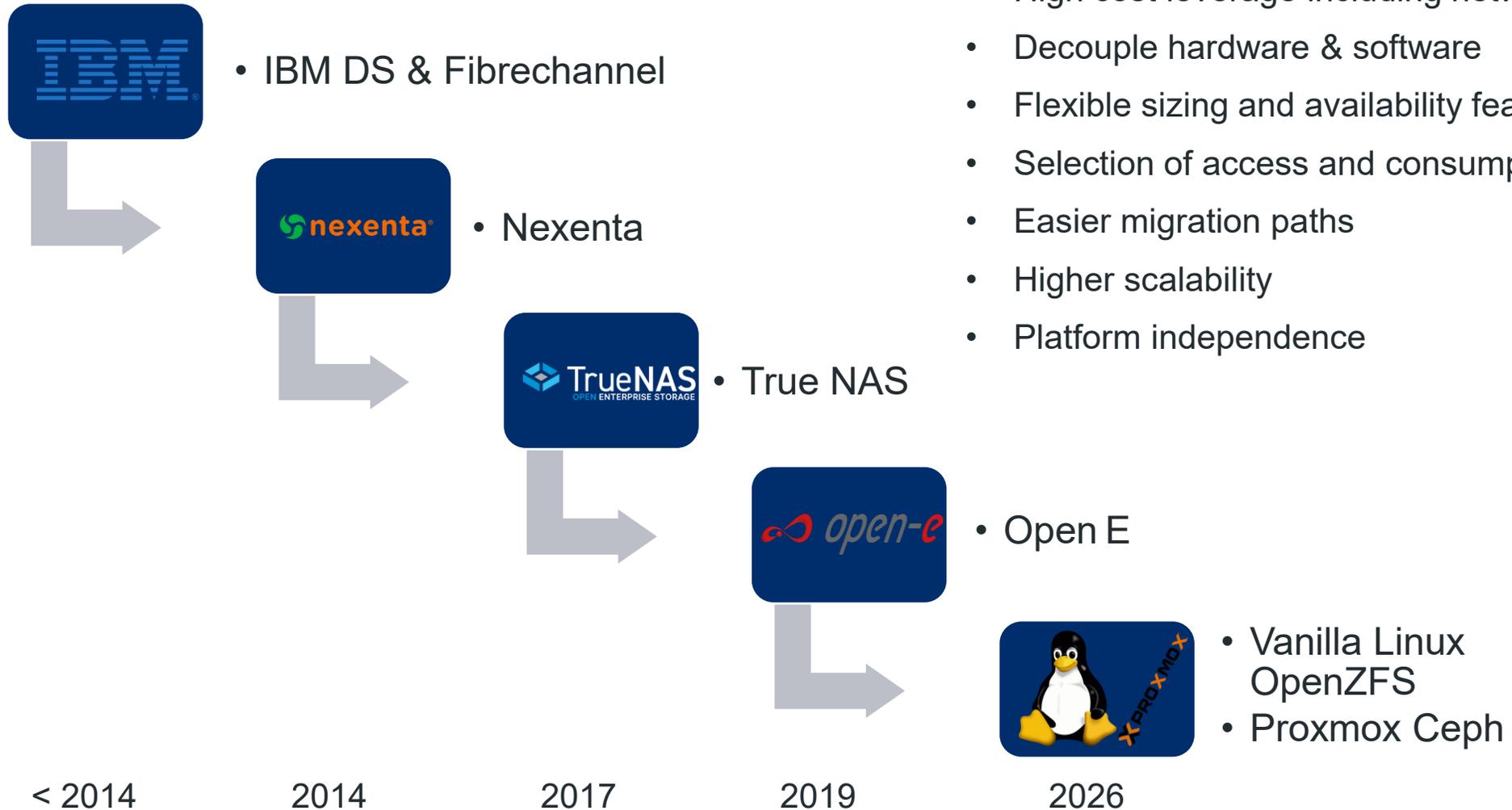
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Lighthouse Success Story



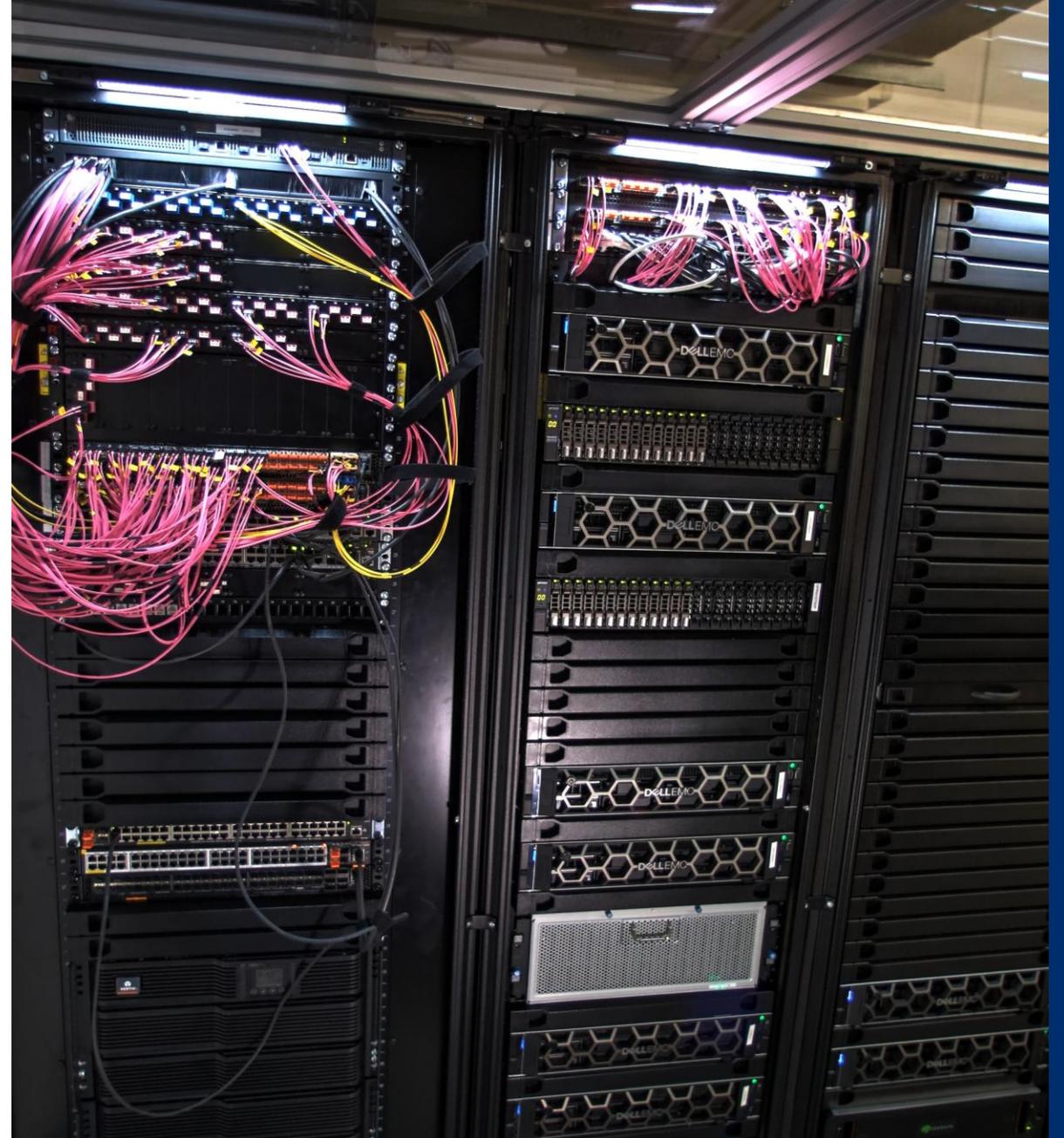
Example Storage Journey



- High cost leverage including network changes
- Decouple hardware & software
- Flexible sizing and availability features
- Selection of access and consumption models
- Easier migration paths
- Higher scalability
- Platform independence

KPIs

- Growth from 30 TB to 7.6 PB
Factor 260
- Reduce cost
 - Mitigate network optimization cost
- Eliminate migration cost
- Flexibilization of platform
- Eliminate vendor lock in
- Differentiate service offerings
- Savings vs. traditional quotes est. 7 MEUR in 10 years



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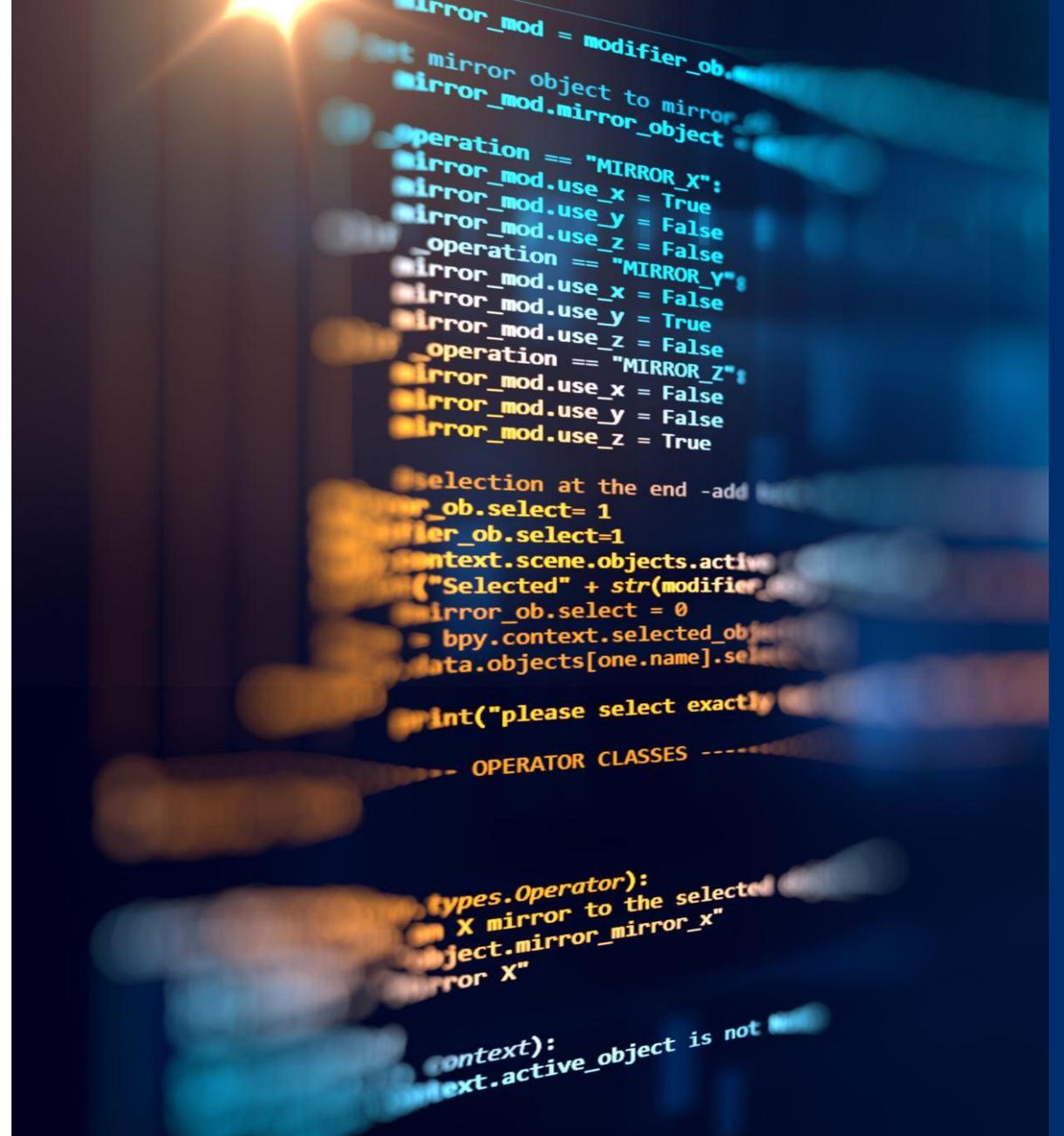
Outlook



Varieties Open Source Projects & Business Models

Open-Source Software Evaluation

- Of course: features & functions
- Project community health
- Open-source license flavor
e.g. GPL, Apache, BSD, ...
- Maturity & persistence
- Contribution culture & oversight
- Code quality & oversight
- Longevity & persistence



Four Open-Source Support Models

Community Only

- Participate in projects
- Train own staff

Independent Open-Source Supporters

- Freelance specialists
- General support companies

Commercially Backed Open Source

- Utilize open-source project
- Contract related company for support
- Struggles community-based features

Commercialized Open-Source

- Utilize open-source project
- Subscribe complete support

Operational Aspects

- Staff knowledge & acceptance
- Training resources
- Community & consulting resources

- Monitoring integration
- API options & formats
- Integration
- Update & distribution availability



Projects & Products

The Status Quo

Core Infrastructure

Operations & Support

User Related Systems



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Platforms Strategic



Central Platform & Automation Stack





f.benke
Admin

- Organization
- Racks
- Devices
- Connections
- Wireless
- IPAM
- VPN
- Virtualization
- Circuits
- Power
- Provisioning
- Customization
- Operations
- Topology Views
- Hardware Lifecycle
- Plugins
- Admin

Organization

| | |
|----------|----|
| Sites | 26 |
| Tenants | 23 |
| Contacts | 72 |

DCIM

| | |
|--------------|------|
| Sites | 26 |
| Racks | 81 |
| Device Types | 303 |
| Devices | 1224 |
| Cables | 1433 |

IPAM

| | |
|--------------|-------|
| VRFs | 24 |
| Aggregates | 0 |
| Prefixes | 490 |
| IP Ranges | 147 |
| IP Addresses | 14834 |
| VLANs | 388 |

Circuits

| | |
|-------------------|----|
| Providers | 18 |
| Circuits | 22 |
| Provider Networks | 0 |

Virtualization

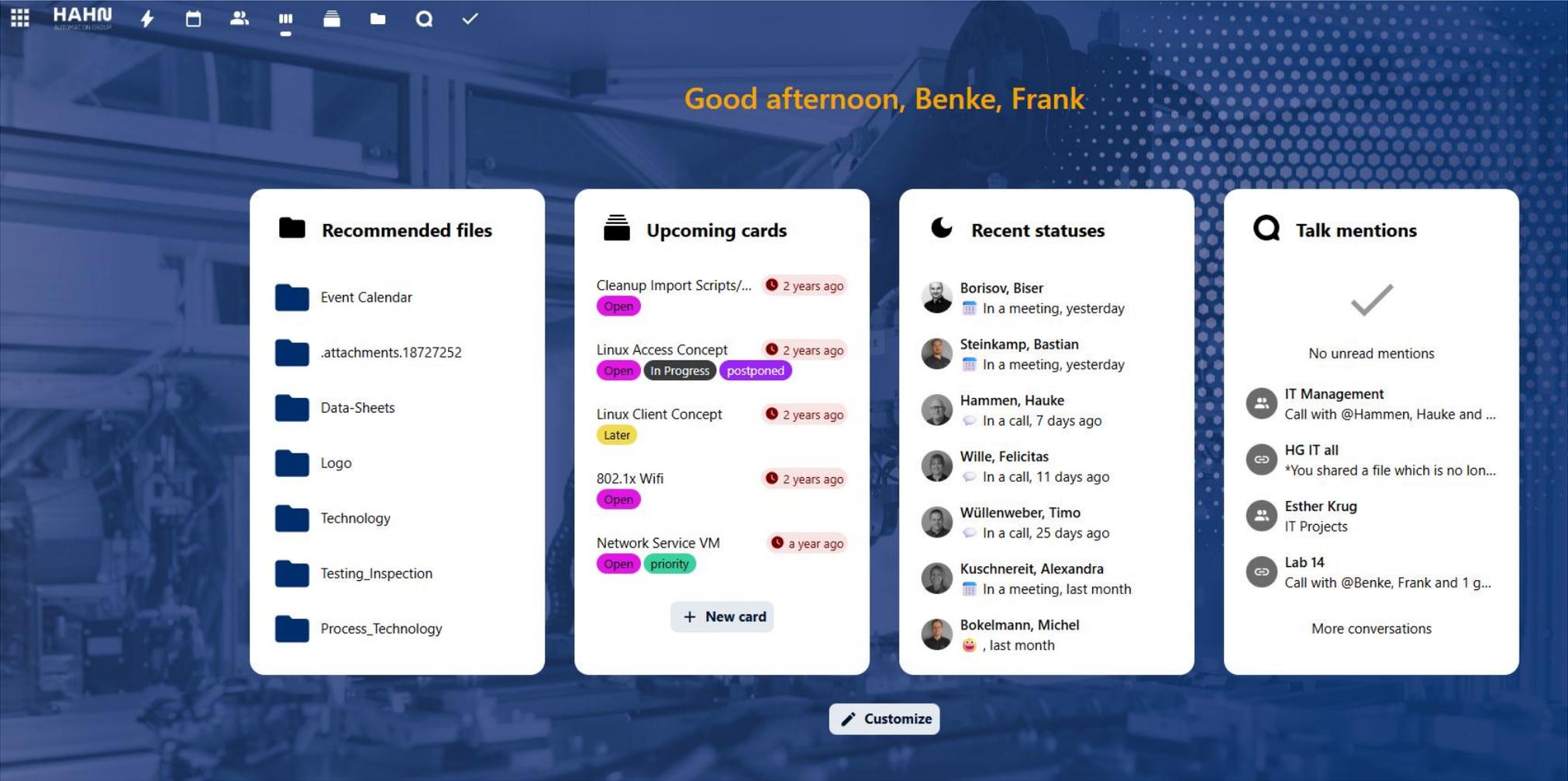
| | |
|------------------|-----|
| Clusters | 35 |
| Virtual Machines | 715 |

Change Log

| TIME | USERNAME | FULL NAME | ACTION | TYPE | OBJECT | REQUEST ID |
|------------------|----------------|-------------------|---------|-----------------|-------------------------------|--------------------------------------|
| 2025-09-24 09:18 | s.zimmermann | Sascha Zimmermann | Updated | Device | DERHAssemblyHall05-01 (13518) | 6ed34e65-b719-4a2e-9bff-f27cc93a3b48 |
| 2025-09-24 09:18 | s.zimmermann | Sascha Zimmermann | Updated | Device | DERHStock02 (16368) | 58f0c3c2-a0bd-4292-8cdf-1ec90dd1e6a3 |
| 2025-09-24 08:58 | b.heitmann | Bastian Heitmann | Updated | Virtual Machine | svrh1gwcon03p | 1030cb12-8978-438d-97b5-6f1e148c8a20 |
| 2025-09-24 08:57 | b.heitmann | Bastian Heitmann | Updated | Virtual Machine | svrh1gwcon02p | e32e72f9-fed9-4994-9689-0658a6a6fd2e |
| 2025-09-24 08:46 | t.wuellenweber | Timo Wuellenweber | Updated | IP Address | 45.146.84.28/24 | 8ddf9f10-ab1d-46b5-8a2e-f7d876fd7d8b |
| 2025-09-24 08:45 | t.wuellenweber | Timo Wuellenweber | Updated | IP Address | 45.146.84.13/24 | 45981813-04a4-47d9-b1fb-75b8ca034c20 |
| 2025-09-24 08:45 | t.wuellenweber | Timo Wuellenweber | Updated | Virtual Machine | svrh1gwcon01p | 0932a2f4-411a-4c99-85cf-7b2eb86d8ee3 |
| 2025-09-24 08:43 | t.wuellenweber | Timo Wuellenweber | Created | Tag | firewallobjecttag-gwcon | 193dbb7a-56e0-49d6-9a1f-9b4b342112cb |

NetBox Community v4.3.4
Get Cloud | Get Enterprise

Central Collaboration Platform



Private Compliant AI Platform

The screenshot shows the LM Studio 0.3.31 interface. At the top, the title bar reads "LM Studio - 0.3.31". Below it, the "My Models" section displays a "Models Directory" at "C:\Users\Frank\.cache\lm-studio\models". A filter bar shows "LLMs" selected, with options for "Text Embedding" and "View All". A search bar contains "Filter models... (Ctrl + F)".

| Arch | Params | Publisher | LLM | Quant | Size | Date Modified | Actions |
|---------|--------|--------------------|--|--------|----------|---------------|---------|
| llama | 8x3.6B | DavidAU | llama-3.2-8x3b-moe-dark-champion-instruct-uncensored-abliterated-18.4b | Q4_K_S | 10.66 GB | today | ⊗ ... |
| qwen3v1 | 8B | qwen | qwen/qwen3-v1-8b | Q4_K_M | 6.19 GB | today | ⊗ ... |
| llama | 3B | lmstudio-community | llama-3.2-3b-instruct | Q4_K_M | 2.02 GB | today | ⊗ ... |
| gemma | 2B | lmstudio-ai | gemma-2b-it | Q8_0 | 2.67 GB | 493 days ago | ⊗ ... |
| | | | meta-llama-3-8b-instruct | Q4_K_M | 4.92 GB | 521 days ago | ⊗ ... |

On the left, a "Downloads" panel is open, showing a list of completed downloads:

- DavidAU : Llama 3.2 8X3B MoE Dark Champion Instruct Uncensored Abliterated 18.4B GGUF Q4_K_S (10.66 GB)
- MODEL qwen/qwen3-v1-8b (6.19 GB)
- lmstudio-community : Llama 3.2 3B Instruct GGUF Q4_K_M (2.02 GB)

At the bottom of the Downloads panel, there are buttons for "Open Downloads Directory" and "Clear History".

On the right, three "Download Completed!" notifications are visible, each with a "Load Model" button:

- lmstudio-community/Llama-3.2-3B-Instruct-GGUF/Llama-3.2-3B-Instruct-Q4_K_M.gguf has finished downloading.
- qwen/qwen3-v1-8b has finished downloading.
- DavidAU/Llama-3.2-8X3B-MOE-Dark-Champion-Instruct-uncensored-abliterated-18.4B-GGUF/L3.2-8X3B-MOE-Dark-Champion-Inst-18.4B-uncen-ablit_D_AU-Q4_K_S.gguf has finished downloading.

At the bottom of the main window, a status bar indicates: "You have 5 local models, taking up 26.46 GB of disk space." The system tray shows "LM Studio 0.3.31 (Build 7)", "User", "Power User", "Developer", "RAM: 0 GB", "CPU: 0.00%", and system icons.



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Recommendations

- Infrastructure first strategy
 - Storage has often high leverage
 - Monitoring has high maturity
- GPL first strategy
- Start with commercial backed options
- Search for independent support
- Think big
- Train staff
- Automate



Outlook

- Digital sovereignty
 - Public paradigm shift
 - Taxpayer money
- Collaboration platform
 - Evaluation of “La Suite”
 - Lessons from Schleswig Holstein
- Artificial Intelligence
 - Local LLMs & RAG
 - Universal Meeting Bot
 - Coding Assistant

The screenshot shows the numerique.gouv.fr website. At the top, it says "numerique.gouv.fr Digital technology at the service of the effectiveness of public action". Below the navigation bar, there is a section titled "In the spotlight". The main content features a video conference interface with four participants and a chat window. To the right, there is an advertisement for "La Suite" with the text "Public servants? Discover how The Suite can improve your daily life" and a "Learn more" button. Below the video conference, there is a headline: "Digital sovereignty: the State rolls out 'Visio', its secure and sovereign videoconferencing solution for public officials".

The screenshot shows a website for Schleswig-Holstein titled "Open-Source-Strategie Schleswig-Holstein". The header includes the logo of Schleswig-Holstein and the text "Schleswig-Holstein Der echte Norden". Below the header, there is a navigation bar with "Start", "Projektziel", "Service", and "Kontakt". The main content area features a large image with the text "Open-Source-Strategie Schleswig-Holstein" and logos for "LibreOffice" and "Nextcloud". Below the image, there is a headline: "Mit Open Source zu mehr digitaler Souveränität in Schleswig-Holstein". The text below the headline reads: "Der digital souveräne IT-Arbeitsplatz soll die öffentliche Verwaltung weniger abhängig von einzelnen Softwareanbietern machen und so die digitale Souveränität vorantreiben. Doch der Einsatz von Open-Source-Software verbessert nicht nur Informationssicherheit und Datenschutz, sondern ermöglicht auch schnellere Innovation bei IT-Anwendungen."

The screenshot shows the European Commission website. The main headline is "Open source software strategy". Below the headline, it says "The European Commission will further encourage and leverage the transformative, innovative and collaborative potential of open source." There is a "Page contents" section with links to "Open source software strategy 2020-2023", "Open source software strategy 2014-2017", and "EU-FOSSA - Free and Open Source Software Auditing". The main content area has a sub-headline "Open source software strategy 2020-2023" and text: "On October 21st, the European Commission approved the new Open Source Software Strategy 2020-2023 of the Commission. This is an important step towards achieving the goals of the overarching Digital Strategy of the Commission and contributing to the Digital Europe programme." It also mentions "The internal strategy, under the theme 'Think Open', sets out a vision for encouraging and leveraging the transformative, innovative and collaborative power of open source, its principles and development practices. It promotes the sharing and reuse of software solutions, knowledge and expertise, to deliver better European services that benefit society and lower costs to that society. The Commission commits to increasing its use of open source not only in practical areas such as IT, but also in areas where it can be strategic."

The screenshot shows a news article from taz titled "Bund zahlt mehr für Microsoft-Lizenzen". The article is dated 9.2.2026, 15:06 Uhr. The headline reads: "Digitale Abhängigkeit von den USA: Bund zahlt mehr für Microsoft-Lizenzen". The sub-headline is "Lizenzen". The main text says: "Die Bundesverwaltung setzt stark auf Produkte des US-Techkonzerns. Frankreich hingegen macht sich unabhängig – und spart dabei sogar Steuergeld." There is a photo of a person looking at a folder in a filing cabinet. The article is written by Svenja Bergt. At the bottom, there is a quote: "Trotz der Pläne, Deutschland digital unabhängiger von den USA zu machen, sind die Ausgaben des Bundes für Lizenzen des US-Softwarekonzerns Microsoft im vergangenen Jahr erneut gestiegen."

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