ZKI Working Group for Strategy and Organisation

Results of the ZKI Top Trends Survey of the ZKI Strategy and Organisation Working Group for 2023

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Campus Mitte

A campus rich in tradition and home to humanities, social sciences, economics, law and theology in Berlin's historic centre
Campus Nord

Life sciences on the historic site of the former veterinary school
Campus Adlershof

Natural sciences and mathematics in Germany's leading Technology Park Adlershof
Activities of the ZKI Working Group since 2020

• Top Trends Survey Focus Topics
  • 2020: Effects of digitalization
  • 2021: Effects of the pandemic
  • 2022: Cloud, digital sovereignty, new work
  • 2023: Energy crisis

• BigBlueButton
  • Community building and crowd funding to increase software maturity

• Software Tools at Universities
  • Initial Survey 2021
  • Complete report 2022 – 19 Categories

• Information Security
  • Workshops on information security: „At some point it happens to everyone”
  • How to prepare for incidents beyond process maturity?

• Whiteboard solutions for digital teaching and learning
• Surveys about tools for contact tracing in universities
• Survey about the IT budget and staff ratio at universities

https://zenodo.org/search?q=keywords%3A"ZKI"
Which top trends are particularly relevant for you? 2023

1. Information Security - 28
2. Cloud Services - 17
3. Digital Transformation - 12
4. Shortage of staff - 11
5. Digital Sovereignty - 9
6. Shortage of skilled workers - 6
7. Digitalisation of processes - 5
8. Cooperation - 5
9. Single Digital Gateway - 4
10. Automisation - 3
## Top Trends Changes 2018 to 2023

<table>
<thead>
<tr>
<th>Trend</th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
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<td>Cooperation</td>
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<td>Shortage of staff</td>
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<td>9</td>
<td>5</td>
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## Survey on Software Tools (2022)

<table>
<thead>
<tr>
<th>Kategorie</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
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<tbody>
<tr>
<td>Backup</td>
<td>Veeam</td>
<td>IBM Protection</td>
<td>Bacula</td>
<td>CommVault</td>
<td>Dell EMC-Networker</td>
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<tr>
<td>Campus Management</td>
<td>HISinOne</td>
<td>HIS GX</td>
<td>CampusNet</td>
<td>SAP SLCM</td>
<td>CAMPUSonline</td>
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<tr>
<td>Chat / Instant Messaging</td>
<td>Microsoft Teams</td>
<td>RocketChat</td>
<td>Matrix</td>
<td>Cisco Webex</td>
<td>Mattermost</td>
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<tr>
<td>CMS - Content Management</td>
<td>Typo3</td>
<td>Wordpress</td>
<td>Drupal</td>
<td>Plone</td>
<td>FirstSpirit</td>
</tr>
<tr>
<td>DMS - Document Management</td>
<td>Codia d.3</td>
<td>Alfresco</td>
<td>DocuWare</td>
<td>Lib-IT Filero</td>
<td>ELO Digital Office</td>
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<tr>
<td>Research Information System</td>
<td>HISinOne-RES</td>
<td>Self developed</td>
<td>Clarivate Converis</td>
<td>Elsevier Pure</td>
<td>DSpace-CRIS</td>
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<tr>
<td>IT-Service-Management</td>
<td>i-doit</td>
<td>JIRA Service Management</td>
<td>KIX</td>
<td>TOPdesk</td>
<td>Matrix42</td>
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<tr>
<td>Calendar</td>
<td>Microsoft Exchange</td>
<td>SOGo</td>
<td>Horde Framework</td>
<td>Microfocus Groupwise</td>
<td>Communigate</td>
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<tr>
<td>LMS - Learning Management System</td>
<td>Moodle</td>
<td>Ilias</td>
<td>Stud.IP</td>
<td>OLAT</td>
<td>OPAL</td>
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<tr>
<td>Mail</td>
<td>Microsoft Exchange</td>
<td>Dovecot</td>
<td>GroupWise</td>
<td>Communigate</td>
<td>Zimbra</td>
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<td>Project Management</td>
<td>GitLab</td>
<td>Jira</td>
<td>Microsoft Project</td>
<td>OpenProject</td>
<td>Redmine</td>
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<tr>
<td>ERP</td>
<td>HIS</td>
<td>SAP</td>
<td>Mach</td>
<td>Self developed</td>
<td>GebMan</td>
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<tr>
<td>Sync and Share</td>
<td>NextCloud</td>
<td>OwnCloud</td>
<td>Seafile</td>
<td>Micro Focus Filr</td>
<td>Microsoft OneDrive</td>
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<tr>
<td>Ticket- and Incident Management</td>
<td>OTRS</td>
<td>KIX Professional</td>
<td>Znuny</td>
<td>JIRA</td>
<td>Zammad</td>
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<tr>
<td>Event Management</td>
<td>Indico</td>
<td>Converia</td>
<td>cobra EventManager</td>
<td>ConfTool</td>
<td>HIS LSF</td>
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<td>Video Conferencing</td>
<td>Zoom</td>
<td>BigBlueButton</td>
<td>Microsoft Teams</td>
<td>Cisco WebEx</td>
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<td>Video Management</td>
<td>OpenCast</td>
<td>Panopto</td>
<td>Vimp</td>
<td>MediaSite</td>
<td>Camtasia</td>
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<tr>
<td>Virtualization / IaaS</td>
<td>VMWare</td>
<td>Microsoft Hyper-V</td>
<td>Proxmox</td>
<td>OpenStack</td>
<td>Nutanix</td>
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<tr>
<td>Knowledge Management</td>
<td>Confluence</td>
<td>Microsoft SharePoint</td>
<td>Mediawiki</td>
<td>dokuwiki</td>
<td>Foswiki</td>
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Summaries

**Operation Models**

- On-premises by service provider: 1424, 75%
- On-premises by us: 352, 18%
- Off-premises by service provider: 34, 2%
- Off-premises by us: 65, 3%
- Mixed operation model: 30, 2%

**License Models**

- Hybrid: 21, 5%
- Commercial: 51, 11%
- Open Source: 136, 31%
- Self developed: 234, 53%
BBB Community Development

- Crowd-Funding – ~240,000€, 24 universities/partners
- A major advance in this regard is the renewal of the basic "Kurento" video conferencing components to a more powerful and future-proof "mediasoup" component. This is expected to make BBB increasingly usable for larger events. The breakout room features have been significantly expanded, and in addition to selecting background blur for privacy, it is now possible to select preconfigured virtual backgrounds. Moodle integration has also been done and features are available for more flexible splitting of video views, including for sign language interpreters, for example. The recording functions for events have been improved and there is a prototype integration of video subtitling. Furthermore, a process to improve the UI has been started. For version 2.6, one focus is the implementation of a very high quality new component for the whiteboard using the TLDRAW component. These features will significantly expand the application possibilities of BBB.

https://zenodo.org/record/7624015
Prohibition of contracting and contract performance

• Detective Works:
  • HTTP-Commander
  • Kaspersky
  • Agisoft
  • CommuniGateSystems
  • NGINX
  • EMS SQL Manager for PostgreSQL
  • 7-Zip
  • Master PDF Editor
  • Telegram
  • Any.run
  • Matrix 42
  • …

• Subject of sanctions in the field of public contracts and concessions under Article 5k Regulation (EU) 2022/576
• Contractor comes from Russia or has strong ties to Russia
Help for Ukraine

So, like the previous year, a computer-based entrance test will be conducted to enter the educational establishments. At the bachelor's (master's - for medicine) level of higher education in 2023, applicants will need to pass a National Multi-Subject Test (NMT), for admission to a master's degree - a Unified Entrance Exam (UEE), a Unified Professional Entrance Exam (UPEE). Because of the war, thousands of applicants from Ukraine are forced to stay abroad.

It is very important for them to be able to enter Ukrainian universities and continue their career path in our country. That is why the Ministry of Education and Science of Ukraine and the Ukrainian Center for Educational Quality Assessment are asking you to assist in the creation of temporary examination centers (TCs) on the basis of educational establishments / institutions of your country.
New Work, Staff Shortage and changes in Culture
What percentage of home office do you see in the future for your university's IT facility?

- 1% up to 1%
- 10% up to 20%
- 12% up to 40%
- 21% 50%
- 25% bis 60%
- 31% bis 80%
- 18% bis 100%

The survey results show that 25% of respondents believe up to 60% of the home office will be in the future for their university's IT facility.
Impact on Work Culture

**Addressed**

- Investments into better work equipment (like for a studio at home)
- Flexible office spaces
- Best of both worlds: „Work from home“, „social exchange and meet people on-site“
- Use the digital space to smoothly integrate shorter meetings with higher meeting frequency and more people
- Projekt management methods and projekt management tools to have tasks and results transparent

**Not yet addressed / unsolved**

- Infrastructure quality compared to cosy home atmosphere and food/beverage quality at home
- „Dissolving boundaries“ in digital communication
- Adequate onboarding
- Higher complexity for management staff
- Address „work out of the silo“ structurally
Projekt management methods and projekt management tools to have tasks and results transparent

- **Top Trends 2023: What new management tasks are you currently working on?**
  1. Project management methods
  2. Recruitment
  3. Digital sovereignty
  4. Digitalization of processes
  5. Digitalization strategy
  6. IT security
  7. Cooperation with universities
  8. Establish more continuing professional development
  9. Restructuring of data center structure
Energy Crisis
Example Aggregated Mail Infrastructure Power Consumption

• Down from 3.04 KWh to 2.32 KWh per hour
  • (~25%)
• ~0.5g carbon Footprint down to ~0.4g per Mail
What measures have you taken in the context of the energy crisis?

1. Reduce heating
2. Shutting down devices automatically
3. Manual shutdown of systems that are not needed
4. Workplaces are optimised
5. Shutting down PC pools
6. None
7. Emergency manuals reviewed and expanded
8. Preparation of shutdown scenarios
9. Switching off WLAN access points
10. More centralisation
11. Modernisation of systems
12. Increased home office
13. More virtualisation
14. Reduced load cut-off
15. Raising awareness among employees and students
16. Review energy consumption IT

- Automation of the turn-on and turn-off of IT
- Energy Consumption as Research Meta Data for Workflows
- Register Data Analysis Workflows (DAW) and foster re-use
Which employee skills are becoming more important?
1. Communication skills
2. Awareness of IT security
3. Project management skills
4. Process thinking
5. Awareness of data protection
6. Acting on one's own responsibility
7. Management of external partners
8. Cross-divisional collaboration
9. Cloud technologies
10. Flexibility
11. Methodological awareness
12. Software development
13. Ability to work in a team
14. Requirements management
15. IT architecture
16. Customer orientation
17. Contract design

Which employee skills are becoming less important?
1. None
2. Work alone
3. Old skills
4. Hardware knowledge
5. Programming knowledge
6. In-depth knowledge in only one area
Thanks

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