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C3 Lessons learned from international knowledge exchange models

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Campus **NL**

Knowledge sharing and hybrid working
Annual report 2023-2024



Campus **NL**

Knowledge sharing and hybrid working
Annual report 2023-2024

“Campus NL is for universities by universities”

Commissioned by
UNL (Universities of the Netherlands)
and fourteen Dutch universities,
edited by members of TU Delft’s Campus Research Team

October 2024

Colophon

This research report is the result of the first year of Campus NL 2023-2027, a project that was conducted on behalf of “Universities of the Netherlands” (UNL) and each of the fourteen Dutch universities by a research team from TU Delft, during the period from June 2023 to August 2024. The editor team thanks UNL, steering group, core team and all campus contacts for providing advice, data and text for this study (see pg. 266-267).

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For presentation purposes and by Campus NL partners, the short citation “Campus NL (2024)” can be used.

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Preface

At the beginning of 2023, the collective universities, represented by UNL (“Universiteiten van Nederland”, an association of universities in the Netherlands), commissioned a project to explore knowledge sharing about the past, present, and future of Campus NL. The focus is on campus management and supporting decisions about land, buildings, and other facilities of Dutch universities.

Campus NL is a four-year project, from 2023 to 2027. This report summarises the results of the first year, 2023-2024. During this year, our academic team, the steering group, the core team and the 14 campus contacts started working together. Collectively, we focused on Campus NL office space and chose “hybrid working” as the first year’s theme for knowledge sharing.

This Campus NL report consists of three parts: (I) introduction and research background, (II) results of the year 2023-2024, and (III) conclusions, strategies, and next steps. In part II, the results follow the research structure, with (A) campus data, (B) campus trends, (C) campus elsewhere, and (D) campus learning. Considering the various (teams of) authors who contributed to this report — for which we are grateful — we have marked chapters with an orange page.

While we are proud of the output of 2023-2024, which amounts to a considerable number of pages. Due to its size, this report requires and contains a management summary (before part I of this report) and a detailed summary of conclusions in part III. A Dutch version of the management summary can be found at the very end of this report.

On behalf of the Campus NL team, I would like to thank all the universities for providing data, text, and images, for the inspiring meetings and workshops, from the preparatory input workshop in October 2022 to the first annual conference in May 2024, and for their feedback on draft versions of (parts of) this report.

Special thanks go to all the campus contacts, the steering group, core team and UNL for their intensive guidance and valuable discussions, especially Boudewijn Peters and Mansur Karadavut. Last but not least, I would like to thank my Campus Research Team colleagues in Delft - especially Monique Arkesteijn, Chiara Pelosi and Jasmine Bacani - and the other authors from TU Eindhoven (TUE) and Center for People & Buildings (CfPB) for our collective writing, assembling, and editing process, as well as Daan Schlosser and Ruben Vos for the graphic design and final editing. During the first year, Campus NL has already demonstrated its goal: “for universities, by universities”.

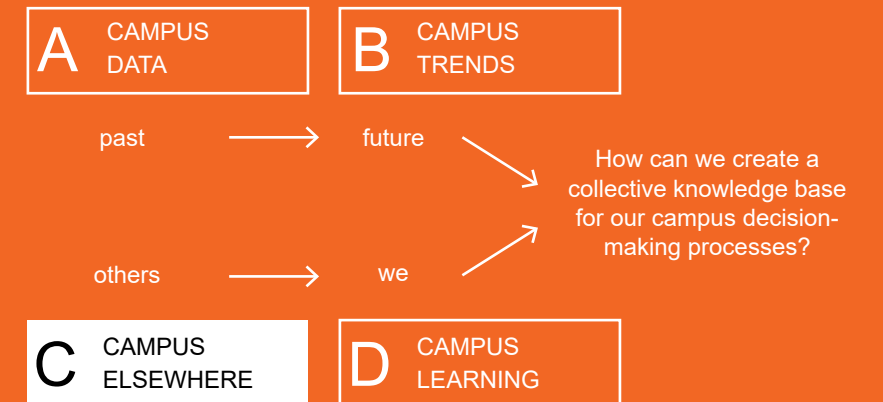
Alexandra den Heijer
TU Delft’s Campus Research Team
Professor of Public Real Estate
Delft, October 2024



University of Oxford
(photo Unsplash/Sidharth Bhatia)

Part II - Results 2023/2024

C3 Lessons learned from international knowledge exchange models



Authors:

Jasmine Bacani, Monique Arkesteijn & Alexandra den Heijer

C3.1 Introduction

On university campuses today, influenced by large-scale trends and challenges, knowledge exchange is important because universities pursue similar goals and can solve common challenges with each other’s help. In addition, “learning from each other” and “data collection for knowledge generation” fit the education and research functions of the institutions. As university campuses face similar challenges in different locations, knowledge exchange enables campus managers to draw on shared experiences and best practices, promoting cooperation and innovation between universities.

Knowledge is information that has been processed, understood and integrated into an individual’s mental framework. It serves as a vital resource for making informed decisions and solving complex problems. Nonaka & Takeuchi (1985) distinguished two fundamental types of knowledge: tacit and explicit knowledge. **Tacit knowledge** includes intangible insights such as personal wisdom, know-how and experiences, while **explicit knowledge** can be documented and transmitted through formal channels such as data, manuals and guidelines. Sharing tacit knowledge is more challenging because it involves embedded understanding that is difficult to articulate and convey to others, while explicit knowledge is more easily transferable because of its codified nature (Argote & Fahrenkopf, 2016).

Knowledge exchange is the dynamic process of transferring knowledge between organisations through the interactive involvement of individuals and groups (Institute for Health & Work, 2012). Tacit and explicit knowledge exchange use different methods, with tacit knowledge directly requiring face-to-face or distant interaction and explicit knowledge requiring platforms for data exchange and understanding.

In this report, we study the exchange of knowledge within (other) European campus/university networks through a preliminary desk analysis. A distinction is made between **campus networks** which focus on the management of campus real estate and properties, and **university networks** which manage a broad spectrum of university activities including education, research, and campus management. In her dissertation on ‘Managing the University Campus’, den Heijer (2011) provides an overview of numerous international networks of campus managers or university associations, which ensure the dissemination of information on trends and strategies to policymakers and campus managers.

Of these networks, AUDE in the UK, HIS in Germany, SYK in Finland and Akademiska HUS in Sweden (Figure C3.1) were selected as potential best practices for the Netherlands because of their well-established and developed models of knowledge exchange that provide valuable insights for UNL and Dutch campus managers.

This report summarises the history, organisational structure and knowledge exchange services offered by these foreign networks, drawing comparisons between them and with the Dutch context. Through the analysis of these networks, valuable lessons are learned, taking into account the results of the Campus NL baseline measurement which showed that facilitation and platforms for knowledge exchange between universities could be enhanced. More information on the organisations can be found via their respective websites (see hyperlinks underlined).

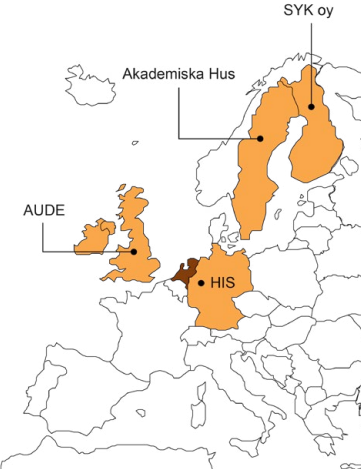


Figure C3.1: Map of campus/university networks abroad (Campus NL, 2024)

Universities of The Netherlands }

Figure C3.2: UNL logo (source: https://factcards.nl/decks/dutch-research-universities/unl/) (UNL, n.d.)

C3.2 Universities of the Netherlands (UNL)

To serve as a lens to analyse knowledge exchange in campus/university networks abroad, knowledge exchange in [Universities of the Netherlands \(UNL\)](#) was analysed. UNL is a university network which supports the 14 universities in the Netherlands. The results of the preliminary desk research (i.e. findings from the UNL webpage) found that the organisation is responsible for spending (public) funds and providing broad insights into the university sector. Its main roles are to make figures and data on the university sector available and bridging universities to support education and research, by:

- Providing a platform for knowledge exchange
 - UNL organises a conference where staff from all universities come together and participate in consultations on various topics
 - Figures, data, updates and news are published on UNL’s website to keep members informed
- Lobbying towards national politics
 - UNL lobbies in the House of Representatives, in ministries, and in Brussels. This role includes activities such as seeking collaborations, negotiating with policymakers, publishing information on the sector and positions, and issuing press releases and lobbying.
- Fulfilling the employer role
 - UNL announces good governance code and social safety statement

The UNL office consists of three steering committees that meet five times a year. These are the Education & Research Steering Group (Stuurgroep Onderwijs & Onderzoek (SOO) in Dutch), the Business and Finance Steering Group (Stuurgroep Bedrijfsvoering en Financiën (SBF) in Dutch), and the Strategy, Public Affairs & Governance and Valorisation Steering Group (Strategie, Public Affairs & Governance en Valorisatie (SSPG) in Dutch), in which the 14 members from each university are represented. Each steering committee has a chair and vice-chair who make up the UNL Board, which meets 10 times a year and receives advice from the steering committees.

UNL also coordinates and participates in official working groups where colleagues from different universities jointly exchange knowledge to strengthen the university sector. These official networks focus on teaching and research, internationalisation, student affairs, strategy, finance and HR.

Furthermore, among others, UNL is also part of the [European University Association](#) (EUA), an organisation representing over 850 universities and umbrella associations which plays a crucial role in influencing EU policy on higher education, research, and innovation. As a member of the EUA, UNL takes active participation in a forum for exchange of ideas and good practice among universities.

Despite the role that UNL already plays in supporting and bringing Dutch universities together, knowledge exchange on campus management specifically can still be strengthened. Focusing on this topic, the HOI and DFB networks were established as bottom-up networks (i.e. collaborative networks originating from campus/facilities management directors rather than imposed by the university institution) to discuss emerging opportunities and challenges in university campuses.

Following on from Campus NL 2016, Campus NL 2023- 2027 aims to explore opportunities for knowledge collection and knowledge exchange in close cooperation with UNL, HOI, DFB, and other inter-university networks already facilitated by UNL.



Figure C3.3: EUA logo (source: https://www.tudelft.nl/en/about-tu-delft/strategy/cooperation-of-universities/european-university-association) (EUA, n.d.)

C3.3 AUDE, United Kingdom (UK)

The [Association of University Directors of Estates](#) (AUDE) is a campus network/organisation that works with property and facilities management professionals from UK universities, and increasingly from overseas universities. There are currently more than 2,800 members from more than 200 higher education institutions (HEI). Membership is offered to universities at a tiered pricing structure based on turnover, meaning that universities with higher turnover at AUDE pay lower prices. Rates vary for non-university organisations.

AUDE provides support on relevant issues by facilitating conversations and developing intellectual capital through discussions and networking among members, industry, government and the wider community.

C3.3.1 History of AUDE

After World War II, a national strategy was implemented to massively increase the number of students in the UK. To oversee this expansion, specialised development managers and construction officers became important roles in senior management. This expansion also had financial implications. Sector expansion was granted by the University Grants Committee (UGC) and the Universities Funding Council (UFC).

After this time, it became government policy to drastically reduce the number of students, creating a surplus of university buildings. During this period, meetings between building officials were common, but no official network was established. At a regional meeting, initial ideas emerged for an association of building officials with a national executive committee and president. The ideas for an association were then approved at the next annual conference. Universities focused on long-term plans for (campus) development, as well as management and maintenance. The term ‘Directors of Estates’ emerged, as the term ‘building officers’ no longer reflected the activities involved.

In the 1990s, Polytechnics were integrated into the university sector, leading to the need for new “funding councils” to seek professional contacts across all professional services. In response, AUDE was formed as an association. Today, AUDE is incorporated into Professional Higher Education Services (PHES), an umbrella organisation of seven different HEI Special Interest Organisations (SIO) wholly owned by universities. AUDE is a non-profit organisation funded mainly by membership fees in addition to commercial partners, sponsorship and exhibition opportunities. All universities in the UK are autonomous and legally independent of the state, but are still regulated by the government.

C3.3.2 Organisational structure of AUDE

AUDE consists of 10 geographical areas in the UK and Republic of Ireland: London, South-West, East Midlands, Scotland, North, North-West, West Midlands, Ireland, Wales, and South-East (Figure C3.5). Each region has its own chair, made up of campus directors who sit on AUDE’s executive committee and represent the needs of members within their region.



- London
- South-West
- East Midlands
- Scotland
- North
- North-West
- West Midlands
- Ireland
- Wales
- South-East

Figure C3.5: AUDE member universities per region (source: <https://www.aude.ac.uk/the-aude-network/he-map/>) (AUDE, n.d.)



Figure C3.4: AUDE logo (source: <https://www.aude.ac.uk/>) (AUDE, n.d.)

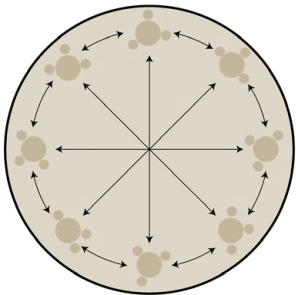


Figure C3.6: AUDE organisational structure conceptual diagram (Campus NL, 2024)

AUDE does not have a traditional board of directors, but instead has an executive group and chairs of regional and special interest groups. AUDE’s executive group forms the organisation’s steering committee. It consists of university representatives - Campus Directors - who perform expert and advisory functions for the organisation. The executive group meets four times a year and organises an annual conference. Regional chairs organise local networking meetings for all directors in their region. Because there is no board of directors and university representatives act as regional or special interest group chairs, knowledge is exchanged directly between universities rather than through the organisation (Figure C3.6).

C3.3.3 Services offered at AUDE

A key goal of AUDE is to provide opportunities for members to develop their knowledge and skills. To facilitate this, professional development is central to its activities. These include events, coaching, work shadowing, e-learning, webinars, the Development Fund and the Professional Development Group.

C3.3.3.1 Events

AUDE organises larger events four times a year: the Annual Conference (Figure C3.7), the Big Conversation, the Summer school and the AUDE Awards. These events allow members to meet and learn from each other, as well as collectively gain new skills. Unlike the annual conference, the Summer school and the AUDE Awards, the Big Conversation is a more intimate event, where up to 100 people have the opportunity for plenty of networking.

Events can be in person or online via webinars. They are both organised by the organisation, with several events each week on different topics. Members can find their area of interest and register for an event online. The Special Interest Groups are categorised by capital, property management, professional development, institution size, space management, strategic facilities management and sustainability. The events cover these topics but are not limited to them and include topics ranging from wellbeing and mental health to productivity and wider economic impact.



Figure C3.7: AUDE conference (source: <https://www.aude.ac.uk/professional-development/e-learning/>) (AUDE, n.d.)

C3.3.3.2 Coaching

The coaching programme provides an opportunity for career development through workplace learning. Property and facilities management professionals in the UK and Republic of Ireland can volunteer their time to help another member or sign up as a coach/supporter. This can take place either in person or virtually via:

- Short intensive periods of 1:1 contact, ideally outside the participants’ workplace
- A series of meetings, usually every 4-6 weeks
- A personalised development activity
- A confidential environment in which issues can be explored
- Using real work problems as learning materials

C3.3.3.3 Work shadowing

Work shadowing aims to support and improve succession planning within the sector (i.e. taking on the role of a leaving employee). It involves a participant receiving a host. This depends on the availability of hosts who volunteer their time to shadow a participant. Different types of work shadowing include:

- Observation - “fly on the wall” involves continuous observations of what the host does on a daily basis
- Regular briefings - “burst interactions” are passive observations of the host for specific activities preceded by a mini-briefing and a follow-up debriefing.
- Hands-on - “job sharing” is an extension of the observation model where participants perform some observed tasks.

C3.3.3.4 E-learning

AUDE offers an e-learning platform with a range of free courses for members. These courses are a selection of procurement and finance courses, more of which will be developed over time.

C3.3.3.5 Development Fund

The Development Fund aims to allocate resources to AUDE members and member-led projects for ongoing professional development. The funds can be used to support activities such as participation in AUDE events/courses, external events and international conferences. Members can complete an application form online no later than 4 months prior to the event. A maximum of £4,000 can be allocated per application.

C3.3.3.6 Professional Development Group

This is a subgroup within AUDE for higher education professionals who want to develop programmes based on: knowledge sharing, staffing/skills development, identification of opportunities and commitment to continuous development.

C3.3.3.7 News and blogs

AUDE has an extensive and regularly updated news and blog space where newsletters, blogs, videos, media, publications (Figure C3.8) and reports are added and archived. In this context, publications and reports from events provide a summary of key learning points for members who could not attend. There is also an annual Estates Management Report (EMR), which is the most valued document for members to inform their long-term strategic decision-making for property management.

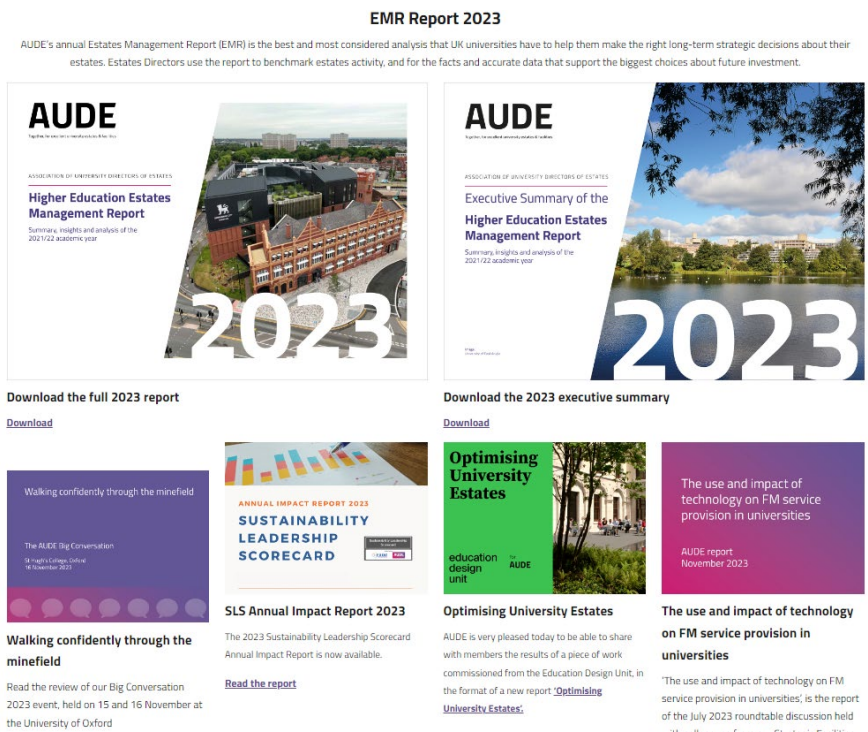


Figure C3.8: AUDE publications (source: <https://www.aude.ac.uk/news-and-blogs/publications/>) (AUDE, n.d.)

C3.3.3.8 Knowledge hub

The Knowledge Hub consists of pages and special tools for members of each of the SIOs. Here, for example, a Sustainability Leadership Scorecard was created to build a picture of an institution’s sustainability performance. There are also special toolkits and templates to reduce the time needed for decision-making.

C3.3.4 Comparison with the Netherlands

While both organisations aim to bring universities together to exchange knowledge, AUDE is specifically focused on campus management, while UNL covers a wide range of activities for universities including education and research. AUDE’s focus on connecting and supporting property and facilities management professionals in the UK is more similar to HOI and DFB networks in the Netherlands, but with a much larger and systematic organisational structure, as well as more members and services to connect workers from different universities.

In the Netherlands, real estate and facilities management professionals are part of many networks focusing on various topics related to campus management. This is similar to AUDE’s special interest groups. However, many of these Dutch networks are initiated from the bottom up and are not organised into one network where employees can easily connect with counterparts or other relevant employees from other universities.

UNL and Dutch universities can learn from the extensive list of professional development activities carried out by AUDE. Creating an organisational structure for the existing networks in the Netherlands that is able to manage knowledge exchange through direct exchanges such as events, coaching, work shadowing and e-learning can improve collaboration (and learning for informed decision-making).

C3.4 HIS, Germany

Hochschul-Informationen-System (HIS eG, henceforth referred to as HIS) has supported German universities as a software company for more than 50 years. As a successful university network and cooperative model, cooperation between HIS and the universities was expanded by staffing the bodies and committees with representatives from the universities. The organisation now comprises 300 employees with members from more than 300 universities. HIS software supports institutions with a total of more than 2 million students.

HIS provides solutions for all areas of the university. This includes University Enterprise Resource Planning (ERP), HISinOne campus, HISinOne research, business intelligence, and HIS software-as-a-service.

C3.4.1 History of HIS

HIS GmbH was founded by the Volkswagenwerk Foundation in 1969. In 1971, the Higher Education Statistics Act came into force and ordered official statistics on university data to be collected for planning purposes and to create a national database. HIS GmbH was developed as an advisory centre for building and resource planning for universities. Federal states and governments took over HIS GmbH in 1976 when it became a public organisation.

By 1982, the data of more than 400,000 students in Germany were managed by HIS systems. With the creation of personal computers in the late 1980s, the need arose to further process data managed by HIS systems, giving HIS the confidence of government and universities. HISQIS was officially introduced as a web-based software in 1999, with data from more than 80% of German students. HISinOne was introduced in 2006 as a web-based fully integrated system that bundles all HIS competences into one software. It was also integrated into universities as a campus management system in 2009. Focusing on their software, HIS GmbH made the transition to a new state-cooperative model in 2014 - HIS eG. As a state-run non-profit university cooperative where members can actively participate in its strategy and developments, all committees in the cooperative are staffed by university representatives. In Germany, public universities are owned (and managed) by the state, while private universities are owned by private organisations.

C3.4.2 Organisational structure of HIS

All members of the cooperative have equal voting rights and take joint decisions at an annual general meeting. Members elect the group of supervisors and advisory groups. The supervisors is the controlling body of HIS eG that appoints the board of directors/executive board and oversees its activities. The advisory group consists of university representatives (Figure C3.10) who advise the board on business and product strategy and development planning, making them an important link between universities and the HIS office. HIS products are developed and made available to universities based on the board's final decisions.

The working areas of HIS eG are divided into 2 directorates: Product Management and

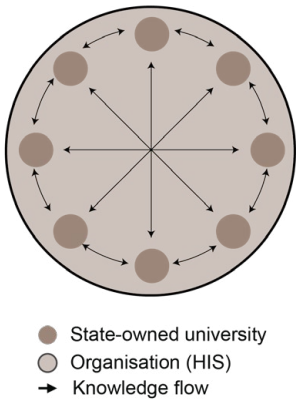
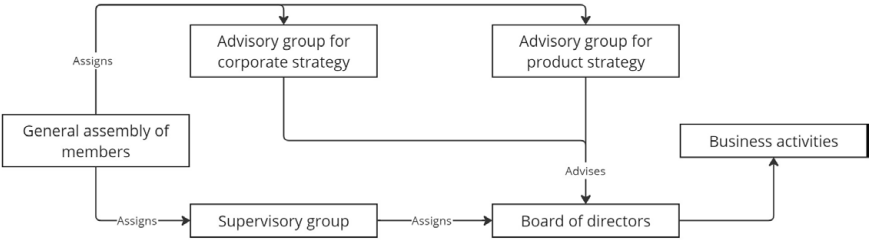


Figure C3.9: HIS logo (source: <https://www.his.de/>) (HIS, n.d.)

Figure C3.12: HIS organisational structure (source: <https://www.his.de/his-eg/genossenschaft>) (HIS, n.d.)

Development on the one hand, and Projects and Commercial Services on the other. There is also a newly created Strategic Development Staff Department, which directly supports the board on strategic issues and is in direct contact with the universities (Figure C3.12).



C3.4.3 Services offered at HIS

HIS eG aims to support members with software, IT services and technical advice for business processes. They develop products and services with the active involvement of university members, enabling a relationship of trust with customers.

C3.4.3.1 General Assembly

The HIS User Conference NUTA (Figure C3.13) is an annual three-day conference where the HIS eG office and university members work together to explore various aspects and opportunities for university and campus management. It is an opportunity for HIS users and HIS experts to exchange ideas intensively and constructively. Numerous workshops and lectures on the various applications of HIS products are held during NUTA.



Figure C3.13: HIS NUTA conference (source: <https://www.his.de/nuta>) (HIS, n.d.)

C3.4.3.2 Events

HIS offers online events through its open-source software 'Big Blue Button'. These events were initially developed in response to Covid pandemic restrictions, but have now grown into a successful format that is an integral part of HIS's services. The events ensure that members are aware of news about software updates and that there are opportunities for members to exchange ideas with other users. Some recurring event themes include:

- Cost and performance accounting
- Experience reports
- Financial management
- Staff management
- GC/QIS

C3.4.3.3 Training

HIS offers training courses for members to learn how to use HIS software. More than 2,000 employees from different university areas attend these courses. The format of the training can be online, on site at the Hanover office, and externally where representatives of the organisation visit a university to deliver the training course. Topics in the training courses include:

- Personal services and directories (HISinOne-PSV) and system infrastructure (HISinOne-SYS)
- Registration and admission (HISinOne APP)
- Student management (HISinOne-STU)
- Business intelligence (HISinOne-BI)
- Exam and course management (HISinOne-EXA)
- Illustration of examination arrangements (HISinOne-EXA)

C3.4.3.4 HISlive

HISlive is a platform to keep up to date with all the news about HIS eG and its products. It includes news articles, publications (Figure C3.14) and reports on events and other developments.

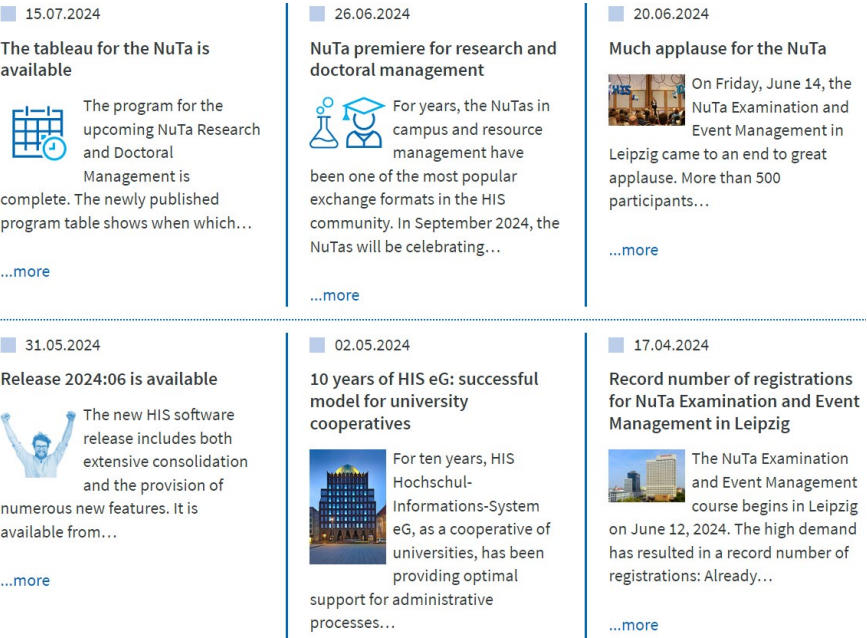


Figure C3.14: HIS publications (source: <https://www.his.de/hislive>) (HIS, n.d.)

C3.4.3.5 Release special

There is a page on the organisation's website where all the major highlights of each year can be found. These highlights are easily accessible summaries of various topics, from campus management to research management, and from financial management to human resources management.

C3.4.3.6 Topic news

Specific topics that affect all universities will have their own pages to keep members informed about regulations and how HIS systems deal with new changes. This provides subject-specific information on:

- Energy law for students
- Student reporting procedure (SMV)
- Online Access Act (OZG)
- DoSV and multiple training
- General Data Protection Regulation (GDPR)

C3.4.3.7 HIS up2date

HIS up2date is the membership magazine of HIS eG. It contains regular reports on events and topics related to the university cooperative. Recently released and archived songs are available for download online.

C3.4.3.8 University ERP

HIS eG maps all university resources into an integrated system. By connecting to HIS systems, universities can benefit from shared data and consistent processes. The university ERP is formed by the financial and HR management modules of HIS. The financial module combines topics such as fund management and financial accounting, procurement and materials management, as well as inventory and asset accounting. The HR module is human resources management precisely tailored to universities.

C3.4.3.9 HISinOne campus

This service maps a university's core processes related to campus and research management, from admission application to graduation. This increases the efficiency and transparency. HISinOne campus (Figure C3.15) provides a variety of tools to manage campus and research by creating a central access point that can be integrated into existing IT interfaces. HISinOne campus tools can also be used to manage documents, provide access to individual results and summary lists, and identify management and directory services in an AVG-compliant manner.

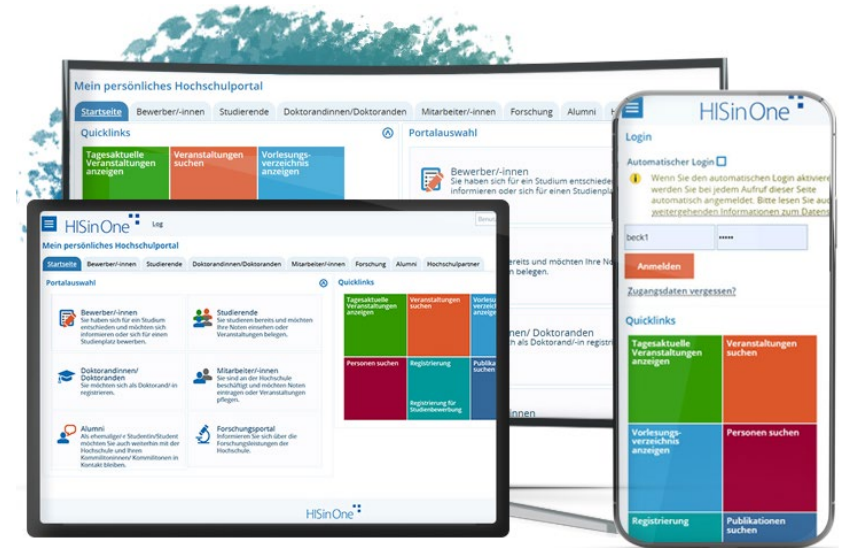


Figure C3.15: HISinOne (source: <https://www.his.de/hisinone>) (HIS, n.d.)

C3.4.3.10 HISinOne research

HISinOne research is used to manage research processes and metadata to add value to administration and scientists. It provides a set of core research data, which facilitates the exchange of information between universities. It also stores information on external funding and funding ads online for decision-making processes. HISinOne research provides tools for successful analysis, communication and integration of research.

C3.4.3.11 HISinOne - Business Intelligence (BI)

This service offers the ability to oversee the entire university. It includes reports, documents, and key figures that can answer questions about a university's status and development - both strategic and operational. With HISinOne - BI, graphical evaluations can be made to provide a quick overview and a solid basis for decision-making.

C3.4.3.12 HIS software-as-a-service (HIS-SaaS)

HIS-SaaS provides cloud solutions to take care of all administrative tasks, from server installation and maintenance to updates and configuration. The aim is to provide universities with the current version of HIS software.

C3.4.4 Comparison with the Netherlands

HIS focuses on bringing universities together on a single platform through digitisation. Its structure and operation is most similar to SURF in the Netherlands. SURF is also a cooperative association of 100 Dutch education and research institutions working together to develop digital services and knowledge exchange. It was founded by the 14 Dutch universities and is now also used by universities of applied sciences, University medical centres, research institutes, and secondary schools.

The members own SURF and are represented by a member council that appoints the board of directors. This board determines SURF's policy and strategy. A Supervisory Board and the Scientific Technical Council (WTR) are also part of the organisational structure with the members of the WTR being appointed by the Members' Council. Each SURF-member institution appoints a Coordinating SURF Contact Person (CSC), and various SIOs are active within SURF.

In the same way that HIS offers training courses and events on the use of their IT applications, SURF academy also offers workshops, master classes, courses, seminars and training on various IT and education/research topics. SURF's main services are identity and access management, procurement and contract management, IT security, network connectivity, educational logistics, data storage and management, publishing and computing power.

Dutch universities can learn from the way German universities manage, store and exchange data and knowledge using HIS applications. Universities can then easily make comparisons and retrieve relevant information from other universities through a central access point where all data is stored, using the way HIS and in the Netherlands also SURF enable the rapid generation of figures and results.



Figure C3.16: SYK logo (source: <https://sykoy.fi/en/home/>) (SYK, n.d.)

C3.5 SYK (Oy), Finland

[Suomen Yliopistokiinteistöt Oy](#) (SYK) is a campus network/organisation owned by 8 universities (also called owner universities) and the Finnish state. These 8 universities include Tampere University, University of Turku, University of Oulu, University of Eastern Finland, University of Jyväskylä, Åbo Akademi University, LUT University and University of Lapland (Figure C3.17). SYK owns and develops higher education campuses used by the owner universities, and also leases real estate to companies and other educational institutions in 10 Finnish university towns apart from the owner universities. In this way, the owner-universities exchange knowledge through SYK as the property manager. The company's real estate portfolio also includes properties in other locations, such as research sites where universities were located, but which are now leased to third parties.

Its main objective is to become a strategic facilities partner of universities by providing them access to affordable spaces needed for their operations, bringing space solutions, providing high-quality customer service, adding value and secure owner benefits. Their campuses have facilities for different users:

- 8 owner universities, including university teacher training schools
- 4 colleges
- 3 primary schools
- 3 welfare services
- 2 private nurseries
- 92 corporate tenants

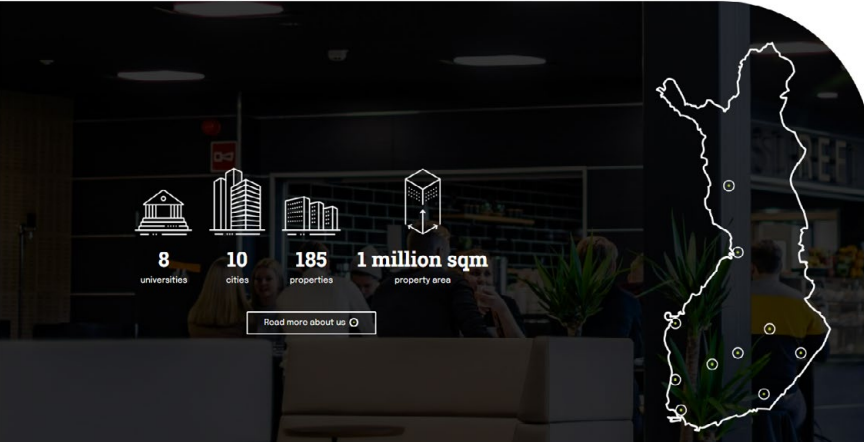


Figure C3.17: SYK location and properties (source: <https://sykoy.fi/en/home/>) (SYK, n.d.)

C3.5.1 History of SYK

SYK was founded in 2009 as part of a nationwide university reform in Finland. This reform aimed to give Finnish universities more financial and administrative autonomy, which led to the transfer of campuses and buildings owned by Senate Properties Ltd and leased by the owner universities. These were transferred to SYK. After the ownership transfer, SYK's business focus shifted to cost-effective space solutions for the owner universities, allowing them to develop their own space use on campuses.

Following changes in the use of space by universities, leases were concluded between SYK and colleges, cities and municipalities, welfare service regions and individual companies. This resulted in multi-user campuses where universities and other users benefit from proximity to each other and where the spaces can support new and different forms of collaboration.

C3.5.2 Organisational structure of SYK

SYK is an organisation with about 40 employees including site-specific campus teams. The core of the organisation consists of a chairman, vice-chairman and board members elected at an annual general meeting. The board consists of a minimum of five and a maximum of seven members who appoint and dismiss the CEO. An executive team is appointed by the CEO to jointly manage business operations and participate in decision-making for the implementation of strategy and risk management (Figure C3.18).

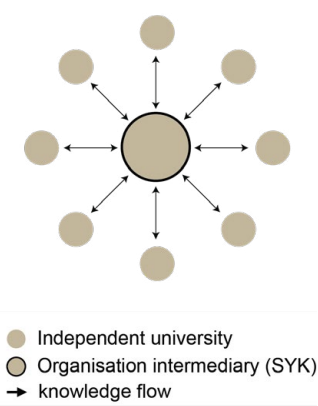


Figure C3.18: SYK organisational structure conceptual diagram (Campus NL, 2024)

The division of roles between SYK and owner-universities stipulates that SYK, as property owner, is responsible for property management. Meanwhile, the universities, as owners and users, are responsible for facilities management. Property management includes ensuring the usability, value development, and preservation of a property; therefore, SYK is responsible for fixed structures, equipment and other systems of the building. On the other hand, facilities management organises the user’s perspective and services. It consists of usability and behaviour management, facility operations management, facility planning, and facility service management. These services often include space planning, furnishing, cleaning, security and restaurant services.

C3.5.3 Services offered at SYK

The aim of SYK’s operations is to be the best campus partner for its own universities and other customers operating in their premises. To this end, they ensure that their premises remain attractive for the activities of universities and other customers through consistent collaboration with stakeholders.

C3.5.3.1 Campus-specific team

To ensure effective collaboration with various stakeholders, SYK’s experts work together from different locations. Day-to-day work is carried out by a site-specific campus team consisting of a customer relationship manager, a technical manager and a development manager. The campus teams also communicate with other actors and stakeholders such as service providers, users of public spaces, visitors, and the media.

C3.5.3.2 Campus “Safety” Day

SYK organises an annual Campus Safety Day to provide participants with insights into how the organisation prepares for and stays abreast of changes at the campus level, emphasising the importance of collaboration, roles and predefined processes. This event addresses exceptional and unprecedented circumstances such as the war in Ukraine and focuses on risk management in general, not just campus safety. The programme consists of lectures and presentations by experts leading to discussions among participants.

C3.5.3.3 DEMO

DEMO is a demonstration of joint R&D activities and pilot operations of small-scale constructions carried out with different faculties within universities or with other parties. These R&D activities are used to explore space solutions and how they affect on-site activities and users’ enthusiasm and comfort - “where prototypes of future spaces

and culture are created”. Universities participate in the assessment of the DEMO and share lessons learned, information and solutions with other universities and SYK. The university may also award research and order studies related to the DEMO project aimed at joint development, joint funding (SYK and the university invest 50% of the total cost) and joint evaluation. DEMO project descriptions can be downloaded in PDF format from SYK’s website.

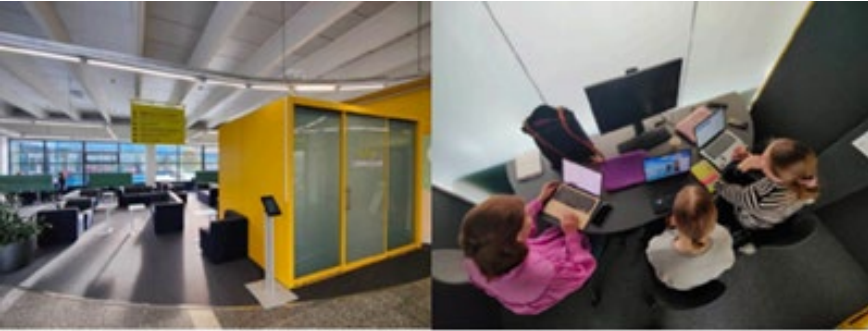


Figure C3.19 DEMO cube formats for hybrid working (source: <https://sykoy.fi/materiaalipankki/>) (SYK, n.d.)

An example of a DEMO project was the result of the ‘hybrid collaboration month’ at the University of Oulu (Figure C3.19), carried out in collaboration between the Faculty of Education and Psychology, Campus Services and the Architecture Unit of the Faculty of Engineering, adapting pre-existing commercial solutions and making use of the know-how accumulated in the university’s ICT services in developing hybrid spaces. In this project, fully scalable cube formats were designed and produced, supporting multi-site teamwork and media production. The cubes are equipped with video and podcast mixers that students and staff can use to create various audio, video or hybrid productions that are also compatible with hybrid lecture rooms and group classes. For private work, the cubes are soundproofed with glass walls that can be dimmed using a smart film. The reservation status of the cubes was monitored in the initial phase from reservation calendars while the user experience and realisation of the intended activities were measured using surveys conducted by students.

Another example is the flexible optimisation of space use on campus, carried out in cooperation with Lappeenranta University of Technology and Indoor Informatics Oy (a private company that tracks property occupancy rates using surveillance cameras). The idea was to use imaging and pattern recognition to determine the average number of users in educational spaces. The system dynamically adjusts reservations and updates changes in reservations for users, such as students and teachers. In this way, the number of users and space reservations can be more optimised and available spaces can be used by others. The DEMO included spatial changes related to camera installations implemented by Indoor Informatics Oy.

C3.5.3.3 Knowledge base

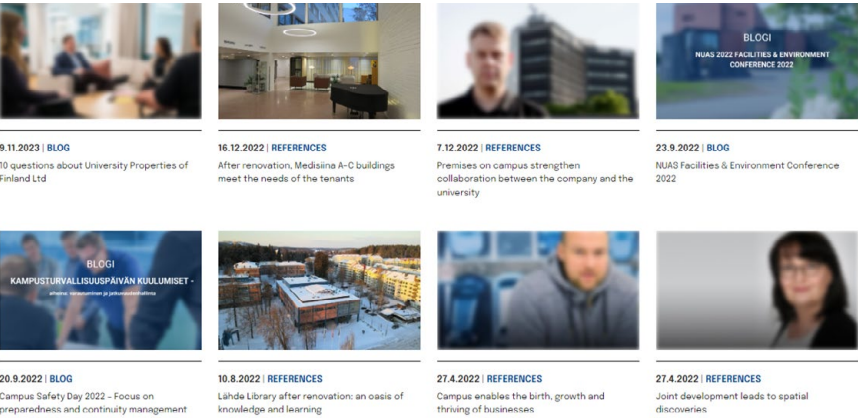
SYK has a comprehensive knowledge base consisting of reports, instructions, project briefings, templates and more that can be downloaded in PDF format. In the organisational context, a knowledge base refers to a centralised repository or database where knowledge or resources are stored, organised and made accessible to users. SYK’s material bank provides a space where information can be gathered to guide strategic operations. The material bank includes:

- Demo library - project descriptions
- Administration materials - policies, reports, guidelines and financial statements
- Publications - R&D publications and brochures

- Construction manuals - BEM project bank instructions, CAD instructions, project cost management instructions, final document handover instructions, construction instructions, design instructions and information management instructions.
- Communications and logos - graphic instructions
- Maintenance manuals - energy management and environmental instructions, KIRJO system, indoor environment instructions

C3.5.3.4 News and blogs

SYK has a webpage (Figure C3.20) for references, news and blogs that are updated regularly. References are short articles about lessons learned after a project or renovation and general spatial discoveries. News and blogs are short reports on events and conferences, as well as an opportunity for SYK to answer recurring questions raised by members and external organisations.



C3.5.4 Comparison with the Netherlands

Compared to Finland, the Netherlands does not have an organisation that centrally manages university and campus property. Instead, property management is carried out per university in the Netherlands. Since SYK owns the combined properties of eight universities, it is easier to have an overview of different university properties and compare “best practices” to see what would work best for each university. The organisational structure that makes this possible is less relevant to the Netherlands, but may contain lessons for the Netherlands.

Despite the differences between campus management structures in Finland and the Netherlands, UNL and Dutch universities can still learn from the joint R&D activities facilitated by SYK. Through joint development, funding and evaluation between universities for small-scale space solutions, campuses can act as “living labs” to test innovation, and joint projects can be a systematic way to exchange knowledge by bringing together the expertise of different universities.



Figure C3.21: Akademiska HUS logo (source: <https://www.liveinlab.kth.se/en/nyheter/aktuellt/akademiska-hus-satsar-pa-utveckling-och-pa-att-framja-innovationer-1.683028>) (Akademiska HUS, n.d.)

C3.6 Akademiska HUS, Sweden

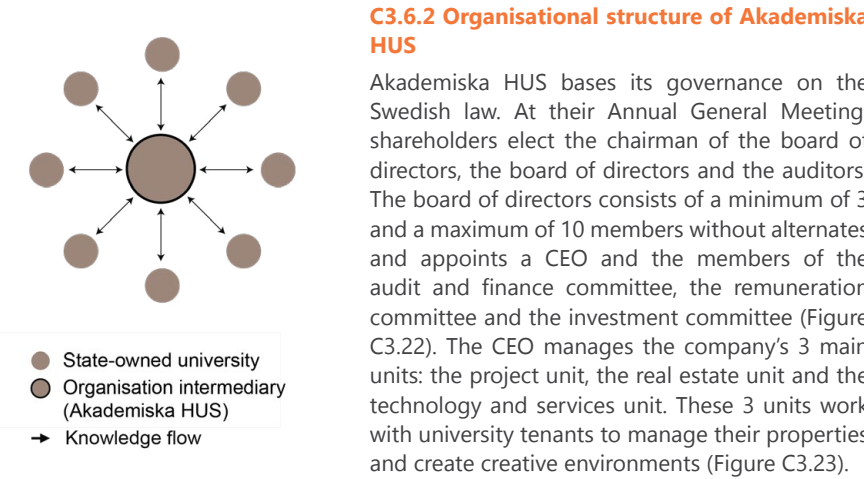
Akademiska HUS is one of the largest state-owned enterprises in Sweden. As a campus network/organisation, they build, develop and manage environments for education, research and innovation in cooperation with universities and colleges. Currently, about 300,000 people study and work in Akademiska HUS properties.

As an organisation, Akademiska HUS focuses primarily on education and research activities and the sustainable long-term development of campuses, conducting operations in a business-like manner and achieving competitive profits. With 51 education centres in 29 Swedish cities, Akademiska HUS has a 60% market share of the total floor space.

C3.6.1 History of Akademiska HUS

In connection with the restructuring of state-run property management in the early 1990s and the Provision Premium Reform in Sweden, it was stipulated that property management should be separated from the use of land and buildings, providing a more accurate picture of costs in the state budget. It was also stipulated that property management should be carried out at a market rate of return and that the Swedish state should have an ownership role. To make this possible, education centres received subsidies from the state to cover rental costs.

Akademiska HUS was founded in 1993, along with other companies such as Vasakronan and the National Property Board of Sweden as a result of the splitting of the National Public Buildings Board into several smaller units. Over the years, the organisation has expanded its portfolio and undertaken several projects to meet the changing needs of the academic community. This includes new construction, renovations and a major focus on sustainable design principles. With their services, they charge rent to universities on market terms. Akademiska HUS now manages more than 3.4 million square metres of rentable space, consisting of teaching spaces (45%), laboratories (35%) and other spaces (20%).



The organisation brings together research, business and entrepreneurship by creating active meeting points for people and ideas. They also work with municipalities to ensure needs are met close to campus, such as with student accommodation. Collaboration with municipalities enables the organisation to coordinate internal and external infrastructures in the form of cycle paths, parking facilities and other service facilities.

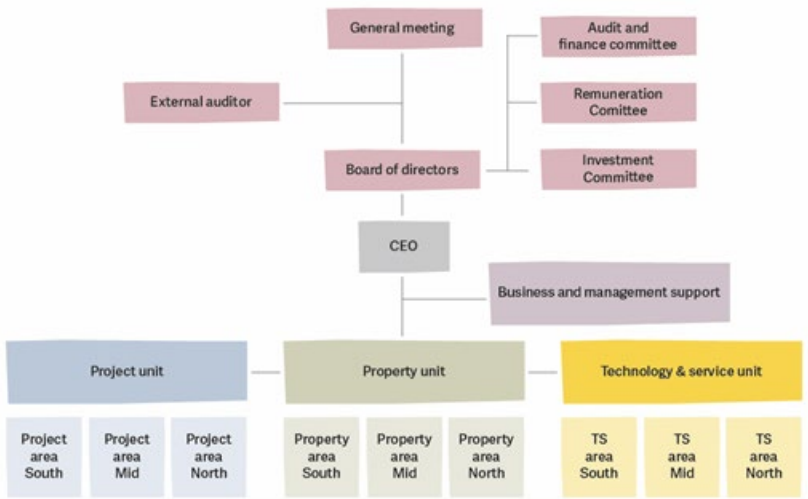


Figure C3.23: Akademiska HUS organisational structure (source: <https://www.akademiskahus.se/en/about-us/CorporateGovernance/>) (Akademiska HUS, n.d.)

C3.6.3 Services offered at Akademiska HUS

Akademiska HUS is committed to high-quality property management with a focus on resource efficiency and sustainability. This includes all technical and financial operations that are carried out over the lifetime of a building. Apart from this, the organisation also has initiatives that facilitate knowledge exchange between client universities.

C3.6.3.1 Mitt Campus app

This free app (Figure C3.24) is designed to easily find information about the campus and buildings where a person is located. This includes maps, contact details, news, and ongoing breakdowns. The Mitt Campus app is complemented by pages on akademiskahus.se to allow people to easily search, find and store contact details for each campus and building, making it easy to ask questions or report outages. Using the app, maintenance requests can be made and tracked in real-time.



Figure C3.24: Mitt campus app (source: <https://www.akademiskahus.se/vara-kunskapsmiljoer/forvaltning/mitt-campus/>)

C3.6.3.2 Social media

Akademiska HUS has an active Instagram feed with the latest posts and updates on property construction, renovation and management, as well as events, lectures and conferences in which employees participate. Updates on agreements between Akademiska HUS and universities are also posted on their social media channels.

C3.6.3.3 Newsroom

Besides collecting the latest news about the organisation's properties, the newsroom also archives the reports Akademiska HUS publishes for their client universities and other stakeholders. This includes interim, annual, and sustainability reports. Any changes in the organisational structure of Akademiska HUS are also announced via the newsroom. To facilitate searching, news items can be filtered by topics (such as architecture, collaboration, energy, finance, student housing, etc.) and university campus.

C3.6.3.4 Press room

Mynewsdesk.com collects all Swedish press releases and related materials such as documents, publications (Figure C3.25), reports, illustrations and photos created by Akademiska HUS. This press room is managed by a press manager and communications director. Experts at Akademiska HUS can also be contacted via the press room to answer questions.

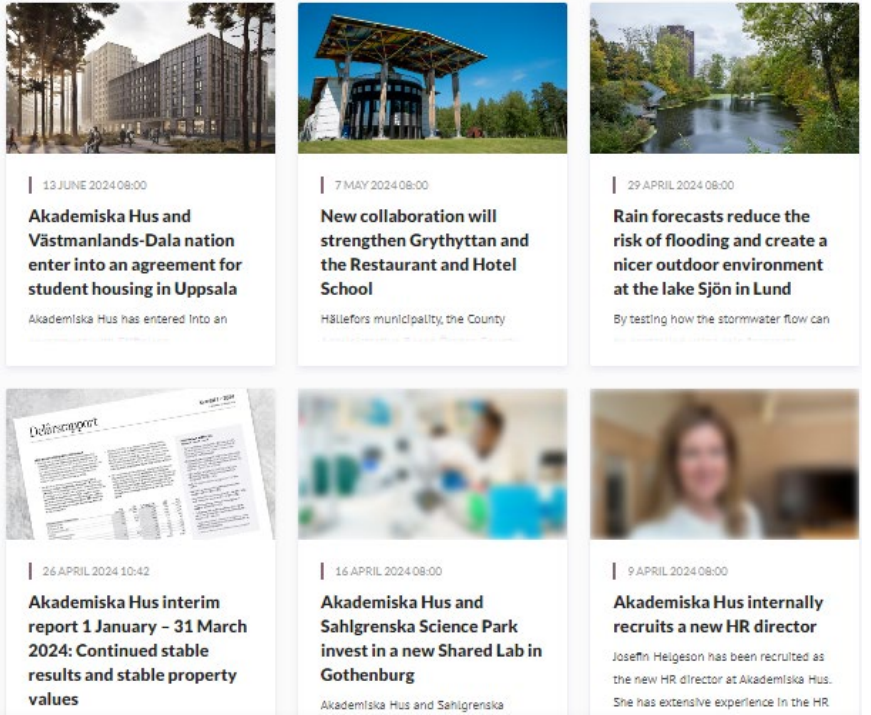
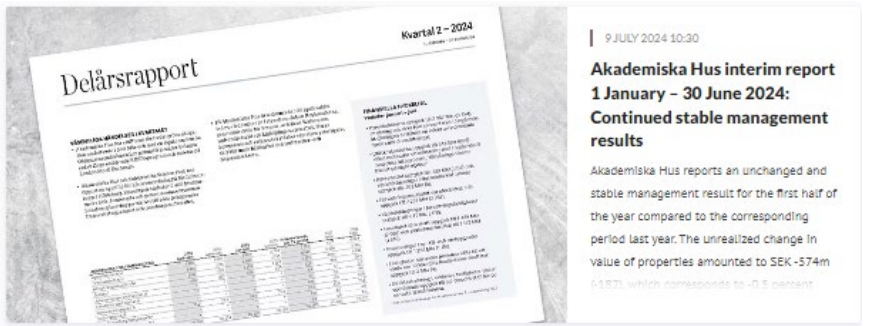


Figure C3.25: Akademiska HUS publications (source: https://www.mynewsdesk.com/se/akademiska_hus_ab) (Akademiska HUS, n.d.)

C3.6.4 Comparison with the Netherlands

Like SYK, Akademiska HUS also owns university and campus buildings, which in the case of Sweden are owned by the state. Compared to other foreign networks and the Netherlands, the organisation focuses more on its business model and the management of premises it rents out to universities. Therefore, the organisation's business model is not transferable to the Netherlands. However, the convenience and ability to contact relevant people through the Mitt Campus app and press room for questions related to campuses and buildings, as well as press releases, publications and other documents, enables rapid exchange of information that can help strengthen knowledge sharing between Dutch universities.

C3.4 Universities abroad and the Netherlands

Studying the foreign networks, it was found that AUDE and HIS focus on bringing universities together, through cooperation and providing a central platform. SYK and Akademiska HUS are more focused on property management and ensuring the highest quality of campuses for their tenants or owner-universities, with some services facilitating knowledge exchange. Moreover, the knowledge exchange services of the foreign networks are much more comprehensive, systematic, and focused on campus or facilities management compared to UNL or the HOI and DFB networks.

In terms of organisational structure (Figure C3.26), it can be seen that each network has its own dedicated executive board that facilitates and oversees cooperation and property management between universities. One exception is AUDE, which instead of having an executive board has a steering committee and regional and SIG chairs. Similarly, SYK has experts working specifically on different campus locations. Both AUDE and SYK therefore manage universities at regional and interregional level, unlike other foreign networks and UNL which manage universities only at interregional level. Following the organisational structure, there is also a difference in the flows of knowledge between the organisation and their member or client universities. In AUDE and HIS, knowledge is exchanged directly between universities because university representatives sit on the organisations’ committees. In SYK and Akademiska HUS, which are not staffed by university representatives, independent employees act as intermediaries who facilitate the exchange of knowledge between universities.

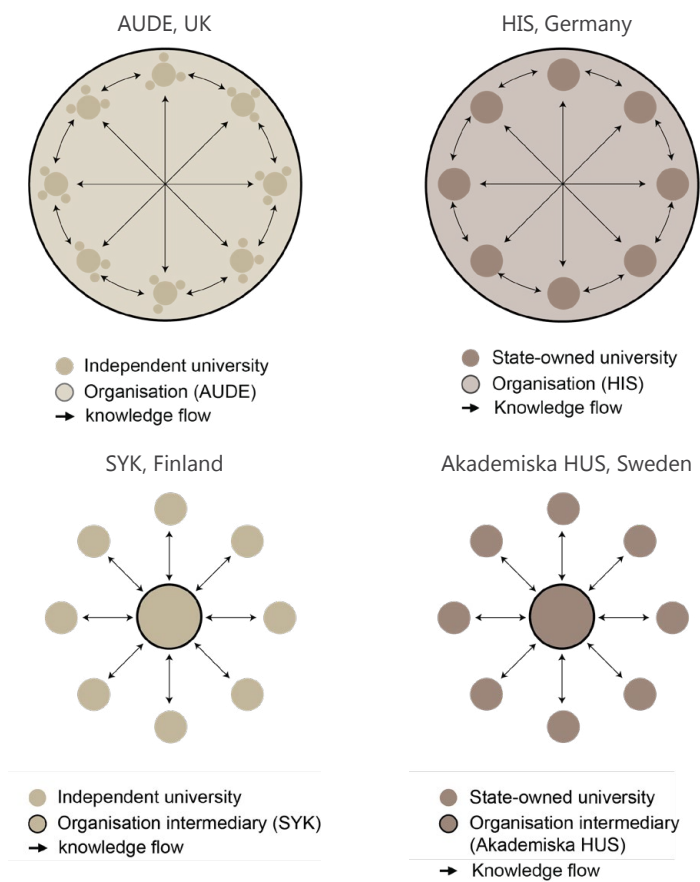


Figure C3.26: Organisational structure conceptual diagrams of foreign university /campus networks (Campus NL, 2024)

Because of similar organisational structures and knowledge exchange processes relevant to the Netherlands, AUDE and HIS are more relevant examples of knowledge exchange networks to aim for compared to SYK and Akademiska HUS. When learning from AUDE and HIS, the aim is not to copy the networks as a whole, but to extract and apply relevant knowledge exchange processes.

When it comes to knowledge exchange processes by network, Table 1 summarises the different types of processes found during the literature review phase conducted in Campus NL and which processes are used in each foreign network. The findings show that AUDE, HIS, SYK and Akademiska HUS function as central governing bodies that facilitate knowledge exchange between universities in their respective countries. At the same time, the organisations also act as knowledge brokers connecting universities with their expertise in campus management. Universities can turn to the organisations at their headquarters as physical centres to facilitate knowledge exchange.

Comparing the types of knowledge exchange processes per network (Table C3.1), it is clear that AUDE offers more services to facilitate knowledge exchange, with a strong focus on educational activities for tacit knowledge exchange. In contrast, HIS emphasises the creation of an integrated digital system centralising data from different universities to promote explicit knowledge exchange. Unlike AUDE and HIS, both SYK and Akademiska HUS do not show a strong tendency towards tacit or explicit knowledge exchange. However, SYK stands out for facilitating joint projects. In addition, Akademiska HUS offers a campus app, which streamlines access to campus information and relevant contacts, enhancing opportunities for tacit knowledge exchange.

Knowledge exchange processes per foreign network					
Knowledge exchange processes in literature		United Kingdom	Germany	Finland	Sweden
	Central governing body	AUDE	HIS	SYK	Akademiska HUS
	Knowledge brokers				
	Joint project			DEMO joint R&D	
	Employee relocation	Work shadowing	Training courses		
	Physical center	Loughborough	Hanover	Tampere	Göteborg
	Educational activities	- Annual large-scale events (Annual conference, Big Conversation, Summer school, AUDE awards) - Online events or webinars - Coaching - E-learning courses - Professional development fund	- NUTA conference/Annual general meeting - Online events - Training courses	Annual campus safety day	
	In-person conversations	- Meetings - Discussions	- Meetings - Discussions	- Meetings - Discussions	- Meetings - Discussions
	Document sharing	- Knowledge hub - News and blogs	HISinOne	- News and blogs - Material bank	
	Technology sharing	Knowledge hub			Mitt campus app
Electronic communication				- Mitt campus app - Press room	
Online database	News and blogs	- HISinOne - News platforms	- News and blogs - Material bank	- Social feed - News room - Press room	

Table C3.1: Knowledge exchange processes per foreign university/campus network (Campus NL, 2024)

The preliminary findings from this desk analysis of foreign campus and university networks provides potential models and practices for knowledge exchange in the Dutch context. In the following research phase of Campus NL, the campus network of AUDE and the university network of HIS as more comparable to the Dutch context, along with the university network of EUA and more relevant networks will be (further) explored to inform knowledge exchange in Campus NL.

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