

D1 Survey "baseline measurement" knowledge exchange

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Publication date 2024

Document Version Final published version

Published in

Campus NL - Knowledge sharing and hybrid working: Annual report 2023-2024

Citation (APA)

Bacani, J., Arkesteijn, M. H., & den Heijer, A. C. (2024). D1 Survey "baseline measurement" knowledge exchange. In *Campus NL - Knowledge sharing and hybrid working: Annual report 2023-2024* (pp. 162-177). Delft University of Technology, Faculteit Bouwkunde.

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Campus NL

Knowledge sharing and hybrid working Annual report 2023-2024





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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photos: Image credits (see pg. 268)

How to cite this research report

When referring to the content in general, this report can be cited as (APA style): Den Heijer, A., Arkesteijn, M., Pelosi, C., & Bacani, J. (Eds.). (2024). Campus NL – Knowledge sharing and hybrid working: Annual report 2023-2024. TU Delft, Faculty of Architecture and the Built Environment, Department of MBE.

A specific chapter can be cited as (APA style): [Chapter authors]. (2024). [Title of chapter]. In A. den Heijer, M. Arkesteijn, C. Pelosi, & J. Bacani (Eds.), Campus NL - Knowledge sharing and hybrid working: Annual report 2023-2024 (pp. [chapter page numbers]). Faculty of Architecture and the Built Environment, Department of MBE.

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.

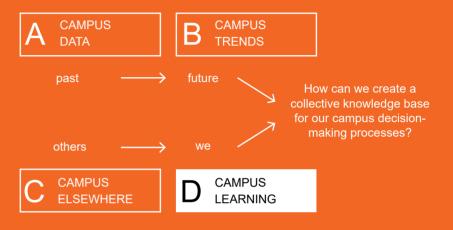
Special thanks go to all the campus contacts, the steering group, core team and UNL for their intensive quidance and valuable discussions, especially Boudewijn Peters and Mansur Karadavut. Last but not least, I would like to thank my Campus Research Team colleagues in Delft - especially Monique Arkesteijn, 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



Part II - Results 2023/2024

D1 Survey "baseline measurement" knowledge exchange



Authors:

Jasmine Bacani, Monique Arkesteijn & Alexandra den Heijer

D1.1 Introduction

Universities experience similar challenges related to hybrid working, climate change, student accommodation, and so on. One of the aims of Campus NL is to pool the resources and knowledge of the 14 Dutch universities to solve these problems jointly and efficiently. This requires learning from others rather than reinventing the wheel or solving individual challenges. To facilitate this process, Campus NL will closely link science and practice to make inter-university learning easier.

Part of Campus NL's research (Part C) is dedicated to studying how other foreign universities and other industries/sectors with similar real estate and campus management as Dutch universities exchange knowledge. We study them to find relevant solutions to improve the situation in the Netherlands. To know which interventions are applicable and which might be successful, we first analyse the knowledge exchange between Dutch universities.

To measure knowledge exchange, a literature review was conducted in summer 2023 to identify relevant elements for measuring knowledge exchange. These are: (1) the organisational context, (2) drivers and barriers of knowledge exchange, (3) processes of knowledge exchange, and (4) outcomes. As shown in Figure D1.1, each element has different variables that are measured. The questions used to measure these variables are based on both the literature review (from science) and meetings with campus contacts/ directors (from practice). Figure D1.1 summarises these elements and forms the basis for the questions this survey attempts to answer:

- 1. How and to what extent do employees exchange knowledge between universities? Knowledge exchange processes include written text, formal and informal communication.
- 2. What organisational factors influence knowledge exchange between universities? Organisational factors include both facilitating conditions and social influences.
- 3. What individual factors influence knowledge exchange between universities? Individual factors include both intrinsic (personal motivation) and extrinsic (motivation through external rewards) influences.
- 4. What are the existing networks and partnerships between universities?
- 5. Has the Covid pandemic led to more (or less) knowledge exchange?
- 6. What benefits do employees expect from knowledge exchange? The outcomes of knowledge exchange include conceptual, instrumental, strategic and process use of knowledge.

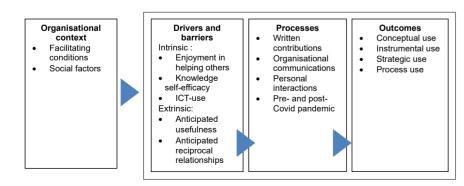
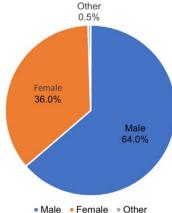


Figure D1.1: Survey elements resulting from the literature review (Campus NL. 2024)

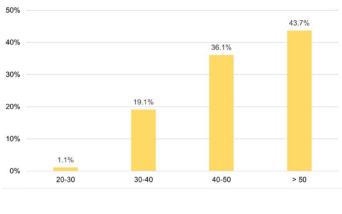
The survey ("knowledge exchange baseline measurement") was distributed in November/ December 2023 by campus contacts in their respective universities. Target respondents were around 300 employees of Campus Real Estate (CRE) and Facilities Management (FM) departments, with priority given to team/department leaders. With 183 surveys completed in about a month (excluding Christmas holidays), the final response rate of the baseline measurement was 61%. The characteristics and distribution of respondents are shown below with more information in the appendix E. Campus contacts were asked to select participants based on a list (see appendix G) of roles provided by the research team to ensure that participants had diverse backgrounds.



Notable in the profile of the respondents is the higher percentage of men (64%) compared to women (36%) in CRE & FM departments (see fig. D1.2). Furthermore, the majority of the respondents are 50 years and older (43.7%), as shown in Figure 4. With regards to their years of working experience, it can be seen that there is no big difference between the categories in figure D.4. Interestingly, a small proportion (8.2%) of the respondents indicated that they have no experience in campus management and thus have a different type of job. These respondents may be working in positions related to campus management but are not directly employed in the CRE & FM department.



Figure D1.3: Age distribution of survey respondents (Campus NL, 2024)



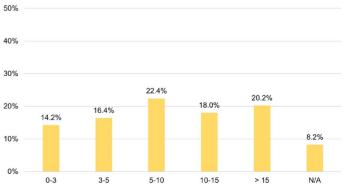


Figure D1.4: Work experience years of survey respondents (Campus NL. 2024)

D1.2 Knowledge exchange processes

Knowledge can be exchanged through various means. In the baseline measurement, knowledge exchange was measured through three processes, as shown in Figure D1.5. The results show that respondents exchange knowledge most often through organisational communication (19.8%), followed by personal interactions (12.2%), and written text (5.7%) as the least used process. This ranking is based on the total proportion of respondents who said they exchange knowledge with the frequency of 'often' and 'always' per process.

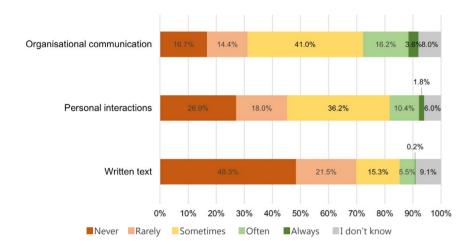


Figure D1.5: Knowledge exchange processes (Campus NL, 2024)

Looking at all knowledge exchange processes together (Figure D1.6), it can be seen that about a third of people exchange knowledge with a frequency of "sometimes", in addition to a collective 12.6% who do so with a frequency of "often" or "always". For knowledge exchange between universities - as a nuance - exchanging knowledge "sometimes" may suffice for those in the field of campus management. Since knowledge exchange need not happen every day to benefit organisations, "sometimes" may be a sufficient frequency for some employees. Figure D1.6 also indicates that knowledge is exchanged between universities, but not routinely or systematically. Nevertheless, the results show that for the nearly 50% of respondents who "never" or "rarely" exchange knowledge, there is room for improvement.

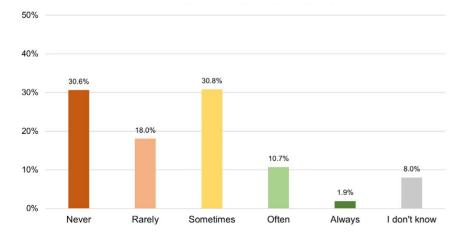


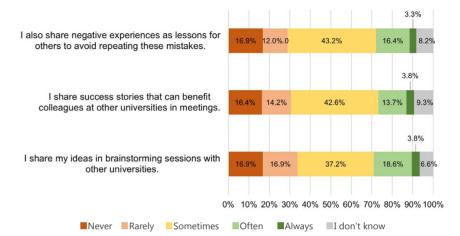
Figure D1.6: Knowledge exchange frequency (Campus NL, 2024)

communication (Campus NL, 2024)

Figure D1.7: Organisational

D1.2.1 Organisational communication

For the most commonly used method of exchanging knowledge, an average of 41% of respondents indicated that organisational communication, such as meetings and brainstorming sessions between universities, takes place with a frequency of 'sometimes'. This may indicate too little routine knowledge exchange. Furthermore, the responses to the questions in Figure D1.7 show that both positive and negative experiences and ideas are shared between universities, allowing them to learn from one another.



With regard to specific barriers of exchanging knowledge through organisational communication, the majority (40%) of respondents say that nothing prevents them from exchanging knowledge, while 28% cite time as the biggest barrier and 14.3% say a lack of incentives is a barrier (Figure D1.8). An analysis of the responses of respondents who answered "other barriers" shows that 14.3% believe that few formal meetings are organised with other universities and that they do not know who the right person to contact is at the other universities.

Q: What prevents me from exchanging knowlege sometimes? (Organisational communication)

A: "unfortunately, consultations with colleagues from other universities are rare."

A: "unfamiliarity with who holds my position at other universities."

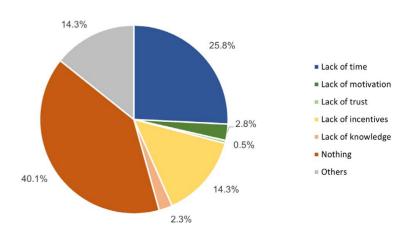


Figure D1.8: Organisational communication barriers (Campus NL, 2024)

D1.2.2 Personal interactions

As with knowledge exchange through organisational communication, the majority of personal interactions also happens with a frequency of "sometimes". Figure D1.9 shows that employees help each other through these personal interactions.

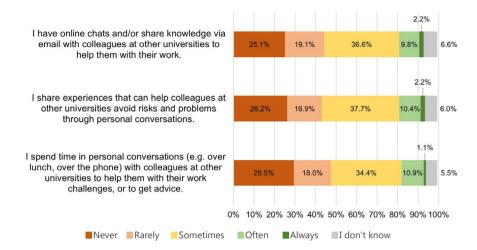


Figure D1.9: Personal interactions (Campus NL, 2024)

Again, the majority of respondents (39.3%) do not mention any specific barriers, while 26.6% mention time as the main barrier (Figure D1.10). Moreover, lack of incentives at 16.8% is a slightly bigger barrier to personal interactions than organisational communication at 14.3%. Analysis of responses from 12.6% of respondents who answered "other barriers" shows that another barrier is not having contact information of counterparts from other universities or not knowing about platforms where interactions can take place.

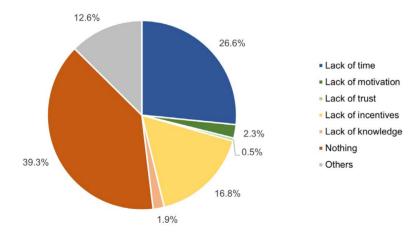


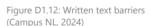
Figure D1.10: Personal interactions barriers (Campus NL, 2024)

Q: What prevents me from exchanging knowlege sometimes? (Personal Interactions)

A: "I have no contact with colleagues from other universities at the moment."

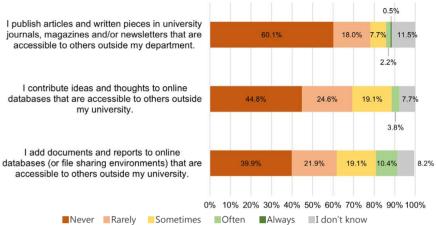
A: "I am not in a network within which this is possible."

Figure D1.11: Written text (Campus NL. 2024)

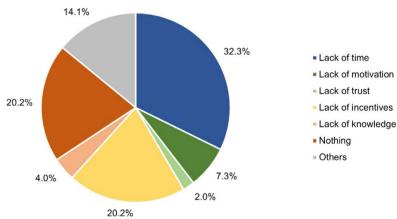


D1.2.3 Written text

Written text (contributions/pieces/data etc.) was found to be the least used method of knowledge exchange, with a significantly higher percentage of respondents indicating that they never use this method. The results of the questions in Figure D1.11 show that a high proportion of respondents "never" publish articles and/or written pieces (60.1%), share ideas (44.8%), or add documents (39.9%) to online databases.



The main barriers to exchanging knowledge through written text are lack of time (32.3%). followed by lack of incentive (20.2%); however, there are also those who experience no barriers (20.2%) (Figure D1.12). Analysis of respondents who answered "other barriers" shows that respondents (14.1%) do not know of any platforms where knowledge can be exchanged through written documents or online databases.



These results show that most respondents exchange knowledge through formal and informal interactions rather than through written text. Without sufficient contacts and platforms/channels, this cannot be done systematically or frequently either. This could explain the large number of respondents who indicated that 'nothing' prevents them from exchanging knowledge, while perhaps the lack of a platform to do so is the (biggest) cause. The following sections discusses possible barriers and incentives to knowledge exchange.

Q: What prevents me from exchanging knowlege sometimes? (Written Text)

A: "Ignorance about which environments are used for this and which environments" are safe for this."

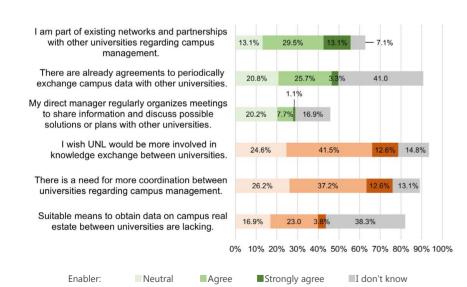
D1.3 Organisational context

Organisational context measures the working culture and environment that enables and encourages knowledge exchange. This is measured by general facilitating conditions related to the organisational structure and social climate between universities. The results also indicate what can be improved within universities to enhance knowledge exchange. The organisational context was measured using positive and negative statements to indicate potential enabling and impeding factors. The results were analysed by looking at the proportion of respondents who answered "neutral", "agree", "strongly agree" and "I don't know".

D1.3.1 Facilitating conditions

The results show that more respondents 'strongly agree' or 'agree' with statements on barriers such as the lack of UNL involvement (54.1%) and the need for more coordination between universities (49.8%) than on facilitating factors such as existing networks (42.6%) and existing agreements for knowledge exchange (29%) (Figure D1.13). Considering that only 8.8% of respondents 'strongly agreed' or 'agreed' that their immediate supervisor regularly organises meetings with other universities, this shows that more facilitating conditions are needed to improve knowledge exchange between universities.

The high percentage of respondents answering "I don't know" to questions on existing knowledge exchange arrangements (41%) and appropriate means of obtaining data (38.3%) is in line with the "lack of platforms or opportunities" raised by respondents in questions on knowledge exchange through written text, organisational communication and personal interactions.



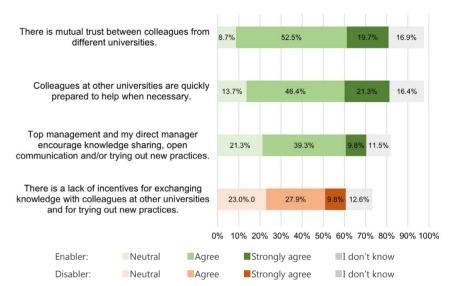
Strongly agree

I don't know

Figure D1.13: Facilitating conditions (Campus NL, 2024)

D1.3.2 Social factors

In terms of social factors, the results show that the majority of respondents (who answered 'strongly agree' or 'agree') perceived a high level of trust between universities (72.4%), willingness to receive help from other universities (67.7%) and encouragement from top management and immediate manager to exchange knowledge with others (49.1%) (Figure D1.14). This indicates that respondents view the social climate between employees as more positive than facilitating conditions or organisational structure. Nevertheless, 37.7% of respondents also felt that there is a lack of encouragement to exchange knowledge with other universities.



The high proportion (~20%) of respondents who answered "I don't know" to questions on both incentive conditions and social factors could indicate that some employees are not very familiar with the initiatives (e.g. networks) and employees at other universities and therefore may not have an opinion. The next section discusses possible individual factors that could influence knowledge exchange.

D1.4 Individual factors

Figure D1.14: Social factors (Campus

NL, 2024)

The individual factors measure respondents' internal and external motivation to exchange knowledge. These intrinsic factors include questions on enjoyment in helping others, knowledge self-efficacy, and ICT use, while extrinsic factors include questions on anticipated usefulness and anticipated reciprocal relationships from knowledge exchange.

D1.4.1 Intrinsic factors

Intrinsic factors measure the potential drivers and barriers of knowledge exchange caused by personal beliefs. The results show that the majority of respondents have the necessary intrinsic motivation to exchange knowledge with others (Figure D1.15). The main intrinsic motivators have to do with enjoyment in exchanging their knowledge (94%) and confidence in the relevance and value of their knowledge for other universities (89%). Similarly, only a small proportion of respondents (< 20%) 'strongly agree' or

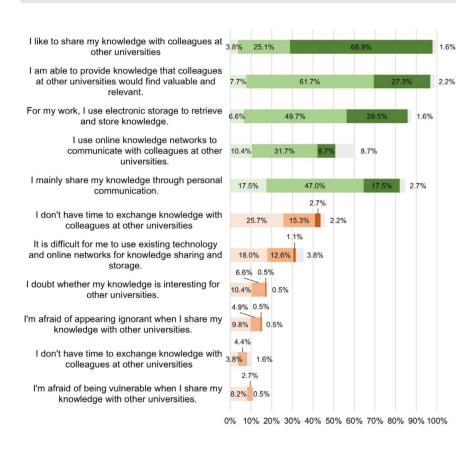
Neutral

Disabler:

'agree' with statements such as lack of time (18%) and difficulty in using technology (13.7%) for knowledge exchange. Similar to the results of the chapter on knowledge exchange processes, intrinsic factors were found not to be barriers to knowledge exchange. In contrast, some open text responses did mention lack of time as a barrier and that knowledge exchange is unnecessary to perform tasks.

"It is encouraged by universities, but at the same time it is often the first thing to be dropped when there is a lack of time. You could manage it more in time allocation."

"You don't need the relationships between universities to do your work on a daily basis. As a result, there is no need to actively build a network at other universities."



Enabler:

Disabler

Neutral

Neutral

Agree

Agree

■Strongly agree

Strongly agree

I don't know

I don't know

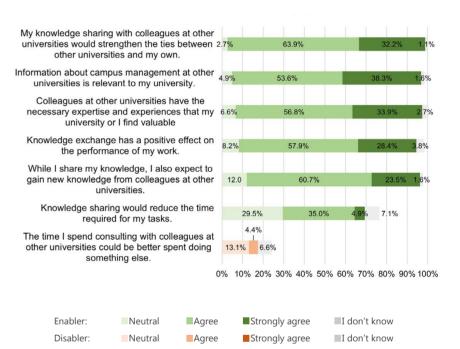
Figure D1.15: Individual intrinsic factors (Campus NL, 2024)

Figure D1.16: Individual extrinsic

factors (Campus NL, 2024)

D1.4.2 Extrinsic factors

Extrinsic factors measure motivation to exchange knowledge based on expectations of rewards and benefits. The results show that the majority of respondents believe that they would benefit from exchanging knowledge with other universities and that this knowledge would be relevant to their university (Figure D1.16). There is also a higher percentage of respondents (39.9%) who 'strongly agree' or 'agree' with the statement that knowledge exchange reduces the time they need to complete their tasks. In any case, the low percentage of respondents who agree with the statement that time would be better spent on something other than knowledge sharing (4.4%) indicates the high presence of external motivation among employees who could bring about reciprocal knowledge exchange.



The results on the intrinsic and extrinsic factors show that there is a strong motivation to exchange knowledge between employees, whether internally motivated or by the expectation of benefits from exchanging with other universities.

However, if we look at the correlation between answers about individual factors and organisational context, with those about knowledge exchange processes (see appendix F), then it can be seen that there is a higher correlation between organisational context - both facilitating conditions and social factors - and knowledge exchange. The results show that compared to other factors, the existence of networks, encouragement by top management, and incentives have a higher correlation with the use of knowledge exchange processes. This indicates that the organisational context has a greater influence on whether employees exchange knowledge with other universities compared to individual motivation/factors.

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D1.5 Existing networks

Respondents were asked to list the networks they are part of to identify existing connections between universities. 68 different networks were found and they were classified into 9 categories discussing the following topics: Energy & Sustainability, Waste & Catering, Education, Contract & Procurement, Management & Maintenance, Safety, Information Management, Real Estate & Development, and General Campus Management topics (e.g. HOI & DFB). See the detailed list of networks in the Appendix G. Figure D1.17 shows that most networks discuss Real estate & Development (15), General Campus Management topics (11), Energy & Sustainability (10), and Information Management (10)),

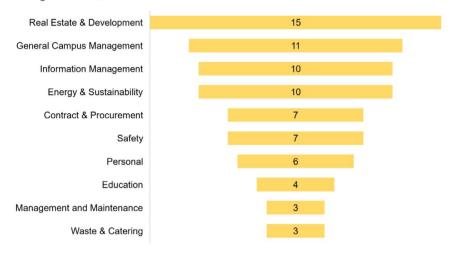


Figure D1.17: Number of networks per category (Campus NL, 2024)

The results show that 106 respondents were members of at least one network. Of these 106 respondents, almost half (46.2%) belong to 2 networks, 17.9% to 3 networks, 7.5% to 4 networks and 3.8% to 5 networks. There are also 6 respondents who communicate with employees from other universities through their own personal networks. Figure D1.18 shows the number of respondents per network category, where respondents could belong to more than one network. It shows that General Campus Management networks (50) where multiple topics are discussed have the most members, followed by Energy & Sustainability (32), and Real Estate & Development (31).

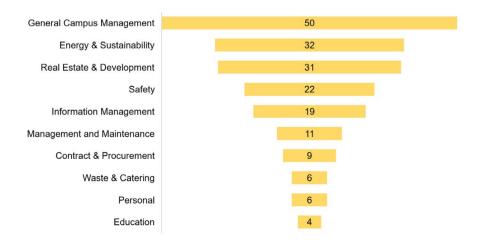


Figure D1.18: Number of survey respondents per network category (Campus NL, 2024)

Figure D1.19: Pre- and post Covid pandemic (Campus NL, 2024)

D1.6 Pre- and post-Covid pandemic

The Covid pandemic may have had a major impact on knowledge exchange as communication became easier with the advent of online platforms. The effects of Covid on knowledge exchange were measured using three statements, as shown in Figure D1.19. The results show that Covid did not have a major impact on knowledge exchange in terms of improvement or urgency, while 38.3% of respondents 'strongly agreed' or 'agreed' that knowledge exchange was already happening regularly with other universities, even before Covid. This might explain why most respondents were neutral about the improvement of knowledge exchange (36.6%) and the urgency of knowing colleagues from other universities (30.6%) since the Covid pandemic. Nevertheless, the open-ended responses made it clear that some respondents felt that digital opportunities for knowledge sharing became easier during the pandemic, while some respondents felt that meetings requiring face-to-face interaction were not picked up since the pandemic.

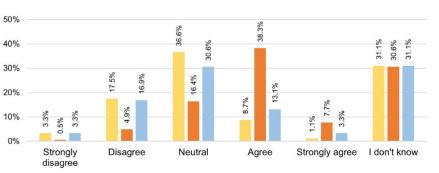
"Before the Corona pandemic, we did an annual exchange day (HOI Project Leaders Day) where Projects colleagues visited each other's university campus. We then had content exchange sessions or case studies that we discussed with our own experiences. That hasn't been picked up since Corona, the last one was in February 2020."

"Meeting digitally has taken off though, as a result you see colleague universities more often because travel time is then no longer an issue."

"There are arguments for and against [digital knowledge sharing]. Teams has made it easier to meet up with people outside your own institution. At the same time, it makes consultations more formal, there is less (personal) interaction."

Interestingly, a large proportion of respondents (~30%) answered "I don't know" to all the questions asked. This can be attributed to the proportion of respondents who were not working at their universities before or during the pandemic.

"I was not yet working for the Uni during the corona pandemic."



- Knowledge exchange with other universities has improved significantly since the Covid
- Knowledge exchange with other universities already took place regularly before the Covid
- During the Covid pandemic, it became more urgent to identify and reach colleagues at other universities.

D1.7 Expected outcomes (benefits of knowledge exchange)

Outcome expectations were measured based on different types of knowledge use. These expectations deal with changes in how to make informed decisions (strategic use), changes in organisational practices (process use), changes in organisational structure (instrumental use), and changes in understanding how to use and benefit from knowledge exchange, especially regarding the role of Campus NL in facilitating this (conceptual use). Each expected outcome was measured through multiple questions per outcome that related to the same use.

The results show that "strategic use" is on average the most important goal of knowledge exchange (56.7%), followed by process use (50.5%), conceptual use (45.4%) and instrumental use (33.7%). Figure shows which specific statements more than 50% of respondents 'agreed' or 'strongly agreed' with. The most expected outcomes are creating awareness through knowledge sharing (79.2%) and accelerating innovation and progress by learning from other universities (73.2%). Analysis of the open-ended responses shows that some respondents' expectations depend on the form of knowledge exchange and the extent to which facilitation matches employees' needs.

"How big the role of CampusNL and knowledge sharing in general is depends very much on the form how this is set up. The knowledge should be easily accessible, and relevant to the employee in question."

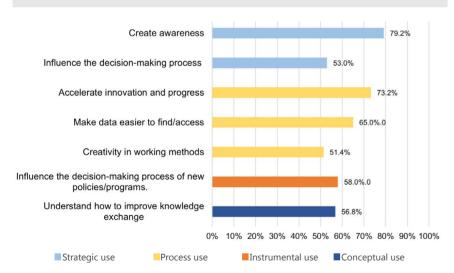


Figure D1.20: Expected outcomes (Campus NL, 2024)

It is striking that, on average, some 15% of the respondents answered with "I don't know" about the role of Campus NL in the process of knowledge exchange. The open answers show that a number of respondents do not know Campus NL and therefore cannot predict what role this (new) research project might play as a facilitator of knowledge exchange. For a baseline measurement, this seems a logical result, as Campus NL has only just started and still has little familiarity. At the same time, in open answers, some stress that (besides new) also long-standing knowledge exchange initiatives (and networks) could be better facilitated. So, also further improving what is already going well.

"A coordinating role does not always lead to better cooperation, often it increases the number of interfaces. [I] think people only need to be encouraged. Coordination is not necessary."

D1.8 Conclusions

Results describe both the goals and means of knowledge exchange on campus management: from motivations to perceived barriers, from the types of knowledge exchange processes to the different networks respondents know or belong to. This provides an initial basis for discussion, improvement and further research in coming years.

For now, it is clear that knowledge exchange occurs through both formal interactions (e.g. meetings and brainstorming sessions) and informal interactions (e.g. online chats, phone and at lunch) via online or in-person means. An analysis of the factors that enable or hinder knowledge exchange reveals that employees already have a strong personal motivation to exchange knowledge, both intrinsically (through enjoyment in helping others, knowledge self-efficacy, and ICT skills) as well as extrinsic (through expected usefulness and mutual relationships). The social climate between employees in different universities is also perceived as very positive. In contrast, the organisational structure and facilitating conditions of universities are perceived to require improvement by a large number of respondents, while we know that this organisational context has a greater influence on how (frequently) employees exchange knowledge with other universities compared to individual motivational factors. The results show that respondents want more UNL involvement, regular meetings and appropriate data processing and exchange tools to learn from each other.

These findings indicate that a perceived lack of facilitating conditions (e.g., UNL involvement and coordination between universities) could be the main barrier to knowledge exchange, while personal motivations and a positive social climate between universities are the main drivers. The results show that encouragement by top management and incentives from the organisation have a higher correlation with knowledge exchange than other factors; thus, these factors play an even more important role in facilitating knowledge exchange, especially for those who do not currently do so. There should therefore be a balance between systematic support and providing incentives for knowledge exchange, not only making current exchange methods more systematic, but also strengthening current reasons for knowledge exchange. To this end, existing networks offer platforms to learn from and test new initiatives to strengthen current knowledge exchange and encourage new methods, taking into account individual expectations.

Finally, interviewing respondents on the effects of the Covid pandemic on knowledge exchange shows that there are advantages and disadvantages to digital versus physical communication where one method is not necessarily better than the other. Supporting knowledge exchange will depend on the needs of network members.

In summary, therefore, the glass is both half-full (there are already many networks and the willingness is there among many) and half-empty (there is still much to improve in the effectiveness of knowledge exchange and actually storing and retrieving knowledge). The "collective campus memory" can be better captured and there is certainly fertile ground (motivation) for this, but also an urgency, as the new generation of "campus managers" changes jobs more quickly and also depends on the knowledge sharing of the older generation with decades of campus expertise (who sooner or later will retire or perhaps leave otherwise). Campus NL will work closely with campus managers in the coming years to suggest improvements for more effective knowledge sharing.