

How to improve Diversity, Equity and Inclusion – Key learnings from a tour of Technical Universities in Europe and the US

Contents

Introduction	3
Suggestions for Chalmers University of Technology.....	4
The goal.....	4
The problems.....	4
Suggested actions	4
Successful methods	6
Key findings	6
Increasing the numbers and organizational structures.....	7
DEI in the university structure	10
Key findings	10
The draw of industry	13
Diagnosing the problems.....	16
Key findings	16
Diversity beyond binary gender	22
Key findings	22
Appendix 1.	26

Introduction

This report is based upon interviews (23 interviewees) about Diversity, Equity and Inclusion at technical universities in the United States and Northwestern Europe. The universities are top performing technical universities based on the Times Higher Education ranking of engineering focused institutions. The interviewees are academics researching gender and diversity or staff working full-time with Diversity, Equity and Inclusion (any combination of those words or other related terms) at technical universities. Two STEM scholars are included as they provided insights from their perspectives, their experiences of gender equality initiatives and gender disparities in their field. The number of people working in technical universities with gender equality, diversity and inclusion for faculty and research staff varies, in the visited universities numbers ranged from 1 to 17, centering positions that work with these issues the majority of their time, i.e., not including faculty representatives¹. The universities and interviewees have been anonymized in this report, sharing their region and position.

The focus in the interviews was how the work is structured, practices and who does what in these technical universities. This report focuses on what is being done to promote diversity and equity and what has been successful and what challenges arise. It does so by presenting positive examples, the problems interviewees regarding lacking diversity and equity and areas for development. The interviewees have many years of experiences leading change work in top notch technical universities, diagnosing the particular problems technical universities face and finding solutions for exclusionary practices that limit the potential of researchers and universities.

A brief discussion on language: DEI, D&I, gender equality, EDI, Likabehandling/likestilling/lighed or equal treatment, jämställdhet, likabehandling och mångfald², there are many names for this category of work. In this report DEI and gender equality will be used respectively with interviewees using their preferred terms.

The report is structured as follows: First, organizational suggestions for Chalmers University of Technology aimed at reaching 40% female research staff in 2029³. Second, the main qualitative

¹ See Appendix 1, a chart of the university employees to DEI workers ratios.

² Diversity, equality and inclusion in Swedish

³ Genie - Gender Initiative for Excellence (chalmers.se)

findings are presented in brief under key findings. Third, chapters exploring the main findings focused on successful methods and challenges.

Suggestions for Chalmers University of Technology

The goal

One of the Genie project's greatest successes so far is the increase of Assistant Professors, from 33% women in 2018 to 50% 2022. These are suggested actions to help reach the Chalmers wide goal of reaching at least 40 % female research staff in 2029. Currently, two (2) academic positions reach or surpass the goal of 40 % female researchers, Assistant professor (50%) and Project assistant (41%). 7 positions reach 30 % female researchers, one of those is base funded faculty, Associate professor (31%)⁴. Reaching the goal is a challenge but there is an opportunity to work on retention of Assistant Professors and create similar opportunities in other positions. The suggestions below are actions based in academic literature and interviews with diversity workers in Europe and the United States. They focus on structural and organizational changes that enable the desired change: increasing and retaining women in research positions and are expanded in Key Findings.

The problems

Analyzing the current situation at Chalmers University of Technology these are problems that have been hindering change, numerically and structurally, in the organization:

- There has been a lack of systematic work on gender equality, diversity and inclusion regarding recruitment and retention.⁵
- Few women in academic positions.

Suggested actions

1. Prioritize female applicants for research positions in departments and divisions with low representation. Utilizing headhunting for underrepresented gender for open positions⁶.
2. Monitor numbers at departments with low representation of women and all-male divisions. A suggested model is the German Cascade model, the positions below should have more of the underrepresented group, in this case women, creating a base for promotion and retention from

⁴ See Genie's internal report 2022.

⁵ There have been multiple systematic advances DEI in education and teaching.

⁶ Can be motivated by C 2004–97 Beslut om Positiv särbehandling [Decision for positive discrimination] and C 2017–0547 Inriktningsbeslut för Chalmers jämställdhetsintegrering [Guiding decision for Chalmers Gender mainstreaming].

PhD-Postdoc up to Full Professor. Line management must take responsibility and prioritize resources for recruitment and education on diversity, equity and inclusion for staff⁷. Line management reporting to: Deputy President of Leadership and Equality and departmental gender equality groups.

3. Create and maintain departmental gender equality groups. Being embedded and having contextual insights creates an opportunity for concerted efforts with greater impact than what a single gender equality officer or central gender equality worker can provide. Collaborating with a central Office they can tailor efforts to departmental needs with a gender equality officer and a departmental group (Ní Laoire et al., 2021: 588–589)⁸. These groups should have representatives from different divisions, enabling changes in the divisions and departments.
4. Create a permanent Office for Diversity, Equity and Inclusion. This enables structural work and continuity within the organization (Dobbins & Kalev, 2017)⁹. The employees should have a minimum of 50 % full-time equivalent for the Office. Having in-house knowledge provides stability and limits reliance on short- or long-term use of external consultants. Tasks: Supporting employees and leadership in DEI work, long term planning, follow-up and active measures for increased diversity and inclusion¹⁰.
5. Partially funding slots for overrepresented gender and full funding for underrepresented gender. The funding for base funded faculty slots could be limited if the department/division has a very low number of underrepresented gender in base funded positions and a very high number of overrepresented gender¹¹.
6. Tying equality goals to promotion and pay raises in line management to create accountability. Possibility of sanctions when set goals are not met (Cortis, Foley & Williamson, 2022: 217; Lombardo and Mergaert, 2013; Mergaert and Lombardo, 2014:2)¹².

⁷ E2 is a positive example at Chalmers.

⁸ Ní Laoire, C., Linehan, C., Archibong, U., Picardi, I., & Udén, M. (2021). Context matters: Problematizing the policy-practice interface in the enactment of gender equality action plans in universities. *Gender, Work & Organization*, 28(2), 575-593.

⁹ Dobbins, Frank, and Alexandra Kalev. 2017. Are Diversity Programs Merely Ceremonial? Evidence-Free Institutionalization. In *The SAGE Handbook of Organizational Institutionalism*, ed. Royston Greenwood, Christine Oliver, Thomas B. Lawrence and Renate E. Meyer, 808-828. Thousand Oaks, CA: SAGE.

¹⁰ KTH currently has 2 DEI strategists, 1 project manager, 1 pedagogical developer and 3 experts with special tasks at their Equality office.

¹¹ This ties into suggestion 6 with accountability, if a division or department do not retain or recruit underrepresented gender, this action sanctions the division/department for their lack of progress.

¹² Cortis, N., Foley, M., & Williamson, S. (2022). Change agents or defending the status quo? How senior leaders frame workplace gender equality. *Gender, Work & Organization*, 29(1), 205-221.

Mergaert, L., & Lombardo, E. (2014). Resistance to implementing gender mainstreaming in EU Research Policy. *European Integration Online Papers*, 18(Special issue 1), 1–21. <https://doi.org/10.1695/2014005>

Successful methods

Key findings

The suggestions in the previous chapter are based on what the visited universities have implemented successfully, these are the main strategies to create lasting change numerically and culturally in technical universities. Two experiences from top performing technical universities stand out as successful when it comes to changes for gender equality and representation. The first is a university (Scholar, 5) that implemented a fellowship where all vacancies would only be open to women for the first six months, the university had the lowest number of women in research positions in the country before this initiative. They employed a scouting team of 10 people to find and encourage women to apply for the open positions. After a year 50% of vacancies had been filled by women and they were not the worst in the country anymore. The university went to court for discrimination, and they were instructed to use the method where they deemed there was a low percentage of women rather than a blanket fellowship for all vacant positions. What they share with the second university (Scholar, 3) is the organizational alignment and investment in driving change.

The second university has an infrastructure of one office dedicated to gender and diversity with five staffers, a traditional equal treatment office, a central gender equality officer and integration of gender and diversity perspectives in both research and teaching with through three chairs for gender scholars. They have 12 employees working with different aspects of gender equality and diversity (See, Appendix 1). Scholar 3 and Scholar 5 both highlight that building these infrastructures was made possible through leadership buy in and investment, believing in that change is needed and putting that into personnel resources. The quotes from these scholars and others that follow demonstrate that change is possible, and others have found success in creating more diverse and equal technical universities.

These two examples provide some key insights. As bold as the method of Scholar 5's university was it did pay off for them and provides other European universities a how to build a recruitment strategy. Both examples focus on building organizational infrastructure which requires top leadership to not just be encouraging but also be frontrunners in enacting change to their organization. Changing a large

Lombardo, E., & Mergaert, L. (2013). Gender Mainstreaming and Resistance to Gender Training: A Framework for Studying Implementation. *NORA - Nordic Journal of Feminist and Gender Research*, 21(4), 296-311.
<https://doi.org/10.1080/08038740.2013.851115>

organization also demands staff tasked with implementing and developing methods to move towards the goals of the organization, this is done best by permanent structures and roles that know the organization well and can therefore strategize appropriately for the long-term.

- Bold methods might pay off.
- Gender equality and DEI measures necessitate leadership buy-in.
- Permanent structures with employees are essential to develop effective measures and maintain change.

Increasing the numbers and organizational structures

Scholar 5 discusses her experience of a successful gender equality effort at her university, when she and her colleagues presented their idea for a fellowship for women the deans of the university wanted to go further:

“...And they can get some kind of start-up money for their careers. When we were discussing that with the deans in the end they said no, we have to put it 100 percent to the vacancies. So what happened in the middle when we were presenting this plan for the [Name] fellowship the executive board together with the two deans decided that all the vacancies would fall under the fellowship. So first they would search for women the first 6 months and if they wouldn't find a woman they would then open the position for everyone. This thing ran for one year [...] The summer of 2019 to the summer of 2020. In the meantime, so the vacancies were indeed announced like that, we managed to hire 50/50. Not 100 percent as was the idea actually but we were also put to the Court of Human Rights where they advised us to change the fellowship because it completely excluded men, because on paper it was 100 percent for women but in reality it was 50 percent but on paper it was not. So, after running it one year where we really repaired our numbers a lot, we are not the last anymore [lowest representation in the country]. We were last for many years. Then we had to restrict to a certain percentage, this is also what the court suggested. We need to implement this medium where it's needed, so in faculties with a low percentage. You can define what is low, we defined it to 30 percent. That goes off the research that shows that minorities under less than 30 percent they don't open their mouth. Above 30 percent, they do. So that is the minimum the absolute minimum.” Scholar 5, Europe.

Despite the dramatic detour to the Court of Human Rights, they were successful in their objective to increase the number of female researchers by announcing all vacancies only for women in the first six months, then opening up for everyone. Scholar 5 describes further:

“At the same time there was a scouting team that was 10 people, I don't know whether they, I think they are still employed. They professionalized the position, it was not that we waited for the people to apply, they also motivated the people to that a [program] fellow would come and search for people in the networks and conferences etcetera. So

that helped and they found out that oh yeah there are more women than they thought. So that outside the fellowship also women are hired and not only that we know that this could be a problem. There is, what can I call that it? A whole group of professionals that are working towards this and support that. It's not only me, because I cannot help it alone. The dean is not enough also, there are more people that need to work towards that. So that drastic intervention created a lot of discussions and a lot of resistance. But also a lot of reflection and introspection, to what's happening here, why is it necessary? Can we do it differently? Why didn't we do it this way?" Scholar 5, Europe.

Scholar 5 describes a scouting team actively searching for women for the vacancies, she emphasizes the team effort in having multiple people working for this cause, not just a researcher and deans. As she states it was seen as a drastic measure and opened up for discussions among employees.

Referring to Scholar 5's university, Scholar 8 addresses discrimination suits in the wake of projects to increase women faculty:

"This is a myth. [European TU] they overdid it. If you can show that the disparities between genders is very high, then you can for example say for the first six months you can open a position only for women and only if you don't find a proper candidate in this period then you open it up for the general public. Because that is absolutely possible because they tried court there as well. So that is often the kinds of stories that I get to hear." Scholar 8, Europe.

This comment addresses the fear of legal recourse for having quotas for women and describes what happened in this case, if you can show that the disparities are high you can use more 'radical' measures as the one she suggests.

Scholar 3 brings up how her university has implemented structures for gender equality and diversity in the organization:

"It was really the idea of bringing gender and diversity perspectives in the university in all areas. It means not only having it on a structural, interpersonal, organizational level but also having it on the budget. Also having it on teaching perspective and research perspective, that means you have five areas at universities[...] Five persons supporting this unit as well as a yearly budget of 100 000 euros to make things happen, which in the beginning worked pretty well. And we developed many strategies in order to make change happen and in diverse areas, that means for example that our university had in 2020 20% of females, in 2030 30% females and on each level of the university, and especially on the level of full professors [...] Each and every person had to come and tell why [they] didn't find a female for the short-list, which was very hard for all of them but it worked out really good... And we also have many diverse incentives. Like for example we have a budget in order to hire females, the faculty can get from this budget so there are many many many diverse let's say instruments." Scholar 3, Europe.

Scholar 3 highlights the financial aspect where the university invests and how there is accountability for recruitment where a lack of female applicants on the short-list must be motivated. She also

highlights the holistic nature of the work where DEI is part of all parts of the university. Discussing her own experience of working with gender equality in her university she states:

“I really think that we decided to install the structures that we have that are working really good now. I often say I wouldn’t have been able to develop the concepts I developed, if I hadn’t had international, well reputed male colleagues to support me in the process. And I’m always convinced, our Rector was a mathematician and was very-very clear and very-very logical. So if you want to get more women, it’s something like if it’s quantity then we have to do something. And he was always, you could, it was fast to convince him that it was very logical. So, he was really very-very supportive. So I think it’s really important, because it’s like [co-interviewee] said, not something like a subjective feeling but he was very like natural scientist. He was like: ‘This argument convinces me, okay lets go on’.” Scholar 3, Europe.

Scholar 3 describes the support she received by male colleagues and a supportive Rector who was engaged as key for her own development and the success of implementing new structures for DEI.

Discussing leadership buy in DEI worker 4 discussed what she sees as a way to big impact in a short time span and how the pipeline metaphor can be used to avoid responsibility:

“Biggest impact the soonest, a cluster hire of professors who identify as women and they are in tenure-track position and now you have this faculty of influence who can work at the grassroots level in the organization. Additionally, funding has to come. If you’re not putting money behind it your just doing lip service right. And also the research behind it because, when you said leaking. That’s why we don’t say pipeline, it’s a pathway. Don’t say pipeline that assumes that there is only one way and if it’s leaking what are you doing to address those leaks? Find out what is causing all of those leaks, instead of just ‘Oh it’s a pipeline that’s leaking, oh well’. Here is a pathway, because we can always adjust a pathway to minimize error along the way.” DEI worker 4, United States.

In the final part of the quote she emphasizes the need to address leaks in the ‘pipeline’, researching causes and creating pathways outside of the pipeline. She elaborates and addresses accountability:

“[Creating] A strategic plan to bring the whole university with all the key stakeholders involved, not just engineers. Faculty, students. That’s a model to create a plan, because everyone has, share their input, you have that buy in. Whose role it is to do what though out the whole system. Whose role it is to execute all of these things. Then you have accountability. And a way of measuring where you are going. It’s always going to change, evolve and you need at least 4 years to try it out right and see what happens. [laughs]. DEI worker 4, United States.

She continues discussing what to do when the spots for professors are scarce:

“So, then what can you do? Building a climate that retains those you already have. If you have people leaving, when a position becomes available you can start building from there. And I think oftentimes [people] think an immediate boost is the measure of success, but I think the measure of success is retention. Because then you set the

foundation for when you recruit. They want to stay and thrive there; you're showing a model for women who identify as female to show the possibility... I think sometimes it gets, the numbers game versus looking at the foundation itself which needs to be strengthened." DEI worker 4, United States.

DEI worker 4 emphasizes retention as a metric for success. Addressing leaks or finding alternative paths is still not addressing what she describes as the foundation, the Pipe if you will, the way the university is structured through its formal and informal demands. Creating and maintaining structures whose purpose is to address diversity, equity and inclusion is one step towards changing that pipe.

DEI in the university structure

Key findings

This section focuses on areas for development within diversity, equity and inclusion work in technical universities with some learning experiences. The first section discusses how technical universities and universities in general struggle with DEI work organizationally and how projects are formulated. The second section deals with the 'draw of industry', how to retain or attract underrepresented groups when competing with industry. The key findings emphasize the need for organizational changes paired with recruitment. As such technical universities do not need to be unchanging monoliths, there are possibilities to investigate why people don't stay and try to counter those push factors. To do this building communities that work towards the same goal is crucial, creating opportunities and rewarding collaboration is one way of doing it. It can be collaborating on research, teaching or other forms of collegiality.

- Technical universities are not an exception, creating diverse, equal and inclusive organizations is possible.
- The competing organizational structures in universities are challenging and require cultural change work to avoid working against each other to reach common goals.
- To retain and attract underrepresented groups technical universities need to investigate what the draws of industry are and evaluate how to provide equally attractive prospects.

Speaking to the first point, Scholar 7 suggests a perspective that turns the question of gender equality in technical universities on its head:

"Generally, I would say that technical universities are not necessarily exceptional, different or unique. I mean the dynamics might be pretty much the same also in other

academic institutions, except yes the competition with industry. But that you also have for the economists for example so that is also not unique for technical universities. So, I see also some danger in thinking they are necessarily exceptional and unique, like we have nothing to learn from other experiences because we are different. Not necessarily, I think there is a lot of valuable knowledge that can be learned from what happens in other fields.” Scholar 7, Nordic country.

This comment highlights the cultural aspects of gendering subjects and cultures that maintain that gendering. This is a good starting point to not go into an exceptionalist mindset where we naturalize the underrepresentation of women and other groups as more *natural* in technical universities than for say a university with a heavy social science curriculum.

DEI worker 7 makes a similar point about how departments and faculties relate to central organization:

“I don’t think it’s just a [European university] thing, that departments and faculties like to see themselves as special and that they have their own way of doing things. And obviously of course they are going to follow university policy, hopefully, but they will implement it in their own ways and, you know, they might add their own level of bureaucracy or an extra bit of the process or something, doing things in slightly different ways. And *that* can be a challenge, particularly when thinking about EDI work. It’s a lot easier to have central systems which are consistent, which if they are properly followed it means that every member of staff should be experiencing the same thing, it shouldn’t matter what group or how they identify, that’s not always the case. So often what I think it really boils down to is experience of a work place or as a student where you are starting, it’s very much like your local line-manager or PI [...] head of department is important but I think it’s really the PI in terms of determining what the culture is like in your immediate team, can you talk about EDI issues? Do you feel that you can go for support? [...] So we have been doing a bit more on that, and I think here is a recognition in general in collage that we don’t train PIs as managers very well, we appoint academics because of their academic, and in particular, research success rather than as managers and their people skills.” DEI worker 7, Europe

DEI worker 7 highlights how central systems become difficult when there is a lack of consistency in organization and bureaucracy among departments or faculties. He ends by emphasizing the role of leaders, in this case line-managers and principal investigators, on the local level for group culture. There are competing power structures within the university, the academic with its hierarchies and faculties and the bureaucratic organization with line managers and central leadership. DEI worker 7 has heard another explanatory model for technical universities lacking gender equality in line with Scholar 7’s note on exceptionalism:

“I don’t fully buy into this argument, that because we are such a STEM focused institution and that we don’t have arts or humanities and social sciences, that therefore there is an element missing from our culture which is present at other universities, that there is more of an everyday discussion and understanding of cultural issues or at least

discussion them as academic work. So, if you have department of sociology or you know gender studies or things like that at other universities, that is recognized as an academic discipline and there is work going on there, and therefore there is a pool of expertise that could be used at the university but it's also there and present in the culture. Whereas as a STEM focused institution we don't have that. And I guess there is something to that, but I'm not sure, I'm worried that people might use it as an excuse rather than anything else. And the sense of, just because we are, I say we but I'm a [Humanities degree] by training, but we are talking about engineers and scientist that they are incapable of talking about these things and understanding these things because they are coming at it from a certain perspective. DEI worker 7, Europe.

This relates to the competing structures where the academic (in this case STEM) is characterized as unfit to deal with these issues. The suggested solution DEI worker 7 has heard is not an organizational, line-management one but rather an inclusion of social sciences. As DEI worker 7 points out in the last part of the quote, assuming engineers and natural scientist are 'incapable' of understanding or striving towards gender equality or increased diversity is reductive and can as he suggests serve as an excuse to remain unknowing.

Scholar 7 brings up how the relationship to university leadership and the view of the organization can limit organizational changes:

"I had a conversation with a man, a man in his 60s [Nordic nationality] professor, who complained that leaders at the faculty level, at the higher level 'You know they just ignore you, they just ignore you'. I said: 'Yeah that's possible'. Then the conversation continued, we talked about something else and he said: 'You know what I do with leaders? I treat them like I treat mushrooms.' What, mushrooms? 'You keep them in the dark and feed them shit'. So that was the [laughs], I started to laugh and that's not going to be a really productive relationship between you and your leaders if that's how you act to one another. I mean how frustrating, how meaningless can a human interaction get? But that was his experience of working in academia." Scholar 7, Nordic country.

This might be an extreme example of a lack of faith in the university organization and academic leaders, but less extreme forms of distrust and disinterest create a difficult starting point for DEI work. Alienation from the organization does not create an inclusive environment where employees can work together towards common goals.

One issue faced by DEI worker 1 is the heterogeneous composition of the university and lacking resources to create tailored interventions:

"I'm working on the latest DEI report and that clearly shows that some of our institutes have different representational problems. Like we have [engineering institution] where it's dominated by older white men and then you have some institutes where the balance is more fair. When you look at the administrative parts, I work at HR where we have mostly middle-aged white women, so it's different when we look at the different units.

So the problems and the solutions are also different, but with that said when you for example look at the academic staff, there is also something about which type of environment does the academic field create for women or for people who offer a different approach to work life balance or have different ideas or thrive in another working culture. Because the academic field is a very competitive field and it's a field that is built upon masculine and individualized ideas about excellence." DEI worker 1, Nordic country

He highlights the issue of providing solutions to a lack of diversity in Human Resources and for academic staff, but this varies between units, and the cultural norms that uphold a gender segregated university. This struggle is heightened by a lack of personnel resources, this DEI worker is the only full-time employee tasked with this for both employees and students. With such limited personnel mapping the different needs for departments and categories of employees is limited and relies on managers or heads of departments investment.

Related to how efforts can possibly exaggerate vertical segregation, Scholar 7 brings up how gender equality efforts or projects often focus on tenure track but not tenure:

"I think there is a problem that many gender equality spots are tenure tracks, like in the Netherlands, which again expresses a form of distrust I think of women. If you still want to be free to get rid of her, in case, in case [laughs]. There was a, not only at the university of [city in European country] they also had special position for women, they were three-year positions for women or whatever. Tenure tracks. I think Marieke van den Brink she also wrote papers where she was explaining how these gender equality initiatives can backfire, because women are basically excluded from the decision-making process, it is a temporary position after all, so they are not really on par with their colleagues." Scholar 7, Nordic country.

Many projects don't present if the women hired through these efforts stay to become tenured or leave when the position ends. Scholar 7 highlights the 'a lack of trust' where 'diversity hires' have temporary positions limiting their power in the organization.

The draw of industry

There are many points where you can stay in academia or venture out into industry as a STEM graduate, this varies between fields if you leave after a master's degree, PhD, Postdoc or later. The main differences between academia and industry for STEM graduates are job security, career paths and salary. The academic path might not provide job security and a competitive salary, career paths might not be limited but further advancement in academia might not translate to a better position in industry. Seeing an engineering degree as a guarantee for job security and a high salary, the option of pursuing an academic career might not be attractive, especially if your industry position also includes research.

"I think there is a critical point between being a student and getting into academia to a PhD position. Of course, there is no particular status in being here so they venture outside [of academia]. They need to be looked after and built up, nurtured in a way.

You cannot just assume that they are comfortable and want to continue. There needs to be work done to make sure [they are comfortable]. Of course, it's tough individual competition, and I think it's really important nudging women. Motivating them, hearing that you are good enough and importantly wanted. Then there would be a higher probability they actually choose it. Everything has to be corrected along the way, of course with housework and such things. If they have children and have a family there are lots of unresolved issues going forward. You could say yes [Nordic country], Sweden and welfare states have a higher degree of equality, but then you also have the third shift, which is under researched.¹³ Scholar 6, Nordic country.

Scholar 6 brings up what she sees universities lack in recruitment and retention of women students to continue in academia. A lack of status, lacking external encouragement and not compensating for gendered norms around parenting.

Scholar 7 discusses how local networks can separate international women researchers and local women:

Scholar 7: "Then I think it's very important to reflect on whether we are talking about local women or international women. And then break them down international women into different groups and ethnicity may play a role there as well. I think these are the main issues.

Me: How would you say nationality and ethnicity plays into, can you elaborate a bit on that?

Scholar 7: Networks are central to academia and in some realities, not all of them, networks are very much local. Meaning between people, not only people on the same topic in the same country, but between people who may work on different topics but at the same institution. So they may be about networks that are difficult to penetrate if you are not a local. It may be about mmm, a different perception of potential in a sense. You may say, more trust on men, in a way women have to build stronger institutional ties before being hired as faculty. It may be some part of the reason. I certainly exclude that it will have anything to do with women not being hardwired or interested in particular topics. That can't be the case. The way the academic job market is now I think there are definitely many more competent candidates, including women candidates than places available." Scholar 7, Nordic country

In the end of the quote Scholar 7 brings up how potential is assessed and that women need to develop stronger institutional bonds to become faculty. Scholar 7 continues on the draw of industry. I asked her about the aspect of leaving the social security of the Nordic countries for an international postdoc versus going into industry:

¹³ The third shift is an elaboration of Arlie Russell Hochschild's second shift by Cheris Kramarae (2001, 3). The second shift being coming home from wage labor to unpaid housework and childcare. Kramarae adds the third shift as education through distance learning while juggling the two other shifts. Kramarae, C. (2001). The third shift. *Women Learning Online*. Washington DC, American Association of University Women Educational Foundation, 1-86.

“It’s a good point but also it has a lot to do with the work environment. The companies, they make you feel like you are someone valuable and that is something that the university is not good at doing very often. There can be visible, and less visible hierarchies, there can be dynamics of exclusion. Which of course, hierarchies are everywhere, you can have a bad work environment. But for engineers to work for companies that are actively headhunting them, they would probably feel more valued compared to some [places].” Scholar 7, Nordic country.

Scholar 7 stresses the importance of being welcomed, there are opportunities in academia to be internationally welcoming and making the transition easier. She later describes how some of her colleagues describe feeling drawn to industry because they feel valued in that context by the employer:

“I feel academia’s constant attempt to reject people [laughs], not to reject but to frame interactions in a certain way. Everybody is replaceable.” Scholar 7, Nordic country.

As Scholar 7 states in this conversation, there is a possibility to change this culture. Making people feel valued in academia to pursue a PhD or to stay in academia when industry has seemingly has more attractive options. Scholar 6 describes the competition with industry similarly. I asked her about students, specifically women students and girls, being the focus for gender equality efforts and the lacking focus on faculty:

“Yeah, there has been less focus there right [on faculty]? All the focus has been on recruiting students, very little to get them over the difficult transition between student and PhD for example. It has been addressed more in later years, both because of projects and that we have pointed it out. It has to be done, there are so many resources put into getting them into industry, IT jobs are very attractive. Business and industry are grabbing at them, using a lot of resources to get them. So [Nordic university] need to do a bit more to compete with industry to get PhDs. That is regardless of gender, getting [Nordic nationality] into these subjects.” Scholar 6, Nordic country.

The focus on getting our students out into business and industry is natural, the majority will not go into academic research. But the possibility to retain students of underrepresented groups and making academia an attractive prospect is one step towards increased diversity.

Diagnosing the problems

Key findings

This chapter deals with current the hindrances to a diverse, equitable and inclusive technical university. The interviewed DEI workers and scholars describe their understanding of the current gender disparities in technical universities. The reasons, the structural and organizational mechanisms maintaining the status quo. The findings suggest that retention is key to make lasting change, local studies of perceived workplace climate and exit studies can be actions to begin addressing these cultural and structural challenges. Keeping the findings from previous chapters working on the overall organizational structure and dual hierarchies of academia and organizational leadership, moving from solely individualized success to shared success and goals is crucial.

- Work solely focused on recruitment and not retention can create a swing-door effect where the recruited leave and representation is not maintained after recruitment efforts.
- There are several norms and structures that hinder minoritized groups from succeeding in technical universities. The support of leadership, colleagues and allies and working against limiters rooted in sexism or racism as a collective might be helpful.

This first quote captures the journey from a non-EU country to a European country as a woman in STEM. She went from a context where she was encouraged and closer to a 50/50 gender split in her discipline at the undergraduate level to being the only woman in her lab.

“So that really hit me more, of course I was aware of the gender norms around the world, but that hit me more when I moved to [Northwestern European country]. And I was the only female student in my first lab.” STEM faculty 1, Nordic country.

This particular story shows the cultural and contextual differences in the world regarding how academic disciplines are gendered. Despite her disheartening experience, this story shows that these gendered divisions are not permanent or inherent. They and the cultures around them are malleable and can become truly diverse in representation and impact.

When DEI worker 1 was asked to describe his role this was part of his answer, he gets into what he aims to change:

“...At professor level here at [tech uni] we also see an underrepresentation of women and there is also this swing door effect that I also want to address. Because it’s not enough to have a lot of campaigns or have some programs or initiatives that gets a lot of women into [uni], that doesn’t have any effect I you don’t look at how the

environment, working environment is. In which way our leaders provide an inclusive environment.” DEI worker 1, Nordic country.

He wants to affect the leaders and focus on the working environment, getting more into belonging rather than simply focusing on numbers that cannot be retained in the current work environment.

Scholar 6 however describes increased representation as the start to cultural change work, changing the institution demands a larger minority:

“It’s a very criticized way of reasoning ‘add women and stir’ but with that said I don’t think we should neglect changes that happen when you change the gender balance, it does things to culture and the work environment. It doesn’t fix everything, but it does change things. It is not as easy to take for granted that things will be in a certain way or the way they always have been. It depends on how included the women are, but it is a better starting point in my opinion. But that it would be miraculous on its own [laughs] it isn’t. But things can change slightly. It is important to keep numbers in mind, it’s my hobbyhorse. The question is, how do you begin to change a culture? How do you do it? Getting change is not that easy, but a more equal gender balance makes it easier. It is harder the fewer you have of the underrepresented gender. If you are a small minority it is tremendously difficult.” Scholar 6, Nordic country.

The danger of the swing door effect and focusing on recruitment are not totally opposing views, they work rather well together. A very homogenous group will have great difficulties predicting what changes would accommodate people who are either very few or non-existent in their group. The few who are there might be uncomfortable becoming a representation of the “Other” and speak for a whole diverse group such as women or people with a migrant background. STEM faculty 2 describes how sometimes initiatives for diversity and inclusion can backfire, when those who are oppressed are encouraged to educate and police co-workers:

“I think here I experience that it is very much a numbers game still, it’s all about the statistics. I mean there are initiatives where it’s, let’s have a workshop on inclusive language and then they ask all associate professors to come at the same time. Those kind of events, they make aware of a problem but it doesn’t go further than that. However, these workshops also asks the women, researchers who are there to kind of point out to your colleagues that it is a problem while you have your male colleagues tell you they don’t believe it so you have to persuade them and then you have to solve the problem and it’s actually very taxing.” STEM faculty 2, Nordic country.

Being expected to educate resistant colleagues on your rights alienates the minoritized¹⁴ person from their colleagues and adds an unpaid burden of being a representative rather than just another researcher.

¹⁴ Minoritized rather than minority, showing that it is a process and, in many cases, not an objective minority position. For example: Women might be minorities in certain STEM subjects but are not a minority in the same way people with red hair is a minority in the world population. The making of a majority or minority is a process which can be shaped and depends on context.

DEI worker 3 discusses the risk of being excluded from your research group if you don't follow traditions but is hopeful that there will be a cultural shift. "Little by little". She suggests that one way to do that is working with leaders on what the expectations of researchers and students are. Discussing the unwilling or resistant people in an organization she says:

"There will always be people who are racist, those who don't want this. They just want to have their career and do their research, that's it. It's challenging and I don't think we can change those individuals. It is difficult." DEI worker 3, Nordic country

DEI worker 6 touches upon both the stigma of being branded as a "quota woman" and that there is resistance to change:

"Of course I get it, if you think you work really hard and you get a position and you are scared as being stereotyped as a quota woman, you feel like you're disregarded. However, I think that is part of the narrative that a conservative community is spreading, aiming to have their community replicate those statements and also hoping that change is not coming. Hoping that they can still be unaware of social inequalities and privileges they just received because of where or how they were born." DEI worker 6, Europe.

The stereotype of the "Quota woman" entails that you have been promoted beyond your ability or recruited just because of your gender. This is related to a "diversity quality paradox" argument where diversity is diametrically opposed with meritocratic standards. Diversity then means that those candidates who are valued for adding diversity are seen as lower quality candidates (Seron et al., 2018, 152)¹⁵.

Scholar 1 describes her research on why women leave academia:

"It's numbers, it's climate and if you don't see any intention to change or any interest or prospect it just becomes stagnant [...] I did an exit survey with the math professors who had left who were women, I interviewed 10 or 12 people. Uhm, two body problem, difficult environment for women, a hostile chair, not enough emphasis on teaching, a real push to do research and get money. Those were the four big reason why women left." Scholar 1, United States.

I followed up by asking if family is seen as the main contributor:

"Her: When NSF¹⁶ interview people they do say family reasons but that doesn't mean that, I think often that's a diplomatic way of covering stuff."

Me: Because that's what is expected of you.

¹⁵ Seron, C., Silbey, S., Cech, E., & Rubineau, B. (2018). "I am Not a Feminist, but...": Hegemony of a meritocratic ideology and the limits of critique among women in engineering. *Work and occupations*, 45(2), 131-167.

¹⁶ National Science Foundation, research funder in the United States.

Her: Right, I did Fulbright research in [country] and I interviewed 20-24 people men and women and asked questions based on our Advance survey questions. ‘Does work interfere with work or family interfere with work?’ And the answer was work interferes with family, it’s not family interfering with work.’ Scholar 1, United States.

DEI worker 4 describes how affirmative action has been expanded from white women:

“Honestly, historically affirmative action has been for white women. The way it was written has allowed for interpretation and growth. So, looking at historically resilient groups. When we do work here, when we have programs which say historically resilient groups or marginalized groups in the department right, because it could be male dominated and we just need women or it could be actually there are some [of] our masters programs that are internationally dominated so we need domestic students. So, we really look at what does the data tell us and what is the path we need to carve to get our students here. The biggest win is when we get historically resilient populations, black and brown folks, first gen, into departments that are underserved. Into high ed in general and look at high potential because if you look at equity at the foundation, if you are from a under resourced high school there’s going to be equity issues in terms of you receiving testing scores and have access to information to do research. So, looking at other metrics to identify high potential candidates who can do well and provide the support to help them be successful, because we know they are going to be successful.” DEI worker 4, United States.

DEI worker 4 also highlights how they work to create pathways for underrepresented groups, she uses the word path or pathway in contrast to the pipeline metaphor where options are limited: forward in the pipe or out through a leak. Paths can be created.

DEI worker 1 in a Nordic country echoes the historical focus on affirmative action of recruiting white women. But also highlights the European and Nordic landscape on discussing other categories than binary gender:

“The field of diversity, DEI, has often been translated to ‘inclusion of white women’ basically. It’s been synonymous with how can we, not include, but recruit more white women. So it’s not only white women but it’s only it only covers the D, the diversity part. So it’s a very narrow way of looking at diversity, equity and inclusion. Both in terms of the target groups so to speak, but also in terms of the other dimensions, inclusion and equity. [...] The first question, of who is the target group and what you measure is also what you work to count and include. The data that we have, in the diversity reports we’ve had so far we have only counted or registered these binary gender ideas, men and women and in reality it’s mostly resulted in initiatives to get more white women to join [university]. So, what I’m trying to do is to have a more intersectional way of approaching these things, of course we are confined or limited by what is allowed to register, what we allowed to count. But we have other factors, other criterions like nationality, age and what age you start your position, of course there is the gender dimension also. So, we are trying now to make some graphics.” DEI worker 1, Nordic country

DEI worker 1 describes how a narrow view on diversity, equity and inclusion can become just a recruitment drive ignoring inclusion work and equity. He further highlights the categories deemed appropriate to measure in his context: gender, age to what position and nationality. We discussed how blunt the tool of nationality can be, nationality does not reflect the race or ethnicity of a person which means racial oppression might be made invisible though that category alone. As for gender all Nordic countries, apart from Sweden, has self-recognition for changing legal gender but all lack a third legal gender¹⁷.

DEI worker 3 discusses her thoughts on the low representation of women as full professors:

“Then there are a lot of women who stay one level under [full] professor and don’t ascend. I think that has several causes. Gender roles in society and that it’s hard to take that final step, having the courage because you have demands of everyday life with lots of different responsibilities. But I think a lot of those who take that step feel a lot more freedom being a full professor because you’re not in that middle position, but at the top and can say no to more things and position yourself. Research has shown us that women need a different kind of support and leadership to go all the way. Men automatically get support in their research environment because they automatically belong. Women don’t automatically belong and don’t get the same level of support from colleagues and therefore need it from a leader. I think is true for other minorities too. When you are a minority, you don’t have automatic acceptance in research environments. The fewer you are the more you need of that other type of support. It is society, it is gender roles, it is support of leaders, colleagues support, other allies and role models in the research field.” DEI worker 3, Nordic country.

DEI worker 3 concludes with several factors that effects women’s representation. Most of them are within the university structure and how university structures interact with gendered norms, her main focus being support from leaders and colleagues.

While discussing resistance DEI worker 5 brings up how a few individuals can make DEI work so much harder:

“So, you know Title 9 is a federal law that comes out of the department of education and there is like *one* person who has decided it is his mission to file formal complaints with the department of education for institutions that are providing programs that discriminate against men. So [university name], research institution and all these great resources in STEM wanna have camps for girls, wanna have fellowships and we can still have those camps but we can’t advertise to be focused on females because we’ve had complaints filed and the department of education comes in and says ‘No you can’t’. So, it’s two steps forward but then one step back because of a small minority of society”. DEI worker 5, United States.

¹⁷ [TGEU - Trans Rights Map](#)

Further reading in Swedish about the Swedish process compared to our Nordic neighbors: [Könskaos i Norden? Så har de nya translagarna påverkat våra grannländer | RFSU](#)

DEI worker 4 brings up another barrier, the attitude of people who feel they are progressive or champions of diversity:

“Sometimes the most progressive folks don’t have humility. They don’t see how they are adding to the barriers in place. Some of the first sessions I do are on cultural humility before we even are going to the topic because of your position, how your position has benefited you. Because you have ownership over what’s happening and sometimes [they] actually are getting upset because ‘I’m good, how dare you make me feel bad about myself’”. DEI worker 4, United States.

Her main point being that approaching the topic with humility and recognition of your own positions can facilitate greater change than holding onto ideas that because you are progressive you are not affected by structures and norms.

Scholar 4 in discussion with Scholar 3 describes instrumental thinking about gender equality and diversity:

“Scholar 4: I think a huge issue is the legislation aspect, a lot of people think as long as there is legislation claiming equal rights there is no further issue.”

Scholar 3: Then it’s fine!

Scholar 4: Also, this is something I acknowledge on the basis of my students, if I teach them about ethics, what they usually want is an ethics checklist. They want an ethics checklist so they can go ‘Okay I’m ethical in A, B C’ and so on. But this isn’t the way ethics work, it also isn’t the way how gender works. If I presented one of our groundworks in one of our projects, they also ask: ‘Aren’t we having a checklist for gender?’ and ‘Can you propose some checklist and we can follow the checklist on gender and diversity? And then everything is fine.’ But you’ll have to make them understand that’s not how it works, and also this is the issue with legislation, because yeah, the legislation is there and it has improved a lot of course or indeed. But issues remain and they are veiled so to say by the legislation. It is really an effort to show how this can be un-veiled again by more focusing on equity instead of equality.” Scholar 4, Europe.

They describe a want for an easy checklist for “difficult” topics such as diversity and ethics using their experiences with students and scholars from STEM subjects. They also discuss an overreliance on legislation as the fix to lacking diversity or representation. As most legislation by nature controls breaches of the law relying on it to solve issues is flawed, a culture of unacceptance for discrimination and clearly defined aspirations with actionable items might be better suited to create and maintain a diverse and inclusive culture.

DEI worker 1 describes how focusing on difference can become difficult and when it is necessary:

“I’ve experienced the intention of inclusion as excluding. And that’s because my norm deviating hair color or something or name is, that there is so much focus upon that, that’s it’s been clear for everyone that I’m not a part of the norm and I’m not a part of

the community. This is also a phenomenon when talking about DEI projects, so I'm always or at least I try to be aware of when is it important to highlight norm deviating aspects of human beings, when is it relevant to talk about human beings as foreigners or women or nonbinary and so on. And when is totally irrelevant? Because the solution is not saying that everybody is human, because diverse ideas of human beings always include a certain universality and in this western world and these fields we're talking about is a universality that is based upon the ideal of a white masculine ideal that even a lot of white men don't see themselves a part of. So that's always the balance, when to highlight these identity factions and when to work with inclusion aspects that are more inside the structures. When talking about inclusion it's even more important to create an environment that is inclusive." DEI worker 1, Nordic country.

DEI worker 1's reflections balance the risk of exclusion when talking about 'difference' and inclusion, inclusion is oft forgotten but is key to creating belonging and functional diverse groups of people.

DEI worker 7 highlights the responsibility of technical universities to work for diversity, equity and inclusion:

"I appreciate the limitations that universities have, particularly when doing EDI work, particularly people doing it in addition to their standard duties as a member of staff and when they try to do things. But I see, part of our whole mission is research which will benefit society [laughs] and if we are trying to say as an institution we are trying to have a positive impact on society and we are using research and technological development to do that we can't also at the same time say that there are societal issues that we're just going to say 'That prevents us from doing our stuff, we're just going to give up on those'. It seems a complete conflict of what is inherently meant to be our fundamental mission of trying to improve the society we are in. So I recognize saying that, yes it's a lot of work and it might take a very long time but we shouldn't be using that as an excuse not to do actions." DEI worker 7, Europe

DEI worker 7 addresses the role of research institutions in making societies better and that we should not give upon that change because it is difficult.

Diversity beyond binary gender

Key findings

In the US and UK, DEI generally means a broad intersectional approach to representation of groups who are or have been marginalized because of their identity or societal status. Equity is the most complex one to Nordic or sometimes European ears, compensating for historical and material differences. Equal treatment or jämställdhet (gender equality) does generally not compensate for those differences but stands for a fair process, anti-discrimination and equal opportunities. What happens before that opportunity or the composition of the existing group does

not factor in, some might be encouraged through a statement on how valued diversity is in the organization. In the European cases there is a want and some praxis to work with broader diversity questions, not just gender and not just binary women. The resistance or legal hinderances to using self-identified gender, trans experience, race, ethnicity or dis/ability makes that broadness difficult, as tracking success and analyzing the status quo becomes harder or impossible.

- Other forms of diversity are often not tied to quantitative goals the same way gender is which means they can fall to the wayside or are deemed too sensitive to track.
- The same way gender equality is not reached by relying on anti-discrimination law only, there need to be action plans for other forms of diversity goals.
- Inclusion is not just the presence of different forms of diversity, it means including diverse perspectives when forging career paths.

DEI worker 7 discusses the limitations of liaising on intersectional aspects of DEI work even in a structure that has many different programs and action plans for various forms of identities:

“One of the challenges with [Gender equality program] is that, obviously it has such a big focus on gender equality but the things that we are talking about come back to not just that and are more broad then that. Whether you are thinking an intersectional approach and looking at other aspects of EDI or just thinking about culture more in general. So, for example more recently we’ve made sure that our [Gender Equality program] action plan aligns with our race equality action plan and hopefully thinking about or disability action plan and [LGBTQIA] action plan comes in as part of the wider EDI strategy framework that we have. And then we have all the other things that go on, but I know both in the [Race and Ethnicity Equality] and the [Gender Equality Program] action plans, we have actions about our annual appraisals for staff, in part having a good annual appraisal is important for everyone’s career development but can be particularly important for women or underrepresented ethnic groups and that’s why those actions are there. But I for myself and the EDI team are not necessarily directly involved with that as a project or as an action towards delivering change, that’s someone else...But I think that is one of the issues with these kind of roles, we might be leading on EDI and supporting things and generating action plans but you do have liaise with a lot of different groups to deliver on things, whether that is, often someone in HR, or in other teams as well.” DEI worker 7, Europe

In DEI worker 7’s case they have them most extensive list networks or equality programs of intersecting identities out of the European universities in this report. He highlights how the central EDI team he’s a part of does not execute or manage all the programs. The responsibility is spread out in different working groups in the HR structure and working with academic staff.

One of the main differences between the United States and Europe in the pre-study of universities to visit was the messaging on race. Race and particularly Black Lives Matter was the focus on most US university websites on DEI following the 2020 protests and subsequent calls for racial justice. Scholar 2 comments on how students and faculty of color has become a main focus:

“As we’ve turned to thinking about race issues we’ve dropped gender back out in ways that are really dangerous. From Afghanistan to the United States we’ve seen a real roll back on women’s rights. It should be alarming to people and what surprises me is how not alarmed people seem to be about this.” Scholar 2, United States.

Scholar 2 is not critical of the focus on race and discusses that there has been a revival of the civil rights movement: “It sucks that we had to do it but then again here we are... [University] is more focused on racial diversity right now, rightly so and for good reason.” Meaning that she sees the need for a continual civil rights movement that addresses anti-Black racism in the US.

Discussing why other kinds of diversity are not discussed as much as gender equality DEI worker 3 said:

“I think often when people do not prioritize it, it’s because it’s hard and that you don’t have the vocabulary to discuss it. For example, talking about racism or homophobia. All that, people avoid those discussions and themes because it’s complicated. You don’t know how to deal with it. Then you would rather not talk about it and then you blame something else, another explanation, because you don’t want to admit that you don’t understand. Then you say negative things about yourself, and no one wants to be perceived as ignorant or homophobic or racist. You rationalize it.” DEI worker 3, Nordic country.

Focusing practices that might exclude neurodiverse people¹⁸, Scholar 8 describes how one of her colleagues was brought to tears by the prospect of being forced to participate in role playing to move on to tenure. She said that not participating hinders you from management positions and moving on to tenure. The colleague was autistic and left the university after this incident. University HR did not consider this a discriminatory practice and Scholar 8 highlights this case as failing to accommodate for neurodiversity within the university. In this case the academic potential of this person was not evaluated rather their ability to participate in role playing, an activity that some autistic people might find very difficult or uncomfortable. Using that metric for evaluation does not consider other strengths more related to leadership or the role of tenured faculty.

¹⁸ [What is neurodiversity? - Harvard Health](#)

Discussing transphobia within the university Scholar 9 describes how his experience as a binary transperson differs from nonbinary colleagues at his university:

“I have been out when I came here and my pronouns were accepted a lot quicker than theirs [non-binary people] was. So, I mean that’s still an issue and sometimes that still happens, that their pronouns aren’t accepted.” Scholar 9, United States.

He also brings up experiences from another department at the university has perpetuated transphobia:

Scholar 9: I hate to use the word TERF¹⁹ but...

Me: They are angry that you call women’s studies gender studies?

Scholar 9: Yes

He says that they have driven people out of the department because they don’t agree with them on gender, in this case meaning not accepting transpeople as part of their academic theory or even as people.

DEI worker 6 discusses how she is working to create a program that addresses intersectional aspects of DEI, I asked her about intersectionality and what active work is being done:

“As you say what I’m getting from the community here is the understanding of the theoretical concept, and I guess modern feminism knows, or has agreed upon that intersectional feminism is the only way forward. And also, how it should be. Then in actual initiatives, I agree that since it’s coming, these initiatives are coming from the binary understanding of the gender equality officer, we are also just starting to implement it. So, meaning I’m setting up a program now at the university that is aimed at the dimensions of gender and social background, social economic environment that you grew up in. Because we see that in [country] it still plays a huge role whether you decide on studying in general or also deciding to study at the [University name] or another technical university. Especially for women but with this we are also targeting what we say in [country] FINTA, meaning Female, Intersex, Non-binary, Trans and Agender. But especially those whose parents have not studied, did not go to college. It’s one of our first actual initiative, not just talking and saying we are intersectional.”
DEI worker 6, Europe.

This is one of the few times class and educational background comes up in the interviews as an aspect of diversity and equity. The term FINTA allows for a broader analysis of gender minorities at technical universities and DEI worker 6 describes the beginning of diversity, equity and inclusion program with an intersectional perspective in a technical university in Europe.

¹⁹ Stands for Trans-Exclusionary Radical Feminist. See more: <https://www.theguardian.com/commentisfree/2018/nov/29/im-credited-with-having-coined-the-acronym-terf-heres-how-it-happened> and Pearce, R., Erikainen, S., & Vincent, B. (2020). TERF wars: An introduction. *The Sociological Review*, 68(4), 677-698. <https://doi.org/10.1177/0038026120934713>

Appendix 1.

Appendix 1. Employees, Offices and DEI workers



TUs	EU TU	US Private	US Private2	EU TU2	Nordic TU	Nordic TU2	EU TU3	EU TU4	US Public	EU Private3	Nordic TU3	EU TU5	US Private4
No. Staff/Employees	~7,000 academic staff	~900 faculty and research scholars	~1,500 faculty	~6,700 employees	~6,000 employees	~8,000 employees	~3,500 employees	~13,000 employees	~14,000 employees	~4,000 academic and research staff	N/a	~8,000 academic staff	~1,000 faculty
Offices	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No	Yes	Yes
Number of DEI employees	12 employees	14	8	13	1	1	10 scientific members	5	9	9	n/a	6	17