



UPPSALA
UNIVERSITET

IT 2022/134

Operational plan 2023

Department of Information Technology

Introduction

The work environment survey that was carried out in the department in spring 2019 showed that staff would like to have greater insight into operational goals, strategies and planning. In this context, from operating year 2020, the department will produce an annual operational plan. In spring semester 2021, the faculty produced a Goals and Vision document and called on the departments to write an operational plan based on these goals and visions.

The IT department has chosen to use the template that the faculty provided for this purpose. The following people – in most cases with support from and revision by “their” task group, see https://www.it.uu.se/about_us/organization/groups – were given the chance to contribute to the document:

- Head of department
- Head of division
- Head of Administration
- Head of Education
- Head of Research
- Head of Collaboration and Outreach
- Director of Research Education
- Equalities officer
- Communications officer

The process of preparing the operational plan with attached action plans has involved discussion by the management group on 29 November 2022 and 10 January 2023 and by the department board on 8 December 2022. In addition, the above-mentioned people were given the chance to give feedback on a first draft between 8 and 22 December. The operational plan was set out by the department board on 19 January 2023.

In addition to the operations described in this document, operations are run within UPPMAX, which are described in a separate operational plan.

Appendix A contains the department’s account entries from 2018 to 2023.

1. The department’s measures in relation to the goals of the Faculty of Science and Technology

In spring 2021, the faculty board set out the disciplinary research domain’s vision and goals (TEKNAT 2020/31). The vision and goals document does not contain detailed actions for each goal. Therefore, the faculty board also decided that

*proposals for how the goals would be reached would be set out in collaboration with the departments (and in the work of the preparation and study programmes boards), so as to be set out in operational plans at faculty and departmental level. Comment under headings 1.1-1.7 below in the event that the department is carrying out or planning to carry out actions linked to the respective goals, preferably in a three-year time frame. **Note that all the following goals will not be relevant to all departments every year.** The report should include activities (efforts and measures), special resources that may have been set aside, and if the department has set out its own goals or targets linked to the faculty's goals.*

1.1 Research-related goals

Five goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: Our research must be further developed based on recognised excellence

The PAP group of the department will continue to work proactively on encouraging submission to relevant external calls. This includes our internal process on soliciting, reviewing, and improving KAW applications for the TekNat prioritisation, our use of VR grant writing clubs in each division, and our discussions to identify and support SSF-FFL and WAF applicants. We also encourage and coach or support faculty members to submit ERC applications at all seniority levels. We will also continue to be supportive in the promotion of our best research constellations within the areas that are considered for internal prioritisation by TekNat if not UU, such as for the university-level focus areas envisaged for funding by VR, Vinnova, Forte, and Formas.

The department has several strong and internationally recognised research teams with supervisors who are committed to research, research education, as well as supervisor training. The department has made great efforts to make the structure of research programmes the same for all of our 11 different third-cycle subject areas and specialisations. The research that emerges from the research programmes is assessed as meeting a high international standard. By strategically raising the minimum level of research education, research will continue to develop further.

Goal 2: Broad research efforts will be developed proactively

While we continue to execute on our previous departmental goal of establishing cyber security, we have gone ahead and collectively identified sustainability as

our next important research area for both the department and society at large. As a result of this we are consolidating and clarifying our efforts (currently distributed over all of our five divisions) via an existing cross-division mechanism referred to as an arena, which provides a forum for discussion, a seminar series, an incubator for multi-disciplinary research and grant applications, as well as the single point of contact for other entities (at TekNat or UU or outside) who seek experts in the computational aspects of sustainability. This effort is led by Professor Mike Hazas.

Goal 3: Funding for research must be broadened

See Goal 2: After successfully achieving (in 2020) two of our three departmental objectives, namely establishing research programmes in AI and in Computing Education, we will continue to diversify our research into cyber security, our third objective (where we have already seeded a PhD school, hired a high-profile adjunct professor from industry, and promoted the area for inclusion within the TekNat and UU profile areas), and we have now added Sustainability as a fourth objective. This is expected to increase the number of grants awarded to the department in cyber security and sustainability. In addition to our own internal prioritisation above, we are considering external initiatives. The one with the most immediate potential for impact is the SciLifeLab & Wallenberg National Programme for Data-Driven Life Science (DDLs) because of their upcoming national call for hundreds of PhD and postdoc positions. We see our department as a key player in this area and will proactively position our relevant researchers for this.

We will increase the number of external grants and the proportion of external subsidies with links to business, authorities etc.

Activities:

- Encourage submission to relevant external calls for proposals.
- Provide information on the latest calls for proposals for collaboration research projects from Vinnova, SSF, KAW etc., through LäsIT and staff meetings, (Head of Collaboration and Outreach)
- Provide information on and work towards increased IT participation in the faculty's strategic partnership, and thus towards joint applications through meetings, seminars and visits.

Indicators:

- The number of VR/ERC/EU/VINNOVA/SSF/KAW/KKS (and other private foundations) applications and grants.

Goal 4: Access to qualified research infrastructures must be guaranteed

The following three important research infrastructures are hosted at our department and are all highly relevant also for the Wallenberg Foundation's 12-year-initiative in data-driven life science (DDLs, <https://www.scilifelab.se/data-driven>, see Goal 3):

- UPPMAX provides storage and computational resources at the national level, with a majority of users at UU. UPPMAX also provides local CPU and GPU resources, cloud resources, and storage for research and education. UPPMAX works actively to ensure that the computational infrastructure needs of UU are covered regardless of changes in the national organisation. UPPMAX also actively works to optimise our energy usage, and to add services and platforms aiding ease of use and interoperability built on top of our solid existing hardware offering.
- The VR-funded Uppsala node of InfraVis (<https://infravis.se/>) is a national infrastructure providing state-of-the-art visualisation competence, equipment, and support to help visualise research data from any scientific domain.
- The BioImage Informatics Facility (BIIF) includes the SciLifeLab-funded BioImage Informatics Unit (<https://www.scilifelab.se/units/bioimage-informatics/>) and the Uppsala node of the VR-funded National Microscopy Infrastructure (<https://www.nmisweden.se/>).

We will ensure that the department's infrastructures can function as a bridge between our own researchers and researchers from the surrounding life-science community (both academia and industry), leading to new networking opportunities, which in turn lead to joint PhD and postdoc projects within the DDLs programme.

Goal 5: We will adapt research support to current needs

Essentially, the department has well-functioning, general administrative support. However, we need to review efforts for specific research support.

The department continues its career support programme for tenure-track assistant professors, including grant clubs, two public meetings per year with seminars, individual career planning, and individual yearly follow-ups from their head of division, programme-responsible professor, and director of studies. The department also aims to reactivate PhD-student-coordinated activities, upon reminding them that part of the research budget is earmarked for this and that research support can be a topic for this.

1.2 Goals related to education

Five goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: Our courses will be further developed based on recognised excellence and demand

Building our education on excellence is built into the fibre of the department as witnessed by the many distinguished university (or otherwise prize-winning) teachers who are coached into taking positions as e.g. programme coordinators or head of education. Our research excellence and frequent interaction with companies and industry representatives gives us a good understanding of the demands and needs of industry and society.

We will continue to strive to recruit world-leading researchers who are also excellent teachers. Our main obstacle here is the relative absence of faculty funding for research which is impacting our ability to offer competitive packages as well as the slow recruitment processes. The latter regularly lead to top candidates being offered positions from rival universities despite having applied to these rival universities much later than to Uppsala. The combination of non-competitive packages and slow processes is a severe problem for the department today and will continue to cause problems unless resolved.

The resulting shortage of staff manifests itself as an inability to meet the demands from other programmes at the faculty and from industry and will continue to do so.

Therefore, the most strategic work in our strive for excellence and meeting existing demands is to find ways to address the funding issues at the faculty level.

Goal 2: Our courses will be linked to research

A long-term obstacle is the department's lack of research funding, as above. This hurts research in a long-term perspective and will, unless addressed, promptly lead to teaching being far removed from research.

Starting in 2023, we will do the following to strengthen the link to research in our teaching:

1. Instruct teachers to give at least one lecture (or equivalent) about their research in their courses and explain how it relates to the course content
2. Instruct teachers to cover fundamental and/or recent/relevant research results in their courses
3. Encourage more academic guest lecturers, not just industry representatives

Strategically, we will explore the possibility of moving some of the responsibilities of running, developing, staffing, QA, etc. of courses in similar subjects to teacher teams where there will be an appointed person responsible for the link to research in all courses given by the team. If this method fails or fails to get traction, we will explore other ways to move responsibility down in the hierarchy, but retain some means of controlling how it is done.

Our doctoral students are offered to take on departmental duties at 20%, mainly as teaching activities. As a result, many of our students come into close contact with young researchers who talk about and connect them with their research projects in the context of teaching.

Goal 3: Our courses will be linked to industry

Strategically, we continue to work with industry representatives on all programme boards to ensure continued relevance of our education for industry. Courses are typically proposed by the programmes after consulting with (or getting proposals from) industry representatives. Additionally, we will explore using contract education and lifelong learning to mix students with industry experience and students without. In 2023, we will launch a formal procedure for continuous revision of our course offerings (create, delete courses) as well as a formal procedure for updating courses with new material. We have also recently completed strategic hirings with the express purpose of creating industry

connections for teaching e.g. software engineering with help of industry professionals.

On a per-course level, we will continue to encourage guest lectures by industry representatives on all courses. We also have several project courses where the projects are specified by companies. Finally, most of our thesis students do their thesis work in the context of a company.

Activities:

- Reach out to industry contacts annually in October to encourage providing degree projects.
- The Head of Collaboration and Outreach will maintain an up-to-date list of industry collaboration at the department, including which type of collaboration is involved (course participation, degree project, project collaboration etc.) to simplify finding contacts for guest lectures etc.

Indicators:

- The number of programme advisory boards with a member from industry.
- The number of our courses that have an external guest lecturer or project from industry
- The number of degree projects with links to industry

Goal 4: We will ensure pedagogical development

The department runs a pedagogical lunch seminar which is starting to get larger attendance after returning to campus. We also set aside funding for teachers each year to attend courses or otherwise increase their pedagogic portfolio. The department continues to have a large number of distinguished university teachers and there is a good internal process to help prepare staff members to apply.

In the wake of the pandemic, students seem reluctant to return to classes with regular lectures. Thus, there is an increased need to educate teachers in ways to activate students during face-to-face teaching to motivate them to return physically to campus. Revising our teaching methods to motivate students to return physically to campus is the foremost short-term goal for the department.

Goal 5: We will offer lifelong learning

The department is offering a small number of lifelong learning courses. We have the intention of increasing this offer as we manage to recruit ourselves out of a dire staffing situation. The small number of courses thus serve as a test balloon and way to gather experience going forward.

The department faces a conflict of goals, in which our ambition of offering lifelong learning must take a back seat to our ambition to create a good balance between funding agreement targets and faculty-funded research, thus securing the availability of teachers with strong links to research. Despite the conflict of goals, the goal of offering lifelong learning is considered important and there is great interest in giving/contributing to these courses.

Activities:

- Offer contract and LLL courses aimed at industry and authorities for lifelong learning/continuing professional development/new technologies.
- Support the university/faculty in the development of forms and methods for sustainable lifelong learning offerings.

Indicator:

- The number of courses offered within contract education (paying participants) and lifelong learning.

Intermediate goals:

- 1–3 new courses within contract education and lifelong learning implemented in 2023. Better allocation of research funding could make this figure significantly higher, not least with regard to interest from lecturers in the department.

1.3 Goals related to collaboration

Three goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: Our collaboration internally and with other higher education institutions will be developed

Activities:

- We will make the people behind our research visible, internally and externally, through ~weekly personal portraits/stories on the department's website, as well as on screens in Building 10.
- We will develop alumni activities in the department.

- We will strengthen internal communication in the faculty by continually participating in and contributing to the communication meetings that take place several times per semester.

Goal 2: Our collaboration with external stakeholders will be developed

Activities:

- The Head of Collaboration and Outreach is commissioned to arrange and convey opportunities for and information on collaborative projects with industry and society (individual contacts, national networks/programmes, the university's/faculty's strategic partnership) with the aim of increasing the institution's part/participation in these.
- We will organise seminars, information meetings and discussions with the university's/faculty's existing and new strategic partners, as well as other industry stakeholders of strategic importance to the department.
- We will provide information about opportunities for collaboration, calls for proposals and activities at staff meetings and continually in LäsIT.
- We will participate in public events, such as SciFest and the new Ångström Explanatorium aimed at schools and the public.
- We will strengthen the departmental researchers' understanding of the importance of and opportunities for collaboration through a seminar focused on collaboration within the department's career programme for associate senior lecturers.
- The Head of Collaboration and Outreach will provide assistance with drawing up agreements for collaboration projects according to the department's established collaboration procedure in order to facilitate and protect researcher's rights and to avoid difficulties for the university.
- We will involve doctoral students in organising presentations and visits to primary and upper-secondary schools.
- Review how communication with the Head of Department and Head of Collaboration and Outreach can help to create a warm welcome for external stakeholders, such as industry, schools, other authorities and the rest of society.
- Continually highlight good popular science examples of collaboration and research that is carried out by the department, so that external stakeholders get a clear idea of our research activities.

Indicators:

- The number of presentations/meetings with/by industry
- The number of presentations aimed at the general public and schools

Goal 3: Guidelines for collaboration merit rating will be developed

Activity:

- Together with the recruitment committee, the Head of Collaboration and Outecah will continue to develop proposals and criteria for how collaboration skills should be described and assessed in order to attach real importance to the department's recruitments where collaboration skills are required.

1.4 Goals related to the faculty as a workplace

Three goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: A good work environment with equal conditions for all will be provided

Our ongoing work to ensure equal conditions and equality is much appreciated by the staff, as the department takes its work to reduce potential prejudices very seriously.

At the start of 2022, the world emerged from the worst phase of the Covid pandemic and it was therefore possible to return to working on campus. In 2023, the department is still handling problems resulting from the pandemic to some extent, primarily doctoral students who have had parts of their doctoral studies seriously affected by Covid to their own or a family member's illness and/or difficulties completing their research project in time.

The department views the development of doctoral students primarily as the result of a research education and does not focus primarily on the results of a research project, which helps to create a good work environment with a focus on personal development.

Through communication, we will help to create a greater sense of security and belonging by giving everyone the chance to have their voice heard through communication efforts. This may manifest itself in inclusion in LäsIT, monthly meetings or assistance with promoting local lectures internally.

We continue to review periodically how faculty funding is allocated within each research programme, so that we can share best practices and strive to create equal opportunities for research, independently of which division or programme one is recruited to.

Activities:

- *Safety check.* A physical safety check is planned for October 2023. The focus of the safety check will be ergonomics, electrical safety and chemicals.
- *Induction of new members of staff.* Department-specific support material to ensure a smooth induction of all new staff was developed and implemented in 2022. This will be evaluated in 2023. The work of reviewing the induction of new members of staff is part of the remedial work following the work environment evaluation which took place in spring 2019. In 2023, work will commence on department-specific support material for when staff finish their employment with us.
- *Information and training on the organisational and social work environment.* The department is planning organised training courses for heads/managers on the organisational and social work environment in 2023.
- *Doctoral students' job situation.* The job situation for our doctoral students will continue to be reviewed. In part, this is a component of our continued work with the new GU organisation. It is also part of the remedial work following the work environment evaluation which took place in spring 2019, and part of the follow-up of the research education evaluation carried out in 2021-2022.
- *Evacuation exercise.* The exercise is expected to take place once annually within the campus management area. This is managed by campus management.

Goal 2: Recruitment of outstanding research and teaching staff will take place

The department expects its search groups for the creation of faculty positions to be even more proactive after the publication of an opening, in order to make sure prominent people apply and understand up-front what it means to work in Sweden and at our department.

Goal 3: There will be good career options for our research and teaching staff

See Goal 5 of Section 1.1.

1.5 Goals related to internationalisation

Three goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: The forms of internationalisation will be further developed

The department's activities are largely international. Students in second-cycle courses and doctoral students are recruited mainly from abroad and the same applies to post-doctoral students, researchers and teaching staff. In 2023 we will continue to recruit widely.

Goal 2: Conditions for international staff and students will be improved

This is closely related to the efforts we are making to have a good work environment for everyone (see 1.4 and 2.3) in combination with Goal 3 below.

Goal 3: Language barriers will be reduced

The department will continue to promptly translate all new documents into English or summarise those documents that have not yet been translated.

The department will also continue to encourage our foreign staff to attend the Swedish for Academics courses provided by Uppsala University in order to facilitate their integration. In addition, local language courses are provided for the department's employees at regular intervals.

1.6 Goals related to the faculty's global position

Two goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: The faculty will keep up with relevant global and local goals

We see our investments in sustainability and cyber security as direct actions to take on multiple key global challenges. We also aim to start organising important research conferences again, for increased visibility

Goal 2: The faculty will make the most of opportunities arising from digitisation

The department will increase its use of video conferencing in order to bring a wider range of high-profile guest speakers to our seminar series, our BSc-level and MSc-level courses, and our PhD-level courses, as well as high-profile opponents and committee members to our PhD defences.

1.7 Goals related to future and continuous development

Two goals are described at faculty level (see TEKNAT 2020/31 for details).

Goal 1: We will have an up-to-date world view

No special activities in 2023.

Goal 2: We will regularly review our operations

We will continue working together through our PAP group and Arena start-up funding to explore new directions. This approach has worked very well for us in the past, as seen in our identification and intensification of four strategic research areas over the past few years: AI (new programme and recruitment), Computing Education Research (new programme and recruitment), cyber security (recruitment), and sustainability. We aim to continue this success by identifying our next focus area.

We also aim to get all divisions to periodically revise and make transparently available their internal funding processes, in the hope of the latter becoming more uniform across the department.

2. The department's other goals or strategies

If the department has decided on or planned other goals or strategic prioritisations (in addition to those in Section 1 above), describe them below.

2.1 Overall

Move to common, transparent and fair principles for assigning resources to courses, teachers and divisions

The department is completing its second step in a process to change how money for education is managed and distributed. Our goal is that by the end of 2023, dimensioning of courses is governed by common principles rather than local for each division. This will make processes more transparent and fair and make it easier for the department to make strategic moves.

Goals and strategies for the department

At the department's strategy conference in 2022, ideas and views on proposals for a vision, goals, metrics and activities for the department's strategy IT2030 were gathered. These have been compiled in a draft for work to be continued at the start of 2023.

Activities:

- Hold a department-wide follow-up meeting about the conference to hear views, suggestions and opinions on the draft goals and strategy document.
- Finalise and decide on the department's strategy and goals IT2030 and begin to implement them.

2.2 Doctoral studies

There is a regular review of the situation of doctoral students and their education in a variety of ways, for example at

- the annual update of individual study plans with the help of a jointly formulated progression matrix
- senior group meetings for each doctoral student¹
- supervisors' committees

For the past few years, the department has had a department-wide preparation process for recruiting doctoral students. The purpose of the process is to ensure that we reach a wide audience when advertising PhD student positions and conduct qualification-based recruitment. The process must be followed when admitting and appointing doctoral students for all of the department's third-cycle subject areas. Prior to advertising, a search committee must develop a skills profile and criteria for how the applicants for the position will be assessed. These preparations provide a good basis for the advertisement, which must also take account of the equalities perspective. The search committee is then involved in a two-step interview and the ranking of candidates. An evaluation of the recruitment process to identify possible simplifications will take place in the near future.

The department is involved in far-reaching work to improve the opportunities for doctoral students to carry out their departmental duties, for example, the directors of studies and teacher teams help them to plan their teaching. The goal is to enable doctoral students to plan their time more efficiently, so that they can focus on their research and participation in conferences during periods when they are not teaching.

We have identified that doctoral students' willingness to engage in collegial contexts in the department has decreased over the years. It should be possible to increase interest by making the commitment more worthwhile for individual doctoral students. The department considers it important to be able to provide information about the existing regulations regarding remuneration and the extension of doctoral studies. The inquiry into whether some doctoral student representation work can be counted as part of the 20% departmental duties led to that it could not; instead we recommend the possibility of an extension. We have a

¹ You can find a description of senior groups here:
<https://mp.uu.se/web/info/forska/doktorandhandbok-pa-it>

pedagogical challenge to clarify the importance and advantages of being involved to attract more doctoral students to become active, otherwise we risk exploiting the few doctoral students who show interest. A transparent schedule that clarifies the remuneration a doctoral student receives for getting involved in an assignment will shortly be made available.

The department encourages the further development of supervisors in addition to the mandatory supervisor training. The department strives to ensure that all third-cycle subject areas have supervisors' committees to share experiences, which have proven to be successful where they occur. Supervisors' committees can provide a forum for discussing questions about the doctoral students' and supervisors' expectations of each other and the division of responsibility, for example, how to set clear milestones, maintain the quality of papers and requirements for co-authorship. One suggestion is that all supervisors should take a shorter course in research ethics so as to be able to discuss related questions with their doctoral students who have this as a mandatory course.

2.3 Work environment

Everyone with management responsibility must use a special template to conduct annual appraisals, so that we can cover the entire staff together. The outcome of these conversations must be followed up and discussed by the management group. This allows us to detect signs of stress, ill-health and other problems at individual and group level at an early stage. Another purpose of the conversations is to follow up which members of staff have undergone some form of management or supervisor training. The next period will be March-April 2023.

For doctoral students, the appraisal is divided into two parts. One part is held in connection with writing a new ISP and the other in connection with the senior group's follow-up meeting for the doctoral student.

Time for appraisals must be included as part of staffing plans at departmental level. The head of division and other people with management responsibility, as well as supervisors, must set aside time for planning, conducting follow-ups of structured appraisals, as well as for unplanned conversations of the same nature during the year. Those who conduct these appraisals must pass on budget-related questions that come up during the appraisals to the heads of division or head of department.

Mentoring programme

Everyone who is employed for a period of at least one year at the department must be assigned a mentor by the mentor coordinator.

Language teaching

All new recruits who do not speak Swedish should be encouraged to take part in Swedish language classes.

Work environment survey and health profile

A work environment survey and health assessment must be carried out every five years. Under special circumstances, a separate work environment survey and follow-up are conducted. The latest regular work environment survey and health assessment took place in April/May 2019 when a work environment evaluation was carried out. In this context, all staff were offered a health assessment at the occupational health service. In addition, all staff at UU are offered a health assessment when they turn 50, 55 and 60 years old.

Management training for managers

Management training must be offered and encouraged, everyone with management responsibility such as the head of department, head of division, managers, head of administration, directors of studies, head of education, head of research and research directors. The goal is that at least 90% of all staff with management responsibility will have undergone training. Follow-up will take place on 31 December each year. For 2022, the department's HR team will do this by means of a survey in KURT.

Supervisor training

PhD supervisors and degree project supervisors should take part in supervisor training. In order to be principal supervisor for a doctoral student, supervisor training is required. The goal is that at least 90% of all PhD supervisors will have undergone training. Follow-up will take place on 31 December each year. For 2022, the department's HR team will do this by means of a survey in KURT.

Training in first aid

Every two years, staff must be offered first aid training. A basic course and follow-up must be provided. The next courses are planned for spring 2023.

Preventive health care

Preventive health care must be offered to all staff, for example through subsidised coaching, one hour of preventive health care per week during working hours, massage, fruit baskets in staff rooms. The department must also organise preventive health care activities at the department.

Preventive physical work environment work

The department provides support in the form of workplace design, procurement of work aids etc. If necessary, adaptations take place as soon as possible for staff as well as students. Regular safety checks are conducted. The results are compiled, evaluated and followed up.

Social & cultural activities

The department organises and supports various social and cultural activities.

Stress & conflict management

The department offers training in managing your work situation, particularly in relation to conflicts and stress. This can take place in groups or individually.

Equality

The aspect of equality must be included as an important part of work environment work. The department's equality team must monitor the issue and provide information on its work. Work on equality affects students as well as staff.

Evacuation exercise

The exercise is expected to take place once annually within the campus management area. This is managed by campus management. The evacuation plan is available on the website: <http://www.polacksbacken.uu.se/Sakerhet/Utrymning/>

Fire safety check

The security department must perform a fire safety check once per quarter.

Work environment group

The group meets three times per year. Members: safety representative, head of department, head of administration, HR generalists, student representative. The work environment group must coordinate and provide information on the department's work environment work. In addition, the work environment group functions as a reflection group for the annual review of the action plan for work environment work.

Emergency response group

Members: safety representative, head of department, head of administration, HR generalist, study adviser, student representative. The emergency response group must make sure that the department has procedures for emergency assistance and provide clear information about them.

Information initiatives

We must provide information about the above and clarify the organisation and division of responsibility for everyone through the following channels:

- LäsIT
- The website
- The department's own planning days, meetings etc.
- Work environment signs
- Information meetings after significant changes to procedures

- Staff meeting once per month

2.4 Communication

In addition to the faculty's goals, communication at the Department of Information Technology is expected to fulfill department-specific commitments.

Communications operations 2023

- Social media: posts about our research, events, and any prizes/awards – ongoing
- Updating the website before the start of each semester – ongoing
- Popular science research interviews (researcher profiles) – every other month
- Review information on the staff portal – at the start of each semester
- Update information on the staff portal (Our IT) – ongoing
- Communication meetings, head of department – ongoing
- Communication meetings, head of division – ongoing
- Contribute to internal communication news, staff portal blog – ongoing
- Publish the LäsIT newsletter – every Thursday
- Publish content on our digital screens
- Contribute to the department's staff meetings – each month

Projects and events spring 2023

- Create content and take part in SciFest – publish on social media and in internal channels
- Investigate the work that is required to transfer all information on the website to the new Uppsala University web platform
- Develop new procedures for collaboration – e.g. what happens when external stakeholders want to visit our premises
- Develop our pages on the new university website during the eventual pilot-project (decided in winter 2022)
- Review the department's alumni work – what are we doing today? What could be improved?
- Investigate the advantages and disadvantages of setting up a Twitter account for the department
- Develop a communication plan for external communication for the whole academic year. Use the document “Goals and strategies for external communication” as guidance

- Prepare goals and strategies for internal communication (for staff & students)
- Develop our use of the Slack channel: should we upgrade to pro? Activities in Slack?
- Investigate opportunities for participation in Kulturnatten 2023, for example, a short popular science lecture in central Uppsala

Projects and events autumn 2023

- Contribute to our participation in SciFest 2024, possibly with a short workshop where either the communicator or person responsible for SciFest gives a brief review of the department
- Implementation of a possible transfer to the new web platform (if the pilot did not happen during the spring semester)
- Implementation of a possible transfer of internal group pages on the staff portal to Sharepoint
- Sift through and develop the staff portal content on our sub-pages before/when it is transferred to Sharepoint
- Possible Kulturnatten participation
- Revise goals and strategies for internal and external communication

2.5 Equal Opportunities

1) Introduction

The plan is composed of two parts. The first part describes day-to-day work with equal opportunities and gender equality at the department, and the second part describes activities planned specifically for 2023. The following plan is applicable to all activities within the Department of Information Technology and applies to all staff and students at the department.

1.1 Responsibility for Equal Opportunities Efforts at the Department

The Head of Department has overall responsibility for equal opportunities work at the department. The department has an Equal Opportunities Officer, appointed by the Department Board. The Equal Opportunities Officer is responsible for reviewing and evaluating equal opportunities work at the department, planning and executing equal opportunities projects and regularly updating the Operational Plan for Equal Opportunities. The Equal Opportunities Officer is also responsible for supporting students and staff on issues or questions related to equal opportunities within the department.

2) Day-to-day Efforts with Equal Opportunities

This section presents the day-to-day efforts with equal opportunities at the department.

2.1 Equal Opportunities Officer

An Equal Opportunities Officer is to be appointed. Information about how to contact this person is provided on the department website. Officers in charge: Head of Department and the Equal Opportunities Officer

2.2 The Equal Opportunities Group

The department appoints an Equal Opportunities Group led by the Equal Opportunities Officer. Each division within the department is represented in the group, in addition to representatives of UPPMAX, the A Group and students. The members of the Equal Opportunities Group serve as the department's steering committee for equal opportunities. They are also the review panel for equality issues, such as monitoring and evaluating equal opportunities and gender equality efforts, suggesting equality measures, and planning and implementing equal opportunities projects. The group members are also expected to keep their respective divisions/equivalent and head of division/equivalent informed on the work of the Equal Opportunities Group. The Equal Opportunities Group has monthly meetings except during June, July and December. The group's meetings and reporting/documentation are to be in English. Officers in charge: The Equal Opportunities Officer and Head of Department.

2.3 The Management Group (In Swedish: ledningsgruppen)

Members of the department's Management Group who have not yet participated in training on equal opportunities and gender equality are to do so. At least one member of the Management Group who is qualified to deal with equal opportunities and gender equality issues is to have the explicit responsibility for monitoring these issues. Officer in charge: Head of Department

2.4 Contact person for gender-related violations

There is a contact person for gender-related violations. This person, as much as possible, is to receive relevant training to be able to fully perform this task. Officer in charge: Head of Department

2.5 Recruitment

Responsible parties for each recruitment process (supervisors, director of undergraduate studies, group leader, etc.) should be encouraged to actively and widely search for candidates of the under-represented legal genders. These measures are regularly reported so they can be collected and reviewed to allow gradual development of recruitment channels and contact networks. Over time, this can contribute to a gender-balanced recruitment processes. Officer in

charge: Head of Department

The Equal Opportunities Officer investigates ways to track how an active and wide-ranging search for candidates of the under-represented gender has been carried out, based on feedback from those responsible for the recruitment.
Officer in charge: Equal Opportunities Officer

A follow-up analysis of legal gender representation in positions at the department is conducted using the gender equality indicators. The analysis looks at the proportion of women and men in the positions mentioned in the appendix of this equal opportunities plan. The follow-up should be done every fifth year starting the year 2016. Corrective measures will be taken if improvement is not made. By improvement is meant a visible change towards a gender balance within the interval 40–60%. Officer in charge: Head of Department in consultation with the Equal Opportunities Officer

2.6 Salaries

Differences in pay both within and between comparable groups of employees will be investigated using the salary statistics to determine whether they can be explained on the basis of gender, or if there are other explanations. If any differences are found to be based on gender, action will be taken to address these. Officer in charge: Head of Department during the yearly salary revision.

2.7 Information

Provide general information on equal opportunities efforts at the department, available resources, etc. Officer in charge: Equal Opportunities Officer

Information on the work of the Equal Opportunities Group is provided regularly at division meetings and in LäsIT. Officer in charge: The Equal Opportunities Officer

The work of the Equal Opportunities Group is summarized in the department's annual report. Officer in charge: The Equal Opportunities Officer

Meeting minutes of the Equal Opportunities Group are published on the Staff Portal. Officers in charge: The Equal Opportunities Group

2.8 Appointment of groups with important strategic or decision-making functions

Every group appointed to discuss or decide on issues affecting a larger number of employees is to include representation by both genders. This includes the Department Board, the Work Environment Group, the Emergency Management Group, the Equal Opportunities Group, the Nomination Group and the Programme-Responsible Professors Group (Swedish: PAP-gruppen). Officer in charge: Head of Department

A follow-up analysis of appointments at the department is conducted by collecting and documenting data on the gendered composition of investigative and decision-making bodies. The follow-up should be done every fifth year starting in 2016. Corrective measures will be implemented if progress is not made. Officer in charge: Equal Opportunities Officer

2.9 Research

The department strives to increase the percentage of senior women in research and improve visibility for female researchers (both within and outside the department). This includes women being represented to a high degree in any group of strategic nature – such as groups formed for referral reports, grant applications, etc. Officer in charge: Head of Research

2.10 Doctoral education

The department strives to reduce legal gender differences in representation of doctoral students. Officers in charge: Head of Division

The balance in legal gender of examination committees and faculty examiners for doctoral dissertations are regularly analysed per research subject. Corrective measures are implemented in cases of a gross imbalance over a 36-month period. The aim should be to have an equal gender balance when assigning faculty examiners for defences of doctoral dissertations.

2.11 Bachelor and master's education

Gender coaching and training in gender-sensitive teaching methods are offered to all teachers at the department. Officer in charge: Head of Education

2.12 Equal opportunities plan

The Equal Opportunities Plan is evaluated and revised annually. The plan is provided in both Swedish and English. Should disputes arise over how to interpret the different language versions, the Swedish version takes precedence. Officer in charge: The equal opportunities officer

2.13 Funding for measures to promote equal opportunities

The department has set aside funds for use with activities (proposed by employees at the department at application time) deemed positive for equal opportunities at the department. Calls for grant applications are made four times a year. The applications are compiled and ranked by the Equal Opportunities Group, after which the Head of Department makes the decision. The group may also propose initiatives that could be funded from this fund. A summary of applicants for funds and awarded grants are compiled and published on LäsIT and in other places at the end of each year. Officer in charge: Opportunities Officer

3) Action plan 2023

1) Enhance capacity of the equal opportunities group to work as change agents

WHAT: The goal of this action is to enhance the group's capacity to work as change agents at the department, and to learn about equal opportunities.

HOW:

1. Plan active measures to inform on harassment:
 - 1.1. Interact with communication officer to add information on harassment and sexual harassment on posters and / or screens in Department staff lounge (*coordinator: Diana*)
 - 1.2. Ask Uppsala University's HR Department to offer a course on harassment and sexual harassment for staff at our department (*coordinator: Anna-Lena*)
 - 1.3. Discuss with HR and management group how to add information in onboarding program for new staff on how to report harassment and sexual harassment (*coordinator: Anna-Lena*)
2. Organise Swedish fikas (*coordinator: Dilushi and Mengyu*)
3. Investigate how to better disseminate what the group does (*coordinator: The equal opportunities officer, all*)
4. Add to call for visiting researchers that seminars should acknowledge funding from the group (*coordinator: The equal opportunities officer*)
5. Update the Swedish version of the group's page by adding link to English page of the group (*coordinator: The equal opportunities officer*)
6. Update call for visiting researchers project to fund up to 100% of the costs (*coordinator: The equal opportunities officer*)
7. Investigate the possibility to use gender neutral language in advertisement documents at the department (*coordinator: Anna-Lena and The equal opportunities officer*)
8. Investigate how we can work more closely with the work environment group on work environment issues (*coordinator: The equal opportunities officer*)
9. Prepare proposal for Head of Department: use equal opportunities funding to fund PhD students' time (as part of their department's duties) for supporting non-Swedish native speaker staff to practice spoken Swedish and to translate research documents from English to Swedish

(*coordinator: The equal opportunities officer*). Investigate how this could be implemented at the Division and Department level (*coordinator: The equal opportunities officer, all*).

10. Organise annual retreat of the equal opportunities group (*coordinator: The equal opportunities officer, Anna-Lena and Ulrika*)

WHEN: (1) will be discussed at the February meeting; (2), (3), (4), (5) and (6) will be discussed at the March meeting; (7) and (8) will be discussed at the August meeting; (9) will be discussed at the January meeting; (10) will be discussed at the May meeting.

2) Support gender mainstreaming work at the Department

WHAT: The goal is to raise organizational awareness of gender issues at the IT Department.

HOW:

1. Investigate how we may improve and inform on recruitment at the Department from an equal opportunities perspective, for example by using examples or checklists (*coordinator: Andre with Anna-Lena*)
2. Discuss in one of the group's meetings how to increase the representation of women and non-binary individuals in fields where they are under-represented (*coordinator: ?*)
3. Explore the possibility to conduct a pilot project on collecting and analysing data about academic housekeeping in one of our divisions by funding a PhD student's time as part of their department's duties (*coordinator: Diana*)
4. Investigate whether it might be possible to allocate a % of time to women and non-binary individuals who are part of several committees / boards (*coordinator: Diana*)

WHEN: (1), (2), (3) and (4) will be discussed at the May and at the August meeting.

3) Diversity aware education that creates a better learning environment for all

WHAT: The goal is to support students from a diversity perspective, educate teaching faculty in diversity awareness in teaching and support changes in the introductory courses for teachers.

HOW:

1. Input to Head of Education: make sure to recommend inclusion of lecture on discrimination and diversity in introductory courses of our BSc and MSc programs (*coordinator: The equal opportunities officer*)
2. Input to Head of Education and Jarmo Rantakokko: make sure that a training day on discrimination and harassment for TAs with lectures by Martin Holmberg and specific reference to code of conduct (medarbetar policy) is organised at least twice per year and made mandatory for all TAs, and inform teaching staff; suggest to investigate the possibility to record lectures and make them available asynchronously to TAs (*coordinator: The equal opportunities officer*)
3. Input to Head of Department: inform on TAs training at staff meetings (*coordinator: The equal opportunities officer*)

WHEN: (1), (2) and (3) will be discussed at the March meeting

4) Best PhD student education for all

WHAT: The goal is to have equal opportunities-aware PhD students and supervisors and create a playing field where all PhD students at the IT Department have the same opportunities.

HOW:

1. Discuss outcome of first edition of PhD course on Social Consequences of Technology and Trustworthy AI (*coordinator: The equal opportunities officer, all*)
 - 1.1. Investigate how we could deliver more instances of the course throughout the year either by funding current staff's time or recruiting an adjunct lecturer (*coordinator: The equal opportunities officer, all*)
 - 1.2. Discuss how the PhD course could be aligned with the upcoming seminar series on trustworthy AI (*coordinator: The equal opportunities officer, all*)

WHEN: (1.1) and (1.2) will be discussed at the February and at the April meeting

5) Career development from an equal opportunities' perspective

WHAT: Support early career faculty from an equal opportunity perspective.

HOW:

1. Provide input to PAP group on how to support career development from an equal opportunities' perspective (*coordinator: The equal opportunities officer*)
2. Contact Justin Pearson and suggest that mentor training includes equal opportunities aspects (*coordinator: The equal opportunities officer*)

WHEN: (1) and (2) will be discussed in the November meeting

6) Supporting equal opportunities aware research

WHAT: Support integration of equal opportunities perspective in research activities at the IT Department

HOW:

1. Plan and oversee the recruitment of postdoctoral researchers on equal opportunities aspects in design and development of IT and AI methods (*coordinator: The equal opportunities officer, all*)
2. Investigate the possibility to use equal opportunities funding to fund MSc students' projects of relevance to equal opportunities aspects in design and development of IT and AI methods (*coordinator: Mengyu*)

WHEN: (1) and (2) will be discussed at the January meeting

3. The department's competence maintenance

3.1 Competence maintenance plan

The department's operations plan must include a competence maintenance plan, based on an ongoing and systematic analysis of which skills the organisation needs in the short and long term to meet its present and future goals.

The plan must include all posts, including skills development for future management tasks within the department and the university. The competence maintenance plan must also take into account aspects relating to gender mainstreaming and equality. For 2023 the task is described in the faculty's operations plan 2023 (TEKNAT 2021/276), Section 1.4. The plan must include the following:

1) Survey of:

a) Main strengths

The Department of Information Technology is one of the largest departments at Uppsala University and this provides an opportunity for breadth and depth within research, education and collaboration. In view of the fact that we are able to recruit lecturers and researchers in a large number of different research areas, we can also offer a veritable smorgasbord of first-cycle courses. The students who choose to study here, many of whom are not from a Swedish background, are not only able to combine courses that suit their own interests, but also to acquire an educational profile that meets the requirements for an attractive, up-to-date education on the job market. Within research, we are successful at obtaining external research funding, we stand up well to international competition and have many valued collaborations with industry.

b) Greatest challenges

The department's greatest challenges regarding competence maintenance are; 1. The fast growing funding agreement targets in recent years which are not matched by the same growth in research funding, and 2. The difficulty of achieving diversity in recruitment, primarily in the recruitment of women for roles other than in administration.

1. Over time, it has become increasingly difficult to recruit new teaching staff since the ratio between the funding agreement target and research funding has become even greater. Between 2016 and 2020, the funding agreement target increased by 34%. Expressed as full-time equivalents (FTE) per calendar year, the target increased from 1022 FTE to 1350 FTE. In the same period, our direct government funding for research and third-cycle programmes increased by 19%, from SEK 81 million to SEK 96 million. This means that the terms of employment for all lecturers – including those we recruit – have worsened.
2. Over the years, the department has had a skewed gender ratio and to counteract this, we carry out systematic and ambitious equality work, led by our Equality team. Despite this awareness and our active measures, wider recruitment is one of our greatest challenges. We have therefore initiated work where we produce an overview and review of our recruitment processes. So far, we have developed a department-wide procedure for recruiting doctoral students, which has been approved and implemented. We are also involved in ongoing work to review our procedures for the applications team with regard to teaching positions.

2) Analysis of:

a) Areas of development

Society's interest in our areas of education and research have meant that we are able to offer our prospective teaching staff a range of attractive employment opportunities. We provide opportunities for relevant and up-to-date research and education in a professional, academic environment. One area we are currently focusing on is cyber security, where we have started an extensive operation with good contacts with other parts of UU and surrounding society, and great interdisciplinary visibility on the most important international arenas.

Common funding is also used to provide support for department-wide operations in areas that are considered to be of future importance, either through an arena structure or as concentrated efforts in specific areas. The arena structure is flexible and a new arena is started as soon as it is required. Inactive arenas are closed down. A joint investment in sustainability is one of the latest specific area investments.

We continue to have a deep commitment and responsibility within faculty-wide, interdisciplinary activities, such as AI4Research, SciLifelab, Uppmax, MTSI, eSENCE, CIM, etc. Thanks to financial support from SciLifeLab, the department has recruited a SciLifeLab fellow in "Scientific Computing with Specialization in Data-Driven Life Science". This is in line with the KAW investment in Data Driven Life Science, a SEK 3 billion, 12-year research programme within life sciences and the interface with mathematics, data and AI, linked to KAW's investments in autonomous systems, software and AI, as well as quantum technology through the WASP and WACQT programmes.

3) Strategy for long-term competence maintenance

a) Career paths and skills development

All staff at the department are offered appraisals in which skills development is part of the issue. For doctoral students, special focus is placed on following the individual study plan and analysing and explaining deviations. We offer internal support for becoming an excellent university teacher and achieving the skills required to become a principal lecturer and professor.

For our associate senior lecturers, there is a department-specific programme with activities aimed at facilitating meetings and discussions about challenges and opportunities. During the programme, career paths and their various steps will be highlighted and clarified. This has been much appreciated.

For the administrative staff, skills development efforts are focussed on specific subjects. Course administrators take part in networks and workshops within their

area, and our economists and HR generalists participate in the training activities that are offered internally at the university. If necessary, external training courses are procured. For example, further training in Excel, which everyone in the administration team had the chance to attend in spring 2021.

b) Prioritisations

Our long-term prioritisations regarding competence maintenance mostly involve offering attractive jobs and conditions to teaching staff and researchers in our areas of development mentioned in item 2a above.

Within administrative support, there is continual monitoring of what support is required for core activities as well as departmental management. New roles have been created to meet new requirements, most recently the role of HR coordinator who, in addition to being active in the department's HR work, must also coordinate it.

4) Planned measures

a) Action plan based on the answers in items 1-3

Previously, the department's competence maintenance work has taken place partly at departmental level (e.g. common procedures for the applications team and systematic equal opportunities work) and partly at division/unit level (e.g. planning prior to retirement). We now intend to systematise this work further.

- We have been using a department-wide recruitment process for doctoral students for just under a year. This is partly to ensure wider recruitment but also to guarantee the quality of the process. The process will be evaluated at the start of 2023.
- Review work is ongoing of our instruction to the applications team to ensure wider recruitment as far as possible, as well as to achieve a more qualitative applications team process in the recruitment of teaching staff in general.
- We have appointed a team which will review how we can improve our work on competence maintenance at departmental level. Example of measures include taking greater financial risks in terms of recruitment (use some external funding as the basis for recruitment) and recruiting more lecturers who are expected to carry out a greater proportion of teaching as part of their duties.

b) Potential need for support from the university centrally

In general, the university provides good support in the form of templates and support material. We have also received support from the HR department on a previous occasion on one of the department's strategy days when we focussed on recruitment. The HR department provided a review of skills-based recruitment. In our experience, support is available if needed.

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The areas in which we would particularly like support at the moment are; 1. Achieving a better balance between research funding and funding agreement targets
2. Measures to speed up the recruitment process for teaching appointments. With regard to item 2, we would particularly like to request that a graded level of remuneration is introduced for experts based on the time it takes to complete their expert's report.

Appendix A – Account entries for IT jointly for 2018, 2019, 2020, 2021, 2022, 2023

<i>Function</i>	<i>Account entry 2018</i>	<i>Account entry 2019</i>	<i>Account entry 2020</i>	<i>Account entry 2021</i>	<i>Account entry 2022</i>	<i>Account entry 2023</i>
Management						
Head of department	75%	75%	75%	75%	75%	80%
Assistant head of department	0%	0%	10%	10%	10%	10%
Admin. CSD	40%	45%	45%	45%	45%	50%
Admin. DoCS	50%	50%	50%	50%	50%	55%
Admin. Syscon	30%	30%	40%	40%	45%	50%
Admin. Vi2 (incl. UpCerg)	45%	50%	50%	55% (65%)	65%	70%
Admin. TDB	50%	50%	50%	50%	50%	55%
Education						
Head of Education	20%	30%	40%	30%	30%	30%
Assistant Head of Education				10%	10%	
Research						
Head of Research	10%	20%	20%	20%	20%	20%
Research education						
Director of studies RD	5%	10%	10%	15%	10%	10%
Collaboration						
Head of Collaboration and Outreach	10%	0%	10%	15%	15%	20%
Communication						
Online team	4*10%	2*5%	7%+2*5%	5%	5%	5%
Work environment						
Mentors	Coordination + 4 seniors + 5 doctoral students	Coordination + 3 seniors + 4-5 doctoral students	5% coordination + 2 seniors + 4 doctoral	5% coordination + 2 seniors + 4 doctoral	5% coordination + 2 seniors + 4 doctoral	5% coordination + 2 seniors + 5-6 doctoral

	at 5%	at 5%	students at 5%	students at 5%	students at 5%	students at 5%
Equality						
Equalities officer	10%	10%	10%	10%	10%	10%

Entries within UGA

<i>Function</i>	<i>Account entry 2018</i>	<i>Account entry 2019</i>	<i>Account entry 2020</i>	<i>Account entry 2021</i>	<i>Account entry 2022</i>	<i>Account entry 2023</i>
Management UGA						
Directors of studies	3*48%+2*24%	3*48%+2*24%	4*50%	4*50%+25%	3*50%+2*25%	2*55%+50%+40%+25%
Subject coordinator	20%	20%	20%	20%	20%	20%
Responsibility for Master's programme						
DVM	14%	15%	18%	17%	17%	17%
- SS	-	-	2%	2%	2%	2%
- CoPa	2%	2%	2%	2%	2%	0%
TBM	8%	13%	15%	15%	15%	15%
ISM	9%	15%	15%	15%	15%	15%
DSM	-	-	15%	15%	15%	15%
IMM	-	-	15%	15%	15%	15%