

HR Excellence in Research: self-assessment report TU Delft

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Table of Contents

| | |
|--|----|
| 1. Introduction | 5 |
| 2. Overview of the TU Delft | 6 |
| 3. Methodology for the two year self-assessment | 7 |
| 4. Two year review of the HR action plan: actions and progress | 8 |
| 5. Embedding HR Excellence in Research at TU Delft | 22 |
| 6. Reformulated action plan based on progress made | 23 |
| 7. Appendices | 25 |

1. Introduction

This report provides an update on actions proposed in the first TU Delft HRS4R Action Plan submitted to the European Commission in June 2013. The report provides an overview of progress against stated actions and comments on areas where progress has not been made to the same level. Where relevant, the report outlines proposed next steps under the headings of the original action areas. The report also outlines actions for implementation during 2015 -2016 under the broad headings of the Charter and Code:

- Ethical and Professional Aspects
- Recruitment
- Working Conditions & Social Security
- Training

Chapter 2 will provide a very short overview of the TU Delft, Chapter 3 describes the methodology for the two year self-assessment, Chapter 4 gives an in depth analysis of the two year review of the HR action plan: actions and progress, an update on the self-assessment based on the seven points of improvement. Chapter 5 reflects on embedding HR Excellence in Research at TU Delft, and Chapter 6 will propose the reformulated action plan for the period 2015-2017, based on the progress made and the new actions that follow from the self-assessment. Finally in the appendices (Chapter 7) one can find the updated Action Plan and additional background information regarding the HRS4R of the TU Delft.

2. Overview of the TU Delft

Delft University of Technology (TU Delft) is located in the west of the Netherlands. In addition to being the largest university of technology in the Netherlands, TU Delft is the oldest. It was founded over 165 years ago, although it has borne its present name only since 1986. A fascination with science, design and engineering is what drives the more than 13 000 Bachelor's and Master's students and the 5 000 staff members at TU Delft. Known for its high standards of research and education, TU Delft collaborates with many other educational and research institutions, both at home and abroad.

Because of the importance that it attaches to a healthy research climate in Europe, the university joined the third cohort of the Human Resources Strategy for Researchers (HRS4R) project in 2012. This project aims to implement the 40 principles of the Charter and Code, which was signed by the Association of Universities in the Netherlands (VSNU) in 2007, and to earn recognition through the award of the HR Logo.

3. Methodology for the two year self-assessment

The original internal analysis was conducted through desk research and interviews with 17 experts at TU Delft. The TU Delft Strategy, as established in the strategic plan entitled 'TU Delft Roadmap 2020' forms the basis for the internal analysis and action plan. The Roadmap contains many action points that correspond to the 40 principles of the Charter and Code. The strategy, which was adopted in 2012, sets out the strategic objectives of TU Delft for the period until 2020. This strategy was developed through university-wide discussion on the university's strategic direction. The HR Strategy memorandum, titled 'Freedom to Excel', is also included in the Roadmap 2020.

The internal analysis was conducted by an interdisciplinary team (taskforce) comprising representatives of the department of the HR department, Legal Service and the International Office (department of Educational and Student Affairs). This team is also responsible for monitoring the implementation of the action plan and has conducted the self-assessment.

The taskforce established in 2013 to carry out the original Gap Analysis and Action Plan reconvened with some members remaining and new members added.

4. Two year review of the HR action plan: actions and progress

1. Promoting Transparency

Showing consideration for others and for other people's values and respect for other people's property: these are things we usually do automatically. It also goes without saying that we promote the interests of TU Delft in our work and handle public funds responsibly.

However, situations can always arise which are not clear-cut. Especially in current day society, in which the dividing lines between the professional and the private and work and home are fading more and more, and we are increasingly confronted with complex issues and difficult questions in our work.

Scientists can, for example, be faced with dilemmas regarding research financed by commercial funding or whether or not to accept additional positions. Students may also be faced with situations in which they need to decide where the interests of the university end and their own interests begin. TU Delft's integrity policy entails the 'Code of Ethics', several regulations and committees to support students and staff.

Roadmap for Matters of Integrity

What should you do if you suspect a wrongdoing, notice that something isn't quite right, or find yourself faced with a conflict of interests? The first step is to speak to the colleague or student concerned about his/her behavior. If this doesn't help or you want to know what to do next, try the Integrity roadmap.



Action 1. A. Online publication of ancillary activities

TU Delft is obliged to publish any ancillary activities that may conflict with the university's interests. TU Delft would like its staff to think carefully about the possible effects of ancillary activities for the university, and we expect that staff members will talk about this with their managers. TU Delft staff (both academic as non-academic support staff) needs to report these ancillary activities. If so, the period, the nature of the ancillary activities and the organisation for which staff perform these activities will appear automatically on People Pages (employees own staff page). Permission is granted for 2 years, after which an employee will have to apply for permission again. On the 'how does it work' section staff can read what to arrange as manager or employee.¹

In 2007, agreements were made with the universities regarding the publication of ancillary activities on professors' profile pages. To gain a good picture of the effects, the VSNU has taken stock of the current state of affairs. It is clear that a huge amount of progress has been made in recent years. The ancillary activities of nearly all professors are now listed online and the registration of professors' ancillary activities has been made a high priority at many universities. However, this certainly doesn't mean that there is no work left to be done. The importance of explicitly and transparently reporting all ancillary activities must be continually brought to the attention of professors.²

The TU Delft Conflict of Interest Committee issues recommendations to the Executive Board on cases submitted to it concerning possible conflicts of interests involving a member of staff who is also engaged in market-related activities in addition to his or her position at TU Delft.³

This committee of external experts can advise on issues concerning financial cooperation constructions, shareholdings and secondary employment, in fact on all dilemmas that may confront an organisation involved in the process of valorisation.

Staff can consult the Conflict of Interest Committee concerning dilemmas in advance, via the Executive Board; in order to avoid problems later.

Action 1.B. Establish a confidential advisor for academic integrity and a contact for whistle-blowers.

In June 2013, prof. dr. Jack Pronk was appointed by the Executive Board as confidential adviser for Scientific and Academic Integrity of TU Delft. The confidential adviser is a confidential counsellor for members of staff, students or guests of TU Delft who find themselves confronted by issues concerning scientific and academic integrity and who feel the need to discuss the matter.⁴

1. <https://intranet.tudelft.nl/en/human-resources/themes/employment/ancillary-activities/ancillary-activities/>
2. The VSNU – Association of universities in the Netherlands – is formed by the fourteen Dutch research Universities. VSNU represents the universities to the government, parliament, and governmental and civic organisations. It does so by facilitating debate, developing and disseminating common positions, contributing towards improving the reputation of the university sector, and by making strategic choices to strengthen scientific education and research in the Netherlands. Alongside that, the VSNU is an employers' organisation, which holds consultations with government and labour unions regarding employment conditions in the university sector.
3. <http://www.tudelft.nl/en/about-tu-delft/strategy/integrity-policy/conflict-of-interest-committee/faculty/citg/page/26/>
4. <http://www.tudelft.nl/en/about-tu-delft/strategy/integrity-policy/administrative-integrity/confidential-adviser-for-whistleblowers/>

Action 1.C. Revise the TU Delft Regulations on Academic Integrity. The regulations should be brought into line with the national model regulations for complaints about academic integrity.

As a publicly-funded organisation, TU Delft considers integrity and the ethical aspects of the professional behaviour of all its staff and students to be extremely important. The Executive Board has set up a committee to monitor the quality and independence of our policy on integrity.

TU Delft assumes that all staff involved in research and education will take personal responsibility in matters concerning academic and scientific integrity within the organisation. This is in accordance with the guidelines set out in the Netherlands Code of Conduct for Scientific Practice (Nederlandse Gedragscode Wetenschapsbeoefening, VSNU 2004, revised 2014).

TU Delft also has its own Scientific and Academic Integrity Complaints Regulations, which include a complaints procedure for situations involving breaches of scientific or academic integrity that may occur within the organisation. All these regulations have been brought in line with the national model regarding Academic Integrity Practice (Nederlandse Gedragscode Wetenschapsbeoefening, VSNU 2004, revised 2014).

2. Improve ability to assess scientific research according to indicators

Action 2.A. Establish guidelines (assessment indicators) to allow international comparisons of Master's thesis research. This is happening in collaboration with ETH Zurich and RWTH Aachen (three partners in the IDEA league).

The IDEA-league master thesis benchmark project realised in 2012 to 2014 has significantly contributed to a framework for open, transparent assessment of master thesis research. Two panel workshops were held; each with a team of 25 experts in the scientific domain of Biomedical Engineering and Mechatronics of IDEA League partner institution TU Delft, RWTH Aachen and ETH Zurich, supported by the Members of the Operational Board of the IDEA League consortium and chaired by Peter Wieringa, the Vice-Rector of TU Delft. The IDEA league partners had a wish to increase cooperation on a research and educational level, to contribute to the strategic goals of the separate institutions and at the consortium IDEA league level with respect to making informed decision on institutional direction for quality control. And not least of all to strengthen the visibility and reputation of the IDEA league institution in the European Higher Education area. To support these aims the project specifically focused on:

Quality improvement by:

- Identifying the phases and criteria of the assessment of MSc theses;
- Making the assessment systems for Master thesis transparent;
- Sharing experiences and learning from best practices;
- Strengthening of cooperation via Master thesis work;
- Integration with the European qualification framework.

5. <http://www.cesaer.org/en/home/>

The resulting framework is multi-layered in terms of target groups. It provides a set of Golden Rules and a framework checklist for researchers, teachers, educators, quality control, management and board of examiners for fair assessment. It specifically stimulates cross institutional cooperation in areas of similar research and the mobility of students towards partner institutions. Therewith it increases mutual learning opportunities and improves quality of research and education through critical constructive peer review.

Presently the internal feasibility of the framework is evaluated. Significant ground level work has been accomplished as TU Delft by and large follows the guidelines that have been laid down in the framework. However, follow up steps to further solidify these results should be issued in follow up activities.

Action 2.B. Share guidelines in the CESAER network

CESAER - the Conference of European Schools for Advanced Engineering Education and Research - is a non-profit international association of leading European universities of science and technology and engineering schools/faculties at comprehensive universities and university colleges.⁵ Currently the Rector Magnificus of TU Delft is president of CESAER and chair of the HR Taskforce. This enables us to easily share guidelines within CESAER and to make sure this stays a standard practice for the future.

CESAER stands for scientific excellence in engineering education and research, and the promotion of innovation through close cooperation with industry in order to ensure the application of cutting-edge knowledge in industry and society. It maintains and promotes the highest quality standards.

CESAER was established in 1990 and now has a membership of 50 institutions from 24 countries. CESAER sees the diversity of cultures and structures in Europe as a specific strength and opportunity and aims at a membership that mirrors that diversity.

CESAER members are committed to the following core values and guiding principles:

- High level research-based engineering education;
- Research at the front edge of knowledge;

Close co-operation with the industry towards innovation;
Continuous improvement in and integration of education, research and innovation in the knowledge triangle;
Contribute to sustainable economic, societal and environmental development.

CESAER:

- addresses different target institutions and stakeholder groups in order to influence the developments of policies and programmes related to engineering education, research and innovation proactively or already in early stages of their development.
- exploits the advantages of both the high standards and the diversity of its members in order to stimulate learning processes in and between member institutions and to promote their ambitions towards excellence;
- follows relevant developments in education, research and innovation policies at EU and global level in order to ensure strategic intelligence and also the institutional competence base necessary for being accepted as a relevant dialogue partner at European and national level as well as in international contexts;
- performs consultations among the members on a regular basis in order to stimulate mutual learning and exchange of experiences as well as to identify issues of common interest and concern in the main areas of CESAER activities;
- acts as launching platform for collaborative initiatives and strategic alliances of its member institutions in education, research and innovation;
- prepares policy positions and recommendations on major developments and responsibilities in the course of the modernization agenda of European higher education, research and innovation;
- relies on the active contribution of its members towards achieving its objectives;
- forms designated task forces for targeted initiatives that require quick action.

Action 2.C. Develop workshops for tenure-track staff to help them provide good supervision to their PhD students throughout their doctoral programmes.

At the start of January 2016 a Working Group Doctoral Supervision, led by the HR department will develop several workshops aimed at the professional development of tenured staff that is providing supervision to PhD students. Because of organizational changes at the HR department and the professional development of the Doctoral Education programme the training of supervisors has not been given the attention it deserves. Therefore this action point will be our priority for the period 2015-2016.

To highlight the importance of the target group, TU Delft will host the 9th European University Association (EUA)-CDE Workshop on “Doctoral Supervision – practices and responsibilities”. TU Delft Graduate School has great interest in developments related to doctoral education and doctoral supervision in order to provide the best learning environment for our talented doctoral candidates.

The workshop is a great opportunity to share the experience we obtained and the challenges we identified while developing the TU Delft Graduate School since 2012. Although we implemented a solid structure and organisation for monitoring progress, providing guidance and supervision and for training of doctoral candidates, many questions remain.

Monitoring the progress of doctoral candidates provides insights for the candidates, the supervisors and the management of the Graduate School. However, such systems are a burden to the candidates and the staff and we have yet to prove that the insights gained are beneficial to the stakeholders and in balance with the additional administrative workload it requires.

Guidance and supervision are at the heart of doctoral training. Young supervisors however, have to rely on their own, mostly limited experience related to coaching of doctoral candidates. Discussing do's and don'ts among supervisors helps to select best practices and to prepare for unexpected situations. The EUA-CDE workshop provides a nice opportunity to further investigate best practices on this theme among HEIs. Supervision is the main topic of the EUA-CDE workshop and we hope that this workshop will initiate discussions that will lead to further joint actions in the form of workshops and/or bilateral site visits.

Our doctoral education programme comprises transferable skills, research skills, and discipline related skills; thus enabling the candidate to perform excellent research as well as preparing the candidate for his or her future career, either in industry or in academic research. The doctoral education plans are individual and flexible. It is worth investigating the possibility for exchange of courses and workshops provided by partner institutions during the EUA-CDE workshop in Delft.

6. <http://www.eua.be/activities-services/events/event/2016/01/20/default-calendar/9th-eua-cde-workshop>

TU Delft Graduate School is the response to the development of the third cycle education; an answer tailored to the organisational culture and high research and education standards the TU Delft maintains. We feel privileged to host the EUA-CDE workshop on “Doctoral Supervision – practices and responsibilities” and look forward to discussing developments on doctoral training programmes and supervision with our peers in Europe.⁶

Action 2.D. First tenure-track staff members attend workshops on supervising doctoral programmes.

At the start of January 2016 a Working Group Doctoral Supervision, lead by the HR department Development & Mobility will develop several workshops aimed at the professional development of tenured staff that is providing supervision to PhD students. Our goal is to offer these workshops (first in a pilot form) starting in April 2016.

3. Evaluate current working time regulations according to the needs of staff members. In consultation with broad representation from TU Delft, develop a new vision in the area of working time, adjusting the working time regulations as necessary.

TU Delft believes it is important to cater to the personal needs of staff members as well as meeting organisational requirements. Following this commitment, the new Regulations on Flexible Working Hours and Times 2014 took effect on 1 April 2014.

These new regulations apply to all staff with a full-time or part-time appointment at TU Delft and were adopted together with the TU Delft Vision Document on Working Hours 2014 by the Executive Board, with the consent of the Works Council and the unions represented in the Local Consultation Body. The new regulations will supersede the TU Delft Regulations on Working Hours and Times of 1 May 2005.

The Vision Document focuses on reaching agreements with regard to results and effects and facilitating working arrangements to reach maximum flexibility, thus meeting the needs of both the organisation and staff members.

What do the new regulations involve?

At TU Delft, the organisation of working hours and breaks is agreed between you and your supervisor. In this regard, you are trusted to take personal responsibility in making sensible use of flexible working hours. The emphasis is on

results and presence, accessibility and availability during the hours that TU Delft requires this. Of course, your working hours must be such that you can perform your job properly. This is why it is important that you make clear agreements with your supervisor and colleagues on your presence, accessibility and availability.

4. Develop the valorisation profile further

A. Develop a form of annual reporting in the area of knowledge valorisation.

With regard to the improvement point 4 actions for which the Valorisation Centre is responsible Valorisation Centre can report the following: In order to establish regular reporting in the area of knowledge valorisation an Valorisation Agenda 2020 was formulated and formally endorsed by the university board. It states SMART objectives. The Valorisation Agenda has been translated into key performance indicators which have been approved by the internal valorisation board of the university.

B. Develop a 2013-2020 valorisation agenda for the supervision of supporting activities in the area of valorisation.

Progress made on the indicators is monitored and reported regularly. So far these do not include gender related aspects, other than that gender aspects in research funding activities are an integral part of the grant schemes provided for by relevant funding agencies such as the EU Commission, H2020, or NWO, Vernieuwingsimpuls (in particular Aspasia grants).

C. Select indicators in order to improve the visibility of performance in terms of valorisation and to use them for national and international.

Visibility of valorisation activities and performance of TU Delft is further increased by ensuring the award of prestigious ERC personal grants by stimulating and supporting the application for such grants by researchers, both male and female.

ERC grants are the entry point for TU Delft to take part in multi partner EU consortia. TU Delft is the largest H2020 programme participant in the Netherlands (measured August 2015 with a volume of more than 33 million Euro in 59 contracts, including 10 ERC grants won in 2014 rounds).

See: appendix 1 for the Valorisation Indicators.

D. Further strengthen regional networks in the area of public-private partnerships. In concrete terms, the objective is to establish a regional development in the Zuid-Holland region.

Regional networks have been strengthened over the last year by intensified dialogue with local authorities as well regional entities such as Innovation Quarter, the LDE alliance and its research centres. In addition the TU Delft takes part in projects and bids for European regionally funded projects under the North Western Europe programme as well as Kansen voor West.

The new Delft Global initiative had its launch activity at TU Delft on the 24th of November 2015. It will be able to contribute to the new UN sustainability goals by offering innovations for sustainability and R&D cooperation with developing countries and communities.

E. The formulation of an innovation strategy by all faculties, as an integral part of the strategic planning of the faculty.

Several faculties have developed and implemented valorisation roles within their organisations, bringing valorisation closer to the shop floor of researchers. At the same time overall central valorisation roles are key in ensuring the spread of knowledge and expertise in pre-award funding support and advisory. The expertise about funding mechanisms and other valorisation activities such as IP, venturing and large scale multinational, and multi faculty project management is critical to successful implementation TU Delft 2020 Strategy and the 2020 Valorisation agenda.

F. Investigate the possibility of establishing a multi-talent transitional building on campus for start-ups.

YES!Delft unites the forces of start-ups, coaches, investors, and innovative corporations to fuel entrepreneurial success. They offer guidance and support in building and growing a company and we encourage students, professionals, and scientists on their path of entrepreneurship. By putting the entrepreneurs' interest first, we help turn promising ideas of ambitious people into solid start-ups and successful companies.

YES!Delft focuses on entrepreneurs with concrete ideas for technical, innovative and scalable products or processes. Yes!Delft supports them in numerous ways. Future entrepreneurs will be introduced to the opportunities and explained them the benefits and possibilities of being an entrepreneur. By means of education Yes!Delft helps the students and young entrepreneurs with their development. With high quality training programs the entrepreneurs lay out a solid foundation

for their own company. Entrepreneurs are offered office space and many (technical) facilities, access to an interesting international network and optimal knowledge sharing circumstances to incubate and make these promising companies grow even further.

Building tomorrow's leading firms: that is what YES!Delft is all about. They believe in the power of innovation and the importance of enterprises in the Netherlands. By providing knowledge, offering facilities and bundling forces, Yes!Delft helps starting enterprises grow into leading companies. Over a hundred companies have already made a successful start. These companies have had an impact in numerous technical sectors: medical technology, clean-tech, ICT, industrial applications and consumer products.

YES!Delft is an initiative by TU Delft, The City of Delft and TNO Companies.⁷

7. <http://www.yesdelft.nl/>

5. Improve R&D cycle: Include a 360-degree feedback instrument in the Result and Development (R&D) interview.

An R&D cycle pilot project has taken place at the faculty of Civil Engineering and at DEMO 2014. Instead of the usual R&D cycle with the usual form, we tried an improved R&D system with a new R&D form, that also included a 360-degree feedback instrument. Following a review and various meetings, it has been decided to expand the pilot to the HR domain and to extend the pilot at CEG and DEMO in 2015.

The aim of the pilot project is twofold:

Firstly, the form should help ensure that the meeting not only concerns output/performance, but also development and mobility. Important aspects concern what annual agreements are made with an employee within the framework of university and departmental objectives, an employee's performance in light of what can be expected of him/her, and how an employee can remain continually employable by means of development agreements.

Secondly, the organisation into peer groups has been systematised to facilitate the comparison of different groups of employees with regard to their positions in order to produce a common normative framework for the assessment: for example, secretaries are compared with secretaries, engineers are compared with engineers and scientists are compared with scientists. This ensures that all groups of employees are given the attention and assessments they deserve. The rest of the existing cycle will be maintained: the main components of the cycle are still the Preview (the preliminary consultation), the meetings and the Review (the evaluation consultation).

8. <http://www.tudelft.nl/en/about-tu-delft/working-at-tu-delft/tu-delft-as-employer/delft-technology-fellowship/>

All findings from the pilot will be taken to the digital environment it is estimated that these new developments will be implemented in 2016.

6. Increase the percentage of women scientists to 20% by 2020

Action 6.A. Investigate the options for childcare on or in the direct vicinity of the campus.

TU Delft invests in the quality of its staff, to ensure that talented people from different backgrounds enjoy working here and have the opportunity to develop and excel. In order to realise this ambition, we want to support staff who decide to send their children (0-4 years of age) to a child care centre. **True Colors Delft** offers child care to children up to the age of four. They also provide child care before and after school. True Colors Delft opened on 24 August 2015 as part of a multifunctional International Children's Centre on TU Delft campus. The centre also offers education to children aged between four and 12 by International School Delft. This close collaboration enables the International Children's Centre to offer a continuous learning pathway and a single educational climate for children up to the age of 12. It enables parents to achieve the right life work balance. They facilitate child care for TU Delft staff, but the centre is also open to employees of other international companies and organisations in the region. Parents who work or study at TU Delft will be given priority.

Action 6.B. Start 2nd round of the TU Delft Fellowship: Create and fill ten new vacancies especially for women scientists.

Purpose

Delft University of Technology is aiming to substantially increase the number of top female scientists. To help accelerate this, Delft Technology Fellowship offers high-profile, tenure-track positions to top female scientists in research fields in which Delft University of Technology is active.⁸ The current situation is that 12% of the current full professors are female. The goal is to increase the percentage in 2020 up to 20%.

For whom

The 5-year Fellowships are awarded to outstanding female scientists, from any country and from any of the disciplines as represented at Delft University of Technology, who are currently not employed by Delft University of Technology.

What's unique

The five-year fellowships are awarded at the Assistant, Associate or full Professor level. As a fellow you will be offered the unique chance to establish your own

research programme of international repute, including generous start-up funding (assistant professor €100.000, associate professor €200.000 and full professor €300.000).

An informal mentoring scheme will be in place for Fellows to get to know the university and the Dutch (research) environment. Also, fellows will participate in a university wide introduction programme and participate in the Personal Development Programme.

Recruitment

The Fellowships will be advertised in some (inter)national journalpapers (NRC-Next, Volkskrant, Trouw, Die Zeit) relevant Scientific Journals (Science), on various Job boards and on the website of the University.

Leading scientists at Delft University of Technology will be asked to invite talented female scientists in their network to apply to the Fellowships. Also members of other university networks will be approached.

Selection criteria

You are a highly talented and motivated pioneer holding a PhD in a relevant discipline, with the ambition necessary to become a full Professor. You have a proven drive for scientific excellence demonstrated, for example, by publications in first-rate, international scientific journals, the ability to compete for external research funding and an extensive international network. You have a few years of post-doctoral working experience in industry or academia, preferably including experience outside of the Netherlands. Depending on your level of experience you either are, or have the clear potential to develop into, an academic leader who guides and inspires her group. You have excellent communication and social skills, a coaching leadership style and experience in supervising research projects. You are self-critical and able to align your personal ambition with being an inspiring member of a team of first-rate colleagues. You have educational experience and an affinity for teaching, as you are expected to participate in and contribute to the development of the department's teaching programme.

Research Proposal

Open, however, the discipline needs to be sufficiently related to the disciplines in the respective faculty to allow a strong embedding of the research field in the university after 5 years.

Selection procedure

The faculties of Delft University of Technology are responsible for the first selection of the candidates. Each faculty has established a specific selection committee, chaired by its dean. This committee presents the proposed candidates to the central selection committee, chaired by the Rector of the TU Delft. The central selection committee will make the final decision. The final appointment is done by the executive board of the university.

Appointment

Dependent on the level of experience of the candidate, as well as her position whilst applying to the Fellowship, the starting position for the Fellowship can be at the assistant, associate or full professor level.

Funding

The Fellowships (5 year salary costs for candidate) – and the startup package - will be funded partially (2/3) by the University Board and partially (1/3) by the respective Faculty Board. Once Fellows are awarded with tenure, they will be fully funded by the Faculty/department.

Tenure position

Following a positive evaluation at the end of (a maximum of) 5 years, the Fellow will be awarded tenure on the basis of clearly defined criteria in Performance Criteria WP. Having been awarded tenure, the Fellow will be following the regular career path for scientists at Delft University of Technology. Should the Fellow in the 4th year of the tenure track not be on track, the Fellow will be offered career advice to help explore employment opportunities elsewhere.

In 2011 and 2013 there have been two recruitment rounds. The board of the university decided to have two other rounds, one in 2015 and one in 2017, to meet the goal of increasing the % of top female scientists.

Success rate

1st round: 7,8% (10 candidates out of 128 applications)

2nd round: 7,6% (9 candidates out of 131 applications)

Action 6.C. Establish a dual-career programme: This programme helps the partners of new employees to find suitable employment in the university.

TU Delft aims to achieve quality above all else by recruiting scientific top talent at the very highest international level. We understand that professional and private life goes hand in hand. Therefore, we decided to give special attention to the partners of our top talents. Dual Career Services at TU Delft provides facilitation, information and advice with career opportunities, job search and social interaction in the Delft area. From February 2016 a new Dual Career Services Policy will be implemented, as part of the Recruitment of Scientific Talent Strategy. Progress and new developments will be monitored in the HRS4R Action Plan of TU Delft.

7. Improve the quality of intellectual property

Action 7. A. Establish regulations for intellectual property.

The Intellectual Property (IP) of new ideas, inventions and software can be protected by means of the intellectual property law. This is the law that prohibits others to exploit protected knowledge commercially, unless the owner, the university, has given permission to do so. Protecting intellectual property is an instrument of the valorisation of knowledge which, besides education and research, is the third core activity of the TU Delft.

The Valorisation Centre advises and manages the patent, design and brand portfolios of the TU Delft. By business development we aim to sell these inventions, or to enter into partnerships or licence agreements with businesses. Supporting the start-up of a new business is also possible.

Action 7. B. Develop a training programme on intellectual property for academic staff.

The Valorisation Centre advises and manages the patent, design and brand portfolios of the TU Delft. The Centre guides and supports employees and students with the application procedure. The application procedure includes everything, from exploring the various possibilities, protecting the intellectual property, to the commercialisation process. Read more on intellectual property and the application process.

Moreover throughout the year the Valorization Centre organises several workshops on intellectual property for academic staff.

5. Embedding HR Excellence in Research at TU Delft

There are several factors leading to a successful implementation of the HRS4R. The most relevant ones are:

- Full support from the institutional leadership;
- Allocation of dedicated resources, especially during the initial phases;
- Communication with all the actors involved;
- Securing the buy-in from all departments involved (e.g. by setting up an institutional cross-cutting working group);
- Ensuring the integration of the views of the researchers employed, hosted or funded by the organisation (e.g. by using appropriate tools such as staff surveys, workshops, or focus groups);
- Exchanges with other organisations also involved in the HRS4R processes to learn from their experience

The taskforce HR Excellence in Research will commit itself to the successful implementation of the HRS4R. This means that we will monitor the ongoing actions that have been formulated in the original action plan of 2013. Moreover the taskforce will focus on three new actions namely: **A.** The creation of Gender Equality Plans (GEP's) at TU Delft- and support to research organisations to implement Gender Equality Plans, **B.** Professional Career Development for Support Staff and **C.** Policy framework aimed at tackling working pressure. In the part below these new actions will be described.

6. Reformulated action plan based on progress made

A. ENGINE Project

As mentioned above there are three actions that will be added to the HRS4R Action Plan of TU Delft. The first will be the creation of Gender Equality Plans (GEP's) at TU Delft- and support to research organisations to implement Gender Equality Plans. A master GEP will be developed taking into account the gender measures that are already formulated plus newly developed measures.

Promoting Gender Equality in Engineering and Architecture in the European Research Area, that has been submitted under the Horizon 2020 Programme/topic: GERI.4.2014-2015 - Support to research organizations to implement gender equality plans.

The proposal named ENGINE will be coordinated by prof. Ines Sanchez de Madariaga of Universidad Politécnica de Madrid (Spain) and it will be developed by six leading engineering universities, the training center of the UN agency addressing labour issues ITC-ILO, the European association of engineering universities CESAER, as well as a number of observers, including several Research Funding Organizations and professional associations. Using the well tested ICT-ILO participatory methodology, a master Gender Equality Plan (GEP) will be developed and implemented in six engineering universities most of them with little experience in gender equality measures.

B. Professional Career Development for Support Staff

The concept of lifelong learning is an essential feature of today's knowledge economy. TU Delft attaches great importance to the ongoing personal and professional development of its staff. We offer both academic and support staff the opportunity to attend a wide range of courses, and will often pay some or all of the costs involved. We draw a distinction between courses which staff are requested to attend further to their professional duties, and those which they opt to attend further to their personal interests. From an HR perspective we are currently developing- and evaluating several professional development courses for our support staff.

C. Policy framework aimed at tackling working pressure

Together with the unions, the Works Council is worried about the amount of methods and questionnaires to measure the working pressure of the employees. Also there appears to be a lag in the regular PSA-investigations. Therefore the Works Council has established a new working group 'Working pressure'.

The Faculty Committees of the University Services and the Faculty of Architecture and the unions are also involved in this working group. The main focus is the use of standardized tools and stimulating an integral working pressure policy. Apart from that we will also work on a program of requirements and setting up a policy framework to tackle the working pressure in a efficient and adequate manner. It goes without saying that support staff as well as the scientific staff experiences working pressure.

7. Appendices

A. Action Plan & Progress November 2015

B. INTEGRITY How do you deal with ethical dilemmas? Integrity Roadmap.

C. Valorisation Indicators

D. Internal Gap Analysis TUD June 2013

E. Internal Gap Analysis TUD Gant Chart June 2013.

A. Action Plan & Progress November 2015

| Number | Improvement point | Description of actions | Completed | Status | Responsible |
|--------|--|---|-----------|-------------|---|
| 1 | Promoting transparency | A. Online publication of ancillary activities | Q3 2015 | Completed | EBHR |
| | | B. Establish a confidential advisor for academic integrity and a contact for whistle-blowers. | Q2 2013 | Completed | EB (Supported by Legal Services and Strategic Development) |
| | | C. Revise the TU Delft Regulations on Academic Integrity. The regulations should be brought into line with the national model regulations for complaints about academic integrity. | Q2 2013 | Completed | EB (Supported by Legal Services and Strategic Development) |
| 2 | Improve ability to assess scientific research according to indicators | A. Establish guidelines (assessment indicators) to allow international comparisons of Master's thesis research. This is happening in collaboration with ETH Zurich and RWTH Aachen (three partners in the IDEA league). | Q2 2013 | Completed | Legal Services |
| | | B. Share guidelines in the CESAER network. | Q2 2014 | Completed | Legal Services |
| | | C. Develop workshops for tenure-track staff to help them provide good supervision to their PhD students throughout their doctoral programmes. | Q2 2016 | In progress | Graduate School: Change of responsible actor> This will be led by the HR department D&M starting in 2016. |
| | | D. First tenure-track staff members attend workshops on supervising doctoral programmes. | Q3 2016 | In progress | |
| 3 | Evaluate current working time regulations according to the needs of staff member | In consultation with broad representation from TU Delft, develop a new vision in the area of working time, adjusting the working time regulations as necessary. | Q2 2013 | Completed | HR |
| | | | | | |
| 4 | Develop the valorisation profile further | A. Develop a form of annual reporting in the area of knowledge valorisation. | Q4 2013 | Completed | Valorisation Centre |
| | | B. Develop a 2013-2020 valorisation agenda for the supervision of supporting activities in the area of valorisation. | Q4 2013 | Completed | Valorisation Centre |
| | | C. Select indicators in order to improve the visibility of performance in terms of valorisation and to use them for national and international comparisons. | Q3 2013 | Completed | Valorisation Centre |
| | | D. Further strengthen regional networks in the area of public-private partnerships. In concrete terms, the objective is to establish a regional development in the Zuid-Holland region. | Q1 2014 | Completed | Valorisation Centre (in collaboration with the cities of Delft, The Hague, Leiden and Rotterdam, as well as with the universities in Delft, Rotterdam and Leiden) |

| Number | Improvement point | Description of actions | Completed | Status | Responsible |
|--------|--|--|-----------|------------------|--|
| | | E. The formulation of an innovation strategy by all faculties, as an integral part of the strategic planning of the faculty. | Q2 2014 | Completed | Deans |
| | | F. Investigate the possibility of establishing a multi-talent transitional building on campus for start-ups. | Q1 2017 | In progress | Facility Management & Real Estate with Valorisation Centre |
| 5 | Improve R&D cycle | Include a 360-degree feedback instrument in the Result and Development (R&D) interview. | Q4 2014 | Completed | HR |
| | | A. Investigate the options for childcare on or in the direct vicinity of the campus. | Q4 2013 | Completed | HR |
| | | B. Start 2nd round of the TU Delft Fellowship: Create and fill ten new vacancies especially for women scientists. | Q4 2014 | Completed | HR |
| 6 | Increase the percentage of women scientists to 20% by 2020 | C. Establish a dual-career programme: This programme helps the partners of new employees to find suitable employment in the Netherlands. | Q2 2016 | In progress | HR and Central International Office |
| | | D. The creation of Gender Equality Plans (GEP's) at TU Delft and support to research organisations to implement Gender Equality Plans (ENGINE Project). | Q2 2017 | NEW. In progress | HR Development & Mobility |
| 7 | Improve the quality of intellectual property | A. Establish regulations for intellectual property. | Q3 2013 | Completed | Legal Services |
| | | B. Develop a training programme on intellectual property for academic staff. | Q3 2014 | Completed | Valorisation Centre and Legal Services |
| 8 | Ongoing personal and professional development | Developing- and evaluating several professional development courses for our support staff. | Q1 2017 | NEW. In progress | HR Development & Mobility |
| 9 | Tackling working pressure | A. Develop standardized tools to measure working pressure and stimulating an integral working pressure policy and stimulate an integral working pressure policy. | Q3 2016 | NEW. In progress | HR Development & Mobility |
| | | B. Develop a program of requirements and setting up a policy framework to tackle the working pressure in an efficient and adequate manner. | Q2 2016 | NEW. In progress | HR Development & Mobility |

B. INTEGRITY How do you deal with ethical dilemmas? Integrity Roadmap.

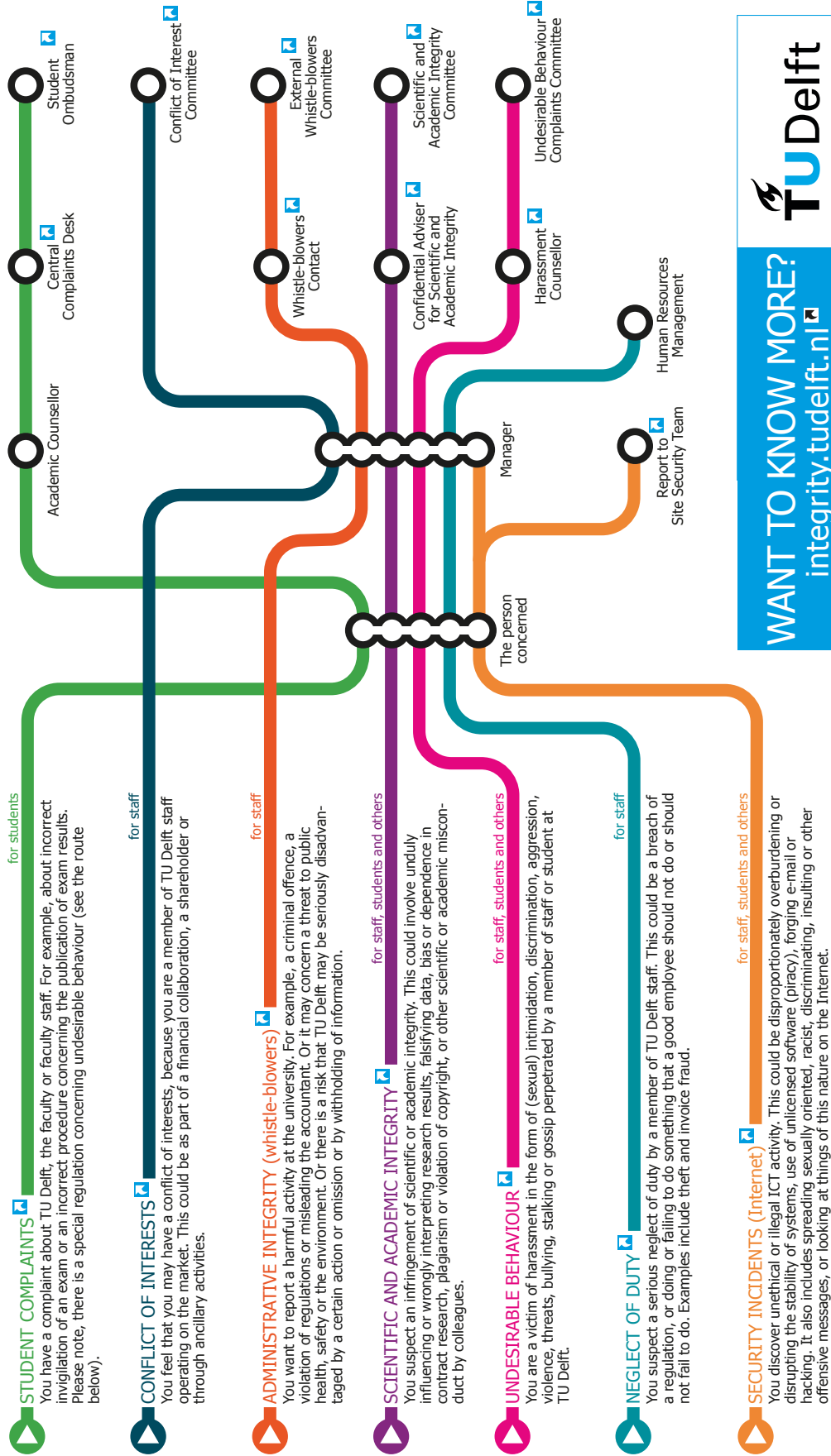
INTEGRITY

How do you deal with ethical dilemmas?

TU Delft expects everyone, whether staff, student or guest, to act responsibly with regard to the ethical aspects of their work or study. But what if you suspect a wrongdoing, or something is happening that isn't right, or you find yourself faced with a conflict of interests? This chart shows briefly what you can do in such a situation.

Our aim is for staff and students to engage in dialogue and dare to call each other to account for their conduct. Managers should create a safe environment in which this is possible.

This is not always easy, though. Maybe you would prefer to skip a step, or you would like to speak to a confidential adviser before confronting a colleague. That is always possible.



WANT TO KNOW MORE?
integrity.tudelft.nl



C. Valorisation Indicators

VALORISATION AGENDA TU DELFT 2020

Mission

Creation of value through making knowledge suitable and/or available for economic and social use and suitable for implementation in competitive products, services, processes and new activities

Vision

TU Delft sees as its social task to contribute groundbreaking technological & scientific solutions that have an important impact on a sustainable society and on a thriving economy

Targets 2020

| | |
|------------------------------|--|
| Technostarters: 25 per annum | Science park Technopolis: 1520 companies |
| Entrepreneurship@tudelft | Regional collaboration |

| | |
|---|---|
| Integrated organisation of entrepreneurial activities | Attractive partner for regional knowledge institutes, industry and government |
|---|---|

KPI's

- | | |
|---|--|
| <ul style="list-style-type: none"> • IP portfolio covering all costs • Continuation and expansion of (pre)seed and PoC funds • Costeffective functioning of Delft Enterprises • Governance for TDH Services and Delft Enterprises | <ul style="list-style-type: none"> • Reinforcement and growth of innovation clusters Medical Tech, clean tech and safety & security • Development/Rollout of Building Campus • Consolidation and professionalization of collaboration with SME's • Further development of science park Technopolis • Active participation in Innovation Quarter • A minimum of 3 EFRO projects |
|---|--|

Key Strategies 20142015

- | | |
|---|--|
| <p>Development of a central approach of IP applications and IP agreements with third parties PoC fund via EFRO</p> <ul style="list-style-type: none"> • Starting preincubation pilots at IDE, EEMCS and AE • Strengthening education in entrepreneurship at faculties • Network of mentors for starting student entrepreneurs • More Yes Delft sponsors from industry • Realization YesDelft2 • Developing MarketTechnology combinations • One stop shop for students who want to start a business | <ul style="list-style-type: none"> • Follow up national VP Deltatechnology • EFRO: Valorisation programme III and VP Digital manufacturing • Sustainability campus • IQ: 1) PoC at TU Delft, 2) EFRO and 3) coordination tasks • HBO cooperation 2.0 • Collaboration with industry as an alternative for 4 years PhD |
|---|--|

VALORISATION AGENDA TU DELFT 2020

Mission

Creation of value through making knowledge suitable and/or available for economic and social use and suitable for implementation in competitive products, services, processes and new activities

Vision

TU Delft sees as its social task to contribute groundbreaking technological & scientific solutions that have an important impact on a sustainable society and on a thriving economy

Targets 2020

€150 million per annum 2nd/3rd funding streams

| Collaboration with industry | NL research funding | EU research funding |
|---|---|---|
| Contractual research industry: 30% Contractual with TO2 (NL RTOs): 14% | 2nd funding stream: 21% NL government: 11% | European funding stream: 16% International funding: 3% |

KPI's

| | | |
|---|--|---|
| <ul style="list-style-type: none"> Acquisition of 2 large projects at € 4M p/a with 'top 50 partners' Collaborating with MNCs in strategic contractual R&D Expanding regular contractual research portfolio Improved monitoring of collaboration with industry Startup of R&D marketing activities | <ul style="list-style-type: none"> Active participation in topsector calls Active TU Delft participation in # icon projects Per NWO infrastructure call 1 TU Delft project awarded VENI VIDl grants same score, # VICI score up Improve participation NWO Free Competition and OTP 1 Gravity programme led by TU Delft in 2016 | <ul style="list-style-type: none"> 29 ERC starting grants, 12 ERC advanced grants participation in 4 KICs by 2018 Unrelented participation in H2020 projects Explore possibilities for innovative education projects |
|---|--|---|

Key Strategies 2014/2015

| | | |
|---|--|--|
| <ul style="list-style-type: none"> Founding of an Innovation Board Development of legal and financial support menus | <ul style="list-style-type: none"> TU Delft participation in top teams and TKIs TU Delft in 2 icon projects Internal procedure to improve NWO call infrastructures & gravity hit rates Optimise internal procedure Renewal Impulse Win 18 VENI, 12 VIDl, 3 VICI grants Win 34 VC/OTP grants Win 30 Take Off grants | <ul style="list-style-type: none"> KIC Raw Materials & KIC Health partnerships 8 to 9 ERC starting grants 3 to 4 ERC advanced grants ProActive dialogue with EU to influence R&D policy H2020 / ERA agenda |
|---|--|--|

D. Internal Gap Analysis TUD June 2013

**The European Charter for Researchers and the
Code of Conduct for the Recruitment of
Researchers**

**“A Human Resources Strategy for Researchers
incorporating the Charter and Code”**

Internal analysis, Gap analysis and Action plan

Delft University of Technology

1. Introduction & approach

Delft University of Technology (TU Delft) is located in the west of the Netherlands. In addition to being the largest university of technology in the Netherlands, TU Delft is the oldest. It was founded over 165 years ago, although it has borne its present name only since 1986. A fascination with science, design and engineering is what drives the more than 13 000 Bachelor's and Master's students and the 5 000 staff members at TU Delft. Known for its high standards of research and education, TU Delft collaborates with many other educational and research institutions, both at home and abroad.

Because of the importance that it attaches to a healthy research climate in Europe, the university joined the third cohort of the Human Resources Strategy for Researchers (HRS4R) project in 2012. This project aims to implement the 40 principles of the Charter and Code, which was signed by the Association of Universities in the Netherlands (VSNU) in 2007, and to earn recognition through the award of the HR Logo.

The internal analysis was conducted through desk research and interviews with 17 experts at TU Delft. The TU Delft Strategy, as established in the strategic plan entitled 'TU Delft Roadmap 2020'¹, forms the basis for the internal analysis and action plan. The Roadmap contains many action points that correspond to the 40 principles of the Charter and Code. The strategy, which was adopted in 2012, sets out the strategic objectives of TU Delft for the period until 2020. This strategy was developed through university-wide discussion on the university's strategic direction. The HR Strategy memorandum, titled 'Freedom to Excel', is also included in the Roadmap 2020.

The internal analysis was conducted by an interdisciplinary team comprising representatives of the department of Legal Services, the International Office (department of Educational and Student Affairs) and the HR department. This team is also responsible for monitoring the implementation of the action plan.

University-wide discussion Roadmap sessions

To establish a university-wide discussion, around 50 large and smaller internal meetings were held, in which representatives of the various groups within TU Delft discussed the university's strategy. The following meetings were held:

- nine Town Hall meetings, in which all staff members (both scientific and supporting) were invited to discuss the strategy of TU Delft
- eleven Faculty meetings, in which the rector, professors, assistant professors and associate professors from various faculties discussed the strategy
- two Management Team meetings at the University Corporate Office
- Various one-off meetings with:
 - Business representatives
 - Works council
 - Student council
 - Departmental directors
 - TU Delft students who have started their own companies
 - Operational Committee (consultation amongst members of the Executive Board and deans) and the Directorate Commission of the University Corporate Office
 - All Directors of Education
 - HR Talent
 - Staff Library
 - Trainees
 - The Delft Women in Science (DEWIS) network

¹ http://issuu.com/tudelft-mediasolutions/docs/roadmap_uk-lr?e=7145896/1435228

The TU Delft strategy through 2020 was discussed in all of these meetings. Discussions with this broad representation of all stakeholders of the TU Delft ultimately led to the strategic choices that are mentioned in Roadmap 2020.

Other relevant sessions

In addition to the objectives set out in the Roadmap, several other points have come to the attention of TU Delft. For example, the topics involving ethical and professional aspects (e.g. academic integrity) were discussed extensively during 25 faculty meetings, in which all stakeholders were involved. The following groups were represented:

- Departmental directors
- Professors, assistant professors and associate professors
- HR staff
- Confidential advisors
- Management team of the Finance department
- Management team of the Marketing and Communication department
- Faculty secretaries
- EB with various key scientists
- Management teams of the University Corporate Office

Insofar as they are labeled as action points within the framework of the implementation of the Charter and Code, these issues are also described in detail in this report.

The result of the aforementioned Roadmap sessions and other relevant meetings form the basis for this internal analysis.

Local regulations and legislation

The internal analysis includes more than the local rules and objectives. The Collective Labour Agreement for Dutch Universities (*Collectieve Arbeidsovereenkomst van de Nederlandse Universiteiten*, or CAO NU) and national legislation were also considered.

Structure of the report

The internal analysis and action points arising from it are described in Part 2 of this report. The action points arising from the internal analysis are shown in the appendix.

2. Internal analysis

In the internal analysis the 40 points of the Charter and Code are explained as these apply to TU Delft. Not all 40 points are discussed separately. Where possible, points have been merged. The 40 points are divided into four main themes:

- I. Ethical and professional aspects
- II. Recruitment
- III. Working conditions and social security
- IV. Training

The most important themes described above form the topics of the internal analysis. If an action point is linked to a topic, it is shown in a table. An overview of all the improvement points and action points is provided in the appendices.

I. Ethical and professional aspects

1. Research freedom, ethical principles, professional responsibility & attitude

Academic freedom, ethics and integrity are of great importance to TU Delft. At both the national and global levels, TU Delft aspires to contribute significantly to the development of solutions to major social issues. Engineers have an impact on the world, and their work touches people's lives. TU Delft recognises this. The staff, students and guests of TU Delft therefore have an ethical duty to behave accordingly.

The guidelines for the professional conduct of scientists are specified in the Dutch Code of Conduct for Scientific Practice (*Nederlandse Gedragscode Wetenschapsbeoefening*)², which was established by the VSNU on 17 December 2004. In addition to this Code of Conduct, which applies to TU Delft, the TU Delft Regulations on Academic Integrity³ have also been established. These regulations are currently being revised. These regulations establish guidelines regarding what should be understood as the principles of academic integrity and what is expected of staff members in this regard. In light of the importance that TU Delft attaches to this topic, an academic integrity committee has been established to monitor compliance with the TU Delft Regulations on Academic Integrity.

In addition to the Regulations on Academic Integrity, TU Delft also has its own Code of Ethics, which includes the university's core values: respect, integrity, expertise, commitment and transparency. Academic integrity is an important issue, and the Code of Ethics has recently been revised. In order to raise awareness amongst employees, considerable attention has been devoted to this code through such activities as organising a university-wide conference in March 2013, during which the subject was discussed extensively. All scientists and other interested parties were invited to this conference. The following statement has been incorporated in the TU Delft Code of Ethics:

"Academic staff apply the core values in their role as researcher as well as in their interaction with their students and colleagues. They strive to present excellent and innovative contributions to their field and bring those to the attention of their peers and of a larger audience. They are aware of dilemmas and the social dimensions of work in their field and take care to execute their research meticulously. They strive to avoid potential conflicts of interest, and bring such conflicts to the attention of the university if these come to their attention."

²http://www.vsnul.nl/files/documenten/Domeinen/Onderzoek/Code_wetenschapsbeoefening_2004_%282012%29.pdf

³<https://intranet.tudelft.nl/en/targeted-info/research-support/administration/regulation-academic-integrity/>

In cases involving the apparent breach of the guidelines for the professional conduct of scientists (as specified in the Code of Ethics, the TU Delft Regulations on Academic Integrity and in the Dutch Code of Conduct for Scientific Practice) a complaint may be filed with the Academic Integrity Committee. This committee formulates recommendations after holding hearings with the parties involved.

The following committees were also established in 2012:

- TU Delft Conflict-of-Interest Committee: This committee advises the Executive Board on possible conflicts of interest for staff members who engage in market-oriented activities.
- TU Delft Human Trials Committee: Researchers at TU Delft are conducting an increasing number of studies involving human subjects (*human involved experiments*). The Executive Board has approved the establishment of a Human Trials Committee as a subcommittee of the Academic Integrity Committee.

In addition, a page on integrity⁴ was launched on the TU Delft website in late 2012. This page provides staff members with information on this topic, along with the associated regulations. Attention is also being paid to academic integrity in a number of other ways. For example, an entire day of the introduction sessions for PhD students is devoted to academic integrity.

The core values of TU Delft (e.g. integrity and transparency) are mentioned in the strategic plan TU Delft Roadmap 2020⁵, in which the university's strategy is set down. Through openness and transparency, TU Delft strives to avoid any conflicts of interest (or the appearance thereof).

Integrity receives considerable attention within TU Delft. For example, the regulations for ancillary activities and business travel have recently been revised. Table 1 provides an overview of the action points aimed at promoting transparency.

| Improvement point | Action point | Completed | Responsible |
|------------------------|--|-----------|--|
| Promoting transparency | Online publication of ancillary activities. | Q3 2013 | Executive Board(EB)/HR |
| | Establish a confidential advisor for academic integrity and a contact for whistle-blowers. | Q2 2013 | EB (Supported by Legal Services and Strategic Development) |
| | Revise the TU Delft Regulations on Academic Integrity The regulations should be brought into line with the national model regulations for complaints about academic integrity. | Q2 2013 | EB (Supported by Legal Services and Strategic Development) |

Table 1: Action points for Transparency

2. Accountability

The Standard Evaluation Protocol (SEP)⁶ is the protocol for evaluating and assessing academic personnel in the Netherlands. The SEP is intended to provide common guidelines for the evaluation and improvement of research and research policy based on assessment by experts (peer review). The protocol centres on external assessment once every six years, based on self-evaluation and site visits. Midterm assessments will be conducted between two external assessments. The SEP has two objectives: the evaluation of the research institute as a whole and the evaluation of its research programmes. Three

⁴<http://www.tudelft.nl/en/about-tu-delft/strategy/integrity-policy/code-of-ethics/>

⁵ Roadmap TU Delft, p. 12

⁶<http://www.tudelft.nl/en/research/quality-assurance/protocols/>

components are tested: 1) results that are relevant for the scientific community, 2) results that are relevant for society and 3) the training of PhD students.

The 3TU protocol⁷ has also been developed within the framework of collaboration between the three universities of technology in the Netherlands. This protocol is based on the SEP. At the local level, the applicable values and norms within the university are reflected in the Code of Conduct for Academic Integrity and the TU Delft Code of Ethics (see also the provisions under Point 1). As noted in the Code of Ethics, TU Delft strives to achieve openness and transparency. The Code also states that education, research (and the valorisation thereof) and administrative decision-making processes must be verifiable at all levels. In addition, the Code specifies that staff members must be careful and efficient in their use of university budgets.

TU Delft attaches considerable importance to high quality in its research and education. The institutional plan TU Delft Roadmap 2020⁸ reflects the ambition to be assessed at least as very good or excellent according to the SEP. Programmes receiving significantly low scores are subject to adjustment or elimination. Until 2020 the focus will be on the continued application of the national frameworks and protocols for the external assessment of the quality of research. The SEP will be decisive in this regard.

TU Delft aspires to further improve its ability to assess scientific research, and has established several actions to this end, as presented in Table 2.

| Improvement point | Action point | Completed | Responsible |
|---|--|-----------|-----------------|
| Improvements in ability to assess scientific research according to indicators | Establish guidelines (assessment indicators) to allow international comparison of Master's thesis research. This is being accomplished in collaboration with ETH Zurich and RWTH Aachen (three partners in the IDEA league). | Q2 2013 | Legal Services |
| | Share guidelines in the CESAER network. | Q2 2014 | Legal Services |
| | Develop workshops for tenure-track staff to help them provide proper supervision to their PhD students during their doctoral programmes. | Q2 2013 | Graduate School |
| | First tenure-track staff members attend workshops on supervising doctoral programmes. | Q1 2014 | |

Table 2: Action points for Accountability

3. Dissemination, exploitation of results & public engagement

TU Delft attaches considerable importance to knowledge valorisation and sees this as its third core task, in addition to the provision of scientific research and education. Contacts with the business community are highly valuable and ensure the transformation of knowledge into products, services and processes. It corresponds to the social task of TU Delft and its ambition to contribute to a competitive economy.

Knowledge distribution has been included among the duties listed in the job profiles for academic staff. The TU Delft Valorisation Centre offers the students and staff of TU Delft support in connection with the valorisation of knowledge. Knowledge valorisation is also a component of the assessment of scientists.

⁷<http://www.tudelft.nl/en/research/quality-assurance/protocols/>

⁸TU Delft Roadmap 2020, p. 57

Science Centre Delft⁹ was established on 1 September 2010. This Centre aims to show the public the focus of research at TU Delft and how the results can be observed in everyday activities. Various research installations prepared by students and staff members are displayed in the Science Centre, and visitors are able to interact with the experiments themselves.

In addition, the Delft TopTech Institute, a subsidiary of TU Delft, is working on the development of post-Master's and in-company programmes. Delft TopTech provides programmes specifically aimed at professionals and managers with several years of experience who would like to broaden and deepen their knowledge.

TU Delft presents its research through four main channels, known as the Delft Research Initiatives: Energy, Health, Environment and Infrastructures & Mobility. Each theme has its own communications advisor, who assists scientists in communicating research projects and results to society.

Another goal included in Roadmap 2020 involves the further development of the valorisation profile. The actions associated with this point are shown in Table 3.

| Improvement point | Action point | Completed | Responsible |
|--|--|-----------|---|
| Develop the valorisation profile further | Develop a form of annual reporting in the area of knowledge valorisation. | Q4 2013 | Valorisation Centre |
| | Develop a 2013-2020 valorisation agenda for the guidance of supporting activities in the area of valorisation. | Q4 2013 | Valorisation Centre |
| | Select indicators in order to improve the visibility of performance in terms of valorisation and to use them for national and international comparisons. | Q3 2013 | Valorisation Centre |
| | Further strengthen regional networks in the area of public-private partnerships. In concrete terms, the objective is to establish a regional development in the Zuid-Holland region. | Q1 2014 | Valorisation Centre (in collaboration with the cities of Delft, The Hague, Leiden and Rotterdam, as well as with the universities in Delft, Rotterdam and Leiden) |
| | Formulate an innovation strategy by all faculties, as an integral part of the strategic planning of the faculty. | Q2 2014 | Deans |
| | Investigate the possibility of establishing a multi-talent transitional building on campus for start-ups. | Q4 2014 | Facility Management & Real Estate with Valorisation Centre |

Table 3: Action points for valorisation

4. Non-discrimination

As described in Roadmap 2020, the core values of TU Delft are respect, integrity, expertise, commitment and transparency.¹⁰ Within these core values, and thus within TU Delft, there is no room for any form of discrimination whatsoever. Employees who have experienced inappropriate conduct are able to turn to a confidential advisor. They may also file a complaint according to the Complaints Procedure for Inappropriate Conduct.

⁹<http://www.sciencecentre.tudelft.nl/en/>

¹⁰TU Delft Roadmap 2020, p. 12

Dutch legislation also stipulates that discrimination is not allowed. This is established in the following laws, to which TU Delft and its staff members are naturally bound: the General Equal Treatment Act (*Algemene Wet Gelijke Behandeling*), the Act for the Equal Treatment of Men and Women (*Wet Gelijke Behandeling Mannen en Vrouwen*), the Working Time Discrimination Act (*Wet Onderscheid Arbeidsduur*), the Equal Treatment Act (*Wet Gelijke Behandeling*) on grounds of disability or chronic illness and the Equal Treatment Act on grounds of age in employment.

5. Evaluation/appraisal systems

TU Delft operates a Result and Development (R&D) cycle for all of its staff. The R&D cycle starts with setting goals for the coming year, and it ends with the evaluation of the results at the end of the period. Progress meetings are scheduled between interviews. The R&D cycle is applied for all temporary and permanent employees. Staff members are evaluated by their immediate managers and a co-assessor. The R&D cycle contributes to an independent and transparent form of assessment.

In addition to the R&D cycle, TU Delft has also adopted the Guidelines for Conscientious Compensation (*Gedraglijn Bewust Belonen*), which define the policy regarding compensation at TU Delft. The manual for the R&D cycle and the Guidelines for Conscientious Compensation are available on the TU Delft website¹¹.

In order to further develop the R&D cycle, TU Delft aspires to introduce the 360 degree feedback instrument to the R&D cycle for all positions at scale 10 or higher¹².

| Improvement point | Action point | Completed | Responsible |
|-------------------|---|-----------|-------------|
| Improve R&D cycle | Introduce the 360-degree feedback instrument in the Result and Development (R&D) interview. | Q4 2014 | HR |

Table 4: Action point R&D

¹¹ <https://intranet.tudelft.nl/en/career-and-development/result-and-development-cycle-2013/>

¹² TU Delft Roadmap 2020, p. 89

II. Recruitment

6. Recruitment

TU Delft follows the guidelines of the Recruitment Code of the Netherlands Association for Personnel Management and Organisation¹³ (NVP code). In accordance with this recruitment code, applicants receive clear information in advance with regard to the recruitment procedure to be followed, the content of the vacancy and its place within the organization. For example, in addition to the relevant characteristics of the vacancy, the advertisement text lists the method of application, the information to be provided by the applicant, any special selection procedures (e.g. psychological examination/assessment), any pre-employment medical examination that may be required and the application deadline. Vacancy advertisements include at least the following relevant characteristics: job requirements, tasks, responsibilities, position within the organisation, nature of employment, working hours, contract length and location. Job requirements involve skills, behaviours and personal qualities. Requirements for personal characteristics are specified only if they are necessary for good job performance, and must never be in conflict with statutory regulations.

In addition to the NVP code, TU Delft also applies its own guidelines for the recruitment and selection of academic staff (R&S Guidelines for Academic Staff¹⁴). In accordance with these guidelines, the advertisement text must include the components required on the CV and the possible use of an assessment.

TU Delft is also a member of Academic Transfer¹⁵ (AT), a job site for scientists. Academic Transfer is a cooperative in which all members have committed themselves to placing all their academic vacancies on the website. The main objective is to offer the complete range of available positions for PhD students, researchers, post-docs, assistant professors, associate professors and full professors. The website is multilingual. All vacancies for which foreign candidates are explicitly recruited are also available in English. By default, academic vacancies are posted to international job sites (e.g. EURAXESS).

As mentioned in the TU Delft HR Strategy memorandum entitled 'Freedom to Excel' (HR Strategy), TU Delft strives to achieve diversity amongst its incoming staff. People with different characteristics and backgrounds have different frames of reference and choose different angles, thus enriching research and education.¹⁶ The HR policy aims to encourage diversity in all areas (including age, nationality/culture and gender). The first priority for TU Delft is gender diversity.¹⁷ See also the provisions under Point 19.

In accordance with the TU Delft Roadmap 2020¹⁸ and the HR Strategy,¹⁹ recruitment procedures for academic staff focus on attracting highly talented candidates with mono-disciplinary knowledge, but with multidisciplinary interests and experience, an orientation towards application, didactic qualities and broad competencies. Recruitment efforts also focus on candidates with high potential who are able and willing to develop to this level.

The careers for academic staff at TU Delft are clearly described in the HR Strategy²⁰ and the TU Delft Tenure Track Directive.²¹ The Tenure-Track Policy is described in the latter memorandum. This policy is aimed at offering assistant professors with high potential career paths that progress to the ranks of associate professor and eventually full professors.

¹³<http://www.nvp-plaza.nl/documents/doc/sollicitatiecode/sollicitatiecode-english-2009.pdf>

¹⁴ R&S Guidelines for Academic Staff, p. 14

¹⁵<http://www.academictransfer.com/>

¹⁶TU Delft HR Strategy, p. 20

¹⁷TU Delft HR Strategy, p. 20

¹⁸TU Delft Roadmap 2020, p. 78

¹⁹TU Delft HR Strategy, p. 20

²⁰TU Delft HR Strategy, pp. 22-26

²¹<http://www.tudelft.nl/en/about-tu-delft/working-at-tu-delft/a-career-at-tu-delft/academic-staff/career-prospects/tenure-track-programme/>

Career development opportunities are clearly indicated in the wording of vacancy advertisements. The R&S Guidelines for Academic Staff²² further specify that the closing date for application should be coordinated with the date on which the advertisement was last posted.

7. Selection & Transparency

In accordance with the HR Strategy, selection procedures for new academic staff should involve an assessment of the qualities that TU Delft seeks. This requires that assessment methods and the composition of selection committees should be carefully coordinated to the position and quality requirements, as well as to the general competencies that the TU Delft organization considers important (i.e. management, personal leadership and willingness to change).²³

Appointment Advisory Committees (AACs) are composed in such a way that the candidate can be assessed with authority on all selection criteria.²⁴ For example, in order to assess the didactic qualities of candidates, the director of education is always a part of the AAC. In addition, the AAC must include at least one woman, an HR advisor and a professor or associate professor from another section. The HR department also monitors the quality of the composition of the AAC.

In accordance with the TU Delft R&S Guidelines for Academic Staff and the checklist of the TU Delft Council of Professors,²⁵ selection committees for the recruitment of professors are to be composed as follows: one member from another faculty, one member from another university, one member from the social environment and one internal or external female expert in the field.

The HR Strategy specifies that a wide range of resources should be used in order to assess the required qualities in the selection of assistant professors, associate professors and full professors. Examples include the following: giving a lecture, presenting a research vision, conducting interviews with various stakeholders, peer review and an assessment of management and leadership skills. All of these instruments are used in selection processes.²⁶

As described under Point 6, the career tracks for academic staff at TU Delft are clearly described in the HR Strategy and in the memorandum on the TU Delft Tenure-Track Policy. Career prospects are clearly specified during the recruitment process.

Finally, in accordance with the R&S Guidelines for Academic Staff, all candidates who have been rejected will be informed by telephone by the chair of the selection committee.²⁷

8. Judging merit (Code)

As mentioned under Point 6, in the interest of strengthening the academic staff, TU Delft seeks highly talented candidates with mono-disciplinary knowledge, but with multidisciplinary interests and experience, an orientation towards application, didactic qualities and broad competencies in the area of networking, entrepreneurship, leadership, organisation and communication. The TU Delft also seek candidates with high potential who are able and willing to develop to this level. This is noted in several documents, including the memorandum on the TU Delft Tenure-Track Policy.²⁸

In accordance with the HR Strategy, these qualities should also be tested during the selection of new staff members. To this end, testing methods and the composition of selection committees (see also Point

²²R&S Guidelines for Academic Staff, p. 14

²³TU Delft HR Strategy, p. 19

²⁴TU Delft HR Strategy, p. 19

²⁵R&S Guidelines for Academic Staff, p. 63; Appendix to the checklist of the TU Delft Council of Professors

²⁶TU Delft HR Strategy, p. 19

²⁷R&S Guidelines for Academic Staff, p. 16

²⁸TU Delft Tenure-Track Policy, p. 3

7) should be carefully coordinated to the position and quality requirements, as well as to the general competencies that the TU Delft organisation considers important.²⁹

9. Variations in the chronological order of CVs (Code) & Recognition of qualifications

In accordance with the TU Delft R&S Guidelines for Academic Staff, candidates are selected on the basis of the content of the CV and the cover letter, among other things.³⁰ If desired, the candidate may explain any variations in chronological order.

The Competence Instrument for Universities in the Netherlands (*Competentie-instrument Nederlandse Universiteiten*)³¹, which was developed for the recruitment, selection and development of employees, can be used for the valuation of alternative career patterns. This instrument, which is linked to the University Job Classification (*Universitair Functie Ordenen*, or UFO) profiles, consists of competences in all job profiles, in addition to several generic competence profiles. The competences are derived from five clusters of competence areas: brainpower, personal effectiveness, influence, leadership and the ability to achieve results.

Items testing each competence have been included in the competence instrument in order to support processes of recruitment and selection. These test questions can be used to pose targeted questions to potential candidates for a position.

10. Recognition of mobility experience

In its HR Strategy, TU Delft specifies that work experience in different environments is valued.³² Scientists can thus enhance their academic careers by occasionally stepping outside of the institution in order to develop new ideas. For this reason, PhD students who would like to remain at TU Delft are first advised to pursue a post-doctoral position elsewhere. In general, post-docs are also advised to seek a position elsewhere following their temporary appointments. These staff members are not lost to TU Delft. The university's international network is enriched through these practices. Some of these scientists eventually do return, bringing with them intellectual baggage and experience.

At TU Delft, researchers with more experience are also regularly encouraged to refresh their knowledge by taking sabbaticals, undertaking new activities, or engaging in an exchange with industry or other scientific organizations, to name a few examples.

11. Seniority

According to the Collective Labour Agreement for Dutch Universities³³, the employer determines the job profile and the job of the staff members in accordance with the rules of the University Job Classification system.³⁴ The actually assigned duties form the basis for the classification (valuation) of a position. The applicable job profile is based on the assigned duties. To determine the level of particular positions, classification criteria are included in each job profile. The classification criteria are included in the job profile as a matrix, ranging from the lightest level of the position to the heaviest level. Finally, classification rules have been included. The criteria of the University Job Classification System form the basis for recognition of the seniority requirement. The classification criteria indicate the level of the position.

²⁹TU Delft HR Strategy, p. 19

³⁰R&S Guidelines for Academic Staff, p. 16

³¹<http://www.vsnul.nl/files/documenten/CAO/2010.12.01%20Competentie%20Instrument%20VSNUL.pdf>

³²TU Delft HR Strategy, p. 24

³³Art. 3.5, Section 1 of the Collective Labour Agreement for Dutch Universities

³⁴http://www.vsnul.nl/functie_ordeningsysteem_ufo.html

12. Post-doctoral appointments

The Collective Labour Agreement for Dutch Universities specifies the maximum number of appointments and the maximum length of employment determined by an employer,³⁵ also for post-doctoral researchers. Appointments with other employers are disregarded in the Collective Labour Agreement. Post-doctoral researchers who are considered to have high potential are offered the possibility of a permanent appointment at TU Delft within the tenure-track framework.

As is the case with other staff members, attention is paid to development opportunities during the assessment of post-doctoral researchers.

³⁵Art. 2.3, Section 1 of the Collective Labour Agreement for Dutch Universities

III. Working conditions and social security

13. Recognition of the profession

As previously indicated, the University Job Classification system is applied at TU Delft. The basis of the system consists of approximately 100 job profiles: compact descriptions of the various positions available in Dutch universities. These descriptions take into account differences in the weight of particular positions by distinguishing multiple levels for each job profile. The following profiles have been developed for academic staff:

- Professor
- Associate Professor
- Assistant Professor
- Lecturer
- Researcher
- PhD student

This system is applied by all universities in the Netherlands. Staff members are recognised as professionals at all levels. Visiting scientists without appointments are also recognised as professionals by TU Delft.

14. Research environment & Good practice in research

TU Delft aspires to be a good employer. Good working conditions are a necessary condition in this regard. Ensuring good working conditions is the responsibility of the manager, who receives support in this regard from the Health, Safety and Environment (HSE) division within the department of Human Resources. This division combines services for health (e.g. occupational physicians, occupational social work) and services for safety and the environment (Labour/Environmental advisors). The dynamic risk inventory and evaluation (RI&E) is one important tool for monitoring and improving the quality of working conditions. This assessment draws upon various tools, including state-of-the-art software such as the Safety Report System developed at TU Delft. The national Occupational Health and Safety Act (*Arbowet*) is applicable in this regard. This legislation consists of the following: the Working Conditions Decree (*Arbodesluit*), the Occupational Health and Safety Regulations (*Arboregeling*) and the Occupational Health and Safety Policy regulations and catalogue³⁶ of the Association of Universities in the Netherlands, which formulates specific measures for universities.

The IT department is responsible for data protection at TU Delft. They have the necessary knowledge, and they are able to provide advice in the area of information technology and data protection.

As specified in the TU Delft Roadmap,³⁷ participation in numerous collaborations is necessary within the evolving new scientific world order, which is characterised by fierce competition for people and resources. Such collaboration is therefore encouraged within TU Delft. It is becoming increasingly necessary for the university to maintain a clear presence in international governance through the IDEA League and other prominent networks, and to be represented in European university networks, including the European Universities Association (EUA) and the Conference of European Schools for Advanced Engineering Education and Research (CESAER).

The research facilities are necessary conditions for TU Delft to be able to conduct its research programmes and thus to achieve its profiling choices. TU Delft has a research infrastructure of national and European significance, with great social value. The ability of TU Delft to continue to fulfil its social mission depends upon the timely modernisation of existing infrastructures and timely investment in new

³⁶<http://www.vsnu.nl/arbocatalogus.html>

³⁷ TU Delft Roadmap 2020, p. 54

infrastructures. This may involve new buildings, new equipment or a combination thereof. This process receives continual attention³⁸.

15. Working conditions

TU Delft operates within the extensive Dutch legislation on working conditions.

The Working Hours Act (*Arbeidstijdenwet*) specifies rules with regard to working hours. This legislation specifies how long employees are allowed to work, when they are entitled to breaks or rest periods and the minimum number of vacation days they are entitled to. The Working Hours Adjustment Act (*Wet Aanpassing Arbeidsduur*) grants employees the right to work more or fewer hours, thereby improving their ability to combine work and care. This is also the purpose of the Work and Care act (*Wet Arbeid en Zorg*), which regulates the right to parental leave and the right to care leave.

In addition to legislation at the national level, various agreements have been made at the level of the Collective Labour Agreement with regard to working hours per week. These agreements concern sabbatical leave, the senior staff scheme, maternity leave, care leave and paid parental leave.

The latter is also facilitated by the fact that all scientists at TU Delft are able to perform activities at any time and from anywhere in the world through teleworking. PhD candidates (both paid and unpaid) and scientists with salaried positions of more than two years receive a free ADSL connection at their home addresses.

The terms and benefits of employment thus consist of national regulations, as well as sector-level (Collective Labour Agreement for Dutch Universities) and local regulations. Both local arrangements and the Collective Labour Agreement for Dutch Universities are available to all staff members through the TU Delft website. In addition, the terms and conditions of employment are explained in an employment interview at the commencement of employment.

TU Delft also has its own schemes, including the Regulations for Working Hours per Week (*Regeling Werkduur en Werktijden*)³⁹ and the Special Leave Scheme (*Regeling Buitengewoon Verlof*).⁴⁰ In order to make it even easier for staff members to combine work and private life, the regulations for working hours per week are currently being revised.

| Improvement point | Action point | Completed | Responsible |
|---|---|-----------|-------------|
| Evaluate current working time regulations according to the needs of staff members | In consultation with broad representation from TU Delft, develop a new vision in the area of working time, adjusting the working time regulations if necessary. | Q2 2013 | HR |

Table 5: Action points for working conditions

16. Stability and permanence of employment

The Collective Labour Agreement for Dutch Universities establishes rules concerning the maximum duration and number of extensions for temporary appointments. Temporary appointments of scientists must not exceed six years, and the appointment can be extended no more than twice. In accordance with Article 2.4 of the Collective Labour Agreement for Dutch Universities, a third extension implies the automatic conversion of the temporary appointment into a permanent appointment.

³⁸ TU Delft Roadmap 2020, p. 60

³⁹<https://intranet.tudelft.nl/nl/arbeidsvoorwaarden/aanstelling-en-arbeidstijd/aanstelling/arbeidsduur-en-werktijden/arbeidsduur/arbeidsduur/>

⁴⁰<https://intranet.tudelft.nl/en/terms-of-employment/leave/bijzonder-verlof/leave-for-moving-house/>

The TU Delft Tenure-Track Programme is a path towards a permanent appointment, offering clear and attractive career prospects for young, talented scientists. For tenure track, see also the provisions under Point 6.

17. Funding and salaries

The applicable salaries for the scientists are determined in the Collective Labour Agreement for Dutch Universities, which includes all salary scales. The salary scale for a specific employee is determined by the level of the position, in accordance with Article 3.5, Section 1 of the Collective Labour Agreement. There are 24 levels for academic staff. A starting scale may be applied at the beginning of the appointment for a staff member who is not yet capable of fulfilling the position in its entirety (Article 3.8 of the Collective Labour Agreement for Dutch Universities). An employee may be placed in a starting scale for a maximum of two years. The salary of PhD students is specified separately (Article 3.10 of the Collective Labour Agreement for Dutch Universities). TU Delft operates according to the Guidelines for Conscientious Compensation (as elaborated in Art. 3:20, Section 2 of the Collective Labour Agreement). In the interest of increasing quality and productivity, TU Delft aspires to provide its staff members with additional rewards for exceptional performance. This is because dedication and commitment increase when staff members receive attention and recognition from their environment for such performance.

Social security legislation obviously applies as well:

- The Unemployment Insurance Act (WW)
- The Work and Income (Capacity for Labour) Act (*Wet werk en inkomen naar arbeidsvermogen*, or 'WIA');
- The Exceptional Medical Expenses Act (*Algemene wet bijzondere ziektekosten*, or AWBZ) and
- The General Old-Age Pensions Act (*Algemene Ouderdomswet*, or AOW)

The ABP pension scheme also applies.⁴¹ Staff members at Dutch universities are enrolled in the ABP Pension Fund. The ABP is the occupational pension fund for the government and education sector. The ABP provides income at retirement and in cases of disability and death.

18. Gender balance

Diversity is of great importance to TU Delft. Gender diversity has also been high on the agenda for a long time.⁴² TU Delft was the first university in the Netherlands to sign the Talent to the Top charter. This initiative is aimed at improving the gender balance in the highest levels of organisations by appointing more women to positions as professors and top-level managers. One of the first actions that the TU Delft has taken in the framework of the charter involves the implementation of a study of gender diversity within the university. The recommendations from this study form the foundation for the measures that are intended to promote diversity within the university. The current focus of the diversity policy is on increasing gender diversity.

A variety of measures has already been implemented. For example, the management information submitted by all faculties now includes an indicator for diversity. In addition, labour-market communications have been assessed and adjusted on the basis of the diversity objectives in 2011. In addition, DEWIS organises special training courses, networking events and similar activities for women scientists.

The TU Delft Fellowship⁴³ was introduced in 2010. This fellowship reserves 10 tenure-track positions for outstanding women scientists. This initiative has led to the appointment of 10 outstanding female scientists.

⁴¹<http://www.abp.nl/over-abp/wie-zijn-wij/statuten-reglementen/pensioenreglementen-en-statuten.asp>

⁴² TU Delft Roadmap 2020, p. 77

⁴³<http://www.tudelft.nl/en/about-tu-delft/working-at-tu-delft/tu-delft-as-employer/delft-technology-fellowship/>

Roadmap 2020 specifies a concrete target for the percentage of women scientists in 2020 (i.e. 20%). This target is to be achieved by following the action steps (see Table 6), which were formulated in response to the previously mentioned study.⁴⁴

| Improvement point | Action point | Completed | Responsible |
|---|---|-----------|---|
| Increase the percentage of female scientists to 20% by 2020 | Investigate the options for childcare on or in the direct vicinity of the campus. | Q4 2013 | HR |
| | Start 2 nd round of the TU Delft Fellowship: Create and fill 10 new vacancies especially for female scientists. | Q4 2014 | HR |
| | Establish a dual-career programme: This programme helps the partners of new employees to find suitable employment in the Netherlands. | Q4 2013 | HR in cooperation with the Central International Office (CIO) |

Table 6: Action points for gender

19. Career development

Article 6.5, Section 2 of the Collective Labour Agreement specifies that the employer must establish a career policy. In the TU Delft Roadmap 2020, the university states that good career prospects and development opportunities are important to attracting and retaining outstanding people.⁴⁵

In addition, the TU Delft HR Strategy states that it is essential for people to continue to develop and progress to appropriate functions and for the promotion policy to consist of clear, attractive career paths.⁴⁶ One of the strategic objectives mentioned by TU Delft involves maintaining or improving the high quality of staff through such measures as good progression management and a customised training programme.⁴⁷ Attractive career paths offering the possibility of both upward and lateral career moves are available to the academic staff, as well as to the administrative and support staff.

TU Delft has chosen to appoint all incoming assistant professors to tenure-track posts and to let them participate in the tenure-track personal development programme.⁴⁸ The tenure-track programme offers staff members with high potential the opportunity to develop and progress into permanent positions as assistant or associate professors, with structural support and guidance. Such progression occurs only if mutual expectations are met. For candidates who fail to demonstrate potential for scientific growth, TU Delft offers guidance in the selection of another career.

The core academic career track at TU Delft thus proceeds as follows: (tenure track) Assistant Professor – (tenure track) Associate Professor – Professor

Although TU Delft has made a general choice to discontinue the practice of recruiting for academic positions that are not part of the core academic career track, this does not completely eliminate the possibility of specialisation, as the university attaches great importance to the integration of education and research. Individual employees with good track records and outstanding performance in either research or education are offered space to concentrate exclusively on research or education later in their careers.⁴⁹

⁴⁴TU Delft Roadmap 2020, p. 78

⁴⁵TU Delft Roadmap 2020, p. 78

⁴⁶TU Delft HR Strategy, p. 23

⁴⁷TU Delft HR Strategy, p. 5

⁴⁸TU Delft Roadmap 2020, p. 78

⁴⁹ TU Delft Roadmap 2020, p.24

Academic staff members who would like to broaden their careers have the opportunity of moving into positions in education management (e.g. director of studies or chair of a Board of Examiners). Professors can progress to top-level posts in their faculties (e.g. Director of Education, Department Chair or Dean). Broader posts are also available at the inter-faculty level, for example in research schools and research institutes. In many cases, recruitment for these posts is restricted to existing staff, with the goal of offering progression opportunities to academic staff members.

Career opportunities are discussed during the annual review session (R&D cycle). Employees can also obtain comprehensive information about career opportunities from the HR Talent division of the HR department. Employees can also find extensive information about career opportunities on the TU Delft website.⁵⁰

20. Access to career advice

As stated in Article 6.5, Section 3 of the Collective Labour Agreement, any staff member with a temporary appointment of two years or more will be offered the opportunity to obtain career advice from a professional organisation. The costs of this advice is to be borne by the employer. This article also specifies that this possibility should be offered at a time when such information would be useful in the framework of individual guidance trajectory focused on increasing opportunities in the internal and the external labour markets.

In addition, as established in Article 6.5, Section 4 of the Collective Labour Agreement, every employee with a permanent appointment is entitled to a session with an expert career consultant at least once every five years. When possible, these sessions should culminate in a recommendation for career development.

One of the strategic objectives of TU Delft is to maintain or improve the high quality of staff through measures such as good progression management and customised training programmes.⁵¹ Offering career consultancy corresponds to this objective. At TU Delft, career consultancy programmes are available to members of academic staff upon request. Upon completion of their studies, PhD students receive advice concerning their further scientific careers. For all other permanent and temporary members of the academic staff, including the post-docs, career advice is available upon request.

21. Intellectual Property Rights

In the Netherlands, intellectual property rights are subject to legislation including the Patent Act (*Rijksoctrooiwet*) and the Copyright Act (*Auteurswet*). In addition, the Collective Labour Agreement (Chapter 1, Section 3) stipulates that the employer can impose additional regulations with regard to patents and copyrights. These regulations concern the duty to report (Collective Labour Agreement for Dutch Universities, Article 1.21), transfer of the preservation of rights (Article 1.22) and compensation (Article 1:23).

The Intellectual Property (IP) department of the TU Delft Valorisation Centre provides information about intellectual property rights and assists scientists with registering patents. The house rules concerning intellectual property and patents are also published on the TU Delft website.⁵²

As stated in the Roadmap, TU Delft aspires to increase the number of commercially applicable technologies and make them easily accessible to market participants.⁵³ Patent protection makes it interesting for companies or investors to exploit inventions. TU Delft aims to increase the quality of its intellectual property. The starting assumption is that screening and scouting should take place close to the academic workplace.

⁵⁰<https://intranet.tudelft.nl/en/career-and-development/>

⁵¹TU Delft HR Strategy, p. 5

⁵²<https://intranet.tudelft.nl/en/targeted-info/valorisation-centre/intellectual-property/?login=1>

⁵³TU Delft Roadmap 2020, p. 64

A training programme is being developed in order to further promote knowledge among academic staff of intellectual property rights.⁵⁴

TU Delft is currently working to develop regulations regarding IP (see Table 7). These regulations will involve the further elaboration of the provisions contained in the previously mentioned articles of the Collective Labour Agreement. They are expected to be completed by the third quarter of 2014. This will prevent problems such as those involving the current ambiguities within the university concerning intellectual property rights for software. For example, one of the principles of these regulations will be that copyrights (including software and databases) and patents should always be reported to the head of the research group. In the case of patents, TU Delft must decide whether it will register a patent after it has been reported. If TU Delft does not register the patent, the staff member may do this independently. When the employer does register and exploit the patent, the one-third rule applies: after deducting the application fee, the revenue will be divided, with the inventors receiving one third of the income. Although software is technically subject to copyright, it is treated in the same way as patents at TU Delft.

| Improvement point | Action point | Completed | Responsible |
|--|--|-----------|----------------|
| Improve the quality of intellectual property | Establish regulations for intellectual property. | Q4 2013 | Legal Services |
| | Develop a training programme relating to intellectual property for academic staff. | Q3 2014 | Legal Services |

Table 7: Action points for intellectual property

22. Co-authorship & teaching

The publication of research in peer-reviewed and other outlets is of great importance to TU Delft. Both the author and the co-author are always acknowledged. In many cases, the researcher's supervisor is included as the co-author of the publication, or vice versa.

All publications are included in the R&D cycle on a yearly basis. All PhD candidates must author four independent publications during the four-year programme. These publications will ultimately result in the doctoral thesis.

The University Job Classification System is applicable at TU Delft (see also the provisions under Point 9). The University Job Classification System profiles specify teaching and research duties for each job category. Annually, within the framework of the R&D cycle, scientists can make agreements regarding the distribution of teaching and research duties. PhD candidates are expected to devote no more than 15% of their working hours to teaching activities.

To prevent young scientists with tenure-track posts from becoming overly focused on research – and thus possibly becoming ineligible for tenure (and/or promotion to associate professor in due course) – agreements about teaching duties are made with the researcher in advance.⁵⁵

23. Complaints/appeals

TU Delft has a procedure for complaints and appeals. Staff members who disagree with decisions that affect them can file a complaint. This complaint will be submitted to the Central Objections Committee by the Executive Board. This independent committee is composed of external members. Subsequently, the researcher may also appeal to the courts and to the Central Appeals Council.

⁵⁴ TU Delft Roadmap 2020, p. 64

⁵⁵ TU Delft Tenure-Track Policy, p. 14

<http://www.tudelft.nl/en/about-tu-delft/working-at-tu-delft/a-career-at-tu-delft/academic-staff/career-prospects/tenure-track-programme/>

The Higher Education and Research Act (*Wet op het Hoger onderwijs en Wetenschappelijk onderzoek*) and the Collective Labour Agreement for Dutch Universities (Articles 1.12, 1.13, 10.10) establish rules regarding inappropriate conduct and regarding complaints and appeals.

Employees who, in the course of their work, undergo social, psychological and/or physical harm that can also be considered inappropriate, annoying, harassing or threatening objectively and socially may appeal to the TU Delft Complaints Procedure for Inappropriate Conduct (*Klachtenregeling Ongewenst Gedrag*). In addition, TU Delft has 12 confidential advisors to whom employees can turn. The confidential advisors are independent and open to confidential complaints.

TU Delft has an ombudsman for students. This ombudsman can also be approached by PhD candidates who encounter problems during their PhD programmes.⁵⁶

The National Committee for Academic Integrity (*Landelijk Orgaan voor Wetenschappelijke Integriteit*, or LOWI)⁵⁷ processes complaints after they have been handled by the institution where the alleged infringement occurred. It only accepts cases filed by an interested party, i.e. a plaintiff, defendant or the board of the institution or research organisation. An institution's board may also request a recommendation from this committee with regard to a case pending within the organisation before the board issues its own ruling on the case.

24. Participation in decision-making bodies

TU Delft offers various forms of consultation in which the interests of the staff (including the academic staff) are represented. Each university is responsible for the further elaboration of the agreements set down in the national Collective Labour Agreements at the local level. At TU Delft, this happens in the Local Consultation Body (*Lokaal Overleg*, or LO),⁵⁸ in which the four unions reach agreements with the Executive Board regarding the terms and conditions of employment and the legal status of all staff members.

The works council (*Ondernemingsraad*, or OR)⁵⁹ is a body that represents the staff. The works council is a consulting partner of the Executive Board, and it exercises structured influence and control over the policies of the Executive Board. It consists of members elected by and from the staff. The works council also has subcommittees within the various faculties and offices. TU Delft has established regulations regarding compensation and facilities for the works council. Each year, the Executive Board makes a specific amount available to the TU Delft works council for the training and education that the council deems necessary in order for its members to perform their duties, as specified in Article 18, Section 2 of the Works Councils Act (*Wet op de ondernemingsraden*, or WOR).

The interests of PhD candidates are promoted by Promood, as well as by the other aforementioned bodies. Promood is an independent organ. Promood was initiated by PhD candidates at TU Delft. The board consists of about 10 members who perform various tasks (from legal affairs to social activities).

Relevant legislation for participation in decision-making bodies at Dutch universities include the Higher Education and Research Act and the Works Councils Act. When a shared-council system is chosen (a student council and a works council), the student council has advisory powers, as specified in the Higher Education and Research Act. The advisory powers of the works council are in accordance with the Works Council Act. That is the way representation is organised at TU Delft.

⁵⁶ <https://intranet.tudelft.nl/en/on-campus/faculties-and-services/university-corporate-office/education-and-student-affairs/ssf/ombudsman/>

⁵⁷ <http://www.knaw.nl/Pages/DEF/28/514.bGFuZz1FTkc.html>

⁵⁸ <https://intranet.tudelft.nl/en/on-campus/personnel-associations/trade-unions/local-consultation/>

⁵⁹ <https://intranet.tudelft.nl/en/ceg/consultation-and-advice/representative-bodies/works-council/rights/>

IV. Training

25. Relationship to supervisors; Supervisory and managerial duties

As noted in the TU Delft Roadmap⁶⁰ and HR Strategy⁶¹, coaching leadership is one of the factors in the success of the university. This is a style of leadership in which managers inspire their staff to realise their maximum potential. This leadership style is needed for academic staff, as well as for a large part of the support staff, which is made up of professionals and highly trained specialists. Scientists, whose motivation is to a large degree intrinsic, do not require 'leadership' in the traditional sense of the word. Coaching leadership implies management focusing on results. Managers thus allow their staff employees the freedom to decide where, when and how they will achieve the desired result. Coaching managers provide their staff members with tools, knowledge and opportunities with which they use to develop and improve their performance. They talk to them about their hopes, ambitions, power, potential, development needs and constraints. That is why TU Delft also attaches great importance to providing its managers with the training they need to bring their coaching skills up to the desired level. For the period until 2020, TU Delft will strive to offer training programmes in coaching leadership to all existing and new staff members in management positions.⁶² TU Delft has recently introduced a special training course in coaching leadership for PhD supervisors.

In addition to this training course, other targeted training courses are provided to PhD supervisors within the framework of the Graduate School (e.g. 'Code of good practice on doctoral supervision'). These special training courses for PhD supervisors focus on the particular form of guidance and attention that PhD candidates need in order to complete their programmes properly and effectively.

The training course entitled 'PhD start-up' has been available to PhD students since 2009. In this training course, which has been mandatory since 2012 for all appointed PhD candidates and is open to visiting PhD candidates, new candidates focus issues such as developing the personal competences that they will need to ensure that the relationship with their supervisors proceeds smoothly.

In addition to the training courses provided to PhD supervisors, each PhD candidate is offered an education and supervision plan within three months of their appointment, in accordance with Article 6.8 of the Collective Labour Agreement for Dutch Universities. This plan, which is developed in consultation with the daily supervisor or PhD supervisor, is updated annually, where necessary. This plan specifies the minimum number of hours of personal supervision that the PhD student will be entitled to each month. If the daily supervisor is not the PhD supervisor, the PhD candidate will meet with the PhD supervisor at the beginning of the doctoral programme and at other points that are decisive for the progress of the research (but at least once each year).

Other scientists also regularly engage in consultation with their managers about progress and development. In addition to the work meetings in which managers and employee exchange information on all matters affecting work and the workplace, an annual R&D interview is also conducted. This R&D interview is a formal occasion during which to consider progress, development and supervision.

At TU Delft, experienced researchers are assigned to provide guidance to researchers with less experience. For example, experienced researchers are assigned as mentors for researchers who are following a tenure track.

TU Delft also has a management development programme, the components of which include an academic leadership course, a training course in coaching leadership and basic-skills training for managers. The latter training is a cooperative project involving the universities of Eindhoven, Leiden, Utrecht and Rotterdam. It has been offered to all new managers since the spring of 2012.

⁶⁰ TU Delft Roadmap 2020, p. 78

⁶¹ TU Delft HR Strategy, p. 5

⁶² TU Delft Roadmap 2020, p. 89

A special training programme for professors, deans, directors and others in similar positions has also been offered since 2012.

26. Continuing professional development & access to research training

TU Delft aspires to be a flexible, learning organisation that is constantly adapting to changing environmental factors. The HR Strategy,⁶³ also mentions this as one of the university's four success factors. The university staff and managers must therefore engage in continuous self-development. In addition to a university-wide tenure-track programme and a coaching leadership programme, the TU Delft Roadmap⁶⁴ also mentions a need to improve insight into career, development and training opportunities. This should be pursued as part of the HR policy. TU Delft invests in its staff by offering proven quality education and training for personal and professional development. These educational programmes and training courses consist of educational programmes organised by the HR Talent division within or outside TU Delft. They are carried out in partnership with professional providers. For many popular training courses, special customised versions have been developed for TU Delft (these include personal leadership, English language skills, media training and academic leadership). Scientists can obtain additional information about academic careers on the TU Delft website (employee portal, Careers at TU Delft). Here a list of training providers can be found.⁶⁵

In September, a partnership with the universities of Leiden and Rotterdam was established in order to enlarge the range of educational programmes/training courses available to the staff and guests of TU Delft. This partnership (LDE) offers the staff and guest of TU Delft access to several educational programmes offered by the universities of Leiden and Rotterdam. Career and personal development, along with the associated education and training, is also an important part of the annual R&D interview that all employees must have with their managers. In accordance with Article 6.6 of the Collective Labour Agreement for Dutch Universities, multi-year career objectives and agreements are specified in a personal development plan. TU Delft aims to give optimal consideration to the goals and needs of its staff. Development through training is therefore a topic of discussion during the R&D interview, as is development through other means including coaching, attending conferences, study tours, internships with companies and part-time appointments at foreign universities. All costs for training that the employer deems necessary for the proper performance of an employee's current or future position and which is followed by order of or with the permission of the employer will be fully reimbursed.

DEWIS provides additional courses and guidance for women scientists. New researchers with teaching duties and less than five years of teaching experience are required to follow the Basic Teaching Qualification (*Basis Kwalificatie Onderwijstraject*, or BKO) programme. This training programme imparts the competences needed in order to perform teaching duties successfully.

All the training courses/educational programmes offered by TU Delft are also open to visiting researchers. In most cases, the costs of educational programmes and training courses followed by visiting researchers are borne by the faculty where the guest is employed.

⁶³ TU Delft Strategy, p. 5

⁶⁴ TU Delft Roadmap 2020, p. 87

⁶⁵ <https://intranet.tudelft.nl/en/career-and-development/education/>



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E. Internal Gap Analysis TUD Gant Chart June 2013.

The European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers

“A Human Resources Strategy for Researchers incorporating the Charter and Code”

Appendix: Gap analysis and action plan

Delft University of Technology

Appendix: Gap analysis and action plan

The table provides a summary of the relevant improvement points, the stakeholders involved, the actions to be taken, the schedule and the party responsible for the action. The improvement points and actions arising from the TU Delft Roadmap 2020 were the subjects of intensive discussion during the 50 meetings held during the period from March to November 2011. The following groups were involved:

- Academic and support staff
- Students
- Works Council representatives
- Representatives of companies and government organisations that are important to TU Delft

| Number | Improvement point | Description of actions | Completed | Responsible |
|--------|--|--|-----------|--|
| 1 | Promoting transparency | Online publication of ancillary activities | Q3 2013 | EB/HR |
| | | Establish a confidential advisor for academic integrity and a contact for whistle-blowers. | Q2 2013 | EB (Supported by Legal Services and Strategic Development) |
| | | Revise the TU Delft Regulations on Academic Integrity. The regulations should be brought into line with the national model regulations for complaints about academic integrity. | Q2 2013 | EB (Supported by Legal Services and Strategic Development) |
| 2 | Improve ability to assess scientific research according to indicators | Establish guidelines (assessment indicators) to allow international comparisons of Master's thesis research. This is happening in collaboration with ETH Zurich and RWTH Aachen (three partners in the IDEA league). | Q2 2013 | Legal Services |
| | | Share guidelines in the CESAER network. | Q2 2014 | Legal Services |
| | | Develop workshops for tenure-track staff to help them provide good supervision to their PhD students throughout their doctoral programmes. | Q2 2013 | |
| | | First tenure-track staff members attend workshops on supervising doctoral programmes. | Q1 2014 | Graduate School |
| 3 | Evaluate current working time regulations according to the needs of staff member | In consultation with broad representation from TU Delft, develop a new vision in the area of working time, adjusting the working time regulations as necessary. | Q2 2013 | HR |

| Number | Improvement point | Description of actions | Completed | Responsible |
|--------|--|---|-----------|---|
| 4 | Develop the valorisation profile further | Develop a form of annual reporting in the area of knowledge valorisation. | Q4 2013 | Valorisation Centre |
| | | Develop a 2013-2020 valorisation agenda for the supervision of supporting activities in the area of valorisation. | Q4 2013 | Valorisation Centre |
| | | Select indicators in order to improve the visibility of performance in terms of valorisation and to use them for national and international comparisons. | Q3 2013 | Valorisation Centre |
| | | Further strengthen regional networks in the area of public-private partnerships. In concrete terms, the objective is to establish a regional development in the Zuid-Holland region. | Q1 2014 | Valorisation Centre (in collaboration with the cities of Delft, The Hague, Leiden and Rotterdam, as well as with the universities in Delft, Rotterdam and Leiden) |
| 5 | Improve R&D cycle | The formulation of an innovation strategy by all faculties, as an integral part of the strategic planning of the faculty. | Q2 2014 | Deans |
| | | Investigate the possibility of establishing a multi-talent transitional building on campus for start-ups. | Q4 2014 | Facility Management & Real Estate with Valorisation Centre |
| 6 | Increase the percentage of women scientists to 20% by 2020 | Include a 360-degree feedback instrument in the Result and Development (R&D) interview. | Q4 2014 | HR |
| | | Investigate the options for childcare on or in the direct vicinity of the campus. | Q4 2013 | HR |
| | | Start 2 nd round of the TU Delft Fellowship: Create and fill ten new vacancies especially for women scientists. Establish a dual-career programme: This programme helps the partners of new employees to find suitable employment in the Netherlands. | Q4 2014 | HR |
| 7 | Improve the quality of intellectual property | Establish regulations for intellectual property. | Q4 2013 | HR and Education & Student Affairs |
| | | Develop a training programme on intellectual property for academic staff. | Q3 2014 | Legal Services |



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