Education and Student Affairs Annual Report 2018
Developments in the service chains

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2018 was the first full calendar year for Education and Student Affairs (ESA) after the TU/e shift toward a future-oriented educational organization (TDO, from ‘toekomstgerichte onderwijsorganisatie’). We can look back on this first year with pride. In spite of the difficulties we have had in certain parts of the organization - especially in the Center for Student Administration (CSA) and in Academic Advice and Counseling - because of the problems with the new systems, we have had excellent results and have made important steps in our development.

To excel as an educational support organization, we need professionals who put their hearts into their work. In 2018, we have been able to welcome many new staff members within ESA, filling the vacancies that came about during the 2017 hiring freeze. One big milestone is the teacher support network we set up, with teacher support officers in each department. That provides a good basis for the future. Together, we have discussed and clarified ESA’s core values, with customer focus as one of the most important. In addition, we have created professionalization plans and development plans for each service chain, to guide our steps. Seeing the commitment and professionalism of our employees makes me happy week after week.

In the past year, we have made great strides in interagency coordination in the service chains and within ESA management. In 2017, employees with the same position would still have to introduce themselves to each other during an outing. These days, we all know who everyone is and where to find each other. The key word here is ‘together’. Together, we are working on better service provision and a better university. That, to me, is the basis for taking real steps forward.

To improve and harmonize processes and systems, we have made progress but have not arrived at the finish line yet. The biggest problems with the new systems have been worked out. In addition, we are working on new systems like digital testing on paper and the mobility tool to help professionalize our services even further and to support our teachers and students. Within the service chains, the first steps have been made in standardization and harmonization. The service chains are all developing at their own speeds and will continue to do so in the next few years. The new systems will eventually be a tremendous help in taking our service provision to the next level.

ESA will need several years to reach full maturity. The past year has been instrumental in laying the foundation for this process. I would like to thank all ESA employees, because it is not always easy to go the extra mile to develop your work in a university that is growing and changing and already requiring additional effort. I would also like to express my gratitude to the ESA managers who, in addition to their work in the departments and central service, are responsible for developing a university-wide service chain for educational support.

Patrick Groothuis
Managing Director of Education and Student Affairs

Preface

“Winning the student award for ‘best bachelor teacher of BMT’ during my first year of teaching has been an incredible honor. However, I would not have been able to achieve this without the support by ESA.”

Jasper Posten, Assistant Professor Tendon and Ligament Mechanobiology
Looking back on becoming a future-oriented educational organization (TOO)

1.1 VISION ON EDUCATION

From its vision on education, TU/e has spent the last few years turning itself into a future-oriented educational organization (‘toekomstgerichte onderwijsorganisatie’ (TOO) in Dutch), integrating its bachelor’s degree programs, master’s degree programs, technological designer programs and PhD tracks into a Bachelor College and a Graduate School. Students now have more freedom and can choose whether they want to spend their studies developing a broad basis of knowledge or specializing in a specific field. Much more often than before, students follow courses offered by different departments. During this process, TU/e has heavily invested in coaching, skills development and internationalization.

This educational reform is of crucial importance for educational quality and performance and has resulted in a strong growth of student numbers. One of the key elements of TU/e’s educational vision for 2030 continues to be its small scale. The master-journeyman (‘meester-gezel’ in Dutch) interaction is seen as a critical building block of technical-scientific education. Maintaining that quality requires new ways of working and optimal support of students and teachers.

1.2 ESA EDUCATIONAL SUPPORT: ENABLING EXCELLENCE

The TU/e Bachelor College and Graduate School aim to provide top quality education that is attractive, challenging and feasible. Making that happen requires optimal support from the educational support organization Education and Student Affairs (ESA). By providing the right type and amount of support, ESA aims to keep the TU/e standards and quality of education high and aims to facilitate innovation. Educational support stays close to students and teachers within the provided frameworks. We strive toward processes and systems that are harmonized or standardized as much as possible. In short, customer intimacy and operational excellence are our starting points in educational support, enabling excellence for students, teachers and management.

1.3 WORKING WITH THE SERVICE CHAINS TOWARD A CHANGING ESA

The changing educational environment and clearer ESA objectives have put ESA on a path of change and development. We have created a development plan for ESA as a service department, which follows the TU/e reorganization plan and covers ESA as a whole. In addition, we have created development plans for the service chains and organizational development plans for the ESA teams. These development plans are living documents, describing the short- and medium-term plans per chain and per team.

“The accessibility of ESA and its employees is something that must be preserved.”

Joost van Engelen, president of the federation of study associations Eindhoven
New digital educational landscape

In July 2017, the Center for Student Administration (CSA) got underway as a part of the new ESA in the future-oriented educational organization. This start occurred almost at the same time as the complete upgrade, in the spring of 2017, of the complete digital educational landscape of TU/e, notably the introduction of Osiris and Canvas.

During the summer and fall months, a number of issues became evident with the new digital systems. These issues mostly emerged from the interaction between the different systems and the lack of compatibility of existing processes with these new systems. The extent and impact of these issues were larger and heavier than initially estimated. In addition, CSA had several job openings after the hiring freeze that came with the TOO reorganization and the changes made to staff capacity.

The combination of these factors put a lot of pressure on CSA’s service provision. For that reason, the taskforce and project group for Integral Problems in Systems, Organization and Processes (IPSOP) was created in September of 2017, with the mandate and budget to straighten out service provision. The project group had two project leaders, one for Systems and one for Organization and Processes.

This initiative has resulted in the following:

- Accounts in Canvas and Osiris now match.
- The entire lecture and exam schedule is now visible in MyTimeTable.
- Students can, after re-enrollment, now use their campus cards to enter buildings again.
- First-year students now get their campus cards on time.
- New students get their accounts in time so they can access TU/e facilities such as the network, Osiris, Canvas, etc.
- Students can use the PlanApp to submit their electives.

Joska Aerts, Commissioner of Education of the study association Protagoras

“ESA is always open for new ideas concerning educational matters.”
Developments in the service chains

3.1 | FROM REGISTRATION TO ENROLLMENT

Within the service chain From Registration to Enrollment, the project Ready, Steady, Go was started in February 2018. This project aims to update the processes from application to enrollment by resolving bottlenecks in the process and using a student focus group to make the process more student-centered.

The goal was to make sure that the majority of first-year and senior students can start their studies without needing to take additional actions because everything in terms of administration and logistics is done before the start of the program. In the past, students often had to wait until they, for instance, received a campus card, registered for their courses, gained access to Osiris, etc. This led to annoyance on the part of students and additional work on the part of CSA staff.

By implementing status reports for each student, it is now possible to see in an early stage what actions need to be taken - for instance, reminding a student to upload a photo for their campus card. A project group consisting of representatives from the Communications Expertise Center (CEC), the International Office (IO) team and the In and Out Flow Students team have jointly tackled this.

In addition, a focus group of first-year students and senior students was started during the project. All communications - emails, text messages, website texts, etc. - were shown to this focus group during the project to make sure that the communication fits the audience.

These measures have had a tangible effect. By better aligning the different processes and improving the communication, for instance by using text messages, the number of students who had completed their enrollment or re-enrollment at the start of the academic year had grown by around 3000 students.

3.2 | EDUCATION POLICY

Within the Education Policy chain, strategy days were organized for policy officers in the departments and those who work on a more central level (ESA, General Affairs). Their main goal was to facilitate alignment and cooperation between the various policy levels, and to make it easier to consult each other at work. By getting to know each other better, collaboration will improve.
Thanks to activities organized by the Education Rules and Regulations chain, which also includes departmental policy staff, some colleagues had already gotten to know each other better. However, not all TU/e policymakers are active in this chain. In addition, Education Rules and Regulations focuses on their own work in educational regulations, not on policy advice and proposals. Before the Education Policy chain became active, collaboration mainly happened at the individual level and was mostly based on incidental personal contacts. In addition, people were not aware of the different roles and tasks of the various policy staff members and sometimes did not even know who was the policy officer within a department. From these strategy days, several working groups have started, with topics such as smart document management and clear lines of decision-making. These working groups are developing and implementing proposals about their topic within the chain.

In 2018, the following policy proposals and projects were realized.

- In general:
  - An annual topic list was created, dealing with the Educational and Exam Regulations (OER) for bachelor’s and master’s degree programs. Using the list has resulted in changes in the regulations. This is a process that the Joint Program Committee, the University Council and the Executive Board have found very valuable.
  - A study was done into tuition for students from outside the European Economic Area. Policy proposals flowing from that have been accepted.
  - In light of increasing internationalization, several initiatives have been started, such as the international classroom.
  - The final Learning Analytics report was created and its policy proposals have been accepted.
  - Initiatives have been held to improve housing for international students and PhD/ PDEng trainees. The contract with Vestide has been adapted to better support this target group in finding housing in Eindhoven.
  - The regulation regarding cum laude graduation has been evaluated and will be changed per September of 2019. The other levels of distinction will no longer be used.
  - A study was started into timely publication of exam results, a topic that got mediocre marks in the National Student Questionnaire. This study is still ongoing and will result in proposals in 2019.
  - An approach has been developed with respect to the career impulse days, which should entice students to pay more attention to career-related activities during their studies. This plan is currently taking shape and will soon be implemented.

- Bachelor College:
  - A team was created to provide support for the Bachelor College’s basic courses, which the teachers of those courses appreciate.
  - The procedure for decentralized selection for the bachelor’s degree programs with limited admission has been evaluated and partially revised. In addition, a study is ongoing into the experiences of students who have enrolled in or will enroll in a degree program with limited admission in 2018 and 2019.
  - The admission limits for the limited-admission programs have been updated and preparations have been made to increase the number of bachelor’s degree programs with limited admission.
  - The processes for switching between limited-admission programs and doing a dual degree in two limited-admission programs has been reviewed and the related policy has been partially revised.

"ESA has made communication lines with study associations shorter to be more aware of occurring problems among students."

Thomas Wiepking,
Educational Officer of GEWIS
2018-2019
• Graduate School:
  o The International Experience Fund, which provides scholarships for TU/e students doing an exchange program, has been evaluated and revised in light of the desired increase in student exchange (see International Experience chain below).
  o For admission to the master’s degree programs, a policy proposal has been elaborated and implemented that is based on country-specific grade point averages (GPAs) instead of generic GPAs.
  o The admission deadline for external master’s degree students and pre-master students has been synchronized to 1 May. This way, the same deadline is in effect for all incoming TU/e students.
  o A project was started to look at the process and communication around graduation and internship contracts.
  o The proposal to develop English and Math tests for students coming from Dutch HBO (Universities of Applied Science) programs has been discussed at several levels and will be implemented in 2020.

• Increasing student numbers:
  o Several scenarios for the increasing student numbers and applications until 2022 have been determined and elaborated.
  o The remodeling plans for Laplace as educational building (see the Education Planning and Scheduling chain) have been discussed extensively in the Education Board and elsewhere. In 2019, it will be determined what the remodeling will look like in detail.
  o Policy regarding Teaching Assistants (TAs) has been developed and defined by the Executive Board. TAs are intended to reduce the workload on teachers, given the growing student numbers and the increased educational efforts required.

### DECENTRALIZED SELECTION

The academic year of 2018-2019 was the first time TU/e used an admission limit for four of its bachelor’s degree programs: Biomedical Technology, Industrial Design, Industrial Engineering and Computer Science and Engineering. Under guidance of a taskforce, a working group consisting of ESA managers and the program directors of the four limited-admission programs shaped the decentralized selection process. Every participant of the selection process could in the end be placed.

### Table 1: Overview of enrollment in the bachelor’s degree programs with limited admission

<table>
<thead>
<tr>
<th>Admissions Limit</th>
<th>Biomedical Technology</th>
<th>Medical Sciences and Technology</th>
<th>Industrial Design</th>
<th>Industrial Engineering</th>
<th>Computer Science and Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Applications</td>
<td>225 150 250 250</td>
<td>190 90 390 367 629</td>
<td>106 52 131 174 195</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Developments in the service chains

3.4.3 | IMPLEMENTATION OF FEEDBACK FRUITS
In 2018, the first steps were taken to link the Feedback Fruits tools to Canvas. During this phase, it was decided to only work with tools that can be linked to Canvas through a Learning Tools Interoperability (LTI) interface: interactive documents, interactive videos and interactive presentations. Since the interactive presentations tool appeared to be an insufficiently developed and tested beta version, we focused on the interactive documents and videos tools. Both tools have gone through successful pilot tests in TU/e courses and have been made available to all TU/e teachers. The other Feedback Fruits tools will be taken on pilot runs through Canvas BOOST if and when teachers express the need. The Feedback Fruits think tank also started a project for TU/e: they are designing a custom feedback tool for TU/e, based on input from Teacher Support and teachers.

3.4.4 | TEACHER SUPPORTERS IN EVERY DEPARTMENT
Teacher Support has seen its activities shift in the fall of 2018. According to plan, each department hired departmental teacher support officers to be the first point of contact for teachers in the departments. These departmental teacher supporters have also taken on the ownership of departmental support projects. Central ESA Teacher Support is developing into a secondary support organization, working on processes for tool development, professionalization and specialist educational advice.

3.5 | HBO BRIDGING AND PRE-MASTER’S PROGRAMS
In the service chain HBO (University of Applied Science) Bridging and Pre-Master’s Programs, several important staff changes have taken place. Starting 1 September 2018, one of the members of the In and Out Flow Students team has taken on coordinating tasks regarding enrollment of Dutch HBO graduates. The policy tasks have been taken on by a General Affairs staff member for now. Responsibility for the chain has been transferred to the CSA manager as of February 2019. The theme of 2018 has been consolidating the various activities of the chain.

3.6 | INTERNATIONAL EXPERIENCE
One of the goals of the Graduate School is that in 2022, 90% of all graduates will have done at least 15 EC worth of courses or internships abroad.

| 2018 | Exchange students coming to TU/e | 424 |
|      | TU/e GS students going on exchange | 562 |
3.6.1 | MOBILITY ONLINE

The current process of arranging student exchange is mostly manual, which means the desired increase in incoming and outgoing exchange students would require a linear increase in support staff. The chain is therefore implementing the Mobility Online tool to digitize large parts of this process. Then, the expected growth of the number of exchange student will no longer require an equivalent growth in the number of internationalization officers. The Mobility Online tool will also simplify the administrative process of incoming and outgoing non-degree students. TU/e will have a better overview of student mobility and it will be easier to keep track of which students are where at which time. The tool was purchased in spring 2018 and implementation was started in September 2018.

“...the international office from ESA really helped me with the practical side of arranging my external traineeship!”

3.6.2 | STRENGTHENING COLLABORATION AND KNOWLEDGE TRANSFER BETWEEN INTERNATIONAL EXPERIENCE STAFF

Before TOO, the international exchange services were scattered across departments and the central International Office (IO). Department staff were in charge of the daily incoming and outgoing exchanges, while IO passed on information to the department staff regarding exchange frameworks, policy, scholarships, etc. With only two meetings per year at university level, there was very little room for collaboration and exchange of knowledge and experience.

With the new international exchange targets set by the International Experience initiative, there is a considerable need to strengthen International Experience operations in all of TU/e.

As of October 2017, a monthly team meeting is held in the International Experience chain. Participants are the chain owner, IO team leader, central and departmental IE staff and a central internationalization policy officer from Policy, Advice and Projects (PA&P). The goal of the meetings is to exchange experience, ideas, tips, tricks, problems and solutions, and to have deeper discussions about core IE themes. This will help harmonize IE operations throughout TU/e and support process standardization.

3.6.3 | COLLABORATION ON POLICY AND IMPLEMENTATION OF THE INTERNATIONAL EXPERIENCE PROGRAM

Before TOO, the process for incoming and outgoing international exchange students was not fully harmonized. The Dean of the Graduate School and the Graduate Program Directors came to an agreed procedure for the implementation of the new IE policy. However, there was no TU/e-wide agreement about how departmental policymakers should manage the topic of internationalization. Now, an agreement has been made that each department should have an educational policy officer who also has IE in his or her portfolio. A visit from the core IE team to the departments led to an agreement of how the IE policy should be implemented and who the responsible employees are in each department. Since the end of 2018, each department has had a policy officer who is also responsible for and contact person for IE.

In October 2018, these IE policy portfolio holders met for the first time. The goal was to exchange best practices and align policy to increase harmonization of IE operations and procedures in the departments. Until further notice, the topics and frequency of these meetings will be determined by request, to avoid holding a meeting just because it happened to be on the calendar. The request can come from the policy staff, from the chain – because policy and implementation can be intertwined – or from central IE policymakers looking to align central and departmental policy.
In addition to the policy staff meetings, it is also possible to consult with the Graduate School Dean and, if desired, with the Graduate Program Directors. Policy matters are also on the agenda of the monthly IO staff meeting about student exchange. By including the central IE policy officer and the responsible officer from the chain, these meetings facilitate communication of insights, desires and bottlenecks between groups.

3.7 | International Admissions

The mission of the (Inter)national Admissions service chain is to provide high-quality, transparent and rapid admission decisions for students. The chain was initiated to focus on international admissions. In 2019 and 2020, national admissions will be added to its responsibilities. The chain contains members of International Office, the In and Out Flow Students team and departmental admissions board secretaries and members (scientific staff).

In 2018, the chain owner and admissions officer/team manager met with the departmental admissions boards to better get to know each other. During the meetings, information was provided about plans and their feasibility assessed. In addition, it was discussed how the process works at a central level and how the different departmental admissions boards work.

The (Inter)national Admissions chain is very much dependent on changes in policy and legislation at local and national level. Initially, the chain was started as a process-oriented chain. However, policymaking is now becoming a more integral and important part of the chain. This changed the goals and priorities of the chain over time. However, the initial goals stated in the development plan are still in place. The chain achieved its first major achieved goals in 2018, as described below.

3.7.1 | Reducing Lead Time for Incoming Students with an International Diploma

The maximum lead time for international students has been reduced from 8 to 6 weeks. The central admissions committee (CTC) has been able to reduce its lead times by advising the departmental admissions committees (FTC). In addition, a fast track was introduced to give applications from very promising students priority processing. Lead times are continuously being monitored for more improvement opportunities.
1. Smoother cooperation and harmonization of processes across faculties, sharing best practices, getting to know each other better and finding each other with the chain, etc. Some examples:
   - A monthly Quality Assurance meeting has been started for substantive and procedural alignment of quality assurance activities. This meeting includes good preparation, a clear annual agenda and note taking.
   - The position of central quality assurance policy officer has been created and filled, with a focus on the central coordination of quality assurance processes. This is a connecting position, the first contact for all quality assurance staff.
   - Steps have been taken to clarify the desired profiles of quality assurance staff.

2. Within TU/e, a broad spectrum of quality assurance tools is in use and a range of reports is generated for many purposes. Many things are going well, but analysis also shows room for improvement. Some examples:
   - Graduation questionnaires were not held systematically, even though they are a substantial part of MSc-level education. To make sure this is done well, a new procedure was developed.
   - In addition to the central quality assurance instruments, many additional evaluation methods are in use. An inventory and appraisal of these methods is ongoing, with sharing of best practices.
   - A new format is being developed for reporting graduation percentages. These are important to many stakeholders, including Exam Committees.
   - Within the Business Information (BI) tool, new reports have been developed for data about education, including the National Student Questionnaire data.

3. To create maximum support among students and teachers, it is important that quality assurance is highly visible and transparent. This is being improved in several ways. Some examples:
   - An annual cycle has been developed to provide an overview of the TU/e quality assurance instruments and the way they are linked.
   - In communications about educational evaluations, there is more attention for information about the goal, connection and background of the instruments.
   - A framework is in development for quality assurance in education, which will serve as a general foundation for the departmental quality assurance policy.

4. A high questionnaire response rate increases the quality of measurements and the support from stakeholders. We have worked on several measures to increase questionnaire response. Some examples:
   - Better alignment of the timing of educational evaluations to prevent overburdening students.
   - More attention to sharing the results and improvements with students. An advisory report provides suggestions to improve this.

5. IT systems are important for quality assurance processes. Several issues need to be solved. Some examples:
   - Evasys and the Portal are not working optimally, which leads to many disruptions of daily processes. It is being evaluated whether the contract with these parties should be renewed or whether alternatives should be considered.
   - A primary specification has been written about using the BI tool for reporting on educational evaluation data.

3.9 | EDUCATION PLANNING AND SCHEDULING

Student numbers are growing – from around 7,000 in 2012 to around 14,500 in 2023 - while the number of lecture rooms is staying roughly the same. TU/e has taken a range of measures in the past years to make sure every student can still go to lectures, such as projecting live lectures in nearby lecture halls and scheduling the occasional evening lecture. In addition, the Blue Hall (‘Blauwe Zaal’) and two promotion halls in the Auditorium building have primarily been assigned to teaching.

After extensive data-driven analyses and consultations, the Executive Board decided the following:
   - A 10-hour schedule will be implemented at TU/e.
   - In addition, eight lecture halls will be outfitted for streaming lectures online for courses with many students. This will replace projection of lectures to different rooms.
   - Scheduling will be governed more tightly.
   - A new position will be created for scheduling: the air traffic controller.
   - New tools will be implemented to make pro-active planning possible in scheduling.
   - Courses may be allocated differently across time slots; this needs to be looked into.
   - The daily scheduling plan needs to become tighter to bring the final lecture hours forward:
     - Start times remain unchanged at 8.45 a.m.
     - The lunch break will be shortened to 1 hour instead of 75 minutes.
     - The evening break between hours 8 and 9 will be shortened to 15 minutes from 45 minutes; this means hour 10 ends at 7.15 p.m. instead of 8 p.m.
• Time slots B3 and D3 will be switched.
• The Laplace building will become part of the compact campus, to be used for educational purposes after its 2020 renovation.

Implementation of these measures started in April 2018.

3.9.2 | STREAMING LECTURES
Since Q1, lectures in the Auditorium have been streamed every day. Students rate the quality of the stream at 8.1. After some initial problems with server capacity, this solution is now robust enough to take it further. From Q4 onward, no more lecture halls will be reserved for students to watch the streams, which was the case in the previous three quartiles. Now, students can watch the streamed lecture from a place they choose. The lecture room space this frees up can now be used for non-streaming lectures, reducing the amount of teaching needed in hours 9 and 10.

3.9.1 | 10-HOUR SCHEDULE
The 10-hour schedule was implemented in the 2018-2019 academic year. Analyses over Q1 and Q2 show that attendance in hours 9 and 10 is similar to that in hours 7 and 8. Initial research in the Bachelor College shows that student performance is not negatively affected by the 10-hour schedule. Still, some resistance exists within TU/e against providing education in hours 9 and 10. Based on lecture room availability analyses, we will try to use hours 9 and 10 as little as possible in the coming months.

“A thorough analysis and simulation gave important insights into the scheduling process and the related issues. It became very clear that solutions are not easy, but are feasible given the current constraints in terms of buildings, lecturers and planning staff. A more controlled university-wide planning process brings a lot of benefit to handle our strong growth in the student population.”

Tom van Woensel, Full Professor of Freight Transport & Logistics

“The best thing about livestreaming of lectures is that it allows for reaching an unlimited number of students with teaching from a limited size lecture hall.”

Akke Suiker, Full Professor in Applied Mechanics
Since this step, further consolidation of streaming has started. The following activities are being done:

- The Eindhoven School of Education is researching how streaming affects education and students. The results of this study are expected in 2019.
- Entire lecture series will be streamed, instead of only those lectures that could not be scheduled in a large enough room. This provides more clarity to students and teachers. To make this happen, we need to determine whether more lecture halls need to be set up for streaming.
- Further quality assurance is being developed for streaming, with a primary focus on making sure that students keep appreciating the availability of streaming.
- Further teacher support is being developed, especially looking into alternatives that can be used to prevent the need for streaming a course.
- Policy is being developed for saving recordings to provide up-to-date availability in the media library while maintaining optimal performance.

3.9.3 IMPROVING GOVERNANCE ON SCHEDULING
From the 2018 analyses, it has become clear that there are opportunities in smarter scheduling. Since 2017, the occupation of the 70 largest lecture halls has been measured. Based on initial analyses by the new officer for analyses, prognoses and monitoring (the ‘air traffic controller’), improvements can be made by reducing the number of lectures that end up being canceled and making the schedule based on the number of students expected to attend the course instead of the number of students registered for a course. The scheduling team will use current information to approach teachers who reserve lecture rooms and do not use them and to create better schedules. In addition, the chain is working on automatic measurement of lecture room occupancy using sensors. Finally, a project is redesigning the scheduling timeline, creating a more logical scheduling process that is also more appreciated by teachers.

3.10 EDUCATION RULES AND REGULATIONS
Before TOO, employees did not look for many university-wide collaboration opportunities regarding educational regulations. Since the start of the Education Rules and Regulations chain, collaboration between chain members has improved, all existing educational regulations have been inventoried and the development process and responsibility matrix (RACI) has been determined for each regulation. Currently, we are working on student- and teacher-centered communication of the regulations and optimizing the writing process of the Education and Examination Regulations (OER), which will be elaborated on below.

3.10.1 FROM PUBLICATION TO COMMUNICATION OF EDUCATIONAL REGULATIONS
Students and teachers often turn to administration, academic advisors, program coordinators and exam committee secretaries for explanations of educational regulations. Summaries and FAQs could play a large role in communication, reducing staff workload and providing clarity, which in turn supports harmonization within the chain. With the help of a communications expert, clear and understandable summaries and FAQ lists have been created. They will be tested within the chain in 2019, after which they will be made available to students and teachers.

3.10.2 OERWRITE FOR EDUCATIONAL REGULATIONS
Until now, educational regulations were written in a free format in MS Word. Turning them into an appropriate format takes a lot of time from members of the Education Rules and Regulations service chain. This rewriting step can also lead to unwanted changes to the required OER template. In addition, feedback on draft regulations, provided by the reading committee, is now collected in a fairly unstructured way. The new online tool OERWrite will streamline this process. A pilot project for OERWrite will run in the 2018/2019 academic year to support the educational regulation creation process, making regulation format and content easier to handle and facilitating publication of the regulation. It also improves the alignment and collaboration within the chain.

3.11 ACADEMIC ADVICE AND COUNSELING

3.11.1 RECRUITMENT PROFILE FOR ACADEMIC ADVISORS
The main goal of this project was to define the competencies academic advisors need to have and to recruit professionals across TU/e. The project defined a common profile, which has already been used to hire new academic advisors. The new profile focuses more clearly on the competences described in the job classification system and on the training and professional background academic advisors need to have to be able to show these competences: empathy, integrity, coaching skills and experience with impairments. Though jobs are still sometimes combined within TU/e, the focus on these competences has been a big boost to professionalization in academic advice.

3.11.2 REFLEX APPOINTMENT SYSTEM
The Reflex system for making appointments with student psychologists, student counselors and academic advisors was implemented in 2018 to allow students to book their own guidance appointments online. Student guidance staff can upload their calendar to Reflex and students can pick a time that suits them best. The system is beneficial for both students and staff: students get more control to choose an appointment time that suits their needs and their schedule and educational support staff spend less time emailing back and forth to set up an appointment.

OERWRITE FOR EDUCATIONAL REGULATIONS

Until now, educational regulations were written in a free format in MS Word. Turning them into an appropriate format takes a lot of time from members of the Education Rules and Regulations service chain. This rewriting step can also lead to unwanted changes to the required OER template. In addition, feedback on draft regulations, provided by the reading committee, is now collected in a fairly unstructured way. The new online tool OERWrite will streamline this process. A pilot project for OERWrite will run in the 2018/2019 academic year to support the educational regulation creation process, making regulation format and content easier to handle and facilitating publication of the regulation. It also improves the alignment and collaboration within the chain.

3.11 ACADEMIC ADVICE AND COUNSELING

3.11.1 RECRUITMENT PROFILE FOR ACADEMIC ADVISORS
The main goal of this project was to define the competencies academic advisors need to have and to recruit professionals across TU/e. The project defined a common profile, which has already been used to hire new academic advisors. The new profile focuses more clearly on the competences described in the job classification system and on the training and professional background academic advisors need to have to be able to show these competences: empathy, integrity, coaching skills and experience with impairments. Though jobs are still sometimes combined within TU/e, the focus on these competences has been a big boost to professionalization in academic advice.

3.11.2 REFLEX APPOINTMENT SYSTEM
The Reflex system for making appointments with student psychologists, student counselors and academic advisors was implemented in 2018 to allow students to book their own guidance appointments online. Student guidance staff can upload their calendar to Reflex and students can pick a time that suits them best. The system is beneficial for both students and staff: students get more control to choose an appointment time that suits their needs and their schedule and educational support staff spend less time emailing back and forth to set up an appointment.

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Developments in the service chains

The working group took a close look at the BSR process and determined where the procedure can be improved to better inform students about BSR deferment. A draft mind map was created that contains the procedure’s steps for the student and all involved TU/e employees. In addition, a draft infographic was developed for students. This document is intended to show students at a glance what they need to do to qualify for a BSR deferment. A draft information email was also created, to provide clear, unambiguous information around the procedure students must follow. The goal is for academic advisors to use this email in their communication.

3.12 STUDY PROGRESS

The Study Progress chain consists of three sub-chains:

1. Grade Processing
2. Examination and Graduation
3. Exam Committee Support

In 2018, the Study Progress chain was increasingly called upon. This emphasizes the importance of this chain but also increased its workload. Not just for the team leader and person responsible for the chain, but also for the other staff members active in this chain. Additional support from ESA is required in the coming years for the chain to be able to pick up all important issues in the future. Below, the developments in each sub-chain will be addressed briefly.

3.12.1 DIGITAL GRADE PROCESSING

In 2018, the Digital Grade Processing project was started. From the 2019-2020 academic year onwards, grading will be simpler and more efficient. Teachers will be able to enter exam results into Osiris directly. This is a great development for teachers, students and CSA staff.

Because of the increased workloads among teachers and CSA staff, a simple and efficient grading process is becoming more and more important. Earlier this year, an enthusiastic team of grade processing staff, key Osiris users, a functional manager and a project leader came together to simplify and digitize the process. Grade processing already happens digitally to a significant extent, but removing some manual steps will digitize the process even further. For instance, printing and signing grade lists or handing in result sheets will soon be a thing of the past. Teachers will have more grip on the grading process. They will be able to do all tasks themselves: entering partial grades, determining final grades and correcting grades within the time slot available. This saves teachers time, significantly reduces the chances for errors and gives students a chance to see their results sooner. The burden on CSA staff will be reduced as well, leaving them more time to support teachers in other, more complex issues. The new process is currently undergoing rigorous testing. The interest among teachers is high and feedback so far has been mostly positive.

Maartje Borst, Commissioner of Education of the study association Simon Stevin

“No matter what subject, ESA always tries to help.”
In addition to revising the grading process, the Grade Processing sub-chain has introduced the so-called ‘third try’ in Osiris. From exam committees came the desire for proper administration of students given a third try at an exam in Osiris under the hardship clause. This was not possible before. As a workaround, earlier grades were deleted to be able to enter the grade for the third attempt. This has a detrimental and undesirable effect on the history and analysis of examinations. In consultation with functional management and the Osiris developer, a satisfying solution was found. Correct administration of the third try has now become standard TU/e wide.

Grade processors, the Study Progress team leader and the person responsible for the Study Progress chain meet every six weeks to align and where possible harmonize and unify processes to do with grading.

3.12.2 | EXAMINATION AND GRADUATION

Since mid-2018, a regular meeting is held where department ESA officers, the Study Progress team leader and the person responsible for the Examination and Graduation process in the Study Progress chain meet every six weeks to align, harmonize and unify processes regarding examination and graduation. One result has been TU/e-wide agreement about sending out diplomas and processing Honors programs. Right now, steps are being taken to reshape the workflow around graduation theses (submission, checking and archiving) to be safe, controlled and preferably digital. In addition, a project was started to evaluate the freedom of choice within master’s degree programs with PlanApp. The chain is also working on unifying the logistical and administrative processes around dual degrees.

3.12.3 | EXAM COMMITTEE SUPPORT

Within this chain, the processes around the BSR and study progress requirement (for incoming students with an HBO degree) are being evaluated and optimized. A consensus has been reached among stakeholders about the communication, content and processing of several decisions around the BSR and study progress requirement. Right now, a fraud policy is being implemented in a variety of administrative processes. Soon, procedures will be developed to guide exam committees in their activities in relation to the EU General Data Protection Regulation. Exam committee secretaries meet every six weeks to align and, where possible, harmonize and unify processes. They also discuss cases, which contributes to uniform decision-making within the various exam committees. In addition, a process has been started to create a more uniform exam committee secretary profile.

Hans Cuypers,
Full Professor in Discrete Mathematics

“By using ANS we could organize the grading of almost 3000 Calculus exams extremely efficiently. Moreover, ANS provided us with a detailed analysis of our exam. But, maybe most importantly, almost all students checked their graded work and had a look at the feedback provided by the graders.”

3.13 | EXAM PLANNING AND FRAUD

3.13.1 | DIGITAL TESTING ON PAPER (DiToP)

In September 2018, the Digital Testing on Paper (DiToP/ANS) project was started. It is a sequel to the Digital Testing project. In the next few years, TU/e will still go on testing on paper. Not all exams are suitable to be taken digitally right now. Sometimes, the assignment does not lend itself to a digital answer (think ‘draw a graph’ or ‘elaborate a mathematical equation’). Other times, we lack the capacity to hold digital examinations for large numbers of students at the same time. The basic Calculus course, for instance, has 3000 students. Digital Testing on Paper is a useful intermediate solution.
Developments in the service chains

This process of printing, providing, gathering, copying and storing exams is called PAVOT. Improvement opportunities exist in this process, especially around printing exams. Printing on the multifunctional units in the departments is not 100% secure. The available solution in the central print service has the required security level but is not teacher-friendly, since teachers have to stay close by while the printing is done. A project was started to make the PAVOT process more secure and user friendly for teachers. In 2018, the first phase was completed. The decision was made to outsource the printing to an external print provider, with a user-friendly web interface so teachers can upload exams. In early 2019, this process will be implemented and the link to ANS completed.

3.13.3 | OPTIMIZING EXAM SCHEDULING

By analyzing the exam scheduling process and identifying bottlenecks, we can improve it step by step. We are working on better student number prognoses for exam attendance. Departments and the central exam coordinator are sharing their ways of working and are developing improvement suggestions for the processes.

Many actions are in progress:

• Functional management for Osiris has created an access tool so educational administrations can easily filter out dropouts and unregister them from courses and exams. This is done regularly.
• To support exam scheduling, work instructions have been created to improve study feasibility and attendance prognosis.
• To improve exam scheduling, the number of students enrolled in a course is checked before the start of the course to make sure assigned locations are sufficient.
• The concept exam schedule is created earlier, before 1 May. In mid-May, bottlenecks can be discussed and solved. At the end of May, the final check is done. A similar timeline will be created for semester B.
• Source data are taken from the Osiris course catalog. Agreements are in place with the team that maintains the course catalog about education and exam types to schedule. Unified use of these exam types (written, written with notebook, STEP, etc.) provides a better overview. The course catalog is put together between 1 February and 1 April. In the meantime, in combination with the scheduling project, an export from Osiris is done to find and correct any errors and ambiguities.

Toward the end of 2018, the proof of concept was concluded successfully with some exams and midterms. In Q2, more pilots were done in the project. As of Q3, DitoP will be adopted. The initial response from both teachers and students is positive. Teachers find ANS easy to use and can get started with it quickly. It reduces the administrative overhead and logistics around exams. Providing students with feedback is easy, and ANS creates good analyses of the graded exams. Finally, the proof of concept shows that teachers and graders need on average 4 hours less to grade an exam (with 129 students on average) and doing the student review. Students like being able to review the exam digitally and find the instructions for correctly filling out the exam easy to follow.

3.13.2 | PRINTING, PROVIDING, GATHERING, COPYING AND STORING EXAMS

The intended rise of digital testing with STEP sticks and Cirrus will lead to a reduction in the total volume of paper exams. At the same time, the introduction of digital testing on paper with ANS will cause a shift toward more central printing of exams.

The tests are made by students on paper. Prior to this, the teacher has created the test in the ANS software program and printed the tests from that program. Once the exam is done, the tests are scanned and uploaded to ANS. Grading the test is done digitally through ANS. The grader does not generally see the students’ names when marking the test. Reviewing the test also happens digitally: students can view their exams, including scores and any teacher’s remarks, on-screen. They can also ask questions about it directly to the teacher.

The advantages of DitoP for teachers and students are:

• Grading can be done with multiple teachers at the same time.
• Grading can be done anywhere and anytime.
• Students can see results and feedback independent of time and place. They can review the exam from anywhere and ask questions if they want to. Teachers can respond from their own screen, so students who want to review an exam no longer have to attend special review sessions or visit a teacher’s office.
• The chances of fraud and errors are reduced.
• Exams do not have to be moved around as much, reducing the chances of some getting lost.
• TU/e will have better insight into where exams are, making them easier to find (for instance during inspections).
• It is possible to do a simple analysis of scores per question or grader.

In the meantime, in combination with the scheduling project, an export from Osiris is done to find and correct any errors and ambiguities. This process of printing, providing, gathering, copying and storing exams is called PAVOT. Improvement opportunities exist in this process, especially around printing exams. Printing on the multifunctional units in the departments is not 100% secure. The available solution in the central print service has the required security level but is not teacher-friendly, since teachers have to stay close by while the printing is done. A project was started to make the PAVOT process more secure and user friendly for teachers. In 2018, the first phase was completed. The decision was made to outsource the printing to an external print provider, with a user-friendly web interface so teachers can upload exams. In early 2019, this process will be implemented and the link to ANS completed.

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3.13.4 | FRAUD PREVENTION
The Exam Planning and Fraud chain is working to better inform students in the area of fraud prevention, following the evaluation of the central exam regulation. As a result, ESA Student Facilities now requests the mentors of first-year students to discuss the rules with their group of students before the exam period. The rules will also be sent to first-year students in an email prior to the first exam period. Flyers will be handed out to students in the first quartile. And finally, the rules are displayed on screens and banners during the exam period.
Developments in the service chains