

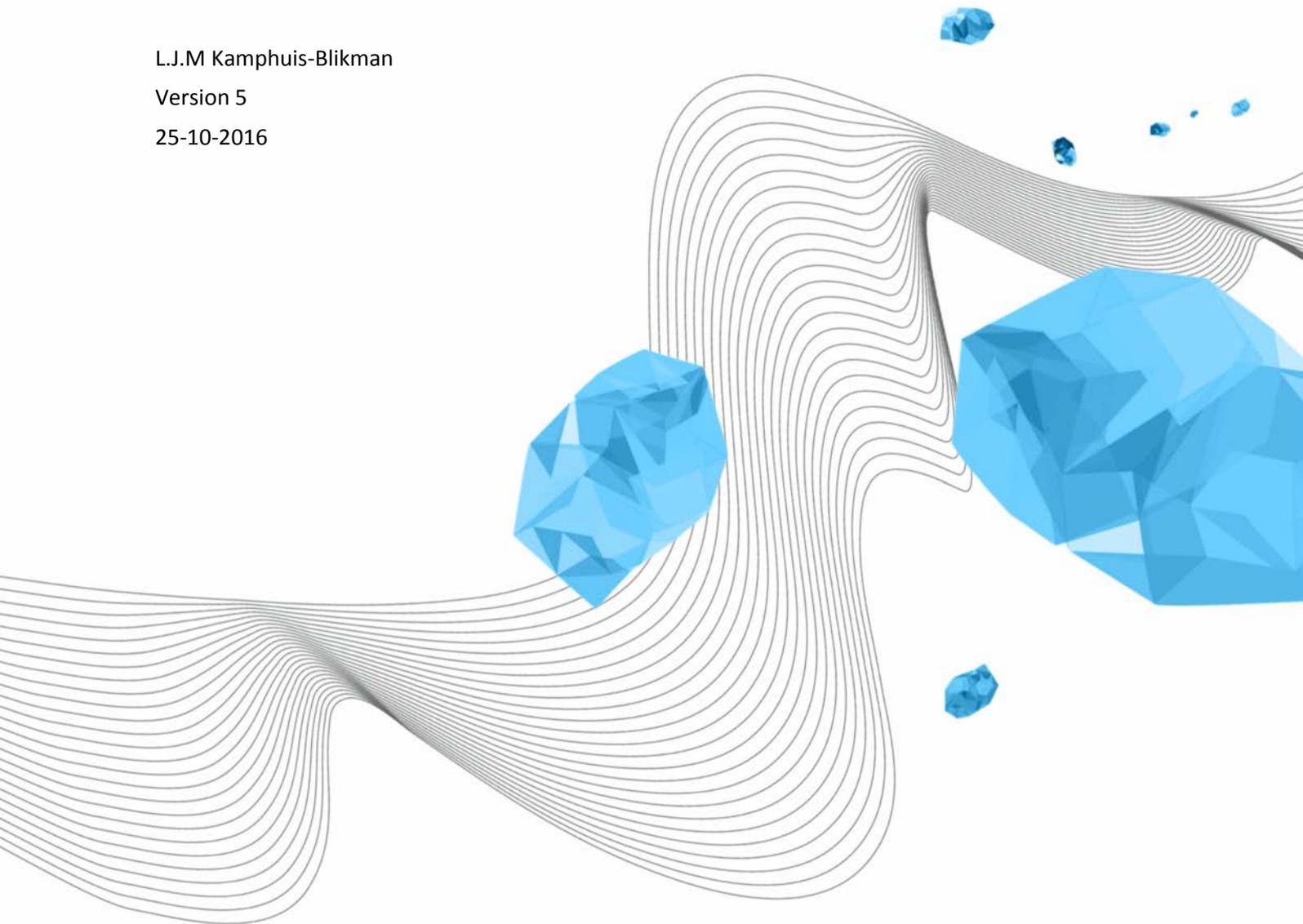
APPRAISAL OF UNIVERSITY OF TWENTE RESEARCH SUPPORT

RESEARCH SUPPORT PROVIDED BY LISA AND OTHER UNIVERSITY OF TWENTE SERVICE DEPARTMENTS; SUPPORT NEEDS FROM RESEARCHERS' POINT OF VIEW; ORGANIZATION OF RESEARCH SUPPORT IN OTHER UNIVERSITIES

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1 MANAGEMENT SUMMARY

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2 INTRODUCTION

2.1 BACKGROUND

All universities in the Netherlands are currently assessing the organization of research support. At the same time, each university has a different starting position, and each has its own way of organizing support. In March 2016, the SURF project 'Support4research' published a report entitled 'Research support in the Netherlands, the status quo'(1). To this end, SURF approached four institutions (Delft University of Technology, and the universities of Rotterdam (EUR), Leiden (LUMC) and Maastricht (MUMC +)), and posed the following questions: What is your vision for research support? What e-infrastructure and related services are available to researchers? How is research support organized? What is the agenda for the near future? The report shows how the various institutes have organized their research support. An important principle here is that the researcher is placed at centre stage. Various other key areas have also been identified: central or decentralized infrastructure & support, multidisciplinary approach, a single one-stop shop, data management and the data lifecycle, as well as national e-infrastructure (e.g. via SURF). Research support at universities outside the Netherlands also seems to be organized in a number of different ways. Many universities opt for a presentation per service department, often mainly coordinated by the university library (e.g. [Cornell University New York](#), [Harvard](#)) or other service departments ([University of Cambridge](#)). Others opt for the integrated presentation of all research support on a single page (e.g. [Monash University \(Australia\)](#), [UCL \(London\)](#), [University of Oxford](#)).

LISA has formulated a number of priorities in the areas of research and commercial knowledge transfer: offer comprehensive research support and boost the visibility of research support (see Appendix 3.5.0). However, LISA is not the only service department that provides support in the field of research. Many service departments at the University of Twente support a single element of the research process, from ideas for new research to publication and commercial knowledge transfer, and these services are complementary to one another. Information on the support provided is available from various sources. Yet, many support staff are wondering whether researchers are sufficiently well aware of the support options that are available. Partly for this reason, a joint approach to these services and closer cooperation are needed to optimize research support. This is entirely in keeping with the vision of high-quality service set out in the 2016 comprehensive annual plan for all University of Twente service departments (see Appendix 3.5.1). In short, the comprehensive delivery of service is designed to effectively free the academic staff from their routine cares, allowing them to concentrate as much as possible on research and commercial knowledge transfer.

In February 2016, with a view to these priorities, a programme manager for research support was appointed to look into this matter and to develop a vision for comprehensive research support. In this context, LISA is the driving force behind the appraisal of research support at the University of Twente. However, it will work closely with the other university service departments involved in

i.e. Maastricht University (UM), University of Groningen (RUG) and Delft University of Technology (TU Delft) concerning the organization of support. At [UM](#), research support mainly took the form of a presentation of the services provided by the library. RUG and TU Delft tend to provide more comprehensive support. RUG's [Research Data Office](#) has sought cooperation with other support departments. This has resulted in even shorter lines of communication and in cooperation between the support departments. On the main page of RUG's '[research](#)' website, they showcase a comprehensive research page covering the university's service departments. However, this does not clarify the range of support provided by any given service department.

TU Delft has opted for a comprehensive range of services based in the various support departments. The process used to develop comprehensive research support at TU Delft was similar to our own working practices, i.e. question researchers about their support needs and appraise the range of services offered by support departments. This investigation was headed by staff at the university library. This resulted in a one-stop-shop for all support departments, via a research support [portal](#). As a guideline for the development of comprehensive research support, TU Delft has used a greatly simplified visualization of the research lifecycle, derived from a simple four-stage model developed by the Research Information Network (RIN) in the UK (3) (see Figure 2). There are clear similarities with the model that was presented in Figure 1. In addition, TU Delft has shown that all research support activities throughout the entire university can be accommodated in this model. For this reason, we have used a combination of both models as the basis for identifying research support at the University of Twente.



Figure 2: Research lifecycle by Research Information Network (RIN) & TU Delft

2.3 APPROACH

Research support at the University of Twente is currently supplied by a range of support departments. As indicated, LISA and the other support departments are asking 'are our services sufficiently visible to researchers and are they in keeping with their wishes and needs?'. The project involves an appraisal of the range of research support offered by the support departments and of the researchers' needs and wishes with regard to support.

The first step is to appraise the range of support within support departments at the University of Twente: Library, IT Services & Archive (LISA), General Affairs (AZ), Facility Service Centre (FSC), Financial and Economic Management (FEZ), Human Resources (HR), Marketing & Communications (M&C), and Strategy & Policy (S&P). The purpose of this appraisal is to get a better picture of the current state of affairs in the area of research support at the University of Twente. To clarify the various forms of support for research within a given service department, we have taken a close look at the website of the service department in question, and have conducted personal interviews with various members of that service department's staff. Support staff based in the faculties and institutes were also interviewed.

After appraising the various forms of support offered by the different service departments, we initiated a dialogue with the target group for whom such support was set up: the researchers. We took care to ensure that the subjects interviewed constituted a representative sample of the various faculties and of the various stages of a research career. In interviews with researchers, we attempted to find out whether they were fully aware of the available support. We also appraised their needs in relation to research support.

Based on the results of these interviews with researchers, we have determined which elements of the current range of support are actually being used, and in which areas the needs are not yet being met. The intention is that these findings should ultimately lead to the development of a vision of how comprehensive and optimized research support at the University of Twente can best be organized. In the final stage, we will submit our findings to representatives of the researchers and of the support departments at the University of Twente, to develop an action plan for comprehensive research support.

3 FINDINGS

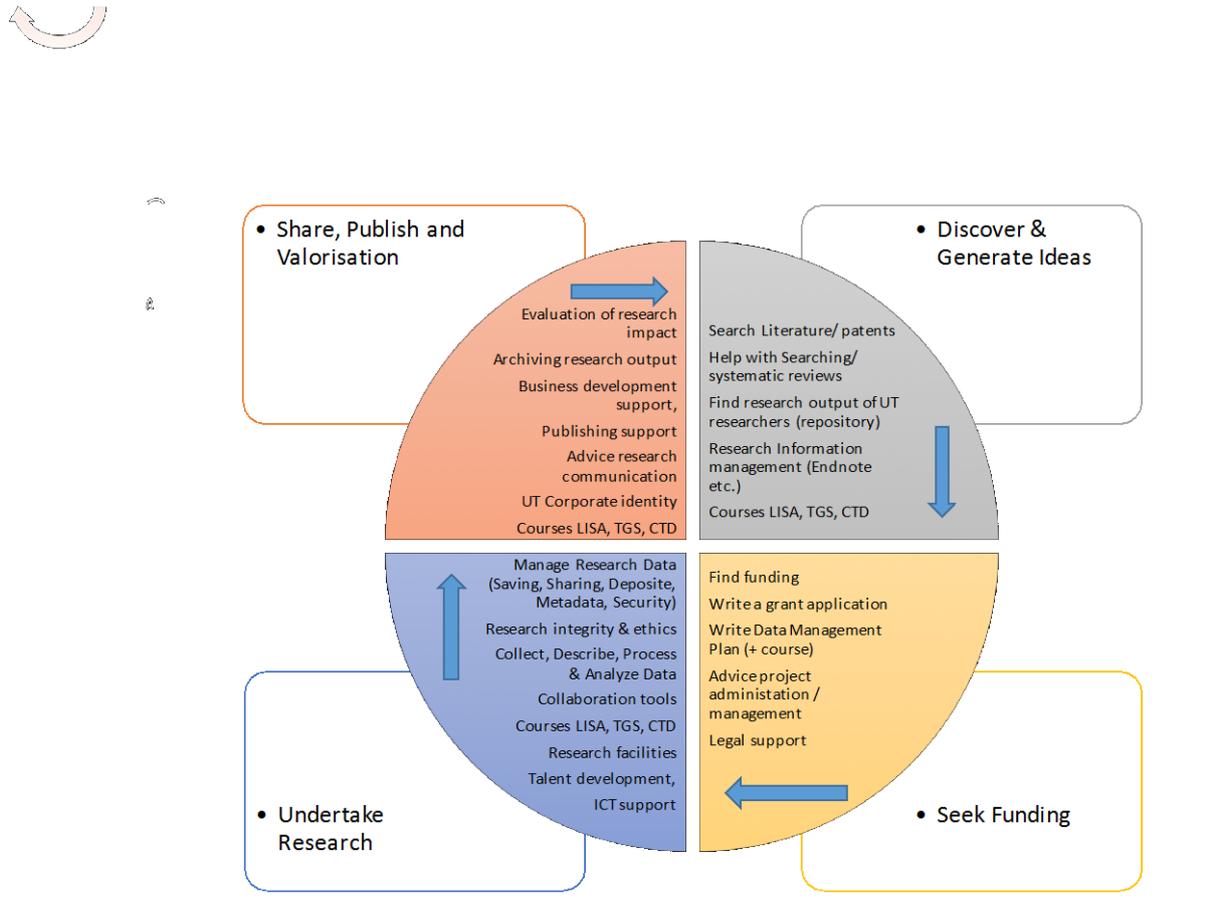
3.1 APPRAISAL OF UNIVERSITY OF TWENTE SERVICE DEPARTMENTS

We initiated our appraisal of the support provided by the various service departments by scanning the websites in question. After all, this is how users access this information too. We also interviewed various members of staff at the service department in question. The list in Appendix 3.5.2 provides an impression, that is as complete as possible, of the support that is available to researchers from the support departments at the University of Twente and from support staff based in the faculties and institutes.

The University of Twente website includes an organogram, which also gives a summary of the support departments at the university. Each support department has its own website, where it presents details of its range of services in areas such as research support. Each service department does this differently, and LISA is, in fact, the only service department with a separate research support website. In addition, it is striking that at the University of Twente website – under [research](#) – nothing is said about research support. Also, ‘facilities and amenities’ only includes details of grants (EU office).

In general, we can say that the LISA service department supports a large part of the research lifecycle, and that it offers various forms of research support. In addition, Strategy & Policy’s EU office is the support partner for those applying for grants and awards. The Kennispark knowledge centre provides legal support and help in applying for and searching for patents (IP), and provides support in starting a business. HR provides support in the areas of talent development and professional development, and shares responsibility with various partners for the range of courses available to researchers. M&C advises on communication issues, maintains contacts with the press, and handles media requests. We have summarized the range of support available in the ‘University of Twente Research Lifecycle Model’ (Figure 3).

Figure 3: UT Research Lifecycle Model



3.2 KEY ISSUES IN THE APPRAISAL OF UNIVERSITY OF TWENTE SERVICE DEPARTMENTS:

In the course of interviews with the staff of University of Twente service departments, numerous key issues were raised with regard to improvements in the way that research support is organized at the university. The full list of key issues (classified by subject) is given in Appendix 2.5.3. A number of important points relating to direct support for the research lifecycle are:

- Visibility of the service department, and of the support it provides;
- Coordinating with other service departments with regard to the support provided;
- Getting involved in the research lifecycle at an earlier stage;
- IT facilities for storing research data (secure, accessible, certified);
- Support in the administration of project management: registering items such as projects, stakeholders, official secretary (or secretaries), grant provider (or providers), size of the grant, partner (or partners). Making a pool of potential project staff available;
- Measuring the level of scientific impact and commercial knowledge transfer involved;
- Talent management process, proactive scouting for opportunities for the researcher in terms of funding/awards, selection based on suitability for training courses;
- Form, content, capacity of the available courses offered by HR, the Centre for Training and Development (CTD) and partners;
- Research ethics: information and training in the areas of scientific integrity, ethical conduct with regard to research data, data protection officer, etc.;
- Seek out promising research topics/areas that offer opportunities to establish connections/cooperation.

It is also worth mentioning that there is support and enthusiasm for the development of research support at the University of Twente. In this context, the visibility (both physically and in terms of information) of the support provided to clients is considered to be of pivotal importance.

3.3 COOPERATION WITHIN THE UNIVERSITY OF TWENTE SERVICE DEPARTMENTS:

In discussions with the support departments, it became clear that there is already mutual cooperation in the area of research support. The cooperation referred to by our interview subjects is described below, as completely as possible. In the interests of the correct interpretation of the EU subsidy sections, the staff of the EU office regularly negotiate with the Kennispark knowledge centre (lawyers, business developers), with LISA (data policy data management, data protection, updated list of publications), and with those responsible for ethical reviews (MIRA coordinator for research on human subjects, LISA). LISA and S&P cooperate with one another in the areas of policy (e.g. publication policy, data policy, impact analysis, scientific integrity). Together, LISA and the Kennispark knowledge centre (lawyers) provide information about copyrights. There are also consultations about the range, type and capacity of courses between the Centre for Training and Development (CTD), the Twente Graduate School (TGS), the Career Development Centre (CDC), the Centre of Expertise in Learning and Teaching (CELT), the TCP Language Centre (TCP), M&C, LISA and the Kennispark knowledge centre. LISA and FEZ conduct consultations on the organization of project

administration. FEZ communicates with project leaders in the faculties. University Information Management (UIM) cooperates with LISA (IT) and FEZ (project administration).

In some faculties/institutes, support staff from the service departments share the same space (e.g. the MESA+ Institute for Nanotechnology (MESA) and the MIRA Institute for Biomedical Technology and Technical Medicine (MIRA): M&C, EU office, business developers), this encourages informal discussions and a multidisciplinary approach. In the faculties, there are IT consultations and bilateral meetings with department chairs, directors and the representatives of the University of Twente service departments. In bodies such as library committees and the focus group, the faculties and service departments exchange details of lessons learned. Furthermore, working in small groups, the representatives of support departments and faculty/institute staff brainstorm the issue of new support (e.g. 'health Datalab' or ethics committee).

Points for improving the cooperation between the support departments were also raised in the talks. In short, these boil down to four points: agreeing responsibility for multi-departmental support; locating the right contact at the support departments; the different ways in which meetings/contacts between support departments and faculties are organized; occasionally, the organization's internal expertise is not used when formulating new policies/creating new services.

3.4 NEEDS AND WISHES OF RESEARCHERS

The researcher's position may have an impact on their need for support during the research in question. That is why we interviewed several researchers at different stages in their research careers: early-stage researcher (early to advanced PhD), advanced researcher (Post-doctoral researcher, Assistant Professor to Associate Professor), expert researcher (Professors, Research Directors). There will be more emphasis on some activities in the research life cycle than on others, depending on the position and experience of the researcher in question. The activities of a PhD student mainly involve conducting research and publishing research results. Post-doctoral researchers and assistant professors have more responsibility in terms of generating research ideas, fundraising, project management, supervising a PhD student, and setting up their own line of research. In addition, they will still be doing their own research and publishing the results. The professors are often responsible for managing research groups (including matters relating to personnel) and for fundraising. They also bear responsibility for projects and act as supervising professors for PhD students.

The appraisal of the researchers has produced many insights into the use of – and the need for – University of Twente support departments. We talked with more than thirty researchers, representing every faculty: Behavioural, Management and Social Sciences (BMS), Engineering Technology (ET), Electrical Engineering, Mathematics and Computer Science (EEMCS), Geo-Information Science and Earth Observation (ITC) and Science and Technology (ST). The analysis of our results shows that, with perhaps a few exceptions, researchers in different research areas have very similar needs. There may be individual differences between departments, in terms of the amount of use that they make of a given support department. TU Delft also concluded that the needs of researchers from different fields of study do not differ greatly.

In many interviews, it emerged that the researchers in question were relatively unfamiliar with the University of Twente's research support services. Those expert researchers who were familiar with a support service had usually found out about it through a personal network. In addition, their

experiences of a given support department usually determined whether or not they would continue to make use of it. In terms of finding out about the options for research support, early-stage researchers are more dependent on their supervisors and counterparts. It is, to some extent, remarkable that different faculties can express divergent degrees of satisfaction when assessing the same type of support. Moreover, some faculties have taken the initiative and have arranged for certain types of support to be provided internally.

Actually, none of the researchers questioned were satisfied with the search function at the University of Twente's website. Instead, they routinely search for information via Google, and add the search term 'UT'. Details of the research support provided by a given support department can be obtained from the website of the service department in question, but it is not presented in an intuitive manner. Some of the researchers interviewed felt that it might be helpful to have a website offering a comprehensive overview of the range of research support provided by the various support departments. However, it is also important to have good personal contacts, for instance contacts who are visibly present and easily accessible in the researcher's surroundings.

According to the researchers questioned, rather than a lack of research support at the University of Twente, it is more a question of various research tasks that should always be supported and where improvement is required (for details, see the substantive and general needs).

3.4.1 SUBSTANTIVE NEEDS

The following overview represents a description of the substantive needs for support – based on a random sample – that were identified during the interviews with the researchers. Here, for the purposes of the presentation, the four-stage structure of the research lifecycle is used.

Discover & Generate Ideas

Access to scientific literature. Access to literature, which is seen as being very important, is assessed as 'good'. Researchers usually search directly in the database, rather than using the library's search function. If a given article cannot be accessed, then the researchers indicated that they usually try to obtain a copy of the article anyway (by contacting an information specialist, or the author of the article, or websites like ResearchGate). Some researchers are familiar with the information specialist, others less so. The former group usually became aware of this individual due to their involvement in an educational programme or course.

University of Twente expertise. The University of Twente should make more use of the expertise present in its various departments.

Network access. It should be possible for the guests of University of Twente researchers to quickly get down to work here at the university. The process of quickly creating new guest accounts with a good internet connection generally does not go smoothly.

Seek Funding

Support in acquiring grants/making proposals/obtaining EU funding. There is general satisfaction with the support provided by the EU office with regard to grant applications, although such support mainly takes the form of information concerning structure and rules. Another point the researchers raised was that the details of the support on offer were not made clear in advance. In particular,

courses for the Veni, Vidi, Vici grants (awarded under The Netherlands Organisation for Scientific Research's Innovational Research Incentives Scheme) and for European Research Council (ERC) grants were assessed as being useful. Substantive feedback is highly dependent on an individual's colleagues and on the faculty organization, e.g. BMS has organized this kind of substantive support for its researchers, although it is the only faculty to have done so. Expert researchers would like to see more support in the form of ready-made blocks of text for use in those sections of grant application forms that do not involve details of the research topic in question. It was also noted that the process of applying for grants could be better coordinated, to avoid the risk of different University of Twente researchers competing for the same grant. The researchers themselves could also assist in this coordination effort, by notifying the university that they are actively responding to a particular call. Better guidance in response to specific opportunities, for individual researchers or entire groups.

Financial support. The faculties differ in their assessment of financial budgets drawn up before a project commences, or of financial summaries prepared while the research is in progress. One faculty, for instance, may take a very positive view, stating that the support staff know exactly which summaries you need for your project's administration, and that they also provide financial insights while the research is in progress. Yet, in other cases, faculties report that they encountered considerable resistance in response to requests for certain summaries, nor was there any evidence of proactive thinking with regard to the type of research in question, and the associated costs. There was also a lack of proactivity in the area of finance. For instance, a failure to inform people that funds are getting low or to indicate that funds remain to be spent.

Support in project management. The researchers found the activities of an official secretary, including the administrative work involved in managing a large project, to be very stressful. They indicated that these were clear reasons not to take on this role. Many choose to hitch a ride with larger partners. Usually, in such cases, no funds are budgeted for the appointment of a project administrator. In this area, the University of Twente could take action to provide better support for project administration.

Alerting researchers to grant calls. Researchers can sign up to receive announcements about specific funding opportunities. Yet some researchers feel that it would be useful if the University of Twente were to take a proactive approach to grants or awards that are relevant to a given individual or department. In particular, searching among the plethora of EU grants is considered to be difficult.

Undertake Research

Courses. Taking good courses is even more important now, due to the TGS/ProDoc rule about obtaining points. However, the researchers did complain about the limited availability and type of courses. Subject-specific courses are taken externally. Courses for grants are also seen as useful, though these often deal mainly with structure rather than content. Support in terms of content is sometimes organized by the faculty itself (e.g. as at BMS).

TGS, ProDoc. Many researchers see this as an additional administrative burden, and are unclear about its value. PhD students are not clear about what is expected of them. ProDoc does not inform assistant supervisors about the progress of their PhD students. It only informs the supervising professors, yet these do not provide direct supervision.

Technician/IT. For departments, the support provided by various labs and technicians is indispensable. Indeed some departments require IT project staff who can be involved in projects for extended periods of time. Not all departments have access to an in-house technician/IT expert. This places an even greater burden on researchers, who then have to provide the department with the support in question.

Data management. Too few researchers are sufficiently aware of the need for data management, and they feel no need to modify their working practices. However, they did note that this may well become more important in the near future, and the grant-awarding bodies appear to be moving in that direction too. Furthermore, many stated that there is a need for reliable, secure storage, which is easily accessible. The awareness of data management, storage and secure use varies quite markedly from person to person. Many researchers organize their own storage, without the intervention of the IT Service Centre (ICTS). At the University of Twente, no provision is made for storage facilities in which accessibility, security and capacity are effectively regulated. As a result, people are currently opting for homemade solutions, which may well involve too many concessions with regard to security. While the researchers are well aware of this, their priorities are convenience and low cost. For instance, the University of Twente does not maintain a cloud, so the researchers arrange for a cloud of their own. PhD students are able to follow the course on data management, but would it also be possible to provide effective training for members of staff (Assistant Professors, Associate Professors, Professors)? We have noticed that there is a need among expert researchers for training in the area of data management.

Data usage. Gaining access to other people's data, how does that work? What are the capabilities of databases and Big Data? What are the benefits of Data Archiving and Networked Services (DANS), and what capabilities does a Statistics Netherlands (CBS) computer offer us?

Data analysis. Various researchers indicated that they would appreciate some assistance with graphics/visualization of data. Software features alone are not enough.

The basic support provided by ICTS is generally good, although researchers often need administrator rights to use software that is required for research purposes. The central service (ICTS) is seen as a black box. You submit your question, but you have no idea how long it will take before you get answers and assistance. It is better to have a direct line of communication with ICTS in the faculty. There are a wide range of views concerning the customization provided by ICTS. One researcher may be very satisfied, while another finds it faster and cheaper to take matters into their own hands. Researchers do not usually know their account manager personally. Indeed, they often work through an IT liaison associated with the department or the lab in question.

Support (editing). Aside from courses, articles need linguistic corrections and improved structure. This could take the form of advice with the selection of external editing agencies, possibly taking the field of study into account.

Ethics. In the area of ethical review, support is available at CTIT (Centre for Telematics and Information Technology), MIRA, EEMCS, and BMS. When researchers are required to attend the Twente Medical Ethics Review Committee (MERC; an accredited medical ethics review committee which assesses medical research that is subject to the Medical Research (Human Subjects) Act), this involves a much longer process (involving additional costs), and appropriate provision is not always made in a timely manner.

Statistical support/methodology support. Methodology Shop (which is run by the department of Research Methodology, Measurement and Data Analysis; OMD) mainly provides support for students, in the areas of methodology and statistics. BMS researchers (and occasionally MIRA) access this support from the department of OMD (BMS). Support capacity for researchers is largely dependent on the availability of a member of staff from that department. However, the OMD department does plan to expand its support in areas such as data analysis throughout the University of Twente. As yet, however, there is no agreement about the form that this might take.

Sharing, Publishing, & Commercial Knowledge Transfer

Those researchers who need it assess the support provided by the Kennispark knowledge centre to be effective. The researchers did make a number of specific comments regarding the level of support for patent novelty searches. Contracts are assessed for legal correctness, but no checks are carried out to determine whether they are correct in terms of content. As a result, the responsible expert researchers must check every single contract themselves.

Open Access is generally viewed as a favourable development, but there is considerable variation in the use of OA options and OA grants. The choice of journal is primarily determined by the subject of the article. In addition, impact factors are still important in assessing researchers. Many researchers still feel (generally incorrectly) that open access has a lower impact factor (although this does vary from one field of study to another). As a result, this option is not always a first choice. The grant-awarding bodies often tend to encourage – or actively prefer – publication by means of open access. Open data is, increasingly, being handled more carefully, for instance the decision to make data available is taken at the author's request, but the open option is sometimes precluded by contracts with companies (also applies to articles).

Repository. While researchers are familiar with the University of Twente repository, many also use their own websites, such as ResearchGate and Arxiv.org. Often the full text is submitted, even though it cannot be published in open media (depending on the journal's rules), but an author's version can be made openly available immediately. It might be an option to specifically draw researchers' attention to this option, so that more author's versions are uploaded. Clarity should also be provided in connection with embargo options, and with follow-up when these expire.

Communication. To improve the chances that people will read information, focus the news on a specific audience (e.g. PhD students), hold a lunchtime meeting, or invite support staff themselves to a departmental meeting or to the council of professors.

The researchers' visibility. How can we boost our impact factors? How can we improve our ability to see and to be seen? How do we measure our research output, what are the alternatives (e.g. including social media)?

3.4.2 GENERAL REQUIREMENTS

In many interviews, it emerged that the researchers in question were relatively unfamiliar with the support departments. They mainly attributed this to the visibility of the support in question, and to access to that support. The researchers feel that there is a lack of overview and insight into the ways in which they can make use of research support. They indicate that it is important for them to have a

physical point of contact in the vicinity, someone they can personally go to with their questions or requests. In addition, there is a need for better information about what specific support really entails, to help researchers understand what they can and cannot expect. Researchers would also like support staff to identify more with the research in question. They often sense a degree of resistance with regard to the provision of support. Some researchers would also like the support departments to adopt a more proactive approach.

Furthermore, all of the researchers expressed a need for support with writing. PhD students in particular always make use of the technical writing course, but this is a one-off. There is an ongoing need for support with written work, involving the structure of additional articles and linguistic corrections. Some everyday supervisors have more time and expertise than others when it comes to lending their PhD students a helping hand. In addition, PhD students can be reticent about bothering their supervisors with their writing problems. Professors mainly tend to need writing support with those sections of grant application forms that do not involve details of the research topic in question. However, some professors also use external agencies to improve those sections that do involve substantive details of the research topic in question. It should be noted that the professors do not expect the University of Twente to offer expertise of this kind. However, they feel it might be possible for the university to make good-quality standard texts available for what researchers describe as the 'incidental' sections.

One reason given for not taking on the role of official secretary in major projects is the large amount of 'red tape' that the researchers have to deal with (and which they find difficult). The availability of effective support, possibly in the form of a pool of project administrators with expertise in these matters, could encourage more people to take on the role of official secretary.

The researchers would like to see a website that presents details of the entire range of available research support. This would make it easier to determine exactly what types of support are available at the University of Twente. In addition, however, it is also important for there to be a physical point of contact within the faculty itself. The researchers mentioned a few other key points. One was that the available support should be listed from the researchers' point of view. Details of the service department that actually supplies the support in question are not important. Other points were making the website easier to find on internet, boosting its visibility and brand awareness. The type of support offered should be described clearly but succinctly. Details should also be provided for a contact, together with information about the times at which they are available.

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APPENDICES:

3.4.0 LISA'S 2016 PRIORITIES FOR RESEARCH AND COMMERCIAL KNOWLEDGE TRANSFER

FROM THE 2016 LIBRARY & ARCHIVE ANNUAL PLAN

- Advice about literature surveys (supervising process) and systematic literature reviews
- Advice on publishing and profiling strategy (at different levels)
- Support for open access
- Advice on data management, in the broadest sense of the word
- Comprehensive research support
- Implementation of research information system
- Open Journal Systems
- Advice on tracking down research funds
- Support for research evaluations (at individual and group levels)
- Advice on copyright
- Advising on integrity and privacy in the research process
- Enhancing the visibility of research support
- Communicating (and measuring) the success of new services (e.g. Open Journal Systems (OJS) and Browzine)

FROM THE 2016 ICTS ANNUAL PLAN

- University of Twente workstation programme; Simplifying the infrastructure; Simplifying the application landscape; Optimizing processes; Self-service; Maintain level of basics;
- Innovation in education and research:
 - Open Data and APIs: (The University of Twente wants to promote the use of Open Data in the context of the campus as a living lab. In many cases, ICTS will be asked to make this data accessible. In 2015, for example, a Campus App was developed. ICTS must see to it that the requisite middleware and integration architecture are in order).
 - Certified storage for research involving medical data: Demand from the Institute for Innovation and Governance Studies (IGS) and BMS for certified storage and servers is handled by account managers in cooperation with security managers. The certification of elements of services or external hosting, and internal process improvement, etc.
 - Research projects involving the use of Sharepoint: In 2015, Sharepoint went live for project sites and team sites in the area of research. It will be rolled out still further in 2016. The pace and priorities involved are determined by demand.
 - Support for Research Data Management: Customization. Responding to demand from the faculties. As yet, no project is planned in this connection, but we do expect customization work via ICTS's account managers. The Research Support Board can also provide input in this connection.

3.4.1 2016 COMPREHENSIVE SERVICES ANNUAL PLAN

Service vision

The entire range of services is designed to effectively free the students and academic staff from their routine cares, allowing them to concentrate as much as possible on education/teaching, research and commercial knowledge transfer. We will be able to achieve this if both the service departments and the academic staff feel responsible for this and act accordingly. In further developing this service, the University Operations Committee (UCB) is guided by the following vision of quality of service.

Kwalitatief hoogwaardige dienstverlening:

1. Zoekt interactie met de klant, kiest in onderlinge afstemming passende oplossingen.
2. Streeft naar een optimale ondersteuning van het primaire proces.
3. Stelt de vraag van de klanten/afnemers centraal.
4. Is oplossingsgericht, deskundig (sluit aan bij de wensen van klanten/afnemers) en wordt geleverd door betrokken professionals.
5. Is innovatief, verbetert en professionaliseert voortdurend.
6. Wordt integraal geleverd, in samenwerking met andere diensten / ondersteuners en het primair proces. Centrale en decentrale diensten zullen elkaar ondersteunen en aanvullen.
7. Is toegankelijk en transparant ten aanzien van mogelijkheden en beperkingen.
8. Kent een duidelijke eigenaar / aanspreekpunt.

3.4.2 APPRAISAL OF SUPPORT PROVIDED BY UNIVERSITY OF TWENTE SERVICE DEPARTMENTS

LISA

Availability of literature: Adding to scientific collection and providing efficient access
Systematic literature reviews
Publishing: Publishing, publishing Open Access Copyright, University of Twente repository, ISBN/DOI application, Publication strategy, Assessing quality of journals and publishers, References, publishing Data.
Research Data: Research data management, Data Policy, Saving/sharing data, Depositing your data (repository 4TU & DANS), Publishing your data.
Support information management during research: Managing references with Endnote (Mendeley, Zotero, RefWorks).
Courses: Methodically and Efficiently Searching for Information (MIZ), Scientific information (searching, managing, publishing) (SI), Endnote (Basic/Advanced), Data Management (DMP), and Web-based training
Funding and grants: Research professional database, research NL newsletter, open access publications fund.
Embedded support: information specialists, data librarian, account managers
Impact and citation analyses: Journal Citation Reports, Hirsch index, personal publication list, publishing and scientific output via Research Information Systems (RIS) or the Centre for Science and Technology Studies (CWTS) at Leiden; improve CV for grants.
Archive management: Reuse information/archiving (JOIN): what elements of the research administration data should be saved, and for how long (the data is managed elsewhere), Contract Management, Project File.
Workplace support (standard, basic, customization)
IT customization: Support and advice in purchasing hardware, software (development) and IT services, infrastructure. Contract management
Servers: Terminal server, Unix, virtual server; Computing servers (e.g. also SURFsarah.) Lightweight database server (MySQL, POSTGRES): Service for the storage and retrieval of research data in a structured database environment.
Websites (including personal websites) (WebHare, Webhosting associations)
Data storage: Archive research data (4TU, DANS); Backup to disk; M, P, U drives (+ Webdrive or remote access to disk); high volume disk storage capacity (other than the M, P and U drives) available: Normal Quality Storage, High Quality Storage & Storage on Network-Attached Storage (NAS). Centrally located storage facilities that are accessible through UTnet)
Collaborative environments (FileSender (for sending large files), SURFdrive, wiki system, SharePoint)
IT security (support for project managers to ensure that projects deliver secure results)
Supporting Research Information Systems (Metis/Pure, DOI, Oracle Projects) & PhD tracking systems (Metis/Pure, GSM,

ProDoc, GATS).

Support for information retrieval: research publication repository, research archive, library systems and scientific search engines.

Project administration (archive cooperates with FEZ, which research papers are important to the archive: contract, final report, financial report, auditor's report, document indicating that client accepts submitted documents), contract management, project file.

AZ

Legal affairs (also works for the Kennispark knowledge centre at Twente)

- Contract law (drafting and assessing various contracts: confidentiality agreements, research agreements and IP transfer agreements)
- Corporate law (advice on the establishment or dissolution of legal persons, the preparation and modification of articles of association and shareholders' agreements)
- Intellectual property law (IP) (advising on patents and copyrights)

Interview: Occasionally involved, through the EU office, in grant applications with regard to legal sections concerning data confidentiality agreements, non-disclosure agreements or material transfer agreements.

Science Shop (commercial knowledge transfer)

Data protection officer

FSC

No direct support for research.

FEZ

Provides information and advice with regard to **financial aspects of research contracts**

Project management (administration, statement of expenses and management) in research projects (involving externally funded projects). Project administrators in the faculty who provide support.

HR

Training courses provided by the Centre for Training and Development (CTD) for Staff, PhD students and postdocs (partners: Career Development Centre (CDC); Centre of Expertise in Learning and Teaching (CELT); TCP Language Centre (TCP); Twente Graduate School (TGS); Library, IT Services & Archive (LISA); Kennispark knowledge centre, Twente; and external lecturers).

- Language/communication (English pronunciation; Cambridge English courses; Dutch; German; Transferable skills for PhD students)
- Personal Effectiveness (personal branding PhDs/Postdocs/Scientists, Project Management for PhDs; professional effectiveness; Analytic storytelling)
- Teaching (training such as education development, teaching and quality assurance in education)
- Research support (Data Management, Scientific Information, Research professional (only LISA); ERC/VENI/VIDI/VICI grant training; VICI presentation training; Poster Presentations; Write to publicize; Technical Writing & Editing; Creative thinking; Competing for research grants for early stage researchers; how to write a competitive proposal; Presentation skills)
- Career development (Career orientation and application; From idea to patent to business; Interview skills in English)
- Leadership (academic leadership, supervising PhD candidates)

Career development and professional development. Some issues raised during interview: Careers advice, Individual coaching, Supervisors programme.

Talent development: Tenure-track system focused support to enable talented scientists to progress to professorships; and **Female talent to the Top; Young Academy.**

Information for PhD students (links to: Courses and training courses for PhD students (CTD, TGS, PhDs teaching in

the classroom); PhD forms (assessment, training programme, annual interview); PhD Network Twente (P-nut); PhD charter; TGS.

Recruitment and internationalization (advice for recruitment and selection committees on professional recruitment and selection, to attract international staff the Foreign Employees Office (internationalization) is responsible for supervising immigration procedures).

M&C

Advising on communications issues (goal, audience, message, medium)

Press Officers: editing press releases, publishing news

Coordinating requests from the media: bringing them into contact with scientists

Organizing events, e.g. involving both scientists and journalists

Media training and providing advice on media appearances

University of Twente house style/University of Twente printed matter (Traffic department)

S&P

EU office: Funds and Grants:

- Strategic advice on grants (How should I prepare? Which networks are relevant? Lobby?); Finding the right calls; Support with the writing process; Support with the administration of the proposal; Submitting the proposal; Supervision of contract negotiations for approved projects; analysis of rejected proposals; alternatives in event of rejection; management of ongoing projects.
- Support for Dutch, European and International research grant applications to organizations such as the Netherlands Organisation for Scientific Research (NWO), the STW Technology Foundation, The Netherlands Organisation for Health Research and Development (ZonMw), the Netherlands Enterprise Agency (RVO), and Horizon 2020.
- ERC grants (individual grant); funding strategies
- Marie curie expertise, Awards/memberships, grant, fellowship

Research & Commercial Knowledge Transfer:

- Awards and nominations (national and international, University of Twente research prizes (de Winter, PhD prize)), talent management
- Scientific integrity
- Commercial knowledge transfer (for University of Twente research; in association with the Kennispark knowledge centre)

Other services provided by S&P: Research and Commercial Knowledge Transfer, UIM, Internationalization, Alumni & Development office, Policy monitoring and Strategy not provide research support to researchers.

SUPPORT PROVIDED BY FACULTIES/INSTITUTES

Twente Graduate School (TGS):

- PhD programmes and courses/workshops for PhD students' and postdocs' academic development: Introductory Workshop for PhD candidates; EntrepreneurialU; Workshop Creative Thinking; Research Management; Science Research Writing; Geo-Information Technology and Governance; Introduction to Programming, MatLab and C++; Summer School doing Narrative Analysis; Personal Effectiveness; Publishing Innovations, Peer Review and How to get published in a Good Scientific Journal (with LISA).
- ProDoc (support for the process)

The Kennispark knowledge centre Twente:

- **Legal support** (advice on the legal aspects of your new company, basic documents for your own general

<p>terms and conditions or contracts or check of your own legal documents, sparring partner for enterprise, corporate and contract law, e.g. the requisite contracts, the right legal form or transferring patents or knowledge (IP, patent applications) (also AZ).</p> <ul style="list-style-type: none"> - Business development team: provides support in starting a business (spin-offs), for instance by providing support in finding financial resources, finding the right market and marketing approach and, if necessary, in appointing the right management team. Assesses product → business case → advise → on patent (Idea to patent-to-business workshops, LISA also played a role in development). - Provides an overview of the most common financing instruments for your innovative business in Twente. - Brings together researchers, businesses, investors - Knowledge centre for commercial knowledge transfer activities
<p>TCP Language Centre: Primary role is to deal with students' writing problems. For staff, it provides professional support for language and communication skills in English, Dutch and Spanish. Courses: write to publicize, poster presentation, presentation skills, interview skills. Provide on request via HR or via direct customized support to researchers.</p>
<p>Techno Centre for Education and Research (TCO): Developing, producing and maintaining unique experimental set-ups, prototypes and instruments. Team of professional prototype builders who approach issues from different technical viewpoints and translate these into practical solutions. Also provides service for research-critical equipment, such as vacuum systems, refrigeration equipment, helium installations, and various other types of equipment. Works mainly for EEMCS and ST.</p>
<p>Lab support: MESA+ NanoLab (BioNanoLab, Cleanroom, Analysis lab), Virtual Reality Lab, IGS DataLab, Experimental Centre for Technical Medicine (ECTM), LEO Center for Service Robotics, the supersonic wind tunnel, DesignLab, the ThermoPlastic Composite Research Centre (TPRC) and the Smart Experience laboratory (SmartXp). Some departments also have their own lab (e.g. in ET's Westhorst building), sometimes with a technical assistant who provides support.</p>
<p>EEMCS and BMS faculty ethics committee. If there is no research that is subject to the Medical Research (Human Subjects) Act, there will be an assessment by Twente's Medical Ethics Review Committee. The faculty committees have no legal basis.</p>
<p>Methodology Shop/Test-o-Theek ('Test Library') BMS (statistics support by the OMD department). Primarily for BMS students. PhDs/Academic staff usually seek support from the OMD department.</p>
<p>EEMCS and ITC have their own repository</p>
<p>IGS 'research services' (intranet): information about calls and proposals (EU office); IGS Datalab (support, consulting and infrastructure for the management, collection, analysis, and storage of data, data science centre (collaboration for big data analysis)); create a poster (print support); Publish or Perish (software by Google Scholar that retrieves and analyses academic citations).</p>
<p>MIRA University of Twente coordinator for research on human subjects: advisory support for MIRA researchers. Also reports to the Health Care Inspectorate (IGZ) concerning the use of medical equipment that is not CE marked.</p>
<p>CTIT has a staff member who advises researchers on the ethical aspects of research.</p> <p>CTIT 'support for research groups' (intranet) information and procedures concerning project coordination, and research funding opportunities.</p>
<p>MESA+/MIRA knowledge transfer support (business development team, patent application/transfer), for MESA+ also commercialization and legal support. All services provided by the Kennispark knowledge centre.</p>
<p><u>External:</u></p> <ul style="list-style-type: none"> - SURF, DANS, 4TU - Medical Ethics Review Committee Twente, ethics committee with a legal basis. Assesses medical research involving human subjects that is subject to the Medical Research (Human Subjects) Act (WMO). Some University of Twente staff are members of this committee.

3.4.3 LIST OF KEY ISSUES FOR UNIVERSITY OF TWENTE SERVICE DEPARTMENTS

'General'

- Visibility of service departments to researchers
- Many service departments indicate that they would prefer to be involved in the grant/research process at an earlier stage (e.g. IT with data storage (costs are often not budgeted for), the Kennispark knowledge centre (business developers) when applying for a research project as a solid foundation at the start can help to avoid problems at the end (or missed points), EU Office and HR help to streamline talent effectively).
- Courses: range, type and expansion of capacity (e.g. data management, writing courses and other TGS/CTD offerings). Make TCP support accessible for PhD students/Postdocs and other academic staff.
- Checklist of things to consider before you start writing the research proposal: Commercial knowledge transfer + data management + IT infrastructure + funding
- Gap between policy and implementation
- Project managers – create a pool of people who do this. At present, they often leave when the job is done. They can deal with peripheral matters and free researchers from their routine cares, enabling the scientists to focus on the content.
- Whenever something is not offered sufficiently well, people tend to ask WHERE and with WHOM the responsibility lies?!
- Reorientation of research institutes: what type of organizational structure do they have? Who are the responsible people? How are interests proceeding?

'Ethical'

- Information (places where this can be inserted are currently difficult to find)/professional development/course of learning (with TGS) in the area of academic integrity.
- Coordinating ethics committee (central? representing various areas of expertise)/procedures regarding ethical review) Goal: safe research, quality, risk assessment and assurance.

'Data (collection, processing)'

- Data protection officer (+ what are the boundaries of the data protection officer's role?)
- Datalab 'Health' medical examination: safe, affordable data storage site so no external parties (e.g. Open Clinica) are required.
- Make the data/research tool offerings more visible?
- Facilities for research data (central/faculty): There must be a secure place/secure facilities where researchers can store their data. Without that, data storage will continue to be insecure, and there is always a risk that something will go wrong.
- If you store and process research data with personal details, and if you keep it for more than six months, then you have to report this to the Dutch Data Protection Authority. At present, this is not being done.
- Is statistics support sufficiently clearly organized?

'Scientific impact/strategic profiling/administration of University of Twente information'

- Identifying/providing insight into partners, funding bodies, the level of budgets involved.
- Project management administration, including aspects such as registering projects, stakeholders, official secretary, funding bodies, and partners.
- Reuse information/archiving of research (JOIN): what elements of the research administration data should be saved, and for how long?
- EU applications are not properly registered.
- Internationalization wants to know who is active internationally, with which partners, and who is the contact person?
- Improve records in source systems (University of Twente Management Information System – MISUT) to prepare effective management reports.
- MISUT domain research: enhance the quality of management information (including content, reliability, availability) still further such that, in addition to the Executive Board, the various

educational programmes, faculties and institutes can be better supported in managing their processes.

- The process of appointing international professionals should run smoothly. This is vital to research relationships. (The most welcoming university, HR pilot project)
- Seek out promising research topics/areas that offer opportunities to establish connections.
- Publication strategy (LISA, S&P)
- Reviews/metrics for evaluating research
- SEP involves a lot of freedom. Which data and indicators should be selected?
- Some at the university do not always use ProDoc.
- We have fewer and fewer in-house official secretaries, probably due to the organizational and administrative work involved. We do not currently offer effective support in these areas, so someone else in the partnership takes on the role of official secretary. For us, this means a loss of earnings. The faculties must provide official secretaries with support. Research administration. FEZ is currently engaged in a project that will, hopefully, improve support in this area.

'Financial/funding'

- Financial aspect of research (from account control): project management of research projects (tariffs, financier)
- Focus on the funding of research projects. What do you want to achieve, where will you get your funds from?
- Support for international funding (i.e. not just at EU level). Occasional support from EU office.
- IGS Datalab: it would be better if Datalab were to list its services with details of the costs involved. This could then be factored into the grant costs.
- The University of Twente provides no support whatsoever for 'Project allowances' (paid to you directly). So – the question is – who is responsible for this? Surely someone must deal with that type of expertise? There is certainly a need – and demand – for 'project allowances'. (Strategic Business Development (SBD) only handles programme allowances)
- Safeguard financial liability (FEZ, faculty) before the lawyers conclude a contract for the appointment of a PhD student.
- FEZ must be more effective in its role as an advisory partner for financial scrutiny at the start of a project.
- Ideal situation: the corporate directors of research institutes should hold timely consultations on IT budget, and this should be included in the grant. The business directors could draw up a type of project design, with a finance section, and a list of things you should consider. → In this way, ICTS could be involved in good time during the grant awarding process.

'Researcher's personal development'

- Researcher's profile (LISA & communication?)
- Talent management, Scouting (for funding opportunities)
- The bottom-up process, in which the faculties put people's names forward, is being poorly implemented. The stumbling block is the talent management process, e.g. start with annual performance appraisal, build CV, talent, evaluation, course.
- CTD wants more selection at the front end (with the assistance of the EU office), who is suitable for what training course and when (e.g. ERC, Vini, Vidi, Vici, writing skills for developing grant).
- Team scans/selections for aspirations and the appropriate processes to be followed in this connection, with scheduling details. Managing that in a better way also has to do with talent management.

'Business/commercial knowledge transfer'

- Technology readiness levels (TRL) (stage of research -> business readiness) identifying researchers (the Kennispark knowledge centre), the TRL level is also important for Horizon grants.
- More unity in commercial knowledge transfer activities, commercial knowledge transfer at the

University of Twente is still very much at the developmental stage.

- Measuring scientific impact/commercial knowledge transfer: alternatives

IT

- More IT project staff who are involved (on a long-term basis) in a research project (e.g. Computer Science and EEMCS need to spar with IT project staff/account managers, with regard to content).
- There is a lack of information managers at faculty level. In that setting, they could be deployed at a more strategic level in IT-related policies and visions.
- Research and IT have become too distant from one another.
- Added value of ICTS compared to external parties. The prevailing view is that they are expensive.
- Long-term support: infrastructure
- Cooperation between the universities of technology in the area of IT is not good enough.
- Recalibration of the I-strategy. The major factors in this regard are: making computing facilities easier to find/use, getting involved at an earlier stage: what facilities do I need, purchase them personally, through LISA, or other support. The initial route is via the account managers but, more importantly, this should be more accessible and there must be a quick response. The view is that central services just take too long. While the University of Twente does offer services, what is the best way to present these to researchers? Trust is needed.