

Interventions Promoting Gender Equality Implemented within the EQUAL-IST Project

**Department of Information Systems,
University of Muenster**

2016 - 2019

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Abbreviations

CFO	Chief Financial Officer
DIS	Department of Information Systems at the University of Muenster
EQUAL-IST	Gender Equality Plans for Information Sciences and Technology Research Institutions
ERCIS	European Research Center for Information Systems
GEP	Gender Equality Plan
ICT	Information and Communication Technologies
IST	Information Sciences and Technology
IS	Information Systems
IT	Information Technology
SBE	University of Muenster’s School of Business and Economics
STEM	Science, Technology, Engineering, and Mathematics
WWU	University of Muenster

1 Executive Summary

This report provides an overview of the work done at the University of Muenster (WWU), Department of Information Systems (DIS) within the Horizon 2020 EQUAL-IST project (“Gender Equality Plans for Information Sciences and Technology Research Institutions”). The project was aimed at *introducing structural changes to enhance gender equality, diversity, and work-family balance* at the six participating Information and Communications Technology (ICT) and Information Sciences and Technology (IST) research institutions. The project was focused on identifying existing challenges, as well as on designing and implementing the interventions to address them. This report provides insights into the course of project implementation at WWU, achieved outcomes, and the project sustainability plan.

The report starts with the introduction of the EQUAL-IST project and the approach followed in it. Afterwards, the main implemented interventions are described and classified according to the objectives they intended to achieve; the faced resistances are indicated here as well. The report is concluded with a summary of the steps towards ensuring the sustainability of the initiated interventions after the end of the EQUAL-IST project.

2 About the EQUAL-IST project

EQUAL-IST (“Gender Equality Plans for Information Sciences and Technology Research Institutions”, <https://equal-ist.eu>, <https://www.uni-muenster.de/forschungaz/project/10219?lang=en>) was an international project funded by the European Commission within the Horizon 2020 Framework Programme (<https://ec.europa.eu/programmes/horizon2020/en>). The project started in June 2016 and was successfully completed in July 2019. The project was aimed at *introducing structural changes to enhance gender equality, diversity, and work-family balance* at the six participating Information and Communications Technology (ICT) and Information Sciences and Technology (IST) research institutions. It has been demonstrated that ICT and IST belong to the fields, where gender inequalities at all levels can be observed (Eurostat Press Office, 2017; Gorbacheva *et al.*, 2018).

The EQUAL-IST project was focused on the design and implementation of tailored Gender Equality Plans (GEPs). A GEP is “a set of actions aiming at: (i) conducting impact assessment / audits of procedures and practices to identify gender bias; (ii) identifying and implementing innovative strategies to correct any bias; and (iii) setting targets and monitoring progress via indicators” (European Commission, 2012, p. 13). Within the EQUAL-IST project the tailored GEPs were designed in a participatory manner involving

a wider audience of staff members (both academic and non-academic), students, and decision makers. This participatory approach was supported by an online crowdsourcing platform, called CrowdEquality (<http://www.crowdequality.eu>), which was developed and applied within the project (Gorbacheva and Barann, 2017; Gorbacheva, Moutzi and Stein, 2019).

The following ICT / IST research institutions from Northern, Southern, Eastern, and Central European countries participated in the EQUAL-IST project:

1. Simon Kuznets Kharkiv National University of Economic, Information Systems Department, Ukraine (<https://equal-ist.eu/gep-in-simon-kuznets-kharkiv-national-university-ukraine/>).
2. Kaunas University of Technology, Faculty of Informatics, Lithuania (<https://equal-ist.eu/gep-in-the-kaunas-university-of-technology-lithuania/>).
3. University of Minho, School of Engineering, Portugal (<https://equal-ist.eu/gep-in-the-university-of-minho-portugal/>).
4. University of Modena and Reggio Emilia, Department of Engineering, Italy (<https://equal-ist.eu/gep-in-the-university-of-modena-and-reggio-emilia-italy/>).
5. University of Turku, Information Systems Science Unit at the Department of Management and Entrepreneurship, Finland (<https://equal-ist.eu/gep-in-the-university-of-turku-finland/>).
6. University of Muenster, Department of Information Systems, Germany (<https://equal-ist.eu/gep-in-the-university-of-munster-germany/>).

The project was coordinated by the ViLabs company, Greece (<https://vilabs.eu>).

This report is focused on the interventions towards higher gender equality, diversity, and work-family balance ('interventions' hereafter), which were implemented within the EQUAL-IST project at the University of Muenster (WWU), Department of Information Systems (DIS). Note: Interventions are specific activities aimed at changing the status quo (e.g., Craig, 2015).

The need to tackle the under-representation of women at DIS at all levels motivated its participation in the EQUAL-IST project. In 2017 the share of women among Bachelor Information Systems (IS) students was 13.2% (vs. 46% of women among all WWU students). The shares of women were higher in the Master IS study programme (25%), as

well as among doctoral researchers (24%) and full professors (1 out of 6, 16.7%), although the numbers were low in these categories too. The lowest share of women was observed among postdoctoral researchers (12%).

3 Approach

Within the EQUAL-IST project, (i) the existing at DIS challenges related to gender equality, diversity, and work-family balance were revealed; (ii) the objectives to address these challenges were set; and (iii) the interventions to achieve these objectives were designed, implemented, as well as continuously assessed and refined. The approach followed at WWU within the EQUAL-IST project included the following phases (Figure 1).

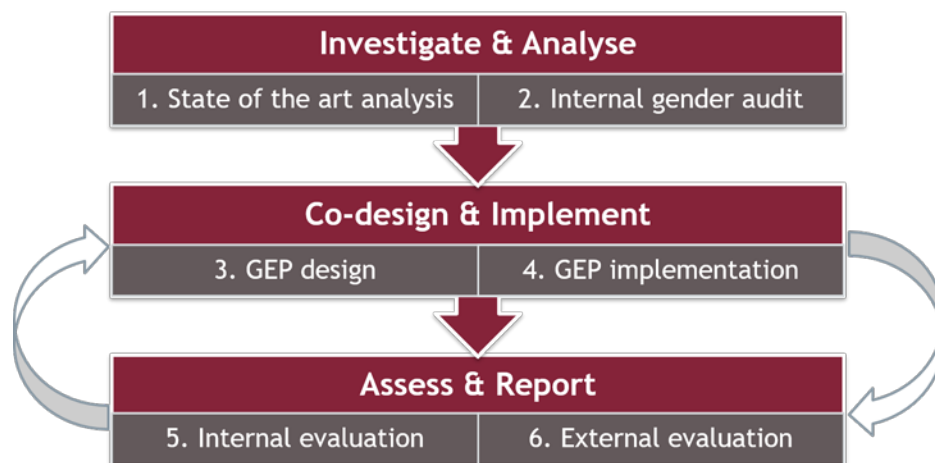


Figure 1 Approach followed at WWU within the EQUAL-IST project.

During the first phase, the state of the art analysis of related work was performed in order to provide valuable insights into the forthcoming GEP design and implementation at DIS. Here the following materials were collected and analysed: GEPs implemented at Departments of Information Systems in Germany and information about third-party funded projects aimed at the GEP design and implementation.

During the second phase, an internal gender audit was conducted in order to (i) investigate current issues related to gender equality, diversity, and work-family balance faced by students or staff members ('challenges' hereafter) at DIS and the faculty which DIS belongs to, namely the School of Business and Economics (SBE); and (ii) collect the ideas to address these challenges ('ideas' hereafter). The internal gender audit included the following steps:

First, in order to show evidence that women are under-represented at all levels at DIS, comprehensive gender-disaggregated statistics, as well as the indicators related to work-

life balance, were collected and calculated for IS students and DIS staff members for the years 2011-2018. Moreover, it was attempted to collect the same statistics for all Departments of Information Systems in Germany. This initiative, however, was not entirely successful, as only few relevant statistics could be found. The statistics for DIS were then analysed and later on extended and used in the subsequent project phases. The extended statistics were required, in particular, to justify the interventions initiated within the EQUAL-IST project and the need in their continuous implementation after the end of the project. It is intended to continue the collection, analysis, and dissemination of relevant gender-disaggregated statistics of (potential) staff members (both academic and non-academic) and students after the end of the EQUAL-IST project. A respective activity was included in the project sustainability plan.

Second, a comprehensive survey “Gender Equality & Diversity @SBE” was conducted, where DIS and SBE staff members and students were invited to participate. The survey was designed in a way that each target group (academic staff members, non-academic staff members, and students) received a set of dedicated questions in addition to the questions relevant for all target groups. Thus, a more profound feedback from each target group could be obtained. The survey was informed by (i) the survey on the status of women faculty conducted by the Association for Information Systems Women Network and (ii) extant academic literature on gender imbalance in the IS field (e.g., Ahuja, 2002; Armstrong & Riemenschneider, 2014; Loiacono, Iyer, Armstrong, Beekhuizen, & Craig, 2016). Invitations to participate in the survey were sent via email and social media channels. The survey was designed in a way that a respondent required not more than 20 minutes to complete it. The LimeSurvey online survey tool (<https://www.limesurvey.org>) was used for the survey design. As a result, 122 complete responses could be collected: 74 from academic staff members (43 of them were from DIS), 7 from non-academic staff members (5 of them were from DIS), and 41 from students (17 of them were from DIS). The survey data, together with the collected statistics, were then analysed and relevant findings were communicated during the subsequent gender audit studies, namely: (i) a workshop with six IS students; (ii) five interviews with decision-makers (three of them were from DIS); and (iii) a focus group with two DIS non-academic staff members (both female team assistants). It is intended to rework and regularly conduct follow-up surveys “Gender Equality & Diversity @SBE”. A respective activity was included in the project sustainability plan.

The challenges and ideas to address them, which were identified during the internal gender audit, were then discussed and extended by DIS staff members and IS students via the aforementioned CrowdEquality online crowdsourcing platform. The platform was developed at WWU by a team of eight Bachelor IS students as part of their project

seminar. (Note: A project seminar is a special teaching format, where students work in teams on some task relevant for research or practice.) The students were supervised by a team of DIS academic staff members who acted as stakeholders. Afterwards the platform was tested and further improved by the EQUAL-IST project Working Group at WWU. The platform's technical basis was the OpenideaL distribution of the Drupal content management system (<https://www.drupal.org/project/idea>). Within the EQUAL-IST project, the students and staff members from the involved six research institutions, as well as external users, had an opportunity to contribute to the platform. All personal data collected on the platform was stored in a secure way on the DIS server. The platform was maintained by DIS during its active phase within the EQUAL-IST project. Afterwards, in order to ensure code security and proper maintenance, the platform was transcoded to a static website. The platform will remain in this static mode for at least three years after the end of the project. The platform code (without content) is available on the WWU GitHub repository (<https://wiwi-gitlab.uni-muenster.de/equal-ist/crowdequality>).

All DIS-related input collected via CrowdEquality was then analysed by the EQUAL-IST project Working Group at WWU and discussed with the stakeholders foreseen to be involved in the forthcoming implementation of the DIS GEP, including the DIS study coordinator, representatives of the IS student council, and representatives of the WWU Equal Opportunities Office.

As a result, during the third phase, the DIS GEP document could be designed and in the subsequent fourth phase it was implemented. In the DIS GEP, the objectives to address the identified challenges were formulated ('objectives' hereafter). Furthermore, the action plan for the interventions aimed at achieving these objectives was set up. These interventions were based on the selected feasible ideas, which were proposed in the previous phase. The implemented interventions are described in detail in the next chapter.

The fifth and sixth phases were focused on the continuous assessment and reporting on the progress and success of the DIS GEP implementation, which was done both internally (fifth phase) and by an external evaluator appointed for the EQUAL-IST project (sixth phase). The internal assessment was focused on the performed work, while the external assessment was focused on the impact of this work. In case the performed work was not in line with the DIS GEP, corrective actions were discussed and carried out by respective stakeholders. The DIS GEP was implemented in two iterations. Based on the outcomes of the 1st iteration and the feedback received from the project external evaluator, the initial DIS GEP document was refined and then implemented further during the 2nd iteration.

Further work packages of the EQUAL-IST project included project management, dissemination of all project activities, as well as ensuring that the ethics requirements set by the European Commission were fulfilled.

4 Implemented Interventions and Resistances Faced

This chapter provides an overview of the main interventions included in the DIS GEP and implemented within the EQUAL-IST project. These interventions were aimed at achieving the objectives, which were set to address the challenges revealed during the internal gender audit at DIS.

The interventions were implemented at the department, faculty, and university levels and are tagged in Table 1 - Table 5 as follows:

- [DIS] – intervention was implemented at the department level primarily by the EQUAL-IST project leader at WWU in collaboration with the EQUAL-IST project Working Group at WWU.
- [SBE] - intervention was implemented at the faculty level (which includes DIS) primarily the by EQUAL-IST project leader at WWU in the role of the SBE Equal Opportunities Officer.
- [WWU] - intervention was implemented at the university level (which includes SBE and DIS) by the EQUAL-IST project leader at WWU and the EQUAL-IST project Working Group at WWU in collaboration with the WWU Equal Opportunities Office.

The first objective of the interventions implemented within the EQUAL-IST project (Objective A) was *to increase the share of women among Bachelor IS students*. The under-representation of women at DIS at all levels was the main reason, why DIS participated in the EQUAL-IST project. During the project internal gender audit, it was revealed that the root problem for it was the low share of women among *Bachelor IS students*.

The second objective was *to enhance inclusion of international IS students* (Objective B). The results of internal gender audit showed that international IS students often felt excluded, especially from group work, as German students tended to team up with other German students. The Master IS study programme at WWU, where English is the only language of instruction, needs to be focused on, as the share of international students there is especially high.

The third objective was *to improve work-family balance of DIS academic staff members* (Objective C). During the internal gender audit several academic staff members indicated that the expectations from them were not communicated clearly during the hiring process, which resulted in dissatisfaction and turnover intention. Difficulties in balancing work and family life were also highlighted by several parents working at DIS.

The fourth objective was *to raise awareness about the aspects related to gender equality* (Objective D). Although DIS faces an under-representation of women at all levels, the internal gender audit revealed that the topic of gender equality had *not* been extensively discussed or recognised as important. Overall lack of interest and even hostility towards the topic could be observed. Low interest in the topic of gender equality often stems from the lack of awareness about what constitutes gender equality and gender inequality issues beyond direct discrimination, why it is important to tackle these issues and how, as well as what interventions already exist at the department, faculty, university, and country levels.

Five interventions were implemented to achieve Objective A (Table 1), five interventions to achieve Objective B (Table 2), four interventions to achieve Objective C (Table 3), and seven interventions to achieve Objective D (Table 4). Moreover, three further valuable interventions were initiated (Table 5). The following sections and Table 1 - Table 5 present key information about each initiated intervention.

All intervention materials are available at <https://uni-muenster.sciebo.de/s/X7IWzwkaJS2TMqY>.

Resistances towards the EQUAL-IST project were faced both at the department and faculty levels, especially at the beginning of the project. A general resistance to acknowledge that there were challenges related to gender equality at DIS and SBE could be observed from decision-makers and staff members. However, in the course of the project, a set of interventions, which are presented in this chapter, were implemented to address this resistance and there was a positive change in the attitude towards the topic of gender equality. In particular, in the course of the EQUAL-IST project, the SBE dean, who was initially sceptical about the need to promote gender equality, became sensitised towards its importance. She became a member of a dedicated working group for reworking the WWU Equal Opportunity Framework document (see section 4.4.2) and contributed to its fundamental revision and improvement.

4.1 Objective A: To increase the share of women among Bachelor IS students

Title [Level of Implementation]	Goal(s)
4.1.1 Organisation and implementation of events promoting the IS study programme within the “Hochschultag” annual information day. [SBE]	To promote the SBE study programmes to potential students as an inclusive place welcoming all.
4.1.2 Organisation and implementation of events promoting the IS study programme within the “Girls’ Day” annual information day. [DIS]	To promote the IS study programme to potential female students as an inclusive place welcoming all.
4.1.3 Survey “How did you learn about your study programme?” [DIS] Preparatory intervention: Review of relevant studies.	(i) To understand, how current Bachelor and Master IS students, especially female IS students, learned about their study programmes; (ii) to identify promising communication channels to promote the IS study programme; (iii) to reveal, how current communication channels promoting the IS study programme could be improved.
4.1.4 Workshop “Why should one want to study Information Systems at the University of Muenster?” [DIS]	To understand, how to make the IS study programmes attractive for the best potential students, and especially for qualified and motivated women.
4.1.5 Revision of the marketing materials promoting the IS study programme applying a gender-sensitive approach. [DIS] Preparatory intervention: Review of relevant studies.	To revise the marketing materials promoting the IS study programme applying a gender-sensitive approach in order to ensure that this study programme is presented in an attractive and welcoming way for all.

Table 1 Implemented interventions to achieve Objective A: To increase the share of women among Bachelor IS students.

In order to achieve the first objective, both (inter)national marketing activities targeted at a larger audience and local ‘in-person’ activities were implemented.

4.1.1 Organisation and implementation of events promoting the IS study programme within the “Hochschultag” annual information day. [SBE]

Goal(s): To promote the SBE study programmes to potential students as an inclusive place welcoming all.

A panel was initiated within the Germany-wide “*Hochschultag*” annual information day for secondary-school students (<https://www.hochschultag-ms.de>), where both male and female SBE students could share with the participating secondary-school students in an informal way their experiences about studying at WWU and living in Muenster, provide details of the study programmes at SBE, as well as reply to questions. The event concept was developed, evaluated, and subsequently implemented within “Hochschultag 2017” and “Hochschultag 2018”.

Gender parity was considered when inviting speakers to the panel. The goal here was to communicate to the event participants in an indirect way that there is gender diversity among SBE students and to promote the image of SBE as a diverse and inclusive place for all. It was especially important that a female IS student participated in the event and could act as a role model to female secondary-school students.

The students were briefed before the event that in their talks they should in a non-intrusive way tackle existing stereotypes about typical Business Administration, Economics, and IS students. In particular, the IS students were briefed that in their talks they should highlight that it is an outdated stereotype that the IS field is for men only. These instructions were reflected in the student presentations during the event. Upon the completion of the formal part of the event, the participants could approach the speakers in person. The speakers received as incentives goody bags with various gifts from SBE and the ERCIS network (European Research Center for Information Systems).

At the end of each event the participants were asked to fill in the evaluation survey. Overall feedback was positive, although the participation in both events and consequently in the survey was very low (n=18 in 2017 and n=11 in 2018). Due to low number of responses to the survey, especially from female secondary-school students, it was difficult to draw a conclusion, whether the events could motivate the participants to start considering the IS study programme as a university major. The majority of participants indicated the Business Administration study programme as the preferred one (both before and after they attended to the events).

4.1.2 Organisation and implementation of events promoting the IS study programme within the “Girls’ Day” annual information day. [DIS]

Goal(s): To promote the IS study programme to potential female students as an inclusive place welcoming all.

An event was initiated at DIS within the Germany-wide “Girls’ Day” annual information day for female secondary-school students (<https://www.girls-day.de>). The event concept was developed, evaluated, and subsequently implemented within “Girls’ Day 2018” and “Girls’ Day 2019”.

During the event, the participants were divided into smaller groups and visited so-called ‘Stations’ related to some of the ongoing research projects at DIS and the project seminars with IS students. The ‘Stations’ showed various facets of the IS field and the IS study programme at WWU. Each ‘Station’ contained some interactive element in it, where the participants could try out various IS artefacts. For instance, in 2018 the ‘Stations’ were focused on virtual reality glasses, a survey about trust and technology using a touchscreen, an E-Bobby car and charging stations for electric cars, a fitness trainer app for a smartwatch, and a guessing game “FakeYou” dealing with the fake news problem. The ‘Station’ leaders were contacted in advance and asked to develop two programme types for their ‘Stations’: a more playful and simpler programme for younger girls and a more serious one for older girls.

The event started with a joint lunch and a walk around Leonardo-Campus, followed by a short presentation by two IS students (including a female student) who introduced the IS study programme at WWU, shared their personal experience about studying and living in Muenster, as well as replied to girls' questions. Afterwards, the participants visited the 'Stations'. Each event was concluded with an informal get together with cakes and beverages, where the participants could share their experiences, mingle with the 'Station' leaders, IS students, and event organisers, as well as ask questions. At the end of each event, the participants were asked to fill in an evaluation survey. Overall feedback to both events was very positive. Each event was opened to up to 20 participants who had to register in advance via the "Girls' Day" online platform.

The event required participation of a high number of DIS academic staff members and IS students as 'Station' leaders. Most potential 'Station' leaders who were invited to participate in the "Girls' Day" events agreed to do it and showed enthusiasm when preparing and presenting the 'Stations' to the participants.

Promotion of the IS study programme at the "Girls' Day" and "Hochschultag" events had an impact on both the event participants and DIS academic staff members and IS students who were involved in the event organisation. The event participants learned about the IS field and the IS study programme at WWU. DIS academic staff members and IS students who were involved in the event organisation learned about the need to encourage potential female students to apply to the IS study programme at WWU. Both events were recognised as important interventions that need to be replicated in the future.

4.1.3 Survey "How did you learn about your study programme?" [DIS]

Goal(s): (i) To understand, how current Bachelor and Master IS students, especially female IS students, learned about their study programmes; (ii) to identify promising communication channels to promote the IS study programme; (iii) to reveal, how current communication channels promoting the IS study programme could be improved.

The survey design was informed by a review of relevant studies (see the following preparatory intervention). The list of potential information sources, where IS students could learn about their study programme, included 28 options and additionally the respondents had an opportunity to extend the list in case any further information sources were used.

The 28 options for information sources were grouped into six categories, namely "People", "Internet / Online sources", "Organisations", "Mass media", "Printed informational materials", and "Events". For each information source, the respondents

were asked to estimate, to what extent they had received from it important information about their current study programme. For some information sources, in case a respondent used them, additional details were requested in order to gain insights that might be useful in further analysis. Moreover, the respondents were asked to recommend top three information sources, which they found most useful. Finally, the respondents were asked to provide suggestions and recommendations, how the information sources about their study programme that they had encountered could be improved. The respondents were also asked to provide some demographic and further information.

The initial survey was conducted in 2018 and it is intended to repeat it once in three years. The students were continuously invited to participate in the survey via several communication channels, including news on the department website, announcements on the *Learnweb* e-learning platform (<https://www.uni-muenster.de/LearnWeb/learnweb2>), posts in the Facebook group of the study programme etc. The survey was designed in a way that a respondent required not more than 10 minutes to complete it. The LimeSurvey online survey tool was used for the survey design.

Collected survey data (n=97) is currently analysed. The results of this analysis should reveal the most promising communication channels to (further) promote the IS study programme at WWU. Based on it, a marketing strategy for promoting this study programme, especially among potential female students, will be developed.

4.1.3.1 Preparatory intervention: Review of relevant studies.

The design of the survey “How did you learn about your study programme?” was informed by a review of relevant studies about the ways secondary-school students in Germany, and especially women, inform themselves about potential study programmes in the STEM fields (Science, Technology, Engineering, and Mathematics).

Relevant information was extracted, structured, and discussed with the EQUAL-IST project Working Group at WWU and the DIS study coordinator. Further specific information sources, which could be used by secondary-school students to learn about the IS study programme at WWU, were also brainstormed. All collected information acted as a basis for the design of the survey “How did you learn about your study programme?”.

The analysed studies also contained information about the factors and barriers influencing STEM career choices. These factors were categorised into those influencing (i) female secondary-school students in Germany; (ii) female secondary-school students worldwide or outside Germany; (iii) all secondary-school students in Germany; and (iv) all

secondary-school students worldwide or outside Germany. These factors will be further analysed in future research.

Moreover, it was investigated, what STEM departments at the universities in Germany had managed to increase the share of their female students. As a next step, the interventions conducted at such departments will be analysed and inform the marketing strategy for promoting the IS study programme at WWU.

4.1.4 Workshop “Why should one want to study Information Systems at the University of Muenster?” [DIS]

Goal(s): To understand, how to make the IS study programmes attractive for the best potential students, and especially for qualified and motivated women.

The workshop was organised and conducted with 9 DIS academic staff members who also studied IS at WWU. At the beginning of the workshop, it was highlighted to the participants that the best potential students can come also from those groups who currently form a minority in the IS study programme. Especially potential female students need to be considered, because they are the largest among the under-represented groups. Thus, the awareness of the workshop participants was raised about the importance of making the IS study programme at WWU an inclusive place welcoming all.

The workshop contained two exercises. First, the participants were asked to brainstorm both (i) positive and (ii) negative aspects experienced while studying IS at WWU (Brainstorming Activity 1). Second, the participants were asked to brainstorm, (i) how to communicate and promote the identified positive aspects to potential IS students, and especially to potential female students, as well as (ii) how to mitigate or eliminate the identified negative aspects in the future (Brainstorming Activity 2).

The workshop participants could identify relatively easily the positive and especially the negative aspects related to studying IS at WWU (Brainstorming Activity 1), but faced difficulties when asked to propose the solutions how to (better) communicate and promote the identified positive aspects and to mitigate or eliminate the identified negative aspects in the future (Brainstorming Activity 2). Nevertheless, the emerged ideas might be useful for the development of the marketing strategy for promoting the IS study programme at WWU.

4.1.5 Revision of the marketing materials promoting the IS study programme applying a gender-sensitive approach. [DIS]

Goal(s): To revise the marketing materials promoting the IS study programme applying a gender-sensitive approach in order to ensure that this study programme is presented in an attractive and welcoming way for all.

Existing marketing materials promoting the IS study programme were revised applying a gender-sensitive approach. The revision was based on the insights from the literature and materials on this topic, which were collected and analysed. In particular, it was evaluated, whether (i) there was a balanced representation of men and women in images, (ii) gender-sensitive language was used in texts, and (iii) no gender stereotypes were transmitted in images or texts. Note: Gender-sensitive language aims at acknowledging gender equality in written and spoken language (EIGE, 2019). By this it was evaluated, whether the programme was presented as an inclusive place welcoming all students.

This evaluation process was followed when revising the brochures and slides promoting the Bachelor and Master IS study programmes. Recommendations for improvement were communicated to the DIS study coordinator and incorporated into the revised versions of the materials. The updated versions of the brochures have recently been published and are currently disseminated.

4.2 Objective B: To enhance inclusion of international IS students

Title / Level of Implementation	Goal(s)
4.2.1 Workshop “Towards higher gender diversity and inclusion of international students in the Information Systems study programme at the University of Muenster”. [WWU]	To discuss the ongoing and prospective interventions towards enhancing gender diversity and inclusion of international students in the IS study programme.
4.2.2 Initiation of a working group within the IS student council to support international IS students. [DIS]	(i) To support international IS students; (ii) to connect them with local students.
4.2.3 Organisation and implementation of the sessions “How to study successfully in Muenster” within the “Master Orientation Day” information days for Master IS students. [DIS]	To provide practical information and recommendations related to studying IS at WWU to those Master IS students who did not study at WWU before and, in particular, to international IS students.
4.2.4 Assignment of students to groups within (Master) IS courses in a random way. [DIS]	(i) To bring in contact local and international students during the group work within (Master) IS courses; (ii) to mitigate gender and culture prejudices that could exist.
4.2.5 Investigation of opportunities for the involvement of regular international IS students into existing initiatives supporting international (exchange) students in Muenster. [DIS]	To explore, how regular international IS students could be (further) involved in existing initiatives supporting exchange students in Muenster.

Table 2 Implemented interventions to achieve Objective B: To enhance inclusion of international IS students.

All interventions implemented to achieve this Objective were aimed at supporting international IS students and raising awareness of DIS academic staff members about the challenges these students faced.

4.2.1 Workshop “Towards higher gender diversity and inclusion of international students in the Information Systems study programme at the University of Muenster”. [WWU]

Goal(s): To discuss the ongoing and prospective interventions towards enhancing gender diversity and inclusion of international students in the IS study programme.

The workshop was organised and conducted with 3 WWU students within the “Day of Teaching” annual event at WWU in 2018 (German: “*Tag der Lehre*”), where diversity in study and teaching was selected as the theme (<https://www.uni-muenster.de/tagderlehre/index.html>). Note: The “Tag der Lehre” events are aimed at discussing various facets of teaching at WWU and connecting WWU teachers and students.

It was communicated to the participants that even though the workshop is focused on the issues existing in the IS study programme at WWU, they are welcome to bring their insights and share experience about diversity issues in the other STEM fields and study programmes and about the interventions to include international students. After a short introduction round, the EQUAL-IST project was introduced as a trigger for the work that has been done at DIS. Afterwards, the gender-disaggregated statistics of German and international Master IS students at WWU was presented, highlighting two of the challenges revealed within the EQUAL-IST project, namely the under-representation of female students and perceived exclusion of international students. The reasons, why the under-representation of women and the lack of diversity in the IS and, more general, in the STEM fields need be tackled, were discussed then, followed by the presentation of the summary of such reasons. The interventions included in the DIS GEP to address the revealed challenges were then presented and fruitful feedback was received from the participants. Surprisingly the planned activity to engage international students to become members of the IS student council was marked by the workshop participants as the most important one. Overall, the participants were very active and motivated.

During the workshop, it was discussed extensively, whether the reasons, why women tend to not select the STEM fields as a university major, are of biological, psychological, societal, or a mixed nature. One of the participants first expressed rather essentialist beliefs that it might be (also) due to biology that men and women are interested in different fields and school subjects. Then another participant disagreed with this point of

view and stated that the main reason is the societal expectations posed on children about what career is appropriate for different genders. The moderator then provided a summary of the main theories, why women tend to not select careers in the STEM fields (gender essentialism, social construction of gender, and gender intersectionality), and asked the participants to reflect on them. It was ultimately agreed that any generalisations about career choices based on biological sex need to be avoided, that within-gender differences might be higher than the differences between genders, and that individual characteristics need to be considered. One of the participants later commented in the workshop evaluation survey *“Discussion was really interesting. I started questioning my own beliefs and understood that there is a lack of information on the topic”*. Such a change in attitude from rather essentialist to a more profound understanding of the topic, as well as the reflection on and subsequent disproof of existing stereotypes about the IS and, more general, STEM fields by the workshop participants can be considered as an indicator for the workshop success.

At the end of the workshop, the participants were asked to participate in a short survey evaluating the workshop. Feedback towards the workshop was very positive: both the workshop organisation and its content received a very positive evaluation. It was highlighted by the participants that the discussion was interesting. The main challenge faced was a very low number of workshop participants, which was the only negative aspect communicated in the workshop evaluation survey. Although 7 participants registered to attend to the workshop, only 3 of them showed up. Nevertheless, the workshop was conducted and lasted over 1.5 hours. It could be that the low number of participants even facilitated the creation of an informal and friendly atmosphere, which, in turn, supported an open, positive, and constructive discussion.

4.2.2 Initiation of a working group within the IS student council to support international IS students. [DIS]

Goal(s): (i) To support international IS students; (ii) to connect them with local students.

A working group “Mentoring” was established within the IS student council. Several meetings of the working group took place, where the required interventions were defined and planned. The working group conducted several Q&A (questions and answers) sessions for first semester Bachelor IS students, where the students received useful information, could ask questions and share experience. The events were also aimed at connecting students. Initial coordinators of the working group have recently completed their studies at WWU and left the IS student council; suitable successors are currently searched for.

4.2.3 Organisation and implementation of the sessions “How to study successfully in Muenster” within the “Master Orientation Day” information days for Master IS students. [DIS]

Goal(s): To provide practical information and recommendations related to studying IS at WWU to those Master IS students who did not study at WWU before and, in particular, to international IS students.

A session “How to study successfully in Muenster” was initiated in Winter Semester 2017/18 within the “Master Orientation Days” bi-annual information days for Master IS students and since then is conducted at the beginning of each semester. Materials for the session were prepared by the DIS study coordinator and revised and extended by the EQUAL-IST project leader at WWU. Some of the sessions were also supported by representatives of the IS student council. The sessions were well-attended and positive feedback was received from the participating students. It is intended to continue the sessions after the end of the EQUAL-IST project. A respective activity was included in the project sustainability plan.

4.2.4 Assignment of students to groups within (Master) IS courses in a random way. [DIS]

Goal(s): (i) To bring in contact local and international students during the group work within (Master) IS courses; (ii) to mitigate gender and culture prejudices that could exist.

A new internal guideline was developed by the EQUAL-IST project Working Group at WWU, which recommended DIS academic staff members to assign students to groups within (Master) IS courses in a random way. The guideline was approved by DIS professors and communicated to DIS academic staff members at the beginning of 2019. Anecdotal evidence showed that DIS academic staff members adopted the guideline within the IS courses in Summer Semester 2019, although no comprehensive inspection was conducted to evaluate the adoption of the guideline.

4.2.5 Investigation of opportunities for the involvement of regular international IS students into existing initiatives supporting international (exchange) students in Muenster. [DIS]

Goal(s): To explore, how regular international IS students could be (further) involved in existing initiatives supporting exchange students in Muenster.

The information about the initiatives supporting international (exchange) students in Muenster was collected and included such initiatives as “Die Brücke” International Centre at WWU (<https://www.uni-muenster.de/DieBruecke>), WWU International Office (<https://www.uni-muenster.de/InternationalOffice>), International Relations Center at SBE (<https://www.wiwi.uni-muenster.de/fakultaet/en/international/irc>), and the Erasmus Münster movement (<https://www.facebook.com/erasmus.muenster>). Furthermore, two meetings with the decision-makers at DIS and SBE responsible for internationalisation and student support took place. During the meetings, existing challenges faced by international students were discussed and the interventions to address them were defined and planned. The interventions towards inclusion and support of international students were also discussed during the workshop organised and implemented within the “Day of Teaching” annual event at WWU in 2018 (see section 4.2.1).

4.3 Objective C: To improve work-family balance of DIS academic staff members

Title / Level of Implementation	Goal(s)
4.3.1 Support in the design and implementation of the survey “Studying with Children”. [WWU]	(i) To identify and analyse the requirements of students who have children or are about to become parents; (ii) to understand their level of awareness about existing (at WWU and beyond) initiatives and opportunities for parents.
4.3.2 Implementation of the updated in 2018 version of the Maternity Protection Act. [SBE]	To support and protect students who have children or are about to become parents.
4.3.3 Workshop “Why should one want to work at the University of Muenster’s Department of Information Systems?” [DIS]	To understand, how to make DIS an attractive place to work for the best potential academic staff members, and especially for qualified and motivated women.
4.3.4 Improvement in the communication to (potential) DIS staff members of the expectations from them. [DIS]	To improve communication of the expectations from DIS staff members.

Table 3 Implemented interventions to achieve Objective C: To improve work-family balance of DIS academic staff members.

4.3.1 Support in the design and implementation of the survey “Studying with Children”. [WWU]

Goal(s): (i) To identify and analyse the requirements of students who have children or are about to become parents; (ii) to understand their level of awareness about existing (at WWU and beyond) initiatives and opportunities for parents.

The survey “Studying with Children” was targeted at all WWU students, but allowed analysis and comparison of the responses from students studying at different WWU faculties. The survey was designed and conducted by the WWU Equal Opportunities Office with the support of the EQUAL-IST project leader at WWU (in the role of the SBE

Equal Opportunities Officer), who provided feedback to the survey design (which was incorporated fully) and overtook the lead in the translation of the survey to English.

Responses to the survey were collected and analysed for all WWU students; analysis of the survey responses from SBE students and their comparison with the responses from all WWU students was included in the project sustainability plan.

The survey design was informed by the interventions supporting staff members and students who have children, which were implemented both at WWU and other universities in Germany. The survey questions were formulated in a way that they contain information about these interventions and thus raise awareness about them among WWU students.

4.3.2 Implementation of the updated in 2018 version of the Maternity Protection Act. [SBE]

Goal(s): To support and protect students who have children or are about to become parents.

The Maternity Protection Act (German: “*Mutterschutzgesetz*”, https://www.gesetze-im-internet.de/muschg_2018) is a national law, which, among the other aspects, regulates the duties of the universities in Germany towards students who have children or are about to become parents. An update in 2018 of the Maternity Protection Act has created a window of opportunity to implement the following interventions at SBE: (i) appointment of a contact person at SBE for students who have children or are about to become parents and (ii) extension of the examination regulations for all study programmes at SBE with information about the rights of students who have children or are about to become parents (e.g., the right to prolong the processing time for writing a Bachelor / Master thesis). The intervention was triggered by the WWU Equal Opportunities Office and supported by the EQUAL-IST project leader at WWU (in the role of the SBE Equal Opportunities Officer).

A contact person was appointed at SBE to support students who have children or are about to become parents, as well as to act as a connection point between SBE and the newly established at WWU Coordinating Unit “Maternity Protection Act” (German: “*Koordinierungsstelle Mutterschutzgesetz für Studentinnen*”, https://www.uni-muenster.de/imperia/md/content/service_familie/familienportal/2018_07_11_info_mutterschutz_koordinierungsstelle.pdf). Establishment of these permanent structures allows the collection of statistics of students who have children or are about to become parents. However, students have the right to not report this information, meaning that the statistics here might be not comprehensive.

4.3.3 Workshop “Why should one want to work at the University of Muenster’s Department of Information Systems?” [DIS]

Goal(s): To understand, how to make DIS an attractive place to work for the best potential academic staff members, and especially for qualified and motivated women.

The workshop was organised and conducted with 8 DIS academic staff members. At the beginning of the workshop, it was highlighted to the participants that the best potential academic staff members can come also from those groups who currently form a minority at DIS. Especially potential female applicants need to be considered, because they are the largest among the under-represented groups. Thus, the awareness of the workshop participants was raised about the importance of making DIS an inclusive place welcoming all.

The workshop contained two exercises. First, the participants were asked to brainstorm both (i) positive and (ii) negative aspects experienced while working at DIS (Brainstorming Activity 1). Second, the participants were asked to brainstorm, (i) how to communicate and promote the identified positive aspects to potential academic staff members, and especially to potential female applicants, as well as (ii) how to mitigate or eliminate the identified negative aspects in the future (Brainstorming Activity 2).

The workshop participants could identify relatively easily the positive and negative aspects related to work at DIS (Brainstorming Activity 1), as well as could propose a variety of solutions to communicate and promote the identified positive aspects (Brainstorming Activity 2). At the same time, the participants faced difficulties when asked to propose the solutions to mitigate or eliminate the identified negative aspects. Nevertheless, the ideas about the communication and promotion of the positive aspects to both *internal* and *external* potential academic staff members form a good starting point to develop a further implementation plan for the concrete activities to make DIS an attractive place to work for the best potential academic staff members.

4.3.4 Improvement in the communication to (potential) DIS staff members of the expectations from them. [DIS]

Goal(s): To improve communication of the expectations from DIS staff members.

During the internal gender audit at DIS a challenge was indicated by several DIS staff members that the expectations from them were not communicated clearly during the hiring process. The Head of DIS was notified by the EQUAL-IST project Working Group at WWU about this challenge and then communicated this information further to the other

DIS professors. The Head of DIS also adjusted the structure of interviews with potential DIS academic staff members who apply for his Chair for Information Systems and Information Management (the largest Chair at DIS). During these interviews, which take place before a potential academic staff member signs the employment contract, the Head of DIS explains to the interviewee future tasks and responsibilities (e.g., work on specific third party funded project(s), teaching, administrative obligations etc.), as well as communicates the expectations in a transparent way. It is also communicated explicitly that obtaining a doctoral degree while working at the Chair is an opportunity and generally no dedicated funding and, consequently, working time, is assigned to it. The other DIS professors are responsible for improving the communication of the tasks, responsibilities, and expectations from their academic staff members. Once the follow-up survey “Gender Equality & Diversity @SBE” is conducted next time (the survey was initiated during the internal gender audit at DIS, see section 3), it will be possible to evaluate, whether the challenge persists.

4.4 Objective D: To raise awareness about the aspects related to gender equality

Title / Level of Implementation	Goal(s)
4.4.1 Dissemination of the implemented interventions. [WWU, SBE, DIS, external]	To disseminate the implemented interventions to all target groups.
Presentation of the DIS GEP at a brown bag meeting of DIS academic staff members. [DIS]	
Presentation of the DIS GEP to DIS professors. [DIS]	
Dissemination of the implemented interventions to the EQUAL-IST project external evaluator. [DIS]	
Dissemination of the implemented interventions within the proposals for SBE national and international re-accreditations. [SBE]	
Communication of the DIS GEP to the SBE dean. [SBE]	
Communication of the DIS GEP to the SBE Equal Opportunities Commission. [SBE]	
Dissemination of the implemented interventions to WWU Decentralised Equal Opportunity Officers. [WWU]	
4.4.2 Proposal of the suggestions for improvement of existing regulations related to gender equality within the refinement of the WWU Equal Opportunity Framework document. [WWU]	To improve the existing regulations at WWU related to gender equality.
4.4.3 Support of the photo campaign at SBE for the 2018 International Day for the Elimination of Violence against Women. [WWU, SBE]	To support the International Day for the Elimination of Violence against Women.
4.4.4 Raising awareness about gender equality aspects among the members of appointment committees for tenured positions at SBE. [SBE]	(i) To ensure a fair and transparent appointment procedure at SBE; (ii) to sensitise members of appointment committees at SBE about the importance of ensuring equal treatment of all candidates and avoiding any form of bias and discrimination.
4.4.5 Incorporation of the gender equality aspects into the SBE mission statement. [SBE]	To incorporate the gender equality aspects into the SBE mission statement.
4.4.6 Awareness raising interventions at DIS by the EQUAL-IST project external evaluator. [DIS]	To raise awareness about the importance of promoting gender equality at DIS.
4.4.7 Keynote speech “Why we Need more Women in IT-Startups” within the “Startup Nights Münster” event. [external]	To raise awareness of the participants of the “Startup Nights Münster” event about the importance of promoting gender equality in IT-Startups.

Table 4 Implemented interventions to achieve Objective D: To raise awareness about the aspects related to gender equality.

All interventions implemented to achieve this Objective contributed to raising awareness about the DIS GEP implementation and the importance of promoting gender equality. Dissemination activities were targeted at DIS, SBE, and WWU staff members and students, as well as wider audience.

4.4.1 Dissemination of the implemented interventions. [WWU, SBE, DIS, external]

Goal(s): To disseminate the implemented interventions to all target groups.

The interventions specified in the DIS GEP were continuously disseminated to DIS staff members (in particular, professors) and students. Moreover, the DIS GEP was disseminated at SBE and WWU levels. Due to a large number of dissemination activities, only some of them are presented below.

Furthermore, selected sustainable interventions initiated within the EQUAL-IST project will be disseminated via the WWU Database of Gender Equality Interventions (see section 4.5.1). Respective short articles in German and English were prepared to be published there. Moreover, an article on the interventions conducted within the EQUAL-IST project at WWU was prepared and will be included in the EQUAL-IST project book (Gorbacheva, 2019).

4.4.1.1 Presentation of the DIS GEP at a brown bag meeting of DIS academic staff members. [DIS]

The DIS GEP was presented at a ‘Lunchtime Seminar’ - a brown bag meeting targeted at DIS academic staff members. Note: Lunchtime Seminars take place at DIS weekly during the semester time and are combined with a lunch break; in addition to DIS academic staff members, DIS student assistants are also allowed to attend. The audience was informed about the purpose and main ideas of the DIS GEP, as well as about the approach behind its design. The talk was attended by 42 participants. Feedback to the talk was rather controversial. On the one hand, there was some positive reception and support. On the other hand, several critical questions from the audience appeared. Further negative feedback related to the approach used for the DIS GEP design was received after the talk. Overall, indifference towards the topic could be observed.

4.4.1.2 Presentation of the DIS GEP to DIS professors. [DIS]

A meeting with a group of three DIS professors took place, which was positioned as a kick-off meeting with the primary goal to reach a joint understanding and an agreement on the challenges, which were identified during the internal gender audit at DIS. Preliminary slides for the talk and a tailored version of the DIS GEP were sent to the professors in advance. The tailored version of the DIS GEP contained only the interventions, which needed to continue to be implemented after the end of the EQUAL-IST project, meaning that further stakeholders had to overtake the work on them in the

future. For such interventions, the approval and, in the best case, also support from DIS professors was required.

The meeting was constructive and productive, and its goal was achieved. Due to a very limited meeting time (1 hour) it was not possible to discuss the planned interventions in detail; therefore, two follow-up meetings with two of the professors were scheduled and later on conducted. The meeting became a very important first step towards reaching the acceptance of the EQUAL-IST project and of the DIS GEP by the DIS professors.

4.4.1.3 Dissemination of the implemented interventions to the EQUAL-IST project external evaluator. [DIS]

The interventions implemented within the EQUAL-IST project were presented to the project external evaluator during his onsite visit at DIS. A discussion on the importance of ensuring sustainability of these interventions took place afterwards. Decision-makers at the department, faculty, and university levels also participated in this meeting and were involved in the discussion. The meeting included 13 participants, namely the EQUAL-IST project external evaluator, the WWU Vice-Rector for Strategic Personnel Development, the WWU Equal Opportunities Officer, 5 DIS professors, 4 DIS academic staff members (2 representatives of the absent DIS professors, the DIS study coordinator, and the DIS CFO), and the EQUAL-IST project leader at WWU. Preparatory individual meetings with all participants were conducted beforehand by the EQUAL-IST project leader at WWU.

The onsite visit of the project external evaluator acted as a trigger to establish or intensify contacts with the decision-makers at the department, faculty, and university levels. Their overall support of the EQUAL-IST project and the sustainability of the initiated interventions could be achieved.

4.4.1.4 Dissemination of the implemented interventions within the proposals for SBE national and international re-accreditations. [SBE]

In 2018 SBE had to submit the proposals for the national (AQAS, <https://www.aqas.de>) and international (AACSB, <https://www.aacsb.edu>) re-accreditations. The description of the interventions performed within the EQUAL-IST project was prepared and included in both proposals as part of the reporting on promotion of gender equality at SBE and WWU. Both proposals were then submitted, approved, and SBE re-accreditation was completed successfully.

4.4.1.5 Communication of the DIS GEP to the SBE dean. [SBE]

The SBE dean is the main decision-maker at the faculty level. Within the EQUAL-IST project, four meetings between the SBE dean and the EQUAL-IST project leader at WWU (in the role of the SBE Equal Opportunities Officer) took place. During the first meeting, the EQUAL-IST project and the approach towards the GEP design were presented. The second meeting was focused on the discussion of the outcomes of the internal gender audit at DIS. During the third meeting, the EQUAL-IST project leader at WWU presented the course of the DIS GEP implementation. Finally, the fourth meeting was dedicated to discussing the ways to ensure the project sustainability at the faculty level.

All meetings were aimed at raising awareness of the SBE dean and further decision-makers at the faculty level about the importance of promoting gender equality at SBE. In the course of the EQUAL-IST project an increased attention and a higher visibility of the topic of gender equality could be observed at SBE, which is as an important first step towards its legitimisation. However, overall resistance still prevails to acknowledge that there are challenges related to gender equality at SBE.

4.4.1.6 Communication of the DIS GEP to the SBE Equal Opportunities

Commission. [SBE]

Within the EQUAL-IST project, four meetings of the SBE Equal Opportunities Commission (see section 4.5.3) were organised by the EQUAL-IST project leader at WWU (in the role of the SBE Equal Opportunities Officer). The meetings included the presentation and discussion of the EQUAL-IST project and the approach towards the GEP design, the outcomes of the internal gender audit at DIS, as well as the course of the DIS GEP implementation. The last two meetings were focused on ensuring the sustainability of the interventions initiated at the SBE level. These interventions were presented to the commission and then were critically discussed, adjusted, and extended.

4.4.1.7 Dissemination of the implemented interventions to WWU Decentralised Equal Opportunity Officers. [WWU]

Meetings of WWU Decentralised Equal Opportunity Officers are organised by the WWU Equal Opportunities Office twice a year and have the following objectives: (i) to raise awareness of the participants about the interventions to promote gender equality, which are conducted at WWU and its faculties and (ii) to exchange experience and ask questions. During one of such meetings, the course of the DIS GEP implementation and selected interventions included in the DIS GEP were presented to the participants by the EQUAL-

IST project leader at WWU (in the role of the SBE Equal Opportunities Officer). After the presentation, the participants could ask questions and a discussion was initiated. The presentation slides and the meeting minutes reflecting on the subsequent discussion were shared with the participants after the meeting. 19 WWU staff members participated in the meeting, including 16 WWU Decentralised Equal Opportunity Officers and 3 representatives of the WWU Equal Opportunities Office. The meeting triggered discussions and experience exchange about the EQUAL-IST project with WWU Decentralised Equal Opportunity Officers and enhanced further collaboration with the WWU Equal Opportunities Office.

4.4.2 Proposal of the suggestions for improvement of existing regulations related to gender equality within the refinement of the WWU Equal Opportunity Framework document. [WWU]

Goal(s): To improve the existing regulations at WWU related to gender equality.

WWU regulations related to gender equality are summarised in the WWU Equal Opportunity Framework document (German: “*Gleichstellungsrahmenplan der Westfälischen Wilhelms-Universität Münster*”, <https://www.uni-muenster.de/Gleichstellung/Gleichstellungsrahmenplan.html>). Due to amendments in the North Rhine-Westphalian Equal Opportunities Act (German: *Landesgleichstellungsgesetz NRW*, https://recht.nrw.de/lmi/owa/br_text_anzeigen?v_id=220071121100436242), the document had to be updated as well. The appointment of the EQUAL-IST project leader at WWU as (i) the SBE Equal Opportunities Officer and (ii) a member of the WWU Equal Opportunities Commission (see section 4.5.2) provided an opportunity to become involved in this process and to communicate the suggestions for improvement of the existing at WWU regulations related to gender equality.

These suggestions were developed based on the outcomes of the internal gender audit at DIS and were discussed and approved by the EQUAL-IST project Working Group at WWU and the WWU Advisor for Equal Opportunity Affairs. The suggestions, together with other comments to the draft version of the WWU Equal Opportunity Framework document, were communicated to the dedicated working group formed to rework this document, the WWU Equal Opportunities Commission, as well as to the WWU Equal Opportunities Office, the Head of DIS, and the SBE dean. Each suggestion was backed up with the collected data. Although the implementation of some of these suggestions was not feasible, it was important that they were considered during the rework of the WWU Equal Opportunity Framework document and could be communicated further to the state and country levels. The suggestions were incorporated partially into this

document and partially into the EQUAL-IST project sustainability plan. The document was approved by the WWU Senate in December 2018 and disseminated to WWU staff members.

4.4.3 Support of the photo campaign at SBE for the 2018 International Day for the Elimination of Violence against Women. [WWU, SBE]

Goal(s): To support the International Day for the Elimination of Violence against Women.

For several years WWU has been participating in the initiative “*We break the silence!*” within the International Day for the Elimination of Violence against Women held annually on November 25th. In 2018 the EQUAL-IST project leader at WWU (in the role of the SBE Equal Opportunities Officer) supported the photo campaign at SBE, where she and several SBE students and staff members participated. Based on the contribution from all the faculties at WWU, a photo collage was created and published by the WWU Equal Opportunities Office (available at <https://www.uni-muenster.de/Gleichstellung/aktuelles/archiv/2018/wir-brechen-das-schweigen.html>).

Fewer people at SBE than expected participated in the photo campaign. Nevertheless, the intervention could be completed successfully.

4.4.4 Raising awareness about gender equality aspects among the members of appointment committees for tenured positions at SBE. [SBE]

Goal(s): (i) To ensure a fair and transparent appointment procedure at SBE; (ii) to sensitise members of appointment committees at SBE about the importance of ensuring equal treatment of all candidates and avoiding any form of bias and discrimination.

Since 2017 each time a new appointment committee for tenured positions at SBE is formed, emails informing about unconscious bias and existing regulations related to gender equality in recruitment are sent to the members of these appointment committees by the SBE Equal Opportunities Officer. The intervention was supported by the WWU Equal Opportunities Office; no objections towards further intervention implementation were expressed neither by the SBE dean nor by the members of the SBE Equal Opportunities Commission.

The intervention was completed in four appointment committees in 2017-2019. In three of them, one at DIS and two at other departments at SBE, female applicants were on the first place, meaning that they received the offer to fill the position. This is an outstanding

result, as at the beginning of the EQUAL-IST project women formed only 12% of full professors at SBE; at DIS there was only one woman out of six full professors.

4.4.5 Incorporation of the gender equality aspects into the SBE mission statement. [SBE]

Goal(s): To incorporate the gender equality aspects into the SBE mission statement.

Within the AACSB Business School Accreditation at SBE, the SBE mission statement had to be reworked. This opportunity was used by the EQUAL-IST project Working Group at WWU to propose to incorporate the gender equality aspects into the SBE mission statement. As a result, current draft version of the mission statement contains the following values: “*We regard humanness, **freedom from discrimination, equality and diversity**, mutual respect, collegiality, individual and common responsibility and accountability, and professionalism as values, which are crucial for the pursuit of our goals*”. The SBE mission statement went through a complex discussion and approval process and should be published soon. It is intended to monitor that the proposed values stay in the final version of the SBE mission statement. A respective activity was included in the project sustainability plan.

4.4.6 Awareness raising interventions at DIS by the EQUAL-IST project external evaluator. [DIS]

Goal(s): To raise awareness about the importance of promoting gender equality at DIS.

During the onsite visit at DIS by the EQUAL-IST project external evaluator, several awareness raising interventions were carried out. First, a meeting with decision-makers at the department, faculty, and university levels was conducted. There, the Head of DIS presented the interventions implemented within the EQUAL-IST project (see section 4.4.1.3), which was followed by a discussion initiated by the EQUAL-IST project external evaluator about the importance of ensuring the sustainability of these interventions. This meeting acted as a trigger to establish or intensify contacts with the participating decision-makers who expressed overall support of the EQUAL-IST project and the initiated interventions. The meeting included 13 participants.

Second, a ‘Coffee and Cake’ seminar was conducted for DIS academic staff members, where the EQUAL-IST project external evaluator held a talk on “*Institutional Change for Gender Equality in Research and Higher Education Institutions*”. This seminar was aimed at raising awareness of the participants about the importance of promoting gender equality at research institutions. The participants also learned about the need in an

institutional change for achieving gender balance and how one could contribute to it at an individual level. Several participants showed scepticism at the beginning of the seminar, which was discussed and resolved in the course of the seminar. The participants were active in sharing their opinions and the seminar turned into an interactive discussion. The seminar lasted longer than planned, which indicated overall interest of the participants and the seminar success. The seminar was attended by 17 participants.

Thus, the onsite visit at DIS by the EQUAL-IST project external evaluator enhanced legitimisation of the topic of gender equality among DIS decision-makers and academic staff members and positively contributed to the sustainability of the interventions initiated during the project.

4.4.7 Keynote speech “Why we Need more Women in IT-Startups” within the “Startup Nights Münster” event. [external]

Goal(s): To raise awareness of the participants of the “Startup Nights Münster” event about the importance of promoting gender equality in IT-Startups.

“Startup Nights Münster” events are organised by Digital Hub münsterLAND (<https://www.digitalhub.ms/>) and are aimed at networking and providing a discussion platform for startup companies from Muenster and the Muenster region. “*Women in IT-Startups*” (<https://www.meetup.com/de-DE/DigitalHubMs/events/253808458/>) was selected as a theme for one of the “Startup Nights Münster” events, and the EQUAL-IST project leader at WWU was invited to give a keynote speech. The conducted keynote speech “*Why we Need more Women in IT-Startups*” had the following objectives: (i) to understand, why we need more women in (IT) startups; (ii) to understand, why women are under-represented in (IT) startups; and (iii) to understand, what could be possible ways to change the status quo.

The event was very well attended: 160 participants registered to it online and further participants attended to it without prior registration. Only favourable feedback to the keynote speech was received. However, directly after the keynote speech there were no questions from the audience. This issue was then discussed with the event organisers who assumed that people in the audience, mostly men, might have never encountered the topic of gender equality before and were not ready to discuss the sensitive issues related to the under-representation of women in startups, which were raised in the keynote speech.

4.5 Further implemented interventions

Title / Level of Implementation	Goal(s)
4.5.1 Development of the WWU Database of Gender Equality Interventions. [WWU]	(i) To structure and store online the information about the WWU interventions promoting gender equality in a secure way; (ii) to provide an overview of these interventions and to disseminate them; (iii) to continuously revise, update, and extend information about these interventions.
4.5.2 Appointment of the EQUAL-IST project leader at WWU as (i) the SBE Equal Opportunities Officer and (ii) a member of the WWU Equal Opportunities Commission. [WWU, SBE]	(i) To increase visibility of the EQUAL-IST project and the initiated interventions; (ii) to build alliances for further collaboration.
4.5.3 Formation of a new Equal Opportunities Commission at SBE. [SBE]	To assemble a new Equal Opportunities Commission at SBE with active and motivated members.

Table 5 Further implemented interventions.

4.5.1 Development of the WWU Database of Gender Equality Interventions. [WWU]

Goal(s): (i) To structure and store online the information about the WWU interventions promoting gender equality in a secure way; (ii) to provide an overview of these interventions and to disseminate them; (iii) to continuously revise, update, and extend information about these interventions.

Results of the internal gender audit at DIS revealed a lack of awareness about the goals and content of existing interventions promoting gender equality at WWU. This has led to a distorted and often negative attitude (of both men and women) towards such interventions. One of the underlying reasons for the inefficient communication and promotion of these interventions was that information about them was not stored in a structured way (although it was collected systematically by the WWU Equal Opportunities Office).

In order to address this challenge, it was decided to develop a database containing information about existing interventions promoting gender equality in study, research, teaching, and career development, which are implemented at WWU and at each of its faculties. The ERCIS Managing Director, who is also one of the members of both the EQUAL-IST project Working Group at WWU and the newly formed Equal Opportunities Commission at SBE (see section 4.5.3), overtook the lead in the implementation of this intervention. The intervention included a ‘consulting phase’ and a ‘software development phase’. During the consulting phase, a conceptual solution for structuring information about the WWU interventions was developed and then discussed and approved by the WWU Equal Opportunities Office. During the software development phase, this conceptual solution was implemented using the Drupal content management system (<https://www.drupal.org>). As a result, the WWU Database of Gender Equality

Interventions (German: “*Gleichstellungs-ONLINE-Datenbank der WWU Münster*”, GL.ON.DA, <https://glonda.uni-muenster.de>) was launched at the end of 2018.

The intervention resulted in a stronger impact than it was foreseen during its initial discussion. The developed online platform has fundamentally changed and improved the formerly rather chaotic processes for collection, storage, revision, update, extension, and dissemination (both internally and externally) of information about the WWU interventions. These processes were revised, simplified, and automated. The platform target audience was extended in the course of its development and currently includes not only internal staff members and students, but also such external bodies as Research Funding Organisations (RFOs), the government etc.

There was no dedicated funding for the platform development, which slowed down the intervention progress. Nevertheless, due to intrinsic motivation of the involved stakeholders to improve the existing processes, the platform was launched successfully and adopted by the WWU Equal Opportunities Office. The intervention sustainability was ensured due to apparent advantages of the new processes over the previous ones. Furthermore, the WWU Equal Opportunities Office and the DIS System Administration (both are permanent structures at WWU) overtook the lead in further content and technical support of the platform. The platform was indicated as an important tool in the *WWU Equal Opportunities Future Concept* document and further internal and external reports. In the future, it will be possible to evaluate the adoption of the platform by both its target audience and its potential contributors, namely WWU decentralised Equal Opportunities Officers.

4.5.2 Appointment of the EQUAL-IST project leader at WWU as (i) the SBE Equal Opportunities Officer and (ii) a member of the WWU Equal Opportunities Commission. [WWU, SBE]

Goal(s): (i) To increase visibility of the EQUAL-IST project and the initiated interventions; (ii) to build alliances for further collaboration.

The EQUAL-IST project leader at WWU was offered and agreed to overtake the following roles in the university-level structures for promoting equal opportunities: (i) the SBE Equal Opportunities Officer and (ii) a member of the WWU Equal Opportunities Commission. These appointments, although they resulted in an additional workload not related to the EQUAL-IST project, enabled the implementation of the majority of interventions and had a significant contribution to the overall project success at WWU.

4.5.3 Formation of a new Equal Opportunities Commission at SBE. [SBE]

Goal(s): To assemble a new Equal Opportunities Commission at SBE with active and motivated members.

The SBE Equal Opportunities Commission is the main equal opportunities machinery at SBE. In order to facilitate the sustainability of the interventions initiated within the EQUAL-IST, a new SBE Equal Opportunities Commission was formed in autumn 2018. For the first time SBE staff members and students actively volunteered to become commission members. The previous commission, on the contrary, consisted of the members who were assigned to it by the SBE dean (mainly to fulfil a legal obligation from the state and university regulations to establish such a commission at each WWU faculty). Potential commission members were invited to join the commission by the EQUAL-IST project leader at WWU (in the role of the SBE Equal Opportunities Officer) and those who expressed interest were then elected at a meeting of the SBE Council. When forming the commission, the gender balance among its members was ensured. The commission has 15 members, including the SBE Equal Opportunities Officer and two deputies, as well as regular and deputy members from the groups of SBE professors, staff members, and students.

The main challenge revealed during the first meeting of the new SBE Equal Opportunities Commission was the opposing opinions of different commission members about what the promotion of gender equality at SBE should entail. The first group of commission members agreed to focus on the promotion of women as the under-represented group among decision-makers at SBE. The second group argued that gender equality had to comprise interventions supporting both men and women. The third group promoted the idea to consider interventions towards gender equality as part of the overall diversity strategy at SBE. Finally, one of the commission members was critical towards the overall topic of gender equality and argued that more evidence showing that bias indeed existed at SBE had to be collected before initiating any interventions promoting gender equality. Each commission member had an opportunity to express their viewpoint on the topic, which was then discussed by all members.

As a first step towards resolving this challenge, it was agreed by the commission members to focus on the areas of agreement rather than areas of difference and to achieve a consensus in defining the interventions to be included in the EQUAL-IST project sustainability plan for SBE (SBE sustainability plan, see chapter 5).

5 Project Sustainability and Concluding Remarks

The interventions towards higher gender equality, diversity, and work-family balance, which were initiated within the EQUAL-IST project, need to be sustainable to make a difference. According to the work done by Athena Swan (<http://www.ecu.ac.uk/equality-charters/athena-swain>), the results of successful interventions become visible only after at least five years since the start of their implementation. In order to develop the EQUAL-IST project sustainability plan, the initiated interventions were analysed and those, which needed or had potential to continue to be implemented beyond the project runtime, were identified and discussed by the EQUAL-IST project leader at WWU with the EQUAL-IST project Working Group at WWU. The selected interventions were then classified as those (i) relevant only for DIS and (ii) relevant for SBE (which includes DIS). These interventions formed the basis for the sustainability plans at the department level (DIS sustainability plan) and the faculty level (SBE sustainability plan). Both sustainability plans are discussed in this chapter. While the DIS sustainability plan has been finalised, approved by DIS professors, and published on the DIS website facing no significant resistance, the design of the SBE sustainability plan is still in progress. Both documents will need to be disseminated, implemented, as well as later on regularly evaluated and refined. It is important to ensure that the stakeholders involved in the implementation of the sustainability plans remain active and motivated.

5.1 DIS sustainability plan

At the department level, a new document entitled “*Plan for Recruitment, Retention, and Advancement of Talented Women, Internationals, and Parents for the Department of Information Systems*” was designed as the DIS sustainability plan for the period 2019-2022. The goals of the DIS sustainability plan were to ensure sustainability of the interventions initiated within the EQUAL-IST project and to improve the processes for personnel recruitment, retention, and advancement at DIS.

Once the activities to be included in the DIS sustainability plan were selected, the main stakeholders foreseen to be involved in their implementation were contacted and their commitment was ensured. These stakeholders included the DIS study coordinator, the IS student council, and selected DIS staff members. A draft version of the DIS sustainability plan was then presented by the EQUAL-IST project leader at WWU to DIS professors during one of their regular meetings. The DIS professors were asked to provide feedback to the presented activities, as well as to propose further activities to be included in the document. All feedback was incorporated into the final version of the DIS sustainability plan, which was approved by the DIS professors in July 2019 and published on the DIS

website. The document is available at <https://www.wi.uni-muenster.de/career/diversity-and-inclusion>.

The activities included in the DIS sustainability plan were aimed at achieving the following objectives, which match the objectives of the interventions implemented within the EQUAL-IST project presented earlier (Objective A - Objective C, see chapter 4):

1. To increase the share of women among Bachelor IS students.
2. To enhance inclusion of international IS students.
3. To improve work-family balance of DIS academic staff members.

17 activities were included in the DIS sustainability plan: eight activities to achieve the first objective, four activities to achieve the second objective, and three activities to achieve the third objective; moreover, two further activities were proposed, which dealt with (i) raising awareness of the topics related to gender equality among IS students and (ii) evaluating the implementation progress and success of all activities. For each activity, the following information was presented: goal(s) and main idea, implementation frequency, and the stakeholders responsible for leading the activity management and implementation ('activity leads' hereafter). Activity leads are responsible for further development of the detailed action plan for each activity, including the definition of the activity target indicators, timeline, resources required, and further relevant aspects. Commitment of most activity leads has been achieved. The DIS sustainability plan is foreseen as a living document, which will be discussed and monitored continuously and reissued every four years.

5.2 SBE sustainability plan

At the faculty level, an existing document entitled "*Gender Equality Plan for the University of Münster's School of Business and Economics*" (German: "*Gleichstellungsplan der Wirtschaftswissenschaftlichen Fakultät*") is currently reworked and updated as the SBE sustainability plan for the period 2019-2023. Establishment of this policy-planning document is prescribed by the state and university regulations and is obligatory for all faculties at WWU.

Once the activities to be included in the document were selected, they were presented by the EQUAL-IST project leader at WWU (in the role of the SBE Equal Opportunities Officer) to the SBE Equal Opportunities Commission during a dedicated workshop. The commission members agreed that it was important to ensure that the interventions initiated within the EQUAL-IST project were continuously implemented and widely

disseminated in the future. They also proposed further activities to be included in the SBE sustainability plan. All ideas were collected into a shared document, where the commission members then had an opportunity to express their opinions. Further ideas for the activities to be included in the SBE sustainability plan were proposed by the SBE dean during one of the meetings with the EQUAL-IST project leader at WWU. These ideas were incorporated into the shared document as well. The document was then transformed into a draft version of the SBE sustainability plan, which was shared with the SBE Equal Opportunities Commission, the SBE Dean, and the new SBE Equal Opportunities Officer who overtook this role from the EQUAL-IST project leader at WWU. It is crucial that the new SBE Equal Opportunities Officer and the SBE Equal Opportunities Commission members finalise and receive approval of this document, as well as monitor and support its implementation. Commitment of the following stakeholders foreseen to be involved in the implementation of the SBE sustainability plan has already been achieved: the SBE Equal Opportunities Commission, the SBE student council, and selected SBE staff members.

The proposed draft SBE sustainability plan had the following target fields, which were in line with the objectives of the WWU Equal Opportunity Framework document (see section 4.4.2):

- A. Monitoring of the intervention course and outcomes.
- B. Promotion of equal opportunities for (potential) students.
- C. Promotion of equal opportunities in personnel recruitment, retention, and advancement.
- D. Raising awareness about the importance of promoting gender equality.
- E. Gender-sensitive communication.
- F. Prevention of sexual and gender-based violence.
- G. Non-discriminatory committees and meeting times.

23 activities were proposed in these target fields: three activities in the target field A, four activities in the target field B, one activity in the target field C, nine activities in the target field D, and two activities in each of the target fields E, F, and G.

It is noteworthy that only one activity was proposed to address target field C: “Promotion of equal opportunities in personnel recruitment, retention, and advancement”. This activity was focused on the provision of informational and advisory support to staff

members and especially to staff members with children. No further activities at SBE were included here due to a high number of related interventions at the university level. It was decided to first disseminate and promote existing interventions, rather than to initiate further faculty-specific interventions.

Two activities were included in both the DIS sustainability plan and the SBE sustainability plan: the first one was aimed at the application of a gender-sensitive approach when revising existing or establishing new materials (including teaching materials), and the other one was aimed at regular evaluation of the implementation course and outcomes.

In addition to preparing the draft SBE sustainability plan, the EQUAL-IST project leader at WWU developed a document summarising the envisioned tasks and responsibilities of future SBE Equal Opportunities Officers and estimated annual workload for each task. This document was presented to the SBE dean, arguing that the current situation, where the position of the SBE Equal Opportunities Officer does not receive any dedicated funding, needs to be changed, and additional support, resources, and opportunities need to be provided to SBE Equal Opportunities Officers. As a result, the following structural changes related to the position of the SBE Equal Opportunities Officer took place. First, a tenured female professor at SBE overtook the role of the SBE Equal Opportunities Officer from the EQUAL-IST project leader at WWU. Earlier this role was assigned to SBE staff members who had fixed-term contracts, which hindered the continuity and sustainability of the conducted work. Furthermore, one of the tenured SBE staff members was assigned to support the new SBE Equal Opportunities Officer on an operative basis. Thus, sustainability of the gender equality work at SBE could be ensured.

Finally, it needs to be mentioned that further interventions aimed at enhancing gender equality, diversity, and work-family balance are continuously implemented at the WWU level, independently or with only minor support from the EQUAL-IST project. The WWU Equal Opportunities Office is primarily involved in leading the implementation of these interventions and ensuring their sustainability.

To conclude, the EQUAL-IST project resulted in an increased attention and a higher visibility of the topic of gender equality not only at the department, but also at the faculty and university levels. Enhanced legitimisation of the topic and raised awareness about the importance of promoting gender equality at DIS and SBE positively contributed to the sustainability of the interventions initiated within the project. The project sustainability plan was designed at both the department and faculty levels and it is intended to evaluate

regularly the implementation progress and success, as well as to refine both sustainability plans.

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