Community Mapping Report:
Cooperation, Barriers and Progress in Advancing Gender Equality in Research Organisations

Deliverable 1.2

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OBJECTIVES OF THE DELIVERABLE

This deliverable presents the results of the ACT community survey and subsequent analysis. The survey was conducted in order to gain knowledge on existing practices regarding gender equality in Research Performing and Research Funding Organisations, their networks as well as needs and support. Moreover, it aimed at identifying potential members of Communities of Practice (CoPs).

A Social Network Analysis (SNA) shows existing cooperation clusters and identifies central actors in the European landscape of research organisations. It also indicates regions that are so far disconnected from the European network and which are interested in becoming part of a CoP.

The reported barriers and consequent needs of survey respondents further provide important information for the ACT consortium to develop suitable support and helpful tools to promote and strengthen existing and future collaborations.

CONSORTIUM

The ACT consortium consists of 17 partners: Fundació per a la Universitat Oberta de Catalunya (project coordinator, Spain), Portia (UK), NOTUS (Spain), Joanneum Research Forschungsgesellschaft MBH (Austria), Advance HE (formerly Equality Challenge Unit) (UK), Loughborough University (UK), Facultad Latinoamericana de Ciencias Sociales (Costa Rica[1]), Technische Universität Berlin (Germany), Karolinska Institutet (Sweden), Science Foundation Ireland (Ireland), Umweltbundesamt (Germany), Stiftung Deutsches Elektronen-Synchroton (Germany), Centre National de la Recherche Scientifique (France), Fundació Centre de Regulació Genòmica (Spain), Uniwersytet Jagiellonski (Poland), Znanstvenoraziskovalni Center Slovenske Akademije Znanosti in Umetnosti - ZRC SAZU (Slovenia), and Haskoli Islands (Iceland).

TERMS OF USE

This document has been developed within ACT, a Coordination and Support Action project funded by the European Union's Horizon 2020 research and innovation programme.

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[1] The action will be carried out in the department of UNESCO Regional Chair on Women, Science and Technology in Latin America FLACSO, located in Buenos Aires, Argentina.

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KEYWORDS

Community mapping, Gender Equality, Organisational Change, Gender in research and teaching, Social Network Analysis, Communities of Practice

ACRONYMS

ACRONYM	MEANING
CoP	Community of Practice
DOI	Digital Object Identifier
EC	European Commission
EIGE	European Institute for Gender Equality
EU	European Union
GE	Gender Equality
GEP	Gender Equality Plan
HEI	Higher Education Institution
R	The R Project for Statistical Computing
R&D	Research and Development
R&I	Research and Innovation
RFO	Research Funding Organisation
RPO	Research Performing Organisation
SNA	Social Network Analysis
SPSS	Statistical Package for Social Science
WP	Work package

EXECUTIVE SUMMARY

The ACT community mapping survey was conducted in order to gain knowledge on existing practices regarding gender equality in Research Performing and Research Funding Organisations, their networks as well as needs and support. Moreover, it aimed at identifying potential members of Communities of Practice.

The survey mainly reached Higher Education Institutions, but also other research institutions, in almost all EU28 countries, which was the regional focus of the study. Half of the respondents are researchers, one third have a leading position and nearly one third hold a position like equal opportunities officer – all these three groups overlap. The interest in ACT turned out to be very high: More than half of the respondents want to become members of a Community of Practice.

Asking about the status of gender equality activities in their organisations, Gender Equality Plans (GEP) proved to be a frequent tool in research organisations: Two thirds plan to have or already have a GEP. In organisations without a GEP, a GEP is seen as needed. Interestingly a higher share of research institutes has a GEP in place compared to Higher Education Institutions – but universities catch up and show a stronger initiative for GEP development.

The regional differences in the existence of GEPs in research institutions are particularly strong: Only 10% of respondents from Eastern and South-Eastern European countries report having a GEP in their organisation, in all other regions of Europe the share lies between 60-74%. So, the potential for GEP development in Eastern/South-Eastern Europe is particularly high.

The most popular measures in organisations with or without a GEP include activities to identify inequalities and introduce some institutional solutions to the problem like collecting sex/gender disaggregated data, awareness raising measures and setting up a gender equality office, diversity office or gender equality committee. Interestingly, all these measures – but also equal pay measures – are considered by respondents to be very effective. This suggests that equal pay measures, while not being very popular, should be considered for inclusion in GEPs. Other measures that have been mentioned most frequently address the reconciliation of work and private life and the recruitment and promotion of women which were also evaluated as rather effective at least. The integration of a gender dimension in research and teaching is reported less frequently and is also expected to have a smaller effect on gender equality. The most popular activity in this field is the collection of sex-/gender-disaggregated data within research projects followed by the inclusion of sex/gender issues in teaching curricula.

Most respondents see progress in relation to gender equality at their organisations. Especially when a GEP is in place, progress in advancing gender equality is achieved. But organisations are also facing barriers when trying to implement gender equality measures: The most often reported ones referred to the lack of personnel, time or financial resources. Only few respondents have to deal with active resistance from organisation management or employees/staff members. So, it turns out that securing the resources and engaging those who are affected by these solutions are the main challenges, fear of potential opposition may be exaggerated. Moreover, clear responsibilities within the organisations are necessary. But also 45% of respondents see a need to participate in gender equality networks/projects or Communities of Practice and half of the respondents lack gender knowledge – especially external support in the form of trainings, counselling and lectures is required (apart from national and international grants).

Regarding current networks and collaborations of participants the following results can be reported: The respondents who answered questions about their cooperation networks regarding gender

equality altogether named 247 partners they are cooperating with. The analysis shows that organisations cooperate more often regarding organisational change than for integrating a gender dimension in research and teaching. In total a network of 466 nodes (357 distinct organisations) could be analysed, which showed one big and several smaller clusters of cooperation. The big cluster spreads out over the EU28, the smaller ones are geographically focused. The entire network of 357 organisations covers almost the whole EU28 and beyond and shows the highest number of organisations in Spain, UK, Germany, Austria and Poland (what might be biased by comprehensive network-connections of ACT partners). Some South-Eastern and Nordic European countries have scarcely been reached – maybe because there are only a few organisations concerned with the implementation of gender equality, or they have no network connections to the actors depicted. European countries outside the EU28 who are disconnected to the analysed network are Bosnia and Herzegovina, Montenegro, Albania and Macedonia.

The big cluster identified in the partner network is held together by five higher education organisations. Universities in general play an important role in the survey because they are the biggest group of respondents and they indicated a comparatively high number of cooperation partners. This suggests that this type of organisation is particularly well connected and active in cooperation regarding gender equality.

Interestingly, the more central (well-connected) actors in the network not necessarily have a GEP in place. While it is true that organisations which did not cooperate at all to promote GE in the last three years are also very unlikely to have a GEP, the opposite holds only to some extent. In fact, the analysis identified clusters, in which most organisations are without a GEP. In the big cluster – connecting various organisations – the answers are mixed. This leads to the conclusion that having a GEP plays a minor role in defining the position in the network.

60 respondents also indicated that they are currently or have been part of an EU-funded structural change project. Many of the well-connected organisations of the partner network are also part of one or several EU-funded projects. In the network analysis, a group of respondents could therefore be identified that have not had any gender equality cooperation partners in the last three years and did not participate in any EU-funded structural change project but expressed their interest to become part of an ACT Community of Practice. A majority of these organisations are located in Poland, followed by the UK, Spain and Portugal.

Organisations involved in EU-funded structural change projects form a big community of organisations (the consortia are not isolated from each other). Compared to the named partner network, the overall country distribution shifts: Now also Bosnia and Herzegovina, Estonia, Liechtenstein, Morocco and Ukraine are represented. The network analysis shows that the considered EU-funded structural change projects are able to connect organisations all over Europe. The network also stretches out to Morocco, Turkey and Israel.

The community in the network of project partners is held together by some key actors, which participate in multiple projects and form a very active cluster. Most of the organisations in this cluster are public Higher Education Institutions or publicly funded research institutions and this cluster is also very international within the EU28 including Switzerland and Iceland.

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1. INTRODUCTION

Advancing gender equality is one of the institutional goals of many research organisations in Europe and beyond. The European Union decries the waste of talent of women scientists by supporting activities directed at institutional change, through funding projects such as ACT. The aim of ACT, i.e. "Communities of Practice for Accelerating Gender Equality and Institutional Change in Research and Innovation across Europe",[2] is to support Research Performing (RPOs) and Research Funding Organisations (RFOs) in their gender equality actions. This aim will be achieved through creating and supporting Communities of Practice (CoPs) – collaborating groups of practitioners, academics and experts – that work to advance gender equality at the organisational level and to enhance the integration of a gender dimension in research and teaching.

This report presents the results of the community mapping survey conducted as part of the ACT project.[3] The survey was directed at gathering knowledge on existing practices regarding gender equality in RPOs and RFOs, their networks of collaboration partners as well as their needs and support they already get. This knowledge can then be used in order to plan effective and successful activities directed at the ACT Communities of Practice. The conducted online-survey followed three main objectives, corresponding to the three main chapters of this report:

1. To get information about the status quo of gender equality implementation activities in Research Performing and Research Funding Organisations (chapter 4);

2. To map actors – practitioners and experts – who are currently involved in advancing gender equality in their organisation/department and their network of collaboration partners (chapter 5);

3. To identify the expertise and support that these actors would need to overcome barriers faced by the organisation so that ACT can develop suitable support and helpful tools to promote and strengthen existing and future collaborations (chapter 6).

Additionally, the survey aimed at identifying respondents or organisations interested in the ACT project and future collaborations, including the participation in the ACT Communities of Practice.

To present the analysed findings, this report is structured as follows: Chapter 2 provides an overview of the applied methodology, starting with the dissemination of the survey to the different methods and programs which were used in the analysis. Chapter 3 then shows some of the main sample characteristics and mentions also some of the shortcomings. In chapter 4, existing organisational policies and activities in relation to gender equality at the organisational level as well as the integration of a gender dimension in research and teaching are described. Chapter 5 focuses on collaboration patterns in relation to gender equality by means of a Social Network Analysis (SNA). Chapter 6 elaborates on the kind of support that respondents would need to improve their implementation efforts regarding gender equality and which internal and external barriers currently hinder change. In the end, chapter 7 summarizes first recommendations for ACT.

[2] For more information on the project and its progress visit https://www.act-on-gender.eu/project.
[3] The questionnaire can be found at https://zenodo.org/record/2553070#.XKXoVk2P670.

2. METHODOLOGY

The ACT community survey was carried out online between the 27th of November 2018 and the 15th of February 2019 and addressed Research Performing Organisations (RPOs) as well as Research Funding Organisations (RFOs). The online-tool used to implement the survey was SoSci Survey[4], hosted at a secure server at JOANNEUM RESEARCH.

Invitations to the online survey were first sent out to the contacts of each ACT consortium partner and then took the form of snowball-sampling. Hence, the initial contacts were invited to participate in the survey via email and were then asked to forward the invitations to their contacts and so on. Moreover, the consortium leaders of the structural change projects funded in FP7 and Horizon 2020 were contacted to spread the survey in their consortia. Additionally, the Directorate General for Research and Innovation from the European Commission sent the survey to all delegates of the ERAC Standing Working Group on Gender in R&I encouraging distribution. Some of the ACT partners made further efforts to contact organisations and networks in their countries. Due to this sampling strategy, some countries are represented more than others, which need to be taken into account when interpreting the results.[5]

The online survey consisted of three sections: The first was a general section (section I), focusing on basic information about the organisation/department and the respondent. It also gave respondents the opportunity to voluntarily provide their contact information and express their interest in receiving the ACT newsletter, invitations to ACT events and/or to participate in ACT by becoming part of a Community of Practice as well as being listed as a contact person on the ACT website. Section II asked the respondents about the presence of a Gender Equality Plan (GEP) in their organisation/department. Depending on their answer the respondents were then questioned either about their GEP and additional measures in the organisation (and their effectiveness) or – if no GEP is implemented yet – about the status of GEP development as well as other potential gender equality measures that are in use. Furthermore, information on cooperation activities regarding gender equality was collected in this section. The final part of the survey (section III) then focused on barriers, support received so far and what is needed in order to improve gender equality in the organisation.

Respondents could choose between filling out the survey for the entire organisation or an individual department or institute. Hence, multiple responses from the same organisation are possible, e.g. from those representing diverse departments or leaders describing their gender equality efforts at the institutional level. While respondents could provide their personal data for being contacted and invited to ACT project activities, all contact information (including the name of organisation) was separated from the main dataset before the analysis to form a list of contacts together with the respondents' preferences for being included in the ACT project.[6]

The data analysis was divided between the Jagiellonian University in Krakow and JOANNEUM RESEARCH. Jagiellonian University in Krakow focused their analysis on the status quo of gender equality (GE) among responding organisations, as well as their needs and support (chapter 4 and 6) mainly using the software SPSS. This part of the data analysis was conducted using the entire sample of anonymous survey responses, highlighting the subjective experiences of respondents within their

[4] See https://www.soscisurvey.de/en/index.
[5] See Annex for the exact country distribution. The overall representativity of the sample will be discussed in chapter 3.
[6] For details on the data cleaning process please refer to the Appendix.

institutions, including their perception of the effectiveness of Gender Equality Plans, barriers to implementation of change or opinions about needed support.

JOANNEUM RESEARCH hosted the online-survey, carried out the data cleaning process and an overall description of the data (chapter 3). Furthermore, JOANNEUM RESEARCH analysed the data with respect to cooperation patterns and conducted a Social Network Analysis (SNA) in the software environment of R Studio[7] (chapter 5). The presented SNA results focus on describing two separate (but connected) networks, which are based on the same sample of survey respondents but are distinguished by the partners that are added. In the online-survey, respondents could list up to 5 main cooperation partners regarding gender equality. The main partner network is based on these listed partners. The second network that is considered is that of project partners: Respondents of the online-survey were also asked to indicate, which EU-funded structural change projects they participated in. Based on respondents' project selection, the respective consortium partners were added as partners to this network.[8] Separating the two networks helps to keep the visualisations clearer in order to see individual ties and clusters but also allows for a comparison.

[7] See https://www.rstudio.com/.

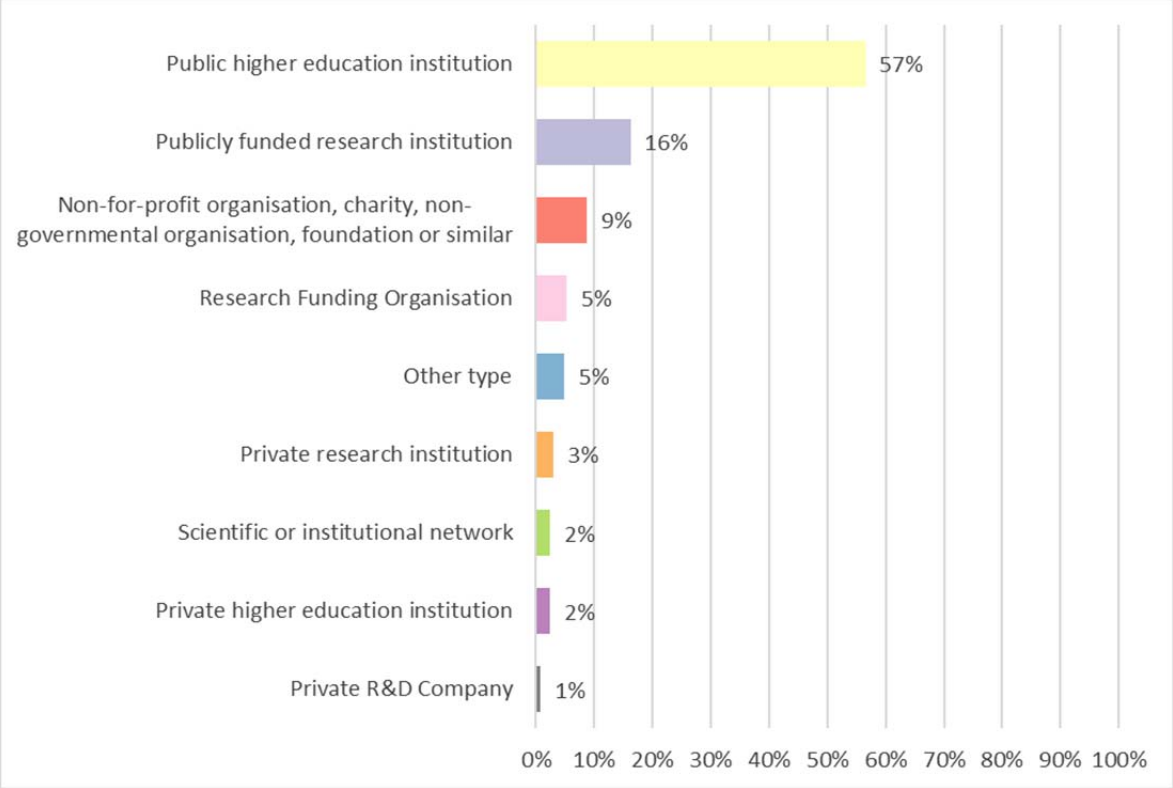
[8] A list of consortium partners was made manually (internet research). Please refer to **Table 3** in the Appendix for a list of included projects and the total number of selections.

3. SAMPLE CHARACTERISTICS

The main sample consists of 265 survey responses. Among these, 221 completed the entire online-survey, others dropped out at different points. As there are cases in which multiple surveys were returned from the same organisation (e.g. multiple departments from one university), the sample covers information on 192 distinct organisations.

Out of all 265 respondents, 228 specified their gender.[9] The vast majority of survey respondents are female (88%), 11% are male and 1% are gender diverse. Concerning the types of organisations that respondents are affiliated with, public Higher Education Institutions make up the largest share with 57% (see **Figure 1**). Another 16% of survey responses stem from publicly funded research institutions and 9% from NGOs or similar types of organisation. The remaining respondents are affiliated with Research Funding Organisations (5%), private research institutions (3%) scientific or institutional networks or private Higher Education Institutions (each 2%). Two surveys were returned from private R&D companies (1%).

Figure 1: *Survey responses by type of organisation (n = 265)*



Source: ACT Community Mapping Survey (2019)

The survey gathered information on two levels – institutional level and level of department. Overall, 132 survey respondents answered for the whole organisation, 133 answered on behalf of an individual department/institute. Note that those who participated in the study were not official/legal representatives of an institution, but self-appointed "representatives" – giving personal opinions about their organisations' functioning. Hence, respondents answered based on their knowledge and understanding of the respective processes in their organisation, which may be incomplete in some cases. The high share of respondents answering at the departmental level is closely connected to the

[9] Note that gender was only surveyed as part of the contact data, i.e. only respondents interested in participating in ACT received this question.

high participation of public Higher Education Institutions where departments often function almost independently and have their own regulations, including Gender Equality Plans.

The great majority of responding institutions are located in the EU28 (91%).[10] Altogether, surveys were returned from 36 different countries (see **Table 2** in the Appendix). These were recoded into five regions, leaving a country distribution as presented in **Table 1**.

Table 1: Number and share of responses by region (n = 265)

REGION	TOTAL	SHARE
Western/North-Western Europe	99	37%
Eastern/South-Eastern Europe	82	31%
Southern Europe	56	21%
Nordic countries	19	7%
Non-European countries	9	3%

It is important to note that the distribution between countries is not representative because respondents coming from the countries which are represented by the ACT consortium dominate in the sample. Furthermore, it must be emphasised that the overall sample is only a very small subset of the European landscape of RPOs and RFOs. As a point of reference, the European Tertiary Education Register (ETER) can be used: Covering the extended European Union[11] in the year 2015, this database lists 2,991 Higher Education Institutions alone[12] and the ACT survey covers only 151 of them. However, the survey addressed a very specific group in the European Research Area, namely those research institutions interested in gender equality. Whether this survey is representative for this specific group cannot be assessed. Considering these shortcomings, the analysis does not generalise findings on the country level but instead focuses on regions as shown in **Table 1**. Furthermore, the Social Network Analysis and geographical mapping merely describe the underlying sample and regional distributions are interpreted with caution.

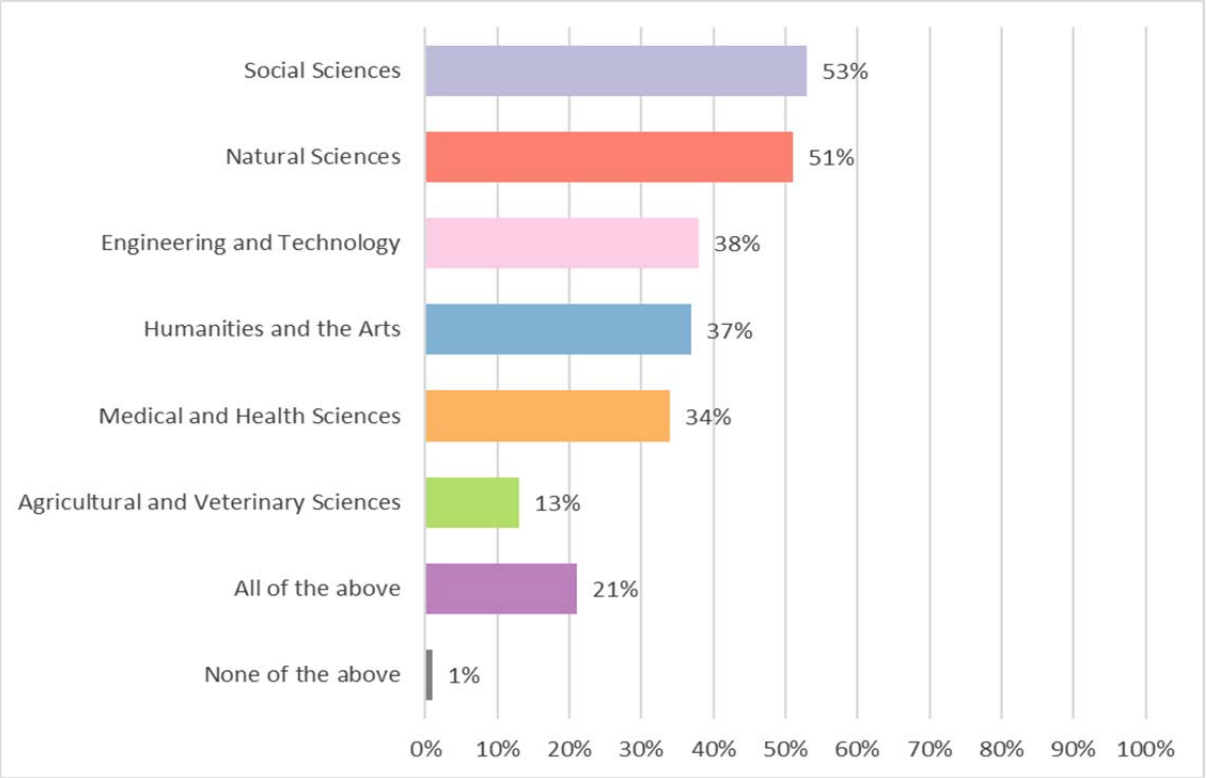
The respondents in the study come from institutions covering multiple scientific fields. This applies typically to universities, which are the biggest group in the sample. 21% of survey respondents even said that their institution conducts or funds research and/or educational activities in all of the listed scientific areas (see **Figure 2**). Overall, the highest share of respondents works in organisations who cover the field of Social Sciences (53%) and/or Natural Sciences (51%). Engineering and Technology is a working field of 38% of respondents' organisations, followed by Medical and Health Sciences. Two NGOs or similar types of organisations and one publicly funded research institution selected "none of the above".

[10] Representatives from merely four member states were not reached by the survey despite the efforts of the consortium members (Malta, Luxembourg, Estonia and Finland). The latter two will be included in the Social Network Analysis, because survey participants named partner organisations from these countries.

[11] Including the EU28 countries plus Iceland, Liechtenstein, Macedonia, Montenegro, Norway, Serbia, Switzerland and Turkey

[12] Number taken from the ETER website search engine, selecting 2015 data (see https://www.eter-project.com/#/search)

Figure 2: *Respondents' institutions by scientific field (n = 264)**

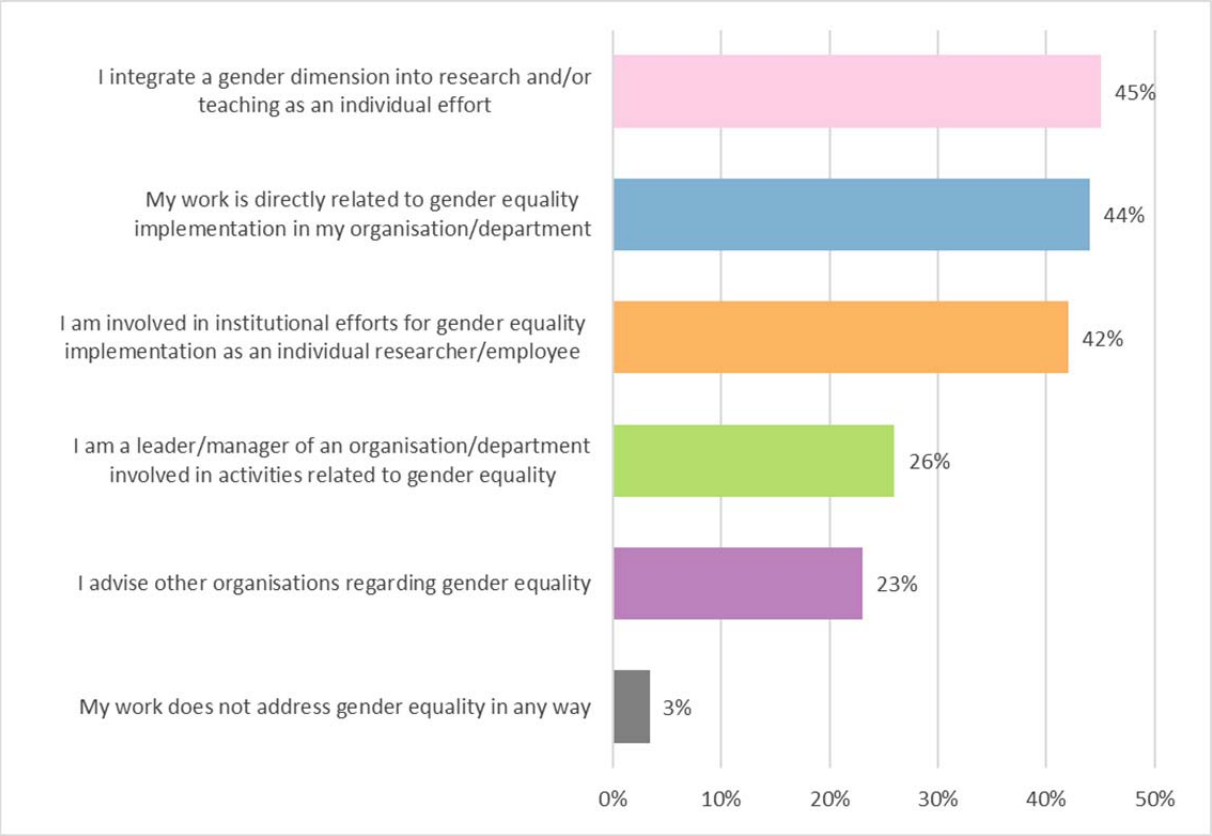


*Source: ACT Community Mapping Survey (2019) * Multiple selections possible.*

Respondents often indicated several roles that they hold in the institution, whereas the most common profile of respondents is that of a researcher/academic teacher or scientific personnel (49%). Nevertheless, there was also quite a high response from the management of organisations: 34% of respondents hold leadership positions. Respondents in leadership positions often indicated that they carry out additional activities within their organisation, such as research or working within the equal opportunity office. Another critical group for the GE measures implementation are Women's representative/Equal Opportunities Officer/Diversity Officer or similar: 29% of respondents hold such a position.

The survey was answered by those who are typically directly involved in gender equality issues (see **Figure 3**). Altogether, 45% of respondents claim that they address gender equality issues by integrating a gender dimension in research and/or teaching as an individual effort. This is related to the high participation of researchers in the study and will relate to low institutionalised engagement on this matter (see chapter 4). Concerning institutional level activities, 44% of respondents hold a position that is directly related to gender equality implementation in the organisation/department. This includes the position of HR Manager, Equal Opportunities Officer, or minority representative. 42% are involved in institutional efforts for gender equality implementation in their role as researcher and/or teacher, while 26% address GE in their role as organisation/department leader. Furthermore, there is quite a significant share of expert-respondents: 23% of respondents are active in advising other organisations regarding gender equality. This data indicates that among the respondents there are those who are personally interested in engaging with gender equality related efforts, as well as those who directly contribute to organisational change (as leaders but also as researchers).

Figure 3: *Respondents' involvement in work activities related to gender equality (n = 265)**



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible.*

As mentioned previously, one of the aims of the study was to gather contacts from institutions willing to engage in Communities of Practice or other ACT initiatives. In fact, among the survey respondents, the interest in ACT was very high. Altogether, 242 respondents provided their contact information in order to get updates on the project or to be involved in it. 85% of these contacts said they would like to receive regular information about the project through the newsletter, 71% are interested in participating in ACT events (including conferences and workshops). Most importantly, 150 respondents said that they would like to become part of one of the ACT Communities of Practice. This indicates that the study participants were primarily those directly interested in the ACT project and willing to participate in efforts for structural change concerning gender equality in research organisations.

4. STATUS OF GENDER EQUALITY IMPLEMENTATION IN THE ORGANISATIONS

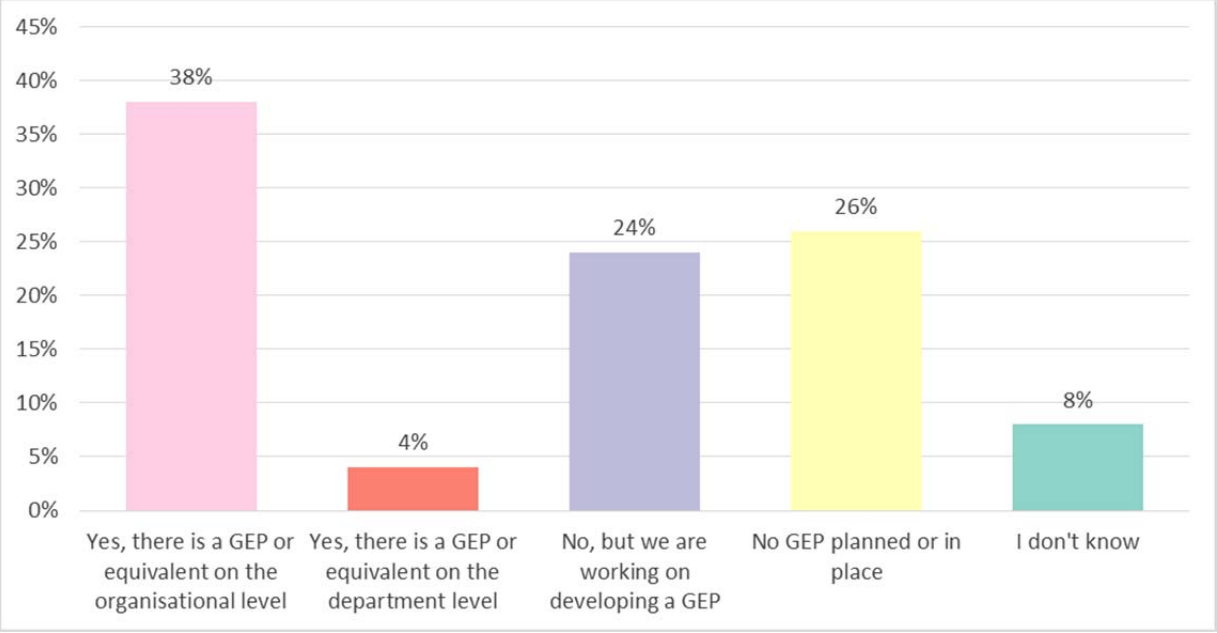
The main aim of ACT is to support Research Performing Organisations as well as Research Funding Organisations with their institutional change processes, particularly in the implementation of Gender Equality Plans. Therefore, this chapter of the report looks into the situation concerning the existence of Gender Equality Plans or other gender equality measures in organisations that are potentially interested in joining one of the Communities of Practice. This information will enable a better planning of the project activities in relation to providing support for organisations' developing gender equality policies.

4.1 Existence of Gender Equality Plans in research organisations

Gender Equality Plans as a frequent tool in research organisations

Gender Equality Plans (GEP) are a common tool within gender equality policy in research organisations – the latest EU report *She Figures* 2018 (EC, 2019) indicates that in 56% of EU Research Performing Organisations such a tool exists. Among the study respondents, less than half of them come from organisations/institutions where a GEP or equivalent document exists: in 38% of the organisations, it is the case on the organisational level and in 4% on the departmental level (see **Figure 4**). In case of 24% of respondents, while the GEP does not exist, respondents are aware of institutional efforts for developing a GEP. 26% of respondents declare that in their institutions or departments no GEP is planned or in place and 8% of them do not have such knowledge.

Figure 4: *Existence of Gender Equality Plans or equivalent (n = 260)*



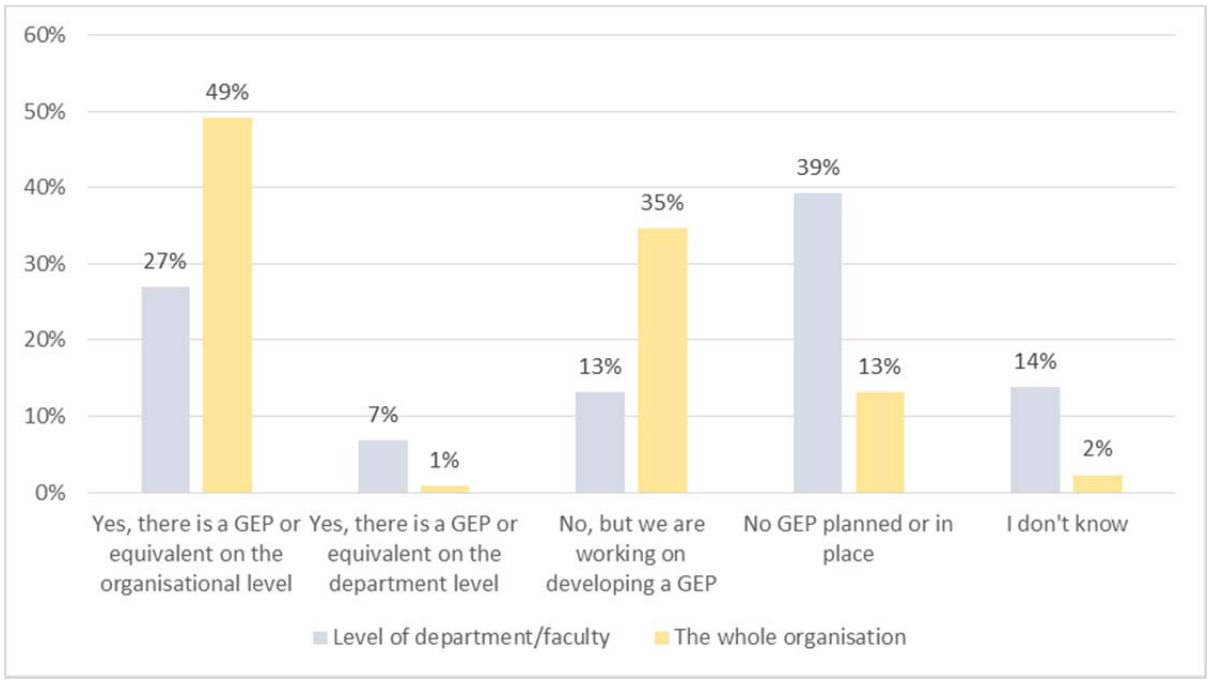
Source: ACT Community Mapping Survey (2019)

Gender Equality Plans prevail at organisational level

Gender Equality Plans are reported much more often at the organisational level, confirming that the trend is to implement such instruments for the whole organisation or institution, rather than for separate units or departments. The positive answer about GEP implementation is more common among those who represent whole institutions– 49% of them confirm GEP existence, while only 28% of those who answer at a departmental level confirm having a GEP in their organisation, and 7% - at

the level of their department (see **Figure 5**). Those respondents who answer at the departmental level do not know if a GEP actually exists more often, compared to those who represent the whole organisation suggesting issues related to knowledge transfer. This result indicates two important groups who participated in the survey: First, those who are active representatives of institutions with GEPs; Second, the survey was quite popular also among those who at the departmental level are actually more often not aware of such solutions, or work in institutions were such solutions do not exist. We may on this basis suggest that potentially researchers – concerned with gender equality matters or policy – constitute a good channel to reach institutions without GEPs.

Figure 5: *Existence of Gender Equality Plans or equivalent by answer level (n = 230)*

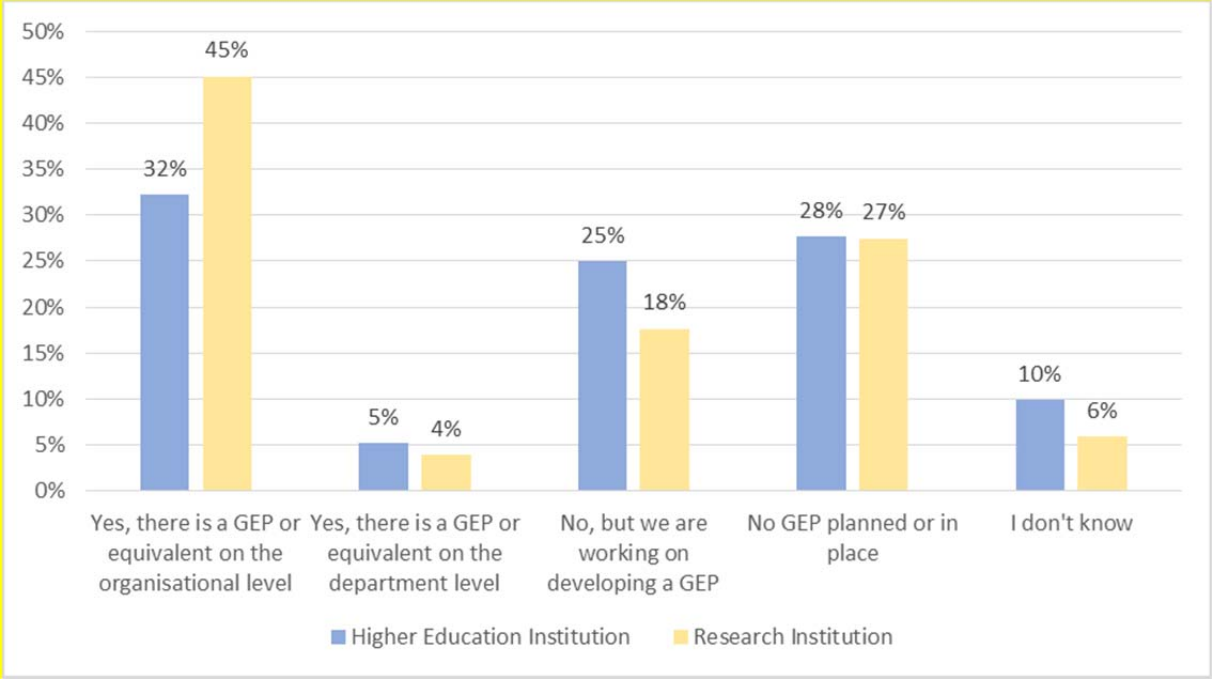


Source: ACT Community Mapping Survey (2019)

Stronger initiative of Higher Education Institutions for GEP development

If we consider two types of organisations that participated most willingly in the study, Higher Education Institutions and research institutions (both of public or private standing), the respondents of research institutions indicate having experiences of GEP implementation a bit more often (see **Figure 6**). Nevertheless, those from Higher Education Institutions in comparison to research institutions are more likely to be in the process of developing a GEP – showing more initiative in this sector. About ¼ of respondents from both types of institutions declare the lack of a GEP.

Figure 6: *Existence of Gender Equality Plans or equivalent by type of organisation (n = 203)**

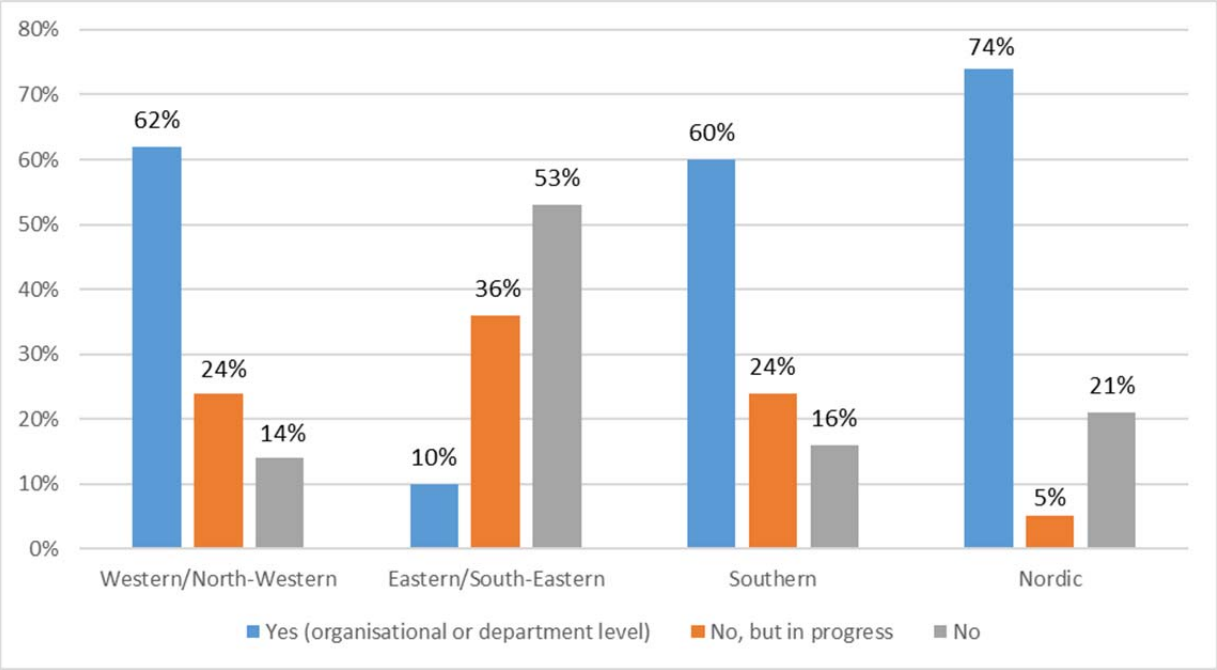


*Source: ACT Community Mapping Survey (2019) * Excluding other forms of organisations that participated in the study*

Potential for GEP development in Eastern and South-Eastern Europe

The study confirms that the existence of Gender Equality Plans differs between European geographical regions. Considering experiences of respondents, the data indicates that having a GEP is least common in Eastern/South-Eastern European countries (see **Figure 7**) – where only 10% of respondents declare having a GEP in their organisation or department and in 53% of cases, there is neither a GEP nor plan to develop one. In the cases of Western/North-Western Europe, Southern Europe and the Nordic countries, the presence of a GEP is much more often declared – they exist in more than 60% of institutions. Interestingly, the data indicates that a good share of respondents of the ACT survey come from institutions which are in the process of developing a GEP, indicating a strong interest in the development of gender equality policies in the region. In the case of the Nordic countries, which have the highest percentage of institutions described as having a GEP, the number of institutions currently developing a GEP is low, indicating potential stagnation in policy developments.

Figure 7: *Existence of Gender Equality Plans or equivalent by geographical region (n = 230)**



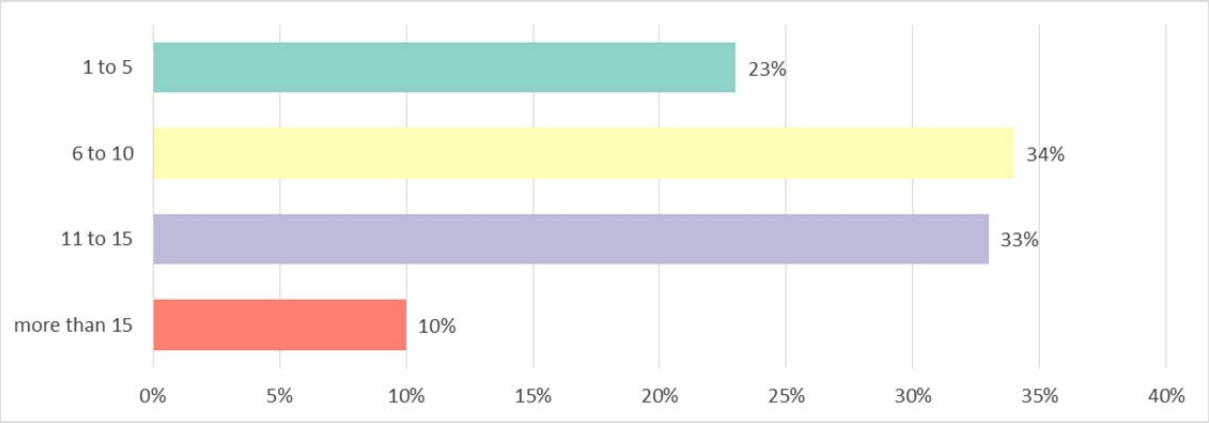
*Source: ACT Community Mapping Survey (2019) * Single selection, excluding those who replied "I do not know" and non-European countries due to low response*

4.2 Gender Equality Plans content - measures to foster organisational change in relation to gender equality

Multiplicity of measures within Gender Equality Plans

The Gender Equality Plans, as described by respondents coming from organisations with a GEP or in the process of its development, are usually rather ambitious – proposing several measures and tackling diverse issues in relation to gender equality. In fact, GEPs – as described by the respondents – have been planned as rather or very rich, tackling diverse issues. On average, there are nine measures reported, but the quantity of measures varies strongly (see **Figure 8**).

Figure 8: *Number of measures included in Gender Equality Plans or equivalent (n = 77)*[13]



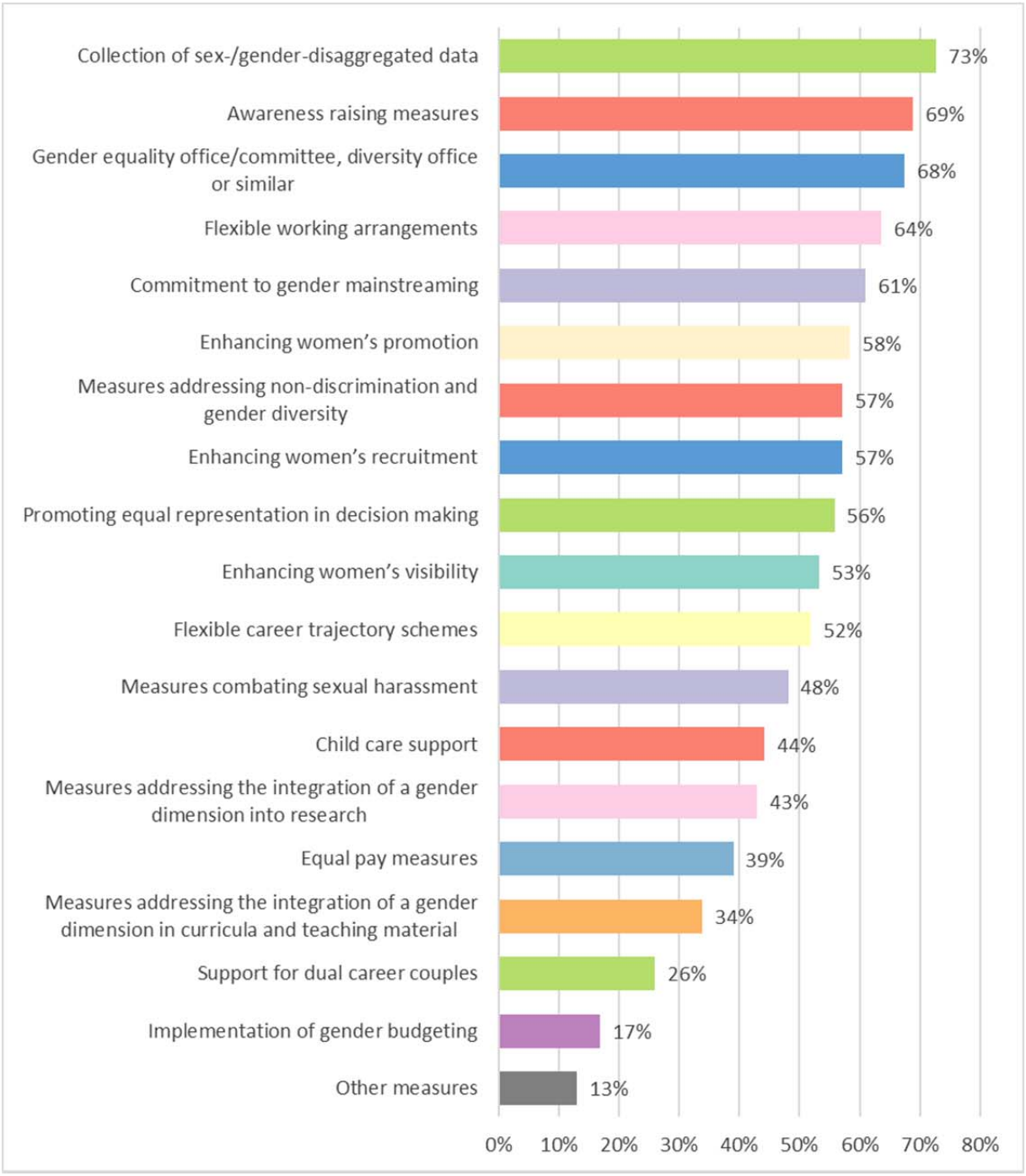
Source: ACT Community Mapping Survey (2019)

The most popular measures include **activities which aim to identify inequalities and introduce some institutional solution to address the problem**. Most often selected measures are (see **Figure 9**): Collection of sex/gender disaggregated data (73%), awareness raising measures (69%) and setting up of a gender equality office, diversity office or gender equality committee (68%). The most popular measure is also the most common one to introduce by those who are in the process of GEP development. To conduct a diagnosis of the situation in relation to gender equality in the organisation is often a starting point for institutional efforts towards gender equality. The second most popular measure enters into the pool of so called "soft measures" – by indirectly steering change and not binding the institution to actual structural interventions. The third measure relates to the creation of structures – and while the existence of such structures is important constituting a clear signal of organisational engagement, their financing, reach and positioning are important factors that further contributes to impact. It is important to add here that having an office, a committee or a person responsible for gender equality issues (or in a wider sense gender diversity issues) appears as rather common in the institutions whose employees/representatives replied to the survey call. Among the respondents, 31% of them hold a position such as Women's representative/Equal Opportunities Officer/Diversity Officer or similar. The second group of measures, relatively present in GEPs, are aimed at fostering **institutional commitments towards tackling inequalities**: Commitment to gender mainstreaming (61%), measures addressing non-discrimination and gender diversity (57%) and those combatting sexual harassment (56%). These measures whilst being slightly less frequent have more of a binding character to the institution, and potentially could have a direct impact on the organisation regulations and functioning.

These are followed by potentially more specific **measures directed at supporting women's careers, including recruitment, promotion and work conditions, and their representation in decision-making**, including such measures as flexible working arrangements, enhancing women's promotion, recruitment or visibility (reported by more than 50% of respondents), as well as those which aim to promote **equal representation in decision-making** (56%).

[13] This question was posed to those who declared having a GEP or its development. The low response rate for this questions resulted also from the survey design, which included in one questions two requests to respondents – to choose measures within GEPs and to evaluate the measures. While, 109 of respondents reported having a GEP in their institution and 62 developing one, only 77 chose at least one measure that was a part of the GEP. At the same time, a bit higher number of them evaluated the measures, without marking it in the survey as existing within a GEP (the numbers differ depending on the measure evaluated).

Figure 9: *Popularity of measures included in Gender Equality Plans or equivalent (n = 77)**



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible. N based on number of respondents that selected at least one item*

Another important group of measures constitutes those directed at the **reconciliation of work and family,** including flexible working arrangements (64%) or child care support (44%). These measures have a direct impact on the organisation of working time, and those directed at caring may demand substantial financial investments. Measures addressing the **integration of gender dimension into research (43%)** and in curricula and teaching material (34%) are relatively less popular, but it seems that these measures are also gaining presence in Gender Equality Plans.

The least popular solution is the **implementation of gender budgeting (17%)** – preceded by interventions directed at dual career couples (26%) and those directed at reducing the gender pay gap (39%). Those solutions, directly linked to more substantial financial contributions, may have heavier weight for institutions and be less willingly implemented, compared to those actions demanding smaller financial investments.

4.3 Activities in relation to integration of a sex/gender dimension in research and education

When asked about the implementation of activities concerning the inclusion of a gender dimension in research and teaching, respondents most commonly report one or two activities in their organisations concerning this topic. Respondents could select all activities that were implemented in at least one case (i.e. activities do not necessarily have to apply for all conducted projects, courses etc.), which differentiates them from more sustainable efforts in relation to Gender Equality Plans. 18% of them indicate the existence of at least one activity, 15% recalling two such activities, 25% - between three to five activities, and others six or more. Finally, 31% respondents declared lack of such activities in their department or organisation.

The most popular activity (see **Figure 10**) is **the collection of sex-/gender-disaggregated data within research projects:** 57% of institutions (considering those who selected at least one activity) conduct this task, which is aimed at identifying the status quo of gender equality in the organisation. Again, similarly to measures included in the Gender Equality Plans, the diagnosis remains the most popular and basic activity.

It is also rather common that respondents indicate the presence of **activities directed at the inclusion of sex/gender issues in teaching curricula (44%), as well as the integration of a sex/gender dimension in research programmes and policies (39%)**. Similarly, popular is the presence of training(s) for research staff regarding methods for implementing gender as a research dimension (34%).

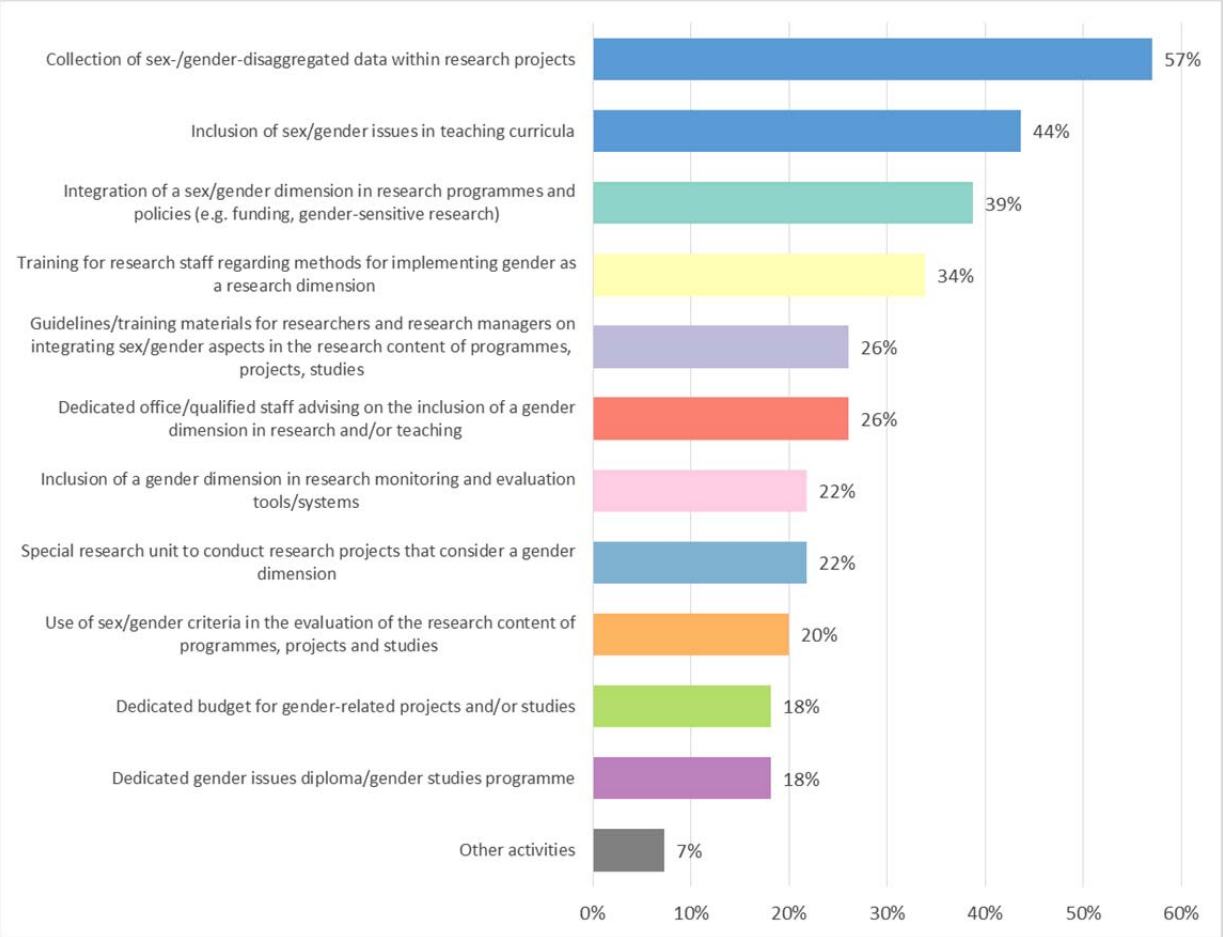
It is nevertheless important to note that respondents report additional **institutionalised activities or measures** which potentially could have a greater general impact at the level of the whole organisation or department (see the following):

- Having a dedicated office/qualified staff advising on the inclusion of a gender dimension in research and/or teaching (26%);
- Guidelines and/or training materials for researchers and research managers on integrating sex/gender aspects in the research content of programmes, projects and/or studies (26%);
- A special research unit to conduct research projects that consider a gender dimension (22%).

Another set of activities is directed at including a **gender dimension in evaluation procedures** – such as research monitoring and evaluation tools/systems (22%), as well as using the specific sex/gender criteria in the evaluation of the research content of programmes, projects and studies (20%).

The least popular are **dedicated studies on gender issues (18%)**, as well having **a dedicated budget for gender-related projects (18%)** – similarly to other measures linked to gender equality on the organisational level, those which demand substantial financial investments are not so frequently implemented.

Figure 10: *Popularity of activities directed at including a gender dimension in research and teaching (n = 165)**



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible. N based on number of respondents that selected at least one item*

4.4 Evaluation of gender equality measures effectiveness

Collection of sex/gender disaggregated data and gender equality structures with highest scores

Respondents were asked to evaluate the effectiveness of the respective measures concerning gender equality within their institution or department (**Figure 11**). The highest evaluations (above 3 points on average) receive such measures as flexible working arrangements, with a score of 3.3 (on the scale 1 to 4) as well as the collection of sex/gender disaggregated data and gender equality structures (office, committee or similar), with a score of 3.2. Awareness raising measures also obtain relatively high evaluation scores (just below 3 points). Interestingly, as shown in the section before, all these measures – besides equal pay measures - are also the most popular ones within Gender Equality Plans. This suggest that equal pay measures while not being very popular should be considered for inclusion in GEPs as they are evaluated relatively high for their effectiveness.

The measures related to diverse ways to support women's career and their advancement are on average evaluated between 2.6 and 2.9 out of 4 – showing they are relatively effective. Measures that receive the lowest rating are those related to the integration of a gender dimension into research and in curricula and teaching material; support for dual career couples; and implementation of gender budgeting (between 2 and 2.5). These are as well the measures which

prove the least popular in the context of Gender Equality Plans. This shows that the measures that are more frequent, i.e. used more widely, are considered more effective. Hence, also because of that fact they gain positive attention and become part of subsequent GEPs. On the other hand, less popular measures also are evaluated as least effective, but this may relate to the fact that there is less experience with their implementation. It is important to note that the activities directed at the integration of a gender dimension in research and teaching are more novel than the measures directed at organisational change in relation to gender equality, which may affect their popularity and design – therefore, further development in time may raise their effectiveness and popularity.

Figure 11: *Evaluation of effectiveness of measures in relation to gender equality*

	N	Mean	Standard deviation
Flexible working arrangements	102	3.22	0.83
Collection of sex-/gender-disaggregated data	104	3.18	0.79
Gender equality office, diversity office, gender equality committee or similar	101	3.15	0.75
Equal pay measures	72	3.03	0.90
Awareness raising measures	98	2.91	0.89
Enhancing women's visibility	90	2.90	0.92
Promoting equal representation in decision making	93	2.89	0.83
Child care support	86	2.88	1.02
Measures addressing non-discrimination and gender diversity	86	2.87	0.90
Flexible career trajectory schemes	79	2.85	0.92
Commitment to gender mainstreaming	96	2.83	0.78
Measures combating sexual harassment	79	2.75	0.90
Enhancing women's promotion	91	2.69	0.92
Enhancing women's recruitment	103	2.68	0.98
Measures addressing the integration of a gender dimension into research	80	2.50	0.99
Measures addressing the integration of a gender dimension in curricula and teaching material	64	2.34	1.03
Support for dual career couples	56	2.18	0.96
Implementation of gender budgeting	52	2.02	0.92

Source: ACT Community Mapping Survey (2019)

4.5 Measures implemented in organisations without a GEP

GEP or nothing – GEP seen as an effective tool for sustainability of measures

Gender Equality Plans are believed to be an effective solution for introducing particular measures into institutions/organisations. Respondents from organisations that do not have a GEP or equivalent, nor are planning to have one, as well as respondents that do not know about GEP existence, were asked about the existence of measures to address gender equality. Among them (n = 87), 28% of respondents indicate the existence of any such measures in their organisations. 13% of them report developing such measures. 38% declare not having such measures nor planning their development. What is more, quite a lot of respondents do not know if such solutions exist (22%).

Among the institutions without GEPs, the most popular measures are the following:

- Flexible working arrangements (7 indications)
- Measures addressing non-discrimination and gender diversity (6 indications)
- Enhancing women's recruitment (6 indications)
- Gender equality office, diversity office, gender equality committee or similar (5 indications)
- Collection of sex-/gender-disaggregated data (5 indications)

This selection mirrors the list of preferred elements of Gender Equality Plans.

GEP is seen as needed, even if some measures exist

The representatives of organisations which do not have a GEP or do not know of its existence (n = 81), in most cases articulate the need for such a solution: **73% of them see the need for introducing a Gender Equality Plan, compared to 27% who do not see such a need.**

The need of having a GEP is most often expressed by those who do not have any measures tackling gender inequality (81% of them want a GEP) and those in the process of such developments (91%), but also those who have some measures still believe that a GEP would be a useful tool for their organisations (60%). Among those who do not have knowledge on gender equality measures in their organisation, there is still high interest in developing a GEP (61%).

In the survey, those respondents who expressed, the need (or not) to have a GEP were asked to explain their position. The qualitative analysis of open questions suggests that introducing a GEP is supported by respondents from institutions/organisations where gender equality is well addressed at their institution but also by those who believe that there is space to improve due to persisting gender inequalities at their institutions.

> *"There is noticeable imbalance between male and female scientific positions and possibilities, also on management level, documented histories with mobbing and sexual harassment".*
>
> *"Only 4 women out of 22 professors should be reason enough."*
>
> *"There is evidence of significant gender imbalances in several dimensions of activity in the department, not only in what concerns career opportunities for the staff but also in what concerns models of interaction and models of teaching".*

Introducing complex and coherent regulations, such as GEPs, is seen as enabling the institution to address insufficient interest issues and limited knowledge about gender equality in research, especially at the management level, but also to establish goals, long-term strategies and mechanisms monitoring their achievement. The answers to open questions suggest that GEPs are perceived as a means to reduce the identified gender inequalities in research and teaching:

"GEP is needed in order to address different gendered issues such as sexual harassment, work life balance measures for both students and professors, to support women in leadership positions, to create a more inclusive working environment etc."

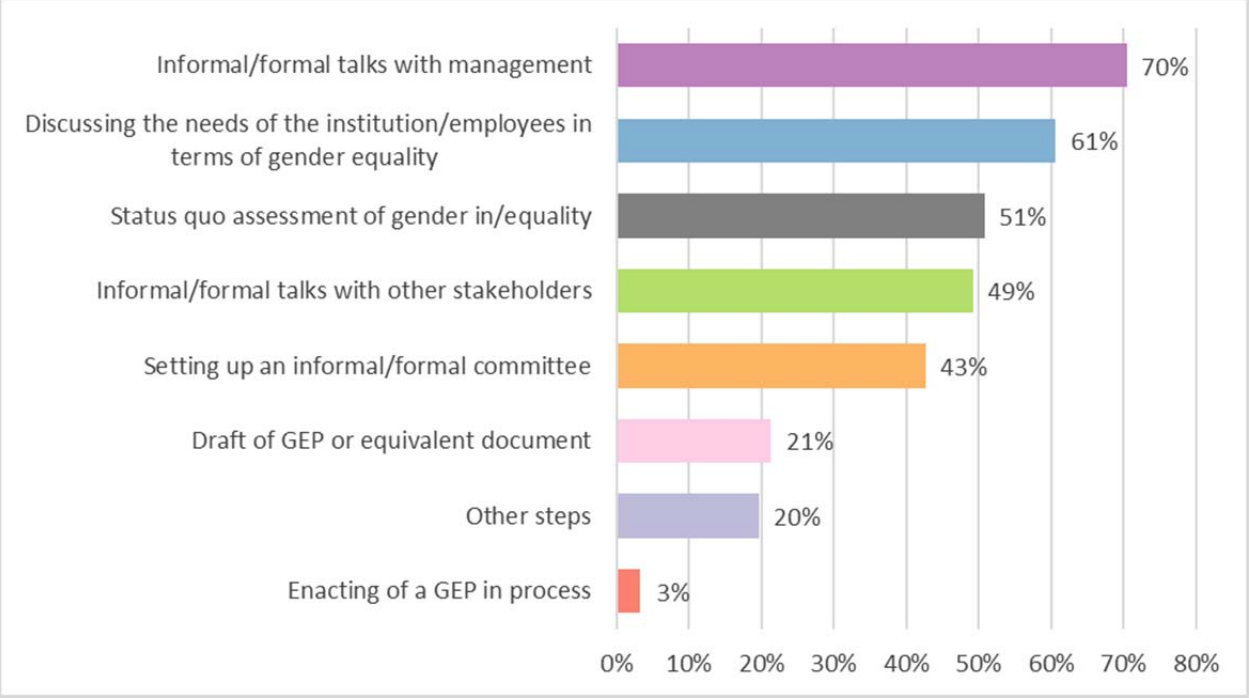
Analysis of the answers by those who do not see the need for introducing a GEP shows that GEPs are not considered as an important tool. These respondents either do not recognize/see gender inequalities (*"I think there is gender balance regarding positions and power"*), or work in institutions/organisations with a relatively equal number of women and men and a management sensitive to GE issues. On the other end, there is a voice of disbelief that gender equality would be considered an important problem: *"I think that nobody will take it seriously"*.

4.6 Activities of organisations currently developing a GEP

First steps to GEP enactment: informal lobbying and analysis of status quo

Quite a substantial share of institutions' representatives in the study, are currently in the process of developing a GEP – they constituted 24% of the studied sample. It is important to say that those institutions' representatives indicated mostly informal activities that would lead to GEP implementation (see **Figure 12**) – such as informal talks with management or other stakeholders, or discussing the needs of the institution/employees in terms of gender equality. Still, in half of the institutions a status quo assessment of gender in/equality was conducted. The institutions most "advanced in the process" are drafting a GEP or already enacting a GEP.

Figure 12: *Steps undertaken in development Gender Equality Plans or equivalent (n = 61)**



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible. N based on number of respondents that selected at least one item*

5. COOPERATION AND NETWORKS

The ACT project builds on and aims to expand the existing cooperation between research institutions within Europe and beyond to promote gender equality efforts. This cooperation will constitute a basis for creating and supporting the various ACT Communities of Practice. The mapping of these institutions' existing cooperation networks is presented in this chapter.

For this purpose, the online-survey asked respondents about their main cooperation partners regarding gender equality (max. 5) and their participation in projects for structural change funded by the EU in FP7 and H2020[14]. These two networks are presented separately in this report because they differ in their form of cooperation and, moreover, a joint network would not allow a clear visual analysis due to the abundance of data. The first part of this chapter will focus particularly on the named partners (partner network) whereas section 5.2 describes the network of project partners from EU-funded projects for structural change (project partner network)[15]. The chapter will discuss diverse characteristics of these networks, ways of cooperation, its intensity and perceived benefits.

5.1 Main external cooperation partners (Partner network)

The partner network contains a large cooperation cluster

The analysed partner network consists of 466 nodes (**Figure 13**). One node represents one responding organisation or department/institute or added partner. It corresponds to one dot on the social network plot.[16] Altogether, 222 out of these 466 nodes (48%) are institutions represented by the survey respondents (depicted as red nodes). Out of these 222 cases included in the Social Network Analysis, 109 (49%) survey respondents chose to answer on the level of department, the remaining 113 respondents (51%) answered for the whole organisation (referred to as "mother-organisation" to distinguish multiple answers from one organisation). To visualize these different levels, whole organisations are depicted as circles, individual departments/institutes as triangles. The remaining 244 of the 466 nodes (52%) were either named as partner, but no survey was answered from the respective organisation or corresponds to the added "mother-organisation" (grey nodes). Note that "mother-organisations" can be either red, if a survey was also answered for the whole organisation, or grey, if the "mother-organisation" was added as a node to the network merely to indicate a connection.[17]

Taking a closer look at **Figure 13** shows multiple cooperation clusters among the research organisations in relation to gender equality. There is one big cluster (or chain) going through the centre of the plot, accompanied by some smaller clusters adjacent or separated from the central cluster of cooperating institutions. Apart from the identified clusters there are also some isolated red nodes, these are survey respondents which did not name any partners. These respondents either indicated that they do not cooperate regarding gender equality or they simply did not mention any of their partner organisations by name. As we will see later on, some of the isolated nodes did participate in EU-funded projects for structural change and therefore take on a more central role in the project partner network.

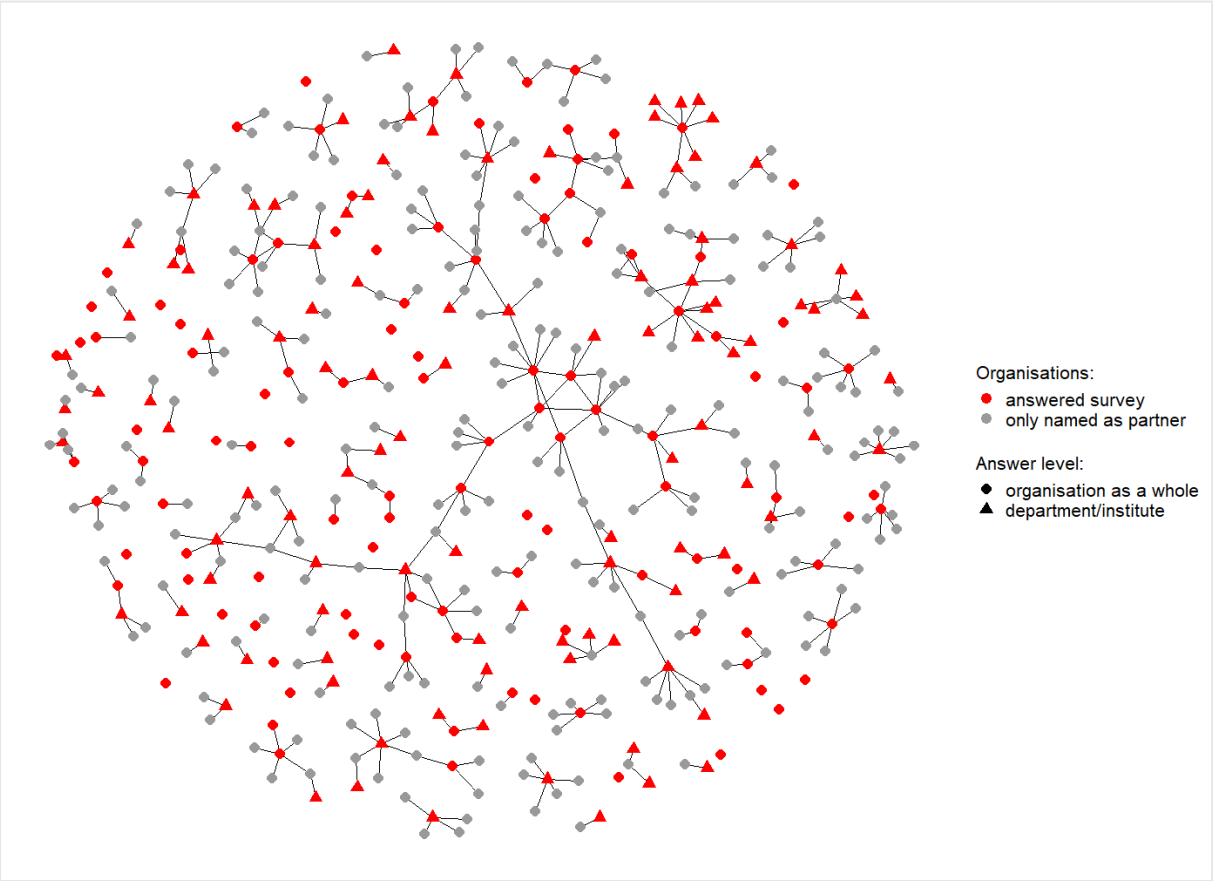
[14] In H2020 all projects were considered that had started before November 2018. A list of projects involved in the project partner network is included in the Appendix.

[15] If respondents indicated that they were (had been) involved in a project, the project partners were added to the data set.

[16] To review the used SNA terminology please refer to the Appendix.

[17] The "mother-organisation" was added as partner to each responding department/institute. This way, it is directly visible if multiple respondents answered from the same organisation. Note that the entire analysis was also conducted at the organisation level (recoding all partners to the "mother-organisation") to test robustness, which showed that results stay the same.

Figure 13: *Partner network cooperating on gender equality by answer level (n = 466)* [18]



Source: ACT Community Mapping Survey (2019)

What is visible in **Figure 13** is that there are some cases in which multiple departments/institutes of the same organisation responded to the online-survey. Considering only distinct organisations, i.e. only one survey per organisation, would leave 357 dots on the map. However, important attributes may differ between departments, which is why the individual survey responses are depicted.

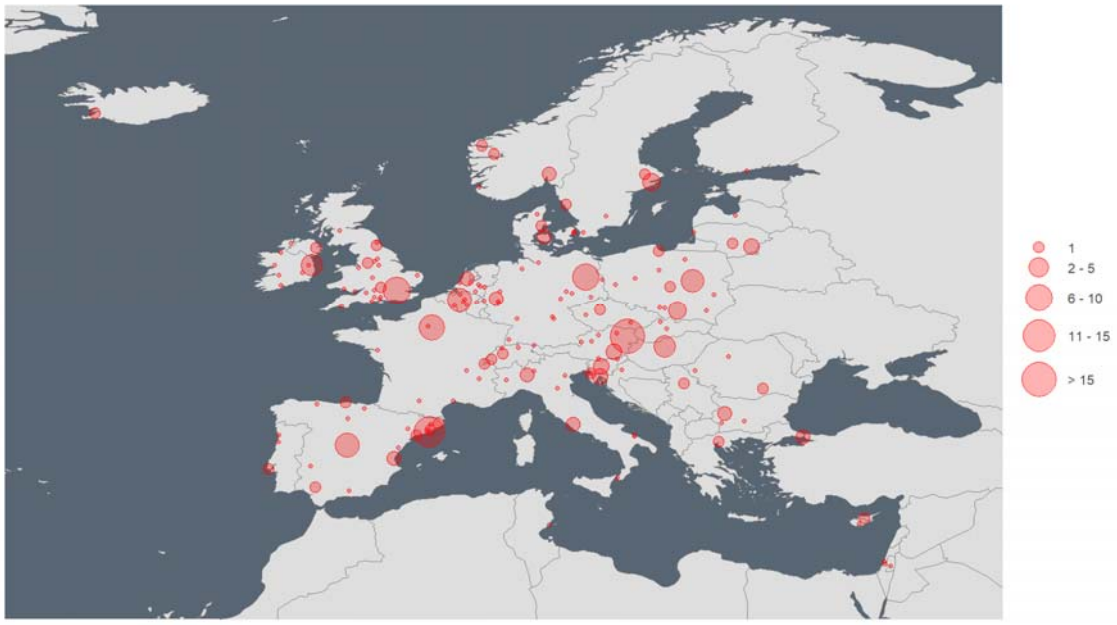
The partner network covers almost the whole of Europe

The participating organisations and their cooperation partners are mostly located in Western and North-Western Europe, but also to some extent in Southern and Eastern European as well as in the Nordic countries. **Figure 14** shows the responding organisations in cities in and around Europe.[19] The size of the red circles refers to the number of distinct organisations in each city, ranging from one organisation in the majority of cities to more than 15 organisations in Barcelona and even 19 organisations in Vienna, which results, to some extent, from the sampling strategy described in chapter 2. Altogether, the organisations are located in 188 cities, almost all in Europe.

[18] Each line represents a connection (edge) between two nodes and therefore a cooperation between organisations/institutes. The maximum number of partners, which could be listed in the online-survey, was set to five. However, more connections (edges) are possible if the organisation was named as partner by another and due to the connection between departments/institutes and their "mother-organisation".

[19] All organisations are mapped at the location of their headquarters. The majority (57%) of these institutions have only one location, this corresponds to 126 nodes. 81 respondents (37%) say, the organisation has several locations on the national level, whereas the remaining 14 (6%) are international organisations.

Figure 14: *Number of distinct organisations and named partners in cities in and around Europe (n = 334)*



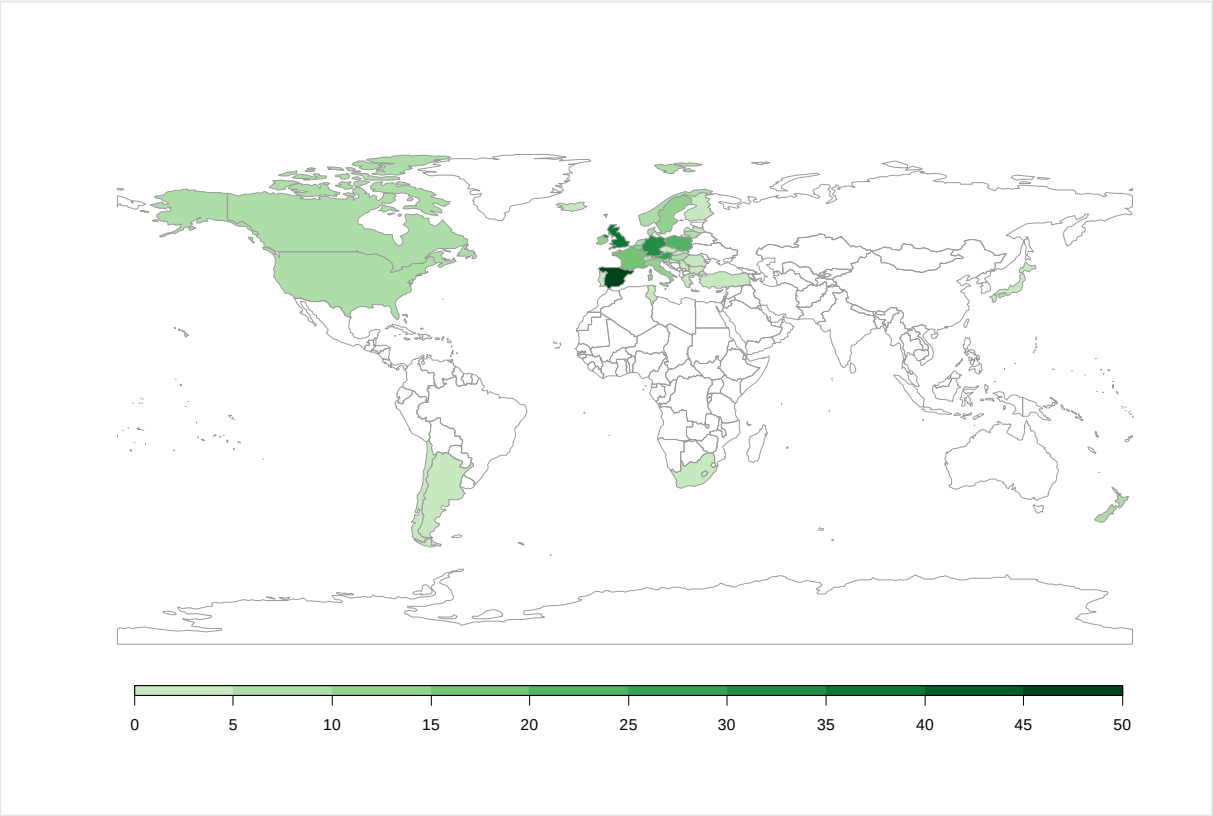
Source: ACT Community Mapping Survey (2019)

If we take a global view, the analysed organisations in the named partner network stem from 40 different countries on six continents, with a majority being located in the European Union (see **Figure 15**).[20] The country with the highest number of distinct organisations included in the Social Network Analysis is Spain, with 47 out of 357 organisations (13%). Further countries with many gender equality active research organisations are the UK (36 organisations), Germany (31 organisations), Austria (28 organisations) and Poland (25 organisations). Since all these countries are represented in the ACT Consortium, it can be assumed that the distribution of the organisations reached and mentioned shows a bias in this respect (see also comments in chapter 3 on representativeness). A table showing the number of organisations from each country is included in the Appendix (see **Table 4**). This shows that the GE cooperation activities of responding institutions have a rather far reach.

Considering only the organisations which responded to the online-survey shows that some regions within Europe were reached only to a small extent despite the efforts of the consortium members to promote the survey/project. This includes some South-Eastern European countries but also some Nordic countries such as Finland as well as Estonia. There are several possible explanations for why these regions have little representation or none at all: Perhaps there are only a few organisations in these regions that are concerned with the implementation of gender equality, or they have not been reached by the manifold activities of disseminating the questionnaire because they have no network connections to the actors depicted.

[20] Out of all EU28 countries, merely three are not represented by at least one organisation, namely Estonia, Luxembourg and Malta. However, Estonia is included in partner network 2 through one project partner.

Figure 15: *Number of distinct organisations and named partners by country worldwide (n = 357)*



Source: ACT Community Mapping Survey (2019)

In **Figure 16**, a Europe-centred map is chosen to portray the 438 European nodes and their connections to each other. The illustration of the network connections on a geographical map shows that the most frequent connections exist between cities in the same country or region[21]. Some lines also go to the borders of the map, indicating that the partner lies outside of the shown region.

The thicker lines in **Figure 16** indicate that some cities form multiple ties with each other: Munich and Dresden for instance (connected 6 times), or Vienna and Graz (connected 5 times). Some other cities are connected twice, including London and Dublin as well as Krakow and Warsaw. The map also shows that Balkan countries such as Bosnia and Herzegovina, Montenegro, Albania and Macedonia are completely disconnected: No organisation from these countries returned an online-survey[22] and no organisation was named by other survey respondents as GE cooperation partner. Also, no organisation from Serbia filled out an online-survey, however, two organisations were named as GE cooperation partners, connecting Serbia (Belgrade) with the European network through 9 ties with other organisations.

[21] While geographical maps help us to understand the connections between different countries and regions, they cannot show individual nodes and their attributes because the dots on the map would simply overlap. Furthermore, no network connections between organisations in the same city can be shown.

[22] One organisation from Bosnia and Herzegovina started filling out the online-survey but only completed the first section. Therefore this organisation could not be included in the Social Network Analysis. As for the project partner network, Bosnia and Herzegovina is included as project partner of the SAGE project.

Figure 16: *Partner network on a European Map (n = 438)*[23]

Source: ACT Community Mapping Survey (2019)

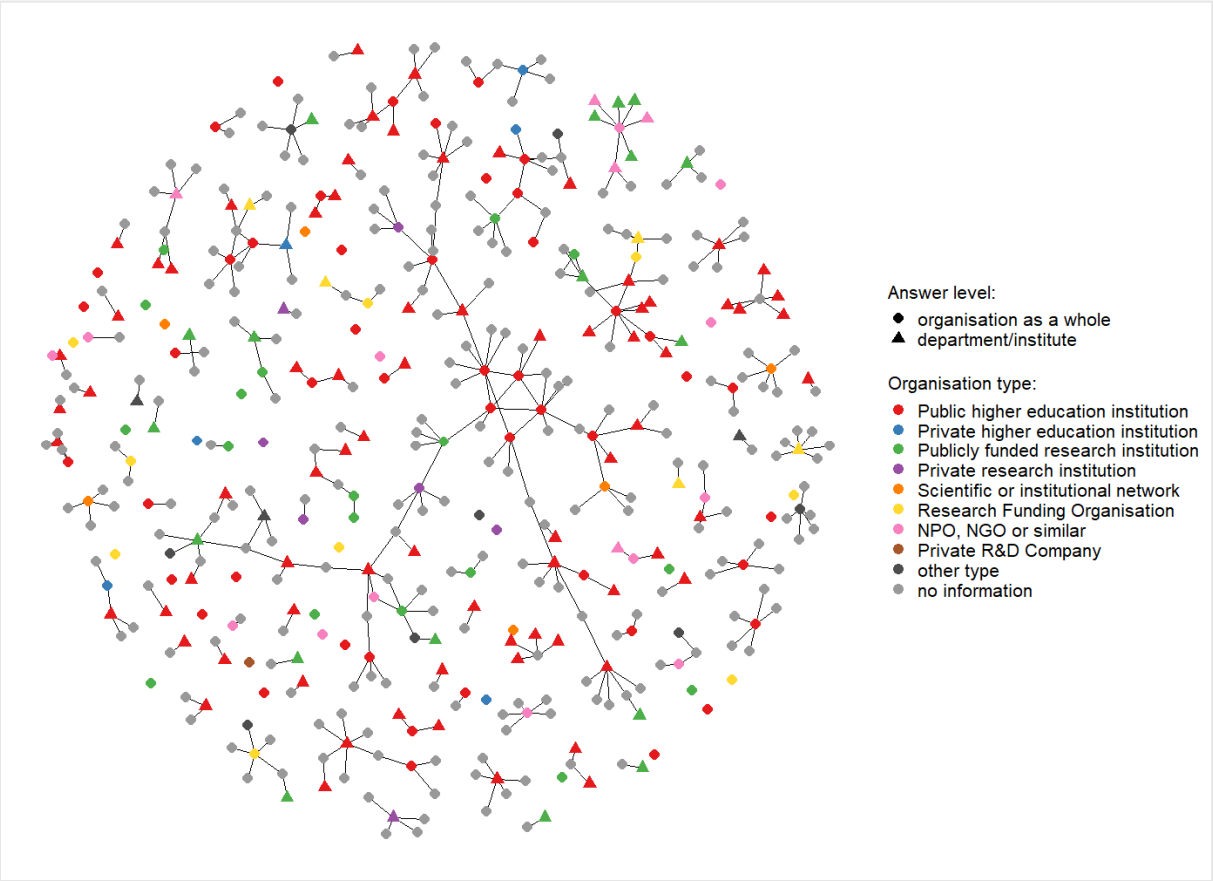
Especially Higher Education Institutions are well connected to foster Gender Equality

Let us now turn to the characteristics of organisations that can have an impact on patterns of cooperation. The first attribute we consider is the type of organisation. As we discussed in chapter 2, the most common participants of the survey were public Higher Education Institutions, this is the same for the group of organisations who gave information about cooperation (**Figure 17**).

The high share of public Higher Education Institutions included in the mapping and the number of partners they named in the online-survey suggests that this type of organisation is particularly well-connected and active in GE cooperation. Whether or not organisations rather cooperate with similar types of organisations cannot be concluded from the Social Network Analysis because the type of organisation is only available for the participants of the survey and not for named partners. However, ACT should aim at mapping the diversity of cooperation, potentially supporting the inclusion of other types of organisations that generally appear less interconnected.

[23] Note that the size of the dots on the map depends on the number of nodes in the respective city. The size (thickness) of the lines depends on the number of connections between two cities (i.e. between the organisations therein). Note that isolated dots on the map do not necessarily mean that organisations in the respective city do not have GE cooperation partners but their partners could simply be located in the same city, which is not visible.

Figure 17: *Partner network by type of organisation (n = 466)*



Source: ACT Community Mapping Survey (2019)

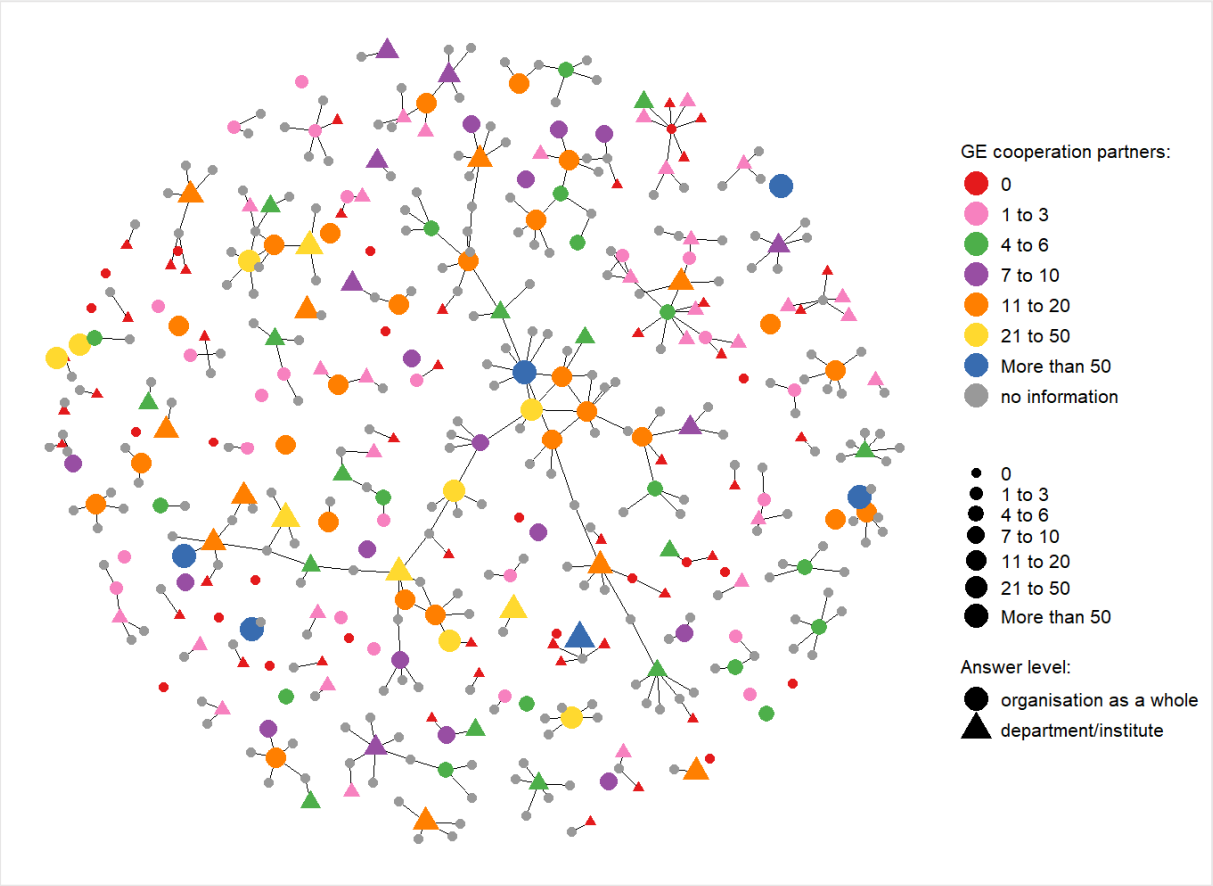
The scientific fields in which these organisations operate are quite diverse: 52% at least research/teach in the field of Social Sciences, 51% in the field of Natural Sciences, 37% in Engineering and Technology and/or Humanities and Arts. Medical Sciences make up 35%, Agricultural and Veterinary Sciences is the least common field (11%). 20% of respondents work in all listed fields (typically universities).

The most central or well-connected organisations/institutes in the partner network generally tend to have a high number of cooperation partners regarding gender equality. **Figure 18** indicates how many cooperation partners for promoting gender equality the organisations had within the last three years (according to survey responses). Red nodes are those, with no cooperation partners within the last three years. 29% specifically said that they did not cooperate regarding gender equality within the last three years. The figure shows that these red nodes are either isolated or are institutes connected only to their "mother-organisation".[24] However, not all isolates are red, i.e. have had no GE cooperation partners in the last three years. This means that some survey respondents stated that they did cooperate for gender equality within the last three years but did not name any of their partners. As **Figure 21** will show, some of these organisations were part of one or several EU-funded projects and did not list additional cooperation partners for Gender Equality.

[24] This stems also from the set-up of the online-survey: due to filters, the respondent was not asked to name partners if the number of GE partners selected was zero. In some cases, however, the department/institute may not have listed partners, but the respondent from the "mother-organisation" did. In such cases, individual departments/institutes are not cut off entirely from the network because they are indirectly linked to the partners of the "mother-organisation".

Pink nodes indicate those with one to three cooperation partners. This group makes up 24% in total and around one third of those with at least one cooperation partner. Altogether 23% of the respondents said that their organisation/department had more than 10 cooperation partners in the last three years, 8% have even had more than 20. The data further shows that organisations with more than 20 cooperation partners are involved in EU-funded projects with above-average frequency. Hence, their high number of cooperation partners can be a result from participating in these projects (or vice versa).

Figure 18: *Partner network by number of cooperation partners for promoting gender equality (n = 466)*



Source: ACT Community Mapping Survey (2019)

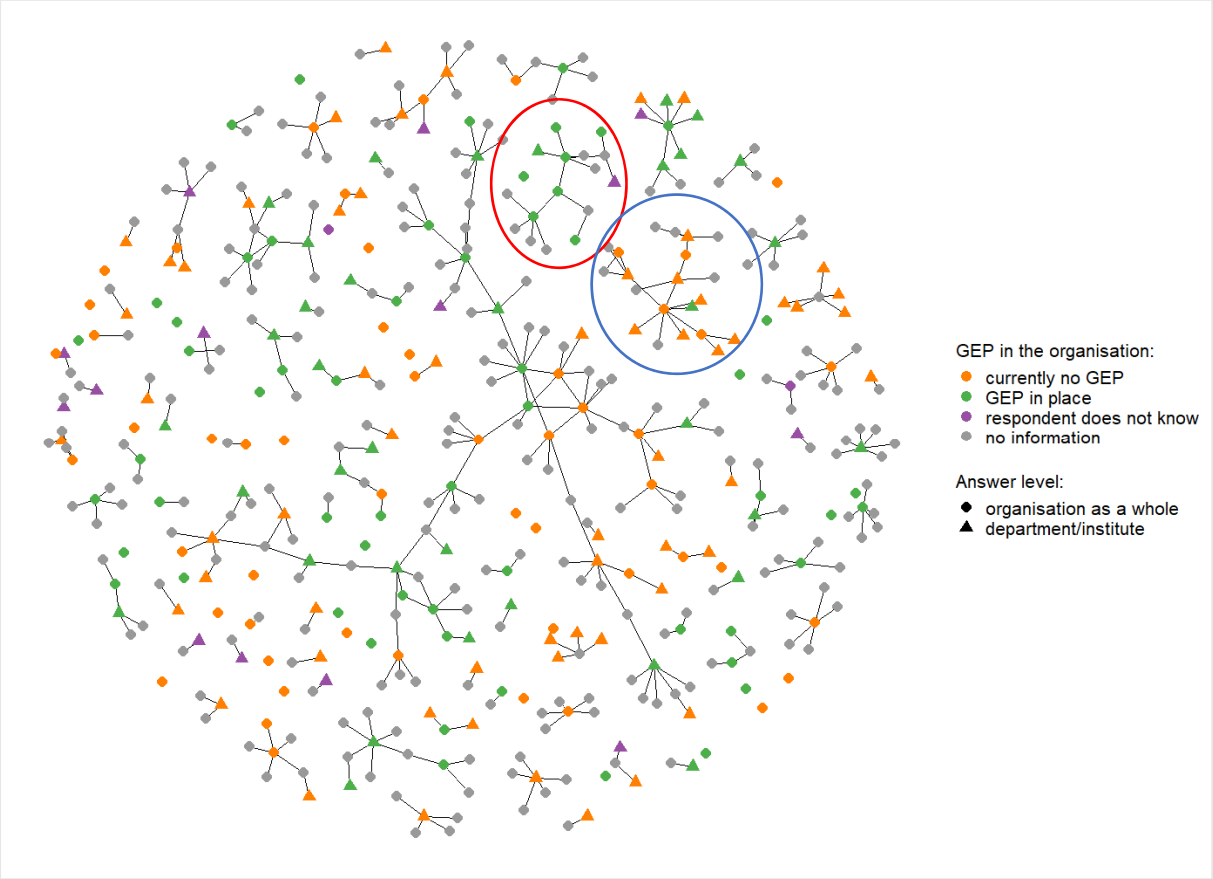
The existence of a GEP and the degree of networking are not related

Shifting our attention now to gender equality within the organisation, **Figure 19** shows that the more central actors in the network are not necessarily more likely to have a Gender Equality Plan (GEP) in the organisation or department.[25] 51% of the respondents stated that they currently do not have a GEP in place, in 42% of the research institutions there is a GEP either for the whole organisation or at the departmental level and 7% did not know whether there is a GEP or not.

[25] For the graphical analysis, the respective survey-question was recoded to fit the following levels: (1) currently no GEP; (2) GEP in place; (3) respondent does not know; and (4) no information is available. In the online-survey, the question provided more detailed answer options, including also "No, but we are working on developing a GEP" (53 selections, depicted in **Figure 19** as "currently no GEP") and "No, we used to have one, but it is no longer in place", the latter was never selected.

Interestingly, there are some smaller clusters, in which most organisations do have a GEP (red circle in **Figure 19**) and others which mostly do not (blue circle). This leads to the conclusion that organisations cooperate rather with other organisations that are similar in their GEP status. However, the big cluster is rather mixed when it comes to the presence of a GEP in the organisation. Altogether it can therefore be concluded that a GEP does not play a role in defining the position in the network. Furthermore, it does not influence the likelihood to cooperate with other organisations to foster GE. For ACT, **Figure 19** also shows that there is a potential of organisations with GEP experience that currently do not cooperate, but could perhaps be integrated into CoP activities to make their experience available to others.

Figure 19: *Partner network by presence of a Gender Equality Plan (n = 466)*



Source: ACT Community Mapping Survey (2019)

Interested in joining a CoP is independent of the degree of networking

Besides analysing the status quo of gender equality efforts and networks of cooperation, the ACT community mapping follows a third mission: To detect the interest of survey respondents from different organisations in becoming part of the ACT project. The participation in the project can take on different forms, starting with receiving a newsletter and invitations to ACT events to becoming visible on the ACT website as a contact person and ultimately, to join one of the 7 ACT Communities of Practice (CoPs).

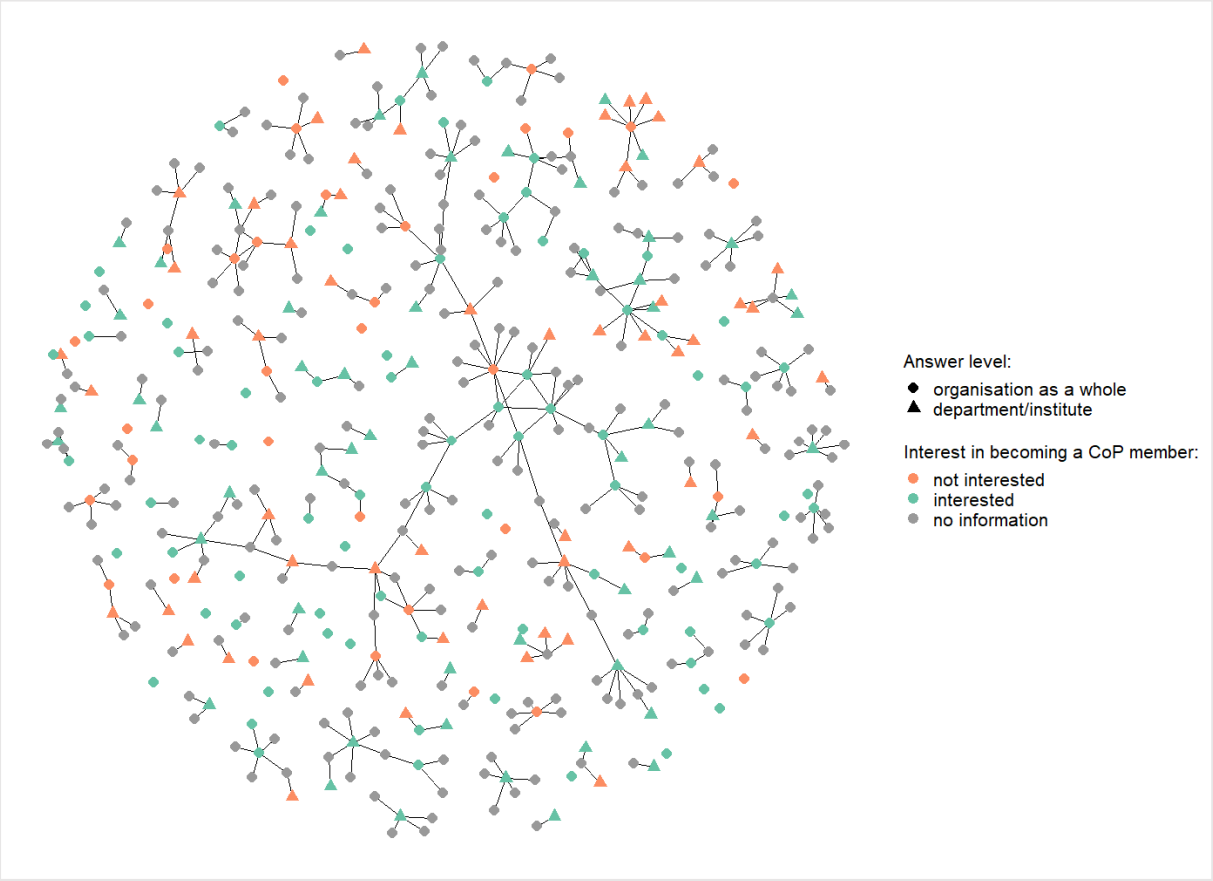
The online-survey shows that there is high interest among participating organisations to become part of the project. Altogether, 133 respondents[26] stated that they would like to become part of a CoP.

[26] Out of the SNA sample (n = 222). The overall interest is described in chapter 3.

Figure 20 shows that the interest in becoming part of a CoP is independent of how strongly a research institution is networked regarding gender equality. This is also confirmed by comparing **Figure 18** with **Figure 20**.

We have seen before that there are 64 respondents which have not had any cooperation partners regarding gender equality in the last three years. Out of these, 52% express their interest to become part of an ACT Community of Practice. ACT should therefore make an effort to focus particularly on these organisations, which are currently disconnected from the network. A majority of these organisations are located in Poland, followed by the UK, Spain and Portugal.

Figure 20: *Partner network by interest in becoming a Community of Practice (CoP) member (n = 466)*



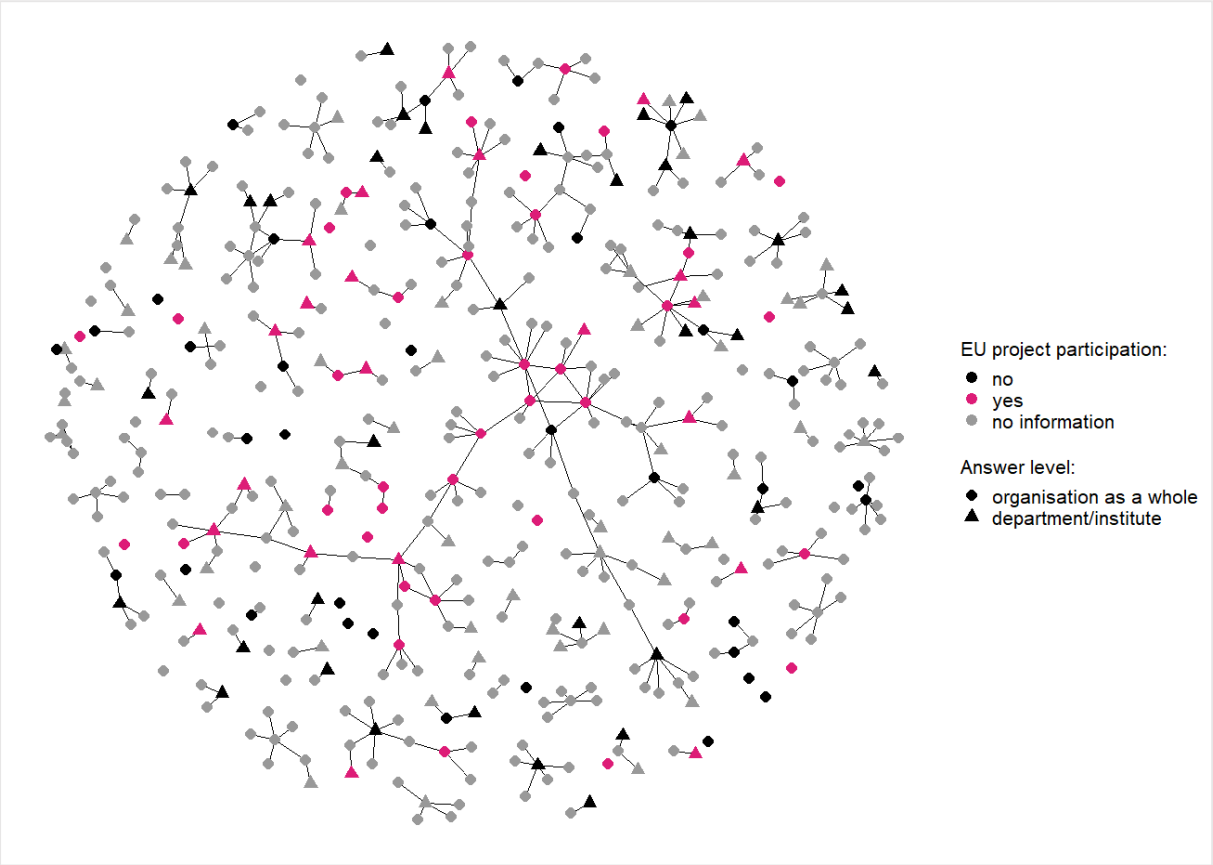
Source: ACT Community Mapping Survey (2019)

The next chapter will take a closer look at the project partner network. In order to connect the two networks, **Figure 21** shows that many of the well-connected nodes of the partner network are also part of one or several EU-funded projects. Furthermore, many of the isolated institutions in the partner network did participate in at least one EU-funded project. These nodes will therefore play a more central role in the project partner network. However, there are also some nodes that are disconnected in both networks. This is why ACT should aim at picking up particularly those isolated organisations, considering their expressed interest in GE cooperation activities.

Altogether, 27% of the respondents said they were part of one or several of the listed projects, another 39% said that they were not. 34% of the survey respondents did not provide an answer and are therefore shown as grey nodes, just like the organisations for which no survey data is available at all. Among those who did select at least one EU-funded project, 35% said that they have no

additional cooperation partners for implementing gender equality (beyond the partners from the selected project).

Figure 21: *Partner network by participation in EU-funded projects for structural change (n = 466)*



Source: ACT Community Mapping Survey (2019)

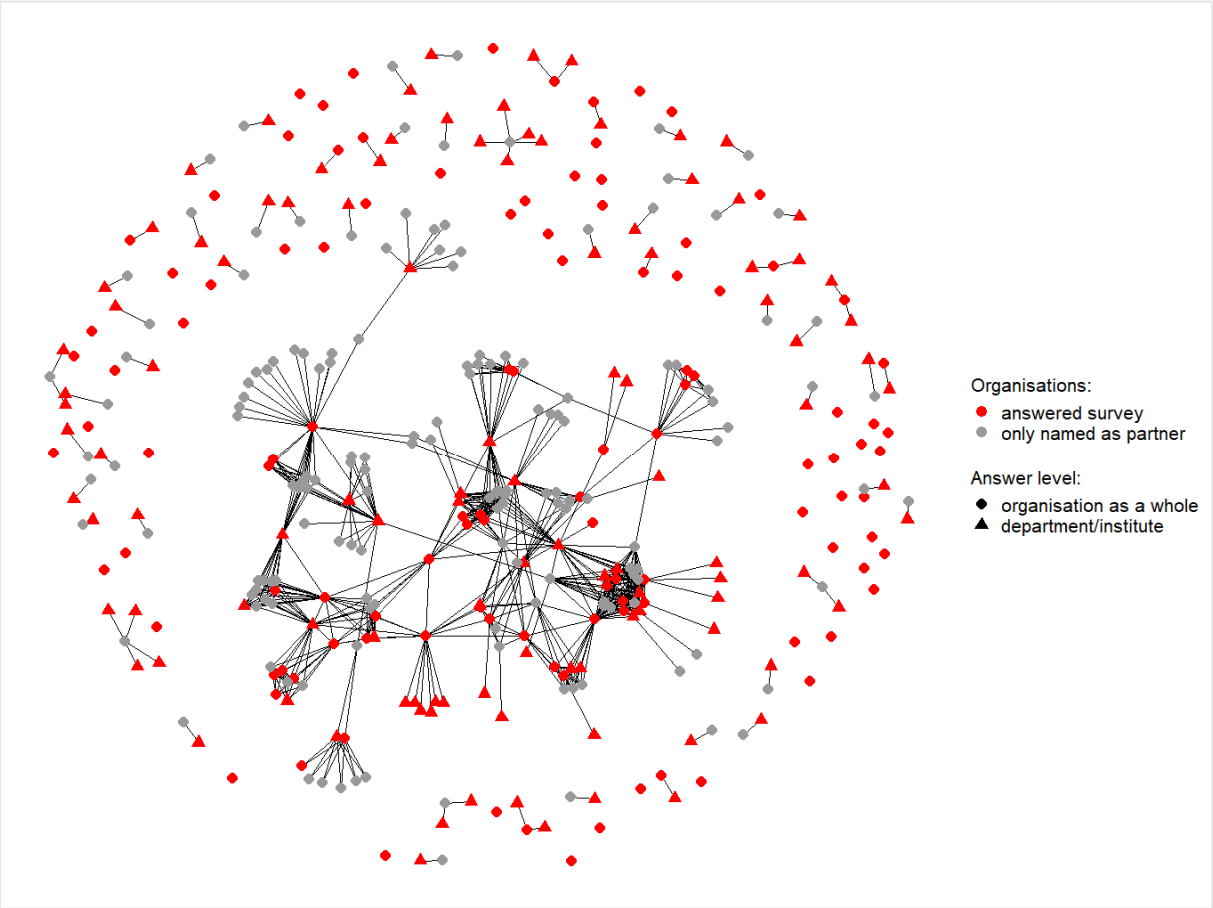
5.2 Involvement in EU-funded projects for gender equality (Project partner network)

EU-funded structural change projects form a big community

Contrary to the named partner network, the project partner network only consists of one central cluster, including all project consortium partners, and otherwise only depicts connections between departments/institutes and their "mother-organisation" (see **Figure 22**). Due to the high number of partners added through each project participation, the number of connections increases tremendously compared to what we have seen in the previous plots. The big cluster in the centre of the plot now consists of the following three groups: (1) the 60 survey respondents, which selected at least one EU-funded structural change project from the provided list; (2) any department/institute or "mother-organisation" that is tied to these 60 nodes through a logical connection; and (3) added partners that did not fill out a survey but were part of at least one project consortium. All in all, the project partner network contains partners of 19 structural change projects. What is nicely shown in this figure is that the corresponding partners within these EU-funded projects are not isolated from each other but form a big community of organisations. The community is held together by some key actors, which participate in multiple projects.[27]

[27] Note that the shape of the nodes again indicates the answer-level of respondents.

Figure 22: *Project Partner network by answer level (n = 378)*



Source: ACT Community Mapping Survey (2019)

Figure 23 shows that this big community based on EU funded structural change projects is spread throughout Europe. The size of the red circles again corresponds to the number of distinct organisations in the respective city. Compared to the named partner network, the country distribution shifts: now also Bosnia and Herzegovina, Estonia, Liechtenstein, Morocco and Ukraine are represented. However, the total number of cities included in the project partner network is with 173 slightly lower than that of the named partner network (188). The highest number of organisations again lies in Vienna (12 organisations), followed by Barcelona (9 organisations).[28]

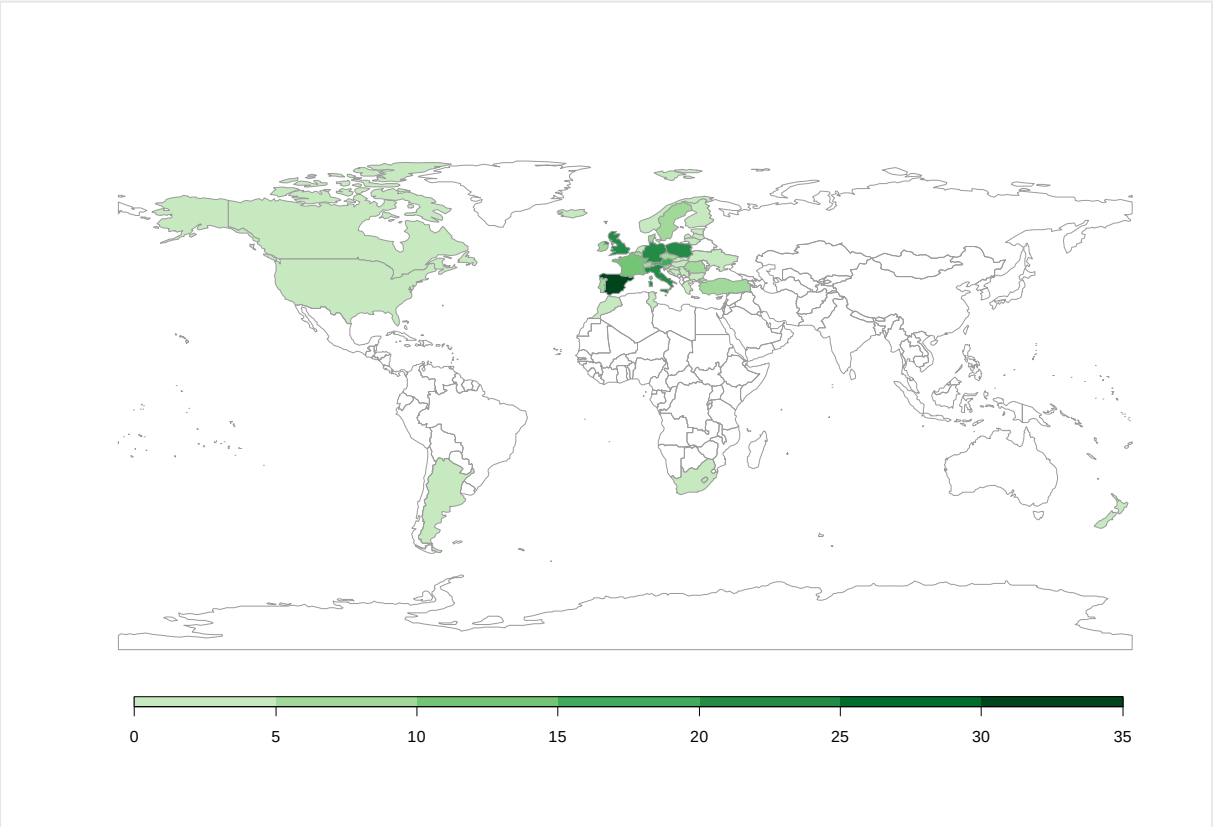
[28] Some organisations lie just outside of Barcelona and are depicted as smaller circles around the city. Altogether this area includes the highest number of distinct organisations.

Figure 23: *Number of organisations and project partners in European cities (n = 263)*

Source: ACT Community Mapping Survey (2019)

Considering the distribution of project partners across countries shows that these organisations are spread out over 42 countries worldwide. In the EU28 also Estonia is now represented with one organisation, leaving only Luxembourg and Malta that are not included in the network. The maximum number of nodes per country now lies in Poland, with 42 nodes (see **Figure 24**). Altogether, only 6 organisations lie outside of Europe and its surroundings. A table showing the number of project partners from each country is included in the Appendix (see **Table 5**).

Figure 24: *Number of organisations and project partners by country worldwide (n = 269)*



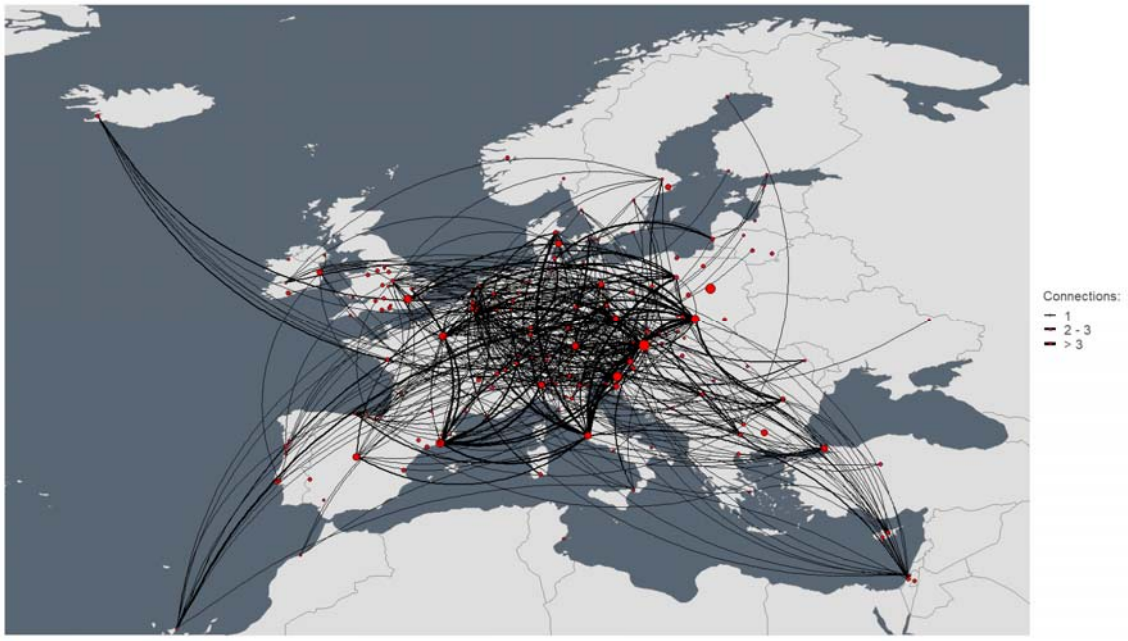
Source: ACT Community Mapping Survey (2019)

The considered EU-funded structural change projects are able to connect organisations all over Europe (**Figure 25**). The network also stretches out to Morocco, Turkey and Israel. However, due to the high number of connections between the organisations, it is very difficult to analyse the connections graphically.

Major cities in Austria, Italy, Poland and Spain show multiple connections across the network. Some cities form particularly close ties: Rome is very often connected with organisations in Krakow, Aarhus or Torun. Also, Barcelona and Milan are connected four times, the same applies to Munich and Dresden. However, the map shows that the majority of connections in the project partner network are found at the centre of Europe. Again, some of the South-Eastern European countries are entirely disconnected, such as Montenegro and Macedonia.

Compared to the partner network, the project partner network includes many more ties between organisations. This is, because it is not limited to five main cooperation partners. Furthermore, project partners often are located in different cities, in contrast to those named in the partner network. Named partners are often those, which are rather close and hence do not show up on the map as a connection (the points overlap). This is also shown by the total number of organisations per city, which is much lower in the project partner network than in partner network 1. Considering the geographical distribution of partners at the organisation level shows that 58% of named partners are located in the same country, compared to only 6% of project partners. Note that respondents may have focused particularly on regional partners when naming organisations, because the international partners are included in the EU-funded projects that could be selected before. This way, the more connected organisations may show up in different regional clusters in the two analysed networks.

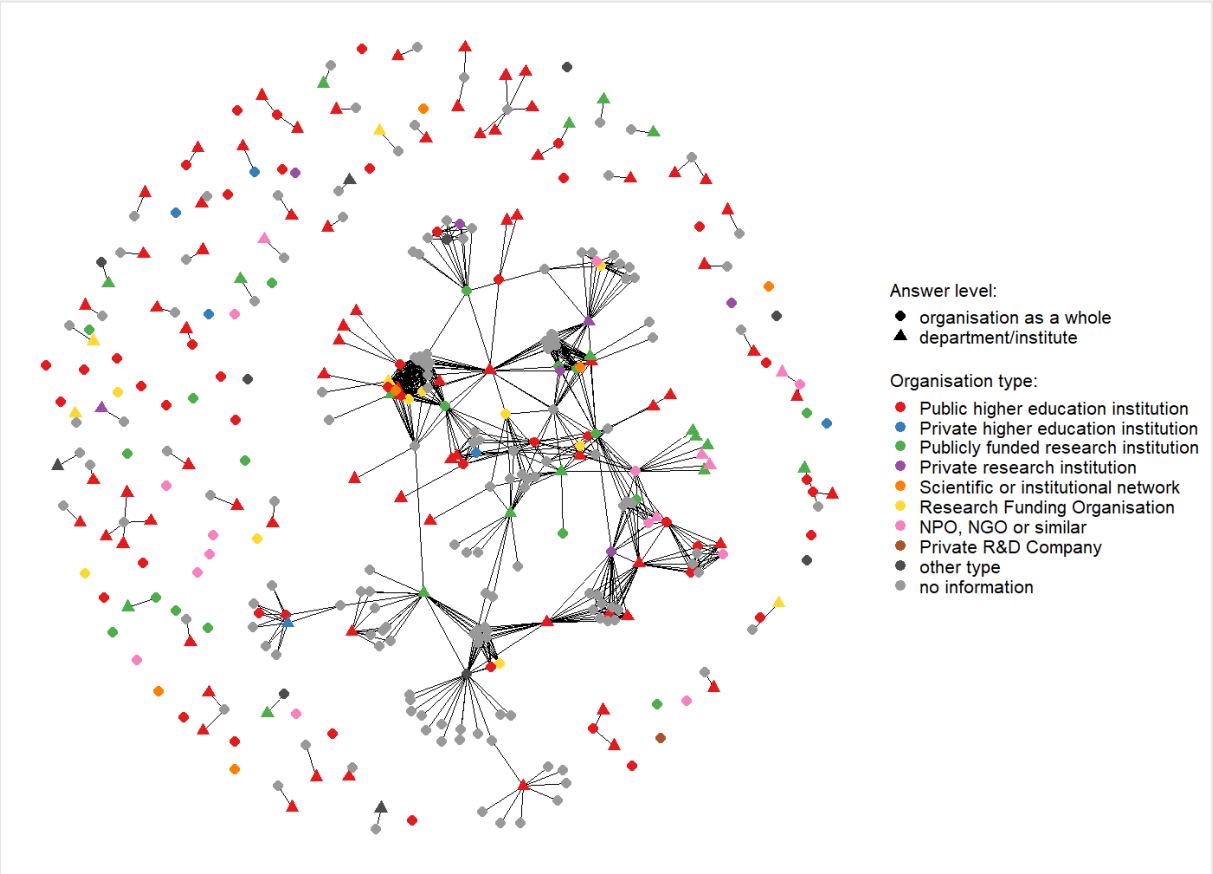
Figure 25: *Project partner network on the European map (n = 368)*



Source: ACT Community Mapping Survey (2019)

Figure 26 shows that the types of organisations involved in the big community of structural change projects are very heterogeneous, with an overall majority of public Higher Education Institutions. Compared to the main partner network, more Research Funding Organisations are now involved in the big cluster of project partners (yellow nodes).

Figure 26: *Project partner network by organisation type (n = 378)*



Source: ACT Community Mapping Survey (2019)

5.3 Cluster Identification, Network Centrality and Analysis

Identifying existing clusters within the entire network is of high interest in the ACT project because these shall be considered in the process of setting up Communities of Practice (CoPs). This chapter will focus particularly on the big clusters in each of the two networks, indicating also the location of some smaller clusters.

5.3.1 Clusters and central actors in the partner network

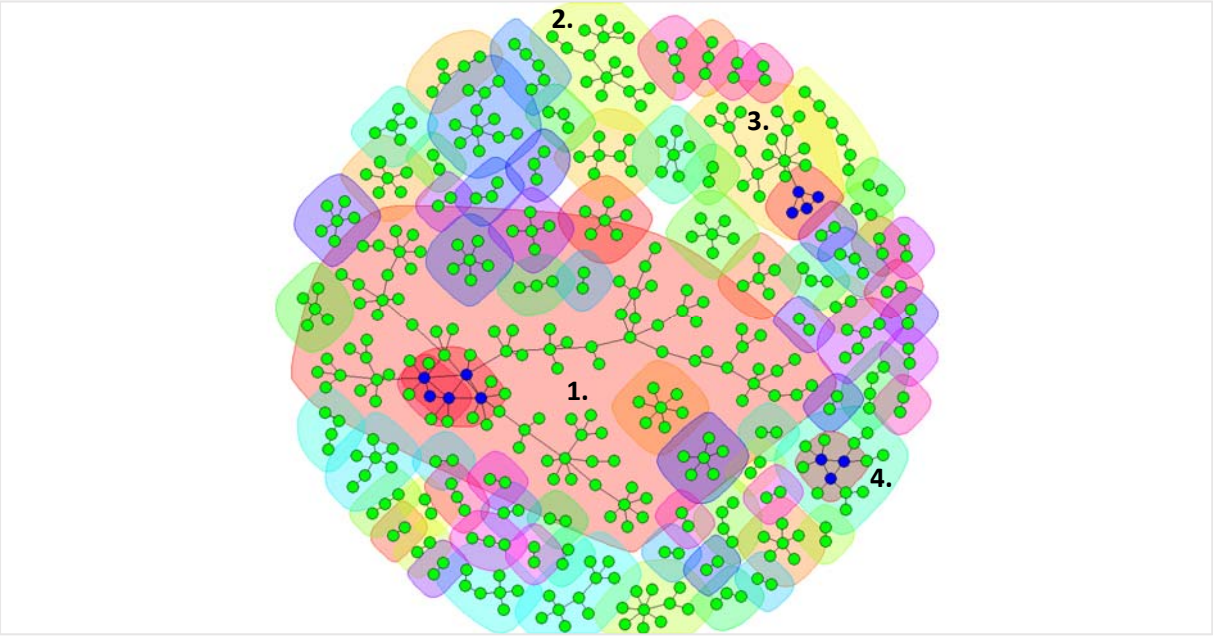
Universities are central actors

The clusters in the partner network were already visible in the graphical analysis of chapter 5.1: There is one big cluster in the centre, with a few smaller ones around it. **Figure 27** again shows how these clusters can be distinguished when all isolated nodes are removed from the plot. Altogether, 83 cohesive blocks can be identified in the partner network. Note that these blocks may also be clusters within clusters (see shading in **Figure 27**), i.e. one node can be part of multiple blocks. Many of these blocks, however, consist only of individual departments/institutes of the same organisation. 4 blocks (clusters) can be identified that should be considered in ACT because they are the largest clusters and consist of comparatively many organisations:

1. **The big central cluster (red shading):** covering the whole of Europe;
2. **Cluster (yellow shading):** based mainly in Spain;
3. **Cluster (orange shading):** based in Poland, Northern Germany, Denmark, the Netherlands;
4. **Cluster (light blue shading):** based mainly in the UK and Ireland.

In **Figure 27** the node colour shows the level of cohesion of the respective node, i.e. how many connections can be found between the respective nodes. While most nodes are green and show only low levels of cohesion within other nodes (only limited connections), there are a few dark blue nodes which are connected through multiple bonds, forming little cohesive subgroups. Such groups do not yet fall apart if one connection is dissolved because the nodes are still connected through their partners. It also becomes visible that most clusters of green nodes could easily be disconnected if only one connection was removed.

Figure 27: *Cohesive blocks in the named partner network (isolated nodes removed, n = 423)*



Source: ACT Community Mapping Survey (2019)

Altogether, there are 103 nodes (85 distinct organisations) in the big cluster of the partner network. The nodes with the highest level of cohesion, i.e. those that form multiple ties among each other (dark blue nodes), are universities from five different countries (Bulgaria, Denmark, Germany, Ireland and Sweden). However, as shown in **Figure 28**, the maximum number of organisations from the big cluster are located in Vienna and Graz (shown by the circle size) and also the number of connections between the two cities is the highest (shown by the thickness of the connecting line). This observation shows that in these two cities there is a conglomerate of gender research active organisations that tend to cooperate with each other frequently.

The big cluster is very international

What becomes evident in **Figure 28** is that the big cluster is spread all over Europe. However, Balkan countries such as Croatia, Serbia or Bosnia and Herzegovina are not part of this network. Also, some major cities such as Berlin and Madrid are disconnected. On the other hand, some partner organisations are located in Israel (2 partners), the United States (2 partners), Chile (1 partner) and Japan (1 partner). However, these partners are only connected through one tie and are therefore not considered as central actors in the network. These in fact lie in Denmark (Odense) and Germany (Aachen). Since the central cluster is the only big conglomerate of connected nodes, the nodes with the highest network centrality all lie in this cluster. Hence, the most central actors in the big cluster are the most central actors in the network.

Figure 28: *Partner network on European map, big cluster only (n = 103)*

Source: ACT Community Mapping Survey (2019)

Contrary to the big cluster, it seems that geographical distance (closeness) is an important contributing factor for cooperation in the other identified clusters. Even though each cluster also includes individual partners from more distant regions, the majority is located in the same region or even the same country.

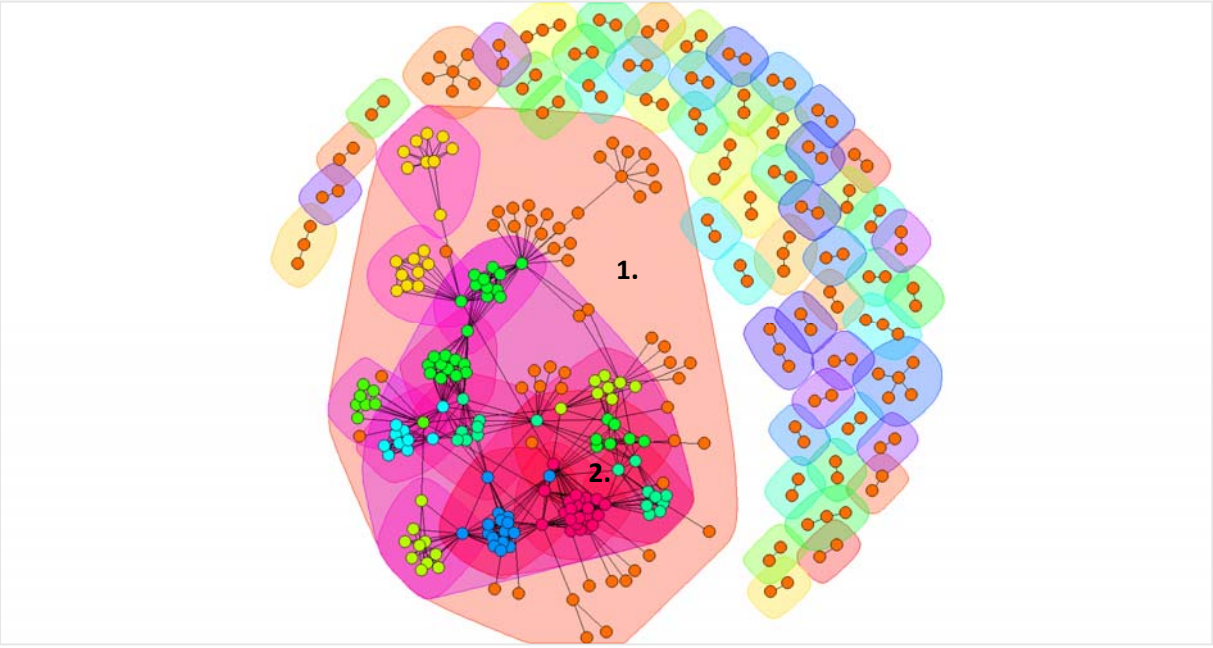
5.3.2 Clusters and central actors in the project partner network

In the project partner network, the big cluster consists of all organisations, which selected at least one EU-funded structural change project from the list (in the online-survey). Furthermore, all the remaining consortium partners from each of the selected projects were added. No other clusters outside the big cluster exist (see **Figure 29**).[29] However, the individual EU-funded projects form blocks of their own inside the big cluster. The organisations that are involved in multiple projects hold the cluster together and take on a very central role in this cluster as well as the overall network. That is why we will take a look at the following two clusters:

1. **The big cluster (red shading):** covering organisations all over Europe and beyond;
2. **The cluster with the highest centrality (purple shading):** many from Southern and Western Europe, but also stretching to other regions.

[29] Connected nodes outside the big cluster are simply different departments/institutes and their "mother-organisation".

Figure 29: *Cohesive blocks in the project partner network (isolated nodes removed, n = 317)*[30]



Source: ACT Community Mapping Survey (2019)

Altogether, the big cluster in the project partner network consists of 193 nodes (154 distinct organisations, i.e. project partners). The highest share of organisations/departments in the big cluster of project partners stems from Italy (14%), followed by German organisations (12%). Roughly 10% are located in Spain, 7% are from Austria. The majority of organisations in the big cluster are pubic Higher Education Institutions, but also Research Funding Organisations and publicly funded research organisations are quite prominent in this cluster.[31] The distribution of selected scientific fields generally corresponds to the distribution in the entire sample (n = 222). However, the big cluster in the project partner network includes a relatively high share of respondents from the Medical and Health Sciences (43% compared to 35% in the entire network).

The second cluster in the project partner network (nodes with the highest centrality) consists of 43 nodes (38 distinct organisations). This can be seen as the most prominent cluster because it contains the actors with the highest centrality scores in the entire network[32]. 7 out of the 43 nodes in this cluster are from Italy, each 5 are from the Czech Republic, Germany and Spain, 4 from Switzerland. The rest are spread out over Austria, Belgium, Croatia, Denmark, France, Iceland, The Netherlands, Romania, Slovenia and the UK (see **Figure 30**). Hence, the cluster members are again spread all over Europe. The organisation with the highest centrality score[33] of this cluster (as well as in the entire network of project partners) is located in Austria (Graz).

[30] Less cohesive nodes are depicted in orange. These can be nodes outside the big cluster or institutes which are only connected to their "mother-organisation". However, also two projects which were named only by one respondent are depicted in this colour, because no cross-connections are found.

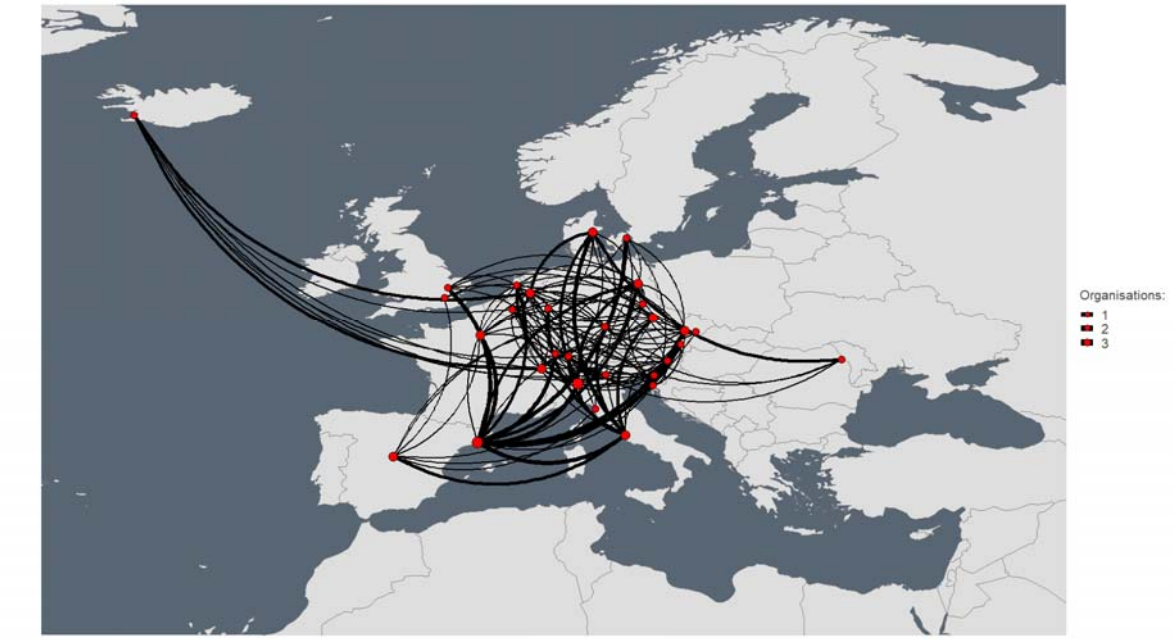
[31] Note that the organisation type is not available for all cluster members because many of them are simply added partners and did not fill out the online-survey.

[32] Note that having a high centrality score is directly connected to the number of projects that the organisation participated in.

[33] Considering the measure of eigencentrality, i.e. the total number of connections weighted by how well-connected the partners are and so on.

Most of the nodes in this cluster are public Higher Education Institutions or publicly funded research institutions. Two Research Funding Organisations are part of the most prominent cluster (9%). In this cluster, 50% of respondents research and/or teach in the field of Natural Sciences and/or Medical Sciences. 32% operate in the field of Social Sciences. Engineering and Technology on the other hand is a field of only 14% of respondents in this cluster.

Figure 30: *Project partner network: cluster of most central actors (n = 43)*



Source: ACT Community Mapping Survey (2019)

It is further interesting to see, which organisations are part of the big clusters in both partner networks (i.e. the named partner network *and* the project partner network). This applies to 39 nodes (30 distinct organisations). These organisations are not only actively involved in EU-funded structural change projects but also cooperate with others beyond these projects in order to promote gender equality. The highest share of these organisations is located in Austria, followed by Bulgaria, Czech Republic and Switzerland. Based on the survey data and the project partnerships it can be concluded that organisations from these countries tend to be well-connected in their efforts to promote Gender Equality. Of course, there are also other highly active players all over Europe, which we have already seen in multiple figures.

Overall, it should be emphasised that this network analysis shows only a part of all the existing connections between European research institutions. It should merely provide a general impression and show some existing clusters as well as areas that are so far hardly connected, so that ACT can take this into account when founding its Communities of Practice. Next, we will take a closer look at the different ways in which organisations typically cooperate to promote gender equality, and how they benefit from this cooperation.

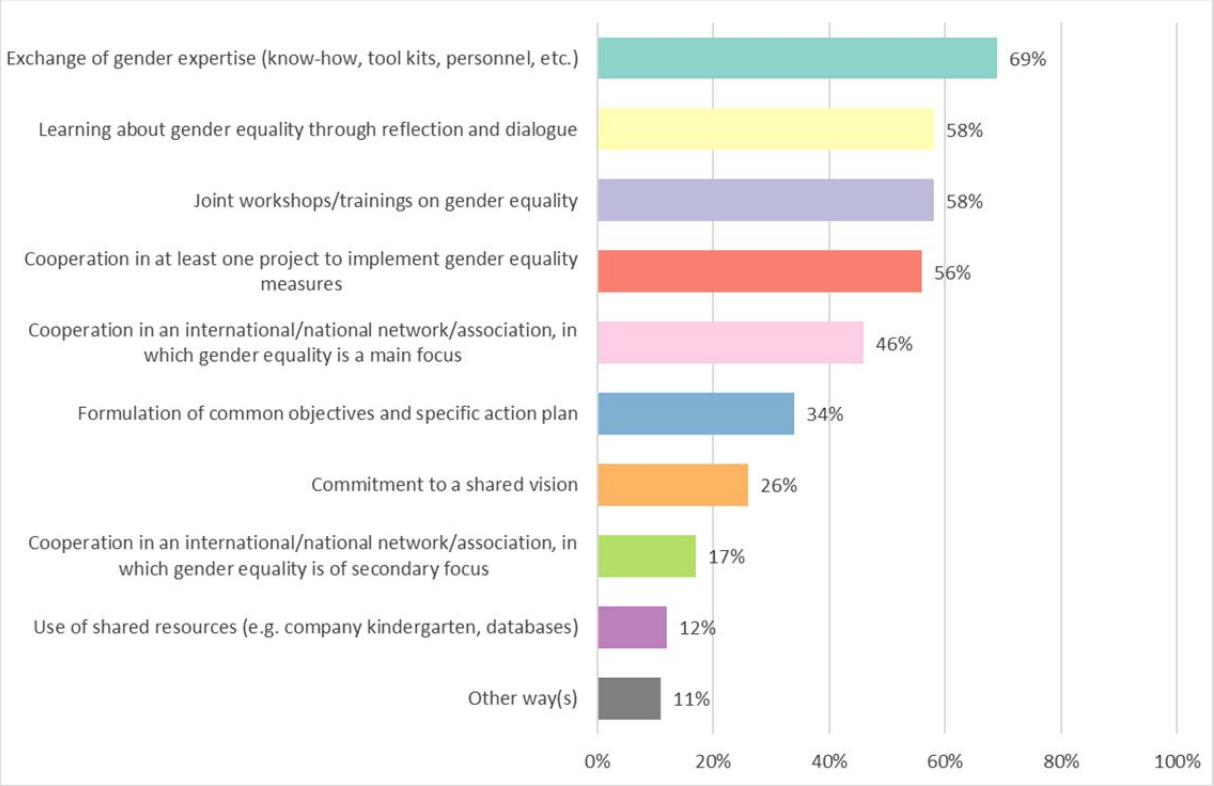
5.4 Different Types and Benefits of Cooperation

Collaboration to share knowledge is most popular and profitable

All in all, 158 out of 222 respondents indicated that they did cooperate to foster gender equality in the last three years. Most of them (87%) focussed on cooperating regarding structural change towards gender equality. As shown in **Figure 31**, the most common forms of cooperation for

structural change comprises knowledge exchange by exchanging gender expertise, learning about gender equality through reflection and dialogue and conducting joint trainings on gender equality. Moreover, more than half of the respondents already participated in at least one project to implement gender equality measures. Furthermore, 46% of responding institutions are cooperating in an international/national network/association. Compared to that sharing objectives, visions or action plans regarding gender equality is less common. Sharing infrastructure (e.g. company kindergarten, databases) is rare. Alternatively, respondents could state that they did not cooperate to improve gender equality on the organisational level within the last three years. 15 out of 158 respondents (almost 10%) gave this answer.

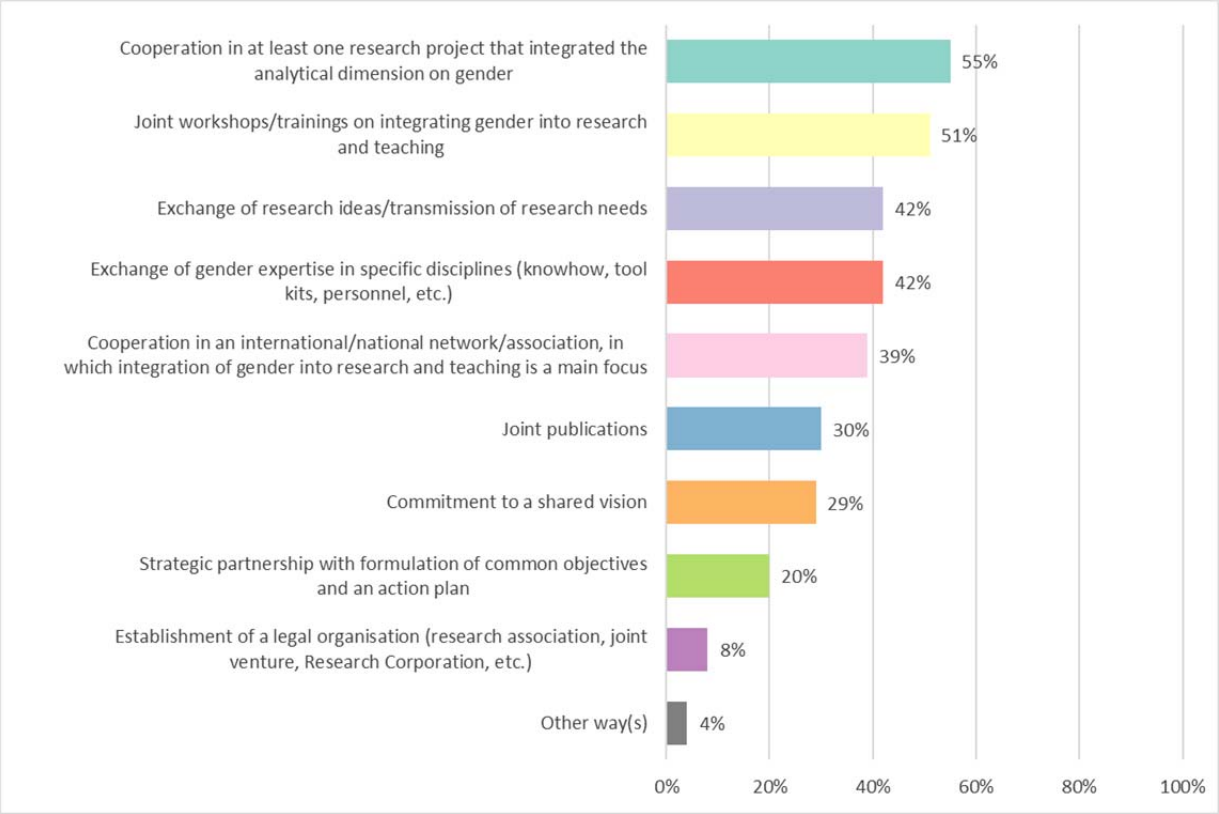
Figure 31: *Different forms of cooperation to improve gender equality on the organisational level within the last 3 years (n = 137)**



*Source: ACT Community Mapping Survey (2019) * N based on number of respondents that selected at least one item*

Overall, it is more common for responding institutions to cooperate for structural change than for the integration of a gender dimension in research and teaching. Only 72% of respondents with at least one GE cooperation partner in the last three years have conducted cooperation activities to foster the integration of a gender dimension in research and teaching. **Figure 32** shows that the most common way to cooperate for this purpose is to participate in a project that includes the gender dimension (54%), whereas joint publications in this regard are less common (30%). Other important forms of cooperation focus on knowledge transfer like joint workshops on how to integrate a gender dimension in research and teaching, exchanging research ideas and gender expertise. Moreover nearly 40% of respondents cooperate in networks focussing on the integration of gender dimension in research and teaching. Strategic endeavours like committing on shared vision, forming a strategic partnership or even establishing a legal organisation are less common.

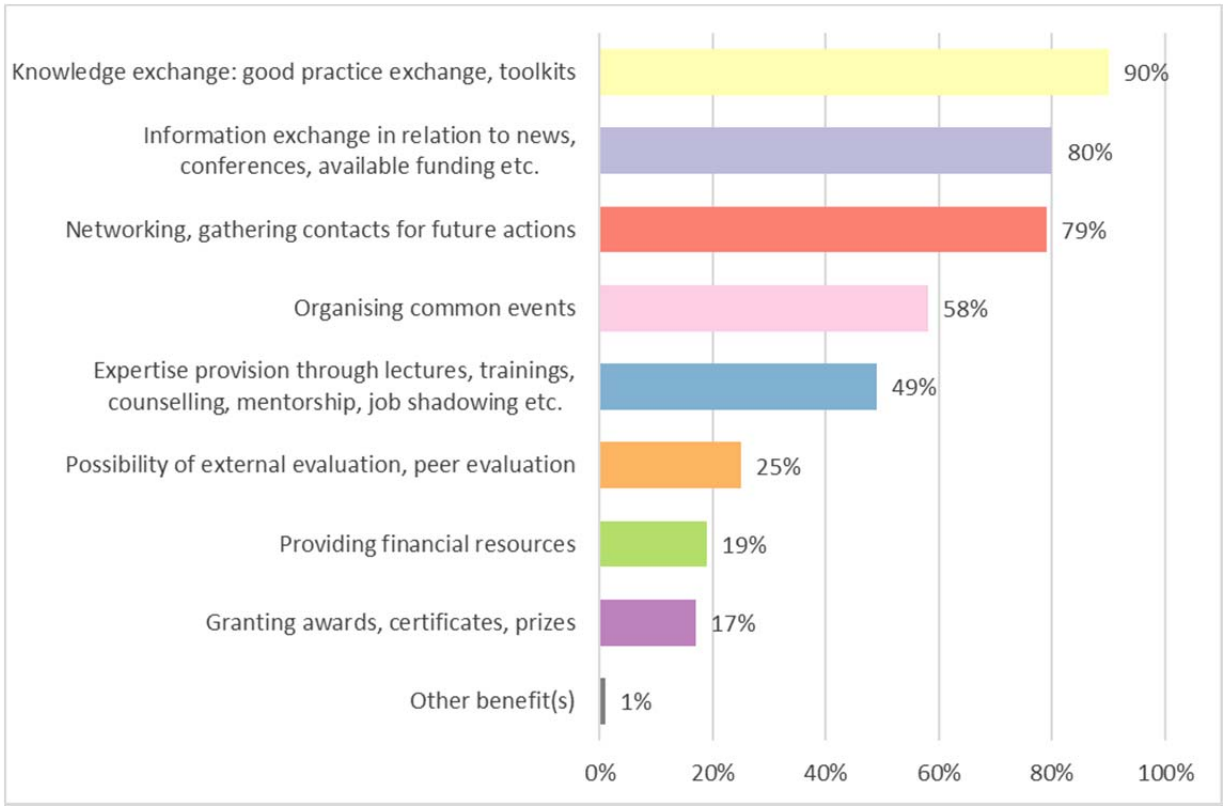
Figure 32: *Different forms of cooperation when it comes to integrating a gender dimension into research and teaching within the last 3 years (n = 114)**



*Source: ACT Community Mapping Survey (2019) * N based on number of respondents that selected at least one item*

The most common benefit of cooperation stems from knowledge exchange, including good practices and toolkits and information exchange regarding news, opportunities to allocate funding and contacts for further action (see **Figure 33**). Relatively often respondents also profited from cooperation by organising common events and receiving additional expertise through lectures, trainings, counselling or similar activities. Comparatively seldom respondents received the possibility of external evaluation/peer evaluation, financial resources or awards, certificates or prizes in connection to their cooperation activities regarding gender equality.

Figure 33: *Benefits from the participation in networks or shared GE projects (n = 146)**



*Source: ACT Community Mapping Survey (2019) * N based on number of respondents that selected at least one item*

6. GENDER EQUALITY SUCCESSES, NEEDS & SUPPORT

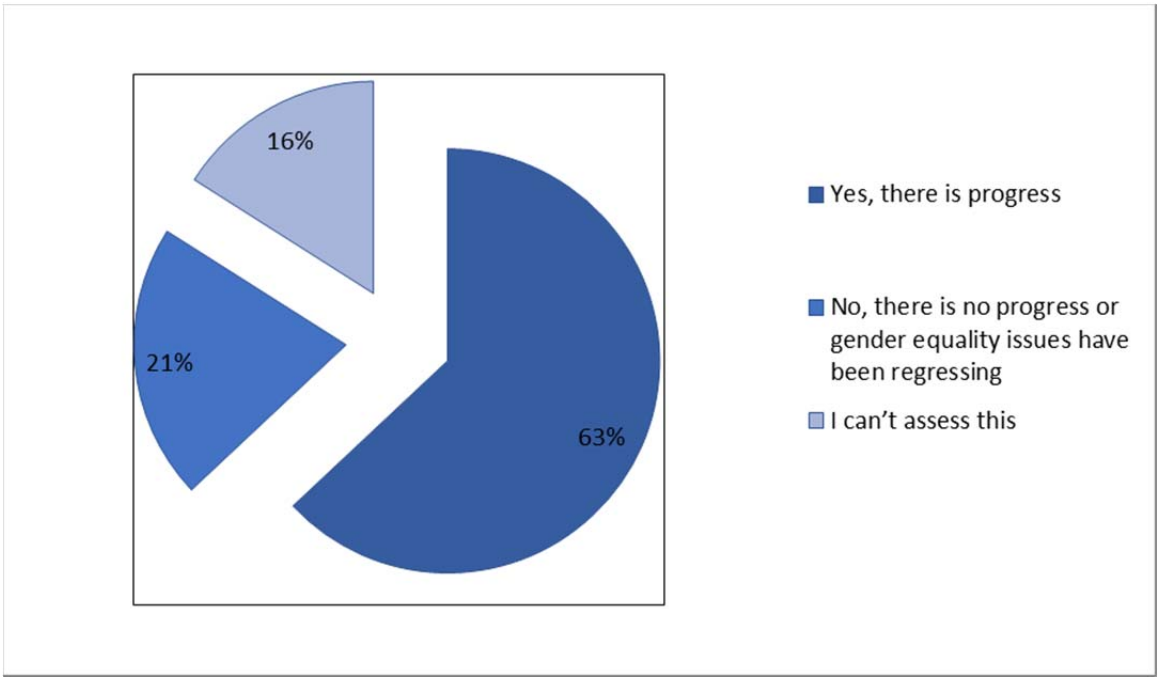
The ACT project creates and supports a network of Communities of Practice to advance gender equality in Research Funding and Research Performing Organisations. To enhance their expertise on gender equality and impact on their organisations and provide effective measures for knowledge sharing, the existing obstacles affecting the implementation of gender equality have to be overcome. This chapter examines the pursuit of gender equality in these organisations, highlighting the progress, which has been made over the past years, but also identifying barriers that currently disadvantage the fostering of equality between women and men. To further explore the opportunities to strengthen gender equality implementation in RFO and RPO are discussed. First, this chapter traces various external and internal measures adopted in these organisations. Second, it makes a diagnosis of the measures that are still needed to improve gender equality.

6.1 Progress in advancing gender equality

Most respondents see progress in relation to gender equality at their organisations

The majority of respondents observe progress at their institution or department in issues related to gender equality over the last three years. Such opinion is expressed by 63% of respondents, while about every fifth person reported that there was no progress or even that there was a regression in their institution. About 16% of respondents could not assess whether progress has been made or not.

***Figure 34**: Observed progress in respondents' institutions when it comes to gender equality in the last 3 years (n = 225)*



Source: ACT Community Mapping Survey (2019)

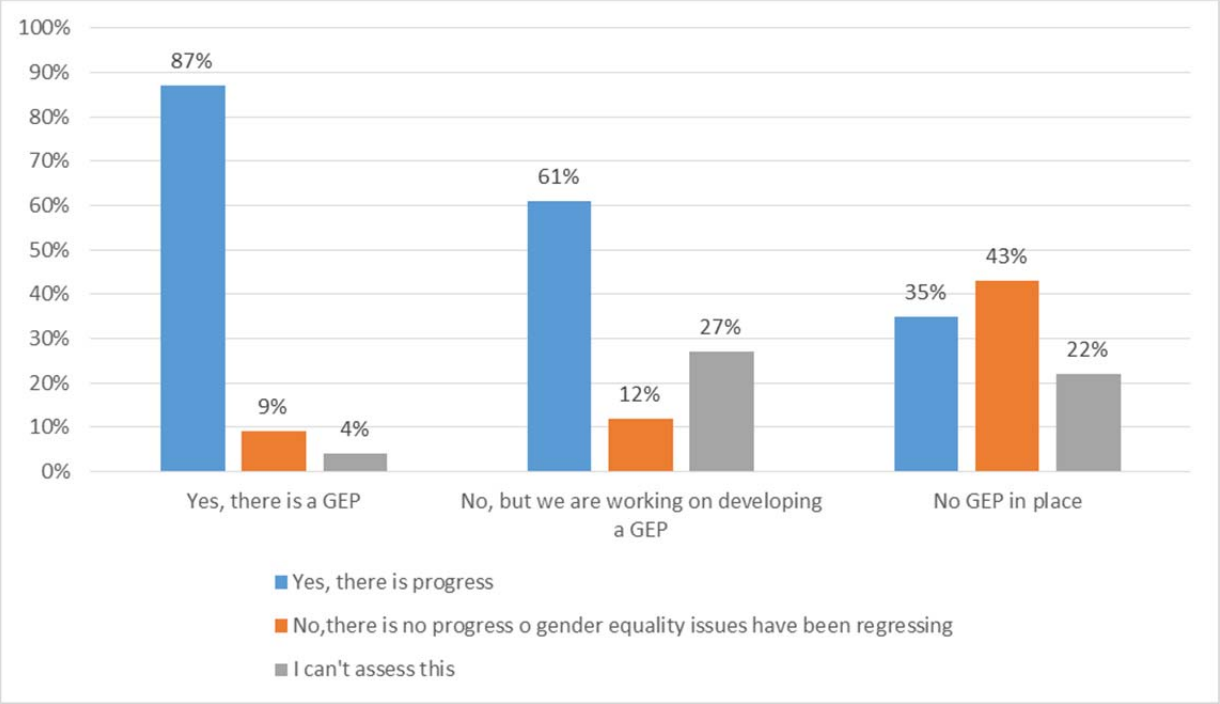
Respondents that represent the whole organisation express more positive opinions in relation to gender equality issues than those who represent individual departments/faculties (75% compared to 52%). Among the latter, more respondents believe that there was no progress or even a regression when it comes to GE in their department/faculty (31% compared to 11% of those who represented the whole organisation).

Leaders in the institutions (i.e. those who either occupy management positions, or work as Human Resource Managers or in positions linked to policy implementations such as Diversity or Equal Opportunity Officers) also more often observe progress in gender equality issues. This may be a result of their evident engagement in the process of implementing GE measures. They surely have more knowledge of activities or policy initiatives around gender equality issues as most possibly they formulate and contribute to them within their institutional roles. On the other hand, gender equality measures should directly benefit the employee community (no matter the position), therefore, lower evaluation of progress among the non-leaders may indicate a low impact of the existing measures. It may also mean that people who are directly affected by the gender equality measures - academic teachers, researchers and scientific personnel – are more critical towards the commitment of their institution to gender equality goals, and as they have practical experience how close or far the solutions implemented in their institutions contribute to these aims.

GEP as a tool enabling progress in gender equality issues

The survey clearly shows that progress in advancing gender equality is achieved when a GEP is in place. The majority of respondents whose institutions already implemented a GEP (87%) stated that they can observe progress in gender equality issues over the past 3 years: they outnumber those from institutions without a GEP by slightly more than double. The progress in advancing gender equality issues was also declared by two thirds of respondents working in institutions that had already started working on a Gender Equality Plan. This data shows that promoting and implementing GEPs contributes to the progress in an institution when it comes to gender equality issues.

Figure 35: *Observed progress in respondents' institutions when it comes to gender equality in the last 3 years by implementation of a GEP (n = 210)*



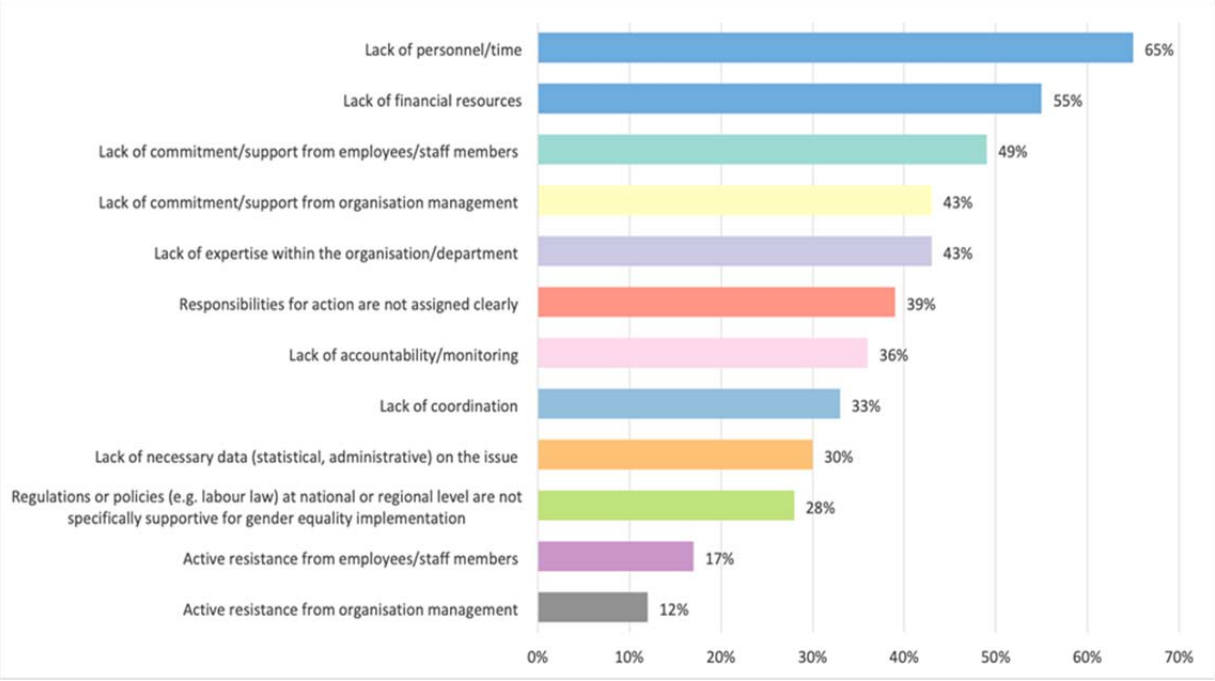
Source: ACT Community Mapping Survey (2019)

6.2 Barriers affecting the implementation of gender equality

Lack of resources and low commitment hinder gender equality

The respondents identified a broad range of barriers hampering the implementation of gender equality in their institutions – both in the whole organisation and at the level of department. The most often reported and easily recognized barriers referred to the lack of resources – either of personnel/time or financial. Such barriers were selected in the online-survey by 65% and 55% of respondents, respectively. The implementation of gender equality measures was also affected by the lack of commitment and support from employees/staff members (49%) and management (43%). Almost 2/5 of respondents recognised a lack of expertise within the organisation/institution as a factor influencing implementation of gender equality in a negative way. Importantly, the advancement of gender equality had little to do with the active resistance from the organisation's management nor from employees/staff members, which was the most rarely selected barrier. This is an important contribution of our study showing that implementing more gender equal measures in research performing and Research Funding Organisation requires in the first place securing the resources and engaging those who are affected by these solutions, and that the fear of potential opposition may be exaggerated. Some respondents selected option "other barrier(s)", noting that a "lack of understanding the need" and a "lack of awareness that it could be better" are also considered as important factors hindering the implementation of gender equality. Other critical comments were made about the lack of importance of gender equality ("GE is not a priority area") and the real impact of political barriers and so called "gender wars" and anti-gender movements which criticise gender studies.

Figure 36: *Different types of barriers affecting the implementation of gender equality (n = 202)**



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible. N based on number of respondents that selected at least one item*

Although all barriers were identified as being experienced both at the level of faculty/department and organisation, there were differences in their importance as reported by the representatives of those different institutional levels. The substantial discrepancy occurs in reference to barriers related to a lack of personnel/time and a lack of commitment/support from employees/staff members. Both

of those barriers were recognised more often by the respondents representing the whole organisation than those addressing the situation at the level of their department or faculty (respectively 73% and 56%). On the other hand, the greatest differences between the reported barriers at the level of the department/faculty and the whole organisation can be observed in relation to the following issues:

- *Insufficient support in law and regulations for GE implementation* which was acknowledged by 33% respondents representing their department/faculty and 24% of those representing the whole institution;
- *Responsibilities for action are not assigned clearly* (42% and 36% accordingly);
- *Lack of coordination* (38% and 29% accordingly).

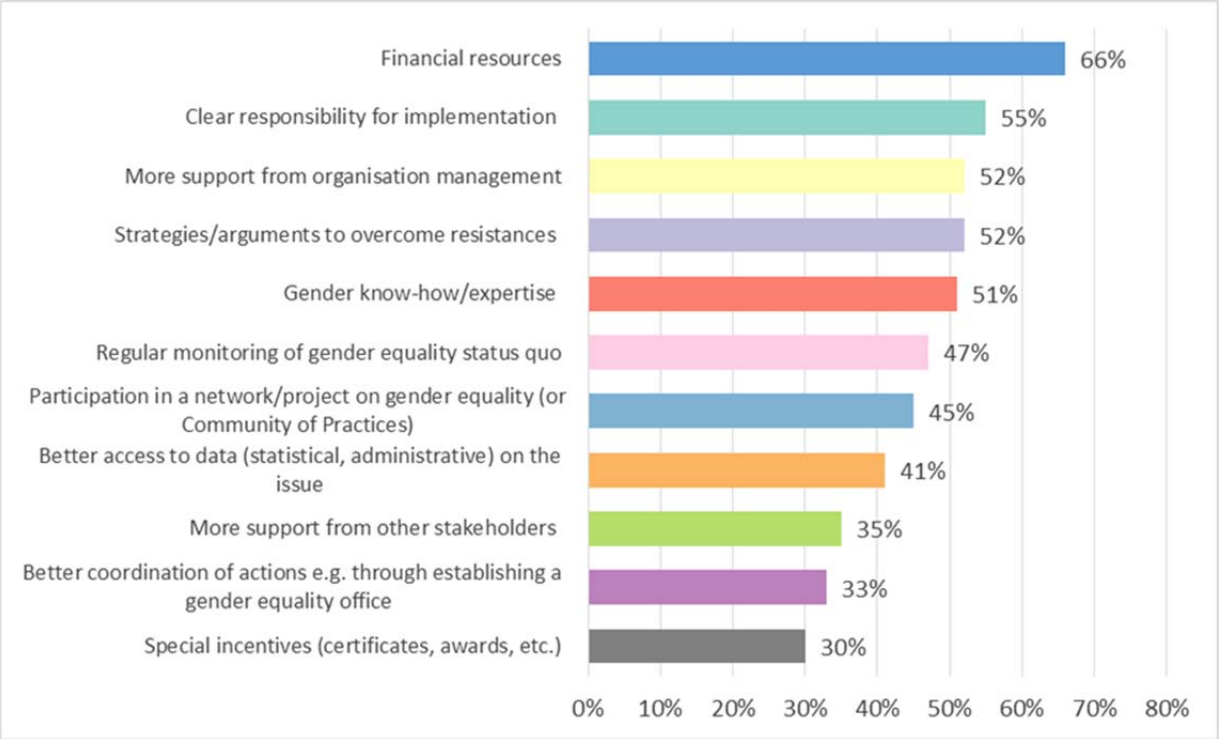
What the above results show is that on the level of department/faculty, a general framework for gender equality policies should be advocated due to the identified above internal barriers. It is therefore important to pinpoint the demands of those who represent the departments for binding regulations and the implementation of gender equality law. Additionally, there is also a clear need to establish effective institutional mechanisms and units for creating, implementing and coordinating gender equality strategies as well as providing leadership in efforts to achieve gender equality, which can be similar to gender equality machinery.

6.3 Support in gender equality measures implementation

Financial resources and clear division of responsibilities as key internal factors to advance gender equality

The respondents were asked to indicate the internal factors required to improve gender equality in their organisation or department/faculty. They were given a list out of which they could choose all relevant answers. When selecting the most important internal factors critical to gender equality, the respondents indicated such solutions, which constitute in fact a remedy to the barriers or challenges described in the previous section. The majority of respondents (59%) pointed out that the advancement of gender equality depends on securing financial resources, while half of them expressed a need for a clear division of responsibilities among those who implement gender equality measures. The respondents commonly indicated strategies/arguments to overcome resistance (47%), support from organisation management (46%), gender know-how/expertise (45%) and better access to data (statistical, administrative) on the issue – 41% as important. Therefore, broadening knowledge on gender equality and support from higher management are seen as a key to increase equality between women and men in research. Respondents indicated also participation in a network or project on GE (or Community of Practice) as an important factor (40%) – potentially it is linked to the perception of such communities as a source of gender expertise, which is highly needed. Surprisingly, the respondents indicated a need to provide better coordination of actions, e.g. though establishing a gender equality office to a lesser extent: such a measure is chosen only by every third respondent. In the open question, the respondents also suggested a need for punitive measures for not improving GE as well as proposed “carrot and stick” approach which offers a combination of incentives and punishment to motivate organisations to advance GE.

Figure 37: *Different types of internal factors needed to improve gender equality (n = 204)**



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible. N based on number of respondents that selected at least one item*

As with barriers, respondents indicated a variety of internal factors needed to achieve gender equality but depending whether they addressed this problem at the level of the department and faculty or the whole organisation, they focused on slightly different aspects. Those who represent the whole institution recognized the demand for financial resources (71% compared to 61% of respondents representing the faculty/department), strategies/arguments to overcome resistance (59% and 44% respectively), more support from other stakeholders (respectively 40% and 30%) and participation in a network/project on gender equality (or Community of Practice) (50% and 39% respectively). These aspects outweigh institutional factors related to better coordination of actions, e.g. through establishing an equality office and clear division of responsibilities when it comes to the implementation of gender equality policy or incentives. In contrast to the factors indicated by the respondents who referred to the whole organisation, those who evaluated the needs at the level of the department or faculty more often reported a need to receive more support from management (56% compared to 48%). This is not surprising as the institutional context plays a more important role in adopting and implementing gender equality objectives at the lower level: having the support from higher management allows adopting gender equality objectives or strategy more efficiently.

Grants and expertise support the implementation of gender equality

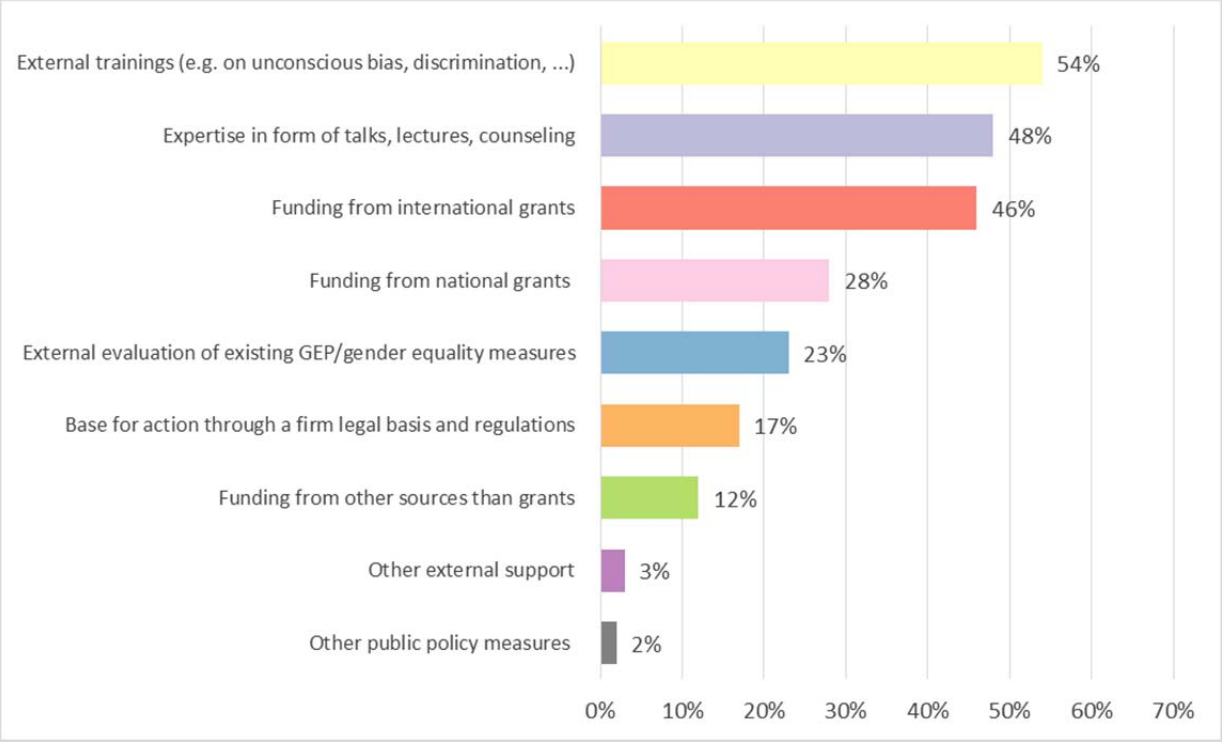
Additionally, to the internal factors analysed above, the implementation of gender equality measures may depend on external support. In order to gauge the kind of external support received by organisations, respondents were asked to indicate all forms of external support for gender equality implementation their organisation/department received in the last three years. The most often reported support was as follows (see **Figure 38**):

- External trainings (e.g. on unconscious bias, discrimination etc.) – 54%;

- Expertise in form of talks, lectures, counselling – 48%;
- Funding from international grants – 46%.

Among other types of external support, less than every fifth respondent indicated that their institution received support in the form of external evaluation of existing GEPs or other gender equality measures. What is most telling in relation to the last point is the salience of funding from national grants (28%) and other sources than grants (12%). These responses provided a sense that gender equality as a goal is more easily translated into a funding scheme rather at the international than the national level. While public policy measures and firm legal regulations could provide a general framework shaping the actions within the institutions, this type of external support was not often reported: less than every sixth respondent declared having received such a support.

***Figure 38*:** Different types of external support received for gender equality implementation in the last 3 years (n = 125)*



*Source: ACT Community Mapping Survey (2019) ** Multiple selections possible. *N based on number of respondents that selected at least one item*

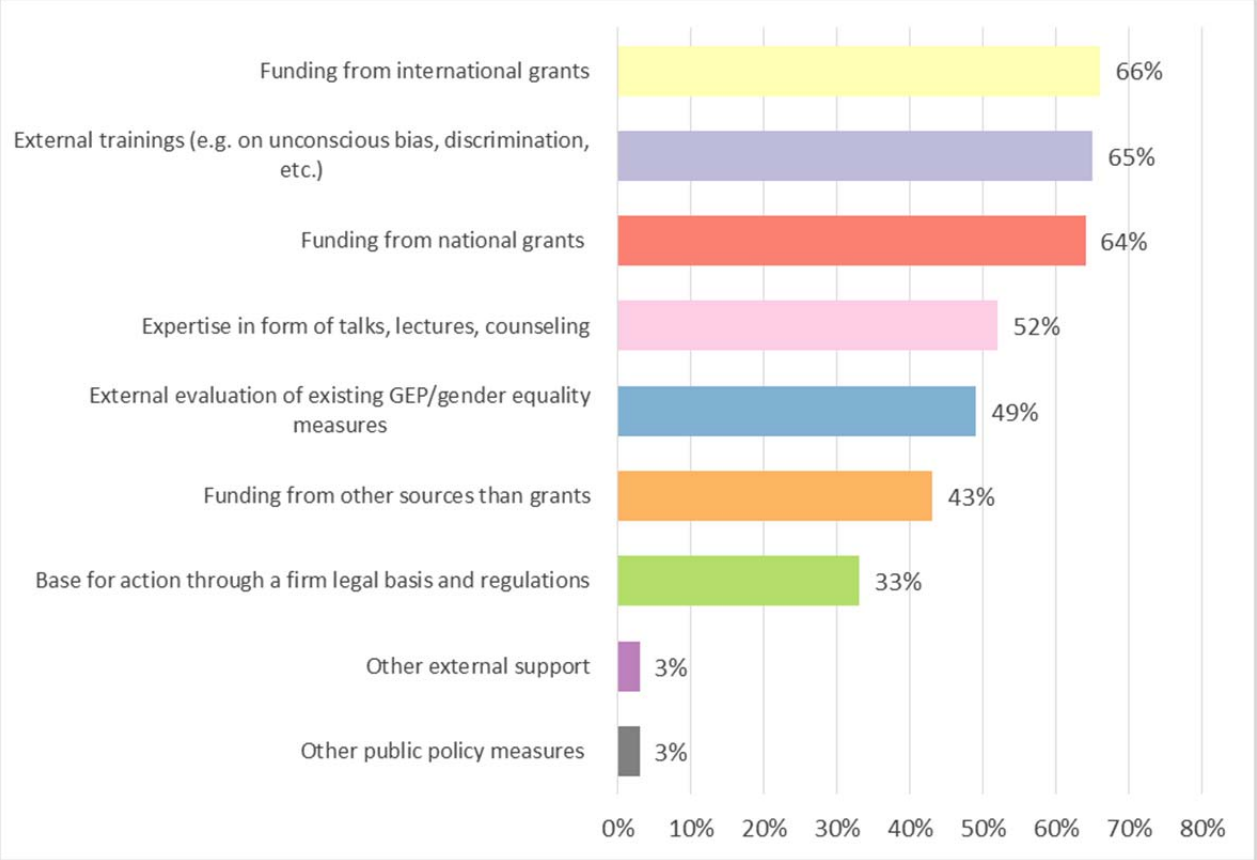
There are also marked differences between respondents referring to the level of department or faculty and the whole organisation in their responses regarding the external support received to improve gender equality. The respondents representing the whole organisation referred especially to external support in the form of evaluation of existing GEPs or gender equality measures (27% compared to 18% of respondents representing their departments or faculties). The same applies to providing a base for action through a firm legal basis and regulation (respectively 20% and 12%) and using expertise in form of talks, lecture and counselling (respectively 51% and 43%).

External support in the form of funding, knowledge and expertise exchange and monitoring of gender equality measures still needed

Respondents were asked to indicate the external support needed to improve gender equality in their institutions. The external support, which was most often indicated, can be divided into three groups:

(1) Related to funding; (2) knowledge/expertise exchange; and (3) monitoring of gender equality measures. First, in relation to funding: 66% of respondents found international grants useful while 64% declared that national grants were needed. Second, equally important was support in the form of external training (e.g. on unconscious bias, discrimination etc.) and expertise in the form of talks, lectures, counselling as this measure was also reported by 65% and 52% respondents respectively. Third, the external support is also needed in the form of external evaluation of existing GEPs or gender equality measures, as indicated by 49% respondents. A base for action through a firm legal basis and regulations was considered less important and indicated by 33% of respondents.

***Figure 39*:** Different types of external support needed to improve gender equality (n = 196)*



*Source: ACT Community Mapping Survey (2019) * Multiple selections possible. N based on number of respondents that selected at least one item*

The responses at the level of the department or faculty and the whole organisation clearly overlapped. Yet the respondents representing the whole organisation more often pointed out a need for external funding, especially from other sources than grants (49% compared to 38% of respondents who indicated needs in terms of external support at the level of the department or faculty). External evaluation of existing GEPs and gender equality measures was also more often reported by respondents who represented the whole organisation (53%) compared to those referring to the level of the department or faculty (44%), potentially due to the fact that those solutions exist at the level of the whole organisation (as shown chapter 4).

7. FIRST RECOMMENDATIONS FOR ACT

Through conducting this survey, 150 respondents from research institutions all over Europe were identified who are interested in participating in the ACT Communities of Practice. These people will now be contacted by the ACT partners in order to invite them to participate in those CoPs that are currently being established. They come from very heterogeneous institutions – and the status of gender equality implementation spans a wide range. ACT should take this into account when developing support and forming CoPs. This heterogeneity will be of great benefit to the CoPs because it enables members to learn from each other.

When forming CoPs, ACT should try to:

- Integrate organisations without GEPs or gender equality measures (especially in Eastern and South-Eastern Europe because there are few organisations with GEPs so far).
- Integrate also types of organisations other than universities, which are generally less connected.
- Integrate identified key actors as multipliers, because they participate in multiple projects and form a very active cluster.
- Integrate organisations that have not had any GE cooperation partners in the last three years and did not participate in any EU-funded structural change project but expressed their interest to become part of an ACT Community of Practice.

When developing support, ACT should:

- Address the need for support to establish effective institutional mechanisms and units for creating, implementing and coordinating gender equality strategies.
- Provide strategic support for those who want to start implementing a GEP, or have already started doing so, but are currently still in an informal activity phase. Strategies are needed to obtain institutional support and financial resources without which no structural change process can be implemented.
- Provide training on argumentative strategies for securing commitment by management and staff to GE and overcome their resistance and develop tools for sharing knowledge and expertise.
- Encourage research institutions to create and implement GEPs as the most efficient way of advancing GE in organisations.
- Provide tools for status quo assessments of gender (in)equality and encourage the use of participatory approaches to secure the commitment of management and staff.
- Develop implementation support for those measures which are judged to be very effective by the respondents.
- Moreover, provide implementation support for measures that are considered as effective by experts (less popular measures might have been evaluated less effective by the respondents because they don’t have enough experience in the use of such).
- Focus to a greater extent on including the gender dimension in research, curriculum and teaching because these measures have to date not been implemented so often.
- Provide gender knowledge – especially support in the form of trainings, counselling and lectures is required and support in distributing gender knowledge within the organisation.
- Encourage members of CoPs to disseminate knowledge on measures adopted in their organisation and to evaluate the implementation of these measures at the departmental/faculty level.

8. REFERENCES

Butts, Carter T. (2008). network: a Package for Managing Relational Data in R. Journal of Statistical Software, 24(2). URL: http://www.jstatsoft.org/v24/i02/paper [11.3.2019].

Butts, Carter T. (2015). network: Classes for Relational Data. The Statnet Project. R package version 1.13.0.1. URL: http://CRAN.R-project.org/package=network [11.3.2019].

Butts, Carter T. (2016). sna: Tools for Social Network Analysis, R package version 2.4. URL: https://CRAN.R-project.org/package=sna [11.3.2019].

Csardi, Gabor, Nepusz, Tamas (2006). The igraph software package for complex network research. InterJournal. Complex Systems 1695. URL: http://igraph.org [11.3.2019].

European Commission (2019). She Figures 2018. URL: https://ec.europa.eu/info/publications/she-figures-2018_en [10.04.2019].

Fellows, Ian (2016). OpenStreetMap: Access to Open Street Map Raster Images. R package version 0.3.3. Using the JMapViewer library by Jan Peter Stotz. URL: https://CRAN.R-project.org/package=OpenStreetMap [18.4.2019].

Luke, Douglas A. (2015). A User's Guide to Network Analysis in R. Springer International Publishing.

Minka, Thomas P., Deckmyn, Alex (2018). maps: Draw Geographical Maps. R package version 3.3.0. Original S code by Richard A. Becker, Allan R. Wilks. R version by Ray Brownrigg. Enhancements by Minka and Deckmyn. URL: https://CRAN.R-project.org/package=maps [18.4.2019].

Scott, John (2000). Social Network Analysis. A Handbook, 2nd Edition, London: SAGE Publications Ltd.

South, Andy (2011). rworldmap: A New R package for Mapping Global Data. The R Journal Vol. 3/1: 35-43. URL: https://cran.r-project.org/web/packages/rworldmap/rworldmap.pdf [18.4.2019].

Wickham, Hadley (2016). ggplot2: Elegant Graphics for Data Analysis. New York: Springer-Verlag.

9. APPENDIX

This Appendix shall provide additional information for interested readers concerning the data cleaning process, commonly used SNA terms and some additional data tables. Note that the entire online-survey is available at https://zenodo.org/record/2553070#.XKXoVk2P670 and is therefore not included here.

9.1 Data Cleaning

The aim of the ACT community mapping survey was to map gender equality practitioners with a main focus on the EU28 countries. The survey included multiple topics, ranging from gender equality actions within the institution to cooperation for structural change and including a gender dimension in research and/or teaching. Furthermore, also existing support schemes and perceived needs should be analysed based on survey results. In order to cover all these topics, the survey addressed not only individuals that hold management positions or those responsible for GE within the organisations, but also general researchers which may include gender as a dimension in their work. Furthermore, due to the snowball sampling method it was possible that multiple surveys were returned from the same organisation, or even from the same unit (i.e. department/institute).

This provided some challenges in the data cleaning process. First, all responding organisations had to be clearly identified and provided with a distinct name of organisation. The text matching process was conducted partly in R using fuzzy matching functions[34], combined with manual matching in Excel. Note that for some organisations, especially in the case of universities, there may not be one single name of institution, but different ways to refer to the same organisation. Hence, all of these had to be checked and coded respectively. Then, each organisation with multiple responses had to be considered. In order to distinguish separate departments/institutes from the same organisation, each case was assigned a unit code. This unit code consists of the code of organisation combined with a number for each institute (e.g. 38_01 refers to organisation with code 38, institute number 1). If the answer level was the whole organisation, the organisation received a unit code ending on “00”, e.g. 38_00 to use the previous example. This way it became clear, which cases actually refer to the exact same unit and would have to be considered more closely or even sorted out.

For the Social Network Analysis (SNA), another issue had to be dealt with: When plotting the networks it had to be clear, which nodes belong to the same organisation and which answer level the respective respondent had chosen. Furthermore, the individual ties between nodes should stay visible and not only ties between affiliated organisations. In the SNA sample (n = 222) there are 109 cases (49%) in which the survey respondent referred to the level of department/institute. The remaining 113 surveys (51%) were filled out for the whole organisation. In order to deal with these different levels and multiple responses for the same organisation (e.g. multiple departments from the same university), the respective “mother-organisation” was added as a fictitious partner to every department/institute to indicate a connection. In some cases, survey data for the “mother-organisation” is also available, i.e. one person filled out a survey for the whole organisation, and another filled it out for an individual department/institute. In other cases, the “mother-organisation” was added merely as a partner, with no survey data available. For the graphical analysis, “mother-organisations” are typically shown as circular nodes, departments/institutes are shown as triangles. This way, the different levels are clearly identified and accounted for in presenting summary statistics. For the calculation of network specific measures, such as centrality, only selected measures were meaningful in this sample set-up. In order to check if results are robust, the entire analysis was also conducted at the organisation level, i.e. all partners from different levels (organisation or

[34] See https://cran.r-project.org/web/packages/fuzzyjoin/fuzzyjoin.pdf for the applied method.

department/institute) were assigned to the "mother-organisations". This showed that presented distributions stay the same. However, respondent attributes could not be simple re-assigned to the "mother-organisations" as they differ between respondents (i.e. department could have a GEP but not the overall organisation etc.). That is why the presented results focus on individual responses and not the overall organisations.

9.2 SNA Terminology

For readers unfamiliar with Social Network Analysis, the following descriptions shall provide an overview of the commonly used terminology:[35]

- Node: Refers to one single unit of analysis, which in our case is one responding organisation or department/institute or added partner. It corresponds to one dot on the social network plot;
- Edge: Refers to a connection between two nodes, sometimes also denoted simply as "connection" (mainly used in this analysis) or "tie";
- Undirected/directed network: In undirected networks, it is irrelevant who named who as partner, in directed networks also the direction in which partners were named are analysed. The analysis of this report is based on an undirected network;
- Adjacency matrix: A binary n x n matrix of all nodes in the sample, indicating 1 if there is a connection, 0 if there is none. In an undirected network the adjacency matrix is symmetric (this sort of matrix was used in this analysis);
- Network centrality: Centrality scores show the more or less connected nodes in the network. The centrality measure used in this analysis is eigencentrality (also called eigenvector centrality), which is calculated by multiplying the adjacency matrix with a vector that includes the total number of connections for each node.

All calculations concerning the Social Network Analysis were carried out in the software environment of R Studio. R packages used for the SNA include the packages *network*, *sna* (Butts 2008; 2015; 2016) and *igraph* (Csardi and Nepusz 2006). For visualisation mainly *ggplot2* (Wickham 2016) and *igraph* were used. The geocoding and geographical mapping was conducted with the help of *OpenStreetMap* (Fellow 2016), *maps* (Minka and Deckmyn 2018) and *rworldmap* (South 2011).

The SNA results of this report are typically presented on the node level, i.e. for each individual respondent. Note that multiple responses from the same organisation are possible but refer to a different level (either the organisation as a whole or one specific department/institute).

9.3 Additional Data Tables

This chapter includes tables with total survey respondents or network partners which have been mentioned throughout the report. **Table 2** shows the total number of survey responses by country as well as the region that the country belongs to in the analysis.

[35] For a more thorough introduction to Social Network Analysis refer to Scott (2000).

Table 2: *Number of survey responses by country and regional classification (n = 265)**

COUNTRY (REGION)	TOTAL	COUNTRY (REGION)	TOTAL
Argentina (5)	1	Latvia (2)	1
Austria (1)	19	Lithuania (2)	4
Belgium (1)	6	Netherlands (1)	4
Bosnia & Herzegovina (2)	1	New Zealand (5)	1
Bulgaria (2)	11	Norway (4)	2
Canada (5)	2	Poland (2)	35
Croatia (2)	4	Portugal (3)	6
Cyprus (3)	3	Romania (2)	3
Czech Republic (2)	4	Slovakia (2)	1
Denmark (4)	8	Slovenia (2)	17
France (1)	13	South Africa (5)	1
Germany (1)	25	Spain (3)	32
Greece (3)	1	Sweden (4)	5
Hungary (2)	1	Switzerland (1)	4
Iceland (4)	4	Tunisia (5)	1
Ireland (1)	6	Turkey (3)	2
Israel (5)	2	United Kingdom (1)	22
Italy (3)	12	United States (5)	1

** To keep the table easily readable, the regions were numbered as follows: (1) Western/North-Western Europe; (2) Eastern/South-Eastern Europe; (3) Southern Europe; (4) Nordic countries; and (5) Non-European countries.*

Table 3: *EU-funded structural change projects listed in the online-survey (n = 20)**

PROJECT	TOTAL	PROJECT	TOTAL
Baltic Gender	2	GENOVATE	1
CHANGE	6	INTEGER	1
EGERA	1	LIBRA	8
EQUAL-IST	1	PLOTINA	4
FESTA	7	R&I PEERS	0
GARCIA	6	SAGE	2
GEECCO	5	STAGES	5
GENDERTIME	5	SUPERA	1
GENERA	13	TARGET	3
GENIS LAB	1	TRIGGER	3

** Total refers to the number of respondents selecting the respective project in the online-survey.*

Table 4: *Nodes in partner network 1 by country (n = 466)*

COUNTRY	TOTAL	COUNTRY	TOTAL
Argentina	2	Latvia	1
Austria	33	Lithuania	9
Belgium	15	Netherlands	9
Bulgaria	11	New Zealand	7
Canada	8	Norway	9
Chile	1	Poland	46
Croatia	8	Portugal	6
Cyprus	4	Romania	5
Czech Republic	6	Serbia	2
Denmark	13	Singapore	1
Finland	1	Slovakia	2
France	21	Slovenia	16
Germany	41	South Africa	1
Greece	3	Spain	54
Hungary	7	Sweden	13
Iceland	3	Switzerland	11
Ireland	15	Tunisia	1
Israel	5	Turkey	5
Italy	16	United Kingdom	47
Japan	1	United States	7

Table 5: *Nodes in partner network 2 by country (n = 378)*

COUNTRY	TOTAL	COUNTRY	TOTAL
Argentina	2	Liechtenstein	1
Austria	21	Lithuania	7
Belgium	7	Morocco	1
Bosnia and Herzegovina	1	Netherlands	4
Bulgaria	9	New Zealand	2
Canada	4	Norway	3
Croatia	4	Poland	42
Cyprus	4	Portugal	9
Czech Republic	8	Romania	7
Denmark	10	Serbia	2
Estonia	1	Slovakia	3
Finland	2	Slovenia	16
France	20	South Africa	1
Germany	33	Spain	40
Greece	3	Sweden	10
Hungary	2	Switzerland	9
Iceland	2	Tunisia	1
Ireland	9	Turkey	8
Israel	5	Ukraine	1
Italy	28	United Kingdom	34
Latvia	1	United States	1