Deliverable 6.2

Stakeholder Workshops

including three

Policy Briefs

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 665637
July 2018

Introduction

This report explains the purpose, agenda, activities and experiences of the two stakeholder workshops held by the GENERA project in 2018. The aim of these events was to engage external actors (practitioners and policy makers in European Research Area) in dissemination and communication activities about GENERA products, and to obtain feedback from them on how useful the tools developed and tested by the GENERA consortium as part of GEP implementation are for other RPOs and RFOs. These interactions were used to help identify ways that can support more systematic and systemic GEP implementation activities in ERA.

The two workshops attracted 150 attendees and were organised using a participatory-style. The first workshop was 2-day one and the second was of 1-day duration. The format for both was designed to maximise opportunities for discussion and exchange of experiences between the different actors and stakeholders. The key question was how to support national RPOs and RFOs in different countries in GEP implementation. These discussions and exchanges of views provided input for GENERA policy briefs and informed the GENERA communication and dissemination activities. The good start was that involved in GENERA were 31 research partners, 28 of whom where RPOs and RFOs in physics. Each partners in turn has introduced GENERA to their networks.

Workshop 1 – London 22-23 January 2018, Kings College, 85 participants

1. The first aim of Workshop 1 was to present and discuss GENERA results with practitioners and managers involved in similar Gender Equality promoting projects, and through participatory activities obtain feedback from them on how to improve GEPs as a tool for change. The idea was *not to discuss the why's* of Gender Equality actions, but *to agree how to* make GEPs easier to implement and with sustainable impact.

2. The second aim of the Workshop was to introduce the GENERA Network[1] for research organisations in Physics, to ensure continued exchange of experience in implementing GEPs as well as other gender equality good practices, to enable mutual learning and achieve systematic and systemic improvement across ERA in organisational processes, human capital development, science knowledge making, and institutional governance.

For the list of participants: please see Appendix A.

The Agenda for both workshops (long version): is at Appendix B

[1] Find more details on the GENERA Network in the WP5 networking reports

Workshop 1- outline programme and highlights

Senior leaders from physics organizations (GENERA partners & observers as well as others) were invited to the Workshop to speak about their experiences of advancing gender equality. Welcome in particular were individuals who have driven change in the UK as part of the JUNO Programme of the Institute of Physics, or the Athena Swan programme. In addition to gender equality activities designed to directly influence physics institutions themselves, the Workshop has also examined:

- Outreach and teacher programmes
- Career and family support
- Leadership support
- Systematic disciplinary approach

One of the aims of the Workshop was to identify "gaps" in GEP that can be overcome through sharing of knowledge and improvement of practices for GEP implementation.

Programme slide day 1

Programme (part 1)

13:00 – 13:30	Brief introduction to GENERA: GEPs from physics for physics Explanation of what the Workshop is about: activities and outputs
13:30 – 15:00	Science and institutional leaders share their experiences in implementing GEPs in Physics. The Panel includes high-level representatives from among the GENERA 30 participating organisations
15:00 – 15:30	Implementing GEPs in tough settings: lessons from Israel military
15:30 – 15:45	Break and Networking
15:45 – 16:45	Reports from GENERA on key achievements and deliverables: new tools for GEPs

Learning from institutional commitment to gender equality in physics in the UK setting

In many respects the UK has led the way in advancing gender equality in physics, since 2005 when the Institute of Physics initiated a programme of visits to University Physics Departments to assess the status of gender equality. This initiative led to the JUNO

programme of recognition of departments that have advanced gender equality in a significant way.

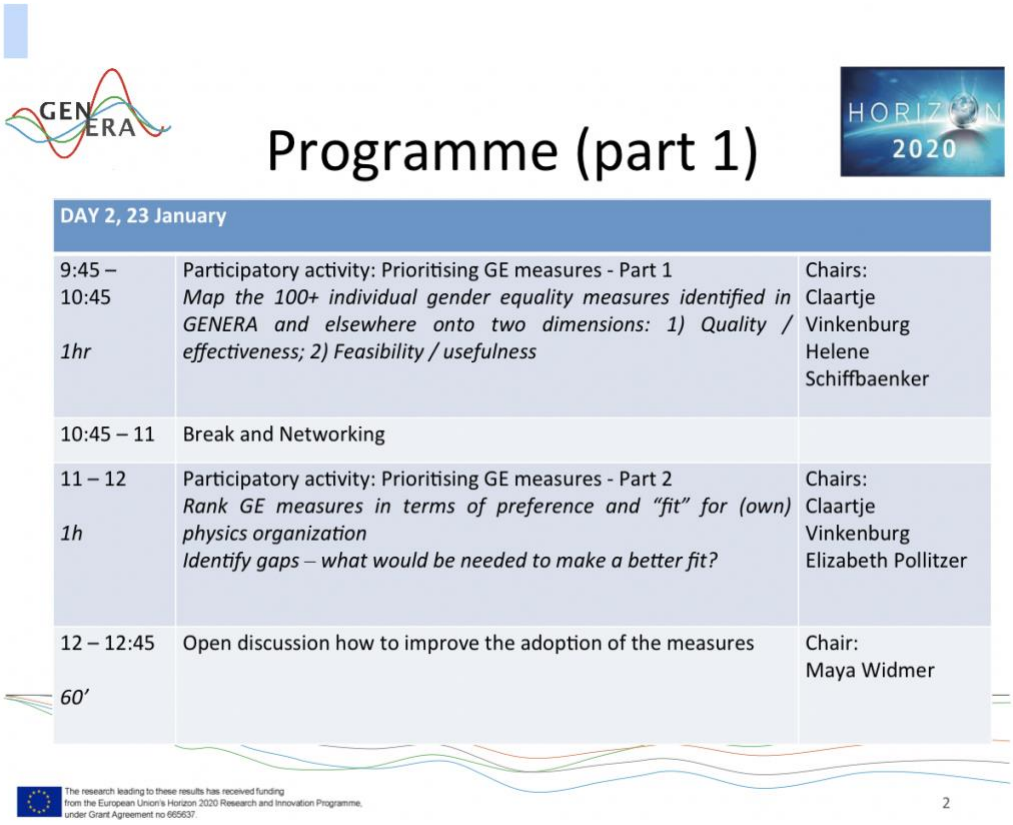
The Workshop 1 panel included high-level representatives from Physics and STEM institutions in the UK, invited to share their experience of JUNO and Athena SWAN interventions.

- Peter Main, Kings College, Head of Department of Physics at Kings College London
- Simone Buitendijk, Vice rector for educations at Imperial College
- Valerie Gibson, Head of the High Energy Research Group at Cambridge University

Participative activity: prioritizing gender equality measures

The aim of the participatory activities was to jointly examine and prioritize the almost 150 gender equality measures collected from different sources, those that were included in the GENERA Toolbox, and also those in the EFFORTI typology of gender equality interventions[2], and a list of strategies for attracting and retaining women in academic science (Williams et al., 2017)[3] .

Programme slide day 2 (participative activity)



Programme (part 1)

DAY 2, 23 January		
9:45 – 10:45 *1hr*	Participatory activity: Prioritising GE measures - Part 1 *Map the 100+ individual gender equality measures identified in GENERA and elsewhere onto two dimensions: 1) Quality / effectiveness; 2) Feasibility / usefulness*	Chairs: Claartje Vinkenburg Helene Schiffbaenker
10:45 – 11	Break and Networking	
11 – 12 *1h*	Participatory activity: Prioritising GE measures - Part 2 *Rank GE measures in terms of preference and "fit" for (own) physics organization* *Identify gaps – what would be needed to make a better fit?*	Chairs: Claartje Vinkenburg Elizabeth Pollitzer
12 – 12:45 *60'*	Open discussion how to improve the adoption of the measures	Chair: Maya Widmer

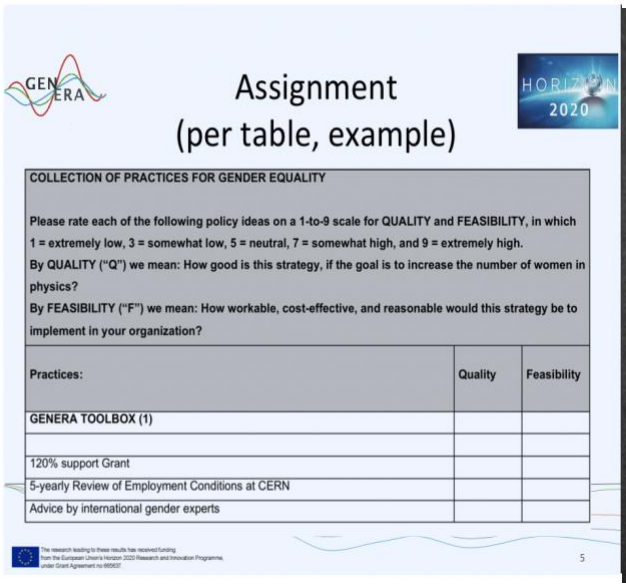
[2] https://efforti.eu/sites/default/files/2018-03/EFFORTI%20D3.3%20FINAL%2027032018.pdf

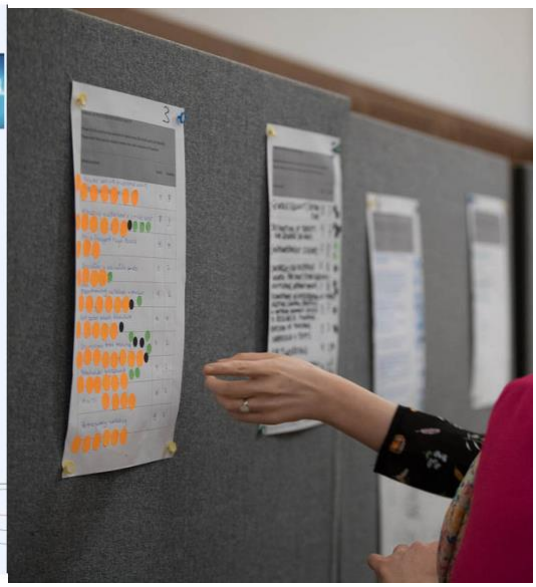
[3] https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00700/full

The approach involved a multi-criteria decision analysis method. The participants were organised into small groups and asked to review the collected measures and segregated them onto two dimensions: quality/effectiveness vs. feasibility/usefulness, giving a score ranging from 1 – extremely low to 9 – extremely high. Each table was asked to map 2 sets of 15-20 measures from one of these sources, making sure each 1 set was mapped twice. After the initial mapping exercise, participants were asked to rank the prioritised measures again to identify the best fit with the potential to of implementing each in their own organization. In addition, we asked participants to reflect on possible gaps and ideas for improving fit. This resulted in the selection of top 25 of gender equality measures prioritized as of high quality, feasibility and fit for purpose.

Table 1: prioritized gender equality measures from three different sources (~ 150 in total) G – GENERA toolbox, E – EFFORTI , W – Williams et al article

Rank	Measure description	Quality	Feasibility	Fit	Source (G, W, E)
1	Unconscious / implicit bias training	9	7	15	G
2	Develop mentoring programs for all faculty	9	9	12	W
3	Girls day	9	9	9	G
4	Train decision makers for inclusive action	9	9	8	W
5	Managing motherhood and scientific career	7	9	10	G
6	Leadership Accountability	9	5	11	G
7	Support no-cost extensions for grants	9	9	6	W
8	Parental leave with occupational activity	8	9	7	G
9	Flexible Working Conditions	9	8	7	E
10	Stakeholder Engagement	8	7	9	G
11	Allow changing from full-time to part-time	9	7,5	7	W
12	Management Programme for women	9	9	5	G
13	Awareness raising activities	8	8	7	G
14	Post Career Break Fellowship	8	8	7	G
15	Use technology to promote flexibility (e.g. telework)	8	8	7	W
16	Gender-disaggregated data	9	5	9	G
17	Advice from international gender experts	8	9	5	G
18	Search committees to ignore family-related CV gaps	9	7	6	W
19	Childcare on campus	8	8	6	G
20	Diversity training for research funders	9	7	6	G
21	Allow unpaid sabbatical & leave M/F without penalty	9	7,5	5	W
22	Workshops on workplace climate & resource allocation	9	8	4	W
23	Observation in evaluation panels	9	7	5	G
24	Provide subsidies for care services	9	7	5	W
25	Participatory Modeling (system dynamic intervention)	8	7	6	G





Workshop 2 – London 20 June 2018, IET, 65 participants

- The first aim of the 2nd Workshop was to gain input for and discuss GENERA products and experience with science and policy communities to help produce Policy Briefs that can facilitate progress towards mainstreaming gender in STEM at institutional, ERA, and European levels. The purpose of these Policy Briefs is to provide evidence and an assessment of progress and gaps across the different policy commitments and actions

- The second aim of the workshop was to report on the future of the GENERA Network and its role in creating Communities of Practice to help organisations with shared interests and objectives to use in common with others best practices and methods for make improvements on specific gender issues, and/or manage GEPs design and implementation.

Summary of the programme and highlights from participation

The event started off with presentations by a very informative panel of policy leaders (Science with and for Society, Euraxess and EuroDoc) that bridged the local, national, and European policy levels (or down, mid, and upstream) on gender equality in ERA, taking the perspectives of gender mainstreaming, human resources for researchers, the precarious positions of early career researchers, and funding for gender equality in the future framework programme into account.

Next, the process moved on to the participative part of the programme, which involved SWOT analysis of the gender equality plan (GEP) approach at three relevant levels of policy making.

One to three tables each prepared a SWOT analysis at a particular level of policy making. A summary of the outcomes of this session is provided below.

Agenda (long version): see appendix C

Table 2: Output of SWOT analysis of the GEP approach and gender equality measures at three levels of policy making (upstream, midstream, downstream).

SWOT ANALYSIS GENDER EQUALITY POLICIES – 3 LEVELS (June 20th, 2018, GENERA meeting)				
Policy (D,M,U)	**Strengths**	**Weaknesses**	**Opportunities**	**Threats**
GE earmarked resources for large infrastructures (UPSTREAM)	More equal money distribution Link the money to GE to make money dependent on outcomes	Lack of policy implementation Organisational resistance	Distribution of funds with GE requirements	Depends on political priorities that change
Conference charter (MIDSTREAM)	Greater participation, more diversity Positive label/mark of quality	Impact is limited Funding Physical infr/str limitations	Example for others More inclusive environment (no aggression	Lack of participation by individual organisations
Dataset (MIDSTREAM)	Standardisation to compare & identify gaps Positive feedback between organisations	Need qualitative and quantitative data Data doesn't always show the problem	Influence upstream level Leverage GEP good practice already in place Powerful tool to advocate for action	Resistance internally die top admin overhead GDPR Staff resources to gather data

SWOT ANALYSIS GENDER EQUALITY POLICIES – 3 LEVELS (June 20th, 2018, GENERA meeting)				
Policy (D,M,U)	**Strengths**	**Weaknesses**	**Opportunities**	**Threats**
			National legislation e.g. pay gap	
Gender equality full scope (MIDSTREAM)	Women 'forced' into workplace Budgetary & programme focus in FPs Positive discrimination in institutions →More support for development → Stronger measures and targets	Lack of female applicants for positions Imbalance in family-friendly research Barriers from working cultures →lack of research data → lack of gender assessment	Implement gender equality societally (schools) Bidirectional; gender equality awareness (also men) Societal awareness and acceptance → push for younger awareness → participate in broader societal discussion	General budgetary restrictions Myth everything is done Disillusionment with the system →stronger focus on issues → stronger actions for issues
Special chairs (MIDSTREAM)	Increase the representation of women Get high level influential women Role models Building a critical mass	Internal resistance from women Lack of appropriate candidates Need of external funding Unconscious bias at top level	Role models Political; momentum Fresh funding EU programmes, stakeholders, investment legitimacy	Legal implications Meritocracy Shifting of priorities Gender issues as part of other issues, e.g. migration Haters in social media
Flexibility policies (MIDSTREAM)	Integrating into legal framework Applies equally to all Stakeholder engagement	Supervisor discretion not applied consistently	Vacancy notice inclusion – attraction as employer Upper level management setting example Indirect influence towards other employees	Negative perception Funding withdrawn/ mismatch
GEP approach Including awards (DOWNSTREAM)	Snowball effect/competition who is best	Limited power of those implementing GEPs (change	GEP/athena approach How institutions deal with this	Reduced budget for SWafS

SWOT ANALYSIS GENDER EQUALITY POLICIES – 3 LEVELS (June 20th, 2018, GENERA meeting)				
Policy (D,M,U)	**Strengths**	**Weaknesses**	**Opportunities**	**Threats**
	Raise awareness of physics Carrot and prestige (Athena) Joined action Whole community Healthy competition (Athena)	agents-young, non permanent Only tick-box exercise Wall of resistance Limited knowledge on gender Lack of recognition of social science National rules GE offices not effective No consequences for inaction Too specific/too general measures	Better working conditions Physics community cares about GE	GEP for whole university vs. physics institution Resources/money Not enough time

Final remarks

The feedback from the SWOT analysis and the panel sessions and discussions was used to develop three policy briefs based on the GENERA project for three levels of policy making. The draft versions of these policy briefs can be found in Appendix E.1, E.2, and E.3 respectively. We thank our workshop speakers, participants, and GENERA partners for their openness and willingness to discuss the often "wicked problems" of GEP implementation.

Portia LTD July 2018

This report is deliverable D6.2 of GENERA - Gender Equality Network in the European Research Area - a project funded by the European Commission under GERI-4-2014 01 September 2015 - 31 August 2018 grant agreement 665637. GENERA's main goal has been to implement gender equality plans in physics.

For further information about GENERA please contact Dr Thomas Berghoefer, thomas.berghoefer@desy.de
For further information relating to the content of this report please contact Dr Elizabeth Pollitzer, ep@portiaweb.org.uk

Appendix A

First Name	Last Name	Institution
Mathieu	Arbogast	CNRS - Mission for the place of women
Sveva	Avveduto	National Research Council Irpps
Ursula	Bassler	CNRS - IN2P3
Thomas	Berghoefer	DESY
Daniela	Bortoletto	University of Oxford (Physics)
Martine	Bosman	
Simone	Buitendijk	Imperial College London
Tessa	Carver	
Stephen	Curry	Imperial College London
Valerie	Dahl	Gender & Physics group, Institute of Applied Physics, University of Muenster, Germany
Cornelia	Denz	Gender & Physics group, Institute of Applied Physics, University of Muenster, Germany
Ilaria	Di Tullio	IRPPS - CNR
Eileen	Drew	Trinity Centre for Gender Equality and Leadership, Trinity College Dublin
Irene	Eisemann	KIT
Eric	Eliel	Leiden Institute of Physics, Leiden University
Clémence	Epitalon	CNRS
Meytal	Eran Jona	Weizmann Institute of Science
Meike	Flammer	Europe XFEL
Rochelle	Fritch	Science Foundation Ireland
Catherine	Gater	EMBL-EBI
Val	Gibson	University of Cambridge
Monique	Gomez	Instituto de Astrofisica de Canarias
Mandy	Grobosch	HZDR
Genevieve	Guinot	CERN
Anne Laure	Humbert	Cranfield School of Management
Ebru	Ilhan	Kite Global Advisers
Anna-Christina	Jauch	DESY
Helen	Jermak	Liverpool John Moores University
Sabine	Jochsen	
Katarzyna	Jurzak	Jagiellonian University in Krakv≥w
Niamh	Kavanagh	Tyndall National Institute, University College Cork
Yvonne	Kavanagh	Institute of Technology Carlow
Regina	Kelly	Institute of Physics Ireland (Univeristy of Limerick)
Sylwia	Kostka	National Science Centre Poland (funding agency)
Ioanna	Koutava	CERN
Marta	Lazarowicz-Kowalik	Foundation for Polish Science

Ruth	Lazkoz	University of the Basque Country
Natalie	Lerch-Pieper	Paul Scherrer Institute (PSI)
Frauke	Logermann	MPQ
Marie	Lutz	
Emyr	Macdonald	Cardiff University
Anna	Maerdian	KIT - Karlsruher Institut fVºr Technologie
Peter	Main	Kings College , Deaprtment of Physics
Maria	Mantini	Centro Studi Progetto Donna e Diversity Mgmt
Ute	Meier-Diedrich	University of Kassel, Department of Mathmetics and Natural Sciences, Germany
Petra	Metz	Humboldt-Universitaet zu Berlin
Victor	Molina	Max Planck Society
Agneta	Nestenborg	
Deirdre	Ni Eidhin	University of Limerick
Victoria	Pearson	Open University
Lucio	Pisacane	CNR IRPPS
Ben	Pollitzer	Portia
Elizabeth	Pollitzer	Portia
Francesca	Primas	ESO
Maria Dolores	Rodriguez Frias	Space and Astroparticle group, University of Alcala, Madrid
Tamara	Rogers	Newcastle University
Sabah	Salih	The University of Manchester
Dalia	Satkovskiene	Vilnius University
Helene	Schiffbänker	JOANNEUM
Paulina	Sekula	Uni Krakow
Steffi	Steins	European Southern Observatory (ESO)
Lotta	Strandberg	NordForsk
Jusyna	Struzik	Jagielonski University
Lucia	Tinari	INFN
Rita	Tojeiro	University of St Andrews
Angela	Townsend	Institute of Physcs
Hanna	Vehkamäki	University of Helsinki, Finland
Claartje	Vinkenburg	Independent & VU Amsterdam
Stephen	Watts	Uni Manchester
Ulla	Weber	Max Planck Society
Magdalena	Wencka	Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland
Maya	Widmer	GEMO Widmer
Helmut	Wiedenhofer	Joanneum
Richard	Pollitzer	host
Eugenijus	Satkovskies	(Dalia's husband)
Aoife	Bharucha	Centre de Physique ThV©orique, Marseille
Valentina	Forini	Humboldt University Berlin (now), City University of London (from January)
Paula	Gonzalez Saiz	BCMaterials

Lia	Lang	DESY
Eisabet	Koehler	CNRS
Mieke	Johannsen	DESY
svevva	avveduto	
Ursula	Bassler	
Sylwia	Kostka	

First Name	Last Name	Institution
Pierre	Anderson	
Ana	Arana Antelo	EC
Sveva	Avveduto	CNR
Thomas	Berghöfer	DESY
Nigel	Birch	EPSRC
Anette	Björnsson	EC
Hans	Borchgrevink	Portia
Louise	Carvalho	CERN
James	Dawkins	Advance HE
Els	de Wolf	NWO
Ilaria	Di Tullio	CNR
Aleksandra	Drecun	INTERSECTION
Clemence	Epitalon	APC
Meytal	Eran Jona	WEIZMANN
Catherine	Gater	EBI
IRIZA ISHIMWE	GISELE	
Monique	Gomez	IAC
Limota	GorosoGiwa	
Cécile	GREBOVAL	CoE
Mandy	Grobosch	HZDR
Genevieve	Guinot	CERN
Christina	Hadulla-Kuhlmann	BMBF
Wendy	Hansen	MERIT
Sandra	Hesping	NWO
Anne Laure	Humbert	
Sophia	Ivarsson	VINNOVA
Roswitha	Katter	JOANNEUM
Sylwia	Kostka	
Lia	Lang	DESY
Marta	Lazarowicz	

CHRISTINE	MANIRAGUHA INGABIRE	
Stanley	Maphosa	ASSAf
Petra	Metz	HU Berlin
Victor	Molina	MPG
Dorothy	Nyambi	
Gareth	O'Neill	Eurodoc
Sonja	Ochsenfeld-Repp	DFG
Hee Young	Paik	
Victoria	Pearson	
Lucio	Pisacane	CNR
Joanna	Podgorska-Rykala	
Ben	Pollitzer	PORTIA
Elizabeth	Pollitzer	PORTIA
Francesca	Primas	ESO
Lakshmi	Ramachandran	Women in Science Singapore
Vandana	Ramachandran	Institute Mechano-biology, Simngapore
Mark Ivan	Roblas	
Sabah	Salih	Uni Manchester
Sudaba	Shiraliyeva	
Lotta	Strandberg	NordForsk
Angela	Townsend	IOP
Livius	Trache	IFIN-HH
Ketel	Turzo	GANIL
Charikleia	Tzanakou	
Susana	Vazquez-Cupeiro	
Claartje	Vinkenburg	
Magdalena	Wencka	IFMPAN Poznan
Maya	Widmer	GEMOWIDMER
Aleksandra	Wrońska	Uniwersytet Jagielloński
Giulia	Porino	La Sapienza Univeristat di Roma

Appendix 2 – Workshop 1 Agenda

DAY 1, 22 January		
12:00 – 13:00	Arrivals, light lunch, networking	
13:00 – 13:30 *30´*	Brief introduction to GENERA: *GEPs from physics for physics* Explanation of what workshop is about: *activities and outputs*	Speaker: Thomas Berghoefer Claartje Vinkenburg
13:30 – 15:00 *90´*	Science and institutional leaders share their experiences in implementing GEPs in Physics. *The Panel includes high-level representatives from among the GENERA 30 participating organisations* *<u>Panel speakers:</u>* Lotta Strandberg (Nordforsk) Stephen Watts (Manchester Uni) Sveva Avveduto (CNR) Genevieve Guinot (CERN) Monique Gomez (IAC)	Chair: Francesca Primas
15:00 – 15:30 *30´*	Implementing GEPs in tough settings: *lessons from Israel military*	Speaker: Meytal Eran Jones
15:30 – 15:45	Break and Networking	
15:45 – 16:45 *60´*	Reports from GENERA on key achievements and deliverables: *new tools for GEPs* *<u>GENERA appetizer (5min´s each)</u>* *Protocol – Claartje Vinkenburg* *Toolbox & fields of action – Irene Eisemann* *Roadmap – Victor Molina* *Monitoring Tree – Helene Schiffbaenker* *Data Template – Lucio Pisacane* *Interview results – Paulina Sekula* *GiPD – Ilaria di Tullio*	Chair: Claartje Vinkenburg
16:45 – 17:45 *60'*	Creating the GENERA Network: Part 1 *What is it about and for:* to *promote long term monitoring of GEPs and to share knowledge and experiences*	Chair: Thomas Berghoefer

DAY 2, 23 January		
9:00 – 10:15 *1h,15min*	Participatory activity: Prioritising GE measures - Part 1 *Participants are divided into groups and asked to map the 100+ individual gender equality measures identified in GENERA and elsewhere onto two dimensions: 1) Quality / effectiveness; 2) Feasibility / usefulness*	Chairs: Claartje Vinkenburg Helene Schiffbaenker
10:15 – 10:30	Break and Networking	
10:30 – 11:45 *1h,15min*	Participatory activity: Prioritising GE measures - Part 2 *Based on part 1, participants will rank GE measures in terms of preference and "fit" for (own) physics organization*	Chairs: Claartje Vinkenburg Elizabeth Pollitzer
11:45 – 12:45 *60'*	Open discussion how to improve the adoption of the measures that have been prioritised as effective and/or useful in terms of what has to be provided to make it easier for organisations to put them into practice. *Representatives from other FP7/H2020 projects to reflect on their experiences (PLOTINA, EGERA, EQUALIST, TRIGGER, etc)*	Chair: Maya Widmer
12:45 – 13:30	Lunch	
13:30 – 14:30	Building institutional commitment to GE in the UK setting *The panel includes high-level representatives from Physics and STEM institutions in the UK, highlighting the JUNO and Athena SWAN approach, identifying "gaps" in GEPs, and promoting the gender dimension in research and education* Simone Buitendijk, Imperial College Valerie Gibson, Cambridge Uni	Chair: Elizabeth Pollitzer
14:30 – 14:45	Break and Networking	
14:45 – 15:45 *60´*	Creating the GENERA Network: Part 2 *Discussion on how the network could support development of good practice, Signing of the Letter of Intent*	Chair: Thomas Berghoefer
15:45 – 16:00 *15´*	Closing: *Main points on how GEPs as a tool for change could be improved.*	Elizabeth Pollitzer
16:00 – 16:30	Refreshments and Networking	

Appendix C

Long version of Workshop 2 Agenda

20 June – Morning Session **Advancing and Implementing Gender Equality Policies in Europe**		
9:00 – 9:30	**Arrival, Coffee, Refreshments**	
9:30 – 10:30	*PANEL SESSION* - *Gender Equality Plans (GEPs) and other institutional-level structural change measures advanced under SwfS* - *Human Resources Strategy for Researchers (HRS4R) across EU academic institutions* - *Gender Mainstreaming at the CoE: institutional setting and practical examples* - *Attracting, advancing and retaining (Early) Stage Researchers*	*PANEL* **Ana Arana Antelo**, EC, SwafS **Fabienne Gautier**, EC Euraxess **Cécile Gréboval**, Council of Europe (CoE) **Gareth O'Neill**, EuroDoc
10:45 – 11:00	**Coffee, Refreshments**	
11:00 – 13:00	*PARTICIPATORY SESSION* The aim is to do a SWOT analyses of the GEP approach to inform and review three draft GENERA Policy Briefs, produced to help improve impact of science-related gender equality policies in Europe.	*ALL – facilitated by Claartje Vinkenburg*
13:00 – 14:00	**Lunch, Networking**	
20 June – Afternoon Session: **GENERA Network Kick-Off**		
Time	***Session***	***GENERA presenters/chairs***
14:00 – 14:15	- Summary of last Network event (London, 22 January 2018) - Aims of this second Network event	Thomas Berghöfer, Lia Lang
14:15 – 15:15	- GENERA Experience with observers: circles of influence - Data for the future: the GENERA Minimum Data Set - Transforming GENERA Networking into a Community of Practice: what can the European funded ACT project do for GENERA and vice versa	Meytal Eran Jona IM Group Lia Lang
15:15 – 15:45	Open discussion: Structure and functioning of the GENERA Network	Maya Widmer (TBC)
15:45 – 16:15	Coffee and Tea Break and Networking	
16:15 – 16:30	Linking GENERA Network with European and national associations	Sveva Avveduto
16:30 – 16:50	A Memorandum of Understanding for setting up of the GENERA Network	Els de Wolf

16:45 – 17:00	Closing remarks: What Next?	Thomas Berghöfer and Lia Lang
17:00 – 17:30	Refreshments and Networking	

Appendix D

Policy briefs (draft)

Policy Brief 1

Maximising the benefits of investment in gender sensitive research and innovation

Key messages

- Large body of scientific evidence shows that biological (sex) and sociocultural (gender) elements may produce different research and innovation outcomes for males and females that call for different tailored interventions – and not only in health – to ensure the same quality of benefits for women and men.
- Scientific quality and societal relevance of research can be improved by increased gender balance and diversity in research/innovation teams and sex/gender sensitivity in research content.
- Understanding when, why and how women and men differ in their biological and socio-cultural characteristics can create novel socio-economic linkages between scientific knowledge production and its translation into new products, processes and services, with improved impact on societal and environmental wellbeing.
- It has been estimated that $12 trillion could be added to global GDP by 2025 by advancing gender parity[4], and that by 2015 women will control $28 trillion of consumer budget globally[5]. This growing economic advancement of women should be seen as opportunities for creating new markets for science knowledge that recognise the different needs and interests of women and men.
- Between 2005 and 2011, the compound annual growth rate for researchers in the EU (as reported in She Figures 2015) was higher for women (4.8%) than for men (3.3%). The accumulation of scientific capital held by women creates advantageous conditions to promote "technology push" type innovations based on scientific discoveries that demonstrate critical sex differences in research results, which may also differentiate outcomes.
- Large and established high-technology companies have been increasingly moving away from in-house knowledge creation to technology acquisition through purchase of technology start-ups or by engaging in Open Innovation. Open Innovation creates variety of opportunities to effectively close gender gaps in innovation systems and activities by creating innovation environments that are more inclusive to women as idea creators, problem solvers, innovators, and as target users/consumers.
- Furthermore, promoting the culture of Open Innovation may provide a vehicle for attracting more tertiary educated women to consider entrepreneurship as a career opportunity. This may be especially attractive in sectors that are not strongly bound by regulatory requirements, where the cost of entry may be too high, or where institutions and cultures have been traditionally dominated by men.

[4] McKinsey (2015) The Power of Parity: How Advancing Women's Equality can add $12 trillion to Global Growth. See https://www.mckinsey.com/featured-insights/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth

[5] Silverstein, M.J. and Sayre, K. (2009) The Female Economy, *Harvard Business Review*, September 2009. Online available from: https://hbr.org/2009/09/the-female-economy

- Gender balance in innovation is often measured by how many women there are among patent applicants. Women are greatly underrepresented in technological innovation, in general. However, the observed increase in the share of women in international patenting activities (PCT) coincides with the increase in women's participation in higher education, and in particular in life sciences, at both undergraduate and PhD level.
- During 2012-2015, the fields with the highest shares of PCT applications with women inventors were those related to life sciences, including biotechnology, where women are well represented. In contrast, the fields with the lowest shares of PCT applications with women inventors were related to engineering and computer technologies, where women are in a minority.

Conditions that foster participation and success of women in:		
Research[6]	**Innovation[7]**	**Entrepreneurship[8]**
• Fair, transparent and gender bias free recruitment, retention, and competition in career advancement • Fair, transparent and gender bias free evaluation of professional performance • Equal access to and chances of success in being awarded a research grant • Fair, transparent and gender bias free recognition of merit in selection to important panels, committees, and decision-making bodies • Access to professional and leadership training • Opportunities to collaborate with excellent researchers/research teams • Access to research infrastructures and resources • Work-life balance and	Improving innovation environment by making it more inclusive of women • *in design and implementation of innovation strategies* • *in innovation processes* • *as target users* Improving measurement of women's contribution to • *technological advances* • *non-technological innovations that create functional improvements through design* • *creating new services, and more efficient organisational processes.* Improving quality of innovation outcomes, especially for women • *taking into account the potential influence of sex-gender differences (biological, physical, behavioural)* • *equally valuing different interests and preferences of women and men.*	Improving entrepreneurial environment • *Opportunity perceptions* • *Start-up skills* • *Willingness and risk* • *Networking* • *Cultural support* Creating entrepreneurial ecosystem • *Opportunity start-ups* • *Technology sector* • *Quality of human resources* • *Competition* • *Gender gaps* Promoting entrepreneurial aspirations • *Product innovation* • *Process innovation* • *High growth* • *Internationalisation* • *External financing*

[6] Laursen, S. L., & Austin, A. E. (2014). StratEGIC Toolkit: Strategies for Effecting Gender Equity and Institutional Change. Boulder, CO, and East Lansing, MI. www.strategictoolkit.org

[7] Lee, H. and Pollitzer, E, (2017), Gender in science and innovation and as components of socio-economic growth, https://gender-summit.com/images/Gender_and_inclusive_innovation_Gender_Summit_report.pdf

[8] The 2015 Female Entrepreneurship Index, The Global Entrepreneurship and Development Institute

conducive working environment		

Recommendations

The following recommendations are intended to inform and improve gender equality policies for upstream interventions (with wide-ranging impact) and mid-stream interventions (with cross-cutting impacts). Relevant intended actors are European Commission (e.g. through Innovation Union, and Framework Programmes), ITRE, STOA and FEMM Committees at the European Parliament, national institutions implementing ERA, cross sectorial bodies such as EARTO, etc.

- **Recognise gender as a driver for economic growth and socio-economic wellbeing** (e.g. by including gender-related indicators in the Innovation Scoreboard), and an opportunity to create advantageous, cross cutting benefits from knowledge production to multiple applications with relevance for society. *For example, scientific discovery that women mount stronger immune response to vaccines calls for new approach to vaccine design (for women and for men), and for redesign of public health vaccination campaigns, e.g. in responses to emerging epidemics.*
- **Recognise women's growing economic and consumer (behaviour influencing) power** as advantageous to promoting new markets for science knowledge that target the special interests and needs of women (that have been traditionally ignored). *For example, car safety systems should be improved to prevent injuries suffered more severely by women than by men in car crash situations.*
- **Recognise the growing (at a faster rate than that of men) scientific capital of women as** advantageous to promoting ("technology push") innovations based on scientific discoveries of important sex differences in research outcomes. *For example, metabolic profiles of women and men are significantly different and this calls for new biomarkers for women and for men in health conditions linked to metabolic disfunctions, such as obesity, Alzheimer's, and diabetes*.
- **Closing the gender gap in innovation is an opportunity to change innovation cultures by making them more inclusive and open to participation by women researchers, and women as users and consumers.** *For example, women have been shown to be very successful in solving technical R&D problems in 'crowd sourcing' innovation environments where companies broadcast problems they cannot solve internally.*[9]
- **Close the gender gap in entrepreneurship** as an opportunity to promote entrepreneurship to the growing body of women graduates, promoting, for example, business-creation conditions that are not strongly bound by restrictive and expensive regulatory compliance requirements (e.g. information and communication technologies), and in knowledge areas where women are well represented (e.g. health). *For example, such opportunities could involve creating entrepreneurial ecosystems linked to the socio-economic and environmental challenges that underlie the goals of the UN Sustainable Development Agenda or the realisation of the vision of the 4th Industrial Revolution.*

[9] Jeppesen, L.B. and Lakhani, K.R. (2010) Marginality and problem solving effectiveness in broadcast search, 2010. Online available from: http://dash.harvard.edu/bitstream/handle/1/3351241/Jeppesen_Marginality.pdf?sequence=2

- **Ensure continued leadership in Europe in advancing gender in research and innovation, established in Horizon 2020, to solidify the progress made and to strengthen the technical and socio-economic impact of the next Framework Programme 9.** The experience of Horizon 2020 of promoting structural change for gender equality and integration of gender dimension in research and innovation content has provided important body of knowledge and experience to make systematic and systemic advancements in FP9. *In FP9, this could provide the basis for promoting gender sensitive socio-economic impact of research outcomes in the fields that have been historically seen as 'gender neutral', e.g. physics, transport, energy, climate change.*
- **Increasing the proportion of women in engineering and retaining those already in the system are key to addressing persistent gender imbalance in product-related, technological innovation**.

NOTES

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Policy Brief 2

Maximising benefits of gender equality in higher education, and in research and innovation

Key messages

- According to She Figures 2015 there has been a slow but positive trend across several key indicators of women's participation and status in higher education and in academic career progression, in the EU (see table below).
- There are, however, still significant (but decreasing) differences between individual Member States in the rate of progress made, which may have historical backgrounds, or indicate the presence/absence of top-level policy commitment to gender equality at national level.
- There are more men than women in Grade A academic positions across all fields, regardless of how many women there are in the 'talent supply pipeline'.
- In the life sciences, for example, more women gain PhD degree than men (EU-28), but this increase in the supply of new research talent has not been translated into matching improvements in subsequent academic career stages. This is a situation that could benefit from the introduction of (cascading model) quota.[10]
- By contrast in the physical sciences, engineering, and computing the low presence of women persists at each stage, from entry into higher education to Grade A positions. However, small improvements between 2004 and 2012 have been reported in She Figures 2015.
- Across EU-28, more men than women apply for research grants; men are more successful in obtaining research grants; and men receive larger grants than women. Some improvements have been reported but overall men still have 4.4% higher chance of success. Carefully thought out quota mechanisms have been shown to deliver positive but fair impact (see the example in NOTES)
- Due to the fact that men in senior academic positions are generally older than women it can be expected that in the next 10 years more men than women will be retiring, creating opportunities for more women at present in Grade B positions to compete for the top academic posts (with the help, perhaps, of cascading quota intervention).
- Among emerging issues in the workplace has been sexual harassment. Academic workplaces have the highest rate of sexual harassment after military (58% vs. 69%).[11]
- Among persistent issues are work-life balance and employment conditions: fewer women researchers than men researchers have children; more women than men hold part-time

[10] Wallon, G,. Bendiscioli, S., and Garfinkel, M.S. (2015), Exploring quotas in academia, EMBO

[11] National Academies of Sciences, Engineering, and Medicine. 2018. *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*. Washington, DC: The National Academies Press. doi: https:// doi.org/10.17226/24994.

positions; women earn less than men. This makes academic research careers appear more precarious for women than employment in other sectors.

Data from She Figures 2015 (with some other earlier She Figures data included for comparison)	
Glass Ceiling Index, EU *(GCI = 1.0 means women have same chance top men of being promoted to Grade A position)*	1.76 (decrease from 1.90 in 2004)
Share of women PhD graduates	47.4% (increase from 43.6% in 2004)
Share of women PhD graduates in STEM (LS, PS, M, C)	37.5% (increase from 33% in 2004)
Share of women in Grade A academic positions	20.9% (increase from 15.3 in 2002)
Share of women scientists and engineers in total labour force	2.8% (increase from 1.75% in 2010)
Research grant success rate difference *GSRD = 1.0 means women and men applicants have equal chance to secure a grant*	4.4 (decrease from 6.8 in 2010)
Proportion of RPO's that adopted gender equality plans	36%

Recommendations

The following recommendations are intended to inform and improve policies for midstream interventions (e.g. within a field and/or inter-institutional partnerships) and downstream interventions (within organisations). Relevant intended actors are LERU, EUA, EMBO, FEBS, CESAER, RPOs and RFOs, etc.

- **Continue the use of She Figures** as a source of reliable statistical overview of progress in achieving gender equality in research and innovation in the EU, including integration of gender dimension in research content, which was introduced in the 2015 edition. However, She Figures do not provide contextual information that can help explain for the observed statistical trends.
- **Information is needed to provide field-specific context, behind the statistics in She Figures about the shares of women at each education and academic career level,** to help better understand how women transit over time from one level to the next, especially Grade C and Grade B before tenure and after. This would help institutions to improve their gender equality interventions, and make them more responsive to the issues that are specific to each stage, also reflecting the differences between the fields.
- **Quantitative, gender-segregated data on career paths and working conditions of researchers are needed** to monitor and better understand how the patterns or moves through career positions, institutions, sectors, and nations develop during the 17 years that it takes on average to traverse from gaining a PhD to reaching Grade A position.[12]

[12] MORE. (2017). *Final report MORE3: Comparative and policy-relevant analysis of mobility patterns and career paths of researchers*. https://cdn5.euraxess.org/sites/default/files/policy_library/final_report_1.pdf

- **Systematic analyses of the evolving discourse on why more women should choose STEM subjects to study, and/or as a research career, are needed** to improve future efforts to promote gender balance. Four separate but interconnected general reasons have dominated the calls to improve women's participation in STEM in the past: social justice; economic benefits from women's intellectual contributions different to those of men; improved intellectual quality and impact of research and innovation; and improved research and work cultures. Choosing the core argument can dictate action, for example, the 'economic' argument has been embraced by industry. The 'quality' argument is attractive to science policy makers. Corrective actions will tend to focus on a particular intervention. For example, many companies have adopted quota in hiring staff. To make STEM more attractive to girls, the focus has to be on why women are not attracted to engineering or computing, perhaps because they simply are not aware of the opportunities or because they do not know what work engineers do, then corrective actions will have to focus on outreach and informing girls of the opportunities engineering careers offer them.[13]
- **Work environments, employment conditions, and work-life balance need improving** so that women researchers do not have to feel that pursuing a research career means not being able to be a parent or fulfil caring responsibilities; or that pursuing a research career means committing to potentially precarious and uncertain employment future, with short term contracts and necessity to be geographically mobile; resulting in economic penalties in terms of salary and pension levels.
- **Actions to prevent and tackle sexual harassment are needed** by enabling easy and confident reporting and monitoring of unprofessional behaviour. Academic science and research institutions exhibit at least four characteristics that create higher levels of risk for sexual harassment to occur: 1) strongly male-dominated environments, with men in positions of power and authority; 2) organizational tolerance for sexually harassing behaviour (e.g. failing to take complaints seriously, failing to sanction perpetrators, or failing to protect complainants from retaliation); 3) the fields share hierarchical and dependent relationships between faculty and their trainees (e.g. students, postdoctoral fellows, residents), 4) the fields share isolating environments (e.g. labs, field sites, and hospitals) in which faculty and trainees spend considerable time. Such actions should be included in the design and implementation of gender equality plans (GEPs), and in the institutional commitments to adopt the Euraxess HRS4R.
- **Improve the criteria and processes used in the assessment and awarding of research grants to ensure that men have the same chances of winning as women**[14], but also allowing time flexibility in grant duration due to maternity leave, maternity cover, and eligible care costs.
- **Provide opportunities for leadership training** targeting young women researchers, in particular, to provide them with confidence to compete for more senior research and management roles.
- **Promote and monitor implementation of Gender Equality Plans** by research performing and research funding institutions to ensure systematic and systemic structural and cultural change, across different scientific fields, and sectors.[15]

[13] Beddoes, K. D. (2011). Engineering education discourses on underrepresentation. Why problematization matters. International Journal of Engineering Education, Vol. 27 No 5, pp.1117-1129, 2011
[14] https://www.gender-summit.com/attachments/article/1346/Ferguson_GS9Eu.pdf
[15] http://genera-project.com/portia_web/GENERA_Toolbox_2017_final_revision.pdf

NOTES

Best Practice in advancing gender equality in research organisations

Science Foundation Ireland: *Increasing the number of applications for research grants from women*

In 2013, the SFI put a cap on 6 applications per University. This resulted in 27% of applicants being female and 27% of awardees being female. In 2015, the SFI added a gender dimension to the process by raising the cap per university to 12 but the maximum 6 could be men. There was no change to the assessment and selection process. This has produced 47% of applications from women and 55% of awardees being female.

GENERA: *Toolbox for implementing GEPs in physics, as well as other fields*

The GENERA Toolbox aims at assisting GENERA partner organisations that are in the process of the implementation of gender equality plans (GEPs) in tailoring their GEPs and gender equality measures to their needs. The Toolbox is a structured collection of over 100 good practices – measures, instruments, and activities –the information for which was collected and catalogued to reflect related structural, social, cultural, and political aspects of work environments in various (mainly physics related) research performing organisations (RPOs) and research funding organisations (RFOs) as well as higher education institutions (HEIs).

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POLICY BRIEF 3

Evidence and recommendations for Physics institutions to implement Gender Equality Plans

Key messages

- Working within the context of Physics, the GENERA project has circumvented problems that are common to GEP implementation by institutions when conducted in isolation from others, through processes that differ widely in terms of their scope and effectiveness, and often without a proper assessment of gender equality needs and priorities, or the necessary monitoring and evaluation. GENERA's disciplinary focus brought not only recognition and comparability, but also a shared belief in data, measurement, and an experimental approach.
- On the basis of this shared conviction, one of the main strengths of the GENERA project was the development (through an intensive iterative process) of the specifications of a so-called "minimal dataset" (MDS) that physics institutions can use to track gender representation and progress on several comparable indicators across local and national settings. These data currently cannot be found in the She Figures (Europe's go-to statistical source) because information there is: a) not provided on a disciplinary level, and b) is restricted to indicators that can apply to the majority (if not all) of EU countries.
- The role of the evaluation partner in GENERA was transformed into a 'critical friend', realized operationally through ex-ante and ex-post interviews with managers and leaders in the partner institutions. Reflections from the interviews were combined with the data collected elsewhere throughout the project by the evaluation partner to produce a monitoring tool (not anticipated in the deliverables), the Monitoring Tree, which organizations can use to monitor progress made in implementing gender equality policy measures.
- GENERA's aim was to create GEPs that can be adapted to the needs of different organizations but at the same time could promote systematic and systemic improvements. Key to identifying what was needed were the interviews with 83 physics researchers (women and men) from the partner organizations as well as senior leadership and HR staff. This led to a growing understanding and reconciliation of top and bottom expectations of GEP design and implementation in physics organizations.
- The work done in GENERA will be shared, expanded and improved through the GENERA Network, one of the project outputs. The purpose of the Network is to act as a channel for sharing knowledge and experience as well as best practices in implementing GEPs. The practical opportunity to do this is the Horizon 2020 funded project ACT in which three of the GENERA partners are also involved. The purpose of ACT is to develop Communities of Practice for gender equality in research and innovation and the GENERA Network is included as one target for transformation into such a community.

The GENERA protocol "Physics best for all"

Based on several brainstorming and argumentation mapping sessions, the GENERA partners jointly developed "Physics best for all" protocol of predefined procedural method for improving gender equality in physics organizations (in the same vein as the protocols for conducting scientific experiments). This protocol, aimed at institute directors and senior HR, serves as an umbrella under which to develop local, customized GEPs and actions.

GENERA Protocol for improving gender equality in Physics:

- Gender Equality Plan (GEP)-driven
- Systemic change using a transformative approach
- Data-driven, evidence based
- Addressing notions of excellence
- Promoting inclusion and belonging

Recommendations

Based on GENERA experience in designing and implementing GEPs in eleven physics organizations, reflecting on the experiences of the implementation managers (IMs), observers, evaluators, and experts, and taking into account the very different nature of the physics institutions in which many operate, the project offers the following recommendations for improving the GEP approach to promoting gender equality. These recommendations (based on the identified gaps in GEPS) are particularly relevant for physics organizations, but more generally could be adapted to institutions in other STEM fields in which women are severely underrepresented at all career levels.

- **IMs** should be skilled in forging **organizational change**, dealing with resistance, and building support networks to ease their burden. If hiring IMs specifically for this role, project funding should be earmarked and capacity building should be incorporated for skill development.
- Provisions should be built into calls for proposals for the position of **IMs beyond the direct scope of the project**. If IM positions and contracts are directly tied to project income, this puts them in a precarious position within the institution, and generates issues of continuity and sustainability beyond the project lifetime in terms of gender equality policies and progress tracking.
- **Experts** have relevant knowledge and experiences in promoting gender equality in research organizations above and beyond projects. For future calls for proposals, infrastructure and/or financial support should be built-in to effectively **broker** this expertise among project partners.
- **Instructions for internal evaluators** should be clearer on the task of measuring progress in terms of gender equality, and/or gender equality plans, and/or project management.
- **Symbolic change** is important, next to meeting project deadlines and tracking representation. A well-visited gender in physics day, an exciting video from a school competition, or the signing of a GEP by institute directors need to celebrated.

- Call for proposals should clarify the unique role of **observers** and should allow the reservation of funds for travel etc. for observers to participate in project events. If observers cannot take on a full partner role because of legal or budget constraints, or if observers want to join the project while it is already running, this lack of funding and clarity limits the potential seeding and community building inherent in the collaborative, cross-national approach of GEPs.
- Most GEP projects develop ways to track and quantify **career progress** of women (and other minorities) in their institutions and/or disciplines, from entry-level students to senior levels. These efforts have rarely been held against guidelines developed for measuring progress in research careers and often do not go beyond representation (in %) at different career stages. We therefore recommend the utilization and further development of the GENERA **Minimal Dataset** (MDS) and a **career progress indicator** to longitudinally collect and compare career data within and across institutional, disciplinary, and national borders.
- GENERA prioritized "**unconscious bias training**" as its number one gender equality measure in terms of quality, feasibility, and fit in physics institutions during its first stakeholder workshop. Mitigating gender bias in performance evaluation is a diversity intervention that aims to fix the system, uncover meritocracy discourses and bend stereotypically masculine norms dominant in research organizations. At the same time, research shows that only raising bias awareness may result in resistance, denial, and anger. It is therefore crucial to take into account evidence-based design specifications for effective bias interventions.[16]

NOTES

According to Nielsen (2018), few studies have systematically evaluated the effectiveness of different types of gender equality policies and measures in promoting gender equality in research organizations. Furthermore, the field is fragmented in terms of theoretical frameworks and evaluation standards (Müller ea, 2011). Examples of such evaluation studies are Nielsen, 2018 on Scandinavian countries, Timmers ea 2010 on the Netherlands, and Zippel ea 2015 on Germany. Taken together, these studies suggest several important conditions to be met for GEPs to be effective, from support from senior leadership; adaptability to institutional, disciplinary and national gender equality and equal opportunity structures; monitoring of progress on multiple indicators beyond representation; to building a community of practice to share and build knowledge and expertise beyond the lifetime of the funding of GEP projects.

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16 EHRC 2018, Unconscious bias training: an assessment of the evidence for effectiveness; LERU 2018, Implicit bias in academia; Vinkenburg, 2017