Report on Gender STI Co-Design Labs I

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LIST OF ABBREVIATIONS

AC	Associated Countries
DoA	Description of Action – Annex I of the Grant Agreement
EC	European Commission
ERA	European Research Area
EU	European Union
H2020	Horizon 2020
IC	Innovation Camp Method
LAB	Gender in STI Co-Design Lab
MoU	Memorandum of Understanding
MS	Member States
RFO	Research Funding Organisations
RIA	Research and Innovation Action
R&I	Research and Innovation
R&D&I	Research, Development and Innovation
STI	Science, Technology and Innovation
WP	Work Package

EXECUTIVE SUMMARY

This deliverable describes the organisation, results and validation phase of the first Gender STI Co-Design Lab (hereafter LAB).

The first Co-design Lab that took place in September-October 2021 addressed the Gender STI objectives to integrate the gender perspective in bilateral and multilateral agreements between the EU Member States (MS), Associated Countries (AC) and third countries through design thinking methods and participatory techniques.

The document describes the methods, participatory steps and tools that have been applied in the first LAB to co-design shared solutions and prototypes for common challenges regarding gender inequalities in STI and to support the emergence of an international community of practitioners with similar challenging objectives. More specifically, the deliverable collects in detail "**what**" was done and how in the LAB, it reflects on the "**so what**" question, as to the sense and purpose of the challenge-based prototypes and their initial outputs, and finally draws some conclusions with a "**now what**" reflection on what was learnt and suggests possible priorities for future actions.

The report is organized in three overarching sections:

- The first section with the *Introduction* and *Organisation of the First Co-design Lab*, relates to the **method and process:** what was done and how, describing the LAB's preparation, organisation, interactive sessions and throughput; the core method at the basis of the LABs is the Societal Innovation Camp Methodology, with its inclusive, agile, iterative, non-linear, incremental, entrepreneurial and pioneering discovery mindset. The LAB sessions involved 70 people in an intense cocreation process that led to seven prototypes of strategic actions and initiatives that can address the gender gap in STI.

- The second section relates to the **contents and results**, the challenges, emerging prototypes and the benefits and impact that they can bring to address the gender perspective in science technology and innovation. Seven prototypes were generated through the LAB sessions and we assessed how these can impact and benefit policy dialogues and agreements through the Gender STI prototyping matrix. This section is described in the chapters on *Challenges and prototypes*, *Prototype Actions and Recommendations* and on the *Gender STI Community of Practice*;

- The third and final part of the report presents the **conclusions and lessons learnt**.

While the deliverable covers in a comprehensive way all the possible facets of supporting the complex nature and global scope of the Gender STI project, the process has also been influenced by how the methods have been applied and adapted due to the Covid 19 pandemic. Actually, the emergence of Covid 19 restrictions has been an opportunity to innovate and increase the inclusivity by adapting the tools and processes and by combining asynchronous tasks and synchronous workshops (online or face to face) performed in different time zones by the global consortium and all the other stakeholders.

1 INTRODUCTION

The Gender STI project analyses the participation of women in STI and studies how gender equality is considered and promoted in international cooperation dialogues between European Union Member States, Associated Countries and 10 selected third countries.

In this context the Gender STI project has hosted the first of a **series of Co-Design Lab workshops** (hereafter LABs) to address three priority objectives identified by the European Commission's gender equality strategy to promote gender equality in research and innovation:

1. Gender equality in scientific careers;
2. Gender balance in decision making bodies and positions; and
3. Integration of the gender dimension in research and innovation content.

These three forefront **challenges** facing women in science, technology and innovation (STI) are at the core of the work performed within the first **Co-Design Lab sessions**.

The Co-Design Lab workshop's aim is to identify key issues in these three areas and develop potential solutions through a facilitated design thinking process in order to contribute to integrate the gender perspective in STI bilateral and multilateral agreements. Participants discussed opportunities in their country or institution; and co-design potential solutions that can be implemented to foment greater equality in these areas in the weeks, months and years ahead.

The first Lab sessions have created the environment to **co-design and prototype solutions regarding gender inequalities in STI dialogues**.

As a result, the project is establishing the **Gender STI Community of Practice** that will help to scale up the experience of gender equality in STI at a European and international level, and the **European Observatory on Gender in STI**, which is unique of its kind in Europe and will serve as a hub for gender equality in STI dialogues, incorporating all knowledge and materials resulting from the project.

These actionable insights will feed the process to formulate policy recommendations to enhance the integration of gender equality in STI dialogues with third countries.

In the following sections we present a description of the preparation and organisation of the first Gender STI Co-Design Lab and how the challenges, including background information, underlying issues and guiding questions for the Lab sessions have led to the creation of first prototypes of actions and recommendations that can feed the policy making process with reference to international bilateral/multilateral agreements on gender equality in Science, Technology and Innovation.

2 THE ORGANISATION OF THE FIRST CO-DESIGN LAB

The design planning and implementation of the first Gender STI Co-Design Lab followed the steps planned in the methodological handbook[1]. All the activities have been and are being performed according to the iterative design thinking principles and action learning mindset of the LABs. This implies a continuous learning and adaptation process to cater to the needs and opportunities emerging from the running of the LABs process.

The diagram below describes the flow of the first Co-Design Lab, from preparatory setting up of the process to the prototyping phase and indicates the roadmap leading to the next steps.

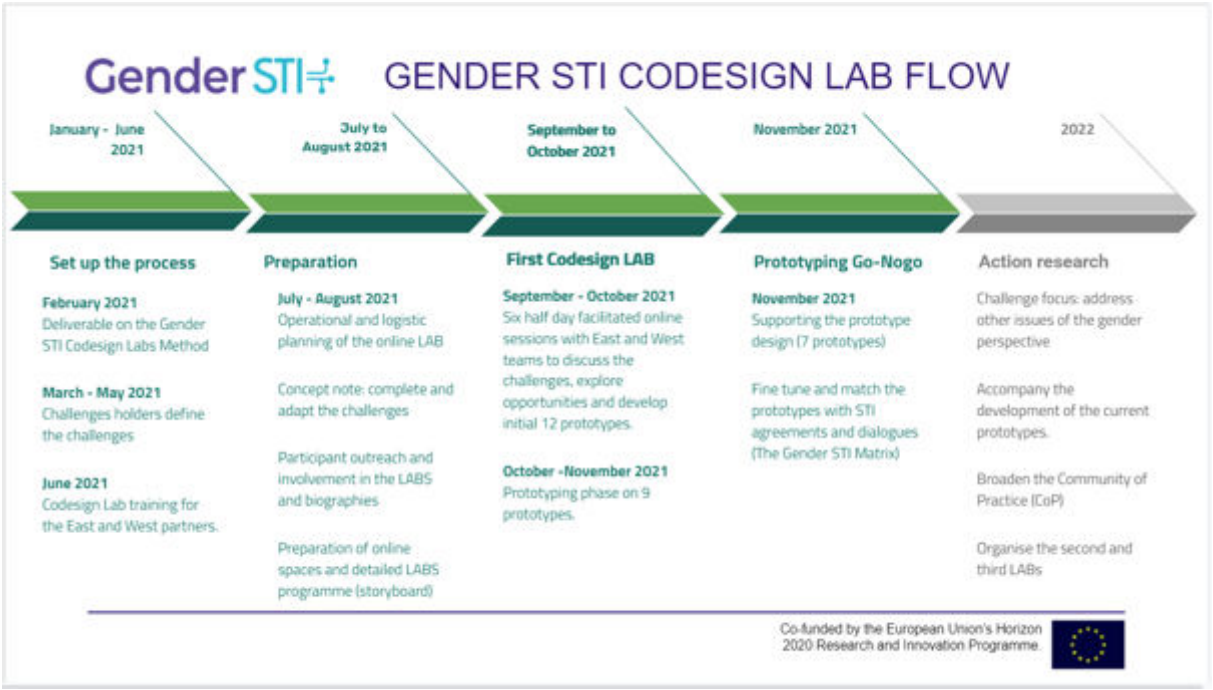


Figure 1: The Gender STI Co-design Lab roadmap

2.1 The design and set-up of the Gender STI Lab (January - June 2021)

The first phase of designing and preparing the D3.1 Methodological Handbook on the GENDER STI Co-Design Labs began with the launch of the project and involved FUTOUR with other partners in its finalisation between *January and February 2021* when the deliverable was submitted to the EC. This phase required a thorough reflection on the adaptation of the LAB process and method for the online setting, due to the Covid-19 travel restrictions. These initially led to a redesign of the process, originally planned for 2 and a half days in presence, into 6 half-day sessions (3 half-days for each LAB EAST and WEST) including synchronous and asynchronous phases. It also required the integration and adaptation of several online visualisation tools and platforms to cater for the needs of online facilitated sessions. The design, redesign and adaptation of the process has been led by the FUTOUR facilitation team.

Between *March and May of 2021,* the Methodological Handbook was the basis for the definition of the challenges and questions that would be used during the LAB training

[1] See the deliverable D3.1 – Methodological Handbook on the GENDER STI Co-Design Labs

sessions. A core team was set up to organise and run the LAB. This team was led by FUTOUR as process and WP3 leader and involved partners TU Graz, UPM and VTT taking the role of challenge holders for each challenge (the organisations taking the lead in describing the challenges and addressing specific questions within the challenges), as well as INMARK for the scientific coordination with the expert advice of CNRS and SPI for the support in the following Go-No-go phase.

The **challenges addressed in the Gender STI Co-design Lab** were based on the **three objectives of the EC Gender Equality Strategy in R&I**:

- **Gender equality in scientific careers at all levels**. The challenge holders for this first challenge were TU Graz.
- **Gender balance in decision-making bodies and positions.** The challenge holders for this second challenge were UPM
- **Integration of the gender dimension in research and innovation content (sex and gender analysis).** The challenge holders for this Challenge were VTT.

The core team developed an initial version of the challenges and questions to be addressed in the LAB, which was discussed and adapted throughout the preparatory phase.

The **training and simulation of the Gender STI Lab** took place online in *June 2021*. The training was performed in two parallel sessions of two half days to cater for the different time zones of the project partners.

- The EAST trainings and simulations involved partners from Asia, South Africa and Europe and took place on the 3rd and 10th of June 2021 from 900 to 1200 CET. These training and simulation sessions were attended by 22 partners.
- The WEST training and simulation sessions involved partners from the Americas and Europe and took place on the 8th and 15th of June 2021 from 1500 to 1800 CET. These training and simulation sessions were attended by 27 partners.

Within the trainings FUTOUR explained the method and facilitated both the main plenaries and three breakout groups, one for each challenge team.

The training and simulation were an opportunity to understand the facilitated LAB process and phases, to learn how to work online and use the participatory videofacilitator[2] online meeting space, to apply and practice the joint brainstorming and visualisation tool MIRO[3], to openly discuss and fine tune the selected challenges and to identify participants that may should be involved in the first pilot LAB. The training was also an important event for an initial team building among consortium members from different time zones. The **participatory biography tool** designed by FUTOUR was also applied, adapted and validated in this phase as it would then be used for the community building and networking process of the Community of practice.

[2] VideoFacilitator is an online platform that allows participants to self-select the breakout rooms they want to work in (for more information see www.videofacilitator.com).
[3] MIRO is a digital canvas that allows participants to cocreate by add sticky notes according to specifically designed frames and processes (for more information see www.miro.com).

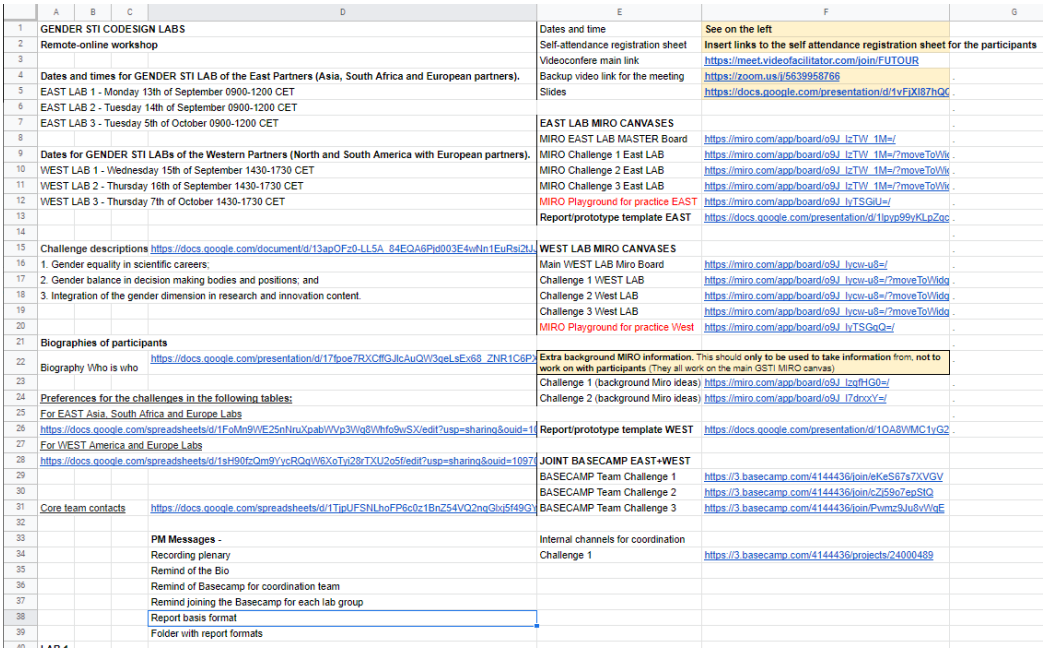
2.2 Preparation of the first LAB (July to August 2021)

Between the training that took place in *June* and *September* a series of tasks were performed to prepare and organise the first online LAB.

The LAB is a discovery process through its design thinking phases. This process includes 3 half days online sessions for exploring and deepening the knowledge, alongside asynchronous individual and group activities where participants could do some preparatory work before, between and after the LAB workshops. This required creating trust and a collaborative spirit between the participants across cultural and technical differences (using online digital tools for online workshops requires some practice and confidence).

The preparation and operational planning of the online LAB included the detailed design and adaptation of a series of digital tools, logistic aspects and processes that had to be integrated in the facilitation and coordination of the process.

A detailed operational agenda, the **storyboard**, that could cater for contingency plan, have all the links to the videoconference and digital brainstorming tools always available and accessible for the LAB core team to manage the articulated online processes. The storyboard includes the beginning and end time for every task, the role to be played by a facilitator, the challenge owner and the prototyping team, as well as asynchronous activities as shown in the figure below.



	A	B	C	D	E	F	G
1	GENDER STI CODESIGN LABS				Dates and time	See on the left	
2	Remote-online workshop				Self-attendance registration sheet	Insert links to the self attendance registration sheet for the participants	
3					Videoconfere main link	https://meet.videofacilitator.com/join/FUTOUR	
4	Dates and times for GENDER STI LAB of the East Partners (Asia, South Africa and European partners).				Backup video link for the meeting	https://zoom.us/j/5639958766	
5	EAST LAB 1 - Monday 13th of September 0900-1200 CET				Slides	https://docs.google.com/presentation/d/1vFiXI87hQC	
6	EAST LAB 2 - Tuesday 14th of September 0900-1200 CET						
7	EAST LAB 3 - Tuesday 5th of October 0900-1200 CET				EAST LAB MIRO CANVASES		
8					MIRO EAST LAB MASTER Board	https://miro.com/app/board/o9J_lzTW_1M=/	
9	Dates for GENDER STI LABs of the Western Partners (North and South America with European partners).				MIRO Challenge 1 East LAB	https://miro.com/app/board/o9J_lzTW_1M=/?moveToWi	
10	WEST LAB 1 - Wednesday 15th of September 1430-1730 CET				MIRO Challenge 2 East LAB	https://miro.com/app/board/o9J_lzTW_1M=/?moveToWi	
11	WEST LAB 2 - Thursday 16th of September 1430-1730 CET				MIRO Challenge 3 East LAB	https://miro.com/app/board/o9J_lzTW_1M=/?moveToWi	
12	WEST LAB 3 - Thursday 7th of October 1430-1730 CET				MIRO Playground for practice EAST	https://miro.com/app/board/o9J_lyTSGiU=/	
13					Report/prototype template EAST	https://docs.google.com/presentation/d/1lpyp99vKLpZqc	
14							
15	Challenge descriptions https://docs.google.com/document/d/13apOFz0-LL5A_84EQA6Pld003E4wNn1EuRsi2tU				WEST LAB MIRO CANVASES		
16	1. Gender equality in scientific careers;				Main WEST LAB Miro Board	https://miro.com/app/board/o9J_lycw-u8=/	
17	2. Gender balance in decision making bodies and positions; and				Challenge 1 WEST LAB	https://miro.com/app/board/o9J_lycw-u8=/?moveToWidg	
18	3. Integration of the gender dimension in research and innovation content.				Challenge 2 West LAB	https://miro.com/app/board/o9J_lycw-u8=/?moveToWidg	
19					Challenge 3 West LAB	https://miro.com/app/board/o9J_lycw-u8=/?moveToWidg	
20					MIRO Playground for practice West	https://miro.com/app/board/o9J_lyTSGqQ=/	
21	Biographies of participants						
22	Biography Who is who	https://docs.google.com/presentation/d/17fpoe7RXCffGJlcAuQW3qeLsEx68_ZNR1C6PX			Extra background MIRO information. This should only to be used to take information from, not to work on with participants (They all work on the main GSTI MIRO canvas)		
23					Challenge 1 (background Miro ideas)	https://miro.com/app/board/o9J_lzqfHG0=/	
24	Preferences for the challenges in the following tables:				Challenge 2 (background Miro ideas)	https://miro.com/app/board/o9J_l7dnxxY=/	
25	For EAST Asia, South Africa and Europe Labs						
26	https://docs.google.com/spreadsheets/d/1FoMn9WE25nNruXpabWVp3Wq8Whfo9wSX/edit?usp=sharing&ouid=1(				Report/prototype template WEST	https://docs.google.com/presentation/d/1OA8WMC1yG2	
27	For WEST America and Europe Labs						
28	https://docs.google.com/spreadsheets/d/1sH90fzQm9YycRQqW6XoTyi28rTXU2o5f/edit?usp=sharing&ouid=1097(				JOINT BASECAMP EAST+WEST		
29					BASECAMP Team Challenge 1	https://3.basecamp.com/4144436/join/eKeS67s7XVGV	
30					BASECAMP Team Challenge 2	https://3.basecamp.com/4144436/join/cZi59o7epStQ	
31	Core team contacts	https://docs.google.com/spreadsheets/d/1TipUFSNLhoFP6c0z1BnZ54VQ2nqGlxj5f49GY			BASECAMP Team Challenge 3	https://3.basecamp.com/4144436/join/Pwmz9Ju8vWqE	
32							
33				PM Messages -	Internal channels for coordination		
34				Recording plenary	Challenge 1	https://3.basecamp.com/4144436/projects/24000489	
35				Remind of the Bio			
36				Remind of Basecamp for coordination team			
37				Remind joining the Basecamp for each lab group			
38				Report basis format			
39				Folder with report formats			

Figure 2: The Storyboard dashboard to facilitate the digital LAB

To foster the interaction and create a fruitful participatory atmosphere in the online environment, we adopted the **VideoFacilitator platform**. This platform gives a total freedom for participants to move between breakout rooms and to create more rooms on the go without interrupting the flow of work for the existing working groups. This functional, efficient and effective logistic virtual environment allows the LAB participants to concentrate on the content of the discussion within the lab rather than on the technical aspects of the tool.

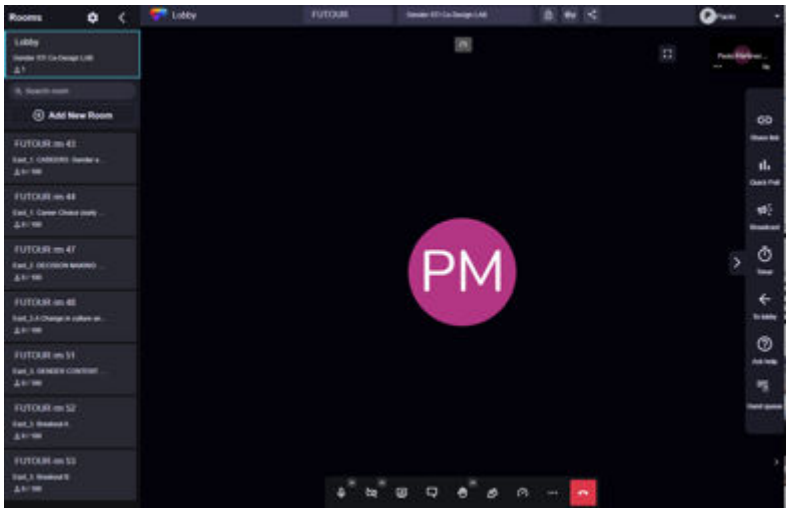


Figure 3: The VideoFacilitator platform and breakout rooms

Through the VideoFacilitator platform, both the EAST and WEST LABs had a dedicated plenary room, breakout rooms and sub-breakout rooms for each challenge and prototyping groups.

In parallel to the discussion in the breakout groups the participants used a shared **canvas** with the design thinking process of the LAB moving from the initial exploration and reframing of the challenges into looking for alternative opportunities, questions, initial ideas and prototypes that could be further developed according to a roadmap of short, medium and long-term activities.

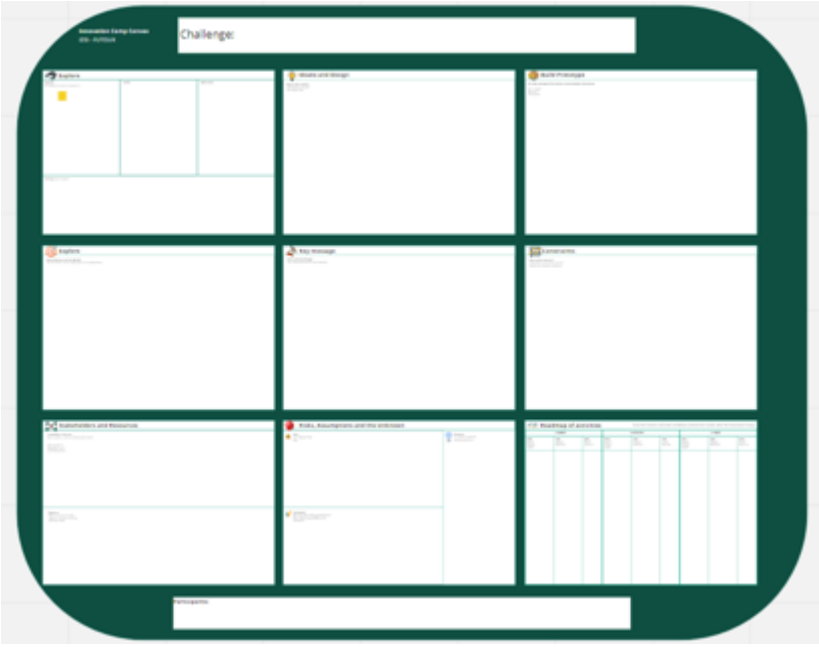


Figure 4: The LAB Canvas

For this purpose, every challenge had a Canvas, both for the EAST and WEST labs. The canvases were used as places where ideas could be shared, clustered and prioritised through sticky notes, arrows, images, links, notes and diagrams that could foster the creative and constructive dialogue. To train participants on the use of MIRO the FUTOUR team created a video tutorial in English and provided all participants that were registering

with the tutorial and a link to a demo space where they could practice how to add sticky notes, boxes of text, arrows, images and so on.

The ideas and clusters emerging from the digital brainstorming on the Canvases were crystallised as initial prototypes by following the structure that was provided to each prototyping team. The prototype report forms were prepared before the lab in two formats: a) slide format in the initial phase to facilitate the presentation of results in the debriefing sessions then b) in a document format in the follow-up prototyping and Go-No Go phases.

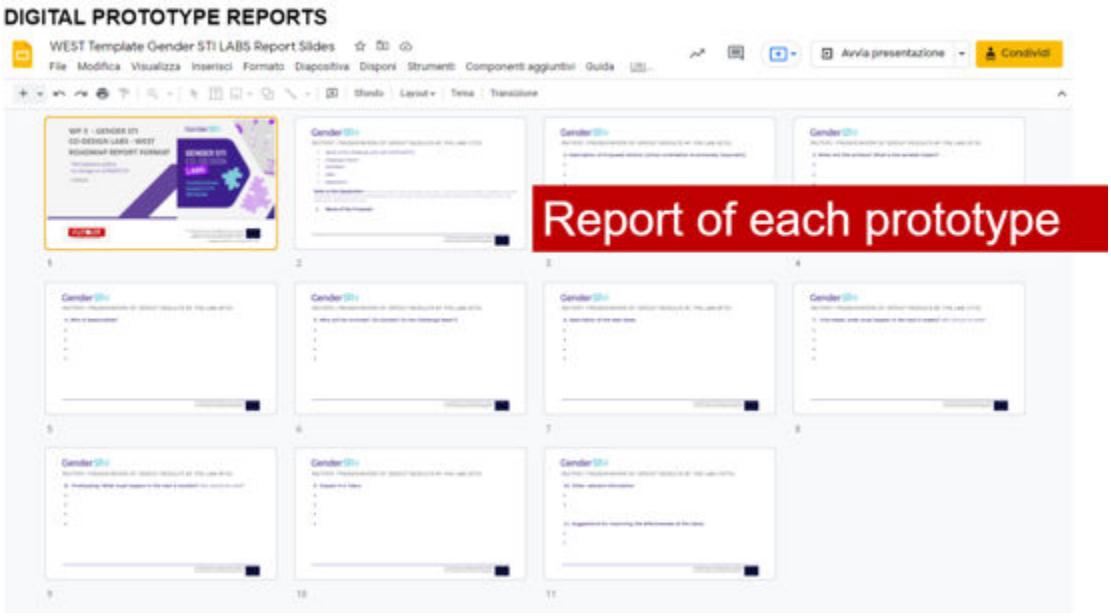


Figure 5: The outline of the digital prototype template reports in slide format

To facilitate the internal communication and interaction between the participants, before, during and after the LAB we adopted the Basecamp platform. This was used to share all links, have open discussion threads, define tasks and commitments and share links to resources and files that were needed for the co-design process.

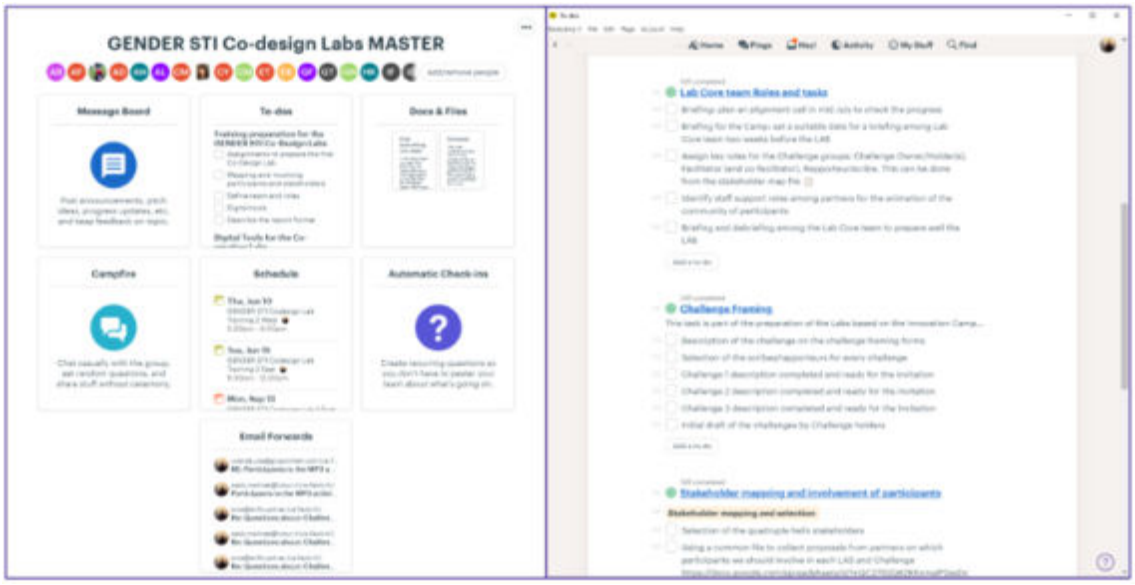


Figure 6 - The Basecamp space of the Co-design LAB

2.3 Communication Actions to Promote the Co-Design Lab

Gender STI carried out a series of online communication actions to promote the Co-Design Labs, which was invitation-only. Because of this, the actions were highly targeted to increase the RSVPs and attendance to the event, and included initiatives on the project's website, email, and the third-party event management platform Eventbrite.

Ultimately, the project's communication actions proved to be successful, attracting a diverse number of participants from different sectors and four continents.

Invitation

Project partners sent out personalized invitations via email to key stakeholders working on gender equality across a variety of sectors, including government, science, technology, funding agencies, the private sector, and NGOs, among others. The Gender STI design team created a special graphic for this purpose, included above, which aimed to convey a message of problem-solving gender equality issues worldwide.

Figure 7 - Invitation for the Gender STI Co-Design LAB

Each partner sent out invitations on an individual basis according to GDPR privacy requirements.

Blog actions

When considering the promotion of the Co-Design Labs, the project communication team decided to use Eventbrite as the main event landing page to reduce the number of steps participants had to take in order to register.

Figure 8 - Blog Banner for the Gender STI Co-design LAB

Nonetheless, we used the Gender STI website to post the agendas for the Co-Design Labs, thereby informing interested participants of the key elements of the online workshops. It should be noted that we did not use our social media channels to promote the Co-Design Labs because the online event was invitation-only and designed for intensive online interactive activity for a limited number of participants.

Eventbrite

As noted above, Eventbrite served as the main landing page for the Co-Design Lab and was included in all the personal invitations sent by the project consortium. It provided a short and compelling event description, which you can see below, and allowed interested participants to register for the Co-Design Labs in less than five minutes. In total, 48 participants registered for the WEST LAB sessions and 32 participants for the EAST LAB ones**.** Participants received their tickets to the event via email and received reminders about the event one day and one hour before it started (see also Annex A).

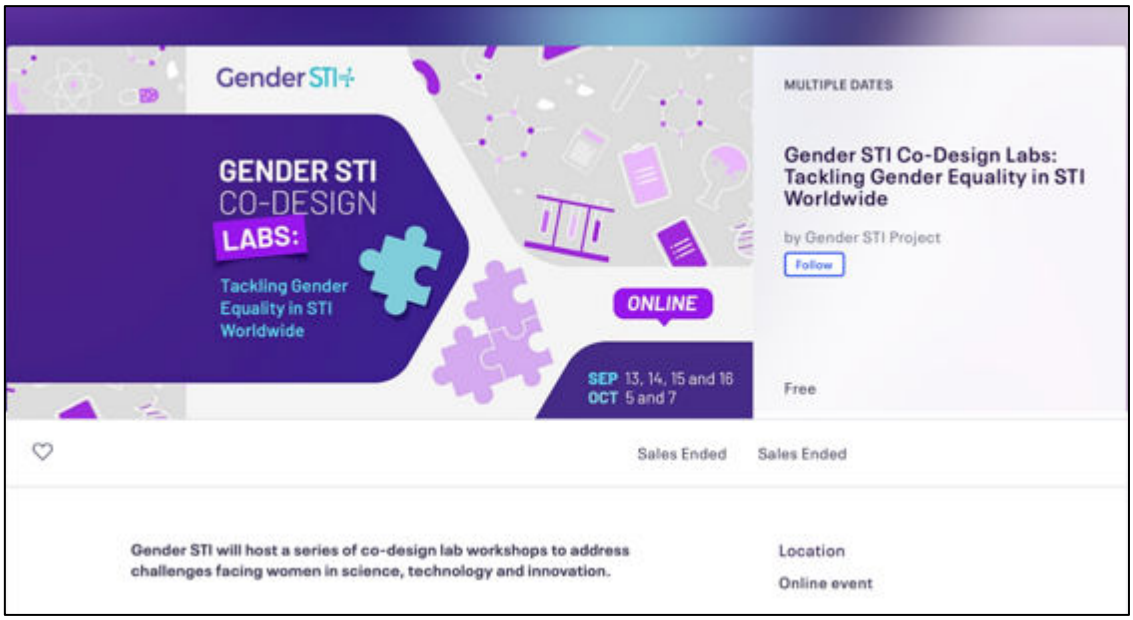


Figure 9 - LAB registration landing page on Eventbrite

Full Eventbrite Description

The Gender STI project will host a series of co-design lab workshops to address three of the forefront challenges facing women in science, technology and innovation (STI): gender equality in scientific careers, gender balance in decision-making bodies and positions and the integration of the gender dimension in research and innovation content.

The series of three facilitated interactive Labs, which will include participants from 16 countries across four continents, aims to identify the key issues in these areas and develop potential solutions using design thinking. Prior to the Labs, participants will each be assigned a specific challenge and receive a concept note with background information as a reference for the discussion. They will then work with members of the Gender STI consortium during the event and share their knowledge and experiences related to specific challenges; discuss opportunities in their country or institution to tackle them; and co-design potential solutions that can be implemented to foment greater equality in these areas in the weeks, months and years ahead.

The global event will take place online over a period of three separate days in September and October. Each workshop will last approximately three hours and will include about 30 participants. As spaces are limited, we ask that you please make sure you will be available to attend all three Lab days.

Gender STI is an international project, and as such will host two series of Labs to accommodate participants from Europe, America, Africa and Asia.

2.4 The First Co-design LAB (September to October 2021)

The first Co-design Lab was held between September and October 2021. It consisted of three half day facilitated online sessions for each LAB, one with participants from the EAST and another one for the WEST, in order to discuss the challenges, explore opportunities and develop initial prototypes. Like the trainings and simulations that were performed in June 2021, to include participants from all time zones the first online LAB had to be organised in two series of sessions including synchronous workshops and asynchronous activities.

- **EAST GENDER STI LAB sessions'** dates and times for Asian, South African and European participants.
  - EAST LAB 1 - Monday 13th of September 0900-1200 CET
  - EAST LAB 2 - Tuesday 14th of September 0900-1200 CET
  - EAST LAB 3 - Tuesday 5th of October 0900-1200 CET

- **WEST GENDER STI LAB sessions'** dates and times for American (North, Central and South) and European participants.
  - WEST LAB 1 - Wednesday 15th of September 1430-1730 CET
  - WEST LAB 2 - Thursday 16th of September 1430-1730 CET
  - WEST LAB 3 - Thursday 7th of October 1430-1730 CET

In every LAB session there was an opening plenary and people would then break out in three workshops, one for every challenge group. Within those challenge groups once some ideas for prototypes were identified and the participants would again create more breakout sessions, one for every prototype.

The core team members of the Gender STI LAB performed a keystone role by attending both the EAST and WEST session as facilitators, challenge holders and rapporteurs of the LAB sessions. This required a strong coordination among the core team and several briefing and debriefing sessions were performed also to fine tune the process of the first LAB and adapt to the current circumstances and opportunities.

Figure 10: A Gender STI Co-design LAB session on videofacilitator

The online nature of the LAB allowed the experimentation of different approaches and styles. For instance, in some cases the teams decided to start with broader challenge groups to create a common ground before splitting into breakout groups while in other cases, it was chosen to start with smaller sub-challenge groups that could generate ideas more rapidly and then share the results with the bigger challenge team of participants.

The sessions of the LAB applied and adapted all the tools that were designed in the preparation phase.

VideoFacilitator was organised for each session with one plenary room, three sub-plenary rooms for each challenge group and the possibility to have three or more prototyping breakout groups for every challenge.

All challenge and prototyping groups were provided with links to their dedicated videoconferencing rooms that could be accessed 24/24 in for other meetings between the LAB sessions. These were used in the phase after the second LAB sessions between September and October, when there two weeks to prepare the initial draft prototypes, and after the third LAB session, to organise specific meetings to continue adapting and improving the prototypes.

The challenge holders and facilitators made an intense use of the Canvas to share, visualise and organise their ideas with sticky notes, images, arrows and other visual tools.

Figure 11: the Canvases of the first Gender STI Co-design LAB for the EAST and WEST

All participants were also sent a link to the video tutorial on how to use the Miro tool and a link to a Miro space where they could practice. Time was dedicated by the facilitator and challenge holders to help people with less digital skills to learn how to add and move sticky notes and concepts. And in some cases, also participants were providing their support to the less experienced.

The first LAB was attended by **42 participants for the WEST LAB** sessions and **28 participants for the EAST LAB ones**. These included people from **19 countries**: Austria, Argentina, Belgium, Brazil, Canada, Chile, Finland, France, India, Italy, South Korea, Mexico, Portugal, South Africa, Serbia, Spain, Switzerland, The Netherlands, USA that followed the synchronous and asynchronous activities.

The **Self-Presentation Biography** tool was designed by FUTOUR to support the networking among LAB participants. This helps people to briefly present themselves, if they want, on a shared document, by adding their name, Surname and Organisation, a picture and the LAB session that they are attending, then by describing themselves briefly through the following fields:

- **Who am I, brief bio** and something about me that will make me easy to be remembered.
- **What I am looking for and would like to achieve through the LAB** (expectations, desires)
- **What I can contribute with my experience to address the gender challenges in Science, Technology and innovation?**

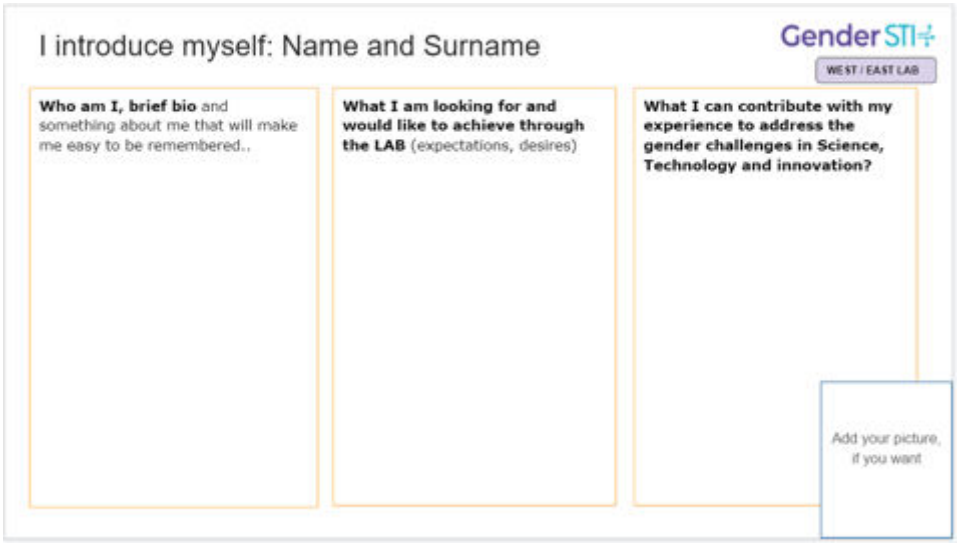


Figure 12: The framework of Gender STI Self-Presentation Biography

The Self-Presentation Biography was filled by the majority of the LAB participants and only the participants can have access to the fiches due to GDPR rules.

Co-design Agora. The **Gender STI Basecamp spaces** have a message board section that allows participants to open a discussion thread, propose questions, share ideas and take decisions, a to-do space to set tasks and deadlines, a document sharing space to have all the documents and links available, a chat function for quick and rapid sharing of ideas or resources and a schedule where to keep track of the events and meetings. This virtual office was extremely useful to keep everyone on the same page and find all the information relating to the challenge and prototypes for all the participants.

The Gender STI Co-design Lab is **an agile, experimental and iterative process** that fosters the dialogue and supports the identification of solutions to complex societal challenges through the co-creation of prototypes among the participants. This is often an exploration into the unknown where every participant learns from each other and takes the initiative to make new discoveries, accept the possibility of making mistakes and getting to the solution by trial and error, as in research and innovation. The diverse competencies, levels of power, domains and cultures can contribute to find and address solutions. This is why people from diverse walks of life and the quadruple helix are involved: research, industry, policy, civil society. The LAB process requires strong and complex challenges (such as the ones addressed by Gender STI), time for participants to get to know each other and an inquisitive, open mindset to get out of one's comfort zone, acceptance of the unknown, of risk taking, faith and trust in each other.

During the first LAB process **12 prototypes** were initially designed and developed. Due to the bridging role of the core team challenge holders and facilitators several themes that were proposed in the prototypes were merged between the EAST and WEST participants so as to create more robust concepts. As a result of this process by the end of the third session of the LAB there were **8 prototypes** and related slide reports that were presented in the closing plenaries of the LAB. During the follow-up prototyping process that took place between October and November 2021 a prototype was merged with another and as a result of there are now **7 prototypes**.

2.5 The prototyping and first Go-No Go phase (November 2021)

As envisaged by the LAB method, the first six weeks after the LAB, between *mid-October 2021 and the end of November 2021*, were dedicated to the first Go - No Go prototyping phase.

These weeks served to support and validate the seven initial prototypes and to stimulate a reflection on how prototypes could be further improved. The first Go - No Go phase has the aim of both developing the prototypes that are most promising and to go back to the drawing table where prototypes need further refinement of the concepts, more evidence, further research and documentation, interviews and so forth. It is not a process of exclusion but a continuous improvement process.

As part of the experimental discovery process of the LAB, the prototypes generated by participants are considered as initial workable concepts that can be used and applied so as to identify further improvements until they reach a point of maturity and can be widely applied. The first weeks after the LAB are a testing period where the prototypes can be discussed initially with a closer circle of colleagues to get feedback and further ideas. This is an open process that leads to find more questions and to adapt and improve the initial concepts embedded in the prototype so as to continually fine tune and improve them.

The first LAB was a strong learning process for the participants and for the consortium. As prototypes would also contribute to the next phase of the project, relating to *recommendations for implementing gender equality in STI dialogues* (WP4), a general framework was developed after the LAB to define in a deductive way, how to use and increase the impact and scope of the emerging prototypes to address the current Gender STI challenges in international bilateral agreements and policy dialogues.

To frame the international bilateral agreements and policy dialogues and then match the prototypes the team created the Gender STI Matrix. This ongoing process and mechanism are described below, in section 4.1. relating to the prototype actions and recommendations.

The seven prototypes generated in the first LAB sessions are described in the next chapter as brief summaries and in much greater details in the annexes.

2.6 Action research – 2022 and beyond

The first LAB produced very useful results both in terms of the process and method and in terms of the content. The LAB's holistic and pioneering approach of the LABs has stimulated a strong learning process among the partners and participants. This is generating very rich prototypes and results, as described in the next sections, and fostering an agile, continuous improvement mindset, also within the method, by integrating processes, facilitation techniques, digital tools and content in terms of the Gender STI challenges to be addressed by international bilateral agreements and policy dialogues.

The next steps relating to the method and organisation of the LAB, *from 2022 onwards*, will continue with a **combination of process and content**, as in the first phase. We outline both the dimensions here while we describe in greater depth the content aspect in the next sections.

From the **methodological and process perspective** the organisation of the virtual lab was extremely effective, inclusive and sustainable. People from as many as 8 time zones could participate at the same time. The organisation of the online LAB in two parallel sessions required a strong effort and commitment for the core team and also many rehearsals and technical fine tunings to make sure that all logistic aspects and tools would work in the online setting.

This virtual LAB format was a pilot as a similar approach had never been adopted before. Unlike webinars and other online traditional events that can be extremely tedious and boring, the interactive and engaging nature of the LAB, with the support of professional facilitators demonstrated immediately that no matter what is the distance or experience everyone can share their thoughts, learn, support the co-design and generate interesting ideas.

In terms of **process** the most important achievement has been that of finding the right mix of time, methods, task, tools and a good balance synchronous and asynchronous activities that could balance for the reduced number of sessions. Time, both in the online and in the face-to-face LABs has always been one of the main challenges when doing research, co-designing and developing new concepts and people do not know each other.

The **next phase** of the Co-design LAB activities will still be based on the action research principles of GENDER STI and will include the following steps:

- Preparation of the LAB 2 sessions in the late spring of 2022 and in the fall 2022, including the focus questions to be addressed by the challenge groups for the new prototypes.
    - Second co-design Lab in the spring 2022 - Online format EAST and WEST (as 1st Co-design LAB).
    - Third co-design Lab in the fall 2022 – In presence (depending on the Covid-19 circumstances) or in online format EAST and WEST (as for the first Co-design LAB).
- Process adaptations in the LAB tasks and timing. The facilitation and core LAB team will address the timing and process of the next LAB to see if the synchronous sessions can be prolonged in duration and reduced in number and if this can be further compensated by more asynchronous activities to facilitate the participation of people that have busy agendas.
- Process and methodological support with the core team and challenge holders to:
    - improve the existing prototypes from LAB1 (see the next sections).
    - identify new core issues and focus questions within the three gender equality challenges;
    - include new participants and stakeholders in the next LAB sessions while keeping a nucleus of initiators of the LAB process to guarantee the continuity and consistency of the method;
    - contribute to the strengthening and animation of the emerging international Community of Practice of Gender in STI (CoP).

As indicated in the Methodological Handbook, a LAB based on the Innovation Camp process creates conditions in which participants can frame and reframe challenges, issues and problems in the light of other points of view and different perspectives.

Once the reframing process has started, and promising ideas have emerged, the rapid prototyping process can turn these into prototypes for possible action. These prototypes can then be tested, improved, retested, and once again make better – in direct interaction with their intended users.

Thus, a LAB based on the Innovation Camp method does not *deliver* solutions *to complicated or complex issues.* It *does* build better understanding of how these issues work in their societal context – and how they may more effectively be addressed. Reframing problems, enriching understanding, fast prototyping, thinking in outcomes, preparing for action: these are key LAB processes that define what participants can expect from the LAB. The results in terms of **content** from the LAB process are described in the next sections. These include how the prototypes that emerged from the three main challenges.

3 CHALLENGES AND PROTOTYPES

The challenges of the first Gender STI Co-design Lab were identified and described in detail in between the spring and summer of 2021. They were then validated during the Gender STI Training sessions held in June 2021 and fine-tuned in view of the first LAB between July and August 2021.

In this section, we present the initial challenges and guiding questions as described on the concept note, the prototypes that emerged in the EAST and WEST LABs from the work of the participants and the summary of the emerging actions and recommendations.

3.1 Challenge 1: Gender equality in scientific careers

The main question addressed in the first challenge has been: ***how can conditions be improved to increase the number of women pursuing STI careers?***

BACKGROUND
Current statistics still show a gender gap in STI fields. Case in point: Just 30% of the world's researchers are women. Even though the proportion of women in STI fields is increasing, this gender disparity remains. Meanwhile, experts point out that "science, technology, engineering, and mathematics (STEM) occupations are projected to grow over two times faster than the total for all occupations in the next decade." To satisfy this demand and give women the opportunity to shape the future, we must increase the entry rate of women in STI studies.

Career choice and encouragement are the two main components of this challenge. The broad scope of STI offers a wide framework and thus many opportunities to create a roadmap with recommendations.

Gender equality is a global societal issue that, like climate change, has to be dealt with on a structural level, not an individual level. Therefore, the framework of these Co-Design labs, with its special composition of partners and stakeholders worldwide, is perfectly suited to address this problem.

As a community, we can share best practices and learn from the experiences and policies of various countries to identify systems and initiatives that contribute to gender equality in STI.

UNDERLYING ISSUES

- Science culture: competition-oriented, temporary employment contracts, not family-friendly, lack of balance between personal and professional life.
- Gender-biases and gender inequalities in society.
- Acknowledging the contribution of women in STI.
- Prejudices/stereotypes of women's capability in the workplace and gender-biased education (vs. science culture).
- Leaking pipeline of women talent in higher education.
- Women face more difficult conditions, lower appreciation for their work.
- Lack of women role models in science for girls in school.
- Visibility of women role models in STI, who are often not seen even if they are there.
- Women face a pay gap, glass ceiling.
- Lack of networks of women in STI.

GUIDING QUESTIONS

- **How can we support STI career choices?**
  - Create a new approach and remove old and inflexible structures in science culture.
  - Work to make science a family-friendly professional field.
  - Implement parental leave policies and flexible work schedule arrangements.
  - Include inclusive language for job vacancies.
  - Ensure job security for women in the long-term.
  - Lift up women role models in STI and increase their visibility.
  - Promote scientific careers for women in culture, religion and politics.
  - Break stereotypes around expected career paths for women and reduce societal pressure to go into predetermined fields.
  - Promote gender equality in recruitment and career progression.

- **How can women be encouraged in STI fields?**
  - Give more visibility to women references in science.
  - Promote and encourage women mentoring other women.
  - Encourage women to take lead positions in science.
  - Provide incentives for women to lead projects.

3.1.1 Prototypes on gender equality in scientific careers

The LAB team working on challenge 1, relating to *gender equality in scientific careers* **is working on 2 prototypes:**

1.1 Science culture - University and research organizations (with an atmosphere that addresses a balanced distribution of students)

1.2 Multilateral agreement to increase the representation and progression of women in STI careers

The section below summarises the key points of the two emerging prototypes from challenge 1. A more detailed description of the prototypes can be found in the annex B.

1.1 Science culture - University and research organizations (with an atmosphere that addresses a balanced distribution of students)

The EAST Co-design Lab has developed the prototype "Science culture - University and research organizations (with an atmosphere that addresses a balanced distribution of students)". This prototype sets up recommendations for actions to support a cultural change at universities. Therefore, the following underlying issues are target: Science culture, recognition of women's contribution to STI, the lack of visibility of women talent in higher education, difficult conditions faced by women, lower appreciation for women work, visibility of women role models in STI, lack of visibility of women, and the existence of few networks of women in STI.

The following recommendations have emerged. To implement the prototype, the gender STI partners of the universities and RTOs will be involved for a pilot study. Together, the first framework conditions and steps for the development of the prototype are determined. The commitment of the partners as well as the time schedule should be fixed in order to ensure a target-oriented cooperation for the development of this prototype.
The prototype is intended to promote women in the field of STI (for now) in university by creating a welcoming atmosphere. This is possible through recommendations and actions such as highlighting female role models in STI and increasing their visibility and promoting and encouraging women to mentor other women.

Key words: science culture, mentorship, recommendations, universities, research organisations.

1.2 Multilateral agreement to increase the representation and progression of women in STI careers

The Co-design Lab from the WEST team focused on the Challenge 1 prototype "Multilateral agreement to increase the representation and progression of women in STI careers". This prototype develops an international charter or agreement between different countries to increase the representation of women in STI careers in the next few years and fix nationwide goals.

The following underlying issues are the focus of this prototype:

- Gender-biases and gender inequalities in society.
- "Leaking pipelines" of women in STI careers.

- Women facing more difficult conditions including a lower appreciation for their work.
- Women facing a "glass ceiling" and a lack of visibility of women role models in STI.

All the above issues are based on the current status for women in STI careers. Initial considerations for a possible agreement should be made. For this, the Gender STI partners, especially from the political sector, have to be involved. As a prototype, this "Multilateral Agreement" can contribute greatly to the advancement of women in STI careers. Actions such as family friendly policies STI careers can attract more women in the STI profession. This could lead to a reduction of gender stereotypes. The prototype should also be used to develop recommendations to make STI a family-friendly work environment and to encourage women to take leadership positions in STI. To sum up, this prototype is intended to support women in STI careers, by increasing quotas, adopting parental leave policies and flexible work schedule arrangements. This includes inclusive language in job descriptions, ensuring long-term job security for women, and promoting gender equality in recruitment and career progression.

Key words: STI agreement, guidelines, quotas

3.2 Challenge 2: Gender balance in decision-making bodies and positions

The main question addressed in the second challenge has been: ***what needs to be addressed to improve the gender balance in decision-making bodies and positions in STI?***

BACKGROUND

Women are underrepresented in decision-making processes and positions in areas such as politics, STI advisory groups and business. In politics, gender-balanced participation is an important condition for effective democracy and good governance, and it contributes to citizens' trust in democratic institutions. On the other hand, gender balance in business management and leadership functions can boost innovation, competitiveness and productivity, and contribute to a country's prosperity.

Reasons for the persistent under representation and low participation of women are broad and multifaceted. Root causes include traditional gender roles and stereotypes as well as unequal sharing of household and care responsibilities. Political and working cultures favouring long working hours that clash with care responsibilities traditionally assigned to women are also a factor. Furthermore, women are subject to gender-based harassment and bullying in the workplace, with the emergence of online violence as an increasing concern. These factors discourage and limit women's participation in politics and public life, and ultimately hinder gender equality in decision-making.

Recent research has shown that gender bias has important implications for the content of science itself. Few women are in leadership positions or involved in decision-making. The SHE figures statistics show that there are striking imbalances between the number of women and men at the highest levels of academia in the great majority of EU countries. The proportion of women among heads of institutions in the higher education sector in the EU increased from 20.1% in 2014 to 21.7% in 2017. The respective proportion among the heads of universities or assimilated institutions accredited to deliver PhDs increased slightly over the same period from 14.1% to 14.3%. Women made up only 27% of board members (including leaders) in the EU in 2017.

The gender gap in decision making and leadership positions is also related to the gender gap in entrepreneurship, which continues to persist. The number of women in business leadership is low. In April 2019, women accounted for just 27.8% of board members of the largest publicly listed companies registered in EU countries. Furthermore, in the second quarter of 2019, women accounted for 31% of parliament members in EU countries. On the other hand, negotiation is a process that creates, reinforces and reduces gender inequality in organizations. However, a larger number of gender-conscious women in the negotiating room does not necessarily translate to better outcomes in agreement negotiations or more gender provisions in agreements.

For most leaders, the past year has demanded more innovation, endurance and creativity than any time in recent history. This period of change, activated by a global pandemic and social justice movements, has called for rapid redeployment of resources while positioning and maintaining equity as a priority. For women, the circumstances have generated new opportunities to demonstrate their leadership talent and also presented new challenges, as studies have shown that the covid-19 pandemic has exacerbated inequalities related to gender.

The low number of women in decision-making positions throughout the science and technology system is a waste of talent and capacity that countries' economies cannot afford.

UNDERLYING ISSUES

- Glass ceiling, or the evident but intangible barriers that prevent women from achieving high professional positions or success.
- Lack of dissemination of success stories of women in leadership.
- Traditional family roles (motherhood, spouse, informal caregivers of family members, etc.).
- Societal perspectives / culture.
- Lack of policies that take gender issues into account in hiring processes.

GUIDING QUESTIONS

- **How can we foster the empowerment of women in STI?**
  - Leadership training, including training on unconscious bias in regard to gender balance in leadership positions.
  - Create networks of women in STI (e.g., entrepreneurial, research, etc.) to perform coaching and mentoring and encourage women to seek senior professional positions and leadership roles.
  - Disseminate information and trends on gender equality in decision-making, including success stories.
  - Gender balance quotas in panels and governance bodies.
  - Promote women leadership and decision-making skills in scientific careers.

- **How can we engage all groups involved, including governments, funding organizations, universities and businesses, to tackle traditional gender roles and stereotypes to improve gender balance in decision-making and leadership positions in STI policy dialogues?**
  - Coordinate gender equality policies among different countries signing STI cooperation agreements.
  - Improve conditions to increase the number of women in decision-making positions and in the negotiation of STI agreements.
  - Favour common decision-making and shared responsibilities instead of individual leadership.
  - Involve men in structural changes.

3.2.1 Prototypes on gender balance in decision-making bodies and positions

The LAB team working on challenge 2, relating to *Gender balance in decision making bodies and positions* has been **working on 2 prototypes:**

2.1 - Worldwide Spread of Female Networks.

2.2 - Guideline supporting more gender sensitivity and mainstreaming in the process of developing STI agreements for decision-making positions.

The section below summarises the key points of the two emerging prototypes from challenge 2. A more detailed description of the prototypes can be found in the annex B.

2.1 - Worldwide Spread of Female Networks.

One of the evident ways to work in the content of this challenge has to do with the promotion of female networks that empower women in STI and help them to reach decision-making positions. This type of networks support women who aim at leadership, gather and share information about existing opportunities and improve the chances to be appointed as a member of powerful groups with political weight, among others.

This prototype aims to achieve a wide variety of leadership profiles and lower the prominence of the implicitly masculine leadership norm. To do so, the steps will include: identifying female networks in research, higher education and innovation, as well as high-profile women potentially interested in joining them or building similar ones; organizing meetings to obtain feedback about what needs should be met; and finally, depending on that feedback, define the actions to be implemented later (they could be events to promote the dissemination of the networks or create local networks for the already existing ones, for example).

Key words: female networks, women empowerment.

2.2 - Guideline supporting more gender sensitivity and mainstreaming in the process of developing STI agreements for decision-making positions.

It is important to realize that a gender-balanced decision-making body does not guarantee more gender-sensitive STI agreements. That is why this prototype intends to provide a tool to support the decision-makers (and other stakeholders) who are involved in the negotiation and development of STI agreements in order to help reduce the current global gender gap existing in them.

This topic is important because international agreements which take into account gender equality play an important role in different ways: fostering the inclusion of women in important research worldwide, assisting the creation of long-term career pathways for them, encouraging women to take on leadership positions, raising research questions on the gender dimension in R&I content, etc.

This prototype will be carried out in 4 steps. First, a diagnosis phase about the gender agreements collected in the Gender STI mapping task. Second, and based on the identified improvement aspects, a guideline with recommendations will be developed to support the gender mainstreaming in STI agreements. Then, a checklist will be defined to help monitor and evaluate the implementation of the above recommendations. Those agreements that meet the minimum criteria will be awarded with the "Gender Equality Seal", a distinction for STI agreements that guarantee gender equity. Finally, the results of the prototype will be tested in a pilot activity with 3 or 4 institutions.

Key words: STI agreements, guideline, seal.

3.3 Challenge 3: integration of the gender dimension research and innovation content

The main question addressed in the third challenge has been: ***how can the gender dimension and awareness be strengthened in research and innovation content, such as research teams and research projects?***

BACKGROUND

In this challenge, we aim to understand how the gender perspective is included in different kinds of Science, Technology and Innovation (STI) dialogues, specifically in those related to research, development and innovation (R&D&I). With STI dialogues we mean official bi- and multilateral agreements, third sector collaboration, university level collaboration and financial/funding agreements. In this challenge, we aim to understand how the gender perspective is included in research and innovation content. We will approach the issue through the innovation process perspective, which allows us to focus on different areas of research and innovation, starting from academic research to commercialization and grassroots entrepreneurship funding agreements. Having an innovation process perspective is important, as the gender dimensions and status quos vary at different stages of innovation processes. Furthermore, adopting an innovation process perspective enables cross-pollination of ideas, practices and results from one field to another, encompassing the whole of dialogues in various innovation processes. As such this perspective also functions as a method of co-creation and knowledge sharing.

Traditionally, integration of gender in research and innovation has been approached in terms of gender-balanced participation in research and innovation output, namely in publication output, publication impact, patent output and the difference between women and men researchers in funding success. According to the European level statistics, women are still underrepresented in scientific authorship. International academic collaboration outside the EU is male dominated. It is, however, delightful to observe a modest growth (+0.4 %) in the proportion of women inventors for all technology domains in the 2005-2016 period, although the majority of inventors' teams are still all-male.

In contrast to the outputs in the academic scene, gender aspects in research and innovation can be approached from invention and innovation perspectives. This is important, as gender is emphasized in the responsible research and innovation (RRI) approach and as such strongly influences research and innovation activity. Moreover, having this perspective brings light to the research, development and innovation processes and outcomes of these processes, namely products, solutions, services, concepts, etc. This so-called input side analysis allows us to discuss inclusion, diversity, equality, gender and intersectionality. We aim to address these issues through questions such as: How gender sensitive are innovation development processes? In addition, how are diverse groups of women, such as minorities, included in research content?

Covering the complete innovation process, from academic research to women entrepreneurship, offers a holistic picture of gender in the R&I. For example, the inclusion of women in research differs from the gender challenges encountered in innovation closer to commercialization. Neither R&I processes nor innovation outcomes should be discriminating. While it is acknowledged that diversity benefits innovation—resulting in different knowledge bases, skills, capabilities and views—we still observe that, for example, many startup ecosystems have poor records on diversity. According to the State of European Tech 2020 report progress on gender diversity in the European technology scene had stagnated, with all-men teams capturing 90.8% of all capital raised in 2020.

To summarize, this challenge will address gender in R&D&I on three main levels, namely on the international high-level cooperation (bi- and multilateral state agreements), innovation financier level (e.g., development financiers, research funding organizations,

start-up funds) and civil society and university-level engagement. Understanding how the gender dimension is included in contracts and agreements in these three domains enables us to understand gender dimensions in international cooperation holistically. This approach takes into account the whole of innovation processes, starting from agreements to commercialization. Moreover, as international cooperation in R&D&I consists of actions beyond official state level cooperation, it is important to look at how gender issues are accounted for and materialized in these international R&D&I domains.

UNDERLYING ISSUES

- Decision-making procedures and protocols in allotting capital to start-ups are gender biased (consciously or unconsciously).
- General lack of understanding how different R&I projects are gendered.
- Lack of political prioritization of gender questions in bi- and multilateral agreements.
- Lack of awareness of the impact of STI agreements in research team settings (e.g., in the male - female ratio).
- Lack of female representation in negotiations.
- Lack of female employees in STEM fields.

GUIDING QUESTIONS

- **How do we ensure and increase gender balance in research and innovation teams?**
  - Establish equality in the number of women and men teams in research and innovation (e.g., start-ups).
  - Promoting female entrepreneurship.
  - More STI agreements in fields that support women's inclusion in research teams.

- **How do we ensure that the research and innovation process is inclusive and gender sensitive?**
  - Implementation of gender sensitive research as part of international STI dialogues.
  - Increasing gender awareness in STI agreements.

- **How do we ensure that innovations are non-discriminating?**
  - Promotion of gender aware start-up funding.
  - Implementation of gender clauses in bi- and multilateral agreements.

3.3.1 Prototypes on the integration of the gender dimension research and innovation content

The LAB team working on challenge 3, relating to *the integration of the gender dimension in research and innovation content* has been **working on 3 prototypes:**

3.1 Inclusive design process perspective: Integration of inclusivity clause in research and innovation funding.

3.2 Inclusiveness education/training programme and guide: Develop a training programme for educators and researchers on inclusiveness.

3.3 Organisations and tools.

The section below summarises the key points of the three emerging prototypes from challenge 3. A more detailed description of the prototypes can be found in the annex B.

3.1 Inclusive design process perspective: Integration of inclusivity clause in research and innovation funding

This prototype aims to develop a methodology based on inclusive design for R&I funding agencies to integrate the gender dimension as a compulsory requirement to be addressed in funding programme design, e.g., in research grant applications, and their evaluations. This aims integrating an inclusivity perspective into the research content via inclusive design assessment of the research design and content. This will be done to further enhance gender mainstreaming in research content. Gender in this prototype is approached through intersectional understanding for which in the terminology we refer to inclusivity. This entails not only setting up inclusivity analysis as a requirement in research proposals, but meaningful evaluation of it. The proposed action also requires training of researchers and RFOs in gender analysis in research content, which will be further developed in prototypes 3.2 and 3.3.

As such, this inclusive design prototype aims to integrate inclusive design thinking into research content via research funding agencies (policy + training tools). The idea is to, on the one hand, work on the inclusive design process perspective, and, on the other, develop it further in the context of the above-mentioned levels for example. This enables us to develop the inclusive design process and examples on how to apply it in practice in relevant contexts (for example international high-level dialogues and in bilateral and multilateral agreements).

In summary, the prototype:

- Aims to develop practical guidelines to incorporate inclusivity thinking into the assessment of research proposals & pre-/post- processes / research funding etc.
- Is based on inclusive design which is a thinking tool or way to facilitate inclusiveness in a variety of settings. As such, this prototype is seen as an umbrella prototype that will host a series of sub-prototypes, depending on the context in which they will be implemented (e.g., prototypes dealing at the level of research funding agencies, innovation financing and high-level international cooperation).

Key words: inclusivity, inclusive design, gendered research and innovation, research funding organisations, inclusive research content.

3.2 Inclusiveness education/training programme and guide: Develop a training programme for educators and researchers on inclusiveness

To enable integration of gender dimension in research content, researchers will need to be knowledgeable of gender and inclusiveness issues. For this, the second prototype will address the gap of gender understanding in research organisations and universities / other educational institutes. Gender in this prototype is approached through intersectional understanding for which in the terminology we refer to inclusivity.

This prototype will develop a training programme that can be implemented in a variety of settings. The gender studies will be the base for the educational program at a higher level, but the training will emphasise inclusiveness - how to embed inclusive thinking in R&D&I. Gender studies will provide a feed for what has to be addressed, definition and descriptions, as well as insights about the cultural contexts to which the education/training program has to adapt in order to be adopted and effective.

In summary, the prototype:

- Aims to embed inclusive thinking in R&D&I education and research. This will have a "trickle down" effect that will foster inclusiveness in the culture by having learners and consumers of research be exposed to inclusiveness indirectly.
- Is important for increasing researchers' gender sensitivity in the STI fields.
- Will enable researchers to understand how gender influences research and ensure gender justice (inclusivity) and diversity.

Key words: training, gender equality, inclusiveness, research organisations, universities.

3.3 Organisations and tools.

This prototype aims to facilitate the creation of the standardized framework for constant monitoring and supporting gender equality & integration of gender into research content in **joint research projects** between different organizations. According to the GEAR tool, the "best starting-point for developing an effective set of actions [to enhance gender equality] is to have a thorough understanding about how your organisation is doing regarding the promotion of gender equality. After assessing the state-of-play of your institution, you will know which measures need to be implemented. "The aim of this prototype is the creation of a **tool** that enables integration, monitoring and supporting the inclusion of gender equality in multiple types of organisations.

A GEP questionnaire is meant to be used in inter-organizational as well as intra-organizational research projects funded by third parties (3rd party requires answering a Gender Equality Plan questionnaire to leverage inclusion of sex/gender analysis in R&I projects) and used as an evaluation methodology to constantly evaluate and track gaps and needs of gender sensitivity in research projects. The survey should be directed and integrated as a common practice by R&I organisations, RFOs, ministries and other relevant stakeholders that are involved in R&I projects (incl. private entities). Fulfilment of GEP questionnaire is a precondition for funding.

Thus, this prototype will help monitor and support the integration of gender equality in research and innovation projects. This will be done through 3 tracks, i.e., with the survey that maps out gaps and needs in gendered R&I assessments, through the introduction of mandatory inclusivity assessments and training for project research groups (which are developed in further detail in prototype 3.1 and 3.2).

In summary, the prototype:

- Aims to develop a monitoring and assessment tool for organisations to enable constant monitoring and supporting gender equality & integration of gender into research content in **joint research projects.**

- The monitoring tool is used as an evaluation methodology to constantly evaluate and track gaps and needs of gender sensitivity in research projects.
- Will enable gathering understanding and knowledge about where gender inclusivity needs to be enhanced.

Key words: gender equality mapping, research organisations

3.4 Go – No Go prototyping phase

As part of the continuous improvement and self-reflection process of the LAB every prototype undergoes through a Go – No Go check and retrospective that is also based on peer review comments and contributions from its creators, from external stakeholders and potential beneficiaries. This phase is performed in three steps:

1. the first step is for rapid prototyping checks that are performed in the first month and a half after the LAB. If the prototype requires more fine tuning it is either discarded or adapted.
2. If the prototype is mature enough it goes into a longer period of tests and adaptations based on feedback from beneficiaries and other stakeholders. This phase of consolidation of the initial prototype is normally lasting about 6 months. If the prototype demonstrates that it is not realisable or incoherent it is either transformed or discarded by its proponents.
3. If the prototype is consistent and coherent with the requirements of the challenge stakeholders and decision makers and can be robust enough to be proposed as a possible action, recommendation, form of agreement, solution to the challenges, then it will be proposed to the stakeholders for its adoption. This phase enters into the time frame and processes of the policy making activities which can be within medium and long term.

This fine-tuning process helps to develop the Proof of Concept needed for the prototype proposals to be more robust, practical, concrete and operational as they go through iterations, refinements, polishing and improvements.

In the LAB, as a result of this process some prototypes were merged while others were totally transformed and adapted.

As part of Task 3.3 Follow up and validation, partner SPI collected two sets of comments and suggestions from the partners and participants to see which prototypes could go through next phases and which ones required still more testing and validations on the ground.

The Go – No Go assessment and agile coaching process collected feedback that showed that according to participants and partners the prototypes with the highest endorsement are the following:

- 2.2 - Guideline supporting more gender sensitivity and mainstreaming in the process of developing STI agreements for decision-making positions.
- 3.2 Inclusiveness education/training programme and guide: Develop a training programme for educators and researchers on inclusiveness.
- 3.3 Organisations and tools.

Other prototypes that would need further discussion are the following:

- 1.1 Science culture - University and research organizations (with an atmosphere that addresses a balanced distribution of students).
- 1.2 Multilateral agreement to increase the representation and progression of women in STI careers.

Overall, some partners also underlined that, the prototypes seem to be on the right track, but still need further improvements. Some of these related to what is perceived as the need to have a broader involvement of external stakeholders in the development and scaling-up of the prototypes.

These initial feedbacks to the first prototypes were provided taking into account the idea that the most promising prototypes shall later be translated as policy recommendations. In that sense, the Go – No go team supported the improvement of selected prototypes considering the following aspects:

- a proper identification of the target audiences (understanding what their job entails and their sphere of influence);
- a clear selection of what policy/rule should be transformed (identifying its shortfalls);
- a strong explanation of how the prototype can improve the status quo; an evidence-based justification of the ideas proposed by the prototype;
- a special attention to aspects of practical implementation, cost-effectiveness and acceptable decisions by specific beneficiaries of the future recommendations;
- a clear identification of the steps and resources needed to later test the prototype and eventually support the beneficiaries in putting the decision into force.

As we shall see in the next session all the emerging suggestions and retrospective analyses from the agile phase of the Go – No go have been taken in consideration in the Gender STI Prototyping Matrix and in the recommendations from the challenges based on the first LAB's co-design activities.

4 PROTOTYPE ACTIONS AND RECOMMENDATIONS

In this chapter we describe how the potential impact and outcomes of the prototypes have been matched according to the Gender STI Prototyping Matrix and the resulting recommendations from each challenge of the Gender STI Co-design Lab.

4.1 The Gender STI Prototyping Matrix

To assess the potential benefits, outcomes and impacts of the co-designed prototypes on international STI agreements and dialogues, we have developed the **Gender STI Prototyping Matrix.**

The **Matrix** has emerged after the LAB and prototypes as a way to identify ideas, proofs of concepts, recommendations and priorities. The Matrix's background information is based on a clear understanding of international agreements and policy dialogues and all the aspects that determine them. It examines the possible benefits and impact the prototypes can generate according to four dimensions.

- Agreements: level of agreement that could benefit from the prototype.
- Areas: focus areas where gender aspects could be addressed in the prototype.
- International Policy Dialogue on STI: Policy Dialogue Level (Interactions among stakeholders) and policy dialogue instruments and tools in which the prototype could contribute.
- Target audiences.

Below we examine and describe more in detail these four dimensions and how they integrate with each other. We then cross reference the information with the seven prototypes that were generated in the first Gender STI Lab sessions.

4.1.1 STI Agreements

The Gender STI Prototyping Matrix considers especially the following levels of **agreement** that could benefit from the prototypes:

- Bilateral Agreement
- Multilateral Agreement
- Memorandum of Understanding (Incl. an updated version of an agreement/ revision)
- STI implementation activities/ Joint actions / Joint program (e.g., call for proposals, rules for participation, evaluation criteria, etc.).

These bilateral, Multilateral agreements, MoU, and specific STI cooperation agreements are legally binding documents. They contain provisions regarding the framework (term, purpose, duration…), rights and obligations, organization, and often resources, liability, intellectual property rights…). Therefore, it is difficult to introduce elements regarding gender equality, except for general statements, if they are related to already existing national regulations.

While framework agreements are usually not very detailed, specific STI agreements often foresee to set up governance bodies (steering committee, executive committee…) to implement the action plan. There one could possibly introduce gender balance criteria in the composition of such bodies by adding for example "The Parties will strive for a gender balanced composition" rather than "commit to have 50% women" which would make it legally binding and not compliant with most of the national regulations.

Specific international cooperation agreements signed between research organisations or universities often include (usually appended to the core agreement) a description of the scientific programme to be performed. There it is possible to try, on a case-by-case basis, to propose topics integrating the gender dimension in research, or specific actions (e.g., summer school for female students…) and events or dissemination activities targeted towards women (e.g. girl's day…).

Bilateral or multilateral agreements signed between research funding organisations may possibly consider gender aspects (gender balance as evaluation criteria, gender-disaggregated data on applications….) regarding the joint call(s) to be implemented within the framework of such agreement.

Some mentions of gender aspects are incorporated in the implementation programmes of the agreements and in the terms and conditions of the calls for proposals e.g., Evaluation Criteria for R&D projects: "Socio-economic and environmental impact. Job creation, private investment mobilized, company measures aimed at gender equality, social inclusion and sustainability improvement will be assessed".

Thus, the possibilities to integrate gender aspects in international cooperation agreements are rather limited if not based on mutual interest in such policies and expected added value of the cooperation.

4.1.2 Policy dialogues on STI

Policy dialogues are related to science diplomacy and are not legally binding. They are negotiated at State/Ministry level.

The Gender STI Prototyping Matrix assesses especially the following **International Policy Dialogue Levels on STI** (interactions among stakeholders), that could benefit from the LABs prototypes:

- Preparatory meetings/ Support Processes (technical representatives).
- Regional Policy Dialogue (e.g. EU-CELAC) (high level representatives).
- National Policy Dialogue (between countries) (high level representatives).
- Background documentation (study reports).
- Concept note (include background, rationale, objectives, methodology, expected participants).
- Agenda.
- Set of recommendations.
- Roadmap/ Action Plan.
- Policy briefs (prepared to capture and communicate key messages).
- Declaration.
- Evaluation reports from policy dialogue.

To assess the potential contribution of the GENDER STI prototypes to policy dialogues it is important to be aware that:

a) A Policy Dialogue is a long process, which usually involves bilateral summits, senior officials' meetings and working groups. For example, this is the case of bi-regional dialogues such as the EU-CELAC Policy Dialogue between the European Union and the Community of Latin American and Caribbean States[4]

[4] For the EUCELAC Policy Dialogue see: https://www.eucelac-platform.eu/policy

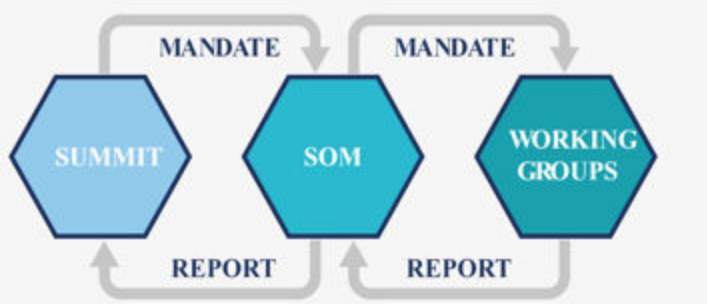


Figure 13 - EU-CELAC Policy Dialogue process

b) The scope of the Dialogues is very broad, STI being just one topic. So even if gender issues are included in the action plan it is not necessarily related to STI.

c) STI Roadmaps and concept notes are usually addressing global challenges (related to SDGs) without addressing gender aspects, not even as a cross-cutting issues.

4.1.3 Focus Areas of the Gender STI prototypes

The Gender STI Prototyping Matrix has identified, the following **focus areas** where gender aspects could be addressed in the prototypes to determine their possible impact and outcomes:

- Advice/recommendations on implementing gender equality.
- Gender balance in governance bodies.
- STI objectives/priorities (e.g., strengthen research excellence, increase the number of women researchers in STI activities, etc.).
- Evaluation criteria for STI programs/ projects.
- Monitoring of STI programs/projects.
- Calls for proposals/applications.
- Rules for participation.
- Impact of project results.
- Science communication/ raise awareness.
- Contribution to Sustainable Development Goals.
- Gender dimension in research content.

4.1.4 Target Audience of the Gender STI prototypes

The **target audience and beneficiaries** of the Gender STI LAB prototypes include all the quadruple helix stakeholder that can influence policies and strategies to balance the gender dimension in STI. More specifically:

- Government organization.
- Funding organization.
- Research and Technology Organization.
- University.
- Foundation.
- Private company.
- Public company.
- STI agency/association.
- Non-governmental organization.

The four dimensions – Agreements, Focus areas, International policy dialogues on STI and Target audiences – were matched with the prototypes from the first LAB to identify what

benefits and impact the prototypes could generate to address and contribute to improve the Gender STI Challenges.

In the Gender STI Prototyping Matrix below, through the fields marked with an X, we show how the four dimensions described above and the prototypes have been matched to identify possible outcomes, benefits and impact.

Here is the legenda of the first Co-design LAB prototypes (*) per challenge:

- **Challenge 1 (Careers):**
  - Prototype Nº 1.1 Science Culture – University and Research Organizations.
  - Prototype Nº 1.2 Multilateral Agreement to Increase the Representation and Progression of Women in STI Careers.

- **Challenge 2 (Decision making):**
  - Prototype Nº 2.1 Worldwide spread of female networks.
  - Prototype Nº 2.2 Guideline supporting more gender sensitivity and mainstreaming in the process of developing STI agreements for decision-making positions.

- **Challenge 3 (Gendered content):**
  - Prototype Nº 3.1 Inclusive design process perspective.
  - Prototype Nº 3.2 Education programme/ guide.
  - Prototype Nº 3.3 Organizations and Tools.

Table 1: The Gender STI Prototyping Matrix

	Co-Design Labs Prototypes (*)						
	Prot. Nº 1.1	Prot. Nº 1.2	Prot. Nº 2.1	Prot. Nº 2.2	Prot. Nº 3.1	Prot. Nº 3.2	Prot. Nº 3.3
AGREEMENTS							
Level of agreement that could benefit from the prototype							
Bilateral Agreement		X		X	X	X	
Multilateral Agreement		X		X	X	X	
Memorandum of Understanding (Incl. an updated version of an agreement/ revision)				X	X	X	X
STI implementation activities/ Joint actions / Joint program (e.g., call for proposals, rules for participation, evaluation criteria, etc.)	X			X	X	X	X
AREAS							
Focus areas where gender aspects could be addressed in the prototype							
Advice/recommendations on implementing gender equality	X	X	X	X		X	
Gender balance in governance bodies			X	X			
STI objectives/priorities (e.g., strengthen research excellence, increase the number of women researchers in STI activities, etc.)	X	X	X	X	X	X	
Evaluation criteria for STI programs/ projects		X			X		X
Monitoring of STI programs/projects		X					X
Calls for proposals/applications					X		
Rules for participation		X					
Impact of project results	X		X		X	X	X
Science communication/ raise awareness	X		X		X	X	
Contribution to Sustainable Development Goals							
Gender dimension in research content					X	X	X

	Co-Design Labs Prototypes (*)						
	Prot. Nº 1.1	Prot. Nº 1.2	Prot. Nº 2.1	Prot. Nº 2.2	Prot. Nº 3.1	Prot. Nº 3.2	Prot. Nº 3.3
INTERNATIONAL POLICY DIALOGUE ON STI							
Policy Dialogue Level (Interactions among stakeholders)							
Preparatory meetings/ Support Processes (technical representatives)			X		X	X	
Regional Policy Dialogue (e.g. EU-CELAC) (high level representatives)			X				
National Policy Dialogue (between countries) (high level representatives)			X				
Policy dialogue instruments and tools in which the prototype could contribute							
Background documentation (study reports)					X		X
Concept note (include background, rationale, objectives, methodology, expected participants)					X		
Agenda			X				
Set of recommendations			X				
Roadmap/ Action Plan			X			X	
Policy briefs (prepared to capture and communicate key messages)						X	X
Declaration							
Evaluation reports from policy dialogue							X
TARGET AUDIENCE							
Government organization		X	X	X	X	X	X
Funding organization		X	X	X	X	X	X
Research and Technology Organization	X	X	X	X	X	X	X
University	X	X	X	X	X	X	X
Foundation			X		X	X	
Private company			X		X	X	X
Public company			X		X	X	X
STI agency/association			X	X	X	X	X
Non-governmental organization			X		X	X	

The Gender STI Prototyping Matrix shows that the LAB has created concrete and strong proposals in the form of prototypes that can continue to be improved and refined to demonstrate the proof of concept for future international policy agreements and dialogues on gender in STI.

There are three prototypes that could contribute more to integrate the gender perspective in STI agreements at all levels and in the international policy dialogue. These are:

- Prototype Nº 2.2 Guideline supporting more gender sensitivity and mainstreaming in the process of developing STI agreements for decision-making positions.
- Prototype Nº 3.1 Inclusive design process perspective.
- Prototype Nº 3.2 Education programme/ guide.

Moreover, the gender aspects that could be addressed in the prototypes are associated to different focus areas, in particular to:

- STI objectives/priorities (e.g., strengthen research excellence, increase the number of women researchers in STI activities, etc.).
- Advice/recommendations on implementing gender equality.
- Impact of project results.

As for the main target audiences that could benefit from the prototypes to implement gender equality strategies in STI these are:

- Research and Technology Organization.
- Universities.
- Government organization.
- Funding organization.

4.2 Actions and recommendations of Challenge 1 - Careers

Gender equality in scientific careers remains a major challenge.
There are already many national and international initiatives and projects aimed at motivating and inspiring more women in the fields of Science, Technology and Innovation, thereby strengthening the attractiveness of this field for women. The intensive examination of this topic by Challenge 1, in the co-design lab, clearly shows that there is nevertheless a great need for action here. This need for action must be made visible. The special composition of the Gender-STI project and the Co-design Lab show possibilities of how gender equality in scientific careers can be continued and worked on. This has resulted in the following actions:

- Definition of a working group on gender equality in scientific careers
- Research and development of concepts for role models, mentorship, and recommendations (for Universities and Research and Technology Organisations).
- Investigate the existence of quotas (agreements, MoUs, etc.) for women in STI careers.
- Identify existing working systems in order to further develop or to use them and make them more widespread.

These individual actions are intended to support future work on gender equality in scientific careers. On the one hand, in the area of Universities and Research and Technology Organisations, efforts are being made to demonstrate functioning systems through best case practices and to support or to develop their use. On the other hand, in the area of governmental organization and funding agencies, an action plan should be developed to address quotas in the field of STI careers.

As far as it is possible according to the current state of knowledge, the following recommendations can be made for **gender equality in scientific careers**:

- Give more visibility to women participation in STI fields;
- Raise awareness of women's career in STI fields;
- Establish quotas for women in STI for governmental and/or funding organizations.

The Challenge 1 prototypes provide the basis for the above recommendations. Next steps can be taken by further addressing gender equality in scientific careers. These can serve as a basis for agreements in the field of STI, in order to increase gender equality.

By increasing visibility and highlighting existing inequalities, further interventions could be developed as a pilot for Universities or/and Research and Technology Organisations.

4.3 Actions and recommendations of Challenge 2 – Decision making

The LAB's solutions proposed in the form of prototypes to address the content of this challenge are a concrete, realistic and practical way to achieve. On the one hand, that women who aspire to leadership positions reach them and, on the other, that the people who are in decision-making positions support more gender-sensitivity and gender mainstreaming in the process of developing STI agreements.

Gender equality is a very broad issue that we can face with small actions and concrete initiatives that allow us to generate an impact on our social and organisational environment. For now, we propose that in the coming months we bring this reality closer together by taking the following steps:

- Connect networks of women in research, higher education and innovation, with high-profile women potentially interested in joining them or building similar ones.
- Gather information on what needs to be done to make women's networks more visible and closer to the people.
- Analyse aspects of improvements within the existing STI agreements and set up recommendations to take those aspects into account when developing new ones.
- Engage institutions to test a guideline which will help introduce the gender perspective in STI agreements.

Thanks to the previous actions, we will promote a greater gender balance in decision-making bodies and positions, and contribute to reduce established biases and the existing gap in the leadership positions of companies and institutions. In addition, we will also offer decision-makers (and other stakeholders) to foster more gender-sensitive decision-making positions.

Regarding the initial recommendations, which emerge from the work carried out so far, there are two aspects that should be addressed both in policy dialogues and in the drafting of bilateral or multilateral agreements. These are:

- Women's networks should receive more support to have greater visibility and presence in the R&I field.
- Realize that current STI agreements often do not address gender aspects and it is crucial to promote more gender-sensitive ones.

Challenge 2 prototypes will continue to work along the current lines in order to obtain results that contribute to involve more countries including gender equality in STI in their national strategies and plans or establishing new policies, laws or programs that address the status of women in STI.

4.4 Actions and recommendations of Challenge 3 – Gendered Content

The inclusivity training and guidelines developed related to gender within the LAB's prototypes are practical tools to embed inclusivity thinking and processes in the STI domain. The suggested pilots will bring insights, learning, experience, good practices and examples on how gender content can and should be integrated in R&D&I content. We acknowledge that the task of integration is neither by any means easy nor straightforward; therefore, we suggest starting from the operative level, among those STI practitioners such as researchers, scientists, educators and R&D&I funders who daily need to make decisions related to gender and inclusiveness. These decisions are for example, use of gender inclusive data, formulating gender inclusive research questions or composition of a research team, or steering group.

We suggest for example the following actions:

- Map the existing initiatives and projects related to inclusivity, and review of other research institutes' practices (e.g., Vinnova, HorizonEU + other national practices)
- Modify inclusivity content into R&D&I context and make pilot guidelines and training material.
- Consult and engage national and international experts with similar experiences. For example, inclusivity and gender associations.
- Engage pilot organizations in Europe and third countries
- Run the first pilots (e.g., R&D&I inclusivity training course)

We foresee that these practices will lead to advantages in international STI dialogues by mainstreaming inclusive, diverse and gender equal R&D&I which means that we would not need to pinpoint gender. In fact, the inclusion process aims that we would not need to discuss gender in future. Such transformation takes a long time, but we believe it is not attainable without smaller institutional changes that we aim to create with the prototypes and pilots in different national organisations. A major advantage of the Gender STI is that we can reach several countries at the same time through the Gender STI consortium, albeit it is also a disadvantage because inclusive design and gender issues are highly context dependent.

At this phase of the project, we can make initial recommendations related to **integrating gender dimension in research and innovation content:**

- To improve awareness of inclusive design and gender equality in research performing and research funding organizations.
- To educate and train practitioners of inclusivity related to R&D&I, i.e., researchers, scientists, R&D&I decision makers, and administrative personnel related to R&D&I.

Envisaged recommendations to STI policy dialogue could be formulated to the area of STI implementation by the form of guidelines and instructions for inclusive research design and implementation. These practices could translate into formal STI agreements to a description of the scientific programme. It is relevant especially in MoUs between research organizations or universities. For example, monitoring and evaluation of gender and inclusivity in a R&D&I project could be a good practice of research performing organization that is translated to the international STI collaboration.

5 THE GENDER STI COMMUNITY OF PRACTICE

The first LAB was a powerful team building process, bringing together many people, especially women, from 4 continents and 19 nationalities. The diverse backgrounds, ages, nationalities and roles were a key ingredient for the stimulating discussions and helped to create prototypes that could integrate the diverse and gender perspective.

Stakeholders that participate in the LAB were invited to join the **Gender STI Community of Practice (CoP)**. As a result, a first nucleus of the CoP has emerged through the direct collaboration, cocreation and codesign process that was experienced by the participants in the LAB. This community building process was enhanced by the networking and team building activities that occurred during the LAB, by the collaboration of participants on the design and improvement of prototypes (during and after the synchronous LAB sessions), and by setting up asynchronous tools such as the networking biographies and the collaborative spaces for each challenge group on the Basecamp platform, bridging the communication also across the different time zones.

After the LAB, we launched the first communication action to the CoP in order to welcome its members, create a sense of belonging and share the first project research, activities. Ultimately, the GENDER STI CoP will contribute to foster gender STI dialogues and gender equality across European and third countries involved in the project.

6 CONCLUSIONS AND LESSONS LEARN

The Gender STI project hosted the first Co-design Lab workshop to address three of the forefront challenges facing women in Science, Technology and Innovation (STI): **gender equality in scientific careers, gender balance in decision-making bodies and positions and the integration of the gender dimension in research and innovation content.**

- The LAB sessions were a pioneering experimental experience of online co-design. Due to Covid-19 the first LAB sessions were a pilot testbed for organising a long and complex facilitated online co-design process that involved 70 people from 19 countries. Activities were performed so as to cater for the needs and time zones of people from America and Europe (WEST LAB sessions) and for participants from Asia, Africa and Europe (EAST LAB sessions). This meant that the first LAB was effectively made of **two full-scale online parallel sessions** rather than just the one LAB that had originally been planned in a face-to-face setting in a European country.

- The LAB sessions were an effective learning process. The **virtual LAB process** required all participants to both learn how to apply its design thinking principles and to learn how to co-create and collaborate in a facilitated participatory way in a **remote online setting**. After an initial **training and simulation** activity involving all the partners, based on two sessions of two half-days in June 2021, **two parallel LAB sessions** of three half-days each were run between September and October 2021. These LAB sessions included both **synchronous** meetings where participants would meet together virtually, and **asynchronous** activities where they would collaborate, make proposals and take decisions on specific platforms (such as Basecamp, Miro or shared google files). In these digital sessions all the participants had to stretch their comfort zone and learnt how to apply in a creative way several the **methods and techniques** that were combined for the first time to address three societal challenges related to gender equality in STI.

- The LAB sessions were efficient and inclusive. Working online proved to be **extremely efficient** and **inclusive** with participants being "only one click" away, even if they were thousands of kilometers separating them. This was the result of **careful planning among partners** and the **support of facilitators** with a lot of **experience in creating a collaborative atmosphere online**, in spite of time and technological constraints. More adaptations to the process will be considered to find a trade-off between the complexity of the topics being dealt with, the time needed to address them and generate ideas and the optimal use of digital techniques.

- The LAB sessions were effective. Through the LAB sessions the challenges were addressed by challenge holders and participants to **generate first prototypes of solutions** that could address the gender perspective in STI relating to careers, leadership and decision making and gendered content. The first LAB initially generated **twelve prototypes** that were then merged and consolidated into **seven prototypes** involving participants from all time zones. These seven prototypes are the main basis for the identifying ways to **have an impact and benefit** on current and future **policy dialogues and agreements** on gender in STI.

- The LAB prototypes undergo an iterative testing and continuous improvement process. After the first LAB sessions the **seven prototypes** will continue to be adapted, improved and developed by the prototype proponents. This iterative process will lead to the definition of a **Proof of Concept** for the emerging prototypes and their further improvement in the next phase leading to the future LAB sessions.

- The LAB challenges and their solutions are the main drivers of the LAB's pioneering discovery process. The **three gender challenges** that have been addressed will keep guiding the whole LAB process. New specific dimensions of these may be addressed in the future LABs, on the basis of new requests and priorities and also to fill gaps that were not covered by other prototypes with reference to the **Gender STI prototyping matrix**. As a result of these challenge aspects and new questions the next LABs will generate more prototypes that can contribute to strengthen the connection with the current policy challenges.

- The focus of the challenge in the LABs is key to guide the questions and subsequent prototypes. As a lesson learnt while the first exploratory LAB addressed the challenges very broadly, with prototypes that range from very strategic to tactical actions, the next phase of the LABs will work on **selecting more focused aspects of the challenges** with a direct link to ones that could have **a strong support from decision makers**. This selection of targeted aspects of the challenges may also be enriched by liaising directly with people involved in institutions and organisations that are directly active in international bilateral and multilateral agreements and policy dialogues. This also increases the engagement and commitment of all parties involved in the LABs and broadens their scope and systemic impact.

- The LAB sessions are a catalyst for the creation of the first international **Community of Practice (CoP)** to address the gender perspective in STI through improved policy agreements and dialogues. The first nucleus of the **CoP** has emerged from the interactive, challenge-driven LAB session activities. By meeting in a facilitated environment, through ice-breakers and team building activities, participants have had the possibility to learn more about their different backgrounds, expectations, dreams and hopes relating to gender equality in STI and have realised that together they can achieve much more than they could even imagine. Some were initially sceptical and then extremely enthusiastic about the LABs, especially as this process helped them to achieve, in a relatively short span of time quality outcomes that would have required much more time if there was not a strong and clear method. The Community of Practice, being a many-to-many and demand and supply self-driven mechanism counts also on a strong passion and commitment on the gender in STI challenges addressed by the LAB. In the next phase, the Community of Practice will be broadened through communication and dissemination activities and through an intensive orchard approach where every new participant is onboarded and coached word of mouth from the existing members.

Summing up the main findings and lessons learnt, the first Gender STI Co-design Lab (Sept-Nov 2021) has been a test bed to start to better define the three challenges and this led the first seven detailed work-in-progress prototypes. This prototyping, action research and continuous improvement process is in the experimental design thinking nature of the LAB's methodology.

Considering the complexity of the issues and of the Covid-19 circumstances, the first LAB was a great achievement and as consortium we are aware of the positive results as well as of what can be improved:

- It was the first time such an online LAB was ever organised on a global scale in two different time zone areas (East and West of Europe) and across about 12 different time zones on such societal policy issues.
- Most participants had never worked with online digital brainstorming tools so there was also a steep learning curve that was supported by all the team and the facilitators.

- We had to compress the time that was originally planned for the Gender STI Labs from 2,5 days (face to face) to 3 half days (online). This compression meant less time to discuss and go deeper in reflecting, analysing and synthesising. Thus, the role of the consortium partners has been key to keep the continuity and depth of the discussion in the LAB, their prototyping and implementation phase in spite of time constraints.
- Future Labs will broaden the diversity of perspectives by involving more external stakeholders from outside the consortium, depending on the coherent with the challenges and scope of the project.

The next phase of the Co-Design Labs will include the preparation of the second and third LAB sessions. While the second LAB sessions will be performed online, duplicating again the work and activities as for the first LAB, the third LAB will probably take place in a face-to-face context. This will depend on the Covid-19 situation as well as on the assessment of the LAB's effectiveness and inclusiveness to involve more participants from many different countries through the virtual format.

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