

Co-creative and Co-participatory Methods to Promote Equality, Diversity and Inclusion: A Case Study in the Open Labs of the Italian Institute of Technology

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Abstract: This paper explores the application of co-creative and co-participatory methods in research performing organisations (RPOs), focusing on a case study at the Italian Institute of Technology (IIT) during its Open Labs initiative under the EU-funded NEXUS project of the Horizon Europe Framework Programme. The main objective is to assess the effectiveness of these methods in fostering an inclusive and collaborative research environment, particularly in approaching themes such as gender equality, diversity and inclusion in the workplace. We present an in-depth analysis of the process, highlighting the challenges encountered and the strategies used to overcome them. Through this case study, we assess both the short-term benefits of using co-creative methods — such as improved collaboration, knowledge sharing and increased awareness of different perspectives — and the ongoing challenges, that persist, including navigating institutional inertia and other barriers in an approach focussed on gender equality, diversity and inclusion lens. The paper outlines how these methods have been tailored to the specific context of IIT's Open Labs and offers insights into the adaptability of co-participatory approaches in different RPO environments when addressing pervasive and cross-cutting issues such as gender, equality, diversity and inclusion. This analysis will be of relevance to those working to implement gender-sensitive and inclusive policies and practises in research organisations. The findings suggest that co-creative and co-participatory methods offer a viable framework for addressing 'inclusion gaps' in research spaces, although their long-term effectiveness requires further research. Ultimately, this work contributes to the growing discourse on inclusion in research settings and provides both theoretical and practical insights into the benefits and limitations of participatory methods.

Keywords: Co-creative Methods; Participatory Methods; Research Performing Organisations; Horizon Europe Framework Programme; Gender Equality Plan (GEP); Equality, Diversity and Inclusion.

1. Introduction and Background

This paper analyses a case study and offers practical insights into fostering inclusivity and collaboration within research organisations using co-creative and participatory methods while addressing equality, diversity and inclusion in the daily life of an institution devoted to STEM research. By addressing institutional barriers and tailoring strategies to specific contexts, the present contribution provides valuable knowledge for those seeking to implement gender-sensitive, inclusive policies in research, in line with the conference's focus on innovation. The analysed case study examines specific open labs conducted at IIT in 2024. It is intended to serve as an example of how the open lab method, when applied to topics such as gender, equality, diversity and inclusion (EDI), can bring to light important discussion points. These findings can then serve as a catalyst for further actions and initiatives and promote greater acceptance and integration of EDI into institutional practise. This paper is of particular interest as it deals with issues that are not normally the subject of research within the organisation concerned. Indeed, the IIT was established as a research institute primarily dedicated to scientific disciplines that are often categorised as "hard sciences". In this context, the work was more challenging than for universities or research institutions that inherently include sociological or social science and humanities fields in their remit. In fact, the authors believe that everything described below can be reused in the form of knowledge exchange, especially by research institutions that have a similar structure to the IIT, as well as by academic institutions and other fields of study. The study can benefit all those who wish to investigate similar or related topics in their organisations, as well as the scientific community, by serving as a case study with specific features, but also offering the potential to reuse its results.

The experiences reported here are the result of specific tasks within an EU-funded project entitled *Twinning Research and Innovation Institutions to Design and Implement Inclusive GEPs*, or NEXUS for short, G.A. N. 101094949. It is an ongoing project with a duration of two years, starting in September 2023. This is a CSA (Coordination and Support Action) project, which does not focus on specific research activities but rather aims at the dissemination and promotion of specific topics. In the case of NEXUS, the project seeks to make participating institutions more sensitive to the themes of inclusion, diversity, and gender equality. It is a very extensive action, with intensive activities and a very dense programme, coordinated by the Technological

University of Dublin in Ireland and involving a total of 10 partners from universities and research centres in Italy, France, Serbia, Turkey, Hungary, Poland, Bulgaria, and Cyprus.

The overall objective of the NEXUS project is to promote institutional change through the design and implementation of innovative inclusive measures that lead to the further development of Gender Equality Plans (GEP) in order to support the further development of the partners' GEP in an intersectional and intersectoral direction. This will be achieved through mutual learning processes within a twinning programme and capacity building to go beyond the minimum requirements for GEPs defined in the Horizon Europe eligibility criteria and to ensure the sustainability of results, as illustrated in the figure below.

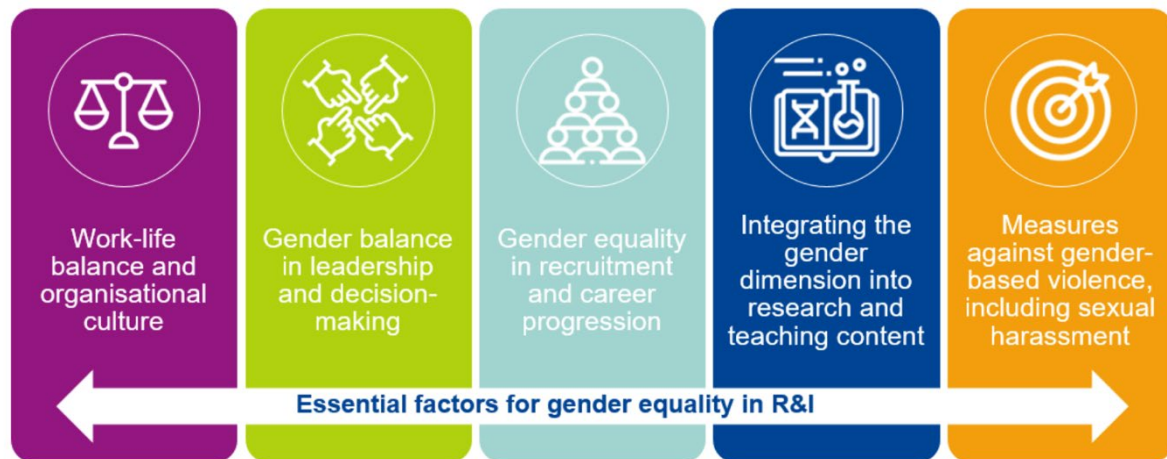


Figure 1: EC's mandatory GEP requirements¹

NEXUS also promotes geographical inclusion and integration thanks to a highly context-sensitive approach in the pilot actions in the 10 organisation and 9 participating countries covering the western, central, southern and south-eastern regions. NEXUS interventions aim to improve the research excellence of participating organisations and to bring about institutional and cultural change that is context-sensitive, realistic and sustainable.

The Istituto Italiano di Tecnologia (Italian Institute of Technology, IIT) participates as a partner and takes on certain tasks. In fact, IIT has recently added a new Equality, Diversity and Inclusion Department to its organisation, with the specific aim of promoting the application of the GEP as well as inclusion and diversity in the workplace to provide a better environment for researchers and staff from more than 70 different countries. With an average age of 36 years, the IIT is open to any measure that improves inclusion, equality and diversity and thus enhances research performance and well-being.

The idea of adopting an open lab method stems from the conviction that institutional and lasting change should come from those who live and work in the institution (Zamenopoulos and Alexiou, 2018). Recent studies show how the approach of co-creation of knowledge and scientific progress can also be fruitful for those institutions that were not used to such participatory action research (Cornish et al., 2023) and helps overcome institutional resistance to change and to close the gaps (Lombardo, Naldini, Poggio, 2024).

2. NEXUS Open Labs as a Concrete Means of Co-creation of Durable Changes

One of the specific objectives of the NEXUS project is “to co-design and implement innovative inclusive pilot actions using a multi-stakeholder participatory approach of solution co-creation leading to the refinement of GEPs across the 5 recommended thematic areas”. This is done by “initiating a participative multi-stakeholder process of solution co-design through co-creation workshops (Open Labs)”, followed by a joint design and

¹ https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/democracy-and-rights/gender-equality-research-and-innovation_en. Last accessed 4/12/2024.

implementation of innovative inclusive actions that address the challenges and embed the solutions that emerged during the Open Labs. This action would help to assess and improve or mitigate the impact of the individual GEP actions in the respective organisation, in this case at IIT.

Figure 2 below, taken from the project concept, illustrates the working method and the expected impact of the Open Labs on the refinement and reorientation of the GEP.

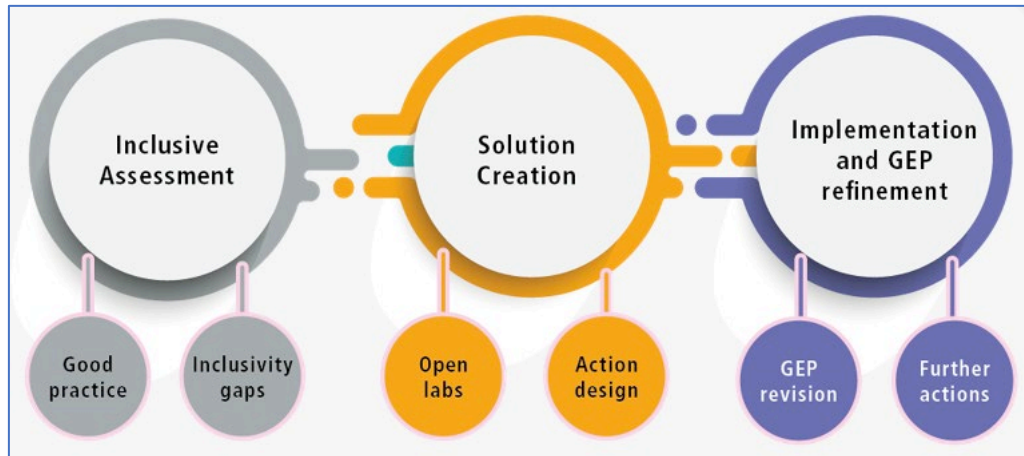


Figure 2: The NEXUS Process

The IIT Open Labs were co-creation workshops that brought together a wide range of IIT staff and stakeholders from the different R&I ecosystems with the aim of providing creative input and ideas for the development of concrete actions, based on the multiple participation of different stakeholders working inside and outside the organisation who meet to share, learn and progress together (Gomez Zermeño and Aleman de la Garza, 2021). Design and collective thinking have proven to be excellent drivers for achieving the project's goal, creating a scenario that is changing the way research and academic institutions relate to their environment (CIVIS, 2022).

The Open Labs took place on two afternoons in March and April 2024 and were attended by a total of 31 people with different backgrounds and positions. According to the methodology, the Open Lab participants included a mix of internal IIT stakeholders and external stakeholders. The external stakeholders were identified from the Italian research and innovation ecosystem and selected based on their expertise and previous experience with inclusion-related topics. The external stakeholders that participated in the IIT Open Lab were a research funding organisation, represented by two people, and a research organisation, represented by one person. Another external stakeholder had been contacted and originally agreed to participate, but did not attend the meeting. The IIT participants were selected from the staff of the Research Organisation, Technology Transfer, Communications, Legal and Human Resources departments. The invitation to participate was sent to internal employees by e-mail and to external stakeholders in personal preliminary talks. Their participation was voluntary.

The following table illustrates the composition of the group of participants in the first Open Lab in March 2024.

Table 1: Participants to the first Open Lab

Role/Job Position	Number
Research Organization	1
Directorate IIT	
Human resources	4
Directorate IIT	
Technology Transfer Directorate IIT	3
Research Unit IIT	1
Researcher IIT	1
Communication Directorate IIT	1
Representatives of external RPOs/RFOs	3

The first Open Lab held in March 2024 was gender-balanced: 11 women, 3 men.

The following table illustrates the composition of the second Open Lab, which took place in April 2024, with the additional information about the earlier participation in the first Lab.

Table 2: Participants to the second Open Lab

Role/Job position	Number	Participating also in the first workshop (yes/no)
Research Unit	1	yes
Human resources officer	3	yes
Technology Transfer Office	1	yes
Legal Office	1	no
Researcher	1	no
Research Organization Office	1	yes
Representatives of external RPOs/RFOs	3	yes

This Open Lab was gender-balanced as follows: 9 female, 2 male.

Originally, we had compiled all the invitees in an *Excel* file and ensured a balanced gender ratio when compiling the list. The invitees then signed up and at the time of the event we were confident that we had ensured a balanced ratio. However, on the day of the event, some male colleagues were not present.

The participants who opted for the initiatives were motivated and very open to the content of the labs: they reserved an entire afternoon for them (each lasted about three hours) and were very active. Based on a common methodology with the entire NEXUS consortium, in which the trainers were trained, the aim was to better identify and conceptualise the concrete transformative actions needed to bridge the inclusion gaps. Feedback from participants emphasised the value of these sessions not only for developing concrete and practical solutions, but also for opening communication channels between departments and fostering a stronger sense of collective ownership of inclusion goals.

During the first Open Lab, participants were asked to identify and discuss the main factors of discrimination and inequality within their organisation. Ethnicity and religion were identified as the most important, as they have the greatest impact in the daily work environment. In this context, external stakeholders reported on their experiences with silent spaces, i.e. special spaces for prayer or moments of meditation, which are internationally recognised as good practise.

Furthermore, much of the discussion focused on a common challenge: the difficulty of inclusive data collection, i.e. how can we narrow the gap in inclusive data by ensuring that data is disaggregated and organised for intersectional analysis? How can we overcome national and institutional barriers related to data collection? There was some discussion about how to collect this data. In particular, the use of an anonymous online questionnaire was suggested to capture the needs of employees, with a focus on improving the work experience rather than sharing personal data.

Between the first and second Open Lab, the GEP team at IIT conducted an internal analysis aimed at identifying two promising actions based on the discussed gaps to be developed together with the participants of the second Open Lab. This analysis was conducted based on criteria focussing on the potential impact of each measure within the institute and the feasibility of implementation, taking into account the available resources and the project's timeline. The measures selected were two innovative initiatives: data collection and workplace harassment.

In the second Open Lab, the working method was different. The original group was split into two smaller, focused working groups that allowed for a deeper, more focused discussion on critical topics such as harassment and

inclusive data practises, maximising the expertise available in each group. External stakeholders chose to participate in the harassment subgroup because they had professional experience of this issue and because their organisation had been involved in developing activities in this area.

In order to facilitate the work of each group, the facilitators used a methodology based on the logical framework model, a management tool used to structure the key elements of an intervention/action and identify the causal relationships between them. This model provides a basis for planning, implementing, monitoring and evaluating an intervention. Based on the logical framework, a co-design tool was developed to effectively guide the discussions between the different stakeholders and ensure a productive and focussed exchange of ideas.

The form is titled "Action's title:" and contains eight rows, each with a label in a blue box on the left and a light blue input field on the right. The labels are: Impact, Outcomes, Audience, Time-frame, Activities, Outputs, Inputs, and Inclusive dimensions.

Action's title:	
Impact	
Outcomes	
Audience	
Time-frame	
Activities	
Outputs	
Inputs	
Inclusive dimensions	

Figure 3: Tool used for co-designing actions during Open Labs

The two groups then presented what had emerged in their group and together we decided to revise the logical framework, in particular the type of target group, the time frame and the inputs.

Secondly, the group that had worked on the data collection presented the logical framework and commented on the more complex aspects of this activity such as the target group and the detailed step-by-step actions. It was then decided to involve a larger number of departments within the IIT, with activities ranging from creating a new data collection process to training those who will work on it.

The working groups responded very positively and dynamically to the joint activities carried out during the workshop. It became apparent that the overarching goal of an organisation should be to foster an organisational culture where diversity and inclusion are part of the daily activities and well-being of the team. For example, one of the two working groups came up with the idea of developing a training course for almost 30 project managers. The other working group emphasised the need for new data collection and inclusion in relation to non-binary people. In fact, it emerged that gender, equality and inclusion need to be addressed through two central themes:

- (a) Contrasting gender-based violence in relation to anti-harassment practises and cultures;
- (b) Gender mainstreaming thanks to the integration of non-binary subjects in the data collection processes of the IIT.

3. Conclusions and Lesson Learnt

The results of the labs offered new insights and solutions that go far beyond the so-called fundamental attribution error (Ross, 1977) to include the often underestimated situational and environmental factors (Berry, Frederickson, 2015) in the investigation and to correctly identify them with the participation of key stakeholders. They also helped to implement concrete and actionable measures to achieve GEP in a research organisation such as IIT, making an important contribution to mitigating and overcoming the barriers and overcoming the resistance to change typical of large organisations (Bencivenga, Leone, Siri, 2021).

As a result of the NEXUS Open Labs, it became crystal clear how EDI and a concrete day-by-day GEP implementation should become an organisational value embedded in all processes, which is particularly glaring in any organisation whose resources are primarily its people (Christensen, 2023). Although the authors are fully aware that EDI concepts are constantly evolving and therefore require continuous monitoring and adaptation within complex organisations such as research institutions, it remains fundamental to recognise that the integration of EDI values into institutional life is essential today. The NEXUS project serves as a critical support tool for promoting day-to-day positive actions that can help to undermine conservative tensions and institutional resistance.

The main objectives and measures identified in the NEXUS projects have helped to make the measures contained in the GEP and already approved by the IIT management more comprehensive. Indeed, the aim of the NEXUS project is to understand how the problem can be solved and how to respond to the associated societal needs (Bernstein et al., 2022) in a collaborative way.

In addition, the results of the lab highlighted the following aspects requiring action: 1) developing a specific workflow for the non-binary gender variable that can be used cross-functionally to collect data that meets European and international standards, e.g. in relation to requirements for EU funds and tenders; and 2) developing training for specific target groups within the organisation that focuses on harassment in the workplace and uses an intersectional framework that takes into account multiple causes and types of discrimination.

A major obstacle we encountered in this approach was the challenge of addressing institutional inertia and resistance to change (Mergaert and Lombardo, 2014). Despite efforts to involve a diverse group of stakeholders, existing organisational structures and entrenched practises often slowed down the implementation of the jointly developed measures (Murgia, Poggio, 2014). In addition, there was a risk that certain demographic groups, particularly male colleagues, engaged only to a limited extent, highlighting ongoing gender dynamics and the difficulty of achieving broad participation. Although participation was open to all interested individuals in the organisation, it was mainly women who took part in the initiative. This is by no means surprising but encourages the organisers to reflect on how they can involve a wider range of male staff to move beyond the biologisation of the social aspects, which is still crossed with the socialisation of the biological aspects (Bordieu, 1998). Thus, although participation in the workshops showed a higher involvement of women, confirming that gender roles are still repeated today, we can also draw another lesson. That is, women are among those most interested, inclined and active in driving institutional change and pushing for a work environment that is less discriminatory and more inclusive. This is not just about the pay gap (Goldin, 2014, 2021), but also about protecting all forms of diversity and different needs.

Ultimately, this work demonstrates the transformative potential of co-participatory methods for research organisations and suggests that, with sustained engagement, such methods can bring about lasting cultural change towards a more inclusive research environment.

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