



InCUBE

sustainable building innovations

Training on Social Inclusion & Gender Impact Matrix

Agenda

Timing

Topic & Objective

11:00

Social Inclusion (25 minutes)

- Refine the conceptual understanding of social inclusion in deep renovation.
- Prioritising the social inclusion recommendations.

11:30

Gender Impact Matrix (20 minutes)

- Presentation of results for the first and second investigation.

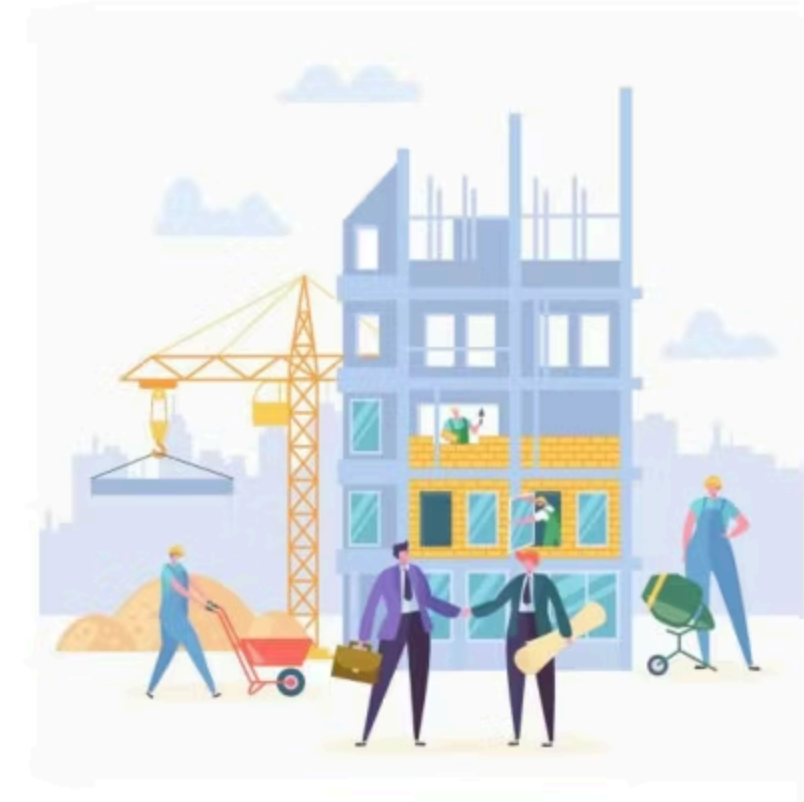
11:45

Short survey (5 minutes)

- To inform the KPI calculation.

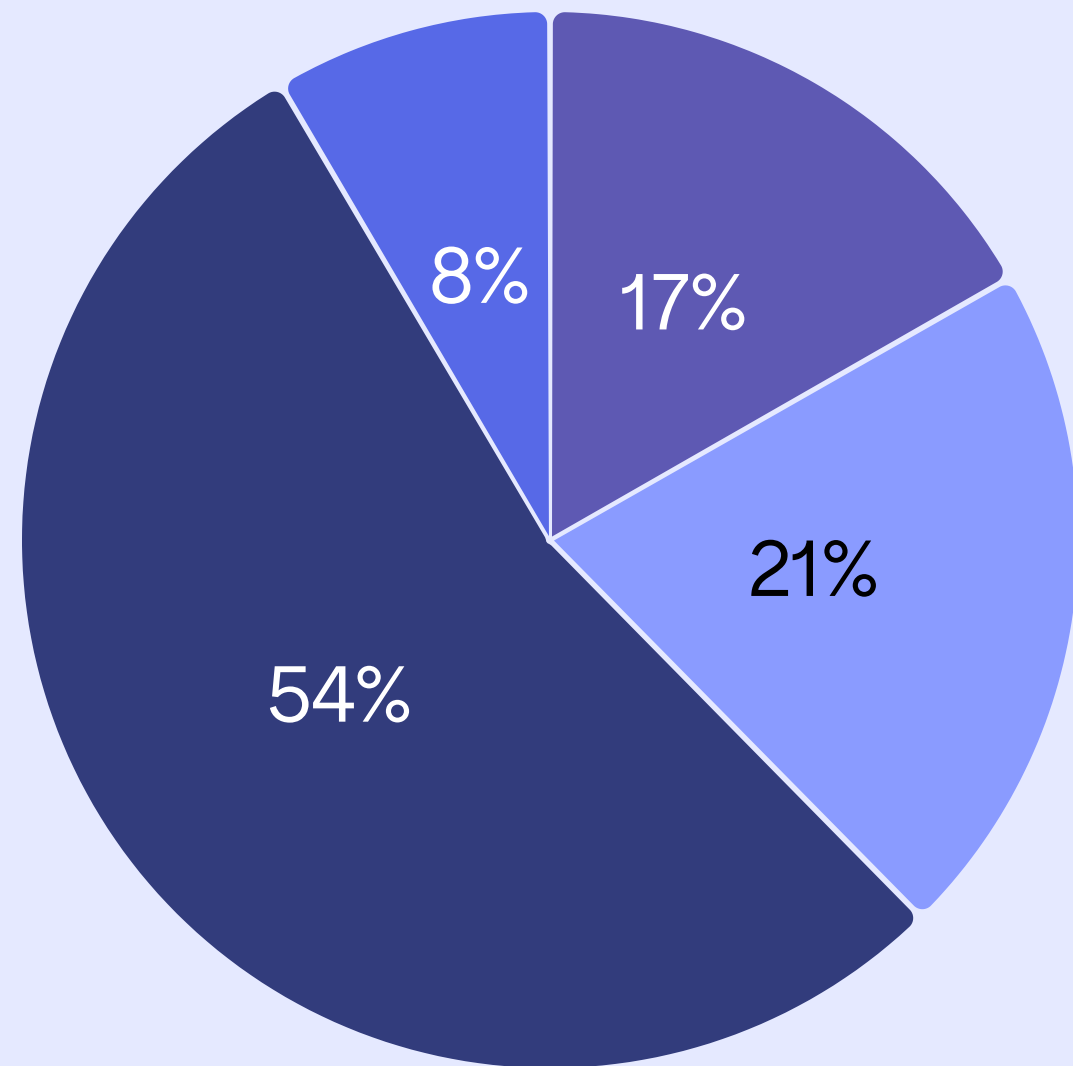
11:50

Q&A (10 minutes)



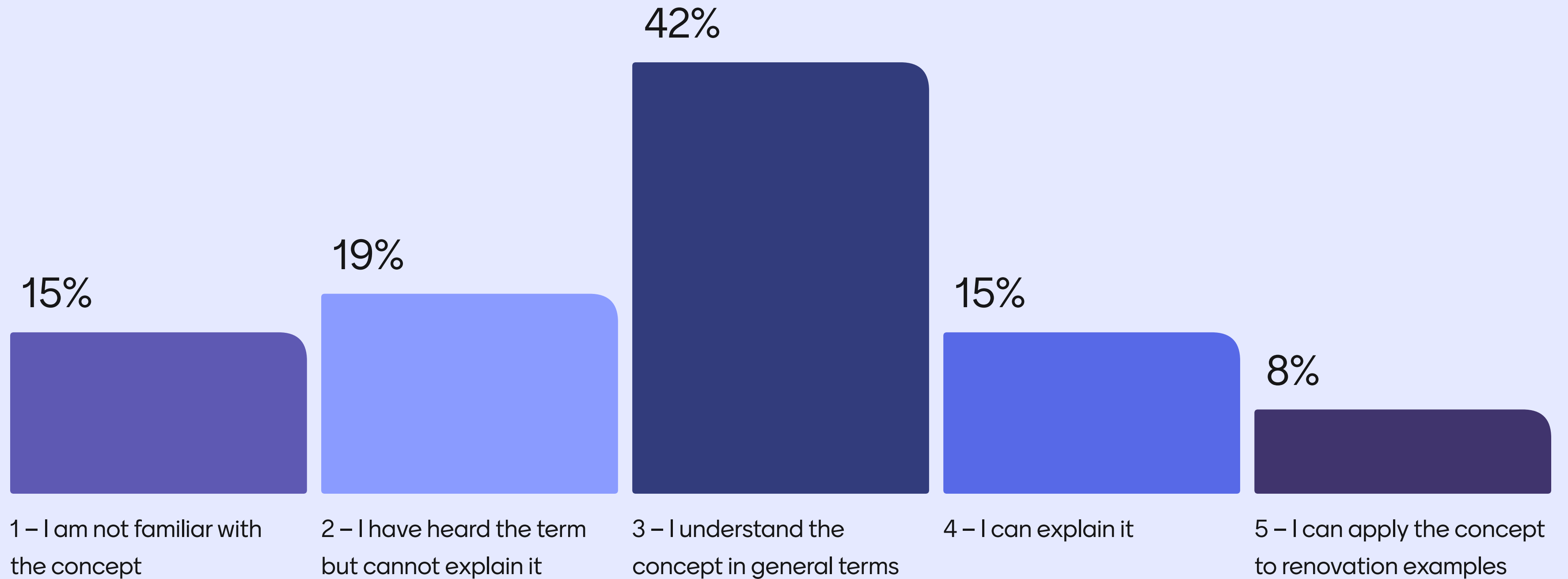


If you had to explain social inclusion in InCUBE to a new partner tomorrow, how ready would you feel?

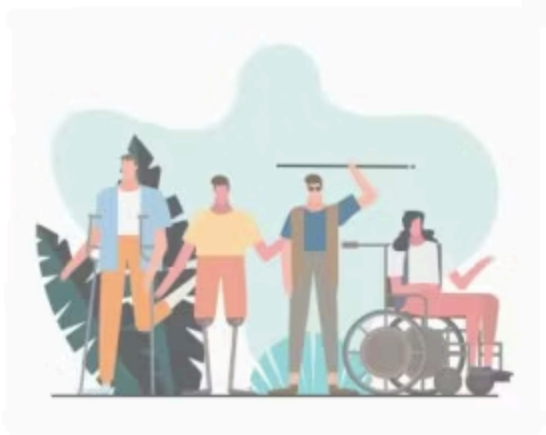


- 17% 1 – I would struggle to explain it clearly
- 21% 2 – I could mention a few elements but not confidently
- 54% 3 – I could explain the main ideas
- 8% 4 – I could confidently link it to InCUBE activities and challenges

How well do you understand the concept of energy justice in relation to deep renovation?



Social Inclusion in Deep Renovation



What is Social Inclusion?

Social inclusion is the process of enhancing the terms on which individuals and groups participate in society, **improving the ability, opportunity, and dignity** of those disadvantaged based on their identity.

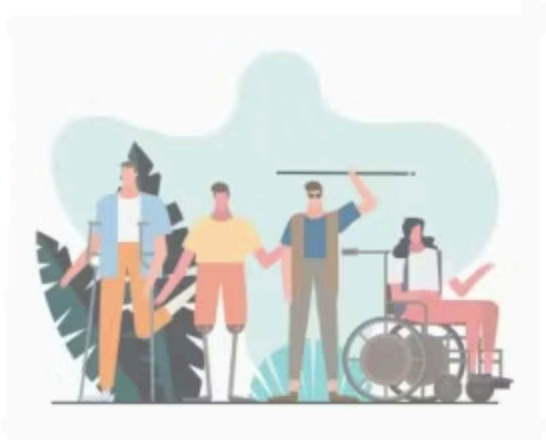


InCUBE Scope

The **scope of social inclusion** lies in **improving the renovation process for actors involved** in the three demo sites, ensuring that the renovation activities are technically viable, sustainable and socially equitable.



Social Inclusion in Deep Renovation



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Source: (Ricci et al., 2025)



Social Inclusion in Deep Renovation – Distributive justice



Goal

Ensure the **benefits and burdens** of deep energy renovation are distributed fairly, without disproportionately affecting vulnerable households.



Social Inclusion in Deep Renovation – Distributive justice



Goal

Ensure the **benefits and burdens** of deep energy renovation are distributed fairly, without disproportionately affecting vulnerable households.

Key elements

Examples in deep energy renovation



Fair distribution of costs and benefits

- Targeted subsidies for low-income households
- Fair allocation of retrofit investments



Social protection for residents

- Legal safeguards against renoeviction
- Rent-neutrality (energy savings exceed rent increases)

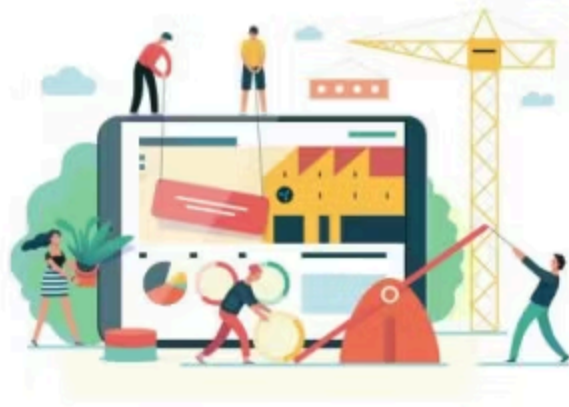


Equitable outcomes

- Reduction of energy poverty
- Verifiable improvements in health and thermal comfort



Social Inclusion in Deep Renovation – Procedural Justice

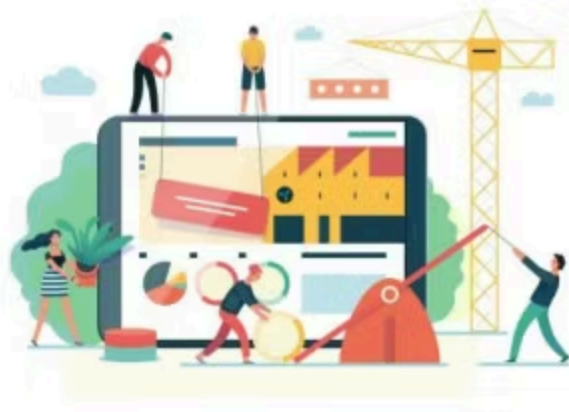


Goal

Ensuring that those **affected by renovation are meaningfully involved** in decisions and that governance processes are transparent and accountable.



Social Inclusion in Deep Renovation – Procedural Justice



Goal

Ensuring that those **affected by renovation are meaningfully involved** in decisions and that governance processes are transparent and accountable.

Key elements

Examples in deep energy renovation



Inclusive participation

- Involve residents early in renovation planning
- Co-design renovation measures with tenants and communities
- Train residents on use of new systems



Transparent decision-making

- Provide clear information on costs, benefits, and disruptions
- Communicate renovation timelines and expected impacts



Collaborative governance

- Facilitate dialogue between residents, housing providers, and policymakers
- Maintain engagement throughout planning and renovation stages



Social Inclusion in Deep Renovation – Recognition Justice



Goal

Recognising that **different groups face different constraints, capabilities, and starting conditions** in renovation processes.



Social Inclusion in Deep Renovation – Recognition Justice



Goal

Recognising that different groups face different constraints, capabilities, and starting conditions in renovation processes.

Key elements

Examples in deep energy renovation



Recognition of vulnerable groups

- Identify energy-poor households, elderly residents, and tenants at risk
- Consider socio-economic and cultural diversity in housing



Mapping lived experience

- Understand residents' energy practices and comfort needs
- Acknowledge the potential performance gap caused by the mismatch between complex tech and user capability



Recognition of residents' perspectives

- Integrate residents' lived experiences in renovation planning
- Ensure local knowledge informs renovation solutions



Based on your experience, which social factors most often undermine the success of deep renovation projects?



10% Limited engagement of residents during planning and implementation



8% Diverse household needs not adequately reflected in the design



12% Low awareness of renovation benefits or new technologies



7% Low acceptance of installed technological solutions



10% Disruptions during construction reducing trust and cooperation



14% Financial strain or unclear cost arrangements



12% Lack of consensus among tenants or property owners



7% Conflicts of interest among stakeholders



7% Poor communication between project actors



6% Limited transparency in decision making



7% Insufficient attention to vulnerable or energy poor households



1% I have not observed significant social barriers

InCUBE Social Inclusion Framework

DIMENSIONS

IMPACT AREAS

TARGET GROUPS





End User Engagement

- Clear two-way communication with residents
- Collect regular user feedback
- Provide guidance and administrative support
- Minimise disruption during renovation
- Raise awareness of energy efficiency



Stakeholder Engagement

- Maintain continuous coordination among stakeholders
- Communicate renovation progress and key milestones



Accessibility

- Improve accessibility during renovation following universal design



Health & Safety

- Ensure compliance with safety regulations
- Ensure safety and hygienic conditions for the residents



Affordability

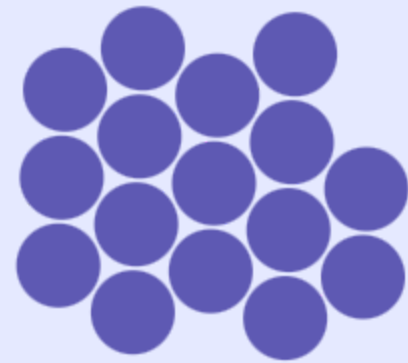
- Improve transparency in financial decisions to build trust and promote fair handling of funds among actors



Equal employment opportunities

- Raise awareness to cultivate an inclusive work environment that offers equal opportunities for all

Which recommendations do you consider most relevant to your role within the InCUBE project? (You can select upto three).



30% Strengthening end user engagement and communication



13% Improving stakeholder coordination and transparency



8% Enhancing physical accessibility through universal design



21% Increasing financial transparency and affordability



17% Strengthening on site health and safety for workers and residents



9% Promoting equal employment opportunities and inclusive workplace culture



2% None of the above

For future projects, which three recommendations would you prioritise replicating?



28% Strengthening end user engagement and communication



21% Improving stakeholder coordination and transparency



8% Enhancing physical accessibility through universal design



15% Increasing financial transparency and affordability



9% Strengthening on site health and safety for workers and residents

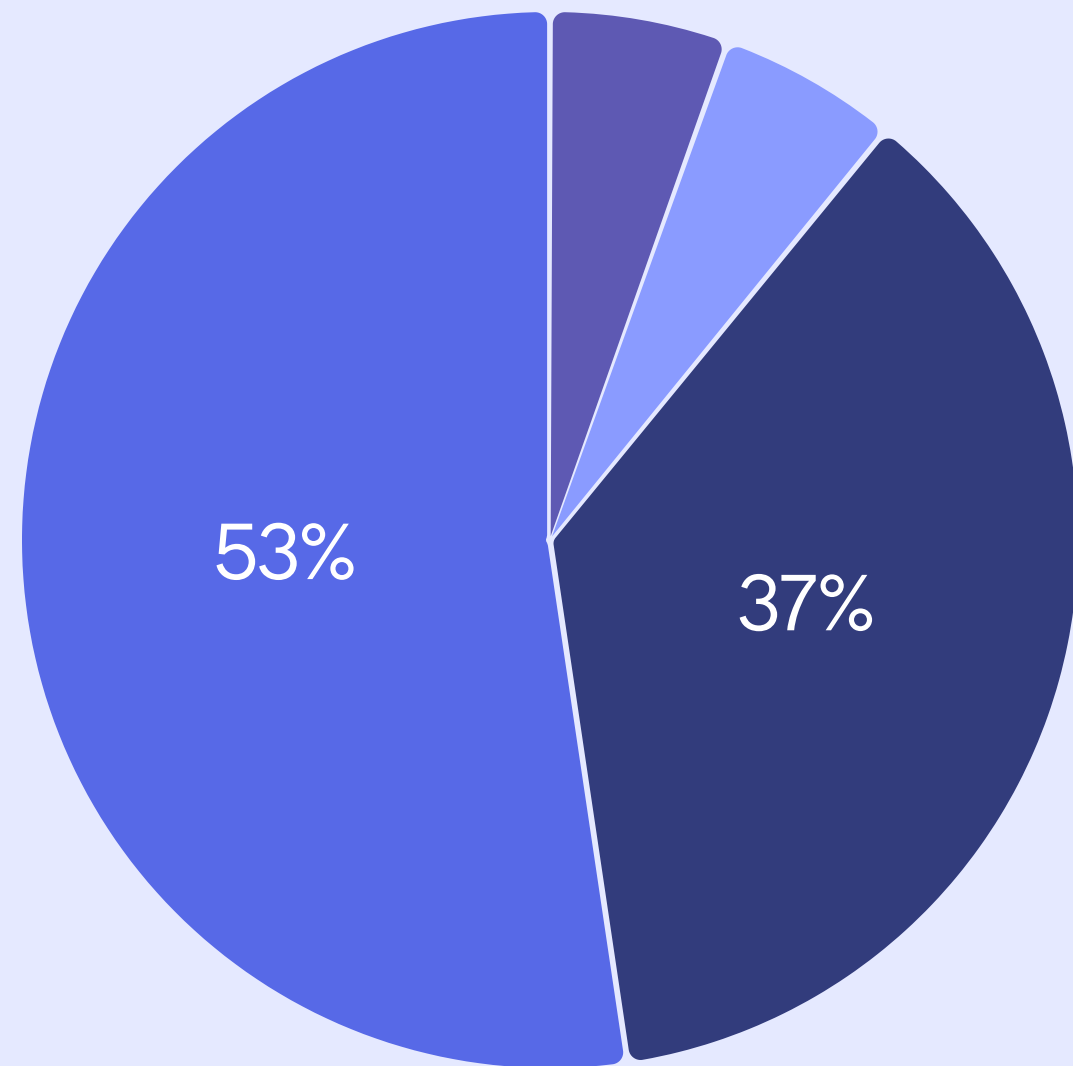


17% Promoting equal employment opportunities and inclusive workplace culture



2% None of the above

Now, how ready do you feel to explain social inclusion in InCUBE to a new partner?



- 5% 1 – I would still struggle to explain it clearly
- 5% 2 – I can mention some elements but not confidently
- 37% 3 – I can explain the main ideas
- 53% 4 – I can confidently link it to InCUBE activities

Section 2: Gender Impact Matrix



What is the correct definition of gender mainstreaming?



8% A. Ensuring that gender equality objectives are addressed through specific actions within selected project activities.



75% B. Systematically integrating a gender perspective into all stages of policies and projects to prevent inequality.



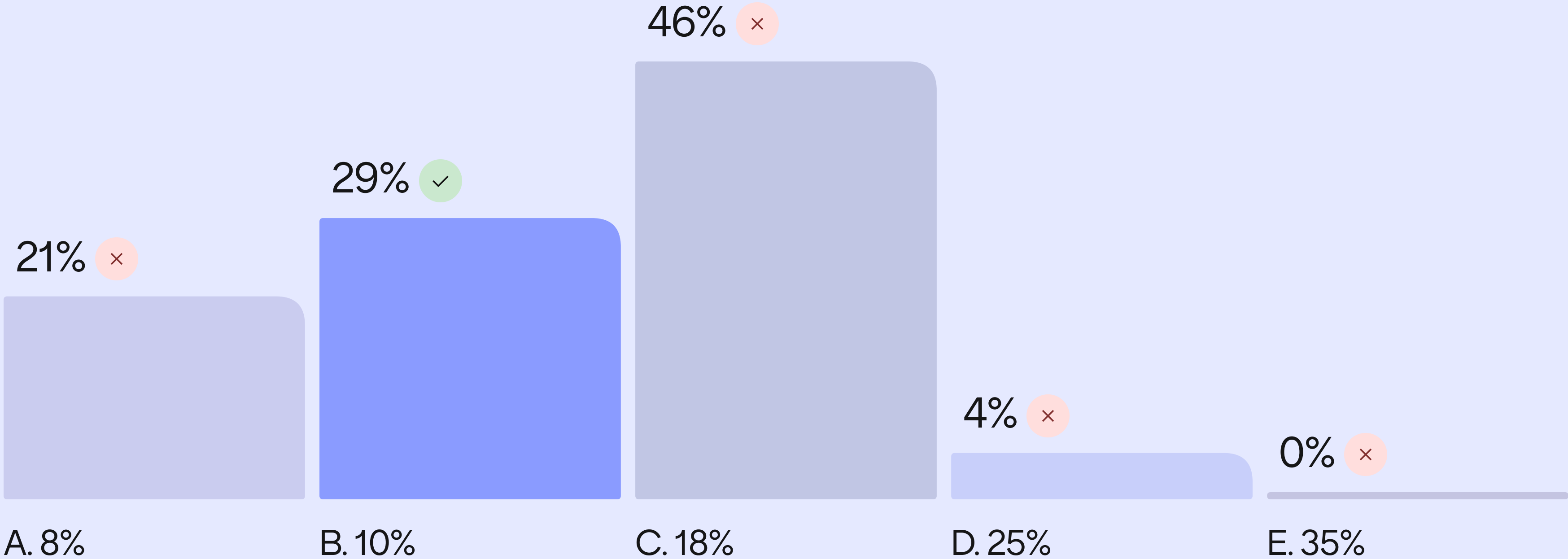
8% C. Assessing the different needs of women and men at the beginning of a project to inform inclusive design.



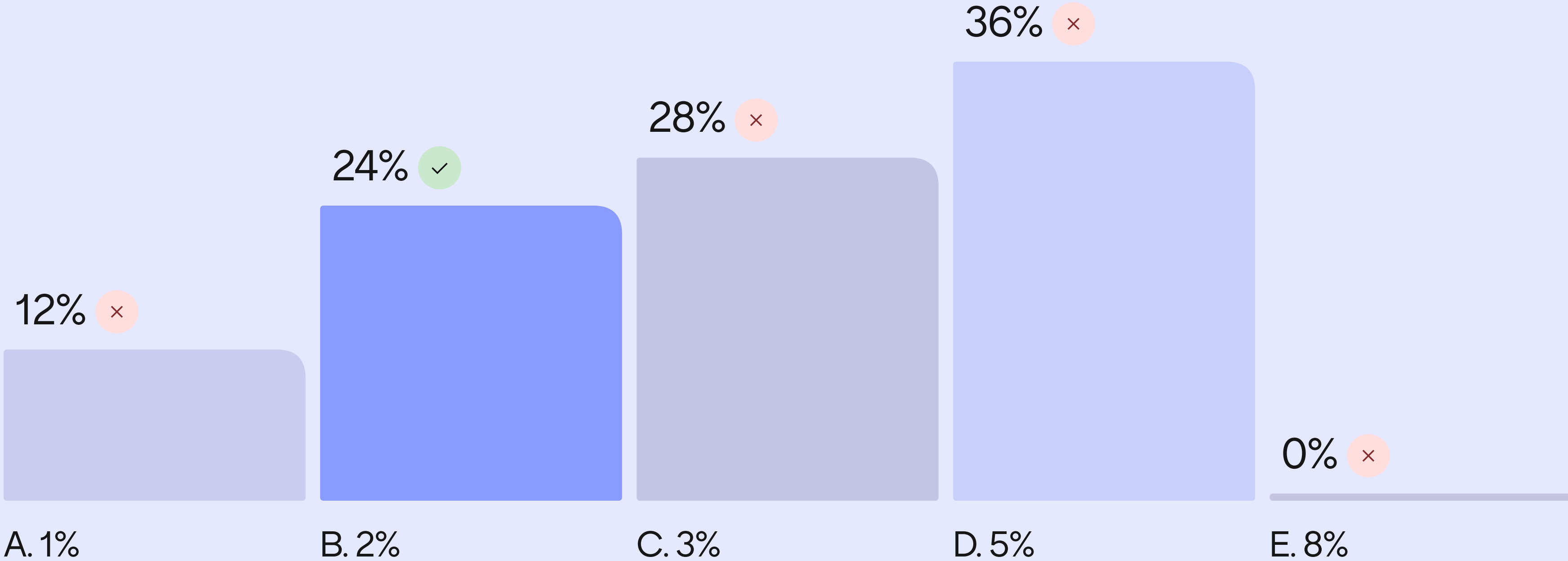
8% D. Promoting balanced participation of women and men in decision making processes.



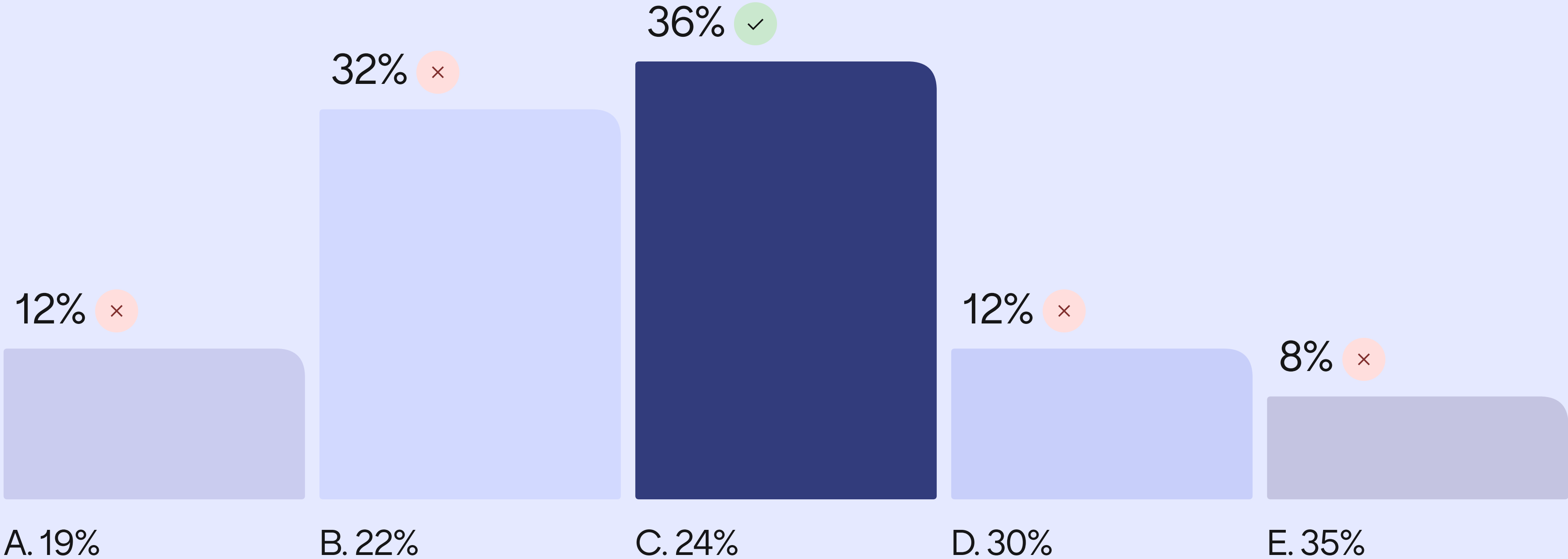
What share of the EU construction sector do you think is made up of women?



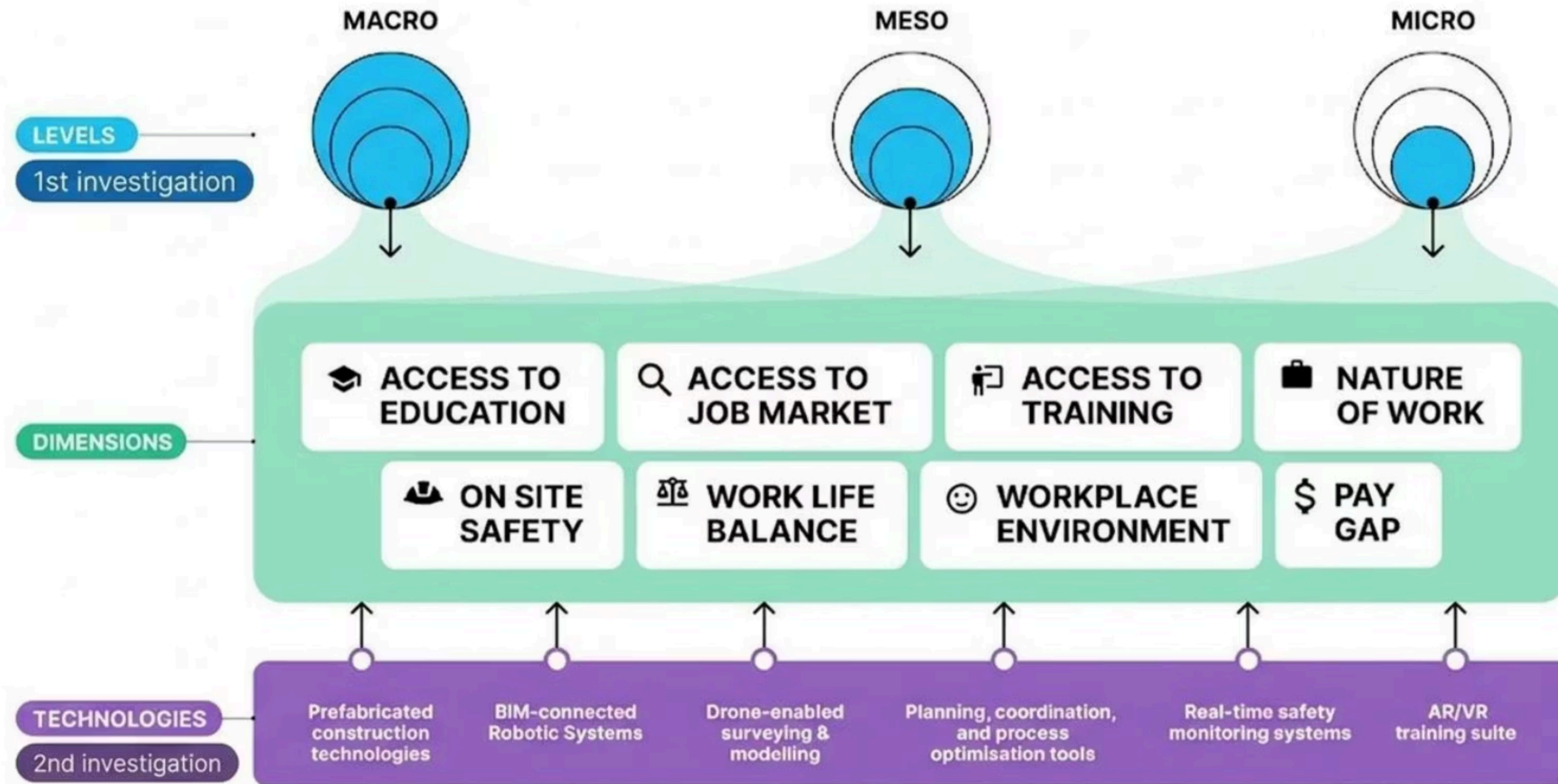
What percentage of workers on the construction site in the EU are women?



What percentage of the EU energy sector workforce is women?

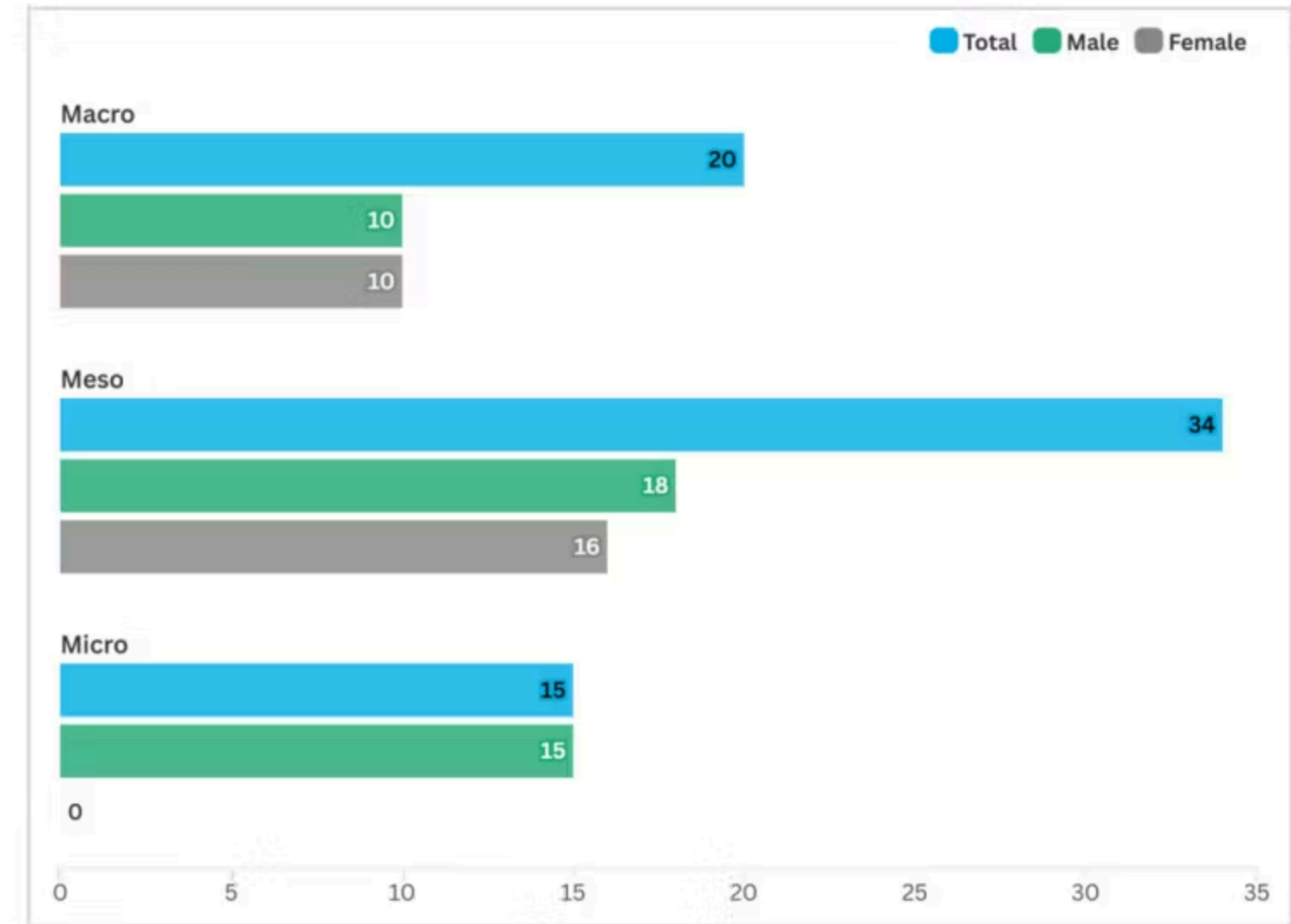
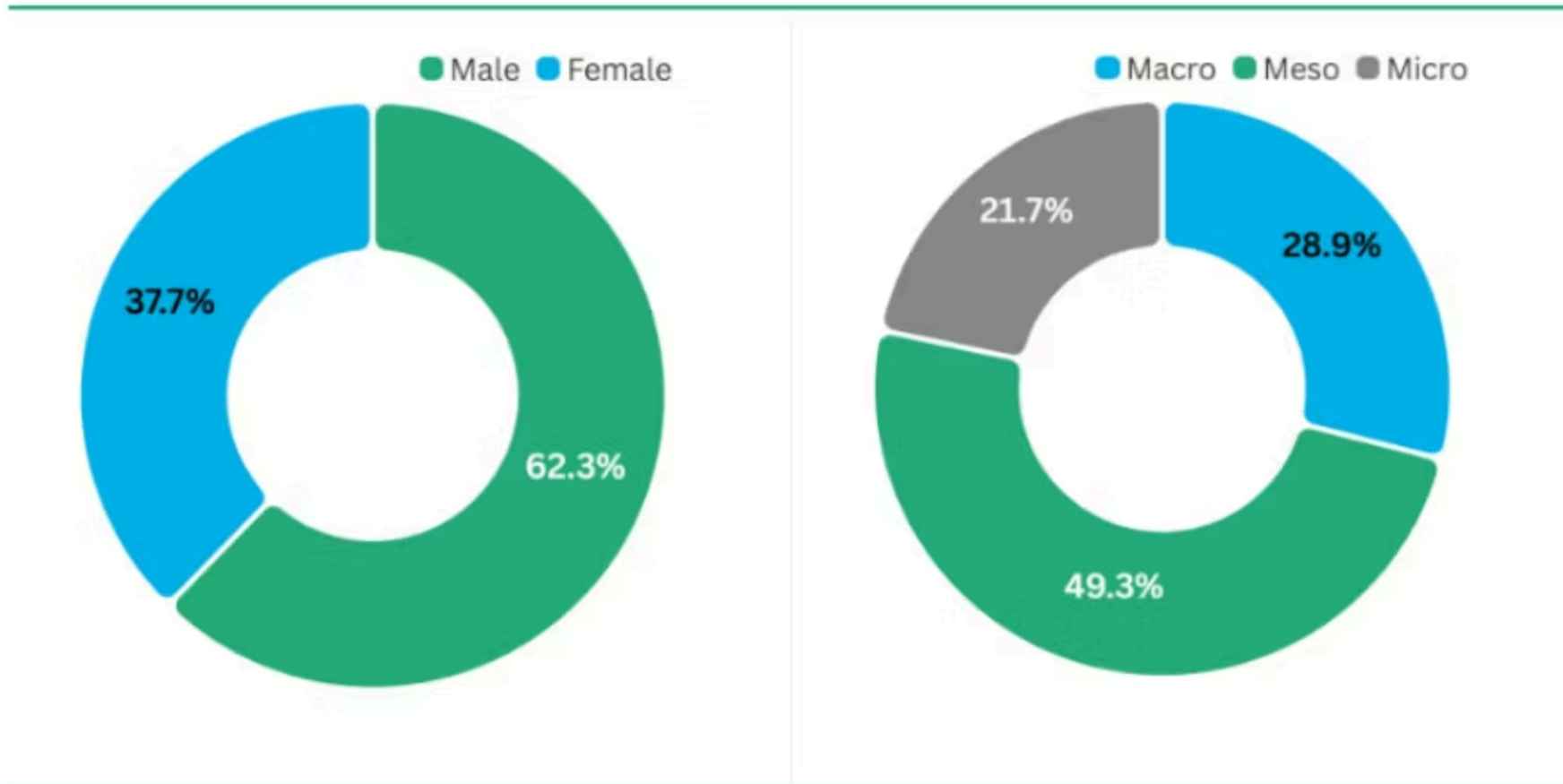


InCUBE Gender Impact Framework

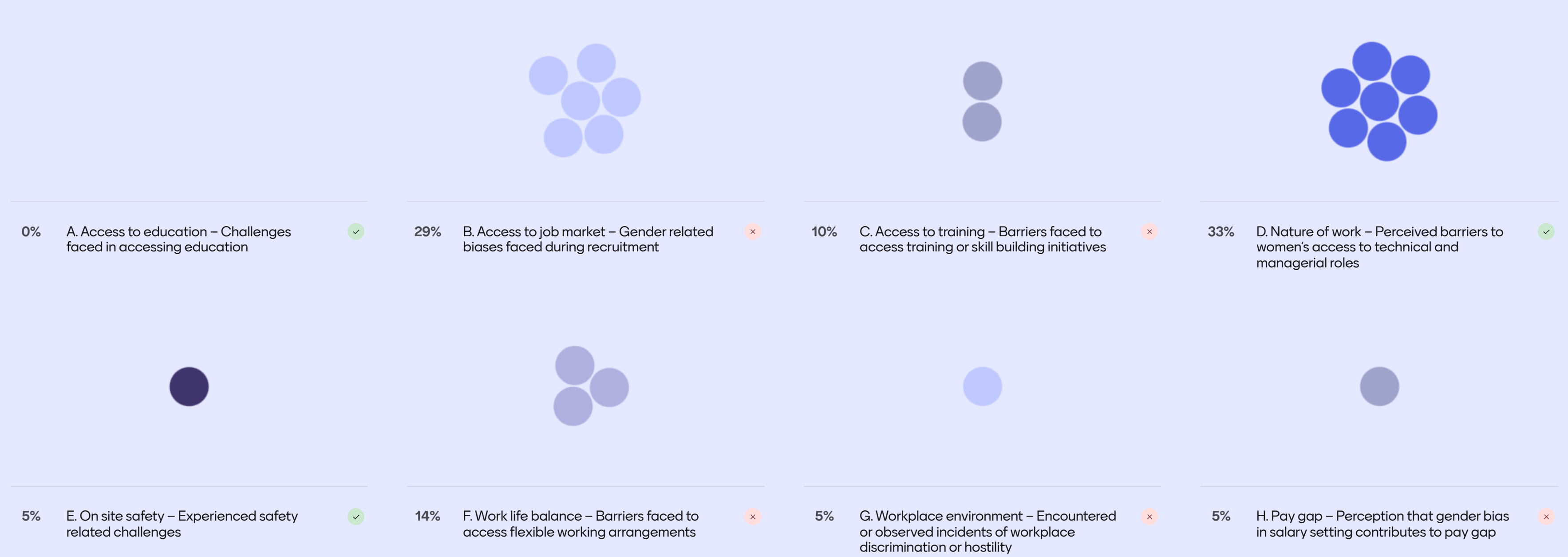


Insights from First investigation - Profile

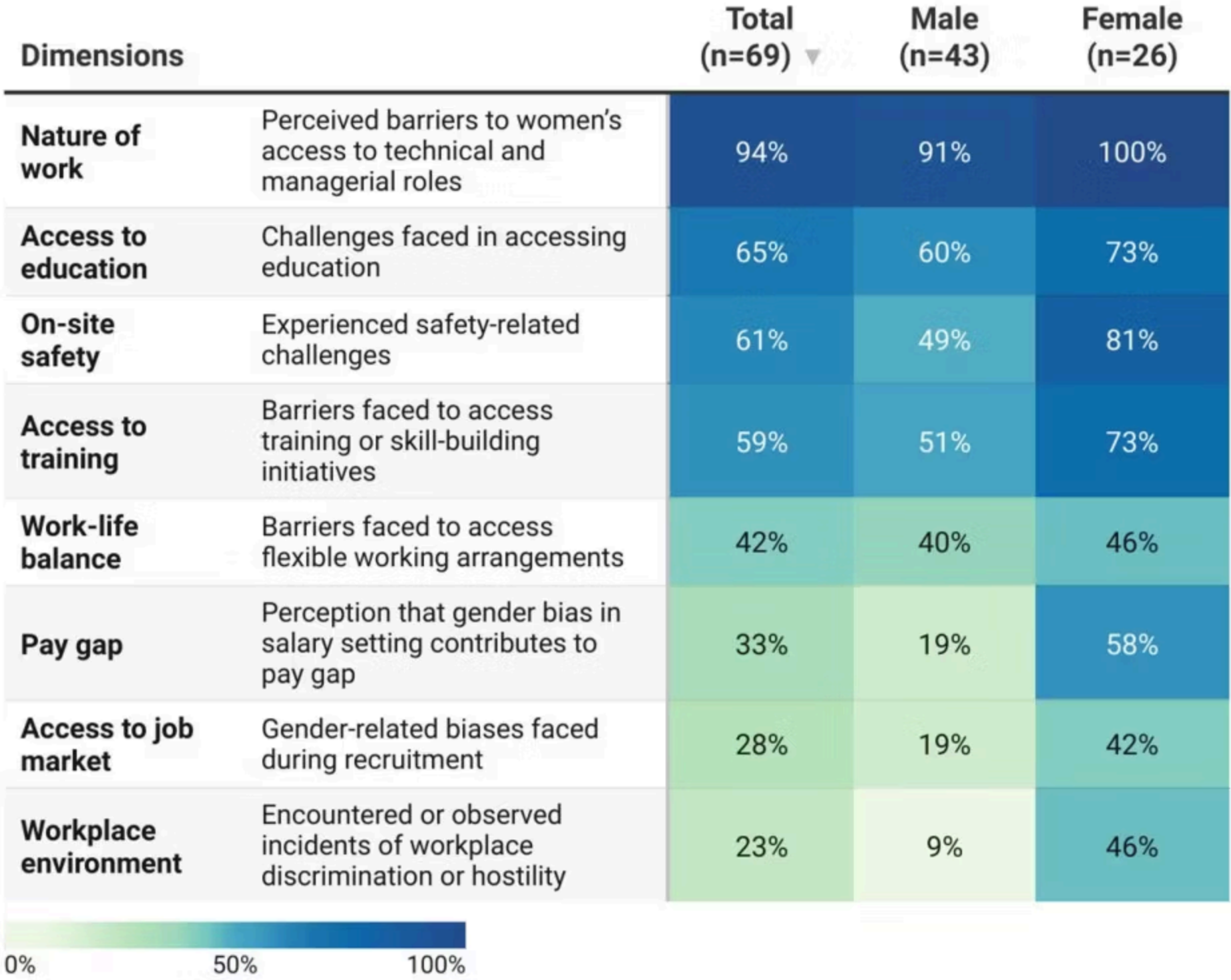
- Number of participants: 69
- **Gender composition:** 43 participants (62.3%) were male, while 26 (37.7%) were female
- **Sector composition:** 20 respondents (29%) belong to macro-level institutions; 34 participants (49.3%), are affiliated with meso-level organisations and 15 respondents (21.7%) belong to the micro-level category



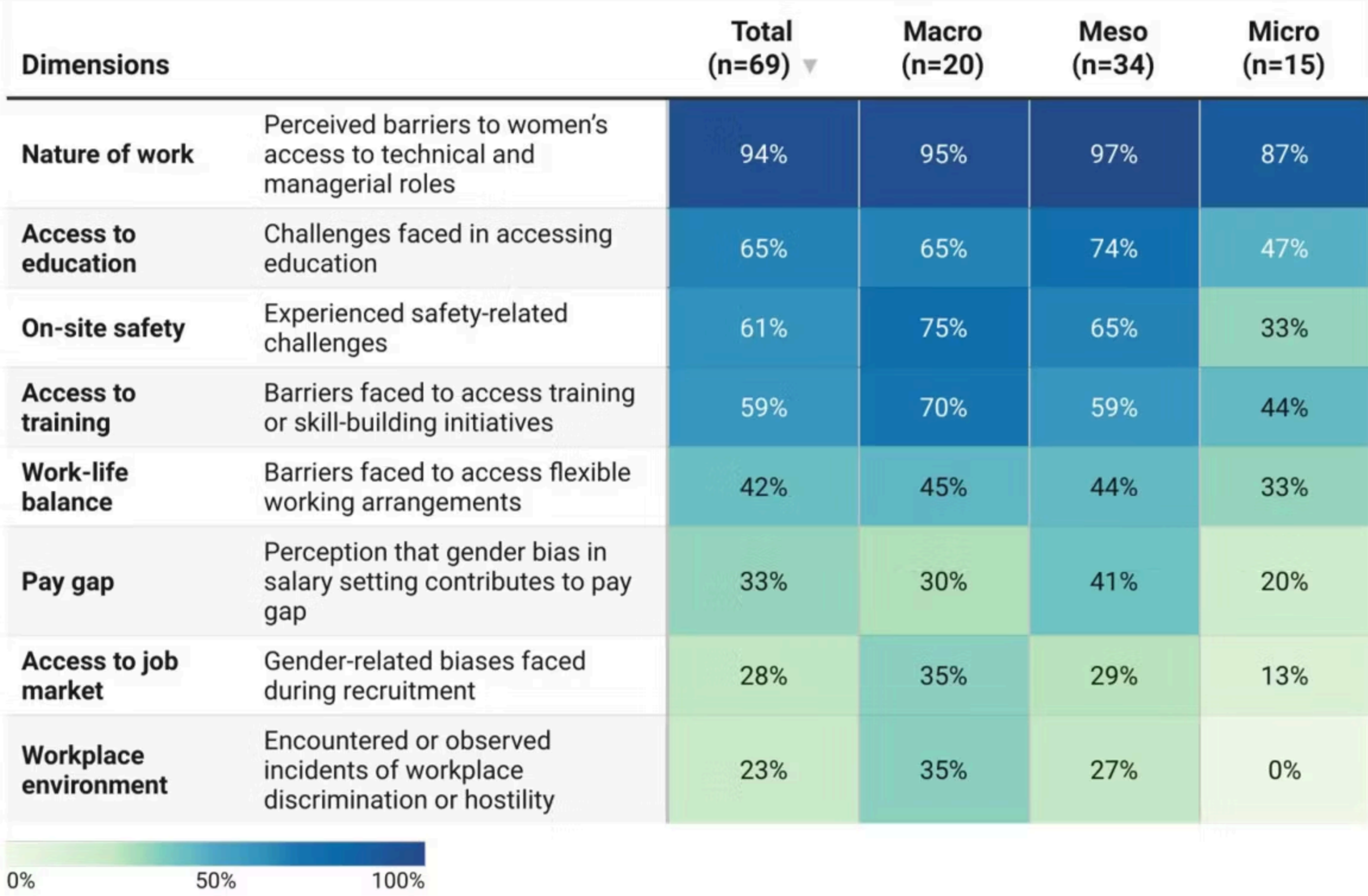
Which challenge do you think was rated highest by the consortium members?



Insights from First investigation

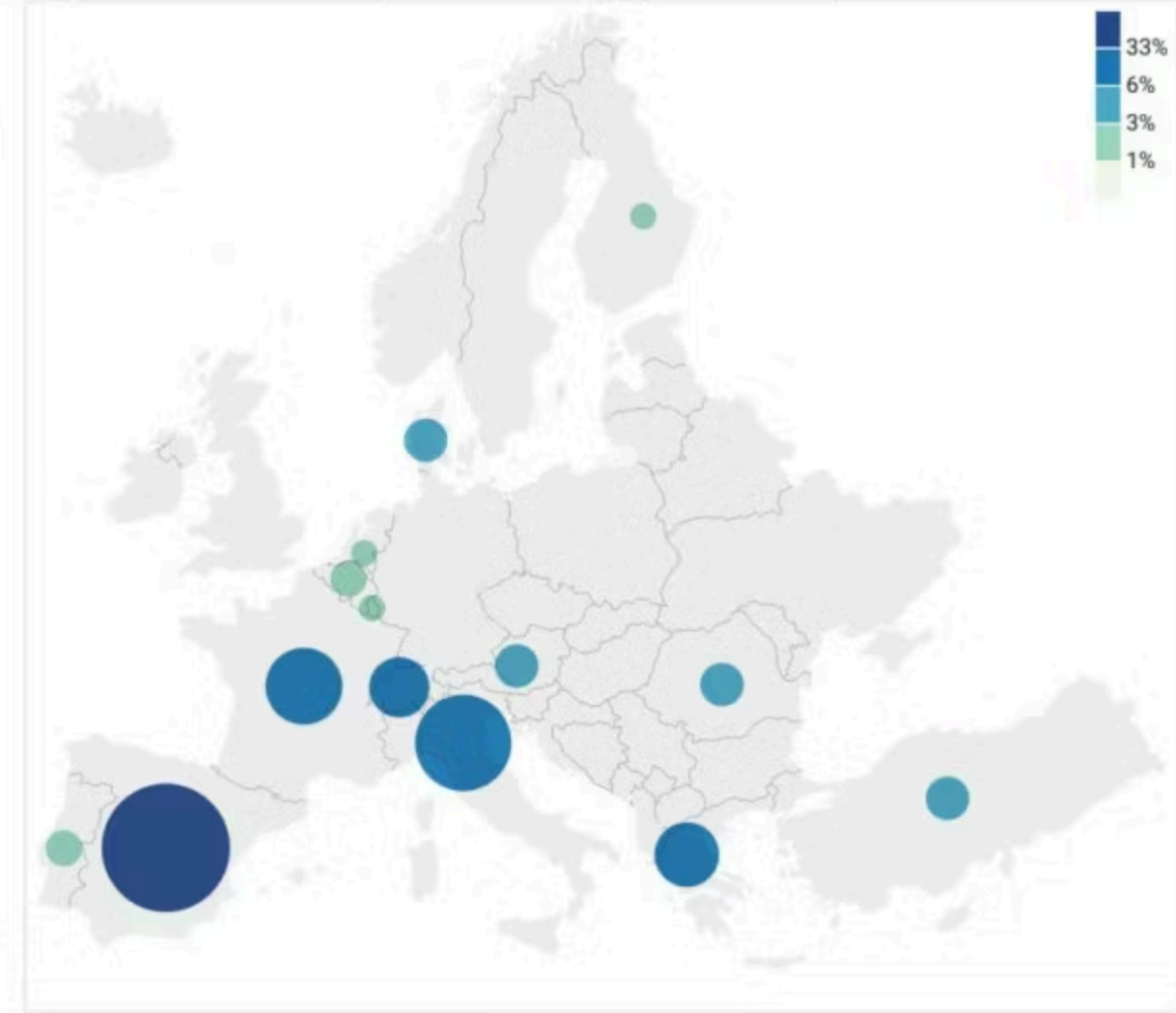
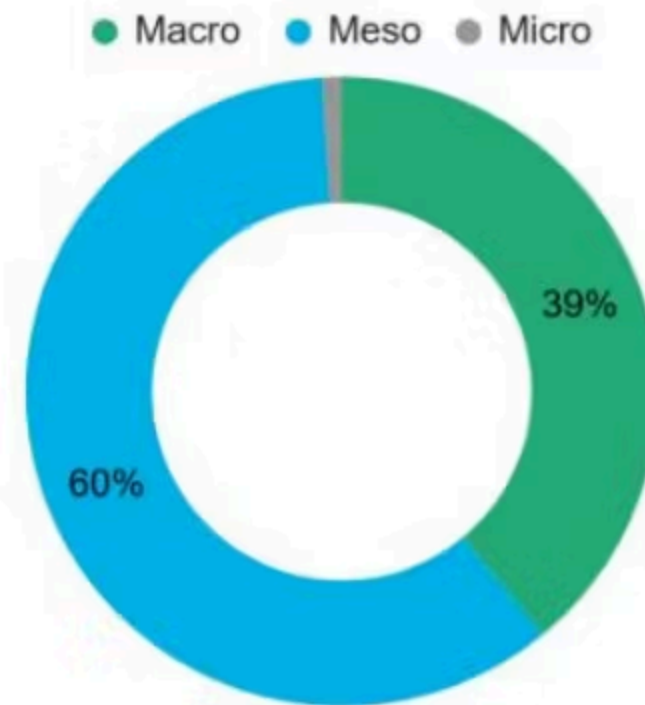
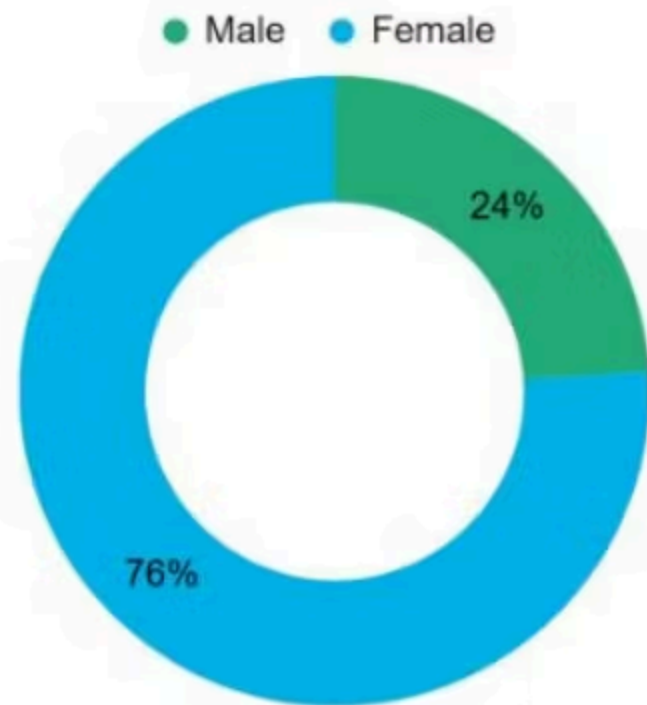


Insights from First investigation



Insights from Tech4EU Construction Cluster

- **87 participants** from the Tech4EU projects – [BEEYONDERS](#), [ROBETARME](#), and [HUMANTECH](#)
- Respondent group was predominantly female, with **66 women (76 %)** and **21 men (24 %)**.
- Respondents were **geographically diverse**, Spain represented the largest share of participants (33 %), followed by Italy (18 %) and France (11 %).
- Strong presence of individuals (60%) working at operational roles (construction companies, architect firms, technology providers, etc.) within the sector.



Insights from Tech4EU Construction Cluster

Top three barriers

1. The most frequently reported issues were the **absence of mentorship or role models** and **gender biases in hiring, promotions, or advancement**.
2. **Insufficient workplace policies supporting work-life balance**.
3. **Lack of awareness about career prospects**, further highlight difficulties in navigating and sustaining careers within the sector.

Absence of mentorship or role models in the field

Mentimeter 41.4%

Gender biases in hiring, promotions, or career advancement

41.4%

Lack of workplace policies supporting work-life balance

40.2%

Lack of awareness about career prospects in the sector

39.1%

Unequal pay for equal work

37.9%

Limited access to leadership or decision-making roles

36.8%

Workplace harassment or discrimination

24.1%

Inadequate safety measures on-site,

23.0%

Limited access to skill-building or professional training for career development

21.8%

Lack of an inclusive workplace culture

18.4%

I did not face any challenges

12.6%

Limited access to educational opportunities

10.3%

Limited access to internships and courses

9.2%



17th March 2026
InCUBE Training



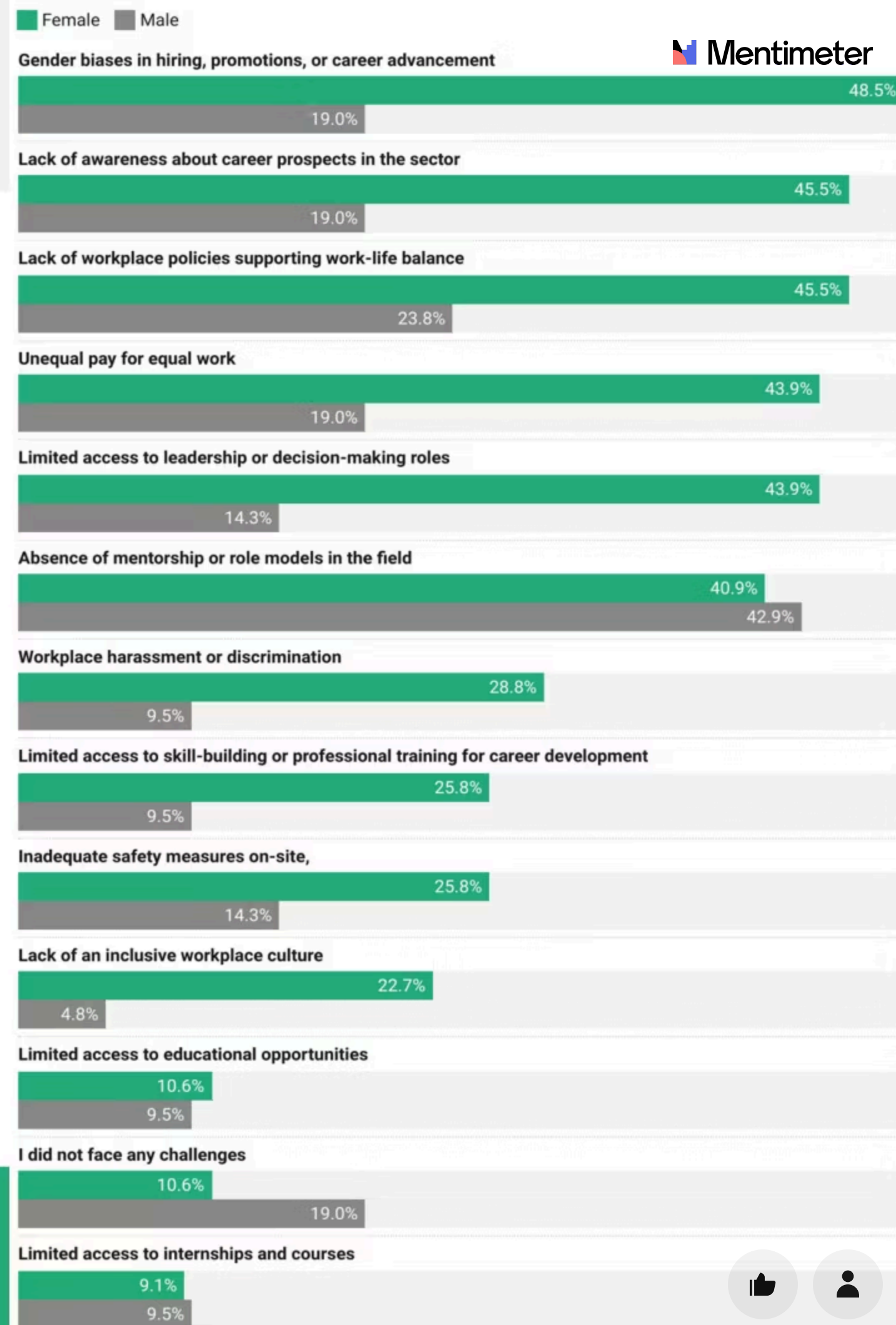
Insights from Tech4EU Construction Cluster

Top three barriers - Female respondents

1. Gender bias in hiring, promotions, or career advancement.
2. Lack of awareness about career prospects and Insufficient workplace policies supporting work–life balance.
3. Unequal pay and limited access to leadership roles at similarly elevated levels.

Top three barriers - Male respondents

1. Absence of mentorship or role models, the only challenge reported at a level comparable to female respondents.
2. Lack of Work–life balance policies.
3. Unequal pay, gender bias in hiring or promotion, and lack of awareness about career prospects.



Insights from Tech4EU Construction Cluster

"I have repeatedly faced toxic behaviors from colleagues and supervisors due to my shorter professional experience compared to theirs." - Female respondent

"When it is a woman giving the orders, it seems hard for them to take her seriously, and sometimes her knowledge or ability to address problems that may arise on the site is questioned." - Female respondent

"During my job search, I was directly asked about potential plans to have children. In meetings, I repeatedly experienced that my constructive suggestions were dismissed until a male colleague repeated them, at which point they were suddenly considered very good." - Female respondent

"When I worked in a construction company, I encountered situations of verbal discrimination from some specific colleagues. The work environment on-site was very masculinized and manners were often abrupt." - Female respondent

"In general, I think the sector is markedly masculine and sexist. You don't see women leading any private companies. Working as a project technician, when contacting a company together with some of my male colleagues, they treated me like the secretary simply because of my sex instead of respecting my job position." - Female respondent



Which technology do you consider most impactful for improving women inclusion in the sector?



33% A. Prefabricated construction technologies- Modular façades and BIPV ✗



24% B. BIM connected robotic systems - Drilling and demolition robots ✗



19% C. Drone enabled surveying and Scan to BIM - UAV based 3D modelling and analysis ✓



14% D. Planning and optimisation tools - IPD, A3, LPS, JSO, Lean Construction Platform ✓



5% E. Real time safety monitoring systems - PPE monitoring, Anti Collision System, Resilience Dashboard ✓



5% F. AR VR Training Suite ✗

Insights from second investigation

- Innovative technologies are perceived as **enabling instruments rather than transformative forces**. They are viewed as supportive tools that reduce physical strain, enhance workplace safety, and shift tasks towards digital and cognitive domains, thereby potentially broadening access to the sector.
- Technology is not inherently inclusive. Meaningful inclusion requires parallel cultural and organisational change alongside technological innovation.
- Distributional effects of technology depend on governance and implementation structures.

Dimensions		Prefabricated construction technologies (n=48)	BIM-connected Robotic Systems (n=42)	Drone-enabled surveying & modelling (n=36)	Planning, coordination & process optimisation tools (n=36)	Real-time safety monitoring systems (n=42)	AR/VR training suite (n=36)
Access to education	Potential to improve access to educational opportunities	0%	0%	0%	0%	0%	69%
Access to job market	Potential to improve access to and create new job opportunities	46%	62%	58%	0%	52%	58%
Access to training	Potential to support new digital and technical skill development	58%	50%	72%	0%	5%	50%
Nature of work	Potential to transform the nature of work	67%	57%	61%	47%	0%	0%
On-site safety	Potential to improve on-site safety conditions	60%	55%	47%	0%	83%	0%
Work-life balance	Potential to support work-life balance and job flexibility	29%	29%	17%	39%	64%	44%
Workplace environment	Potential to improve workplace culture	33%	0%	0%	75%	0%	0%
Pay gap	Potential to contribute to fairer and transparent pay structures	8%	19%	14%	0%	0%	0%



Section 3: Short Survey



Introduction

This survey aims to assess the impact of WP6 activities on awareness and understanding of gender mainstreaming and women's empowerment in the construction sector. Your responses will contribute directly to the monitoring of **KPI SE11: Women's empowerment in the construction industry**.

Drawing on your participation in WP6 activities, workshops on social inclusion and gender mainstreaming, and this training session, please indicate the extent to which you agree with the following statements.





Strongly disagree

Strongly agree

Q&A

