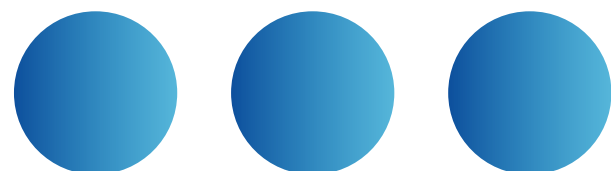
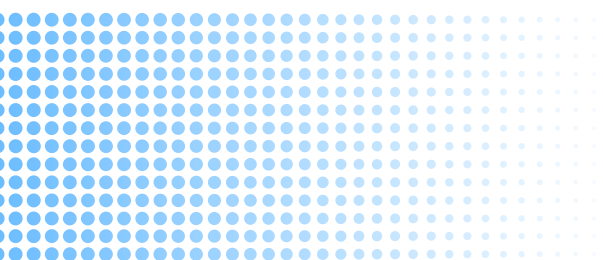


# **WOMEN IN QUALITY FRAMEWORK:**

**BRIDGING THE GAP FOR BETTER  
SAFETY AND INCLUSIVITY**



## Introduction

There is a demand to ensure the quality and safety of products and services to ensure they are fit for purpose. Quality infrastructure (QI) plays an important role in ensuring product and service quality and safety. International Network of Quality Infrastructure defines Quality Infrastructure as “The system comprising the organizations (public and private) together with the policies, relevant legal and regulatory framework, and practices needed to support and enhance the quality, safety and environmental soundness of goods, services, and processes.

Quality infrastructure is required to effectively operate domestic markets, and its international recognition is important to enable access to foreign markets. It is a critical element in promoting and sustaining economic development and environmental and social well-being.

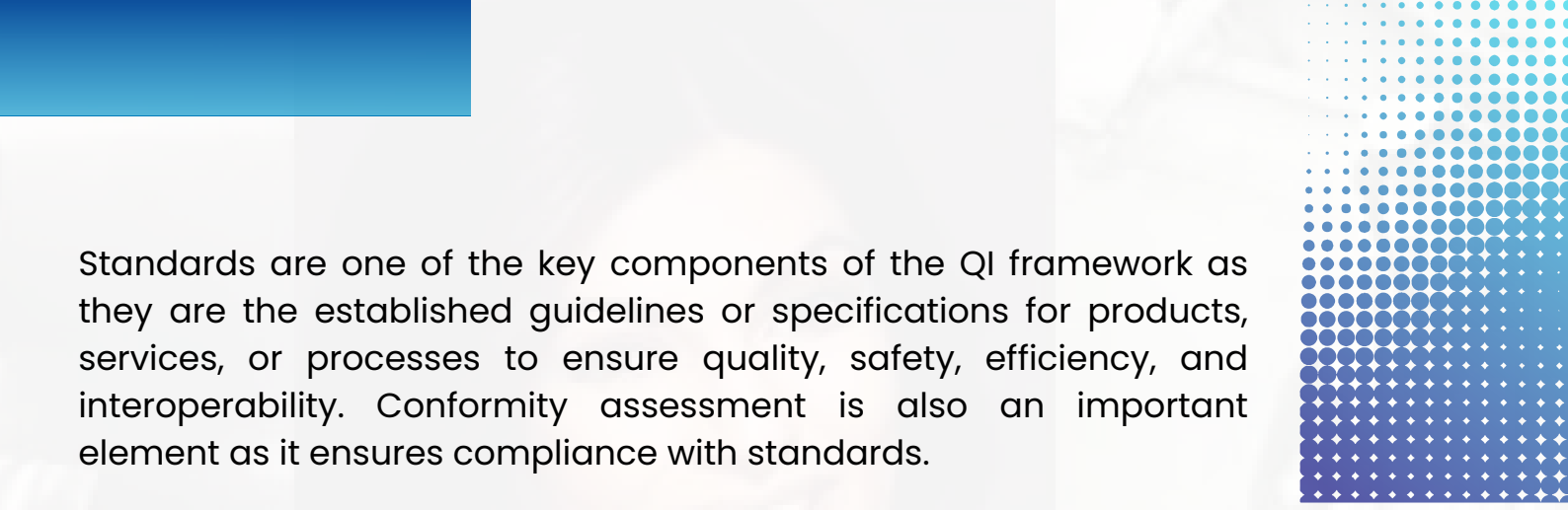
It relies on

- metrology,
- standardization,
- accreditation,
- conformity assessment, and
- market surveillance.

UNIDO states, “Setting up a Quality Infrastructure System is one of the most positive and practical steps a developing nation can take on the path forward to developing a thriving economy as a basis for prosperity, health, and well-being”. QI organizations play a catalytic role in improving the quality of products and services, ensuring that they are safe and effective for all people, regardless of gender differences.

### Key objectives of QI are:

- Raising the competitiveness of enterprises,
- Facilitate trade capacity building
- Boosting economic development.



Standards are one of the key components of the QI framework as they are the established guidelines or specifications for products, services, or processes to ensure quality, safety, efficiency, and interoperability. Conformity assessment is also an important element as it ensures compliance with standards.

The National Standards body is the main organization responsible at national level for setting the standards for technical requirements, compliance requirements, and where required for regulatory framework. The standards can also be developed by industry groups, government agencies, or international organizations, and they often reflect a consensus among experts and stakeholders in a particular field. From healthcare and education to economic policies and environmental regulations, they are essential for the overall well-being of society. Standards are developed with scientific inputs from a variety of stakeholders including those of the global community. Every day we have new standards, which require more and more innovative measurement methods. Conformity assessment bodies play a vital role in verifying compliance with technical regulations and national, regional, and international standards. Conformity assessment bodies use the system of testing, inspection, certification, and verification to ensure compliance with standards thereby ensuring the reliability of products and services.

Traditionally QI framework largely utilizes the services of men for the development, planning, and management of activities wherein the perspectives of all users, especially women are not considered. due to limited participation and understanding towards their needs. Women constitute less than 30% of workers in sectors integral to QI, such as engineering and construction. In developing countries, only 1 in 10 women in technical roles receives formal training on quality assurance and standards. The involvement of women in Quality Infrastructure is essential to ensure sustainable, responsive, and equitable requirements of the users. QI framework must consider the ergonomics of equipment and men's and women's anatomy to be suitable and safe for everyone. It must also consider the customs and culture of both genders. There is a need to use gender-responsive mechanisms in the QI framework.

## **NEED FOR GENDER-RESPONSIVE QUALITY INFRASTRUCTURE FRAMEWORK:**

The United Nations recognizes this, and the Sustainable Developmental Goals (SDG) goals adopted by them address equality as the center of sustainability. SDG No. 5 aims to achieve gender equality and empower all women and girls by ensuring their participation in various decision-making processes. In the past, standards and regulations have seen unconscious bias that has overlooked the needs of women and other gender groups.

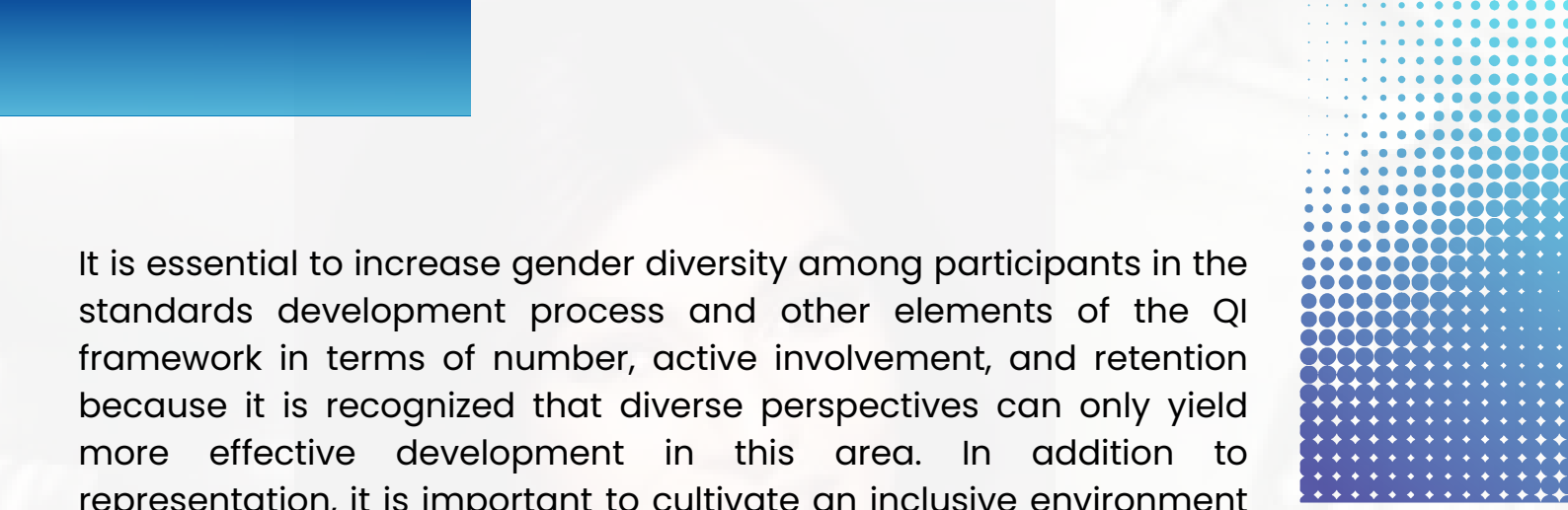
Diverse teams and discussions make effective decisions. It is thus essential that role of women are enhanced in the QI framework as they influence the creation of inclusive standards and policies that address the needs of all stakeholders, including marginalized groups. Gender-responsive standards are necessary as women comprise 49.6% of the world's population and possess a wealth of knowledge, viewpoints, and life experiences that are valuable assets to society. These perspectives and insights come from a wide range of personal, professional, and cultural backgrounds, and despite this, they have not been included in the corridors of authority.

For a standard to be considered gender-responsive, its requirements must target an equal and effective level of safety for every person it impacts, with thoughtful consideration for the physical and societal differences that exist between people of different genders.

The unique problem-solving skill is essential to explore the multi-faceted role being played by evolving QI framework wherein we explore new principles of sustainability and digitalisation.

Women's participation in industries such as manufacturing, construction, and healthcare can significantly boost productivity and ensure equitable development.





It is essential to increase gender diversity among participants in the standards development process and other elements of the QI framework in terms of number, active involvement, and retention because it is recognized that diverse perspectives can only yield more effective development in this area. In addition to representation, it is important to cultivate an inclusive environment that encourages meaningful participation from all involved, regardless of gender. For instance, car accidents are reportedly taking more female lives due to their oversight in testing and vehicle design, as they have been designed to withstand crashes only for average adult male anthropometric measurements<sup>1</sup>. The National Fire Protection Association also talks about ways the safety equipment for firefighters is designed with a male in mind, leading to ill-fitting and uncomfortable gear for women<sup>2</sup>. The digital era is revolutionizing society. It has the potential to create favorable conditions for women to excel in the future of work, access essential digital services, and enhance their involvement in civic and political affairs. There is a need that technologies underpinning these fields to be built with women at their core. Involving women in the standard-setting process is not just about equality anymore but has also become a pragmatic necessity.

Some specific examples of products that may have adversely affected women because they had not been developed with a gender lens include<sup>3</sup>

- Personal Protective Equipment
- Clothing for professional and recreational use
- Passive restraint systems in vehicle
- Construction equipment
- Pharmaceuticals
- Women's Hygiene products

Standards formulation is the first section of QI framework and Women's representation in QI promotes sustainability and equity. Standards and regulations created with women's insights are more likely to consider issues such as environmental impact, accessibility, and safety.

## THE GLOBAL PERSPECTIVE:

Globally, over 2.7 billion women are legally restricted from having the same choice of jobs as men. Of 190 economies assessed in 2023, more than one-third (69 economies) have laws constraining women's decision to work 4

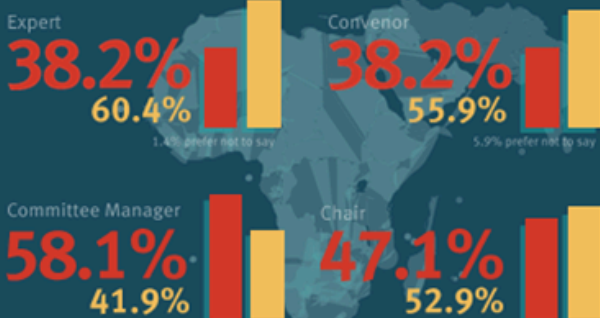
The International Organization for Standardization (ISO) estimates men's participation is twice as high as women's For the International Electrotechnical Commission (IEC) the figure is 14% (the data is estimate provided).

ISO has surveyed to explore the current participation of women involvement in standards development. This survey is divided into the 4 main geographical regions of the world.

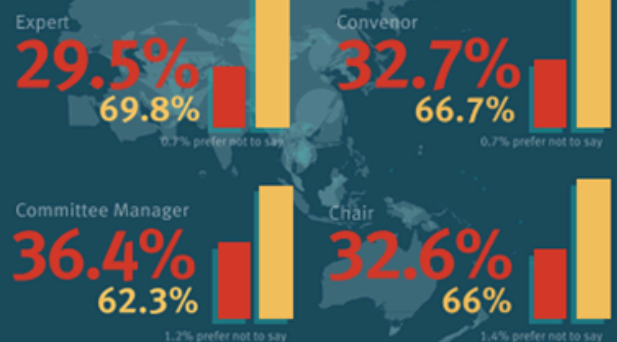


### Women's representation in standards work by region

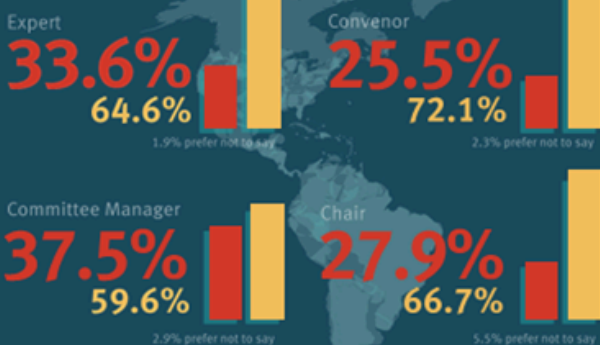
#### Africa and Arab States



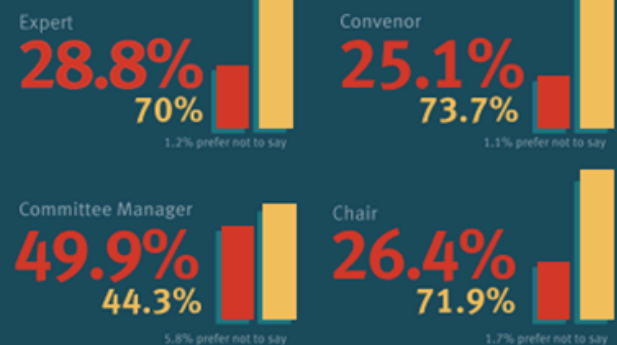
#### Asia and the Pacific



#### Americas and the Caribbean



#### Europe and Central Asia



•Bar diagram representing Women in Red 1

•Bar diagram representing Men in Yellow 1

## Key:

- **Expert-** Consultants/ specific people contributing to the formulation of standards.
- **Convener-** Responsible for calling and chairing working group meetings and for the development of working group projects.
- **Committee-** Technical committees which are the key bodies that drive the standardization process.
- **Chair-** A committee chair is an impartial body which does not represent any country.

According to McKinsey, advancing gender equality could add \$12 trillion to global GDP by 2025.

The ISO and IEC technical committees have signed the United Nations Economic Commission for Europe (UNECE) declaration on gender-responsive standards and standards development. There is a slow momentum towards the approach of gender responsive QI framework. Gender Responsive Standards guidance for ISO and IEC technical committees 5

Companies with gender-diverse teams are 15% more likely to outperform financially. In developing countries, only 1 in 10 women in technical roles receives formal training on quality assurance and standards.

An example to support the approach is the efforts by different economies have taken the lead in working in the direction of gender-responsive standards. Canada is one of the first countries to quantify the participation of women on Standards Council of Canada (SCC) ISO/IEC mirror committees. The SCC has also determined that the underrepresentation of women in the standardization process correlates with an increase in unintentional injuries. Considering all these factors, SCC's work plan aims to build the overall gender expertise in the standardization process. 6  
India has also taken an approach in this direction.

## **THE NATIONAL ASPECT:**

India's participation in global trade and commerce necessitates adherence to international standards and ensuring compliance using globally acceptable conformity assessment procedures and bodies. Hon'ble Prime Minister of India, Shri Narendra Modi has also said that India will take the lead to make Indian Standards accepted globally to ensure the quality of products. The focus is also to upgrade the testing infrastructure of our country. This requires that we ensure that the Quality Infrastructure framework adapts practices that meet the UN SDG goals.

The challenges faced by Indian women in the sector require more participation of women. A change in the approach to the Cultural and Societal norms that often dictate the job. There is a need to educate and train women in these areas to ensure equal participation. By promoting gender equality within the entities of the QI framework, India can enhance global competitiveness by ensuring that its products and services meet international benchmarks and reflect gender-inclusive practices.

The Bureau of Indian Standards (BIS), took the first step towards the formation of Gender-responsive standards by inviting experts to submit proposals for consideration and inclusion in standards for specific requirements that ease the women workforce in all fields/sectors to help them move forward with the creation of gender-responsive standards<sup>8</sup>. Other stakeholders have also supported the efforts of BIS in this direction.



## Actions by CII-Institute of Quality:

CII-Institute of Quality (CII-IQ) is a Centre of Excellence of CII. CII-IQ initiated a conference series titled **“Women Shakti Leading India’s Success”** in 2021. The series is designed to celebrate, empower, and support women in leadership roles. The conference brings together a diverse group of women leaders, aspiring leaders, and stakeholders to share their experiences, insights, and ideas.

The goal is to break down barriers and challenge gender-based stereotypes and biases that may limit the advancement of women in leadership. Recognizing and valuing the unique perspectives and contributions that women bring to leadership positions and creating a supportive environment that empowers women to fully utilize their skills, and talents, inspire and encourage future generations of women leaders. This event brings together men and women from industry, leaders, experts, and senior managers and helps them connect and share their experiences and the challenges they face. It also facilitates an understanding of requirements from the industry to empower and increase women's participation in the Indian workforce.

CII members are committed to fostering gender sensitivity within their operational frameworks and actively promote the inclusion and participation of women across the supply chain.





## **Actions by UL Standards & Engagement:**

UL Standards & Engagement (ULSE) is committed to developing gender-responsive standards and achieving greater gender balance, representation, and inclusion in its standards development process. In August 2022, the organization signed the Declaration for Gender Responsive Standards and Standards Development from the UNECE. As the next step in ULSE developed a gender action plan to support the achievement of gender equality through standardization 9.

To quote an example of a UL Standard, ANSI/CAN/UL 3741, Standard for Safety for Photovoltaic Hazard Control, addresses the safety of photovoltaic hazard control equipment, which protects firefighters from shock hazards when responding to emergencies on buildings with solar panels. In developing the standard, it was noted that physical characteristics such as body weight and skin sensitivity could have a direct effect on certain threshold limits for electricity and that most female firefighters tend to have lower threshold limits than male firefighters. For this reason, UL 3741 applies these current threshold limits to its requirements for PVHCE, to reduce the hazard of serious injury and death for male and female firefighters alike. 10

To celebrate International Women's Day both organizations collaborated for a virtual session and deliberated on the topic "In the Room Where it Happens: Women Impacting Quality Ecosystem". Aligned with the International Women's Day theme "Inspire inclusion" this event in March 2024 saw active participation from some of the inspiring voices who have made significant contributions to the development and implementation" of standards, that have enhanced the quality ecosystem. The event highlighted the need for sensitization, capacity building, and increased participation of women in different elements of the QI framework. In addition, the need for promoting STEM education mentorship and leadership programs was also considered. The event led to a new series of discussions and planning of future actions to lay the groundwork for a robust action plan that will highlight the importance of gender-responsive standards as a pathway to prosperity.

## **Benefits of Women's Inclusion in Quality Infrastructure and Standards Formation**

Studies have shown that organizations with more diverse and open-minded teams are more innovative and perform better financially. Gender-sensitive QI has a significant impact on community well-being. There is also a need to incorporate women's perspectives as sensitivities are different. An example in this regard can be considered in the patient care unit of the healthcare industry.

### **FUTURE ACTIONS:**

India is on a trajectory to become the world's third-largest economy, driven by robust economic reforms, technological advancements, and a growing consumer market. Central to this progress are stringent standards and regulations that ensure quality, safety, and sustainability across various sectors. These frameworks foster innovation, enhance global competitiveness, and attract foreign investment by creating a reliable business environment. By upholding high standards and compliance norms in manufacturing, services, and infrastructure, India aims to boost its economic output and build trust in its products and services globally, paving the way for sustained growth and development. In this journey, women's participation in standards development in India is crucial for fostering inclusivity, innovation, and economic growth. By tapping into the talents and insights of women, India can strengthen its standards development process and different elements of the QI framework, contributing to national and global competitiveness and sustainable development. Initiatives such as 'Women at IEC' have already raised awareness. However, to further improve diversity and inclusion, it is important that lead assessors and working group convenors provide an environment during the assessments and meetings in which all participants feel safe to speak up and share their opinions, and that all are treated with the same respect.

Considering this scenario, CII-IQ, and ULSE plan to actively work in this domain. Suggested path of future actions

**1)** Undertaking robust research and data collection to identify the areas where further participation of women is required in the QI framework

## **2) Education and Training**

- Provide training programs that focus on enhancing the skills of women in fields that are underrepresented.
- Conduct an awareness program on the importance of women's participation in quality framework and the benefits of diversity.
- Develop a mentoring program

## **3) Leadership**

- Ensure women's participation in decision-making with targets for equal women in leadership roles

## **4) Networking and Collaboration**

- Creation of a women's network to work in collaboration. Develop this collaborative network with domestic and international bodies.

## **5) Financial Support and Incentive**

- Recognition program for women's involvement
- Development of a reward mechanism to felicitate the women in the QI framework which will serve as a powerful catalyst to inspire further participation.



**6)** Need for implementation of policies to promote Gender-inclusivity. Sensitisation to corporates to provide women with important portfolio of quality assurance. Discussion on barriers that hinder women's advancement including unconscious bias, limited mentorship access, work-life balance, and identifying and cultivating essential skills to help increase their participation in standard formation.

**7)** Creating awareness at grassroots levels, colleges, or institutions to empower a whole new generation of women to pursue careers in quality and standardization. Discuss a few schemes that can be offered at the educational institutional level.

**8)** Categorization of standards as gender-neutral, gender-inclusive, and gender exclusive and revising 4-5 standards that are extremely gender sensitive. Evaluation of standards to understand their applicability to quality, hygiene, and safety aspects.

**9)** Developing a guideline document for reviewing the existing committee for more inclusion and advocating for the same in the future.



## CONCLUSION

Collaborative efforts are required to ensure gender equality. It is essential to create an enabling environment for women's participation. The Institute of Quality under the Confederation of Indian Industry (CII) and UL Standards & Engagement can play complementary roles in this endeavor. ULSE can introduce global best practices to facilitate international exchanges to broaden women's expertise and exposure. CII-IQ will play a pivotal role in driving industry collaboration, through networking and mentorship platforms, including conducting research to identify and address future barriers to women's participation.

Together, these distinct organizations with other stakeholder participation intend to launch joint initiatives, such as workshops and awareness campaigns, to create a more inclusive and diverse standards development process and action by different QI framework bodies in India. This will foster economic growth, improve quality of life, and promote social equity, ultimately strengthening India's position in global markets by showcasing its commitment to diversity and innovation.

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