

Women Builders Creating Inclusive Future Principles -- A Practical Guide for Policy Makers

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1. INTRODUCTION

1.1 Background

From 2016 to 2018, APEC leaders have been emphasizing the importance of empowering women economically and bridging the gender gap to increase opportunities for women to realize their full potential. By acknowledging how greater economic participation by women spurs economic growth, APEC leaders have been encouraging economies to promote women's career development, strengthen access to STEM education, and address barriers to economic participation.

In recent years, APEC has been dedicated to diminishing inequality by increasing the participation of women in non-traditional sectors, such as the building sector. According to the ILO Global Wage Report 2018/2019, women continue to be paid approximately 20% less than men.¹ Meanwhile, the World Economic Forum found that women in architecture and engineering earn 27% less than men². Therefore, this project encourages APEC economies to implement measures on developing women's talent in the building sector to reduce wage gaps, foster vocational and skills education for women, and increase the number of women in leadership positions.

The gender pay gap represents a social injustice. As a result, all economies should try to accelerate progress towards gender equality. For example, the gender pay gap in architecture and engineering is more than 25%.³ In addition, The National Council of Architectural Registration Boards reports that women accounted for only 36 percent of newly licensed architects in 2016. And, in 2017, World Architecture 100 indicated that only two firms have management teams consisting of more than 50% women, sixteen

¹ ILO. Global wage report 2018/19: what lies behind gender pay gaps. Geneva: International Labour Organization, 2018

² The Industry Gender Gap: Women and Work in the Fourth Industrial Revolution, World Economic Forum, 2016

³ Ibid.

with no women at all in senior positions, and only 10% with women occupying the highest-ranking positions.

This project utilizes the methods of a questionnaire and a focus group to understand the current causes and conditions of the architecture and engineering industry (hereinafter referred as “building sector”) in APEC economies, including issues on gender pay gap and segregation within recruitment and promotion processes.

Formulated from this project, the Principles on Women Builders Creating Inclusive Future seek to address these regional issues, while creating sustained benefits for all APEC economies promoting women’s participation in higher-wage and high growth sectors. For the purposes of this guide, the term, “builders”, shall refer to architects or engineers in the building sector. Since this project focuses on cultivating the skills and capacity of women in the building sector, we also coordinate with the HRDWG (Human Resource Development Working Group) to empower women in the APEC region.

1.2 About This Guide

Findings from the literature review, pilot survey, and focus group discussions conducted by this project all show how gender stereotypes (in which women are the main child caregivers), lack of transparency in pay, physical strength levels, adaptation to harsh outdoor working conditions, and gender-based violence are the major causes for the gender pay gap in the building sector. Therefore, four inclusive future principles for women builders, namely encouraging women’s participation, establishing gender friendly workplaces, creating healthy and safe workplaces, and ensuring fair career development opportunities, are formulated for policy makers as guidelines to promote an inclusive future.

APEC economies and building sector stakeholders will be invited to adopt the principles and actions listed in The Principles. We anticipate the following actions to be suggested:

Raising awareness: To acknowledge the importance of engaging women in higher-wage and high growth sectors, especially in male-dominated ones, such as the building

sector.

Increasing representation: To ensure women's participation in the building sector across all levels and areas, and to support women builders with diverse backgrounds.

Overcoming barriers: To embed gender perspectives in the building ecosystem, and promote laws, policies, programs and partnerships that create an enabling environment for women builders.

1.3 Target Audience

The target audience for these principles is policy makers, including governments, private enterprises and educational organizations in the building sector.

1.4 Aim and Objectives

The objective of this project is to empower women and increase their participation in the building sector of APEC economies.

There are four objectives for this project:

- To raise awareness on the gender bias and stereotyping in the building sector.
- To identify the issues and causes of gender pay gaps in the building sector.
- To propose strategies that diminish gender pay gap in the building sector.
- To establish an enabling environment for women in the building sector.

2. Principles

To achieve the objectives of the principles, four Women Builders Creating Inclusive Future Principles based on the findings of the entire project are proposed below. Each consists of five sections: statement of issue, objectives, methods, actions, and examples.

1. Encouraging Women's Participation in the Building Sector

Statement of Issue

In the building sector, gender bias and stereotyping might occur at every point throughout an employment cycle. These inherent biases are the results of culture and education.

Along with past research, the results of the questionnaire show that gender stereotyping and social values have a strong impact on decisions regarding university majors and professional careers. Moreover, from the focus group discussions, the results show that employers prefer male engineers when considering on-site job positions. As a result, occupational segregation by gender substantially depresses female wages and contributes to the gender pay gap. Furthermore, in the male-dominated building sector, the scarcity of women role models also worsen gender segregation. Finally, findings show that “uncomfortable, sexist comments” is one of the most common personal experiences in the building sector. As a result, the creation of a workplace free of gender stereotyping and sexual harassment is very important.

Aim

Eliminating gender stereotyping and sexual harassment from workplaces in the building sector

This means

- ✓ Policy makers are aware of the gender bias and stereotyping in the building sector.
- ✓ Policy makers recognize and act to eliminate bias and gender stereotyping in the building sector.

Actions

- ✓ Inclusion of Gender awareness courses in schools and on-the-job training programs, and introduction of legislation tackling gender-based violence and discrimination, eliminating gender stereotypes, enshrining equal rights in the workplace through fair access to skills training, promotions, and equal pay for equal work
- ✓ Requirement for gender awareness courses to be incorporated in the retraining of professional engineers, site managers, safety and health management personnel, and quality control engineers
- ✓ Notifications of gender bias or gender stereotyping found in products and mass media, including but not limited to radio and television
- ✓ Courses on gender equality and events with female builder role models are to be included in primary and secondary education
- ✓ Amendments of Occupational Safety and Health Education and Training Rules and related education and training regulations to make gender awareness courses a requirement
- ✓ Review of the Radio and Television Act to raise overall gender awareness

Examples

Japan

To inspire female junior high and high school students to choose STEM careers, the government is implementing the “Riko-challe” project, which introduces and provides information on events by universities and companies active in STEM fields.

The government also appointed women who are active in science and technology fields as female role models (STEM Girls Ambassadors). They provide lectures at symposiums to inspire female junior high and high school students interested in choosing STEM fields for their careers.

Chinese Taipei

Each year, the Ministry of Labor along with local labor authorities hosts seminars on “Employment Equality and Sexual Harassment Prevention”. Businesses are invited to participate to strengthen the advocacy and education of gender equality in employment.

Chinese Taipei has imposed the following measures:

1. Incorporating gender equality concepts and examples of successful female engineers into technical seminars or trainings conducted in accordance with "Provisions for the Renewal of Professional Engineer License";
2. Holding gender-related seminars or lectures, and inviting professional engineer associations to participate. For example, Chinese Taipei held a "Architecture and Feminism" lecture, which invited the participation of civil and structural engineering associations.

2. Reducing Work-family Conflicts

Statement of Issue

Work-family conflicts are common among workers throughout all economies. These conflicts reinforce gender inequality and pay gap because women are more likely expected to leave jobs or cut back work due to family obligations, resulting in an overall negative impact on the chances for women to obtain interviews, offers, and promotions.

Literature shows that women are more than twice as likely to perform housework on an average day as men. Furthermore, from focus group discussions, it is shown that following characteristics of the building sector make work-family conflicts worse for women engineers.

1. Jobs are mostly conducted via task groups requiring teamwork, designation of responsibilities, and a lot of overtime to fulfill client requirements
2. Positions often require individuals to be on-site for continuous supervision, making the implementation of flexible work hours difficult
3. Difficulty for firms, mostly small and medium-sized businesses, in the building sector to provide childcare or eldercare as a measure for employee work-life balance
4. Frequent work-related social events are often held after work hours

Aim

Eliminating sources of work-family conflict in workplace arrangements and job assignments

This means

- ✓ Policy makers understand and value the importance of work-family balance
- ✓ Policy makers recognize and act to reduce the impacts of work-family conflicts

Actions

- ✓ Provide flexible work arrangements options, such as flextime, work from home, compressed work weeks, and part-time work schedules
- ✓ Establish an efficient substitute system that equips employees with the tools to work remotely and flexibly
- ✓ Offer temporary childcare and eldercare, such as those provided by government-certified agencies
- ✓ Arrange work-related social events within office hours that take into consideration those who are child- or elder-care providers.
- ✓ Amend labor standards acts and all related regulations to allow for flexible work arrangements
- ✓ Establish regulations for family and childcare services agencies that ensure temporary child and elder care services are provided
- ✓ Promote the importance of sharing in family duties and responsibilities, particularly to encourage men's participation in the care and education of children
- ✓ Since working from home during an outbreak, such as the COVID 19 pandemic, can exacerbate work-life conflict, parents can take turns shifting between family and work duties

Examples

Australia

In 2018, Australia introduced significant child care reforms to support families in bearing the costs of child care. For example, the Child Care Package included the Child Care Subsidy, which has provided \$8.3 billion a year to help cover the costs of child care and encourage workforce participation.

Along with the Child Care Subsidy, Australia also introduced the Early Childhood Education and Care (ECEC) Relief Package at the height of the COVID-19 pandemic to help ensure the viability and continuity of child care for families.

Japan

To promote telework, a flexible work style that effectively utilizes information and communications technology (ICT), nationally, the government has been taking the following measures:

1. Granting subsidies for the costs associated with introducing telework
2. Informing the public of telework guidelines
3. Enhancing the counseling system

Chinese Taipei

Chinese Taipei organized the “Work-Life Balance Award” ceremony to promote the philosophy and benefits of work-life balance by commending model businesses.

Conducted in accordance with domestic relevant labor laws and regulations, the policies or strategies aren’t specifically formulated for engineering services or relevant professional consulting industries.

3. Creating Healthy and Safe Workplaces

Statement of Issue

Especially for supervising engineers working at construction sites, the building sector offers some of the most dangerous occupations. In addition to the high risk of work-related injuries, women are also more likely to face gender-based violence, and might even be excluded from consideration for some job positions due to the following reasons:

1. Construction sites are often in remote or sparsely populated locations
2. There are inevitably dark or isolated areas, such as tunnels or basements, at construction sites.
3. Women engineers are often the only female in their teams
4. Poorly equipped working sites, such as those without elevators, lead to additional physical constraints for certain jobs
5. Even for female engineers stationed at a firm's head office, they are still often required to travel to a construction site. As they are often the only female in these trips, the risk of gender-based violence increases.

Aim

Eliminating physical restrictions, risk of work injuries and gender-based violence at workplaces in the building sector

This means

- ✓ Policy makers are aware of the risks of work injuries and gender-based violence in the building sector

- ✓ Policy makers are aware of the impact of physical restrictions and safety of a facility on gender equality

Actions

- ✓ Application of information technology and cameras around the site, as needed and with the understanding and agreement of employees, to ensure safe environments
- ✓ Application of prefabrication and automation to reduce physical restrictions of on-site work
- ✓ Accounting for the physical needs of different genders, such as toilet access and breastfeeding rooms, and ensure adequacy of facilities, such as elevators and lights, to ensure a safe environment and reduce physical restrictions at sites
- ✓ Inclusion of education on sexual health, sexualization, risk, and safety in curriculum so that students understand legal norms to protect their rights at workplaces
- ✓ Amendments of Occupational Safety and Health acts or related regulations that take into account concerns related to high-risk work environments, such as eliminating dark corners and preventing sexual assault.

Examples

New Zealand

As one of seven key areas in the health and physical education section of the New Zealand Curriculum, sexuality education must be included in the teaching programmes of both primary and secondary schools. Objectives for the area are outlined in the curriculum.

Considered a lifelong process, sexuality education provides students with the knowledge, understanding, and skills to develop positive attitudes towards sexuality, take care of their sexual health, and enhance their interpersonal relationships. It

includes the concept of “hauora”, a process of health promotion and a socio-ecological perspective. Students consider how the physical, social, mental, emotional, and spiritual dimensions of sexuality influence their well-being. Through this socio-ecological perspective, students critically examine the social, economic, political, and cultural influences that shape the ways people learn about and express their sexuality. Sources of influence may include gender roles, body image, discrimination, equity, mass media, social media, culturally-based values and beliefs, and the law. Sexuality education is enhanced when supportive school policies and practices are developed, links with relevant community agencies are made, and students are guided in identifying and accessing support. Exploration of personal and societal attitudes as well as values about sexuality are important.

Students require a range of developmentally appropriate learning opportunities in sexuality education. These include opportunities to develop:

1. Knowledge, understanding, and skills relating to sexual health and development: physical, emotional, mental, social and spiritual
2. Knowledge, understanding, and skills enhancing their sexual and reproductive health, such as knowledge about the process of conception and contraception, as well as the capacity to make decisions that maintain and enhance their sexual health and experiences
3. Understanding and skills to enhance relationships, such as in relation to friendships, intimate relationships, love, families, and parenting
4. Critical thinking, reflection, and social-action skills related to issues of equity, gender, body image, sexualization, risk, and safety
5. Personal and interpersonal skills and attitudes, including:
 - A. Personal rights and responsibilities, including consent
 - B. Skills needed to examine people’s attitudes, values, beliefs, rights, and responsibilities
 - C. Respect for themselves and other people
 - D. Care and concern for themselves and other people
 - E. Ethical values
 - F. Effective communication, problem-solving, and decision-making skills

4. Ensuring Fair Career Development Opportunities

Statement of Issue

Transparency is essential to the elimination of gender pay gaps. Maintaining transparent employment and pay practices is likely to prevent gender pay gaps from occurring, helping attract and retain a diverse and committed workforce.

The results of the survey found that "mentorship" was the most important factor influencing career development. Furthermore, "social support from supervisors and colleagues" was stated as the most important factor influencing an employee's decision to stay within an organization.

Results from the focus group discussions and questionnaires suggest that gender quotas for managerial-level positions may not be as effective in encouraging female talent to stay. However, the focus group discussions also suggest that companies increasingly seeking female members to serve on their boards of directors are an influence when making relevant ratings.

Aim

Transparent systems for employment, wages, and support that ensure fair career development opportunities for women engineers

This means

- ✓ Gender pay gap information is audited and published annually to ensure fair career development opportunities

Actions

- ✓ Require organizations in the building sectors with 250 or more employees to publish and report the following figures (see Table 1) regarding gender pay gap annually
- ✓ Organize training activities that gather outstanding women for knowledge transfer and networking in the building sector
- ✓ Develop a promotion and salary system that takes into account the differences of positions, such as technical and research and development fields, so that employees can be promoted according to their respective professions.
- ✓ Monitor the status and progress of participation in managerial decision-making and gender pay differences via statistical analyses by architecture and engineering occupational associations
- ✓ Develop a checklist to promote equal pay for equal work via the government and provide employers with the opportunity to review their organizations' incentives and pay systems for gender equality
- ✓ Establish an act governing the administration of professional engineering consulting and architecture firms, amend related regulations to expose gender pay gaps
- ✓ Promote the successful cases of companies or organizations that value gender diversity

Examples

New Zealand

The Diversity Agenda is a joint initiative from Engineering New Zealand, the New Zealand Institute of Architects and Association of Consulting Engineers (ACE) New Zealand, established to make engineering and architecture better professions for all. Members who want to make the ultimate commitment can then sign the Diversity Agenda Accord, with the personal responsibility from CEs and business owners to be

held publicly accountable for achieving truly diverse industries.

Launched in early 2018 with an initial goal to see 20% more women engineers and architects, the campaign has since expanded beyond gender to encapsulate the full range of diversity and inclusion. The Accord sets out a range of commitments for organisations in the engineering and architecture professions to increase the diversity of the workforces and leadership in these sectors. The commitments include actions such as measuring progress on diversity, closing gender pay gaps, and eliminating barriers to diversity and inclusion. The 45 signatories to the Accord are required to report each year on how they are meeting the commitments in the Accord.

Firms across both engineering and architecture, and those that work within these industries, are encouraged to sign up as members to show they're serious about diversity and inclusion, and benefit from access to resources, events, tools and tips.

(www.diversityagenda.org)

Canada

In December 2018, the Government passed the Pay Equity Act along with amendments to related legislation. The Act, along with the Pay Equity Regulations, will come into force on August 31, 2021 and will establish a proactive pay equity regime for approximately 1.2 million workers, and require federally regulated public- and private sector employers, including the Prime Minister and Ministers' offices, with 10 or more employees to examine their compensation practices and ensure that they are providing equal pay for work of equal value. Proactive pay equity also applies to employers and employees in parliamentary workplaces through amendments to the Parliamentary Employment and Staff Relations Act.

Table 1 Gender Pay Gap Statement

Last Year	Total		Junior level		Middle level		Top level	
	Number	Pay	Number	Pay	Number	Pay	Number	Pay
Male								
Female								
This Year	Total		Junior level manager		Middle level manager		Top level manager	
	Number	Pay	Number	Pay	Number	Pay	Number	Pay
Male								
Female								
Next Year	Total		Junior level manager		Middle level manager		Top level manager	
	Number	Pay	Number	Pay	Number	Pay	Number	Pay
Male								
Female								