

**APEC Women Builders Creating Inclusive Future Virtual Seminar**  
**Hosted by Chinese Taipei PPWE**  
**28<sup>th</sup> - 29<sup>th</sup> July 2021**  
**Minutes of Meeting**

**28<sup>th</sup> July 2021**

**Welcome and Opening Ceremony**

[Ping-cheng Lo / Minister without Portfolio \(Chinese Taipei\)](#)

Ping-cheng Lo first welcomed and expressed his gratitude towards all the participants. He mentioned that APEC has been devoting to promoting gender equality and the economic empowerment of women, yet the economic potential of women is still facing critical structural challenges. Lo then took women working in the construction industry as an example. Although there is an increase in the percentage of women due to the promotion of gender equality, architects are still mostly men. In view of this, since 2017, they have proposed a number of projects to support women's involvement in non-traditional industries, leading the construction industry gradually comes up with a common response to calls for diversity and tolerance. Lo hoped that with the APEC Women Builder Creating Inclusive Future project, they could continue to play a driving force in this development to create an environment advantageous for female construction personnel. He concluded by wishing a successful meeting.

**Welcome and Opening Ceremony**

[Renee Graham / Chair Policy Partnership on Women and the Economy \(New Zealand\)](#)

Renee Graham thanked the colleagues in Chinese Taipei for organizing the virtual seminar. Graham first mentioned that she appreciated the work of companies or organizations that make the workplace more inviting and an environment for underrepresented groups like women. She emphasized that one of the benefits of the PPWE is that we share ideas and practices and ultimately women from each of the economies benefit. Graham then addressed the project proposed by Chinese Taipei including the Principles as practical guide for policy makers and role model brochure. Both of the tools will be extremely helpful and useful across all economies. She concluded by stating that what does show that

all economies want to ensure that underrepresentation of building sectors, but it also shows that we want to do something with each other.

## Welcome and Opening Ceremony

[Jeou-Rong Yan / Deputy Minister of Public Construction Commission \(Chinese Taipei\)](#)

Jeou-Rong Yan started by briefly introduce the commission he works for. Creating a gender-balance and discrimination-free environment for engineering industry is one of PCC expecting goals. He then pointed out the measures that PCC has imposed to ensure gender equality: The first one is to revise the related government procurement regulations and contract templates, adding the indicator of“Corporate Social Responsibility” (CSR) is one of them. In addition, they also strengthened the gender-equality clauses in the contract templates, including prohibiting sexual harassment and gender discrimination. Finally, they keep improving their education and training programs for professional engineers. Yan provided statistics of the first fruit they have reaped, indicating that women-leading position in the engineering profession has gradually increased. He concluded by sharing that the improvement of the working environment in engineering industry would not only increase women’s willingness to enter the industry and facilitate gender equality, but also improve the construction quality and reduce the occurrence of occupational accidents.

## Master Talk: Women’s Economic Empowerment in the Changing World of Work

[Audrey Tang / Minister without Portfolio \(Chinese Taipei\)](#)

Audrey Tang shared thoughts about how positive policy making helps women realize the full economic potential. She explained the experience of Chinese Taipei from three different aspects: **1. Iconic policy change toward marriage equality:** In 2019, Chinese Taipei became the first in Asia to legalize LGBTQ+ marriage equality. To provide a clearer idea, Tang pointed out some statistics: Chinese Taipei ranked the 6<sup>th</sup> around the world in 2019 Gender Inequality Index. Moreover, the proportion of women legislators has exceeded 40% now, ranking 23<sup>rd</sup> worldwide. **2. Economic empowerment:** Important measures were implemented, such as breastfeeding rooms, protection and incentive of taking parental leaves. In terms of the hourly wage gap, it has also been reduced from over 17% to 14%. **3. Gender Mainstreaming:** In view of the gender segregation in education

system, the Ministry of Education has rolled out programs such as inviting award recipients to give speeches to encourage women to join STEM field. Tang stated that, "Biology should not determine Destiny." by sharing the story of a boy wearing a pink mask was first laughed by his classmates, but later became a hero when the public supported him through wearing the same color. To conclude, she pointed out that our policy can help support women to break constraints, narrow the gender gap and encourage them participate in the society to unleash their influence.

## **Master Talk: Why Women Matters in Building Sectors?**

[Karlie Collis / Principal, Director and Structural Engineer at Northrop \(Australia\)](#)

Karlie Collis started by providing 2020 McKinsey Report, "Very diverse company has 36% higher profit than companies that were not doing so well in diversity." She then continued that when teams of people, with diverse thoughts and skills, delivering solutions are put together, the results are always so much better. Women tend to be good at leading and operating in teams as well as skills in communication, both of which are crucial in construction industries. She also added that if there are diverse and inclusive work places everywhere, companies could have saved the money for consultants. Women often bring these skills so needed to bring teams together and to get the best from them. Karlie then shared the three main reasons of why women are prevented from being involved in construction industry: 1. Women/Girls are not aware that it's a viable career option. It's hard to be what you can't see. 2. Women are not made to feel included or valued in the industry. Recruiters' unconscious bias needs to be removed in a top-down way. 3. Women fear that they don't have enough skills, not as good as their peers and the unknown. Mentors in formal and informal networks help women to achieve their best. She concluded by calling on to build a better future together.

## **Project Report: Women Builders Creating Inclusive Future Principles**

[Fan Su-Ling / Project Consultant, Director of Tamkang University Construction Law Research and Development Centre \(Chinese Taipei\)](#)

Dr. Fan Su-Ling started her report by stating the background of the project. Listing some of the issues and areas of concern when it comes to women in the workplace. Dr. Fan provides some numbers, which clearly display the issues of inequality. For example, women are earning 20% less than men, and there are 27% fewer women than men in the building sector. The main goal of this project is to diminish the gender pay gap and to empower the active involvement of women in the building sector. Based on the main goals, four objectives of this project include: (1) Raise awareness on gender bias and stereotyping. (2) Identify issues and causes of gender pay gaps. (3) Propose strategies to diminish gender pay gaps. And last (4) Establish and provide an environment for women in the building sector. Dr. Fan went on to describe the method of the project, which was conducted in two major phases, a questionnaire survey, and focus groups. In summary, Dr. Fan gave four principles based on the findings of the questionnaire survey and focus group. The principles represented different issues for women in the workplace, and with each principle, Dr. Fan provided corresponding aims and actions we can take to solve the said issues.

## **The practices in echoing Principle Guideline**

[Jacob Krolczyk / Manager of Trades and Apprenticeships Division at Employment and Social Development \(Canada\)](#)

Jacob Krolczyk provided a quick overview of the federal support in specific of the trade and partnership of Canada. He emphasized that inequality of women should be dealt in partnership and cohesion. He then focused on the Red Seal Trade Program, which is a joint federal provincial territorial initiative in Canada that sets common trade standard to enhance not only the certification of certain trade but also labor mobility, women in particular. Three of complementary measures policies that federal government has introduced recently in 2018 and 2019 are: 1. Apprenticeship incentive grant for women: a taxable grant to reimburse apprenticeship training in which they are underrepresented. 2. Women in construction fund: aims to increase women participation in construction trade through on-site visiting, hands on experiences, mentoring and career exploration. 3. Skilled Trade and Awareness Readiness (STAR) program: by using funding through school fairs, networks and partnership to improve Canadian who faces barriers such as women and indigenous people to prepare and explore career in trades. Lastly, he mentioned what the private sector can contribute: the apprenticeship service, a three-year program, encourages

small and inter-medium enterprises to higher apprentices to get a certain amount of funding to facilitate not only the entry but also the retention of apprentices.

## **The practices in echoing Principle Guideline**

[Sharon Chiang / Vice President of CTCI Corporation \(Chinese Taipei\)](#)

Sharon Chiang started by giving a brief introduction of CTCI. Founded in 1939, CTCI is a global engineering, procurement, construction and commissioning (EPCC) company dedicated to providing the world's reliable engineering services. Under the executive committee of CTCI, the company is classified into four groups. Then, she moved on to introduce CTCI Implementation of CSR. In order to implement CSR as the major mindset for sustainable development, the chairman has stated two directions: 1. Advocate total participation CSR excellence practice: the company has set up four areas for implementations- Training & Promotion, Execution, Intelligent Management and Rewards system 2. To link closely the four core competencies of CTCI, including iEPC, Smart Plant, Green Engineering and Circular Economy, with the UN Sustainable Development Indicators. Moreover, she also discussed the Reports on Gender Equality of CTCI. CTCI emphasized that talent is the primary factor when hiring and that gender is not a factor considered. On one hand, the percentage of female engineers in CTCI has steadily increased year by year as well as female supervisors. On the other hand, the training and education opportunity between genders are equal in the company. Furthermore, she also shared the honors and recognitions of CTCI, highlighting the Top 10 Domestic Companies Sustainability Model Awards.

## **The practices in echoing Principle Guideline**

[Ma. Cristina Sheila C. CABARABAM / Member of Engineering Accreditation Commission \(the Philippines\)](#)

Shelia started by providing some statistics related to the Philippines: In the Global Gender Gap Report 2021, the Philippines ranked 17<sup>th</sup> (out of 156); in Asia Pacific, the Philippines placed second to New Zealand; the country has passed more than 100 national laws on women including enabling rule and regulations. She mentioned that in spite of numerous

laws for supporting women, stereotype is still prevalent such as women in building sector are not occupying critical decision-making positions. There are absence of policies enticing and/or retaining women talents; snippets of these may be observed in different sectors. She then moved on to suggest some strategic directions: 1. Strengthen information, education and dissemination of women advocacies, gender equality and empowerment with acute focus on women engineers and architects. 2. Encourage workplace decision-making participation of women. 3. In the private sector, promote of women advocacies will improve work productivity, which also supports CSR program. 4. In the professional societies, we need collaboration. Furthermore, embed pockets of women champions in professional societies will advocate for strong gender equality, promote role models and influence in order to provide special membership perks, discounts for women engineers and architects.

### **Panelists: Comments and Report Back**

Sharon Chiang: Sharon's group covered two main issues. (1) The question of how to balance family responsibilities and work responsibilities? And (2) How to create a friendly environment at a project site? The group also discussed the target for future female development. The suggestions include *Development of policies to incorporate the awareness for gender equality and women participation into the construction industry into education system* and *Development of policies to increase the participation of women into engineering profession, by seminars*. Furthermore, the participants support the actions in Principles to make friendly environment for females, such as flexible working hours, work from home if possible, separate toilet at Site, etc.

Jacob Krolczyk: Jacob's group covered three main questions. (1) How do we get from a general framework to establishing a new policy? (2) There are usually more females than males in higher education, but the opposite seems to be the case when it comes to the workplace. The group discusses possible reasons for this phenomenon, and potential methods to solve the problem (i.e. daycare/childcare services for working women). (3) How do we shift from more traditional beliefs to more equitable ones? This isn't a process exclusive to women. Men are responsible to play their part in addressing change as well.

Cristina Sheila C. Cabarabam: Shiela summarizes her group's discussion in lighting the cooperation with public and private sectors. There is still much more that needs to be done

in order to continue all that has been accomplished so far. Apart from government and other public sectors, private sectors should do their share in female empowerment as well. During the discussion, the participants point out the necessary of "Unconscious training", as well as the gender perspective courses for male workers. They discussed the way in challenging the unfriendly working space and being a front-line advocate to change communities.

# APEC Women Builders Creating Inclusive Future Virtual Seminar

## Hosted by Chinese Taipei PPWE

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### Opening Ceremony

[Ju, Ching-Luen / Deputy Director General of the Construction and Planning Agency, Ministry of the Interior Director General \(Chinese Taipei\)](#)

Ching-Luen Ju first expressed his honor to give the welcome remarks. He then explained that the seminar is one of the research working of the APEC Women Builders Creating Inclusive Future about bridging the gender pay gap thereby increasing opportunities for women. From researching the sections of the working salary, awareness, representation in women's working environment, the research project showed the inequality of women in non-traditional sectors such as building sector. Moreover, the project will identify hindrances and how best to empower women in the building sector, encouraging APEC economies to take 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. He then announced the start of the seminar.

### Leading builders, Building leaders

[Deidre Brown / The head of the school of Architecture and Planning at the University of Auckland \(New Zealand\)](#)

Deidre Brown talked about why it is difficult for women to become architect and how we can overcome these issues. First, **education (barrier)**. Female architectures' admissions are from selected sector of society, generally not indigenous or from low socioeconomic group. Moreover, female students are confronted by eurocentric curriculum, exclusively male architects. The solutions to the problems are to remove barriers for admission and increase visibility of women in the curriculum and research actively recruit women into teaching positions. Second, **work (pipeline)**. Some of the recruited architectural women



face unequal pay conditions, which are amplified by slower career progression opportunity, not to mention the inflexible working conditions. The signs of change: remote working (the outcome of the pandemic), collaborative platforms (BIM), men as caregivers (2019 fathers' forum), addressing unconscious bias and adopt zero tolerance for sexism. Third, **registration (threshold)**. In 2019, only 27% registered architects in New Zealand were women. Many registration bodies require applicants to demonstrate a wide range of skills across a wide range of projects, making the professional architect system at risk of becoming redundant. To confront the issue, we should reform the definition of architect to license different types of practice, provide education to reclaim work under threat from other professions, provide mentorship for women seeking registration and encourage atypical/alternative practice. To conclude, Brown stated that with the diversity, world views and shared force of women in construction, they would be able to challenge barriers, pipelines and thresholds and find their own paths.

## Learning from the Best Practices

### [Tan Pei Ing / The founder of PI Architect \(Malaysia\)](#)

Tan Pei Ing first pointed out that Gender Equality is not only a fundamental human right but also a necessary foundation for a prosperous, peaceful and sustainable world. She then provided some statistics. First was from Global Gender Gap Report 2021, mentioning the worrying ranking of Malaysia, dropping to 112. Ing continued to discuss the field of architecture, addressing that women's efforts are often overlooked in this male-dominated field. Furthermore, the Gender Equity Survey Early 2020 found out that long working hours and lack of female role models led to female underrepresentation in architecture. In order to close the gender gap, in 2015, the International Union of Architects (UIA) has signed a policy to promote inclusiveness within the profession. She also explained why was Equity instead of Equality was adopted to the policy. UIA has also approved the committee for International Women in Architecture to address the ongoing debate on gender imbalance. Besides, she shared her own practices in PI Architect. She pointed out some key factors to be an excellent female architect in the male-dominated industry such as respect is earned and not demanded, embrace femininity and uniqueness etc. To conclude, she stressed that diversity, equity and inclusion require joint effort by all.

## Learning from the Best Practices

[Maria Lourdes‘ Joy’ Martinez Onozawa /Certified Green Lifestyle Design Professional, Architect, Environment Planner \(the Philippines\)](#)

Maria Onozawa began with her family story. In a family of 10 siblings, they were trained to think, build, and be creative all the time. Later on, Onozawa brought up her children the same lifestyle as well. Moving on to the time period in architecture school, she found out that projects had to be meaningful to people too and man cannot live without the natural elements. Therefore, she designed spaces for sustainable lifestyles and started a process called “Local Resource Mapping”, by identifying the aspirations and skills of the local folk, culture and natural landscape, which is a win-win strategy in development. She then further explained the benefits from the angles of local community, local government and the developer, such as creating local job opportunities, long term partnership and achieving the goal of sustainability respectively. The biggest takeaway for Onozawa in the process is seeing how the people’s self-esteem emerges and are looking forward to better things ahead for their lives. She believed that as a female architect, they use their natural nurturing instinct aimed to make people’s lives better. The best advice she gave to her fellow female architects is to celebrate the womanhood to the highest.

## **Learning from the Best Practices**

[Ching-Hwa Chang / Founding Partner at Bio-architecture Formosana \(Chinese Taipei\)](#)

Ching-Hwa Chang first located herself on the map, Taipei, explaining that the architectural practice is always effective by the site. Speaking on behalf of BaD (Bio architecture Formosana), she stressed the team practice through collaboration.

Architecture need the cooperation from many disciplines and a holistic approach to complete the work. The first green building of BaF in 2003 is Beitou library, which is designed with the earth in mind and practice with actionable idealism. BaF designs the way nature create itself, completing full Biological Intelligence (BI) in 2020. She stated that BI is the origin of architectural creativity and as AI advance us foster, BI will take us further. In BaFamily, more than 50% of the architectures are women. Chang then introduced the green and open working environment where they produce their ideas. A team named Nine+ is a research-based practice by sustainability and circularity. Moreover, the core values of their aesthetics circle around the art of sustainable living. She showed

the actual practices of some values, including Green Energy: integrated solar energy into the building, Sustainability, Circularity: new building made by old material, Technology for Integration. Lastly, Chang pointed out that in the future, Health Care and Climate Change will be the issues in the architecture field.

## **Special Talk: Ignite the Next Generation**

[Barbara Rusinko / President of Bechtel Nuclear, Security & Environmental, Inc. \(United States\)](#)

In her talk, Barbara started by encouraging listeners to network connections and take advantage of the time, opportunity, and mentors that they have. She then goes on to talk about one of the most commonly asked questions, “Compared to when you started your career as an engineer, how are things different now for females in this sector?” To this, Barbara’s answer is simple. A lot has changed. Things are different and better, but there is still work to do. She describes the increased number of women in the field and the fact that women have more allies in the workplace. What still needs to be done, however, is that we still need to make this career a compelling one for women in school. Then she goes on to speak about the progress her company has made, in regards to gender equity. From assigning mentors for women and underrepresented groups to unconscious bias training to collecting data and making a point that gender issues are business problems, not issues of emotion. Then Barbara continued her talk and lists some things the industry still has to work on. For example, creating an inclusive environment. So the increased number of women entering the field can feel comfortable and included, and decide to stay. Last, Barbara ends her talk by giving some tips for aspiring female engineers. Encouraging them to build leadership skills besides technical skills, and to keep reaching for challenges, so managers and others in positions of leadership can see what you want to accomplish in your career.

## **Career Development Dialogue between Youth and Senior Women Builders**

[Cara Berghan / Systems Engineer at WSP in New Zealand \(New Zealand\)](#)

Cara started her talk by introducing her background in English and the Mauri language. Then she recalls her educational and family background. Pointing out how the female role models in her family, and the education she received ultimately led to her decision to enter the engineering field. Cara then continued speaking about her first job after graduating, in the engineering sector. As a young female in the industry, she spoke of her lack of confidence and mentioned that her first manager was not very encouraging. Often telling her to just focus on what she studied (electrical engineering), and didn't encourage her to upskill in other areas. Then Cara spoke of the opportunity she got to take on a different role in the same company. That shift in her career brought her to where she is today. Working on the city rail link project. In conclusion, Cara reflects on her life and how she got to where she is today and offered four tips to the listeners. Be your true authentic self (including your cultural heritage), find your passion and follow it, seek and be open to all opportunities, and always ask questions. Do not be afraid of looking dumb and not ask questions.

## **Career Development Dialogue between Youth and Senior Women Builders**

[Wan-Jen Lin / Co-founder of Studio HOU x LIN \(Chinese Taipei\)](#)

Using her own experience in designing and building the National Kaohsiung Center for the Arts, and co-founding Studio HOU x LIN, Wan-Jen Lin describes how life can be like for a woman in the engineering field. She spoke of how she was inspired by other females in this industry, the experience of being a working mother in two different places (Chinese Taipei and the Netherlands), and the effects of the pandemic. In her talk, Wan-Jen Lin highlights the challenge of motherhood for many women in this field. Providing data that showed the decrease in the number of Taiwanese working females after age 30. She also described the different experiences she had, working as a mother in Chinese Taipei and the Netherlands. While working in the Netherlands, her company gave her different options of outsourcing, flexible work time, etc. that allowed her to work as a mother. Whereas in the economy, options were limited. And for most women, it is an “either/or” situation. Career woman or housewife. In conclusion, Wan-Jen Lin describes how the pandemic started to show, “flexible work does work.” And hopefully, in the future, working hours can be more flexible. Thus creating an environment that is no longer “either/or” for women, and allowing them to stay in the workforce while starting a family.

## **Career Development Dialogue between Youth and Senior Women Builders**

[Yap Wai Leng / Outgoing VP of Women Engineers Section IEM \(Malaysia\)](#)

After providing some background information, Yap Wai Leng from Malaysia covers a couple of main points in her talk. The career development process for women, the value women bring to the workplace, work-family life balance, and how women can find a footing in a traditionally male-dominant field. The first main point ms. Yap talks about is the importance of seeing how engineering works in real life. She describes how she takes students who are studying engineering to visit actual sites, so they can relate real life to their studies. She also stresses the importance of being observant, because, for engineers, engineering is everywhere in their lives. From the road they walk on, to the rooms they sleep in. She then describes the value women bring to the workplace, often softening tensions at work. Ms. Yap also stresses the importance of flexible working hours. Because her boss allowed her to have flexibility in her working hours, she could stay in the workforce, while fulfilling her role as a mother, and be there for her children. Last, she points out how men like to test women, or are often hostile to female engineers. Thankfully, this has been slowly changing. She ends by encouraging female engineers to show their capabilities and earn their respect by solving listening well and solving problems.

## **Career Development Dialogue between Youth and Senior Women Builders**

[Lisa Mitchell / Senior Director, Alternative Finance Directorate Investment, Partnerships and Innovation Office, Infrastructure Canada \(Canada\)](#)

In her talk, Lisa describes her unusual career path and how she landed herself in the infrastructure sector. She speaks on how her communication skills gained while she was working in politics, which is a skill that can be used in whatever field she found herself in, and eventually landed her a job in the infrastructure/engineering field. Then she describes her early experience in this male-dominated market. Often being the only female in meetings, conferences, etc. In the talk, Lisa also describes the changes happening for women. More and organizations helping women are starting up. And improvements are

being made for the benefit of women. Lisa ends the talk by highlighting the important developments happening for women in the workplace.

## **Closing Remark**

[Hsiu-Chen Wu/ Project Overseer of APEC Women Builders Creating Inclusive Future Project \(Chinese Taipei\)](#)

Hsiu-Chen Wu first expressed her gratitude to the participants. She then pointed out that more and more women are showing up with their extraordinary talents in the building fields in the APEC region. Wu highlighted some take home messages from the two-day discussions: First, diversity should be the core value of construction. The whole industry needs to make women, especially young generation, aware that construction is an attractive career option. Second, eliminating sources of work-family conflict in workplace arrangements and job assignments could be a priority in realizing women's economic potential. Third, collaboration, sharing and public-private partnerships are the key factors. Only collaborative project can lead in system change. To close the seminar, Wu thanked all the valuable contributions of the participants.