



Annual Report 2017-2018

**Engineers Without Borders (Hong Kong)
November 2018**

1. Introduction of EWB-HK

Engineers Without Borders (Hong Kong) Limited (EWB-HK) is an engineering-based charitable organization in Hong Kong. We aim at bridging pro bono engineers who have passion to serve, with those beneficiaries in both organizational and individual basis. We value the professional uniqueness of our missions in Hong Kong and, the collective and expanding intentions of our volunteers.

Engineers Without Borders was founded in 2008, is an approved charitable institution and exempt from tax under Section 88 of the Inland Revenue Ordinance (IRD File No. 91/9757) under the Laws of Hong Kong. EWB-HK is a volunteer-based organization and supported by members and volunteers from engineering and non-engineering backgrounds. We need volunteer input from diversified experience to develop and support the operation of EWB-HK. EWB-HK is an independent organization, a non-governmental organization (NGO), non-political and non-religious organization, as well as non-profit-making organization (NPO).

Engineers Without Borders (Hong Kong) is now a member organization of EWB-International.

2. Missions

- a) To accelerate betterment in life of disadvantaged communities and promote sustainable development through the empowerment of engineering means.
- b) To enhance the capacity of Hong Kong's professionals and the generations to come contributing to the communities in need.

3. Vision

A world of disadvantaged communities empowered by engineering solutions to achieve sustainable development

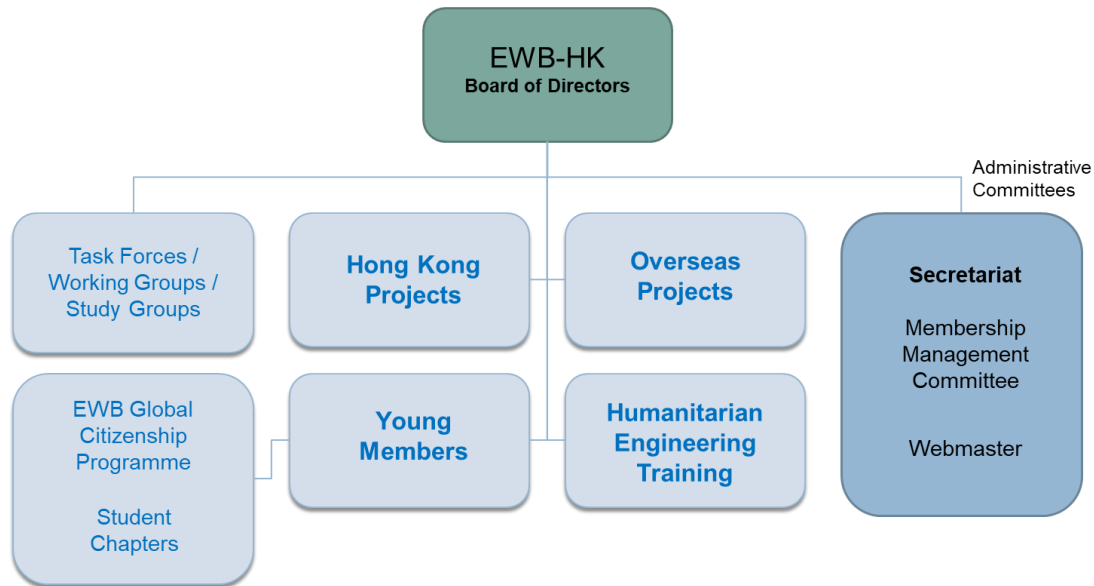
4. Objectives

- a) To pursue ways in bettering the life of disadvantaged communities by empowering them with engineering solutions on a non-profit making basis;
- b) To work partnership with developing communities both within and outside Hong Kong, assisting them to gain access to the knowledge, resources and appropriate technologies they need to improve their livelihood from poverty and after natural disaster;
- c) To pursue the promotion of sustainable development in daily life of any communities in need through the empowerment of engineering means;
- d) To provide engineering and technical supports to charitable and non-governmental organizations with similar objectives; and
- e) To build the capacity and increase the level of preparedness of Hong Kong professionals and their generations to come;

5. Organization Structure and Position

Ever since July 2012 when EWB-HK reshaped its missions, EWB-HK has invariably set out its work in line with the new missions. We re-launch the missions of EWB-HK for the purposes of developing our organization to tackle the needs of disadvantaged communities, as well as

fulfill the notions and directions of sustainable development. Hence, we have set out our first reformation and injected new energy into this organization by means of restructuring the organization and modifying the areas of focus.



In December 2013, we set up the Young Members Group. To tackle the growth of EWB-HK, we set up the new committees responsible for planning and managing projects in Hong Kong and overseas and being set up in February 2017 and January 2018 respectively. In February 2017, we also set up a new committee for providing humanitarian engineering training. The on-going projects and potential projects are under the coordination and management of the Hong Kong Projects Committee (HKPC) and Overseas Projects Committee (OPC). The Humanitarian Engineering Committee (HETC) is responsible for building up the capacity and skills of volunteers and organizations, and in turn, they can provide services with relevant, reasonable and consistent quality to the beneficiaries in Hong Kong and overseas. In 2018, we set up the EWB Global Citizenship Programme Office, under the umbrella of Young Members Group (YMG). The details and progress of the groups are reported in the later sections.

Board of Directors and Senior Management (2017-18)

Ir Edward Chan	Chairman
Mr. Lee Siu Hoi	Secretary
Mr. Janos Choy	Treasurer
Ms. Susanna Tam	Director
Ir Dr. Horace Mui	Director; Humanitarian Engineering Training Committee: Chairman
Mr. Manuel Kwong	Hong Kong Projects Committee: Chairman
Mr. Sam Chan	Overseas Projects Committee: Chairman
Mr. Henry Ng	Young Members Group: Chairman
Ms. Kitty Wong	Membership Manager

Honorary Advisors

Prof. Ir Lee Chack-fan
Prof. Stephen S.Y. Lau

Advisors (Volunteer Training)

Ms Doris K.H. Wong
Mr Raymond CW Yeung

Advisor (Legal)

Ms. Kitty Ng

EWB-HK, as a platform to provide engineering-based supports to the targeted beneficiaries, we shall continue to recruit more volunteers to take up the project leader and coordinator roles, as well as to provide technical backup, administrative supports and relevant trainings

to our volunteers. Many of our volunteers are interested in the frontline service opportunities. We would also encourage more members to be voluntarily leaders and pro bono administrative staff for supporting the organization operation.

6. Organizational Management and Development

Thanks to the efforts of our team leaders, members and volunteers, our pool of volunteers has been expanding in 2018. We have more volunteers from various technical and non-technical backgrounds. Volunteers with passion to manage existing service projects and plan for potential service projects, realize the missions as our long-term development. EWB-HK has continuously been empowered. With the determination to seek for more breakthroughs in capacity, competency and quality, EWB-HK shall further develop the networks between our volunteers and beneficiaries on project basis.

To tackle the growth of our organization, we have to chart the advancement of our NGO governance. In the 2017-18 term, membership and volunteer registration policies have been reviewed. The reason of such a policy revision aims to value the professional uniqueness of our missions in Hong Kong. The updated Membership and Volunteer Registration Policies had been announced in March 2018. The next step of NGO governance is to draft a comprehensive **EWB-HK Operation Manual** that shall be applicable to various operation standards and procedures of EWB Hong Kong and its Committees. This is a big in-house project, we definitely need to have a group of competent volunteers to help on this assignment.

Another immediate action to step up the governance is doing well in reporting. We are now making use of Facebook, website and e-mail as our media of communication to our volunteers and the general public. Our Overseas Projects Committee issued three newsletters in 2018, as the pilot step of transparent reporting. We are aiming to issue the first newsletter for the entire EWB-HK and then in regular basis. Lack of administrative and writing support is the long-lasting hurdle for realizing newsletter publication. We are looking for leaders and members for the public affairs team to manage the editing and publishing of regular newsletters that embrace all news and project reporting of all Committees.

6.1. Retreat

In January 2018, the Board of Directors and Committee Heads conducted the **Retreat 2018 Session 1**. The two conclusions achieved in the Retreat are: "**Project**" is the driver of sustainability and growth; and "**Relationship, expectation management and openness**" are the success factors.

In October 2018, the Board of Directors and Committee Heads conducted the **Retreat 2018 Session 2**. The Retreat covered five areas and number of tentative success factors:

- (i) **Impacts:** impact continuity; enrich the "habit of serving the society"; continuous awareness; provide paradigm and show case, have exit strategy; channel resources to boost up the sustainable development, etc.
- (ii) **Internal Culture:** reduce mutual mis-understanding; achieve better internal alignment; promote inter-committees / inter-volunteers communication; more social and networking activities; more activity and project communication, etc.
- (iii) **External Relations:** develop internal protocol / mechanism for external communication; develop strategic collaboration relationship, etc.
- (iv) **Training Hub:** provide long-term project-based training; strengthen the current context and content of Orientation; provide basic training to volunteers; look for a practical

training site, etc.

- (v) **Young Persons:** look for volunteers responsible young volunteers' recruitment, follow-up and caring; set up volunteer referral system; set up upgrading mechanism for young person; and provide networking opportunity for young engineers, etc.

After the participation of EWB-International Global Forum in 2017, we have stepped up the relationship development with suitable NGOs / social services organizations and tertiary education institutions in Hong Kong and overseas, as well as overseas EWBs.

6.2. Challenges in Funding

EWB-HK is currently managed and operated by volunteers. Funding is still one of the biggest challenges we are encountering. The income from membership fee is neither adequate to acquire staffing and office, nor subsidiary to our projects. Meanwhile, our projects in Hong Kong and overseas are all operated in self-financed basis. For partnered projects, we are offering supports on technical aspect and the fund required for the projects are sought by the partners or other supporting parties.

There is minimal increment of donation nor external funding. The operating expense is still mainly supported by the directors. In the coming year, we will look for possible fund primarily to support the daily operation, administrative work and possible employment of paid staff for EWB-HK and, if possible, subsidize the projects / activities organized by our Committees.

6.3. Partnership with Social Services Organizations / Charitable Bodies

EWB-HK, as the platform to line up pro bono engineers and disadvantaged communities directly or indirectly via social services organizations and charitable bodies. We are continuing the relationship development with possible partners for the purpose of serving the communities in a wider extent, whilst to engage more technical people in volunteering services.

On 1 September 2018, EWB-HK signed the Memorandum of Understanding with the Sowers Action, a reputable charitable organization and has been in Hong Kong for 25 years. EWB-HK is pleased to support Sowers Action and to provide engineering supports to the collaborative overseas service projects for education aspect. The first collaborative project in NE region of Myanmar is now in the design stage.

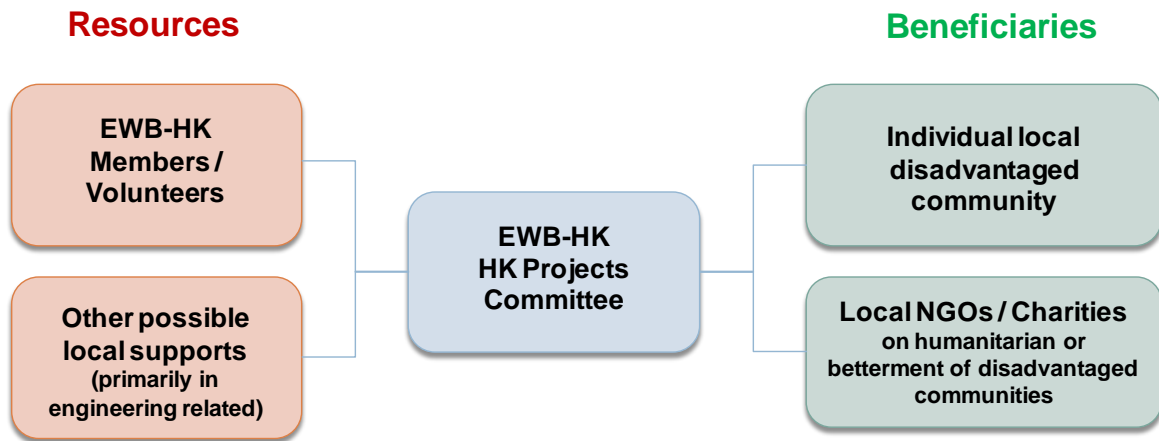
7. NGO Governance

The Board of Directors is the highest decision-making body of EWB-HK. The planning, management, execution and evaluation of our activities and projects, are responsible by our Committees. We aim to enhance the quality of organizational management and safety management, as well as to strengthen the capacity of our volunteers through closer communication amongst our volunteers and pro bono staff of the Board of Directors and Committees. In the coming year, we are intending to further strengthen the capability of NGO governance, so as to improve the quality of services and collaboration with our stakeholders.

To equip the knowledge of better NGO Governance for our board members and our team leaders, we organized the "ICAC Talk for NPO Governance" in June 2018. Representative from ICAC came with us and share the legal requirements and good practices.

8. Hong Kong Projects Committee (HKPC)

The Hong Kong Projects Committee (HKPC) was officially formed in February 2017. The Committee aims to provide a service project platform in Hong Kong and to fill up the technical gaps in the local social services sector. The extent of beneficiaries through our service projects ranges from the local communities in need, social services organizations to individual disadvantaged people.



8.1. Objectives

- a) To set up a platform to bridge the beneficiaries and competent volunteers;
- b) To provide direct and indirect engineering supports to the beneficiaries; and
- c) To provide engineering support to the communities with emergency technical needs

8.2. Core Value

Quality, Teamwork, Social Bonding, Connecting with Stakeholders

8.3. Progress

- a) To facilitate the effective management of engineering-based services project, the Committee commenced the setup of the internal operation procedure and system for project work flow and volunteer matching. Those are being under refinement along with on-going projects' execution.
- b) Our pro bono engineers conducted post-typhoon site inspection in Lei Yue Mun squatter area in September 2017, and investigated the extent of damage to squatter houses, public areas and municipal facilities. To assist the local communities, the team of engineers discussed the possible engineering-based flood preventive measures in both short-term and long-term basis, together with the local inhabitants and community-based social workers from Christian Family Service Centre. The proposed engineering scheme was then conveyed to the Government through our social service partner, and in-turn, large-scale of flood prevention infrastructures were completed by the Government before the typhoon period in 2018. Aftermath of super typhoon Mangkhut in September 2018, the flood impact to the local community was much reduced due to such newly-constructed infrastructure.
- c) Household Survey in Sub-divided Flats in Kwun Tong and Wong Tai Sin districts, had

been commenced in October 2018. This is another collaborative project partnered with Christian Family Service Center. The project is now in the Stage 1: household visit and build up relationship with local inhabitants. Our pro bono engineers and volunteers are trying to explore the chance of establishing friendship with the communities, and then plan for providing community service. The next stages will be household survey, post-survey analysis, engineering advisory to households, household safety education and possible improvement works. This project is in progress.

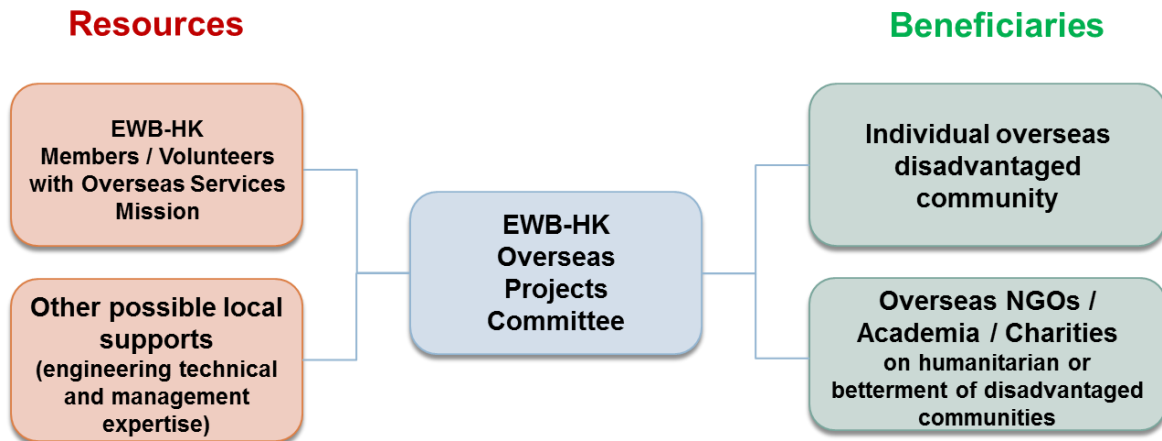
- d) The technical advisory service for the refurbishment works of an elderly center of The Hong Kong Society for the Aged, commenced in late 2017 and now in the tender stage. This project is in progress.
- e) Our pro bono engineers conducted site investigations and advisory service to the Sustainable Lei Chi Woo heritage village revitalization project, that covering the civil, structure and building services aspects for the historical village houses. Apart from that, another engineering team supported the site investigation of farmland flooding problem and advised a flood mitigation scheme for the Lei Chi Woo farmland area. Both projects are working with the partner Hong Kong Countryside Foundation. These projects are in progress.
- f) Our pro bono engineers conducted site investigations, engineering-based safety inspections and front-line technical supports to elderly homes in the squatter areas of Kwu Tung district, New Territories. Our volunteers have done some repairing works to various facilities in elderly's homes. In September 2018, to tackle the possible impact of super typhoon Mangkhut, typhoon preventive and post-typhoon repairing services were carried out in selected squatter houses, with the collective efforts of our skilled technical volunteers, young engineers and engineering students. This service projects in Kwu Tung district are partnered with Evangelical Lutheran Church Social Service – Hong Kong. This project is in progress.
- g) Our pro bono engineers conducted building safety and environmental survey to the Evangel Children's Home in Wong Tai Sin district. Various engineering items had been inspected, then followed up with engineering advices to the children center.
- h) Service hour: Total 290 hours of services have been delivered by volunteers in 2018.

8.4. The Way Forward

- a) Follow up the on-going projects and close cooperation with the partner organizations;
- b) Strengthen the volunteer teams and setup the service quality protocol;
- c) Recruit more experienced engineers for volunteering, project leadership and coordination tasks;
- d) Recruit more volunteers to share the administrative and planning tasks.
- e) We are now developing the inception of a community-based waste sorting and recyclable waste collection project, that aims to help the elderly who are working in waste collection and sorting. The team for this purpose is yet to be formed.

9. Overseas Projects Committee (OPC)

Overseas Projects Committee (OPC) was officially formed on 6 January 2018. The Committee aims to provide engineering services to disadvantaged communities and social services organizations outside Hong Kong. The UN Sustainability Development Goals are the foundation of the engineering supports to the overseas disadvantaged communities, NGOs, academia or charities. The goal of the Committee is to work hand-in-hand with the local communities, and to enhance the overall livability in the developing regions.



9.1. Objectives

- To provide engineering support to the disadvantage beneficiaries in overseas locations;
- To build up the capacity of the beneficiaries leading to the improvement of livelihood.

9.2. Core Value

- Supportive and partnership;
- Skill transfer oriented;
- Attaining UN SDGs;
- Build up with the communities;
- Cultural Understanding

9.3. Progress

9.3.1. Communal Buildings and Infrastructures

- Our pro bono engineers provided engineering (electrical, mechanical and structural) design services to the children center in Masihumelele Township, South Africa. The project partners are Cybertecture For Humanity (Architect partner) and You2Africa (NGO Partner in South Africa). The prototype of a low-cost house originally designed for urban slum, namely "O Pod", had been constructed and displayed in various Hong Kong locations. The project is now in stage completion.
- Our pro bono engineers provided engineering (structural, building services,

environmental, geotechnical) design services to the “Water Hall” project, consisting of school and toilet spaces, water collection and treatment facilities in a village of Battambang, Cambodia. The project partners are Architect for All (Architect partner) and Ptea Teuk Dong Cambodia (NGO partner in Cambodia). This project design stage had been completed.

- c) Our pro bono engineers are providing engineering (structural, building services) and interior design supports to the iLEAD Community Center Facility Enhancement and Temple School Construction project, in Krangyow Commune, Kandal Province of Cambodia. Our project team is supporting the project in technical basis throughout the design and construction timelines, and also support the fundraising tasks. The project partners are Aide et Action Hong Kong (NGO partner in Hong Kong) and Aide et Action Cambodia (NGO partner in Cambodia). This project is in progress, and now in the detailed design and fundraising stage.
- d) Our pro bono engineers are providing engineering (structural, civil, geotechnical, building services) design and quantity surveying supports to the Tachileik Children Center in Shan State, Myanmar. Our project team is supporting the project in technical basis throughout the design and construction timelines. Our site investigation team conducted a field investigation in Myanmar in August 2018. The needs of flood prevention in the school campus and the supply of fresh water for students had been identified. The project partners are Huge Business School (NGO partner in Hong Kong) and a local church (NGO partner in Myanmar). This project is in progress and now in the early design stage. Meanwhile, the team of engineers are now supporting the partner on the construction quality review of another school building, which is undergoing construction in the same region.
- e) Our pro bono engineers and EWB Global Citizenship Programme participants conducted field investigation and building condition inspection at the Fullmoon Children Center, in Yangon Region, Myanmar, in June 2018. The needs of campus buildings thermal insulation, rain ingress prevention, air ventilation, environmental hygiene improvement works had been identified. The formal project team yet to be formed and will be aiming to provide engineering supports to the design assignments, probably construction quality supervision too, for the children center. This project is now in the inception stage. Formation of a full project team is required.
- f) Our pro bono engineers are now providing engineering (civil and geotechnical) design supports to the Doves Student Hostel, in Akha Village, Shan State, Myanmar. Our project team is supporting the project in technical basis throughout the design and construction timelines. Our site investigation team conducted a field investigation in the subject site in August 2018. The needs of flood mitigation and landslide prevention at the new hostel site had been identified. The project partners are Sowers Action (NGO partner in Hong Kong) and Doves Hostel (NGO partner in Myanmar). This project is in progress and now in the design stage.

9.3.2. Community Development

Our pro bono engineers and EWB Global Citizenship Programme participants conducted field investigation in an urban slum, in Hlaing Tharyar Township, Yangon Region, Myanmar, in June 2018. During the investigation, desktop study of the community conditions, interview to local community service provider, local community leaders and local urban slum inhabitants, were conducted. Various challenges relating to engineering, environmental, social, economic and education, had been identified. The formal project team yet to be

formed and will be aiming to provide innovative solutions for the urban slum, in engineering and non-engineering basis. This project is now in the inception stage. The planning team shall to be further strengthened.

9.3.3. Knowledge Transfer

Technical Study Team: A group of pro bono engineers who are interested in the technology and knowledge transfer to the disadvantaged communities, have been gathered and set up a Technical Study Team. The objective of the team is to develop appropriate technologies to suit engineering-based service project needs. Current study topics include Water, Electricity and WASH (Drinking Water, Sanitation and Hygiene). Briefing session, Summer Booster Camp and Student Research Sharing Session will be conducted in 2019. This team is temporarily managed by OPC. For a long run, the team will be supportive to other Committees to cope with the wider service needs.

Geospatial Team: Geo-informatic System (GIS) has been adopted by the United Nations for disaster prevention and investigation of various sustainability development indicators. In the urban slum survey in Myanmar in mid of 2018, our team has already initiated the trial application of GIS-enabled survey tool for urban slum social, economic and environmental survey. EWB-HK shall continue the research and development of this tool as the instrument for the forthcoming site, household and environmental surveys. In the next stage, our Geospatial Team will further develop this technology for building up the database to understand the risk and challenges faced by the disadvantaged communities, collect local data for needs evaluation and disaster prevention purposes, measure the achievement of Sustainable Development Goals, and ultimately, build up resilient and sustainable societies. The GIS tool is now supported by the leading GIS provider, esri.

Vocational Training: The Secretary of EWB-HK has been visiting and teaching in the Science and Technology Training Center (STTC) for several times in the past two years. The vocational training center is locating at the South-East region of Myanmar, nearby the Thai border. The vocational training center aims at providing various technical skill training and build up the capability for local young persons, such that they can better equip themselves with certain skill sets. The local young persons would be able to make use of the technical skill to look for suitable jobs, and in turn improve their livelihood.

Knowledge Exchange: MES YEC – EWB GCP Joint seminar had been organized in June 2018, with the participation of young engineers from the Myanmar Engineering Society (MES) and EWB Global Citizenship Programme participants. The joint seminar had been held in the MES Headquarters, at Yangon. This is our first time to organize joint knowledge exchange programme with MES. The objective for the seminar is to exchange the engineering practices between Hong Kong and Myanmar.

OPC Chairman also attended the Myanmar Young Engineers Forum in August 2018 in Mandalay, Myanmar, for both cultural and knowledge exchange. More mutual understanding with our partner organizations through the participation of partners' activities is encouraged.

9.3.4. Disaster Preparedness

Flooding and other natural disaster is not uncommon in the developing countries. OPC is intending to provide engineering supports for disaster preparedness. Supports to disaster preparedness have been requested by some local partners in Myanmar. The team for such purpose is yet to be formed. Hence, OPC shall recruit relevant professionals in the disaster preparedness and other engineers who are interested in this topic. Once the team is fully

formed, HKPC, OPC and HETC inter-committee collaborations shall be sought. The team shall identify the roles and positions on disaster preparedness.

9.3.5. Newsletter

OPC has already issued 3 quarterly newsletters in 2018 for the purpose of keep informing our volunteers the updated news of OPC.

9.3.6. Overseas Communications

OPC emphasized the importance of global relations with different organizations interested in humanitarian works or pro bono engineering service. OPC keeps building up such networks with the overseas organizations, as well as other overseas EWBs.

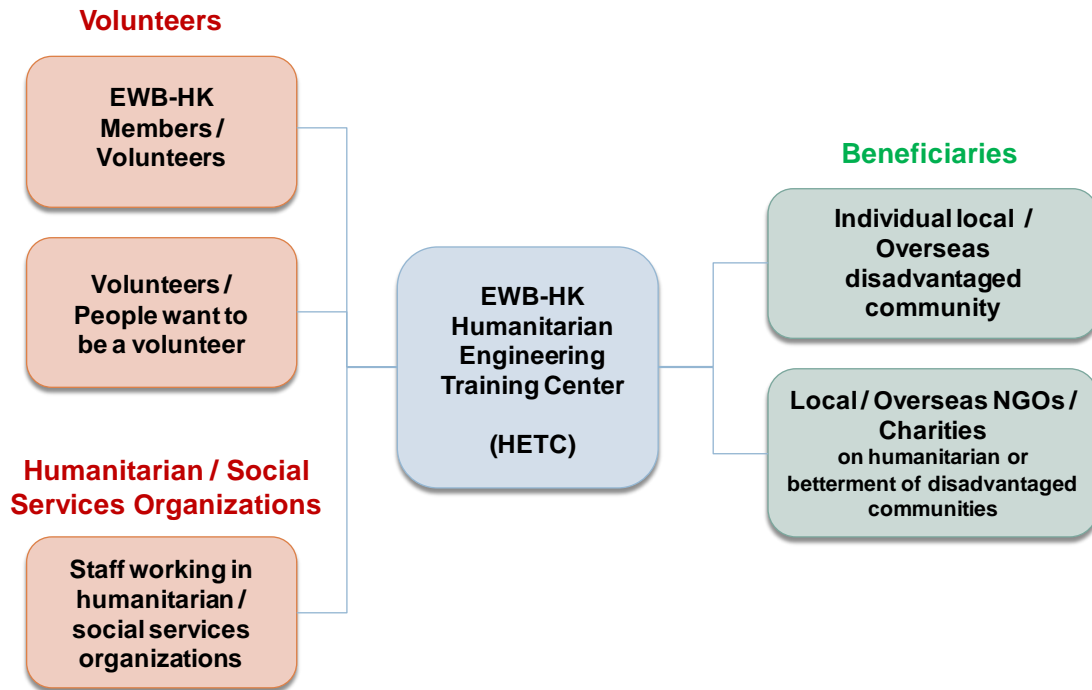
In 2017~2018, OPC Chairman visited EWB-Malaysia in October 2017, as well as EWB-UK and his Oxford Student chapter in March 2018.

9.4. The Way Forward

- a) Follow up the on-going projects and close cooperation with the partner organizations;
- b) Strengthen the volunteer teams and further develop the existing project workflow protocol and procedures;
- c) Recruit more experienced engineers for volunteering, leadership and coordination tasks;
- d) Recruit more volunteers to share the administrative and planning tasks;
- e) OPC has already drafted the 1, 3 and 5-years goals for the OPC development. Such plans to be further discussed with the Board of Directors and OPC team members;
- f) OPC has organized the “Volunteers Empowerment Workshop” in Nov 2018 and will build up the culture of inter-empowerment amongst OPC and HKPC in early 2019. OPC will strengthen the internal coordination with HETC so as to co-organize relevant trainings to OPC volunteers and build up the capacity for serving overseas projects;

10. Humanitarian Engineering Training Committee (HETC)

The Humanitarian Engineering Training Committee (HETC) was officially formed in February 2017. Its missions are to accelerate betterment in life of disadvantaged communities and provide sustainable development, through people-oriented and strength-based training approaches. These are in line with the missions of EWB-HK.



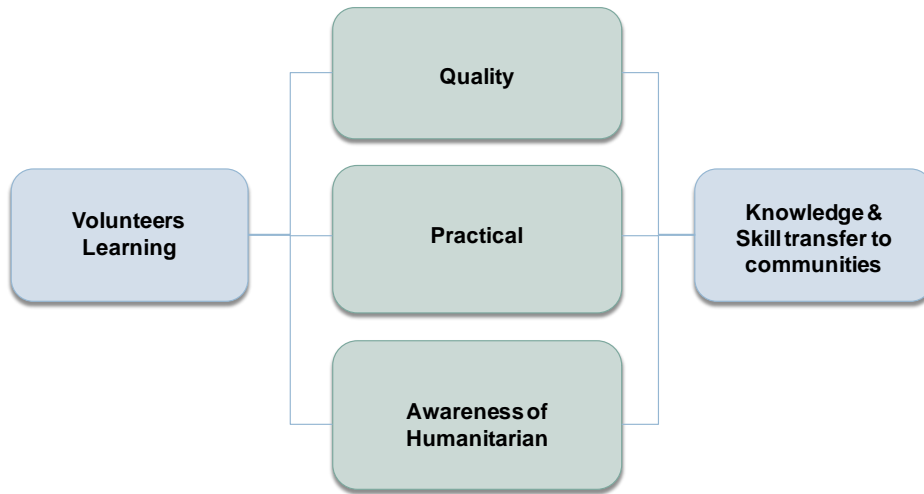
10.1. Vision

The vision of HETC is to establish a humanitarian engineering resources (manpower and knowledge) hub in Hong Kong and serving nearby regions, such that the trained volunteers (not necessarily with technical background) can be equipped with basic service and technical skills, and then serve local and overseas NGOs / communities with humanitarian and social related services.

10.2. Objectives

- Conduct trainings that align with the missions of HETC and address the aspects rendered in the United Nations' Sustainable Development Goals;
- Foster the capacity building on humanitarian engineering in humanitarian and community services related NGOs;
- Enhance the technical and non-technical competence of volunteers, that in turn with benefits to the projects managed by EWB-HK and other NGOs;
- Create a knowledge and skill learning, sharing and transfer culture in EWB-HK;
- Promote stakeholders collaborations in training course development and for relevant resources supports;
- Manage training programs in financially sustainable basis;

10.3. Core Values



10.4. Progress

HETC organized the “Basic Volunteer and Leadership Training Course” for our volunteers in February 2018, in the content of service skill and practical leadership skills. Many of our volunteers possess technical skill and professional engineering knowledge. Nevertheless, our service projects are serving people instead of conventional engineering works, such that our volunteers should be equipped with certain level of service and people communication skill for the benefits of our volunteers and the beneficiaries.

Apart from standalone course, HETC offered learning supports to young persons through the training in the 1st EWB Global Citizenship Programme, on the following topics:

- Team building and service skill;
- UN Sustainable Development Goals and global challenges;
- Trip safety, emergency and crisis preparedness;
- Workshop on community and site investigation;
- Rehearsal of community and site survey;
- Evaluation and ideation workshop

10.5. The Way Forward

In the coming year, HETC will continue its supports to EWB-HK’s Orientation Programme, trainings to project team volunteers and programmes for young persons. The inception of regular “Volunteer Basic Training” will be further developed. Potential collaboration with external organizations and universities will be explored in order to expand our target audience as well as to provide suitable training to different groups of people.

EWB-HK Orientation Program

- Provide a platform for volunteers knowing the current committee members and active volunteers in EWB-HK;
- Align the understanding to the missions and culture of EWB-HK of the volunteers;
- Inform the volunteers the organization plans, functions and activities of various committees and working groups, project and activity work flows;

11. Young Members Group (YMG)

Young Members Group (YMG) is a platform to gather young persons and students to organize and participate into activities in line with our missions. YMG is responsible for linking the EWB-HK's activities with young persons, provide experiential learning opportunities, as well as for developing and mentoring student chapters.

11.1. EWB Global Citizenship Programme (GCP)

EWB Hong Kong launched the EWB Global Citizenship Programme (GCP) at early 2018 in response to the needs of young generations to tackle the challenges faced in the rapid-changing world. The Pilot programme, "Exploration Trip to Myanmar", has been launched in April 2018. The overall pilot programme, including before-trip workshop and trainings, overseas trip, post-trip evaluation, reporting and ideation sessions had been completed in September 2018. The participating undergraduate and post-graduate students came from the City University of Hong Kong (CityU) and the Hong Kong University of Science and Technology (HKUST). Some young engineers were also actively involved in the planning and implementation of the pilot programme.

The GCP Programme has formally launched in October 2018. EWB Hong Kong will take lead in organizing and administrating this Programme, with internal supports from his working committees and external supports from the programme partners, supporters and funders.

Inception of GCP

To accomplish the Sustainable Development Goals (SDG), engineers, who possess technological solutions to global development problems and challenges, play an important role in promoting sustainable development and implementing innovative solutions. We can see how traditional engineering and science (energy, clean water, housings, agriculture, transport and other key infrastructures) relate to global development. However, the engineering sector is also vital in meeting the SDG targets in many other ways, for example, reducing hunger through smarter agricultural practices; improved healthcare through technology innovation; and quality education by encouraging more creativities and participation in experiential learning so we can meet skills gaps in the key sectors.

Young persons are ideally placed to explore issues in global citizenship. The sustainable cities and communities are made possible through large-scale social and technological systems, such as the collaborations amongst leadership, communication, infrastructure, urban and building design, environmental protection, safety and environmental hygiene, education programme, community capacity building, and so on. Engineering and science education programmes in Hong Kong nowadays prepare students for careers in the local culture, practices and regulatory framework. At the same time, virtually all engineers and scientists agree that engineering in the 21st century is global. Engineering and science students graduating today will work locally and globally through physical and virtual platforms. Hence, it is important to prepare students graduating today for global engagement and the mindset of Global Engineer, and ready to new challenges in the world in the 21st Century.

Through the EWB Global Citizenship Programme (GCP), Engineers Without Borders Hong Kong (EWB Hong Kong) envisages engineering and science students as well as young engineers would commit themselves in building a sustainable world with engineering solutions, and thereby becoming our future global leaders in sustainable development. The Programme offers a real and transformative experience for the GCP participants to plan and implement solutions to engineering-based projects for achieving the SDGs.

Programme Goal

To provide a platform to cultivate future engineering leaders to explore the global challenges, to serve the society proactively with global vision, and hence contribute to the sustainable development goals as global citizen.

Programme Objectives

1. Enrich participants' understanding and awareness of the global challenges through exploration activities;
2. Equip participants' capability to identify the root causes of global challenges as well as the sustainable and innovative solutions;
3. Provide a platform for the participants obtaining the experience in service project planning, implementation and evaluation, in addition to the conventional stop-over participation in part of front-line service activity;
4. Provide a platform for the participants to involve into technical and non-technical collaborations to develop solution for the real world;
5. Strengthen the participants' leadership and communication capability through multiple cultural and cross-discipline team works.

Programme Approaches

1. Awareness building;
2. Capacity building;
3. Community services;
4. Network building;
5. Appropriate technology;

Internal and External Collaborations

In the existing structure of EWB Hong Kong, there are two Committees are responsible for the planning and execution of engineering-based pro bono services projects for the disadvantaged communities in Hong Kong and overseas, and a training committee HETC responsible for training matters.

Many of the services projects involve the entire project cycle, i.e. condition survey and investigation to identify the current situations at both community and household levels, project inception, project approval, project detailed planning, project execution and supervision, project evaluation and follow-up actions. Meanwhile, training, communication, project management, promotion, fund raising, reporting, and so on, are all indispensable for the success of the engineering-based services projects.

To facilitate internal collaboration, the post-trip investigation reports are then transferred to the Overseas Project Committee for review. If the project is approved by the Overseas Projects Committee, the project will be set as a formal project under the management of the Committee. The participants completed the GCP will be able to continue their participation in the services projects in the capacity of project pro bon engineer / volunteer.

11.2. Relationship with Universities and Student Chapters

During the year, HKUST Student Chapter organized “EWB-HK Information Sessions” for HKUST students and participated into the promotion and exhibition of “HKUST Engineering Week”. HKUST student chapter also started the “Technical Book Donation to Myanmar Students” activity in November, which is aiming to collect second hand technical books from the campus and then donate the books to university students from disadvantaged families in Myanmar, and the library of local engineering institution MES.

Volunteers from EWB-HK also participated into the “HKU Service Fair” inside the HKU Main Campus for the exhibition of our recent activities and for volunteer recruitment. Besides, we started to recruit students from HKU to join the “Myanmar Cultural Exchange Group”, for those want to know more about Myanmar, want to have cultural exchange between Hong Kong and Myanmar students.

EWB-HK delivered some promotions to PolyU students through the supports from various departments of PolyU. Some current students and fresh graduates have been contributing their effort to support EWB-HK’s service projects in Hong Kong.

EWB-HK offered sharing talk to CityU engineering students, and also delivered a talk in the context of EWB Global Citizenship Programme and tackling global challenges, to the “United States National Academy of Engineering’s Grand Challenges Scholars Program (GCSP) Hong Kong Workshop” at CityU on 14~16 August 2018. A group of CityU students who completed the EWB Global Citizenship Programme also started the “Technical Book Donation to Myanmar Students” activity in CityU.

11.3. The Way Forward

Inadequate succession plan is the long-lasting challenge in the existing YMG and student chapters. Hence, certain level of internal reform to be sought in the forthcoming year, for the purpose of strengthening the basic roles of YMG. EWB Global Citizenship Programme will be one of the main focuses in YMG. Meanwhile, YMG shall spend effort in student member recruitment, participation of activities and projects in Hong Kong and overseas, as well as to develop chapter committee succession program.

YMG shall also take up the mentor role to help the student chapters to plan and execute activities within single chapter or arranged as a joint student chapters program. YMG shall resume the workshops for young persons / student for team building and ideation purpose.

12. Membership Management

EWB-HK is positioned as an engineering-based charitable organization in Hong Kong. Our operation is currently run by volunteers with different knowledge and skill competency. We are aiming at creating a platform between pro bono engineers and the beneficiaries. In view of this, the recruitment and development of volunteer pool is one of the key factors to make EWB Hong Kong sustainable.

The membership management policies were improved and updated in early this year to match the long-term organizational development. The first comprehensive “**Member and Volunteer Handbook**” had been crafted and issued. Its Code of Conduct section embraces the organization operation, local and overseas project aspects, and also applicable to all members, volunteers and staff.

Volunteer Registration system remains unchanged. Applicant shall fill in the basic information required to complete the registration. There is no fee required for volunteer registration. Annual renewal of volunteer registration is not required. Volunteers would be able to participate in various stages of our activities and projects, except taking up office bearer positions in EWB Hong Kong. Volunteers should abide by the terms and conditions as stipulated in the EWB-HK Member and Volunteer Handbook while involved into any tasks related to EWB Hong Kong.

Members shall be interested in promoting and expediting the objectives of EWB Hong Kong. Hence, the volunteers who are participating in the planning, management and execution of our activities and projects; interested in becoming Committee Head or other office bearing positions in the Committees; or becoming Person in Charge, or Head of Mission of activities, events or overseas expeditions, shall be our Ordinary Member. To move forward the overall NGO governance of EWB-HK, we shall request the Ordinary Members to abide by the terms and conditions as stipulated in the EWB-HK Member and Volunteer Handbook while involved in any task related to EWB-HK.

12.1. Activities

In this year, more people joined EWB-HK as volunteers. With the continuous supports from the HETC, we organized an Orientation for our newly registered volunteers early 2018. The Membership Management Committee also organized three recreational activities for our members, volunteers and partner organizations. The Orientation Program is a foundation session jointly organized by the Membership Management Committee and HETC. In the Orientation Program, additional sessions on the introductory level safety and humanitarian engineering related topics are arranged. The Committee aims to conduct Orientation Program in a more regular basis in the forthcoming year.

A group of participants from EWB-HK and our partner organization SAGE enjoyed a trip to Wing Lam Garden's aquaponics farmland in New Territories in the mid of 2018, which is part of our **volunteers' recreational activity**. Also in the mid of 2018, the **Anniversary Party for Project Teams** celebrated the formation of Overseas Projects Committee and one year anniversary of Hong Kong Projects Committee was successfully organized.

The EWB-HK **Annual Dinner** in 2017 and **Anniversary Night** in 2018, received the supports from HETC, HKPC, OPC and YMG team members leading to the success of those events.

EWB Salon titled "New Transformation to EWB Community Service" was conducted in October 2018. This was a brainstorming session for our volunteers to discuss the positioning and quality improvement of our service projects in Hong Kong and overseas.

13. Webmaster

In 2018, the Committee revamped a new website for EWB-HK, which is more user friendly for desktop and mobile device. Meanwhile, a simplified content management system is adopted such that our volunteers can update the text and photos to the website easily. The Committee will proceed the Stage 2 of website revamp and will develop more functions in the

web platform. To facilitate a more effective internal communication and document management, the internal operation is switching to the use GoogleSuite gradually.

The Committee will look for more possible tools to enhance the effectiveness of internal communication and project operation. Facebook remains as the core platform for updating our news and activity progress for acknowledging our members, volunteers and the general public. Further recruitment of volunteer is essential so as to cope with the increased workload of various IT related tasks.

14. Acknowledgement

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9. Engineers Without Borders – International
10. Esri China (Hong Kong) Limited
11. Evangel Children's Home
12. Evangelical Lutheran Church Social Service – Hong Kong
13. First Myanmar Investment Co. Ltd.
14. Green Action Charity Foundation
15. Hong Kong Countryside Foundation
16. Hong Kong Macau and Myanmar Chamber of Commerce & Industry
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