

**About AECOM**

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM had revenue of approximately \$17.4 billion during fiscal year 2016.

# SUSTAINABILITY REPORT 2017

ASIA



## Foreword

According to the United Nations, about 64% of the developing world and 86% of the developed world will be urbanized by 2050. That will be roughly equivalent to 3 billion people living in cities by then, many of which will be in Asia, one of the world's fastest growing regions in terms of urban development.

For AECOM employees, this is where we live and work. With the changes taking place in our societies, we must make conscious decisions on how to develop sustainably as otherwise we will eventually run out of resources. Sustainability is not just about delivering our projects in a socially and environmentally responsible manner but also about managing our lifestyles and our homes in order not to abuse the use of valuable resources like energy, water and materials.

This sustainability report - AECOM's seventh in Asia - reports on our 2016 performance to reduce our waste, energy and travel footprint in the 22 offices we occupy here in the region. We also present the views of our employees on what matters to them in sustainability together with tales from the cities in which they live. This year, our senior leaders were tasked to partner with NGOs or non-governmental organisations to share their expertise on ways to benefit the community. We chronicle their assignments and the lessons they learnt from this encounter.

In AECOM, we have a mission to "deliver on imagination". In Asia, we have the opportunity to do just that, not just for us but for generations to come.

We are AECOM.

## AECOM's Core Values

### Safeguard

We operate ethically and with integrity, while prioritizing safety and security in all that we do.

### Collaborate

We build diverse teams that connect expertise to create innovative solutions.

### Inspire

We develop and celebrate our people, and elevate the communities we touch.

### Anticipate

We understand the complexity of our clients' challenges and help them see further.

### Deliver

We grow our business through operational excellence and flawless execution.

### Dream

We transcend the industry by reimagining what is possible - and realizing it.



## About Us

AECOM operates throughout the globe, working with clients, communities and colleagues to develop and implement innovative solutions to the world's most complex challenges.

We are engaged by public and private sector clients to design, build, finance and operate infrastructure assets.

As leaders in all of the key markets that we serve, including transport, facilities, environmental, energy, oil and gas, water, high-rise buildings and government services, we seek sustainable and innovative solutions to achieve transformative outcomes.

## Overview

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# WHAT IS SUSTAINABILITY?

What is Sustainability?

## Sustainability means **Livability**

We should preserve and protect the places where we live. Change is inevitable and we need to adapt, but in doing so, we will not compromise our core values. We should not waste resources, nor should we damage the environment willfully. We should be conscious of our actions and the impacts these may have on the welfare of others so that livability applies to everyone.

## Sustainability means **Resilience**

In a world facing the challenges of urbanization, we must be resilient. Resilience is the ability to withstand shocks (like typhoons and earthquakes) and stresses (like poverty and pollution), and to bounce back again stronger after the event. This is what builds sustainable communities.

## Sustainability is about **Future-Proofing Our Assets**

Our buildings and infrastructure have withstood the test of time over and over again. But with forces like climate change assailing our cities, we must future-proof our assets to withstand greater trials against nature. We should also consider our human assets. With a growing elderly population, we need to be thinking about reconfiguring our living places for accessibility and active ageing.



# MEASURING OUR FOOTPRINT

Each year AECOM in Asia reports on the environmental footprint of our offices. We track our electricity consumption, paper usage and air travel (in km). In doing so, we can see whether our gross revenue earned increases or decreases with the footprint we impose.

This year was a challenging year for us. We faced static growth in 2016 indicating that, even though we were able to reduce our consumption of resources, our returns did not improve on the previous year.

	GR/unit electricity consumption (\$/kWh)	GR/paper consumption (\$/kg)	GR / flight mileage (\$/km)
2012	101	3521	14
2013	121	4797	15
2014	93	3262	14
2015	112	4232	22
2016	111	4278	17

We have reduced our environmental footprint by:

**7.6%**

Electricity consumption

**8.6%**

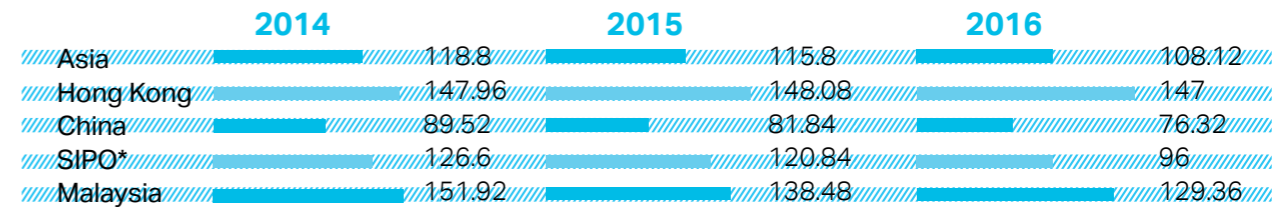
Paper Purchase

**9.2%**

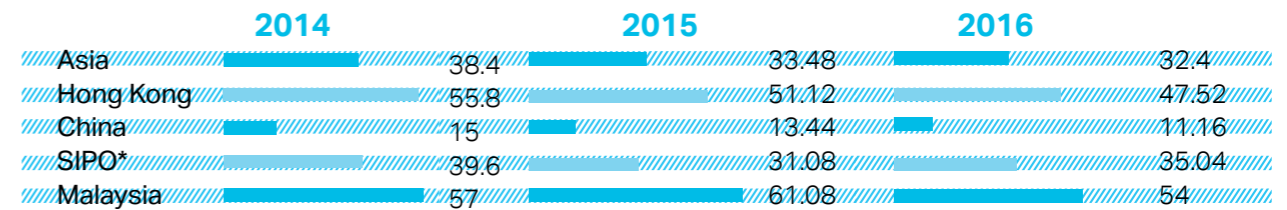
Flight Mileage



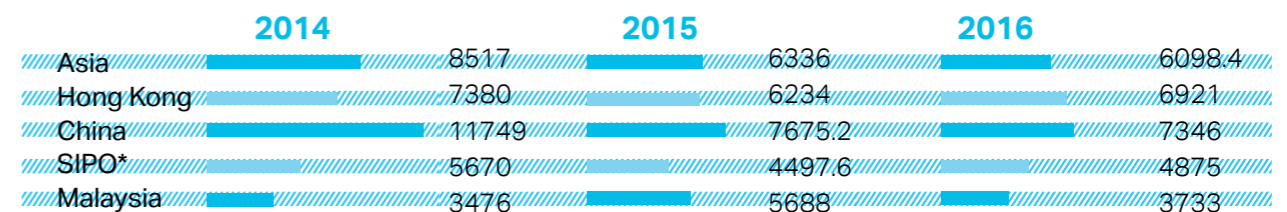
## Reducing our electricity footprint (Annual kWh/m<sup>2</sup>)



## Reducing our paper footprint (Annual kg/capita)



## Reducing our air travel footprint (Annual km/capita)



\*SIPO = Singapore, Indonesia, Philippines & Other Countries



# SHANGHAI'S NEW OFFICE

AECOM's office in Shanghai is at the KIC Center, in the heart of the Yangpu District. Opened in August 2016, our employees enjoy a workspace of 7,000 m<sup>2</sup>, occupying four floors of the building. On each floor, there is an expressive green wall with the AECOM logo etched in the landscape to welcome visitors on each floor. The floors are connected by a central spiral staircase making interconnectivity for employees frequent and productive.

Measuring Our Footprint

AECOM

Black is the dominant colour, chosen to represent elegance, and combined with tinted glass, exposed ductwork, bright lighting and living plants, this sets off a cool work environment with a strong industrial feel, but at the same time offering an image of green vitality.

The open office space is lit by neoteric lighting, making the area neat and professional. Additionally, each desk is equipped with a stationery storage pendant, providing not just personal storage space for employees but also a clever means of accommodating computer accessories that normally clutter the desktop. Different coloured rugs give the work area a sense of identity that is unique and distinguishable from the public walkways.

Public areas in the Shanghai office, such as breakout areas, lounge spaces and amenities, also carry the distinctive black & white pattern. The tinted glass panels give an air of space and, together with wooden flooring and upholstered furnishings, make the place conducive for relaxed discussions.

One of the floors is dedicated to a conference center composed of various functional meeting rooms. Tinted glass, green landscape on the roof terrace, and sleek marble texture add up to an upscale business center both for business meetings and private communication. Office plants are placed on all floors to offer more green and vibrancy. These plants provide not only aesthetic value but further serve to reduce indoor air pollution.

Overall, the office reflects innovative and sustainable design, consistent with the AECOM standard of professionalism and green performance.

## Recommendations

In FY16, AECOM offices in Asia consumed 6,497 MWh which is 531 MWh less than the previous year or 7.6% less. In terms of paper usage, the offices consumed 169 tonnes which is 16 tonnes less or 8.6% reduction. For air travel, employees travelled 3,267 or 9% less in FY16 compared to FY15.

What this means is that if we were to take electricity and air travel as our main contributors to our carbon footprint we are on the right track towards achieving AECOM's global target of 20% reduction by 2020 based on 2015 levels. However certain factors such as the volume of business must be taken into account. If our business grows then our footprint will expand and we should allow for this in calculating our footprint according to carbon intensity.



### Our recommendations include:

- Careful monitoring of our consumption in the larger offices as this is where we can achieve best reductions through economies of scale
- Taking advantage of co-location opportunities to identify measures like sharing of printers and using more natural daylight to further reduce unnecessary consumption of resources
- Tapping into innovative ideas like use of portable meters to measure the resources consumed in localized areas and identify ways to reduce the wastage
- Conducting an awareness campaign for employees on how to reduce energy and waste and display regular monitoring results to show the impacts
- Generating a competition for employees to come up with new ways on how to reduce energy and paper consumption



# WHAT DO OUR EMPLOYEES THINK?

AECOM as an enterprise supports sustainability as this affects the future of the company.

AECOM in Asia conducts an annual survey to assess the views of AECOM employees on sustainability matters. The purpose of this is to test the understanding of a sample of AECOM employees from the Greater China and SE Asia regions on the relevance of sustainability to our work.

Overall, from the responses, it can be seen that our employees think that clients are more aware of sustainability issues and this could influence whether clients choose to work with companies which make sustainability a significant part of the way they deliver projects compared to others.

Our employees further agree that being kept up to date on government policies and sustainability issues is important. AECOM's Office for Corporate Sustainability in Asia currently provides a monthly update on the internal Chatter network and there is a sustainability group on the Technical Practice Network.

In general, employees are highly supportive of sustainability at a personal level, although the link to their work needs to be reinforced. Sustainability guidelines are incorporated in AECOM's project management practices under risk management but can be better highlighted so that employees think about the long term impacts of the project and whether factors like urbanization, climate change and ageing populations would affect the client's assets in the future.

Employees would like to have more training on sustainability, more bite-sized information on sustainability and opportunities to get more involved at a personal level.

The survey results for 2016 are recorded below. In order to track any changes in responses, the findings for the same question are provided for 2015 and 2014 survey results, where applicable. Some questions are new in 2016.

## My clients require AECOM to consider sustainability in our projects.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	20%	51%	21%	4%	4%	0%
2015	10%	41%	28%	10%	10%	1%
2014	17%	45%	16%	14%	9%	0%

## My clients prefer we do not consider sustainability in our bids because they believe this increases the project costs. (new question)

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	1%	13%	16%	25%	39%	6%
2015	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A

## My clients consider AECOM to be a leader in the field of sustainability.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	8%	39%	37%	10%	6%	0%
2015	5%	40%	35%	11%	8%	0%
2014	19%	40%	33%	5%	3%	0%

## Understanding any government sustainability policies and initiatives relevant to AECOM's business is important in my business line to identify opportunities.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	34%	52%	7%	4%	2%	1%
2015	24%	50%	19%	4%	1%	0%
2014	36%	52%	10%	0%	2%	0%

## Embedding sustainability considerations like long term climate issues and carbon footprinting into client advice are key to the future success of the company.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	27%	52%	16%	4%	2%	0%
2015	20%	54%	19%	4%	2%	0%
2014	29%	57%	10%	2%	0%	0%

## I talk to clients about how AECOM sees sustainability, because this is our differentiator.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	13%	48%	26%	9%	3%	1%
2015	14%	47%	23%	8%	8%	0%
2014	33%	45%	17%	0%	5%	0%

## Sustainability has no relevance whatsoever to my work.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	1%	6%	8%	17%	51%	18%
2015	1%	4%	8%	19%	46%	21%
2014	2%	3%	9%	10%	48%	27%

I prefer not to raise sustainability with my clients in case this increases the project costs.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	0%	8%	9%	31%	44%	8%
2015	1%	5%	8%	23%	51%	11%
2014	0%	3%	14%	17%	47%	21%



My line manager encourages me to consider sustainability issues like energy and waste in the projects I work on.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	10%	48%	25%	9%	7%	2%
2015	6%	45%	33%	7%	8%	1%
2014	22%	40%	24%	3%	9%	2%



% of my work delivered in the previous year where I have made a positive difference to the outcome by incorporating sustainability measures. (New question)

	>90%	75% - 90%	50% - 75%	20% - 50%	<20%	~0%
2016	10%	48%	25%	9%	7%	2%
2015	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A



I wish to be connected to more in-house specialists who have an understanding of sustainability issues so I can include them in my proposals and project teams.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	18%	57%	20%	3%	2%	1%
2015	23%	50%	25%	1%	1%	0%
2014	32%	45%	19%	2%	0%	2%



My line manager supports me if I take time to learn more about sustainability or take part in sustainability-related employee engagement initiatives.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	10%	47%	30%	6%	6%	1%
2015	12%	51%	26%	3%	5%	1%
2014	24%	43%	22%	5%	3%	2.00%



I am interested to stay tuned for updates on sustainability in AECOM

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	19%	62%	15%	2%	1%	0%
2015	22%	58%	17%	2%	0%	0%
2014	36%	50%	14%	0%	0%	0%



I am committed to do my bit to help AECOM address its sustainability issues and reduce its carbon footprint.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	24%	62%	13%	0%	1%	0%
2015	26%	59%	12%	1%	1%	0%
2014	48%	46%	5%	0%	0%	0.00%

When asked, I can give practical examples of AECOM initiatives aimed at addressing sustainability like climate change and environmental issues.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	8%	35%	34%	14%	8%	1%
2015	6%	37%	36%	10%	9%	1%
2014	16%	41%	24%	9%	10%	0%



If I have a good understanding of sustainability issues, I can offer clients more sustainable outcomes in my projects.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	22%	57%	16%	4%	1%	0%
2015	21%	56%	19%	1%	2%	0%
2014	28%	59%	10%	0%	2%	0%



I wish that AECOM would provide more training to show us how sustainability and my discipline are related.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	35%	51%	12%	0%	1%	0%
2015	35%	49%	14%	1%	1%	1%
2014	43%	50%	7%	0%	0%	0%



When I have suggestions on ways to green our operations, I know who I can talk to.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	6%	30%	28%	20%	14%	2%
2015	6%	37%	28%	14%	11%	3%
2014	26%	31%	19%	14%	9%	2%



I am aware of the activities of AECOM's Office of Corporate Sustainability in promoting sustainability in the company as well as supporting client work.

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	9%	46%	28%	9%	8%	1%
2015	12%	42%	33%	3%	8%	1%
2014	22%	46%	24%	5%	0%	2%



I feel that AECOM's own internal sustainability policies and practices are consistent with what we advise our clients. (New question)

	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
2016	8%	44%	32%	11%	3%	1%
2015	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A



## What Did Employees Have to Say?



" There is a close [relationship] between design and sustainability."



" Sustainability [should] be built into AECOM deliverables."



" Combine the expertise of all Business Lines and provide training on sustainability mission and goals."



" Please provide training for employees and make them aware of what is green."



" Make sustainability part of AECOM work culture at all levels."



" It is important to implement and promote energy saving measures in office management."



" Please plan [a] budget for local office decoration upgrade so that it will be a showcase for the client. More internal introduction [needed] about AECOM green projects in each area."



" Understanding the Client's business core values and their behavior as well as their sub-contractors will help to identify whether or not to discuss more on the topic of sustainability."



" Conduct more internal courses on sustainability to ensure all staff are aware of what sustainability is and be able to explain to the client clearly when they have an opportunity."



" [The] company should raise importance of sustainability in concurrence with other firms in regional bodies / agencies, to raise the need for this work approach as a practical and pointed [requirement] in projects. Such measures at times increase project cost which should be agreeable to clients across a spectrum of consultants to ensure a level playing field."



" It is good to have internal talks on sustainability, in the form of technological, managerial, planning and implementation, with real examples from various sectors. This will help regional offices to be more attached to AECOM's global network of sustainability. Appreciate that there are technical memos and bulletins on the home page but nothing is more effective than face to face discussion and presentation."



"[Sustainability] is not being discussed in the company. There are emails but more often people just read them and that's it. We need a group that will inform us about the importance of this subject. Spend a few hours or minutes but continuously deal directly with the people and not through emails only."



" I would like to have more information on sustainable projects and technology."



## Recommendations

- Conduct client surveys on their sustainability needs so that an information pack can be produced that AECOM can use in client bids.
- More regular updates and briefings on sustainability issues like climate change so that employees can follow trends and use this information in projects and for personal development.
- Review the project management delivery system and develop a checklist for PMs to assess the sustainability of client assets as part of the PM process.
- Higher visibility of sustainability champions.
- Develop sustainability training courses and align them with AECOM University's training process.
- Provide practical case studies that employees can use to further their knowledge for both client projects and internal operations.
- Provide opportunities for employees to get more involved in sustainability matters as part of their personal development.



# LEADING BY EXAMPLE



Each year AECOM runs an APAC Senior Leadership Development Programme (SLDP) to grow our future leaders. A key component of the programme is the opportunity to work on action learning projects. Action learning (or experiential learning) is a process which involves working on real challenges, using the knowledge and skills of a small group of people combined with skilled questioning, to re-interpret old and familiar concepts and produce fresh ideas.

**The benefits to our future APAC leaders are:**

- The chance to solve real problems
- Bringing back organizational benefits from the projects
- Learning by doing and reflection

In 2016, AECOM made a radical shift moving from internal corporate projects to CSR projects. The objective was to demonstrate that there are strong business benefits from utilizing CSR projects by partnering with the right NGOs to bring tangible and intangible benefits to both AECOM and the participating NGO's.





## Lien AID

Lien AID is an international non-profit founded in 2006 and committed to enabling sustainable access to clean water and sanitation for Asia's rural poor. They focus on community-based approaches in the delivery of multi-year water, sanitation and hygiene (WASH) programmes. Clean water and sanitation is central to living a life of dignity and, through improved health, provides hope for a better future.

### The Problem

Lien AID has run successful programmes in China and Cambodia under the Community Water Enterprise Programme and Village Water Management Programme. They are now moving into a new country of operation, Myanmar. There are three key factors that affect the sustainability and scalability of water services in remote rural areas namely, transaction costs, production costs and incentives/penalties for the users. Lien AID wanted a fresh perspective and ideas for a new service delivery model focused on poor rural communities in Myanmar.

### The Solution

AECOM developed a Life Cycle Costing approach that bridged vital information in delivering services, evaluated criteria, presented information and offered tools for initial assessment based on suitability, adequacy and cost. The approach showed how to carry out simple and practical test methods and provided an "All-In-One" Report Card.

AECOM also provided a CSR advisory framework to help Lien AID understand corporate expectations and review existing CSR programmes for Myanmar. The framework demonstrated the importance of corporate governance, measurable outcomes and partnering opportunities with companies' corporate programs.



We deeply appreciate the team's commitment to achieving the best possible outcomes despite the tight schedule, and would love to have an opportunity to continue working with them to further develop the materials into something more substantive (Ivanna Tan, Head of Programme Development and Partnerships, Lien AID)

## Engineers Without Borders Australia

Engineers Without Borders (EWB) Australia was founded in Melbourne in 2003 to promote engineering in communities and to drive education development programs to lift people out of poverty. The organization's business model is based on four key components: philanthropic contributions, pro bono services, shared value services and volunteers.

### The Problem

EWB Australia's Schools Program had to do more to make engineering the preferred career choice among young graduates and to increase the number of women in the sector. EWB's current 'marketing' tools needed refreshing to reach out to more companies to commit pro bono services. The organization was trying to identify pro-bono engineering and design activities that could achieve maximum impact in the disadvantaged areas in Australia.

### The Solution

AECOM developed innovative methods to sell engineering as a career by highlighting iconic, high-profile and successful projects along with life-changing stories from professionals. AECOM suggested making use of popular social media platforms to do this. AECOM further recommended either setting up a dedicated team within EWB or outsourcing the task of reviewing survey forms to identify two collaborative projects that could be executed with like-minded organisations. For 'disadvantaged areas', a GIS web portal was recommended so that these areas could be connected with member skills, government agencies, local communities and projects. A template to monitor participation and outcomes was recommended.



What an innovative decision by AECOM's Senior Leaders to invest their SLDP teams' time and considerable skills back into AECOM's community partners. Engineers Without Borders Australia (EWB) tasked the team with a range of projects - from discerning business case drivers for participation in pro bono activities, to the mapping of social issues across Australia, and quantifying the impact of school outreach. Not only did EWB receive a great range of solutions, but we also were able to connect with a range of AECOM's senior leaders, and (hopefully) provide them an insight into our work from a community perspective. I hope more companies follow AECOM's lead to provide opportunities for their senior people to invest their skills into community organisations. (Sarah Matthee, Corporate Coordinator, Engineers Without Borders - Australia)





## Worldwide Fund for Nature - Malaysia

WWF-Malaysia was established as a national conservation trust in 1972. The organization is affiliated with the international conservation organisation WWF (World Wide Fund for Nature) and is focused on scientific research of wildlife and natural habitats, the management of protected areas and the broader issues of the natural environment, incorporating aspects such as policy work, environmental education, public awareness and campaigns.

Renewable energy is one of the priorities that WWF-Malaysia wishes to embark on to reduce Greenhouse Gas emissions and tackle climate change. To realise this mission, they planned to 'walk the talk' by installing 250W of solar photovoltaic (PV) panels on their office's rooftop together with a monitoring system so that real-time data can be gathered. This data will be used to identify areas for building energy improvement and to create awareness to the public on renewable energy.

### The Problem

The concerns over this project are the installation process of the solar panels on the roof, finding adequate funding for the project and how to educate the public on the pressing issue of renewable energy.

### The Solution

AECOM's engineers provided design options for WWF-Malaysia and presented on how the project could be implemented through a Net Energy Metering (NEM) Programme. Funding solutions proposed by AECOM include reaching out to solar equipment suppliers and contractors, partnering with universities for fund raising and tapping into corporate social responsibility programmes, including AECOM's. Further ideas on how to broaden the community outreach include the use of 3D energy modelling of the building, real-time monitoring screens in the building lobby, monitoring real-time data on smartphone or tablet apps, creating special displays for children and a "Virtual Living Lab" on WWF-Malaysia's website.

Apart from the solar project, practical building enhancement was suggested through replacing the lighting, improving the heating, ventilation and air conditioning (HVAC) system, installing insulated glazing or window film, increasing indoor greening to improve indoor air quality, maintaining the insulation of air conditioning refrigerant pipes and setting up an energy management system.



### Feedback by WWF-Malaysia

WWF-Malaysia found that some of the ideas are innovative and creative, for instance the steel frames which allows us to also use the rooftop for social and fundraising events.



We wish to record our sincere thanks to AECOM for putting in a lot of work, time and effort for this project. The final report will be a good start as it provides the ground work for WWF-Malaysia to continue its initiative to get solar panels installed on our building. (Dato' Dr Dionysius Sharma, Executive Director/ CEO of WWF-Malaysia)





## Crossroads Foundation

Crossroads Foundation is a Hong Kong -based non-profit organization bringing together those in need and those who can help. This is done by distributing donated goods to people in need in Hong Kong and around the world, linking for-profit and non-profit organisations who want to partner to help meet global need, offering simulation experiences and providing a marketplace which sells goods from people in need within Hong Kong and around the world on a fair trade basis.

### The Problem

The issue of financing is critical for Crossroads which does not have a large budget and the current budget is directed to maximize help for the poor. Crossroads is looking for ways that companies can contribute to serving the poor through pro bono services, at cost materials, fundraising assistance, and other means. In addition, Crossroads would like to assess the costs in their own organization to look for ways to reduce costs as well as identifying any new opportunities for funding.

### The Solution

AECOM developed a corporate fundraising strategy a strategy and presentation for Crossroads Foundation to pitch its shipping fund to companies for support. AECOM also put together selling materials and a marketing plan to assist Crossroads in seeking longer-term strategic corporate donors. In addition, AECOM used the opportunity to test the donor procedures by offering used computers from our Greater China offices.

As with other MNC's, AECOM refurbishes these computers and removes any information stored on the computers so that the latter are ready for use. In order to have these computers donated, Crossroads needed to have proof of registration as a charitable organization and evidence that shipping of these computers to their desired destination could be adequately handled.



*[AECOM] covered quite a bit of ground and even exceeded certain aspects of what was requested. The one part that could have used more coverage (but admittedly is the most challenging) is trialing/user testing the materials they developed. (Jason Noble, Manager, Crossroads Foundation)*

## Lien AID

Lien AID provided a second project for the AECOM Senior Leaders involving a technical issue in China.

### The Problem

Lien AID has a long established track record of rural water projects in China. Most of the clean water infrastructure is centralised piped water systems with simple sedimentation and filtration systems, owned and operated by village water management committees. Lien AID monitors the performance of more than 50% of the 73 clean water systems that have been established in remote, rural poor mountain communities across eight provinces in China.

The quality and availability of the data is almost completely reliant on the paper records of the committees, with no alternative sources to allow triangulation of data (apart from photos of main water meters). Considerable time is spent by Lien AID staff to transfer data from paper-based records to online spreadsheets, and in preparing the data for analysis. The understanding of user adoption rates, revenue and cost structures and service reliability is crucial to ensuring sustainability of services but significant challenges exist in ensuring reliability, collation, and communication of data.

### The Solution

AECOM set out to provide a proposal for a monitoring system as a pilot plan for one project location in China, with a view to achieving project sponsorship. AECOM identified and assessed available technologies to improve water use data monitoring quality and proposed options for field implementation with preliminary costing analysis. AECOM also recommended monitoring parameters of water quality in water sources and processes.



*We understand that AECOM had to change the deliverables due to unforeseen circumstances. Good communication is important in order to develop a clear scope and agreed deliverable. (Ivanna Tan, Manager, Lien AID)*





# CSR ROUND UP

China

Taiwan

Philippines

Malaysia

Indonesia

## Taiwan

AECOM's Taiwan offices have had an active year in 2016. In May, AECOM's Kaohsiung office donated their used office chairs to three foundations for re-use.

In July the Taipei office joined the National Bike Challenge to encourage colleagues to ride more to lead a healthier lifestyle, conserve energy and reduce their carbon footprint. The office also launched a goods exchange platform on Chatter to encourage colleagues to donate used or unused goods.

In October employees from the Kaohsiung office joined the 2016 Osteoporosis Care Run to raise funds for the Taiwan Osteoporosis Care Association. In the same month, 30 employees, along with their families and friends joined the Yilan 52-jia wetland volunteer activity to clean up farming areas and engage in wetland protection.

## Philippines

AECOM Manila has partnered with Kids Rise Inspire Soar (KRIS) Foundation for their program called "Sweets for the Holidays" party for orphans since 2015.

In 2016, AECOM staff visited the orphanage, CRIBS Foundation, to host the sweets party, play with the children and engage with them through a storytelling session.

## Malaysia

AECOM employees in Malaysia participated in the Terry Fox Run in Kuala Lumpur in February. The run is part of a global movement to raise awareness for cancer research. It was also a good chance for the team to connect with the wider community.

## China

AECOM's Greater China sub-region runs a time bank programme to offer paid leave for voluntary work in rural communities. Two members of staff took the opportunity to use their skills to serve disadvantaged communities in Nepal and Cambodia.

In May, Vicky Leung undertook a trip Nepal, a city affected by a major earthquake in 2015. Working with Volunteering Initiative Nepal, Vicky stayed with a host family and visited cow sheds to work on biogas collection for daily use.

Brandon Chung, a water engineer based in Hong Kong, completed a trip to Cambodia in April to design plumbing and sewerage systems for schools in the seaside town of Kampot, Cambodia. The project was initiated by the Cambodia Children Advocacy Foundation, a charitable organization with a focus on providing education for children in Cambodia and enabling them to understand proper health and sanitation practices.

AECOM's Shanghai volunteer team designed and painted a KIC Mini Farm, located within 10 km walking distance of the new Shanghai Office. This activity, led by Helen Hu and Zheng Chao, started in September 2016 and is a long-term community volunteer program to create an open space/engagement area for the community in the form of an urban farm.

## Indonesia

To increase the younger generation's awareness of their heritage and knowledge of the city, AECOM Jakarta has partnered with Urban Guerilla, an NGO movement, to put together an interactive program to engage students and contribute back to the community.

Urban Guerilla dedicates itself to the research, observation, critique, design and study of a variety of subjects related to cities. The purpose of Urban Guerrilla is to provide innovative but practical interactive methods to create a better city life. AECOM has been involved in a series of workshops which have taken place in Bandung, Surabaya, Jakarta and Solo.





# THOUGHT LEADERSHIP

AECOM presented on "Sustainability Best Practices – Sharing Best Practices and Success Stories" in a conference organized by the Asian Strategic Leadership Institute in Kuala Lumpur. AECOM showed how the roll out of the Sustainable Development Goals (SDGs) has triggered some debate as to the role of businesses in supporting the delivery of the goals. Many of the goals are at a high level and therefore seemingly out of reach for most companies although there are instances where business can leverage off existing practices and performance goals.

Dr. Thomas Tang shared his insights at the recent Second Resilient Cities Asia Pacific 2016 Congress held in Malacca, Malaysia. In the panel on 'Resilience and Biodiversity,' Dr. Tang said that blue green infrastructure offers new ways to address flood risks in the urban environment. For example, linking urban water infrastructure (blue) to urban vegetation (green) through sustainable drainage solutions can help build greater climate change resilience, reduces flood and drought risk and increases biodiversity of the area.

AECOM was invited by the Singapore Government to contribute to a review of their climate change adaptation plans. The review covered Singapore's Approach in Building Climate Resilience through Essential Services and Infrastructure, Public Health and Food Security, Water Resources and Drainage and Coastal Protection. Will Symons, National Practice Leader on Sustainability & Resilience for AECOM Australia presented on behalf of AECOM.

AECOM sponsored Asia Society's Pacific Cities Sustainability Initiative (PCSI) 4th Annual Forum on the theme of Building Innovative & Climate Smart Cities. The forum brought in sustainability leaders to Jakarta from North America and Asia with their Indonesian counterparts for a high-level interactive dialogue. The topics included the Health and Resilience of Pacific Cities, Sustainable Water Solutions for Southeast Asian Cities, Low Carbon Urban Mobility, New Approaches and Funding Mechanism for Sustainable Infrastructure Development, Smart Solutions for Urban Challenges and Innovative Cities.

Risa Onishi of AECOM Japan presented a paper on 'Building Resilience for Long-term Wellbeing' at the IAIA conference held in Nagoya in May. The paper discussed the resilience score card developed by AECOM and IBM. Many people from different social backgrounds participated in the session and the overall discussion focused on how to obtain local and indigenous knowledge and the importance of quantifying and prioritizing risks. The Japanese organizers of the IAIA are carrying out a follow up event in Tokyo.

AECOM presented at the Clean Enviro Summit, which took place in Singapore from 10-14 July 2016, on the topic 'Can Cities Unlock the Resource Potential of Food Waste?'. Food waste can be turned into a resource through composting, converting it into animal feed, biofuel or energy. To convert food waste into a resource, there are many challenges along the value chain that need to be overcome. These issues were discussed on a panel organized by the National Environment Agency, Singapore.

AECOM was on a panel speaking at the Property Report Congress in Kuala Lumpur. Dr. Thomas Tang was asked for his views on smart cities and livability as part of a panel that included representatives from Cyberview, Savills, Sime Darby and Red Tone. The topic of discussion was on Living Smart: The Rise of Cyberjaya (And How It Compares to Its Regional Counterparts).

AECOM's Resilience team headed by Will Symons conducted the kick-off strategy workshop in Jakarta. The city of Jakarta has been selected as one of the Rockefeller Foundation's 100RC initiative cities to implement a resilience strategy to strengthen the city against environmental and social challenges.





# WHAT MAKES A GREAT CITY?

AECOM works in 22 cities in Asia.

We asked our employees to explain in their own words what makes the city they live in great using on the following questions.

- What is special about working/living in your city?
- What makes the city exciting or fun?
- How has AECOM become part of the city? What sustainability-related projects have we done there?
- What community work are we involved with?
- How do our families and friends feel about the city?
- Who are the NGOs that we have partnered with or come to know?
- What type of projects are we doing with them?
- Complete the sentence, "As a sustainable city, we love our city because it is ...."



## SHANGHAI Getting Close to Our Communities

Working and living in Shanghai, we experience fast paced changes while being able to sense the history of the city and enjoy community and family life.

Shanghai is a dynamic and action-packed city, which makes the city exciting and fun! For example, community engagement is a topic that we often discuss in this city. I am the AECOM CSR Champion for Shanghai and I get involved a lot in programs like the Cooperative Community Programs with Tongji University and Yangpu District, which elaborate on themes of how we can live together as a model of city life. We observe and think a lot about the challenges of busy urban life and we try to engage more people for community programs.

AECOM employees live in the city and our work helps create a better Shanghai. Besides the major projects that we have done in the city, we also have run small CSR projects such as with the Creative Art Center in the Shanghai Youth Deaf-Mute School, the community drawing wall in the KIC farm, the CSR design for the Young Innovation Center in Fudan University, and our own nature education forum. We are proud of our work with the community. In my opinion, our design projects are the hardware but our people are the software. Sustainable community development, getting personally involved and growing as an organization lie somewhere between the hardware and the software. For some, they may think this is a small thing but it does bring us closer to knowing what is critical for others like personal health and family life.

As a mother, I am involved in the community through my 8-year old son's class where we run many activities for kids and parents. My little daughter is 2 years old and I often play with her in the garden where we live. Recently, I have started to draw a green map for kids in my community. It is an on-going project dedicated to our community and it gives us all real pleasure and a better understanding of urban sustainability. My family and friends feel that Shanghai is a model and open city. For my family, Shanghai is also a green and friendly city. Last year, my family moved to our new apartment which has a little garden on ground floor. We practice planting, gardening and agriculture, and we chart our progress using a nature calendar, which we enjoy a lot especially my parents and children. By learning and practicing in my own little garden, I get to know more about mini community involvement gardens in the city, and I have been invited to be part of the Child Friendly Community Committee. Recently, my 8-year son and his friend won the final round in the "Global Natural History Day 2017" contest in Shanghai. His entry theme was called "the secret of the Raindrop". From the heart, what we do, live and educate for kids are all linked for our sustainable future.

In Shanghai, we partner with the Young Committee of Yangpu District to give volunteer support to the community. We also partner with Tongji University on Cooperative Landscape and Community works in Shanghai. WWF is our main NGO partner in China and we will be providing volunteer design and consulting to WWF Shanghai for their new office fit-out project.

“ As a sustainable city, I love Shanghai because it offers a life that we can lead for a greener future together.



## TAIPEI

### Designing a Sustainable Environment

As the capital of Taiwan, Taipei is a very diverse city where transport networks meet, and shopping department stores, night snack shops, financial hubs and all kinds of leisure centers are available. For those who live and work here, it is very convenient. As well as being a fast city, it is a warm place where you can get a cup of coffee, send a parcel or receive online shopping items 24-hours a day. You can pay your bills and print your photos all in the convenience store.

Many people came to Taipei and they find the most surprising thing is that riding a motorcycle is common to get between locations. But in recent years, the government is trying to promote energy conservation and carbon reduction so the use of public transport is increasing. Lately, cycling is becoming popular through public bike systems like U-Bike. A lot of bicycle lanes have been built in the city since 2012 and the total number of people riding each year is growing. In addition to energy saving, the authorities also want to strengthen waste collection and recycling and are encouraging the public not to use disposable tableware.

Taipei has art exhibitions and stalls to promote culture like the Huashan 1914 Cultural and Creative Industrial Park and the Songshan Wensheng Park so that even though people live at a rapid pace in the city they can still take the opportunity to slow down and enjoy life. There are several public sports centers which residents can use every day to keep their bodies healthy. In addition to these, the traditional night markets offer unique snacks which are the "food" of the people and a key part of our lives. This is like the city's driving force – to enjoy delicious food everywhere. No wonder Taipei people are so happy each day!

In a small city like ours, AECOM can play an important role in designing a sustainable environment. AECOM has been closely involved with Taipei from planning, designing and constructing landfill projects like the Fudeng Lake landfill, to the construction and environmental monitoring of public facilities like the Taipei City Zoo Park. We have rehabilitated our landfills for certain purposes but they can also be educational places to visit for parents and children. One of the attractions is the opportunity for children to play on grass, and also to understand the previous history of the place and how solid waste is managed. Our environmental monitoring services to the Taipei City Zoo during its construction and operation helped to enhance our technical expertise while supporting the city to achieve a sustainable environment.

In AECOM's Taipei office, we look after the health and wellbeing of our employees. For instance we have AED (Automatic External Defibrillator) available for emergency first aid purposes. To reuse resources, we established a materials exchange platform so that our colleagues can share items that they may no longer use. AECOM's NGO partners in Taipei include the World Peace Council, Christian Mustard Seed, Tzu Chi, and the Wilderness Conservation Association. We donate used office furniture and old clothing from time to time and we run counseling activities (e.g. bone marrow donation briefing and homemade peel cleanser tutorial). Each year we turn off the lights during Earth hour.

“ As a sustainable city, I love Taipei because here we treasure the environment. As the capital city in Taiwan, we can promote sustainability as a model for other cities to follow.

## MANILA

### City of Our Affections

“Manila - orgullo de las islas Filipinas!”

Living and working in Manila is special because people are hospitable or accommodating and treat each other like family once they've known each other for a long time. Manila is exciting and fun to be at because of the diversity of places you get to see. From its Hispanic heritage fortress sites in Intramuros, the timeless expressions of its old cathedrals that have stood the test of time, to one of the world's most beautiful sunset views in Manila Bay, the bustling activities of its flea markets and the cosmopolitan outlook of its business districts and shopping malls that echoes the country's vibrant and promising economy, Manila has been an underrated city in the orient.

AECOM has been one of the key companies that can help new planned infrastructure in Manila to be reliable and resilient, and effectively anticipates the growth momentum of its local economy. For example, AECOM was involved in the rehabilitation of the Pasig River for the Asian Development Bank. The project involved four pilot cities along the Pasig River covering renewal of urban poor communities and blighted commercial and industrial areas, development of preservation areas, mobilization of urban poor communities adjacent to the river for solid waste management and training and capacity building of executing government agencies.

At a community level, the Manila office initiated a project called 'One Million Barrels' this year, which is a concept, design and installation plan for simple rainwater harvesting and filtration systems to provide water for a low income community in Tanza, Navotas. The water is to be used for general washing, flushing and irrigation.

Our families and friends still regard Manila as the key center of growth and opportunities in the country. Although there is much to be desired on the quality of infrastructure that exists in Manila, the government and private sectors are united in planning and developing reliable and resilient projects to address current infrastructure deficiencies.

For a number of years now, we have partnered with a US-based NGO, Kids Rise Inspire Soar (KRIS) Foundation, for their various programs for orphans. The Manila office has been involved in KRIS Foundation's programs called 'Sweets for the Holidays' (sweets party for orphans), 'Happy Play-ces' (playground design and build) and has offered volunteer services to design the KRIS Campus orphanage home.

“ As a sustainable city, I love Manila because it is one among the growing Asian cities where people across different classes and affiliation aspire to and strive towards a better living environment despite the present challenges.



Taipei



Taipei



Manila



Manila



## HONG KONG A Bustling City

For many of us, living and working in Hong Kong is special. Some of us were born and raised here; others came to Hong Kong looking for work after attending university and ended up making this place a home. There is a lot of opportunity in Hong Kong. Things are done more quickly here. There is a better environment as well.

Hong Kong is special because it is next to mainland China. It is the connection between China and the international community. The city is very dense and compact, but it makes things convenient especially transportation. We work long hours in Hong Kong, sometimes it seems that there is no work-life balance! But Hong Kong is safe and we don't mind working a bit late. One advantage of Hong Kong is that it is an international city and we have the opportunity to mix with other cultures and learn from them. The work environment is diverse and offers opportunities regardless of age, gender and origin.

Hong Kong, despite being a bustling city, is still close to nature; we can get to mountains and beaches quite easily, there is a blend of city life and natural life available. Hong Kong is a multicultural venue – you can get anything in HK, and transportation is so convenient. We enjoy the shops and restaurants at all times – this is not what you find in other cities. Public facilities are good like public libraries, hospitals, clinics and Hong Kong is not bound by timing or season – in general you can do anything anytime.

AECOM is one of the biggest consultants providing infrastructure services in HK - I think we have built most of the city! Thanks to good environmental regulations like green buildings (BEAM Plus) and environmental impact assessments, AECOM can be part of Hong Kong's sustainable development. We have built one of the world's biggest sewage tunnels (HATS) in Hong Kong, we are putting sewage treatment facilities in caverns in Shatin, we conduct a lot of landslide investigation studies to mitigate landslide disasters and we are doing eco-shoreline work to increase ecological value in some of the reclamation sites – a balance between economic development and ecology.

At a community level, we do tree planting and we preserve the wetlands by removing invasive plants as volunteers. We cooperate regularly with NGOs to recruit volunteers to help the elderly, the vulnerable young and the disabled. Some examples include the School Company Parents program, TREATS workshop (Arts for ALL) and we have won the Caring Company Award for quite a few years now. I know we also work with a lot of NGOs such as Red Cross, WWF, Youth Development Council, Vocational Training Council, Girl Guides, The Women's Foundation, Haven of Hope, HKIE and Geological Society for HK and we participate in the annual MSF Orientation Competition.

How do our families and friends feel about AECOM? Well, they can see the AECOM logo everywhere and they come every year to our annual company fun day. I guess they don't know exactly what AECOM does but my family thinks my work life is quite intense and my friends think AECOM has a good reputation for ethics especially in the projects we do. We are perceived as good in building infrastructure but we are not as popular as other industries like banking or property development.

“ Hong Kong is in a good location between Asia and rest of the world so we are in a good position to promote or test new ideas in sustainability. As a sustainable city, I love Hong Kong because it is so compact and convenient. It has a great environment, is an exciting city with high living standards and many different cultural experiences and provides a suitable environment for kids and future generations. Hong Kong is our city.



## JAKARTA The Next Generation of Urban Development

Jakarta is a very dynamic city. Things that happen today are very different from how they occurred exactly a year ago. This makes us work and live differently according to trends.

Because of the changes in the city (e.g. current political dynamics), there are various upcoming new programs and projects initiated by the local government that, most of the time, greatly impact our routines. Whether it is for good or for bad, these changes affect the types of projects we can work on. For example, under the previous administration, the city focus was on the planning of transit-oriented development (TOD) which is still in the process of implementation. The current one now focuses more on sustainability and social welfare, much of which has already been implemented.

How do our families and friends feel about Jakarta? Currently, many sensitive issues have happened as a result of political changes. There are many people who express that they feel unsafe and uncertain and it is definitely a transitional period to the next government.

As a company, AECOM does practically almost everything in the development of a city. Some part of our daily lives relate to AECOM projects. The most evident example is the Jakarta MRT project, which will change the way we get to places.

In general, most of our works value sustainability as our principle in design and development. As the city and its people get to appreciate sustainability more and more, it is a privilege to be able to implement this into most of our projects. One active project that we are currently working with the city is the development of a city resilience strategy under the 100 Resilient Cities program by the Rockefeller Foundation. AECOM, as a strategy partner, works extensively with the city of Jakarta to create the city resilience strategy.

In the community, we have worked with an NGO, Urban Guerrillas, and created a series of initiatives with the local government and communities. One such activity involves community participatory planning in Setu Pengasinan Depok city. This activity is about how to get the community to be part of the planning process in the kampung (village), in the garden and the lake area. AECOM volunteers helped to develop the vision plan of the site together with the community and other stakeholders. The process might take three stages during this year including baseline setting, gathering ideas, developing options and finalizing them. The stakeholders who have been involved include the local community organization (Forum Komunitas Hijau - Green Community Forum), the Depok City Government, Bazarnas, Ikatan Ahli Lanskap Indonesia and Tarumanegara University.

“ As a sustainable city, I love Jakarta because it is a dynamic city that provides various opportunities to nurture its people and places.







## KUALA LUMPUR A Place to Call Home

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Kuala Lumpur is the capital of Malaysia and is an exciting city to live and work in. It offers a kaleidoscope of bright vibrant colors, which reflect the variety in cultures and religions. Kuala Lumpur is a very diverse city, which is what makes working here fun as you meet different people of all races and backgrounds. It teaches you tolerance and acceptance of one another's values.

Because the city is developing so quickly, there is an air of expectancy each day as to what is going to happen next. Yet even with unfolding events, we can still count on certain things that won't change like the weather, the traditions and the people. Kuala Lumpur has its challenges like many other cities, namely the traffic, littering, air pollution and cost of living but we have a saying here, 'boleh'. Boleh means 'we can' and in time we can – and will – deal with these problems.

AECOM has played a major role in Kuala Lumpur's development. We are currently assisting the city construct its mass transit railway that bisects the city area affording public transport to multitudes of commuters and helping to reduce the number of vehicles on the roads. AECOM is also managing the iconic 'River of Life' project to beautify the Klang River that runs through the heart of the city so that this historic water trail can once again become the pride of the city. In 2015, AECOM set up the Kuala Lumpur Center for Sustainable Innovation as a hub for urban sustainability projects aimed at improving mobility and waste management as well as tackling longer term issues like ageing populations.

The AECOM office in Kuala Lumpur is quite a young team so many of us have early families and it is a great opportunity to educate the right values in our small children. In general, our families and friends feel that Kuala Lumpur is a place to call home. Even folks who may not be from Kuala Lumpur originally now feel comfortable that they call city by its affectionate term, 'KL'. We work hard and we have an active Employee Engagement committee that makes sure that there are enough social activities for us to play equally hard!

What community work are we involved with? We have worked with NGOs like WWF on energy and mobility issues, helped Epic Homes build resilient housing for the aboriginal population and even cleaned out our national Zoo as volunteers. We hope that there will be future opportunities to serve willingly and with good heart. This is what unites us across races, religions and cultures.

“ As a sustainable city, I love Kuala Lumpur because it is a great city and it is our home.



# HOW DID WE DO & NEXT STEPS

Our Target	Last Year	Next Step
<b>Recognition</b> Further pursuit of ISO 14001 certification for our Offices in Greater China and Southeast Asia	Assessing the business case for different offices doing so	Ongoing
<b>Operational Excellence</b> Bringing in all legacy offices into the office performance monitoring.	Done	Implement the global monitoring system, Figbytes
Further efforts in the negotiations of our leases to reduce operating costs through greener and sustainable office performance.	Identified opportunities in co-locating existing offices and setting up new offices like Shanghai's	Ongoing
Continuing to encourage our offices to identify high-carbon components in operations through self-audits and to address those components identified.	Guidelines under development	Ongoing
Establishing procurement guidelines on sustainable certified products.	Establishing procurement guidelines on sustainable certified products.	Ongoing
<b>Employee Outreach</b> Increasing staff awareness through dissemination of useful information and enhanced employee engagements.	Monthly newsletter and regular Employee Engagement activities as well as introduction of Tech-talks this year	Ongoing
Setting up two more Time Bank projects.	Done	Set up two more Time Bank projects.
<b>Thought Leadership</b> Promoting thought leadership by raising our profile in regional and national policy discussions.	Done	Ongoing

