



engineers
without borders
australia

engineering a better world

2020

strategy

2020 aims

Engineers Without Borders Australia's determination to increase both the size and quality of its impact is the motivation and intention behind the extensive journey we have undertaken in creating our Engineering a Better World 2020 Strategy. The story, aims and objectives contained in these pages reflect our values, mission, culture and determination as an organisation.

These pages represent our intent to create a better world. We ask to be held accountable for our actions. We encourage feedback and response from our stakeholders and we believe this strategy articulates our excitement in working with the sector to engineer a better world.

- the ewb australia team.

external aims

aim 1: solutions for social change

aim 2: redefining engineering

aim 3: a global movement

internal aims

aim 1: investing in our people

aim 2: transforming our systems

aim 3: growing our resources

aim 4: increasing our profile

Image: Live fencing being used by EWB Australia Field Professional Jack Nugent in Timor Leste.

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introduction

Engineering, infrastructure and technology are fundamental to a life of opportunity, free from poverty.

The launch of our Engineering a Better World 2020 Strategy coincides with the United Nations General Assembly’s adoption of the Sustainable Development Goals (SDGs) – this generation’s commitment to ending poverty in all forms everywhere, and a shared, global agenda for sustainable development.

The implementation of the seventeen SDGs, will be underpinned by engineering, infrastructure and technology, from education and health, to clean energy and safe water. The goals will help facilitate the urgent action required to combat climate change and its impacts.

It is imperative that individuals and organisations in the engineering profession respond to this global challenge using greater leadership and increased participation. It is our ethical and professional responsibility.

the humanitarian engineering movement

EWB Australia’s growing community believe in the life changing and life sustaining contribution of our profession and are taking action to end poverty and create stronger positive social outcomes for communities. This is what we call humanitarian engineering.




The 2020 Strategy shares our aims and objectives for the coming five years (2015 – 2020), and articulates the outcomes we seek to achieve through our humanitarian engineering work.

The 2020 Strategy was developed through a series of reflection and visioning workshops in 2014. Held with EWB members and volunteers, the staff team and Board Directors, the workshops had two purposes; to review EWB’s impact in line with the 2015 EWB Strategy, and to create a vision outlining EWB’s future contribution to poverty alleviation and sustainable, inclusive development.

To build this vision our community was asked to imagine the future they would like to see in 2065, and then reflect on the role EWB Australia could play in the fulfilling this vision.

EWB Australia’s annual National Council events in July 2014 and July 2015 provided an important opportunity for EWB chapters and regions to contribute their ideas and perspectives. This work was complemented by a membership survey and informal discussions with diverse EWB stakeholders.

The 2020 Strategy will be implemented through targeted, strategies for our work with and in:





-  **specific vulnerable and marginalised community groups**
-  **thematic areas and geographies**
-  **delivery programs and influence initiatives**

EWB Australia was founded in 2003 on the idea that engineering, along with complementary skills sets and aligned organisations, can lift people out of poverty.

We exist to engineer a better world through four mechanisms:

-  **partner**
We work together with communities to create a better world.
-  **think**
We engineer new ideas for a better world.
-  **learn**
We curate knowledge to develop engineers for a better world.
-  **belong**
We bring people together to innovate for a better world.

We focus on these four areas so that more people and engineers can respond to these major humanitarian challenges:

-  **appropriate housing**
It is estimated that 100 million people are homeless worldwide and as many as 1 billion people lack adequate housing. Across Australian this is an estimated 105,237 homeless people.
-  **clean water and hygiene**
Over one third of the world’s population does not have access to adequate sanitation and 650 million people live without safe drinking water.
-  **clean energy**
About 1.3 billion people worldwide (approximately 18% of the global population) do not have access to electricity, and 2.6 billion people (38% of the global population) are without clean cooking facilities.
-  **digital access**
Digital access across the Indo Pacific region is generally very poor. This prevents people from accessing information on changing weather patterns, current events, disasters and early warning system, as well as general information on agriculture and markets to facilitate adaptation.*

*References: Available at www.ewb.org.au/about/whyweexist

global opportunities & challenges

With our members we explored the opportunities and challenges faced by the global community in order to define the role of EWB Australia in future development.

community empowerment

urbanisation

social enterprise

emerging technology

natural disaster

land degradation

hygiene

peace

water

life-long learning

sanitation

pandemic

digital access

poverty

volunteering

global

energy

pollution

non-profit

shelter

sustainable design

probono

resource

competition

food

social impact

women

biodiversity

population growth

conflict

sustainable infrastructure

community-centred design

children

inclusive development

- opportunities
- challenges
- thematic areas

Image: Biodigester Project Managing Director Ben Jefferys interviews community partners about the effectiveness of the Biodigester technology.



our culture

EWB Australia brings together passionate people who are committed to achieve lasting impact through a holistic approach to humanitarian engineering.

Our strength is our people – we pride ourselves on our diversity of skills, backgrounds, cultures and experience.

We show leadership and take an ambitious and brave approach to creating and sustaining change.

We learn together, work together and have fun together – inspiring collective action.

We contribute our time and resources with humility and generosity to advance EWB's vision.

We are innovative and bold – we imagine a better future and work together to make it happen.

our vision everyone has access to the engineering knowledge and resources required to lead a life of opportunity, free from poverty

our mission we connect, educate and empower people through humanitarian engineering

our values we act with integrity, upholding our values of community, sustainability, respect, learning and quality in all that we do.



community

We are a community of people and organisations who share a common vision for the future. Through collective action and community-led change we will learn more, achieve more and have fun together.



learning

We create new opportunities for learning and lasting change. We have a passion for continuous learning and seek to embrace and harness new experiences, wisdom, ideas and expertise.



sustainability

We strive to address the immediate needs of our communities without compromising the needs of future generations. Along with our people, our planet is our most valuable resource.



quality

We strive for quality, professionalism and excellence in everything that we do. We believe we can create positive and long lasting impact in the world.



respect

We build relationships based on mutual trust and respect. We believe all relationships thrive on a two way sharing of knowledge and culture.

Image: EWB Australia Field Professional Hamish Banks works with Lazio Miranda, Production Engineer for Community Housing Limited in Timor-Leste.

our evolution

Engineers Without Borders Australia began in 2003 as a small group of people with a shared passion for making a positive difference through engineering. Adopting the motto “know what you don’t know,” they embarked on a journey together to realise the new organisation’s mission and vision and created a visible presence through speaker nights, appropriate technology workshops, stalls at festivals and book clubs.

Rapidly gaining momentum, EWB and a community of like-minded people grew a movement of volunteers and gained a broad support base which contributes over 100,000 volunteer hours per year. Partnerships, collaborations and chapters were established across Australia, South Asia and South East Asia.

under the 2015 strategy, ewb achieved the following outcomes:

- > We built the technical capacity of over 40 community partner organisations in Australia and across Asia leading to improvements in public health and nutrition, education, employment and reconciliation.
- > We worked with universities across Australia and New Zealand to embed humanitarian engineering into curriculum, reaching thousands of students every year.
- > We created diverse leadership and training opportunities that share knowledge in humanitarian engineering.

EWB Australia’s approach to creating social change is evolving from a foundation of partnerships and placements into a sector-based approach to poverty alleviation. We aim to systematically build the capacity of engineers and relevant organisations / institutions in the countries in which we work. This way they can deliver high quality, community-centred projects with poor and marginalised groups.

EWB Australia’s work in poverty alleviation and development focuses on programs that improve the livelihoods of communities in need. This includes poor, vulnerable and marginalised communities and in geographic regions of socio-economic disadvantage. EWB doesn’t participate

directly in disaster relief or crisis response work. In these circumstances, we refer our members and supporters to partner organisations and collaborators who specialise in this field. We are however, committed to building the resilience and preparedness of our community partners as part of our development approach. We do not participate in non development activities as an organisation.

There is the opportunity over the coming five years to deepen our collaboration with partner organisations and contribute to and lead a collective impact approach to poverty. There is also the prospect of leveraging our significant experience to increase influence on our stakeholders in order to achieve a greater impact in the sector.

EWB Australia creates change by building the capacity of individuals, institutions and entire sectors.



EWB Australia invests in people, partnerships and programs as foundations of our approach to social change.

our approach

what is our model of impact?

For over a decade, EWB Australia has created social change through the delivery of programs, primarily through our work with partner organisations. We now have the opportunity to use our experience and use evidence of our program impacts to influence stakeholders in new ways.

The EWB Impact Model uses an innovation cycle through which the EWB team undertake research and generate new ideas or concepts. An idea then follows a cycle of design, piloting, delivery and evaluation. Established programs repeat this cycle, and feedback incremental improvements in individual programs, in order to increase impacts and the effectiveness with which they are delivered.

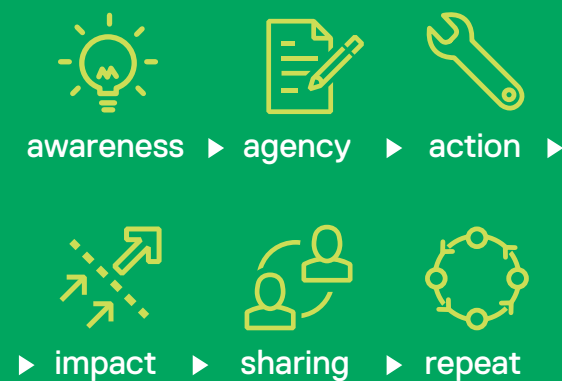
Under the 2020 Strategy, the Impact model will expand to include a significant focus on influence initiatives. This aspect of the model starts with the extraction of new knowledge or innovative practice or processes from EWB's programs. Using this new 'value' we can then influence specific EWB stakeholders through a range of possible initiatives. Examples of influence initiatives include thought pieces and research papers (as part of targeted advocacy), movement building (large-scale campaigning), collaboration through collective action or the ability to scale up existing programs to a greater level of impact.

Both aspects of the EWB Impact Model (program innovation and influence) include a feedback loop for evaluation, learning and improvement. A new expectation has been set that mature programs will go through an annual evaluation process to assess the ability of the program to be transformed for a step change in impact.

The EWB Impact Model is underpinned by four foundations:

- > people, partners and culture
- > resources
- > operating systems
- > brand.

how change happens:

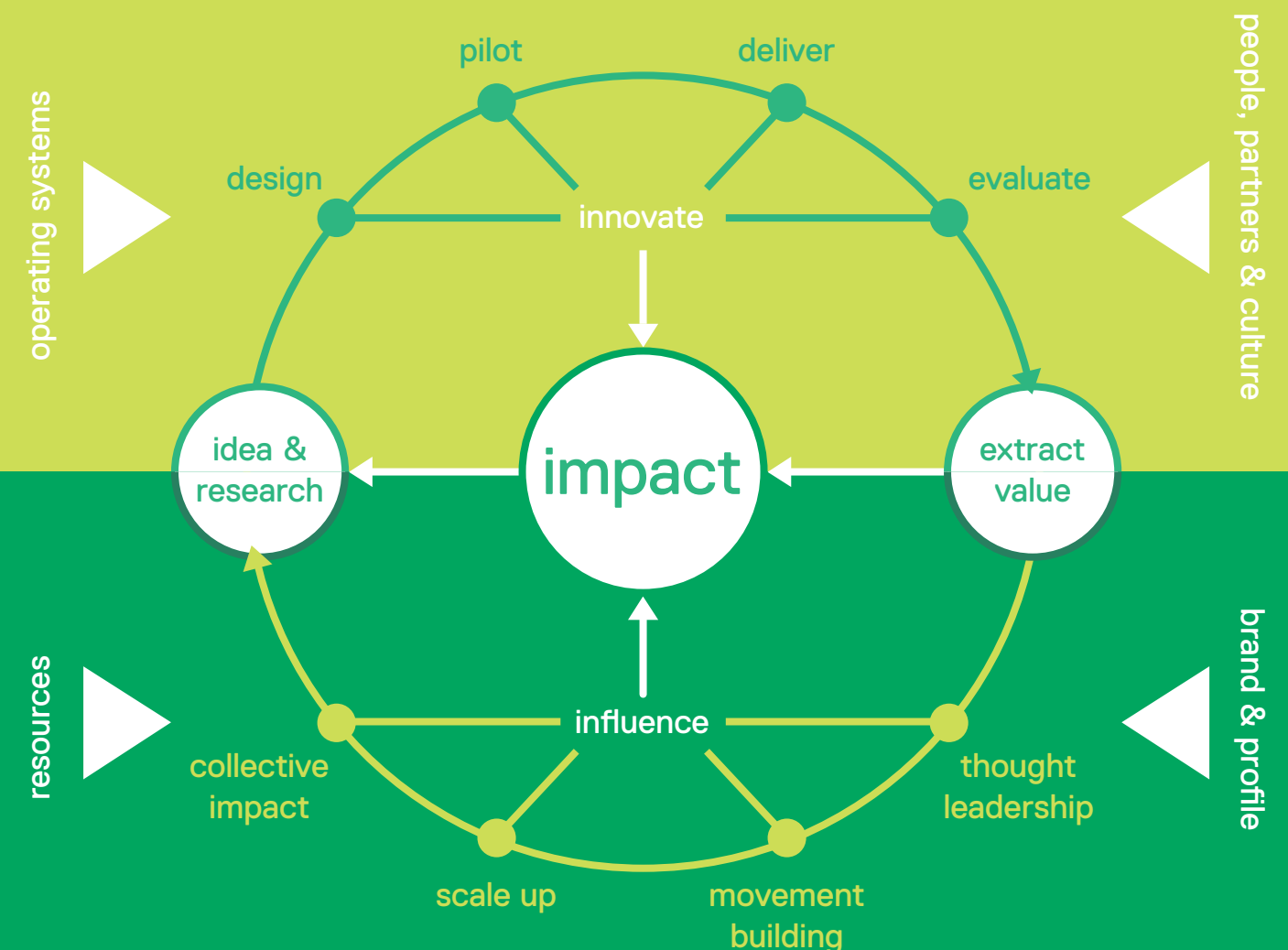


our core mechanisms:

- > Partnering for greater leverage and accountability.
- > Knowledge sharing.
- > Mobilising great people through volunteer and probono opportunities.
- > Investing in our people and culture.
- > Systems for effectiveness and efficiency.
- > Resources to allow us flexibility, creativity and the ability to invest.
- > Sector building.
- > Long-term and inclusive partnerships.
- > Community driven.
- > Capacity building
- > Strengths-based approaches.

ewb australia impact model

evaluate, learn & improve



evaluate, reflect & evolve

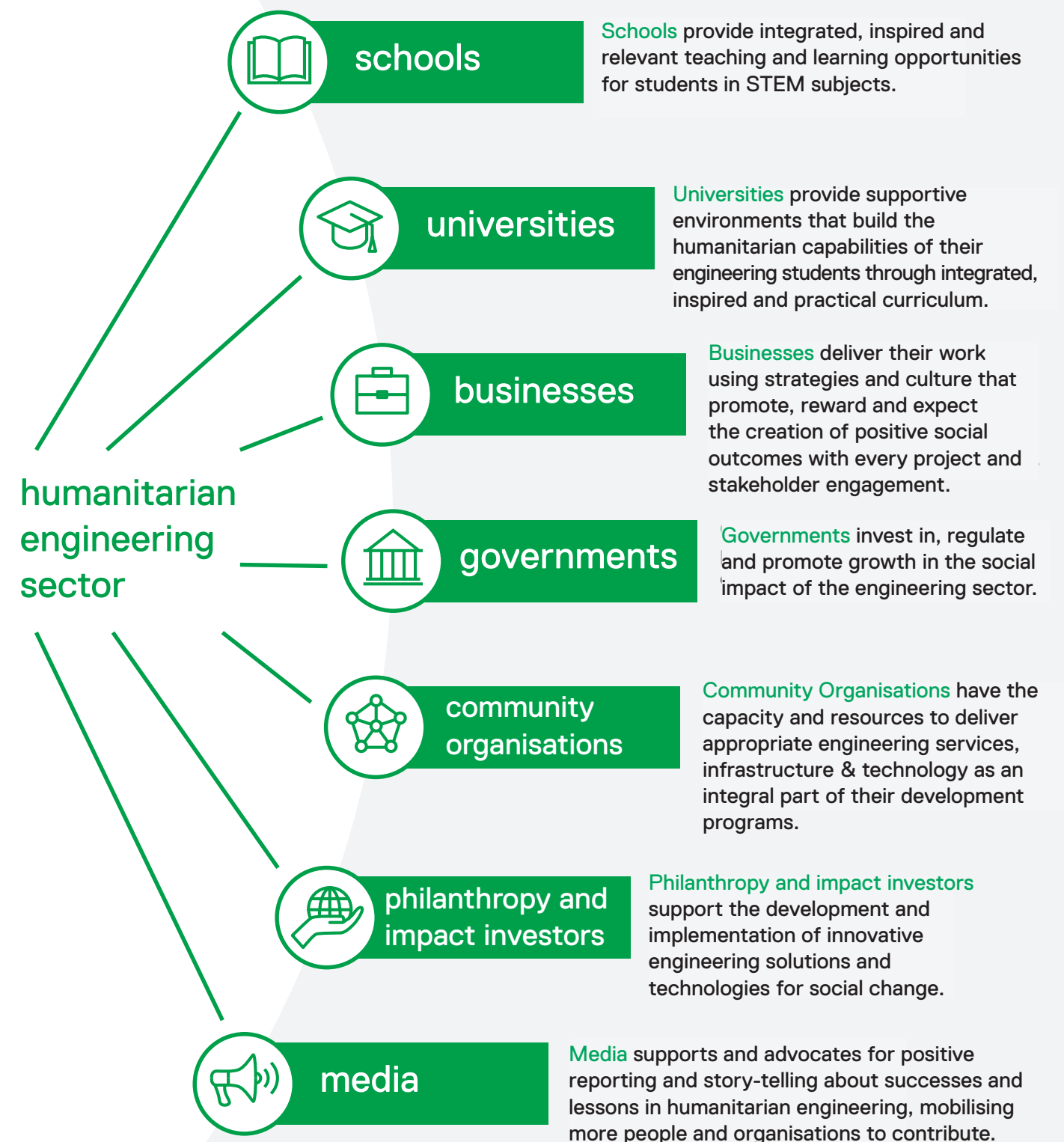
The EWB Australia Impact Model creates social change through program delivery, innovation and influence

2065 vision maps

EWB Australia members created a series of vision maps for the world of humanitarian engineering in five decades time. The use of highly visual and creative maps helped the EWB team explore and design the world they would like to see in 2065. This process allowed the role of EWB in the development of this future to become clear and helped to shape the design of the Engineering a Better World 2020 Strategy.

Image: Field Professional Becky Watts has undertaken four of EWB Australia's programs before working on placement in Cambodia.

our vision for the future in 2065...



external aims

aim 1: solutions for social change

aim 2: redefining engineering

aim 3: a global movement

aim 1: solutions for social change

we will enable appropriate solutions to alleviate poverty and accelerate inclusive, sustainable development through engineering and technology

objectives:

- > Facilitate access to appropriate and community-centered engineering services, infrastructure and technology for poor and marginalised communities.
- > Strengthen the capacity of individuals, community organisations, institutions, governments and businesses to access, deliver and sustain transformative engineering solutions and technology for the benefit of poor and marginalised communities.
- > Influence the institutions and systems through which engineering solutions, infrastructure and technology are delivered to maximise the positive social outcomes for communities.
- > Innovate, implement and scale transformative engineering solutions and technology-based ventures that reduce poverty and accelerate inclusive development.
- > Create well-connected and supported education and employment pathways in the engineering sector for poor and marginalised communities.

outcomes:

- > More poor and marginalised communities have improved access to the benefits of engineering, infrastructure and technology.
- > More service organisations have the capacity to deliver and maintain appropriate engineering services, infrastructure & technology.
- > More high-quality engineering, infrastructure and technology-based projects will be delivered through a community-centred approach, creating the strongest possible social outcomes and community empowerment.
- > New knowledge, innovation and transformative engineering solutions will be created to improve livelihoods.
- > More people from poor and marginalised communities will participate in and have leading roles in decision-making that affects them and their communities, and access new income and employment pathways.

aim 2: redefining engineering

we will redefine engineering as a community-centred profession that provides leadership in the creation of a more sustainable and inclusive world

objectives:

- > Inspire, educate and train students and practitioners in the local and global application of engineering and technology for positive social change.
- > Embed a culture of community-centred design and practice in the engineering professions in which we work, through all aspects of business including shared value creation, pro bono work and volunteering.
- > Improve transparency and accountability regarding the social impact of engineering services, infrastructure and technology, facilitate sharing of effective practice and celebrate the positive impact the profession has on society.

outcomes:

- > More individuals and organisations are inspired, capable and well-supported to deliver their work with the best possible social outcome.
- > More individuals have a strong community service ethic and incorporate pro bono work and volunteering into their careers.
- > Companies are strategic and committed to the delivery of strong social outcomes.
- > More communities in which we work (including general public, clients) expect that engineering services, infrastructure and technology will be delivered for the public good and hold the profession to account.

Image: In partnership with Google and Live and Learn, the EWB Australia Biodigester project aims to provide 15,000 Cambodians with clean energy, water and fertiliser by 2018.





aim 3: a global movement we will inspire and mobilise a global community in engineering for social change

objectives:

- > Inspire, connect and empower engineers and their organisations around the world to participate in a global movement based on the shared vision that “Every engineer can be an agent of change to create a just and sustainable society.”
- > Mobilise the engineering professions in which we work to play a leadership role in ending poverty and creating inclusive, sustainable communities.
- > Learn from, work with and build the capacity of like-minded organisations around the world to contribute towards ending poverty and accelerating inclusive, sustainable development.

outcomes:

- > Individuals and companies in the engineering profession identify as part of a global community that creates a positive, lasting social legacy.
- > The global engineering profession makes an exceptional contribution, and provides a strong and valued voice, in the creation of positive social change.
- > EWB Australia is a part of a connected, innovative and high impact global network of collaborators, working together to create lasting social change through engineering and technology.

Image: EWB Australia Member and former Field Professional Bianca Anderson worked with the Covenant Centre of Development (CCD) in India.

internal aims

aim 1: investing in our people

aim 2: transforming our systems

aim 3: growing our resources

aim 4: increasing our profile

aim 1: investing in our people

we will invest in our people and build our culture of passion, purpose and impact

objectives:

- > Lead, empower and grow the size of the EWB membership base, as enablers of the humanitarian engineering movement.
- > Strengthen and create new, diverse and well-supported pathways for volunteers to contribute towards the EWB mission and vision.
- > Build the skills, experience, knowledge and diversity of our volunteers, staff and Board to effectively implement our work.
- > Proactively foster a diverse EWB community that includes people of varied age and experience, gender and ethnicity.

outcomes:

- > More EWB Australia members will champion the humanitarian engineering movement, inspiring and engaging others.
- > EWB volunteers deliver high quality, sustainable programs of more significant impact.
- > More EWB volunteers and staff have an enriching personal and professional development experience with EWB and feel valued and supported.
- > EWB achieves its strategy, demonstrating effectiveness, efficiency and innovation in its governance and operations.
- > EWB has a more creative, engaged and vibrant community with the capability and capacity to deliver the organisation's mission and vision.

aim 2: transforming our systems

we will improve the impact of our work
and the systems and tools we use to
support our operations

objectives:

- > Improve our monitoring, evaluation, reporting and communication of the impact of our work.
- > Develop and hold ourselves accountable to performance indicators (measures) for each of our aims & objectives and each program we deliver.
- > Invest in integrated business systems, technologies and processes that improve our effectiveness and efficiency.
- > Integrate learning processes into program delivery and operations, including strategic sharing of lessons learned and communication of failures.
- > Improve the transparency and accountability of our management systems (policies, processes and practices).

outcomes:

- > EWB Australia has a strong evidence base that clearly demonstrates the impact of its programs and activities.
- > EWB undertakes continual improvement based on measurable performance indicators.
- > EWB is effective and efficient in the delivery of its work and is supported by simple, resilient and accessible systems.
- > EWB's strategic direction and program delivery is informed by and improved by reflection, analysis and learning.

Image: The EWB Australia community meets annually at its National Council for conversation on the role of EWB in creating social change.





aim 3: growing our resources we will increase our financial and social capital

objectives:

- > Grow our current sources of income and find new and creative ways to generate untied income that align with our mission and vision and enable us to increase the impact of our work.
- > Increase and diversify the capability (skills, experience, knowledge) of the EWB team.
- > Leverage meaningful pro bono and volunteer opportunities to maximise the impact of our work and the efficiency with which we use our resources.
- > Prioritise our programs, renew and reposition our resources and practices to increase our impacts.

outcomes:

- > EWB Australia has a sustainable and resilient income base. The organisation is able to invest in new programs and ventures, and respond to new and emerging challenges, in a way that is flexible and dynamic.
- > EWB fully engages the breadth and depth of expertise in the engineering profession and other relevant sectors to deliver high quality programs and undertake effective influence activities.
- > EWB delivers on its aims and objectives through the systemic engagement of volunteer and probono expertise and capacity.
- > EWB has clear program priorities and uses its resources for maximum impact.

Image: EWB Australia Design Summits trips to India, Cambodia and Nepal provide leading practice educational experiences for Australian engineering students.

aim 4: increasing our profile

we will build our profile, influence and support base

objectives:

- > Grow the recognition of the EWB brand in Australia and the regions in which we work with a focus on the organisation's impact through systemic change and innovation.
- > Build the capacity of EWB people to undertake influence activities.
- > Expand the EWB community and network of supporters who champion the organisation's mission and vision and influence others to support the humanitarian engineering cause.

outcomes:

- > EWB Australia increases its brand recognition, support and influence.
- > EWB leverages the outcomes from its program delivery work and expertise to influence key stakeholders and accelerate implementation of the EWB strategy.
- > EWB increases its support base in Australia and in the sectors within which it works internationally.

Image: EWB Australia's Link Festival promotes the role of design and technology in creating social change.





our performance

We strive to be accountable and transparent in all aspects of our work. We will assess our performance against this strategy on an annual basis and share the outcomes of the review with our stakeholders.

The whole of EWB Australia's monitoring, evaluation, reporting and improvement plan includes a common set of evaluation questions that assess our performance against specific factors, including but not limited to:

- > Effectiveness
- > Efficiency
- > Relevance
- > Innovation
- > Learning
- > Leverage (of resources, networks)
- > Volunteer engagement

our people

EWB Australia nurtures, recruits and retains superstars - people who are passionate about engineering for social change, deeply understand our approach and deliver exceptional work. EWB Australia's superstars are highly responsible and thrive on freedom, self-discipline, learning and innovation. They are attracted to us because the organisation presents a unique set of ambitions and achievements, and has a distinct culture that provides the space to fulfill personal values and create long lasting positive social change.

for information on how to contribute to ewb please visit www.ewb.org.au or email info@ewb.org.au

Image: Long Sokhon of Pursat Province in Cambodia is one of the beneficiaries of EWB Australia's Biodigester Program in Tonle Sap.