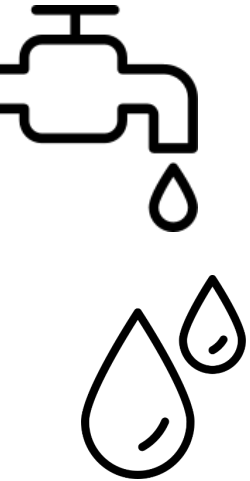




engineers
without borders
australia

ENGINEERS WITHOUT BORDERS AUSTRALIA

Handwashing Stations in Cambodia: A response to COVID-19 Safe Hygiene Practices



**WATER
& WASH 2023
FUTURES**

Achieving SDG6 in a Changing Climate



#WaWF23



engineers
without borders
australia

Who is
EWB?

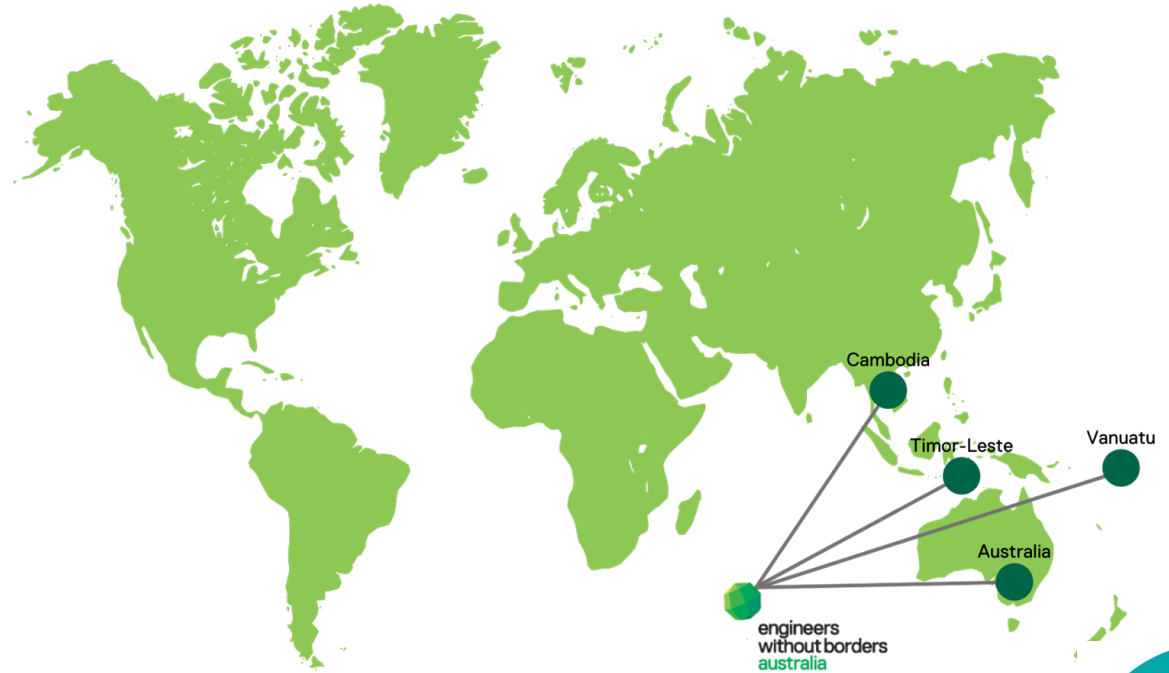
Our Vision:

*A world where technology
benefits all.*

Our Purpose:

*Harnessing the potential of
engineering to create an
equitable reality for the
planet and its people.*

Engineers Without Borders Australia



Our Cambodian WASH Program



*60% of Cambodians
have access to basic
sanitation services*



*23% of Cambodians
use safely-managed
drinking water*



*Rehabilitation of Rural Water
Supplies*



*All Seasons Upgrade of Household Pit
Latrines*



The Challenge: COVID-19 In Cambodia

COVID-19 cases surged In March 2021. Schools closed temporarily and Phnom Penh went into lockdown.

- *International travel ceased; EWB shifted to remote monitoring*
- *EWB had to quickly change from long-term projects to emergency response*



An outdoor market in Banteay Srei District, Siem Reap during the COVID-19 Pandemic.



engineers
without borders
australia

The Opportunity: Government Partnerships

Cambodia's Ministry of Rural Development requested our help to provide adequate hygiene facilities for COVID-19 health centres.



- Identified needs
- Distribute
- Install



engineers
without borders
australia

- Ideate
- Design
- Prototype



- Flexible and reliable support



engineers
without borders
australia

*Innovative Hand Washing
Solution:*

*Employs foot-operated pedals to
allow users to wash their hands
without potentially transmitting
the virus indirectly to another
person through touchpoints.*



*Cambodia Country Manager Dy Many
testing a hand washing station*

The Solution

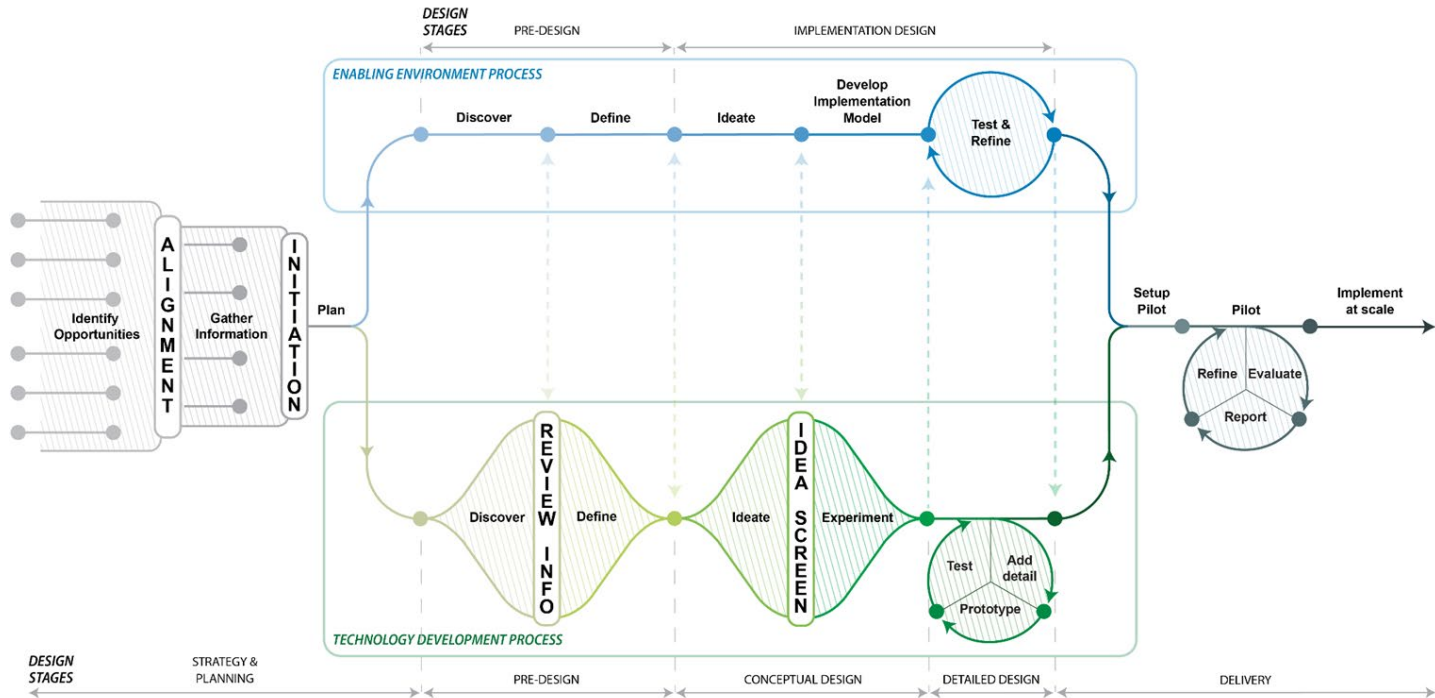


EWB staff (blue t-shirts) and MRD representatives outside a quarantine facility in Kampong Cham Province



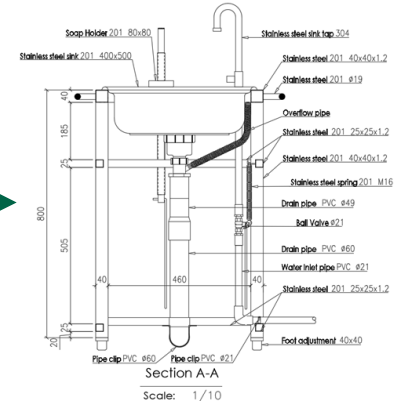
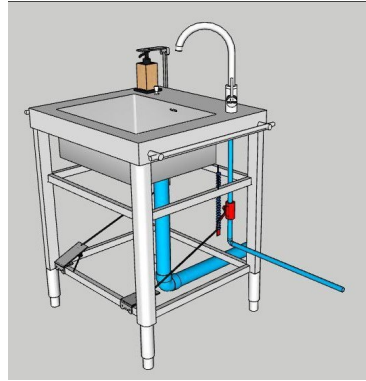
engineers
without borders
australia

The Technology Development Approach





engineers
without borders
australia



Ideate Stage:
Draw on existing
technology
options & user
needs

Idea Screen:
Evaluate ideations
and select one for
further
development

Experiment and test:
Bring the idea with
specification to
fabricator for
prototyping

Add detail:
Provide detailed
drawings with
specification on size and
material



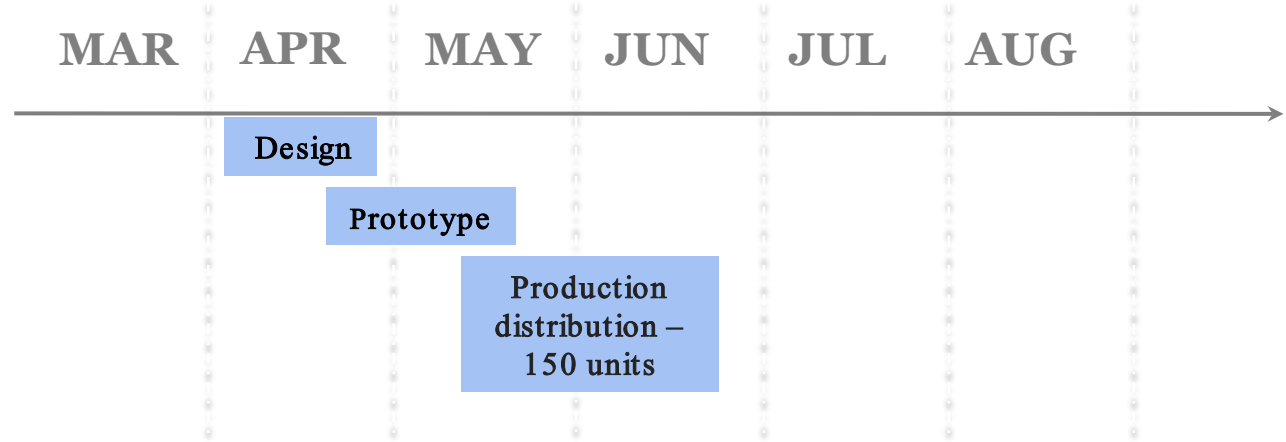
engineers
without borders
australia



engineers
without borders
australia



Reflections on Partnership





engineers
without borders
australia

We installed handwashing stations across nine provinces:

1. *Phnom Penh*
2. *Kandal*
3. *Kampong Cham*
4. *Kampong Chhnang*
5. *Kampong Speu*
6. *Prey Veng*
7. *Svay Rieng*
8. *Takeo*
9. *Sihanoukville*



A quarantine nurse in Preyveng province using the EWB hand washing station

Installation



Quarantine staff in Preah Sihanouk receiving EWB hand washing stations



engineers
without borders
australia

- 150 Handwashing Stations installed in 49 rural and urban medical facilities
- 13,073 Patients and 455 Medical Professionals among the beneficiaries
- EWB was awarded a Certificate of Appreciation from the Cambodian Government

Achievements



Left to right: Chheang Mariny, Dy Many, Keo Chanrika, Ratha Kong
Absent: Prak Pin

Evaluation and next steps

Successes

- 99% satisfied with the product
- 98% would like to have the product in their

home

Areas for improvement:

- 13% said that the installation was difficult
- Re-design for children and for people with a disability
- Scale-up the product for other institutions such as schools



Hand-washing station version 2 for use in schools



engineers
without borders
australia

ENGINEERS WITHOUT BORDERS AUSTRALIA

Our Technology Development Approach:

<https://docs.google.com/document/d/1OkoLeMbuwgujkCMvjDBoaIPocNZzp55RkKKz1bHfQ9Y/edit?usp=sharing>

Our 2030 Strategy:

[EWB Australia 2030 Strategy - Engineers Without Borders Australia](#)

Our inclusive technology projects:

[In rural Cambodia, co-designed technology gives better access to livelihoods - Engineers Without Borders Australia \(ewb.org.au\)](#)

Our social media:

<https://www.facebook.com/ewbaustralia/videos/2727731967519591>

For more information:

j.nugent@ewb.org.au



WATER
&
WASH 2023
FUTURES

Achieving SDG6 in a Changing Climate