

# bGlobal: Bioengineering for Global Health

## An Executive Summary



### The Challenge at Hand

Imagine seeking healthcare where medical equipment, consumables or even clean water are hard to come by. This is a reality facing many rural communities in Southeast Asia. In Timor-Leste for example, limitations in public healthcare infrastructure and supply chain mean that medical supplies we take for granted, like sterile dressings, IV bags and blood pressure machines, are often low in supply or unavailable. While local innovators resiliently develop low-cost low-tech alternatives, there remain many healthcare challenges requiring technical solutions typically out of reach of low-income societies.

### Our Unique Advantage

NUS Department of Biomedical Engineering (BME) is passionate about harnessing technology for effective affordable solutions for communities in need. Our academic faculty and researchers empower our students with a strong engineering foundation and the necessary digital skills to make a difference to beneficiaries. We have been doing this for years through our BME for Good (bGood) programme. Collaborating with an extensive network of community partners, bGood (<https://nusbme.wixsite.com/bggood>) brings faculty and students together with senior and disability communities in Singapore to deliver cost-accessible and bespoke solutions not reached by commercial enterprises.



### Impact Proposition



Expanding from bGood, **Bioengineering for Global Health (bGlobal)** is our latest overseas immersion and experiential educational programme where aspiring biomedical engineers work with and learn from regional partners and community healthcare workers. Emphasising on frugal innovation, efficient use of energy and creation of local economic opportunities, participating faculty and students experience first-hand the range of public healthcare issues faced by the community, before working in teams to uncover affordable and sustainable tech-based solutions.

At bGlobal's inaugural run in 2023, BME seed-funded 16 staff and students to partner non-profit Maluk Timor at Timor-Leste where 14 projects were ideated. We desire to do more with like-minded partners to grow bGlobal into a sustained programme where generations of aspiring biomedical engineers can reach out to regional communities and deploy their engineering expertise towards uplifting public healthcare. An **endowed gift of S\$750k** would go a long way to making this a reality.

