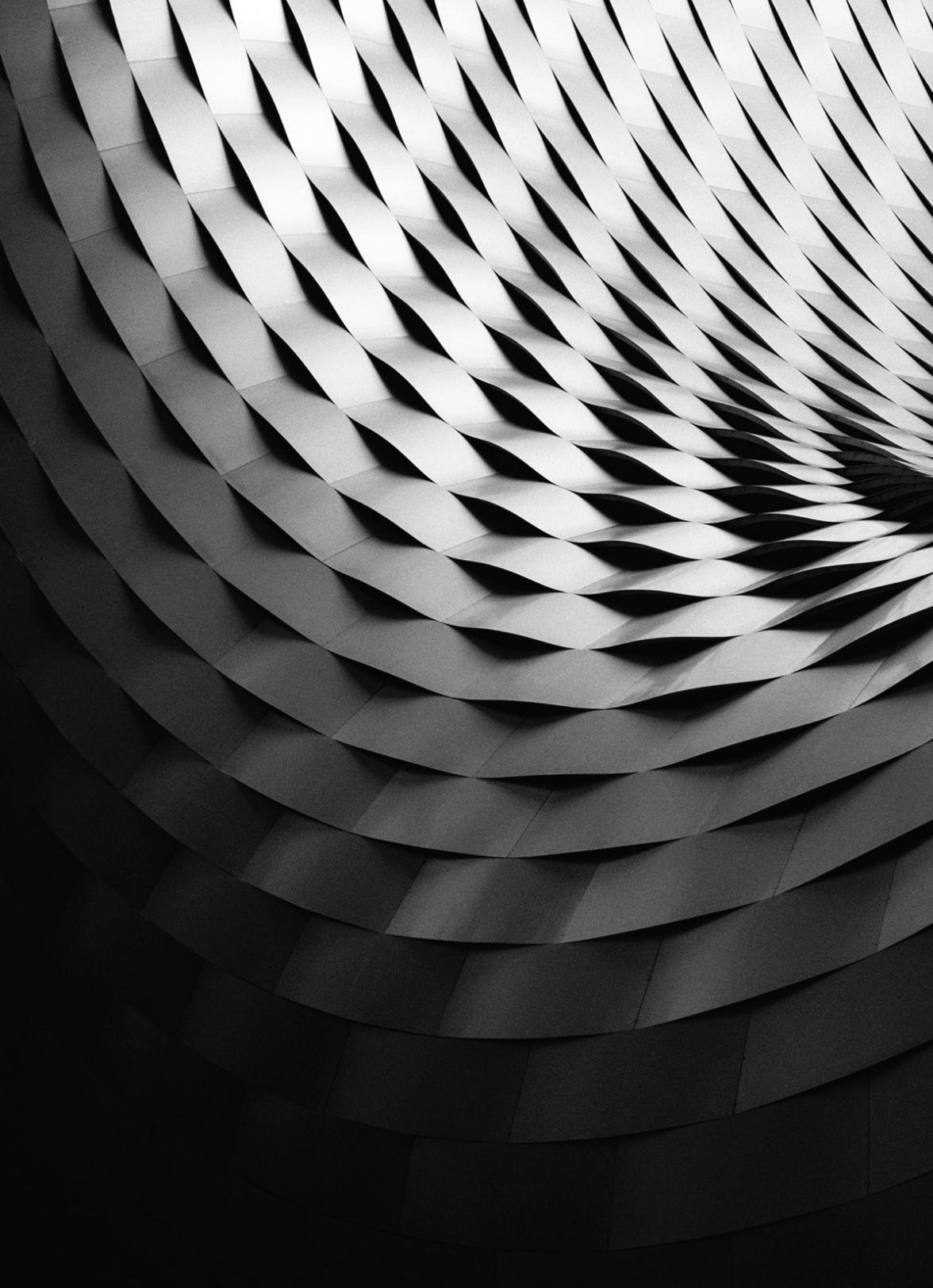




SINGAPORE BIODESIGN

Offerings





Modelled after the established Biodesign Programme at Stanford University, this capability development initiative aims to train and nurture the next generation of health technology innovators for Singapore and Asia.

Launched in 2010, the Singapore-Stanford Biodesign (SSB) Programme is a joint partnership between the Agency for Science, Technology and Research (A*STAR), the Economic Development Board (EDB) and Stanford University.

Since 5 December 2018, SSB has been re-named as Singapore Biodesign (SB), funded by the National Research Foundation, signifying a move to being more Asia-centric and implementation focussed whilst keeping up with industry trends to bring about economic benefits and healthcare value through HealthTech innovation training.

MISSION

High-touch development of HealthTech talent centered on needs-based approach and quality industry mentoring to accelerate health technology innovation and adoption for Asia's (SG, China and ASEAN) unmet healthcare needs.

VISION

To be Asia's leading HealthTech talent development and knowledge partner for accelerating health technologies innovation towards commercialization and adoption.



TALENT

Shift from learning to doing:
Enhancing Biodesign needs-driven
methodology through hands-on and
experiential training



INNOVATIONS

Contextualizing for implementation by
understanding global market needs and
supplementation with real-world industry
mentors for successful startup creation
and healthcare adoption



COMMUNITY

Increased interactions with Singapore
community & regional networks through
talent placement and collaborations to
advance innovations



High-touch mentoring of
multi-disciplinary teams in the
healthtech innovation process.

Fellowship

The flagship Singapore Biodesign (SB) Fellowship is an intensive 10-12 month hands-on team-based training on the entire process of needs-based health technology innovation, focussed on developing new health technologies for unmet clinical needs in Asia.

The fellowship will feature high-touch training and mentorship by esteemed mentors from Singapore Biodesign and our joint program partner, Stanford Byers Center for Biodesign. The fellowship mentors span a wide range of experience from various disciplines such as clinical, technical, venture and industry.



2017 Fellows' visit to Cardiology Suite, Awal Bros Makassar, Indonesia, hosted by Dr. Bam Bang Budiono.



2014 Fellows taking a tour of Venta Medical's manufacturing plant in US.

1. Multidisciplinary team of 4-6 Fellows comprising of engineers, doctors and business/industry professionals will have privileged access to mentors and experts from the wider SB network, both in Silicon Valley and in Asia.

2. Immerse in regional countries i.e China, Indonesia, to investigate unmet clinical needs and develop understanding of the local healthtech ecosystem.

3. Spend 4-6 weeks in Stanford to further refine and develop implementation plans for their top projects under the guidance of experts from Silicon Valley, so as to secure follow-on funding for continue their projects.

4. Receive stipend, overseas living allowance and international travel support.

Programme Structure

Example of the 10-12 month SB fellowship calendar showing the iterative 'Identify', 'Invent' and 'Implement' phases of Biodesign.



Enhanced Features from FY19



JOINT PROGRAM PARTNER WITH STANFORD BIODESIGN

Sharing of best practices in the Biodesign methodology from Stanford Biodesign and access to Silicon Valley's healthtech network



NEEDS VALIDATION IN APAC REGION

Fellows get first hand insights into Asian healthcare needs from both clinical and non-clinical settings



HIGH-TOUCH INDUSTRY MENTORING

Fellows get access to a dedicated stellar mix of clinical, Biodesign and industry mentors with >100+ years of combined experience



INCREASE ON-THE-JOB LEARNING

Fellows will derive greater experience and insights by applying the Biodesign process through longer-term hands-on attachments to innovation projects



INCREASE FELLOWS INTAKE

2 teams of 3 pax each will be selected from FY20 onwards, spurring greater sharing across teams and healthy competition

Biodesign Workshops

SB offers a selection of Biodesign workshop and healthtech training initiatives for industry and medical professionals working in the area of health technology innovation who would benefit from having a framework to de-risk their innovation projects.

Through such workshops, SB aims to create awareness around the successful Biodesign methodology, to aid in the development of health technologies innovation.

The workshops will feature case-studies, opportunity for hands-on learning and interaction with esteemed speakers in the healthtech industry.

DEEPER ASIA FOCUS

With a deeper focus on Asia and implementation towards commercialization and adoption, SB's workshops and training offerings will provide Asian case studies and targeted consultations with domain experts.

NEEDS-DRIVEN APPROACH

SB aims to provide participants with ample opportunity for hands-on training to appreciate the Biodesign needs-driven process. Participants will be guided by experienced trainers and get to work in a multi-disciplinary group setting to tackle real world examples.



Teaching Biodesign through real-world case studies



Workshop participants from multi-disciplinary background learn from interactive sessions

Offerings



1-DAY INTRODUCTORY BIODESIGN SEMINAR

For uninitiated aspiring inventors



3-DAY EXPERIENTIAL LEARNING WORKSHOP

For project teams to learn and apply Biodesign process through multi-disciplinary learning and networking



5-DAY PROFESSIONAL BOOTCAMP

Featuring esteemed guest lecturers, networking and team building opportunity for mature teams

FEE

Available on enquiry, minimum attendance required.

WORKSHOP CUSTOMIZATION

On special request, customized versions of the Biodesign workshop may also be organized depending on audience and deliverables.

PAST WORKSHOP PARTICIPANTS



Enhanced Offerings: One-stop Platform for HealthTech Innovation Training

Following on the introductory Biodesign workshops, SB aims to serve as a one-stop platform for the healthtech innovation training needs of the community throughout the year.

1. Provision of free open-access lectures to general audience
2. Thematic and dedicated hands-on workshop by esteemed domain experts in areas that require deeper dive; Fee: S\$500/pax/0.5d workshop

	TOPIC	LECTURE	WORKSHOP
IDENTIFY	Healthtech Innovation Proccsss Overview: 5-day Biodesign Bootcamp		✓
	Introduction to MedTech / HealthTech Industry	✓	
	Asia Healthcare System and Medical Device landscape: Singapore	✓	
	US Healthcare System and Medical Device landscape	✓	
	Asia Healthcare System and Medical Device landscape: China	✓	
	Asia Healthcare System and Medical Device landscape: Indonesia	✓	
INVENT	Healthtech Assessment: Value and Reimbursement		1D workshop
	Design Thinking Lecture and Workshop: Ideation, Rapid Prototyping		0.5D workshop
	Product Engineering: R&D, Engineering risks, Quality		1D workshop
	Part I: Digital Health 101		0.5D workshop
	Part II: Mobile App Development - Lecture	✓	
	Part III: Health Data Query		0.5D workshop
IMPLEMENT	Regulatory Workshop		0.5D workshop
	IP & Protection in China	✓	
	Quality Management		0.5D -1D workshop
	Clinical Strategy	✓	
	Business Model 3-Day Workshop		3D workshop
	Operating Plan and Financial Modelling	✓	
	Valuation, Deal Structuring, Deals Negotiation	✓	
	Understanding Term Sheet	✓	



SB is committed to collaborate with like-minded entities in the local and regional ecosystem to increase the throughput of projects to achieve economic value and healthcare adoption.

Innovations

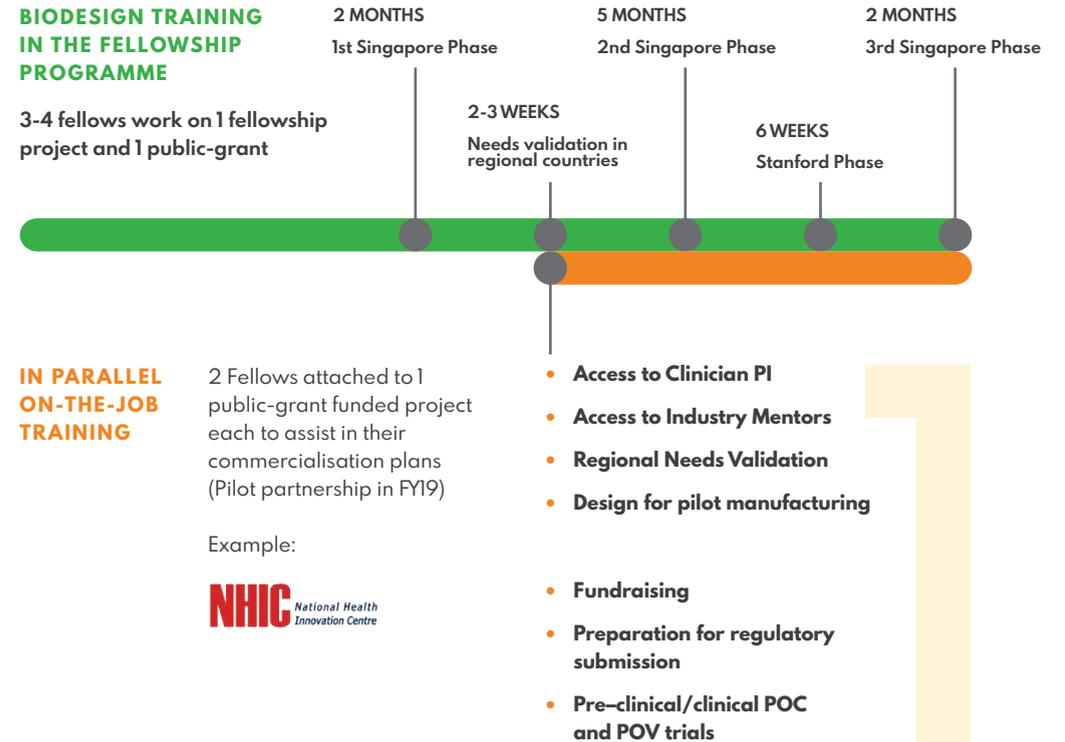
SB aims to generate a successful project pipeline featuring:

1. In-house greenfield projects from our fellows (current and alumni) and staff;
2. Through partnerships and project-based mentoring programmes; and

3. The provision of an engineering lab with in-house product engineer to support early engineering prototyping needs (Tinkerlab)

These initiatives will help empower would-be entrepreneurs with the right skills and to encourage and catalyze spin-offs on sufficiently de-risked projects.

SB-ORIGINATED INNOVATIONS



SB-ENABLED INNOVATIONS

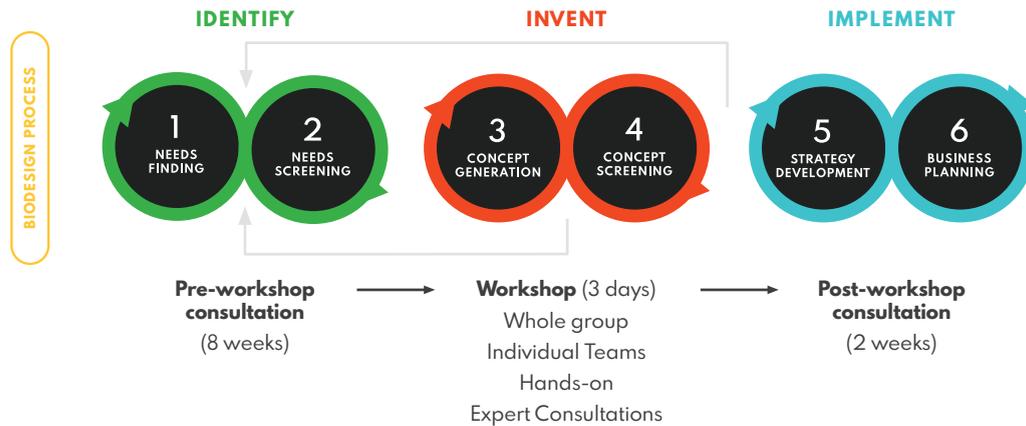
On a competitive basis, SB will also be offering support for up to 1-2 project teams per year for a 9-12 week project-based mentoring programme.

SB support may include the following:

- Project Management
- Access to SB mentors
- Curation/Validation of need
- Early engineering evaluation

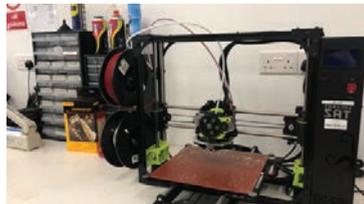
In the end, SB aims to guide the formulation and/or advancement of a de-risked project worthy of follow-on funding.

Example of collaboration to guide project scoping and curation:



TINKERLAB

Over the years, SB has acquired a range of engineering assets and has set up a rapid prototyping space at the engineering lab at A*START Central. The space has been upgraded to improve the access of its equipment and in-house services to support the early engineering needs of healthtech projects.



COMMUNITY

Our community is the most important and valuable asset. SB aims to build on its local and international community to advance our health technologies goals.

Community

SB has been playing the role of an enabler to bring together various players of the HealthTech ecosystem in Singapore and Asia.

SB's partner network to date, comprises of:



INDUSTRY NETWORK

ACADEMIC PARTNERS

59 MENTORS/
SPEAKERS **7** CORPORATE
MEMBERS

9 UNIVERSITIES

CLINICAL PARTNERS

ACROSS DIFFERENT CONTINENTS

15 HOSPITALS
& MEDICAL
CENTRES **1** HOSPITAL
CLUSTER

AND GROWING.

SB hopes to provide the community with thought leadership and perspectives on the challenges and future of the medical technology industry.

Further partnerships, both locally and regionally, will continue to be forged and maintained as SB continues to focus on people as the core of our programme.

Community

ALUMNI EVENTS

Alumni engagement will be an important component and enabler of SB's mission as we see the emergence of like-minded 'Biodesigners' spearheading local healthtech initiatives and forging new collaborations. Our alumni events includes social gatherings featuring alumni sharing, networking opportunities with invited guests and open Q&A sessions to garner feedback for SB's activities. They will also include intimate fireside chats for focused conversations with invited experts to bolster learning.



Homecoming 2017: Gathering of our fellows, class students and mentors



MOU Signing Ceremony between Singapore Biodesign and National Health Innovation Centre in Dec 2018

LOCAL & REGIONAL PARTNERS

SB is actively involved in forging its local and regional partner network to provide thought leadership for its talent base and to encourage the development of a regional collaborative hub with a view for implementation.

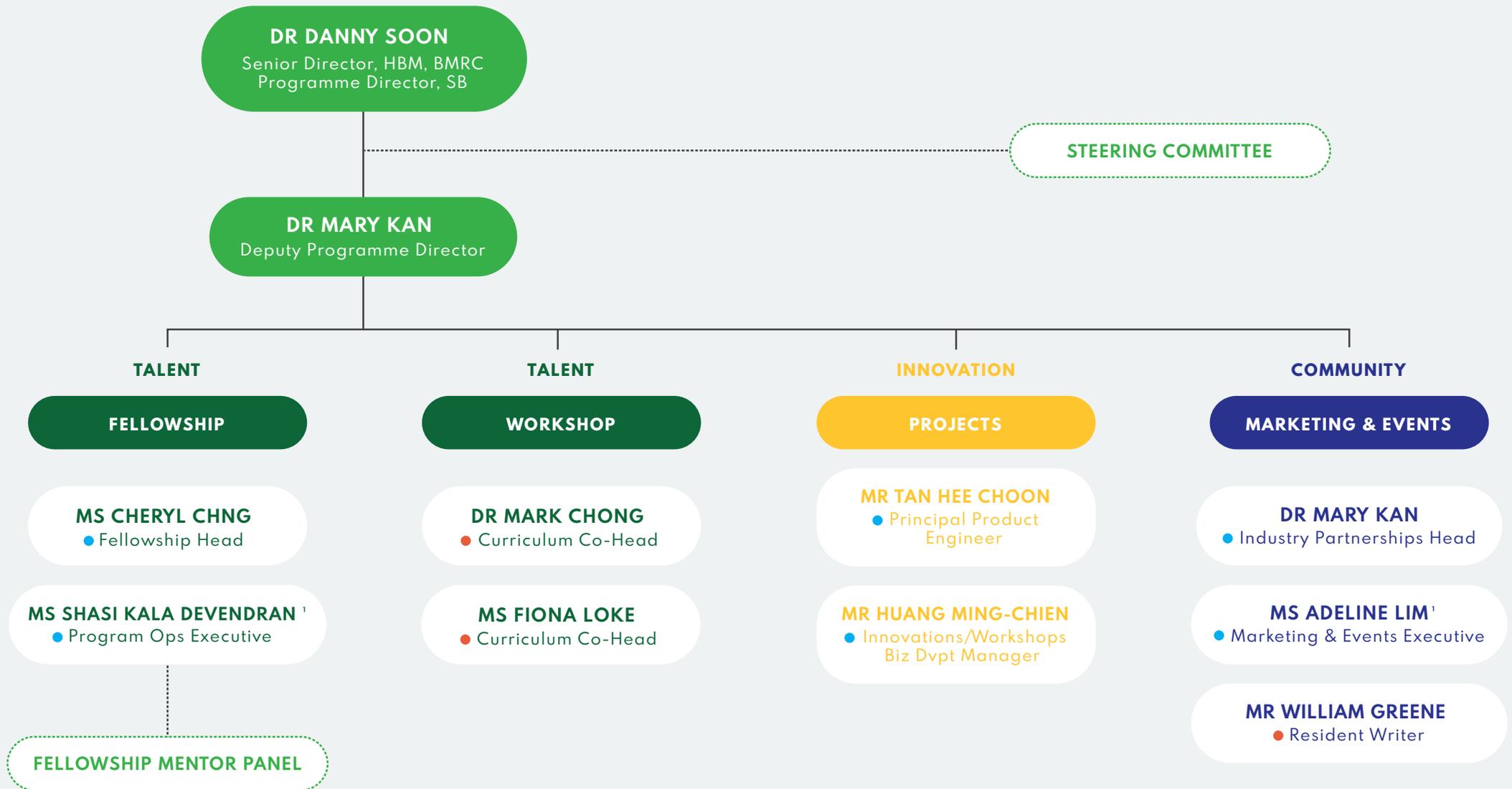
ANNUAL THOUGHT LEADER SERIES

SB organises an annual Thought Leaders Series, where invited healthtech luminaries will share their experience on the importance of needs-driven innovation with an added focus on Asia.



TLS 2018 featuring esteemed international speakers discussing opportunities surrounding diabetes technology innovation in Asia

Organisation Structure



¹ Matrix structure adopted; Program Ops team to be interfaced with specialty tracks; '1' indicates dual roles in matrix structure

LEGEND

- Headcount
- Adjunct / Consultant

Steering Committee



PROF WONG TIEN YIN (CHAIRMAN)

Deputy Group CEO, Research and Education, Singhealth
 Medical Director, Singapore National Eye Centre
 Academic Chair, SingHealth Duke-NUS Ophthalmology and Visual Sciences Academic Clinical Programme



PROF LONDON LUCIEN OOI

Professor & Associate Dean, Admissions, Recruitment and Financial Aid, Duke-NUS
 Clinical Faculty, SingHealth Duke-NUS Surgery Academic Clinical Programme
 Senior Consultant, HPB & Transplant Surgery, SGH



PROF PAUL YOCK

Founder & Director, Stanford Byers Center for Biodesign, Stanford University



MR FREDRIK NYBERG

Managing Director, Asia Pacific, MedTech Innovator



MR JOHNNY TEO

Director, Health & Biomedical Sciences, EnterpriseSG



MR JEAN-LUC BUTEL

Global Health Advisor, K8 Global



PROF TAN SIZE WEE

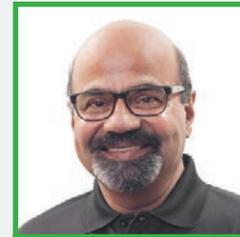
Executive Director, SERC, A*STAR



DR DANNY SOON

Senior Director, HBM, BMRC, A*STAR
 Programme Director, Singapore Biodesign, A*STAR

Fellowship Mentor Panel



MR ALOK MISHRA

Industry Mentor
 CEO, Value Addition



PROF LONDON LUCIEN OOI

Clinical Mentor
 Senior Consultant, HPB & Transplant Surgery, SGH



MS FLORENCE LEONG

Industry Mentor
 Founder, Director, Kosmode Health Singapore Pte Ltd



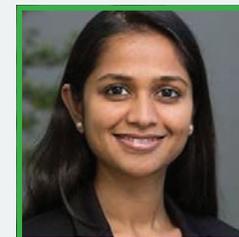
MR PEH RUEY FENG

Founding faculty and Singapore Biodesign Mentor
 CEO and Co-Founder, Advent Access



PROF CHRISTOPHER SHEN

Stanford Biodesign and Global Partnerships Mentor
 Managing Partner, Qiming Ventures



MS RITU KAMAL

Stanford Biodesign Mentor
 VP, Product, Fabric Genomics

Empowering Asia's Healthtech Innovators of Tomorrow

CONTACT US

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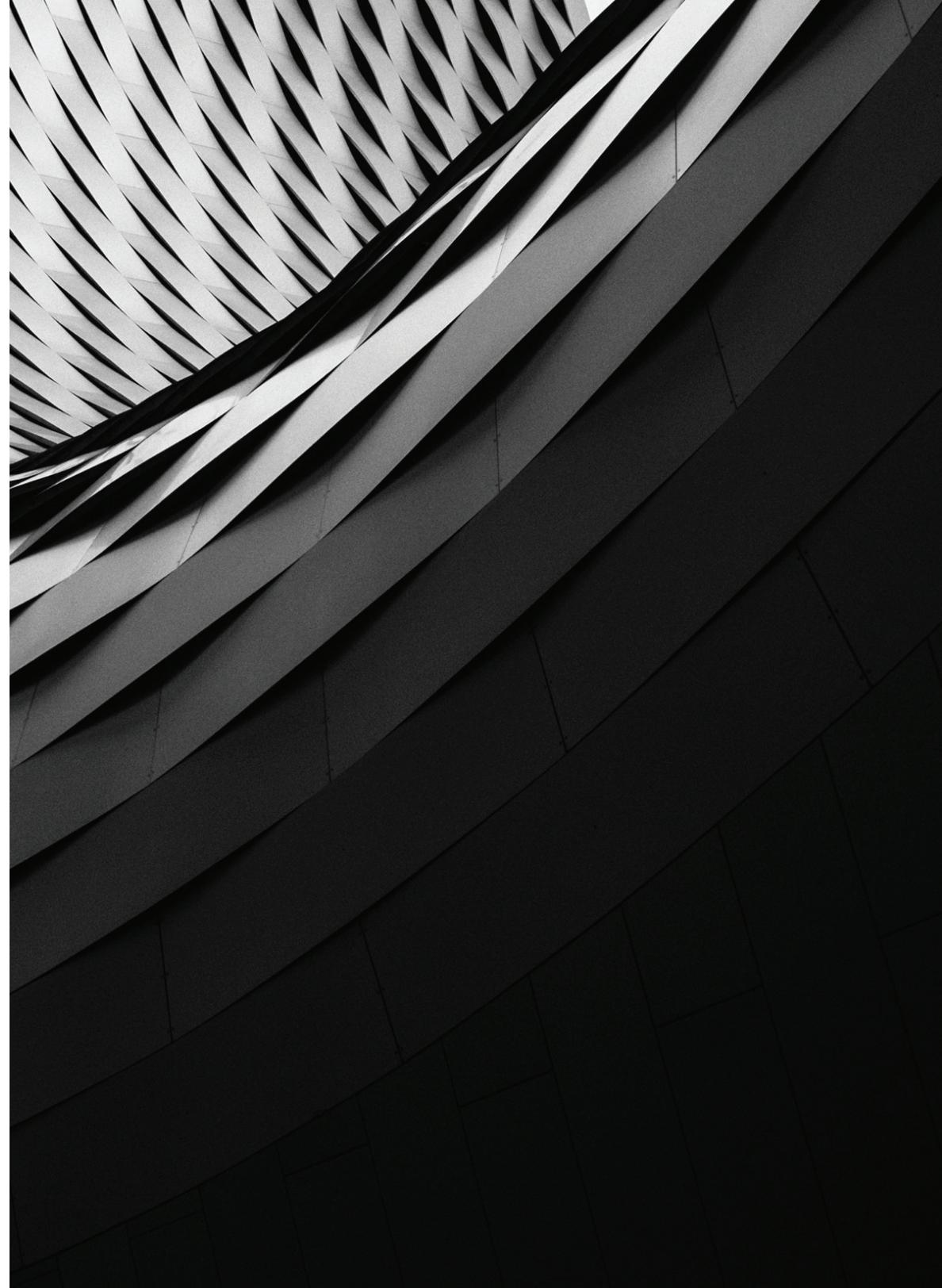
TEL: +65 8793 6406

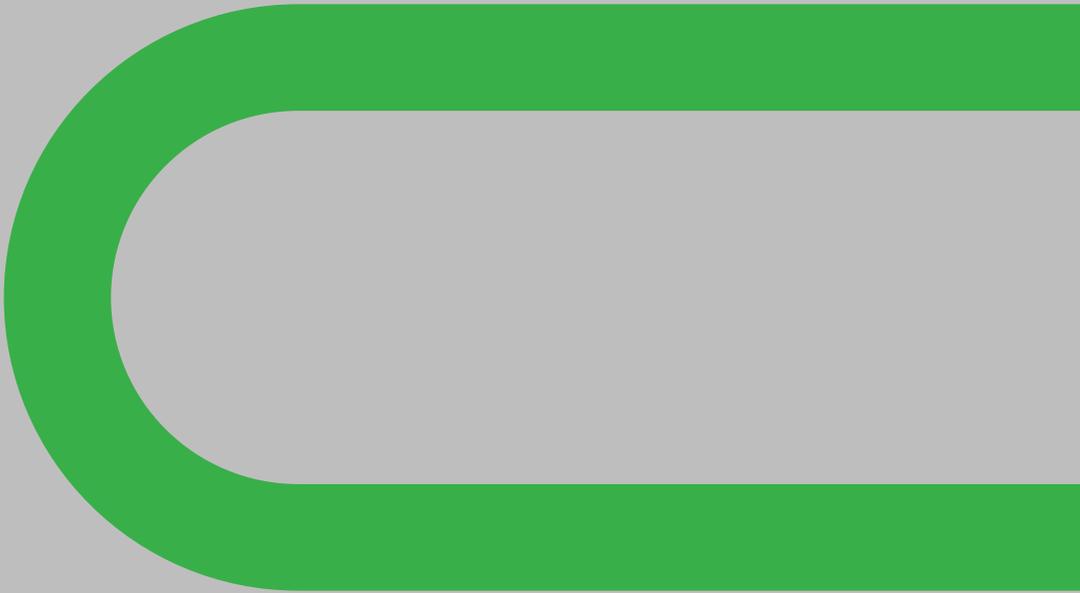
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Agency for
Science, Technology
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JOINT PROGRAM PARTNER:

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