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“SMARTER HEALTHY CITIES BEYOND COVID-19”

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eHealth and mHealth Beyond COVID-19

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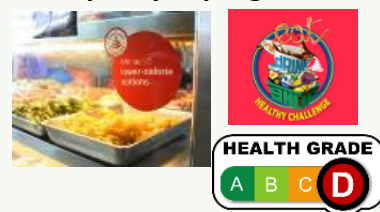
Health Promotion Board (HPB) empowers Singaporeans to take better ownership of their health, through delivery of policies and programmes that will help to educate and nudge behavioural changes, supported by healthy ecosystems in different settings where they could more easily engage in healthier behaviours

Priority areas

Physical Activity:
 flagship progs &
 community exercise
 sessions



Healthy Eating:
 policy & progs



Tobacco Control:
 policy & progs



Screening:
 campaigns & accessibility



Mental wellbeing: progs



Hygiene Campaigns



Active Ageing Programmes



Immunisation:
 Campaigns & subsidisation



Key Enablers

Building supportive ecosystems and amplifying efforts through sustainable partnerships

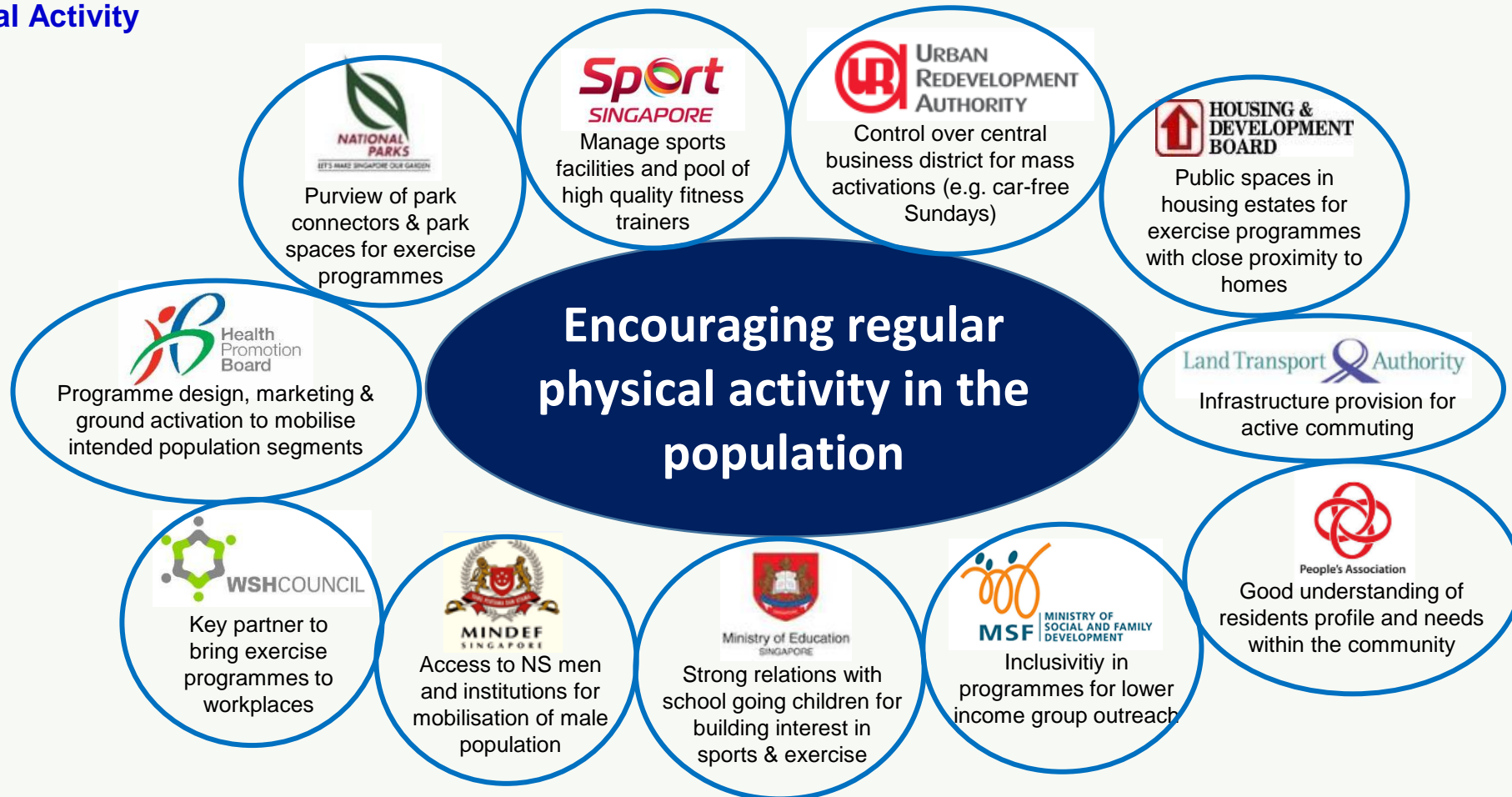


Leveraging technology for better precision in health



HPB collaborates with public agencies by harnessing complementary expertise to extend outreach efforts and build supportive ecosystems where Singaporeans study, work and live

Illustration: Physical Activity



Since 2016, HPB has tapped on ubiquitous technology to gain greater capability in monitoring and delivering programmes that nudge citizens towards healthier behaviours

National Steps Challenge (NSC)

- Encourage residents to reduce sedentary behaviour and increase physical activity
- >1.7m participants cumulatively** over the past 5 seasons

Scale up progs to an unprecedented scale & measure effectiveness with **higher fidelity**

NSC Sign-Ups across the Seasons:



Trend of Daily Average Steps across 5 NSC Seasons:



Eat, Drink, Shop, Healthy (EDSH)

- Participants are incentivised with rewards through the use of digital platform (H365 app)
- Motivate retail partners to promote healthier items & encourage consumer participation via scanning of QR codes



Users earn Healthpoints through QR-code scanning technology



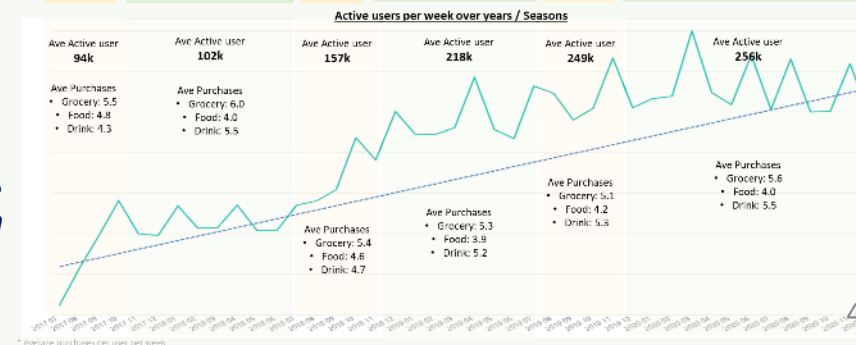
Use of Healthy 365 (H365) App to scan QR codes



“All year round” consumer engagement programme, allowing Singaporeans to earn Healthpoints through partners’ touchpoints daily

Over 808K consumers to-date have participated (i.e. reaching out to 1 in 3 Singaporean adults aged 20 – 49 yo)

EDSH 2017 Mega	EDSH 2017 Always-On	EDSH 2018 Mega	EDSH 2018 Always-On	EDSH 2019 Mega	EDSH 2019 / 2020 Always-On
n = 327k	n = 439k	n = 539k	n = 649k	n = 748k	n = 813k

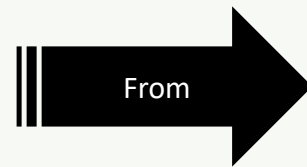


Enhancement of retailers’ POS system to automatically print a QR code on receipt when a healthier item is purchased

HPB is moving from broad-based strategy towards Precision in Public Health (PPH) strategy, that aims to deliver the right intervention at the right time to the right population

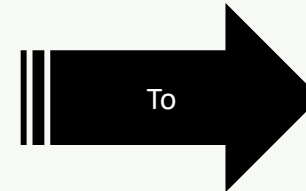
Past: Public Health Education

Promoting mass awareness for healthy living across whole of population



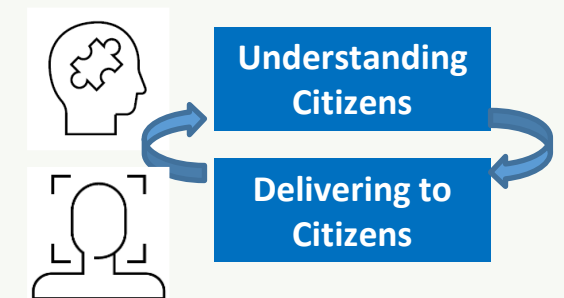
Present: Healthy Eco-systems

Establishing contextualised eco-systems to nudge citizens to live healthily



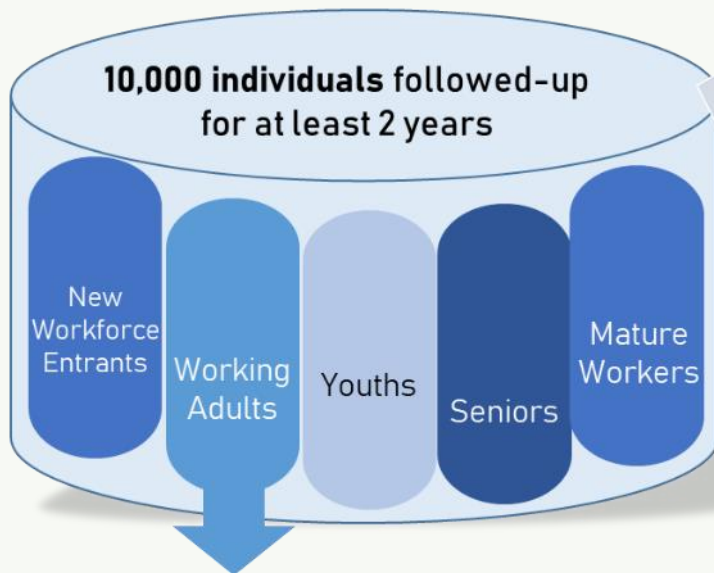
Future : Precision Public Health

Delivering more personalised programmes to individuals



Understanding Citizens

Health Insights Singapore (hiSG): Creating a knowledge base to study interconnectedness of health behaviours and nest studies to test hypotheses



Young working adults aged 21-40 identified as pilot population segment

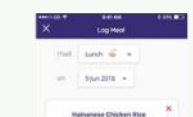
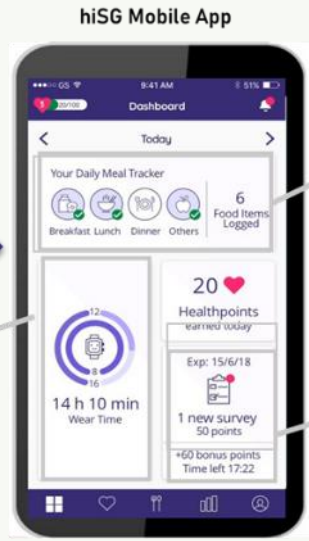
- Period of life stage transitions (marriage, parenthood) which has impact on lifestyle and health behaviours
- Age group where obesity rate spikes up
- Technologically-savvy



Data transmitted to hiSG mobile app

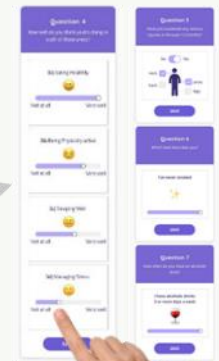


Clock wear time as much as possible



Log meals regularly

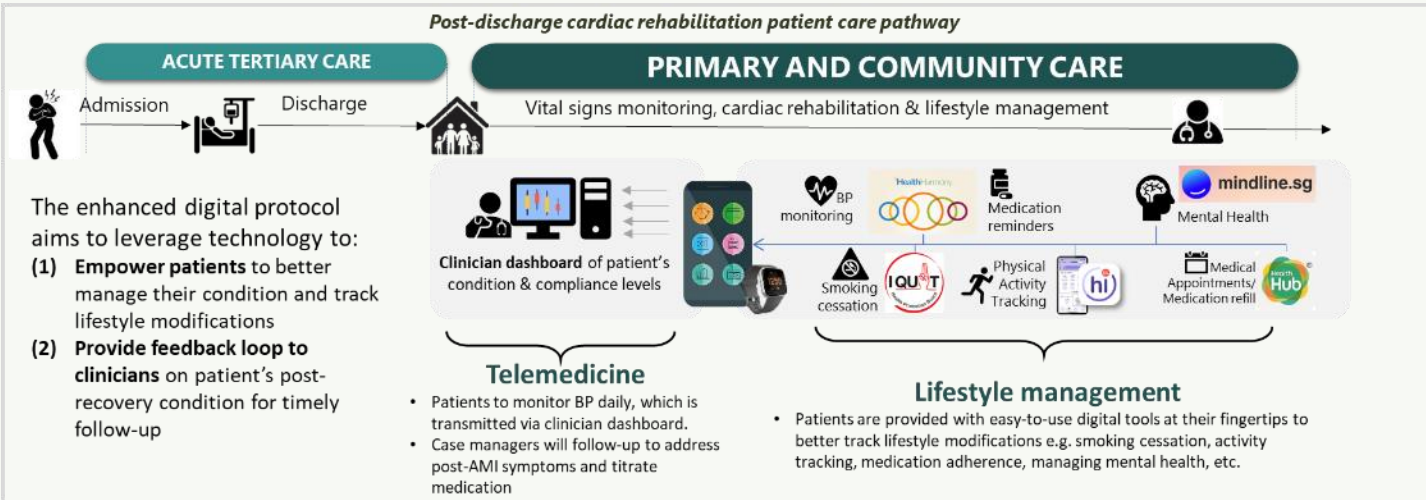
Complete short surveys on health topics



Understanding Citizens

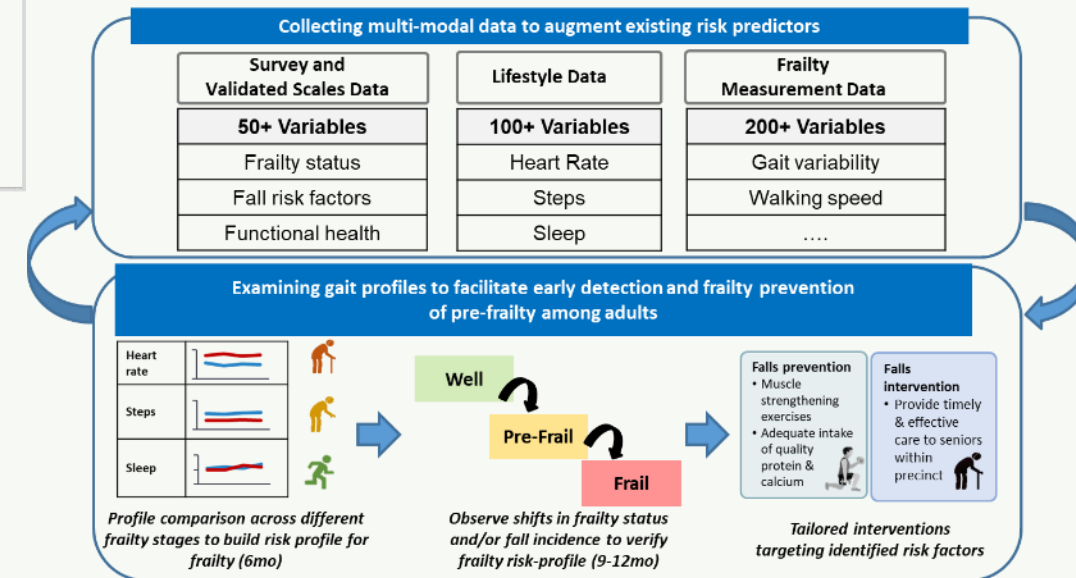
hiSG: Real life application in trialing digitally-enabled care pathways and piloting interventions to prevent pre-frailty

Use case 1: Harnessing multi-dimensional lifestyle data to trial digitally-enabled care pathways combining telemedicine and lifestyle management for post-AMI patients



- The enhanced digital protocol aims to leverage technology to:
- Empower patients** to better manage their condition and track lifestyle modifications
 - Provide feedback loop to clinicians** on patient's post-recovery condition for timely follow-up

Use case 2: Collecting and analysing multi-dimensional data to deepen understanding of key health concerns, and pilot interventions to prevent pre-frailty

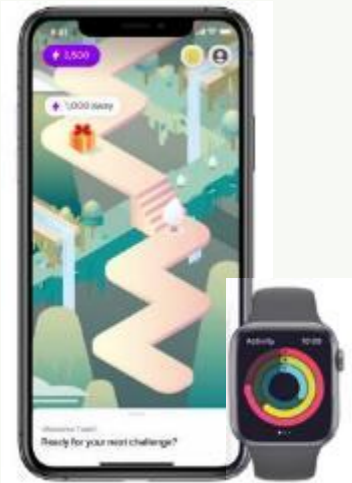
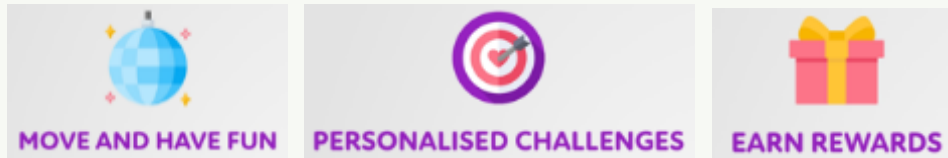



 Delivering
to Citizens

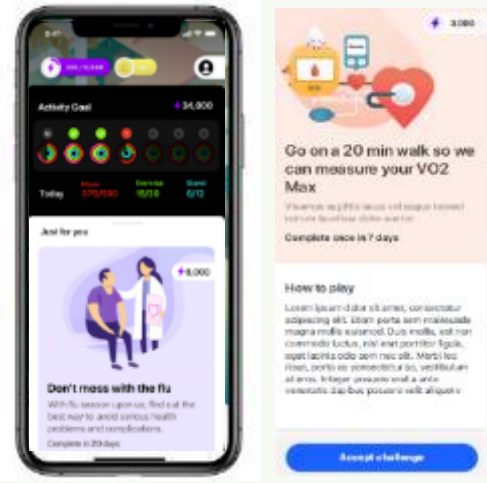
LumiHealth: a personalised health programme that helps and rewards participants for improving overall health and wellbeing through their Apple Watch and iPhone



Gamification for users to:



Participants move through the game to unlock milestones and rewards by completing healthy actions



Different Activity Goals, Wellness Experiences and Just for You Actions are served to users according to their profiles and behaviours

- **Singapore residents** with SingPass account, aged 17 years or older
- Participants can be **rewarded** with up to \$380 worth of HPB eVouchers, over a 2-year period.
- **Components:**
 - **Activity challenge** - physical activity
 - **Wellness challenge** - physical activity, healthy eating, mental health, sleep
 - **Just for you actions** - screening, vaccination, seniors' health

Longer term goal is to enable health research leveraging on the LumiHealth platform

- Programme participants may choose to contribute their data for research and agree to join further research programmes
- Programme data may be combined with other data (e.g. clinical or phenotypic data) to facilitate deeper research



Delivering
to Citizens

LumiHealth has diversified HPB's reach, actively engaging younger adults and improving physical activity, especially among the least active



LUMI
HEALTH

Age profile of Activated Participants



LumiHealth has been successful in **attracting and engaging the youth segment** (below 35 yo).



This **complements HPB's National Steps Challenge**, where drop-outs tend to be higher among the youths, although **engagement among the seniors had been good**.

LumiHealth Participants' Pre-onboarding Activity Levels



LumiHealth attracted a **diverse group** of participants across **different baseline activity levels**.



Majority of the longest cohort who joined in Oct 2020 were **less active adults at baseline**.

Key programme indicators at 10 month mark

Strong retention across all LumiHealth cohorts vs National Steps Challenge

Strong engagement in completing daily activity goals and wellness challenges

Improvement in physical activity, particularly for sedentary group

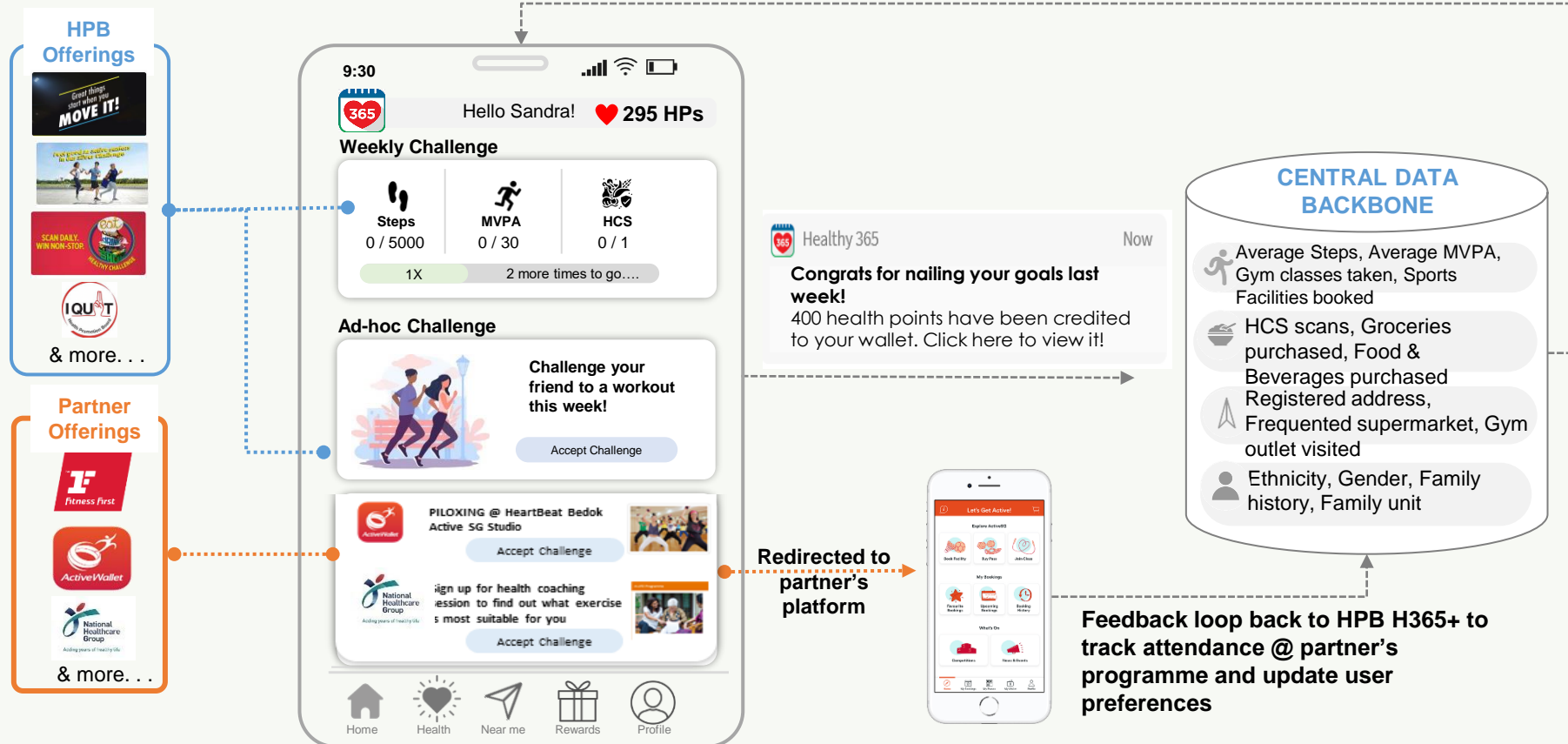


Understanding Citizens

Delivering to Citizens

H365+: Applying learnings to HPB's next generation integrated programme to enable seamless integration of health programmes across settings for all Singaporeans

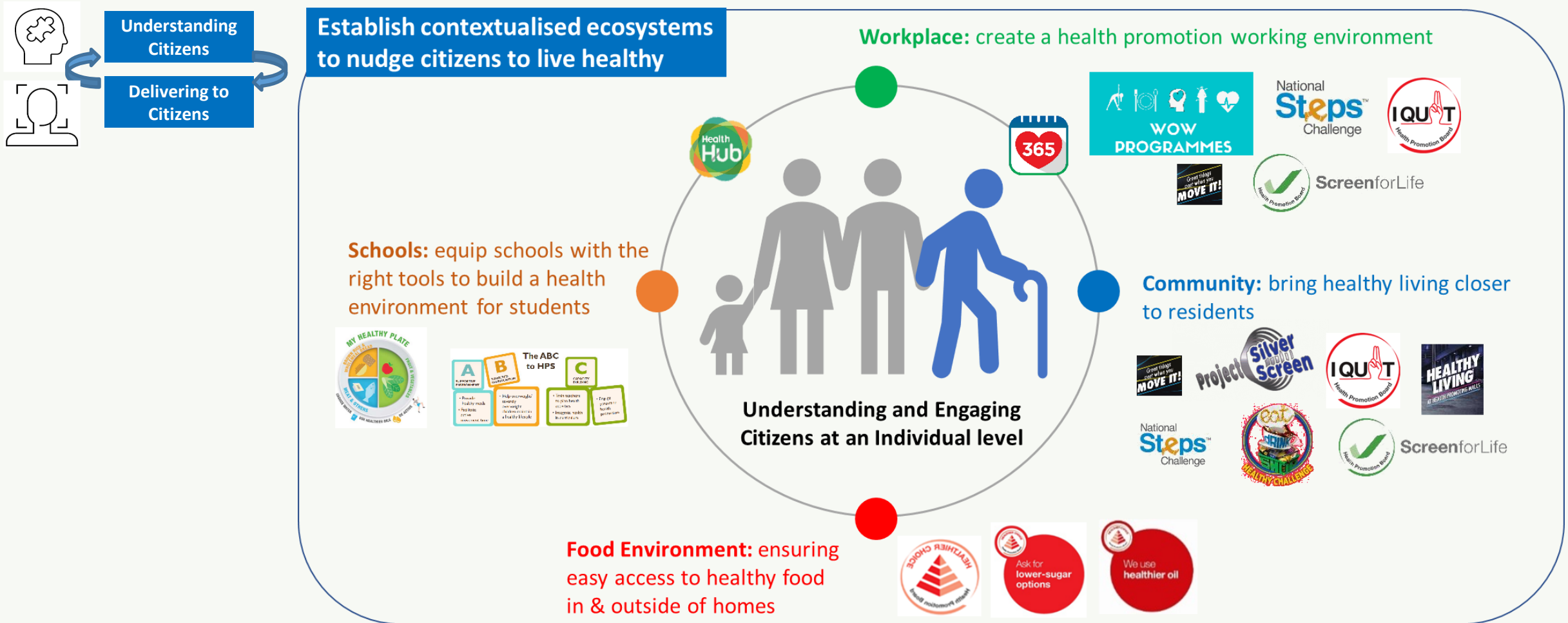
Feedback loop to drive machine learning and enable smart nudging / personalised programming



To citizens

- Access to a more integrated online-to-offline journey, bringing together all pillars of holistic health
- Personalised goals, use cases & recommendations based on individual motivations and progression
- Access to a wider diversity of programmes from HPB and partners
- Earning of HPB rewards across a wider range of lifestyle programmes beyond HPB to stay healthy
- Ability to consent to share their lifestyle data across providers to receive more personalised and relevant offerings, regardless of which provider they use

While technology helps to gain insights and deliver targeted interventions at scale, healthy ecosystems remains crucial to empower citizens to lead a healthy lifestyle



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Thank you

