

OGCIO's Home Quarantine System

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LSCM

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Home Quarantine Support System Overview

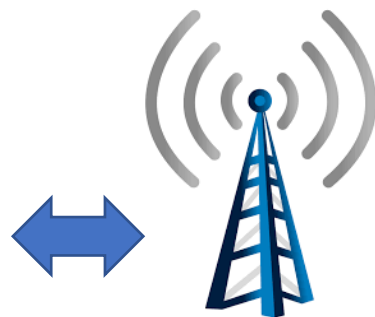


BLE
Connectivity

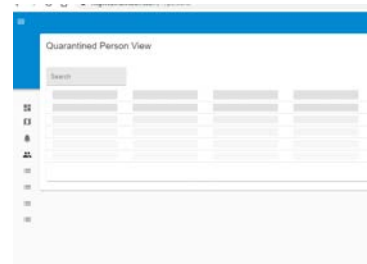
OR



Android Set
Top Box
Installed
SHS App



Existing
Wireless
Network



Centralized
Cloud-based
Monitoring
System

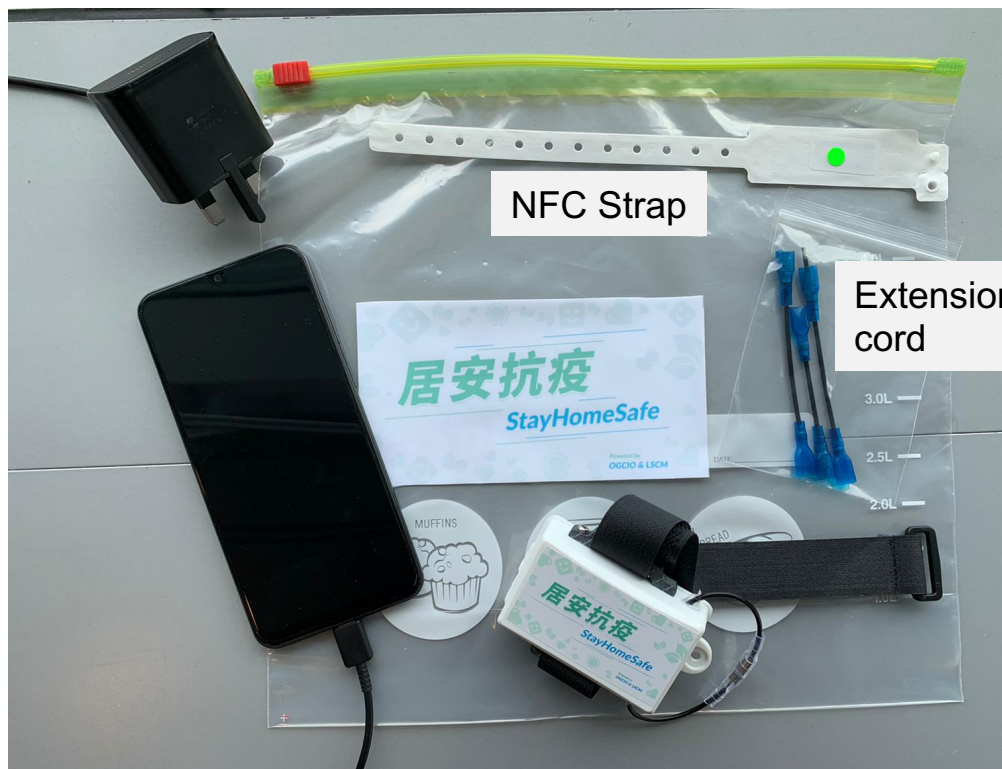


Monitored
by DoH,
OGCIO and
Volunteers of
Civil Servant



Further
Execution
Taken by
Hong Kong
Police Force

LSCM “StayHomeSafe” System Components



Base Station Device
(Smartphone with charger)

Tamper Detection
Electronic Wristband



Mobile App

No	Date	Event
Day 1	2020-01-28 Tue 年初四	Received GCIO's request for "Home Quarantine" mission
Day 2	2020-01-29 Wed 年初五	<div>1</div> Brainstormed on technical solution at LSCM Cyberport Office of LSCM
Day 3	2020-01-30 Thu 年初六	<div>2</div> Proposed technical solutions to GCIO Sourcing raw materials of wristband and electronics parts from HK, China, etc.
Day 4	2020-01-31 Fri 年初七	<div>3</div> OGCIO confirms "Home Quarantine Support System" which combines BLE (passive) + NFC (active) + Smartphone (GPS location & communication) + App + backend system (Dashboard & Alerts) <div>4</div> Collected BLE parts from PolyU (ITF project) QE and HA helped find straps Project and device names proposed and confirmed " StayHomeSafe "



Brainstorming



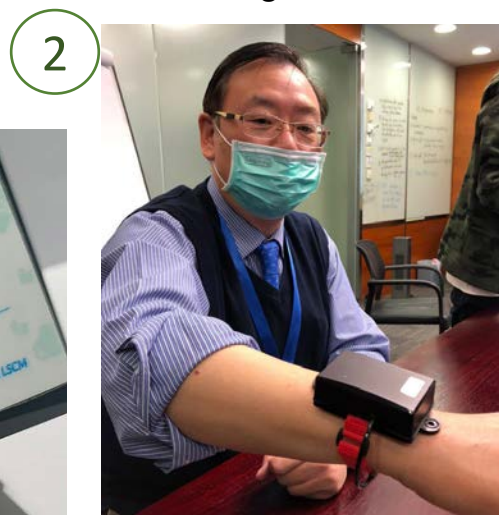
Collecting Parts from PolyU



QE and HA straps



"StayHomeSafe" by OGCIO & LSCM



Initial Idea

Day	Date	Event
Day 5	2020-02-01 Sat 年初八	<div>1</div> <ul style="list-style-type: none"> Product prototyping, Material sourcing, App and System development in STP
Day 6	2020-02-02 Sun 年初九	<div>2</div> <ul style="list-style-type: none"> Prototype evaluation by GCIO Production in progress
Day 7	2020-02-03 Mon 年初十	<div>3</div> <ul style="list-style-type: none"> GCIO announced the solution in the press conference Supported OGCIO to introduce the solution to FHB and DH <div>4</div> <ul style="list-style-type: none"> Answered enquires from Legco members and practitioners



Press Conference



Manufacturing



Evaluation by GCIO

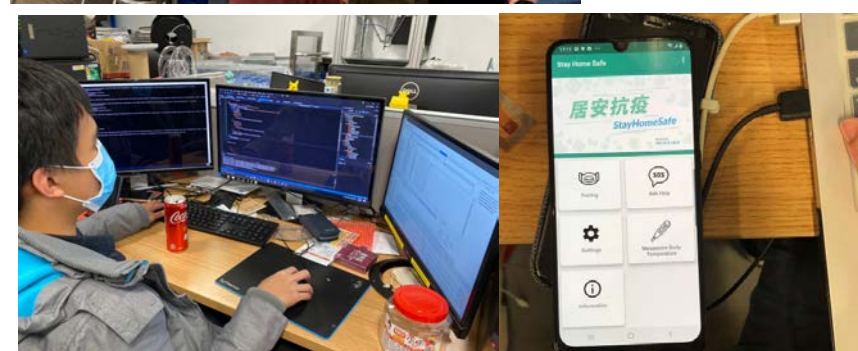


4

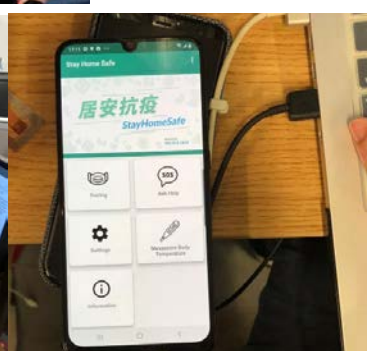
< 日報

政府資訊科技總監林偉喬指，電子手環目的是「阻止佢（隔離者）離家出走」，手環採用BLE低耗電藍牙技術，並配對一個插電掣的電話裝置，若兩者相距逾20至30米，或者隔離者破壞手環或電話，藍牙接駁中斷，系統會通知警方及衛生署。他前日實測確認手環無阻日常生活。不過，系統不涉GPS定位技術，意味隔離者一旦逃走便難以追蹤，林強調需平衡私隱。

資訊科技界立法會議員莫乃光表示，手環使用地理欄柵（Geofencing）技術，配合BLE手帶，「個電話好似圓規個圓心，手環出咗去就會alarm（警報）」，又指若採用GPS技術，耗電量將大增，容易出現假警報。香港資訊科技商會榮譽會長方保僑認為，隔離者非犯人，使用電子腳鐐或GPS定位不合適。



Backend System

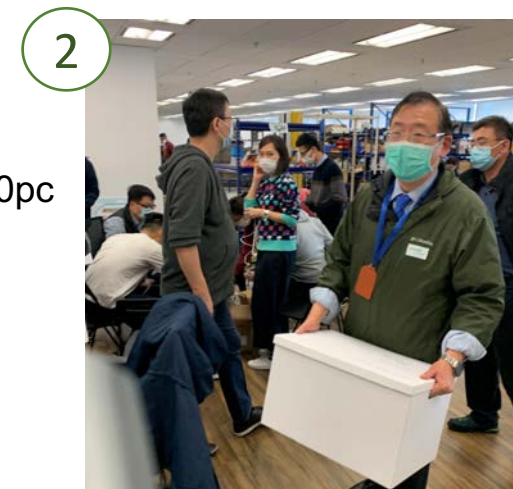


Mobile App

Day	Date	Event
Day 8	2020-02-04 Tue 正月十一	<ol style="list-style-type: none"> 1 PS and GCIO visited LSCM 2 1st batch of 50pc produced 3 Introduced the solution to DH and OGCIO supporting staff 4 1st wristband deployed by DH to quarantine persons. 5 LSCM stationed at Centre for Health Protection (CHP)
Day 9	2020-02-05 Wed 正月十二	<ul style="list-style-type: none"> 2nd batch of 150pc produced (cum. 200pcs) CE announced 14-day quarantine order Conducted user training to DH supporting staff Identifying outsourced production partners (mold, assembly, parts)
Day 10	2020-02-06 Thu 正月十三	<ul style="list-style-type: none"> 3rd batch of 300pc produced (cum. 500pcs) TID helps to receive parts Boosted up productivity and continued material sourcing



PS and GCIO



First 50pc

LSCM Team



CHP



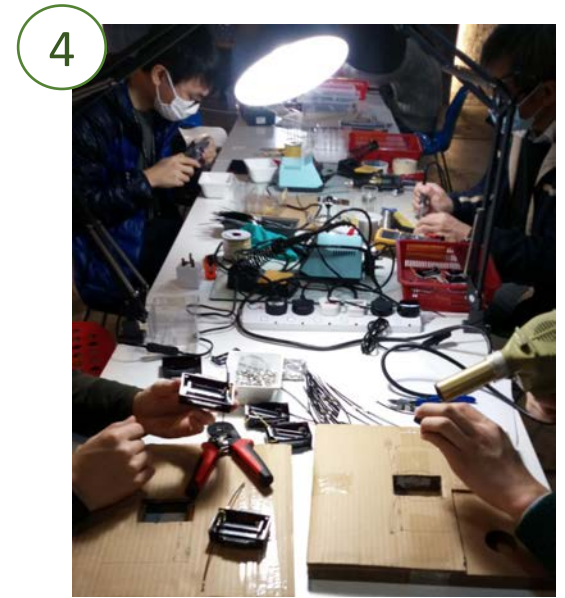
Training to DH



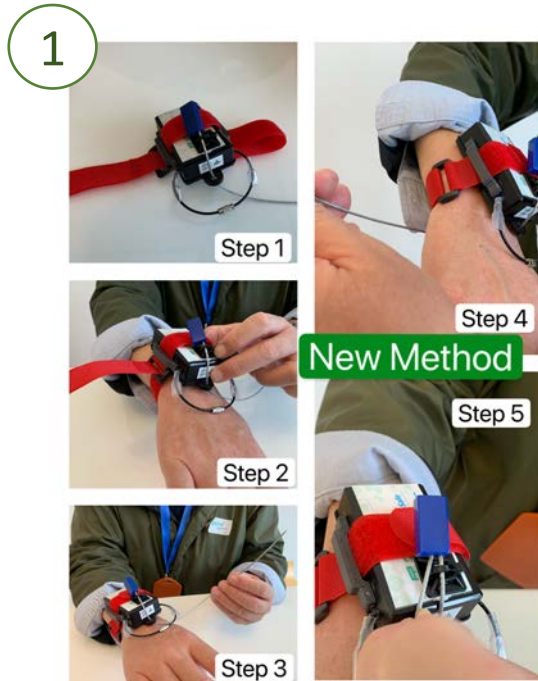
Parts



Day	Date	Event
Day 11	2020-02-07 Fri 正月十四	1 • Continued to enhance product design , user experience and backend support
Day 12	2020-02-08 Sat 正月十五	2 • Met “smart wristband” vendors
Day 13	2020-02-09 Sun 正月十六	3 • New version development • Sourcing from SZ, DG, HK factories and suppliers
Day 14	2020-02-10 Mon 正月十七	4 • In-house and outsourced production in progress



Outsourced HK Factory



New wristband



Vendor Evaluation



Day	Date	Event
Day 15	2020-02-11 Tue 正月十八	<div>1</div> <ul style="list-style-type: none"> • Home visits by LSCM volunteers • Meeting with PS and DGCIO • 4th batch of 145 pcs produced (cum. 645pcs)
Day 16	2020-02-12 Wed 正月十九	<div>2</div> <ul style="list-style-type: none"> • 5th batch of 439 pcs produced (cum. 1084pcs) • Recruited over 60+ volunteers from retirees of HK Police Force and Fire Services Department, etc.
Day 17	2020-02-13 Thu 正月二十	<div>3</div> <ul style="list-style-type: none"> • 6th batch of 250 pcs produced (cum. 1334pcs) • Conducted information session with volunteers.

Home Visit



OGCIO & LSCM Volunteers



“Train the Trainers” video



Briefing to 60+ Volunteers

Day	Date	Event
Day 18	2020-02-14 Fri 正月二十一	<ul style="list-style-type: none"> 7th batch of 250 pcs produced (cum. 1500pcs) "StayHomeSafe" ready at 3 Boundary control points
Day 19	2020-02-15 Sat 正月二十二	<ul style="list-style-type: none"> Sourcing and procurement from EVERYWHERE Concurrent product reengineering and Procurement and Sourcing
Day 20	2020-02-16 Sun 正月二十三	<ul style="list-style-type: none"> Prepare production of 10,000 pcs



Boundary Control Points

2



Big Bull Turtle
1.0



Big Bull Turtle
1.1



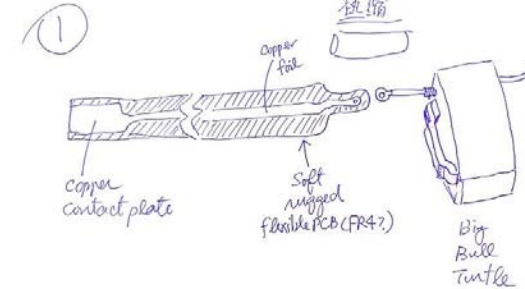
Big Bull Turtle
2.0



SkyTech



WiSilica



Enhancements



CSD
Wristband



Big Bull Turtle
1.5



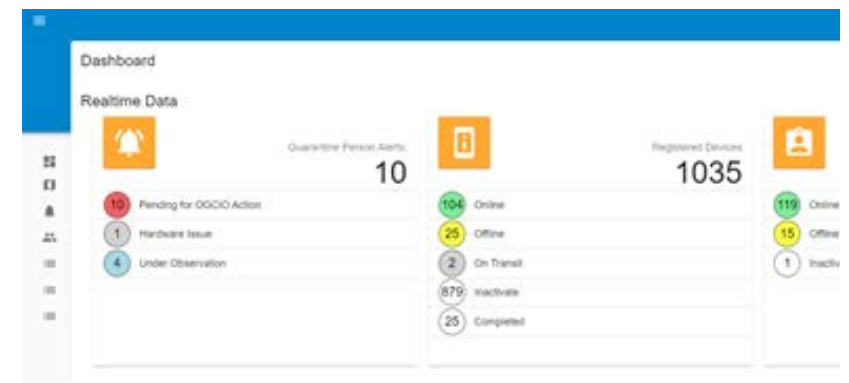
Valta



iRadio



ASTRI





24x7 Backend Support by LSCM



Commissioner of Police
on Day 19 (Sat)



Chief Executive
on Day 20 (Sun)



Commissioner for Innovation
and Technology on Day 21 (Mon)

Chief Executive Visit on 20 Feb 2020



From 20 Feb Onward...



QC Centre



Distribution Centre



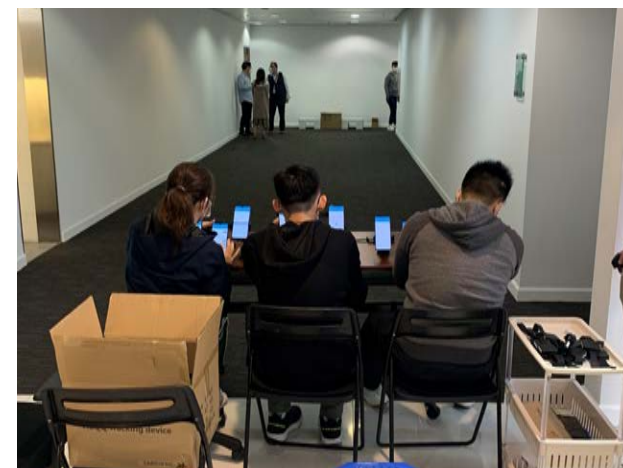
Multimedia Centre



Outsourcing Centre



Warehouse



Volunteer Centre

Support from Many Parties



Volunteers



Technology Companies, HKPC and HKSTP



Manufacturers



Innovation Technology Commission

CE Visit – 20 Feb 2020

行政長官探訪物流及供應鏈多元技術研發中心
及與科技初創公司會面

20.2.2020

**Running Change,
Running Test,
Running Order,
Running Everything...**

Summary: Factors that help make the efforts possible

1. Multiple technology disciplines within LSCM

- IoT, Robotics/ Mechanical, Software app, System Integration, etc.

2. Extensive Experience in Public Sector & Industry (ITF Platform & PSTS & PRP projects) help prepare building blocks such as:

- Device Raw Materials from Smart City projects
- Software Routines from projects for LandsD, CEDD, TD, Customs, CSD

3. Trust of OGCIO, ITB and ITC

4. Get help from different parties

- Govt. Depts (Police, FSD, Customs, TID, HA, LandsD, HKSTP, HKPC, 深圳市坪山區政府...)
- Commercial organizations from Manufacturers, Telco, Healthcare, Technology and Logistics sectors

5. Team spirit, dedication, professionalism and love of our City



Logistics and Supply Chain MultiTech R&D Centre

物流及供應鏈多元技術研發中心

THANK YOU