

Final Presentation

Changi STRIPE

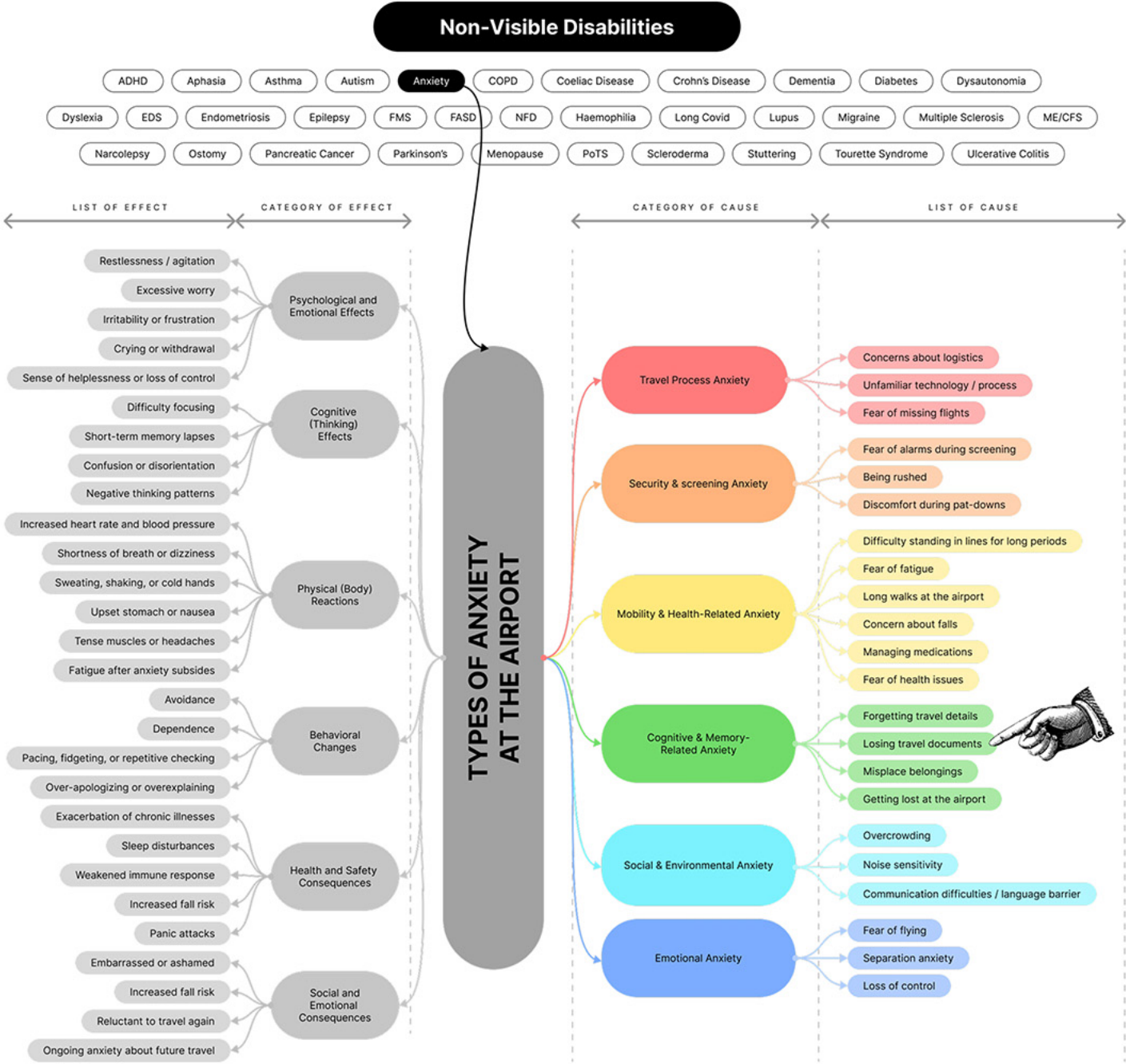
Changi STRIPE: empower elderly travellers by providing confidence, inclusive, and integrated pass experience at Changi Airport

CHANGI STRIPE

Empowering Elderly Travellers at Changi Airport



Anxiety comes in many forms & complexities



Understanding anxiety further

User research: to better understand how our proposed solution could help reduce travel anxiety among elderly passengers.



Anxiety is present at almost every phase of the departure process; however, some instances are minor and often go unnoticed

Many travellers have already taken preventive measures to manage their flight-related anxiety such as checking in early, arriving at the airport ahead of time, or pre-booking their preferences seat (aisle) & mode of transportation.

The Complete Departure Process

Panic, annoyed, anxiety, confused

*Anxiety may already begin even before travellers arrive at the airport:
Somehow, we still hold certain assumptions that anxiety may already begin even before travellers arrive at the airport.*

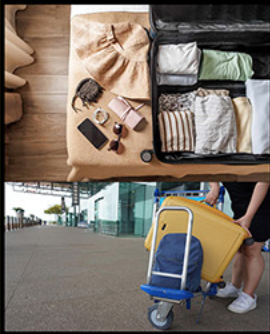
Confused

Stress

These are residual worry, but occasional relief such as feeling impatience, stress, irritated, annoyed, confused, worried, frustrated

Annoyed

Pre-Flight Check



Reached Airport & Check-in



Bag Drop



Security Clearance & Immigration



Wayfinding



Departure Gate



Boarding & Complete



Looking at each step, what is your biggest worry or concern?

THE CONCEPTUAL SHIFT

Finding Opportunity

Accessibility Features
(Help on Request)

Inclusive Infrastructure
(Help to Prevent)

FROM REACTORY

TO ANTICIPATORY

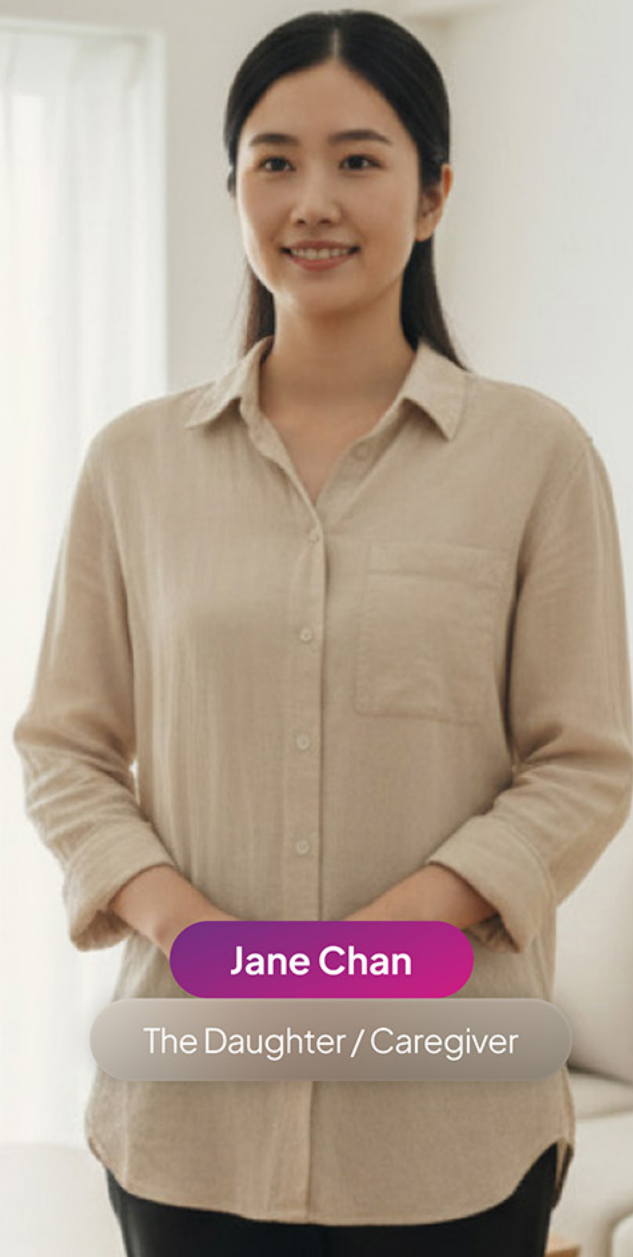
How might we create an anticipatory and inclusive travel experience for elderly travellers at Changi Airport, helping them feel safe, empowered, and free from travel anxiety?



John Chan

The Elderly Passenger

! Metal plate inside his left leg & hearing loss.



Jane Chan

The Daughter / Caregiver



Jonathan

Changi Care Ambassador

CHANGI STRIPE

Empowering Elderly Travellers at Changi Airport



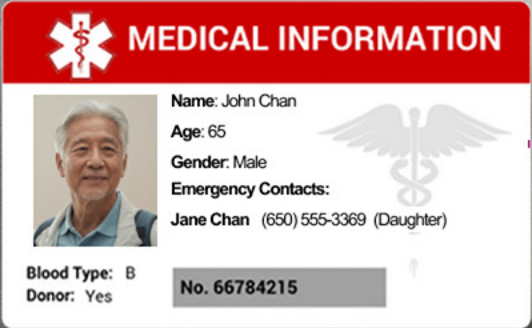
It's a passive device that stores no data
and requires no charging

**Access
and Identity**

Wayfinding

**Real Time
Notifications**





MEDICAL INFORMATION

Name: John Chan
Age: 65
Gender: Male
Emergency Contacts:
Jane Chan (650) 555-3369 (Daughter)

Blood Type: B
Donor: Yes

No. 66784215

Medical ID



Primary Medical Conditions:
Tibia plate on the left leg
Hearing Loss

Allergies:
Bee Stings,
Penicillin

Medications:
Geritol,
Omeprazole,
Vitamin D

Health Insurance Carriers:
AARP - Grp#: 45657694
Medicare - Grp#: 6545480
Cigna - Grp#: G7

Boarding Pass



SINGAPORE AIRLINES BUSINESS CLASS

ETKT: 06182113076908
Flight: SA 7658
LONARDOS

PLEASE BOARD EARLY AS GATE CLOSURES 10MINS BEFORE DEPARTURE
YOU ARE INVITED TO THE SILVER KITS LOUNGE

Boarding Time: 08:30 PM

Seat: 10A Gate: A26 Terminal: T2

QR2A7604

STAR ALLIANCE



Changi App

Changi STRIPE is your new boarding pass



9:41

Changi
Open in Changi app

OPEN

Boarding Pass

SINGAPORE AIRLINES

Terminal Gate
T2 A26

SIN ✈ **BKK**
Singapore Bangkok

Departing flight | **SA7658**

PASSENGER	GROUP	SEAT
John Chan	2	10A

DATE	BOARDS	DEPARTS
12 Nov 2025	07:30	08:30

Business Class

QR

John Chan
April 1, 1965 (60 years old)
My ***Medical ID** >

John Chan

BUSINESS CLASS

ETKKT
S060841173609908 EG

SAA08868417784 · SOHG
From OP2AIPOEG
To
Seat
10A

ETNo 06182113676908
0227 BE STAR ALLIANCE

“Always have a problem when passing the security check-in because of the metal on my knee.”

Participant, Age 66

Scenario Security Screening



Boarding Pass



Terminal Gate
T2 A26

! Tibia Plate on the left leg X

Metal plate on the left leg. Pat the traveller with caution.

! Hearing Loss X

Speak slowly.

John Chan

April 1, 1965 (60 years old)

My ***Medical ID** >

MEDICAL NOTES

AA Changi.com.sg/Medical-ID



“I do proper time management by manually calculating how much time until the boarding time.”

Participant, Age 53

Scenario Wayfinding at Changi Airport



7:10AM

Getting Around at Changi

You are heading to **TERMINAL 2**

T2



NEW GATE

A26



🕒 5min
150m

FLIGHT DELAYED

Gate Departure in 1h:20m

+10mins

08:30AM

RECOMMENDATION



The Calm Room
Near F Gates

🕒 5 min 500m →



Dreamscape
Near F Gates

🕒 6 min 540m →



Gourmet Garden
Lv2 Departure

🕒 10 min 800m →

Nearest Restroom



I need help / assistance



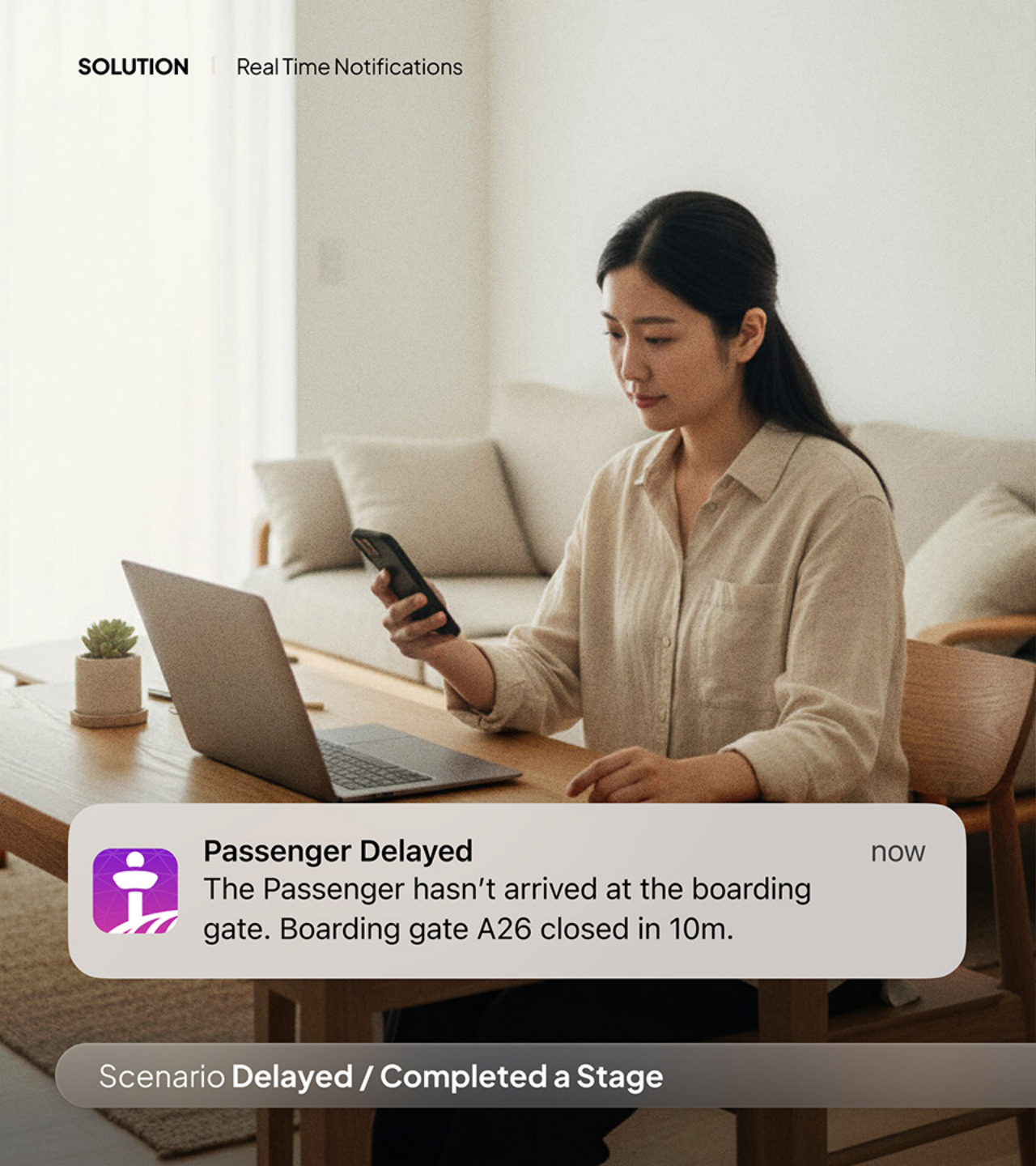
I need medical assistance





The Daughter / Caregiver

Scenario Real Time Notifications

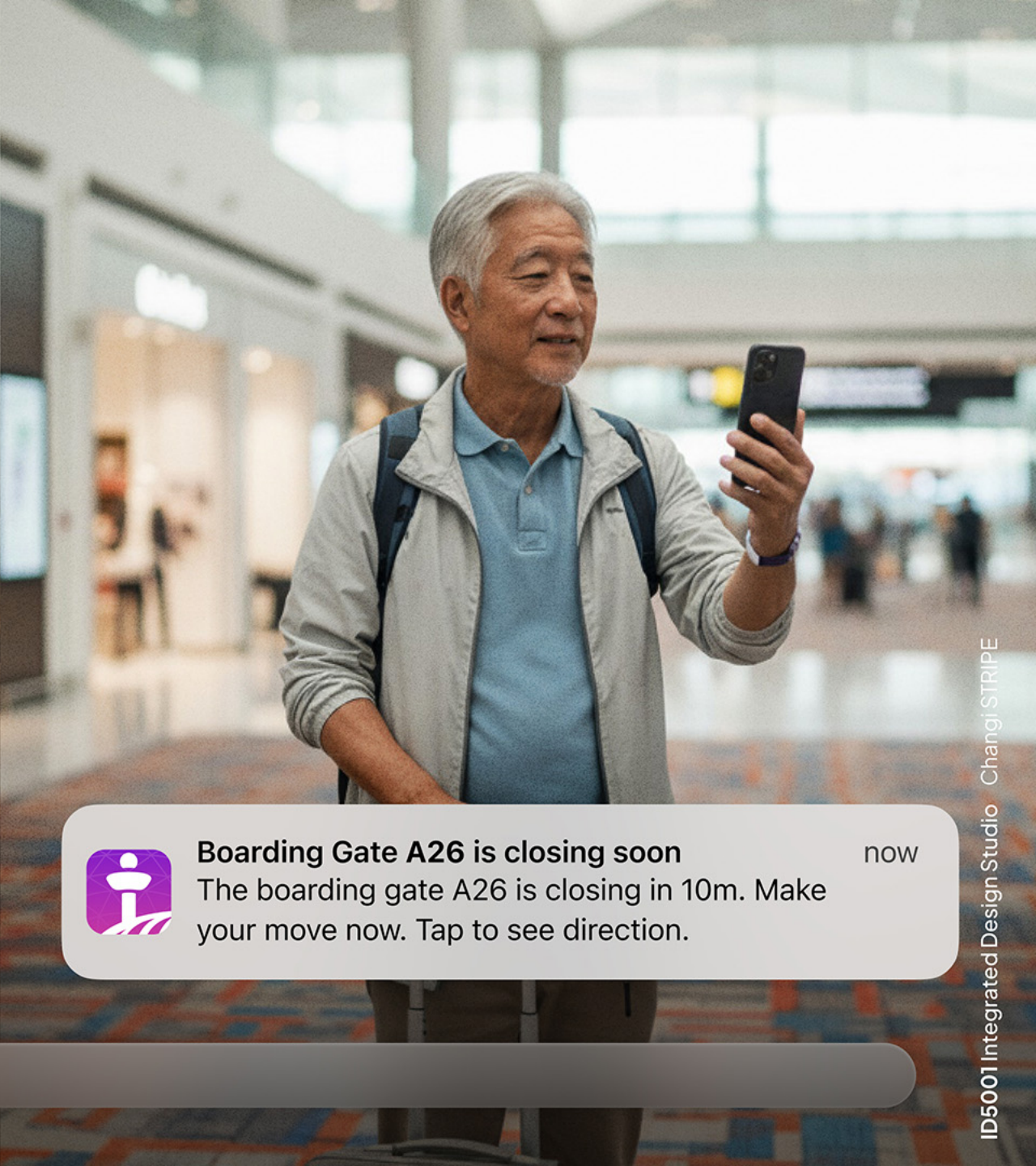


Passenger Delayed

The Passenger hasn't arrived at the boarding gate. Boarding gate A26 closed in 10m.

now

Scenario **Delayed / Completed a Stage**



Boarding Gate A26 is closing soon

The boarding gate A26 is closing in 10m. Make your move now. Tap to see direction.

now



Changi STRIPE as an access & identity

Integration with existing Changi infrastructure





Calm
Room

Changi
STRIPE

Calm Room

“

Right now, the Calm Room is open for everyone and is often used by people who don't actually need it.

Joanne, Industry Partner

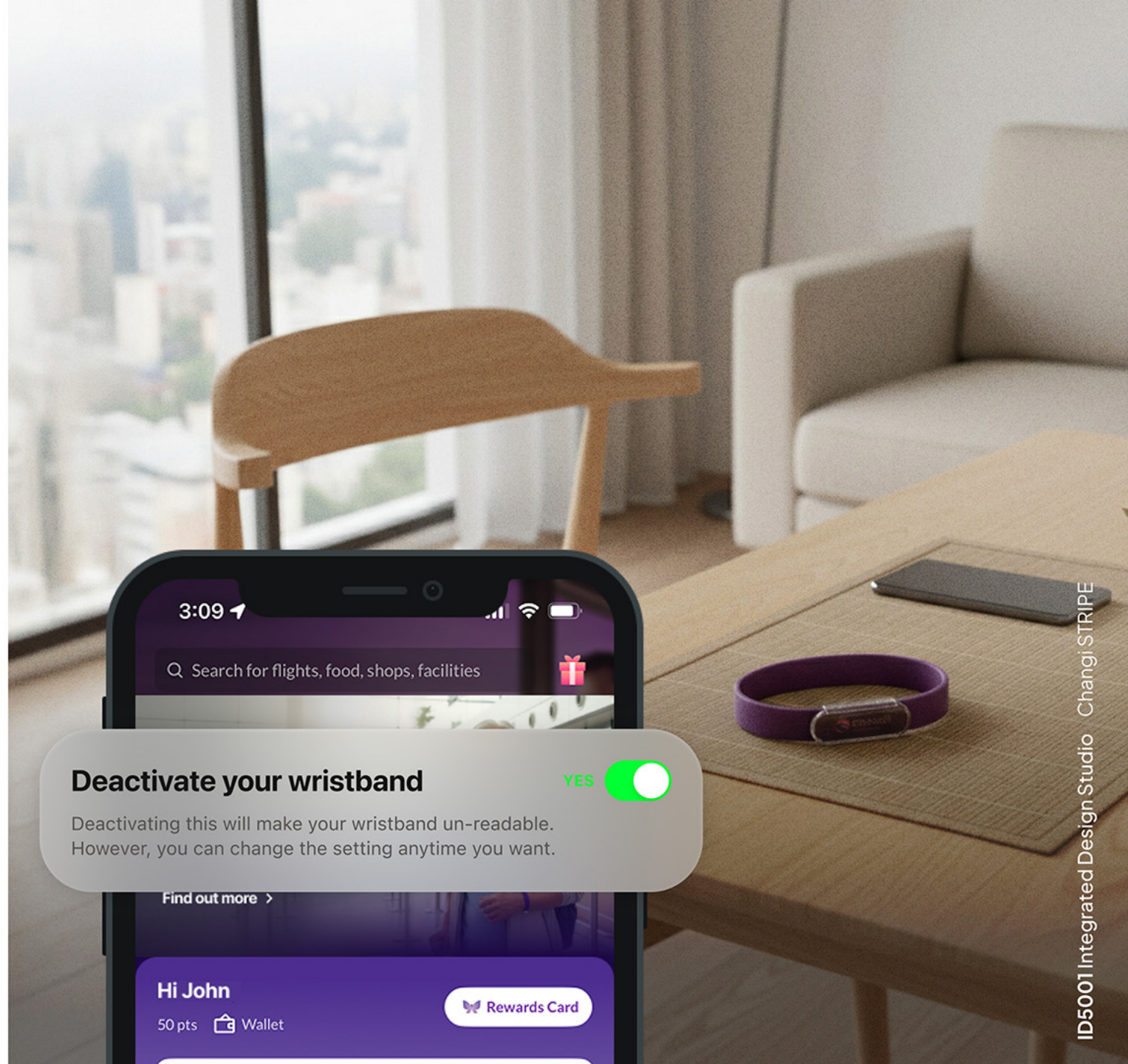
Post Trip / Reuse

Post-Travel Continuity, Reusability, and Data Security

After each trip, your boarding pass will be removed and Changi STRIPE remains fully reusable, you can add a new boarding pass into it.

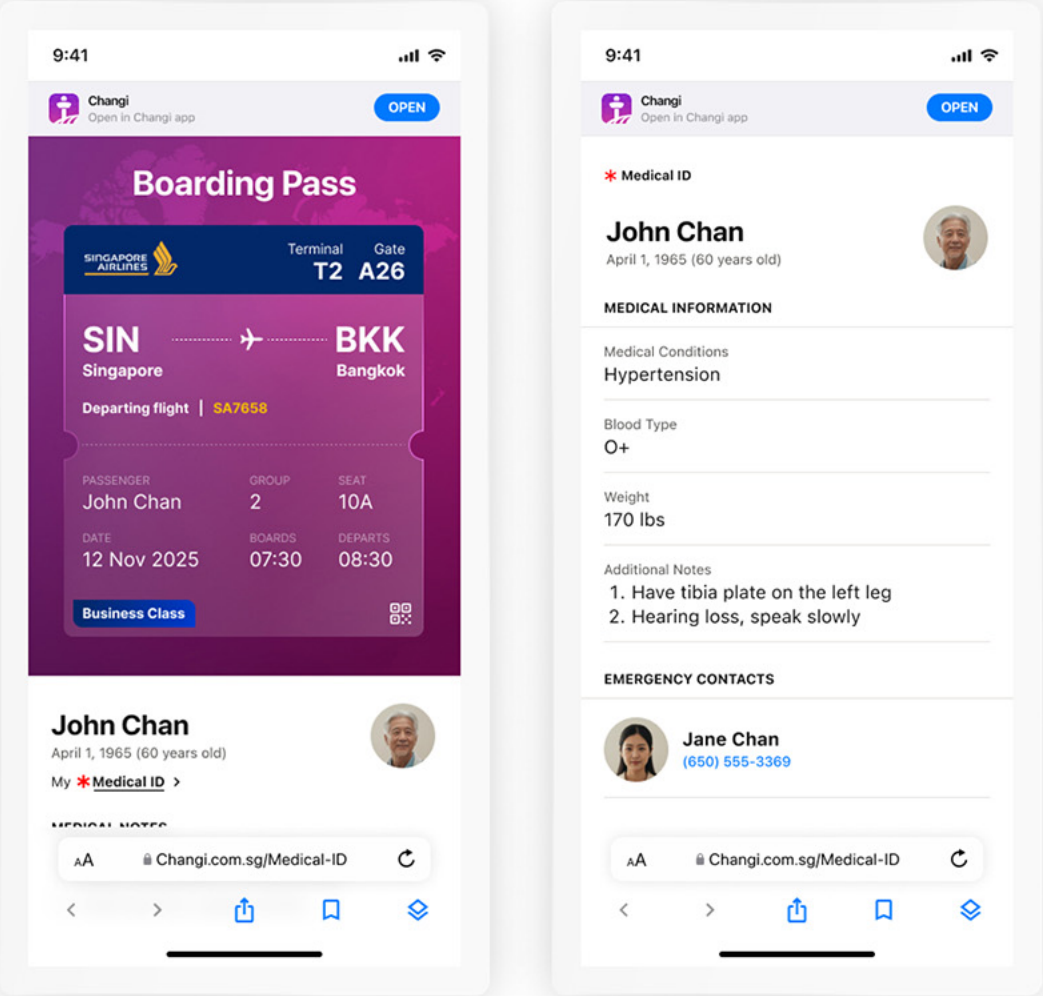
Forgot / Lost Wristband

Simply deactivate your wristband , or request a new one from the app / at a Changi kiosk. Transfer ownership in an instant.





Changi STRIPE is your new boarding pass and *medical ID

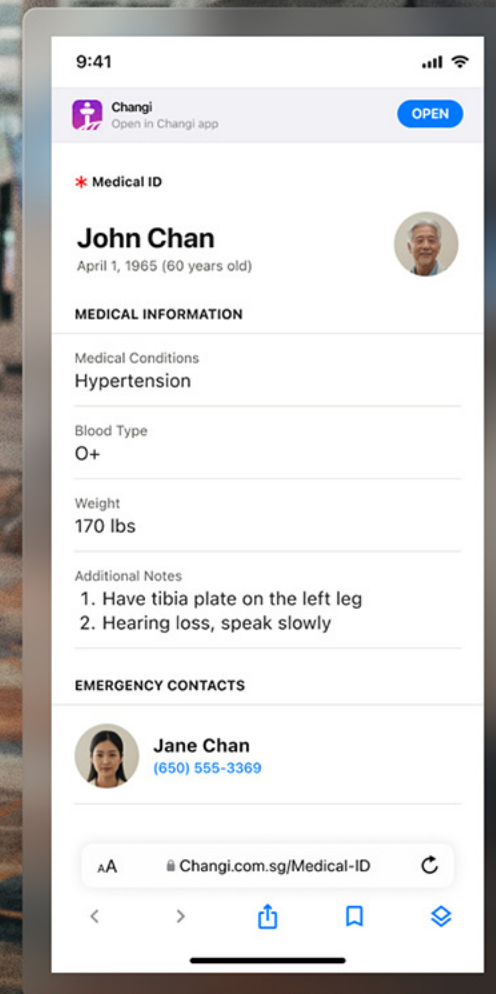


“

Couple times a month, we faces cases where the elderly passengers are lost or requires medical attention but they are unable to provide any information.

Changi Care Ambassador

Scenario Lost at Changi Airport / requires urgent medical assistance



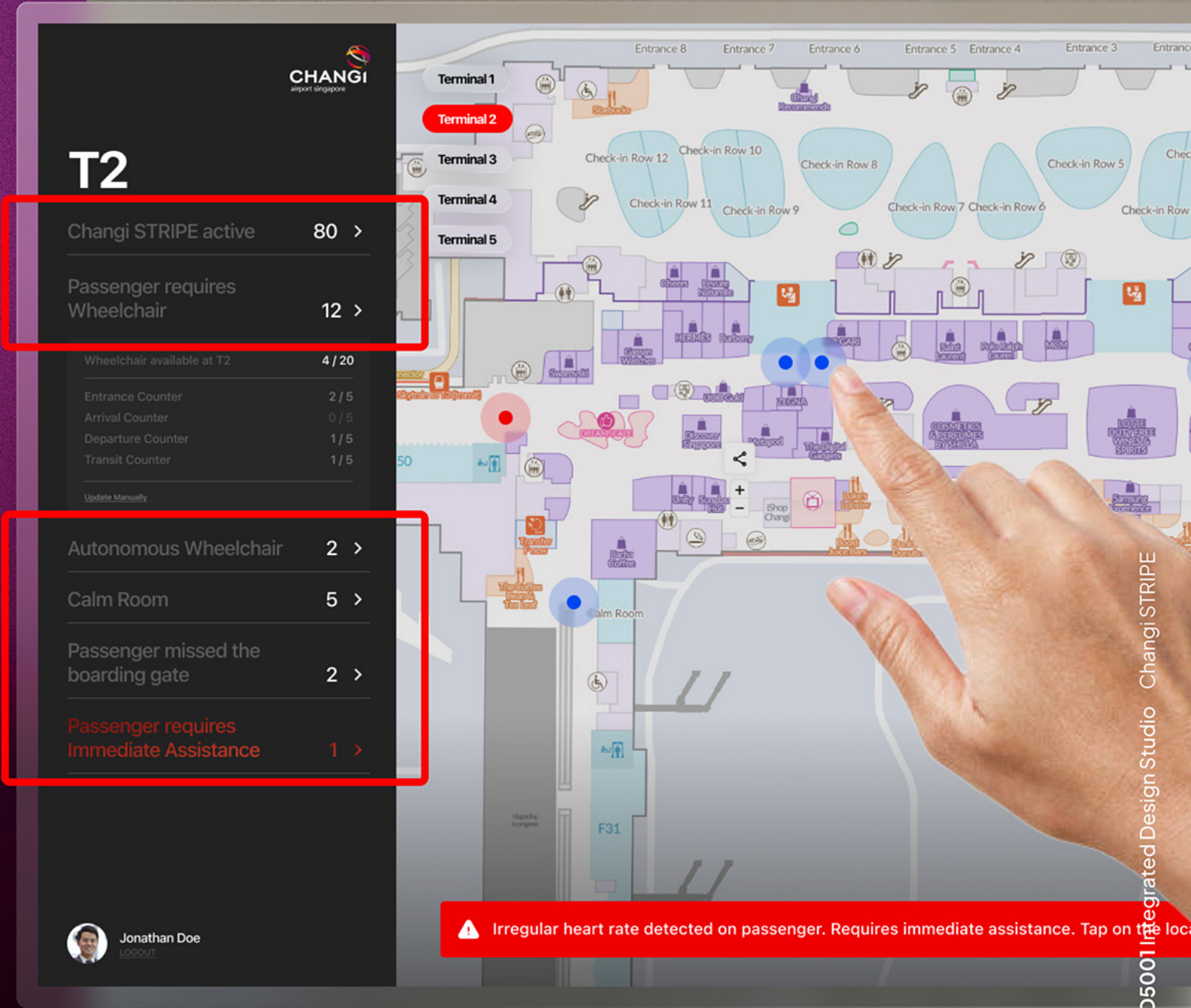
Several scenarios that the participant mentioned:
When travellers are lost, have dementia, or when they requires urgent medical assistance

Other Features

The Smart Platform Dashboard STRIPE

This UI serves as a smart terminal management dashboard with functionality such as:

- 1. Efficient Resource Allocation (Wheelchair)
- 2. Real-time Situational Awareness
- 3. Faster Response to Incidents
- 4. Operational Visibility



The Benefits for Changi Care Staff

All these features will simplify Changi Care Staff's tasks by integrating real-time traveller, assistance management, and resource monitoring to help the staff and rapid response to special / medical situations.



The background of the image consists of a series of vertical stripes in various shades of blue, teal, and brown. The stripes are of varying widths and are slightly blurred, creating a sense of depth and movement. The overall color palette is warm and professional.

Business Opportunities

First in the world

Scalable & Low Cost

Secure Passive Device

No Battery Required

Reusable & Personalized

Uplift Changi App usage

Helps the Staff Workflow

**What's in
for Changi
Airport**

Timeline Summary of the Work Process

Quantitative Survey (n: 43) (Pre-Interim)

Proof of Concept Research (n:8)



Theme Exploration

List of the Features	P.01	P.02	P.03	P.04	P.05	P.06	P.07	P.08	Total	RANK BY THE MOST TO THE LEAST
Personalized Directions & Pacing Guidance	9	9	4	8	8	8	8	4	60	5th
Adaptive Navigation	7	7	5	9	5	3	3	2	41	3rd (TALYS)
Personalized Language	8	9	2	7	7	7	8	6	54	7th
Dynamic & Real-Time Information	2	4	6	3	2	2	4	1	24	2nd
Simplified Identification & Security Check	1	2	1	4	4	4	4	2	23	1st
Immediate Emergency Care	4	5	7	1	9	5	1	9	41	3rd (TALYS)
Automaticity Offer Support & Needs	9	8	9	6	3	1	5	3	44	4th (TALYS)
Immediate Emergency Alert	3	1	8	2	8	9	9	7	47	6th
Alert Notification	5	3	3	9	1	8	7	6	44	4th (TALYS)

Product Prototype & Features



Solution Check with Changi Staff (n:1)



Streamlining the Features



Prototyping & Ideation

Ideation Matrix



Material & Form Exploration



Research Synthesis

Benchmarking the Features



The Future Potentials

THE FUTURE PLAN

STRIPE



COMING SOON

STRIPE+

+Heart Rate



“

It's an important feature as we never know what will happen in the future.

Participant, age 65

CHANGI CARE STAFF POV

⚠ Irregular heart rate detected on passenger. ×
Requires immediate assistance. Tap on the location.

Sending alert

CAREGIVER'S POV



Irregular Heart Rate Detected

The passenger has a irregular heart rate detected. Changi Care has been informed.

now

FUTURE POTENTIAL

**To extend Changi STRIPE's role
from accessibility aid to a holistic
family safety solution**

! Tibia Plate on the left leg X

Metal plate on the left leg. Pat the traveller with caution.

! Hearing Loss X

Speak slowly.

FUTURE COLLABORATIONS

To expand beyond airport operations and integrate directly with airlines

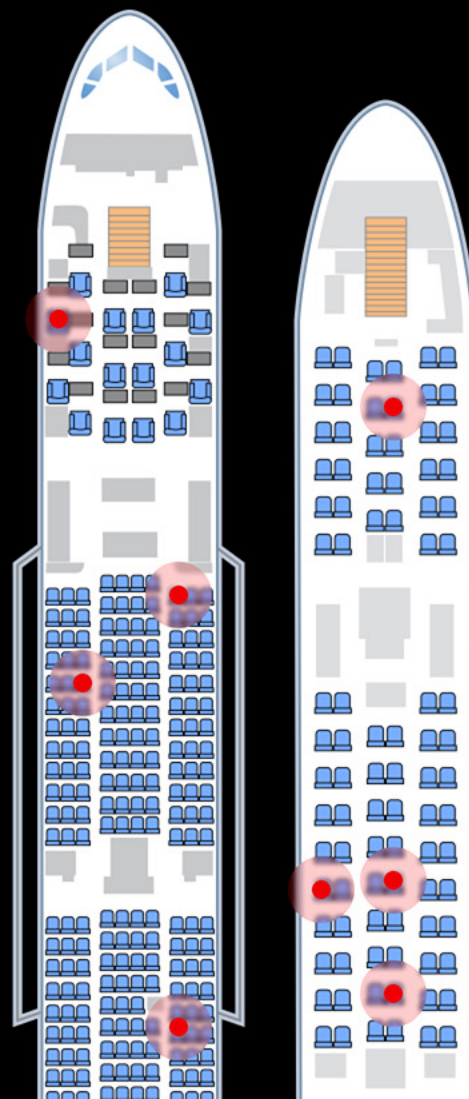
SIN
Singapore



BKK
Bangkok

Changi STRIPE onboard

8 >





ambly audiobooks
www.amblyaudiobooks.com

John Chan
April 1, 1965 (60 years old)
My Medical ID >

Use of the Platform	P101	P102	P103	P104	P105	P106	P107	P108	Total	Score for this report for the latest
Personalized Directions & Parking Guidance	7	7	8	8	8	8	8	8	56	56
Language Navigation	7	7	8	8	8	8	8	8	56	56
Personalized Language	7	7	8	8	8	8	8	8	56	56
Options & Real-Time Information	7	7	8	8	8	8	8	8	56	56
Language Navigation & Security Check	7	7	8	8	8	8	8	8	56	56
Immigration Emergency Case	7	7	8	8	8	8	8	8	56	56
Automated Office Support & Needs	7	7	8	8	8	8	8	8	56	56
Immigration Emergency Case	7	7	8	8	8	8	8	8	56	56
Real-time Information	7	7	8	8	8	8	8	8	56	56



SIN 0830 **12:55 BKK**
T1 - Delayed Delayed

Gate Departure in 1h 20m

A26

9:41

Changi Open in Changi app

Medical ID **OPEN**

Medical ID

John Chan
April 1, 1965 (60 years old)

MEDICAL INFORMATION

Medical Conditions
Hypertension

Blood Type
O+

Weight
170 lbs

Additional Notes
1. Have tibia plate on the left leg

Open in Changi app

OPEN

Boarding Pass

SINGAPORE AIRLINES

Terminal Gate
T2 A26

SIN **BKK**
Singapore Bangkok

Departing flight | **SA7658**

PASSENGER: John Chan GROUP: 2 SEAT: 10A
DATE: 12 Nov 2025 BOARDS: 07:30 DEPARTS: 08:30

Business Class

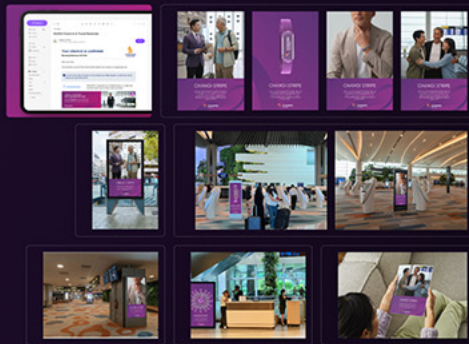
Boarding Pass

- 3 Main Features

 - Access and Identity
 - Wayfinding
 - Realtime Notifications

1 Additional Feature

 - Heart Rate Monitor



Changi STRIDE active

80 >

Passenger requires Wheelchair

12 >

Wheelchair available at T2

4 / 20

Autonomous Wheelchair

2 >

Calm Room

5 >

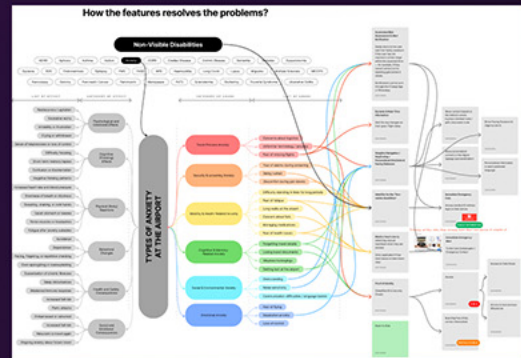
Passenger missed the boarding gate

2 >

Passenger requires Immediate Assistance

1 >

Irregular heart rate detected on passenger. Requires immediate assistance. Tap on the location.



3:09

Q. Search for flights, food, shops, facilities

TRAVEL CONFIDENT WITH THE NEW FAST PASS
Enjoy free fast pass for you to feel secure and connected 24/7 with your loved ones.

Find out more >

Hi John

50 pts

Flights Duty-Free Online Map Parking View All

All Changi Experiences Jewel Attractions

Show available listings for: All dates at all locations

Discover & Book

The best things you can do to make the most out of your day

7:10AM

Getting Around at Changi

You are heading to **TERMINAL 2**

T2 **A26**

5min 150m

Gate Departure in 1h:20m 08:20AM

RECOMMENDATION

The Calm Room Near T Gates 5 min 500m

Dreamscape Near T Gates 5 min 540m

Gourmet Garden Lc2 Departure 10 min 800m

Nearest Restroom

I need help / assistance

I need medical assistance

Deactivate your wristband

Deactivate this will make your wristband un-readable. However, you can change the setting anytime you want.

YES

Passenger Delayed

The Passenger hasn't arrived at the boarding gate. Boarding gate A26 closed in 10m.

now

