

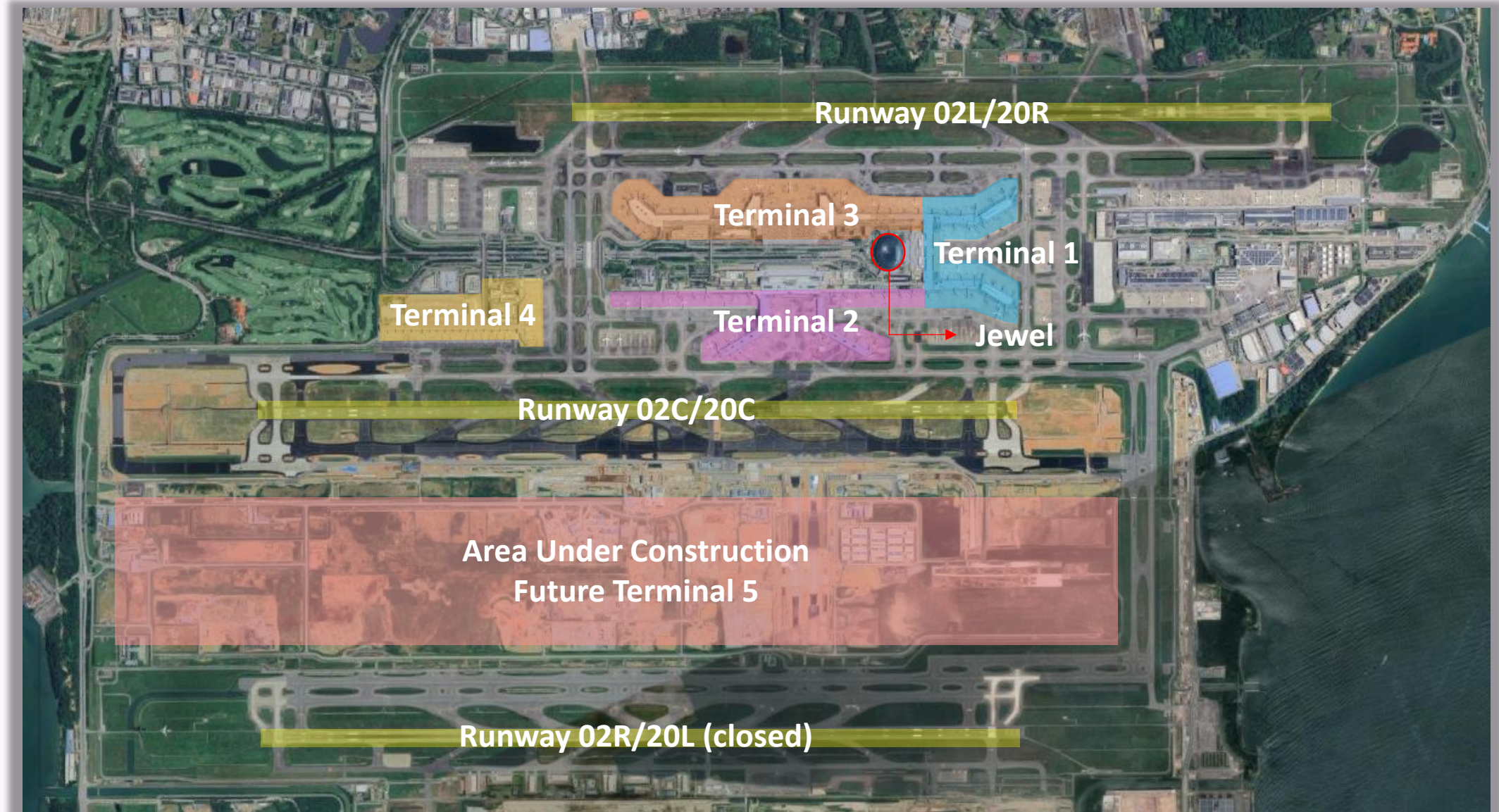


7 April 2025

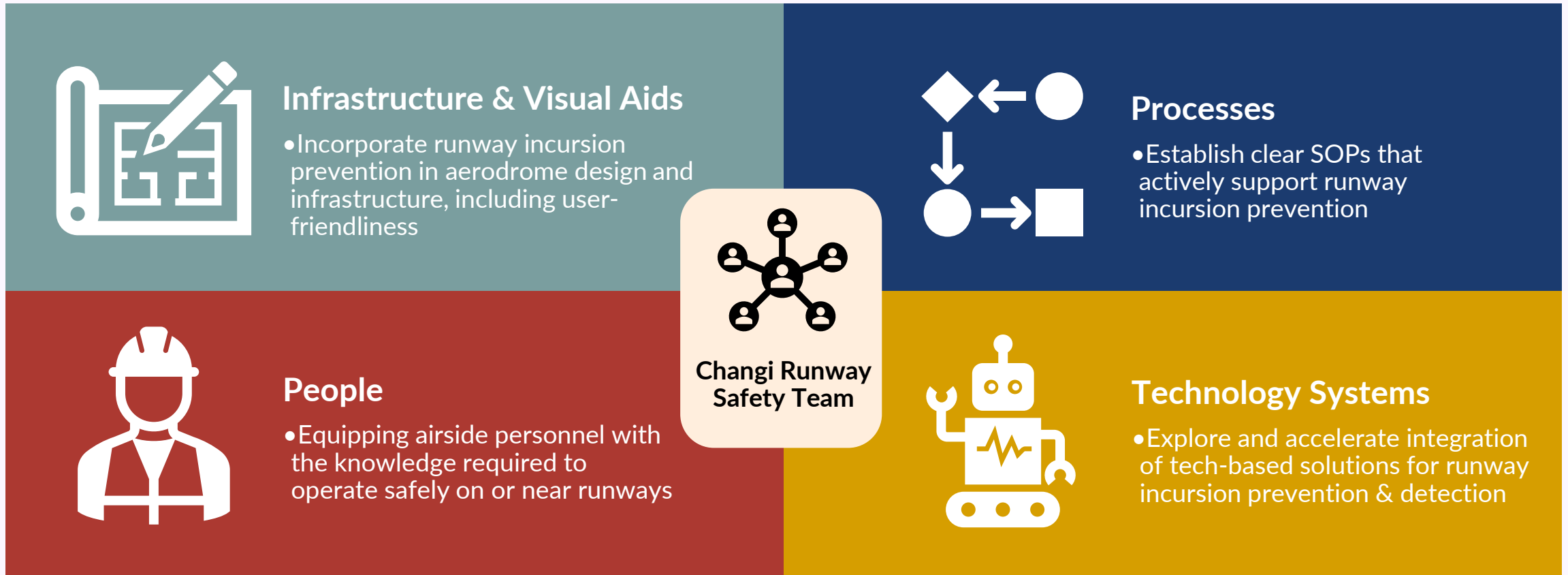
ICAO Asia-Pacific Regional Aviation Safety Team (APRAST/23)

Prevention of Runway Incursions at Changi Airport: Best Practices & Lessons Learnt

Background



Changi's Approach to Prevent Runway Incursions



Target: 0 Runway Incursions



Visual aids to prevent runway incursions



Signs & Physical Barriers on Access Roads



Mandatory Signs



Runway Designator Marking



24/7 Stopbar Lights at all Runway entry and exit taxiways & Runway Guard Lights



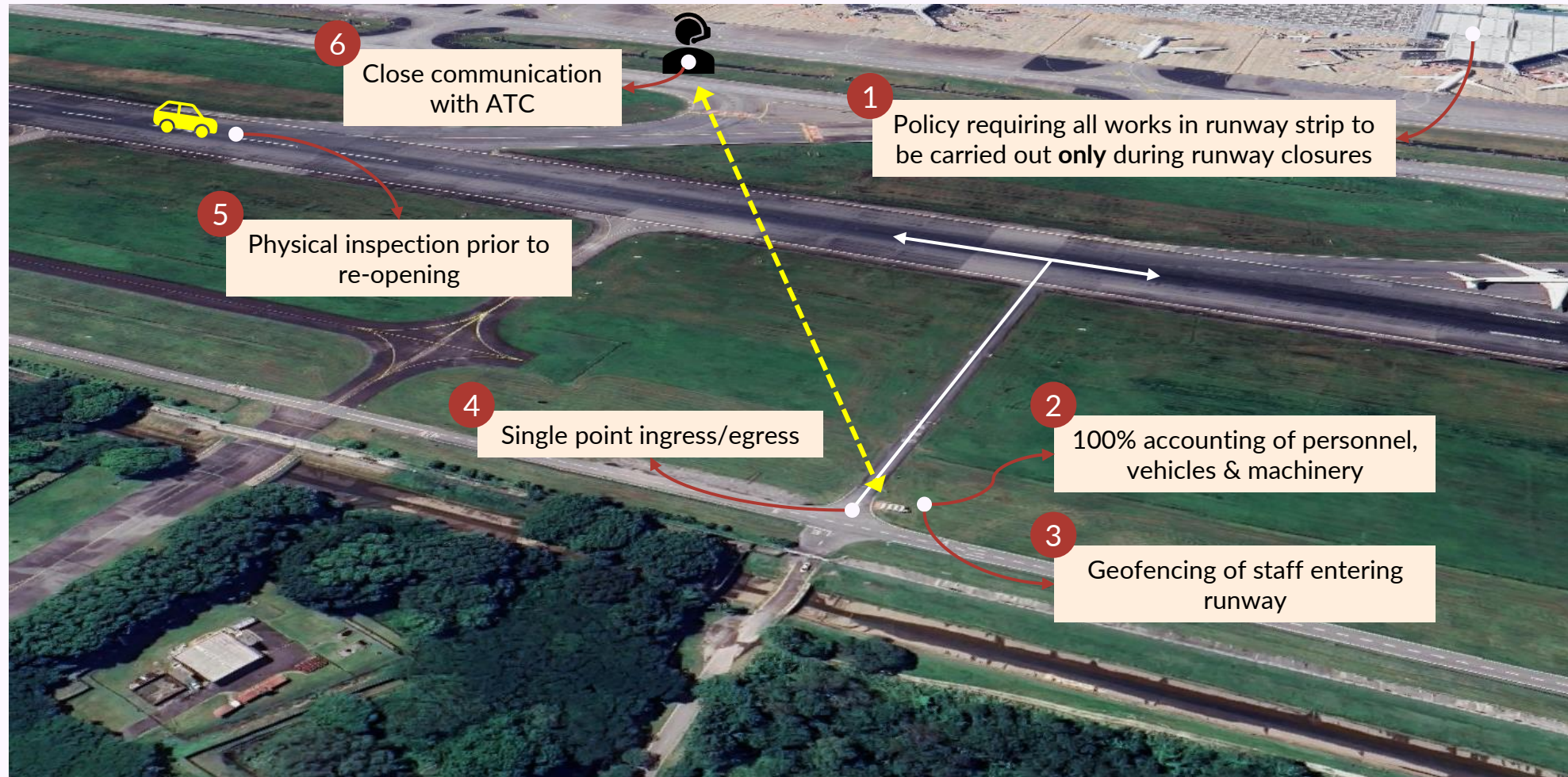
Runway Holding Position Markings



Enhanced Taxiway Centreline



Closely Co-ordinated Runway Closures Ensure Maintenance Works are Carried Out with Minimal Risk of Runway Incursion





Airfield Users are Trained to Comply with Policies & Processes Supporting Runway Incursion Prevention



Airside Staff



ASIB Class in Progress

- All airside staff must undergo an Airside Safety Induction Briefing (ASIB)
- Includes content on out of bound areas and a basic appreciation of runway incursions



Manoeuvring Area Drivers



CAT1/1R Simulator for Training and Testing

- 3-tier licensing programme
 - Airside Driving Permit
 - Apron areas, airside roadways
 - CAT1 Driving Permit
 - Manoeuvring area excluding runways
 - CAT1R Driving Permit
 - Runways
- ICAO English Level 4 requirement for all CAT1 and CAT1R Drivers
- CAT1R Drivers are trained to operate on Single Runway Frequency



Safety Promotions Encourage Top of Mind Awareness for Runway Incursion Prevention

Look Out!
Runway Ahead!

Know when you are approaching a runway!
Do you recognise the following features?

1 Mandatory Signs

White-on-red mandatory signs indicate that a runway is ahead.

2 Enhanced Runway Ahead Markings

Additional dashed yellow lines on each side of the regular solid yellow taxiway centreline.

3 Runway Designator Marking

Displays the designation of the runway ahead.

4 Runway Holding Position Markings

Solid lines are closer to the taxiway and dashed lines are closer to runway.

5 Stopbar & Runway Guard Lights

Never cross red stop bar lights!

Get it Right!

Runway Incursion Prevention Starts with Me!
More information on runway features can be found in CAT1/2TH Section 4.
For questions, please email taxiwayincursion@changiairport.com or info@changiairport.com.

News Feed

Changi Airport

27 Dec 2023 11:29

CAT1/1R Driving: Have You Familiarised Yourself with Runway 2's Re-opening?

Notice something different? That's right! Runway 2 has re-opened since 1 December 2023! Have you taken note of all the changes? Take the challenge and answer all the quiz questions below correctly by 9 January 2024 to stand a chance to win \$20 of ChangiPay vouchers through a lucky draw! 5 winners will be selected. Please refer to the Terms & Conditions for the lucky draw here: <http://tinyurl.com/3ctda3ab>.

Hint: Swipe left and check out the publicity poster before taking the quiz!

For enquiries, please reach out to edwin.chow@changiairport.com

NOTICE SOMETHING DIFFERENT?

CALLING ALL CAT1 DRIVERS!
RUNWAY 2 OPENED ON 1 DECEMBER 2023.
HAVE YOU FAMILIARISED YOURSELF WITH THE CHANGES?
TEST YOURSELF BY TAKING THE QUIZ BELOW!

STAND A CHANCE TO WIN \$20 OF CHANGIPAY VOUCHERS

SCAN ME

OPENING OF RUNWAY 02C/20C AND NEW TAXIWAYS

WHAT IS OPENING?

RUNWAYS 02C/20C

NEW TAXIWAYS

WHAT IS CLOSING?

RUNWAYS 02R/20L

ALL TAXIWAYS EAST OF K1

CAT1/1R Driving: Best Practices for Runway Incursion Prevention

4. LOOK OUT FOR RUNWAY FEATURES

OPENING OF RUNWAY 02C/20C AND NEW TAXIWAYS

EFFECTIVE: 1 December 2023 0400LT

WHAT IS OPENING?

RUNWAYS 02C/20C

NEW TAXIWAYS

T13 U10 U11 U12 U13 D D1 D2 D3 D4 D5 D6 D7 D8

D9 D10 D11 D12 D13 D14 C C1 C2 C3 C12 C13 C14 L

WHAT IS CLOSING?

RUNWAYS 02R/20L

ALL TAXIWAYS EAST OF K1

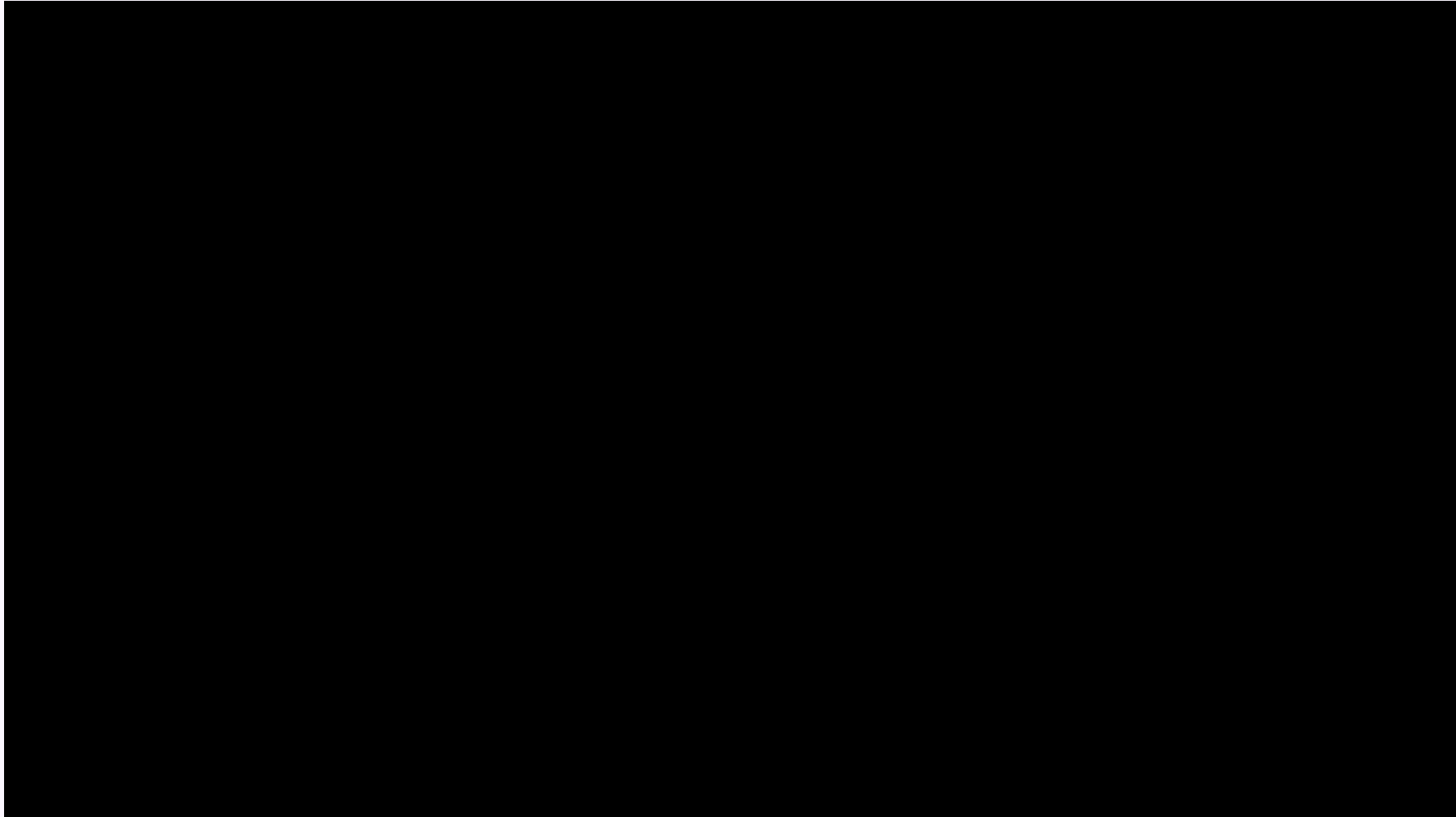
4/7/2025

CHANGI AIRPORT GROUP

7



Safety Promotions Encourage Top of Mind Awareness for Runway Incursion Prevention





Technology is Vital in Runway Incursion Detection





The Future



Integrating multiple systems to expand detection & alerting capabilities, provide **pre-emptive warnings**, and form a single source of situational awareness for all stakeholders



♥
END OF PRESENTATION