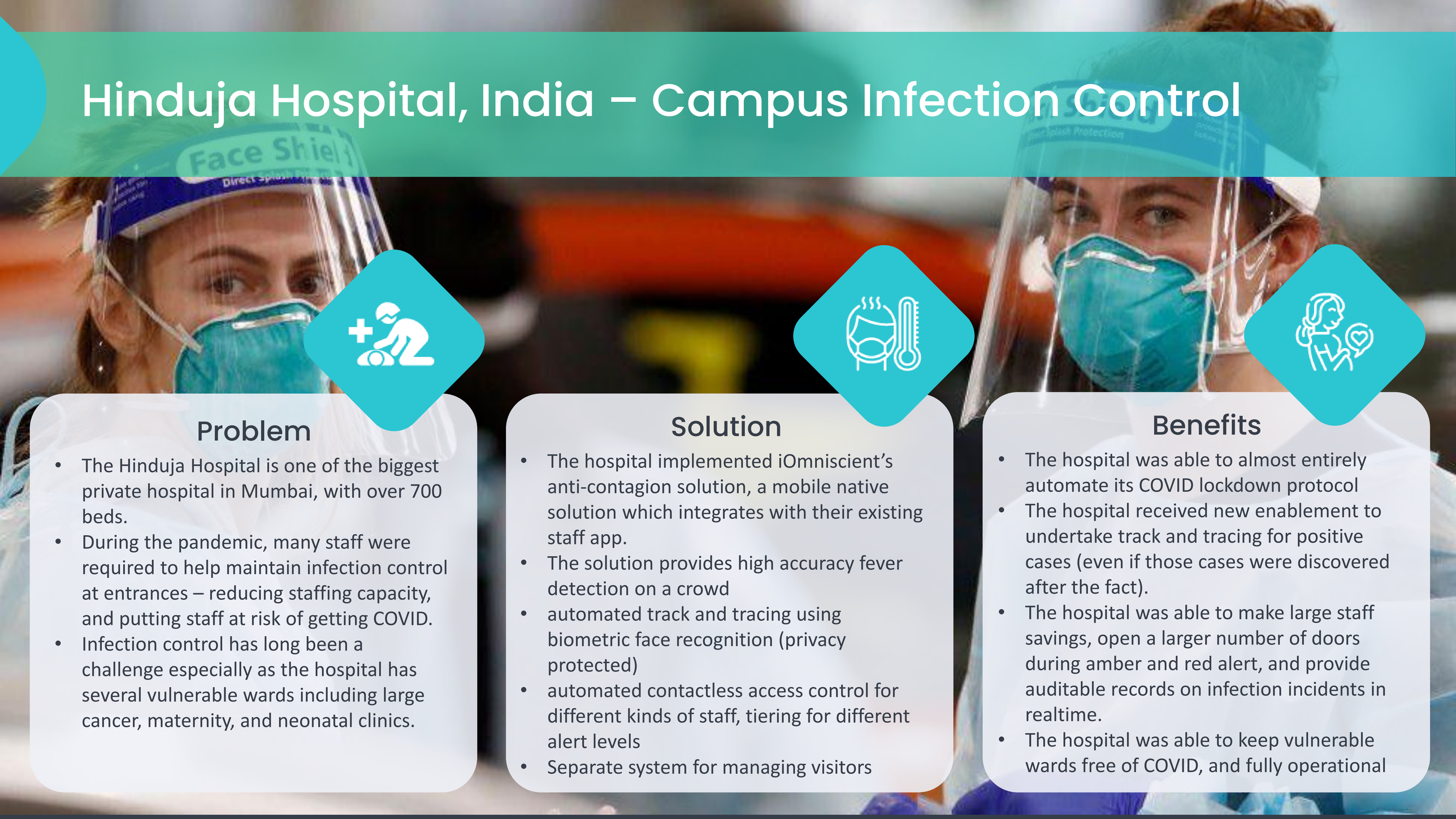
DR JEHAN KANGA – Director Innovation iOmniscient

# iOmniHealth Hospital AI Case Studies

Automating the boring stuff so healthworkers can work safer and more productively



# Hinduja Hospital, India – Campus Infection Control



## Problem

- The Hinduja Hospital is one of the biggest private hospital in Mumbai, with over 700 beds.
- During the pandemic, many staff were required to help maintain infection control at entrances – reducing staffing capacity, and putting staff at risk of getting COVID.
- Infection control has long been a challenge especially as the hospital has several vulnerable wards including large cancer, maternity, and neonatal clinics.

## Solution

- The hospital implemented iOmniscient's anti-contagion solution, a mobile native solution which integrates with their existing staff app.
- The solution provides high accuracy fever detection on a crowd
- automated track and tracing using biometric face recognition (privacy protected)
- automated contactless access control for different kinds of staff, tiering for different alert levels
- Separate system for managing visitors

## Benefits

- The hospital was able to almost entirely automate its COVID lockdown protocol
- The hospital received new enablement to undertake track and tracing for positive cases (even if those cases were discovered after the fact).
- The hospital was able to make large staff savings, open a larger number of doors during amber and red alert, and provide auditable records on infection incidents in realtime.
- The hospital was able to keep vulnerable wards free of COVID, and fully operational

# Hinduja Hospital, India – Dwell Time in the Emergency Dept



## Problem

- The Hinduja Hospital is a major private hospital in Mumbai, and has one of the largest Emergency Departments in the city.
- An ongoing challenge for Emergency Departments is managing triage, ensuring that people who are prioritized down the list are not left waiting hours as their non-urgent conditions could be become urgent without care.
- Auditing adherence to triage protocols (such as ensuring all patients are seen in under 30 min) is challenging, especially as post-COVID staff shortages across the

## Solution

- The Hinduja Hospital implemented iOmniscient's Dwell Time analytics to biometrically track when patients go through different stages of induction and the time between each stage.
- The solution provides also provides high accuracy fever detection and falls to track incidents and infection within waiting area.
- Provides a realtime dashboard to triage nurses, with colour coded highlights on patients nearing their max wait time
- Can be audited autonomously by management to ensure triage protocol is being adhered to.

## Benefits

- The Hospital was able to provide major productivity tools to their Emergency Nurse team automating key tasks and freeing time to deal with other matters.
- The hospital managed to get visibility on when Emergency Departments were overwhelmed in realtime, and able to allocated staff accordingly to managing peaks more efficiently.
- The hospital saved 15% staff hours overall as a major portion of triage component of emergency work was automated, and reporting tasks were also automated.

# St Joseph’s Hospital (St Vincent’s Healthcare Australia) Slip and Fall for Huntington’s Unit

## Problem

- Sydney’s St Joseph’s Hospital has a specialist Huntington’s Disease Unit
- A major challenge for patients with Huntington’s disease is the fact that they are vulnerable to frequent slips and falls, which increases unwarranted variation.
- Patients were falling and lying on the ground for several hours.
- Falls were identified as the key driver for increased bed days within the hospital.
- St Joseph’s had previously tested pressure mats, wearables, and other technologies which suffer from false alarms which waste nurse time, and are inaccurate.

## Solution

- St Joseph’s Hospital implemented iOmniscient’s Slip and Fall system, which is highly accurate (minimises false alarms).
- The system uses depth sensing 3D sensors, so the solution is privacy protected by design.
- St Joseph’s also installed iOmniscient’s ASAP mothership AI system, which doesn’t just provide alerts, but finds the nearest relevant first responder to the incident
- iOmniscient also used St Joseph’s data to create patient personalised predictive data on future falls.

## Benefits

- St Joseph’s reduced response times to falls to under 2 minutes for 100% of falls cases – which led to lower unwarranted variation.
- St Joseph’s also reduced the number of falls through the use of other AI analytics to detect wet floors and trip hazards.
- St Joseph’s also reported that nurses had more time per day as their workflow was not being interrupted by false alarms from low accuracy pressure pads and wearables.
- Families of patients were pleased with high level of care available to their patients.

# St Joseph’s Hospital (St Vincent’s Healthcare Australia) Access and Exit Management for Secured Units

## Problem

- Sydney’s St Joseph’s Hospital has a specialist Huntington’s Disease Unit
- A major challenge for patients with Huntington’s disease is the fact that it’s a closed ward and patients are not permitted to leave it unsupervised.
- Huntington’s Patients can become disoriented, and wander and get lost.
- It’s a closed by unlocked ward which creates a challenge for nurses who must be vigilant in case a patient leaves.
- This means nurses are spending time managing access manually.

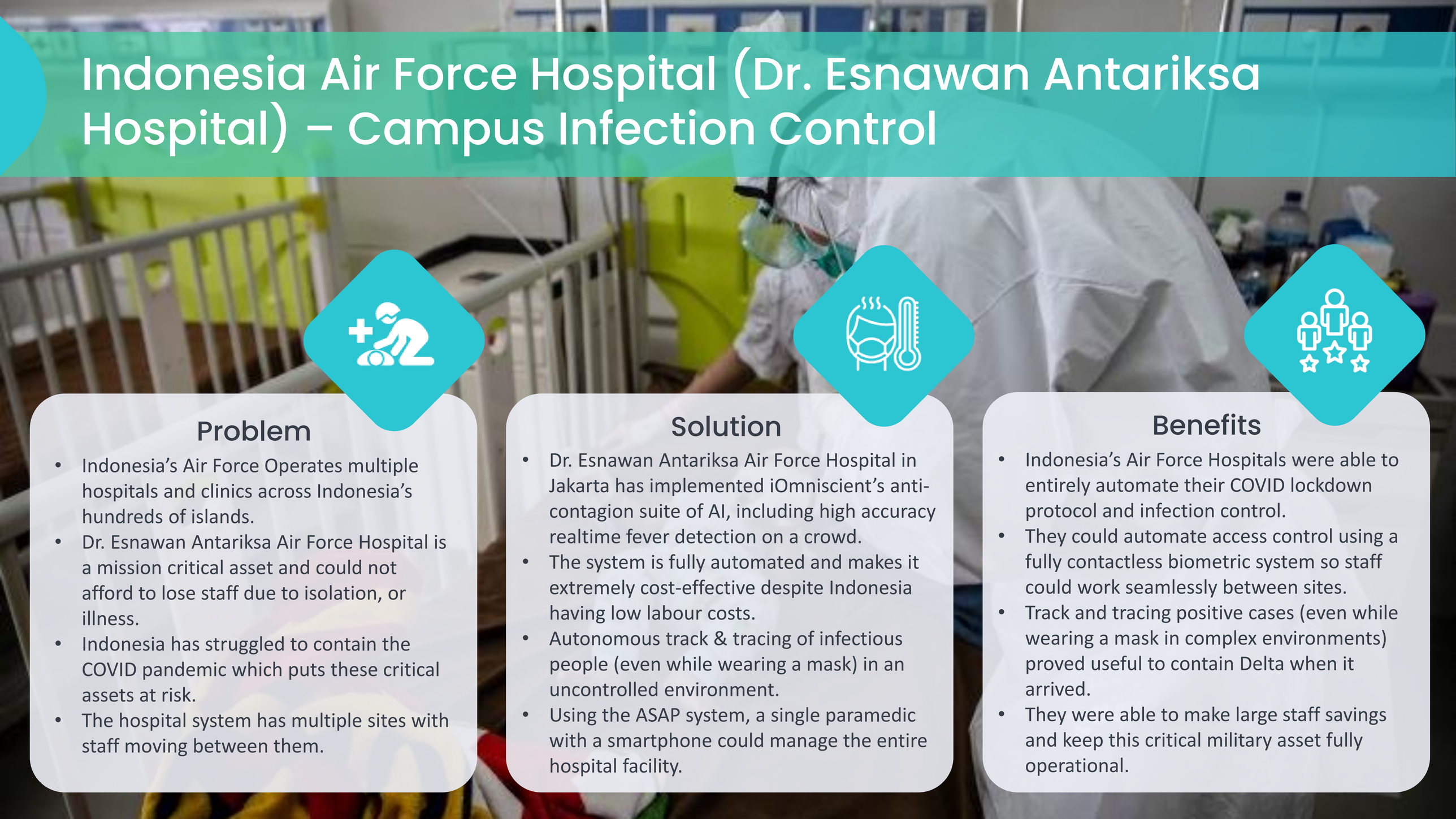
## Solution

- St Joseph’s Hospital implemented iOmniscient’s biometric contactless access control system which identifies allowed personnel and allows them to pass, but locks doors to patients.
- The system is fully privacy protected and GDPR compliant.
- St Joseph’s also installed iOmniscient’s ASAP mothership AI system, which linked to other AI so doors could unlock in case of emergency.

## Benefits

- St Joseph’s reduced response times to falls to under 2 minutes for 100% of falls cases – which led to lower unwarranted variation.
- St Joseph’s also reduced the number of falls through the use of other AI analytics to detect wet floors and trip hazards.
- St Joseph’s also reported that nurses had more time per day as their workflow was not being interrupted by false alarms from low accuracy pressure pads and wearables.
- Families of patients were pleased with high level of care available to their patients.

# Indonesia Air Force Hospital (Dr. Esnawan Antariksa Hospital) – Campus Infection Control



## Problem

- Indonesia’s Air Force Operates multiple hospitals and clinics across Indonesia’s hundreds of islands.
- Dr. Esnawan Antariksa Air Force Hospital is a mission critical asset and could not afford to lose staff due to isolation, or illness.
- Indonesia has struggled to contain the COVID pandemic which puts these critical assets at risk.
- The hospital system has multiple sites with staff moving between them.

## Solution

- Dr. Esnawan Antariksa Air Force Hospital in Jakarta has implemented iOmniscient’s anti-contagion suite of AI, including high accuracy realtime fever detection on a crowd.
- The system is fully automated and makes it extremely cost-effective despite Indonesia having low labour costs.
- Autonomous track & tracing of infectious people (even while wearing a mask) in an uncontrolled environment.
- Using the ASAP system, a single paramedic with a smartphone could manage the entire hospital facility.

## Benefits

- Indonesia’s Air Force Hospitals were able to entirely automate their COVID lockdown protocol and infection control.
- They could automate access control using a fully contactless biometric system so staff could work seamlessly between sites.
- Track and tracing positive cases (even while wearing a mask in complex environments) proved useful to contain Delta when it arrived.
- They were able to make large staff savings and keep this critical military asset fully operational.

# Delivering Impact in 70 Countries across 30 Industries

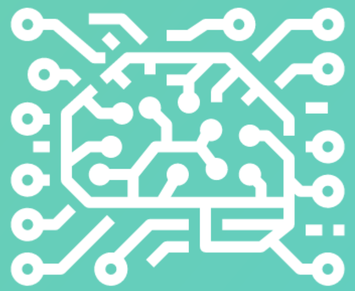
iOmniscient has delivered hundreds of AI-based computer vision systems globally.

**Technology Alliance Partners**

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sales@iomni.ai | +61 412 191 412

