



# COVID-19 Thermal Scanning & Facial Recognition solution



# Solution in summary

An E2E contactless solution has been developed by Purview Healthcare Services to deliver the Health, Safety, Access and Authentication requirements, and create a central repository across all verticals. Since the Indian Government has made it mandatory, and others may follow soon, this specific solution is aimed at not only preventing COVID-19 but also maintaining 360 degree hygiene.

It takes only one second for the thermal camera to detect the temperature of each person. Thus, no congestion will occur when passing through the site where temperature needs to be checked. This solution will add value to the preventive measures at Hospitals, Retails, Office Buildings, Manufacturing Sites, Schools, Railway Station, Airports, Offices, Industrial Parks etc.

## **Health & Safety**

- Thermal scanning process will reduce and eliminate risk of any contagious disease

## **Highly Secured Access control authentication**

- Facial Recognition Solution (FRS) will allow only authorised people with alerts

## **Facial recognition contactless authentication**

- Contactless solution will identify and securely authenticate all the COVID-19 patients (EKYC) before the test

## **Central repository of complete data**

- Data analytics will be maintained for report and dashboards for all the concerned departments.

# Current problem statement and Solution value

Traditional methods like using the ear thermometer or mercury thermometer perform well in detecting people with abnormal skin-surface temperature. However, all of these methods have obvious and significant deficiencies:

## **Close Contact, High Risk**

- Close contact among users, leading to high risk of infection.

## **High Cost, Low Efficiency**

- Lots of manpower invested.
- Person-by-person inspection is inefficient.

## **Difficult to Collect Statistics**

- Manual registration is required, which may lead to human error and not so timely feedback.

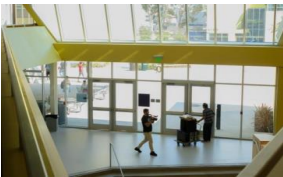
Automating the system by removing manpower alone is itself advantageous and precautionary measure

- Reducing the contact among people. The detection process can be **fast and convenient**, as **imperceptible** and helps crowd management
- Effectively **manages the duration** of skin-surface temperature measurement
- Producing **real-time and accurate temperature** measurement data for management and decision-making.



# Application Scenarios

**School**



Entrance of college building



Entrance of dormitory

**Retail**



Entrance of supermarket



Entrance of restaurant

**Office Building**



Elevator hall of parking lot



Entrance of office building

**Air**



Security Check at Airport



Entrance of terminal



Hospital Entrance



Hotel Entrance



Entrance of Factory



Workshop



Entrance of office building



Classroom



Railway Station



Airport



Factory



College



Office Building



Industry Park



# Why Thermal temperature screening & FRS now?

**COVID-19**

**This pandemic has forever changed the landscape of health and safety at workplace..**



**One sick employee / staff / worker can create a big risk to organization**

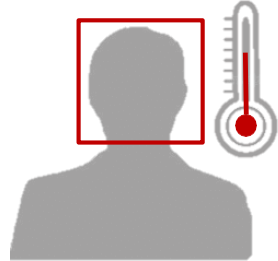
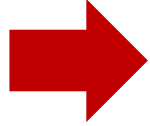
- **Shutdown of operations**
- **Complete cleaning of office and infrastructure**
- **Community lockdown and cleaning of premises**
- **Health & Safety investigation and certification**
- **Employee's daily routine disruption**
- **Worst scenario – Death.**

# Solution Business Flow



Premise Entrance

1



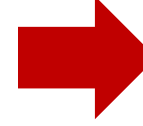
Human skin-surface temperature measurement

2



Locating abnormal body temperature

3



Double check with mercury or ear thermometers.

4

Fast preliminary temperature screening without any physical contact



**S**AFE

Distant and accurate check without physical contact, reducing cross-infection possibilities.

**E**FFICIENT

Automatic alarm triggering, reducing manpower invested.

**A**DAPTABLE

Multiple product types, easy to deploy, and suitable for different scenarios.

**T**RACEABLE

Combining temperature, image and face identification for easy management and query.

# Solution Overview

## Feature (A) Temperature Screening with fast deployment



- ✓ Entrance with short-term requirements
- ✓ Unsuitable for complicated wiring and installation

### 1-1 Thermographic Cameras

Visualized Bi-spectrum Live View



- With Thermographic Camera
- Blackbody is **optional**

### 1-2 Wireless Devices

Easy Connection, Cable Free



- With Handheld Thermographic Camera

### 1-3 Metal Detector Doors

Real-time Sound and Light Alarm



- With Metal Detector Door

- Temperature screening with metal detector door for entrances of police station, subway station, airport security check, etc.
- Indoor space without wind
- Building entrances, elevator, halls, events, examination centers etc
- Wireless deployment (cable free)
- Thermographic turret camera on walk-through metal detector door.

Complete flexibility on creation of dashboards, reporting, alerts and fast video search of target people with abnormal temperatures, without masks etc



# Solution Overview - 2

## Feature (B) Temperature Screening with Access Control



- ✓ Indoor space without wind
- ✓ Security control and Temperature screening at the entrance which has a route to guide people flow



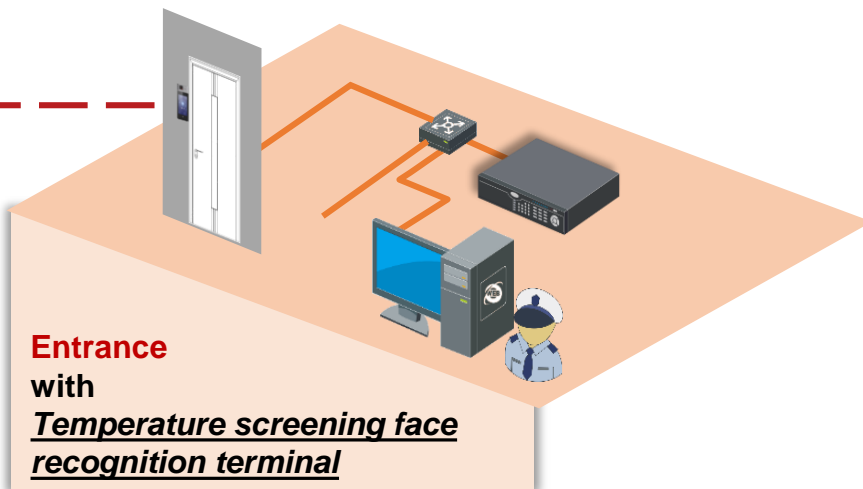
Touchless, access is easier and safest



- With Door Control
- Wall-mount to control the door



Entrance with  
Temperature screening face  
recognition terminal



## Feature (C) Group Temperature Screening



- ✓ Indoor open space without wind
- ✓ Large people flow
- ✓ Temperature screening on crowds



High-risk Group Screening with High Efficiency



- With Thermographic Bullet Camera
- Blackbody is **optional**

- Temperature screening of crowd with high efficiency (indoor)
- Long range temperature screening capacity with access control for building related projects
- One stop centralised monitoring.

Flexible, scalable, reliable and powerful central surveillance system



# Solution Overview - 3

## Feature (D) Temperature Screening on Patrol



- ✓ Indoor open space without wind
- ✓ Patrolling without a fixed route



Anytime, Anywhere, Just one click.



- With Handheld Thermographic Camera
- For preliminary Temperature screening by spot-checking inspectors (indoor)
- Temperature screening without disturbing a person
- Mobile thermal app
- Hotspot capability

## Feature (E) Temperature Screening & Mask Detection



- ✓ Indoor open space without wind
- ✓ Face recognition with mask on



Intuitive Demonstration



- Thermographic Camera & DeepinMind NVR
- Simultaneous Temperature screening for multiple persons (indoor), contact-free
- Detecting whether people wear masks or not and timely giving alarms with alerts
- Confirming identity, **even with mask**, and giving alarms on strangers

# Contactless Authentication

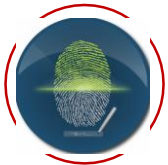
## Touch

### Current scenario & Potential threat



- ✓ RFID Card Access Control
- ✓ Biometric Fingerprint
- ✓ Keypad access controller & time in and out attendance

 **Touch – vulnerable and highly risky to virus**



- Access with biometric
- Unhygienic
- Systems are not 100% accurate

### Present ways of maintaining Patient Record:

- Traditional paper based form filling
- Minimum verification using touch (biometric)
- No Centralized data to keep one patient with one identity.



## Touchless

### Facial Recognition Solution (FRS)



- ✓ High accuracy allows avoiding false identification
- ✓ Integration process is easy & flawless
- ✓ Facial Recognition System is fully automated

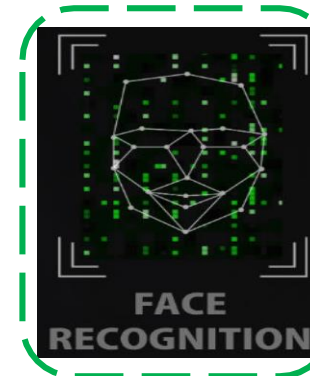
 **Contactless - High efficiency, easier and safer**



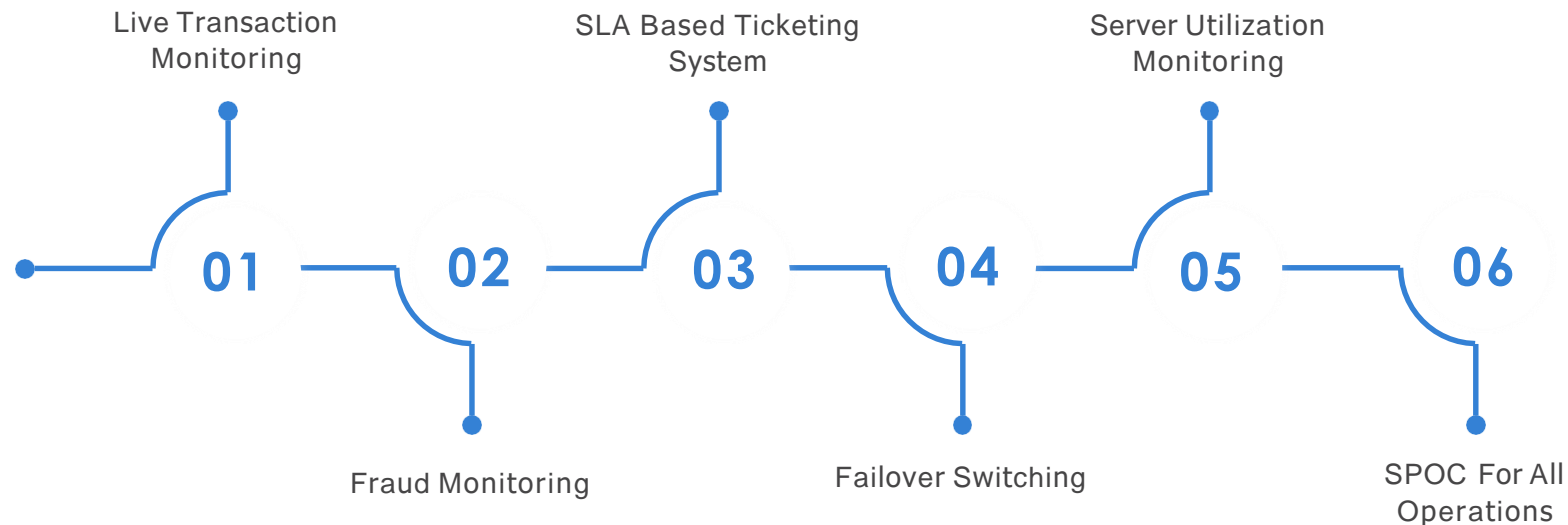
- Secure and Automated Monitoring
- Unauthorized Person Detection
- Realtime Face Recognition

### Future solution ready:

- ✓ App's & Client SDK's for all Stacks
- ✓ License Management
- ✓ Transaction Metering
- ✓ Fraud Monitoring & Controlling Suite
- ✓ Billing Platform
- ✓ Live Monitoring Panel.



# Live Dashboard Centralised Monitoring







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