

# HOW AIRPORTS WILL ADAPT

HEALTHIER AND SAFER  
AIRPORTS FOR TRAVEL

Honeywell



# A NEW NORMAL OF AIR TRAVEL

Restoring Passengers, Staff and  
Service Providers Confidence, across  
the Journey

Honeywell is ready to help airports bring  
travelers back to the skies



# HONEYWELL SOLUTIONS | BRINGING YOU BACK



## Trust Through Expertise

We are trusted because we combine deep expertise with an ever-expanding knowledge ecosystem of people, industries and technology.



## Committed to Results

Our relentless dedication to employees, customers and society, manifests in a drive to tackle complex problems and seeing them all the way through.



## Reinvention is in our DNA

At Honeywell, we know that disruption often breeds innovation. We've done it again and again, for over 100 years, pushing the world forward each time.



## Catalyst to Recovery

Our customers can't create the future if they can't endure the present. We prepare those we work with for the challenges of today and for more productivity and profitability in the long-term.

## Delivering The New Normal Of Travel

# WE UNDERSTAND THERE ARE CONCERNS



## AIRPORTS & AIRLINES CONCERNS

- 1 BUILD PASSENGER CONFIDENCE**  
How do I rebuild trust to come back to the airport?
- 2 KEEPING OUR PASSENGERS, STAFF & SERVICE PROVIDERS SAFER**  
Creating a consistent safety continuum for our airport eco-system
- 3 HOW DO WE COMPLY?**  
Adhere to both ICAO and governmental safety and cleaning protocols
- 4 SUSTAINABLE RECOVERY**  
How do we more safely and smartly get through the holiday season without hindering recovery

# \$63-113B

Approximate revenue impact for aviation industry in 2020\*

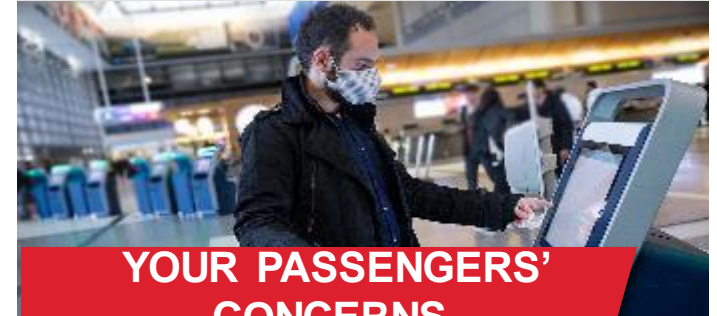
# 91%

Decrease in Passenger Global Occupancy\*\*

# 18

Months at least before travel demands return to some normality\*\*\*

\* IATA March, 2020  
\*\* ACI/IATA, April 2020  
\*\*\* Emirates, May 2020



## YOUR PASSENGERS' CONCERNS

- 1 PERSONAL PROTECTION**  
Usage and availability of personal protective equipment for passengers
- 2 IS EVERYTHING CLEAN?**  
Cleanliness of concessions, lounges, waiting areas, seats, bathrooms and other common areas
- 3 HOW MUCH IS BEING DONE?**  
What is the extent of cleaning and protection measures and what is changing?
- 4 PEACE OF MIND**  
Validation that it's safer to travel and discover new countries from curb, to gate, to inside the aircraft

# OUR TAKE

## THREE CORE AREAS TO FOCUS ON

### PROTECTING PEOPLE BETTER



### HEALTHIER & SAFER TERMINAL



### PROMOTING OPERATIONAL SUSTAINABILITY



**Reassure, Protect, Recover**

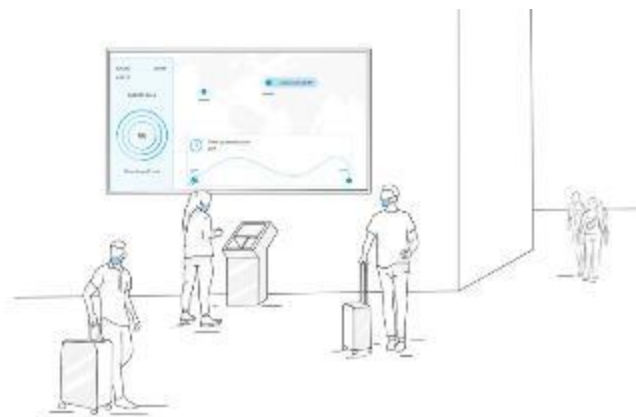
# PASSENGER JOURNEY

## SAFETY CONTINUUM



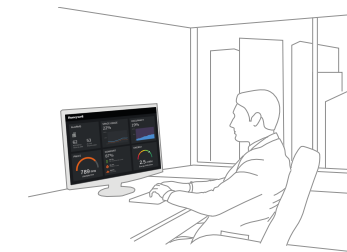
### TOUCHLESS CHECK-IN & IMMIGRATION

- PPE kits available
- Baggage UV light treatment
- Touchless access



### WORRY-FREE TERMINAL EXPERIENCE

- Indoor Air Quality (filtration, temperature, humidity & ventilation)
- Enhanced Cleaning
- Automated Social Distancing & SOP



### LEARN, ADAPT & RESPOND

- Response Workflows and SOP
- Monitoring, analytics & reporting
- Portfolio View & KPIs



### SMART AIRPORT ENTRY

- Rapid testing
- Temperature screening
- PPE compliance
- Passenger flow & occupancy management



### PEACE OF MIND IN FLIGHT

- PPE for passengers & crew
- Continual cabin air filtration & odor elimination using disinfecting technologies

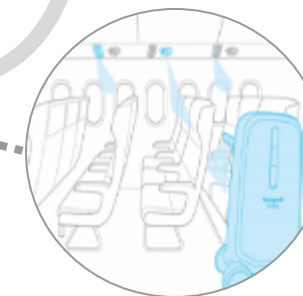
### BEFORE YOU FLY

- Occupancy, health & safety transparency with passengers
- PPE kit delivered to home prior to flight



### ON-TIME DEPARTURE

- Carry-on baggage treatment
- Temperature screening
- Improved boarding procedures



### DEEP CLEANING

- Autonomous solutions Cabin & cockpit
- In-between flights

# **WE HELP TO COVER YOU** **CURB THROUGH AIRCRAFT**

**TERMINAL ENTRANCE**



**INSIDE THE TERMINAL**



**ON THE AIRFIELD AND IN  
THE AIRCRAFT**



# WE HAVE YOU COVERED

## CURB THROUGH AIRCRAFT

### TERMINAL ENTRANCE

#### Healthy Terminal Dashboard

Monitor climate, cleaning and people flow

#### PPE & Safety Kits Availability

PPE Kits vending machine at the airport entrance. Frictionless, no touch, no collection door

#### Temp Screening/PPE Detection

Enable Safety Rules Compliance enforcement & minimize risk exposure

### INSIDE THE TERMINAL

#### Temperature Screening/Social Distancing

Enable enforcement of social distancing policy with AI, PAX counting & flow

#### Lockdown Monitoring with Alerts

Quick & location specific and informed responses

#### Contact Tracing

Monitor movement to record contact tracing through access controls & video analytics

#### Touchless Access

Use Facial Recognition to open gates or doors

#### Sensors for IAQ and Comfort

Track across airport zones

#### Isolating Vulnerable Spaces

Like interview rooms, WC with negative pressure & allow for lock-out tag-out protocol.

#### Hands Free Duty Free Concessions

No touch transactions with superior experience

### ON THE AIRFIELD AND IN THE AIRCRAFT

#### PPE Kit & Airside Employee Screening

For on ground personnel

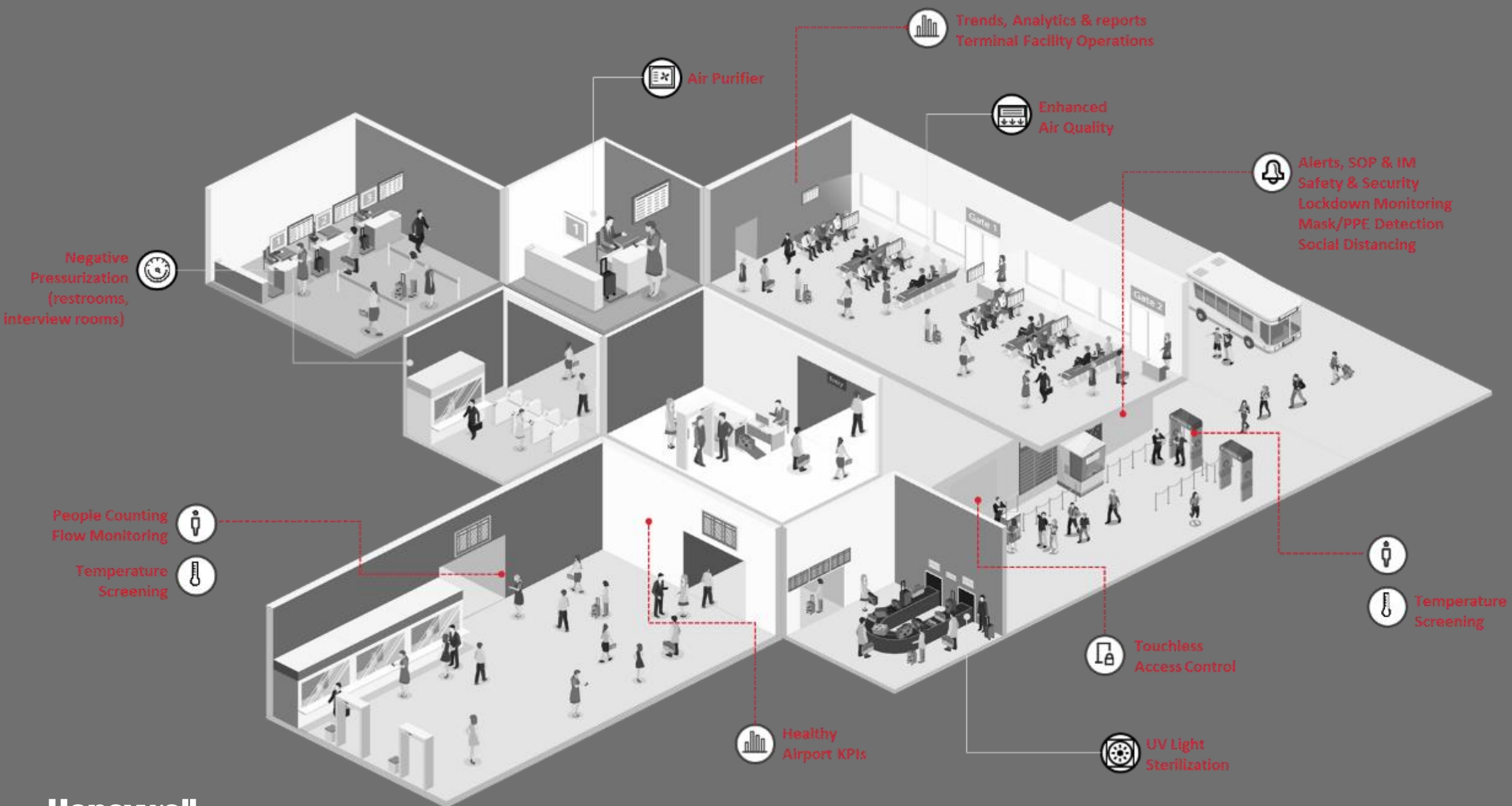
#### Airside/Terminal Performance Integration

Ensure terminal IAQ & Screening readiness upon landing and on time A/D to avoid waiting times

#### Aircrafts

Holistic solutions in place to cleaning planes, ensure air quality in flight and provide branded PPE for crew and passengers.





Negative Pressurization (restrooms, interview rooms)

Air Purifier

Trends, Analytics & reports Terminal Facility Operations

Enhanced Air Quality

Alerts, SOP & IM Safety & Security  
Lockdown Monitoring  
Mask/PPE Detection  
Social Distancing

People Counting  
Flow Monitoring

Temperature Screening

Healthy Airport KPIs

Touchless Access Control

UV Light Sterilization

Temperature Screening

1

# TERMINAL ENTRANCE REASSURING PASSENGERS

PROTECTING  
PEOPLE  
BETTER

HEALTHIER  
& SAFER  
TERMINAL

ENHANCING  
OPERATIONAL  
SUSTAINABILITY



# ENHANCING TERMINAL COMPLIANCE WITH HEALTH & SAFETY REGULATIONS

## Healthy Terminal Dashboard

As a **Passenger**, knowing the terminal has been properly ventilated, cleaned and complies to safety guidelines and regulations,

As a **Terminal Operator**, monitoring climate quality, ventilation, people flow, and more, available virtually anywhere through mobile and with common area digital signage.



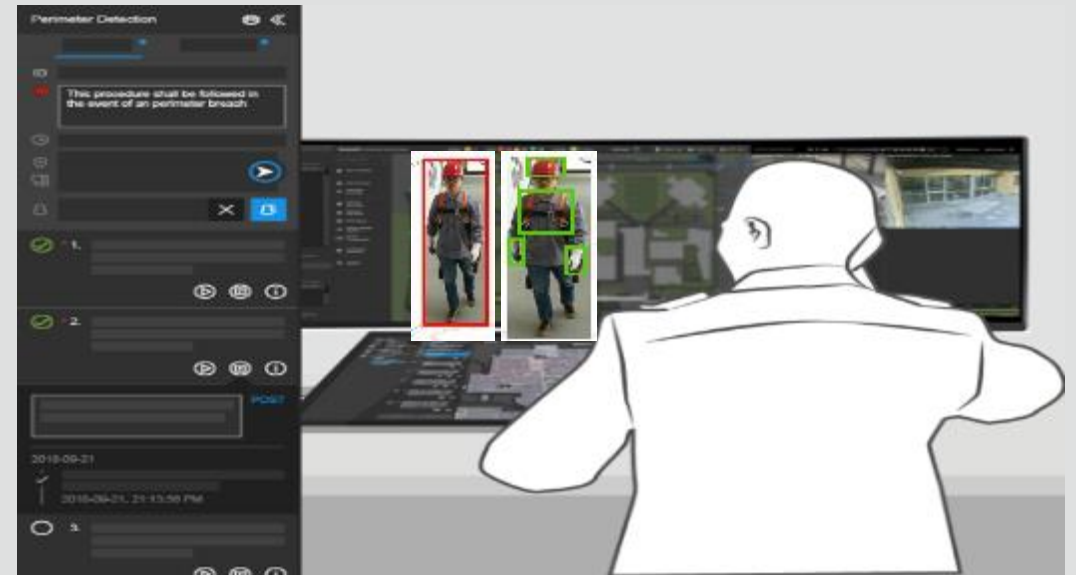
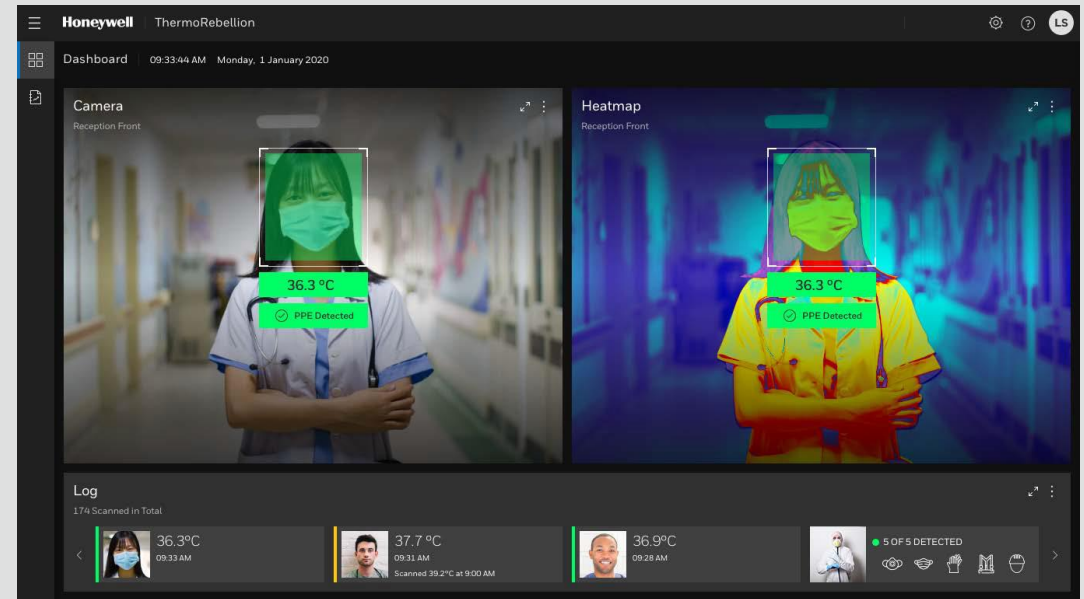
# ENHANCE COMPLIANCE & REDUCE EXPOSURE RISK IN PEOPLE FLOWS

## Thermal Screening

Minimize infection exposure to people by screening for symptoms (fever) at airport entrances and integrated with VMS for monitoring, recording, alarm management and SOP

## Temperature Checks and PPE Detection\*

Using Artificial Intelligence to conduct temperature checks and automated mask and PPE detection



\*Coming soon



**2**

# INSIDE THE TERMINAL

Holidays. Tourists are excited to travel, but they want to know their safety has been considered.

Your passengers. Your staff. Your service providers.  
Your terminals, and your operations.

All better covered.

# HEALTHIER AIRPORTS CROWD DETECTION & FLOW MANAGEMENT

## Near Real Time Monitoring

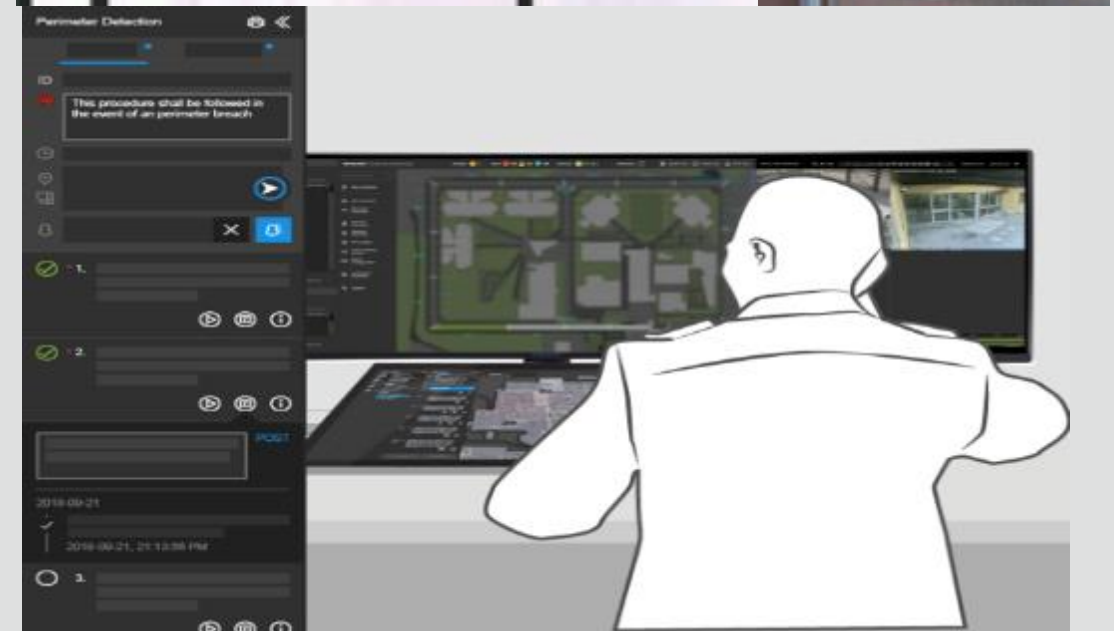
Monitor in near real time if passengers within an airport zone are following social distancing guidelines using access controls or video analytics and receive alerts upon non adherence to trigger automated response like PA/VA to keep distances

## Touchless Access

Reduce inter-personal exposure to staff & passengers by removing high touch readers using Face Recognition

## Access Control For Contact Tracing

Access control monitoring and recording personnel movement will enable contact tracing records in case of infection.



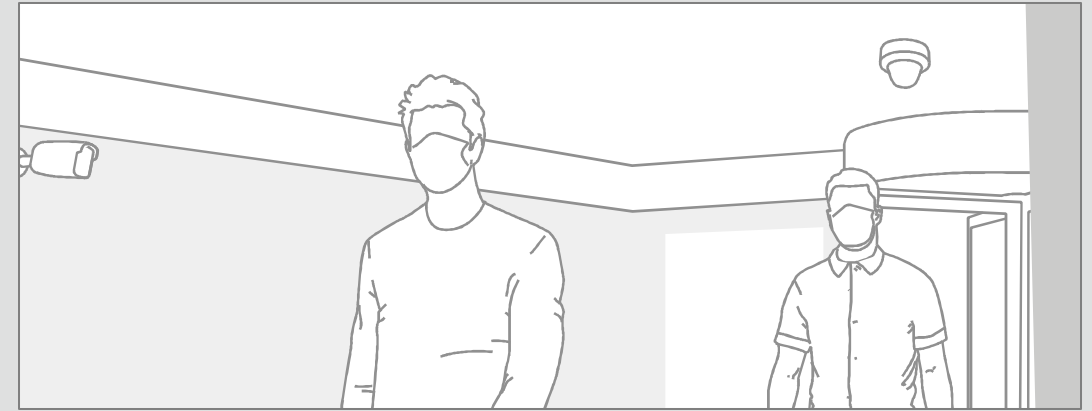
# MONITORING YOUR TERMINAL MORE COMPREHENSIVE OPERATIONS

## Mask & PPE Detection

People counting and flow. Alert, track and apply standard operating procedures

## Lockdown Monitoring with Alerts

Location specific responses coupled with video analytics confirmation





# TERMINAL INDOOR AIR QUALITY\*

## Sensors for Safety and Comfort

From curb to gate, our sensors can track humidity, occupancy volume, temperature, and more.

## Ventilation

Reduce air recirculation as per EASA and other industry guidelines. Help passengers to not stay longer than 30 minutes without proper ventilation

## Filtration

Reduce airborne contaminants, bacteria and fungi with MERV filters and in-duct surface disinfection with UV lights

## Temperature & Humidity

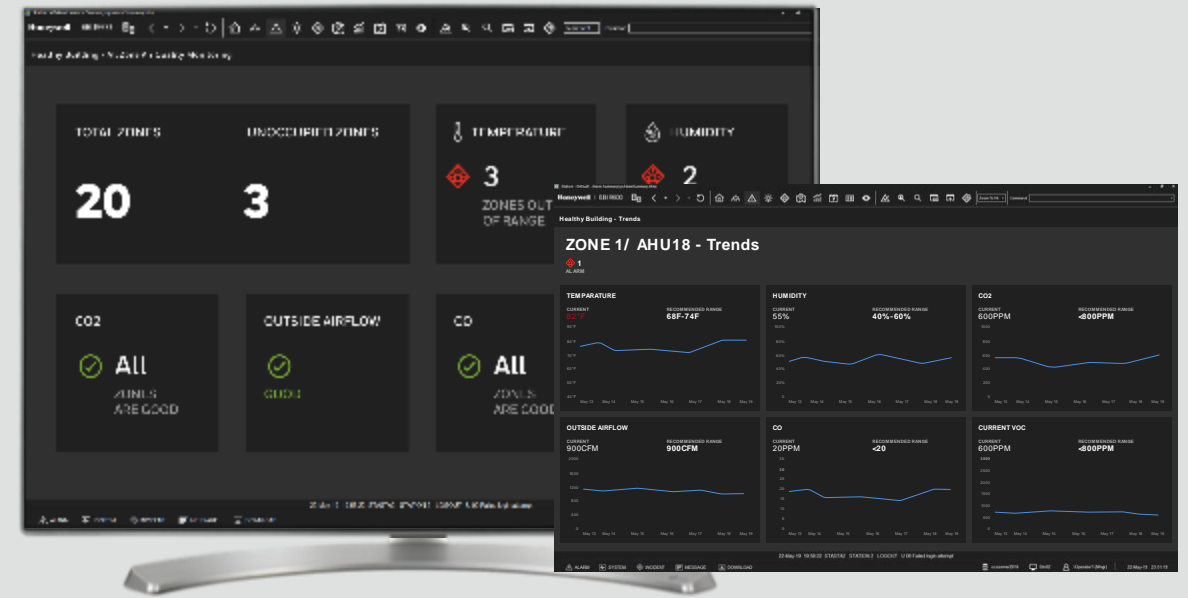
Humidity range of 40-60% can decrease occupant exposure and reduce airborne transmission

## Healthy Terminal Configuration & SOP

Centrally Manage your IAQ based on zone occupancy and industry guidelines\*

\* Results may vary. No testing has been done specifically as to protection against COVID-19

\*\*ASHRAEE, REVHA, EASA



**HB ALARMS  
SUGGESTED ACTIONS**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

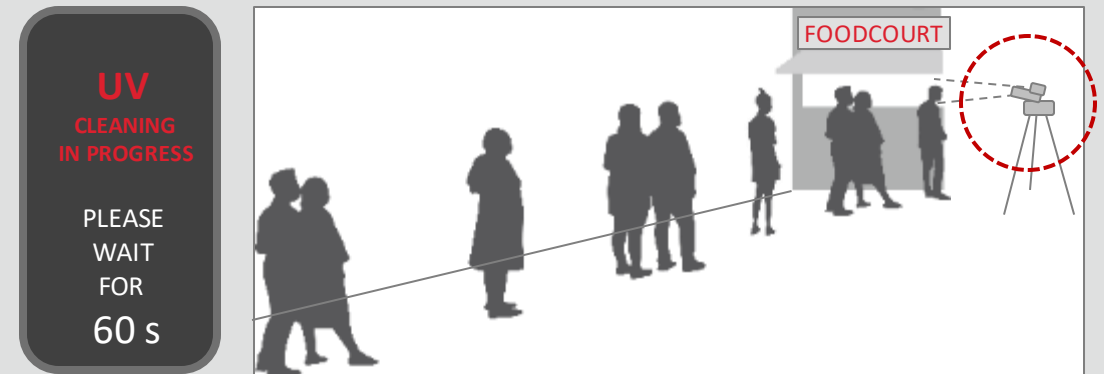
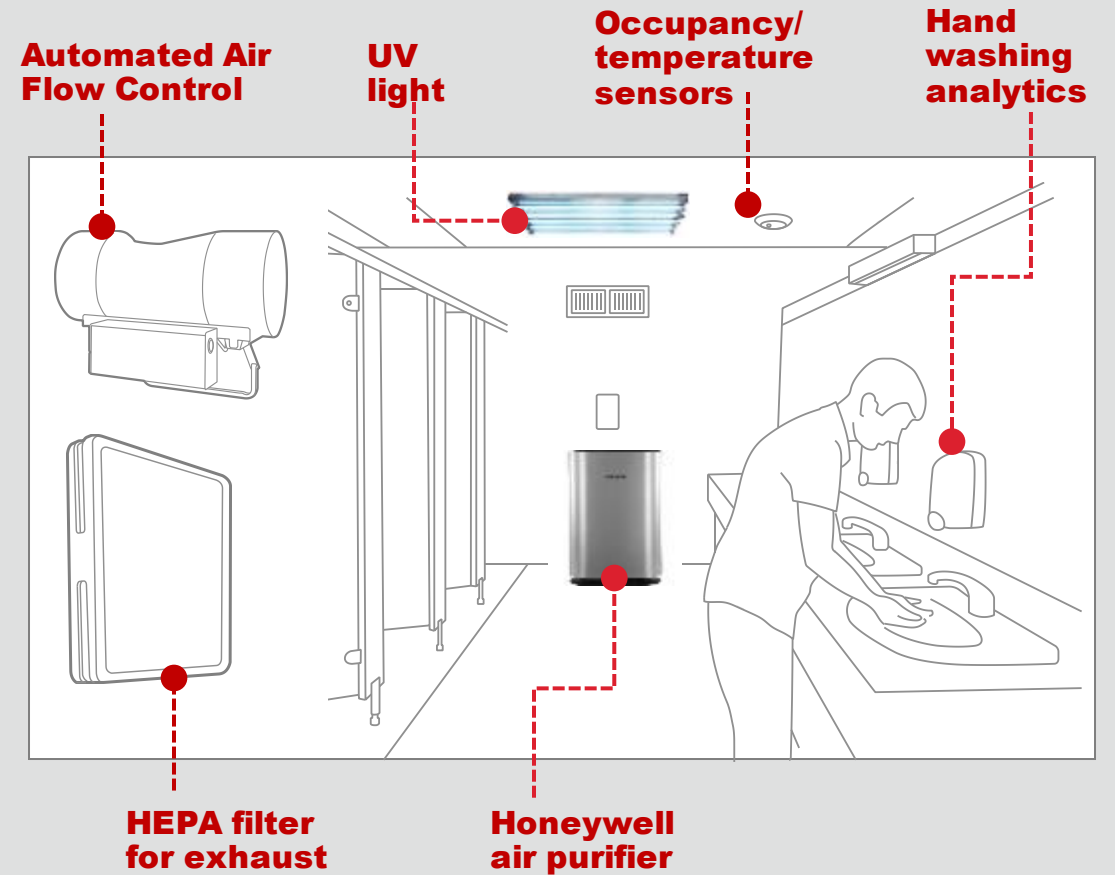
# REDUCING RISKS INTERVIEW ROOMS, BATHROOMS & FOOD COURTS

## Isolating Vulnerable Spaces

Isolating vulnerable spaces with negative air pressurization, filtration and sterilization. Access controls allow for lock-out tag-out protocol.

## Cleaning Tracking

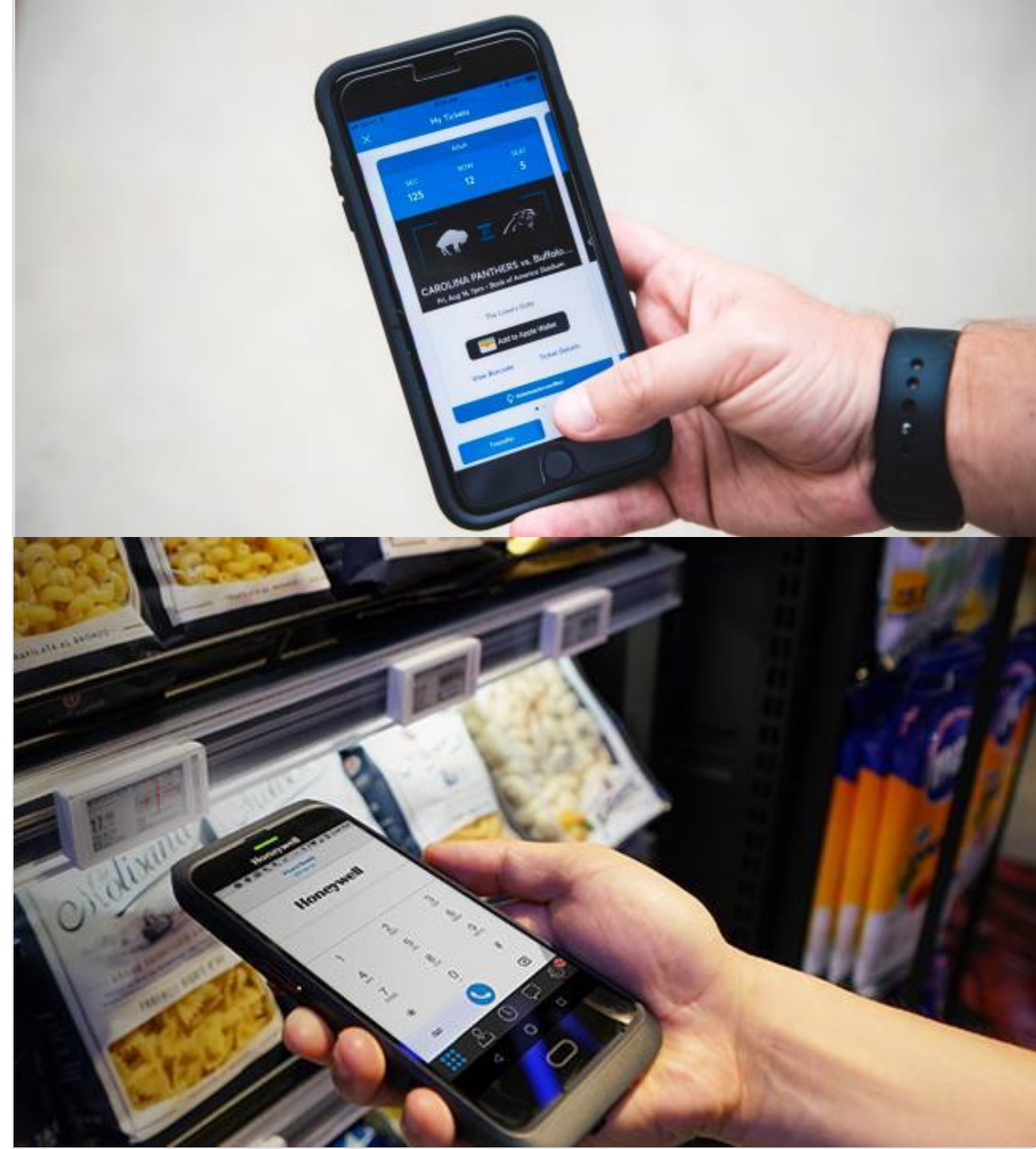
Monitoring cleaning activity across the airport throughout the day



# DUTY FREE CONCESSIONS NO TOUCH EXPERIENCE

## Hands Free Bar Code Scanners and Self Check-out Kiosks

Deliver a no touch transaction at point of sale and still enable superior experiences through customer scanning applications aligned to airline loyalty programs and self-checkout kiosk options



3

# ON THE AIRSIDE SAFETY CONTINUUM

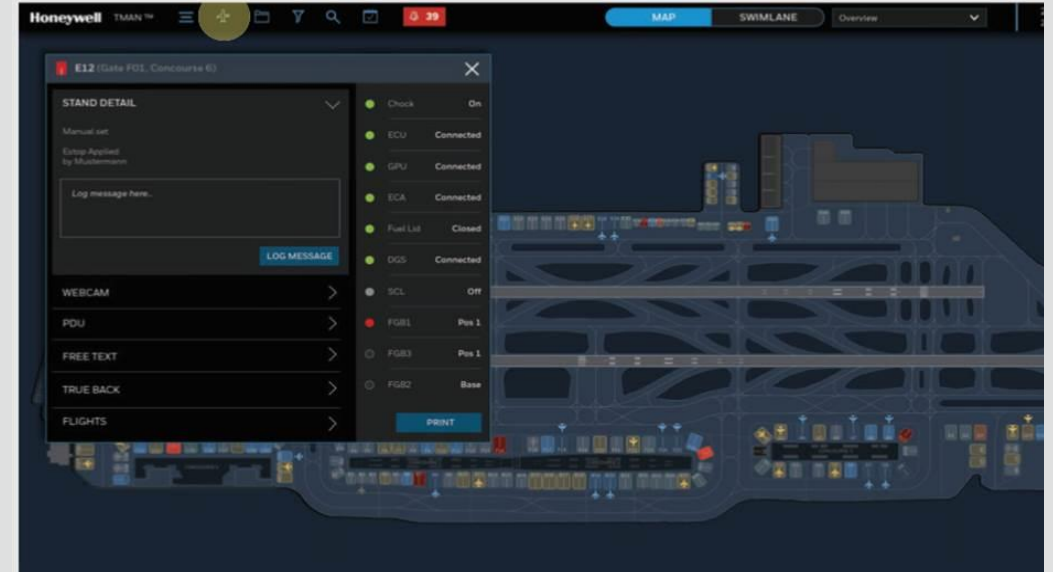
Honeywell



# MANAGING ON TIME A/D PASSENGER FLOWS AND TERMINAL READINESS

## Effective Turnaround Operations

Better Aviation Stakeholders Alignment to Reduce Delays & Passengers Waiting Time. Ensure Terminal Readiness for actual passenger flows: screening, adapted airbridges and terminal air quality levels



*“Aeroplane operators and airport operators should collaborate to ensure that passengers are not kept on board of an aircraft without proper ventilation for longer than 30 minutes.” EASA new Covid19 Guidance*

# ADDED PEACE OF MIND FOR PASSENGERS ON THE GROUND AND IN THE AIR

## PPE Protection

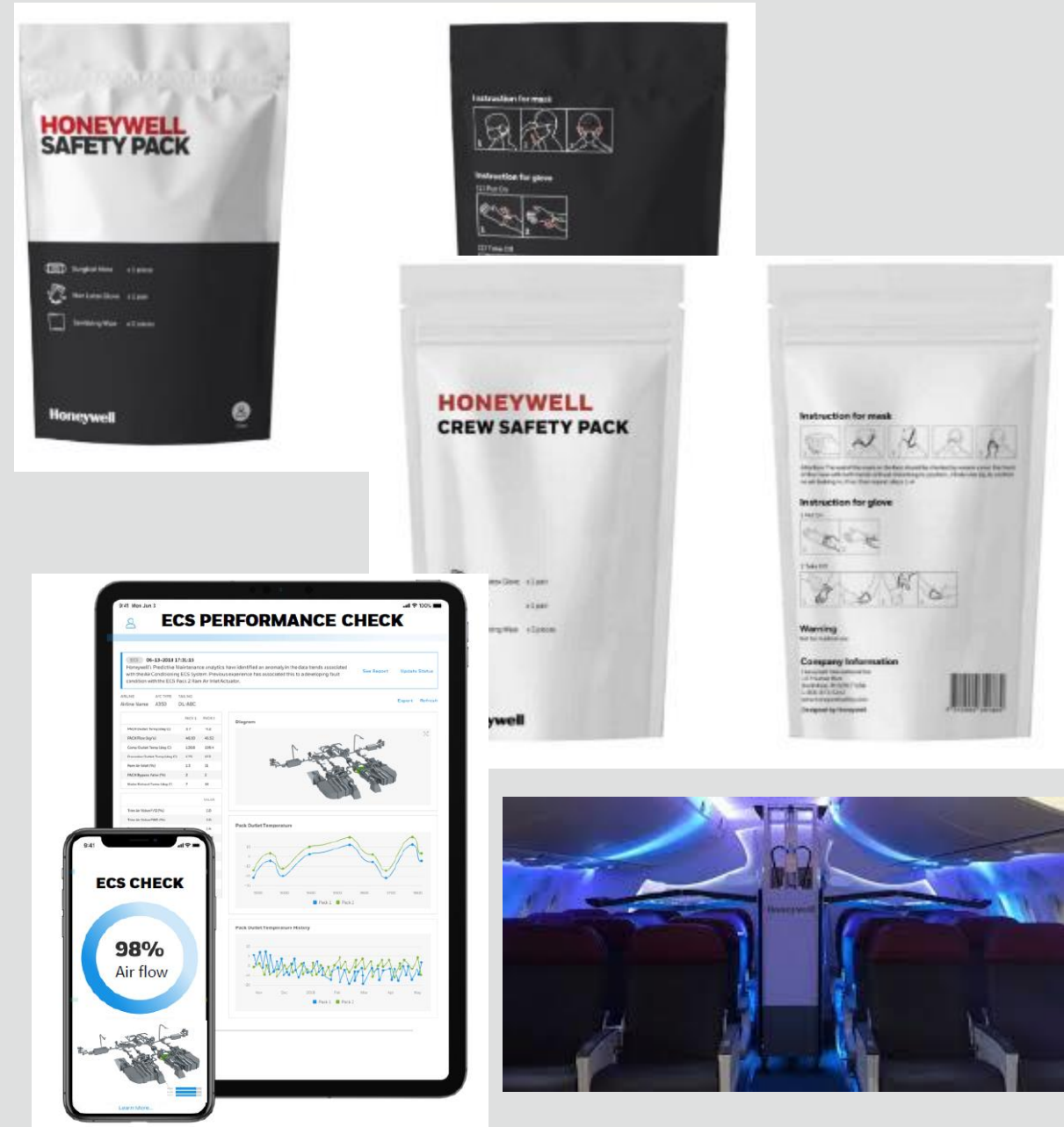
Airline Branded PPE and Safety packs delivered to passengers ahead of the trip and available on board for crew and passengers

## UV Cleaner Concept

Autonomous system that can help clean an aircraft cabin in minutes. Sensors in the airplane confirm cleaning has been completed.

## Environmental Control System Performance Check

ECS Performance Check allow airlines to more quickly use aircraft data and advanced analytics to monitor for air quality in the cabin



# CLIENT TRUST MATTERS THE MOST



**Dubai International Airport**  
United Arab Emirates



**Indira Gandhi Airport**  
Delhi, India



**Incheon International Airport**  
South Korea



**Kuala Lumpur International Airport**  
Malaysia



**Brussels International Airport**  
Belgium



**Abu Dhabi Airports Company**  
United Arab Emirates



**Pittsburgh International Airport**  
Pennsylvania, USA



**Denver International Airport**  
Colorado, USA

**We Work With 500+ Airports in the World, Our Experience Is To Your Advantage**

# TURNKEY INTEGRATED SOLUTIONS FOR AIRPORTS

## HONEYWELL'S MAJOR PROJECT APPROACH

### PROJECT DESIGN

#### **Dedicated Solution Architect**

Develops and delivers solution

#### **Honeywell Building Services & Airport Business**

3,200 person global workforce acting as single point of contact for all contracted work. Airport domain experts

#### **Integrated Systems**

- Fire, PAVA and other life safety
- Building Management System (BMS)
- Intrusion & digital video surveillance
- Unified IT/wireless network design
- Cyber security & IoT integration
- Connect to airport systems AODB, etc.
- Energy savings & Sustainability
- Central command control station
- AGL, Turnaround & Tower Solutions

### EXECUTION

#### **Dedicated Solution Project Lead**

Continued design-to-delivery POC managing updates and changed requirements; aiming for on time, on budget result

#### **Project Management**

- Provisions and sequences labor, parts, digital architecture, certifications and hand over to client
- Coordinates with on-site airport facility management and other preferred service providers
- Manages approvals with local authorities having jurisdiction to complete and sign off work to code

### SERVICES

#### **Dedicated Account Management**

Responsible for lifecycle support and services; leveraging solutions and resources to help achieve maintain existing goals and deliver new requirements inside the terminal and on the airside

#### **Managed Services**

- Training and certification of staff or other contractors
- Monthly KPI & savings reports
- Incident response and predictive maintenance & analytics
- On site team to run routine operations & manage updates
- Flexible extra shift for game day
- Remote managed services 24/7
- Quarterly business review



# GETTING STARTED

1

## Walkthrough to Analyze Current Situation

Expert walkthrough and interviews with Incident Response Team, critical infrastructure, personnel, security, facility management, and more.

2

## Evaluation of Policies and Standards

Review, analyze, and validate current policies and SOPs in place

3

## Deliver Analysis Report and Recommendations

Honeywell to issue a recommendations report, with challenges, opportunities, dependencies, and an action plan

4

## Pain Point Prioritization

Rank the full or partial solutions during a co-ideation session, prioritized by criticality, speed, quality, and impact of implementation

5

## The Proposal

Detailed proposal outlining discrete point solutions, timelines, costs and a proposal to digitize and communicate key airport stakeholders health score metrics

**Selection, deployment, and implementation of our solutions, so you're better set up for recovery, flight after flight**

**Let's Get Planes Back In the Skies And Passengers In Their Seats**

**THANK  
YOU**

**Honeywell**

# **ALTERNATIVE SLIDES & BACK UP**

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## Delivering The New Normal Of Travel

1

# TERMINAL ENTRANCE HELP REASSURE PASSENGERS

PROTECTING  
PEOPLE  
BETTER

HEALTHIER  
TERMINAL

ENHANCE  
OPERATIONAL  
SUSTAINABILITY

Healthy  
Pressurization  
(restrooms,  
interview rooms)

People Counting  
Flow Monitoring

Temperature  
Screening

Healthy  
Airport KPIs

Touchless  
Access Control

UV Light  
Sterilization

Air Purifier

Trends, Analytics & reports  
Terminal Facility Operations

Enhanced  
Air Quality

Alerts, SOP & IM  
Safety & Security  
Lockdown Monitoring  
Mask/PPE Detection  
Social Distancing

Temperature  
Screening

Temperature  
Screening



2

# INSIDE THE TERMINAL

PROTECTING PEOPLE BETTER

HEALTHIER TERMINAL

ENHANCED OPERATIONAL SUSTAINABILITY



Social Distancing  
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Negative Pressurization (restrooms, interview rooms)

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