SAFETY MOMENT

Get your safety information from a reputable source

✔ Establish your safety protocols
✔ Maintain Social Distancing
✔ Wash Your Hands Often
✔ Wear a face mask
✔ Do not leave home if you show symptoms
✔ Take the time to self care
PRESENTATION OVERVIEW

1. Introduction - Plant & Personnel Safety
2. Secure Managed Site Entry
3. On Site Workforce Safety & Comp
4. Remote Collaboration
HAS LIFE GOTTEN A LITTLE MORE COMPLEX THESE LAST FEW MONTHS?

“NEW NORMAL” IS NOW THE TERM TO DESCRIBE OUR FUTURE IN THESE UNPRECEDENTED TIMES
A REALITY CHECK

• “New Normal” likely to persist as a global challenge well into the future

• Preventive measuring causing plant level disruptions
  - Limited workforce on site
  - Restricted workforce movement on site
  - Various risks leading to unavailability of workforce

• Current safeguards are limited to manual process and checks requiring extra time, personnel and efforts

• Remote working, collaboration between team and operating with less workforce on site is new normal.

NEED: An effective layer of protection
PLANT AND PERSONNEL SAFETY

• Wholistic approach to Safety covering Plant, Assets, Process & Personnel
• Integrated Portfolio of Safety & Security Systems delivering enhanced Safety & Compliance monitoring
• Leverage’s digitization & Latest technologies
• Reduces Risk and Impact of Incidents
• Manage Incidents with Confidence.

PLANT AND PERSONNEL SAFETY
Integrated Safety & Security

Improve safety and secure plant, people and environment
LEVERAGING PERSONNEL SAFETY PORTFOLIO

Enhancing Personnel Safety, Enabling Business Continuity

DWM Business Continuity and Response Solutions

- Automated Site Entry
- On Site Workforce Safety & Compliance
- Remote Collaboration
Enhance workforce safety & business continuity

1. Automated Site Entry – Reduced Manpower & Time
2. Secure & compliant site access management
3. Enable Safety and Operational Continuity with reduced workforce
4. Continued Benefits into the future as site return to normal Operations
5. Reduced Risk of Shutting Down from workgroup exposure
6. Enables Social Distancing Compliance monitoring on Site

SOLUTION BENEFITS
ENTRY MANAGEMENT – VISITOR/EMPLOYEE (RTW)

Pre Site Entry

Site Entry Requestor

Email with Instructions & QR Code

Approver

ADMIN/Manager

Site Entry Online request filled By Employee

Site Access

On Site Arrival

Elevated Temperature Check Using Thermal Cameras

Scan QR, Check details, Accept Declaration form by taking Photo

Scan QR ID Check Form Check

Access Card Issued (Visitor) or Activated (Employee)
ENTRY MANAGEMENT – REGULAR GATES

- Workers Approach Entry Gate
- Normal Temperature
- Elevated Temperature Check Thermal Cameras
- Approaching Worker ELEVATED TEMPERATURE DETECTED
- Access Gate AUTO LOCKED
- Security Segregates the person Updates in DWM CARD BLOCKED
- Requestor Email Notification
- Medical Officer Reviews Worker Health

- Digital Video Manager (DVM)
- Experion Industrial Security (EIS) Access Control
- Digitized Workforce Management Software (DWM)
KEY FUNCTIONS – DWM ENTRY MANAGEMENT SYSTEM

**Fully Auditable**
- Inclusive of person who registers, approver, visitor and host

**Self Service Kiosk Option**
- Use of QR code to enter Visitor ID
- Prompts to complete Entry Declaration
- Fast Processing & Digitization

**Tag Board**
- Count of all workers on site continuously
- Total site attendance continuously updated

**Auto Deactivation of Card**
- Not on site for more than N days, card is automatically deactivated

**Additional Access Requests**
- Additional areas access requests approved by area managers

**Fast, Automated, Digitized Process with Enhanced Functionality**

**Reporting**
- Expected Arrivals on Site for Day
- Time on site of at risk personnel
SCALABILITY TO WORKFORCE MANAGEMENT

Comprehensive Workforce Management

Visitor Management
Fatigue / Exposure Management
KPI Dash Boards
SAP, HRMS, LMS Integration
Time & Attendance
Compliance Management
Contractor Management
Process Workflows & Rule Engine

Experion Industrial Security
WHY THE NEED OF THERMAL IMAGING CAMERA

- Elevated body temperature testing is an important means of detecting at risk personnel
- Thermal imaging enables rapid, non-contact elevated temperature measurement
- Thermal imaging cameras support real-time detection and elevated temperature alarms
- The test data is recorded and can be traced.

### Comparison:

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Forehead / ear thermometer</th>
<th>Thermal imaging camera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature measurement method</td>
<td>Super close-range temperature measurement</td>
<td>Contactless remote temperature measurement</td>
</tr>
<tr>
<td>Temperature measurement distance</td>
<td>1-3cm</td>
<td>Above 1m</td>
</tr>
<tr>
<td>Temperature measurement speed</td>
<td>1-5 seconds</td>
<td>Real time</td>
</tr>
<tr>
<td>Temperature display</td>
<td>LED display</td>
<td>Video screen display</td>
</tr>
<tr>
<td>Temperature measurement data</td>
<td>Temporary only / no storage</td>
<td>Records temperature measurement data and video</td>
</tr>
<tr>
<td>Temperature measurement efficiency</td>
<td>12 people /min</td>
<td>60 people / min</td>
</tr>
<tr>
<td>Manpower needs</td>
<td>Manual operation</td>
<td>On-duty processing of alarms only</td>
</tr>
<tr>
<td>High-intensity work ability</td>
<td>Unknown</td>
<td>24x7 continuous operation</td>
</tr>
<tr>
<td>Coping with the environment</td>
<td>Scattered temperature measurement requirements</td>
<td>Areas with a large number of people in a short period of time</td>
</tr>
</tbody>
</table>

Thermal imaging camera: accurate and efficient
THERMAL IMAGING CAMERAS

• Elevated Skin Temperature measurement
• Accuracy within 0.3 °C with black body
• Dual thermal and HD visible cameras - Thermal cameras - High 640x512 and low 384x288 resolution options
• Heat measurement up to 5m away
• Up to 100 measurements per minute
• Can be used with Video system compliant with NDAA 2019 Section 899”
• Very reliable thermal facial detection analytics (ignores face masks and glasses) for temp measurement
• Standalone deployment or Integrated with DVM

* Images Honeywell Silent Sentinel
ELEVATED TEMPERATURE MEASURING CAMERA

- Used indoors or outdoors in a sheltered area such as a portacabin/shed
- Quick installation with mounting kits/trolleys
- Reduces the time at gate required for manual scan with temperature gun
- Alert when a person with an elevated temperature is detected
- EIS Access integration via DVM – lock access-controlled gates on detecting of elevated temperature person approaching it

Typical deployment Trolley, Tripod mounts
VIDEO ANALYTICS INTEGRATION WITH DVM

Social Distancing Violation's
• Crowd Detection
• Queue Monitoring

Safety Monitoring
• Scheduled Detection of people in defined Zone (E.g. Lone worker in Night, Restricted Areas movements)
• Server based analytics can be used with existing cameras with DVM
Control of Social Distancing via RTLS for contact tracing:

- Accuracy of +/- 2 to 3 meters (Required)
- Focused in high occupancy / movement areas
- Non cellular based solution
- Real time social distancing violation alarm enabling immediate action

**Scalable:**
- Automated mustering
- Productivity tracking
- Unauthorized area movement tracking
HONEYWELL ACCESS CONTROL – RULES

ZONE CONTROL RULES
(Maximum Or Minimum Count of People in Zone)

- **Maximum People in Zone**
  Checks the number of cardholders present in a zone and alarm if the maximum threshold exceeds.
  Reduce chances of Social Distancing violations due to over occupancy.

- **Minimum People in Zone**
  Checks minimum number of people in zone and alarms if count goes less than minimum required
  Eg: control /emergency room if the last person tries to leave the control room.
  Optimizes Safety when working with reduced workforce on site

- **Time in zone**
  Alerts if a user spends more than defined time in zone.
  Reduced contact chances.

PATH CONTROL

- Force a cardholder to follow a FIXED path to a destination
- The cardholder has to go to Reception Gate for elevated temperature scan then access other gates, access denied if he approaches other gate directly.

More Value with Your Honeywell Access Control System
LONE WORKER SAFETY MONITORING

• More chances of lone worker incidents as sites operate with low headcount
• Safety of this workforce is critical
• Quick Deployment Solution
  • Safety Suite Real Time Monitoring
    – Cloud and On-Premise Versions
• Real time location & Alarms
  – Gas Exposure Alarms (Upto 4 Gases)
  – Man Down Alarm
  – Panic Alarm
LONE WORKER SAFETY MONITORING

- System Dashboard
- Real-time Instrument Readings
- Map-View for Worker Location
- On-Screen Alarms/ Alerts
- SMS Communication
- Multiple Sites/ Areas
- Incident Playback
- Automated Notifications via Email & SMS
- Reporting for Data Analytics

Real time location of worker and his status, Optimizes rescue time in case of incident

More safety for worker in field.
REMOTE SITE MONITORING & COLLABORATION

Secure Remote Access to On Site Camera
• Enables collaboration between on & off-site teams,
• Remote support in case of Incidents

DVM Mobile Client
• Secure access to DVM cameras via App
  – iOS version, Android (Available soon)
• Access to live and recorded video

DVM Web Client
(Under final development stages)
• Zero Install, browser agnostic web view to DVM
• Display a single camera, navigation capability, review recordings
INTELLIGENT WEARABLES

Video Library of Procedures
- Knowledge Transfer
- Cloud base
- Local access

Expert on Call
- Expert advice
- Real time collaboration
- Increase speed of work
- Operating expenses
- Job compliance
- Reduce meantime to repair

Inspections Rounds
- Digital Workflow Solution
- Reduce manual efforts
- Increase job compliance
- Increase reliability

Docu Assist
- Digital Repository of Documents
- Reduce manual efforts
- Increase job compliance
- Increase reliability
EXPERT ON CALL

What is it?
The Intelligent Wearable Device configured with the Expert on Call application facilitating communication & remote collaboration to solve plant situations.

Benefits:
- Resolve mission-critical situations even when fewer experts are on site
- Real-time, on-demand collaboration
- Rapid issue resolution
- Audio/video call through PPE-compliant, hands free, and intrinsically safe wearable device
- Expert takes call from desktop or mobile phone to rapidly solve problems with audio, video, and image sharing.

Rapid Response through Remote Real-Time Collaboration
COMMAND AND CONTROL SUITE

Connect, Control, Collaborate with Confidence

- Reduce Risk
- Enhance Business Continuity
- Increase Operational Efficiency
- Enhance Image
- Enhance Business Continuity
THANK YOU