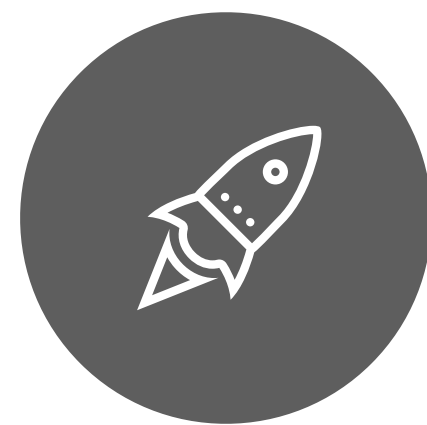




TECHNOLOGY AND INNOVATION BRILLIANTLY BLENDED



WE

ASPIRE - **A**DAPT - **A**DVANCE - **A**CHIEVE

We turn your ideas & ventures into reality.

ABOUT

Who We Are?

We are 4A Labs, your innovative technology solutions partner. We are a team of highly experienced managers, technical architects, engineers, developers, analysts, data scientists and designers who work around the clock to deliver software and hardware solutions that will reduce your costs, increase your visibility and save time during your decision making process. We know one size doesn't fit all, thus, we tailor knowledge, experience and technology just for your needs



Our Experience

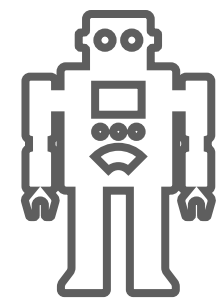
Our managing partners have over 45 years of combined Experience & Expertise in Enterprise Level Software & Platform Development, Mobile Application Design & Development, e-Commerce, B2C/B2B, CMS, CRM, ERP platform Solutions, Agile & Scrum Software Development & Project Management, BI, Big Data Analysis, AI and AR Solutions.

OUR COMPANY IN NUMBERS

75 / **150+** / **50+** / **4**
Members / *Projects* / *Clients* / *Awards*

Our Technology Expertise

Our strength and proficiency in the following areas of technology enable our clients & partners grow their businesses much faster, steadier and scalable



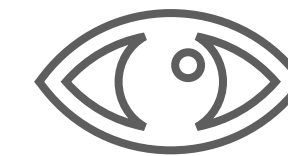
AI, Machine Learning & Neural Net

Neural Networks
Computer Vision
Face Recognition
YOLO
Tensor Flow
DarkNet
Object Classification



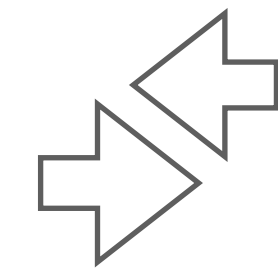
Internet of Things (IOT)

Indoor Positioning
Custom Hardware Design
WiFi / GPS / RF Applications
Wearable Programming



Augmented Reality (AR) Solutions

3D Modelling
VR
OpenGL / WebGL
Hologram
SceneKit / ARKit



Integration Solutions

ERP (SAP, IFS, JD Edwards, etc)
Legacy Systems
AS/400
Scada - PLC
3rd Party Systems

Our Technology Expertise

Our strength and proficiency in the following areas of technology enable our clients & partners grow their businesses much faster, steadier and scalable



Mobile Development

iOS (Objective-C, Swift)

Android (Java)

React Native

Flutter

Xamarin

Ionic



Front-End Development

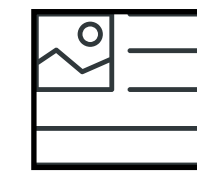
CSS/HTML5

Javascript, Ajax/jQuery, Dojo JS,
ReactJS, AngularJS, jQuery
Mobile

Responsive Design (e.g.
Bootstrap)

JSON/XML/REST & RESTFULL

APIs/Web Services



Web Development

Go Lang

Node.JS

.NET - C#/ASP.NET

PHP

Ruby on Rails

Java

Python



Database Architecture

Oracle

MS SQL Server

MySQL

PostgreSQL

NoSQLs

(CouchDB, MongoDB)



Our Sectors

As a full-service technology and creative solutions provider, we service multiple sectors and industries while working with some of the leading enterprises in their fields.

 GOVERNMENT

 ENERGY

 FINANCE

 TELCO

 RETAIL

 FMCG

 GLOBAL TRADE

 TOURISM

 MANUFACTURING

 EDUCATION

 TRANSPORTATION

 HEALTH

 CONSTRUCTION

Our Custom Solutions

As a full-service technology and creative solutions provider, we rigorously manage operations, focus on quality and operational excellence, while offering competitive pricing. We build lasting partnerships based on trust and transparency. We tackle business problems with intelligence. We use cutting-edge technology and creativity to achieve unparalleled results.



**Customer
Relationship
Management (CRM)**



**B2C / B2B
E-Commerce**



**Distributor
Management**



**Health & Safety
Systems**



**Cyber
Security**



**Procurement
Management**



**Computer
Vision**

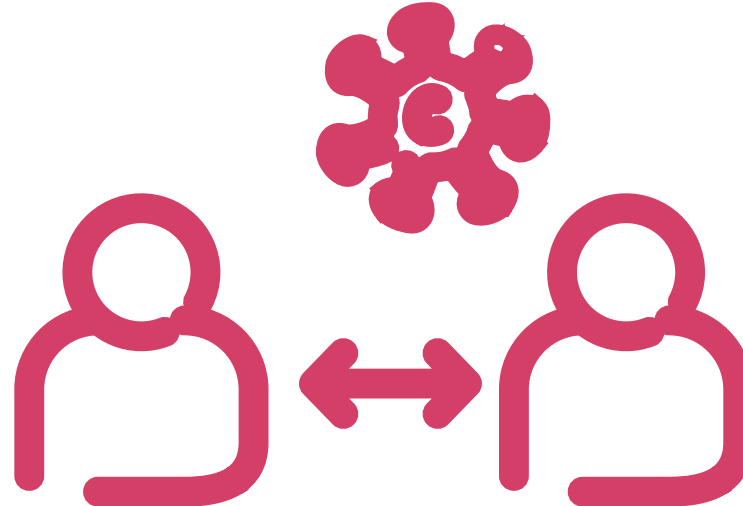


**Planning &
Forecasting
Systems**



**Core Banking &
Payment Systems**

Discover Our Health & Safety (HSE) and Computer Vision Products



InContact



**Man-Down
(Indoor & Outdoor)**



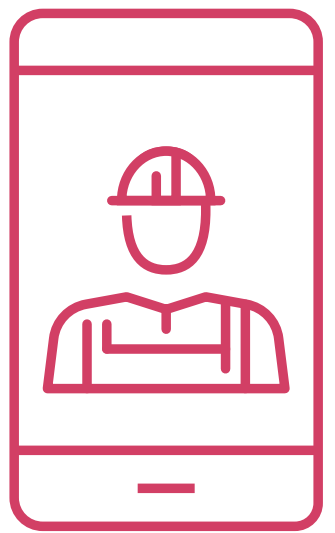
**Man-Down
(Underground)**



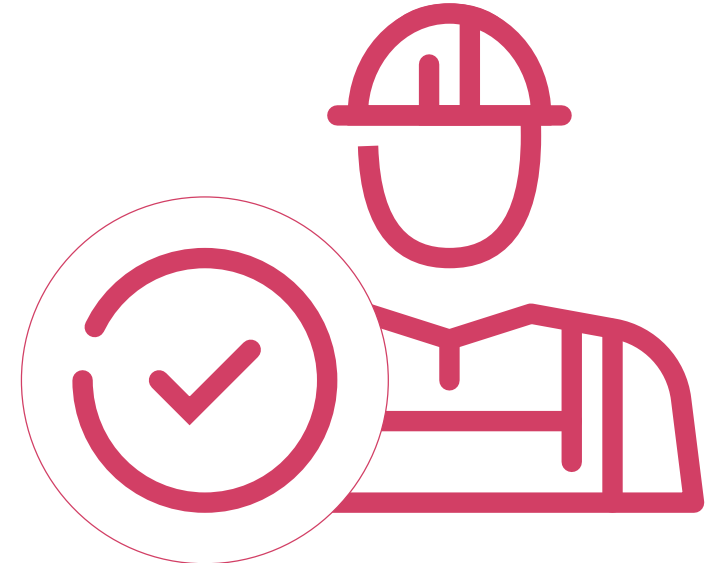
Proximity



**Quality Control
(Computer Vision)**



HSE on Air App



PPE Controller



Our Health and Safety Systems



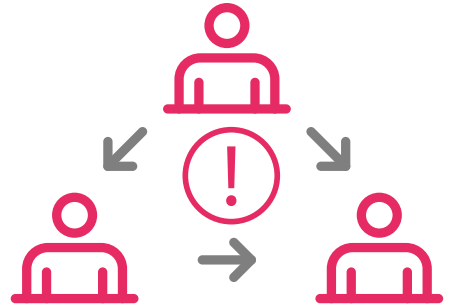
InContact

Contact Tracing and Reporting System



InContact

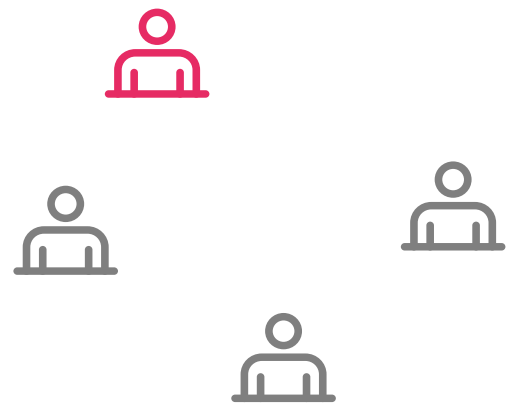
What is It?



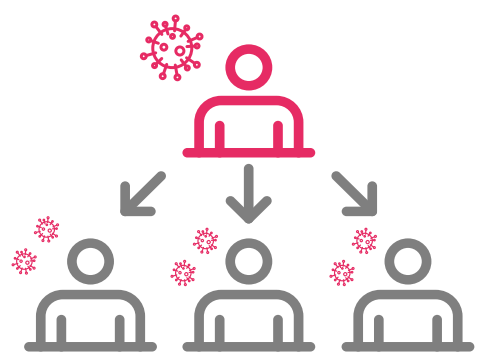
It enables people to protect their social distances in the workplace with the notification mechanism.



Increases Awareness on Social Distancing



With the low energy WIFI & RF technology, it can monitor contact without location tracking.



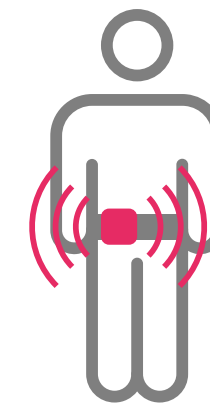
Reports workers in close proximity when an infection occurs and automatically identifies risk groups.



It measures interactions and provides historical reporting.



Adapts to all conditions with its quick and easy set up and monitoring solutions



Wearable hardware can be used by attaching it to the belt or safety vest.



With anonymous user profiles, it enables risk management without tracking

InContact

How Does It Work?

Tracks the proximation of your employees with each other using a light-weight RF device.

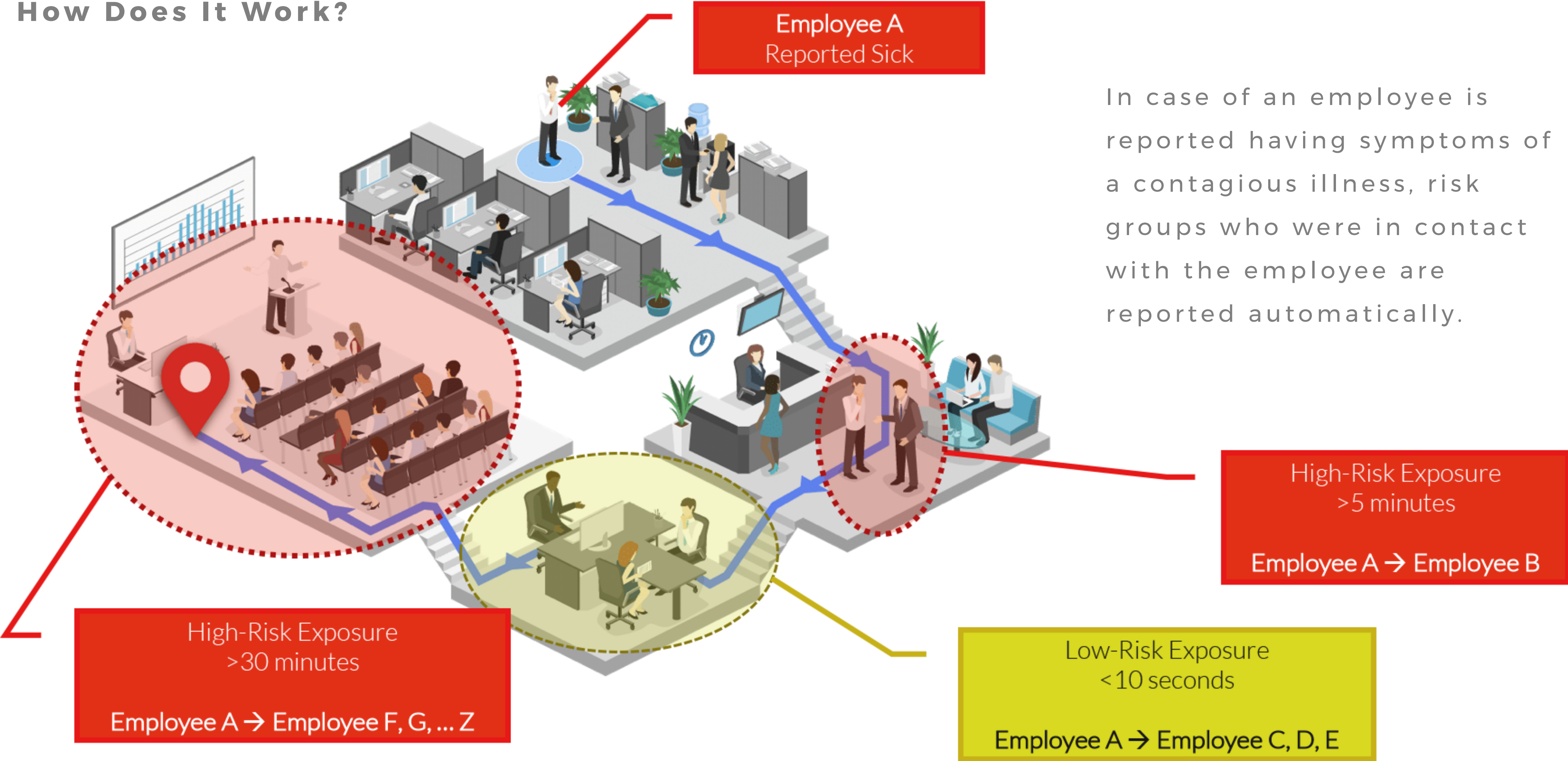
Calculates the distance of proximation and time of exposure.

Can precisely monitor proximation in a group of people.



InContact

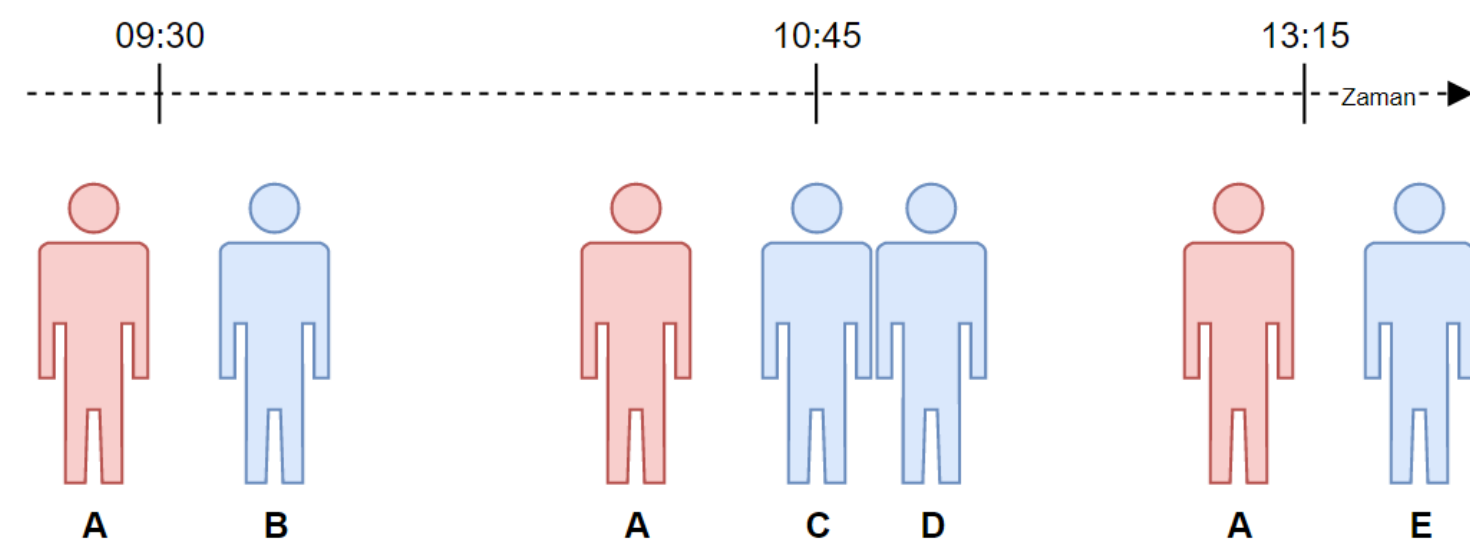
How Does It Work?



InContact

Risk Group Identification

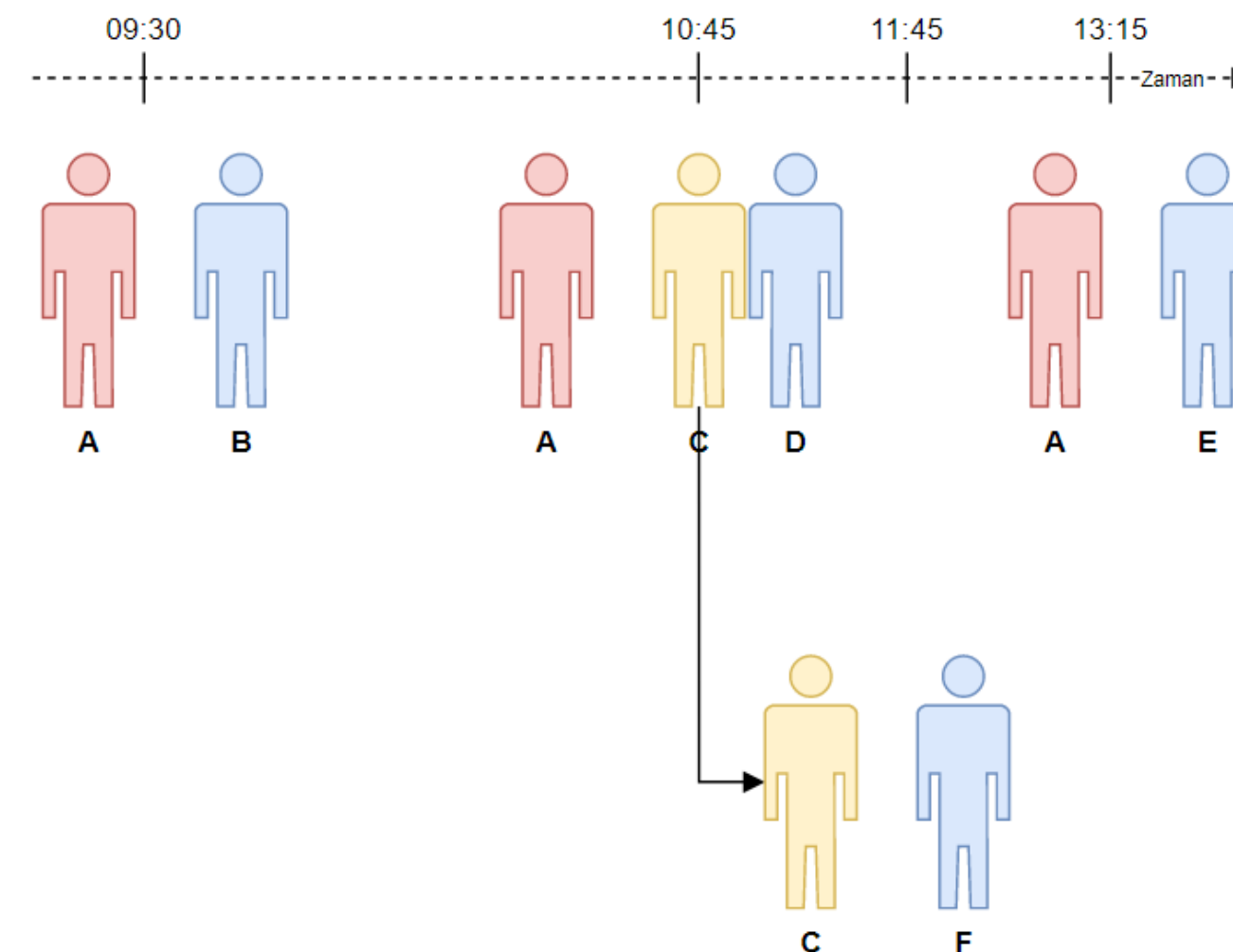
Linear Identification



Employee A is directly in contact with Employees C, D and E.

B, C, D and E are in Risk Group

Nested Identification



Employee A is directly in contact with Employees C, D and E.

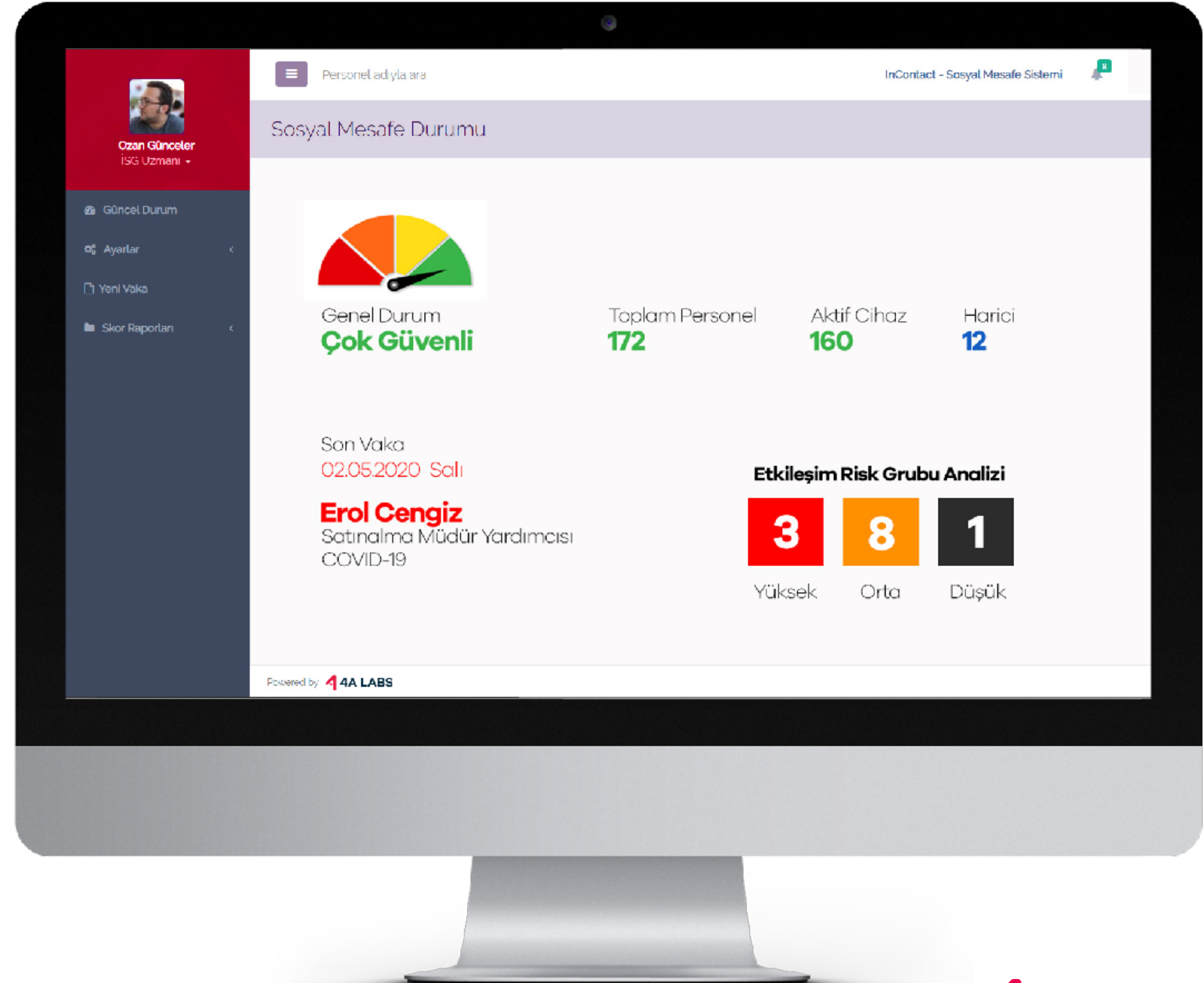
Employee C was in contact with Employee F.

B, C, D, E and F are in Risk Group

InContact

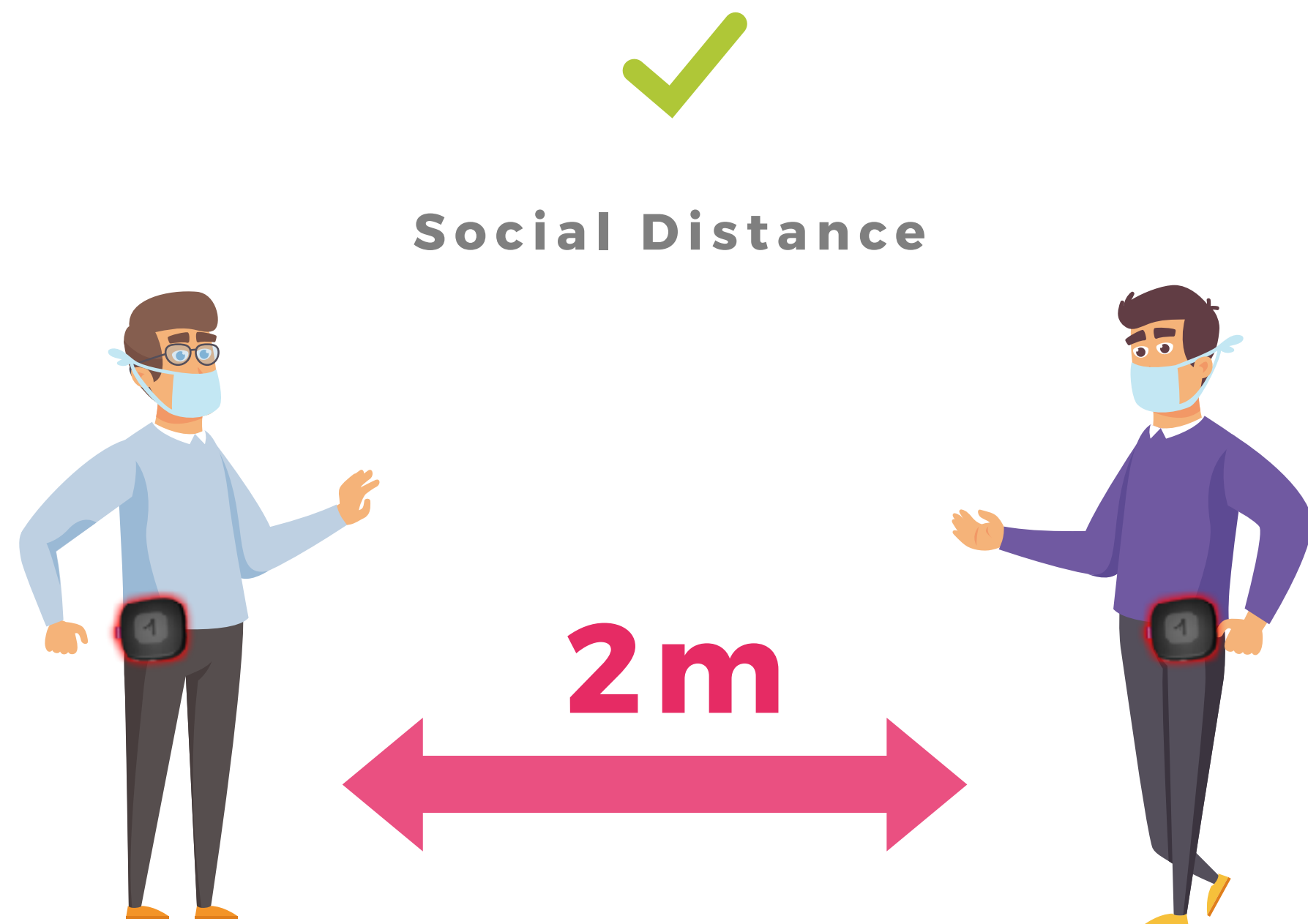
Control Panel

Incontact Control panel screen provides the opportunity to evaluate against the risks of infectious disease and ensures that necessary measures are taken.



InContact

Automated Notifications



InContact automatically notifies employees who are in a risk group via

- **Push Notifications**
- **SMS**





Man-Down

**Instant Health Status
Notification System for
Field Workers**



Man-Down

Worker's Guardian Angel

Wearable assisted solution that protects your employees in an emergency situation, wherever they are



Flat Heart
Rate



Cardiac
Arrest



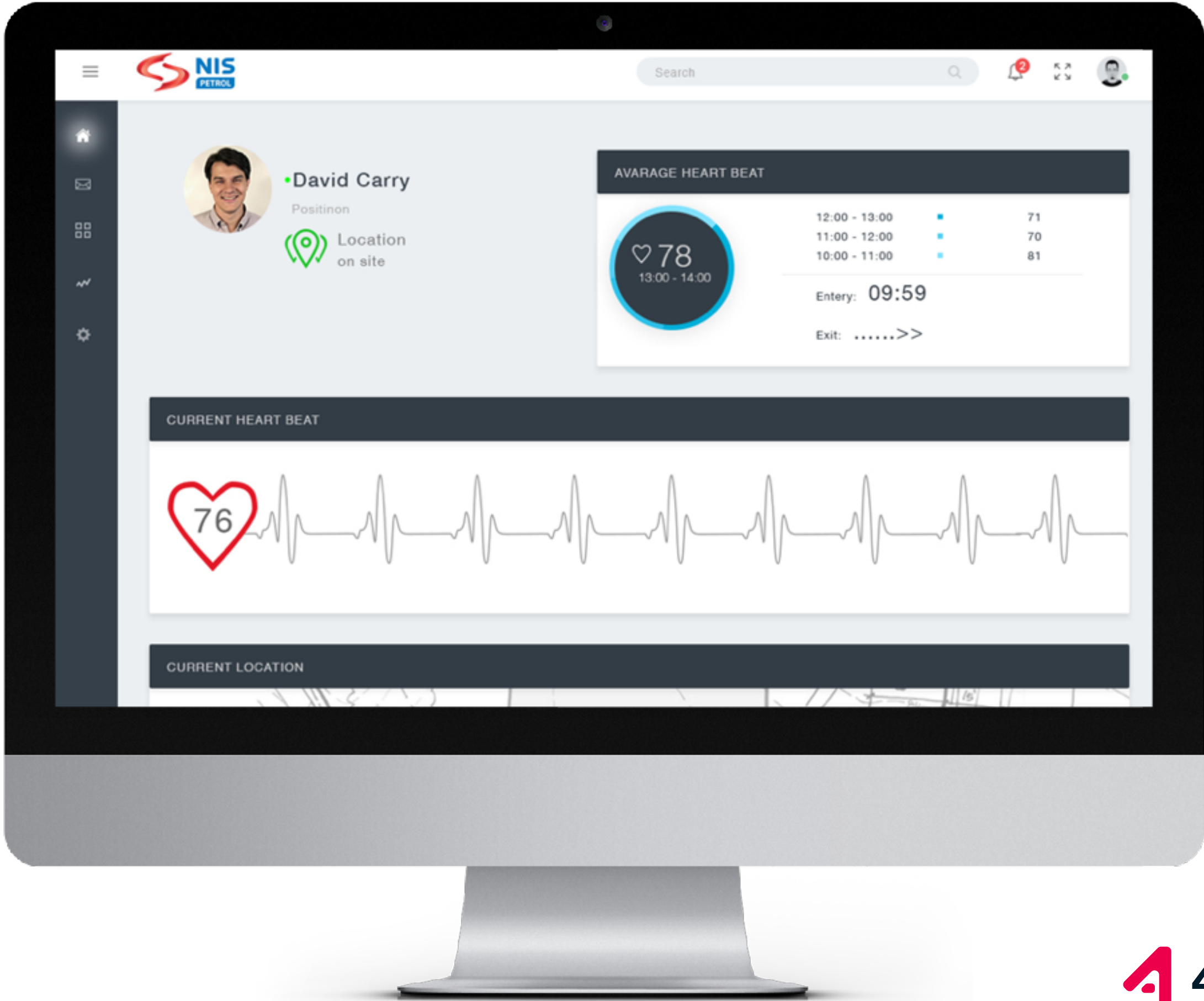
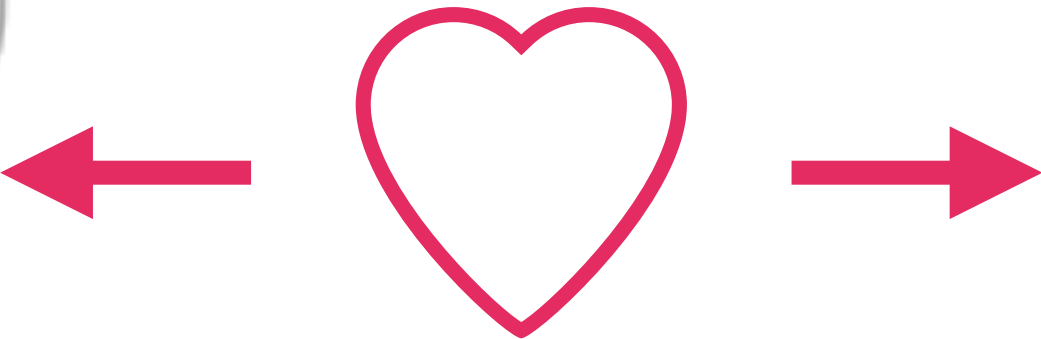
Man Down

Dispatches Health / Search & Rescue Services to Last Known Location

Man-Down

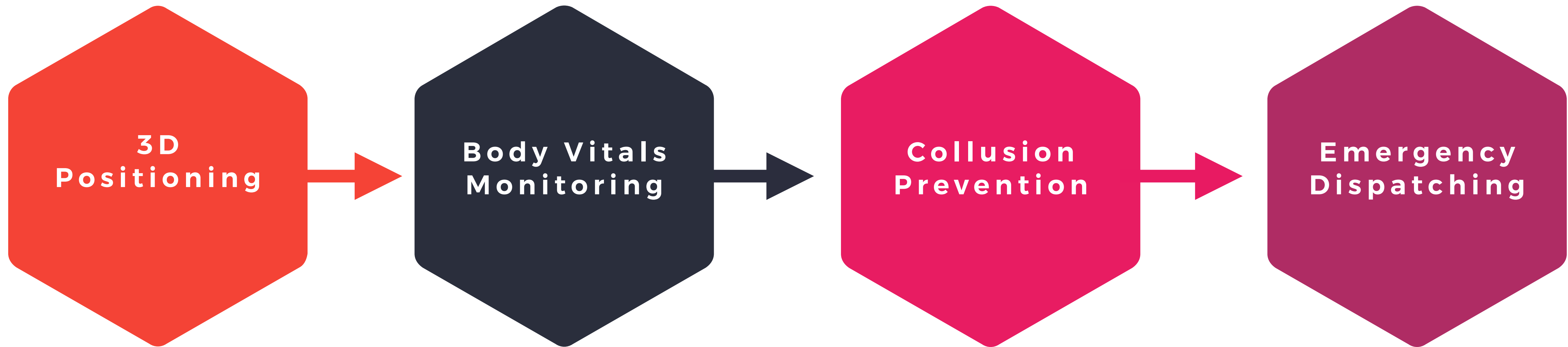
Worker's Guardian Angel

Real Time Body Vitals



Man-Down

Dispatches Health / Search & Rescue Services to Last Known Location



Man-Down

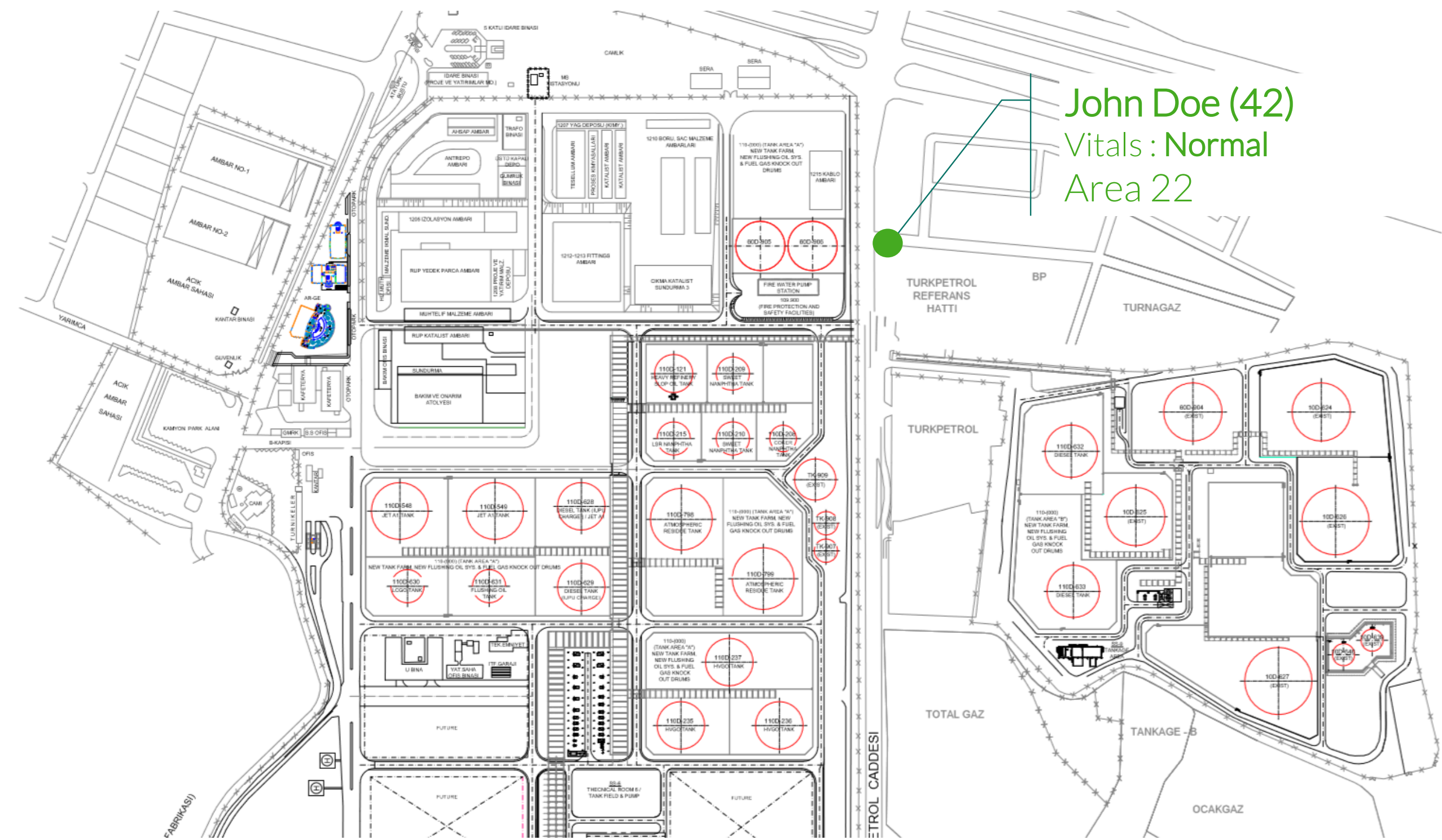
Safety Project

Using multiple positioning technologies such as GPS, GSM triangulation, Beacons and RF Transceivers, 3D Positioning System makes sure that workers are precisely displayed in a virtual map.

Positioning System is able to provide worker vital health data, altitude, measurements of accumulated harmful gasses in worker's environment.

System dispatches search and rescue or paramedics in a situation known as "Man Down" in which worker requires immediate attention

System is able to operate with any Android based smart watch or wearable device.



GPS



Beacon



Man-Down

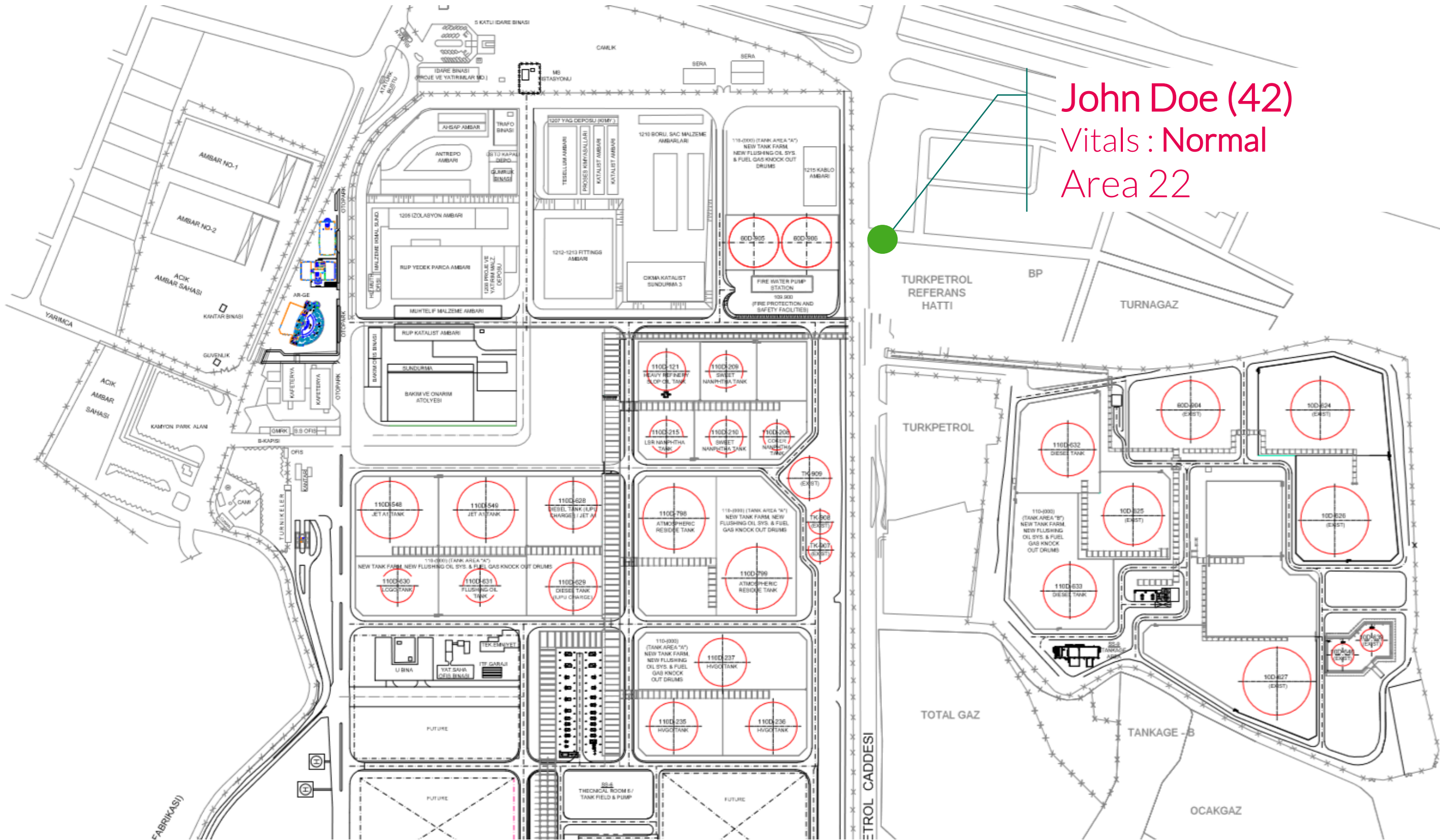
Multi-protocol, real-time problem detection and positioning system.



GPS



WiFi/Beacon



John Doe (42)
Vitals: Normal
Area 22

Man-Down

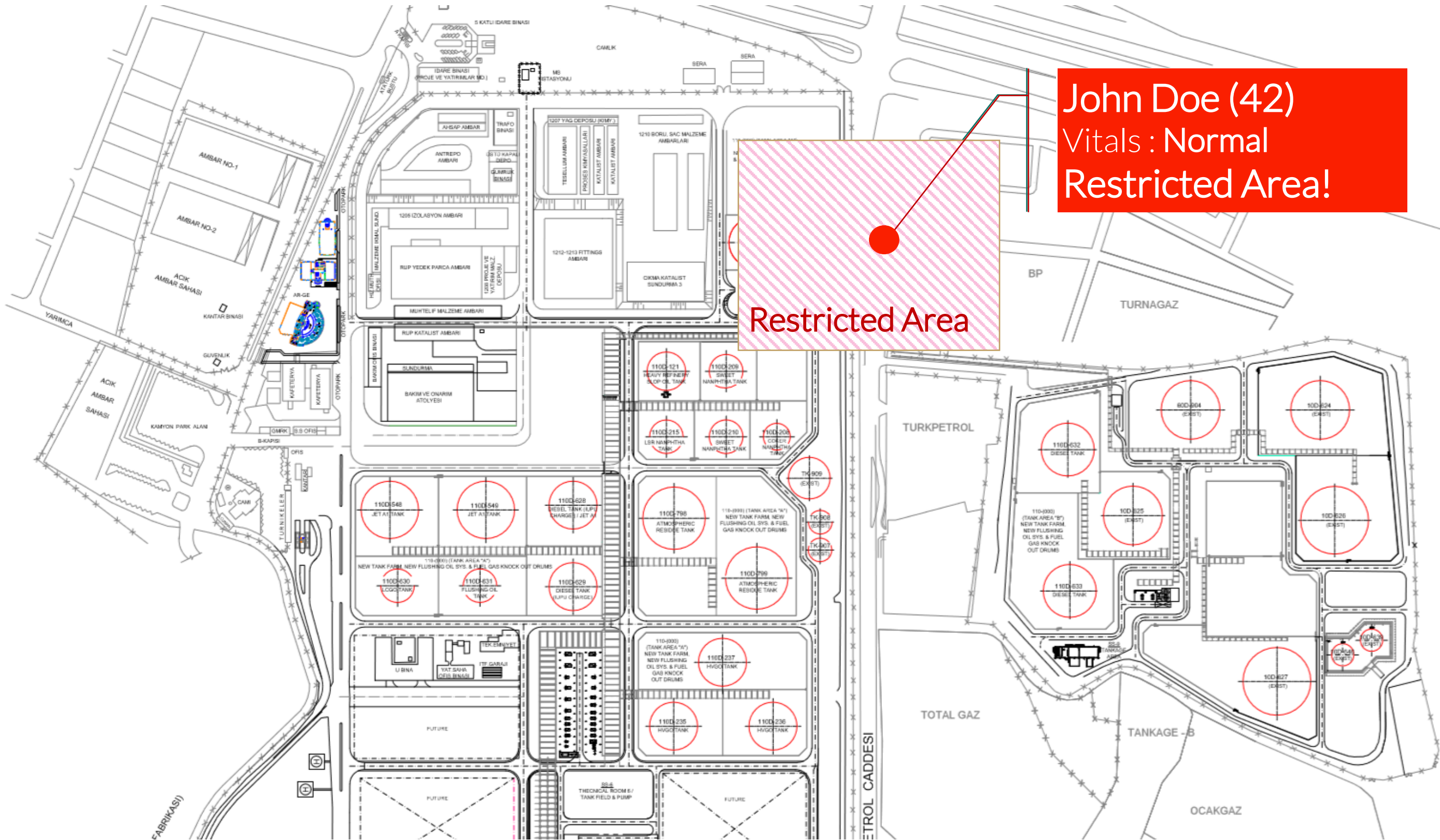
Geofencing and restricted area intrusion detection



GPS



WiFi/Beacon



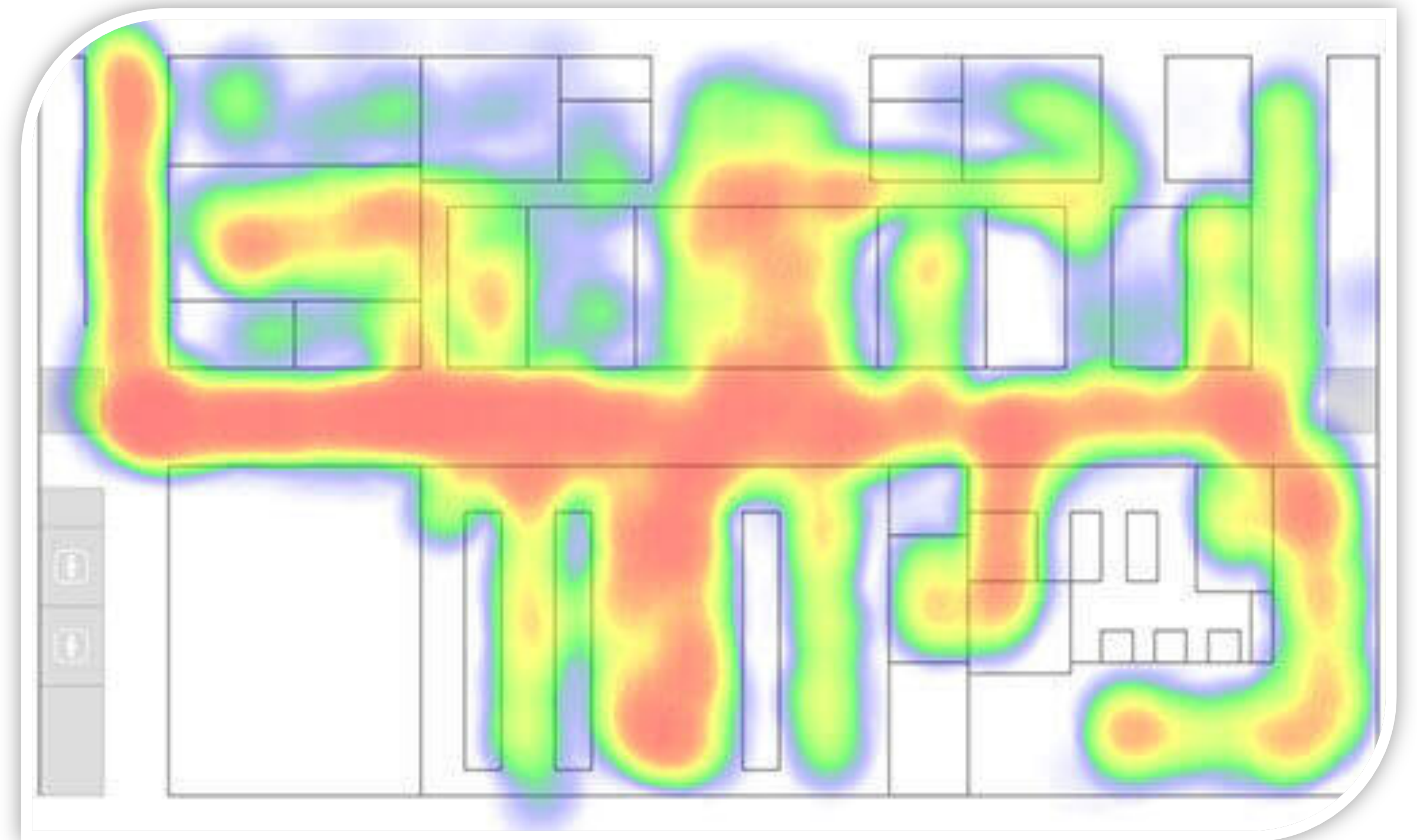
Man-Down

Advanced Performance Dashboards

With advanced heat-map visualization, identify each worker's path on the field.

System can display heat-maps for

Most Visited and **Most Awaited Sections**



Man-Down

Integration with Peripherals

- System can communicate with peripheral devices via Bluetooth
- Ability to use external buzzers, sensors and portable thermal printers



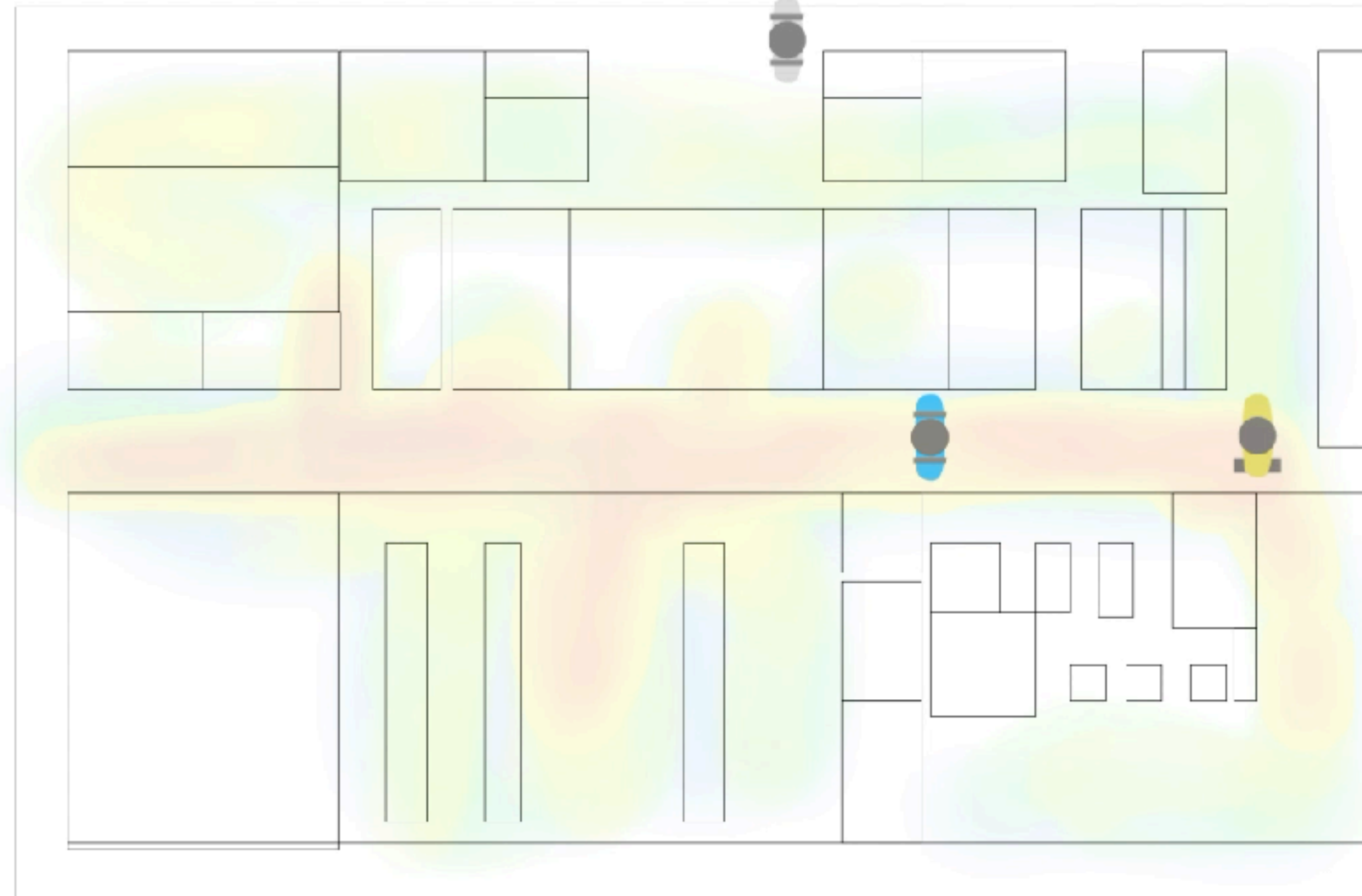
Man-Down

Man Down
📍 3D Positioning

John Doe
Title : Chemical Engineer
Age: 32



Heat Map

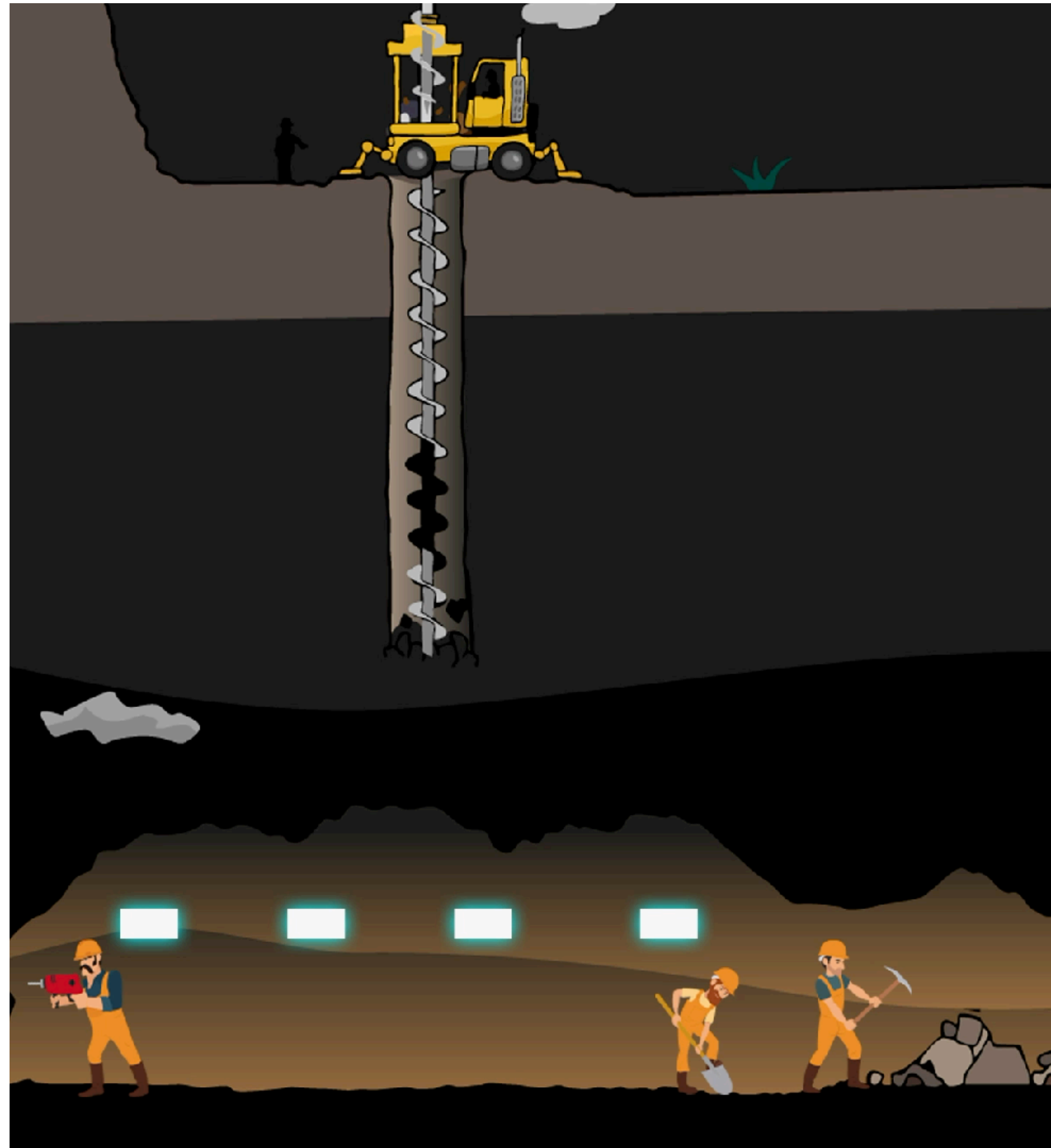


Video Link;
<https://youtu.be/u9euCEvuK7U>

Man-Down (Underground)

Underground Man Down Safety Platform

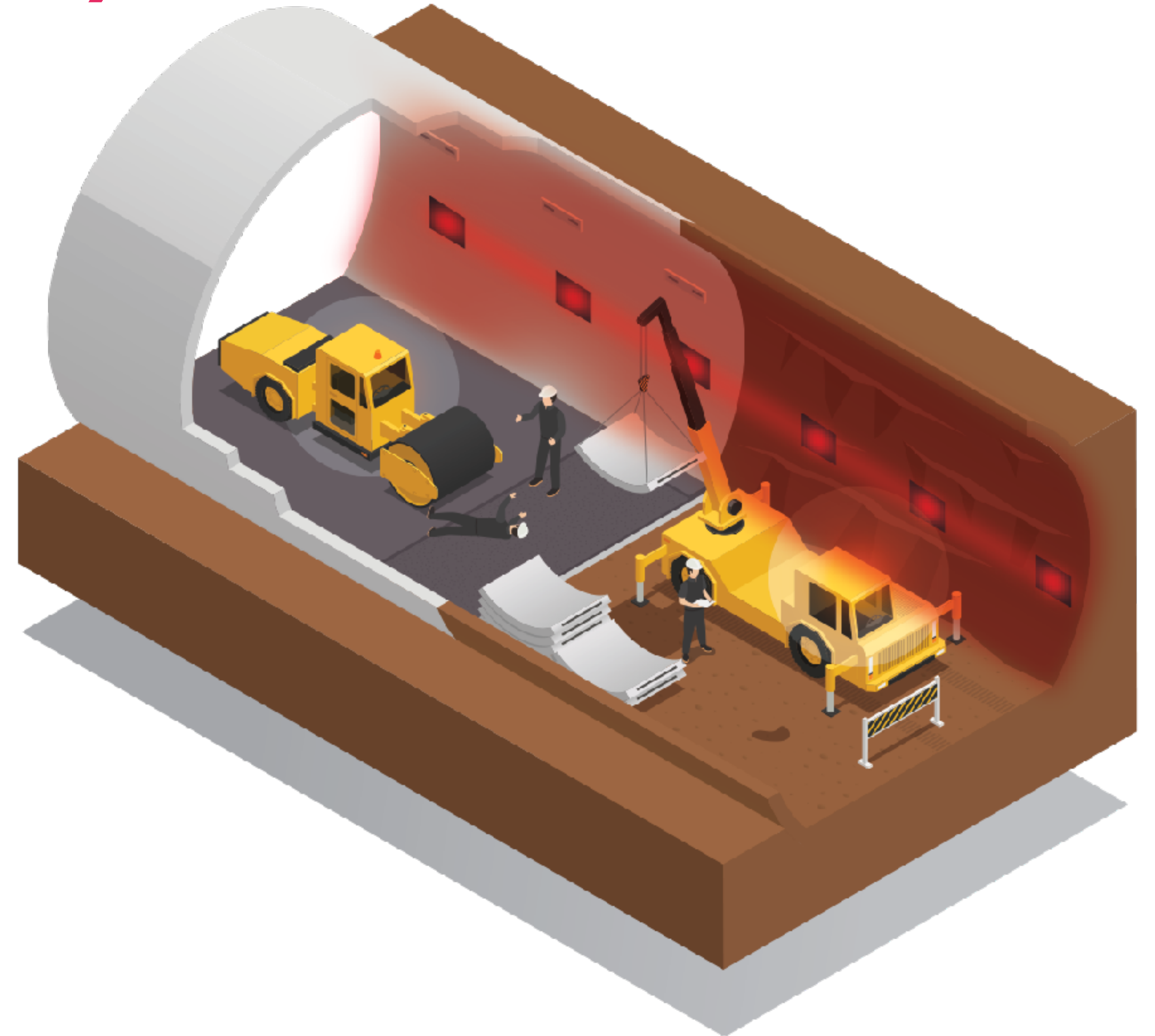
The underground man down system is developed to provide occupational safety for indoor and underground workers. This system aims to ensure that field personnel are constantly monitored for risks of fainting, falling, poisoning, and sudden heart rate changes. System provides immediate and rapid visual and audible warnings in these instances as well as instant alerts to site managers and emergency personnel above ground.



Man-Down (Underground)

Underground Man Down Safety Platform

There are LED lighting, passive Bluetooth positioning units, WiFi Access Points, Buzzer and sensors that can measure various gases, temperature and seismic acceleration in the environment. Base stations are rigidly connected to each other, minimizing the installation cost and time.





Proximity

Early warning and accident prevention system

Proximity

Accident Prevention System

Factories, manufacturing plants and on-loading/off-loading zones are dangerous environments to work by their nature.

Forklifts, heavy duty carrying vehicles and humans share the same - sometimes really tight - space during everyday operations.

Proximity aims to eliminate or minimize accidents that involve humans and vehicles in these floors.

Each person carries a location device on themselves which is embedded to their security vest and vehicles are fitted with a special hardware.



Proximity

Accident Prevention System

Proximity system captures the positions of each person and vehicle iterating this 20 times a second.

In case trajectory of a vehicle intersects with a human, system automatically issues audial and visual alerts of the danger.

In case trajectories still intersect, Proximity system issues a shut down command to vehicle to avoid contact with humans.

Position, speed and direction information is available on a virtual map as well as heat-maps.



Proximity



Video Link;

<https://youtu.be/OIzZn702CBE>



PPE Control

Personal Protection Equipment

PPE control system detects, through computer vision, whether the personnel are wearing the required protective equipment before entering industrial work areas.



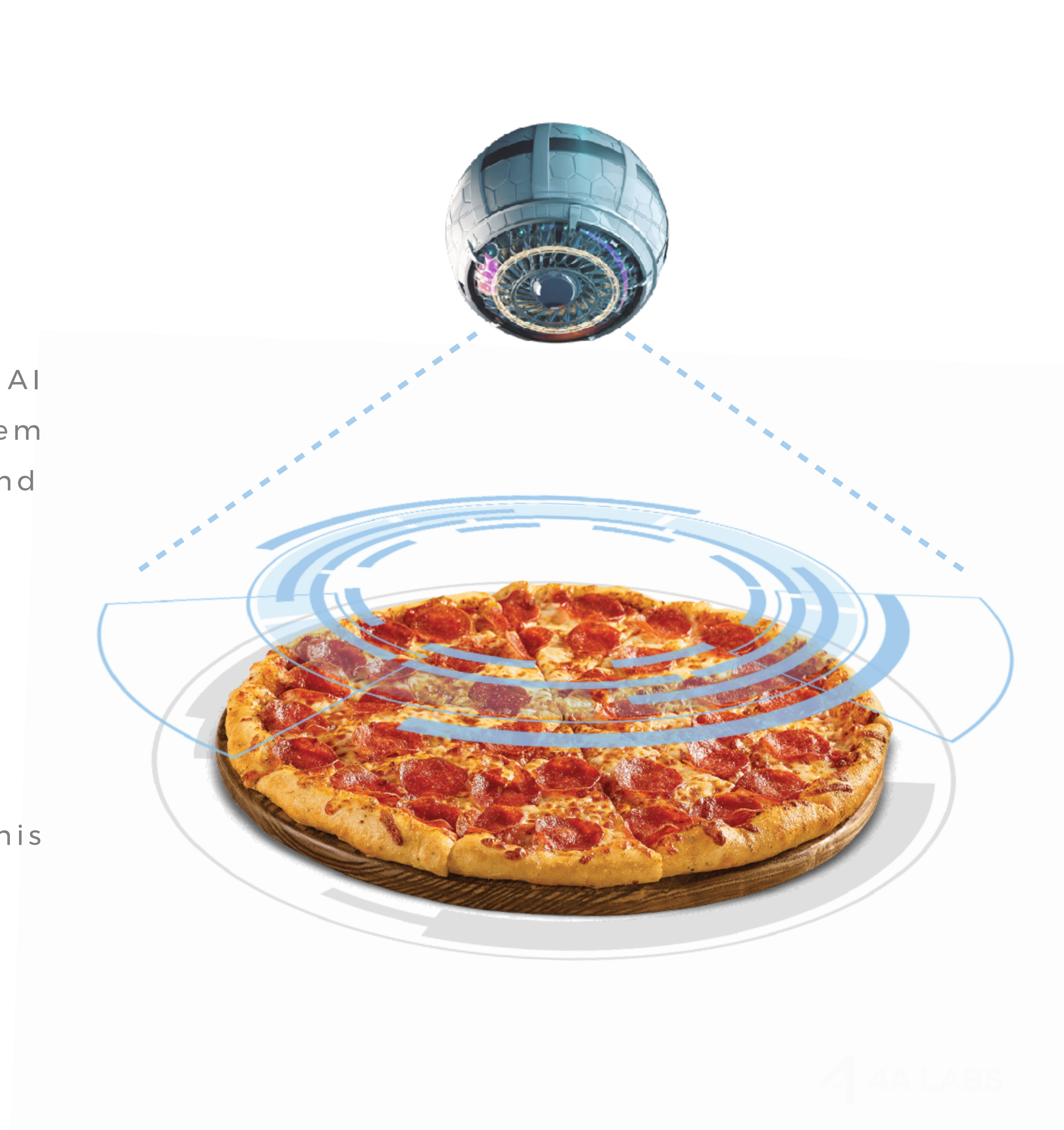


Our
Computer Vision
Quality Control
Systems

Computer Vision Processing

Ensuring quality with technology...

Pizza Quality Control system was developed with AI solutions in the concept of industry 4.0. The system includes Computer Vision, Image Classification and Object Recognition developed by using Conventional Neural Network models with the latest improvements in the field of AI such as Mask-RCNN, YOLO and DETECTRON. The development of Computer Vision Algorithms for detailed inspection of Pizza's size, crust, and ingredient distribution for optimal production. This results in significant time, effort and materials savings



Computer Vision Processing

Quality Control System

As general practice, manufactured goods go through a quality check process prior to shipment to customers. This check is usually done by humans leading to errors and mishaps. Computer Vision Quality Control Systems aims to eliminate these errors by utilizing cameras and advanced image processing algorithms to identify manufacturing defects thus stopping shipments. Defect detection can vary from scenario to scenario however most common ones are artwork check, missing unit, incorrect artwork, physical defect on the item. Decision of the quality control is made in under 2 seconds through advanced machine learning algorithms.



Computer Vision Processing

Quality Control System

With the computer-aided visual recognition system we have developed, we can understand whether any product other than the products of the relevant brand is placed in beverage cabinets in places such as markets, restaurants and bars. We also measure the required occupancy of the shelves with the accelerometers we have placed on the shelves. We monitor the temperature of the cabinet instantly with the heat meters we use in the cabinet and warn if it remains below or above what it should be. With our X and Y axis positioning technology, we give instant information if there is a change in the place of the cabinet.

✓ 4°C

✓ Position



Computer Vision Processing

Quality Control System

Remote Monitoring

Smart Fridges have multiple sensors that log data to their internal database

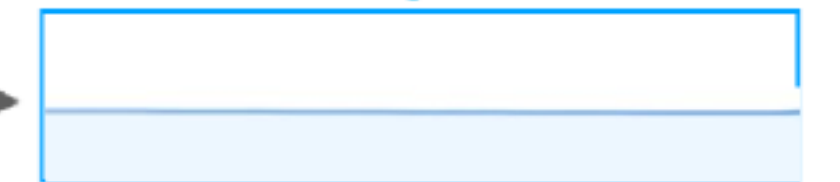
This data can be pulled out to evaluate health and operating conditions of each fridge to maximize consumer satisfaction and reduce operational costs



Inside Temperature °C



Outside Temperature °C



Power Draw W/h



Door Opened count/min



Computer Vision Processing

Inventory In Realtime...

SKUs in the Smart Fridge are determined by the AI/ML/CV module. Weight of each SKU is defined in master database

Shelf weights are constantly monitored

Inventory is calculated based on the defined planogram, weight of each shelf and Computer Vision feedback from the Smart Fridge



+



=

**Accurate
Inventory**

Shelf Weight Sensors

AI / ML / CV Analysis

Computer Vision Processing

Quality Control System

Map Display GPS Positioning

Report operational Smart Fridge inventory

Display real time status of each Smart Fridge

Visually represent each Smart Fridge location on a digital map



Computer Vision Processing

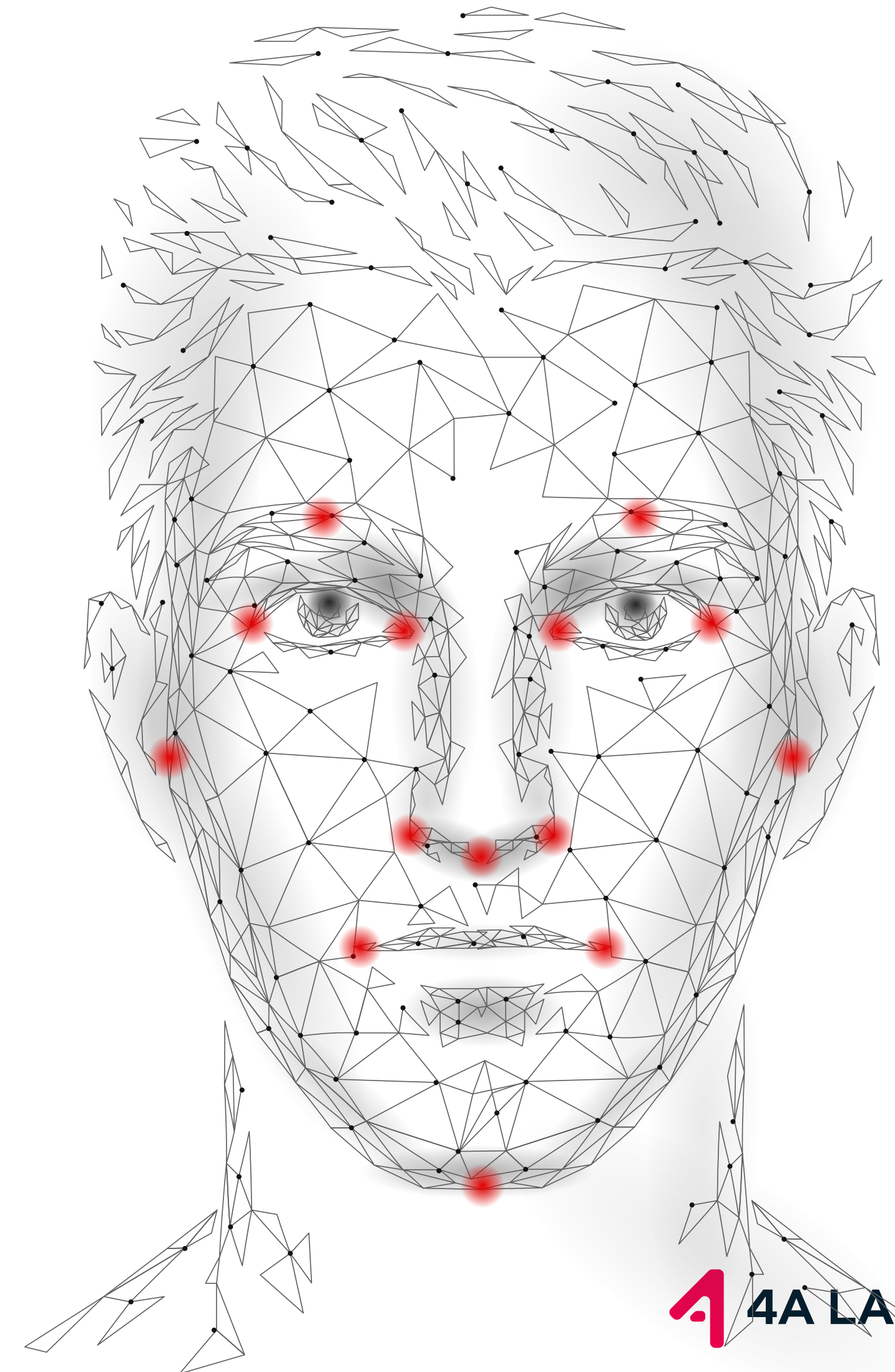
Computer Vision for Document Classification

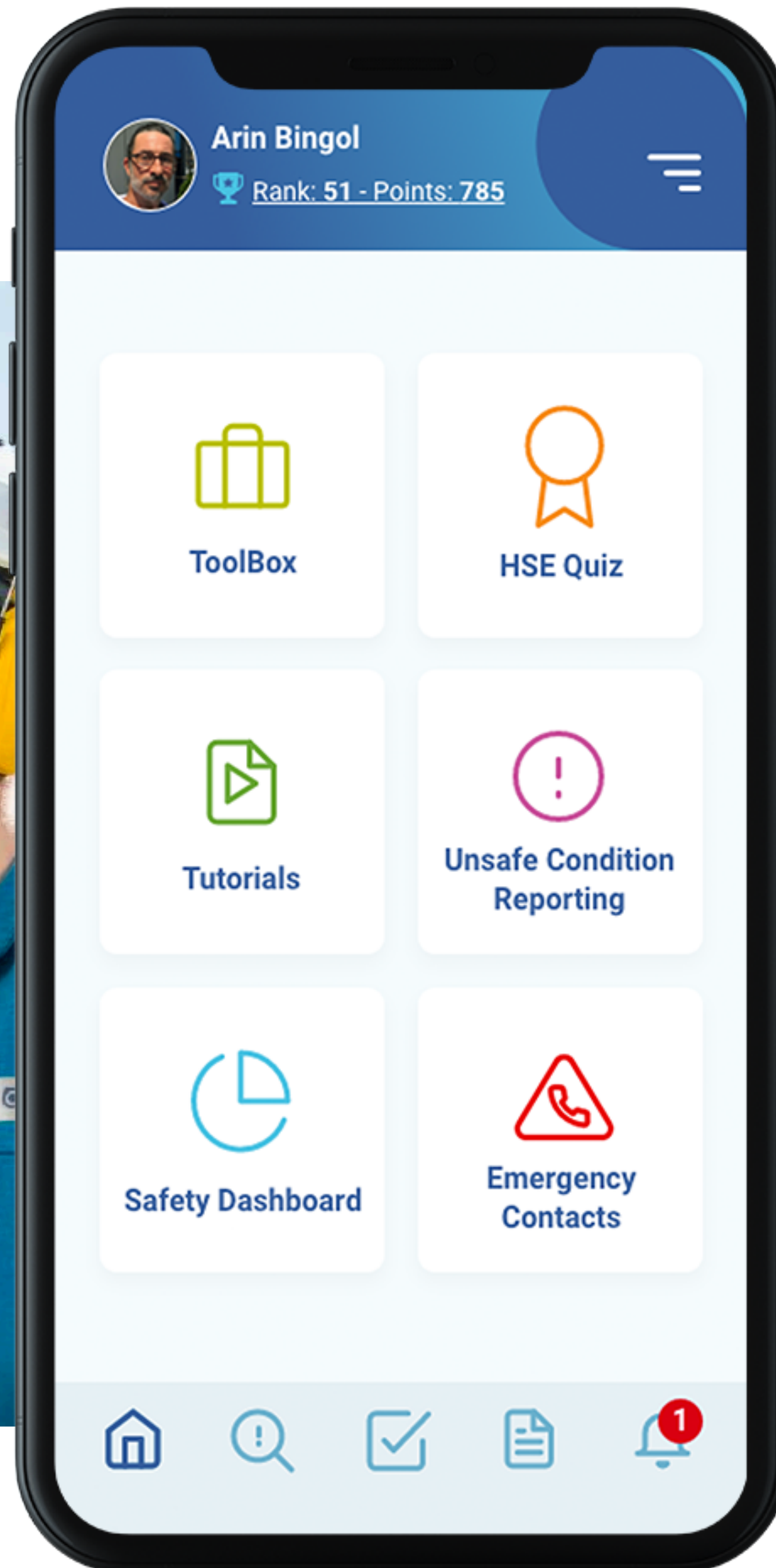
Our face recognition solution analyze and validates documents and automatically extracts information.

Utilizes advanced machine learning algorithms to analyze defects on the document and accurately check portrait photo compliance

Examples:

- Subject should not be wearing glasses
- Biometric Photograph
- Subject's forehead is not covered by hair
- Subject has two visible eyes, nose, mouth and two ears
- Ability to extract industry standard MRZ
- Automatic re-training of the classification models based on scanned documents





Health & Safety Mobile App (HSE on Air)

Arin Bingol
Rank: 51 - Points: 785

To Do List

2019, November ▼

Mon	Tue	Wed	Thu	Fri
28	29	30	31	1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	29

11/06/2019
02:00 pm - 04:00 pm
Location: Manisa
Process : Bilgi güvenliği
Audit ISO 27001



Arin Bingol
Rank: 51 - Points: 785

Documents

Control Lists Monthly HSE Reports

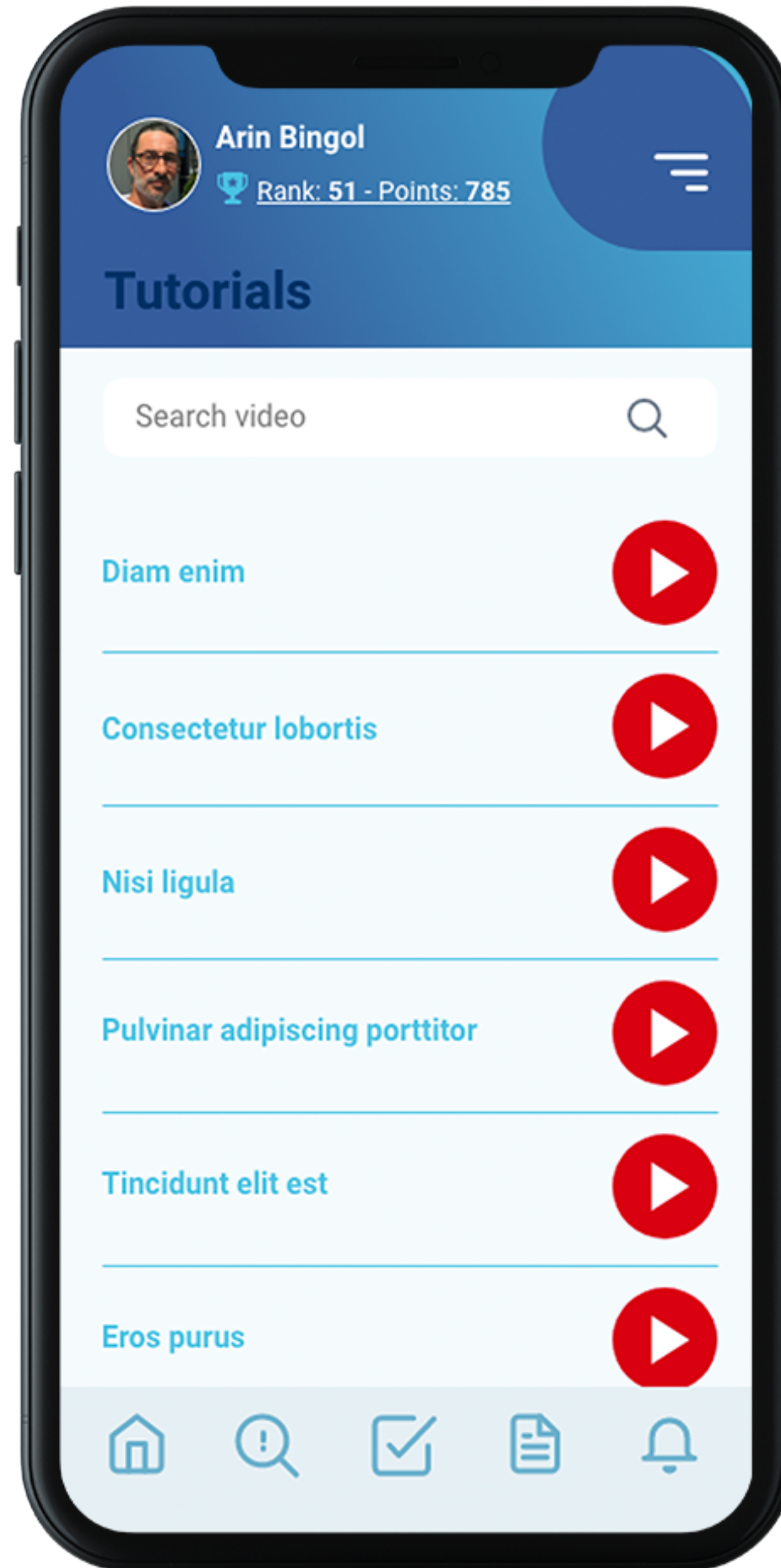
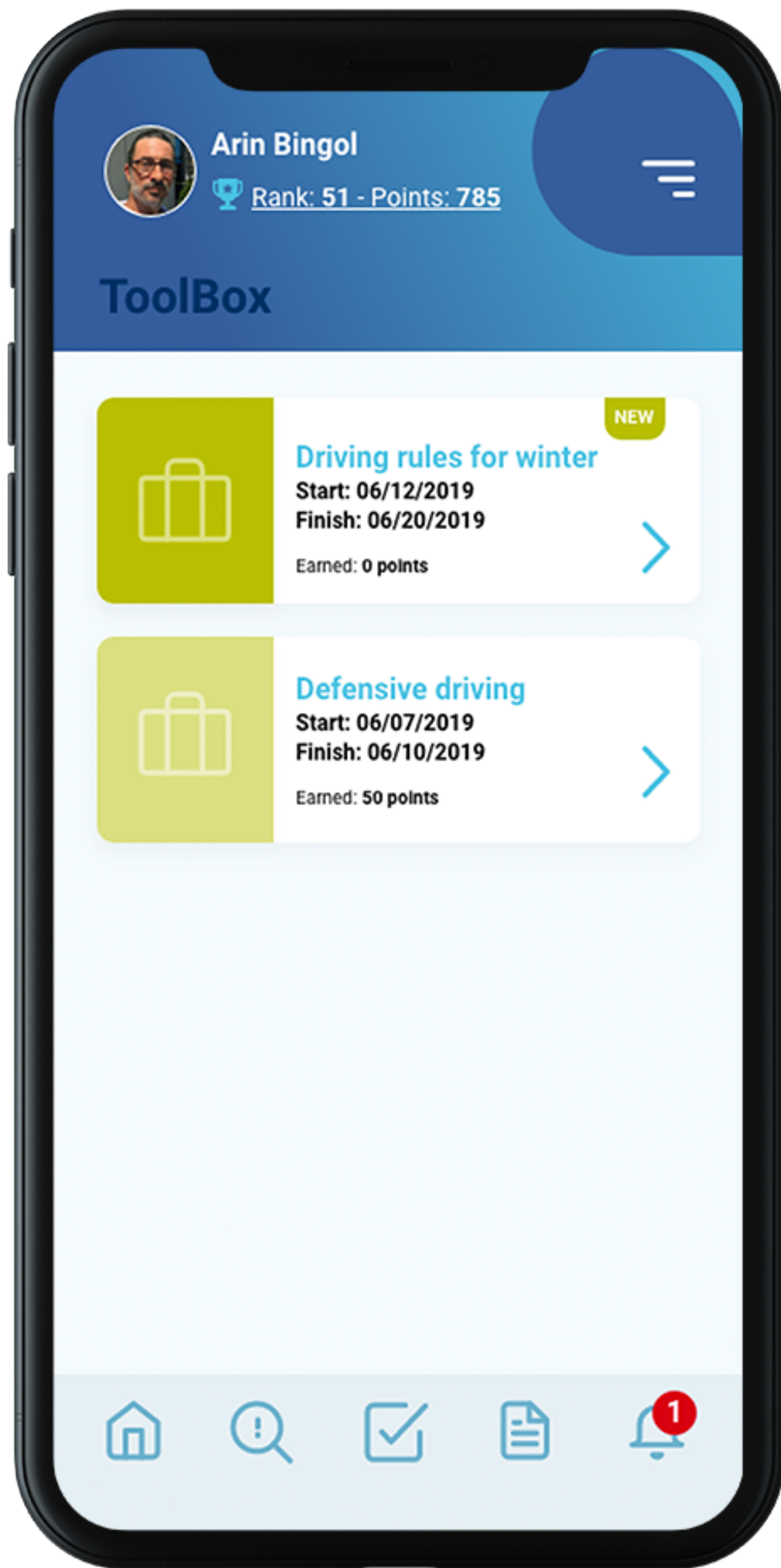
Search Document 🔍

- Document Name**
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam molestie libe... >
- Document Name 3**
Lorem ipsum dolor sit amet, >
- Document Name 4**
Lorem ipsum dolor sit amet, consectetur adipiscing elit >
- Document Name 5**
Lorem ipsum dolor sit amet, consectetur >

Bottom navigation bar with icons for home, search, checkmark, document, and notifications (1).

HSE on Air

“HSE on Air” is an application designed for blue-collar employees to be always aware of health and safety importance in daily life, report unsafe situations easily and follow some actions accordingly.



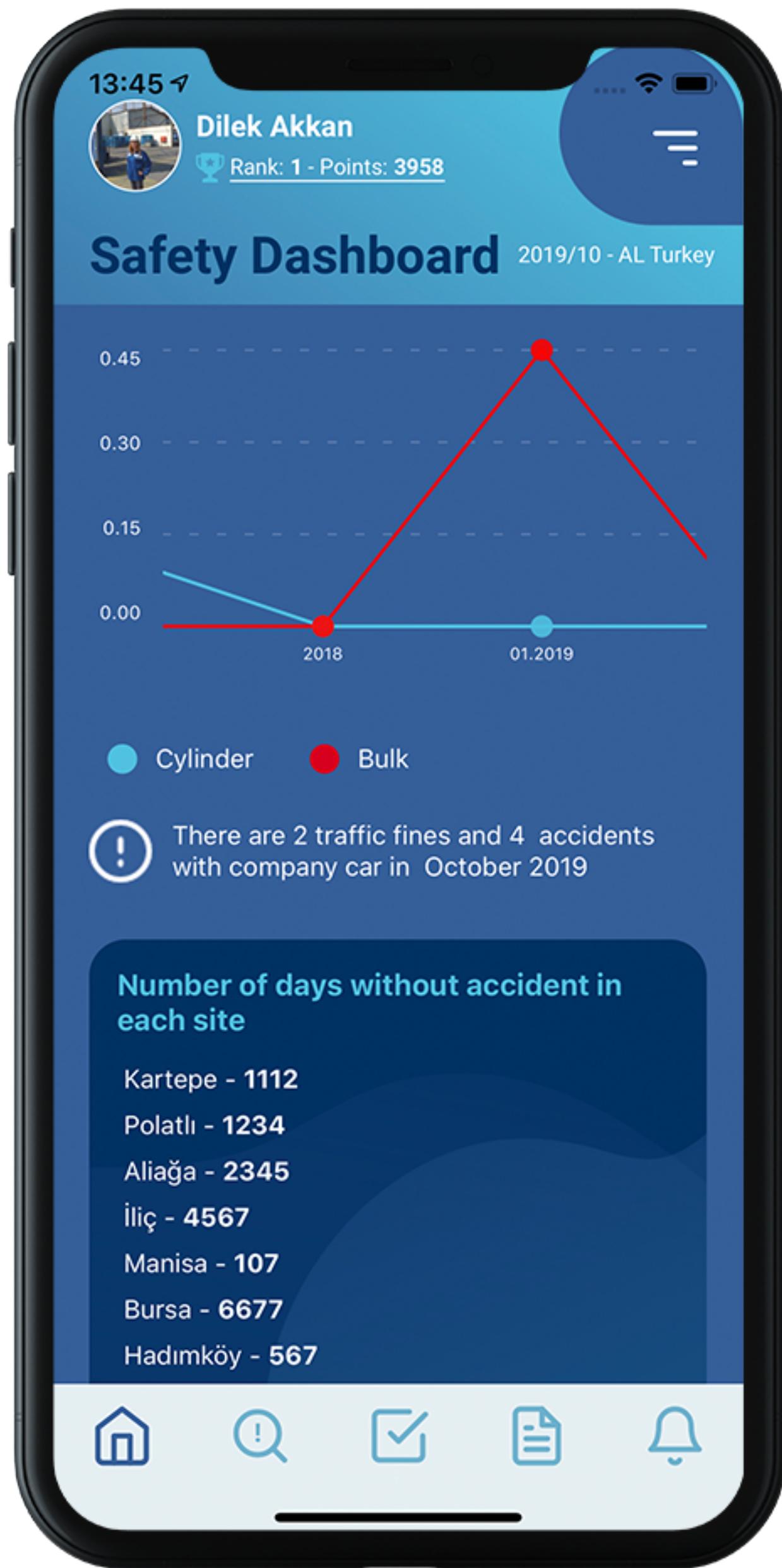
HSE on Air

Toolbox:

Application sends HSE training documents regularly and follows the completion status

Tutorials:

Application sends HSE training videos regularly



< 2019 - 02

1 OF 12

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut convallis sem eget tortor ultrices posuere. Sed at orci sit amet sapien dictum maximus?

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SAVE & NEXT

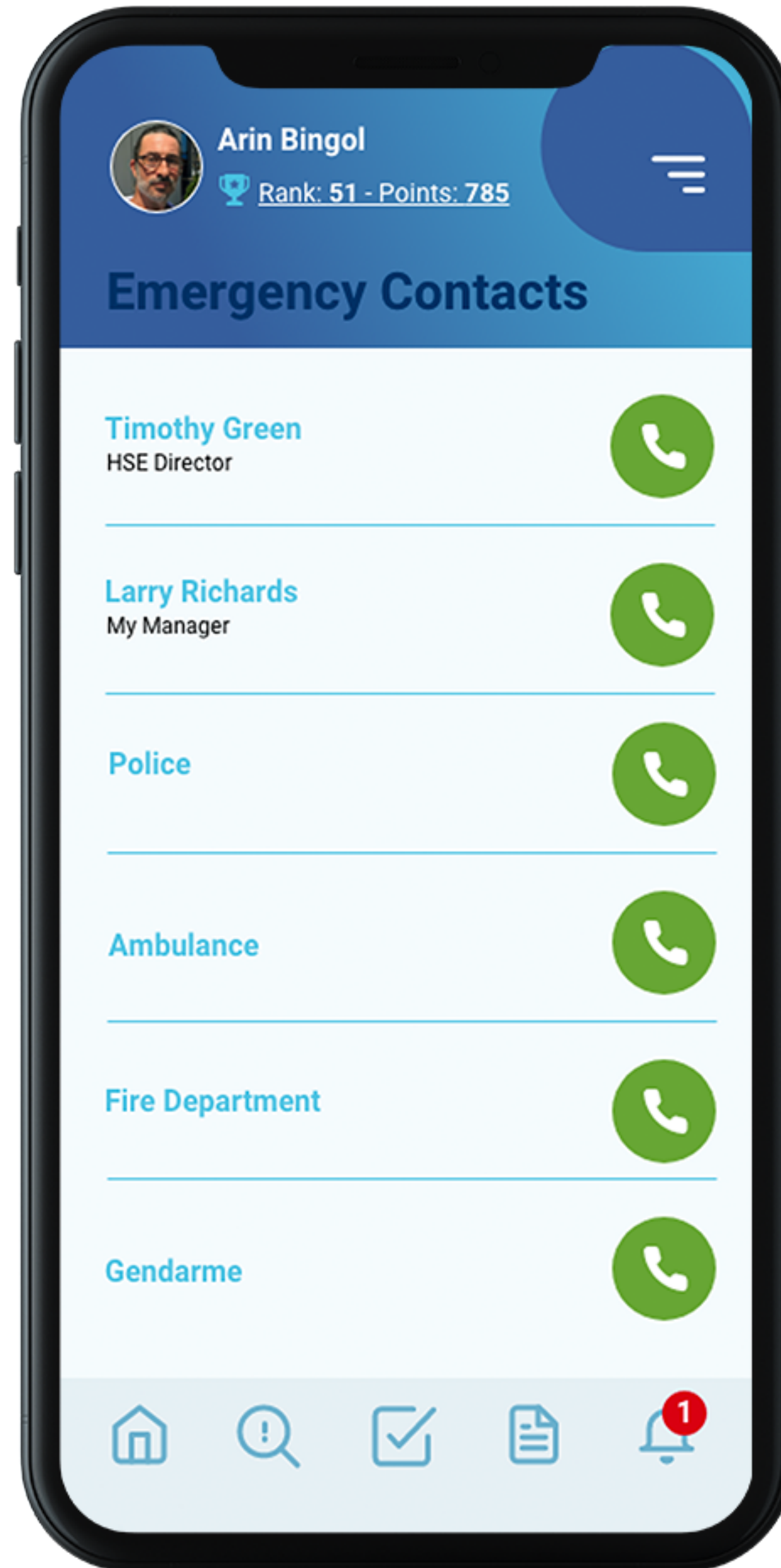
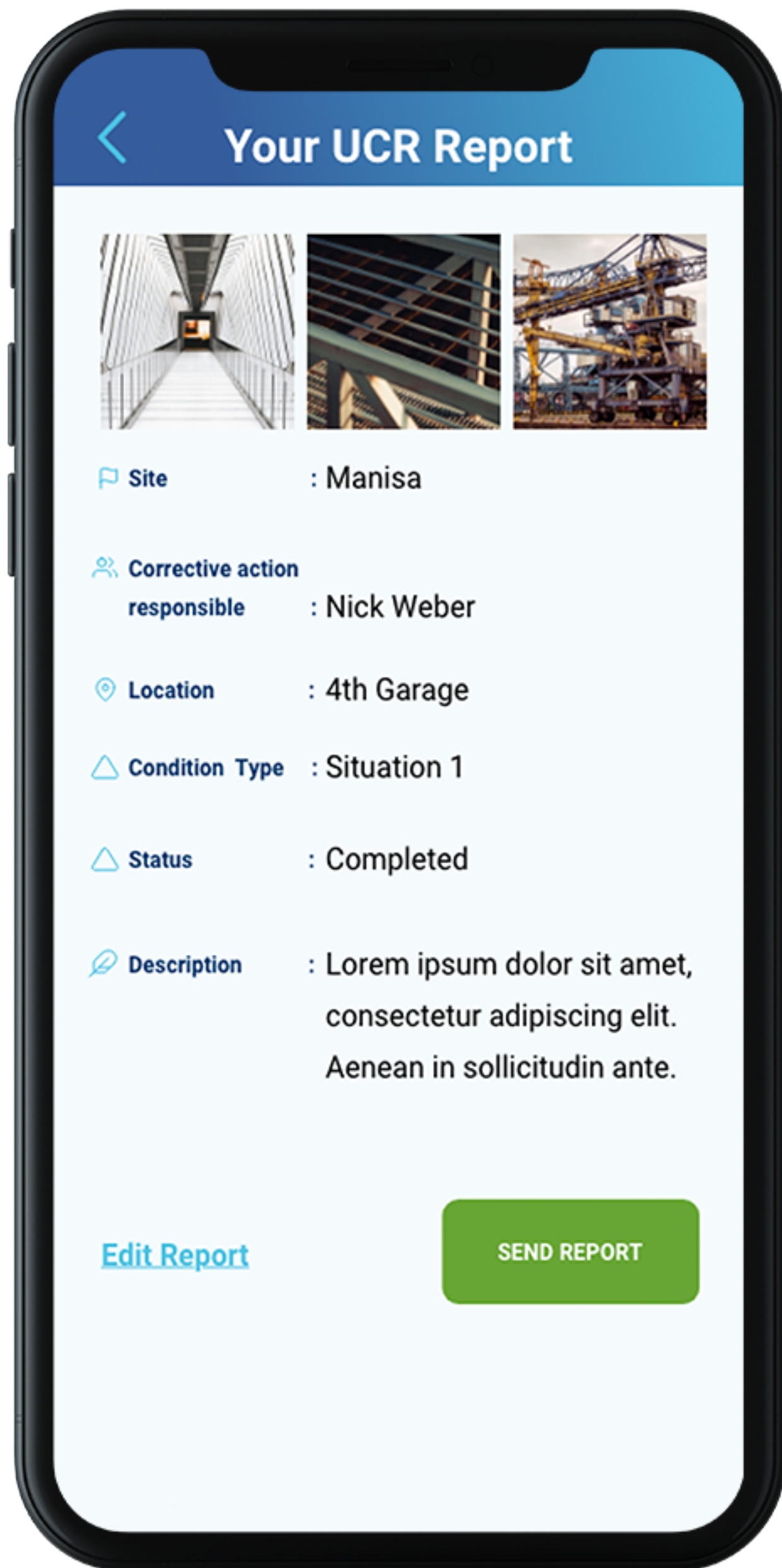
HSE on Air

Safety Dashboard:

Application shows safety status such as road safety events, life saving rules breach or potential serious safety incidents

HSE Quiz:

Application sends some tests to users regularly and calculate results



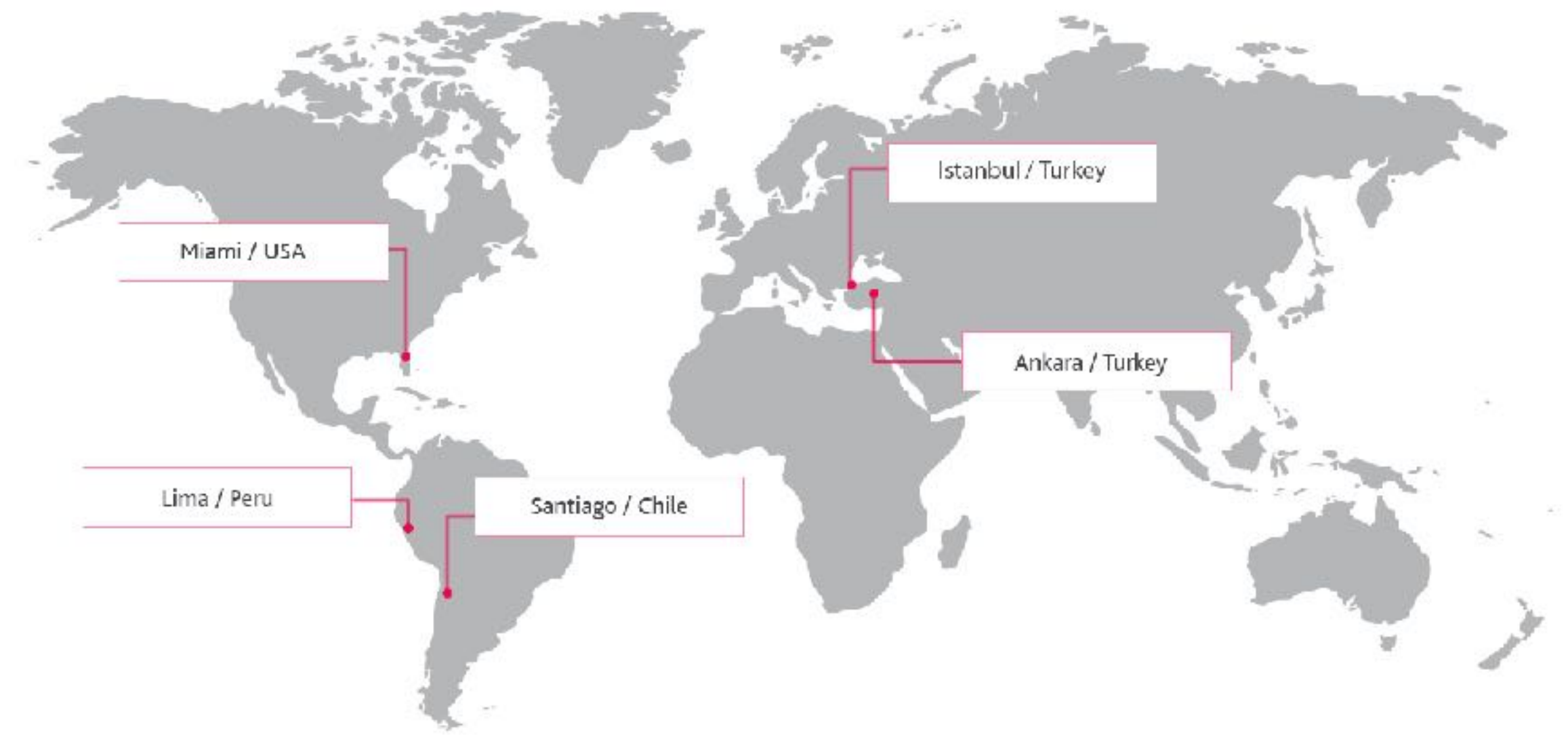
HSE on Air

Unsafe Condition Reporting:
Helps for short way reporting with or without pictures for unsafe conditions detected in facilities

Emergency Contacts:
Users can reach emergency contacts easily

Our Clients





Get in Touch With Us

LOCATION

MIAMI, FL/USA
SANTIAGO/CHILE
LIMA/PERU
ISTANBUL/TURKEY
ANKARA/TURKEY
www.4alabs.io

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TR: +90 212 282 83 85

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info@4alabs.io

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Linkedin
Crunchbase