## Halo by Proxxi

- Wrist-worn band that briefly vibrates to notify wearers that another band is within 6 feet (2 meters), reminding them of the need to maintain social distance.
- Maintains records of interactions with other bands allowing managers to see which bands have been in contact, when, and how many times.
- Facilitates use of positive COVID-19 diagnosis to trace which specific workers might need testing and quarantine.
- Optional data downloads organizations with a comprehensive overview on the success of physical distancing policies.
- No location tracking and not tied to any personal identifying information.

### Specifications

- **Social distancing**
- **Contact tracing**

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1 IMPORTANT: All of the information provided in this document, including the links to websites, was obtained from the public disclosures of the developing organizations, and may not be complete or accurate, but are provided for general information purposes only. Neither the selection of these products and services nor the exclusion of others is in any way intended as an endorsement of, or opposition to, any type of product, service, application, or any manufacturer. The listing is intended solely to provide readers with a general, high-level overview of the kinds of products being developed to address certain aspects of COVID19 remediation. This is by no means an exhaustive list. All readers must carefully evaluate their own specific needs for COVID19 mitigation and compliance, review the specific features and specifications of any technology being considered, configure and install same with qualified information systems specialists, and obtain experienced and informed legal counsel concerning the applicable legal and compliance requirements concerning the selection and implementation of any technology solution.
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| **Estimote** – “Workplace safety wearable” | • Wearable in different versions  
  o lanyard clip;  
  o wrist-worn version with an integrated adjustable strap  
  o card format like traditional security badges often used for facility access control.  
  • Hardware includes passive GPS location tracking, as well as proximity sensors powered by Bluetooth and ultra-wide-band radio connectivity,  
  • Rechargeable battery and built-in LTE.  
  • Manual control to change a wearer’s health status, recording states like certified health, symptomatic and verified infected. User updates reported to others they’ve been in contact with based on proximity and location-data history.  
  • Data stored in a health dashboard that provides detailed logs of possible contacts for centralized management.  
  • Manufacturer seeking collaboration with WHO or other external health organizations to potentially leverage the information for tracing across enterprises and populations.  
  • The pebble-like design is already in production and 2,000 will be deployed now, with a plan to ramp production for as many as 10,000 more in the near future.  
  • **Specifications** | • Social distancing  
  • Contact tracing |
| **PWC’s “Check-In”** | • App is accessible on laptops, desktops, Android and iOS and does not require VPN.  
  • No additional hardware is needed.  
  • Leverages location services which may minimize battery drain.  
  • Provides proximity information with no incremental hardware or infrastructure.  
  • Provides real-time information about whether employees may be at risk of exposure | • Social distancing  
  • Contact tracing |
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| **Romware - COVID Radius** | • Wearable bracelet  
• Monitors actual distance between your workforce, warns worker with visual and vibration indicators.  
• Does not capture or store location or other privacy-sensitive data.  
• Uses Ultra Wideband (UWB) which does not require any data connection, so there is no localization nor any transfer of ID or other personal data.  
• Up to 18 hours in battery life, water resistant, contains fall detection, vibration measurement and wrist detection.  
• Leveraged WHO contact tracing guidelines enabling employers to trace contacts of employees that are presumed or have confirmed to be infected. This feature requires a data connection, but no personal data is sent to or kept on the wearable devices. Personal information is fully encrypted and kept on the Romware Platform and only accessible by the employer.  
• All contact tracing events are deleted after 14 days, the average incubation period of the COVID-19 virus. | • Social distancing  
• Contact tracing |
| **Blackline Safety - "Industrial Contact Tracing for COVID-19"** | • Combines wearable and app.  
• Employee location data streams to the Blackline Safety Cloud and powers interactive contact tracing reports online.  
• Monitors social distancing  
• Walkie talkie-sized device, G7, tracks workers’ movements with GPS and by pinging indoor beacons placed around a workplace, and send the data to Blackline’s cloud.  
• On-body devices use accelerometers to detect an accident, such as a fall, or potentially dangerous situation, like a gas leak, and call for help. Oil and gas refineries, water treatment plants, road maintenance companies, and other tough-job employers use these systems. | • Social distancing  
• Contact tracing |
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| **COVID-19 Remote Early Warning System (CREW)** | • Wearable digital thermometer sensor to measure axillary body temperature, together with a sensor platform - smartphone, smartwatch or wearable IoT device running the CREW app.  
• Cloud-based CREW system monitors incoming data and generates automatic alarms if temperature thresholds are breached.  
• CREW will available initially on iOS and Android products including phones and wearables, with other operating systems to follow. 8 West’s John Murphy says the goal of CREW is to make the solution available to as many frontline staff as possible in Ireland and around the world.  
• Developed in partnership between the College of Medicine and Health at University College Cork (UCC), 8 West, The ASSERT centre and Tyndall National Institute at UCC. | • Screening (temperature) |
| **Oura Ring** | • Wearable - sensors wrapped around finger to capture pulse, resting heart rate, HRV, body temperature, and calorie burn.  
• Tags added for “Cold”, “Flu”, and “Confirmed COVID-19”, allows user to tag days when body was struggling with an infection to better track how your body reacts and recovers  
• Oura is sponsoring research at University of California, San Francisco (UCSF) to study whether physiological data collected by the Oura ring. The study aims to build an algorithm to help UCSF identify patterns of onset, progression, and recovery, for COVID-19. By taking daily symptom surveys, study participants will directly contribute their observations paired to their data to the UCSF team. Researchers will use this information as they attempt to identify patterns that could predict onset, progression, and recovery in future cases of COVID-19. | • Screening (symptom tracker) |

1. Name
## Jackson Lewis PC

**Selected COVID19 Distancing, Screening, Contact Tracing, and Other Technologies**  
**May 10, 2020**

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| **NHS Contact Tracing app** | • App for contact tracing for use in UK.  
• Available in Apple and Android app stores or via a link sent by email to NHS and public sector workers.  
• User must provide the first half of their postcode, which shows the NHS the town or borough they live in - but not their name or their exact home address.  
• App works through phone's Bluetooth to keep track of other phones it comes close to and how long for. NHS insists it will not be tracking location data - only phones.  
• If it is a suspected coronavirus case these symptoms and the anonymous IDs of all the phones the user has come into contact with are automatically sent to an NHS server.  
• NHS will analyze the data sent by the original sufferer using a ‘complex algorithm’. Although it is believed to be largely based on distance of between one and two metres, and the amount of time, probably around ten to 15 minutes  | • Social distancing  
• Contact tracing |
| **Identigy - Citizen JRNY Platform: Pandemic Response Tools** | • App provides various types of registrations options (high risk, exposed, recovered, tested positive, etc)  
• Includes on-device biometrics, and a movement permit/immunity passport (location/movement alerts, geolocation radius restrictions), and secure contact tracing (includes built in privacy protections, live alerts, and location and movement tracing).  
• Enables updates to travel restrictions, communicate directly, and immunity passports.  
• Marketed to governments and large-scale organizations  
• Accessible in a configurable dashboard  
• Specifications.  | • Social distancing (?)  
• Contact tracing |
| **Olea - Temperature Sensing Kiosk** | • Kiosk with infrared temperature sensor/detector provides alert if an individual is running a fever. The system uses an algorithm for fast detection temperature accuracy.  
• No-contact device  
• Specifications  | • Screening |
## RightCrowd - COVID-19 solutions
- Badge for workers or visitors continuously monitors and stores information every time workers come in close proximity (approximately 2 meters or 6 feet), and provides visual warning and stores the unique identifier of each Badgeholder, along with a timestamp and the approximate distance. Data automatically transferred to the management software as soon as it comes in range of a RightCrowd Gateway.
- Database of "digital badgeholder" information renders all contact points and allows for further analysis and reporting. In cases where someone is found to have tested positive, contact tracing reports can be seamlessly provided.
- COVID status can be obtained through an API, or optionally.
- Can be deployed in the cloud or on-premise and can be configured by the customer to meet privacy regulations.
- **Specifications**
  - Social distancing
  - Contact tracing
  - Return to work management

## Tended - "COVID-19 Solution"
- Wearable, ultra-wideband proximity sensor, paired with each worker’s smartphone, immediately notifying them if they come within two meters of a colleague.
- Can configure minimum separation distance, and receive an overview of social distancing breaches that occur.
- Employers can see which of their colleagues have been in close contact with COVID infected colleagues and instruct them to self-isolate.
- **Specifications**
  - Social distancing
  - Contact tracing
## Advanced Industrial Marketing - EGOpro Active Tag and LASE PeCo

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| **Advanced Industrial Marketing - EGOpro Active Tag and LASE PeCo** | • “EGOpro Active Tag” wearable based on UWB radio technology. Warning provided by vibrate and flash of red LED.  
• Allows sensors to be set in facility “hotspots” like entrances, break rooms and bathrooms to ensure social distancing is maintained off the floor and in heavily trafficked areas.  
• Unique serial numbers of wearable could be used for contact tracing.  
• “LASE Pe(ople)Co(unter)” uses standalone 3D cameras to measure # of people in a small space, or a laser solution for larger spaces.  
• LASE PeCo can distinguish adults, children and shopping carts, but not gender or any other identifying features.  
• When too many individuals detected in area alert is sent to designated manager on duty to break up any overcrowding.  
• **Specifications** | • Social distancing  
• Contact tracing |

## Landing AI - AI enabled social distancing detection tool

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| **Landing AI - AI enabled social distancing detection tool** | • AI-powered camera analyzes video streams to ensure social distancing.  
• Calibration is required.  
• **Demo** | • Social distancing |

## Triax Technologies - Proximity Trace wearable tag

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| **Triax Technologies - Proximity Trace wearable tag** | • Based on wearable, Spot-r tag, that detects when workers experience a sudden fall and also locate them on a jobsite within predefined zones.  
• Social-distancing tag fits onto a standard hardhat with a 3D-printed mounting clip, does not need mesh network base stations set up at the site.  
• Tag beeps when it detects another tag nearby, and logs all other tags it encounters, reporting them to a web-based portal when it syncs with a unit at the site's entrance gate.  
• The audible alarm can be deactivated for a preset period with a button press for specific tasks that require multiple workers to be close together.  
• Provides passive collection of worker interactions for contact tracing  
• **Specifications** | • Social distancing  
• Contact tracing |
## Selected COVID19 Distancing, Screening, Contact Tracing, and Other Technologies

**May 10, 2020**

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| **Lopos** - SafeDistance | • Wearable device allows configuring minimum distance and warns user with beep and vibrate if it’s closer than 1.5 meters  
• Worm around neck, on a keyring, in pocket or handbag, or fastened to a hardhat/safety belt.  
• Uses ultra-wideband (UWB), works indoors and outdoors, only communicates with other SafeDistance wearables  
• No data is saved on a server, app, dashboard, or otherwise | • Social distancing |
| **Comarch** - Life Wristbands | • Wearable wristband equipped with SOS button, a GPS module that allows user localization and heart rate monitor.  
• Focused on healthcare application.  
• Allows user to answer and end calls, connect with certain providers. Provides alerts about low battery.  
• Health sector focused.  
• Bulgaria promoting this device as way to record movements using GPS satellite location data. | • Contact tracing  
• Medical alert system |
| **Social Distancer Technologies** - The Social Distancer | • Wearable personal protective equipment (PPE) that utilizes a combination of sound, vibration and LEDs to alert users about unsafe distance from colleagues.  
• Starter kits will begin to be available May 25th. | • Social distancing |
| **Realtime Networks** - Temperature screening solution & No touch biometric reader | • Thermal camera with face, palm and fingerprint recognition technology for employee authentication.  
• Screens employees and visitors for high temperature while entering building or a defined area.  
• Screens for persons not wearing mask.  
• Alarm options include strobe light, siren and a popup on PC workstation  
• Saves data in personnel safety log and verifies records. | • Screening (temperature, mask)  
• Authentication |
### Selected COVID-19 Distancing, Screening, Contact Tracing, and Other Technologies

**May 10, 2020**

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| **Diversified - VitalSign - Body Temperature Check Kiosk** | • Kiosk for temperature checks  
  • Provides results within one second and from three feet away.  
  • Remote deployment of manufacture updates and patches  
  • Specifications | • Screening (temperature) |
| **Lamasatech - Body Temperature Kiosks** | • Kiosk that automatically reads body temperature, and optional facial recognition.  
  • Reads in ~ 1 second, can configure acceptable temperature thresholds  
  • Verbal warning/success message plus LED traffic light system  
  • Optional facial recognition to allow entry for vetted individuals and store regular readings  
  • Specifications | • Screening (temperature)  
  • Authentication |
| **MyLobby - Automated temperature screening** | • Kiosk touchless temperature check.  
  • Facial recognition software can be used as a time attendance application.  
  • Specifications | • Screening (temperature)  
  • Authentication |
| **Telpo - TPS980T Pro** | • Contactless AI biometric facial recognition temperature screening terminal.  
  • Can process three to four simultaneous screenings by combining body and portrait recognition with infrared and visible light double-sensor technology.  
  • Uses infrared thermography and AI, to also perform mask detection.  
  • Works at a range of up to 2 meters.  
  • Available attendance management, personnel management, personnel health report, equipment management and data statistics.  
  • Specifications | • Screening (temperature, mask)  
  • Authentication |
| **ViperImaging - Automated Thermal Imaging Systems** | • Thermal cameras permit setting temperature threshold.  
  • Specifications | • Screening (temperature) |
## Selected COVID19 Distancing, Screening, Contact Tracing, and Other Technologies
### May 10, 2020

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| **Altoros** - AI-Based Fever Screener | - Thermal video camera, AI-based system, cloud data storage, Router POE along with a user management module, adjustable alert system, and video streaming.  
- Delivers advanced notifications with an attached person’s photo, temperature measurements, the location of the spotted person.  
- Providing daily/weekly/monthly reports across the requested parameters  
- **Specifications** | • Screening (temperature)  
• Authentication |
| **SmartX** - Temperature Screening Kiosk | - Kiosk with AI thermal imaging camera  
- Screens over 100 people per minute.  
- Automatic sound alarm and visual red box indicator, and provides automatic counting/statistics.  
- Designed for large-scale temperature monitoring in crowded public places or high traffic areas to detect any individuals with a fever immediately.  
- **Specifications** | • Screening (temperature) |
| **Sunell** - Body Temperature Measurement Camera | - Thermal camera  
- Can be used at night and provide human body temperature monitoring of up to 30 targets.  
- Permits customizing temperature for entering premises  
- **Specifications** | • Screening (temperature) |
| **Accushield** - Kiosk Software | - Kiosk which enables company to put screening questions to visitors during sign in process and stop the sign in process based on their answer.  
- **Specifications** | • Screening (symptoms) |
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| Remark - TK-1 System | • AI-based thermal camera  
• Can detect fever among up to 120 people per minute.  
• Temperature accuracy within 0.3 degrees Celsius from between two and five meters away,  
• Mounts on walls, tripods or ceilings to scan wide areas.  
• Uses facial and object recognition to facilitate access control. | • Screening (temperature)  
• Authentication |
| Hikvision - Temperature Screen Solution | • Various temperature screening camera solutions  
• Specifications | • Screening (temperature) |
| Wello - WelloStationX | • Thermal screening camera.  
• Provides on-screen notification and time and date stamped photograph emailed to staff.  
• Provides sticker for persons with temperatures below the threshold.  
• Specifications | • Screening (temperature)  
• Authentication |