

# Real-Time Health, Safety, & Productivity Intelligence

Powered by  
Human Digital Twin Technology



# Industry Challenges in Worker Safety & Productivity

## Key Pain Points in the Construction & Industrial Sectors:

- 1-High rates of workplace injuries and fatalities due to the lack of real-time monitoring
- 2-Limited visibility into worker health and stress levels
- 3-PPE non-compliance leading to regulatory fines and accidents
- 4-Delays and productivity losses caused by manual supervision
- 5-Difficulty in tracking workers in large and complex job sites
- 6-Reactive safety management instead of proactive prevention

## Result:

Increased operational cost, productivity loss, and risk to human life.



# Human Digital Twin: Real-Time Intelligence for Safety & Productivity

## IoT Gateway – Core Data Collection

Smart Helmet  
Real-Time Monitoring



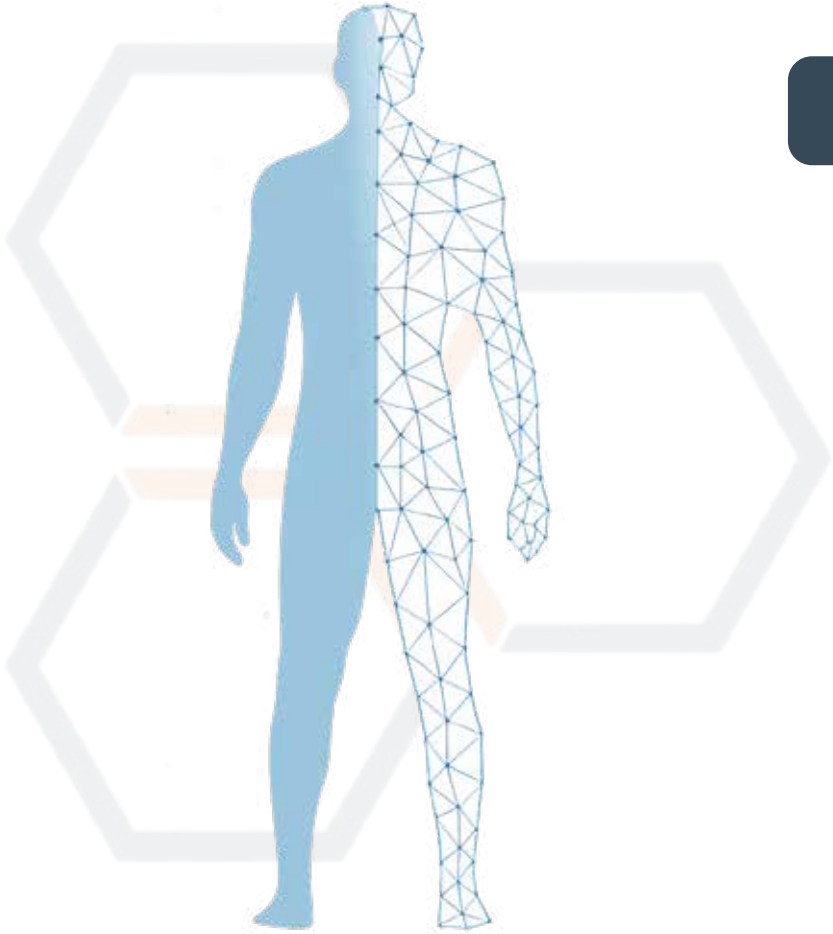
Worker Vital Signs



Live Position Tracking



Emergency Alert Button



Human Digital Twin

## AI Platform – Smart Analytics



Cloud-Based  
Data Processing



Predictive Analytics  
& Insights



Real-Time Visualization



Automatic Risk Alerts



## VCT InSite:

# The Future of Smart Safety Helmets

VCT InSite, the ultimate construction safety personal assistant designed to prioritize the well-being of your workers and enhance project management. With a range of innovative features and cutting-edge technologies, VCT InSite is your go-to solution for ensuring safety, productivity, and efficiency of your project.



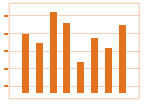
## Comprehensive Vital Signs Monitoring

Our patented VCT InSite helmet attachment is a solar-powered, long-range device built to protect workers in real time. It monitors vital signs like heart rate, oxygen saturation, and temperature, delivering accurate health insights from the field. With GPS tracking, a built-in speaker for alerts, and smart fatigue detection, it helps identify early signs of exhaustion and stress. Supervisors can act fast to prevent incidents, reduce downtime, and keep teams safe and productive.



## Redefining PPE Compliance Tracking

Meet the next evolution in jobsite safety. VCT InSite automatically detects helmet use and scans for smart tags embedded in standard vests, safety shoes, and gear. No need for unreliable AI cameras or expensive upgrades. As workers move through the site, VCT InSite performs continuous zone-based safety checks, comparing their equipment to the specific PPE requirements of each area. If anything is missing, the device instantly alerts the worker through an integrated speaker and notifies the platform for immediate action. You get real-time visibility, automated compliance tracking, and the confidence that every worker is protected, every step of the way.



## Real-Time Intelligence

The VCT True InSite platform brings your entire operation into focus. Designed to integrate seamlessly with the VCT device, the platform delivers real-time insights into worker safety, zone compliance, productivity, and site conditions, all in one powerful dashboard. It visualizes live alerts, PPE violations, fatigue risks, heat stress, falls, and SOS events with unmatched clarity. Interactive maps and zone-based data allow you to monitor teams, identify risks, and take action instantly. No guesswork, no delays. Whether you're managing ten workers or ten thousand, VCT True InSite gives you full control over safety, performance, and accountability across your entire project.



# Our Unique Construction Intelligence Platform

**Delivers total visibility and control across the job site.**



## WORKFORCE HEALTH

Vital Signs Monitoring (Heart rate, Temperature, SpO<sub>2</sub>)

Fatigue & Stress Detection

Digital Clinic Access

Real-Time Alerts & SOS Button

## CONNECTED SITE

Indoor & Outdoor GPS Tracking

Fall Detection

PPE Compliance Tracking

Voice Notifications

Zone-Based Monitoring

## PROJECT INSIGHTS

AI-powered Analytics & Dashboards

Predictive Safety & Fatigue Insights

Real-Time Performance Tracking

Data Integration APIs

*Others provide tools. **We deliver the complete smart safety ecosystem.***

# True InSite Platform Licensing Options

| Category                                                                 | Essential | Analytics | Intelligence |
|--------------------------------------------------------------------------|-----------|-----------|--------------|
| Worker location tracking (outdoor GPS, indoor beacons)                   | ✓         | ✓         | ✓            |
| Vital signs: HR, SpO <sub>2</sub> , temperature                          | ✓         | ✓         | ✓            |
| Fatigue index and thresholds                                             | ✓         | ✓         | ✓            |
| SOS button, fall detection, incident capture                             | ✓         | ✓         | ✓            |
| Zoning, geofencing, entry/exit rules                                     | ✓         | ✓         | ✓            |
| On-device speaker notifications and haptics                              | ✓         | ✓         | ✓            |
| Standard safety and compliance reports                                   | ✓         | ✓         | ✓            |
| Real-time dashboards (safety status, alarms)                             | ✓         | ✓         | ✓            |
| Productivity analytics: utilization, time-on-task, heatmaps, bottlenecks |           | ✓         | ✓            |
| Custom report builder, scheduled exports                                 |           | ✓         | ✓            |
| Operational KPIs, crew and zone benchmarking                             |           | ✓         | ✓            |
| AI risk prediction and anomaly detection                                 |           |           | ✓            |
| AI assistant for natural-language queries and actions                    |           |           | ✓            |



## Safety Command Center: Where data becomes action

VCT-trained operators continuously monitor real-time data from all connected helmets and site devices.

The system detects incidents, health anomalies, or PPE violations and immediately alerts the command center.

The safety team coordinates rapid responses and investigates every observation using True InSite analytics.



# VCT InSite Models - Feature Comparison

A range of advanced solutions designed to meet the diverse needs of industries focused on worker Health, Safety, and Productivity monitoring

|                                        | <br>InSite Pro | <br>InSite Core | <br>InSite Pure |
|----------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Communication</b>                   |                                                                                                 |                                                                                                  |                                                                                                    |
| LoRa/ LoRaWAN                          | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| Built-in Speaker                       | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| Haptic Feedback                        | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| <b>Location Tracking</b>               |                                                                                                 |                                                                                                  |                                                                                                    |
| Indoor Location (BLE)                  | ✓                                                                                               | ✓                                                                                                |                                                                                                    |
| Outdoor GPS Tracking                   | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| <b>Health Monitoring</b>               |                                                                                                 |                                                                                                  |                                                                                                    |
| Heart Rate                             | ✓                                                                                               | -                                                                                                | -                                                                                                  |
| Heart Rate Variability (HRV)           | ✓                                                                                               | -                                                                                                | -                                                                                                  |
| Temperature                            | ✓                                                                                               | -                                                                                                | -                                                                                                  |
| Blood Oxygen Level (SpO <sub>2</sub> ) | ✓                                                                                               | -                                                                                                | -                                                                                                  |
| Calories/ Steps                        | ✓                                                                                               | -                                                                                                | -                                                                                                  |
| Fatigue Monitoring                     | ✓                                                                                               | -                                                                                                | -                                                                                                  |
| <b>Safety Monitoring</b>               |                                                                                                 |                                                                                                  |                                                                                                    |
| Emergency SOS                          | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| Fall Detection                         | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| PPE Compliance Tracking                | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| <b>Power &amp; Durability</b>          |                                                                                                 |                                                                                                  |                                                                                                    |
| Solar-Powered Battery                  | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |
| Dust/ Waterproof                       | ✓                                                                                               | ✓                                                                                                | ✓                                                                                                  |



## InSite Pro

### *Comprehensive Worker Safety and Health Monitoring Solution*

The VCT InSite Pro provides a complete solution for worker safety and health monitoring, ideal for high-risk industries like oil and gas, mining, and heavy construction. Equipped with long-range LoRa-based communication (up to 10km) and real-time indoor **BLE** and outdoor **GPS** tracking, **Live PPE Compliance Status**, this model ensures comprehensive location visibility. Advanced health monitoring features include tracking of heart rate, body temperature, SpO2, and fatigue levels, allowing companies to identify health risks and ensure worker well-being. The **helmet-integrated** speaker and **haptic feedback** system deliver immediate notifications, while the emergency **SOS** function offers rapid response capabilities. With **solar-powered** batteries and a rugged dust and waterproof design, the VCT InSite Pro is built to last in tough environments. This all-in-one solution integrates worker tracking with vital health monitoring, providing real-time insights and enhancing overall safety.

## InSite Core

### *Complete Worker Tracking Solution*

The VCT InSite Core offers a robust solution for industries requiring both indoor and outdoor tracking capabilities. Featuring LoRa-based communication for long-range data transmission and BLE indoor as well as GPS outdoor tracking and PPE Compliance Status, it ensures that worker locations are always visible. The model is designed for industries like construction and heavy infrastructure, where real-time tracking is crucial. With a helmet-integrated speaker for mass notifications, haptic feedback, and an emergency SOS system, the VCT InSite Core provides vital safety features. Its solar-powered batteries ensure extended use without frequent charging, and the dust and waterproof design guarantees durability in challenging work conditions. The Core model delivers essential tracking and safety functionality, making it ideal for projects spanning both indoor and outdoor environments.

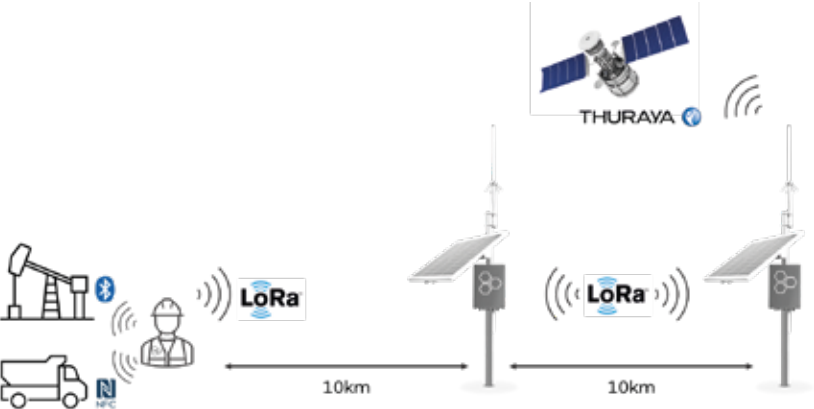
## InSite Pure

### *Essential Worker Tracking Solution*

The VCT InSite Pure provides a streamlined, cost-effective solution for indoor worker tracking. Utilizing LoRa-based communication for long-range connectivity and BLE indoor tracking, and PPE Compliance Status, it offers reliable real-time positioning for improved productivity and safety. This model is perfect for industries like warehouses and factories that require accurate local tracking without additional costs for GPS or health monitoring. Features such as haptic feedback, a helmet-integrated speaker, and a quick emergency SOS system ensure that workers can be alerted instantly in critical situations. The solar-powered batteries, capable of recharging even with indoor or indirect lighting, ensure continuous power. With a dust and waterproof design, VCT InSite Pure is built to last in rugged environments, offering excellent value for those focused on efficient

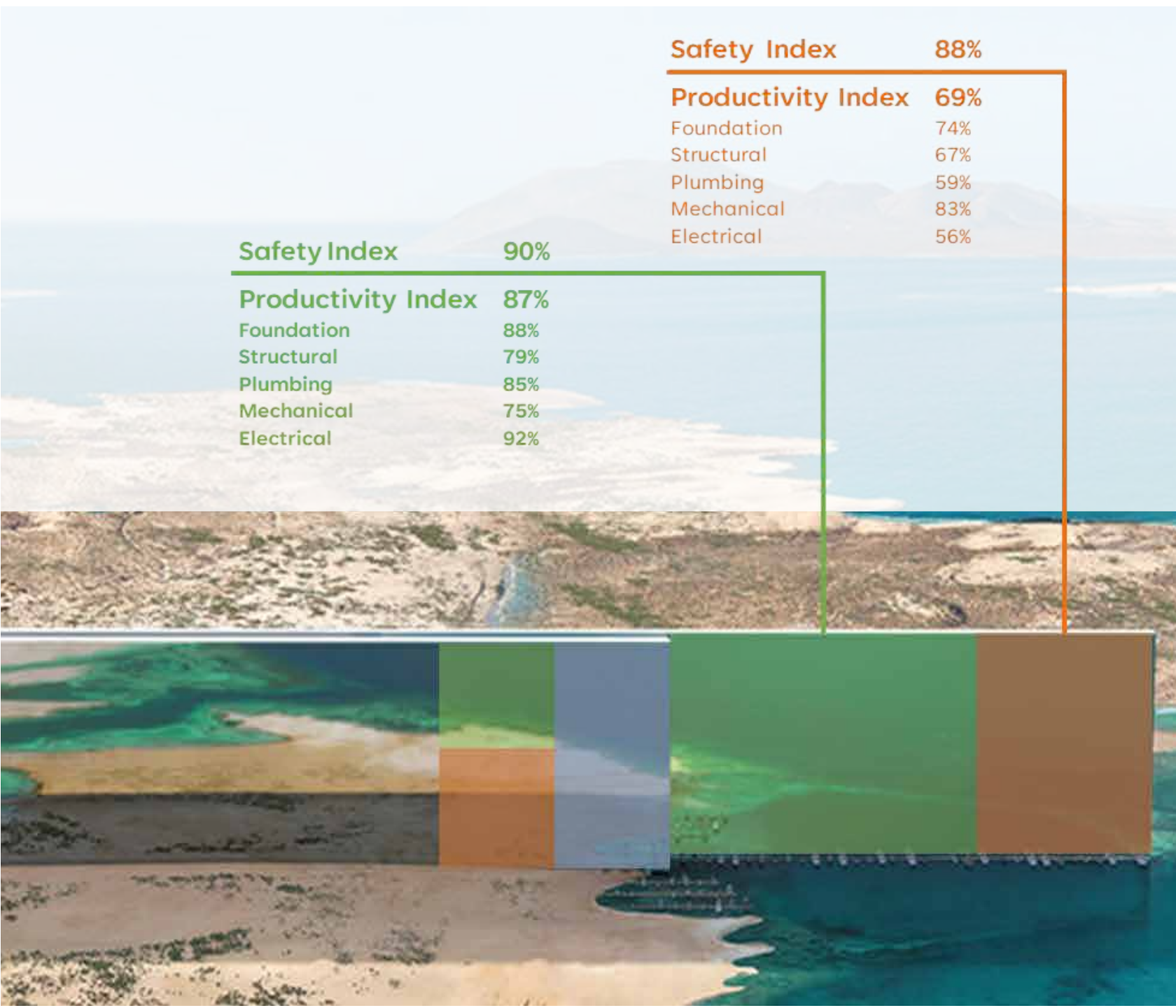
# Elevating Health, Safety and Productivity

VCT InSite technology provides seamless access to valuable insights into safety behavior and productivity performance. Our Health & Safety Index tracks vital signs, PPE compliance, and worker movement, detecting potential risks early and enabling swift response. The Productivity Index measures energy expenditure, step count, and GPS location to identify inefficiencies and improve site performance. With VCT InSite, you can build safer, smarter, and more productive construction sites.



|                    |     |
|--------------------|-----|
| Safety Index       | 90% |
| Productivity Index | 87% |
| Foundation         | 88% |
| Structural         | 79% |
| Plumbing           | 85% |
| Mechanical         | 75% |
| Electrical         | 92% |

|                    |     |
|--------------------|-----|
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| Foundation         | 74% |
| Structural         | 67% |
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Smarter, Safer, More Productive Worksites

# VCT

Virtual Creative Technologies