

## Customer Stories

# Enhancing Workplace Safety through Daily Employee Health Monitoring



## About UNION biometrics

UNION biometrics is a global leader in biometric security, delivering comprehensive, high-performance access control solutions and premium multi-modal recognition devices built on proprietary technologies and patented anti-spoofing methods, protecting critical infrastructure, corporate, and government facilities worldwide through a trusted global partner network.

## Overview

The health and well-being of employees are critical across all industries, particularly in high-risk sectors such as construction and manufacturing. Deterioration in workers' health can significantly increase the likelihood of workplace accidents. To address this, UNION biometrics provided a solution that monitors employee health on a daily basis, tracks key indicators and provides managers with a comprehensive, real-time overview of workforce conditions. This enables timely interventions, mitigating accident risks and ensuring sustained workplace safety and operational efficiency.

## Challenge

A significant number of construction and manufacturing companies recognize that workers on construction sites and those involved in manufacturing processes are constantly exposed to occupational hazards. In particular, construction workers laboring under extreme heat are at considerable risk of accidents such as falls caused by anemia, while incidents of fainting due to low or high blood pressure are also frequently reported. In manufacturing environments, compromised health conditions can increase the likelihood of hand entrapment or similar accidents, posing recurring safety concerns for employees and managers alike.



**Customer**

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**Industry**

Construction & Manufacturing



**Product/Solution**

UBio-Core HealthID



**Partners**

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**Location**

Nationwide construction sites and manufacturing factories

## Solution

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HealthID is an advanced solution developed to address workplace health management challenges by combining contactless facial recognition with real-time vital sign monitoring. Through a single facial scan, the system measures heart rate, cardiovascular index, fatigue, stress, and body temperature, then categorizes results into three levels—Normal, Caution, and Warning—for clear health risk assessment.

At its core, HealthID is powered by the Vital Check algorithm, utilizing remote photoplethysmography (rPPG) technology. By detecting and analyzing micro-changes in skin brightness caused by blood flow, the algorithm calculates biometric values with enhanced accuracy.

All collected data is integrated into a centralized dashboard, enabling administrators to intuitively observe health trends, identify individuals requiring focused management, and conduct timely interventions or consultations. This fusion of biometric authentication and biomedical analytics establishes HealthID as a non-invasive, high-precision health monitoring framework suitable for demanding operational environments.

## Value Delivered

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The solution provided enhanced workplace safety by enabling real-time monitoring of employee health, allowing for the early detection and prevention of accidents caused by anemia, low or high blood pressure, and other health-related risks. Managers were able to respond proactively to health alerts, minimizing disruptions to production lines and workforce availability. Additionally, employees experienced increased satisfaction and trust, recognizing that the company prioritizes their health and well-being. The solution is currently installed in rest shelters at construction sites, providing workers with convenient access to health monitoring while on site.

## Rest Shelters at Construction Sites

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HealthID is currently in operation at rest shelters on construction sites, enabling employees to check their health conditions anytime during breaks.