Smart Prison System

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Targeted Pain Points for “Smart Prison” Solutions

Key Pain Points:

- Enhanced Security: Prison guards are required to accompany prisoners to visitations. The process can be laborious and time consuming. Desire to streamline process while enhancing prisoner tracking.
- Error Prevention: Desire to ensure prisoner treatment for all occasions are consistent and streamlined
- Suicide Prevention: Desire to reduce number of suicides within the prison system and improve response time.
- Prisoner Health monitoring: Desire to improve prisoner care to understand and treat symptoms such as drug withdrawal and catastrophic health failures
- Prisoner Safety: Desire to improve response time to possible illicit activities such as fights and gambling
- Prisoner Independence: Desire to enable prisoners to self manage their own accounts to purchase items with their own credits
Bluetooth Beacon Location/Health Tracking System Overview

Intelligent “Handcuffs” Consisting of:
- Bluetooth/NFC (Near Field Communication) band capable of:
  - Biometrics monitoring
  - Location Tracking
  - Communicate with Electronic Lock
- Bluetooth Beacons

Connected AI Processor Capable of:
- Health Alerts
- Device Off-Line Alerts
- Real-Time Location tracking
- Machine Learning based on User Feedback

Connected Smart Devices & Dashboard:
- Real-Time Alerts
- Video Streaming
Comprehensive Health Tracking

- Full Real-Time Biometric Tracking and database build (Foundational for predictive algorithm for sickness prevention)
- Alert system linked up to inmate database to personalize alerts according to inmate profiles.
- Location tracking synced up with CCTV system to comprehensively monitor
- Comprehensive treatment and patient history to ensure against wrongful medical treatment
Comprehensive Location Tracking

• Proprietary “Fingerprint” indoor location tracking for accuracy within 1.5 meters
• Real-Time Alerts for:
  – Route Deviation (inmate self-service)
  – Possible conflict avoidance
• Real-Time monitoring of “Route Progress”
• Coordination with CCTV system based on location tracking
Connected Biometric “Cuffs”

Key Features:

• Heart Rate Monitor (Vitals Monitoring)
• Blood Oxygen Level (Fatigue Level Monitoring)
• Bluetooth Connectivity
• Indoor Geo Location
• Long Battery Life (Target up to 6 months)
• Special Locking Mechanism
• Alert Trigger for Tampering

Possible Additional Functionalities:

• NFC incorporation for lock opening (Self-Service Visitation Tracking)
Next Steps: Video System Integration + Enhancements

Step 1: Video System Integration

- Align Alerts with appropriate camera
- Enable guards or admin personnel to view and analyze video feed of alerted inmate
- AI learning of video feeds

Step 2 Video Analytics AI:

- Video Analytics Triggers:
  - Illicit behavior: fighting, gambling, illegal gathering
  - Dangerous object recognition: Rolled up bed sheets, sharp objects
Discover data indicators for:
- Heart Disease
- Stroke
- Diabetes...etc

Personalized medicine by tracking sensor data impacts after various treatments (both medicinal and various physical activity)

Applications into other verticals for worksite and facilities safety:
- Construction sites
- Old Age Homes
- Hospitals