# SIMOCO CASH AND VALUABLES IN TRANSIT (CVIT) SOLUTIONS

## PROVIDING INTELLIGENT TECHNOLOGY IN ORDER TO SAFEGUARD YOUR CUSTOMERS' CASH AND VALUABLES

**simoco**
wireless solutions
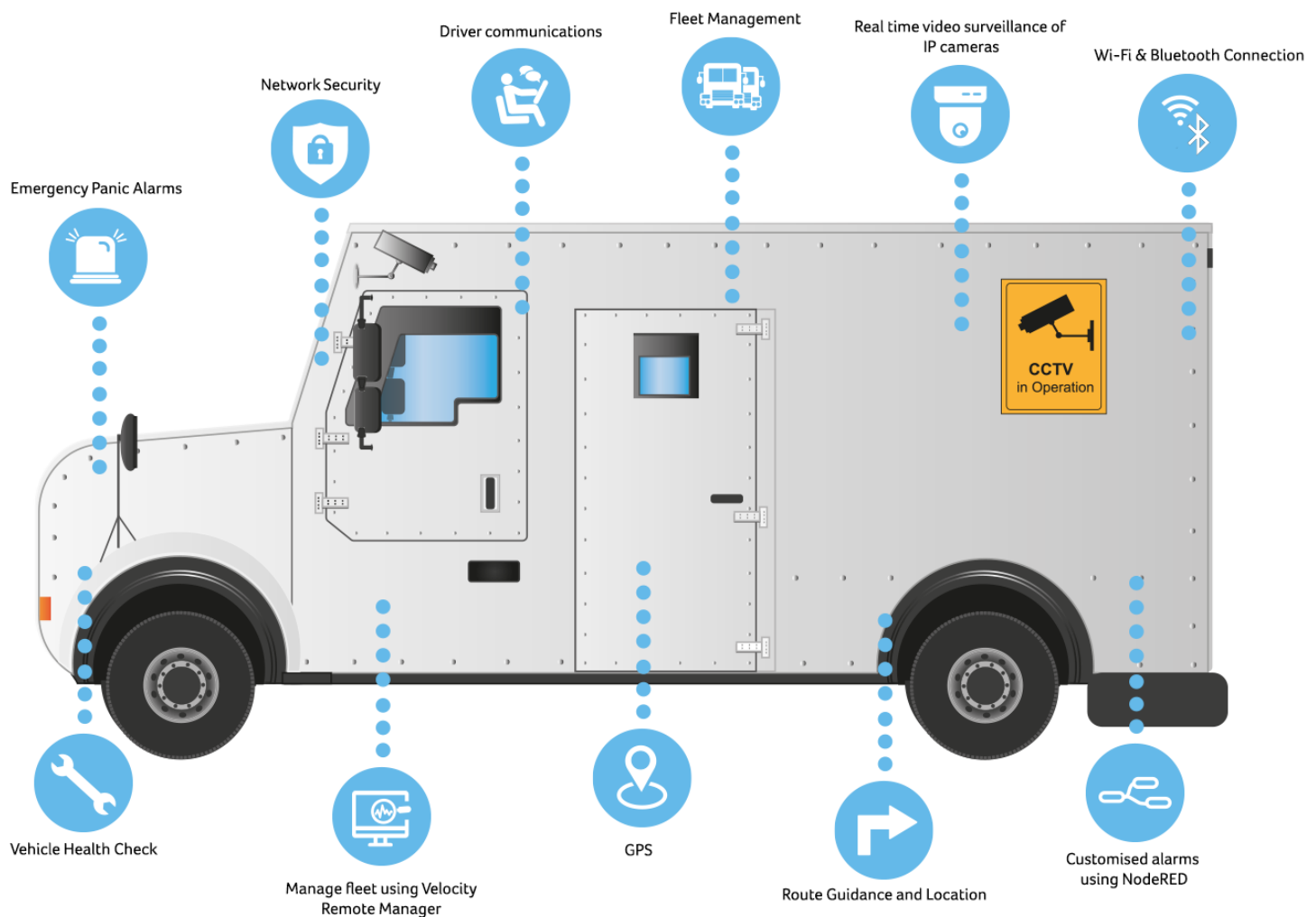
# Cash and Valuables in Transit
# Introduction

Cash in society has been identified as a critical socio-economic requirement. This is backed by the UK government and even in the most advanced countries for digital finance such as Sweden there has been a rethink in policy with ATM machines now increasing in numbers. Some studies prior to COVID have shown that although the physical amount of cash in society had reduced the amount of cash transactions had increased. Cash is and will remain an indispensable part of our lives. Cash and Valuables in transit (CVIT) provides organisations that manage large cash payments a way of transporting cash safely typically in semi-armoured or armoured vehicles and with a minimum set of personnel in order to safeguard large volume of cash being collected.

However, challenges are faced every day by CVIT organisations that fight back against brazen CVIT thieves. CVIT heists are organised criminal operations, executed with military-style planning and precision. Over the past 30 years there have been many different types of attacks on CVIT service providers around the world. In some cases, these attacks lead to severe violence which not only puts the CVIT crew and public bystanders' lives at risk but also leads to substantial collateral damage.

Whilst advances are made in safety and security mechanisms to protect large cash and valuables transported daily, there is little, if any, legislation setting minimum standards for technology to be installed in vehicles or to compel CVIT companies to use the technology.

# Velocity a unique solution for the Cash and Valuables in Transit industry

Velocity provides CVIT operators an intelligent communications solution providing complete visibility of the entire cash and valuables movement process. Velocity is enriched with a whole range of features from driver communications using either LMR or LTE for voice communications in order to stay in contact with control room operators. Using devices such as tablets in conjunction with the Velocity device enables perfect planning of routes and guidance. Surveillance cameras on CVIT vehicles have become a necessity considering the challenges CVIT operators face every day. Utilisation of broadband networks in Velocity enables control room operators to pick up real time video streams. Customised workflows and creation of alarms based on a number of conditions provides additional intelligence for your operational cash and valuables in transit processes.



Driver communications

Fleet Management

Real time video surveillance of IP cameras

Wi-Fi & Bluetooth Connection

Network Security

Emergency Panic Alarms

CCTV in Operation

Vehicle Health Check

Manage fleet using Velocity Remote Manager

GPS

Route Guidance and Location

Customised alarms using NodeRED

velocity

# Wireless solutions built to drive efficiency

**Driver communications**
CVIT personnel can stay in contact with their crew as well as control room operators using either LMR or LTE for voice communications. However, situations do arise where coverage of either LMR or LTE is unreliable when CVIT operators are within close proximity of faraday cages for example. These typically lead to cell phone signal loss and dead zones in buildings. Simoco's DMR Coverage Extender (DCE) can help in this scenario as DCE improves portable radio coverage for personnel by using the higher power of the mobile radio within the vehicle to extend the range of the portable back to the radio system.

**Customised alarms using NodeRED**
Creating customised alarms and workflows in NodeRED has never been easier. The below outlines some useful use case scenarios:
► GPS feed where vehicles are located.
► A sensor that reports whenever a door is opened or closed.
► Control rooms have the ability to react to alarms.
► If the vehicle's GPS is reported to be in the depot, an alarm is not raised as the vehicle is in a trusted location.
► If the vehicle is on route to a customer location, the door is not allowed to open whilst the vehicle is in motion. If the door is opened whilst the vehicle is travelling, an alarm is triggered to the control room.
► If a vehicle is idle for an unusual period of time, an alarm is triggered to the control room.
► When the vehicle arrives at a customer site, doors are allowed to stay open for a set period of time. If the doors are left open for a greater period of time, an alarm can be triggered to the control room.
► Whilst the vehicle is travelling, and the vehicle veers off route, an alarm can be triggered to the control room.

NodeRED provides the ability to tailor workflows that meet the requirements of your operations.

## Fleet Management

Your control room personnel can use our dispatch software with integrated geofencing to track vehicle routes and driver behaviour on the road. The intelligence in our devices allows control room managers to monitor route efficiency, reconfigure routes for maximum effectiveness ensuring drivers can respond as quickly as possible if any danger lies ahead.

## Emergency panic alarms

In the event of an emergency, CVIT staff can raise alarms using emergency panic alarm buttons that relay danger back to control room operators. NodeRED workflows can automatically update the vehicle's status when the alarm is triggered such as locking all doors, automatically marking the incident on video recordings once the alarm is triggered so the necessary footage can be obtained easily of the event and video recordings can be backed up to cloud servers. Additionally the vehicle's siren can be activated as well as access to the vehicle being disabled.

## Wi-Fi and Bluetooth connectivity

The added benefit of Wi-Fi and Bluetooth® connectivity offers device connectivity in and around the CVIT vehicle. Quite often, CVIT personnel require proof of delivery via a wireless device where the recipient needs to sign. Using the wireless hotspot of the Velocity device inside the vehicle makes this possible. The addition of barcode scanners and RFID equipment can also be used in this scenario.
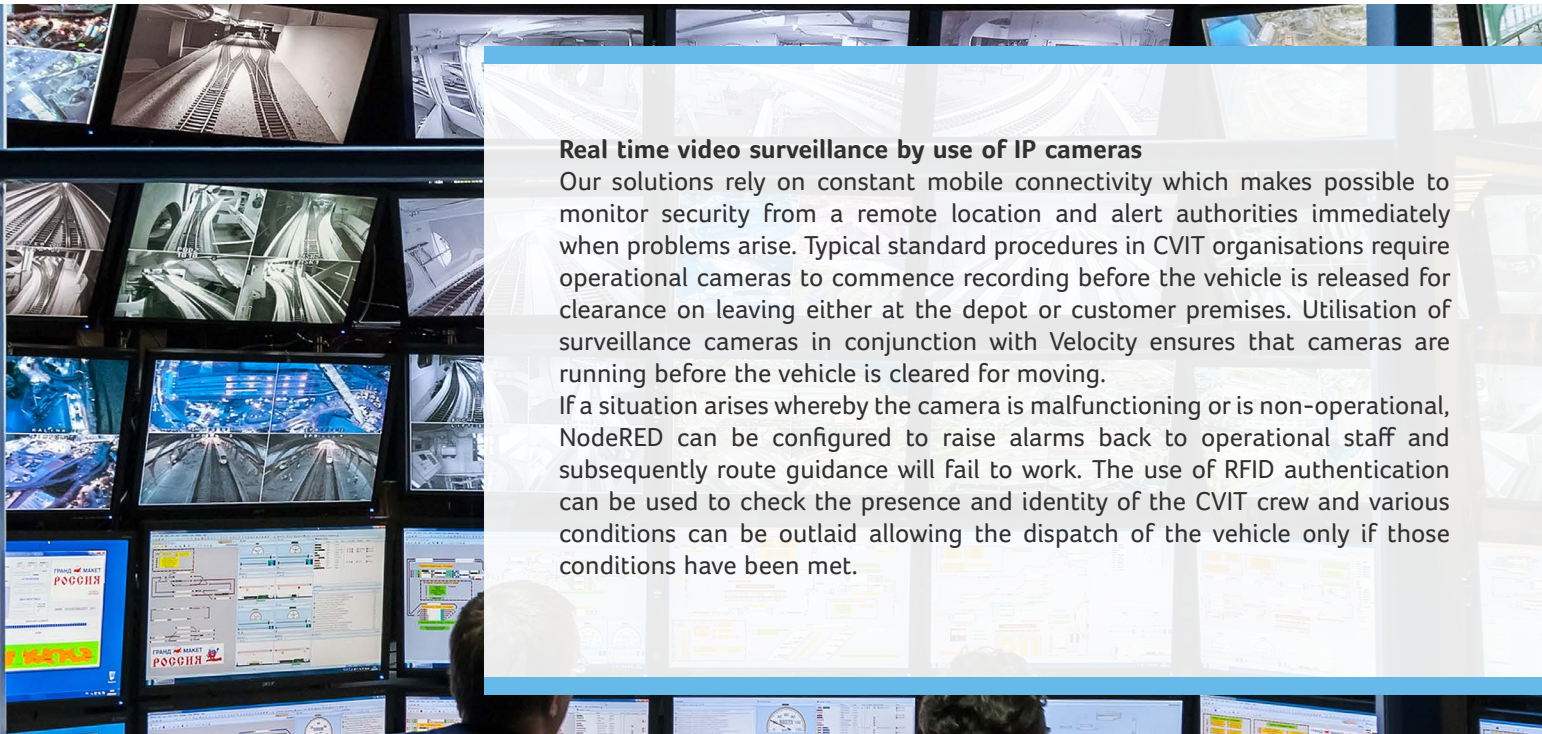
**Vehicle health check**

The vehicle's health for CVIT operators holds huge importance partly due to the volume of cash and valuables that could be stranded in the event of the vehicle breaking down. Velocity can integrate into vehicle electronics to check for early warnings such as service lights, high temperature warnings, oil lights and much more. Preventative maintenance can be deployed on a number of vehicles which help operational staff identify when vehicles require servicing. Additionally alerts can be sent to CVIT back office staff when servicing the vehicle's hydraulics is required. The hydraulics on a CVIT vehicle is put on pressure numerous times with heavy loads of cash or coins lifted time and again. If the vehicle's hydraulics requires servicing after a set number of lifts, an alert can be sent in order for the hydraulics to be serviced.

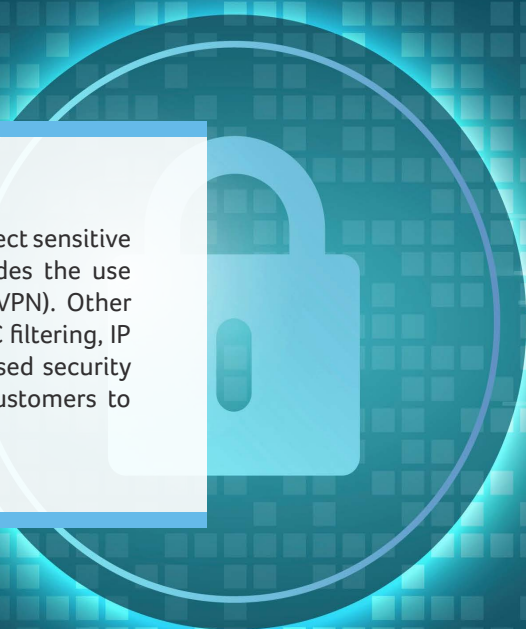**Real time video surveillance by use of IP cameras**

Our solutions rely on constant mobile connectivity which makes possible to monitor security from a remote location and alert authorities immediately when problems arise. Typical standard procedures in CVIT organisations require operational cameras to commence recording before the vehicle is released for clearance on leaving either at the depot or customer premises. Utilisation of surveillance cameras in conjunction with Velocity ensures that cameras are running before the vehicle is cleared for moving.

If a situation arises whereby the camera is malfunctioning or is non-operational, NodeRED can be configured to raise alarms back to operational staff and subsequently route guidance will fail to work. The use of RFID authentication can be used to check the presence and identity of the CVIT crew and various conditions can be outlaid allowing the dispatch of the vehicle only if those conditions have been met.

**Network Security**

CVIT operators require policies in mitigating networking risks to protect sensitive information. Velocity is designed with security in mind and includes the use of advanced security protocols such as virtual private networks (VPN). Other security features include setting up Demilitarized Zones (DMZ), MAC filtering, IP filtering, port filtering and port forwarding provide a standards-based security solution for connecting and managing remote assets, enabling customers to guard against malicious access to sensitive data.

**Manage fleet using Velocity Remote Manager**
Worried about how all your CVIT vehicles will stay updated? Velocity Remote Manager (VRM) allows firmware updates, configurations and maintenance to your wireless on board device from a remote location while ensuring that sensitive data stays safe.

**Integrated GPS**
Integrated GPS comes standard in Velocity and allows greater visibility of your vehicles. For control of GPS locations where limited eyes can monitor CVIT vehicles, Velocity provides the ability to configure GPS in remote servers either by utilising third party or self-hosted servers. If additional security protection is required, encryption can be used providing that extra layer of security.

**Route guidance and location**
We understand that CVIT operators want to mitigate the risk of organised heists to safeguard the contents in vehicles. Some of those safeguards include anonymising the route to security personnel and limiting the visibility of what the driver can see. Route guidance alarms can be triggered in the event of accidents, traffic build up and alert control room operators if the vehicle has no choice but to go off route. In this situation, control room operators can subsequently send new route guidance for the vehicle ensuring alarms are not raised unnecessarily.

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