

Connected systems for connected journeys

## 21<sup>st</sup> Century's Swedish customers implementing future bus systems



### Highlights

- High definition footage available from all cameras
- Downloads available over 4G
- Connection to the Journeo Transit platform
- Video kept secure in scalable cloud EvidenceSafe
- Footage is securely available to Stockholm Police

### Customer requirements

**Swedish operators face stringent requirements when bidding for new routes. The Scandinavian country has long been an early adopter of technology with operators asked to install a range of onboard solutions to demanding standards in quality, availability and reliability. The specification of CCTV is one such critical system that passengers, drivers and the police all depend upon to maintain a safe transport network.**

### Solution and technology

21<sup>st</sup> Century has worked with Swedish customers for many years, especially those in Stockholm, assisting them in remaining at the forefront of technology.

After carefully reviewing upcoming requirements, 21<sup>st</sup> Century recommended a Hikvision-based CCTV system for an initial install of 29 vehicles. Each install (over 3 vehicle types) included an 8-channel Hikvision NVR and IP cameras. The use of digital cameras means that high definition images can be recorded throughout the vehicle meeting the international standards required by the PTA.

To access the footage, each system is connected to a Journeo Edge intelligent gateway. The Gateway connects the on-board recorder to the Journeo cloud-based platform, from where system maintainers can view system health via the Remote Condition Monitoring (RCM) module and Stockholm Police can request video via the Agnostic Video Management System (AVMS). Each connected CCTV installation can report the current system health in real time through into the RCM application. This allows, in the case of this project, 21<sup>st</sup> Century's Stockholm CCTV team to identify any faults and visit the bus to correct it.

The AVMS application allows authorised users to schedule downloads remotely by creating a new request via the cloud-based platform will begin to transmit to the Journeo secure and scalable EvidenceSafe. Any downloads that are interrupted through power or communications outages automatically restart where they left off once the connection is restored.

Robust identity management on the cloud-based platform ensures that only those users who are granted access to view video can, in this case the BAG team at Stockholm Police. Video retention periods can be configured depending on the operator or authority making the system compatible across regions where standards differ.

“

The High Definition CCTV, coupled with our Journeo Transit platform, is delivering real benefits to all stakeholders, including both the operators and the Swedish police. This new system is the future of on-board CCTV and we expect to many fleet-wide rollouts in the years' ahead. ”

Mark Johnson  
Director of Fleet systems  
21st Century

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### Solution and technology continued

Furthermore, the RCM and AVMS applications will work with all major DVR types allowing this operator to support earlier systems and bring them on-line.

### Delivery

Installation has been completed by 21st Century's experienced, Stockholm-based engineering team and the new solution has been incredibly well received, with the enhanced quality of footage and easy-to-use platform most often cited as the biggest benefits.

The High Definition footage available from the IP cameras ensures that any evidence can be gathered with greater clarity, making it more useful when assessing a situation. The RCM and AVMS applications have been recognised for the substantial amount of time and operational effort required to gather evidence and distribute it to the correct people in a secure manner.

Enhancements to the platform will shortly provide BAG the ability to connect live into vehicles to make immediate observations.

Other integrated modules within Journeo Transit range include Automatic Passenger Counting (APC), which allows operators to know vehicle occupancy in real time, whilst also providing a range of historical reporting tools. This uses the same Journeo EDGE gateway for information transmission and with 21st Century's participation and support for the ITxPT transport standards ensures solutions can be adapted for traffic contracts across cities and regions.

