

# Advantages of using network video to improve safety and security onboard

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# Why onboard video surveillance?

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- > Increased pressure to provide a safe and secure transportation environment
- > Need to reduce costs for vandalism
- > To meet fraudulent insurance claims
- > Valid proof for incidents onboard
- > Analytics to optimize resources usage



# Onboard surveillance challenges – analog CCTV

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- > Image quality
  - Stored images have low resolution
  - Unclear images of moving objects and persons
  - Identification challenges
- > Installation costs
  - Several and dedicated cables to each camera
  - Limited flexibility and scalability
- > Complex handling of stored video
  - Sharing
  - Viewing
  - Searching
  - Analysis



# Image quality benefits – Network cameras

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## Higher resolution

- > Clear images with a high level of detail
- > Provides answers to "Who?" and "What?"

## Progressive scan technology

- > Scans the whole image at the same time
- > Ensures sharp images of moving objects

## High quality of stored images

- > High resolution
- > Higher capture rates
- > Maintained quality over time



## Other advantages of network video

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- > PoE – Power over Ethernet
- > Flexible recording software and hardware
- > Integration benefits
- > Wireless communication
- > Scalability
- > Installation and maintenance
- > Intelligent Video



# Axis digital camera offer

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## **AXIS 209 fixed dome network cameras**

- > Especially developed for trains and buses
- > Up to megapixel resolution
- > Vandal-resistant
- > Vibration, moisture and dust resistant
  - EN50155
  - IP66
- > Discreet & small



# Installation benefits – Axis network cameras

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## Less cables and less work

- > Only one cable
- > Power & video

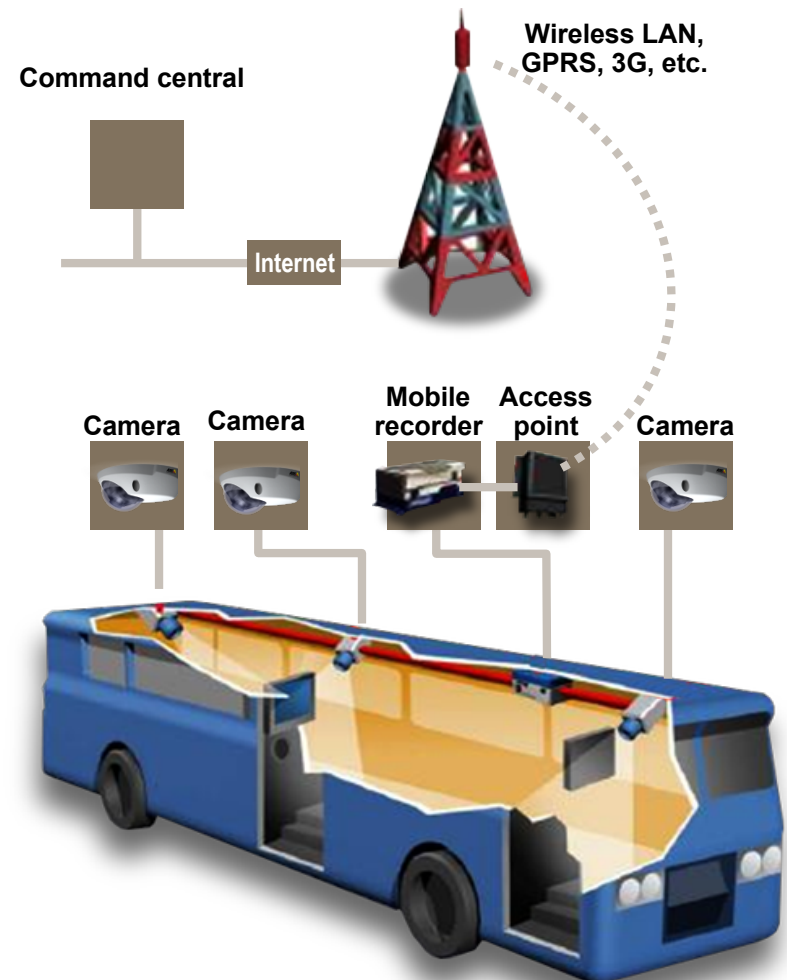
## Scalable, flexible & future-proof

- > Cost-efficient upgrades
- > Based on open standards



# Video handling benefits – Axis network cameras

- > Networked system, just like a computer network
  - Centralized management
- > Live viewing possibilities
- > Automatic storage
- > Easy sharing
- > Quick and simple search
  - Via computer instead of tapes
  - Time or event





## Additional benefits – built in intelligence

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- > Tampering alarm
  - Automatic alert when
    - Covered
    - Redirected
    - Spray-painted
  - Ensures continuous operation
  - Saves valuable time
  
- > Passenger counting



# Several large-scale installations in place

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## Buses

- > SL (Sweden) – More than 10000 cameras in 2500 buses in Stockholm with 4-5 cameras and a mobile NVR in each

## Rail

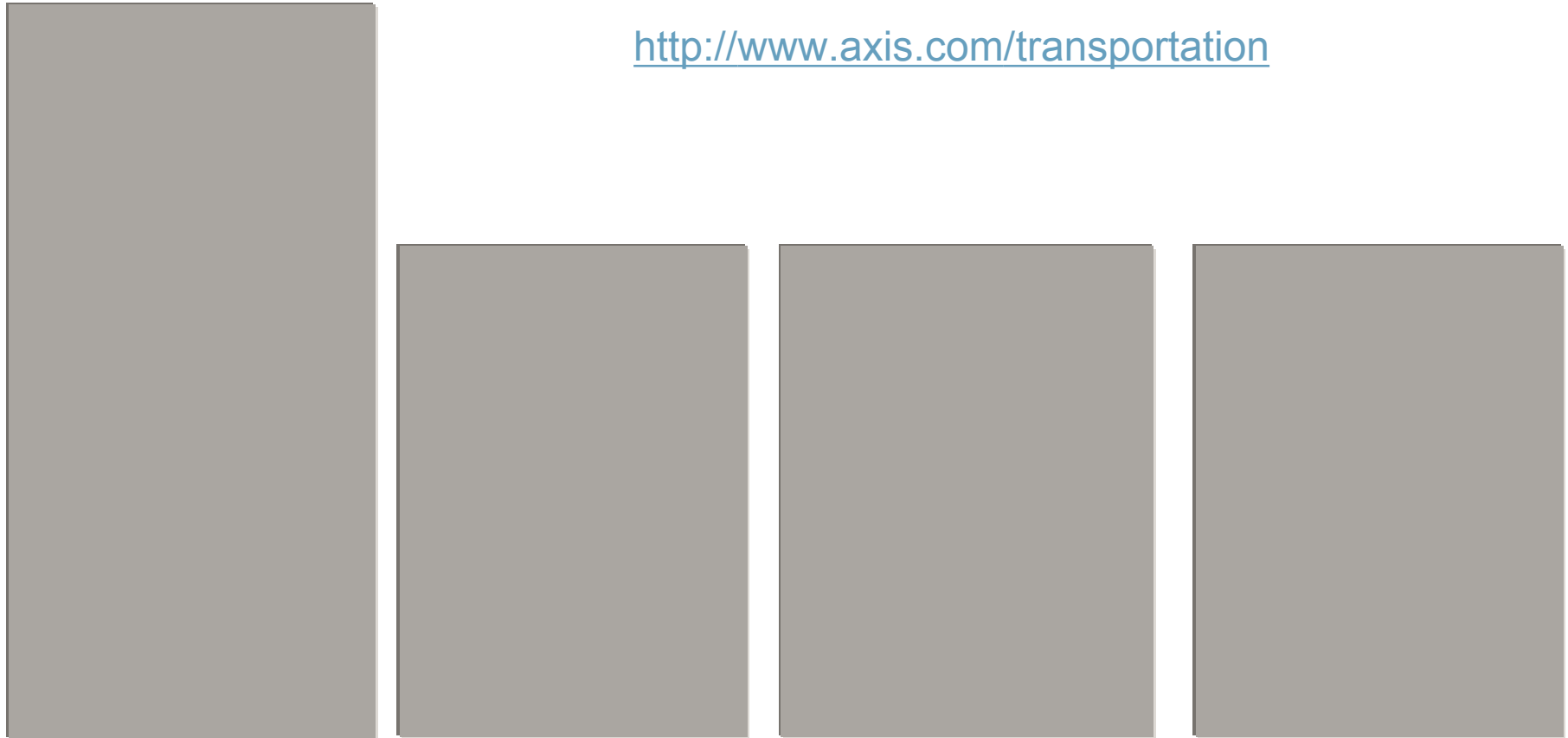
- > Moscow metro (Russia) - 2 lines of 12 so far, 3000 cameras and video servers
- > SBB (Switzerland) - 5000 cameras in commuter trains in Zürich
- > NSB (Norway) - 3200 cameras on intercity trains in Oslo
- > Sydney's new Waratah train suburban fleet - 7,000 network cameras



# Network video in transportation

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<http://www.axis.com/transportation>



## Summary – what's in it for you?

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- > High image quality
  - Reduce vandalism
  - Increase perceived security by passengers and staff
- > Cost-efficient installation
- > Simplified image handling
  - Increased resource utilization



## Questions & Answers

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Thank you!

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