

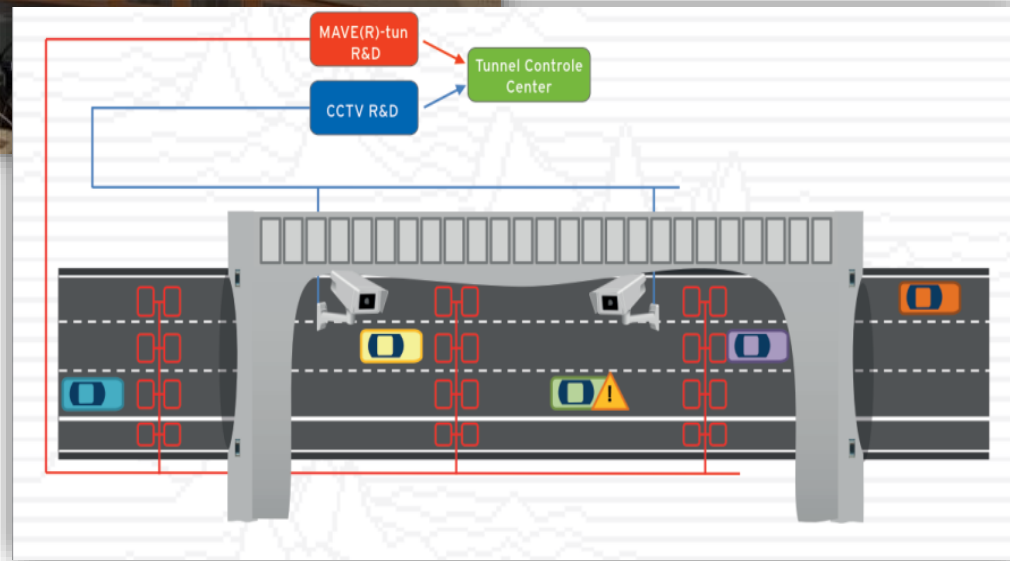
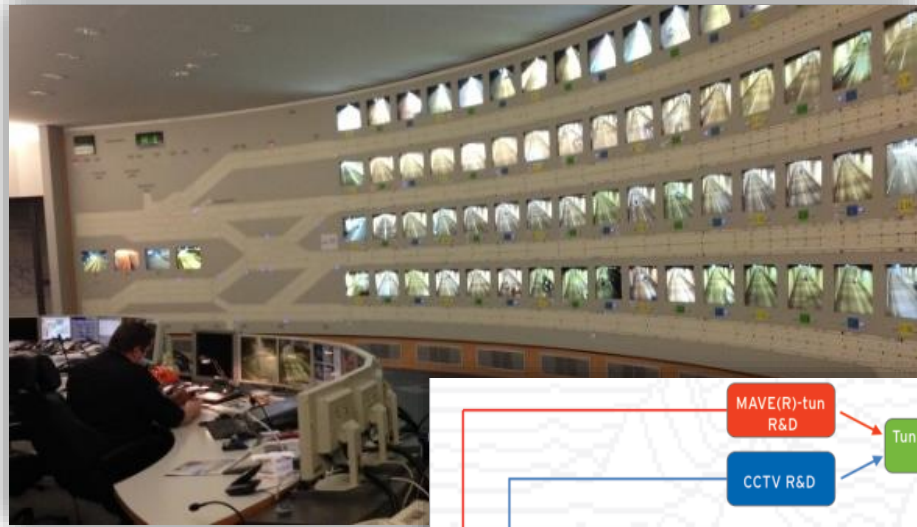
A deep learning approach for video based traffic anomaly detection

General Problem:

- Incident detection in critical Infrastructure
- Types of Incidents:
 - Most common ones known
 - Standstill
 - People on road
 - Slow/fast drivers
 - ...
 - Many unknown
 - ...



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Main Project Task

Confirmation of „Pre-alarms“ using Video anomaly detection

Requirements

- Focus on dangerous movement patterns
- Sub second response time
- Low false positive correlation

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Method

- Self-supervised auto encoder based architecture for feature extraction
- Unlabeled images input for future frame prediction
- Twin model architecture with shared encoder and decoder
- Movement relevant information in latent space
- Anomaly score based on image reconstruction and representation difference

