Free Play of Innovative Forces or Systematic Restructuring-

The perspective of the road operator ASFINAG
ASFINAG at a glance

Holding

Construction Management
Road Operations
Toll/IT

ASFINAG Commercial Services
European Toll Services
Traffic Information Austria

2.785 employees
2.223 km network
30 bn. vehicle-km/year
purely toll-financed
Individual mobility will change drastically in the future – The details depend on many developments/technologies

- Artificial intelligence
- 5G
- Fuel cells
- Internet of Things
- Multi-modality
- Big data
- Cooperative systems
- 5G
- Fuel cells
- 5G
- Fuel cells
Road infrastructure offers attractive opportunities for digitalization but few of them are quick wins.

Topics affecting ASFINAG:

- High investments
- High operational cost
- Long duration of projects and life cycles
- Regional distribution
- Intense manual labour
- Seasonal/situation dependant
- Increasing traffic & transport
- Change in technologies
- Trends in society
- Environmental challenges

Digitalization is a well integrated part of corporate strategy.
Digitalisation in ASFINAG is a stepwise approach – taking into account different perspectives

- How we work & business processes
- Services for customers/partners
- Technology management / digitale competencies
- Security, privacy & legal aspects
- How do we need to transform ourselves? Cultural/personnell related aspects

Strong partnerships and R&D cooperations are essential to face the challenges ahead!
What we bring to the table...

Traffic Surveillance and Control

Incident Management

Traffic Information

Road Works Information

Weather Information

Connected Vehicle Interface

Hightech Inside...

Video Surveillance Video Detection

Cooperative ITS

V2X

Fibreoptic Network

Intelligent Trailer

Environment Data

veh min
Traffic management centers control traffic in tunnels and along the highways.

- 10 traffic control centers
- Incident detection
- ~8500 Cameras
- >85% network coverage
The highway already has a digital twin...

- Video surveillance & Videodetection
- Roadworks
- Reduced lanes
- Traffic sensor data, weather sensor data
- Winter service, FCD-Data
- Traffic control
- Traffic information, incidents
- Traffic level of service
- Tunnel monitoring and control
- Weather information
Road operation is regarded as an „essential service“ by the NIS directive – this creates obligations in IT security and continuity.

Network and Information security directive
EU 2016/1148

Qualified contact to national bodies

State of the art cyber security measures – to be actively proved (incl. monitoring, business continuity, risk management...)

Detection of & response to security incidents in cooperation with CERTs

Active communication on any cyber security incident occurred

Information security management system
Our redundant data network is the basis for our operations units and our services.
In case of a blackout a special blackout-network provides basic communication and services

- Phone
- Rudimentary data services

How do we address the challenges? Example network

~ 150 days

Mautpflichtige Autobahnen und Schnellstraßen
Stand: 2018, Gesamtlänge des Streckennetzes: 2.223 km
Conclusion

1. Infrastructure is a longterm business – change needs inspiration, planning and patience

2. Digitalization is a stepwise approach and needs good R&D programs and partnerships

3. No room for bad availability – many people depend on the infrastructure

4. Security and risk management are mandatory – disruptive changes are rare

5. Not only the technology has to be transformed. We also have to evolve!
Join us at ASFINAG!

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