About the Swedish Transport Administration

• A government administration responsible for the long-term planning of the transport system
• In charge of the national road and railway networks
  – 100 000 km road (including 2 000 km motorway)
  – 12 000 km railway
Vision Zero (zero fatalities)

System designers are responsible for the design, operation and the use of the transport system.

Users are responsible for following the rules for using the transport system.

If the users fail to comply with these rules the system designers are required to improve the system.
Trafikverket has ~6500 level crossings

Protection
- Full barrier 18%
- Half barrier 15%
- Light and sound 12%
- Passive protection 20%
- Without protection 35%
Key figures for level crossings

- **LCC, Life Cycle Cost (25 years)** 2440 M€
  - Included costs for accidents 550 M€

- **Number of fatalities (25 years)** 250
  - Included suicides 125

- **LX replacement value** 800 M€
2770 LX have active protection

MAINTENANCE DEBT, 46% installed before 1988, i.e. more than 25 years old! Replacement cost ~280 M€
Baseline 2014

Compared to modern solutions available on the market our old LX control system design from 1970 is characterized by

- at least 50% higher investment cost
- at least 60% higher maintenance cost
- at least 400% higher energy cost
- difficulty to introduce new solutions to prevent fatalities
Project ALEX

- **ALEX – Automatic Level Crossing system)**
  - Procurement of modern techniques for level crossings
  - Framework agreements with 2-3 suppliers according to the Public Procurement Act

- **Outsourcing policy**
  - Purchase of maintenance, systems etc. from suppliers
  - Suppliers must take responsibility for the supply of components and safety cases during the economic lifetime, for about 25 years
  - Suppliers can introduce new technologies in their systems when it is beneficial to both parties – Win-win!
  - Safety case according to EN 50126 (RAMS)
Thank you for your attention
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