# Electrical Safety programme...

... a way to influence human behaviour for safer working methods



Anna Nicodemi Swedish Transport Administration

# Sweden

- Sweden is the third largest country in western Europe
- 9 million inhabitants
- 450,000 km<sup>2</sup> (174 000 sq mi)
- 23 inhabitants/km<sup>2</sup>
- 85 percent in cities
- 38 percent in major cities



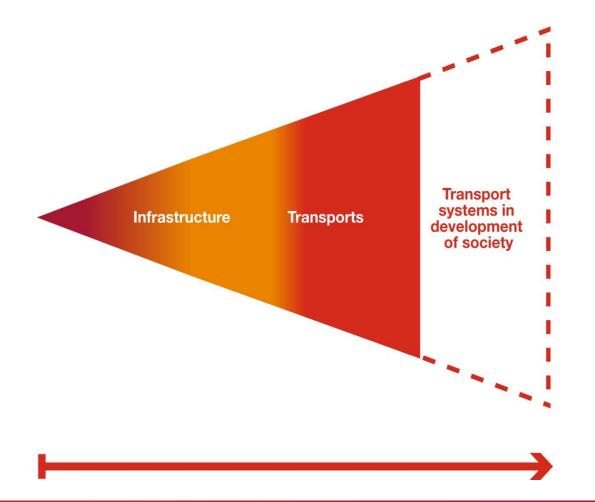


# The Swedish Transport Administration

- Responsible for long-term planning regarding road, rail, maritime and air traffic
- Infrastructure manager for rail and road
  - The railway net consists of 12 000 km, 90 percent is electrified
  - The first railroad opened 1856
  - Electrified tracks, 9453 km
  - Electrical control rooms, 8
  - Converter stations, 47
  - Powerlines 130 kV 16 2/3 Hz, 1900 km



#### A wider perspective





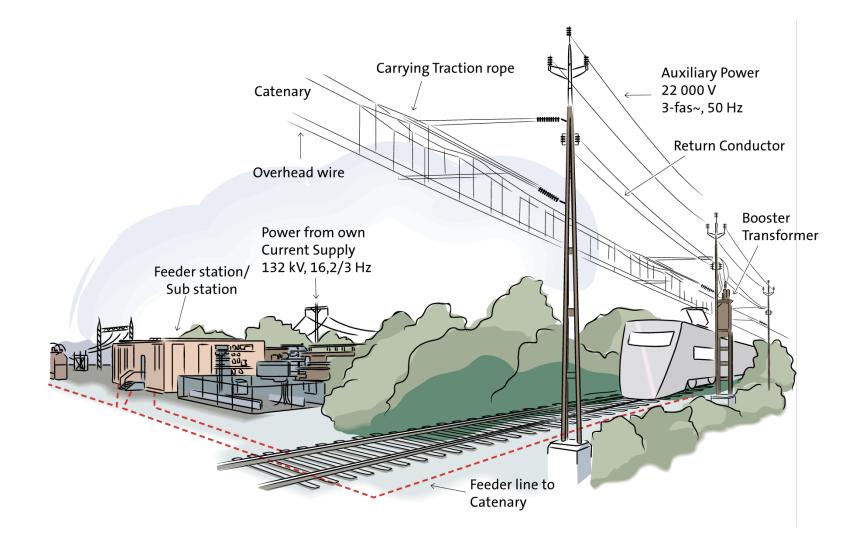
# External Regulations and Internal Rules

- Several governing documents
  - External Regulations
    - Strict responsibility of the installation
  - Internal Rules
    - Regulates working methods
    - How the installations can be accessed and maintained



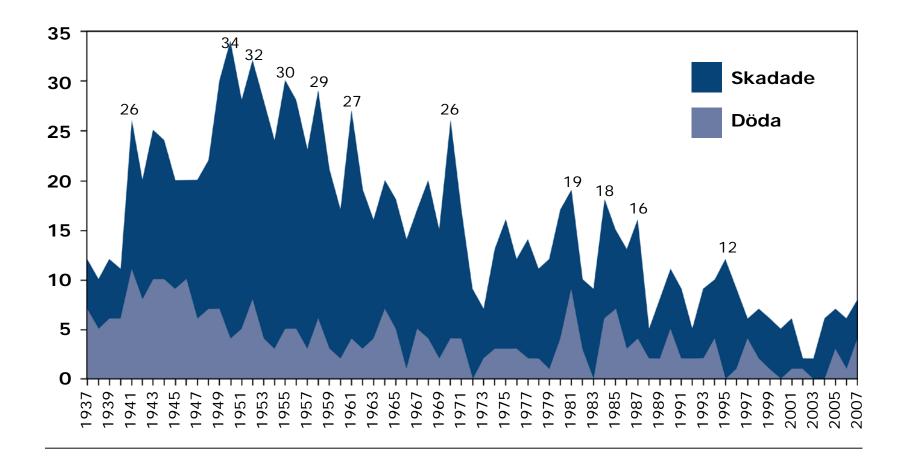


# **Electrical installations in Sweden**





#### Dead and injured in electrical accidents 1937-2007





# Identified areas of problems

- Rules and regulations
- Organization
- Attitudes/ safety related communication
- Installation





#### Fundamental values

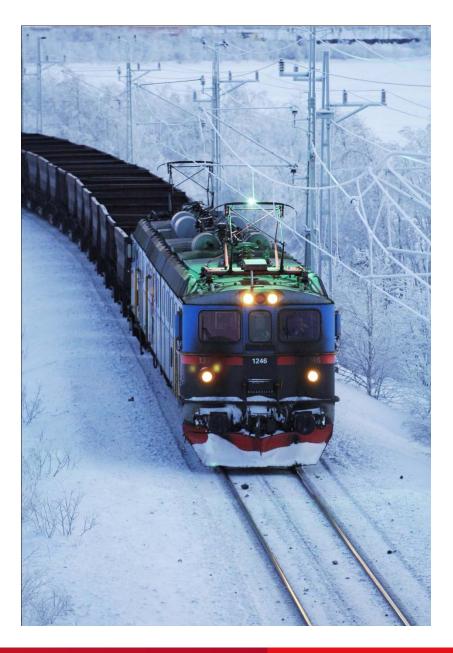
- Human behavior an opportunity to do the right thing
- Simplify the process according to MMI
- A risk-taking behaviour should never be rewarded
- A balance between demands in rules and available resourses





#### First step

- Documentation overhaul
- Adapt documentation
- Create management
- Educate and inform





# Thank you





