Workshop on end-users requirements

Level crossing safety in Sweden, from a rail and road infrastructure management perspective.

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TRAFFIKVERKET
SWEDISH TRANSPORT ADMINISTRATION
Railway, Level crossings and Roads in Sweden

- 16500 km railway
- Level crossings
  - 5520 sum level crossings in operation
  - 2749 active LC (2172 Full/half barriers)
  - 2771 passive LC
- Roads, owned by:
  - Government 754 (98 500 km)
  - Municipalities 780 (42 200km)
  - Private 2428
    - 673 with subsides from the state (74 300 km)
    - 1755 without subsides (a lot….)
Fatal accidents in level crossings 2016

- 2016 – 13 fatalities
- 3 accidents with cars and 10 accidents among pedestrians
- The 13 fatalities, 6 were classified as accidents and 7 as suicides.
<table>
<thead>
<tr>
<th>Protection in LC</th>
<th>Incident vehicle</th>
<th>Incident Person</th>
<th>Accident vehicle</th>
<th>Accident person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
<td>8</td>
<td>14</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Sound and light</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chicane barriers or without protection</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>St Andrew’s cross or without protection</td>
<td>21</td>
<td>3</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>32</td>
<td>22</td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>
Guidelines for safety arrangements in LC

- Goal – make the LC robust
- Important variables:
  - Numbers of tracks in LC
  - Highest allowed speed of the train
  - Kind of road ("normal" road, local road, farmers road)
  - Not focus on the numbers of cars or pedestrians (is very uncertain variable)
  - Important to have information about the environment around the LC, if there is any special risks (e.g. road for children school or sports arenas)
Plk-webb

- Data base for all level crossings that make it possible to overview the system
- Contains information of rail and road traffic
- Each LC has a ID-number
- Every reported incidents/accident in a specific LC has a notation
- Later this year even platform LC and service roads will be included (even if they are not regarded as a LC by the regulations)
Requires a good profile in the road surface, (prevent vehicles from getting caught)
Från K till J 30m

2017-08-24

2017-08-24
Kör igenom bommen – Stanna inte i spåret
Thank you!

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