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agenda item 1.4.8.)

Transmitted by the expert from Sweden

Fire safety in buses
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Aim
The aim of the project is to get a knowledge basis about fire safety in buses and fire properties of material used in modern buses.

Commissioned and funded by
• Norwegian Public Roads Administration
• Swedish Road Administration

Time plan
The project runs for two years, 2005-2006
Project outline

The project is divided into 8 work packages

- Survey of bus fires in Norway and Sweden
- Survey and fire tests of interior material in buses
- Bus construction risk assessment
- Fire partitions to the engine compartment
- Engine compartment – active fire protection
- Fire simulations
- Full-scale fire test
- Proposals for improvements
Survey of bus fires

Cause of Fire, Sweden 1996-2004

- Technical fault
- Unknown
- Technical fault, electricity
- Technical fault, friction
- Technical fault, leakage
- Arson
Are matches fire safe?
ISO 3795

- Test of horizontal flame spread
- Burning rate 100 mm/minute is the main fire safety requirement for buses today
Full-scale seat fire test
Full-scale seat fire test

![Graph showing fire effect (kW) over time (min) for synthetic fabric and wool plush.](image)