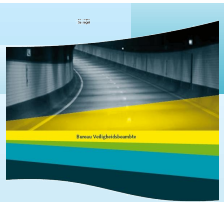


THE SAFETY OFFICERS TASKS AND FUNCTIONS

Ir. E.W. Worm
Safety Officer State owned
Road Tunnels. The Netherlands



STARTING POINT:

DIRECTIVE 2004/54/EC



Key players:

- **Administrative authority**
- **Tunnel manager**
- **Inspection entity**
- **Emergency services**
- **Safety officer**



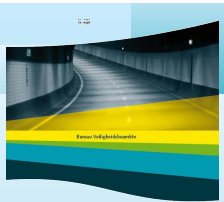
Administrative authority

- **Ensuring all safety aspects**
- **Ensuring compliance**
- **Commissioning the tunnel**
- **Suspending or restricting operation**



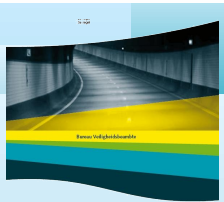
Administrative authority

- **Ensuring**
 - **Testing and inspecting**
 - **Developing emergency plans**
 - **Closing procedures**
 - **Risk reducing measures**
 - **Commissioning after major change**
 - **Inspections**
 - **Notifying not compliance**



Tunnel manager

- **Responsible for tunnel management**
- **Reporting significant incidents**
- **Planning compliance**
- **Safety documentation**



Tunnel manager

- **Consulting the SO before:**
 - Starting construction work
 - Commissioning a new tunnel
 - Recommissioning existing one
 - Any other change
- **Organising exercises with the emergency services**



Inspection entity

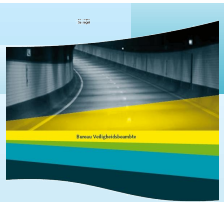


- **Taking care of inspections, evaluations and tests**



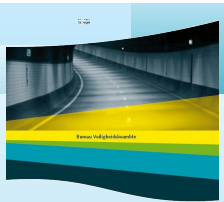
Emergency services:

- **Cooperate in joint periodic exercises**
- **Cooperate in evaluating them**
- **Take care of the emergency response plan**



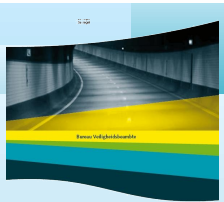
Safety officer:

- **Coordination of all preventive and safeguards measures**
- **Ensuring coordination with emergency services**
- **Taking part in preparation of operational schemes**



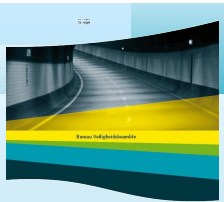
Safety officer:

- **Taking part in planning, implementation and evaluation of emergency operations**
- **Taking part in safety schemes, specifications of structure, equipment and operation**



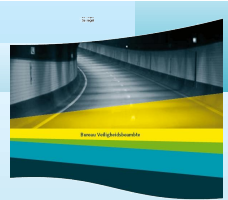
Safety officer:

- **Verifying operational staff and emergency services are trained**
- **Taking part in the organisation of exercises**
- **Taking part in their evaluation**



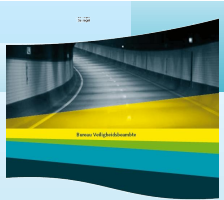
Safety officer:

- **Advice on commissioning of structure, equipment and operation**
- **Verifying structure and equipment being maintained and repaired**
- **Taking part in the evaluation of significant incidents**



Organisational matters

- **Each tunnel: one SO**
- **Nominated by the tunnel manager**
- **Approval of adm. Authority**
- **Tunnel staff or emergency services**
- **Independent**
- **One or more tunnels**



Safety officer – tunnel manager:

- **SO nominated by tunnel manager**
- **Coordination role on all safety aspects**
- **Advisory role (designing, commissioning and operating stage)**
- **Monitoring role (maintenance, repairing, training, exercising)**



Safety officer – adm. authority:



- **Approval of the SO**
- **Advices of the SO**



Safety officer – inspection entity:

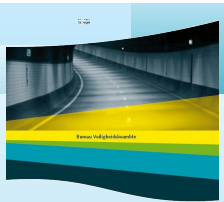
- **Ordering extra measures by the administrative authority based on inspection reports**



Safety officer – emergency services:

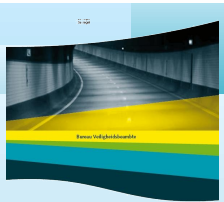


- **Coordinating in operational schemes**
- **Verifying emergency services are trained**
- **Cooperation in exercising**
- **Cooperation in evaluation of exercises**



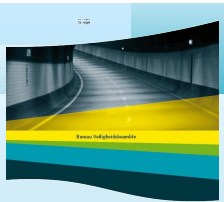
Questions. Regarding the SO him/herself:

- **Positioning the SO:**
 - *where in what organisation and how many tunnels?*
- **What selection criteria**
- **What skills, knowledge and expertise**
- **How to guarantee independancy**



Questions. Regarding the SO knowledge:

- **Risk analysis**
- **Civil engineering**
- **Organisational matters**
 - **tunnel manager organisation**
 - **Tuning the emergency services organisation**

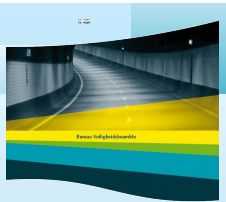


Questions. Regarding the SO knowledge:

- **Electro mechanical installations**
- **Their operating and control**
- **Traffic engineering**

If not:

- **buying external knowledge?**



Questions. Regarding the SO functioning:

- **Ensuring implementation safety issues**
 - **Limited finance**
 - **Conflicting interests**
 - **How independent is independent?**



Serious safety issues

- **Escalation level?**
- **Notify the Adm. Authority?**
- **Probability of being accused of negligible conduct?**



Serious safety issues

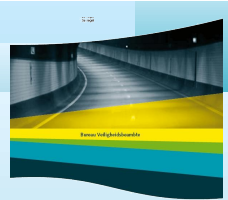
- **Escalation level?**
- **Notify the Adm. Authority?**
- **Probability of being accused of negligible conduct?**

- **Allowed to return next Monday?**



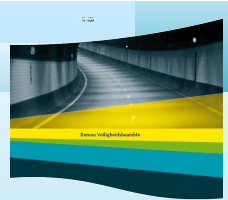
Serious safety issues

- **Coordination of all preventive and safeguards measures**
- **Taking part in the specification of the structure, equipment and operation**
- **taking part in the definition of safety schemes**



SO properties

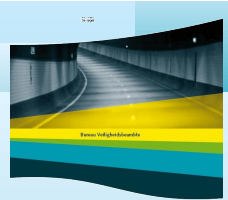




SO properties



A sheep with five legs



SO properties



A jack of all trades



Crucial advice moments

- **Design stage (Annex II art. 1.2)**
- **Commissioning stage (Annex II art. 3)**
- **Recommissioning stage (Annex II art. 4)**



Crucial advice moments

- **What is assessed?**
- **What criteria are used?**
- **What methodical approach?**
- **How extensive?**



Crucial advice moments

- Existing standards in use?
- Standards in development?
- International collaboration?
- “*major*” modifications?



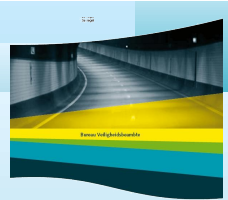
Common and unclear expressions

- **“verifying that operational staff and emergency services are trained”**
- **“verifying that the tunnel structure and equipment are maintained”**
- **“taking part in the evaluation of significant incidents”**



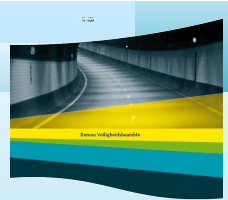
Common and unclear expressions

- **What do those tasks exactly mean?**
- **How are they assessed?**
- **What methodical approaches?**
- **What criteria**
- **Selfdoing or outsourcing?**



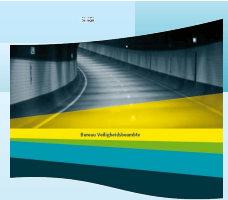
Relation SO-emergency services

- **Coordinating operational schemes**
- **Verifying emergency services are trained**
- **Cooperating in exercises**
- **Evaluating the exercises**



Relation SO-emergency services

- **Methodologies in use?**
- **In development?**
- **Need?**
- **The same for evaluation of exercises**



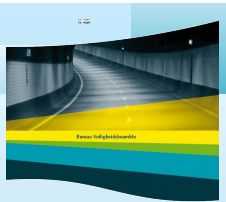
Some more questions

- **Risk analysis by SO himself?**
- **Essence of the 10 seconds rule**
- **Systems engineering**



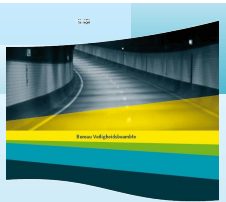
Some more questions

- **Recognisable?**
- **How handled in member states?**
- **What is most appealing?**
- **Further elaboration?**
- **How to organise?**



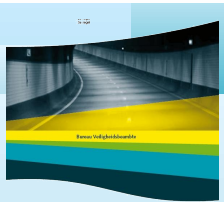
Questions (7)





Questions (7)

Yes; enough I guess



Thank you for your attention