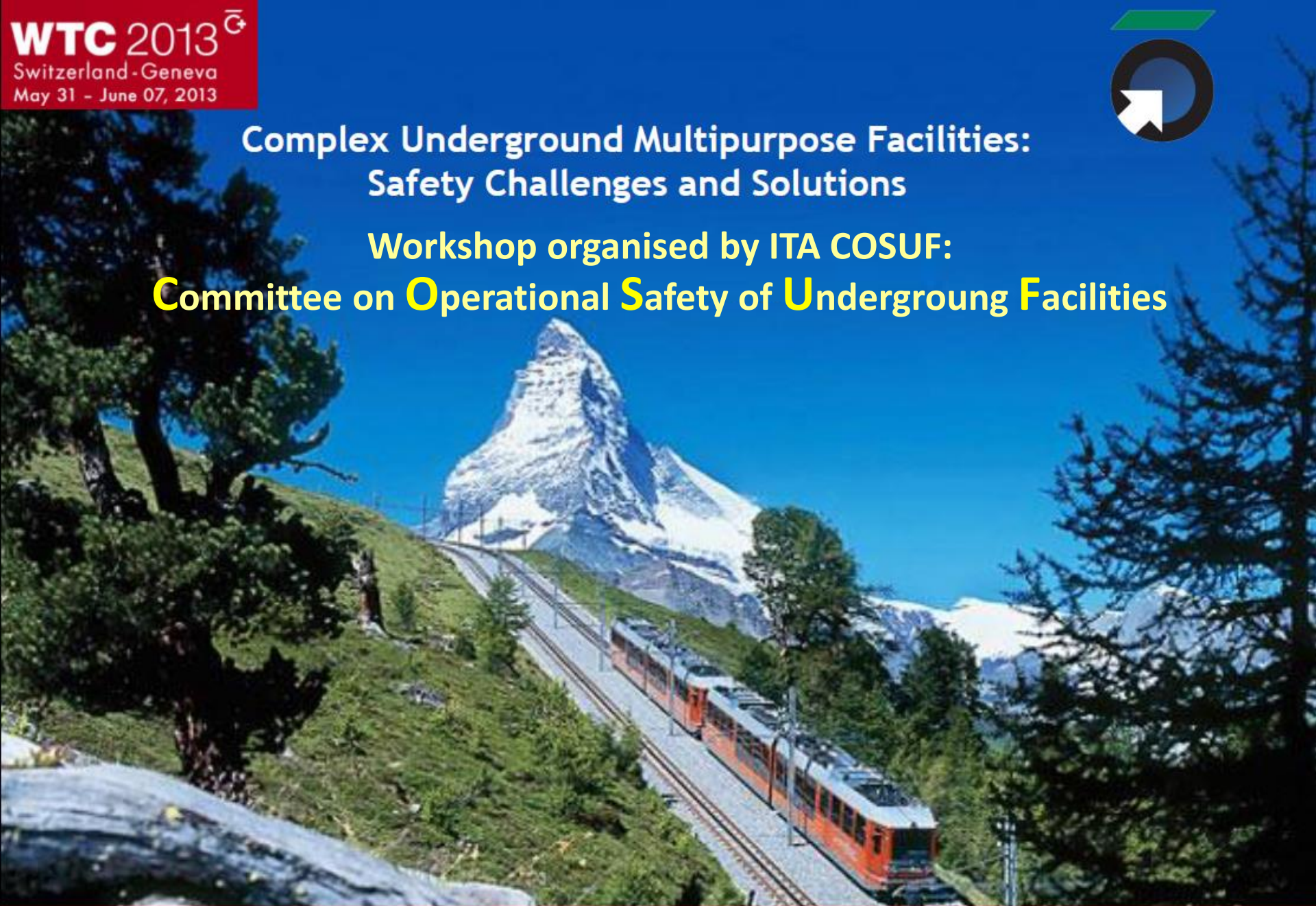




Complex Underground Multipurpose Facilities: Safety Challenges and Solutions

Workshop organised by ITA COSUF:
Committee on **O**perational **S**afety of **U**nderground **F**acilities





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**Opening speech
by ITA COSUF chairman**

D. Lacroix, Centre d'Etudes des Tunnels (CETU – France)

What is ITA COSUF?

- **A committee of ITA,**
the International Tunnelling and
Underground Space Association
(68 Member Nations,
310 Affiliate Members)
- **Also supported by PIARC,**
the World Road Association
(120 Member Governments,
members in more than 140 countries)



Origins of ITA COSUF

- 8 European research projects / thematic networks funded under the 5th & 6th Framework Programmes

D•A•R•T•S



which wished to continue co-operation
and were established an ITA committee in 2005



ITA COSUF Scope and Objectives

➤ Scope

- safety and security
- in operation (*construction is excluded*)
- in all kinds of tunnels (road, rail, metro) and other underground facilities

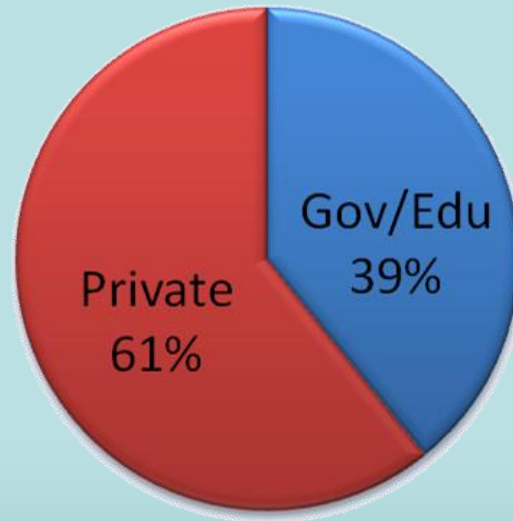
➤ Objectives

- Maintain / develop a international network (to exchange knowledge & build teams)
- Enhance R&D activities and foster innovation
- Promote underground safety and security (incl. by supporting improved regulations)



Membership

- **Open to corporate and individual membership**
(currently more than 70 corporate members)
- **Annual fee**
(250€: public/education, companies with < 10 staff, individuals;
500€: others)



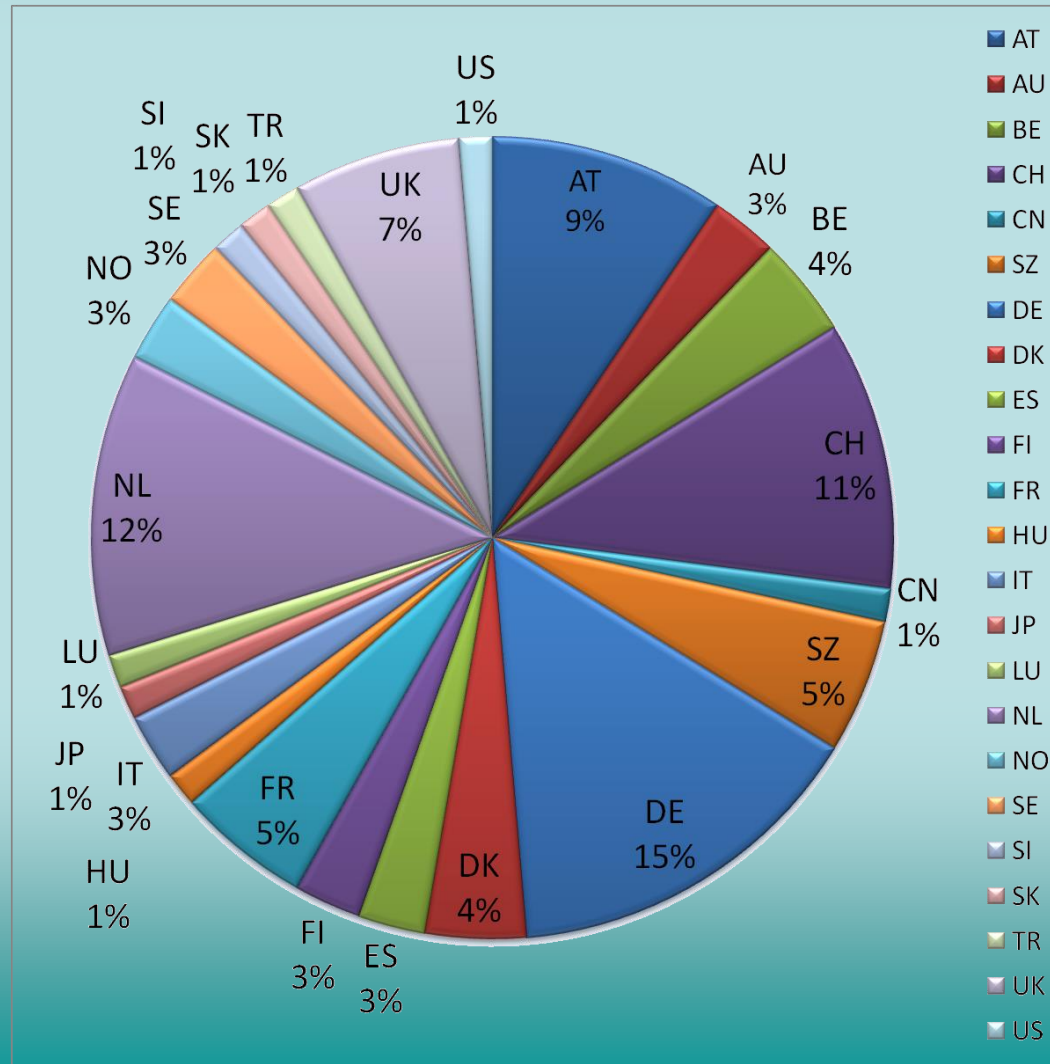
YOU can become a member!

Register at cosuf.ita-aites.org



Membership

➤ 23 countries from 4 continents are represented



Activity Groups

- 4 AGs open to all ITA COSUF members (and only them)
- Each AG meets twice a year, together with ITA COSUF workshops
- Main activities:
 - Exchange **information**,
 - Draft **recommendations & articles**,
 - Organise **workshops**,
 - Etc.



Activity Groups

➤ AG1: Interaction with European and international activities

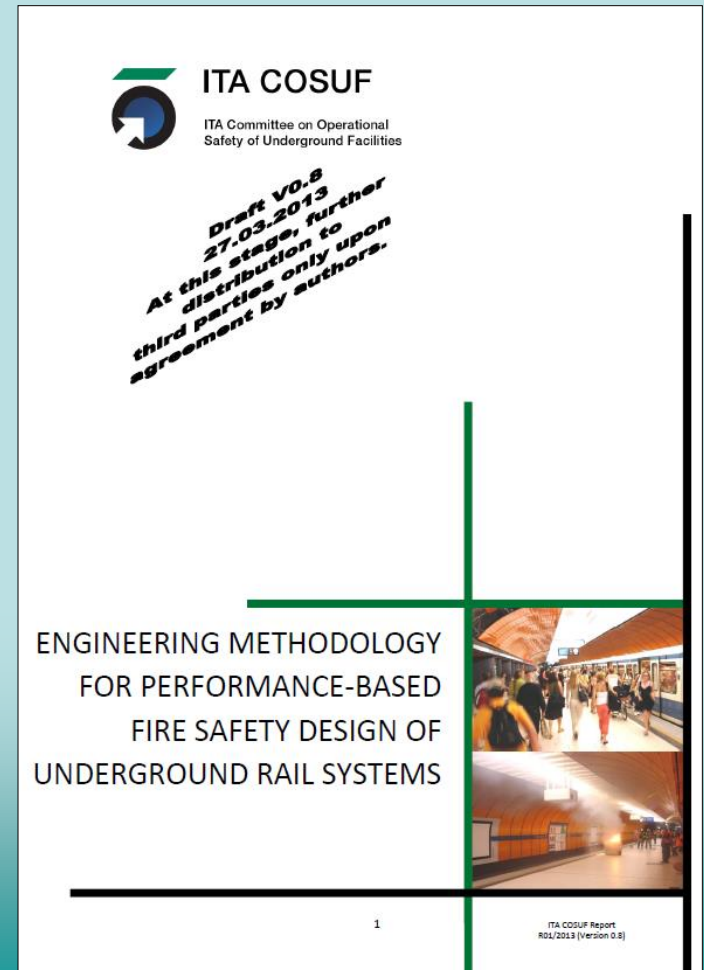
Leader: Ben van den Horn

➤ AG2: Regulations and best practice

Leaders: Stig Ravn
Peter Reinke

Draft new product:

- ✓ Available on COSUF website
- ✓ Comments until 15 September
- ✓ Then finalisation and approval by Steering Board



Activity Groups

➤ AG1: Interaction with European and international activities

Leader: Ben van den Horn (Arcadis, NL)

➤ AG2: Regulations and best practice

Leaders: Stig Ravn (Barbara consult, UK)
Peter Reinke (HBI, CH)

➤ AG3: Research and new findings

Leader: Götz Vollman (Ruhr Universität Bochum)

➤ AG4: Road Tunnel Safety Officers

Leader: Johan Bosch (RWS, NL)



European Forums of Road Tunnel Safety Officers

- 1st Forum in Lyon in November 2009
- 2nd Forum in Brussels in January 2012



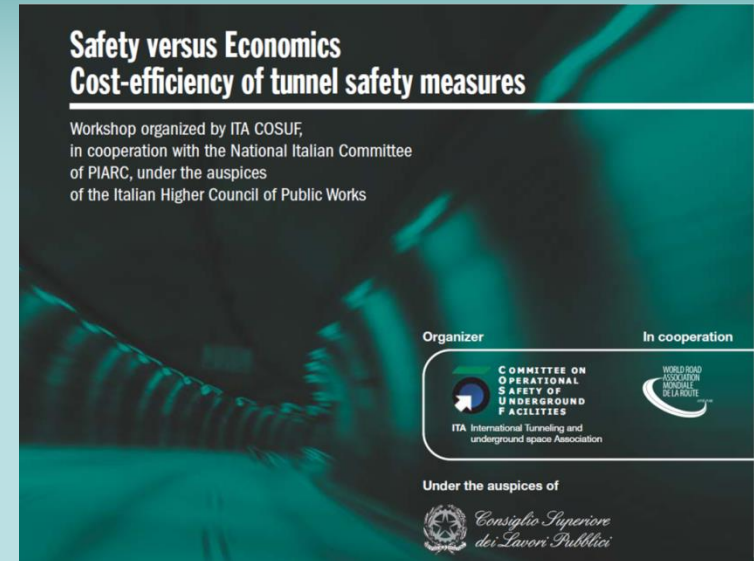
European Forums of Road Tunnel Safety Officers

- 1st Forum in Lyon in November 2009
- 2nd Forum in Brussels in January 2012
- Co-operation between ITA COSUF (AG4), PIARC and the European Commission (which jointly open the forums)
- Attended by > 40 Safety Officers from 18 countries
- Next forum : 1st half of 2014



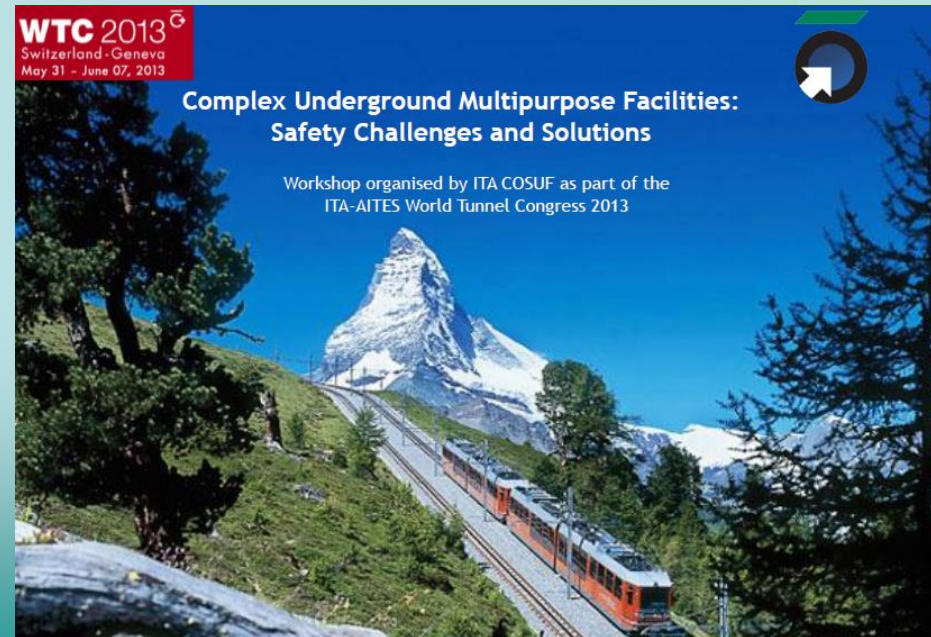
ITA COSUF Workshops

- One open workshop every year
- 22 June 2012 = Rome
Safety vs Economic Crisis:
Cost-Efficiency of Tunnel
Safety Measures



ITA COSUF Workshops

- One open workshop every year
- 22 June 2012 = Rome
Safety vs Economic Crisis:
Cost-Efficiency of Tunnel
Safety Measures
- 4 June 2013 = Geneva
Complex Underground
Multipurpose Facilities:
Safety Challenges and
Solutions



ITA COSUF Workshops

➤ One private workshop every year

(reserved for members)

- 26 Oct. 2012 = Madrid

Safety in complex underground facilities

*co-organised
with AETOS
& PIARC*



ITA COSUF Workshops

➤ One private workshop every year

(reserved for members)

- 26 Oct. 2012 = Madrid
Safety in complex underground facilities
- 30 Sept. 2013 = Prague
Blanka Tunnel project presentation and visit



Other events endorsed by ITA COSUF

SOLIT² Conference (Safety Of Life In Tunnels – Integration of fire-fighting systems) **Berlin, 27-28 June 2012**

- ITA COSUF :
 - sponsored the conference
 - organised a half-day session



Other events endorsed by ITA COSUF

13th World Conference of ACUUS (Associated research centres for urban underground space) Singapore, 7-9 November 2012

- One-day ITA COSUF workshop
*on safety & security of complex
underground infrastructures*



Other events endorsed by ITA COSUF

ISTSS (International Symposium on Tunnel Safety and Security) 2014

- Will take place in Marseille (France) on 12-14 March 2014



ITA COSUF Award

- **Granted to a student or young researcher / professional**
 - for outstanding research / innovation work
 - on safety or security of underground facilities
- **Jury** = COSUF Steering Board
- **Presentation at annual open workshop**
 - Delivery by ITA COSUF Chair
 - Followed by presentation of nominee's work



ITA COSUF Award

- **2009 Award:** Ben Nieman (Univ. Delft, NL)
« Cracking on the Unheated Side during a Fire in an Immersed Tunnel »
- **2010 Award:** Stefan Krazmeir (IFAB, DE)
« Excellent record on tunnel safety research »
- **2012 Award:** Ying Zhen Li (SP, SE)
« Comprehensive works on fire dynamics in tunnels »



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- **2013 Award:** This afternoon!
At the end of the workshop



Today's Workshop

Complex Underground Multipurpose Facilities: Safety Challenges and Solutions

- In the core of COSUF scope
 - Not only road or rail or even multimodal transport, but all kinds and mixes of underground facilities
- A variety of facilities:
 - Keynotes on nuclear waste, particle physics research
 - Lectures on combinations of road, rail, shopping malls...
- A variety of approaches
 - Research on underground fires
 - Analysis and evaluation of risks
 - Real case presentations and syntheses
 - Emergency management, Evacuation modelling, etc.





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Let's start it now!