

## Training session 'Risk Management in Tunnelling'

**Wednesday 6 - Thursday 7 September 2017**

**Double tree Hilton Hotel - Santiago - Chile**

**Objective:** Introduction to the Risk Management process throughout a project lifecycle from the planning, design and construction stages through to the operation of a tunnel or underground project. It is specifically aimed at Owners and Decision Makers, Consulting Engineers, Contractors and others with an interest in risk management activities.

### Wednesday 6 September

#### Session 1: Introduction and Overview on Risk management

09:00 – 09:15:	Welcome & opening: ITA & local representatives	
09:15 – 10:00:	Introduction to Risk Management concepts	F. Amberg
10:00 – 10:45:	Establishing a risk policy for tunnelling : objectives, timeline, keypoints	F. Amberg
10:45 – 11:45	<i>Coffee break</i>	
11:15 – 12:00:	Specific hazards and risks in tunnelling	T. Celestino
12:00 – 12:45:	Site investigation – Considerations about uncertainties in geomechanics	T. Celestino
12:45 – 14:00:	<i>Lunch</i>	

#### Session 2: Implementing a risk management process – Design phase

	Risk Management Plan : content, role and responsibilities, governance and organisation	T. Celestino
14:00 – 14:45:		
14:45 – 15:30:	Hazard Identification and Risk Assessment during the design steps	E. Humbert
15:30 – 16:00:	<i>Coffee break</i>	
16:00 – 16:45:	Risk mitigation during design	E. Humbert
16:45 – 17:30:	Case study 1 : Example of RMP implemented during design stages	G. Reyes
17:30 – 18:00:	Questions & answers	

### Thursday 7 September

#### Session 3: Risk Management during tendering and construction phases

09:00 – 09:45:	Sharing risks in contracts - Contractual documentation - Tendering	D. Brox
09:45 – 10:30:	Case study 2 : Example of contracts with risk sharing	D. Brox
10:30 – 11:00:	<i>Coffee break</i>	
11:00 – 11:30:	The risk approach in the tendering phase from the contractor's point of view	A.Dix
11:30 – 12:30:	Role of insurer	A.Dix
12:30 – 14:00:	<i>Lunch</i>	

#### Session 4: Construction and contractual aspects

14:00 – 14:45:	Risk management plan during construction	F.Amberg
14:45 – 15:30:	Case study 3 : Example of an unforeseen event during construction : contractor's point of view	P. Grandori
15:30 – 16:00:	<i>Coffee break</i>	
16:00 – 16:45:	Case study 4 : Monitoring and reviewing risks during construction	F.Amberg
16:45 – 17:30:	Discussion : does RMP manage to avoid disputes ?	D.Brox
17:30 – 18:00:	Summary & closing of the seminar	