



# bSI/OGC Geotechnical Data Standardization Workshop



## A guidance activity

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Centre d'Études des Tunnels – Centre for Tunnel Studies



# 3 main actors in guidelines



- CETU (1970) : Centre for Tunnel Studies
  - A technical body of the French Ministry in charge of transport
  - Involved in all technical aspects of Road, Rail and Waterway tunnels (development of methodologies, guidelines and regulations, research, engineering projects)
  - Member of AFTES, member of MIN<sup>n</sup>D Project
  - Birthplace of both AFTES and ITA in the 70's



- AFTES (1972) : French Tunnelling and Underground Space Association



- ITA (1974) : International Tunnelling and Underground Space Association



# About ITA



- Founded in 1974, ITA is a Non Profit and Non Governmental Organization
- ITA is the leading international organization promoting the use of tunnels and underground space through knowledge sharing and application of technology and ethical business practices
- Federation of 75 Member Nations and approximately 300 corporate or individual affiliate members
- Since 1987, ITA, as NGO, has got the Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC)



# Goals & Challenges



- Increase the awareness of public and decision makers of the unique benefits of underground space (especially social and environmental benefits)
- Manage and minimize risk and assure safety and security in all tunnelling activities
- Foster sustainable development



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# Main activities



- Co-organization of the World Tunnel Congress (WTC)
- Annual organization of the ITA Awards
- Training courses organized through the ITACET Foundation
- Publication of proceedings, reports and documents : publishing of all working groups and committees guidelines
- Co- organization of colloquia & workshops
- A web portal ([www.ita\\_aites.org](http://www.ita_aites.org)) with 6 sites: ITA activities, tunnels and underground works information (in 6 languages), ITA Awards, a library which will open shortly .....
- Newsletter
- .....

# Main activities



- 22 thematic working groups
- 4 Committees:
- Committee on Operational Safety of Underground Facilities (ITA-COSUF)
- Committee on Education & Training (ITA-CET)
- Committee on Underground Space (ITACUS)
- Committee on New technologies (ITAtech)



- Young Members group: The main goal of this group is to be technical network platform for young professionals and students in the tunnelling & underground space industry (ITAym)

# Working group 22



## WG22: Information modelling in tunnelling

- Information modelling systems allow us to deliver quality engineering to owners and contractors. The process requires skills, tools and robust procedures
- For the entire tunnelling community to take advantage of this, it is of paramount importance to share these experiences and to implement exceptional standards and guidelines, which are driven by the building industry



### **Creation of working group 22**

Animateur : Jurij Karlovsek

Vice-Animateur : Paolo Cicino

Tutor : Lars Babendererde



# Working group 22



## Main objectives:

- Develop common procedures based on experiences and lessons learned, including from other engineering fields
- Identify where underground construction differs fundamentally from civil surface construction and ensure that BIM standards and processes reflect these major differences
- Develop online documents and procedures for consultants, contractors, owners and operators, describing the value, data sources, best practices and benefits for a project using BIM software for tunnels
- Establish workshops to help define, consult and promote the adoption of the abovementioned documents and procedures
- Provide contact points for each part of the BIM process and list suppliers developing BIM software, to ensure a flexible and harmonized approach to the service market



# Working group 22

## Deliveries & task commitments:

- Publication of a BIM Manual for client / owner
- Joint think-tank with the working group 3 to examine the incorporation of the BIM in tunnelling contractual practices



# About AFTES

AFTES is the French Tunnelling and Underground Space Association



Established in 1972. 1029 members

Its aim is to unite and mobilise all players in the profession: investors, project owners, project managers, design firms and inspection bodies, research and training institutes, contractors, consultants, architects, town planners, equipment manufacturers, academics and others, to focus on a number of key objectives:

- Advancing knowledge in its specialist fields.
- Exchanging information between members and disseminating, as widely as possible, the recommendations of its Working Groups and more generally, information at its disposal relating to contracts, techniques, social matters, the environment, and so on.
- Promoting Underground Space and supporting initiatives to make it better known.



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# About AFTES

- Assisting with the development and dissemination of the expertise of French engineers, contractors and construction firms
- Supporting technical contributions and the establishment of professional doctrine.
- Encouraging young engineers and technicians with qualification in civil engineering to take an interest in the specific field of underground works.
- The French Tunnelling and Underground Space Association is Member of the ITA (International Tunnelling and Underground Space Association).

# Main activities

- Organization of the triennial AFTES Congress
- 6 committees : Communication, Technical, Underground Space, Education, Congress, Materials – Equipments – Products
- 1 specialized tunnel Master's Degree
- 45 thematic working groups, 20 in operation
- 95 recommendations published in French, 60 in English
- 1 quarterly review
- A web portal : <http://www.aftes.asso.fr>



# Working group 45 of



## GT 45 : New digital technologies in tunnelling

### Main goals:

- Extending the work of MIN<sup>n</sup>D
- Providing a feedback on the use of BIM in underground infrastructures
- Sensitizing owners
- Writing a guideline of good practices for BIM taking into account the specificities of underground works
- Supporting the training (Specialized Master's degree)



### **Creation of working group 45**

Animateur : Florent Robert

Vice-Animateur : Nataliya Dias

# Thank you for your attention



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