

The ITA-CET committee is divided into four activity groups:

### **Activity Group 1: Training and education for ITA member nations**

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### **Activity Group 2: Training and education for professionals**

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### **Activity Group 3: University network**

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### **Activity Group 4: Development of E-learning and other didactic materials**

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## **Objectives**

At present, the most visible part of the ITA-CET Committee's activities is the preparation of training sessions in collaboration with the ITACET Foundation. These sessions are currently organized at the request of ITA member nations, on their own initiative, or following contact with representatives of the Association or Committee.

Activity group 1 is responsible for relations with the member nations and therefore it engages prior discussions, identifies requirements so as to determine the topic of the training session and prepares the detailed programme in collaboration with the requesting nation.

The activity group is striving to improve this entire process and aims to achieve the following:

- Guarantee high quality training sessions, both in terms of programme content and choice of lecturers. Systematic evaluations of the training sessions provide useful information that will enable us to progress;

- Diversify the training session contents so as to take better account of the requirements of all stakeholders, tunnel owners, project managers and contractors, decision-makers and industry;
- Strengthen links with the national associations involved, in particular by establishing privileged relations with a network of correspondents who will provide regional liaison and support;
- Provide improved communication with ITA member associations on ITA-CET Committee activities and on all issues relating to education and training. Numerous vectors of communication can be envisaged.

Although the Committee mainly focuses on training sessions for emerging countries, the role of AG1 is also to propose programmes adapted to countries that already have sound knowledge on tunnels.

With this in mind, the portfolio has notably been widened to include specific topics such as Numerical Simulation in Tunnel Design, Sustainable Tunnelling and Calculation methods in Tunnel Design.

Construction of tunnels and other underground structures requires highly skilled persons. There have been significant developments in equipment and materials over the last few years, which need trained and qualified persons for their handling and operation.

Activity Group 2 aims to collaborate with industry in order to:

- Providing training courses at the request of contractors or tunnel owners;
- Provide ITA endorsement of certification schemes for specific skills in the tunnelling industry.
- Provide ITA endorsement for training facilities and training courses.

Activity Group 2 collaborates with industry representatives, notably through the ITAtech Committee, which has a representative within the ITA-CET Committee Steering Board. This collaboration has led to the development of Deminars (training sessions which are a mixture of a live demonstration and a seminar), which provide participants with a more hands-on approach than traditional academic courses.

The work of this Activity Group has also led to the ITA endorsement of the EFNARC Nozzleman Certification Scheme. This scheme offers certification to experienced nozzlemen who can demonstrate their technical knowledge and practical skills. The scheme operates through national examiners and is progressing well with certified examiners and nozzlemen from across North America, South America, Europe, South Asia and Australasia.

Activity group 3 aims to improve communication, exchange of ideas and coordination of the higher education institutions offering Masters or Doctorates in tunnelling and underground construction.

The network consists of active professors and lecturers offering courses in underground construction,

Actions conducted to achieve the Activity group's goals include:

- Establishing a database on tunnelling courses (syllabus, didactic methods, duration, credit points);
- Organizing meetings between tunnelling professors to exchange ideas on course contents and didactic methods;
- Organizing student exchanges, including PhD students;
- Developing lecturer exchange possibilities;
- Setting up possible awards for Master and PhD theses.

A [private group for University Network members](#) is available on LinkedIn.

In addition to further developing traditional face-to-face training sessions, the ITA-CET Committee is looking into the possibility of developing short courses through e-learning and notably via video lessons.

This task is undertaken by Activity group 4.

Video lessons are a convenient, efficient and low-cost training solution for addressing an international audience. In view of the ever-increasing demand for ITA training sessions, it is clear that the potential audience is large.

To date, the Activity Group has produced a pilot video lesson which will shortly be made available online.

Other video lessons are planned for 2019/2020.