

## Underground Space Use 21 March 2018 Nigeria - Abuja

**Objective**: Introduction for engineers, architects, planners and public administrators to the use of underground space to increase liveability and sustainability in urban areas and in other key public resource regions. The seminar will identify key issues that need to be considered when using underground space and will show how these key issues are dealt with on a worldwide basis.

## Session 1: Introduction and Overview of the main issues

09.00-09.15: Welcome and Opening: ITA and concerned country representatives 09.15-10.00: Advantages and disadvantages of underground solutions 10.00-10.45: Solutions and missed opportunities for underground projects

10.45-11.15: Coffee Break

11.15-12.00: The key stakeholders and their role and responsibilities 12.00-12.45: The main stages in a tunnel project management 12.45-13.00: Questions and answers

13.00-14.00: Lunch

## Session 2: Organisation and planning

14.00-14.45: Sustainability and resiliency issues 14.45-15.30: Underground utilities and services in urban areas

15.30-16.00: Coffee Break

16.00-16.30: Case study 1: Example of a metro network management 16.30-17.00: Case study 2: Microtunnelling and underground service network 17.00-17.30: Discussion and closing Remarks