

## STUDYING TUNNELLING CONTRIBUTE TO THE SUSTAINABLE DEVELOPMENT

## Today Sustainability Issues

## • Issues

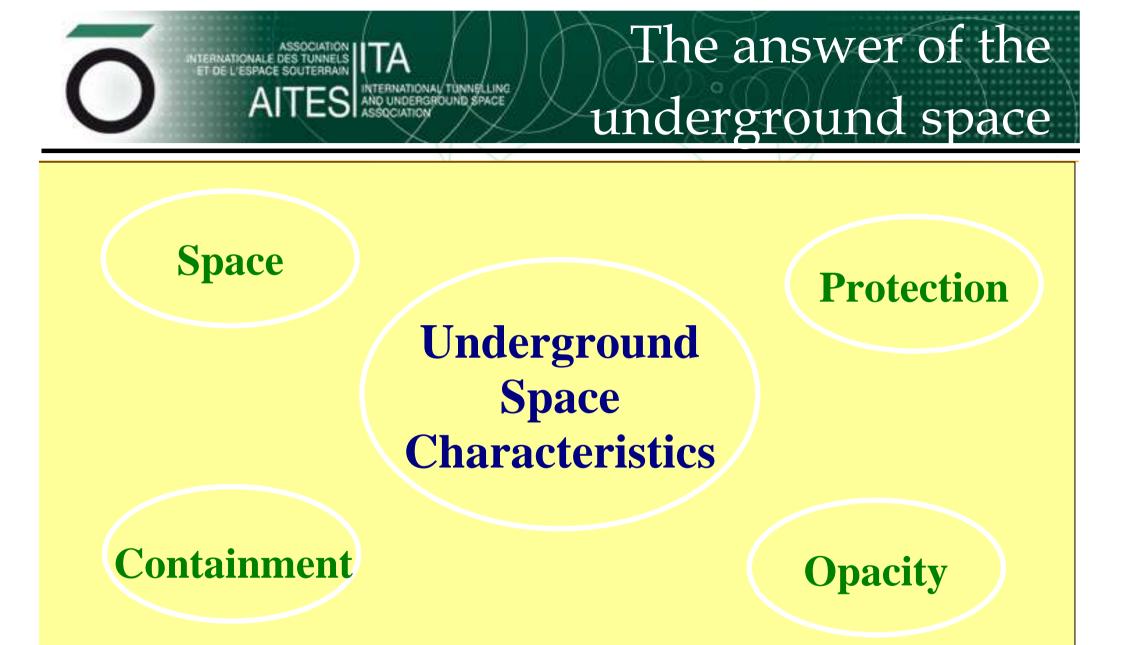
- Water
  - Energy
- Raw materials

ASSOCIATION NTERNATIONALE DES TUNNELS

AITES INTERNATIONAL/TUNNELLIN

- Food
- Transport
- Environment
- Global warming
  - Waste
    - Natural and man-made disasters

- Responses
  - Conservation
  - Expanded infrastructure
  - Compact
  - development
  - Improved environment
  - Resilient infrastructure





• But tunnels are often considered as presenting risks

Risks

- Financial risks
- Public acceptance for the facility
- Changed ground conditions
- Construction risks
  - Contractual risks
    - Environmental risks
    - Risks in operation



## Your Role

- As future specialists your role will be to make tunnels in managing these risks through :
  - Improved techniques
    - Always better health and safety measures
      - Environmental considerations during
        - design and construction
  - Managing budget and costs

From now on you can join ITA and its dedicated working groups to be part of this common aim to promote a safe, environmental, economical, sustainable use of underground space through modern techniques of design and construction.

Ioin ITA

I wish you a great success in your Master at the Politecnico di Torino, endorsed by ITA, which I know, will bring you all the necessary knowledge to become a Tunnel engineer in this period highly demanding for skilled engineers worldwide.

> Olivier VION ITA Executive Director