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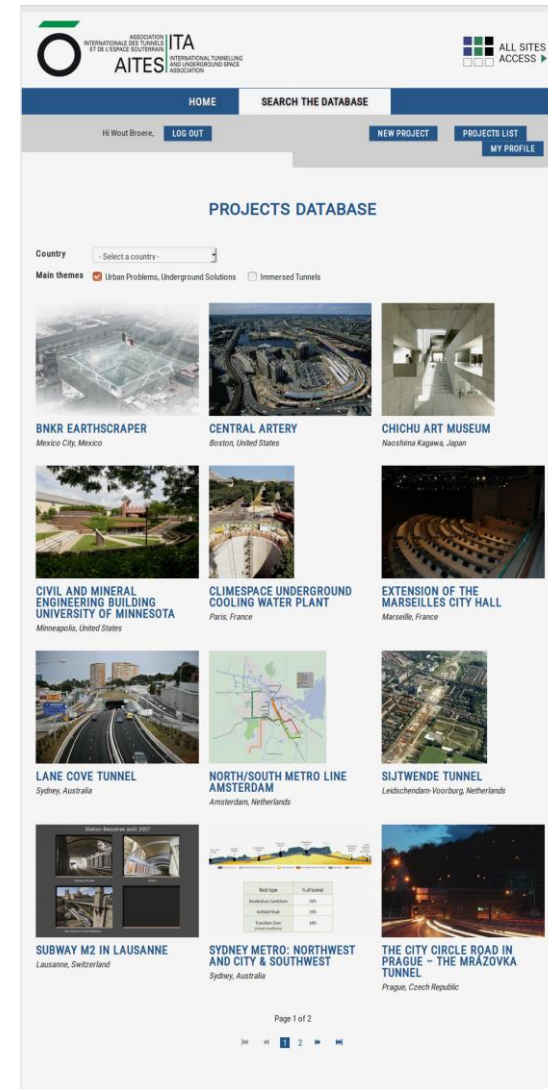


WG20 Urban Problems – Underground Solutions

- Animateur : Wout Broere
- Vice Animateur : Damian McGirr, UK
- Tutor : Olivier Vion
- 14 representatives from 10 countries
 - the Netherlands, UK, Iran, Switzerland, Japan, India, USA, Poland, Russia and Nigeria

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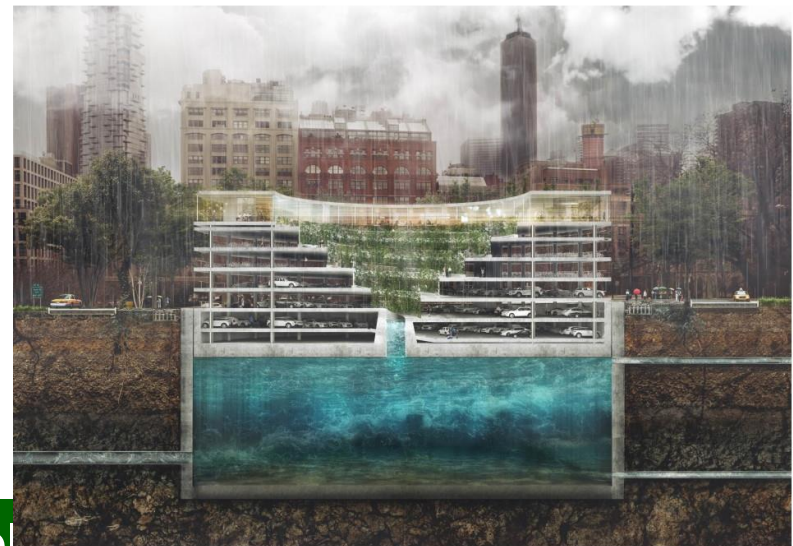
- Database of projects on ITA website
<http://wg.ita-aites.org>
 - Open to submissions
 - Invitation to enter ITA Awards submissions



WG20 Urban Problems – Underground Solutions

How can underground spaces enable cities to develop sustainably and become resilient?

- > What are the resilience issues that need to be addressed?
 - > Climate change
 - > Flooding
 - > Earthquake
 - > Sea level rise
 - > Tsunami
 - > Pollution
 - > Hurricanes
 - > Terrorism
 - > and others .
- > Current Examples
 - > Rotterdam car park
 - > SMART tunnel
 - > Climespace
 - > Sponge parking



WG20 Urban Problems – Underground Solutions

The Plan

- › A document that addresses examples and ideas of how the use of underground space can create resilience
- › Create a short paper on the Terms of reference for this report
- › Create a reference list on existing papers/reports on resilience in cities (e.g. 100 resilient cities; rockefeller foundation; cost suburban)
- › Initial ideas on chapters
 - › What is Resilience
 - › What are the threats to resilience
 - › How can underground systems improve resilience
 - › Planning and future infrastructure
 - › Improving existing infrastructure or reuse of existing infrastructure
 - › Multi-use assets
 - › Demonstrate with examples

