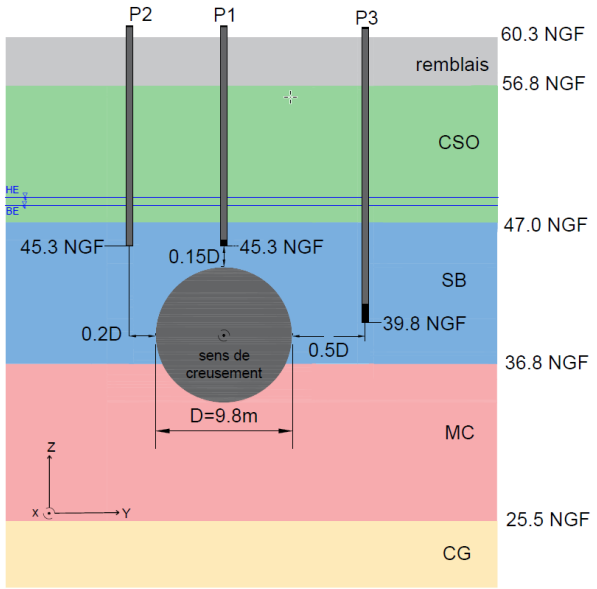
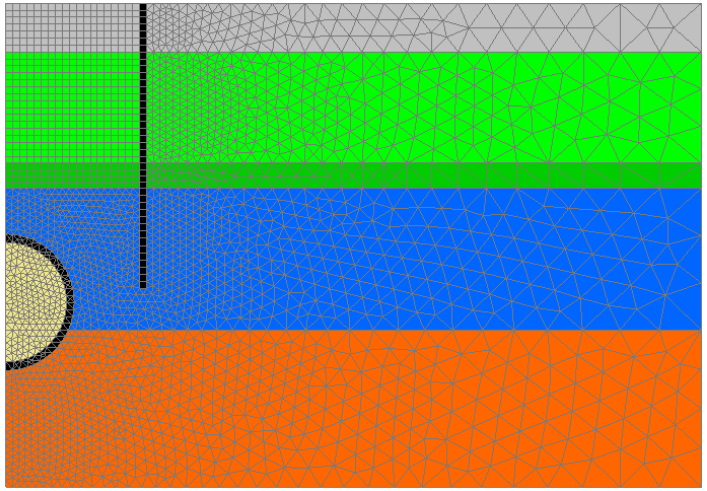
Perspectives et clôture de la demi-journée

Alain LE KOUBY (UGE)
Nicolas BERTHOZ (CETU)





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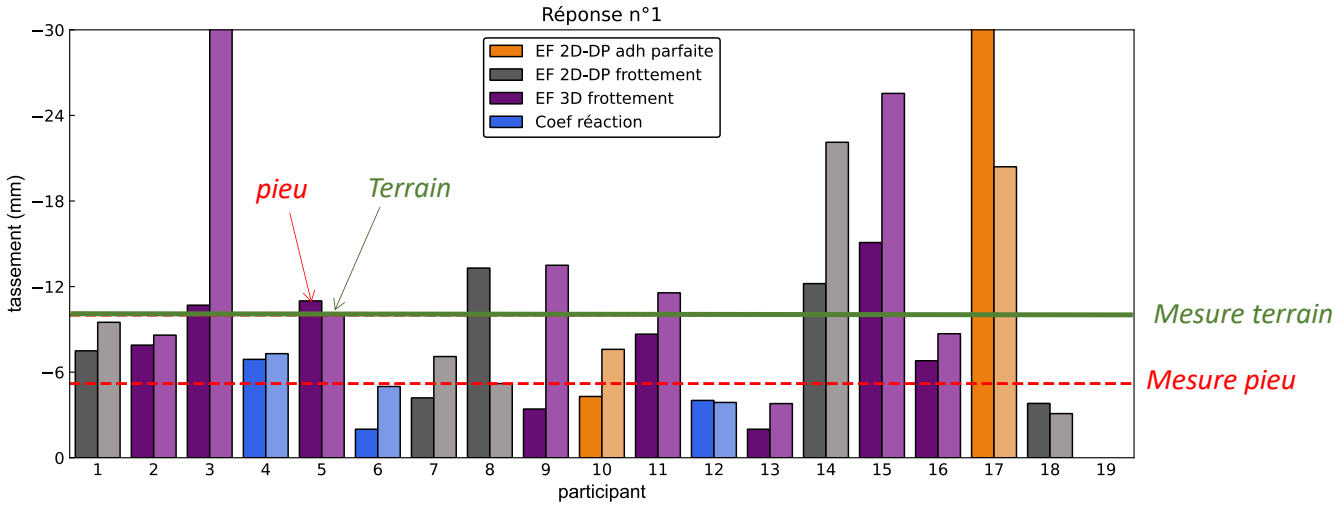
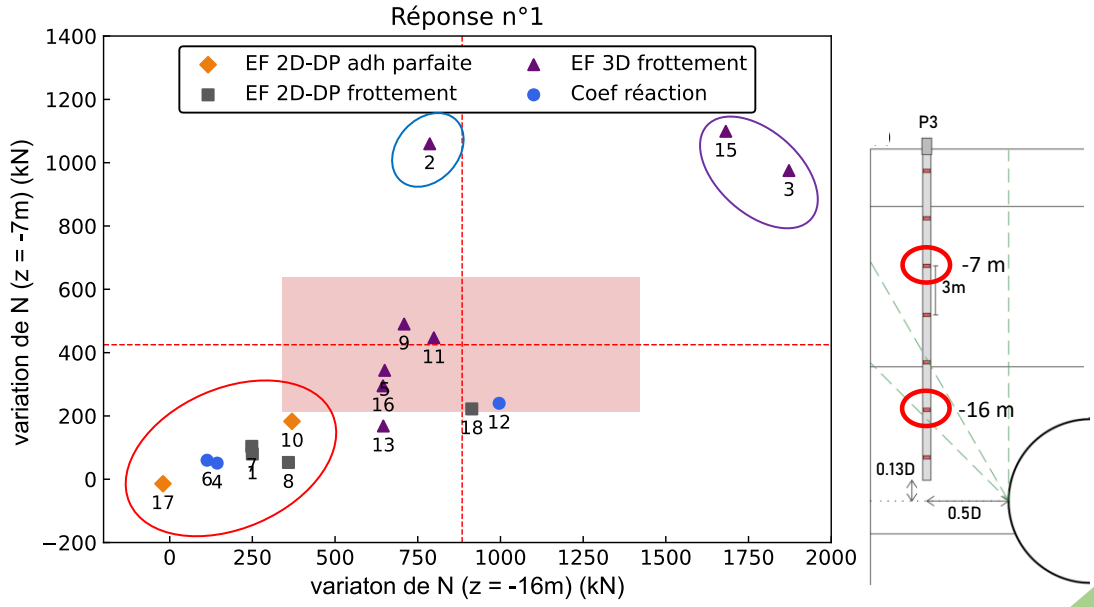
Bilan de l'exercice

- Une belle mobilisation de « la profession »,
- Une dispersion des résultats démontrant qu'il s'agit d'un sujet restant ouvert.





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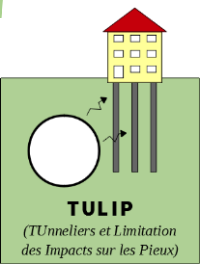
Perspectives

- Rédaction d'un article de synthèse de l'exercice dans la Revue Française de Géotechnique à court terme,
- Publication complète des résultats expérimentaux en cours dans des revues internationales,
- Poursuite des modélisations numériques par nos deux doctorants,
- Poursuite des développements dans le cadre du projet de recherche ANR E-Pilot



Projet ANR E-PILOT : *Etude de l'impact sur les Pieux LOrs du passage d'un Tunnelier*

E-PILOT

Coordinateur
Alain *Le Kouby (UGE)*

- Partenaires :

Université Gustave Eiffel

Cerema

CETU

GC gE

ENTPE

GÉODYNAMIQUE & STRUCTURE

itech

terrasol

setec

Société du Grand Paris

tisséo

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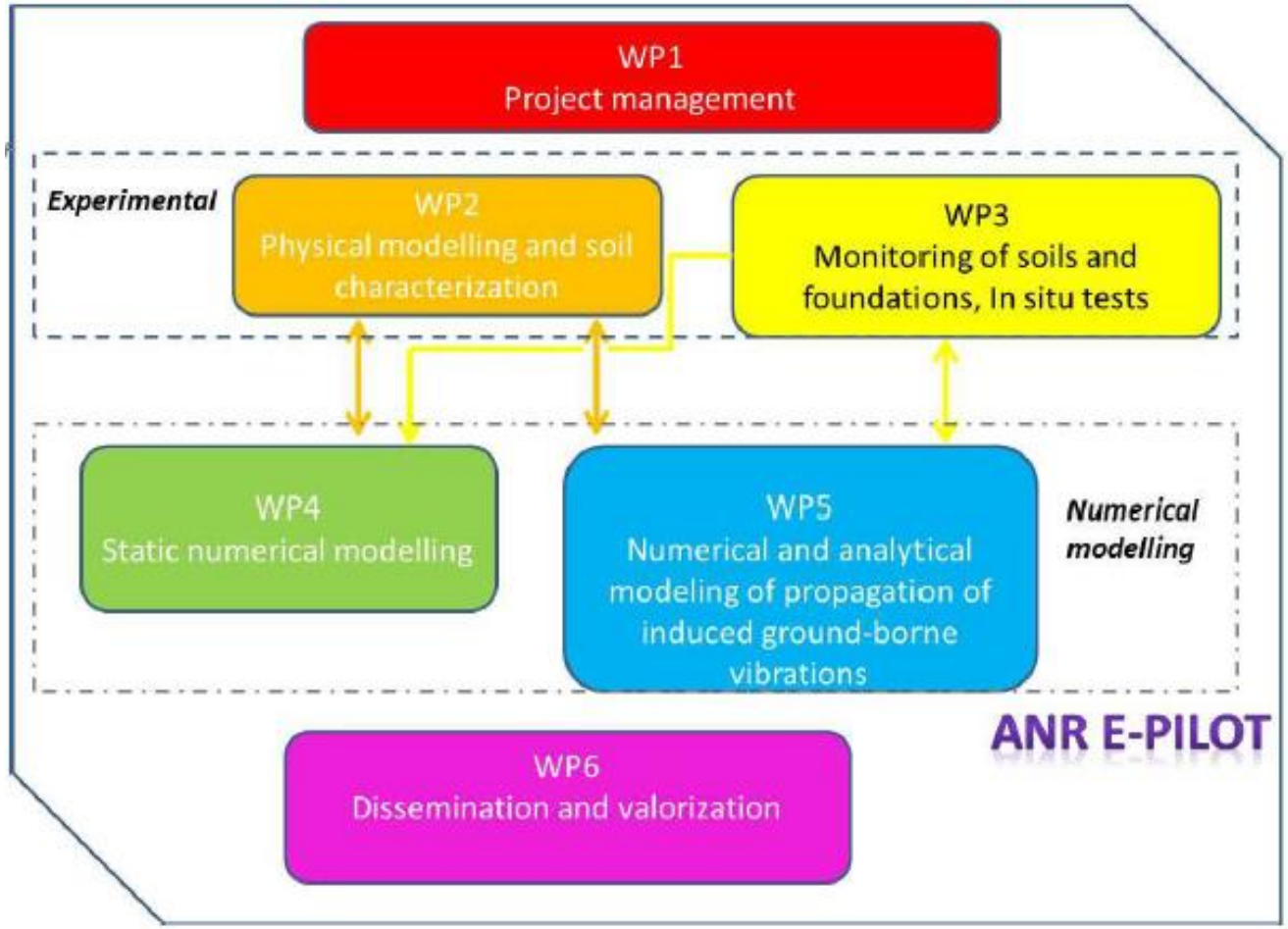
- <u>Objectif :</u> Evaluer l'Effet de la construction des tunnels et du trafic sur les fondations profondes



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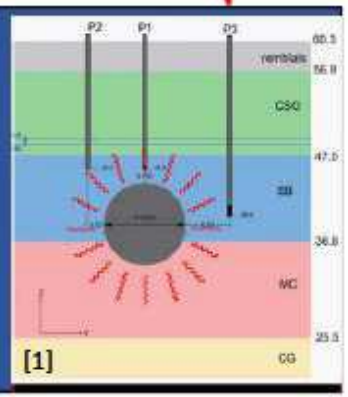
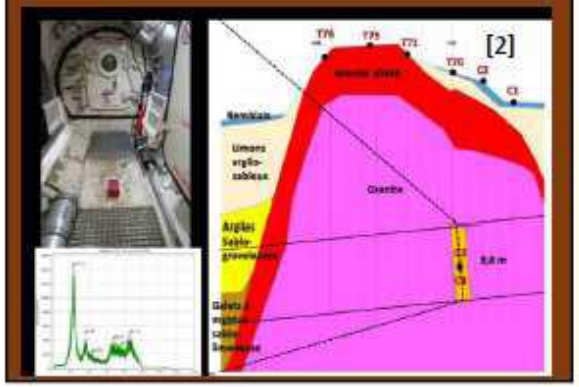
WP 5

Numerical and analytical modeling of propagation of induced ground-borne vibrations

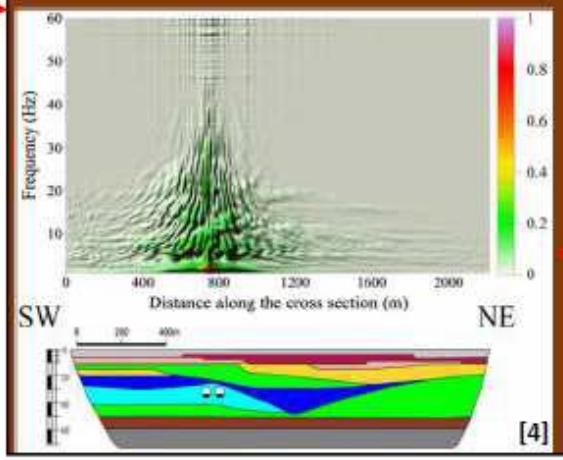
WP 5.1
Input data and parameter calibration for ground-borne vibrations assessment in railway tunnels



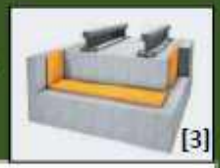
WP 5.2.1
Ground-borne vibrations assessment during tunnel construction



WP 5.2.2
Ground-borne train-induced vibrations assessment



WP 5.3
Methodology for anti-vibratory design of urban railway tunnels



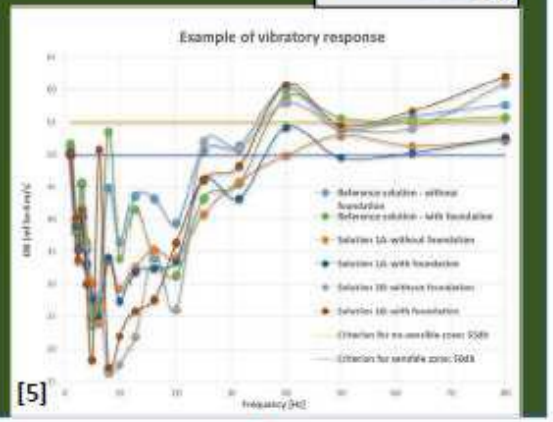


IMAGE SOURCES

[1] Cross section (TULIP ANR project, 2016-2020) highlighting a stratified environment and the presence of piles during emission of waves
[2] In situ measurements of vibrations emitted by a TBM during the building of MétroB in Lyon, France (LTDS/CETU measurement report, 2020). Several sensors on the surface and inside the TBM. In green the DSP from data (longitudinal direction) of one sensor in the TBM, showing a signal with a large frequency band (20;90Hz) where the energy of the signal is relevant.
[3] https://www.getzner.com/en
[4] Bozzano F., Iannucci R., Lenti L., Martino S., Perazza R., Varone C. (2020) – Numerical modelling of vibrations induced by subway in recent buried valley : an example in Rome city centre - Soil Dynamics and Earthquake Engineering (under revision)
[5] Géodynamique & Structure (2019) – Preliminary study for the control of vibrations induced by the passage of a metro train

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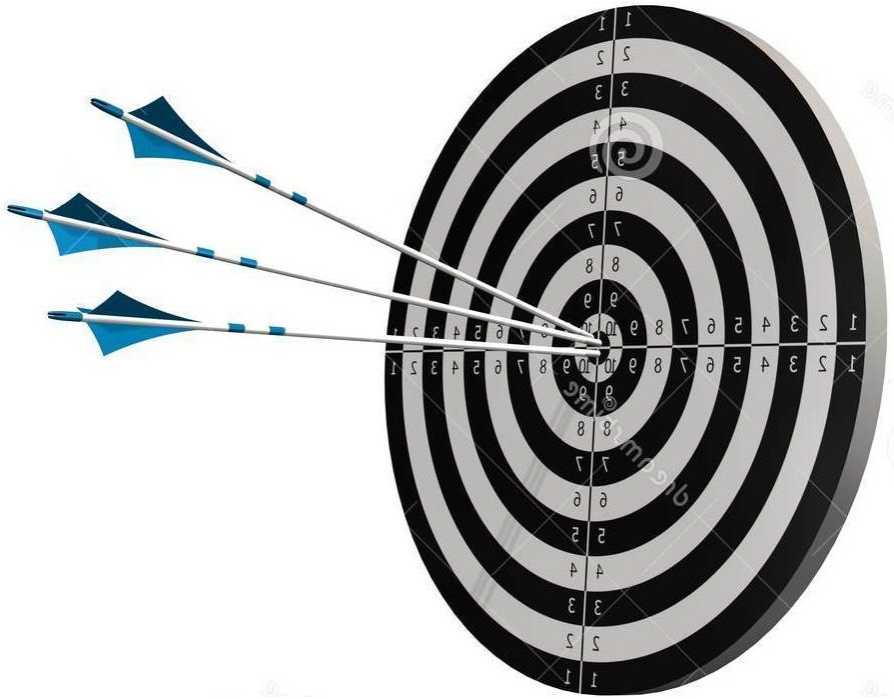
Objectif final



Rédaction d'une synthèse globale de notre expérience acquise sur ce sujet, pour contribution à l'amélioration générale de la pratique française d'estimation des impacts des tunneliers sur des pieux.

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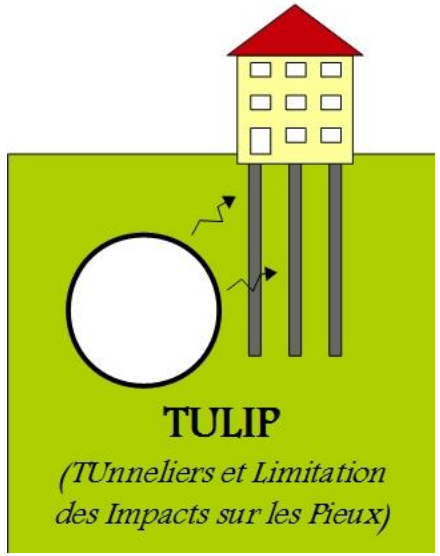

Merci à tous