



# UKCRIC

UK COLLABORATORIUM  
FOR RESEARCH ON  
INFRASTRUCTURE & CITIES  
**Inspired infrastructure  
for better living**

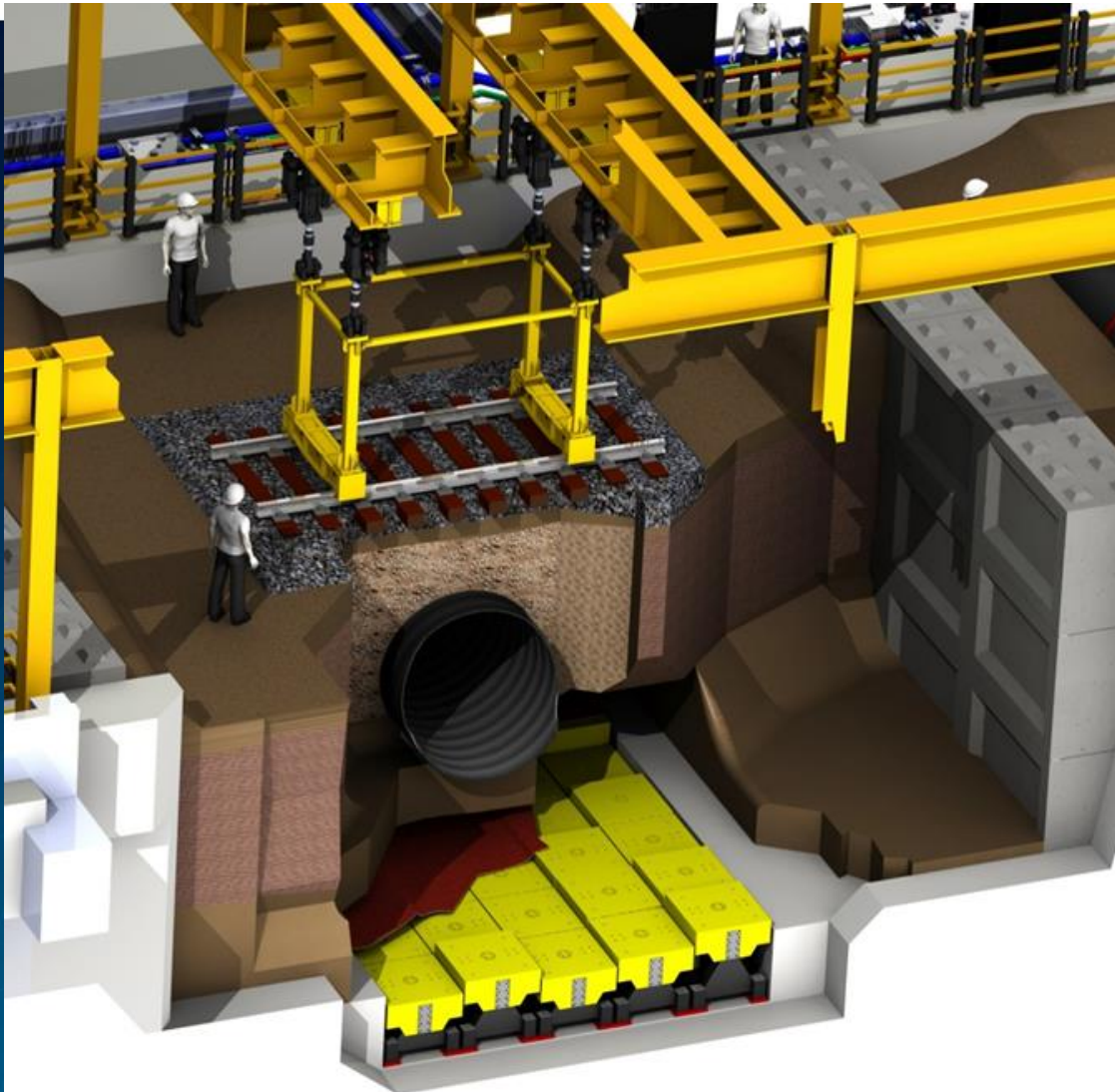


## National Buried Infrastructure Facility

17<sup>th</sup> May 2022

Chris Rogers (University of Birmingham)

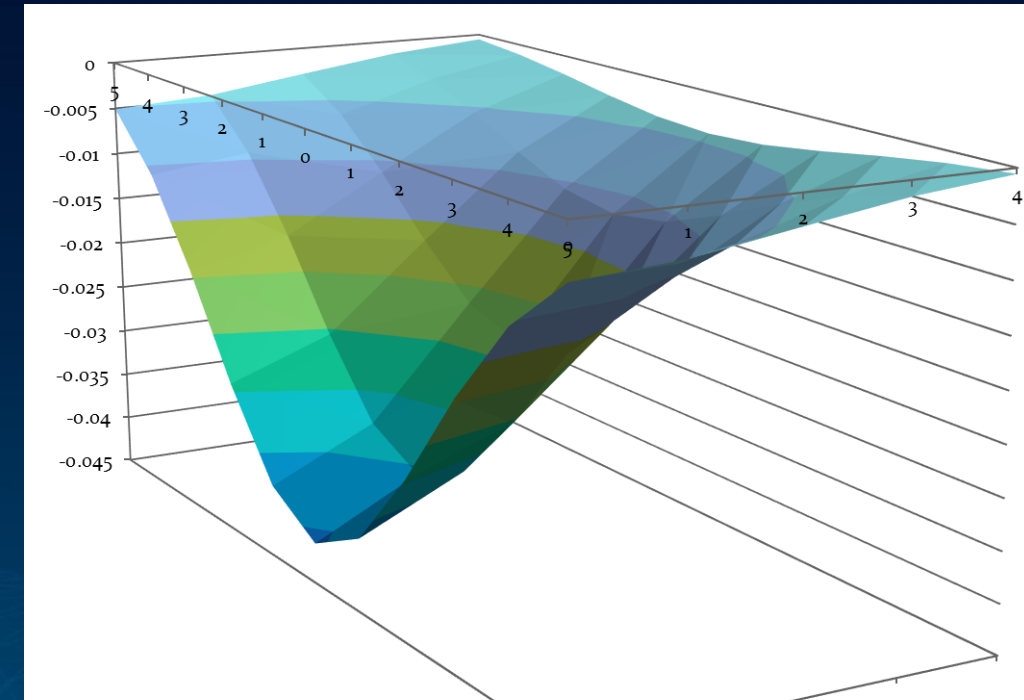
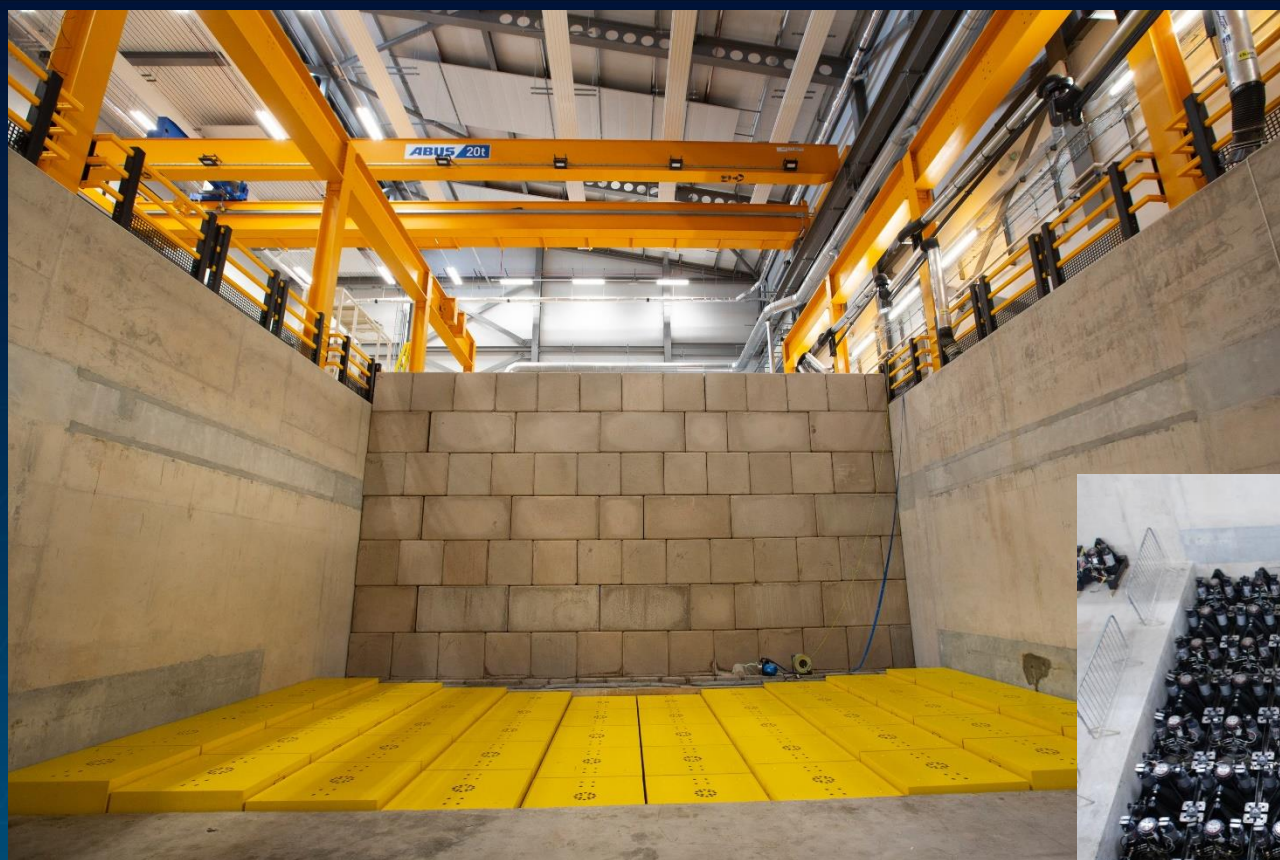
# Moveable Floor System



- One of a kind system
- Simulate ground movement
- Monitor impact on surface and subsurface structures



# Moveable Floor System





# Filling a section of the pit



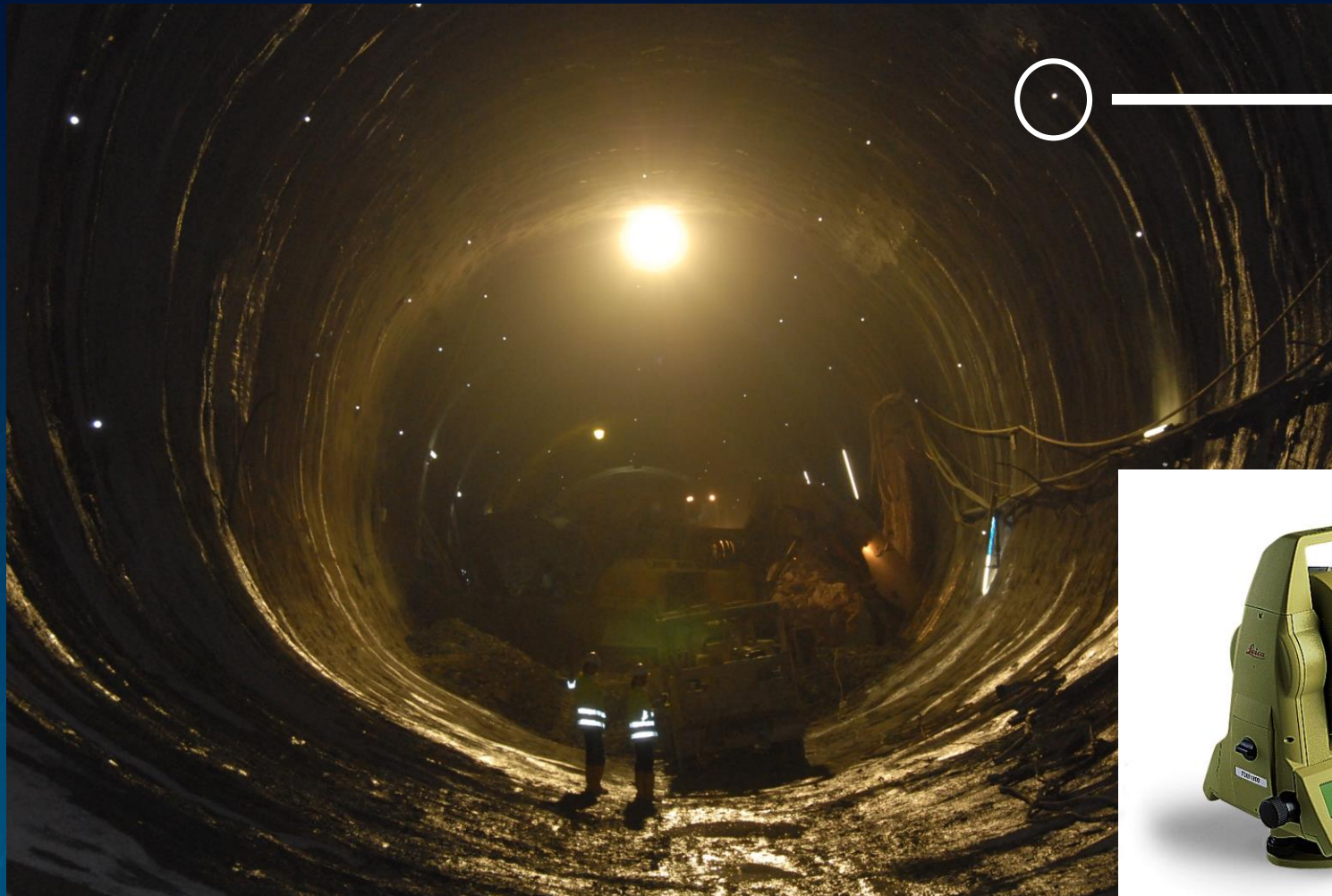
# Quantum Gravity Sensor in NBIF

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# Working with Industry



- Requires line of sight
- Dust can be a problem
- Vehicle / people movement can knock targets
- No long-term monitoring possible as targets covered with concrete eventually



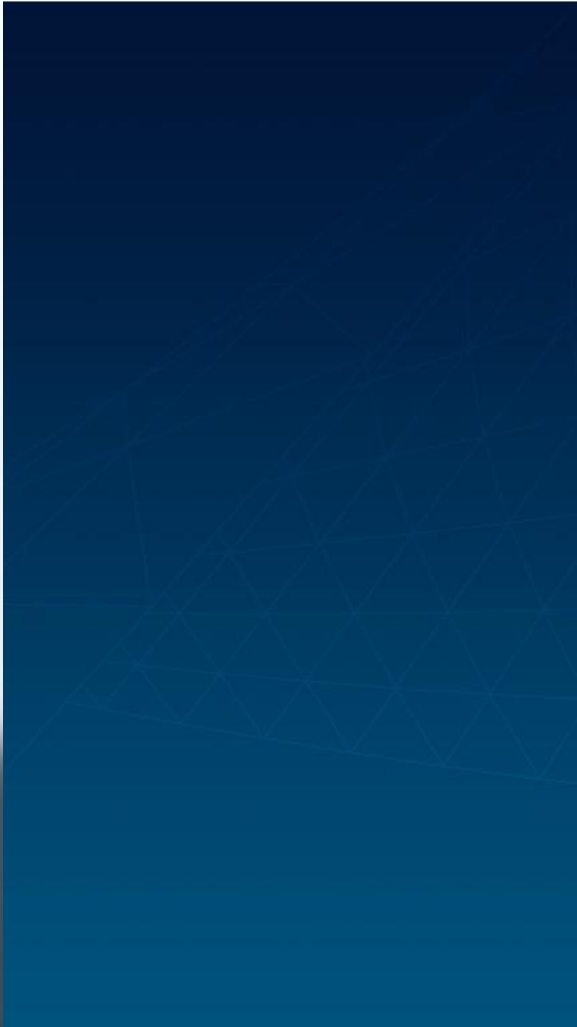
# Working with Industry



Replacing prism targets with optical fibres

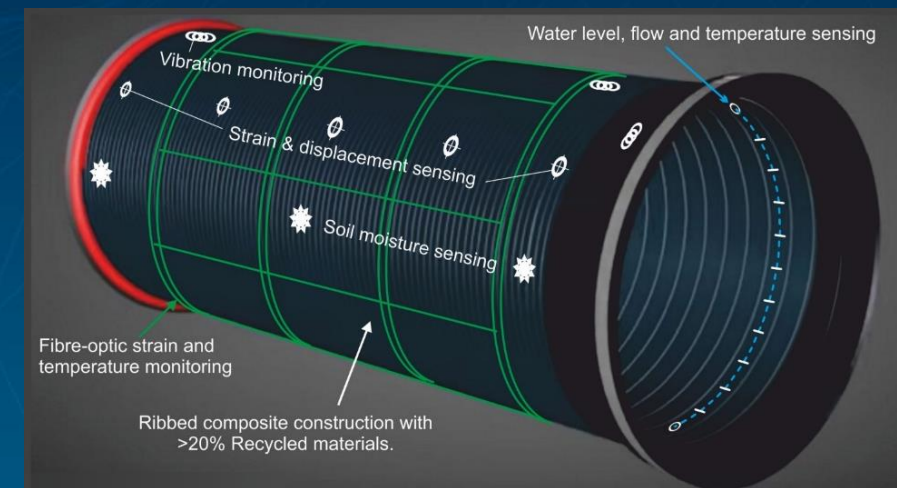
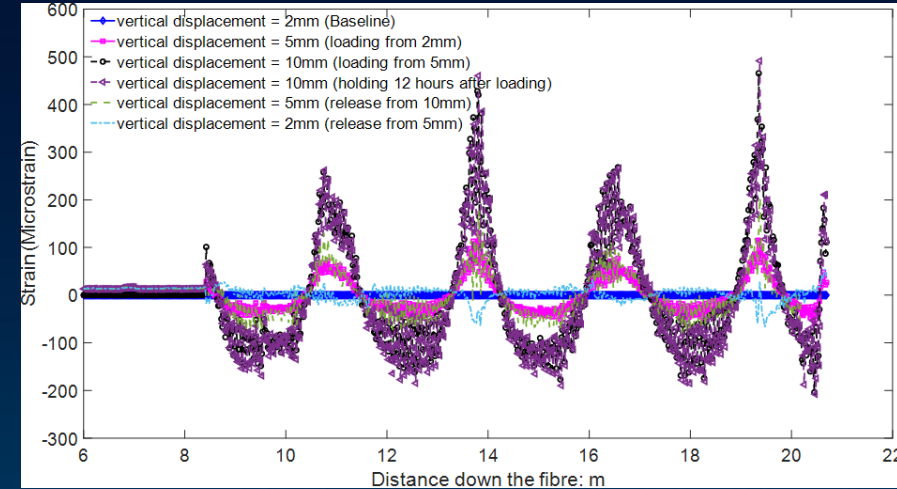
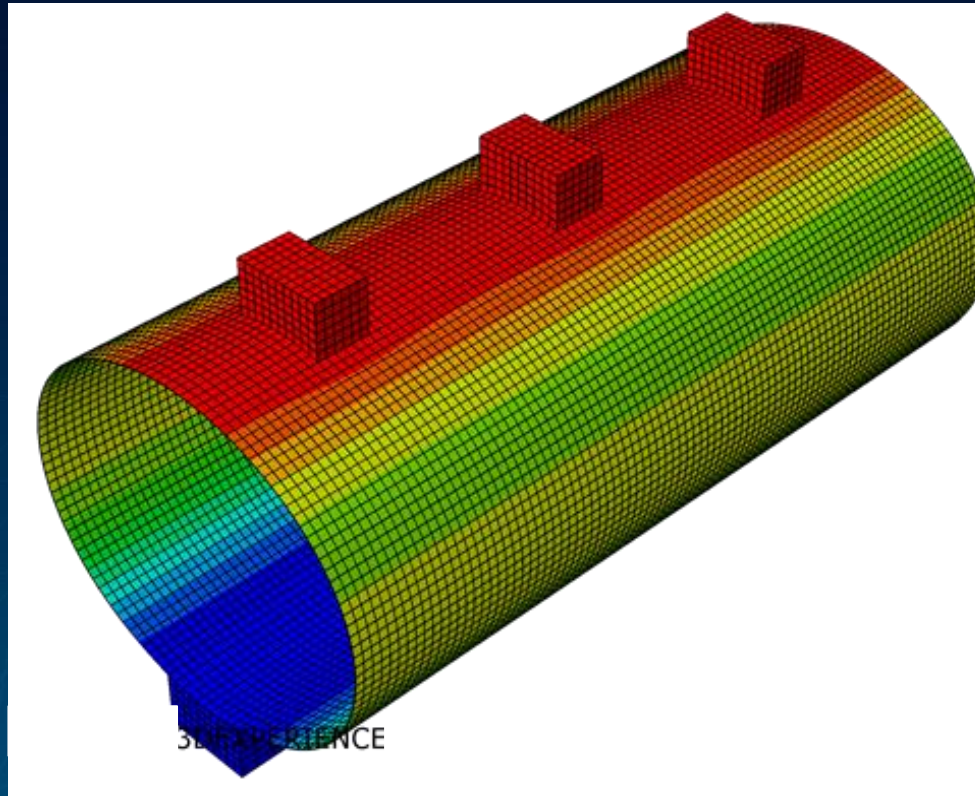
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# Next Steps – Digital Twins



... to better understand the performance of the infrastructure, but also sense their surroundings...

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