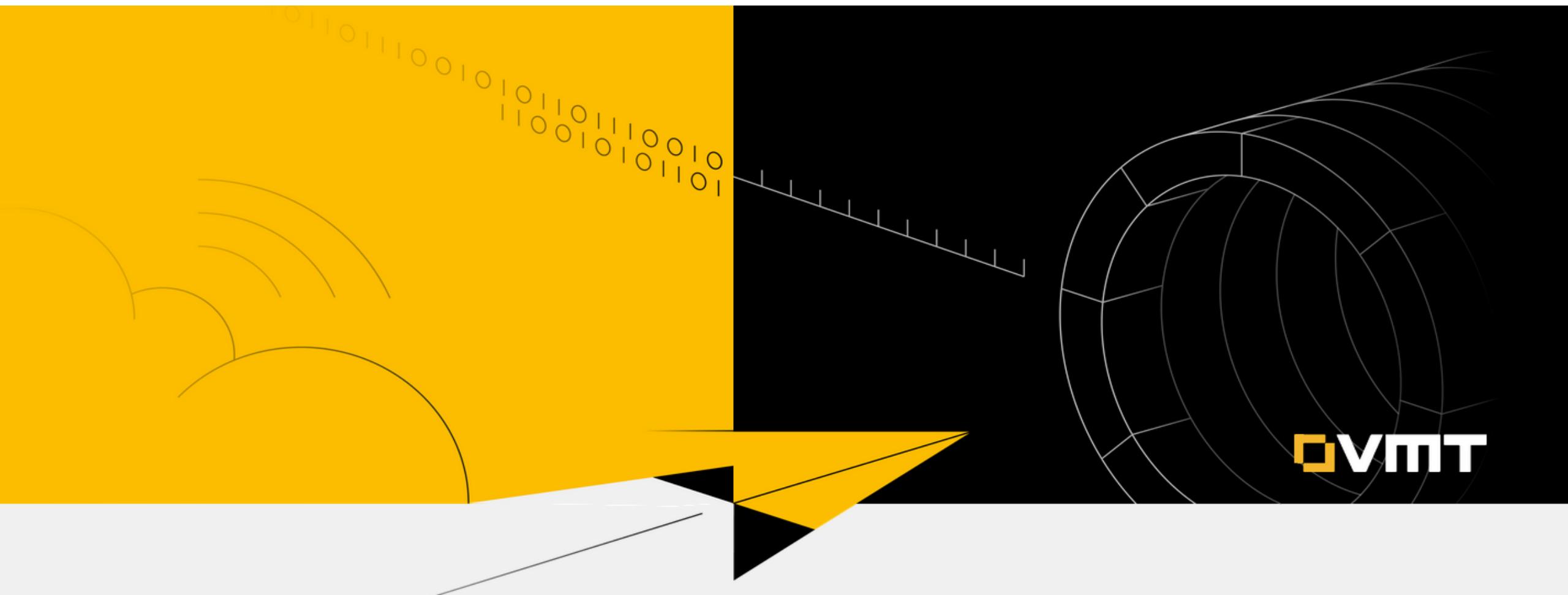


# Pushing the limits of Pipe Jacking and Direct Pipe with automated control surveying

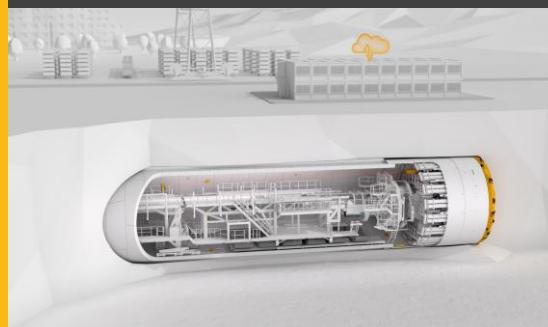
Maximilian Vollmer | Sales Manager



# Driving progress in tunnelling projects for more than 30 years



## TBM Tunnelling



**1,470** Projects



## Microtunnelling



**1,124** Projects



## Conventional Tunnelling



**149** Projects



## Precast



**89** Projects



**8,328 km**

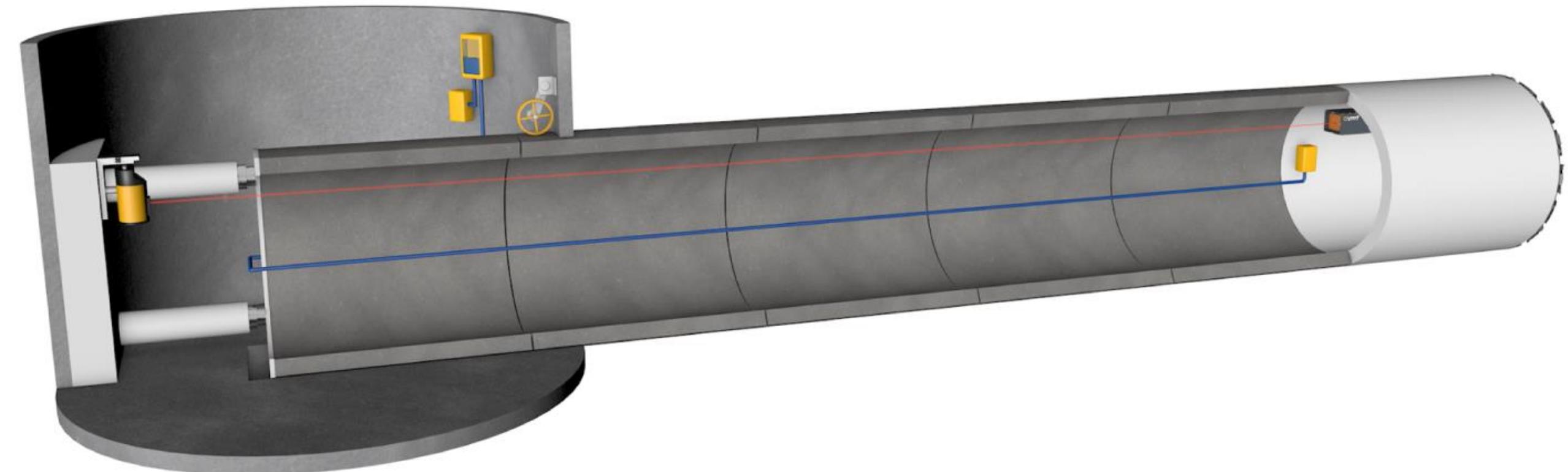
Total driving length



**2,832**

Advance projects worldwide

# Navigation In Straight And Short Tunneling



# Straight And Short Tunneling – Why It Falls Short In Urban Environments

- **Urban Infrastructure Challenges**

Rapid urbanization limits surface space and increases underground infrastructure demand.

- **Limitations of straight and short tunneling**

Traditional tunneling requires many shafts, causing surface disruption and higher costs.

- **Low Alignment Flexibility**

Traditional methods have limited flexibility to navigate urban underground obstacles.

- **Operational Inefficiencies**

Frequent site setups increase time, costs, environmental impacts, and urban inconvenience.



# Modern Tunneling – Addressing Urban Infrastructure Demands

- Flexible Curved Alignments

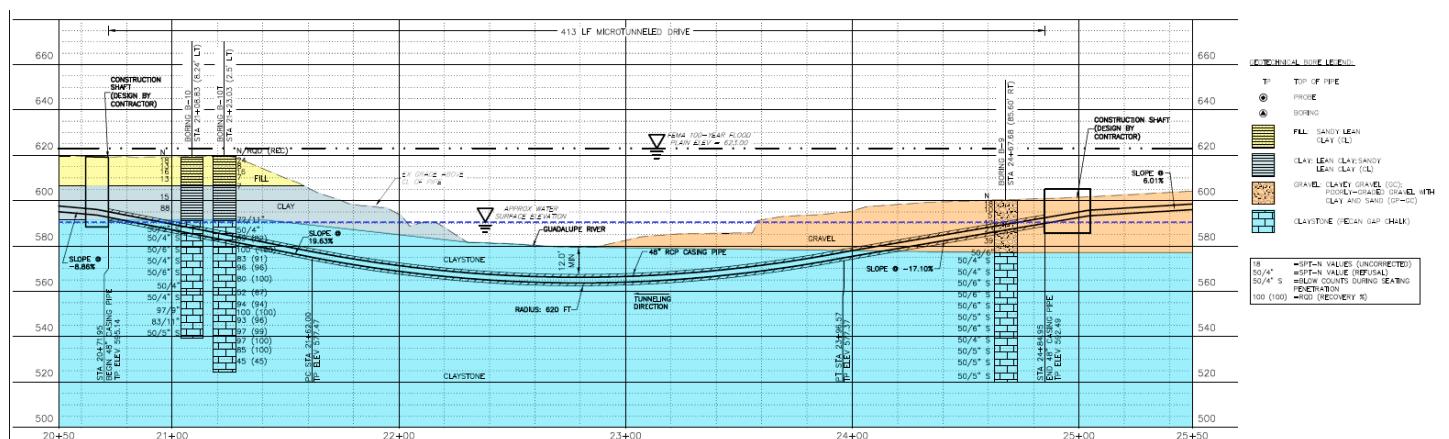
Curved tunnel alignments navigate around existing infrastructure and geological challenges efficiently.

- Reduced Shaft Requirements

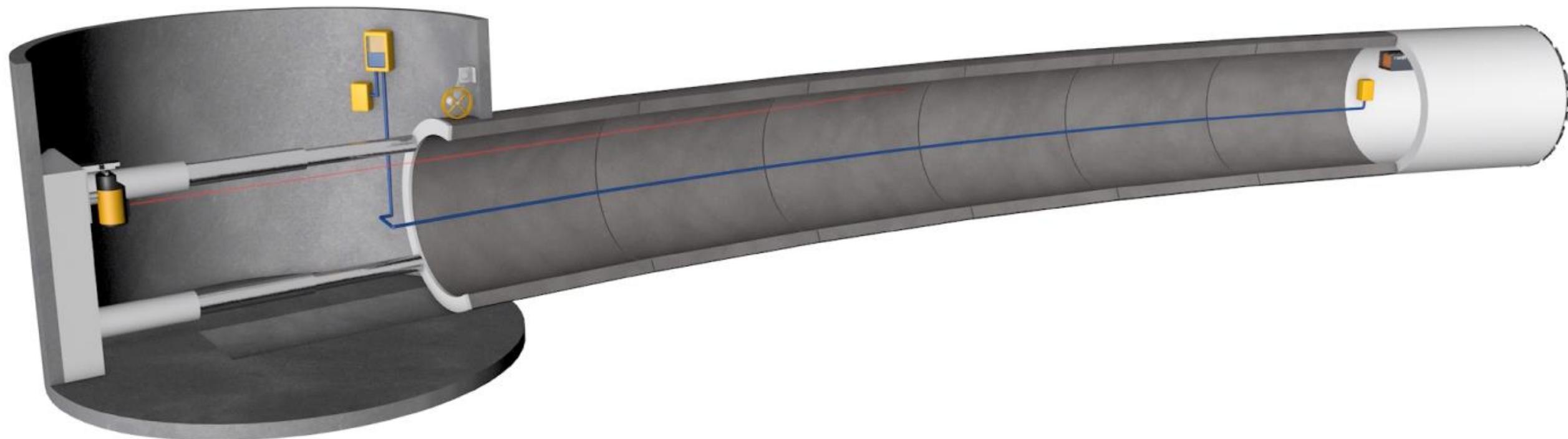
Modern tunneling minimizes the number of shafts, reducing surface disruption, costs and time for building sites in urban areas.

- Increased Efficiency

Efficient machinery and workflows shorten construction timelines and lower labor and equipment costs.



# Navigation In Curved Alignments





## MultiStation

The assistance system MultiStation provides efficient microtunnelling by automating the required control measurements.



# PRECISION GUIDANCE

LATITUDE: 35.62128015  
LONGITUDE: -117.42182144





## Benefits

- **Reduction of downtimes to a few minutes:** Downtimes for control measurements of several hours – standard when done manually – are no longer necessary.
- **Automation equals cost reduction:** By automating the control measurements, a surveyor is no longer absolutely necessary. This reduces the costs for services of surveying experts.
- **Higher frequency, more flexibility, better quality:** Control surveys can be carried out at shorter intervals and at any time. This avoids larger deviations, reduces corrective steering to a minimum and minimises both jacking forces and pipe loads, thereby significantly improving the quality of the pipeline.





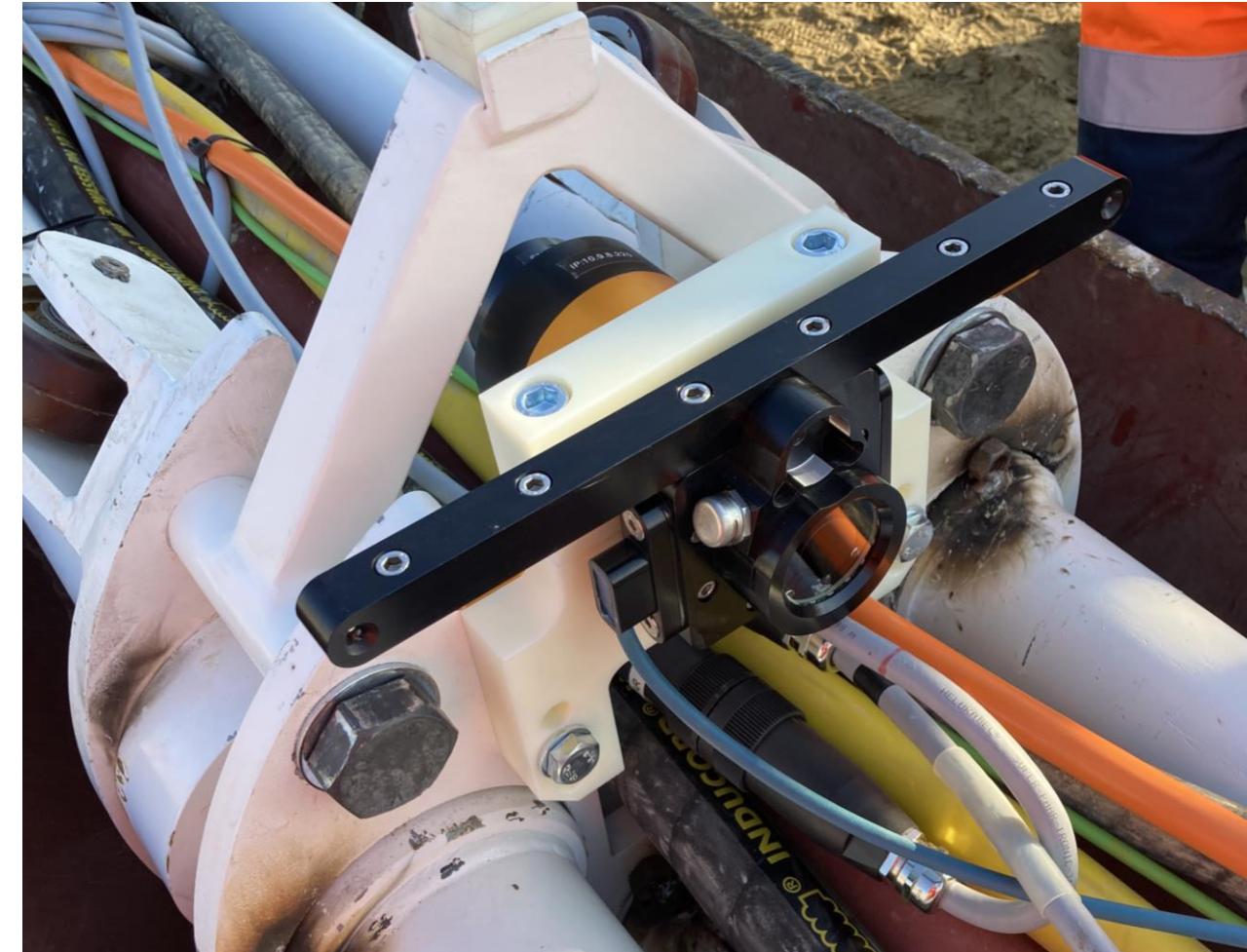
## TUnIS.pipelight

is a camera-based assistance system for carrying out automated control surveys. It improves the precision of gyro-based navigation systems for pipe jacking and Direct Pipe® projects in small and even non-accessible diameters.





# TUnIS.pipelight





## Benefits

- **A new era in microtunnelling:** For the first time, TUnIS.pipelight makes it possible to carry out control surveys in non-accessible curved drives.
- **Significant reduction in costs and construction time:** For small, non-accessible pipe jacking, the number of intermediate shafts can be significantly reduced thanks to TUnIS.pipelight.
- **Considerable decrease in downtime for accessible Direct Pipe® jobs:** Automated control measurements take a maximum of 30 minutes instead of several hours.
- **Maximum occupational safety:** Thanks to TUnIS.pipelight, no surveyor needs to go into the tunnel; no elaborate safety concepts necessary for measurement services in Direct Pipe® drives.



# VMT | CONTACT



**Maximilian Vollmer**

Telefon: +49 7824 302 7002

Mobil/ WhatsApp: +49 151 144 467 36

Mail: [Vollmer.Maximilian@vmt.global](mailto:Vollmer.Maximilian@vmt.global)

Website: [www.vmt.global](http://www.vmt.global)

**VMT GmbH**  
Stegwiesenstr. 24  
76646 Bruchsal  
Deutschland