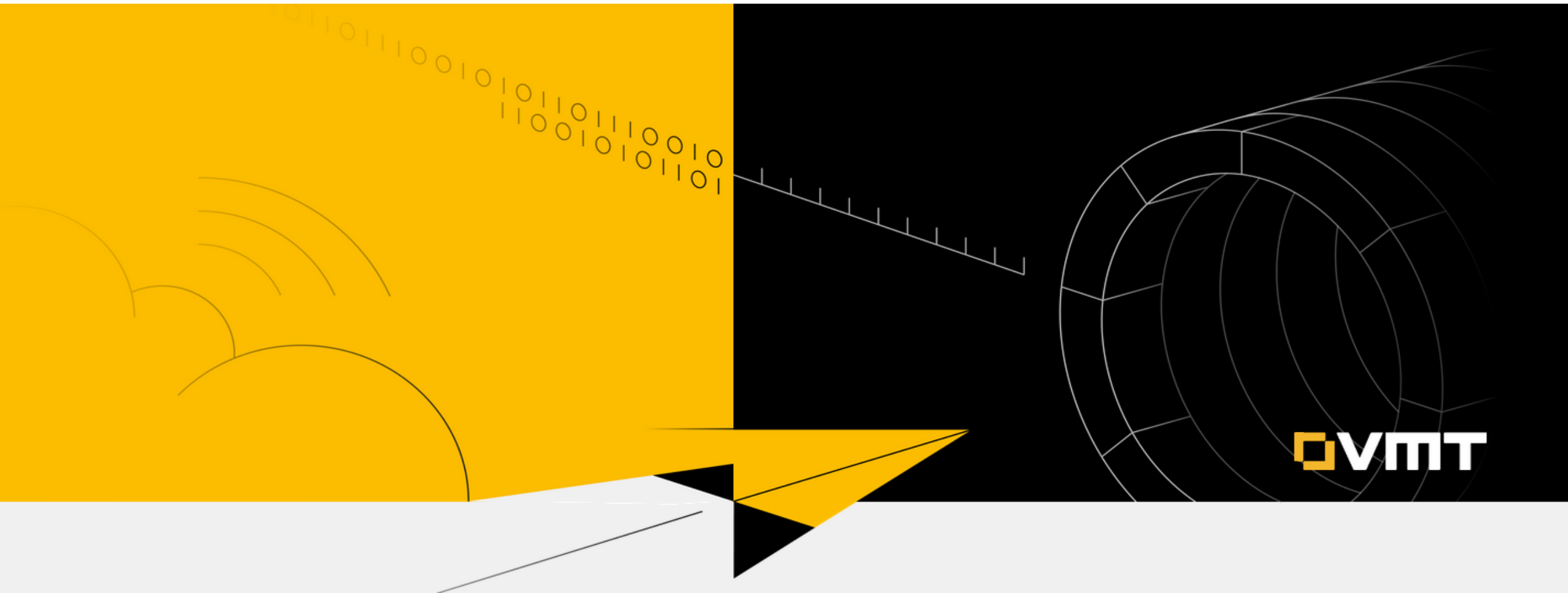


Pushing the limits of Pipe Jacking and Direct Pipe with automated control surveying

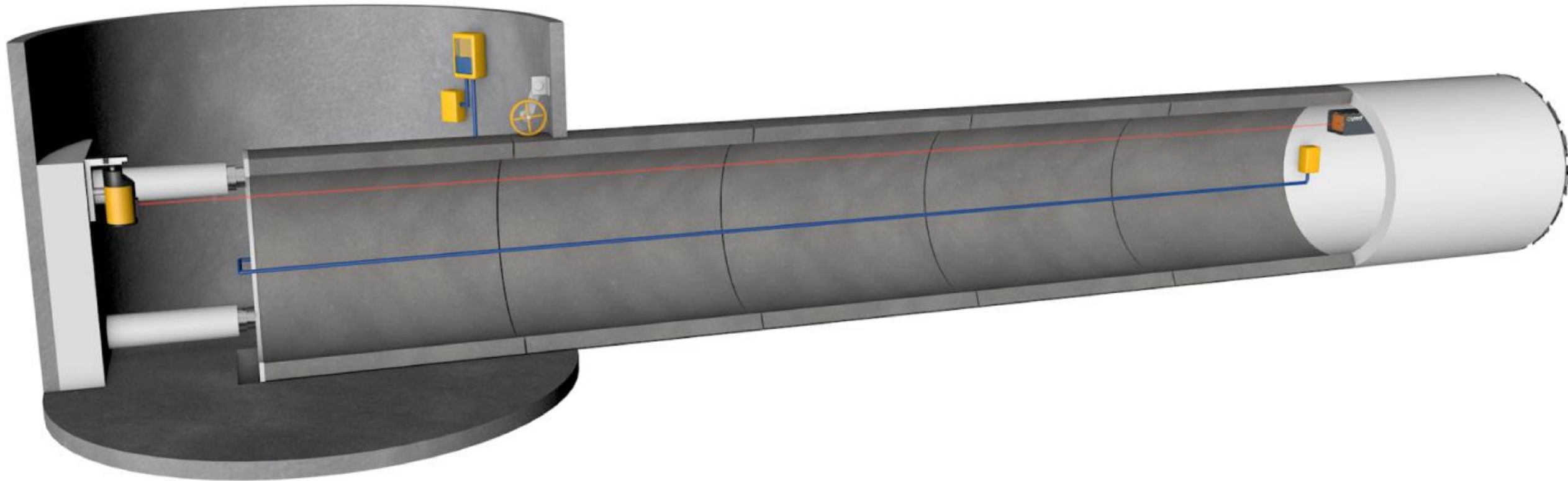
Maximilian Vollmer | Sales Manager



Driving progress in tunnelling projects for more than 30 years



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**

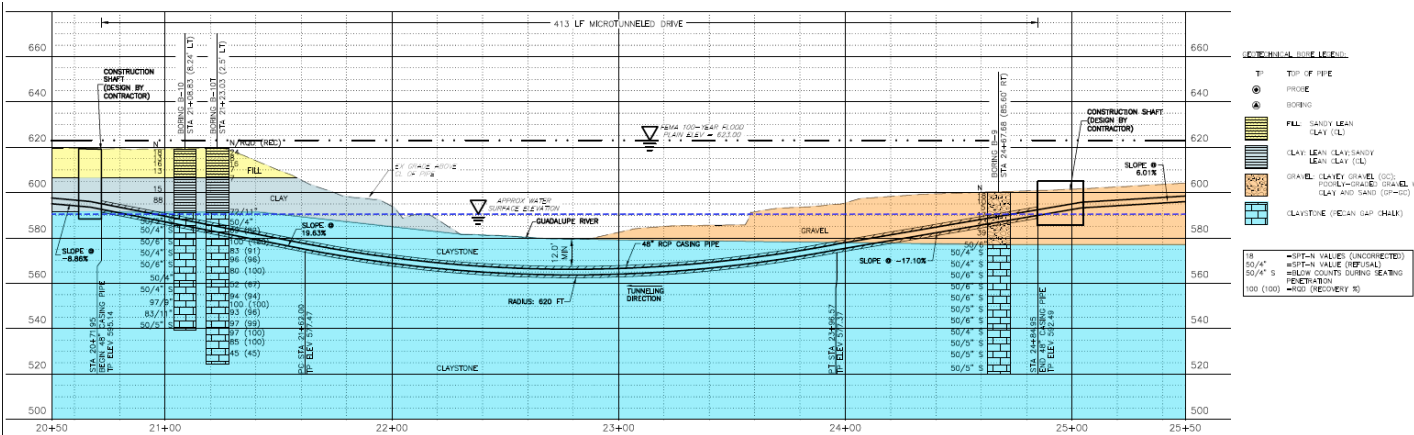
Curved tunnel alignments navigate around existing infrastructure and geological challenges efficiently.

- Reduced Shaft Requirements**

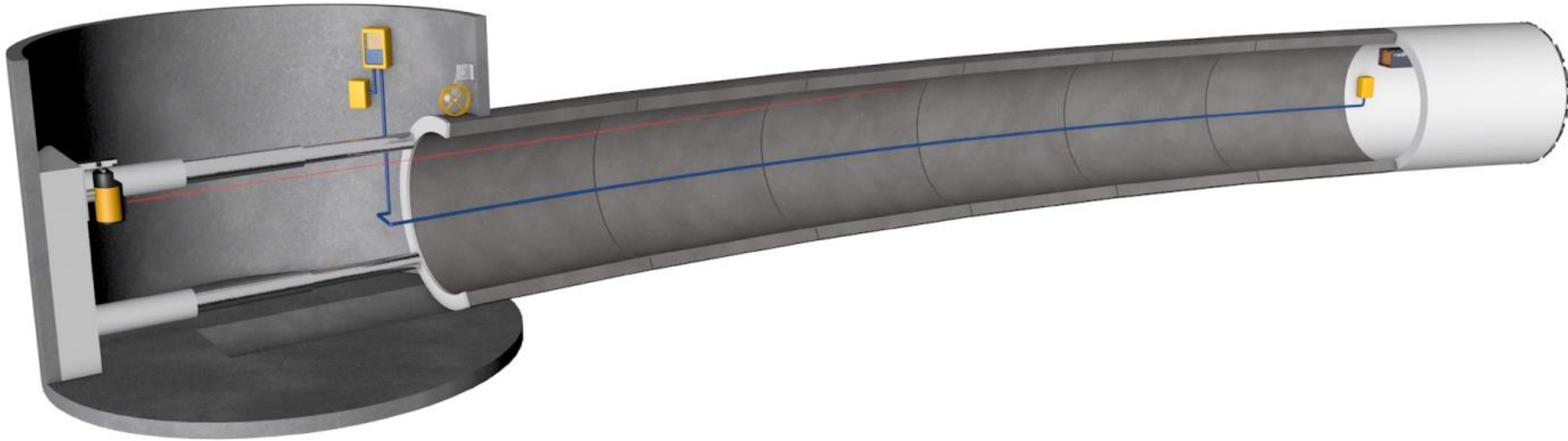
Modern tunneling minimizes the number of shafts, reducing surface disruption, costs and time for building sites in urban areas.

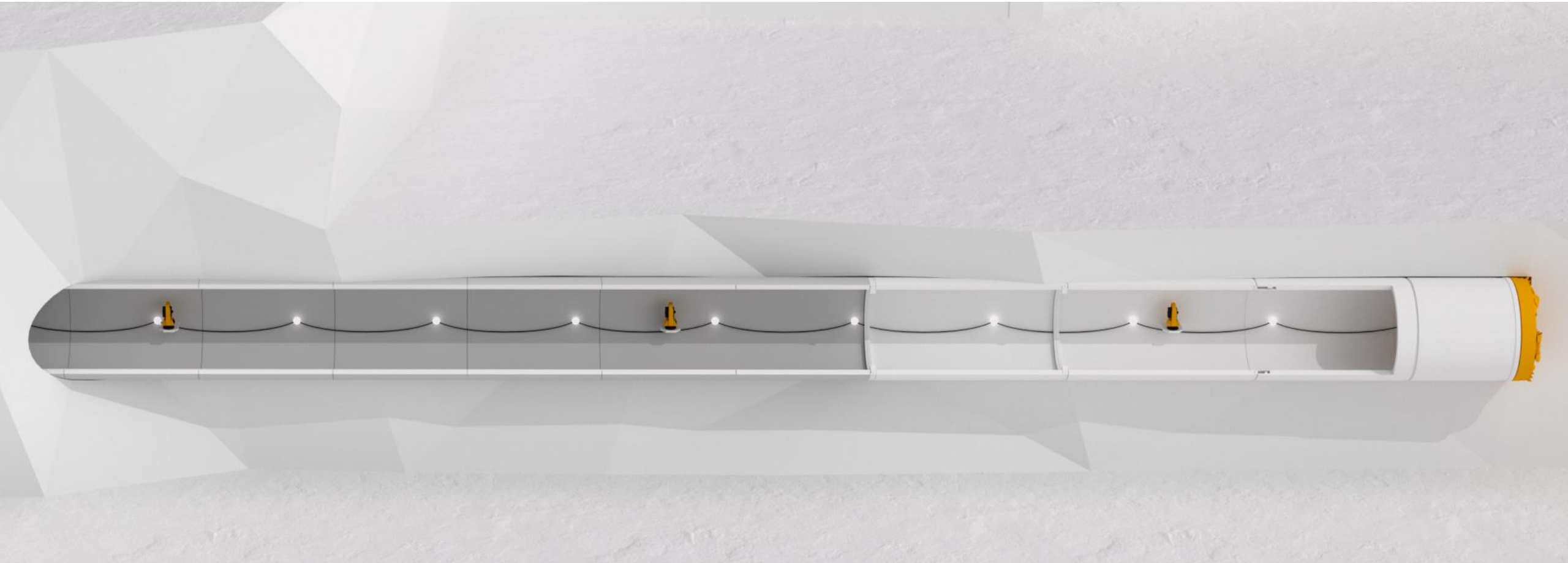
- Increased Efficiency**

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: 45.63, 2801.5
LONGITUDE: 82.42, 8214.4





Benefits

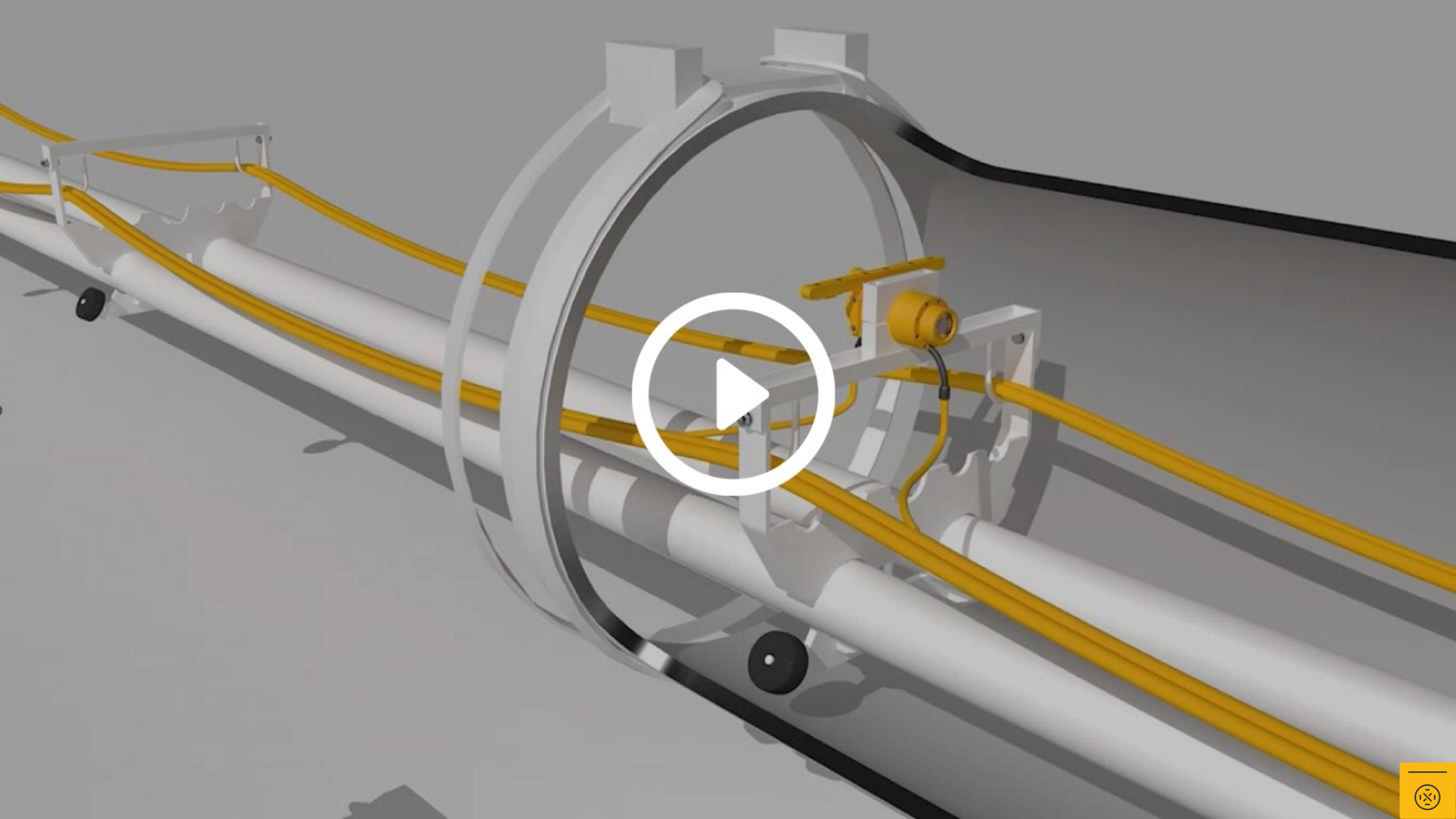
- **Reduction of downtimes to a few minutes:** Downtimes for control measurements of several hours – standard when done manually – are no longer necessary.
- **Automation equals cost reduction:** By automating the control measurements, a surveyor is no longer absolutely necessary. This reduces the costs 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.



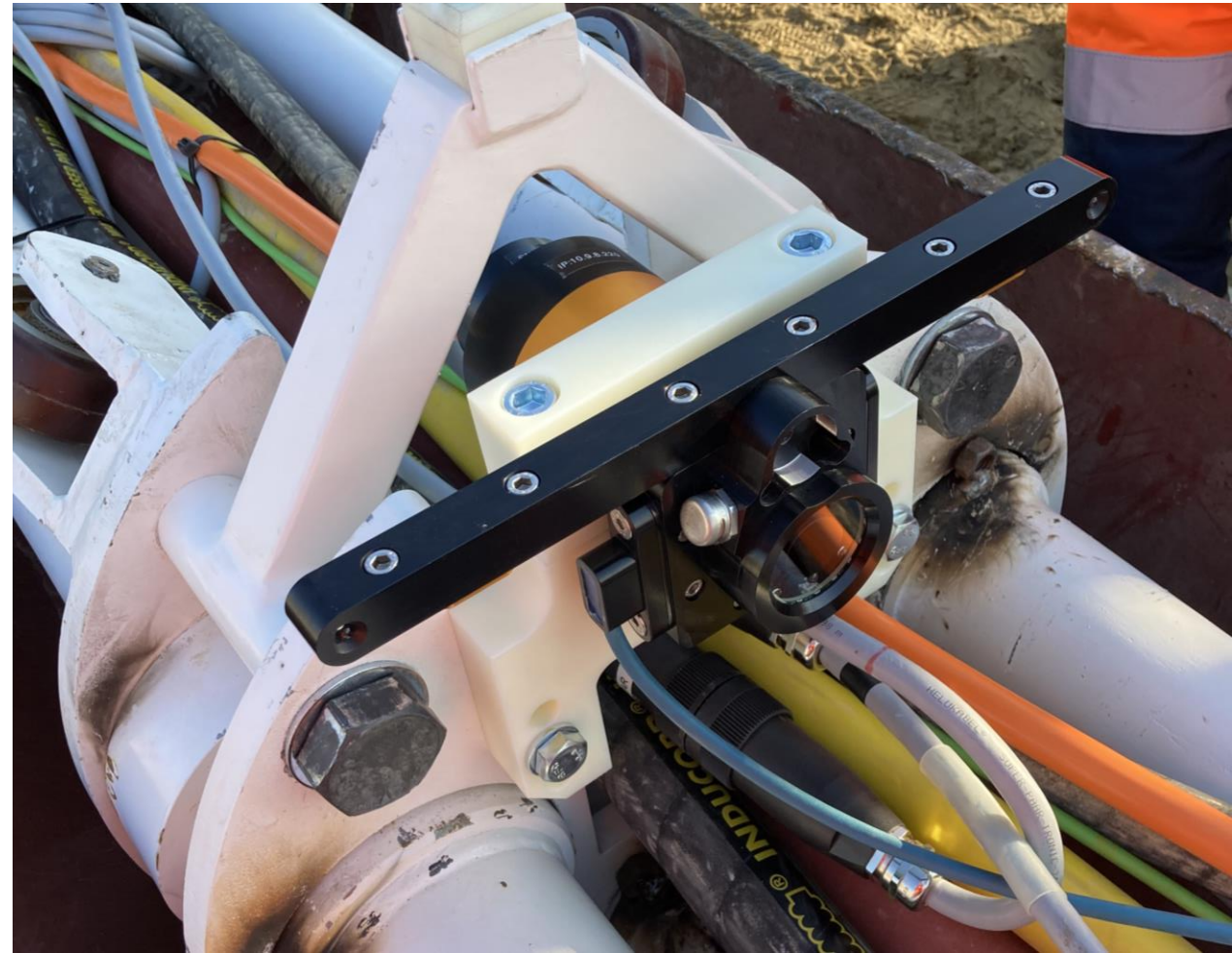


TUnlS.pipelight

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.



TUnlS.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



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