



## DECISION TREE - GROUND FREEZING FOR CROSS-PASSAGES

Realizing a cross-passage between two bored tunnels requires ground improvement in the Dutch subsurface. This is generally done by freezing the groundwater in order to strengthen the subsurface. This freezing can be started, for example, after both tunnels have been bored or before the second tunnel is bored. The final phasing has its effect on the forces and deformations of the bored tunnels.

Using monitoring data from one of our tunnelling projects, your objective is to investigate which model best matches the measurements, where the largest deviations lie and how these deviations can be explained.

You would then compare various phasing methods to evaluate the impact of the ground freezing on the tunnel lining with respect to forces and deformations. Each phasing method must be evaluated to construct a decision-tree that can help determine the most appropriate phasing method for bored tunnels in The Netherlands.

### Interested?

Get in touch with Joost Vervoort

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Do you already have an interesting topic but nobody to guide you? Get in touch with us and we can look for possibilities together.



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