

# Latest Developments in Trenchless Technologies – an overview



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## Latest Developments in trenchless Technologies – an Overview

### 1. Iranian-German Water Partnership-Day 2015 9<sup>th</sup> November 2015



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The German Society for Trenchless Technology is promoting **trenchless technology**, which combines **economic efficiency** and **environmental protection**.

This modern approach for installing underground supply lines can be utilized for **drinking water, wastewater, gas, heating, telecommunications** or **electricity lines**.

This **modern technology** that has been **proven** and **tested worldwide for 30 years**.

Together with international partners, GSTT is continuously working on advancing the science and the practice of trenchless technology for the public and environmental benefit.

## Latest developments in Trenchless Technologies – an overview

The trenchless pipe construction offers **technical, economical and ecological opportunities**.

In certain conditions, for example:

- expensive road surfaces,
- soil exchange and
- high groundwater levels,

it can already be more economical to work with trenchless technologies in shallow level situations, than with conventional construction methods.

## Latest developments in Trenchless Technologies – an overview

It is difficult to understand why the **significant advantages of the trenchless technologies**, in cities with difficult space conditions and high density traffic, **are used so little**.

The combined costs of:

- traffic jams,
  - pollution of the environment and
  - weather related down-times,
- are not taken into consideration.

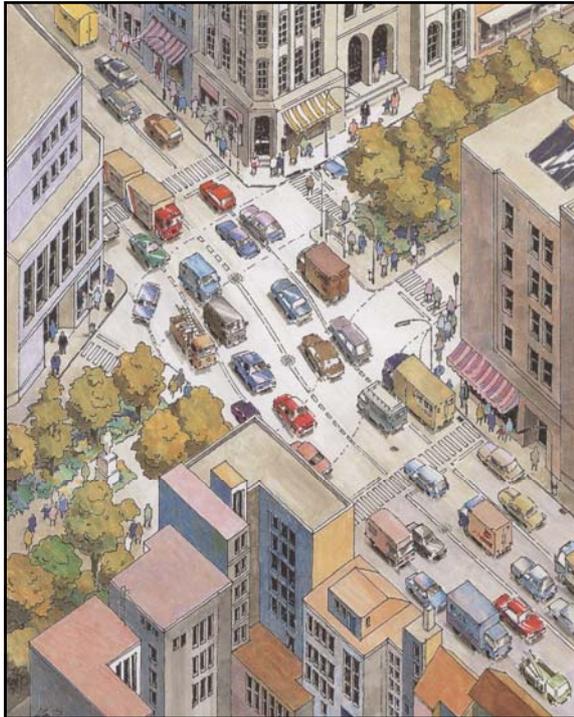
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in  
Germany

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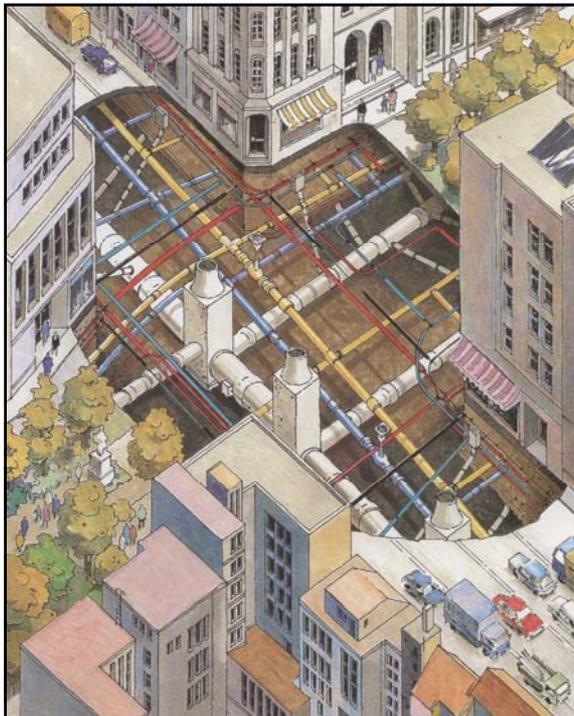
## Traffic jam in Berlin – open construction



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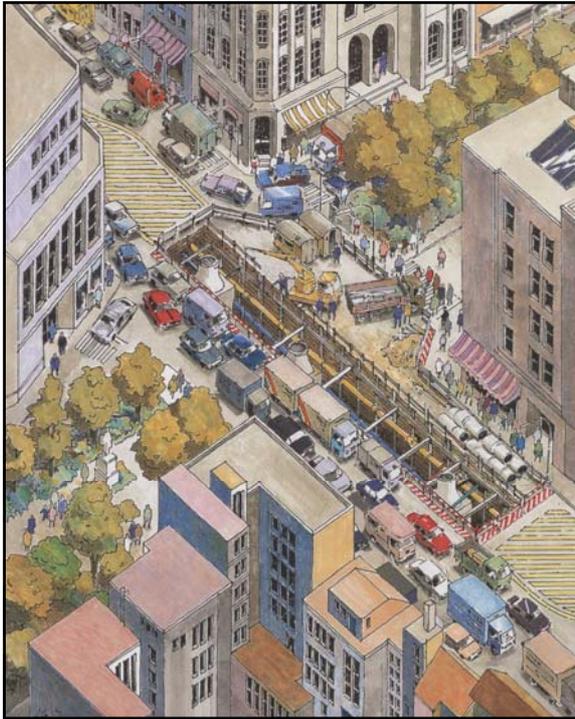
What happens here  
if a pipeline has to  
be repaired?



A look into the  
underground.

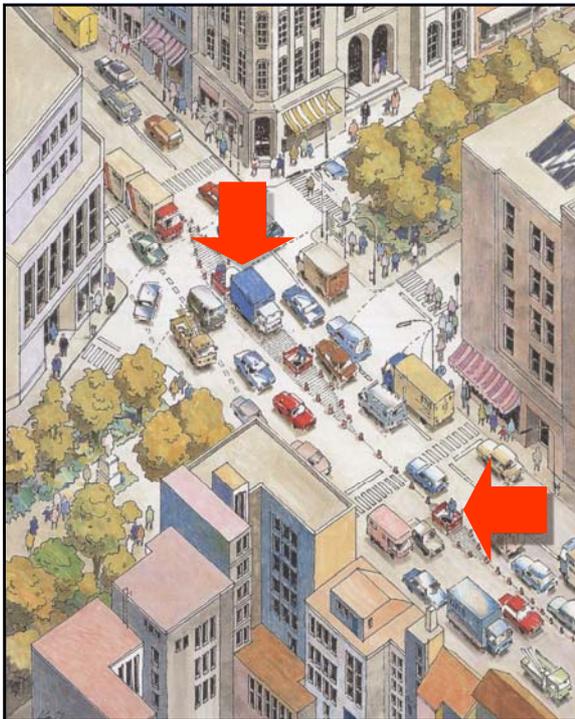
A pipework like a  
spider's web.





worst case.....

- ....a big trench
- ....a big building site
- .... a lot of traffic jam and environment pollution



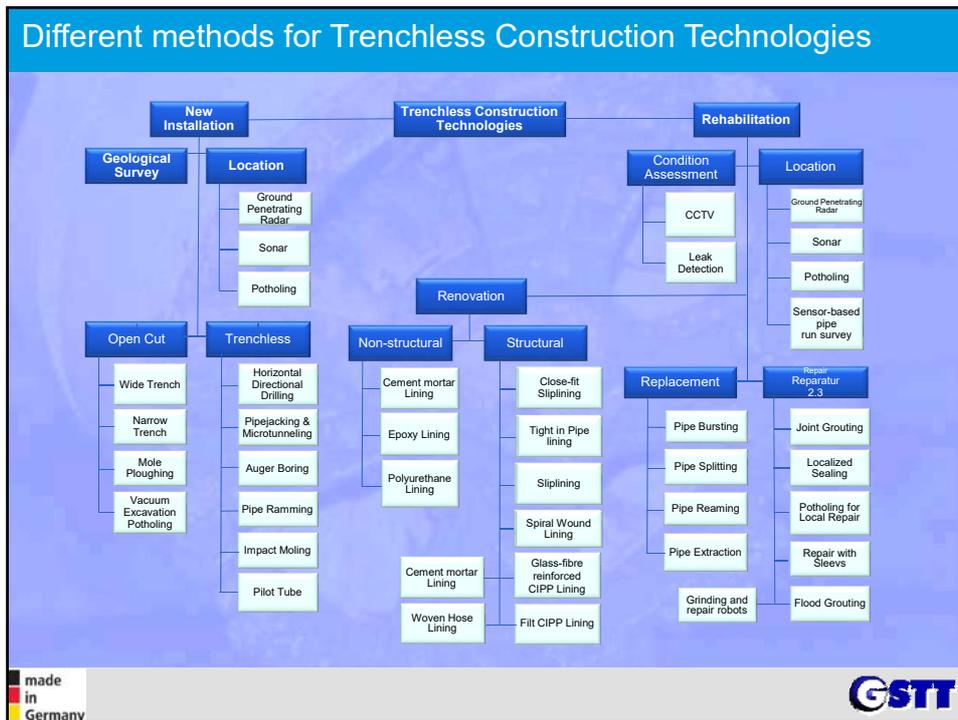
...or like this....

**NO DIG**  
technologies will be used!

why digging trenches.....

..if there are better solutions?!





## Latest Developments in Trenchless Technologies – an overview

Concerning of the **short time I have**, it is not possible to explain all these Trenchless methods.

In so far, I mention only 3 important methods:

For new construction:

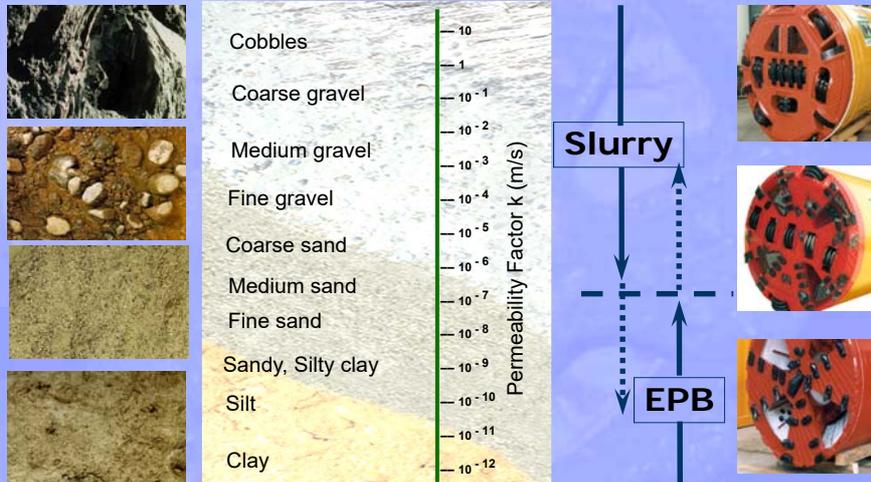
- Microtunnelling (Steerable method)
- Horizontale Directional Drilling (HDD) (Steerable method)

For Renovation:

- Cured in Place Lining (CIPP)

**made in Germany** **GSTT**

## Trenchless Technologies have solutions for all geologies



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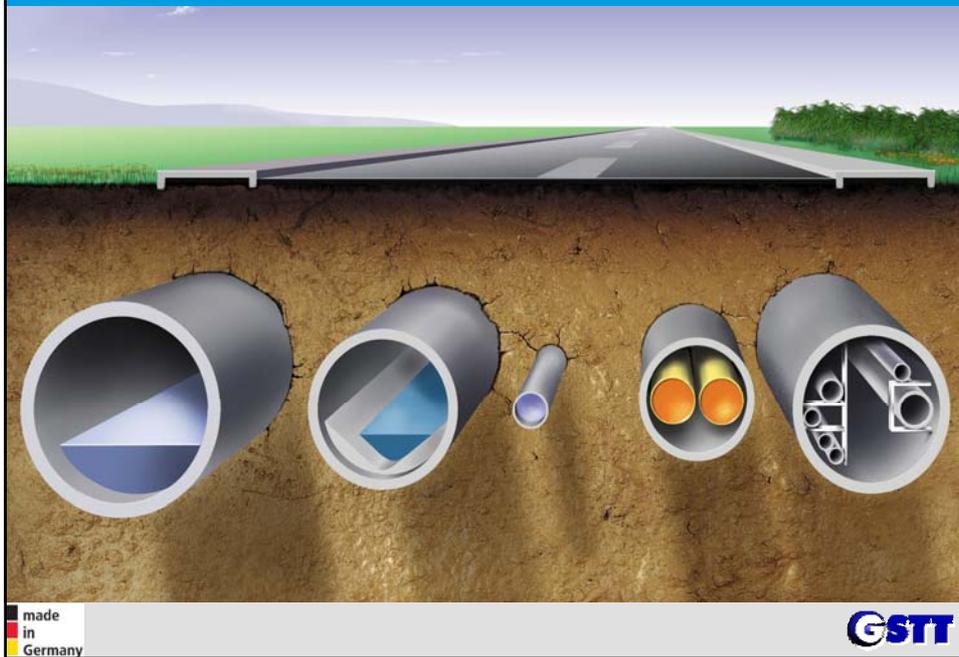
## Different machine types according to geological conditions



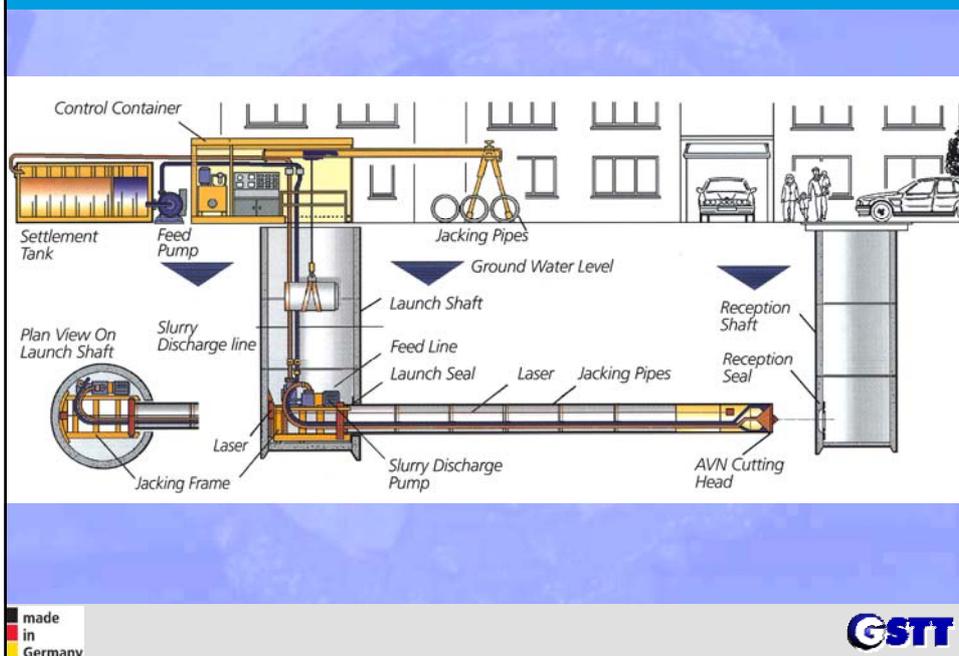
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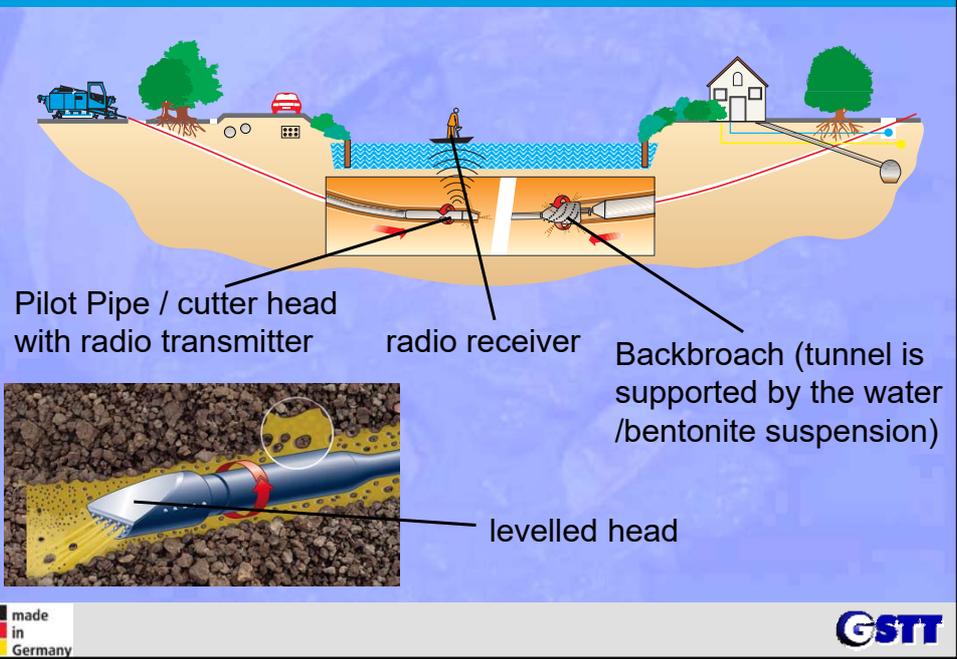
## Trenchless Technologies for all kind of pipeline systems



## Microtunnelling (Jobsite layout)



### Horizontal Directional Drilling (HDD) (steerable method)



### Horizontal Directional Drilling (HDD) (steerable method)



CIPP - UV curing technology - 1. pull the liner into the pipe



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CIPP - UV curing technology - 2. bring the lamp train into the pipe



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## CIPP - UV curing technology



Possible up to DN 1300

(and next year up to DN 1500)

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## Latest developments in Trenchless Technologies – an overview

We invite you, to visit the **NO DIG BERLIN 2017** in conjunction with **WATER BERLIN INTERNATIONAL 2017**

Here you can see life the newest Trenchless Innovations from Germany



Symposium and Exhibition  
24 – 27 March 2015  
[www.NODIGBERLIN.com](http://www.NODIGBERLIN.com)  
Berlin Exhibition Grounds

Approx. 500 Visitors will  
transported with 20 busses to  
more than 15 sitevisites

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## Thank you for your attention

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