

Digital Twin for Integral Spatial Planning Above and Under the Ground, Using the Key Register Subsurface (BRO) and the National Cable and Pipeline Information Portal (klic).

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Key words: e-Governance; Geoinformation/GI; Spatial planning; Standards; subsurface, subsurface information, utility network, climate change

SUMMARY

Important national Challenges for the coming decade are Energy Transition and Climate change. Although subsurface is often not seen, the subsurface is an important contributor for 3D spatial planning.

In the busy and compact delta of the Netherlands (quest for space), with important problems such as climate adaptation and the switch to non-fossil energy, all available information from the subsurface is needed for above and below ground spatial planning. For centuries we have had to work together in the Netherlands between public and private parties to keep our heads above the water.

We have also adopted this method for information about the subsurface: cables and pipes are present almost everywhere in the shallow subsurface, and their location is important for spatial planning. A central portal (KLIC) has been available in the Netherlands for more than 10 years where all cables and pipeline data can be requested. This can be done at every location in the Netherlands, and from all public and private network managers. In addition, the geo key register subsurface (BRO) is available for the deeper subsurface. This includes the drilling data of the deeper subsurface and the soil, geohydrological and geomorphological models.

With the BRO en KLIC the government aims to strongly improve the accessibility of subsurface information. This is achieved by standardizing public information on the subsurface and making it available to both governmental and other parties like network operators (eg electricity providers) for spatial planning and decision making in 3D!

In this way, a digital twin 3D integrated approach to public space can be made together. Not only

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for energy transition and climate adaptation but also for other purposes such as protection of assets and improvement of underground infrastructure such as 5G.

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