

Towards an Ecosystem of Underground Utilities Mapping in Singapore



A new booklet provides details of the activities undertaken in the second phase of Singapore's 'Digital Underground' project. The project is aimed at establishing an accurate, current and complete map of subsurface utilities in the sovereign island city-state.

The [project](#) began in 2017 as a collaboration between the Singapore-ETH Centre (SEC) and the Singapore Land

Authority (SLA). In its first phase, it planned and established what was needed for a roadmap to develop a coherent national mapping strategy for underground utilities. From 2019, it commenced its second phase, translating the roadmap into a reality, and supporting an ecosystem to produce and deliver accurate and complete digital data to stakeholders.

National subsurface digital twin

This new booklet charts the results that emerged, and the ambitions and achievements of various stakeholders and supporters that are an integral part of this developing ecosystem. It makes the case for a national subsurface digital twin, which can integrate information and data on subsurface developments, and mirror those above-ground. From proposing a new subsurface utilities data governance framework to facilitating knowledge sharing by establishing a community of practice, it details the rationale and effort in coming up with recommendations and the development of an ecosystem for mapping the underground.

The booklet views continuous monitoring and collaboration as key to future development in Digital Underground's Phase 3, which commenced in January 2022. With the project's strong foundations, the booklet also looks to the future: "All necessary ingredients are in place," it concludes, as "Singapore has the potential to become a world-leading living lab for mapping the underground".

The booklet titled 'Imagining a digitally enabled future' is available for free download [here](#).



Marina Bay 3D Special and Detailed Control Plan. (Courtesy: Urban Redevelopment Authority, Singapore)