Panel discussion

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SUMMARY

The Vision of the Survey of Israel is to create a national digital twin of the entire country. There are different ways to define a Digital Twin but the one I like best for now is this:□"A Digital Twin is an accurate and dynamic representation of the real world, manmade or natural, of systems, processes and objects".□□We believe that by doing our part we can aid and positively impact many of the challenges our country faces, like: □□Real Estate: From planning through building to register rights. Helping to tackle one of Israel's greatest challenges of 13 years on average from plan to key causing almost impossible dream for young families to buy a home.□Transportation: Helping to tackle the ever-growing commuting time caused by high traffic volumes and huge infrastructure development. □Health: Create models of patients, medical devices or systems, enabling personalized treatment, real-time monitoring, and predictive analytics. assist in disease prevention, and improve medical device efficiency.□Agriculture: Virtual replicas of crops, soil, equipment, that enabling monitoring and predictive analytics, optimize resource usage, improve crop yields, manage diseases, and enhance machinery efficiency.□Security: Building models of assets, networks, environments, to monitor threat detection. help simulate vulnerabilities, and predict potential risks. □□There are many more section that can be influence by the national digital twin.□□Our plan to establish the NDT involves three main foundations □□1.The technological platform□Our new GIS platform - GOVMAP, is a transformative project leveraging AWS cloud and open-source technology to bridge gaps between municipalities. It provides lightning-fast performance, unlimited data sharing, and user-friendly, self-service capabilities, making GIS accessible even to non-experts. Designed for integration with systems like property tax and transportation, it enables all municipalities, big or small, to access government data in one place at minimal cost. This initiative not only empowers users but also addresses urban-rural disparities, ensuring equitable access to advanced tools for better decision-making.□□2.The Data factory□To create a digital twin, we shifted from exclusively using 20 cm orthophotos to incorporating diverse

data sources, including mobile mapping, satellites, and multispectral imagery, with resolutions as fine as 5 cm. This required significant changes: hiring and training staff for 3D data, upgrading infrastructure (stronger computers, more storage, and efficient software), streamlining data acquisition and sharing, and adopting new procurement methods to engage multiple suppliers and incentivize quality.□□3.Governance and collaboration□Governance and collaboration are pivotal in the development and implementation of digital twin systems. Effective governance ensures that policies, standards, and ethical considerations guide the use of digital twins, fostering transparency and accountability. Collaboration between governments, private sectors, academia, and communities—promotes shared expertise, resource optimization, and alignment of goals. □□This abstract offers a glimpse into the potential of Israel's National Digital Twin, setting the stage for a deeper exploration of its foundational pillars.□