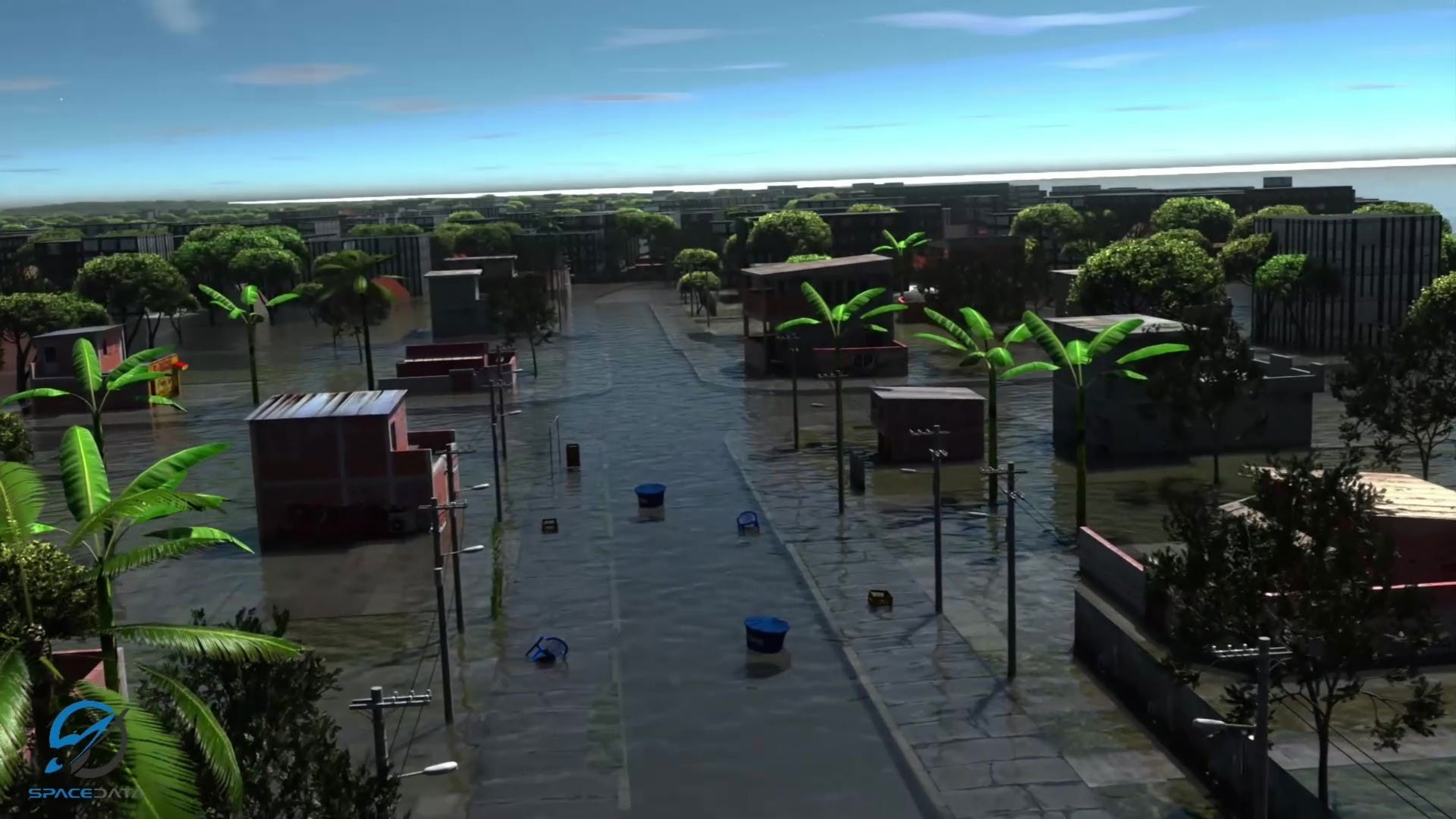




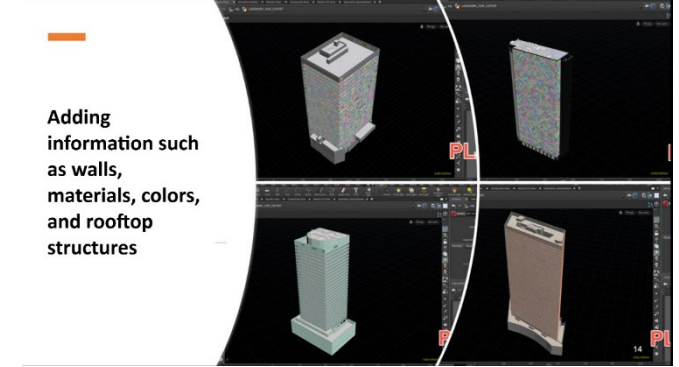
Create Digital Twin from Satellite Imagery



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- Digital twin technology leverages satellite imagery and AI to create highly detailed, real-time 3D models of the physical world.
- Compared to the development from UAV, Drone, or Stereo, using satellite data and AI is **cost-effective**.



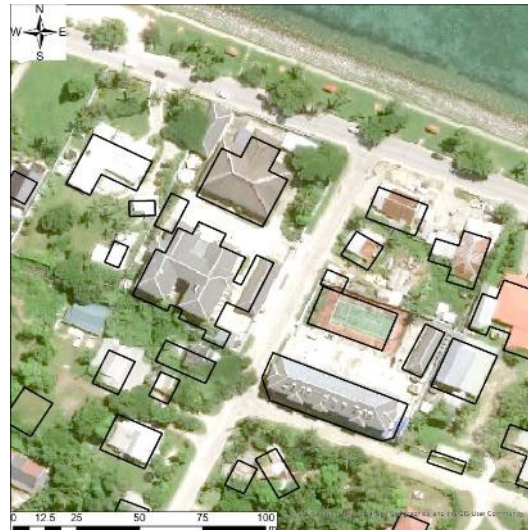
1

Procure 30-50 cm
Satellite Image



2

Detect Building with
Deep Learning Model



3

Build 3D with NeRF and
Gaussian Splatting



4

Create Realistic objects
using Pre-trained model



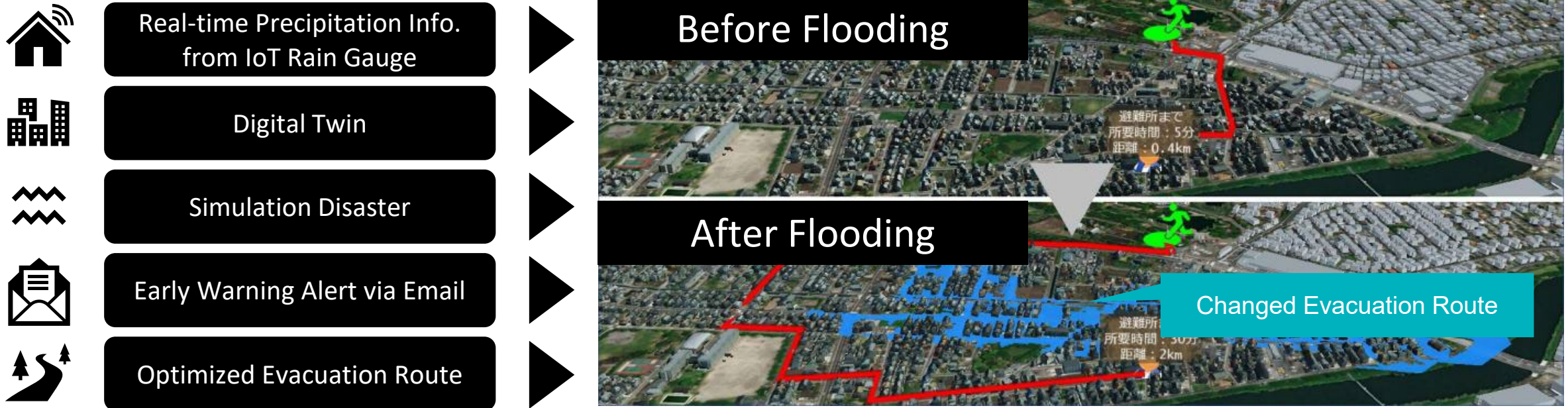
Next Action: 3D Digital Platform for Disaster Risk Management with Optimized Evacuation Route



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- UNOOSA leverages digital twin technology combined with IoT sensors to support disaster preparedness and response. By collecting real-time data on flooding depth, building footprints, road networks, and evacuation facilities, the digital twin helps optimize evacuation routes.
- The platform also facilitates data-driven discussions with stakeholders on updating critical infrastructure and evacuation planning to enhance resilience.



<https://www.mlit.go.jp/plateau/use-case/uc22-041/>