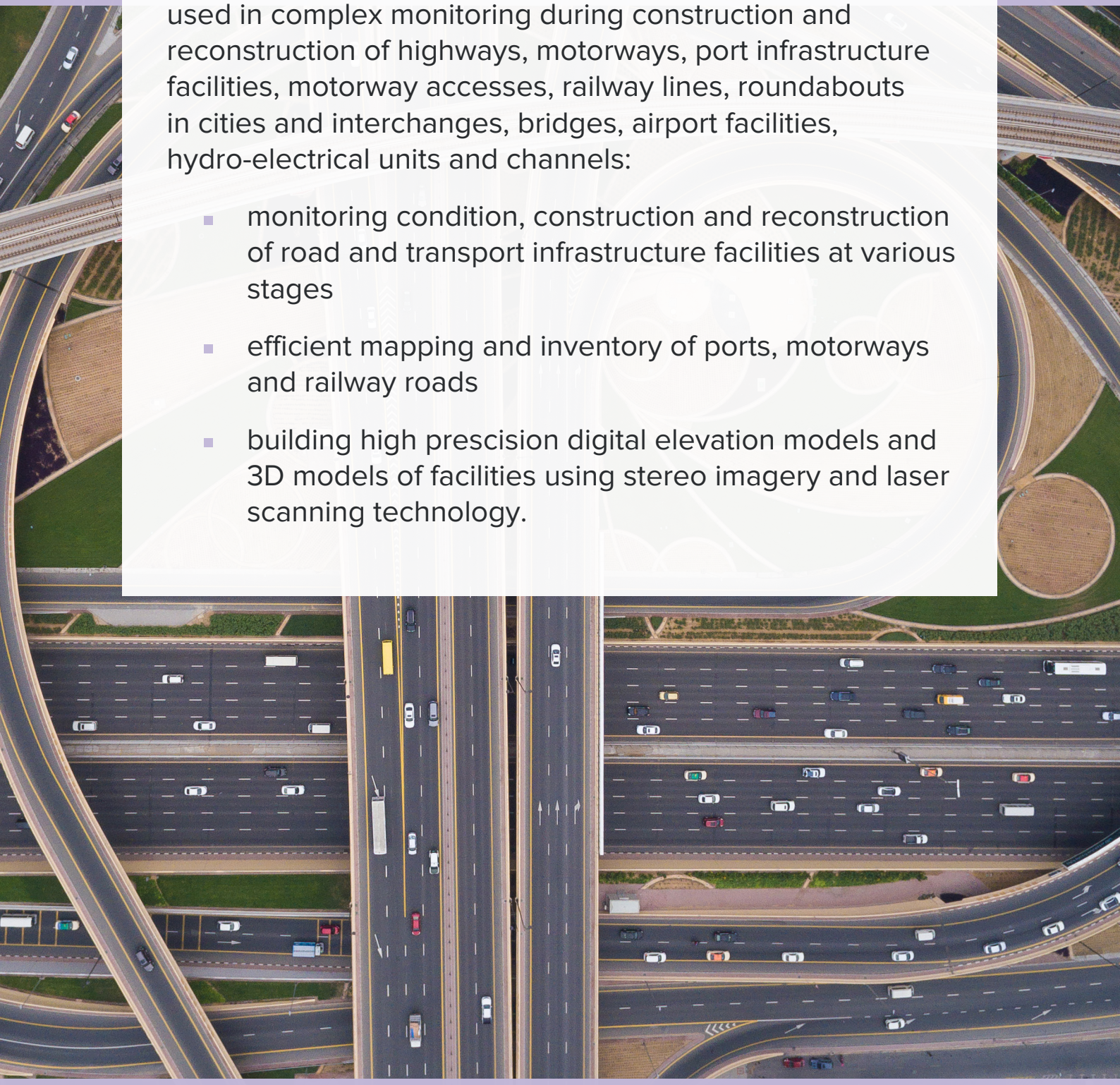
ROAD INFRASTRUCTURE

Space technologies applied by JSC TERRA TECH are used in complex monitoring during construction and reconstruction of highways, motorways, port infrastructure facilities, motorway accesses, railway lines, roundabouts in cities and interchanges, bridges, airport facilities, hydro-electrical units and channels:

- monitoring condition, construction and reconstruction of road and transport infrastructure facilities at various stages
- efficient mapping and inventory of ports, motorways and railway roads
- building high prescision digital elevation models and 3D models of facilities using stereo imagery and laser scanning technology.

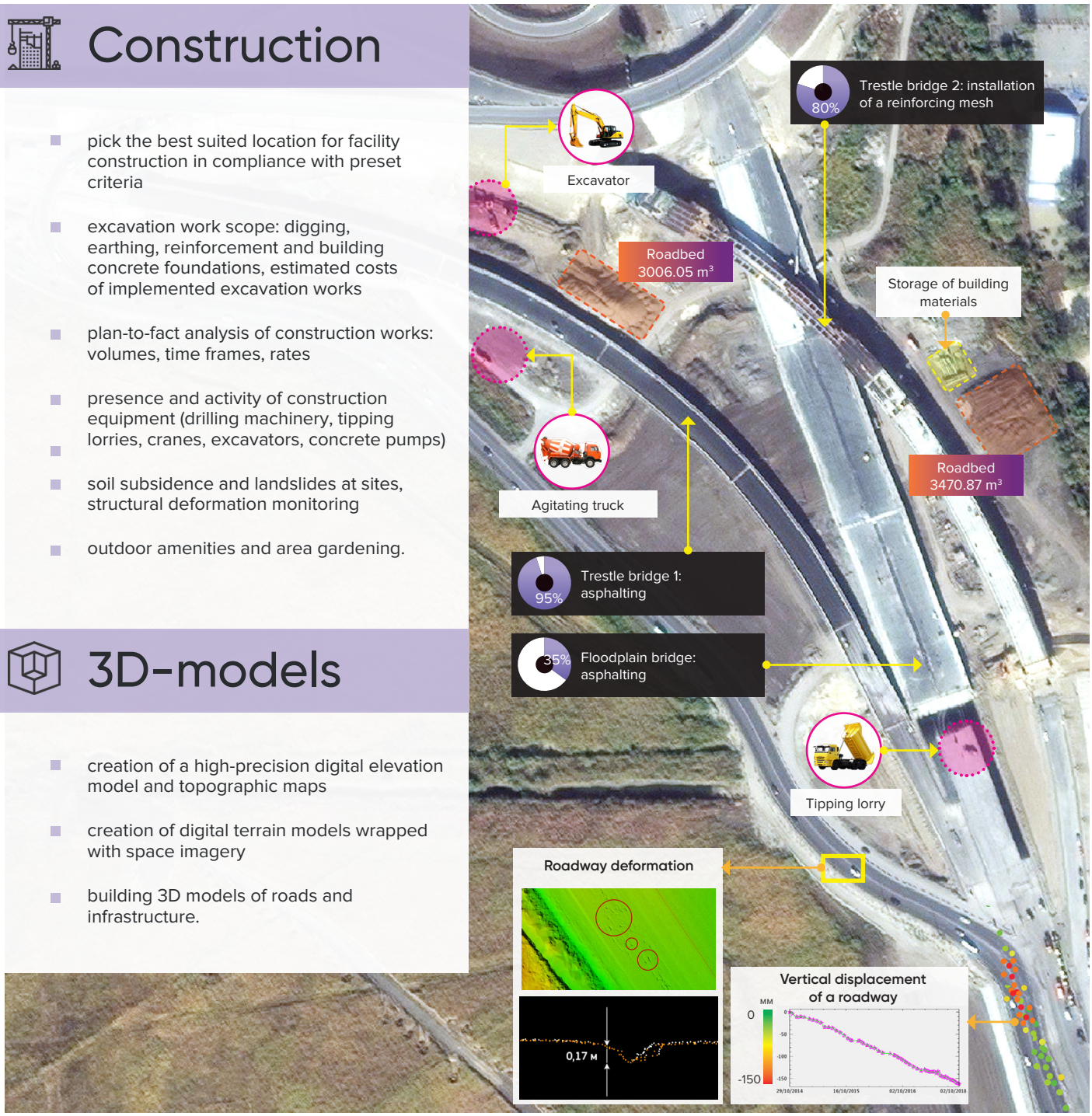


Construction

- pick the best suited location for facility construction in compliance with preset criteria
- excavation work scope: digging, earthing, reinforcement and building concrete foundations, estimated costs of implemented excavation works
- plan-to-fact analysis of construction works: volumes, time frames, rates
- presence and activity of construction equipment (drilling machinery, tipping lorries, cranes, excavators, concrete pumps)
- soil subsidence and landslides at sites, structural deformation monitoring
- outdoor amenities and area gardening.

3D-models

- creation of a high-precision digital elevation model and topographic maps
- creation of digital terrain models wrapped with space imagery
- building 3D models of roads and infrastructure.



Logistics

- updating road and transport network data: stock-taking and detection of new roads
- making logistic routes more efficient to reduce time and money costs of delivering construction materials to a facility construction site.

Roads under operation in 2014 (in accordance with a navigation map)

Roads built between 2014 and 2018 (in compliance with ERS data)

Routes used for construction material delivery to a construction facility till 2018

Optimized routes for construction material delivery