

The Survey of ISRAEL

National Digital Twin

Engine of innovation,
collaboration and
growth Opportunities

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Dear AI, Describe Israel main challenges



Israel main challenges

National security needs

Housing crisis

Infrastructure coordination

Transportation

Energy

Climate and environment



It's OK, you're not alone

A woman with short, wavy blonde hair, wearing a light-colored, textured jacket, is speaking at a podium. She has her eyes closed and a slight smile. Behind her is a blue background with a large, faint white star, resembling the European Union flag. The text "Sounds familiar." is overlaid at the bottom of the image in a bold, white font with a black outline.

Sounds familiar.



**WHAT DO
WE HAVE IN
COMMON?**

Surveying

GIS

Mapping

PROBLEM
SOLVING

Vectors

Cadaster

Aerial Imagery

Spatial Data



**How Mapping agencies
helps to solve problems?**



Location based decisions !

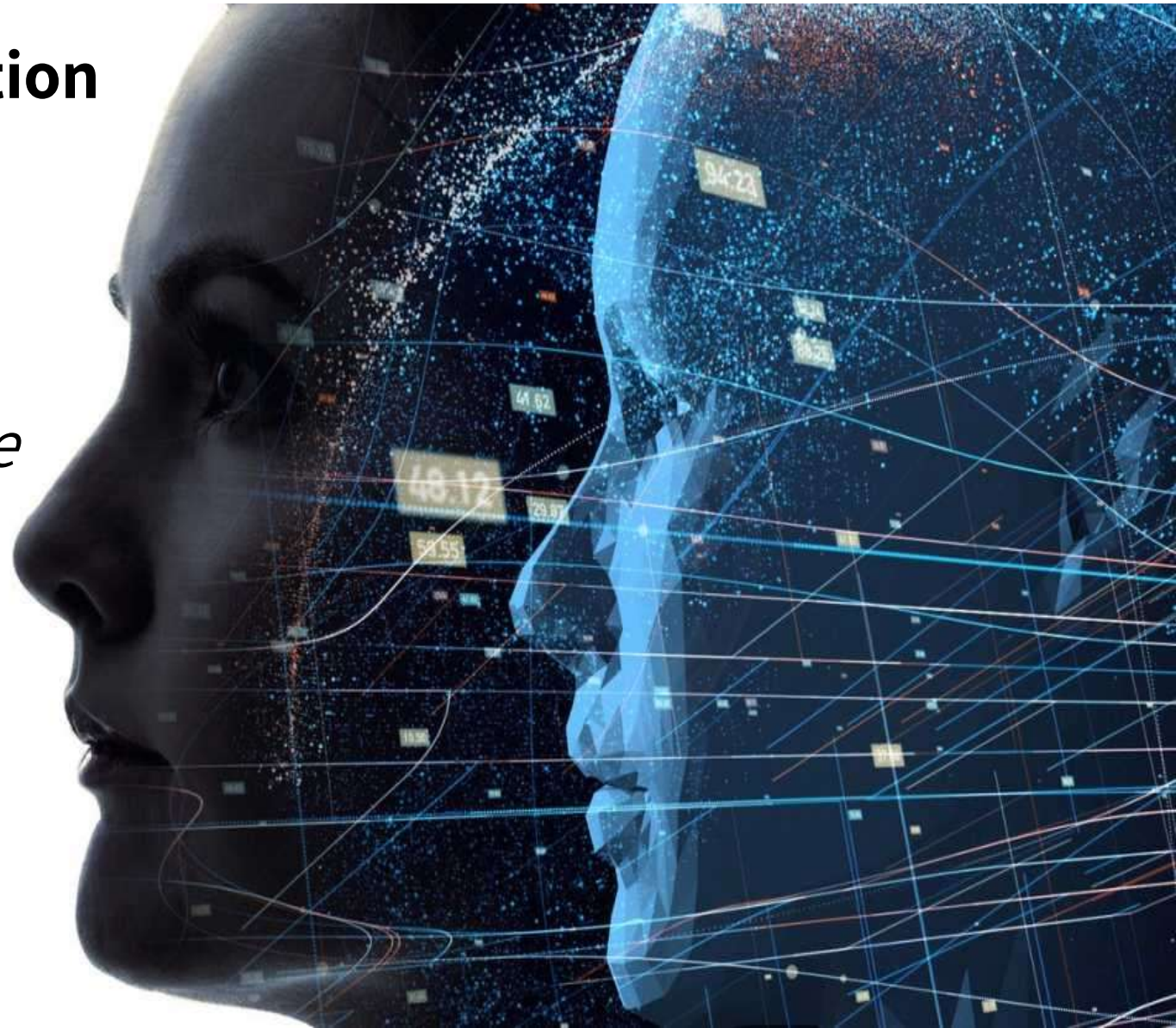


NDT – National Digital Twin

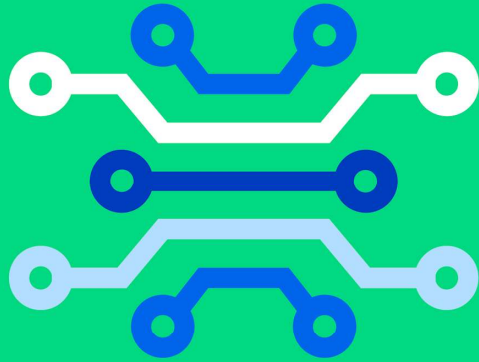


Digital Twin definition

*digital, dynamic,
up-to-date, accurate
representation of
objects, processes,
and systems in the
physical world.*



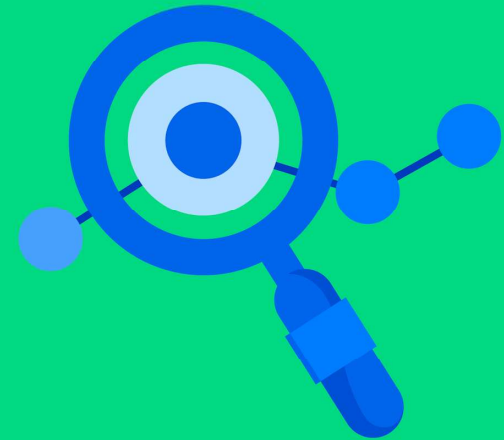
The 3 Pillars of National Digital Twin



Data



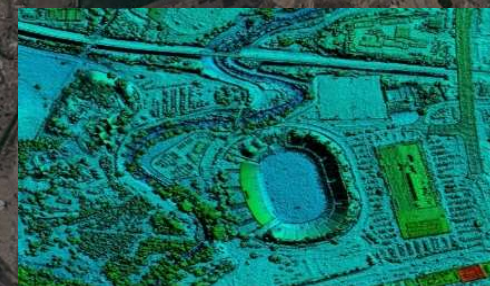
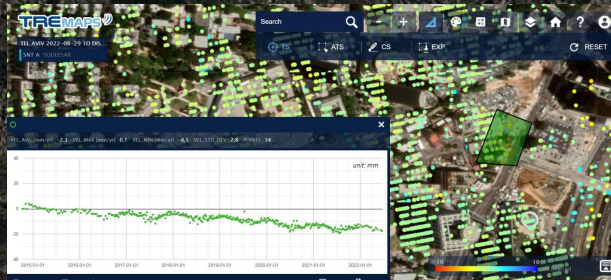
Technology



Collaboration

Data – Building the digital twin of reality

- From satellite to under ground
- Diverse products (vertical, oblique, ground)
- Variable resolutions
- Accuracy on demand
- Fast response



Data via Governance

Cad to GIS

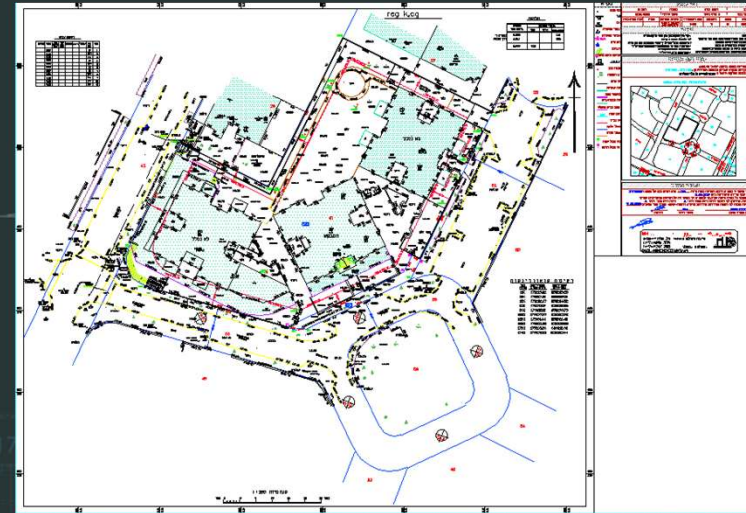
Local – Municipal - National

- Cadaster Maps
- As made maps
- Engineering Survey
- Planning, Licensing, Registration

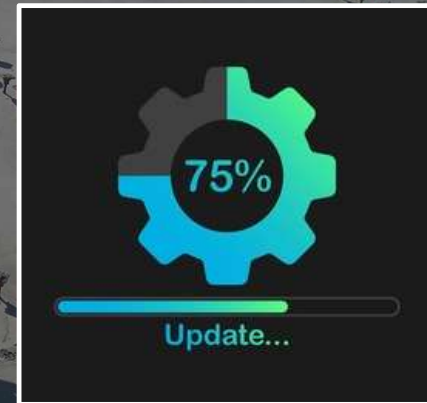
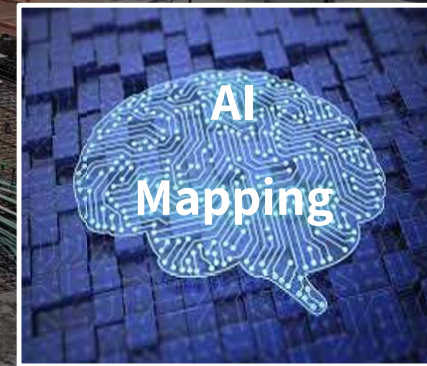
Cad



GIS

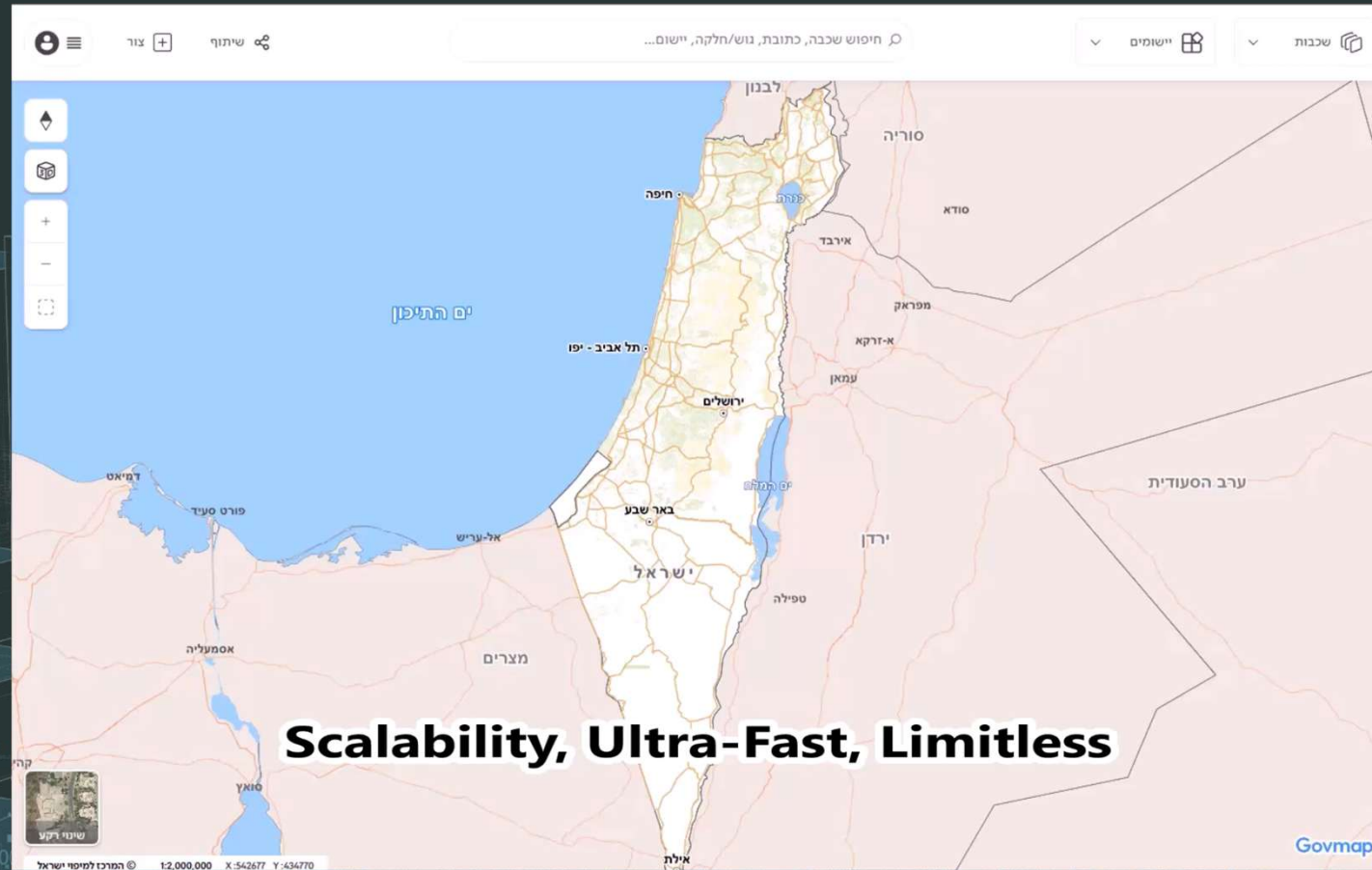


Technology – The need to rebuild Necessity of a digital twin



Platform – National Geospatial Portal

- Open source code
- AWS cloud base
- Limitless
- Scalability
- 3D Build-in engine
- Generic API
- Offline



Collaboration



The Main 3 Challenges

The image shows a red running track with white lane markings. Three hurdles are placed across the track, each representing a challenge. The hurdles are silver with red legs and black and white markings on the top bar. The hurdles are arranged in a line from left to right, with the first hurdle labeled 'Budget', the second 'Tech Talents', and the third 'Collaboration'. The background shows a green field and a white fence.

Budget

**Tech
Talents**

Collaboration

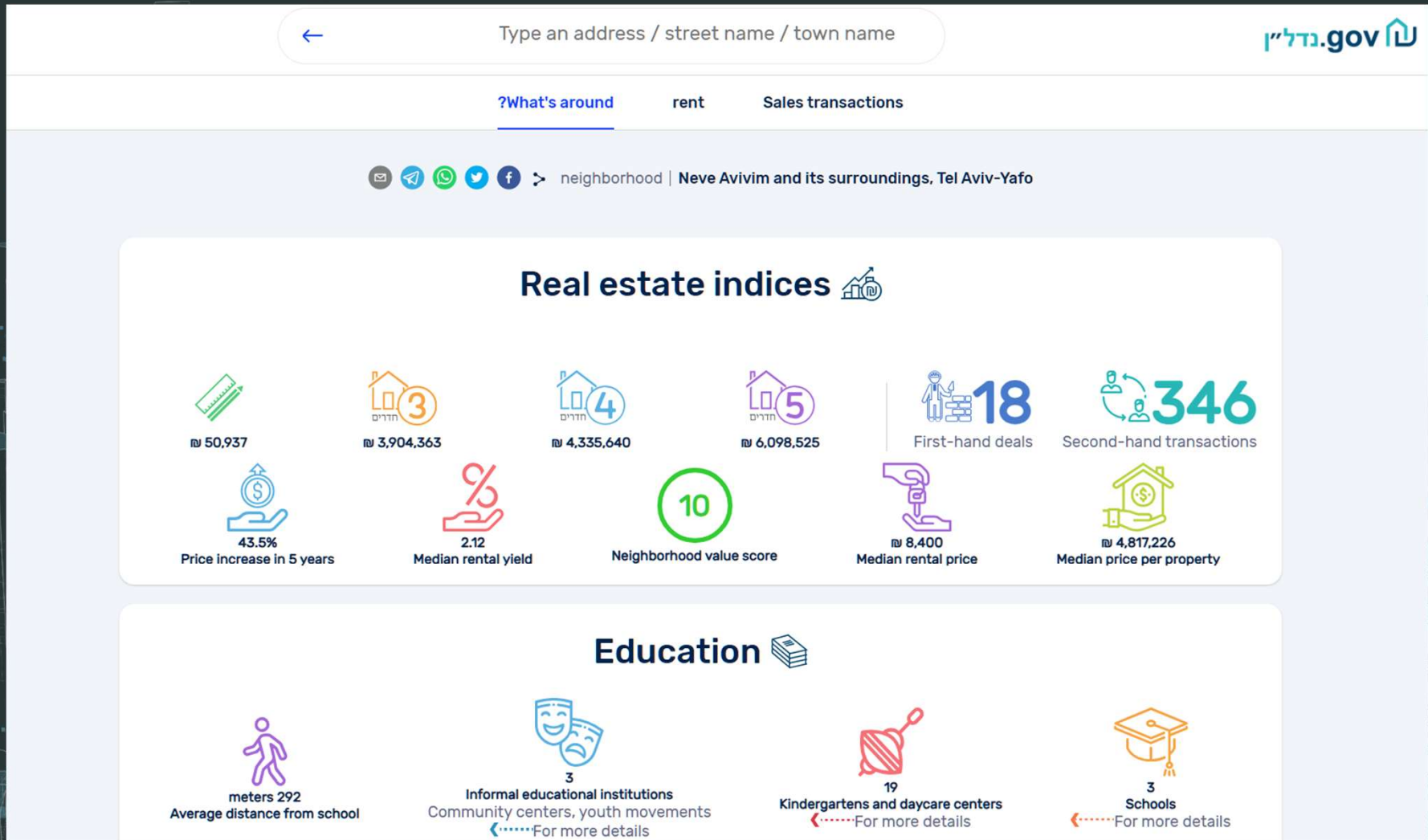
We don't have
the privilege
to wait



**How can we take down
The government silos?**



Real Estate open data



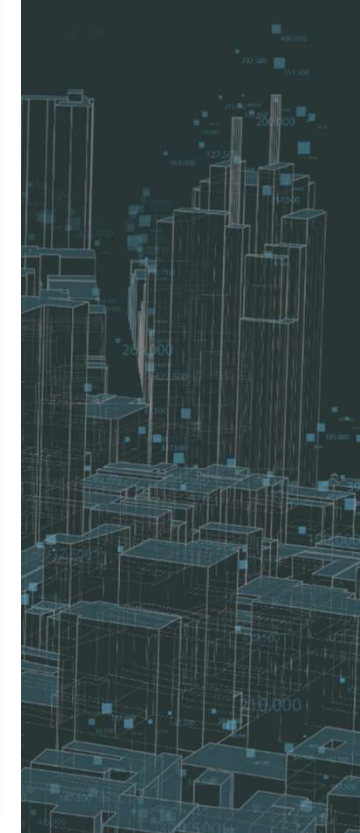
10 Bn investment - urban renewal in peripheral areas

AI classification – image from 1982



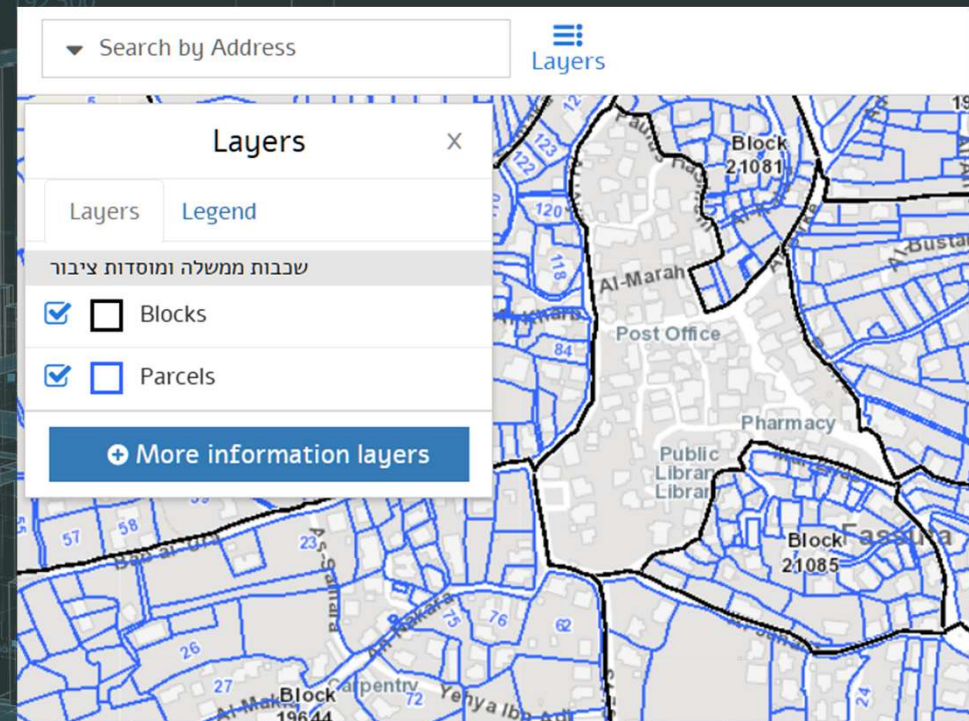
Evacuation and reconstruction



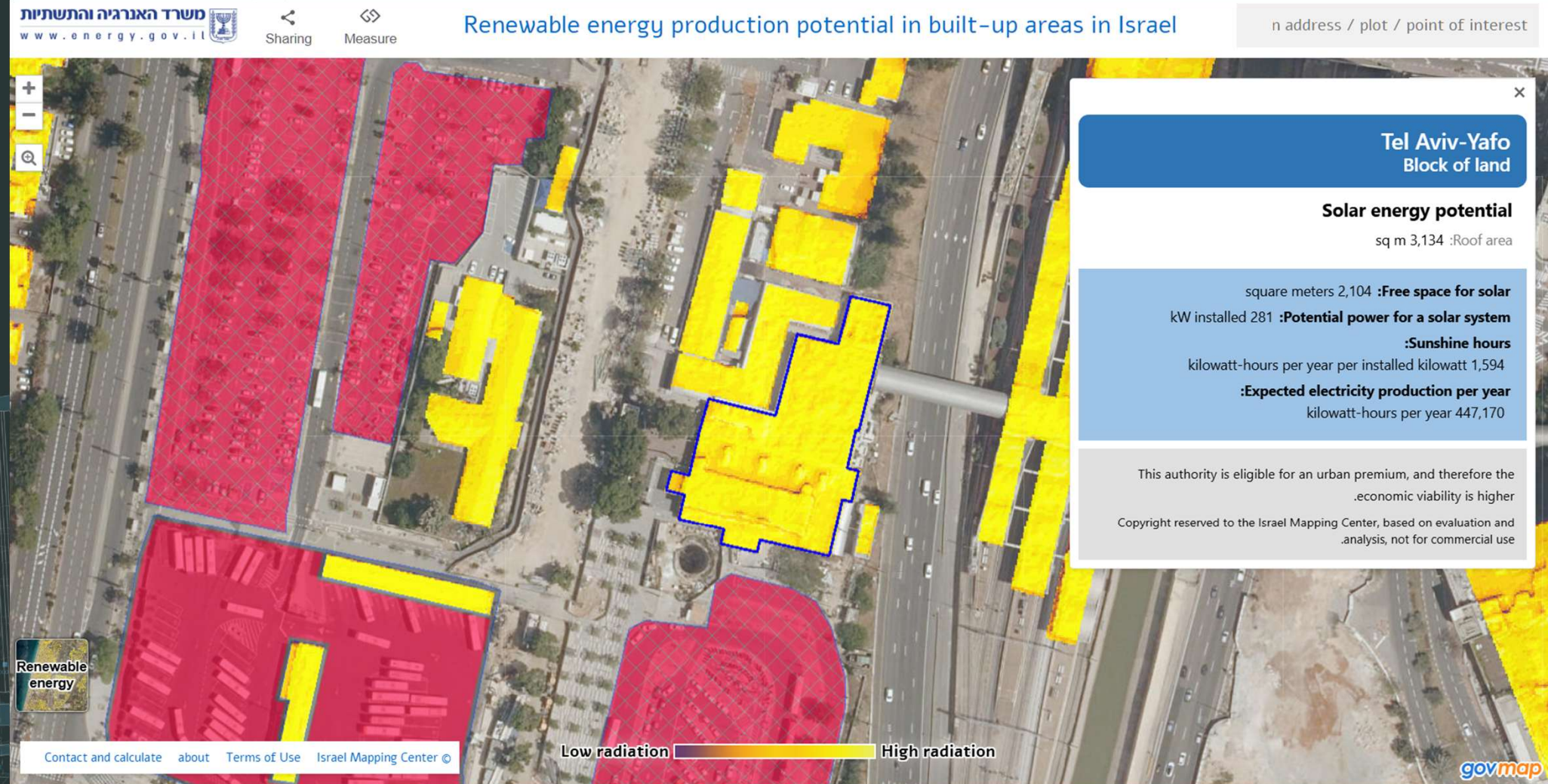


Diversity & Inclusion – bridging the gaps

Peripheral, social, and economic disparities



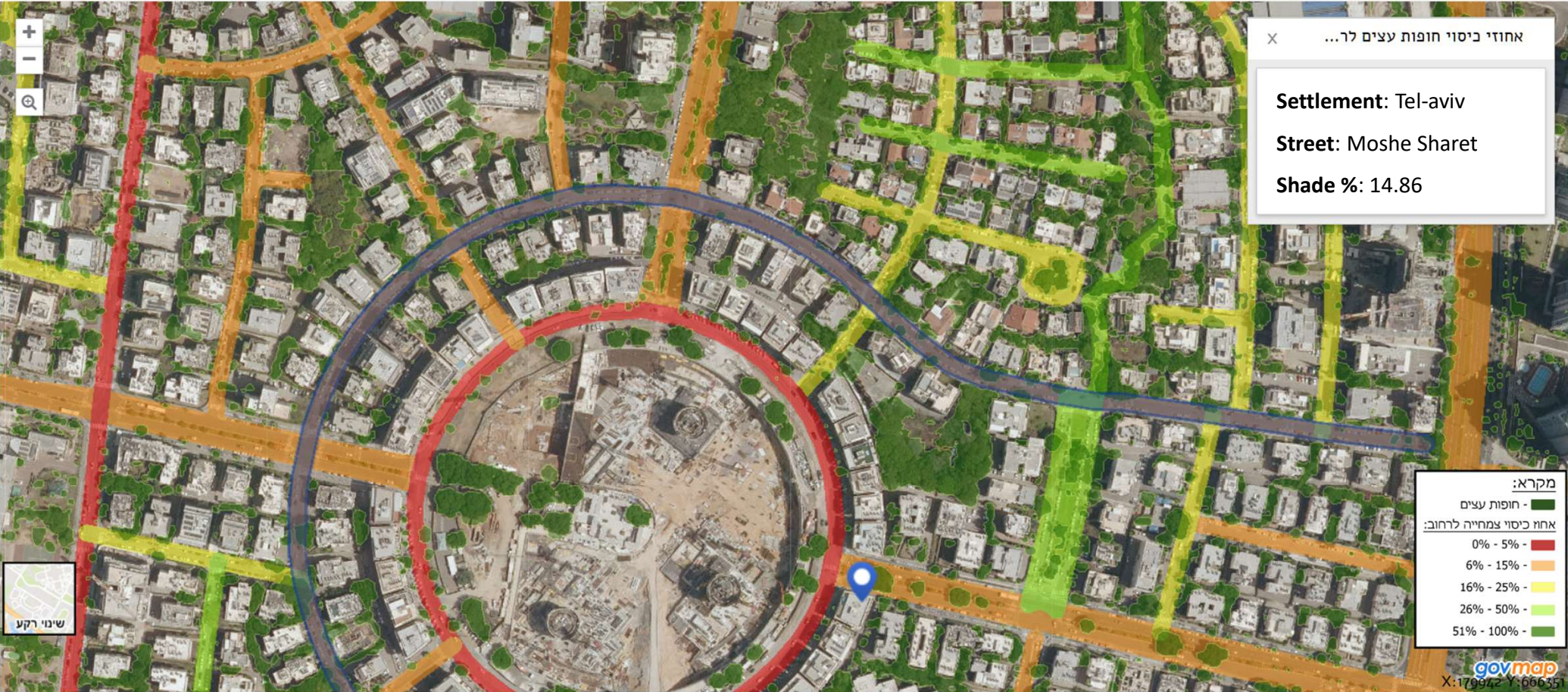
Energy – Where can renewable energy be implemented?



Climate and Environment – Street Shade Index



Mapping vegetation data and canopy cover index in streets




Mapping within the framework of Government Resolution 1022 for shading and cooling of urban space [in the link](#)
Calculated using machine learning – inaccuracies may occur
The map was prepared by the Israel Mapping Center.

Transportation – smart planning decisions



You Show neighborhoods in Rishon LeZion where the price of a 4-room apartment ranged between 3 and 3.5 million NIS.

10a Show neighborhoods in Rishon LeZion where the price of a 4-room apartment ranged between 3 and 3.5 million NIS.

 **Ask-GIS AI**

Highlighted on the map are neighborhoods in which the price of a 4-room apartment ranged between 3 and 3.5 million NIS, based on deal data recorded in the last year and published on the Tax Authority website.

- In the past year, 12 apartments were sold at a median price of 3.42 million NIS.

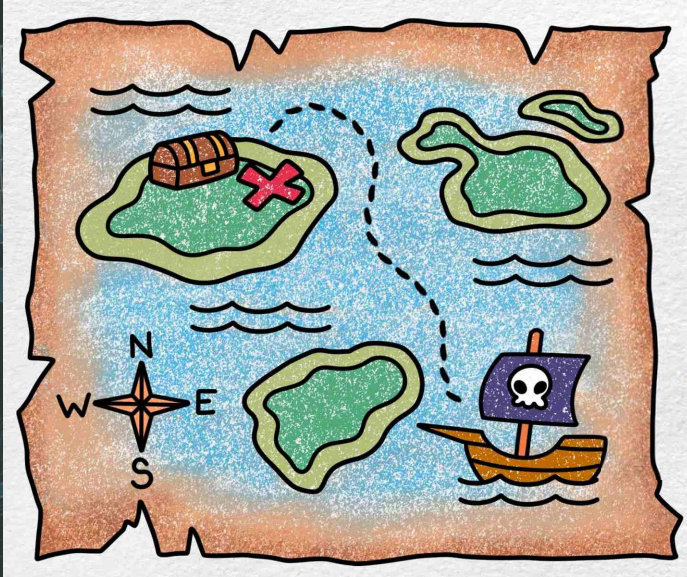
- In the past year, 5 apartments were sold at a median price of 3.12 million NIS.

- In the past year, 9 apartments were sold at a median price of 3.31 million NIS.



Summary – Our role as mapping unit managers:

From display tool into a decision-support tool



VS



National Mapping Agencies SUMMIT

At the International
Cartographic Conference (ICC)
Tel Aviv 2027

