The Survey of ISRAEL

National Digital Twin

Engine of innovation, collaboration and growth Opportunities

Hagi Ronen – CEO, The Survey of Israel

Chat GPT
Dear AI, Describe Israel main challenges

Israel main challenges

National security needs

Housing crisis

Infrastructure coordination

Transportation

Energy

Climate and environment

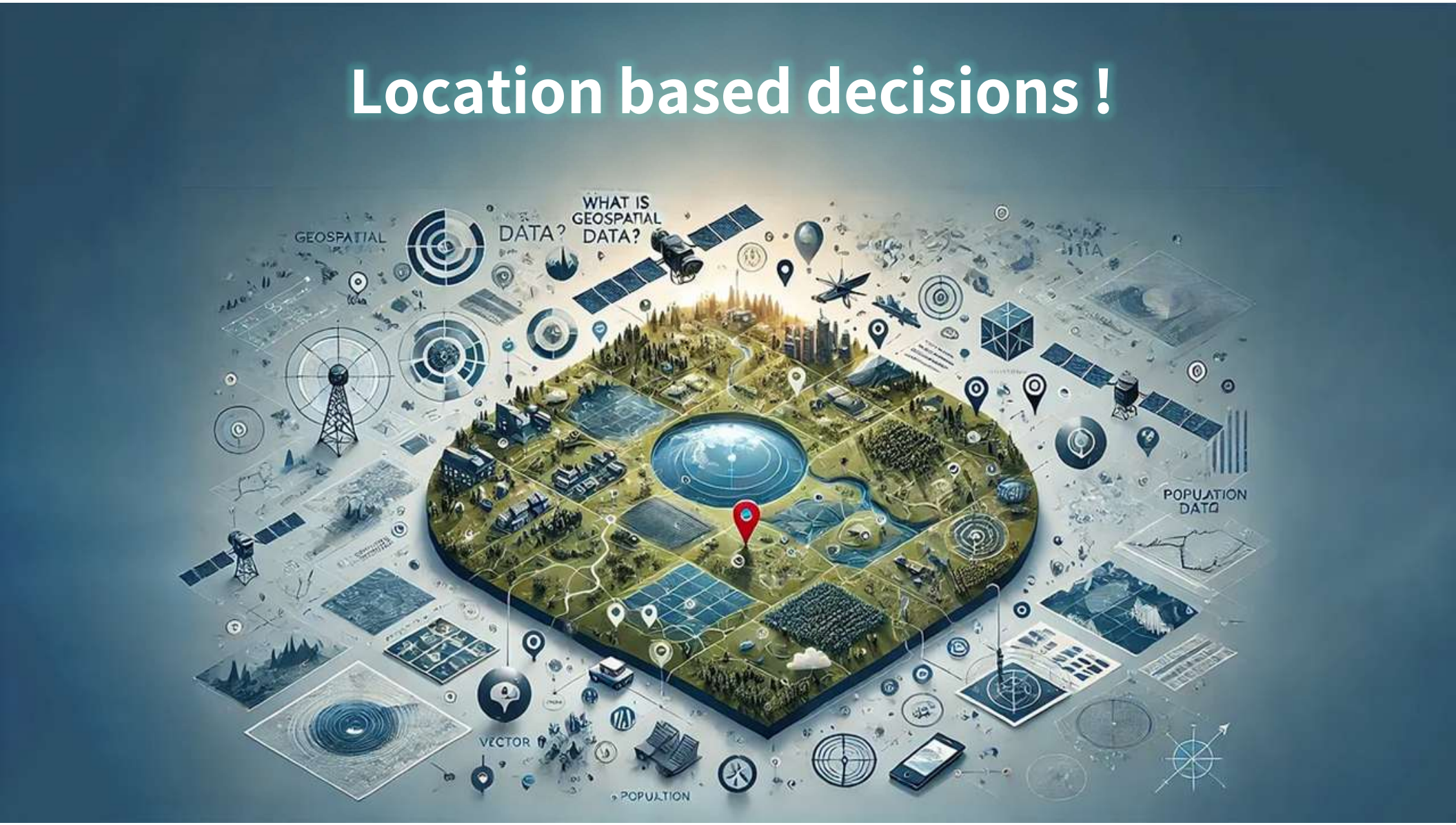
It’s OK, you're not alone

WHAT DO
WE HAVE IN
COMMON?

Surveying
GIS
Mapping
PROBLEM
SOLVING
Vectors
Cadaster
Aerial Imagery
Spatial Data

How Mapping agencies helps to solve problems?

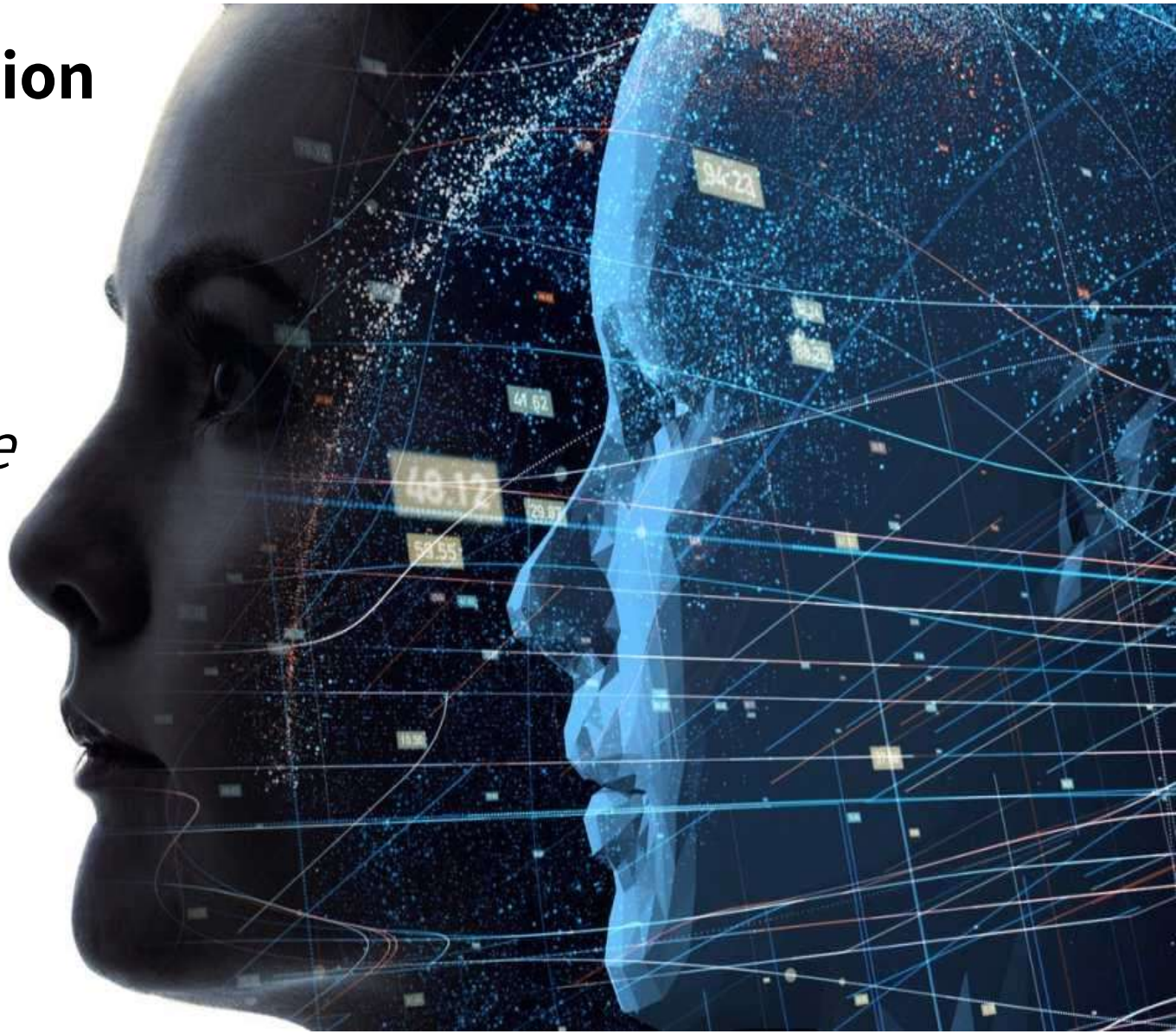
Location based decisions !



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

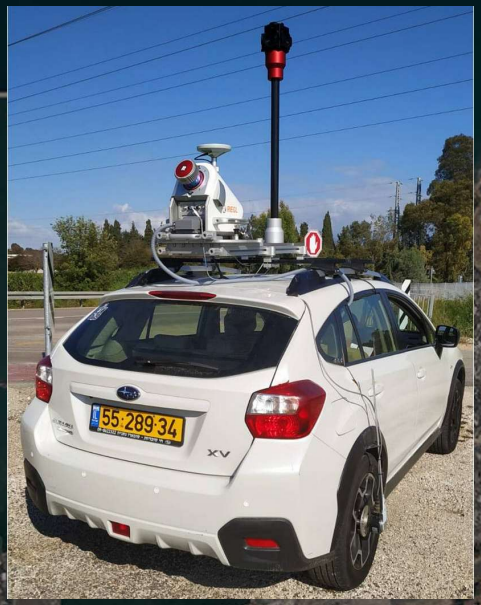
Data

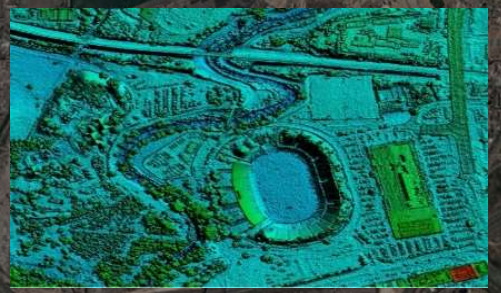
Technology

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



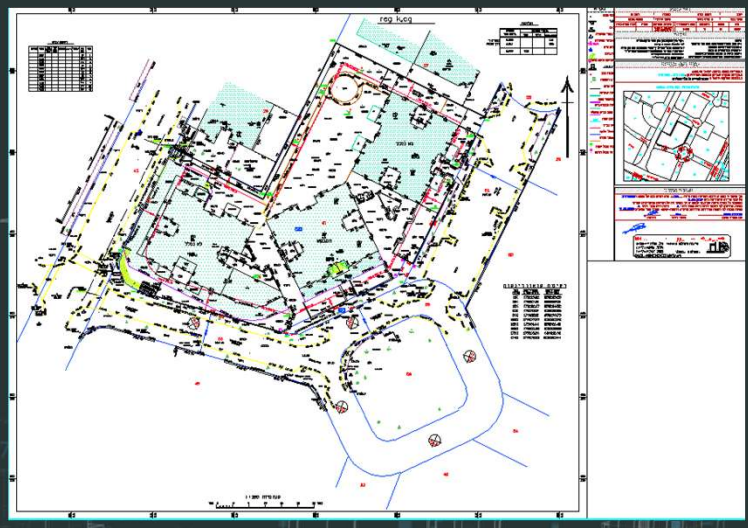


Data via Governance
Cad to GIS

Local – Municipal - National

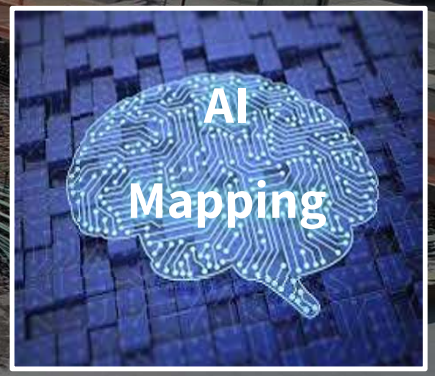
- **Cadaster Maps**
- **As made maps**
- **Engineering Survey**
- **Planning, Licensing, Registration**

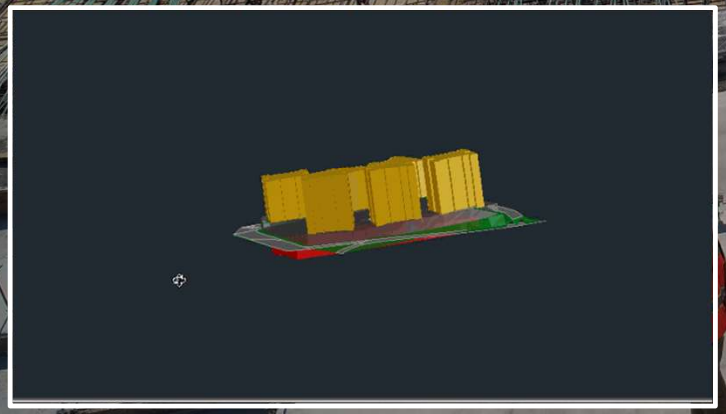
Cad



GIS

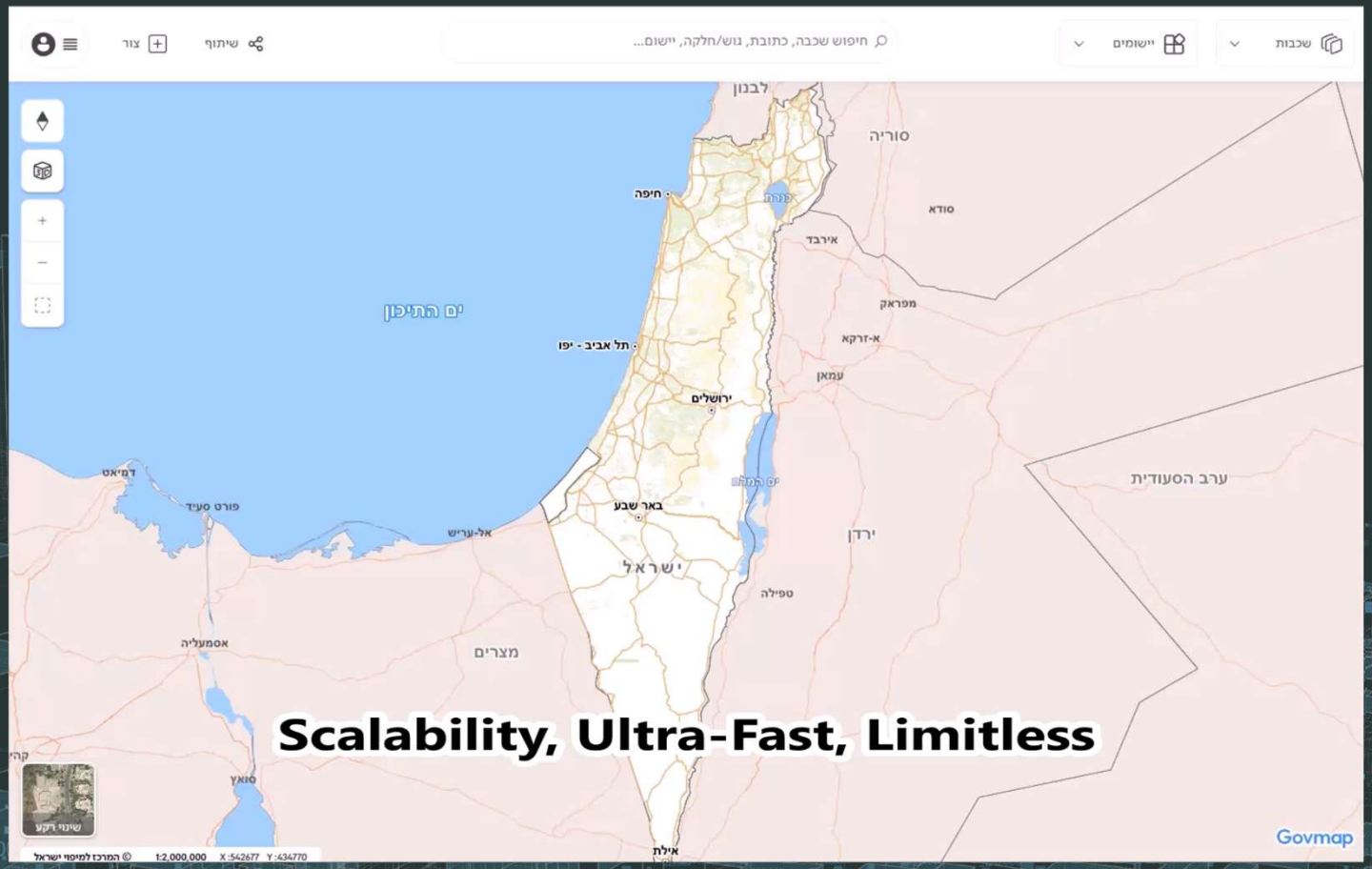
Technology – The need to rebuild
Necessity of a digital twin





Platform – National Geospatial Portal

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



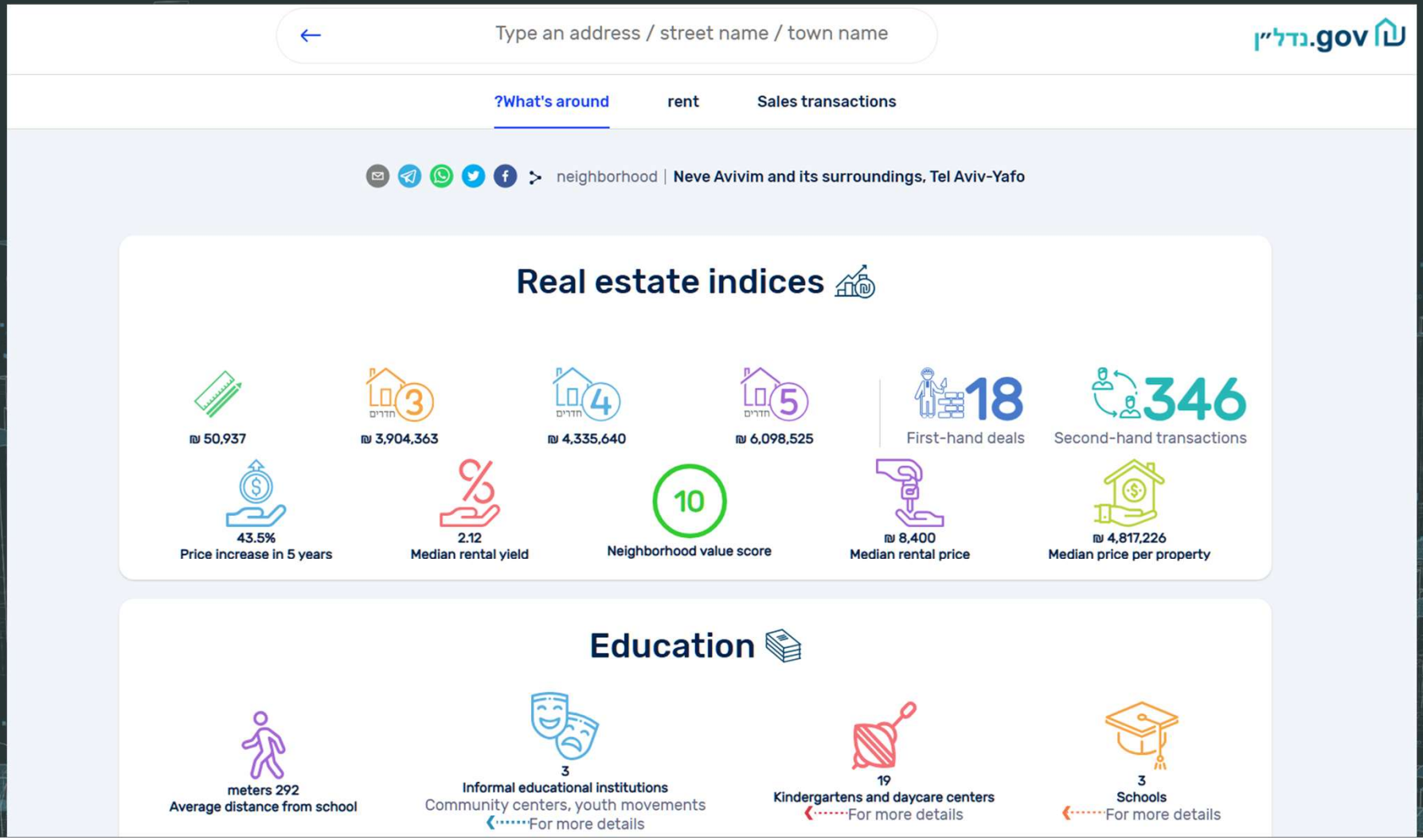
Collaboration

The Main 3 Challenges
Budget
Tech Talents
Collaboration

We don’t have the privilege to wait

How can we take down The government silos?

Real Estate open data

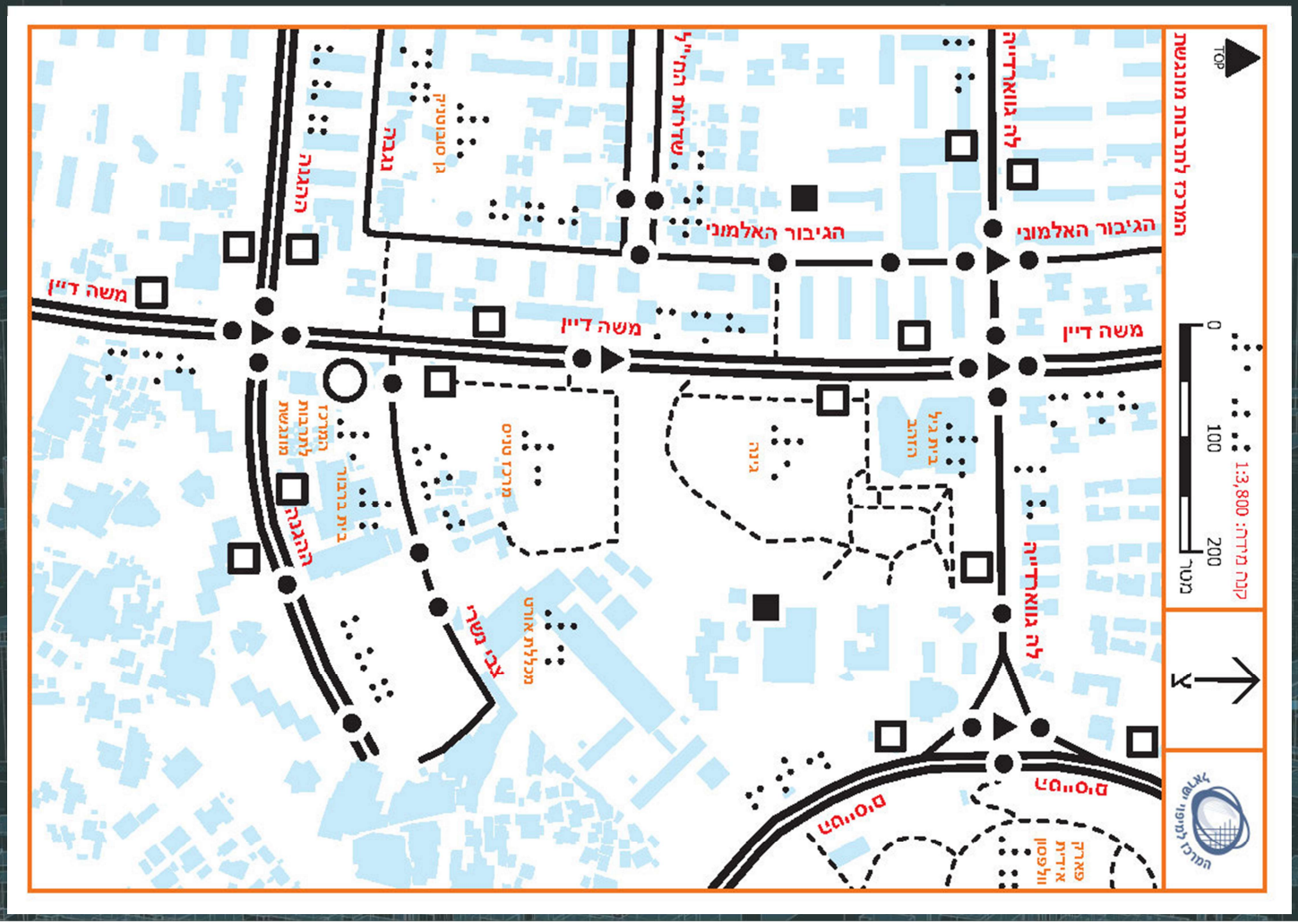


10 Bn investment - urban renewal in peripheral areas

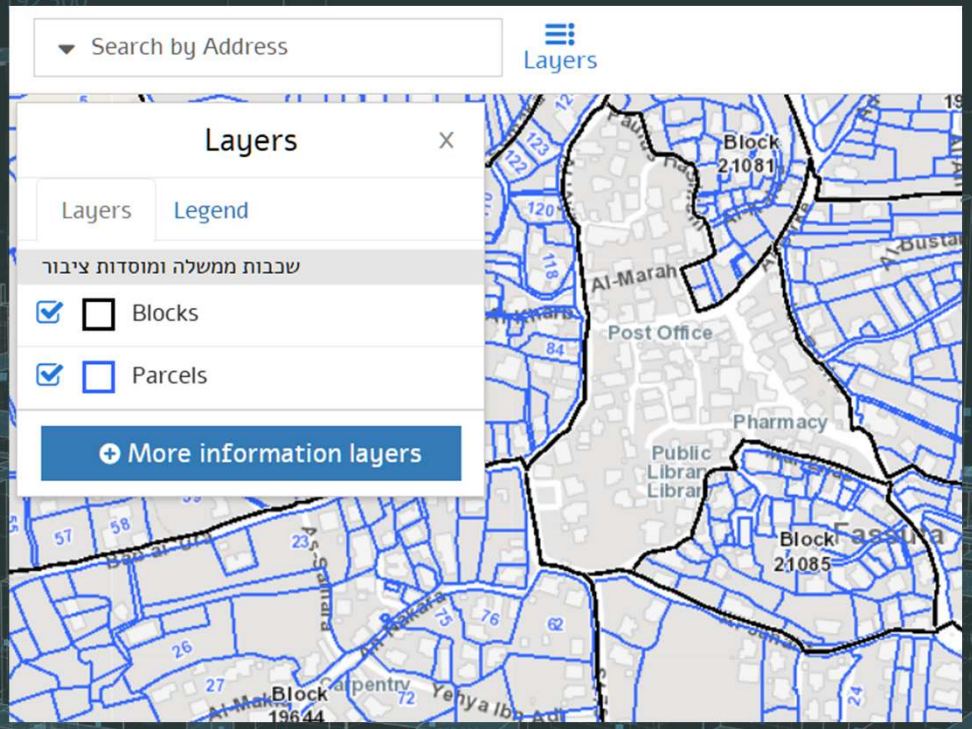
AI classification – image from 1982

Evacuation and reconstruction

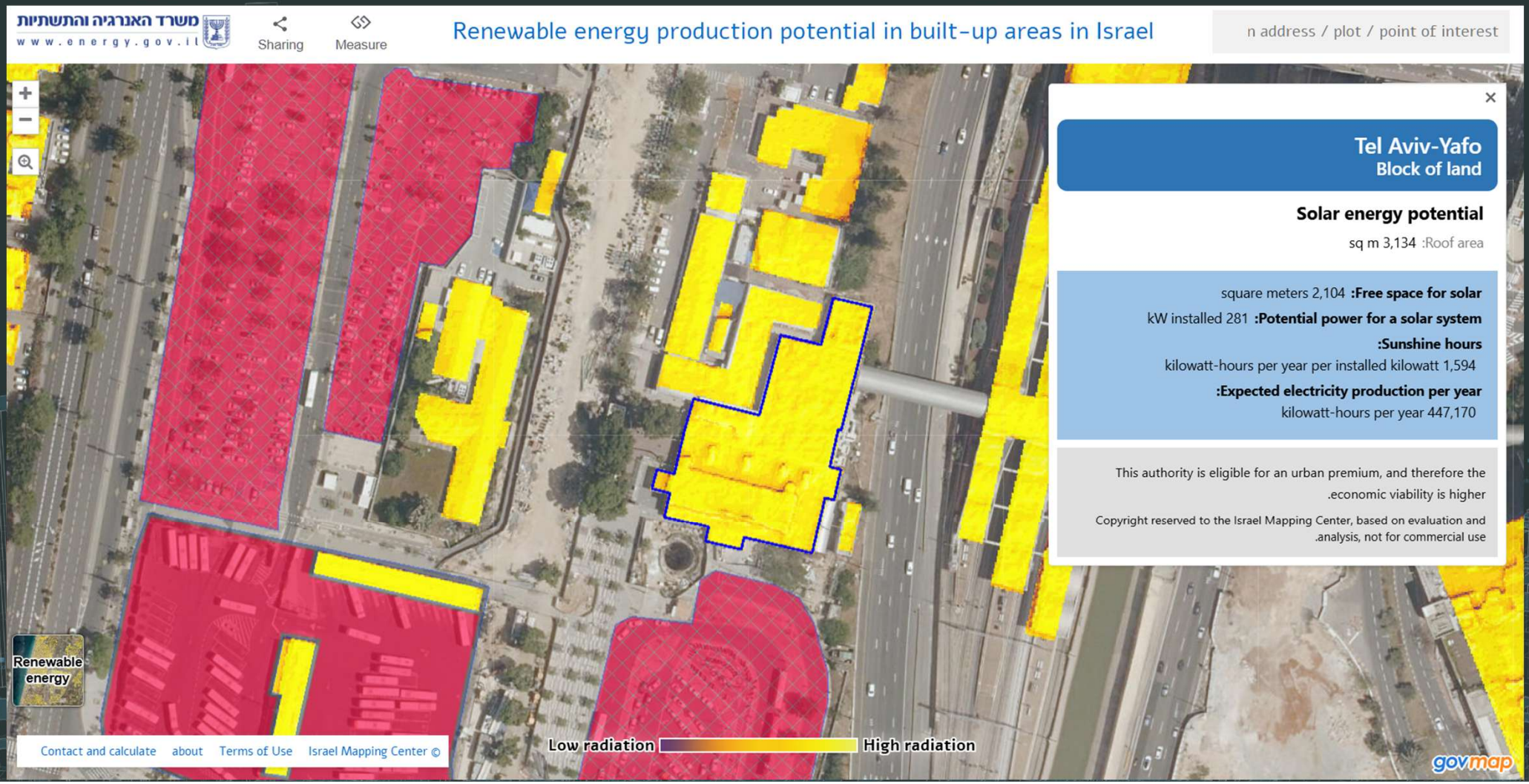
Diversity & Inclusion - Maps for blind and visually impaired



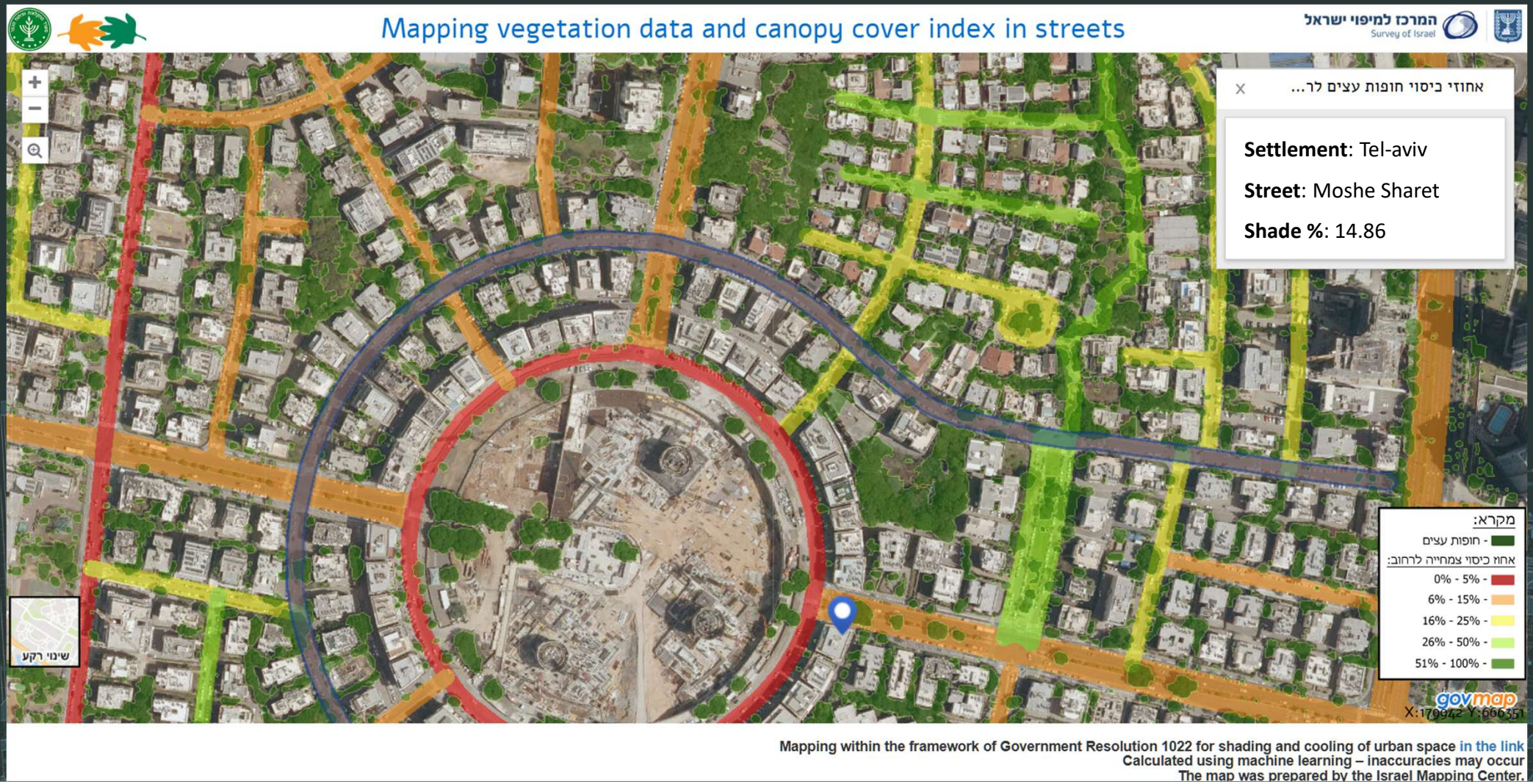
Diversity & Inclusion – bridging the gaps
Peripheral, social, and economic disparities



Energy – Where can renewable energy be implemented?



Climate and Environment – Street Shade Index



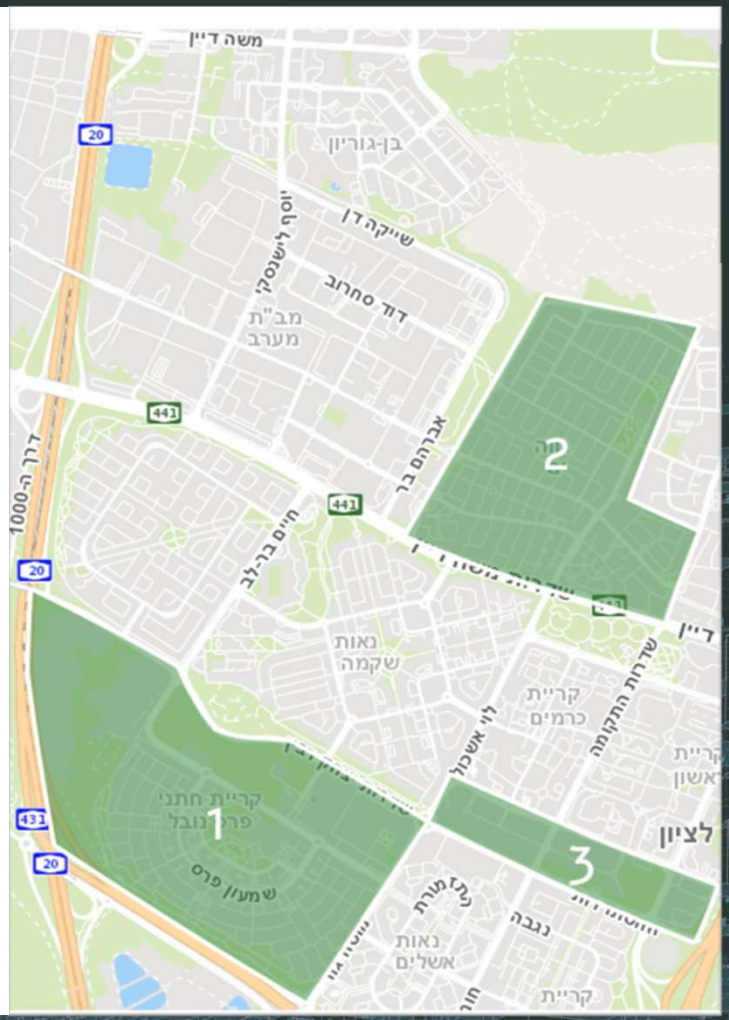
Transportation – smart planning decisions

GenAI - expert technology at the citizen's fingertips

You
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.

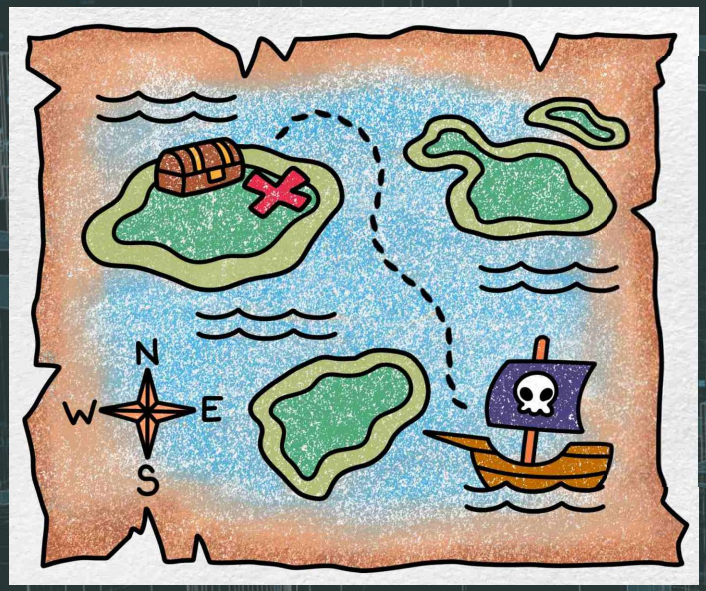
1. **Neve Hof Neighborhood**
   In the past year, 12 apartments were sold at a median price of 3.42 million NIS.
2. **Neve Yam Neighborhood**
   In the past year, 5 apartments were sold at a median price of 3.12 million NIS.
3. **Kiryat HaLeom Neighborhood**
   In the past year, 9 apartments were sold at a median price of 3.31 million NIS.



AskGIS
Israel smart GIS agent

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