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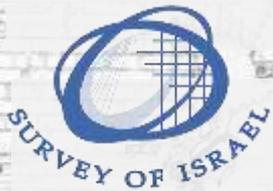
FIG WORKING WEEK 2017

Helsinki Finland

29 May - 2 June 2017

Presented at the FIG Working Week 2017,
May 29 - June 2, 2017 in Helsinki, Finland

New Cadastral Processes for Town Planning Aim at Expediting Land Registration



Eng. Shimon BARAZANI

Deputy Director General for
Cadaster in the Survey of Israel

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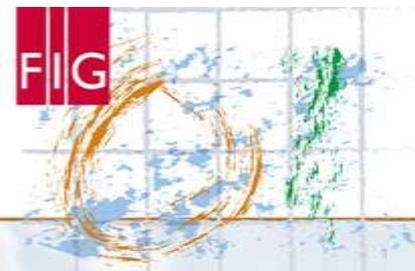
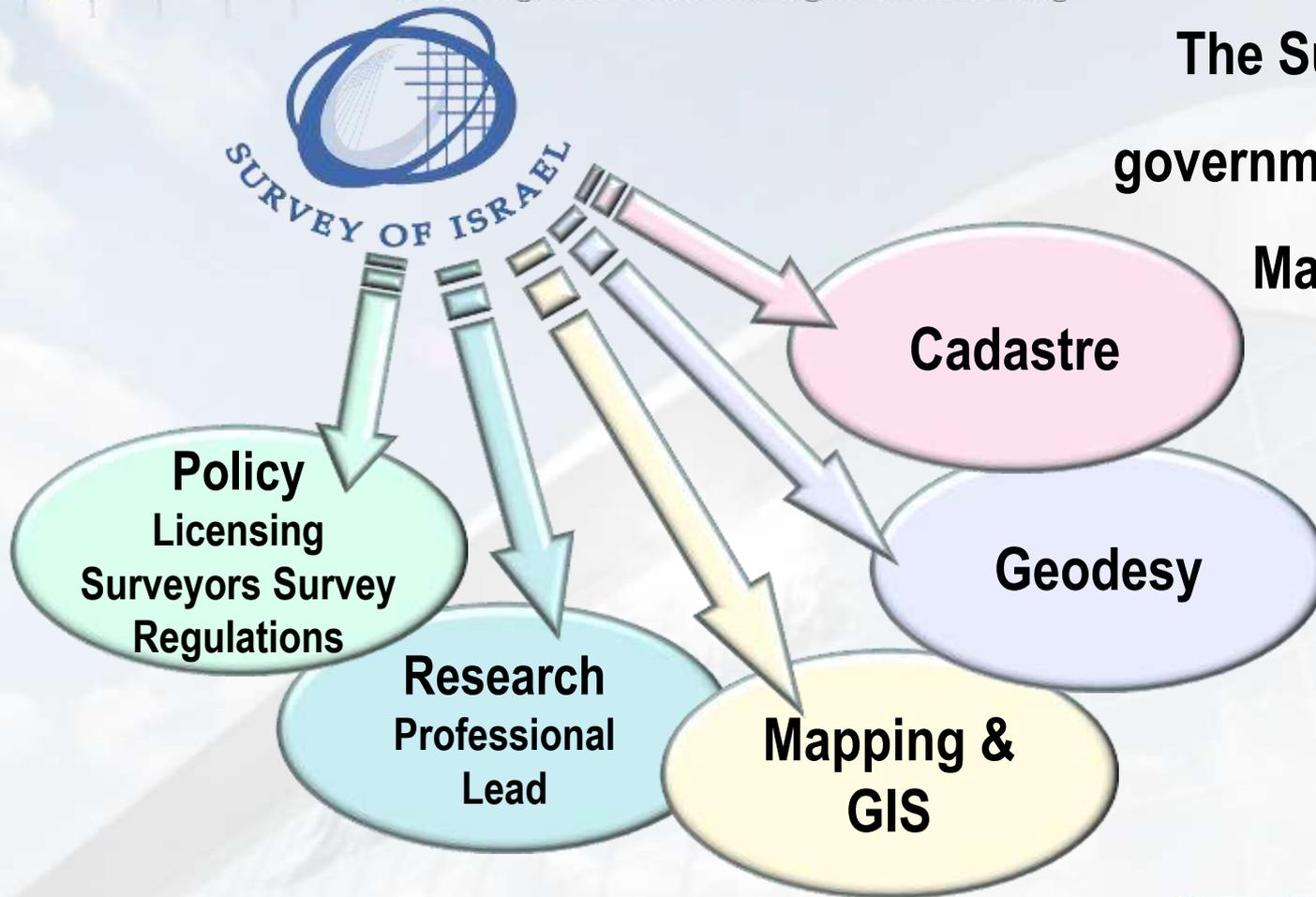


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The Survey of Israel is governmental agency for Mapping, Geodesy, Cadastral and Geoinformatics

State of Israel

Ministry of Housing and Construction
Survey of Israel



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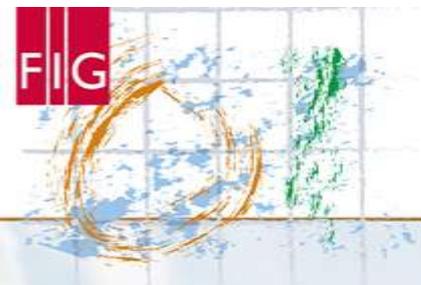


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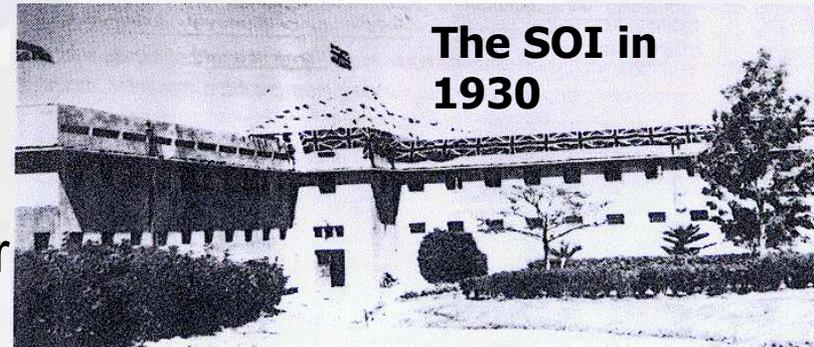
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About the Survey of Israel

- Established in 1920 by the British Mandate
- Employs around 250 people
- More than 30% of the employees have a Master Degree or higher
- Annual budget of ~ 25M\$
- Leads the Israeli inter-governmental committee for GIS
- Govern using ~20 orders, acts and government decisions



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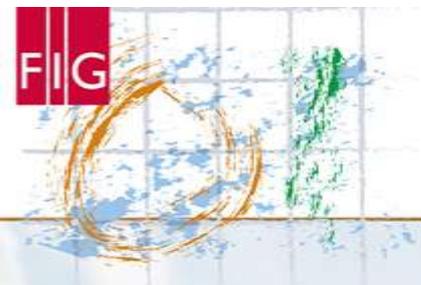


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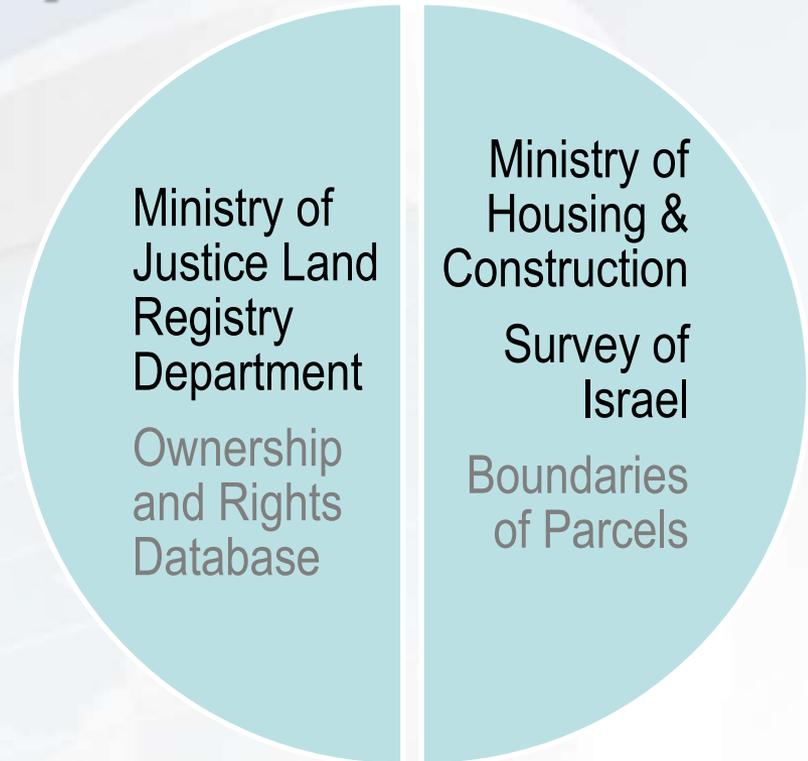
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Israeli Cadastral Principles

- 📍 The land registration method accepted in Israel is based on the Torrens principles (Registration of Titles).
- 📍 The state, through the services of the Survey of Israel, SOI, is responsible for the description of the land parcel boundaries as registered in the Land Registry Department



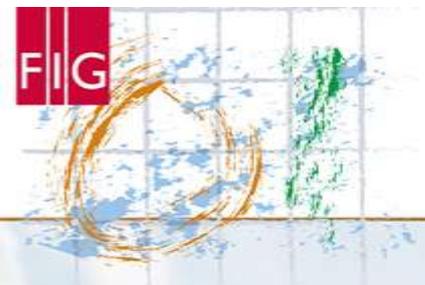


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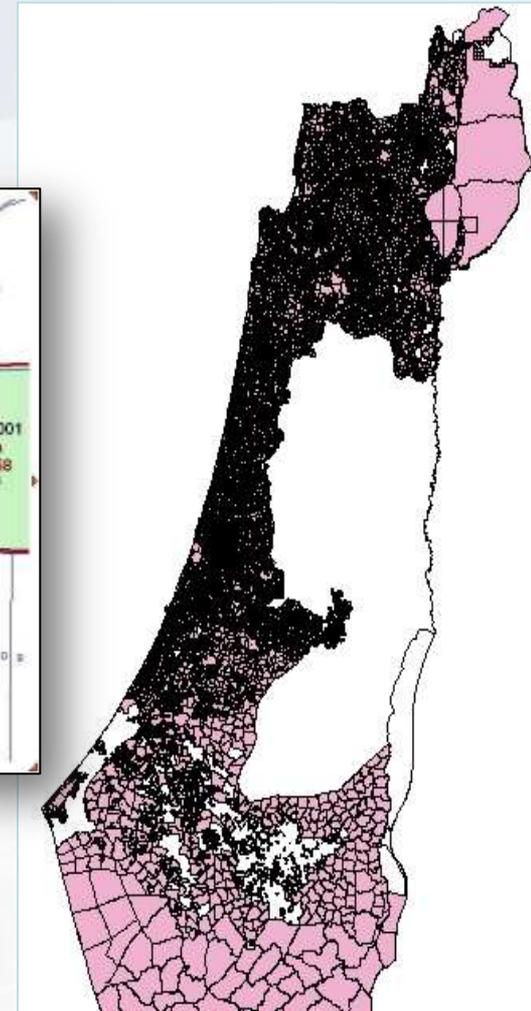
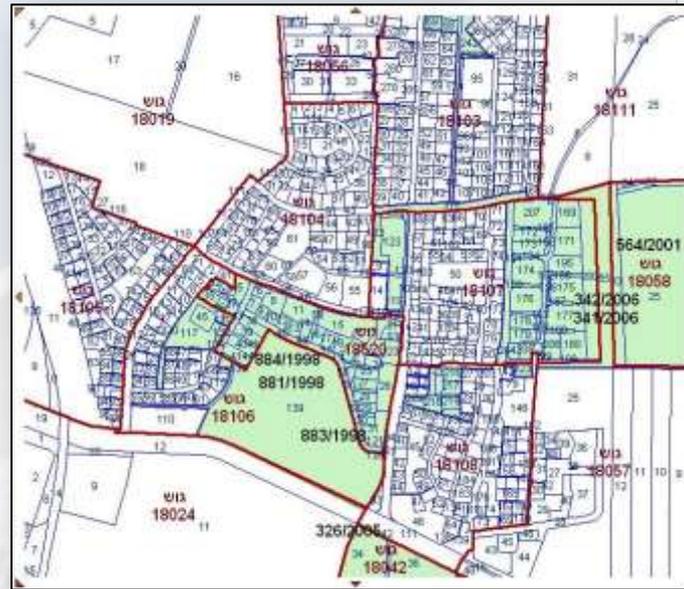
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Israeli Cadastral Layer

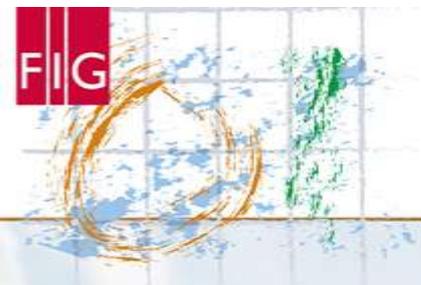
Land settlement

- 📍 Covers about 97% of the State of Israel
- 📍 Includes about 16,000 blocks that contain 800,000 parcels



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Israeli Cadastral Layer

- 📍 The cadaster layer is a puzzle of Registration Blocks and Subdivision (mutation) Plans
- 📍 The accuracy of this layer is 5 cm to 5 meters
- 📍 The accuracy depends on the quality of the method of the cadastral procedures and the way of Inserting the data into the National Cadastral database (digitation, coordinates in old Israeli grid and approximately transformation to modern Israeli grid IG05/12, coordinates in modern Israeli grid)

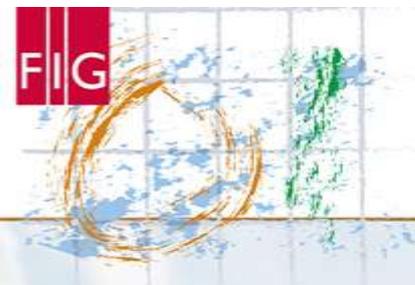


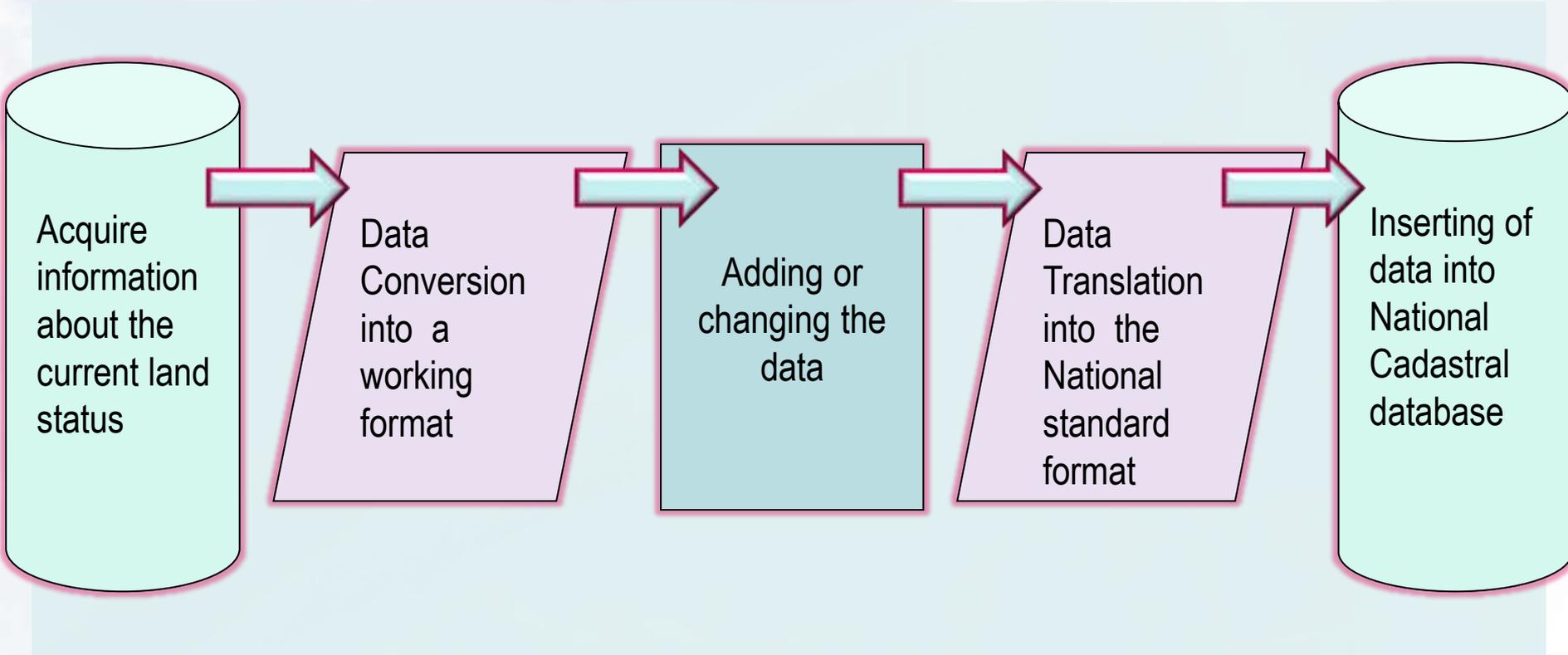
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Israeli Cadastral Process



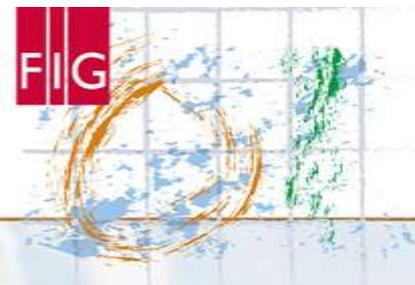


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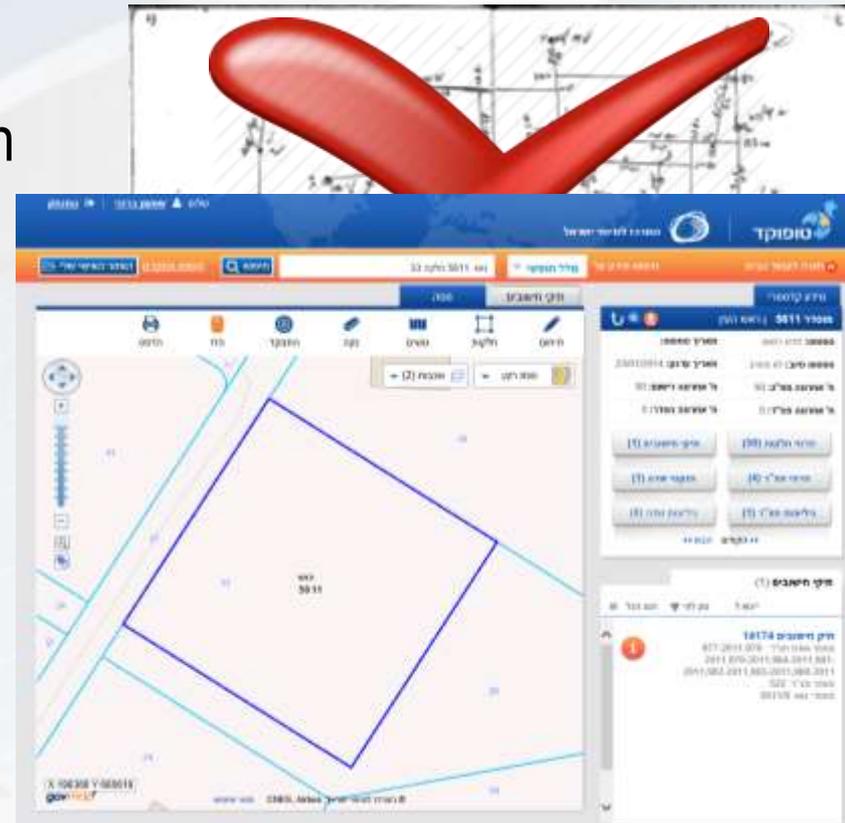
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Coordinate Based Cadastre

- 📍 The idea is to create an optimal set of parcel boundary point coordinates within a cadastral block (adjusted with neighboring blocks, in the current, accurate geodetic datum),
- 📍 and to legislate a new rule stating that authentic field marks will no more determine the position of cadastral boundaries but the "legal coordinates".



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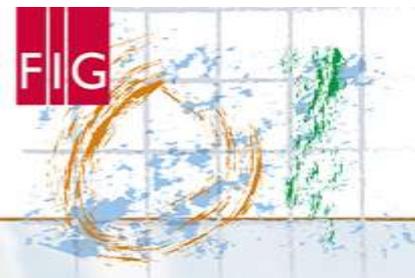


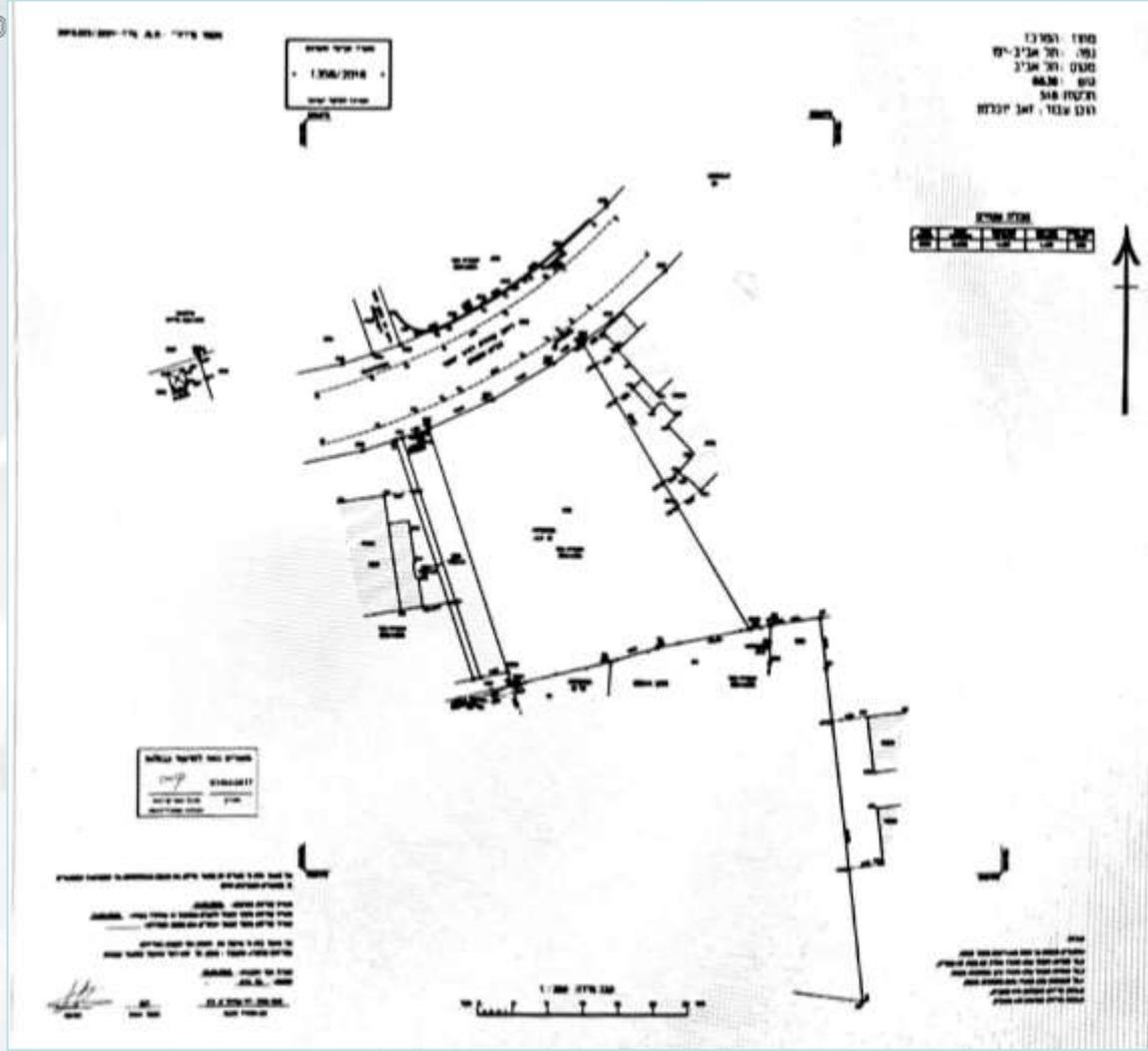
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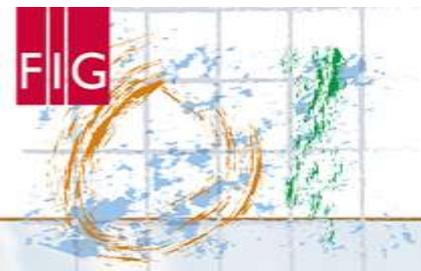
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The most difficult and continuous stage of preparing and reviewing subdivision plans is reconstruction of parcels boundaries in purpose to determine parcels boundaries accurately in the new GPS-based geodetic datum



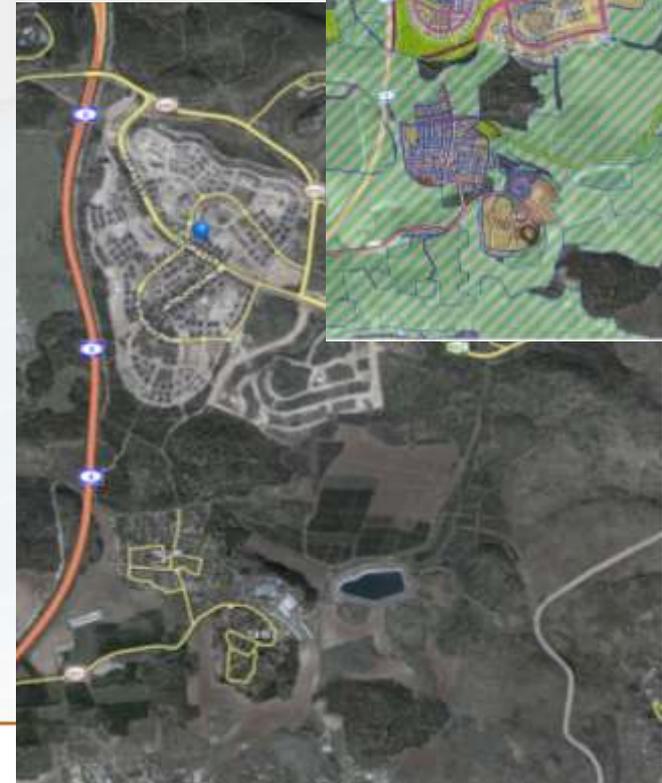
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Cadastre for Town Planning

- 📍 The growth in Israeli population is 2% a year.
- 📍 Therefore, Israel has a particular interest to design and approve many town plans all over the country.
- 📍 After approving town plan there is a necessary to prepare and approve subdivision plan and perform the registration according to these plans



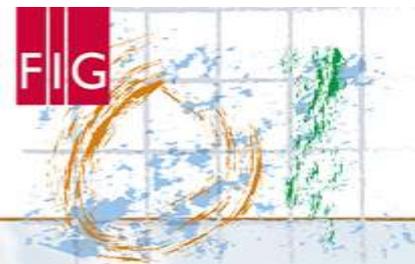


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Certifier



Checking the new **Town plan** parcels to Town Plan



Q.A



Sub Division Plan

Sending Q.A Report to Certifier



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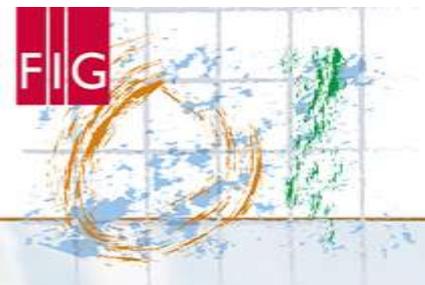


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An Example of Cadastral Procedure As a Result of Town Plan

Settlement:
Beit Shemesh
2005



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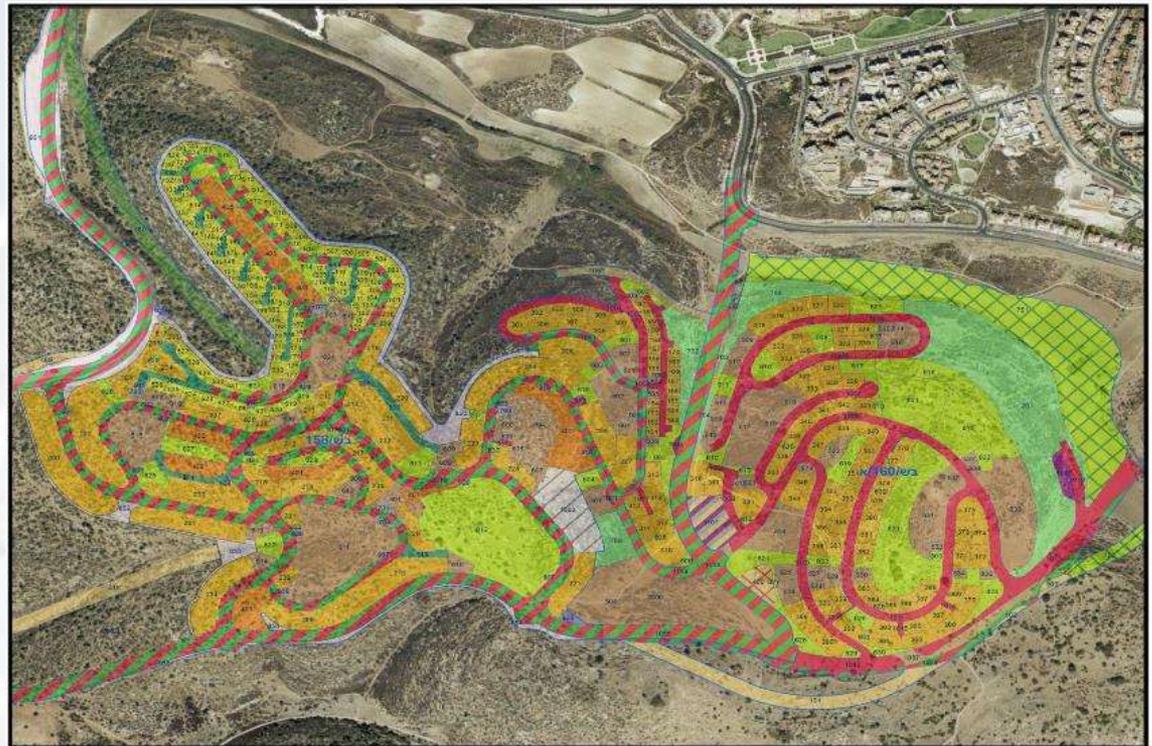
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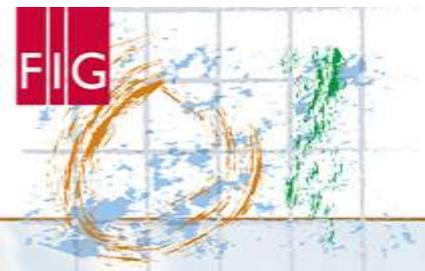


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An Example of Cadastral Procedure As a Result of Town Plan

**Settlement:
Beit Shemesh
2014**



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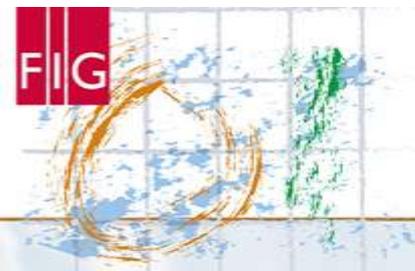


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Settlement:
Beit Shemesh
New Parcels
2014



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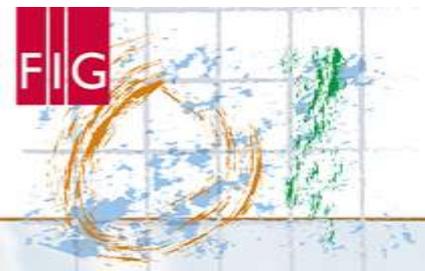


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An Example of Cadastral Procedure As a Result of Town Plan

Settlement:

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New Parcels

2016



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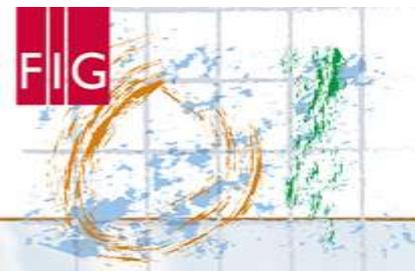


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The Challenge is accelerating the registration of ownership of residents



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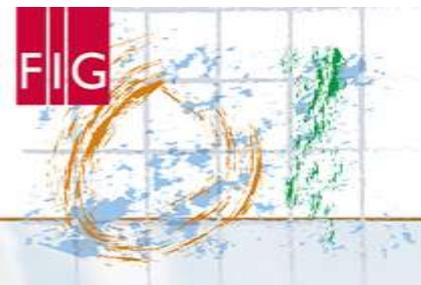


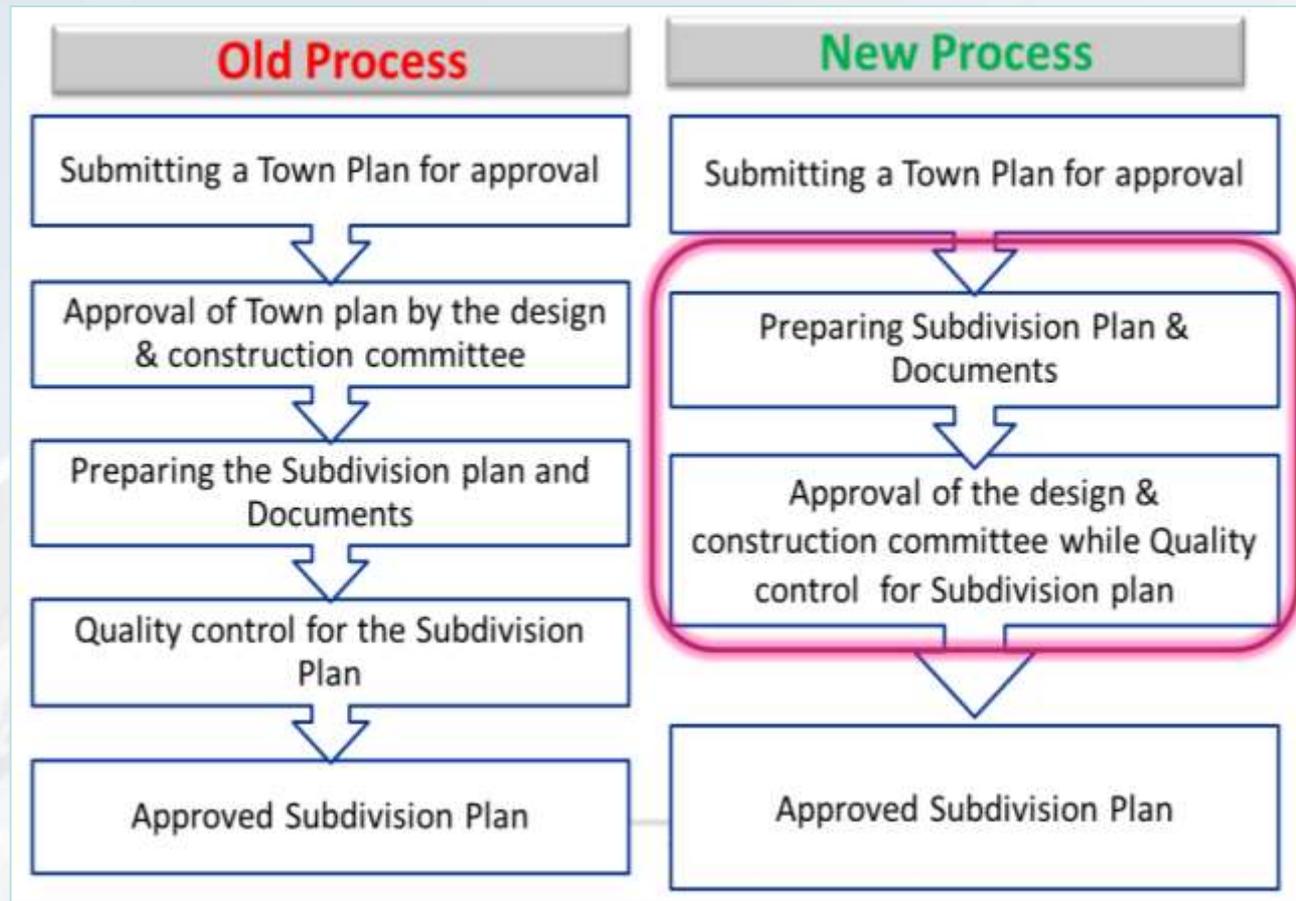
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The Process of Approving Subdivision Plan According to an Approved Town Plan



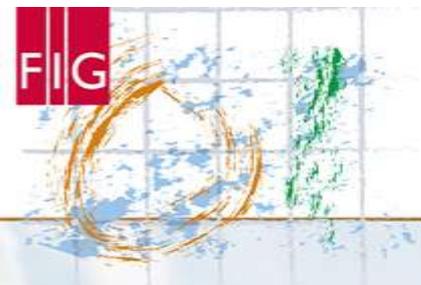


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