

FIG
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Field Surveying Inspection Using Tablets



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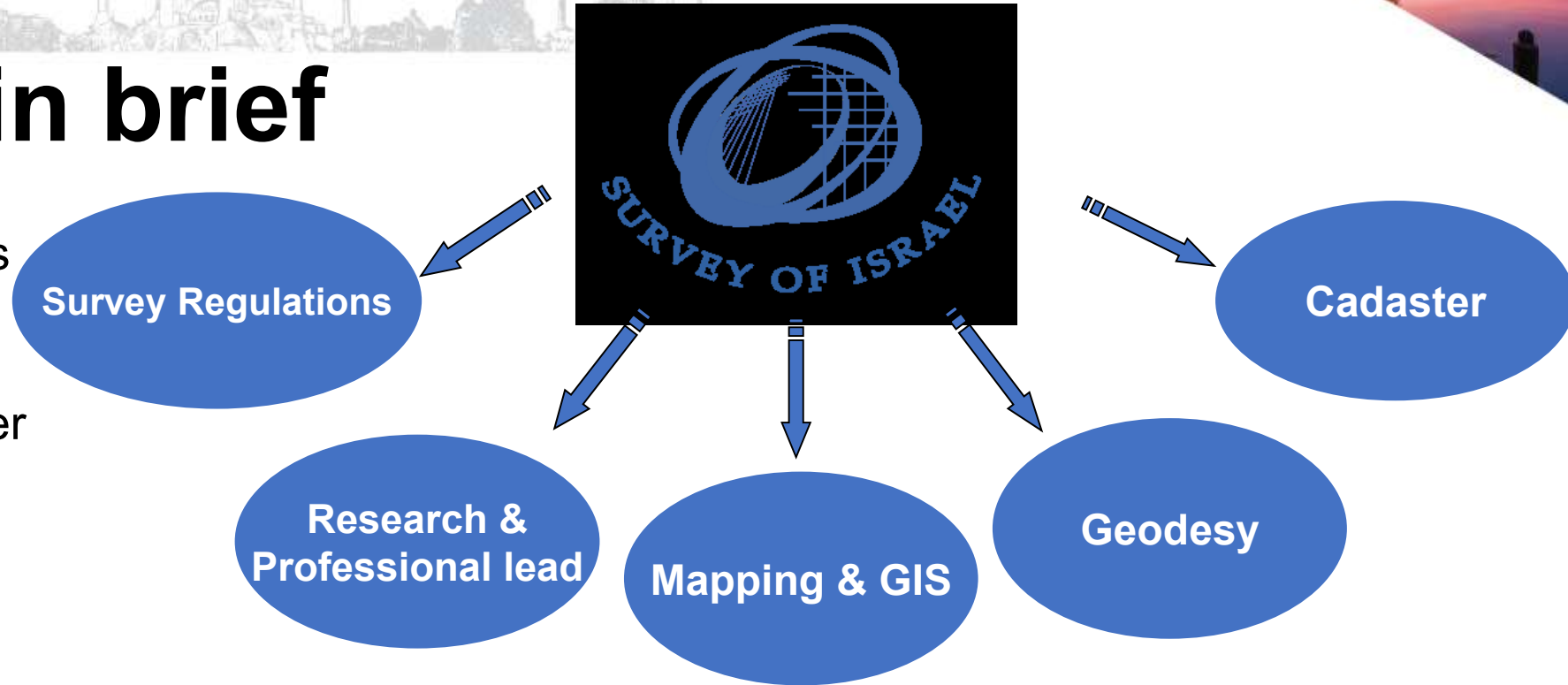
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The SOI in brief

- The SOI (Survey of Israel) is a governmental agency for Mapping, Geodesy, Cadaster and Geoinformatics
our subdivisions
- Established in 1920 by the British Mandate.
- Has around 250 employees.



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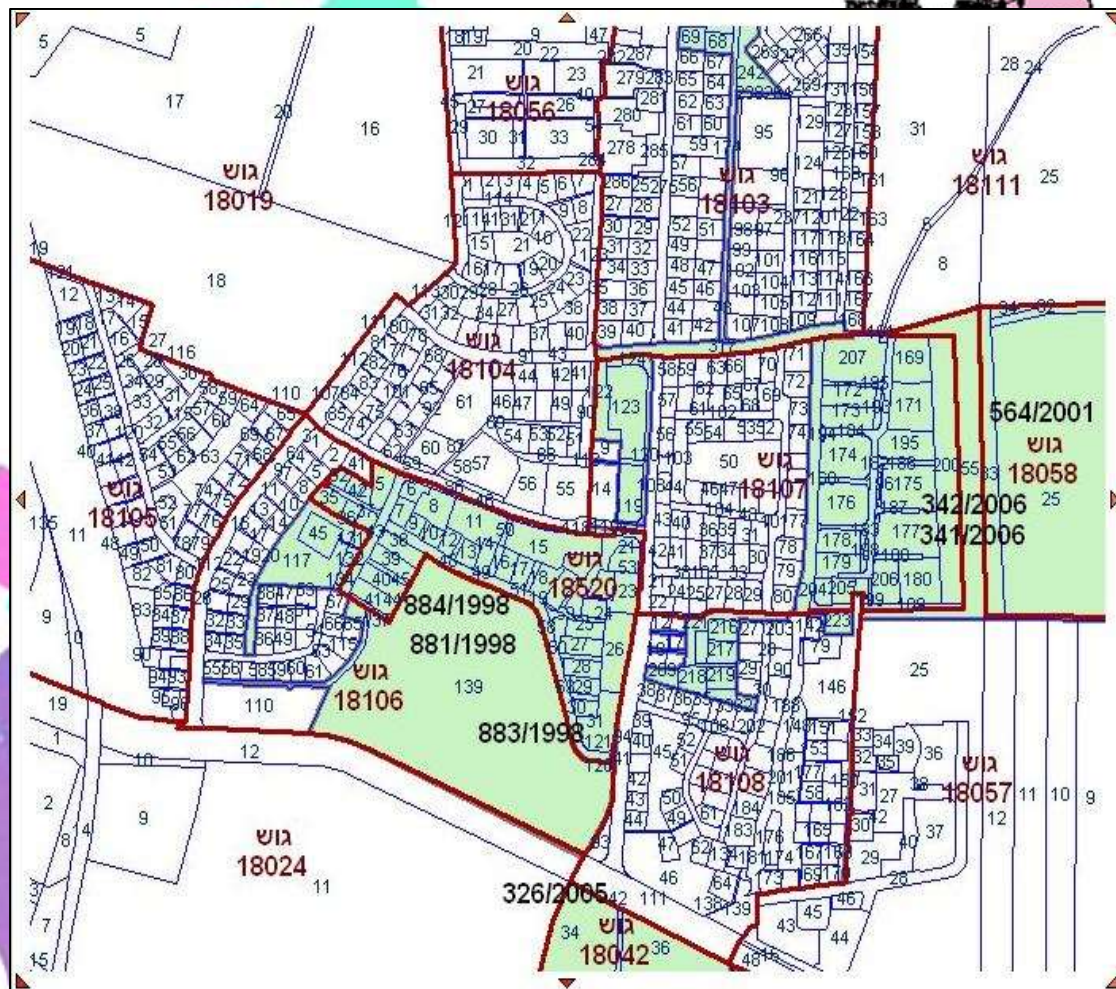
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Israeli cadastral lay

- Land settlement, covers today about 97% of the State of Israel and includes about 16,000 blocks that contain 800,000 parcels
- The cadaster layer is a puzzle of Registration Blocks and Subdivision 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).
- Field division is an integral part of the cadastral division on SOI and it is the division responsible for inspection.



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Israeli cadaster in 5 steps



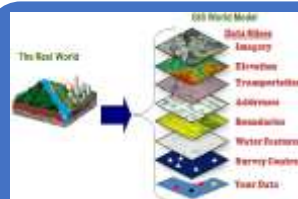
Acquire information about the current land status



Adding or changing the data



Data Conversion into a working format



Data Translation into the National standard format



Inserting of data into National Cadastral database

Field Inspection is relative for all steps and especially for the 4th and 5th steps

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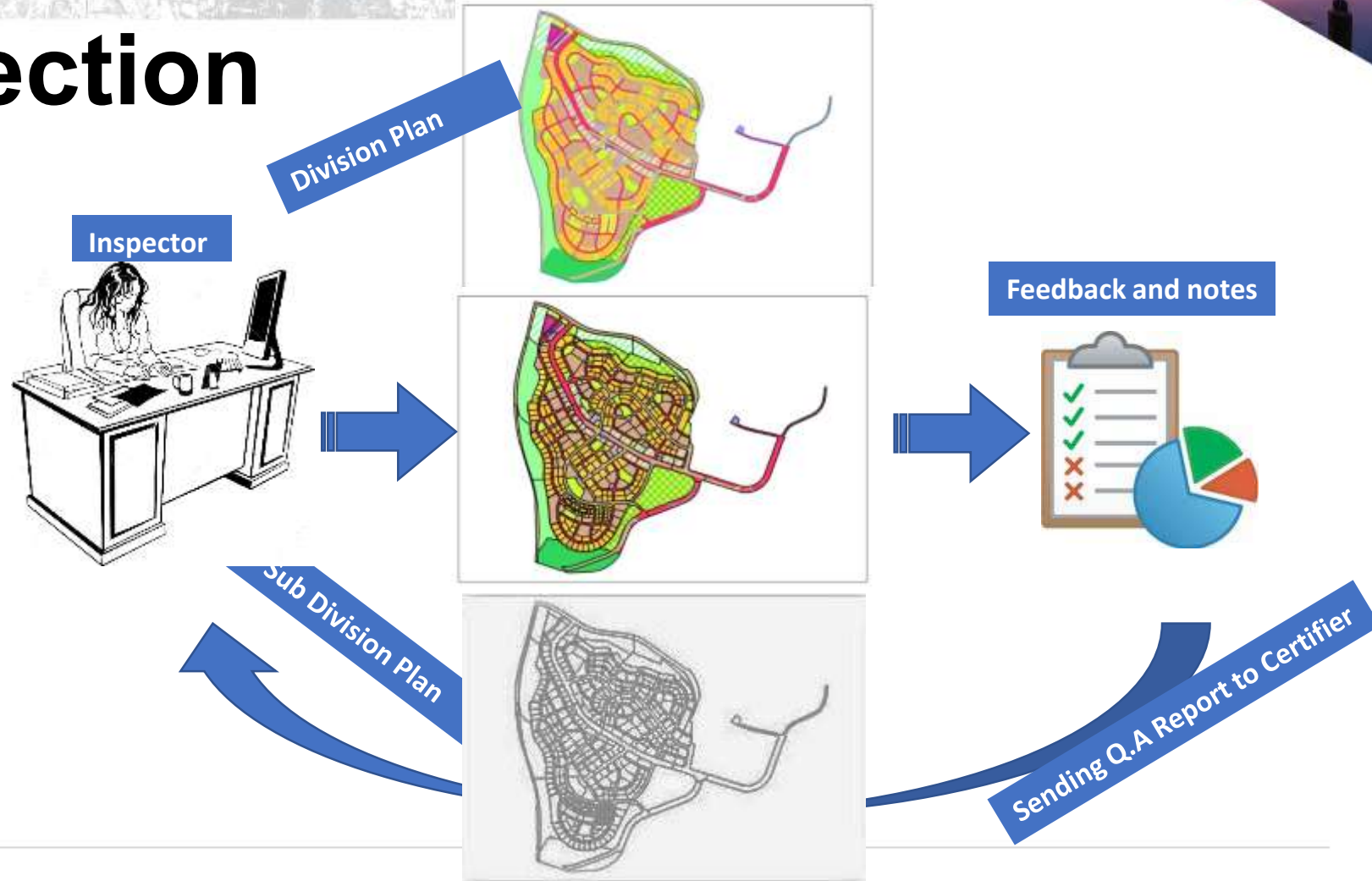
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Office inspection

Recent SOI decision:

- Using tablets for field check inspection.
- Integrating GPS instrument in field inspection through tablets.
- The merger of the digital plan and the sub-division plan produce a very easy, fast and practical course of work between the office inspector and the field inspector.



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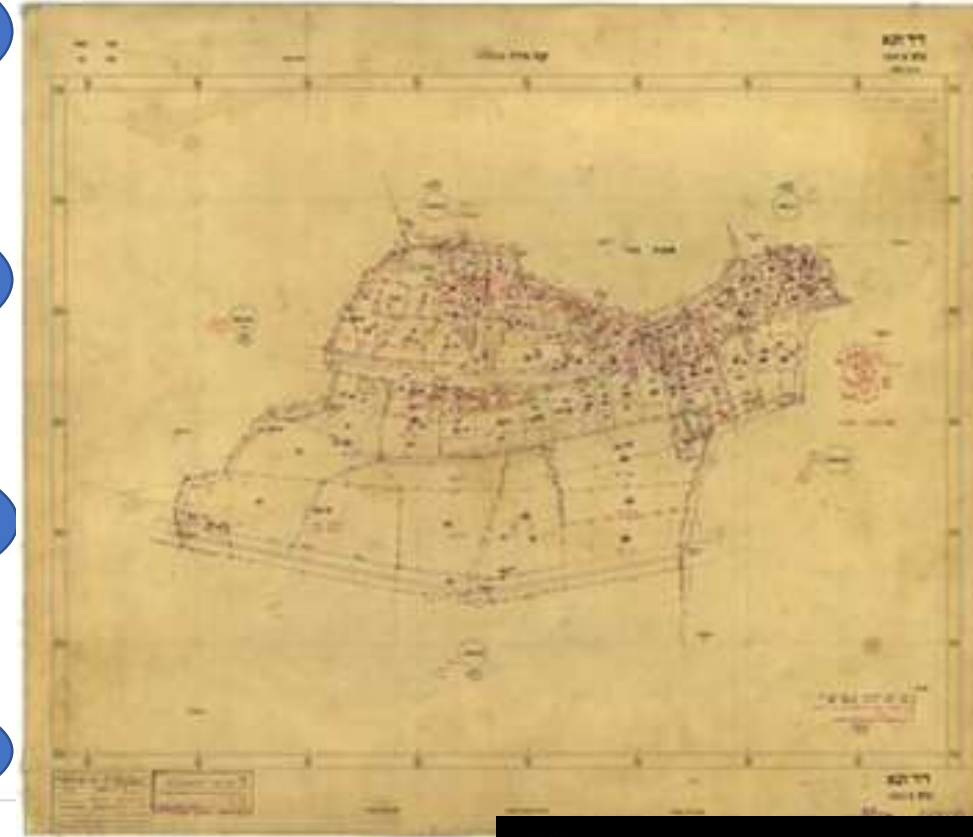
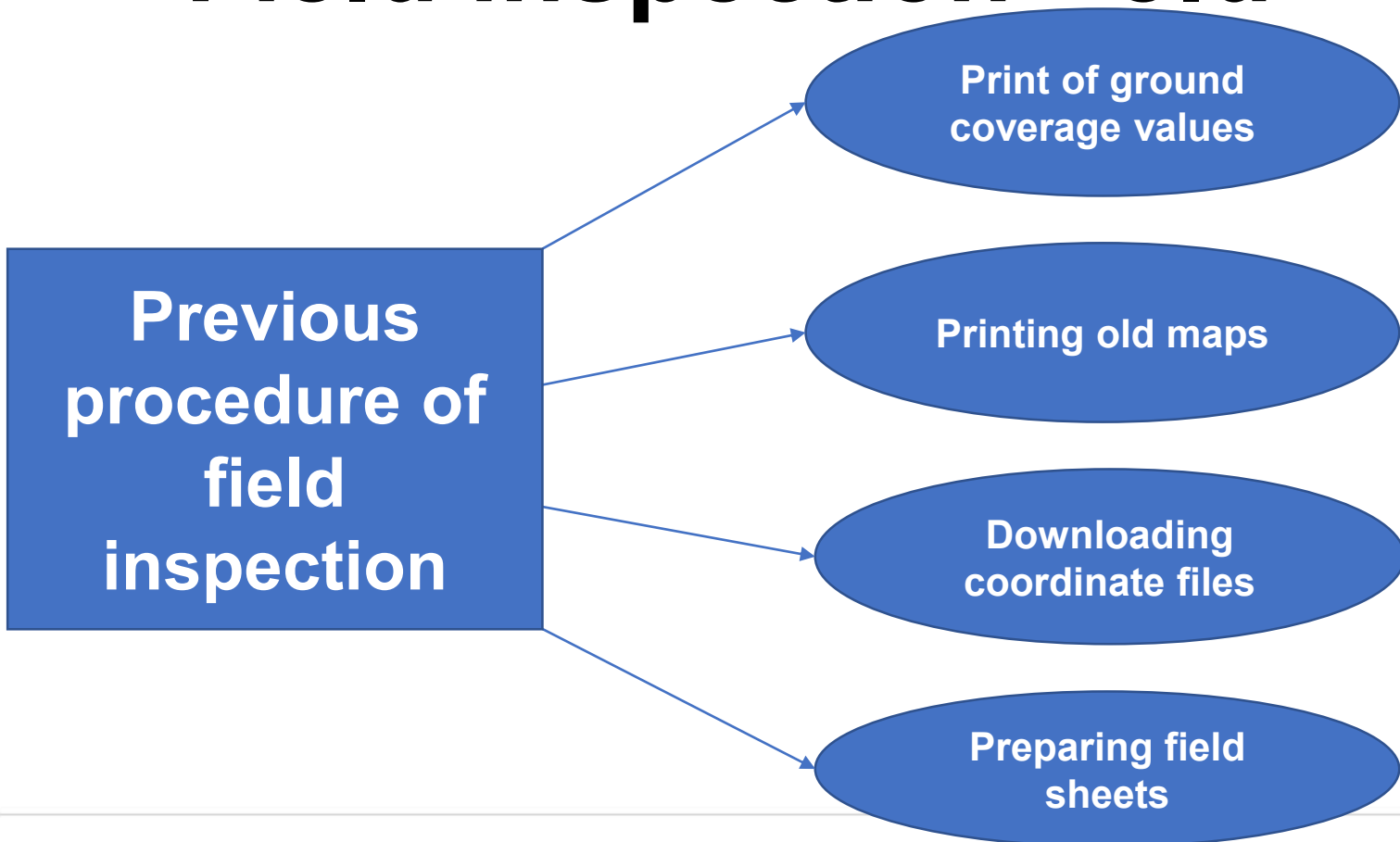


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Field inspection - old



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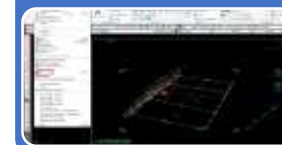




Field inspection - New Digital Method



Work order in digital form



Inspection plan



QA using SOI GIS Data base



Control and other point's list



Field familiarity and learning using GIS



Inspector requests and emphasis

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Executing the field work



Preparation for field inspection



Documentation the inspection



Browsing different projects



Possibility of making calculations at the field



Adding comments on the digital file



Updating the files simultaneously



On-line connection with database

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Advantages of using the tablets



Saving time and resources prior, during and post field inspection



The use of tables introduces new possibilities



Immediate saving of data is guaranteed which decreases the possibility of data loss



Allows a paper free transfer of material



Using tablets has made mobility of field inspector easier and quicker.

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Example of practical use of tablets in inspection



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Furthered research and application



Solutions for cyber defense or system crash



Integrated technology of augmented reality (AR) and virtual reality (VR)

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