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SMART SURVEYORS FOR LAND AND WATER MANAGEMENT CHALLENGES IN A NEW REALITY



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Methodological Guide to Carrying out Planning Processes Successfully, Using Geoinformatics and
Prospective Tools

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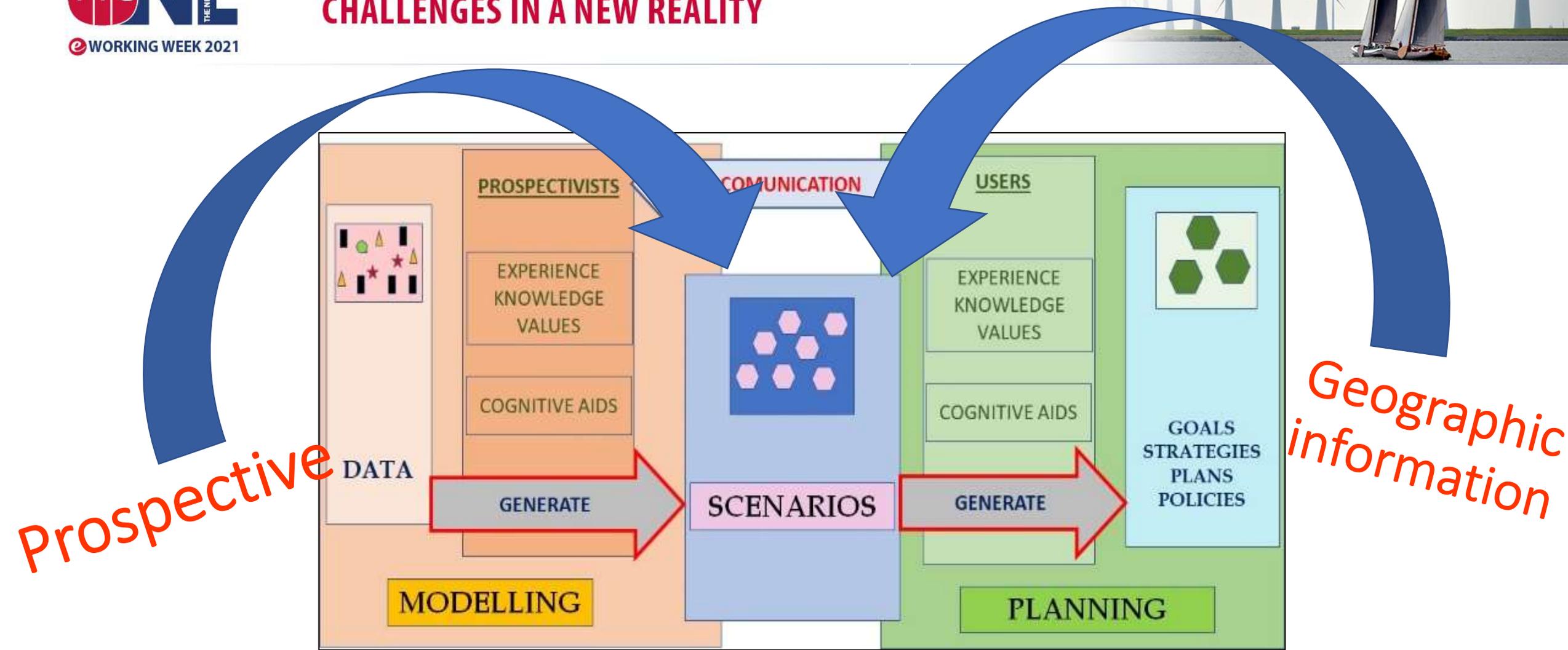
Objective

- To develop a methodology that covers the empty space in the traditional view of urban planning to solve territorial problem.
- The objective of this methodology is:
 - to support decision makers to carry out successful urban planning,
 - to create future georeferenced scenarios as a support for decision making,
 - and to propose a systematic approach to the territory based on geographic informationwhich will result in the development of effective land policies.

Products

- A methodological proposal for urban planning processes based on the combination of prospective studies and geospatial analysis.
- To validate this methodology an application on an open-source GIS (a plugin in gvSIG) was developed to build prospective scenarios.

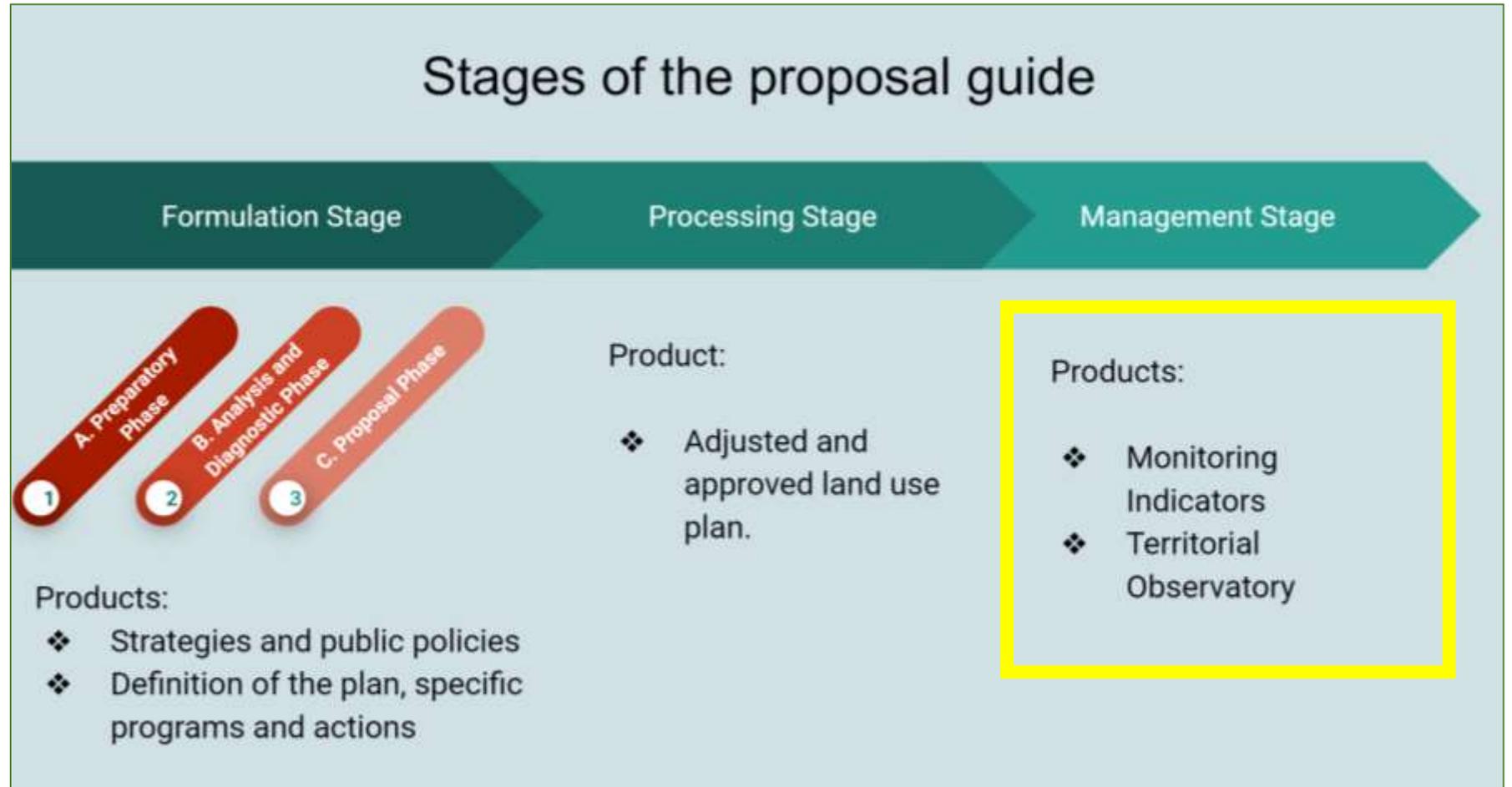
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Source: Adapted from the illustration by Xiang and Clarke (2003).



Proposed Methology





A. Preparatory Phase

A.1. Institutionalizing the planning team

Results:

- ❖ Institutionalizing of the planning process
- ❖ Formation of the planning team
- ❖ Creation of a virtual platform



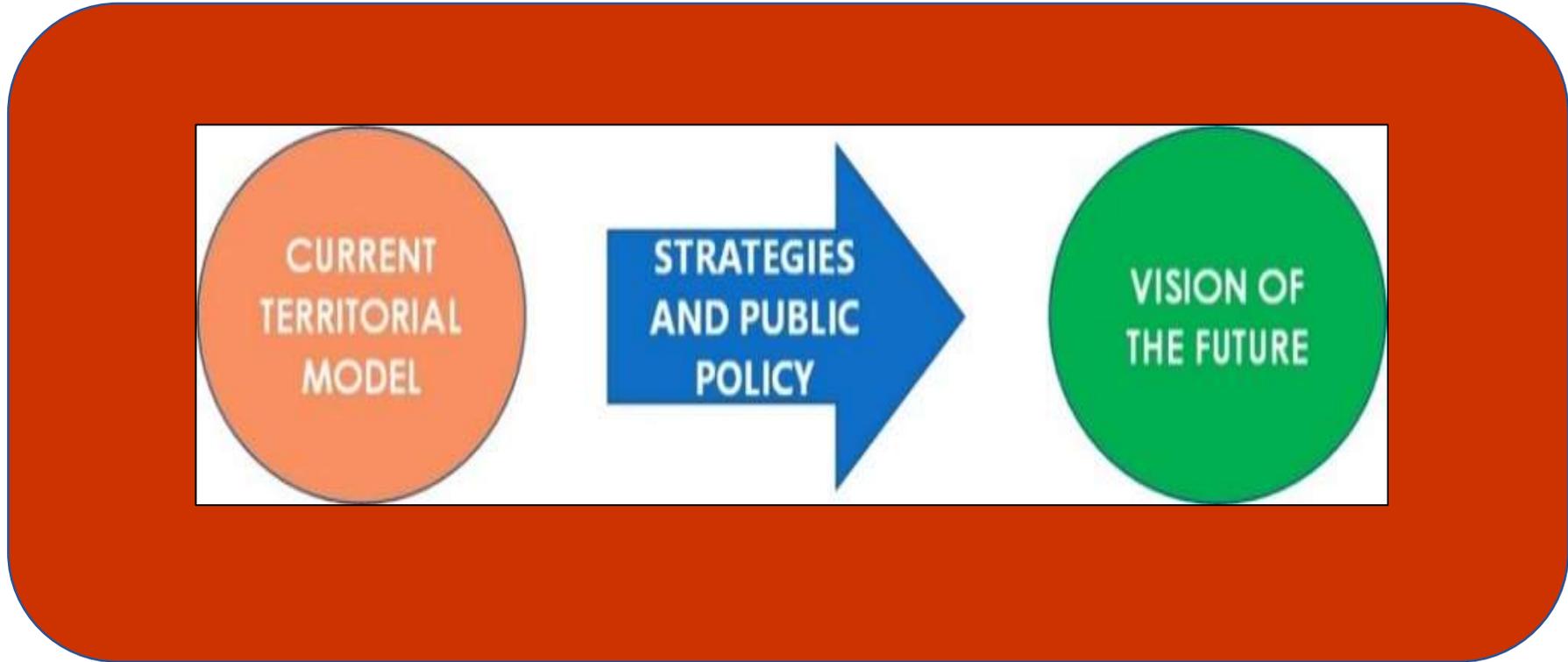
A.2. Identifying the object of the planning process

Results:

- ❖ Creation of a group of experts and actors
- ❖ Identification of the planning object (delimitations: territorial, thematic and temporary)

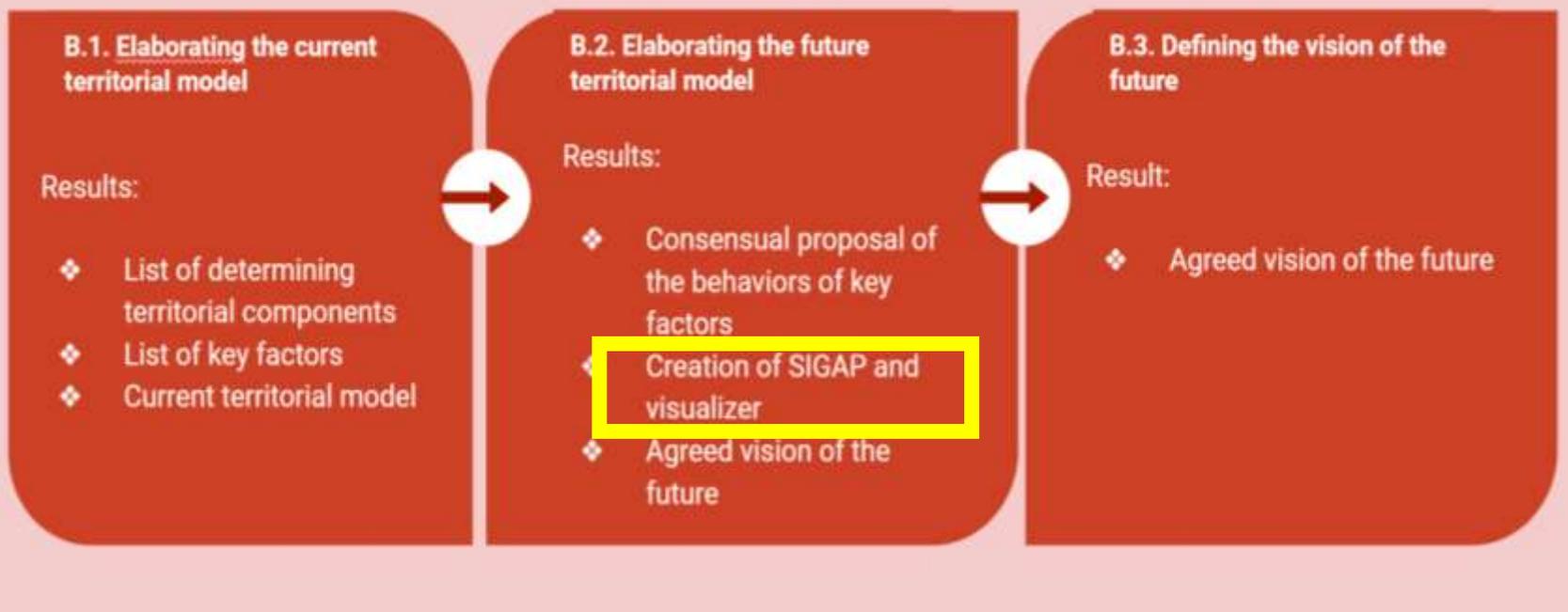


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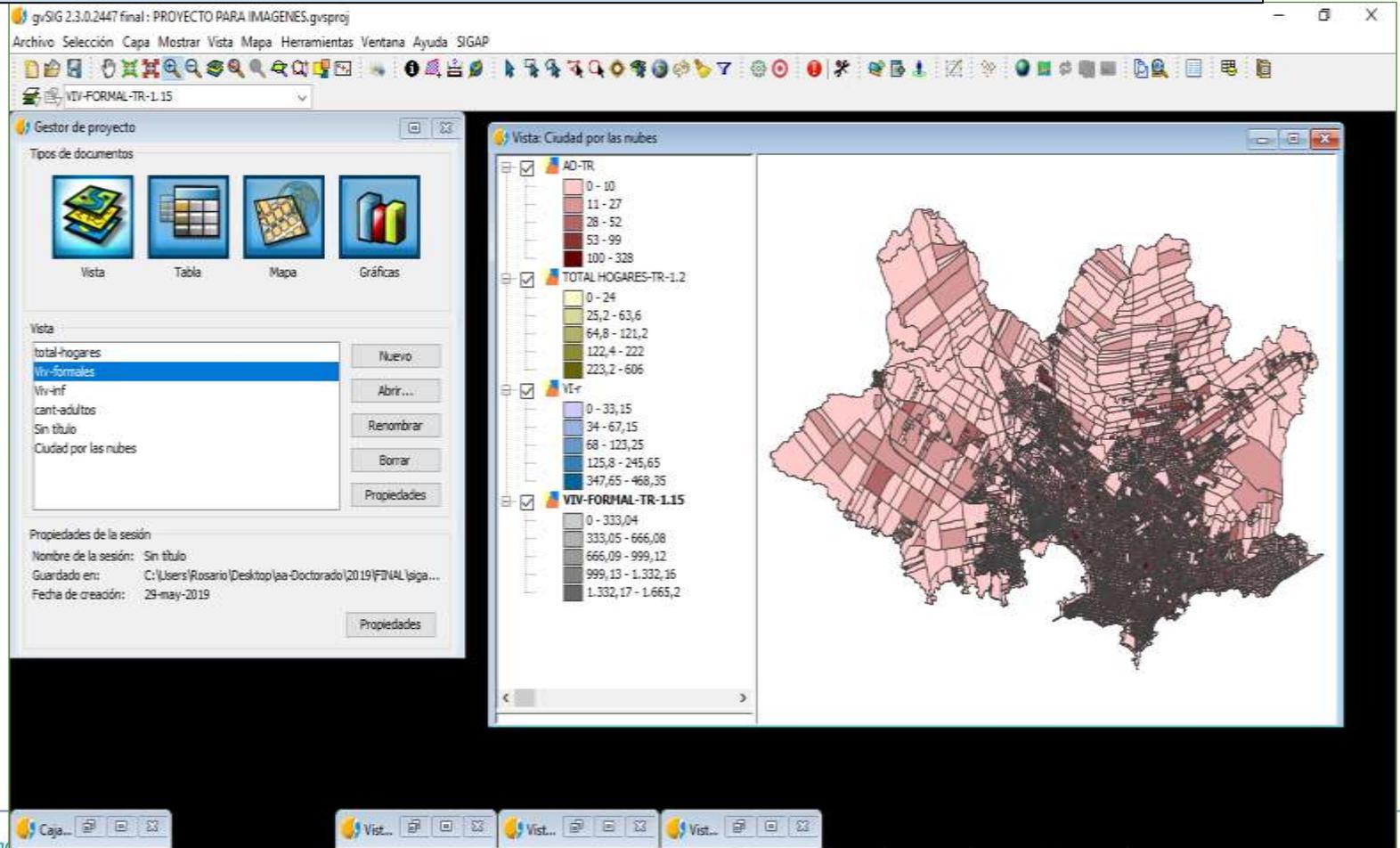
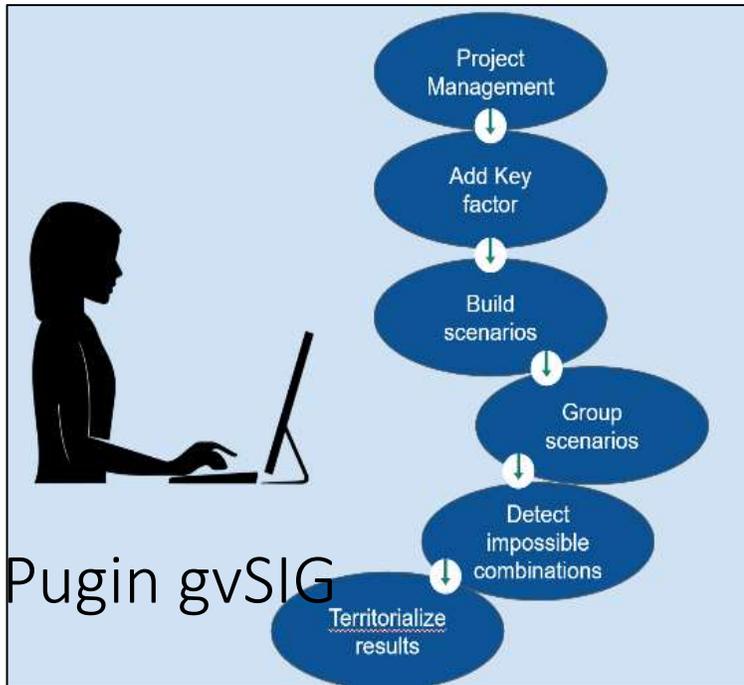


B. Analysis and Diagnostic Phase





SIGAP- GISPA: GIS applied to Prospective Analysis





Processing Stage

Product:

- ❖ Adjusted and approved land use plan.

The administrative process is carried out to formalize the approval of the plan proposed.

➤ Formal requirements:

Each technical team must become familiar with the local regulations to meet the requirements established for the

➤ Communication:

It is suggested to carry out instances of dissemination of the plan, programs and actions with the community in general.

It is recommended that initially the plan proposal is published, with clear and understandable documentation for the general public.



Management Stage

Products:

- ❖ Monitoring Indicators
- ❖ Territorial Observatory



The management stage includes the phases of monitoring, follow-up, and review of the plan.

It is essential to have BASELINE model in order to evaluate the impact of the interventions resulting from the application of the plan.

MODEL is the starting point of the monitoring process.

It is necessary to establish indicators, referring both to the way the plan is implemented and to its impact with respect to the objectives.

These must be **measured periodically**, not only to **evaluate** the magnitude of the impacts, but also, to make the necessary **adjustments to the plan** in order to adjust the actions to achieve the goals.



Some final thoughts...

It is necessary to:

- ❖ Raise awareness among decision makers, government officials, politicians, technicians, and society in general about the advantages of using geospatial data when making land planning.
- ❖ Have statistical data linked to the territory that should be updated periodically and with appropriate procedures.
- ❖ Have financial policies that allow the collection of geospatial data in a permanent and sustained way, since these data will be a fundamental input for a territorial monitoring and follow-up observatory.



- ❖ Work on the training of new generations of professionals linked to land planning, specialized in prospective techniques and geomatic tools.
- ❖ Promote the creation and consolidation of a spatially enabled society.

It is required that societies know and apply the potentialities of geospatial data for their benefit.

In order to fulfill this objective, it is necessary to train the community on the concept of spatiality, so that they can interact and decide on the land aspects that affect them.



Thank You!

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