

PRODUCTION PROCESSES FOR A HARMONISED EUROPEAN POPULATION GRID

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Outline

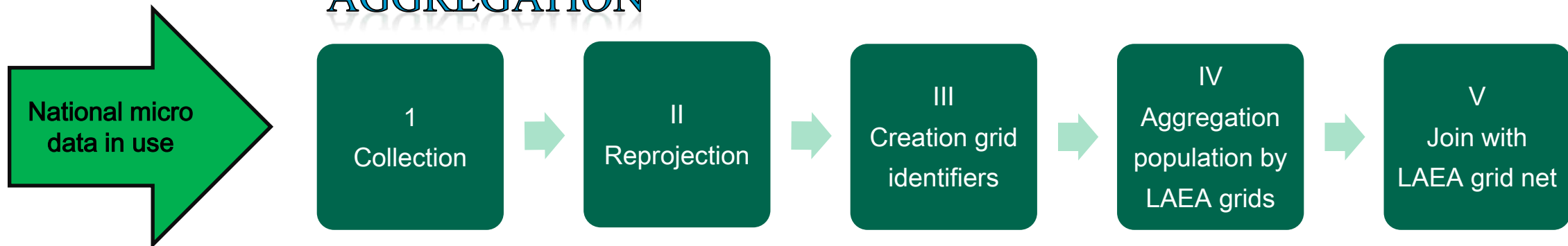
- A part of guidelines material for NSIs
- A description of three types of process flows
- More detailed instructions for
 - Collection
 - Reprojection
 - Creation of grid identifier
 - Aggregation population data into LAEA grids
 - Process of grid cell intersection

Guidelines for NSIs

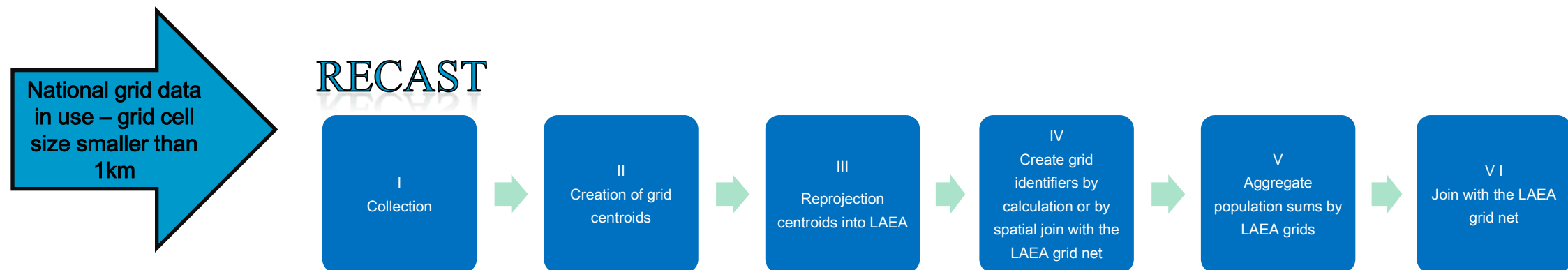
- The guidelines will
 - be available on EFGS web site early 2013
 - focus on a harmonised European population grid compatible with INSPIRE specification
 - describe various production flows
 - describe various software approaches following the production work flows
 - be finalised during the GEOSTAT 1B project including recommendations for metadata and disclosure control and examples of spatial analysis

Three types of process flows for generating population grids

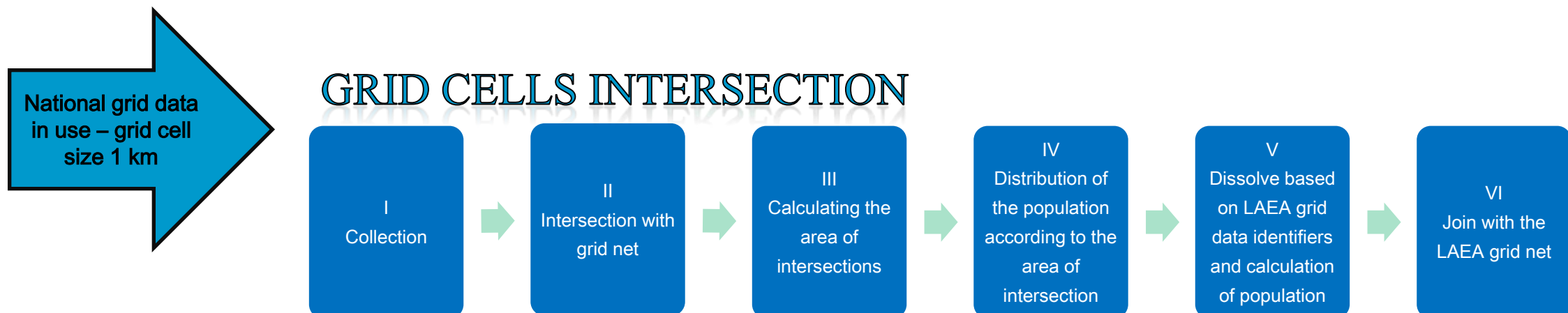
AGGREGATION



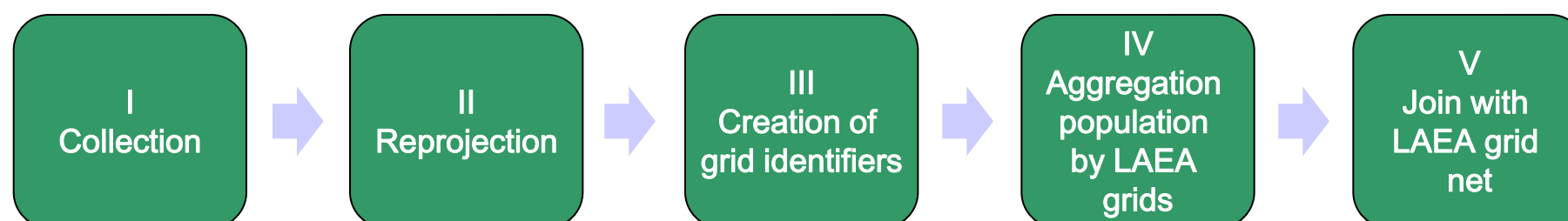
RECAST



GRID CELLS INTERSECTION

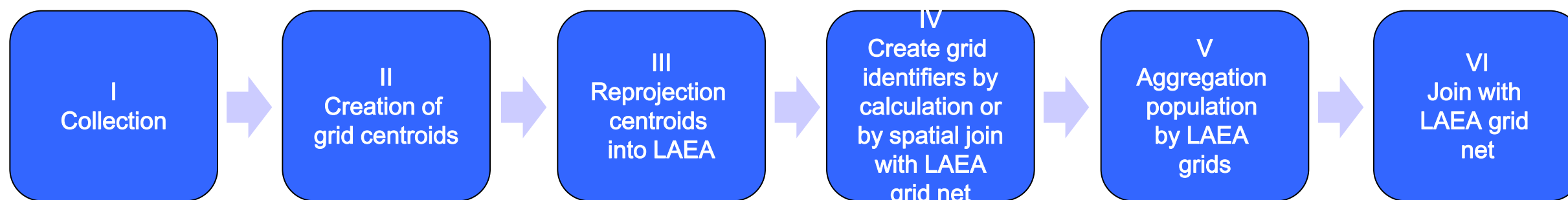


Production process: "Aggregation"



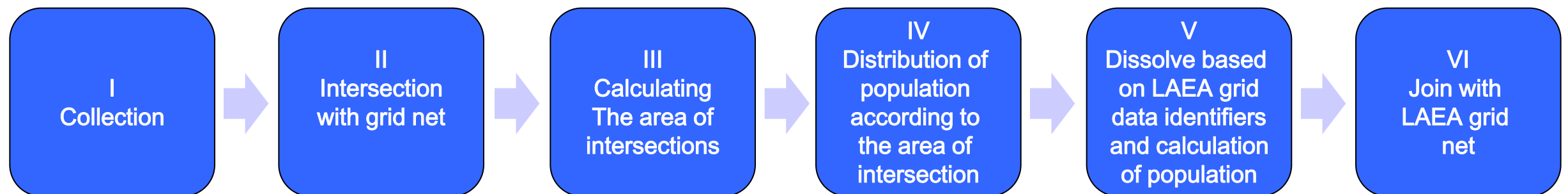
- To be used
 - when micro data is available and data maintenance in ETRS/LAEA is possible

Production process: "Recast"



- To be used:
 - when national grid data already exists
 - preferably when national grid data has smaller grid cells than 1km² due to data quality

Production process: "Grid cells intersection"



- To be used
 - when national grid data already exists
 - as an alternative to "Recast"
 - when only 1km² national grids are available (good alternative)

Important steps in the production process, 1

- **Collection**
 - Country clip (GRID_ETRS89_LAEA_1K) + National data
 - Analysing the spatial extent of the grid net
 - Coverage of the country clip against national map data / primary data or national grid data
- **Reprojection**
 - National micro data or Centroids of grid cells of national grid data
 - ArcGIS or GVSIG

Back to
"Aggregation"

Important steps in the production process, 2

- **Creation of GRID identifiers**
- Based on grids's lower left corner coordinates truncated by grid cell size
- Alternative ways by using SAS or SQL or ArcGIS or GVSIG, Excel
- **Aggregation Population data to LAEA grids**
- Aggregation micro data by SAS or SQL
- Aggregation grid cell centroids by ArcGIS or GVSIG
- Join (and aggregation) with the LAEA Grid net by ArcGIS
- Aggregation data and join with LAEA Grid net in GVSIG

Back to
"Aggregation"

Grid cells intersection

- The whole workflow by ArcGIS (or other GIS software)
- Intersection of a LAEA projected national grid with the LAEA grid
- Calculation of the areas of intersections
- Distribution the population according to the area of intersection
- Dissolve based on the LAEA grid identifiers
- Join to LAEA grid

Back to
"grid cells
intersection"

Conclusion

- Guidelines for producing harmonised **European** population data
- Instructions include
 - Detailed descriptions about alternative workflows
 - Program statements/SAS, SQL, Excel
 - Visual captures of GIS programs
- Will be available on EFGS web site early 2013
- Supplements by the end of GEOSTAT project

Thank you for your attention!