

# Standardised geospatial processes in the Statistics Finland's statistical production

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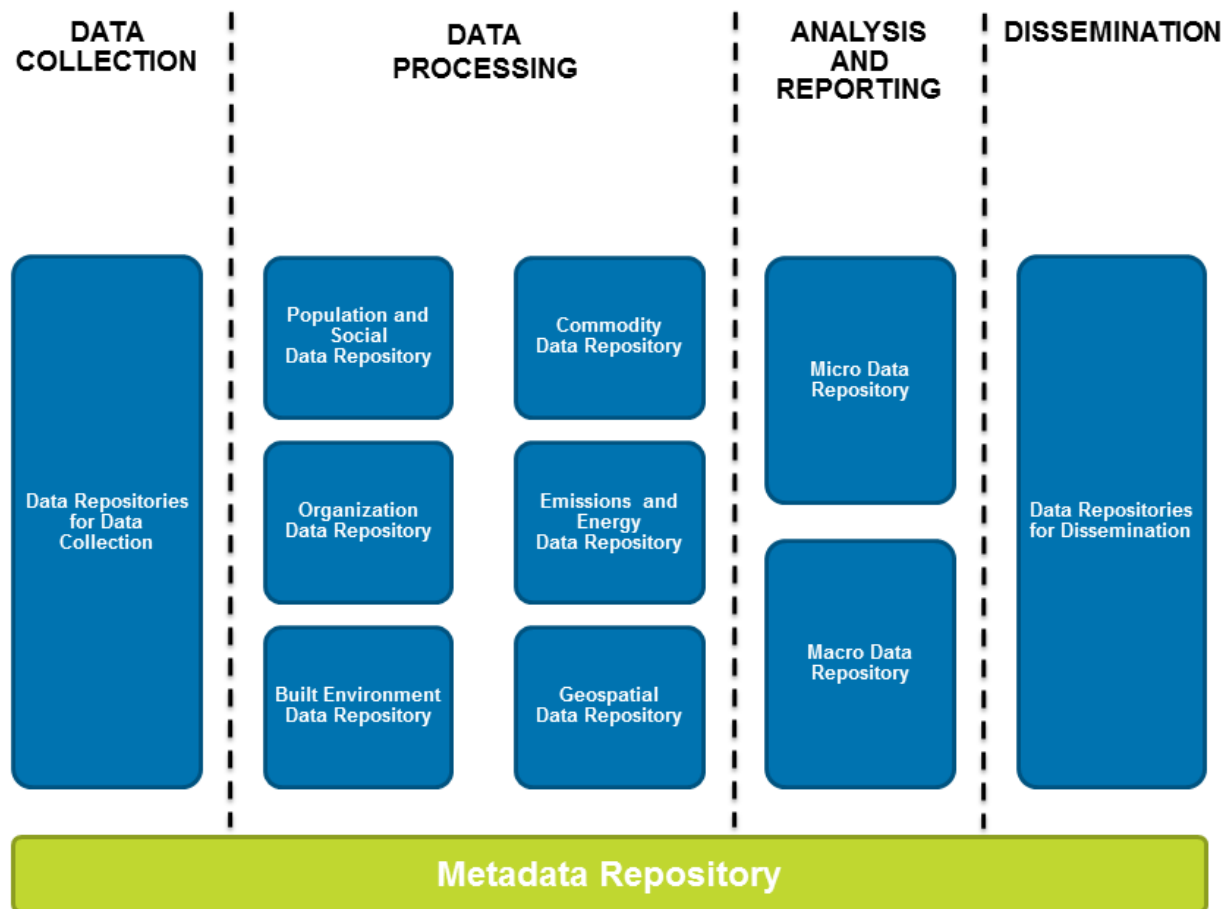
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EFGS 2022 Conference 27.11.2022

# GSGF architecture and Statistics Finland's architecture

- The presentation provides an example of how the GSGF architecture can be implemented at the national level
  1. Geospatial (and other) data is organised according to the GSGF conceptual data model
    - Statistical units are linked to location (geospatial Id)
    - All geospatial information is stored in the geospatial data repository
  2. Processes are consistent with the GeoGSBPM reference model and geospatial activities described in GSGF architecture
  3. Geospatial processing is carried out by modular geospatial services
    - Statistics Finland has implemented some of the services presented in the GSGF listing
  4. The division of responsibilities is defined as role-based
    - Geospatial experts produce shared geospatial data
    - Statistical processes use this shared geospatial data in their processes

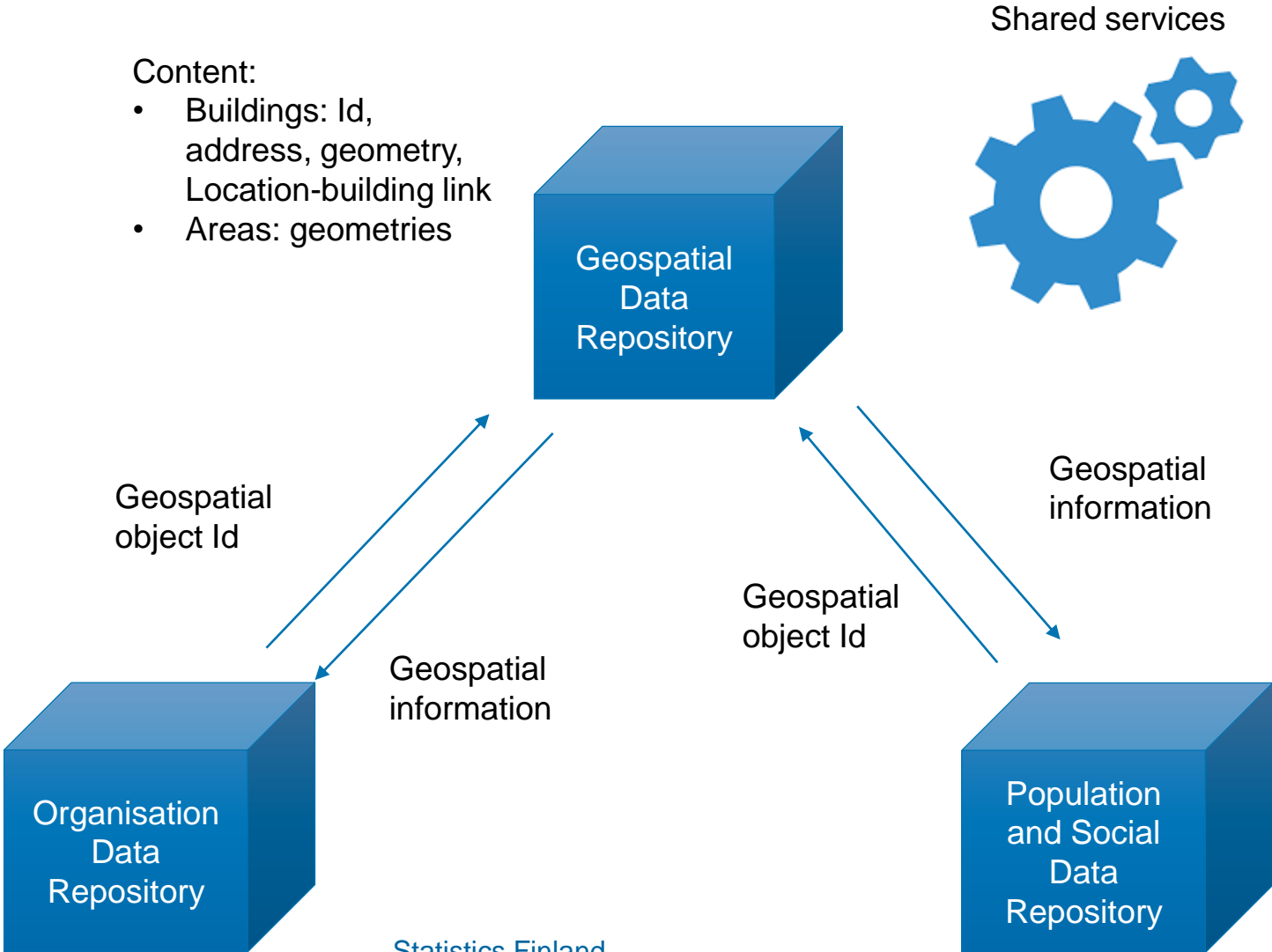
# Logical Data Repositories at SF



- A **logical** description of how **data** is organized into **repositories**
- **Process and store only once – use many times**
- Statistics and other information products may be produced by utilizing data from one or more repositories

# Statistics Finland's architecture for geospatial information

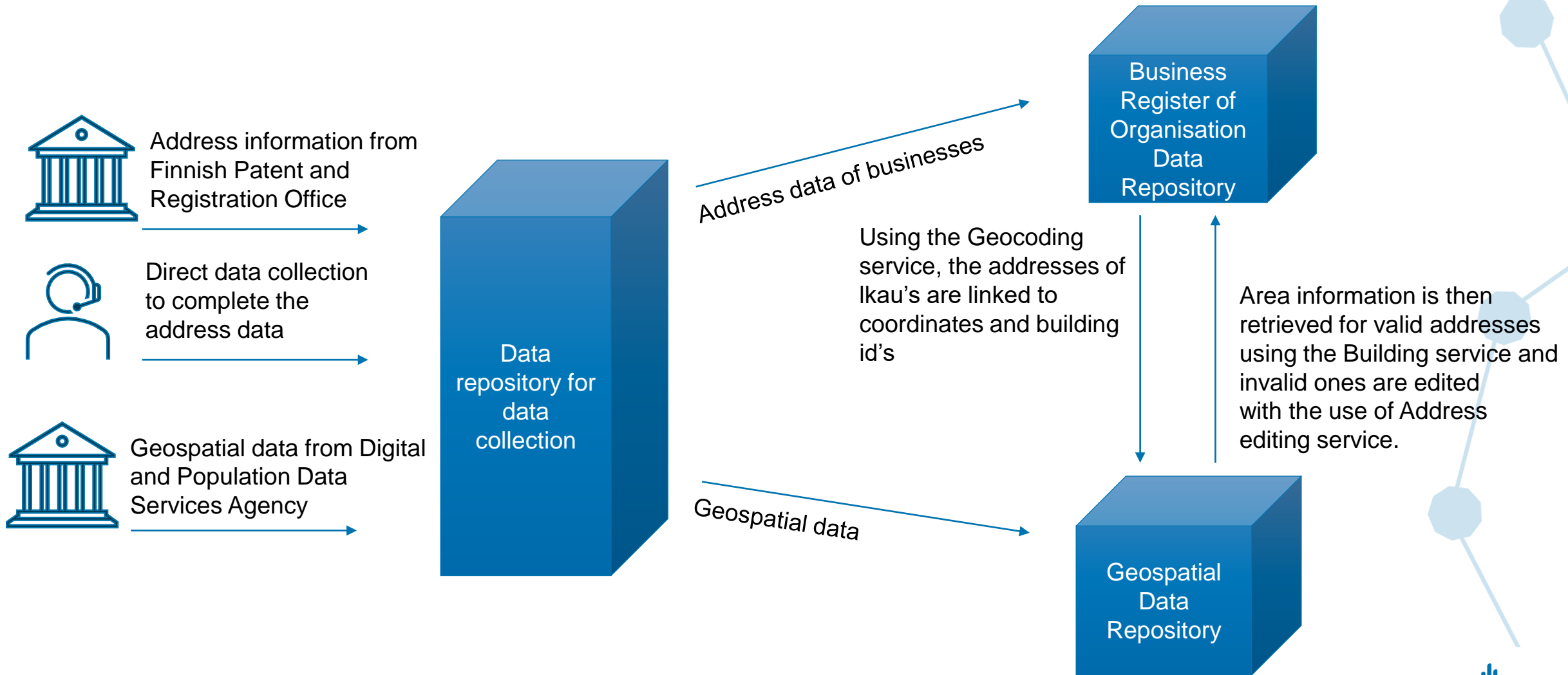
- Content:
- Buildings: Id, address, geometry, Location-building link
  - Areas: geometries



# Statistics Finland's Shared Geospatial Services

Service	Input (example)	Output (example)
Address standardization	Address as a string ("address": "Työpajankatu 13 F 2")	Standardized address in components ("streetName": "Työpajankatu", "streetNumber": "13", "streetLetter": "F", "apartmentNumber": "2" )
Address editing	Misspelled address ("streetName": "Työjankatu", "streetNumber": "13", "streetLetter": "F ", "postalCode": "00580")	Properly written address and confidence of the output ("streetName": "Työpajankatu", "streetNumber": "13", "streetLetter": "F", "postalCode": "00580", "confidence": 88)
Geocoding	Address	Coordinates
Building service	Object Id	Address and area information
Distance calculation	Two locations expressed in coordinates	Distance between locations (straight distance by road)
Coordinate conversions	Coordinates in a given coordinate system	Coordinates in another coordinate system

# Geospatial process for geocoding of Statistics Finland's Business Register



# Benefits of the new geospatial process

- Using the new geospatial process 97,1 percent of all active local kind of activity units with non-missing addresses of the Business Register were successfully geocoded.
  - The quality of the area information produced by the process has been proven very good by substance experts.
- The process is run over night after receiving new addresses through administrative data sources or Direct data collections and by doing so the area information of the Business register is always up to date with the address data.
- Because the area information retrieved using the Shared Geospatial services can be assumed to be ready validated, only the address data of local kind of activity units have to be validated by Statistics Finland's Business Register.
- By geocoding the address data of the Business Register using the Shared Geospatial services, the spatial information of the Register is coherent with other statistical processes utilizing the shared geospatial services.
  - The spatial information of the Business Register is utilized in Structural Business Statistics, Business trends statistics and National accounts to name few, making the area information of them coherent.

# Thank you!