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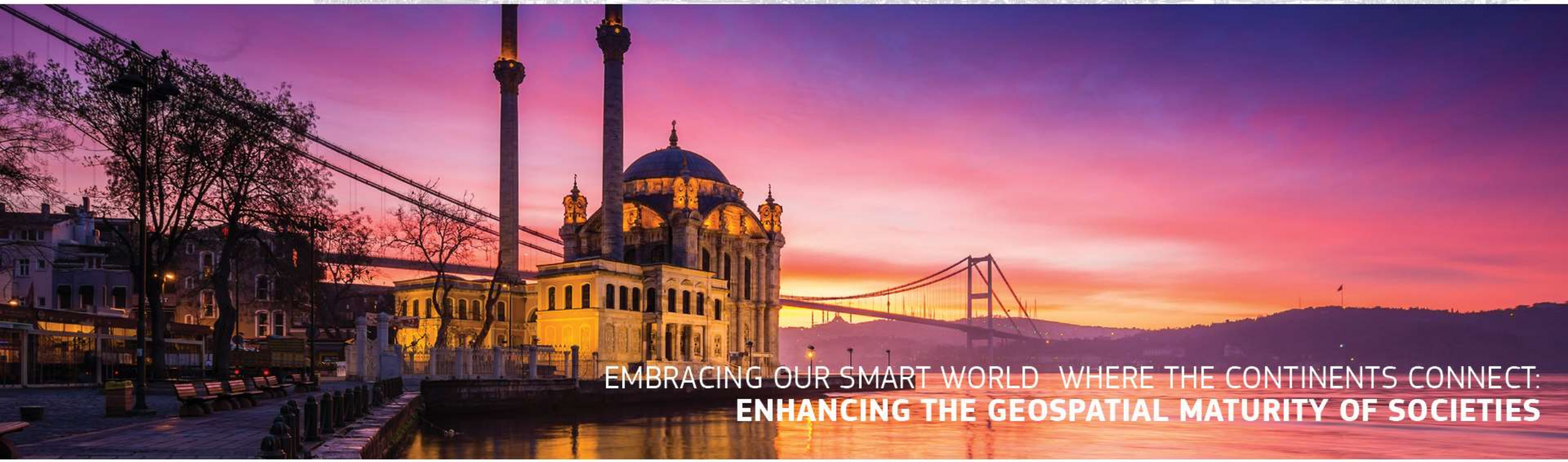

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INVESTIGATION OF THE SPATIAL ADDRESS RECORDING SYSTEM (SARS) PROJECT PROCESS TO BE BASE THE URBAN INFORMATION SYSTEM

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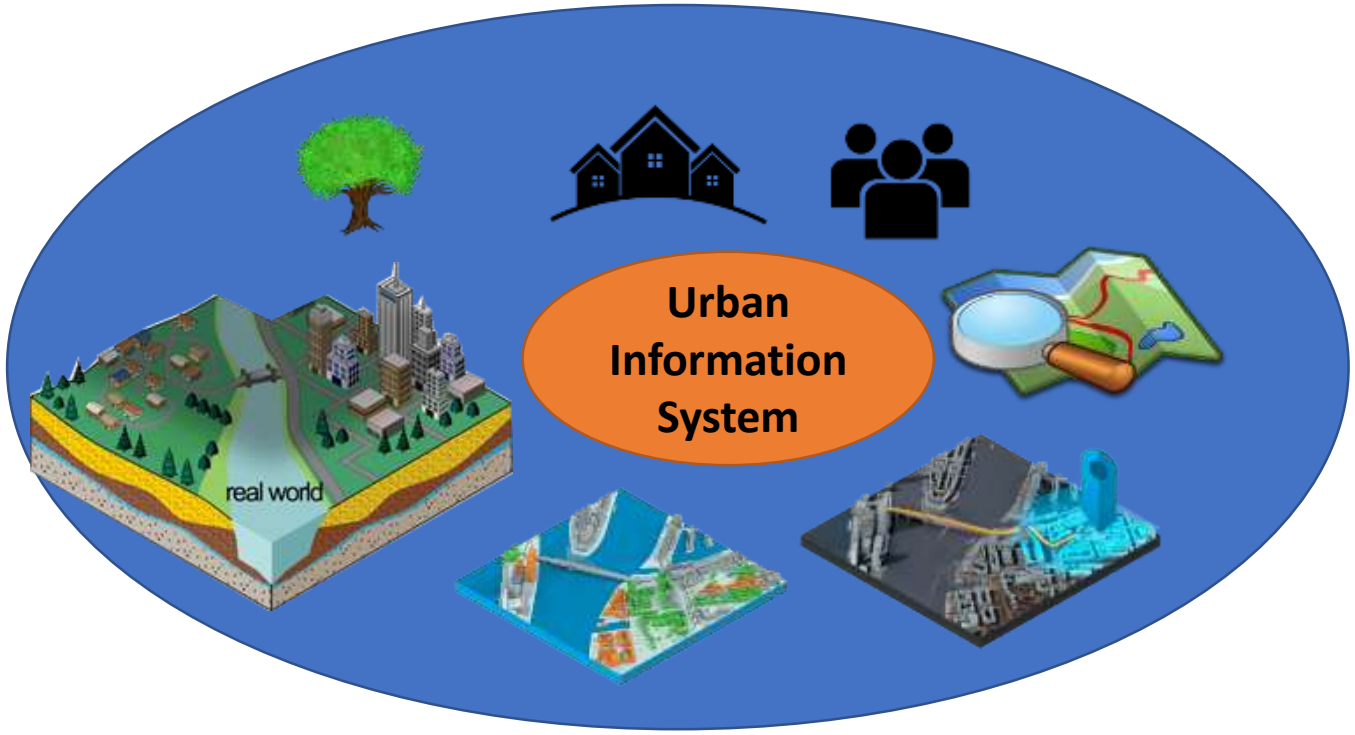
Urban Information System

Urban Information System (UIS), is an urban-based application of geographic information systems designed to address the planning, infrastructure, engineering, basic services and administrative information required for the fulfillment of urban activities in a fast and sound manner.



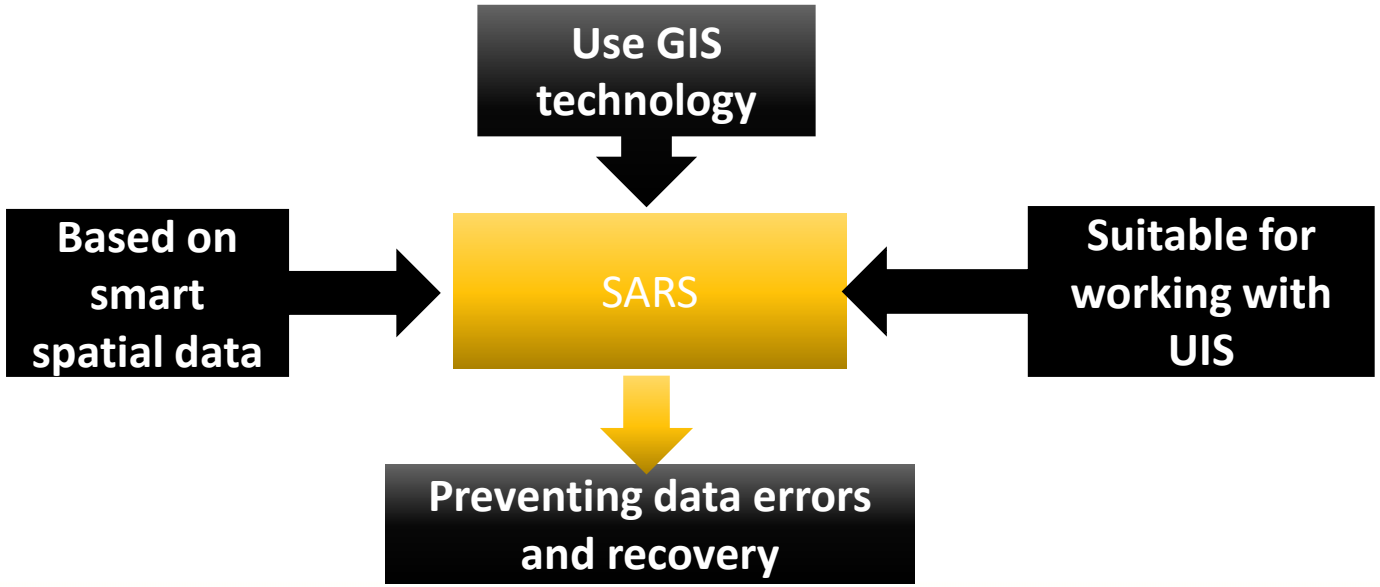
URBAN INFORMATION SYSTEM AND THE ADDRESS COMPONENTS

The address components have an important place in for consist of «Sustainable Urban Information System».

- Especially address data carries great importance for population censuses, in health, education and public services, in the planning and implementation of public investments and in the creation and updating of voter registers.

SPATIAL ADDRESS RECORDING SYSTEM (SARS)

SARS, in Turkey, was created to integrate address information in textual attributes in the Address Registration System (ARS) with geographical coordinates and integrate it with other systems. With this project, it is aimed to give a spatial dimension to the National Address Database in which all address components in the country are textually managed.



SPATIAL ADDRESS RECORDING SYSTEM (SARS) PROCESS STEPS

Within the scope of the SARS Project, the following process steps are followed to make a standard work for each province and to come up with a standard system as a result .

1. The collection of data in Competent Authorities analysis and transformation in accordance with the SARS data model. (Component Authorities: Municipalities, Provincial Special Administration, Organized industrial Zones, Free Zones)

SPATIAL ADDRESS RECORDING SYSTEM (SARS) PROCESS STEPS

2. After checking the necessary conformities of the data provided from Competent Authorities and making the data conform to the SARS data, establishment of the necessary components in the office environment over the orthophotos provided by the General Directorate of Land Registry and Cadastre, General Command of Mapping and the Ministry of Environment and Urbanization,

Data comes from Competent Authorities → Necessary controls → **SARS Data**

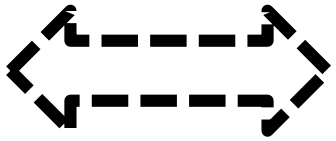
Establishment of the necessary components →

1) Province Border,
2) District Border,
3) Neighborhood Border,
4) Road,
5) Structure,
6) Number,

SPATIAL ADDRESS RECORDING SYSTEM (SARS) PROCESS STEPS

3. Matching the generated spatial data with Nationality Address Database (NAD),

4. Controlling the geographical address data generated as the result of the office work with the data from the field, in order to correct the wrong data and to complete the missing data,



SPATIAL ADDRESS RECORDING SYSTEM (SARS) PROCESS STEPS

5. Providing the integration of all address components with NAD (numbering, independent section), and eliminating any mistakes and deficiencies in NAD,

6. The shortcomings and faults identified in the NAD should be submitted to the authorized persons during the project process by the interface called Project Management Tool,

7. Design of numbering with reference to the "Regulation on Address and Numbering" after the collection of field data, the implementation of office controls and the completion of integration with NAD.

THE RESOURCES CONSUMED DURING THE PROJECT ARE

- GIS DATA
- VERBAL DATA
- CURRENT MAPS
- ZONING PLANS
- PARCEL INFORMATİON OF LAND
- IDENTITY SHARING INFORMATION
- ORTHOPHOTO MAPS
- LICENSE SERVICES

There are many benefits of keeping address data in the spatial form. Some of those are;

- Authorized administrations, which have Geographical Address Information System, can manage the system **without loss of work and duplication.**
- Through the creation of a data sharing infrastructure, the need for **faster and more reliable** execution of work is provided.
- By allowing the integration of the spatial NAD with the competent management systems and by forming the relevant infrastructure, **processing of the correct data in the system as soon as possible will be ensured.**
- Citizens can access the processes related to addressing components and building documents **more quickly and accurately.**
- The system can be used as a base for **many applications.**

EARNINGS WITH SARS

- Coordination with Institutions
- Saving of time and cost
- Efficient use of the system
- Provide of Quality Data
- Compatiblity with UIS

SARS IMPORTANCE IN URBAN INFORMATION SYSTEM

The contribution of the SARS to the UIS is indicated below.

1. In the SARS project, data are collected and processed in the system to the **same standards** throughout the country. The problem of non-availability of standard data generation in UIS will thus be overcome.
2. Large volumes of data collection for the UIS will soon provide **great benefits** for the management and administration of cities.
3. With SARS, the competent authority staff will not have to enter both their UIS and ARS, **the duplication will be removed and the data will be updated through a single system.**

4. Keeping information for individual departments in each structure, **how many individuals live, how to analyse them, and asking questions will be useful data for the urban information system.**

5. The SARS project constitutes the necessary infrastructure for **transportation studies, safety studies, tourism, health, education, planning, cartography, infrastructure/superstructure, design studies and administrative studies which are among the usage purposes of UIS.**

6. The analysis of the SARS project is based on the analysis of intensity in all countries, **classification according to age groups, direction of growth of the city, instant detection of changes in the city, education, health, transportation, and the advantages such as quick and accurate decisions** in this direction will make the cities more liveable.

CONCLUSION

When the SARS project will be activated in the overall of Turkey, it will clearly give **useful results** for the cities.

- **To collect the standard data,**
- **to train the authorized administrative staff,**
- **to include these administrations in the project process,**
- **to solve the mistakes and deficiencies in NAD,**
- **to present the field to the authorized persons with the most accurate and current status,**
- **to make the address data spatial,**
- **to share the obtained data with other institutions and organizations and providing inquiries and analysis,**

are just some of these useful results.

The possibilities of preventing data duplication by processing data in a single system are crucial for making the right decisions for today and tomorrow for our country and for the creation of liveable cities.