

Creating a 3D Data Model for the Kingdom of Bahrain



Ordnance Survey (OS) has created the first 3D-enabled national spatial data model for the Kingdom of Bahrain with the Survey and Land Registration Bureau (SLRB) mapping authority. The National 3D Mapping of Bahrain programme has supported Kingdom-wide data sharing, analysis and decision-making. This case study explores how OS worked with SLRB to create a consistent, intelligent and reliable 2D and 3D data model to aid decision-making.

Creating a national spatial data model for the Kingdom of Bahrain required various components. The key challenges the project faced included:

- Providing stakeholders with relevant data across government, business and public services.
- Moving SLRB's geospatial database to an object-based data model, giving full 3D geometric representation.
- Preparing for the 'National 3D Mapping of Bahrain' programme.

Identifying the needs for the new data model

[Ordnance Survey](#) was selected to create the first 3D-enabled geospatial data model for the Kingdom of Bahrain. They worked closely with [SLRB](#) and key stakeholders to identify what was needed for the new data model, supported effective data sharing across stakeholders and provided clear oversight of existing datasets and maintenance requirements in line with the organizational objectives.

The model was built to [Open Geospatial Consortium](#) (OGC) and International Organization for Standardization (ISO) industry standards.

"OS is a tremendous example of UK commercial and technical excellence developing a mutually beneficial partnership with the SLRB. This project has boosted UK/Bahrain commercial relations further, in the interest of both countries, and has provided future opportunities," commented Iain Lindsay OBE, British Ambassador to the Kingdom of Bahrain.

The benefits of a 3D-enabled national spatial data model

- The 3D-enabled national spatial data model underpins effective analysis and decision-making in the Kingdom of Bahrain.
- Open standards provide a consistent approach to maintaining, distributing and sharing data.
- Consistent and reliable 2D and 3D data supports the development of national and regional policies.
- The establishment of new innovative services is possible with geospatial data.
- The programme contributes to data sharing across Government and towards eGovernment, improving economies, smart cities and communications with the public.