

Geospatial SDI

Serve secure or licensed information using standards-based web services

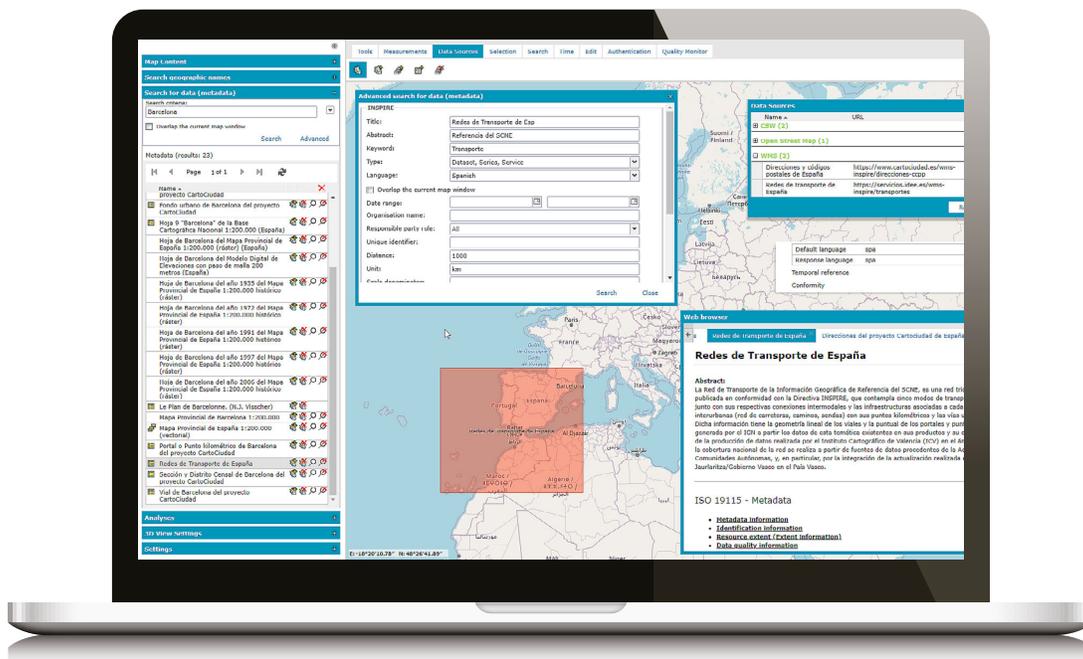


Geospatial SDI

Geospatial SDI is an interoperable and scalable component of spatial data infrastructure for cataloguing and delivering enterprise geospatial data over the web. Designed for data providers that need to manage and serve secure or licensed information using standards-based web services, Geospatial SDI offers powerful tools for controlled access to standards-compliant services and data published by those services, as well as tools for monitoring and reporting service performance. The product adheres to Open Geospatial Consortium (OGC), and International Standards Organization (ISO) standards for web services and metadata compliance. In addition, the Geospatial SDI Services are Infrastructure for Spatial Information in the European Community (INSPIRE) Ready, which means they have been adjusted to follow the current INSPIRE Technical Guidances and allow to deploy INSPIRE services.

With Geospatial SDI, you can easily extend solutions based on GeoMedia WebMap, ERDAS APOLLO, or any other vendor's OGC-compliant product to ensure that the full set of services required for implementation of custom secure Spatial Data Infrastructure (SDI) are available.





Create, edit, import, export, manage and store geospatial metadata records with the flagship SDI service - Catalogue Service for the Web (CSW).

Secure access to OGC-compliant web services

In recent years, OGC web services have become the standard for the creation and exploitation of SDIs. However, OGC standards do not address secure access to these web services, which precludes their use for publishing protected or licensed data. Filling this functional gap represents a critical factor in determining the success of applying OGC interfaces to the delivery of spatial data infrastructures. For providers that need to manage and serve secure or licensed information using standards-based web services, Hexagon offers Geospatial SDI as part of its comprehensive SDI solutions. The product provides comprehensive web service support for these key secured and monitored OGC-compliant services: WMS, WFS, WCS and WMTS.

Geospatial SDI enables configuring of user access permissions for the service instance, the dataset, feature class (WFS service) or layer (WMS service), and spatial area. In addition, an access permission may be granted to the user for a limited time (time period, weekday, time of day) and an IP address.

INSPIRE ready implementation

The current Geospatial SDI implementation follows the Infrastructure for Spatial Information in the European Community (INSPIRE) Technical Guidance Requirements and is INSPIRE ready and compatible. The INSPIRE directive establishes an infrastructure for sharing spatial information among public authorities in Europe. With Geospatial SDI, customers can set up the INSPIRE service instances out of the box.

Compatible with any OGC-compliant client

Notwithstanding secure access control, the objective is to enable ubiquitous communication via OGC-standard interfaces. Therefore, at the simplest level, Geospatial SDI enables authentication using an IP address or IP address range. This provides compatibility with any client application that adheres to OGC standards while at the same time ensuring secure access control.

Alternatively, or additionally, Vendor Specific Parameters (VSP) can be added on top of the base web service, with user and password information. This information can also be incorporated, as it often is, in the HTTP heading. Similarly, the IP address can be interpreted and revised by Geospatial SDI. The additional information provided by the VSP query is compatible with most OGC-compliant clients, including all products in the GeoMedia family.

Easy answers for who, what, when and where

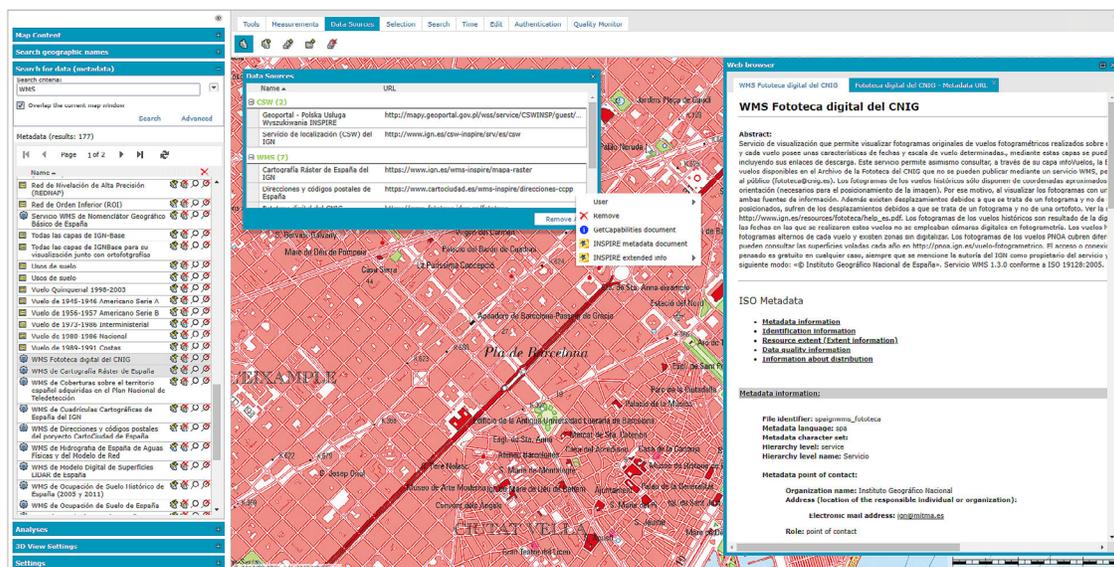
Geospatial SDI extends the services suite offered in GeoMedia WebMap with the standards-based CSW (Catalogue Service for the Web) service. This type of service is the primary tool for discovery, access, maintenance and organization of catalogs of geospatial metadata that describe data and related resources available within enterprise or public Spatial Data Infrastructure (SDI).

Compatible with any façade architecture

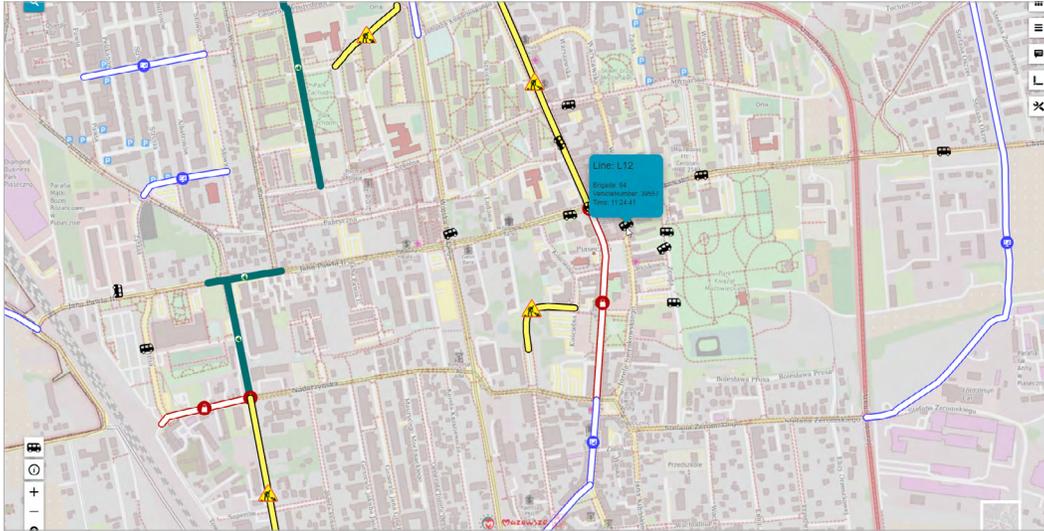
Geospatial SDI functions as a façade, providing a proxy over existing WMS, WMTS, WFS and WCS services. This architecture is also known as proxy OGC Web Service (proxy OWS), an intermediate component that allows and manages communication with OGC web services. The service user (client) communicates directly with the façade, which filters the request based on user rights (and/or other criteria) before passing it to the appropriate data services. The results can be served directly to the client or manipulated before return. This façade architecture also supports the use of web services from other providers. Façades can be used to provide better compliance to standards or to improve overall system security by placing a façade in the DMZ and making sure it is only the façade to connect to the original service behind the firewall.

Quality of administration, configuration and service control

A web-based administrative console provides the means for creating and configuring all aspects of server-side engines, web services and web applications in one place. Web service instances for any type of service can be created, configured, and removed. Geospatial SDI also enables management and monitoring of published services. Advanced features include user-event logging and measurement of service performance.



Combining Geospatial Portal and SDI provides a robust tool to manage and consume geospatial datasets and services, and recognises the need for interoperable, accessible and harmonised datasets.



City officials and citizens of Piaseczno, Poland can view standard map-based information, data relating to local community life and activities, and other business information in a public web portal.

Ease of integration

Geospatial SDI uses an open interface and ensures easy integration with other Hexagon geospatial solutions as well as third-party external services. Modification of standard web services is not required, thanks to the use of vendor specific OGC parameters and/or IP addresses.

Integration with the wider IT system environment

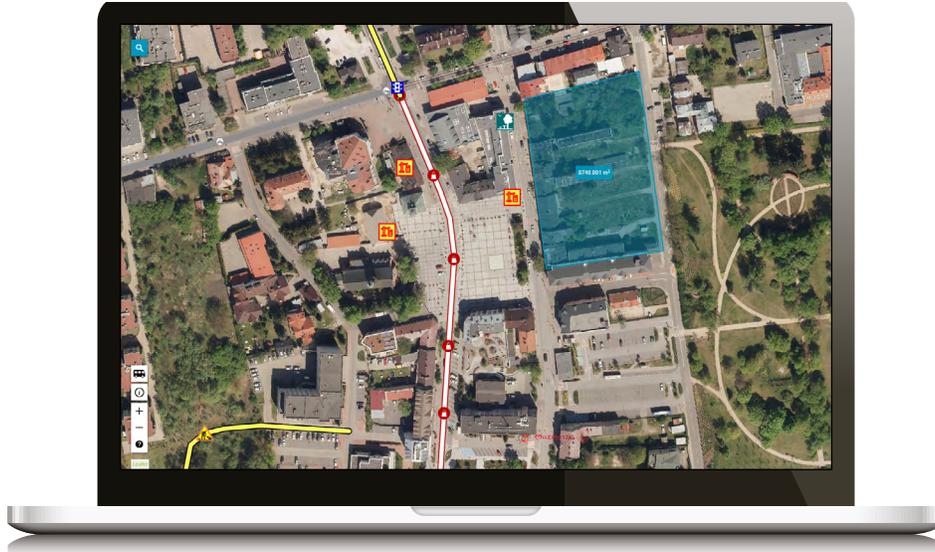
Often, data providers own their administrative databases, such as those used for e-commerce transactions. Geospatial SDI includes adapters that allow it to connect to existing administrative databases, avoiding the need to create and maintain redundant information.

Best-in-class, full SDI solution offering

Implementation of a spatial data infrastructure requires both server-side and client-side capabilities. Hexagon's SDI strategy is to offer you a choice by providing best-in-class capabilities you can implement as a comprehensive infrastructure, as standalone components, or in conjunction with components from other suppliers, including open-source providers.

Geospatial SDI is part of Hexagon's comprehensive SDI application and can be used in conjunction with the Geospatial Portal product for finding, viewing and querying geospatial data published with standard SDI web services.





Shared commune information system: The implemented system enables budget control and tracking of new investments carried out by the Piaseczno Commune.

Connected solution

Geospatial SDI extends compliance for any vendor's OGC-compliant product to assure the full set of services required for implementation of custom secure SDI.

Product and interaction

Provides OGC (CSW ISO AP)-compliant discovery of catalogue records on top of ERDAS APOLLO web services.

Extends the services suite offered in GeoMedia WebMap with the standards based CSW (Catalogue Service for the Web) service.

Extends the services suite offered in GeoMedia WebMap with the tools for controlled access to the standards-compliant services and implementation of custom Spatial Data Infrastructure.

Extends the services suite offered in ERDAS APOLLO with the tools for controlled access to the standards-compliant services and implementation of custom Spatial Data Infrastructure.



Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications. Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Safety, Infrastructure & Geospatial division improves the resilience and sustainability of the world's critical services and infrastructure. Our solutions turn complex data about people, places and assets into meaningful information and capabilities for better, faster decision-making in public safety, utilities, defense, transportation and government.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us [@HexagonAB](https://twitter.com/HexagonAB).