

INDUSTRY

LOCAL AND REGIONAL

Government Solutions

INTERGRAPH®







ADVANCED GEOSPATIAL SOLUTIONS FOR LOCAL AND REGIONAL GOVERNMENT OPERATIONS

The public is increasingly demanding that local governments provide services quickly and efficiently. Whether it is delivering clean drinking water, providing safe streets and roads, collecting garbage, ensuring accurate property assessments, or responding to emergency situations, local governments are on the front line. Planning, programming, and delivering these services consistently in the face of budgetary and staff constraints require the best tools available supported by people who understand local government needs.

For more than 40 years, Intergraph® has met the challenges of local and regional governments with proven business solutions comprised of products, services, and experienced professionals. Today, Intergraph continues its leadership role with modern business solutions based on its pioneering technology, including GeoMedia® software and other industry products focused specifically on the workflows of local government. These new business solutions help local governments efficiently geospatially enable their information technology (IT) infrastructure, providing unprecedented levels of access to geospatial data and functionality throughout the enterprise.

Geospatial technology is widely recognized as an effective tool for integrating disparate local government business systems and processes. As virtually every piece of information in a local government has a spatial reference, geospatial information management can provide the “backbone” necessary to pull your operations together. Integrating geospatial data, functionality, and workflows with open and highly scalable enterprise technology, Intergraph’s geospatial solutions help local and regional governments maximize departmental and enterprisewide efficiencies. This translates into improved services and operations. Government agencies worldwide depend on Intergraph for advanced geospatial solutions for every aspect of their operations.

Managing the Local Infrastructure

Public safety and quality-of-life issues demand that governments effectively maintain their infrastructure. Intergraph’s geospatial solutions for governments can assist personnel in all aspects of the infrastructure life cycle, including:

- Presenting data from multiple sources for planning

- Providing base data to engineers for design
- Providing field-based solutions for asset and construction inspections
- Assisting maintenance and operations personnel in locating assets and making repair/replacement decisions
- Analyzing repair, history, age, and usage to assist with capital improvement project planning

Water and Wastewater

Working with our partners, Intergraph can provide a complete solution for the enterprise asset management of water and wastewater networks. These networks form the core of the asset inventory and maintenance management operations of the water and wastewater department. Using GeoMedia’s advanced feature modeling system, the solution ensures an accurate, connected network that can support sophisticated capabilities, such as network traces. A complete water and wastewater solution from Intergraph reduces the time required for network construction and maintenance and ensures you collect information correctly the first time.

STRONG RELATIONSHIPS MEAN STRONG NETWORKS

Intergraph prides itself on strong relationships and integration with key asset management partners. The resulting solutions provide a seamless, two-way integration between Intergraph technology and key asset management solutions. These relationships allow you to integrate a spatial component into your asset and work management processes, which enables you to quickly locate and identify assets and visualize complex situations – aiding in the decision-making process, while reducing operational costs.



SOCIEDADE PARA O DESEN- VOLVEMENTO COMARCAL DE GALICIA (SITGA), SPAIN/GALICIA

More than 10 years ago, SITGA conducted a GIS supplier survey and selected Intergraph based on its ability to meet SITGA's needs. Since that time, the partnership has been a success for both SITGA and Intergraph. SITGA is now recognized as the official cartography organization of Galicia and has made one of the most impressive spatial data infrastructure (SDI) implementations in Spain. Now SITGA means quality professionalism, and the source for ANY Galicia map. Using Intergraph solutions, SITGA brings valuable geo-spatial information to citizens and businesses.

BARCELONA MUNICIPALITY, BARCELONA, SPAIN

Barcelona City, with more than 1.5 million residents, is one of the most dynamic cities in the Mediterranean. The Barcelona Municipality wanted to integrate and share information with citizens and services contractors (electricity, gas, lights, etc.). The Municipal Computer Institute (IMI) of Barcelona selected GIS solutions from Intergraph in 2007. IMI implemented a spatial data infrastructure (SDI) portal, integrating Web services and GeoMedia. The evolution to a Web services architecture through the SDI portal brings key benefits, including the ability for the municipality and subcontractors to share territorial and service information.

Credit: Institut Cartografic de Catalunya



MEETING THE CHALLENGES OF LOCAL AND REGIONAL GOVERNMENTS WITH PROVEN BUSINESS SOLUTIONS

Transportation

The transportation infrastructure is the lifeblood of any city, town, or county. Transportation agencies must constantly manage the construction, inspection, and maintenance of roads, lighting, and bridges to ensure the safety of citizens. Whether you manage your roads on a segmented basis or use linear referencing techniques and dynamic segmentation capabilities, Intergraph's transportation solution provides all the tools you need to spatially manage transportation-related information.

Land Information Management (LIM)

Governments at all levels must manage a wide range of land information management processes, including surveying, mapping, title/deed recording, planning, addressing, and more. The geospatially enabled IT infrastructure should streamline processing and provide accurate, timely, and current information to all users and constituents, regardless of their location and means of access.

Intergraph's geospatially powered business solutions for government span the full spectrum of land information management, including:

- Maintenance solutions integrated with key business systems, such as title/deeds recording, cadastral registration, valuation, planning and permitting, and property addressing
- Enterprise access to geospatially enabled information and geospatial functionality at desktop, Web, and field levels

- Integration of geospatial technology with non-spatial business systems to spatially enable and leverage more value out of non-spatial systems

As part of Intergraph's geospatially powered solution for land information management, GeoMedia products offer best-in-class tools for parcel management, providing modern workflows necessary for efficient and timely input, adjustment, and integration of parcel data at all stages of the parcel life cycle. Intergraph's advanced data modeling, enterprise transaction management, effective dating, and lineage tools and processes ensure these solutions are flexible, powerful, and scalable. Using GeoMedia Web products, our solution provides enterprise, spatially enabled viewing and analysis of key, non-spatial data assets.

Spatial Data Infrastructures (SDIs)

An executive order, issued by U.S. President Bill Clinton in April 1994, defines national spatial data infrastructure (NSDI) as "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data."

According to a report from the Federal Geographic Data Committee for NSDI, government agencies and other organizations are frequently asked for quick responses to natural disasters, industrial accidents, environmental crises, and homeland security alerts. "Much of the information needed to make sound decisions in such cases is based on geography. There is constant pressure to make wise decisions in a more cost effective and efficient manner. Accurate and current geospatial data are critical to these decisions."

Another study, “Developing Spatial Data Infrastructure: The SDI Cookbook,” supports the value of geographic information in making sound decisions at the local, regional, and global levels. “Crime management, business development, flood mitigation, environmental restoration, community land use assessments, and disaster recovery are just a few examples of areas in which decision-makers are benefiting from geographic information, together with the associated infrastructures (i.e., SDI) that support information discovery, access, and use of this information in the decision-making process.”

Intergraph provides geographic information systems (GIS) and interoperability technologies to enable the deployment of spatial data infrastructures for collaboration and distribution of geospatial data. This framework of spatial data, metadata, and tools is interactively connected to allow government agencies around the world to use and share spatial data in an efficient and flexible way. Some regions of the world enforce laws for sharing geospatial data, and there is also a strong demand for it from a business perspective.

From Intergraph’s perspective, SDI will change the world of geo-related solutions to a service-oriented business. Traditional services that mainly integrate GIS processes (data capture, data maintenance, software integration, database-related implementations, etc.) will change to integration projects, which support the meaning of state-of-the-art services and Internet services among players in the market.

SDI also opens up spatial data for wider use, such as integration within other (non-spatial) business systems and integration with complete,

end-to-end online services, which usually require interaction with multiple systems. This is a key driver for governments in the EU looking to reduce government overhead and increase economic competitiveness by harnessing IT to improve the efficiency, quality, flexibility, and accessibility of services. These same drivers motivate private sector organizations to do the same by linking data and process silos to improve business insight and increase operational efficiency.

Intergraph’s SDI application, based on GeoMedia technology using Open Geospatial Consortium (OGC®) and ISO Web services, offers best-in-class Web tools to build geospatially powered intranet and Internet solutions in minutes. With this technology, governments can implement SDI systems to provide communication and collaboration among government entities, businesses, and the public. Spatial data infrastructures are being defined by government initiatives, such as European Union INSPIRE, United Nations SDI, Canadian Geospatial Data Infrastructure, and the U.S. National Spatial Data Infrastructure.

Taking advantage of Microsoft® .NET, GeoMedia technology readily integrates with other corporate applications through OGC-compliant Web services. This unprecedented level of software integration lets multiple departments, other government entities, businesses, contractors, suppliers, and citizens effectively share information and services seamlessly across the enterprise and beyond.

Geospatial Data Catalog

An increasingly important part of any database system is the maintenance and deployment of a catalog of geospatial data resources within your



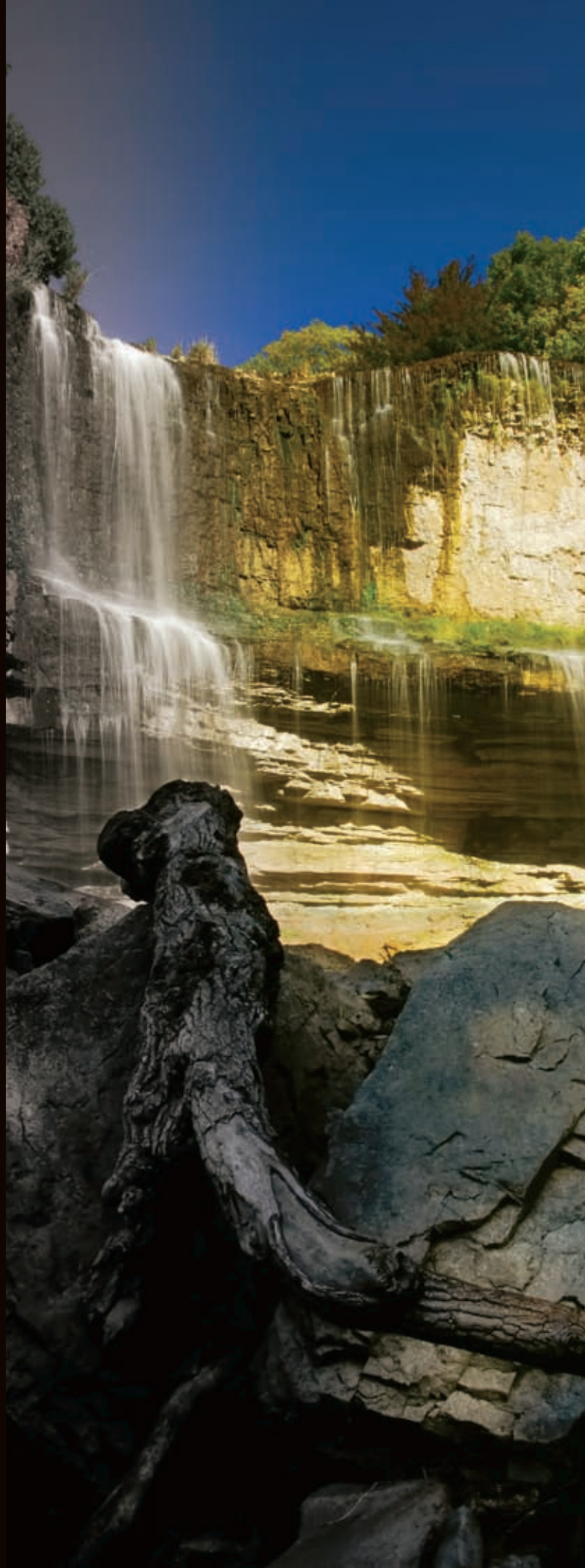
MUNICIPALITY OF CZESTOCHOWA, DEPARTMENT OF GEODESY AND CARTOGRAPHY, POLAND

Czestochowa is first mentioned in recorded history in 1220. Today, the city is a large municipality with well-developed infrastructure and strong social and economic potential. The Department of Geodesy and Cartography of the Municipality of Czestochowa manages the city's cadastral, land registry, and infrastructure maps. The department was using two separate systems for land registry and cadastral maps, creating several challenges. The old system provided very limited integration possibilities. Additionally, it focused on maintaining data, not sharing it.

Czestochowa is using Intergraph government solutions to perform geospatial analysis, maintain geometrical data, and display cadastral and thematic maps. Multi-tiered technology makes it possible to add new workstations to the system easily and extend system functionality as needed. GeoMedia's open architecture and industry standards provides for easy integration of information and data sharing.

CITY OF HAMILTON, ONTARIO, CANADA

The City of Hamilton is a large community of mixed urban and rural areas in southern Ontario. The city required an integrated cross-departmental technology solution to assist in managing their complex infrastructure network. Hamilton uses Intergraph technology for operational assistance in work order management and customer services, fleet management for transit vehicles for the disabled, and capital project planning for sewer, water, and roads. Intergraph's GeoMedia provides a comprehensive set of tools to allow the city to easily input, manipulate, and analyze geospatial data to aid in all facets of infrastructure management.



enterprise via an intranet or Internet. Intergraph provides tools for creating, querying, and managing a geospatial metadata catalog, allowing you to maximize your data investment. Intergraph's metadata solutions for authoring and serving a metadata catalog are transitioning from the U.S. Federal Geographic Data Committee's standards for geospatial metadata to the more robust, international standards and specifications for data and services metadata (ISO-19115, 19119, and 19139). Intergraph's adherence to evolving technology standards and integrated catalog architecture ensures you can easily discover and use your geospatial resources for key workflows in your government operations.

Enterprise Image Discovery, Management, and Distribution

The use of imagery content is critical to the success of many workflows in local and regional governments. Intergraph's Geospatial Content Management application, using TerraShare® technology, provides a single, open geospatial metadata database specifically tailored for geospatial data, so you can address your image management and distribution needs within a single environment. This single environment approach is valid whether your organization has one workflow or several different operational flows. TerraShare is a multi-tiered, client-server product environment designed specifically for geospatial data management, access, and distribution.

This solution helps you avoid wasting time searching for existing imagery files needed for planning, design, construction, and maintenance. Our content management application differentiates itself by providing a solution that manages terabytes of geospatial data and metadata – from acquisition

and storage to exploitation and distribution – and provides a return on investment of improved, end-user performance and increased system efficiency.

Partners Provide Complete Solutions


Intergraph has teamed with non-spatial industry leaders to provide comprehensive, spatially enabled business solutions for local government. These solutions complement and leverage our clients' non-spatial investments, including permitting, recording, asset management, CAMA, taxation, and other systems, by geospatially enabling these investments. This includes integrated, transaction-based maintenance of land information and integrated viewing and analysis of land information. This approach gives you maximum flexibility both in working with your existing business systems and in acquiring new business systems.

The Intergraph Synergy Program supports third-party research, development, and implementation of geospatial solutions based on Intergraph technology. The program is a unique framework based on building and maintaining a qualified worldwide network of research laboratories, value-added resellers, consulting firms, training providers, system integrators, data providers, in-house project teams, enterprise software/solutions providers, and independent software vendors. For more information on the program, visit <http://synergy.intergraph.com/>.

WHY GOVERNMENT LEADERS CHOOSE INTERGRAPH

Government agencies around the world choose Intergraph solutions for their geospatial workflows. Key benefits include:

- We provide the ability to build and integrate GIS, interoperability, and enterprise GIS capabilities to offer complete local and regional government business workflows.
- We can lower deployment costs with our solutions using pre-configured data models and user interfaces.
- GeoMedia continues to provide best-of-class geospatial capabilities for our government solutions. Its open architecture, including industry standards (OGC, FGDC, ISO/CEN, SOA), provide an excellent platform for solving government business problems and ensuring legal compliance.
- Our GeoMedia products use Oracle Spatial data structures and long-term transaction technology or Microsoft SQL Server technology to provide IT standards for data management.
- GeoMedia extends your enterprise data and geospatial capabilities with today's leading map browsers – Google Earth and Microsoft Virtual Earth.
- With the demand for imagery data increasing, our Geospatial Content Management application provides a scalable enterprise solution for managing and exploiting imagery data across all government systems.
- Our direct participation with industry and government policy initiatives (INSPIRE drafting teams, EU referenced projects, OGC technical committees) brings the knowledge and experience of industry standards directly to customer solutions.
- The ability to share geospatial data and services via SDI using Intergraph solutions enables governments to better cooperate across departments, with other governments, and with businesses.
- We provide the ability to distribute government information out to the public via SDI to improve e-government services.
- Our industry-specific tools for spatial data infrastructure management increase customer productivity by providing easy maintenance and administration via a single environment.
- For Europe, Intergraph's Web-based SDI solution and tools follow INSPIRE directives to ensure legal compliance.
- Our Web-based geospatial technology solutions and tools are used by a global user community and distribute data and Web services following OGC and ISO standards. This minimizes the disconnects between groups and maximizes communication.



KOMMUNALES RECHENZETRUM NIEDERRHEIN (KRZN), MOERS, GERMANY

KRZN, the data processing center for the local government authority of Niederrhein, serves more than 40 municipalities and 1.25 million people. When the demand for data processing increased as the area grew, KRZN selected Intergraph's solution for local and regional governments to convert its existing data management systems into one centralized data warehouse. Users can now view and analyze geospatial and other subject data, and then publish both datasets on the Web or company intranet – bringing valuable information to those who need it.





ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

For more information, visit www.intergraph.com.



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