ROLTA

GeospatialFusion™
Utilities

Operational Excellence driven by Operational Intelligence

ROLTA Geospatial Fusion Advantage

ROLTA's Geospatial Fusion is an innovative, world-class framework which fuses disparate information, applications and processes within an enterprise into a cohesive, comprehensive, easy-to-implement solution. Geospatial Fusion allows an organization to increase the value of its legacy systems as well as costly investments in GIS, operational and engineering data and enterprise business applications by enabling cross-functional integration and creating spatial operational intelligence. For a Utility Agency, this new integration can unlock previously inaccessible information and enable new insights, improved operational diagnostics and greater operational efficiencies. At ROLTA, our goal is to help companies of all sizes gain enterprise-wide insight to make an impact on their business and the world in which we live.

Utility Challenges

Gale-force winds of change are altering the landscape throughout the Utility industry.

Changing Business Cycle
Today, we are entering a business cycle where high capital investment is required to update and rebuild an aging and insufficient Generation, Transmission and Distribution infrastructure. Over the next twenty years, investments totaling $1.5 trillion dollars will be required in the U.S. to meet consumer demand that is expected to grow as much as 30% in the same time period. In developing economies, the demand for electricity is growing by as much as 10% per year.

Changing Economics
Now more than ever, the future fate of Utilities is closely tied to global economics. Growing global demand is driving higher energy prices. Access to the capital markets that are required to fund expensive infrastructure projects are highly exposed to Wall Street turmoil.

Changing Environment
Increasing concerns about climate change and the dawn of a new "carbon-constrained" economy is driving the development of alternative sources of energy. Infrastructure improvements are required to reduce carbon emissions and improve the operational efficiency of the energy infrastructure currently in place today.

Changing Customer Expectations
While the electrical system in the U.S. is currently 99.97% reliable, power outages and interruptions still cost Americans at least $150 billion dollars each year. As electricity demand increases, there is a declining tolerance for interruptions plus an evolving demand for individualized smart solutions versus today's one-size-fits-all service model. In developing countries, while the current-day challenges differ from those in the U.S., the expectation for increased access to reliable power is just as demanding.

Consequently, the global industry must revitalize itself in an environment where economic dynamics, customer expectations and environmental concerns are driving prices higher at the very time that the tolerance for price increases is limited. Only through improved operational performance can the necessary revitalization occur and the increasing demand for electricity be met.

Solution

Two infrastructures must be managed in the future, not just one. Everyone readily understands the requirements to improve Utility physical infrastructure. What about the huge gaps in the Information Technology infrastructure that must be addressed? Traditionally, IT applications have been procured to meet specific Utility department goals. For instance, SAP supports financial and work asset management; InService, PowerOn or Oracle Utilities supports Outage Management; MicroStation, AutoCAD, ArcGIS, GE Smallworld or Intergraph supports GIS and engineering design. While each of these systems possess adequate capabilities to create and utilize their own data, new challenges arise when work processes require a convergence of data from multiple systems.

For instance, robust data linkages between OMS, CIS and GIS provide visibility into the probable cause, duration, number and type of affected customers and financial impact needed to keep customers, media, regulators and all other stakeholders informed throughout outage events—not just in their aftermath.

Increasingly, Utility users are demanding that information from disparate sources be presented in a cohesive and insightful fashion for effective decision-making. Such information is required to be geospatially referenced to increase visual understanding. Also users need the analytical power of business intelligence solutions to understand the complex trends and issues associated with maintenance optimization, field reporting, regulatory compliance and reliability.

ROLTA has developed a unique set of web based technologies, called Geospatial Fusion™ that are based on a 25 year history of working with Utility companies and a strong understanding of Utility work processes. The Geospatial Fusion solution, with its powerful OnPoint™ engine, effectively bridges the gap between stovepipe Utility applications in several unique and innovative ways:

- **Configuration:** Wizard based configuration without complex custom programming supports integration with legacy applications and databases.

- **Spatial Integration:** Geospatial Fusion supports the mash-up of unique Utility GIS data with commercial data from Bing Maps and Google Earth, aerial photogrammetry, satellite imagery and other business information.

- **Adaptive Search:** This unique functionality supports asynchronous multi-tier searches across multiple external applications. For example, a user could request a map of all customers who have entered a complaint (GIS application) within a service district associated with aging transformers (Maintenance Management System). Complaints can be further segmented by type of complaint (flicker, brown out or surge) so that disruptions can be isolated and problem transformers repaired.

- **Business Intelligence:** Through the ROLTA OneView™ solution, Geospatial Fusion can be fully integrated with analytics engines such as Business Objects and OBIEE to provide business metrics that enhance decision-making and support regulatory compliance.

- **Security:** Geospatial Fusion provides security at each attribute level for all spatial and business information so that information is easily accessible only by appropriately authorized personnel.

- **Workflows:** Applications should enhance rather than burden Utility work processes. For example, Geospatial Fusion can provide the work processes necessary to ensure that field work is appropriately updated across all legacy systems, eliminating most manual work processes.

- **User Experience:** Geospatial Fusion has the power to adapt the user interface to suit the unique needs of office staff, field crews, GIS analysts and executives.
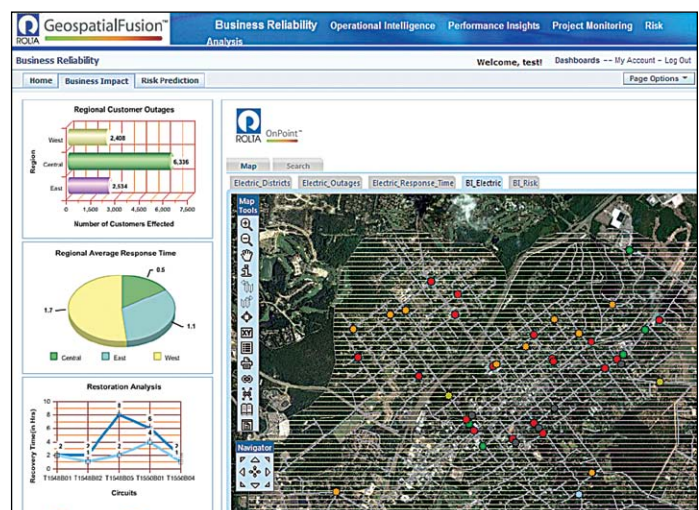
Why ROLTA?

ROLTA provides Enterprise Geospatial technology in order to reduce complexity and provide insights that support intelligent decision-making.

ROLTA's solutions effectively address today's challenges because they are developed and supported by consultants with strong industry expertise.

Geospatial Fusion allows agencies to gain full visibility into their operations, which provides the basis for informed decision-making and enhanced operational efficiencies.

ROLTA has a great wealth of knowledge and experience with successful projects throughout Government and Utility agencies in over forty countries.

Rolta Solutions at Work

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The TDPUD's largest payback has been the easy integration between ROLTA's Geospatial Fusion solution and OnPoint engine with its own advanced GIS-centric outage management systems and award-winning field/redline GIS pen tablet PC's. During outages, district personnel can now access the outage prediction results from within ROLTA's solution, instead of having to maintain multiple OMS Dispatch licenses. The integration with the District's field units have allowed field personnel to redline "Damage Assessment" notes, which are synchronized in near-real-time with the District GIS server and displayed within ROLTA's solution. Users can query for "Damage Assessment" redlines by accessing a custom-configured query window that offers a more complete picture of current outage conditions.

Hydro One

Hydro One is a major electricity supplier in the province of Ontario, Canada. They are the repository for a huge number of assets associated with electrical transmission networks for the entire province as well as the electrical distribution network for much of the province. Historically, these datasets were inaccessible to many users in the organization because they were only available on customized systems that required extensive training to use. In addition, there had been no way to show all these assets on the same interface. The OnPoint engine of ROLTA's Geospatial Fusion solution resolved this with the development and implementation of Hydro One's GIS Portal.

CESC Limited

Every year, CESC Limited delivers more than eight billion kilowatt hours to the eleven million people living in Calcutta, India. CESC presented ROLTA with the challenge of improving the operational efficiency of their call management, outage management and field dispatch crews. ROLTA's Geospatial Fusion solution integrated data across all three systems, providing the spatial analysis required to reduce the number of calls reaching the Regional Reporting Center (RRC) department. Calls from the same area or related to a common cause have been merged into one system, reducing the number of calls reaching RRC and enabling effective mobilization of field crews.

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"The user response has been extremely positive. Within two weeks of OnPoint deployment, 80-85% of TDPUD's sixty staff members were already regular users."

Ian Fitzgerald, GIS Coordinator

ROLTA starts with ideas.
Ideas for our customers' unique opportunities.
Ideas that result in new technology.
Ideas that use technologies in unique ways.

ROLTA is innovative with technology.

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