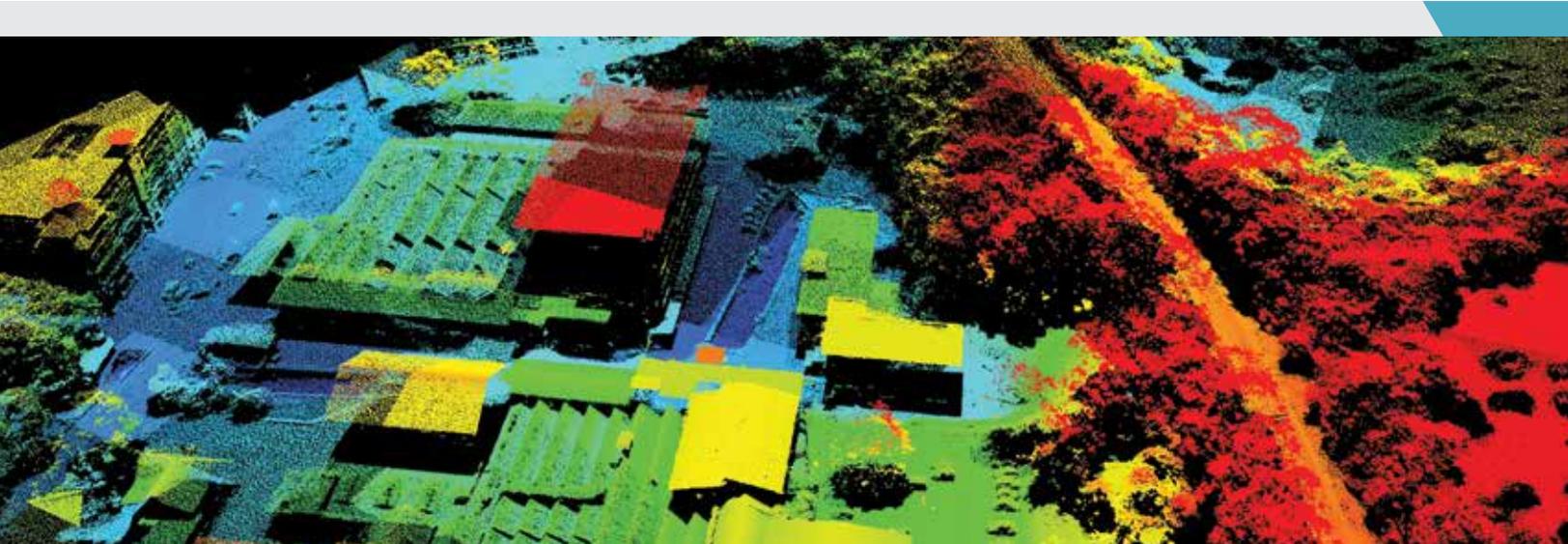


Hexagon Geospatial's Cloud-Based Solution Helps Map Entire Country of Germany



PROFILE

COMPANY: RWE Deutschland AG Germany

WEBSITE: <http://www.rwe.com>

EMPLOYEES: 70,000

INDUSTRY: Utility

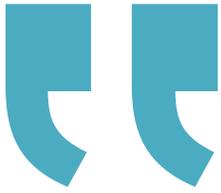
COUNTRY: Germany

PRODUCT USED

- ERDAS APOLLO
- ERDAS IMAGINE®
- ERDAS ECW/JP2 SDK
- GeoMedia® WebMap
- SaaS Cloud Infrastructure

KEY BENEFITS

- Managing millions of geobasis data files
- Ability to serve a heterogeneous GIS environment with multiple GI systems from different vendors
- Lossless data compression of 38 TB raw data
- Producing one ECW source and providing multiple services (WMS, WMTS, ECWP)
- Reduce network bandwidth
- Reduce IT resources and costs
- High performance data using standards (OGC®/INSPIRE and ECWP streaming)
- SaaS solution supports desktop, web, and mobile devices
- Easy data distribution via Clip-Zip-Ship
- Automated update process of 365,000 sq km geospatial data
- Reliability of the services to meet demand 24/7
- One contact and contract partner



Along with understanding how to share the data effectively, different departments within different agencies need to access and process data in a variety of ways.



THE CHALLENGE

Leveraging geospatial data for various purposes across large, disparate organizations that span an entire country is a tremendous challenge, especially when geospatial data ownership is decentralized across states.

Along with understanding how to share the data effectively, different departments within different agencies need to access and process data in a variety of ways. Organizing and keeping data up to date across jurisdictions, while delivering that data in a common way and timely manner, are all crucial factors in enabling national agencies and departments to make smarter decisions.

MANAGING GEOSPATIAL DATA

Hexagon Geospatial and business partner Geosystems were recently awarded a project to help one of Europe's leading electricity and gas companies – the RWE Deutschland AG. With its headquarters in Essen, Germany, RWE Deutschland sought to organize and manage geospatial data for the entire country of Germany, covering more than 365,000 square kilometers of land area.

Project specifications required keeping all mapping data up to date, along with rapid delivery of the data to a variety of regional organizations.

Other important project requirements included:

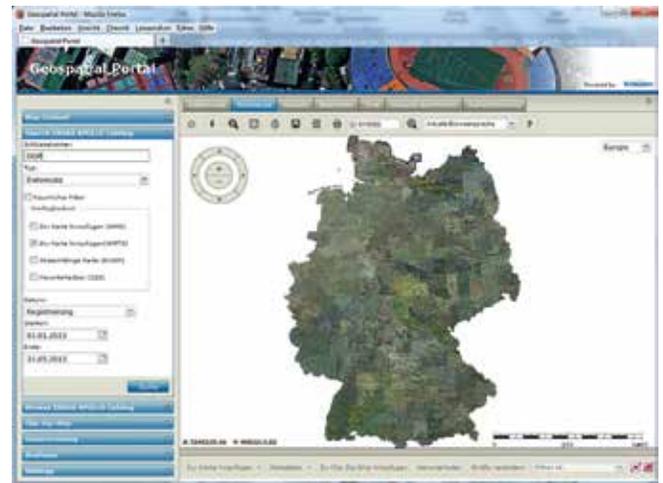
- Usage of geospatial data services in low-bandwidth and offline networks to meet RWE Deutschland and third party needs
- Reliability of the services to meet demand 24/7
- Ability to serve a heterogeneous GIS environment with multiple end-user systems

THE SOLUTION

The solution was built around the following components:

- Terra Map Server provides cloud infrastructure, offering hosting solutions to European customers running off-premise geospatial applications, services, or data information by parcel.
- ERDAS APOLLO is the geospatial data management solution providing the organization and rapid dissemination of massive volumes of disparate geospatial data.

- ERDAS IMAGINE® incorporates geospatial image processing and analysis and remote sensing into a powerful, convenient package. It enables users to easily create value-added products such as 2D images, orthophoto mosaics, landcover classification, 3D flythrough movies, vectors derived from imagery, and cartographic-quality map compositions from geospatial data.
- ERDAS ECW /JP2 SDK provides the central compression and decompression capability within ERDAS IMAGINE and GeoMedia®. Third parties are able to implement this toolkit to read and write Hexagon Geospatial's patented Enhanced Compression Wavelet (ECW) format to offer unparalleled performance, image quality, and file storage savings.



This view points out the world's largest ECW (1-terabyte) image running in Geospatial Portal. The ECWP streaming service is provided by ERDAS APOLLO Essentials and is tremendously faster than standard Open Geospatial Consortium (OGC®) services. It even works in low-bandwidth networks. The uncompressed imagery was 38 terabytes. © BKG (2011) powered by Hexagon Geospatial.

HANDLING MASSIVE VOLUMES OF DATA

One of the biggest challenges was in handling the huge data volume. In particular, the question on how to deliver 38 terabytes of imagery data for all of Germany at 20 centimeters, spanning 370,000 files, had to be addressed. In order to overcome the sheer volume of data, technology found in ERDAS IMAGINE was used to process and compress the 38 TB of uncompressed imagery down to a single 1-terabyte ECW file, while retaining full image quality and excellent performance.

With final pixel dimensions of 3,210,000 pixels x 4,340,000 pixels by 3 bands, or 14 terapixels in size, this is the largest ECW image ever created and quite likely the largest single image of any format in the world.

ERDAS APOLLO has the capacity to serve the single compressed ECW file in a variety of different protocols including fast-streaming Enhanced Compression Wavelet Protocol (ECWP), Web Map Service (WMS), and Web Map Tile Service (WMTS). Streaming imagery rapidly via ECWP is tremendously faster than standard Open Geospatial Consortium (OGC®) services, and even works in low bandwidth networks, which is important in field service. By offering interoperable OGC services in addition to ECWP, it is guaranteed that every standard GIS can benefit from the centralized geo-service. ECWP also caches on the client end, providing yet another means for localities and other external third parties to work in low-bandwidth or offline scenarios.



Hexagon Geospatial helps you make sense of the dynamically changing world. Known globally as a maker of leading-edge technology, we enable our customers to easily transform their data into actionable information, shortening the lifecycle from the moment of change to action. Hexagon Geospatial provides the software products and platforms to a large variety of customers through direct sales, channel partners, and Hexagon businesses, including the underlying geospatial technology to drive Intergraph® Security, Government & Infrastructure (SG&I) industry solutions. Hexagon Geospatial is a division of Intergraph® Corporation. For

more information, visit www.hexagongeospatial.com.
Contact us at marketing@hexagongeospatial.com.

Intergraph® Corporation is part of Hexagon (Nordic exchange: HEXA B). Hexagon is a leading global provider of design, measurement and visualisation technologies that enable customers to design, measure and position objects, and process and present data.

Learn more at www.hexagon.com.

© 2014 Intergraph® Corporation. All rights reserved. Hexagon Geospatial is a part of Intergraph Corporation. Intergraph is part of Hexagon. Intergraph and the Intergraph logo are registered trademarks of Intergraph Corporation or its subsidiaries. Hexagon and the Hexagon logo are registered trademarks of Hexagon AB or its subsidiaries. All other trademarks or servicemarks used herein are property of their respective owners. Intergraph believes the information in this publication is accurate as of its publication date. Such information is subject to change without notice. GEO-US-0190B-ENG 09/14