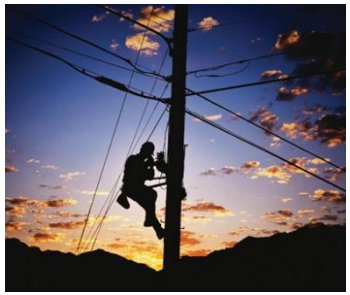
SMARTER DECISIONS FOR GEOSPATIAL

“From the Sensor to the Internet with Hexagon Geospatial Technologies“

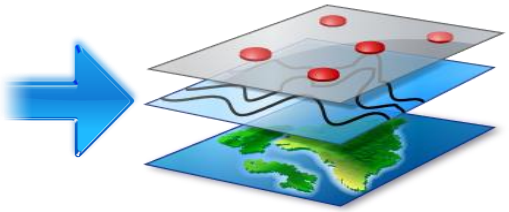
Jairo Linares, Regional Sales Manager, Americas
Intergraph Geospatial
August 17, 2012

From the Sensor to the Internet





Geospatial Information Value Chain

Capture **Process** **Share** **Deliver**

From the Sensor to the Internet

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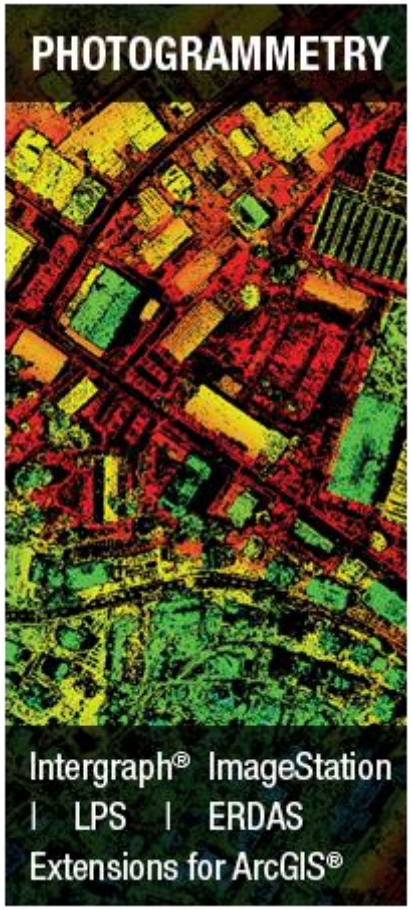
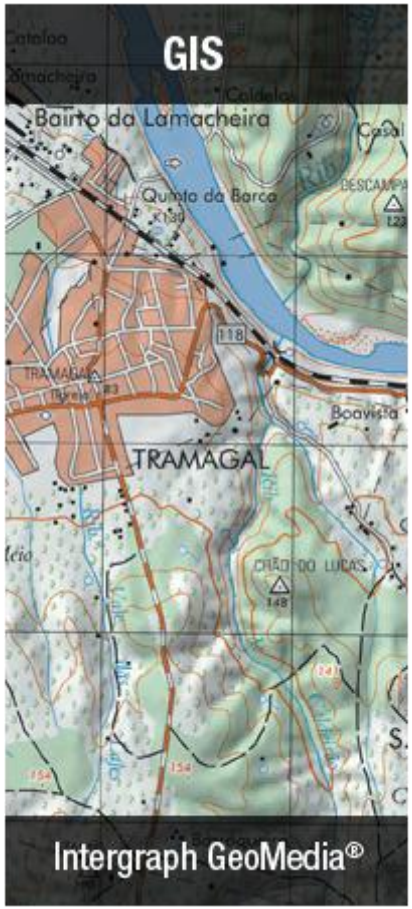
Soluciones Desktop

- Un sistema de autoría de información para producción geoespacial y análisis con productos especializados en las siguientes ramas geoespaciales:





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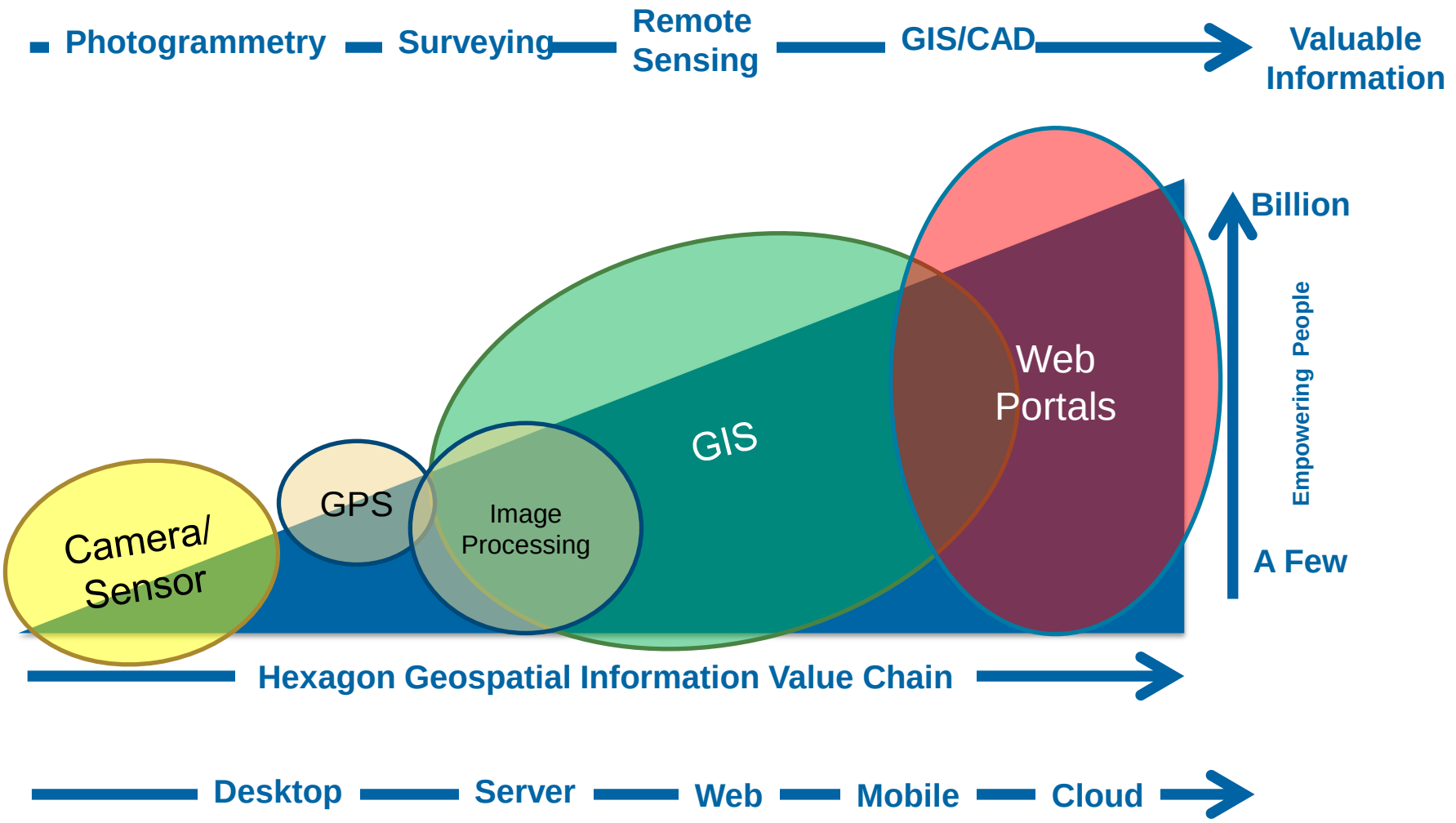
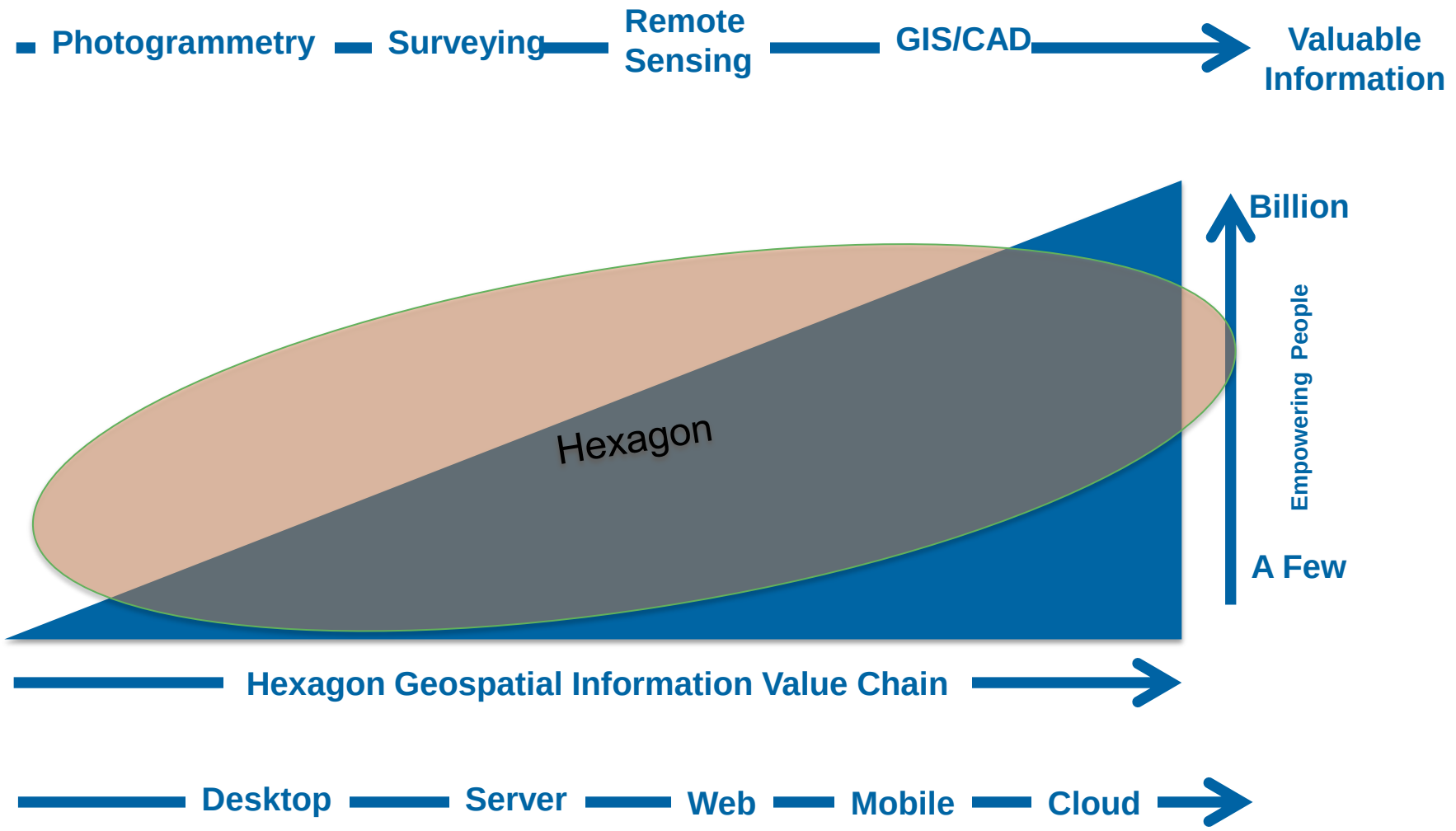
Soluciones Servidor

- Extienden la utilización de los datos geoespaciales e información através de los diferentes departamentos de la organización.

Segmentation of Product Acquisitions



HEXAGON's Companies in One Value Chain



The Geospatial Ecosystem

INTERGRAPH

Field Mapping & Update

Satellite Sensor Data

GeoEye

DIGITALGLOBE

SPOT IMAGE

RADARSAT INTERNATIONAL An MDA Company

Google

Microsoft

Geo-Portals

GIS

INTERGRAPH

Remote Sensing

erdas The Earth to Business Company

Users & Consumers

Intranet/Internet

Information Products ↕ **Web Services**

Data ↔ **IT** ↔ **Data**

Data ↔ **Server** ↔ **Data**

Spatial Database

ORACLE Microsoft IBM

Photogrammetry

ZI IMAGING an Intergraph Company

Leica Geosystems

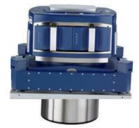
erdas The Earth to Business Company

CAD Engineering Utilities

Leica Geosystems

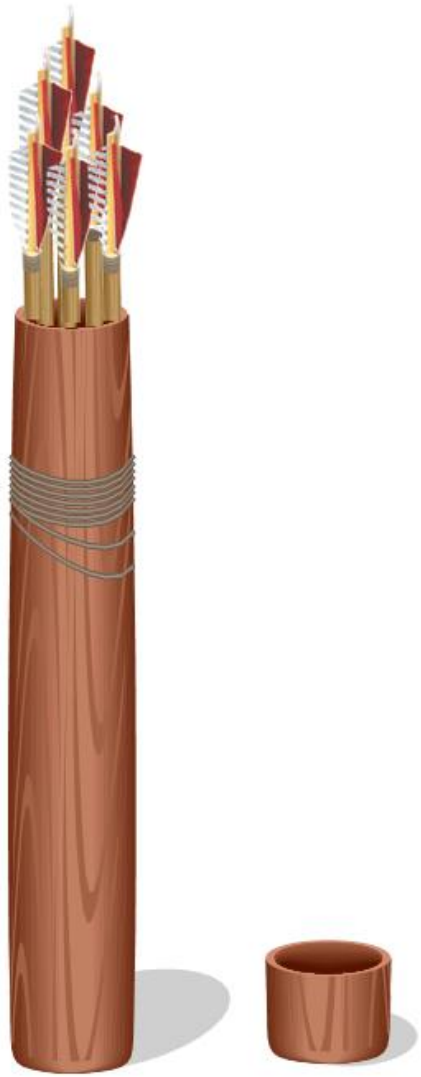
INTERGRAPH

Airborne Sensors



Terrestrial Sensors

Seven Arrows of a Complete Product Portfolio



01 IMAGE/RASTER/POINT CLOUD — IMAGINE

02 VECTOR GIS — GEOMEDIA

03 PUBLISH — APOLLO & WEBMAP ESS

04 DATA MANAGEMENT — APOLLO ADVANTAGE

05 WORKFLOW BASED WEB GIS — GEOMEDIA SMART CLIENT

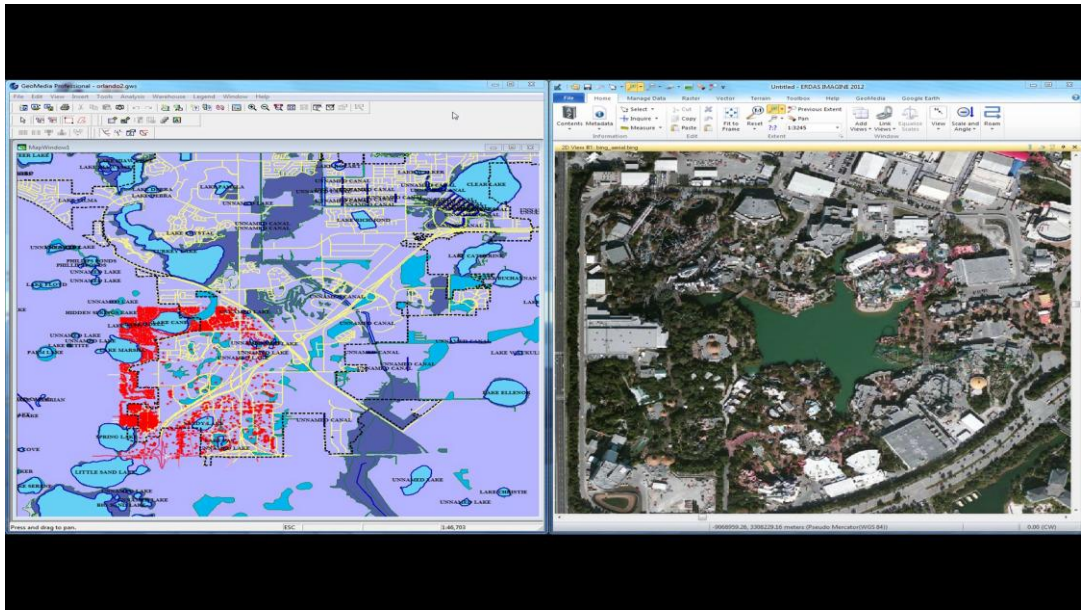
06 GEOPORTAL — GEOMEDIA SDI PORTAL

07 DYNAMIC GEOPROCESSING — APOLLO & WEBMAP PRO

GeoMedia and ERDAS IMAGINE Integration

"Live Link" between IMAGINE and GeoMedia

- Zoom, Pan, Roam operations inside IMAGINE drive GeoMedia's Map Window
- See GeoMedia warehouse features inside IMAGINE
- Use IMAGINE's modeling environment to update feature attributes in a GeoMedia warehouse

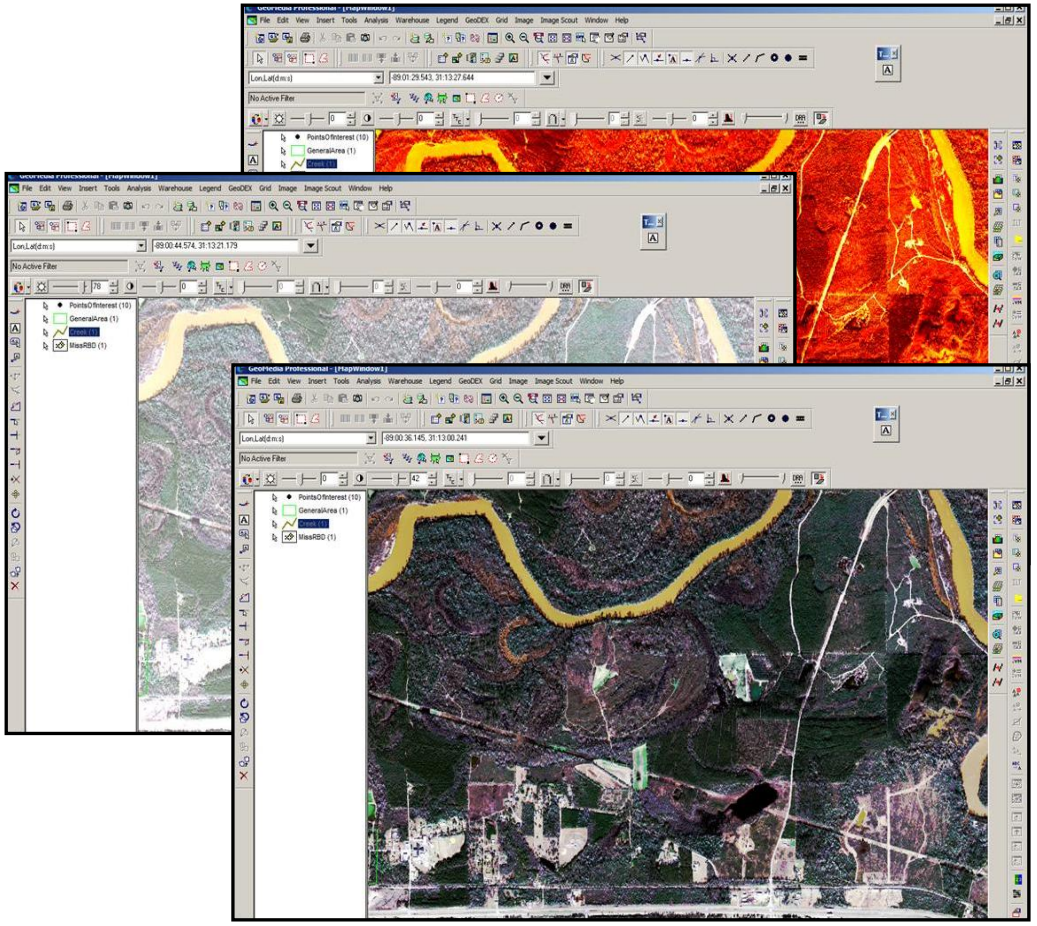


erdas The Earth to Business Company

GeoMedia and ERDAS IMAGINE Integration

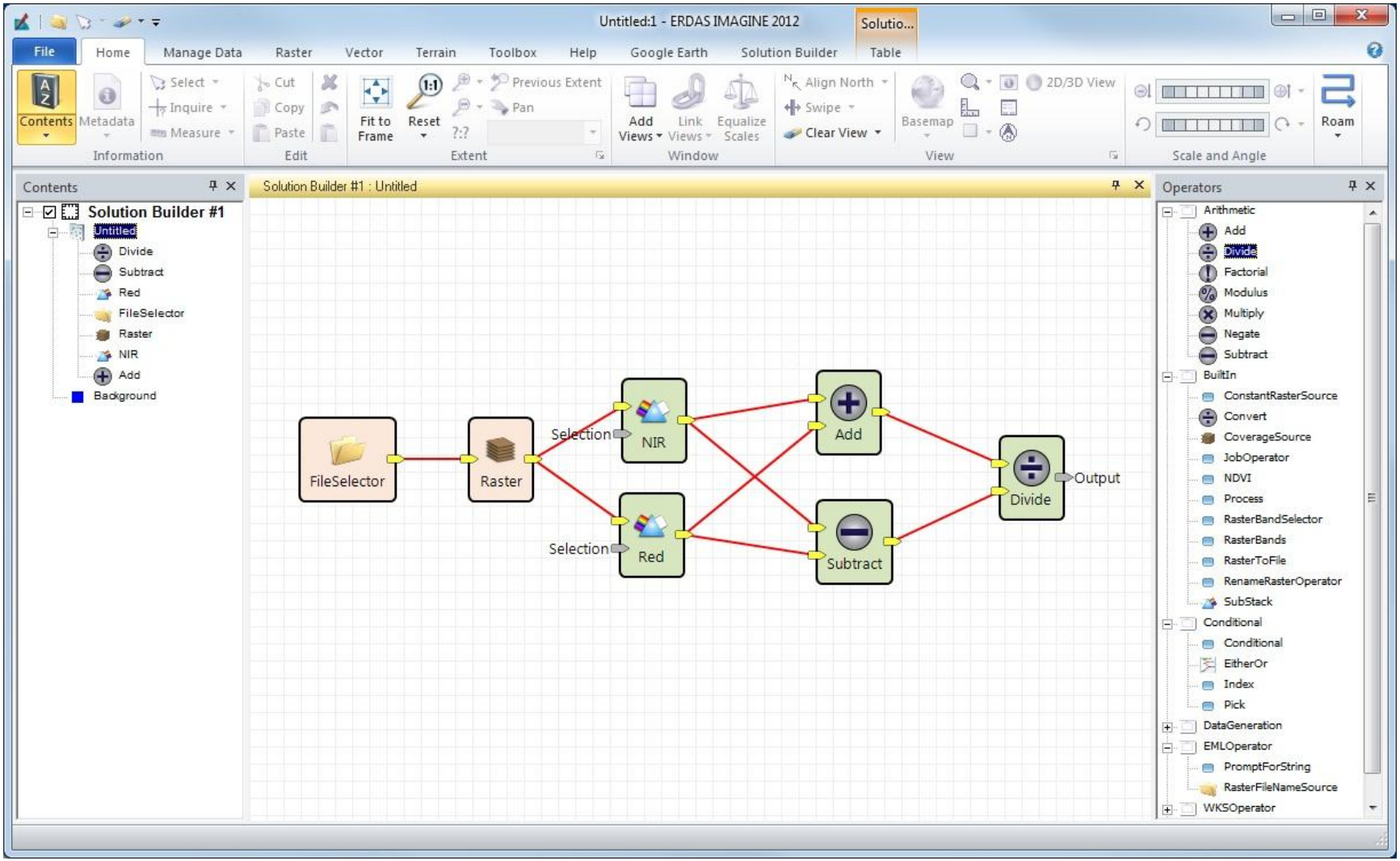
Image Enhancements from IMAGINE to GeoMedia

- Incorporate functionality similar to GeoMedia Image into GeoMedia Desktop products using ERDAS IMAGINE software
- Multi-band images
- Raster/Image following for vector capture

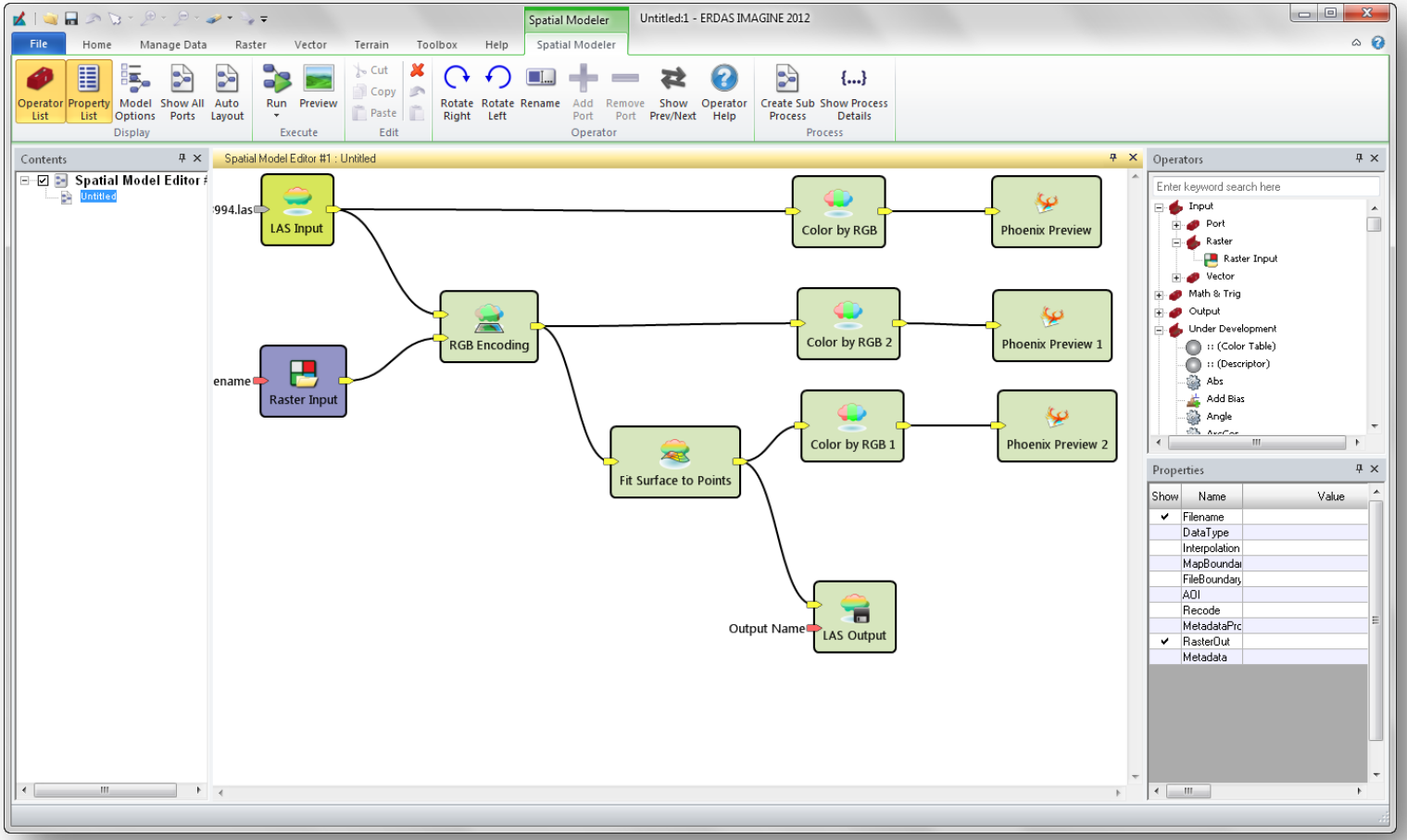


erdas The Earth to Business Company

Solutions Builder Interfase

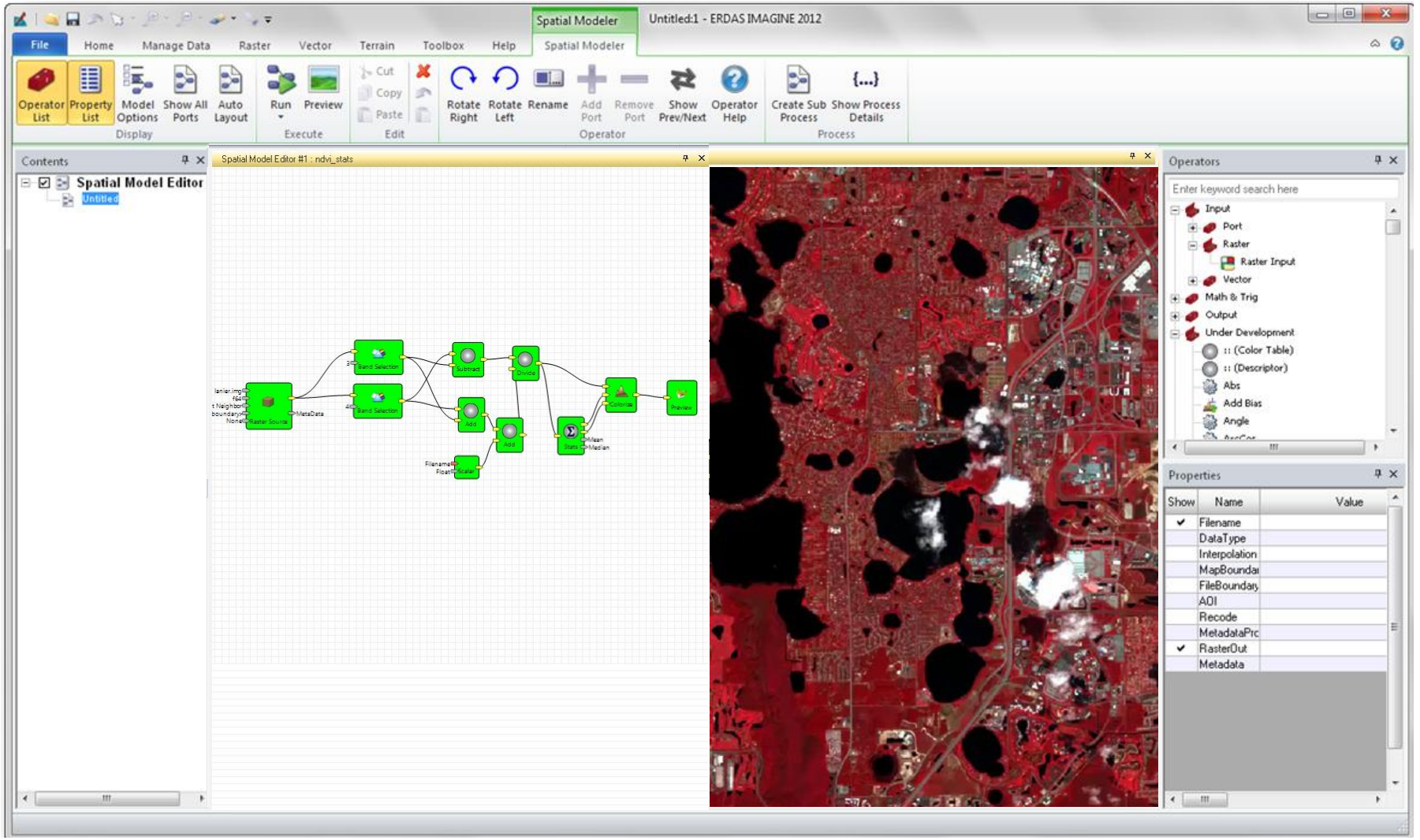


Dynamic Geospatial Fusion



GIS + REMOTE SENSING + PHOTOGRAMMETRY + CAD

Data is Fused and Presented on the Fly



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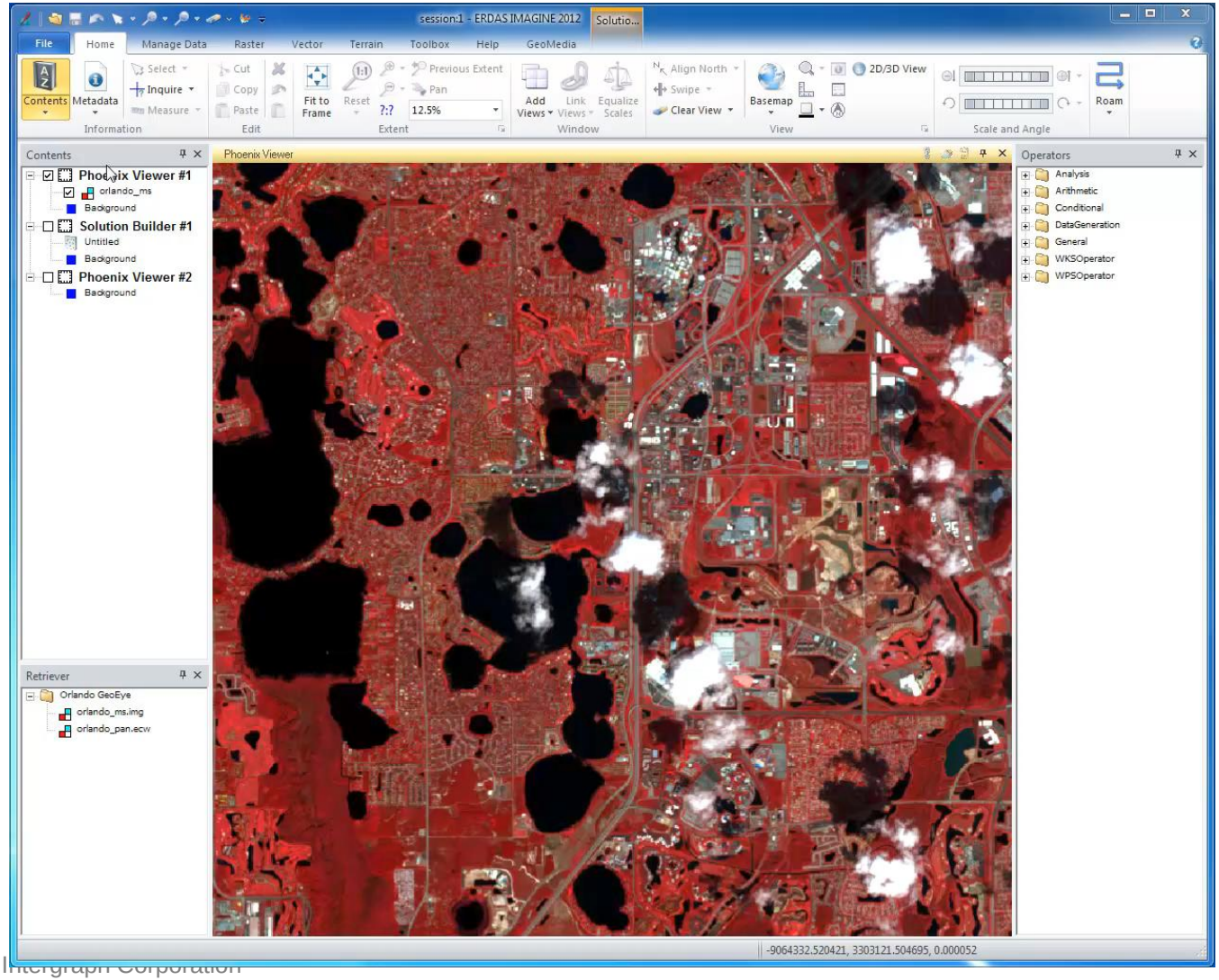

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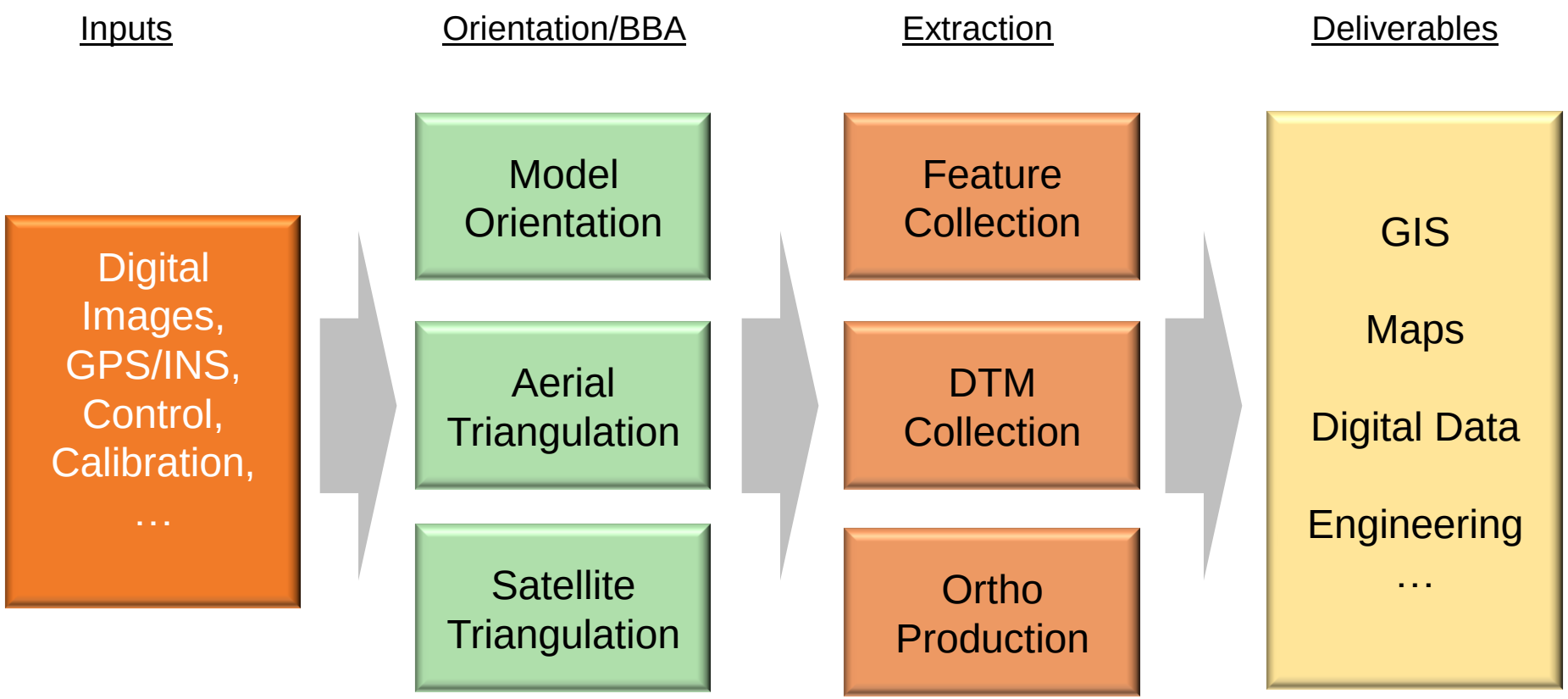
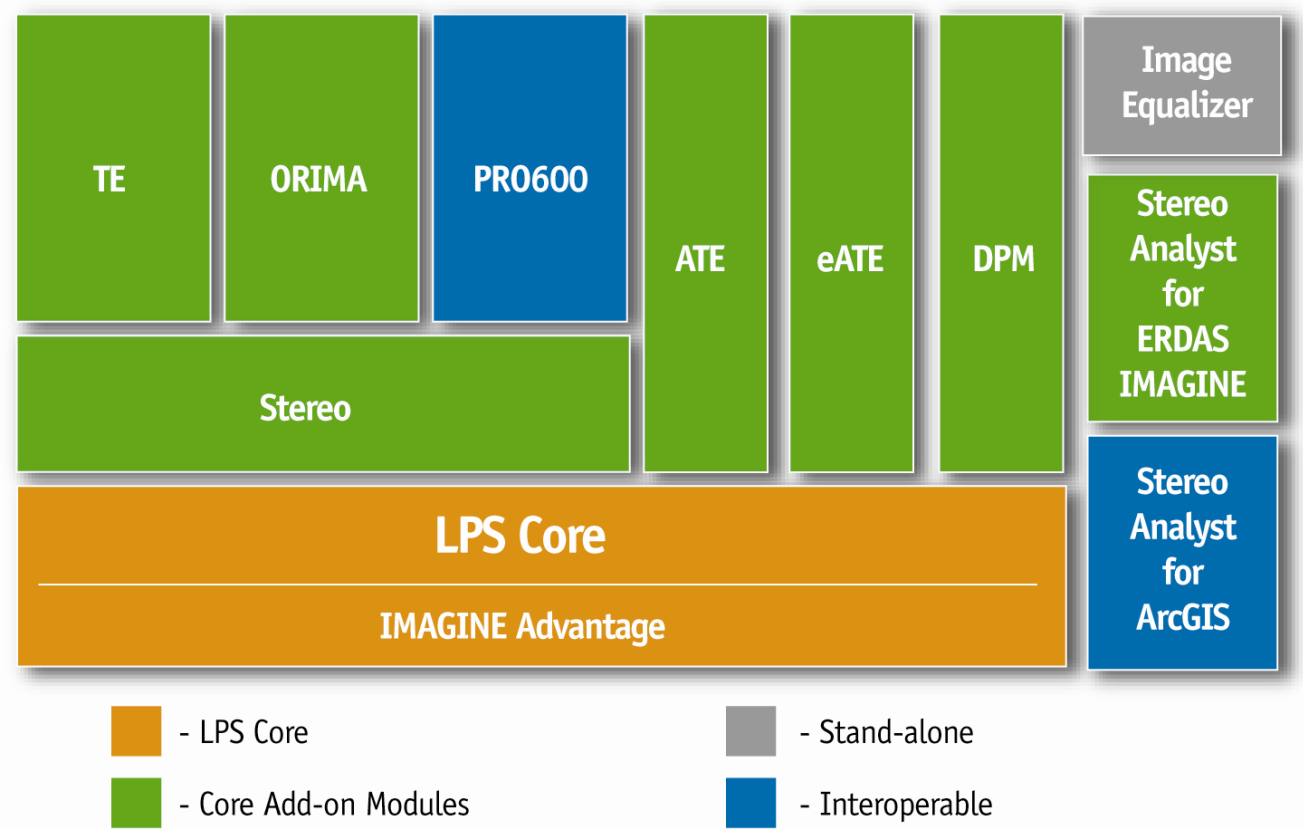
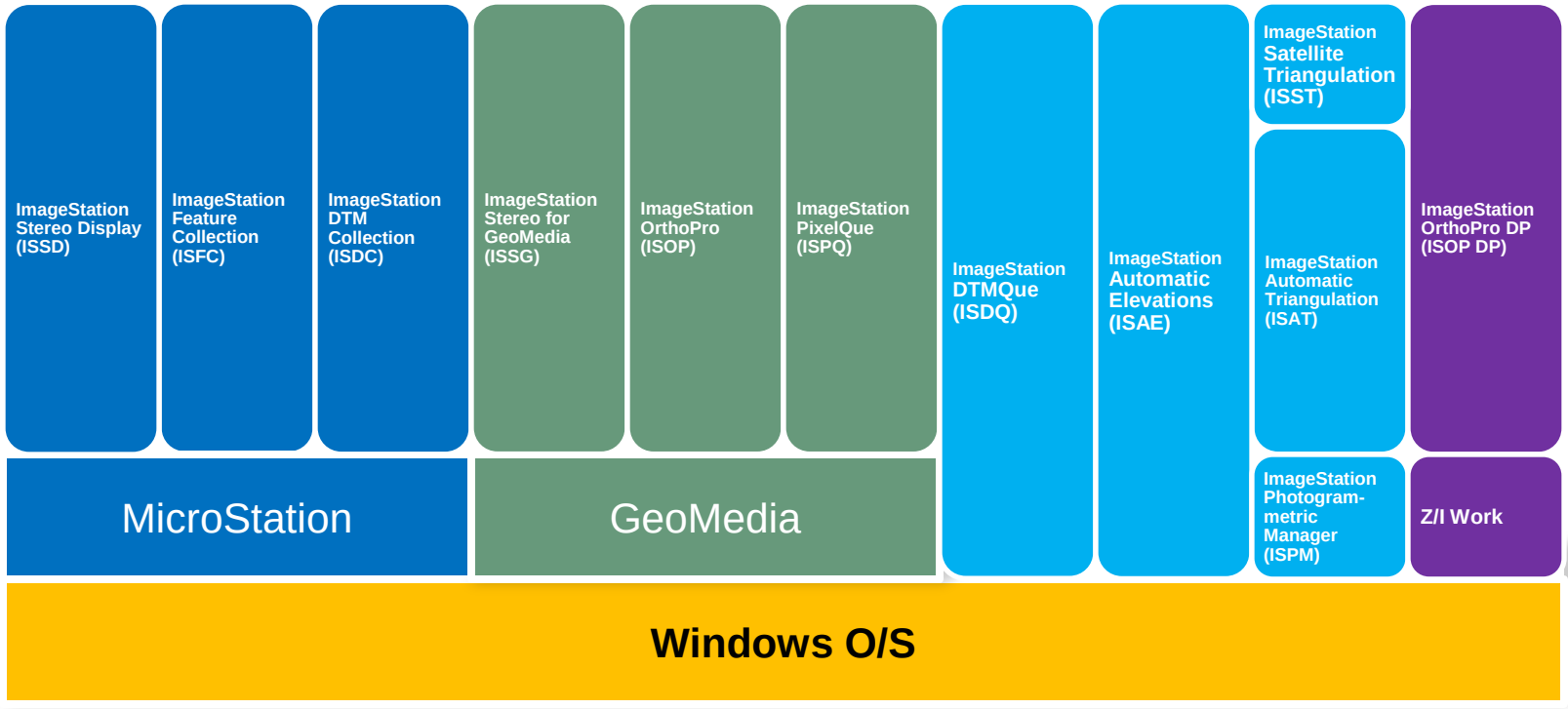
Generalized Photogrammetry Workflow



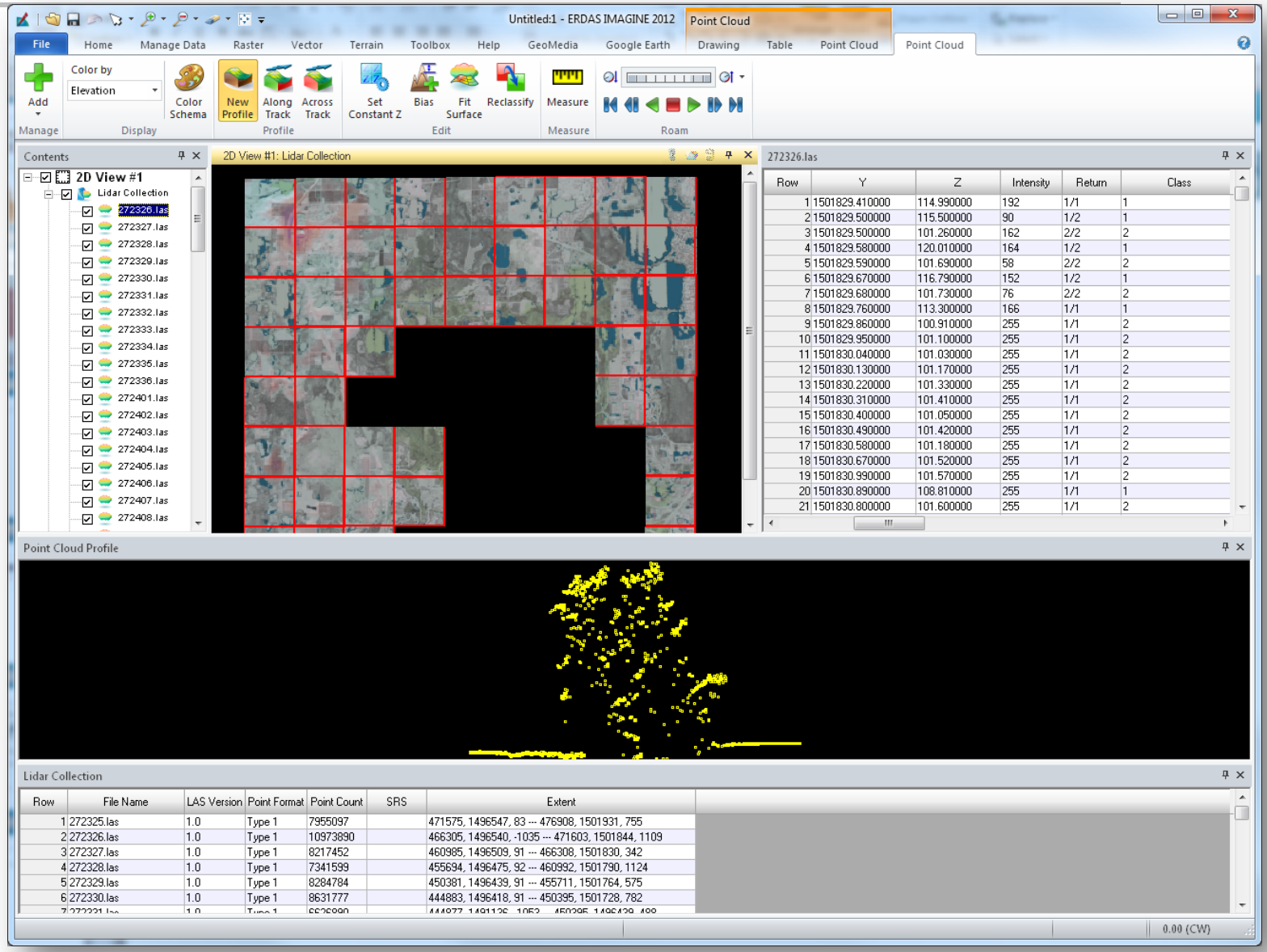
LPS Modules


TE
ORIMA
PRO600
ATE
eATE
DPM
Image Equalizer
Stereo Analyst for ERDAS IMAGINE
Stereo
Stereo Analyst for ArcGIS
LPS Core
IMAGINE Advantage
- LPS Core
- Stand-alone
- Core Add-on Modules
- Interoperable

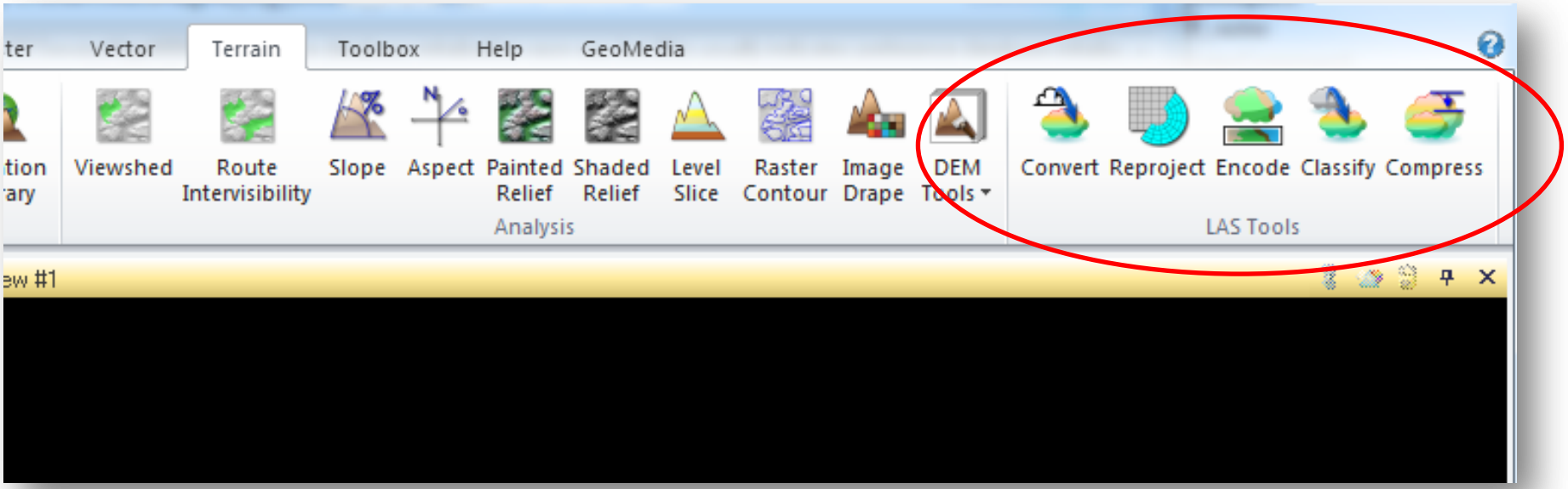
ImageStation Modules



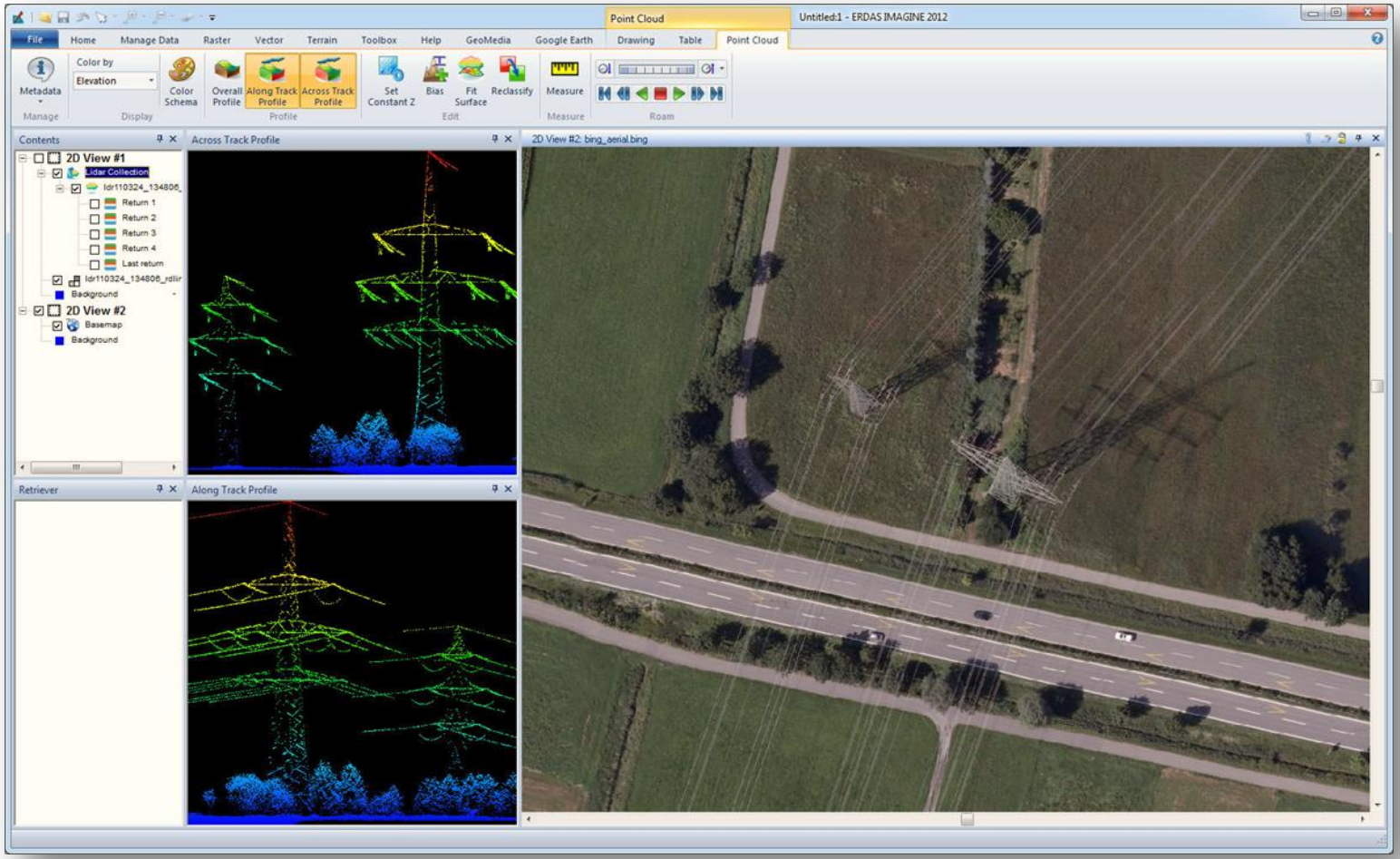
Point Cloud Tool



More LAS functions

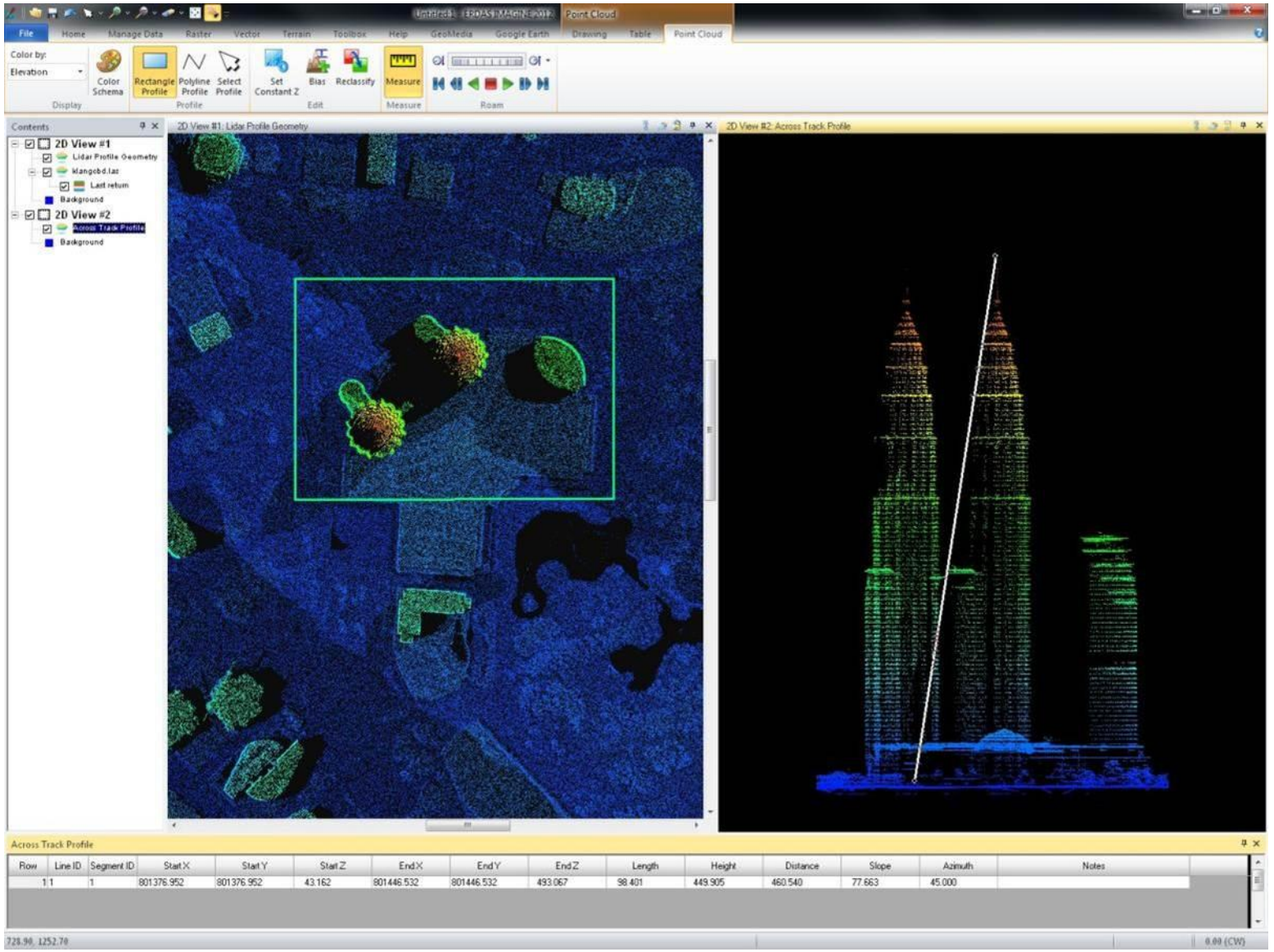


GEOSPATIAL MIXING



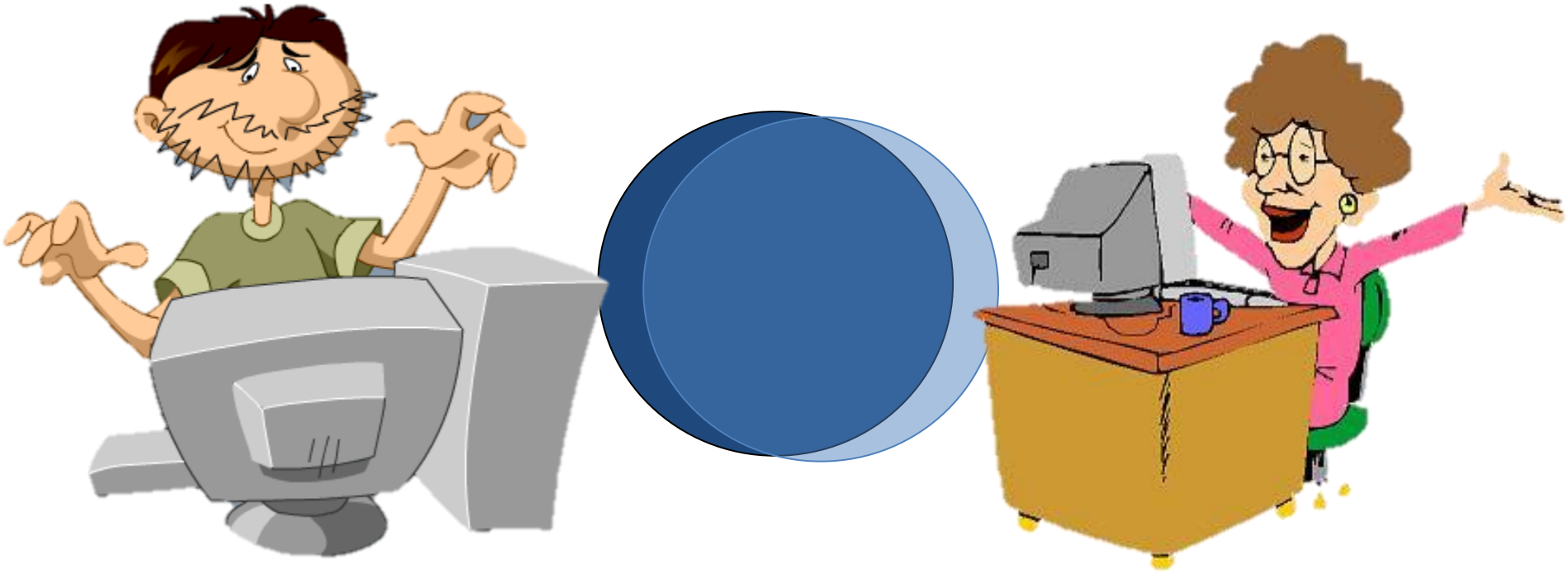
Aerial Imagery + Terrestrial LiDAR = Dynamic Information

LIDAR Allows Direct Measurement of the 3rd Dimension

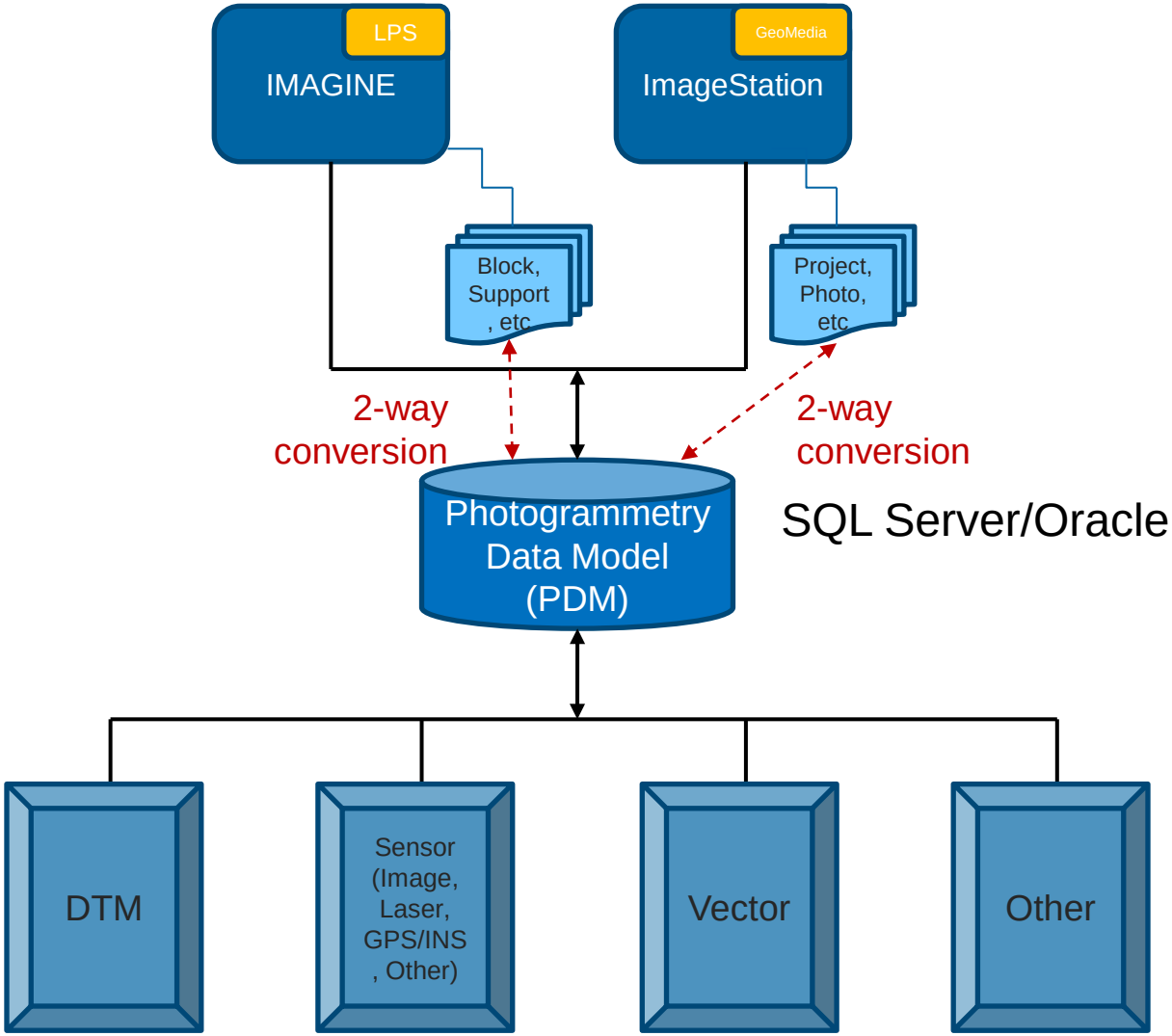


LPS vs ImageImageStation Functional Comparison

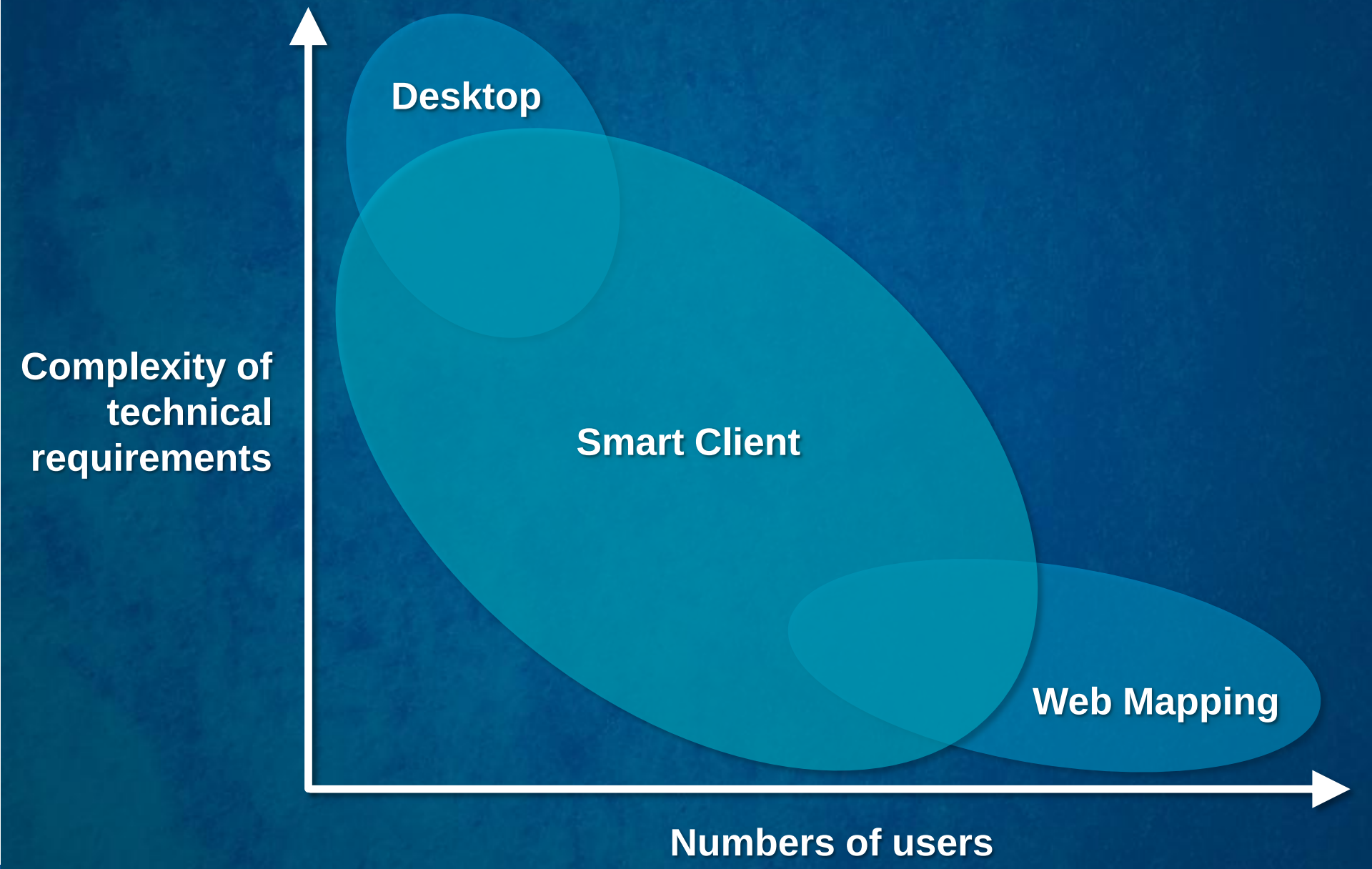
Almost 100% functional overlap (which you'd expect)



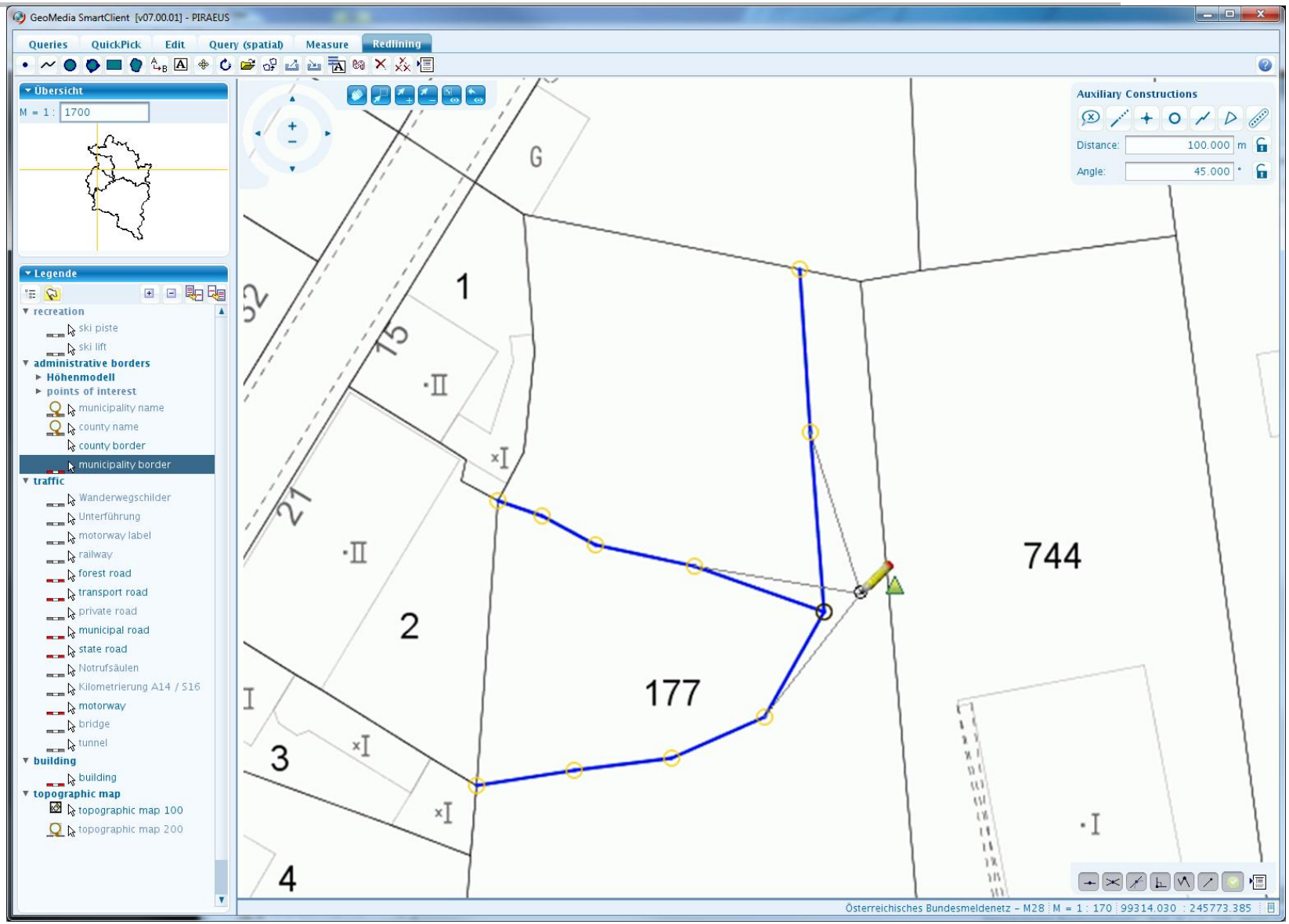
Photogrammetry Data Model (PDM)



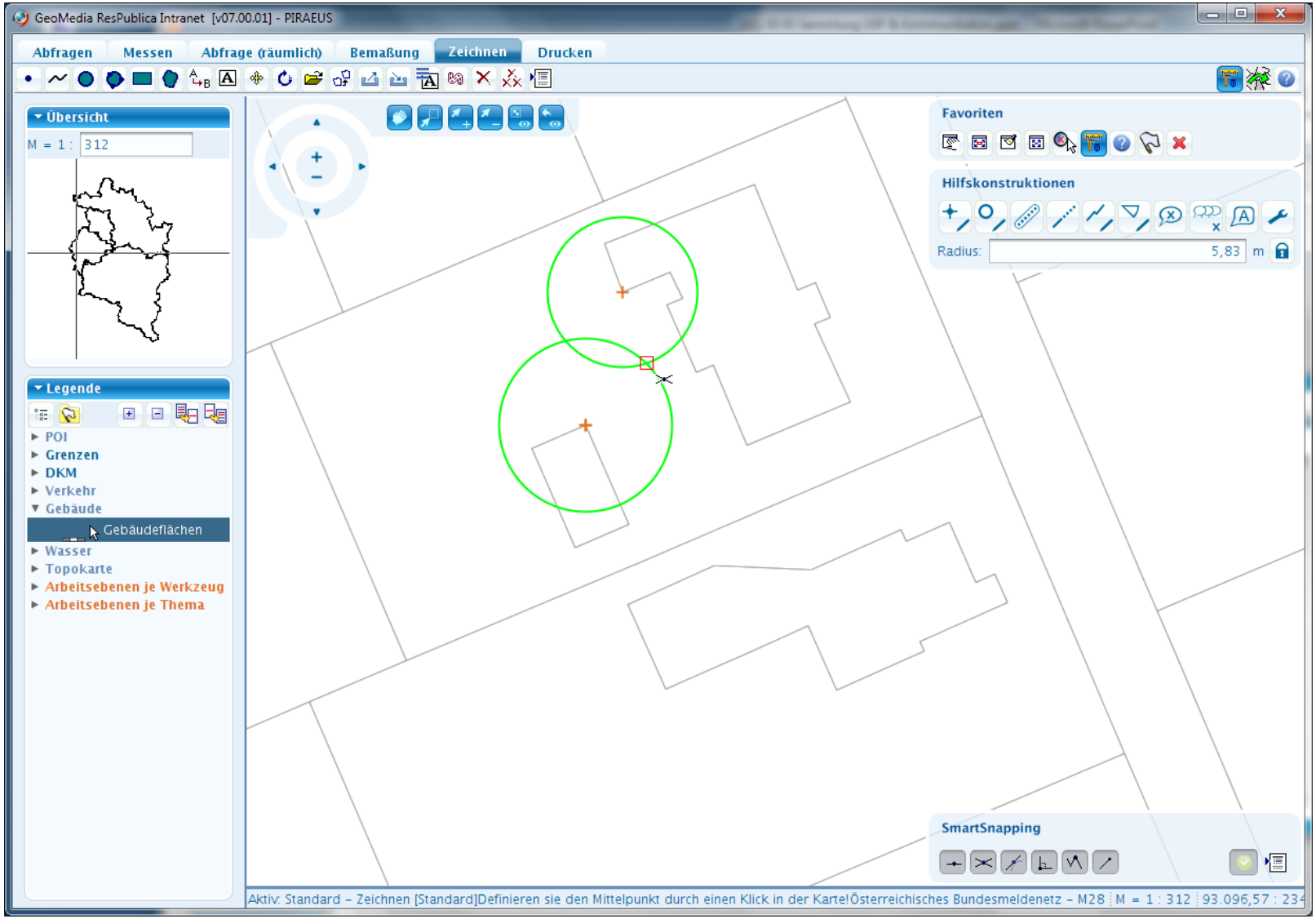
Matching Functionality to Users' Abilities and Needs



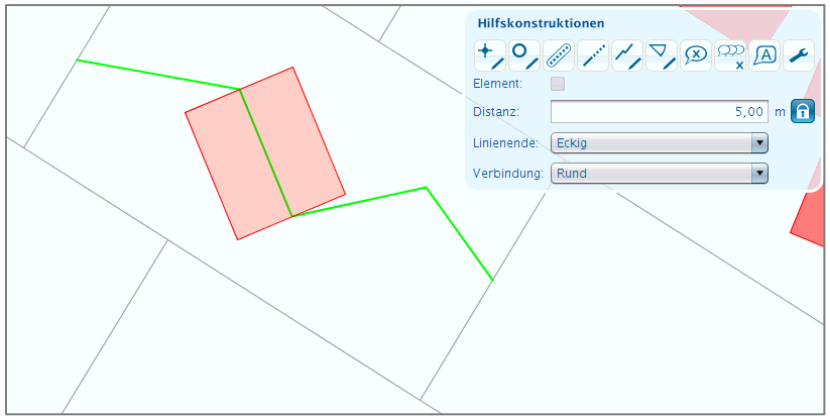
GeoMedia® Smart Client – Powerful Editing Capabilities

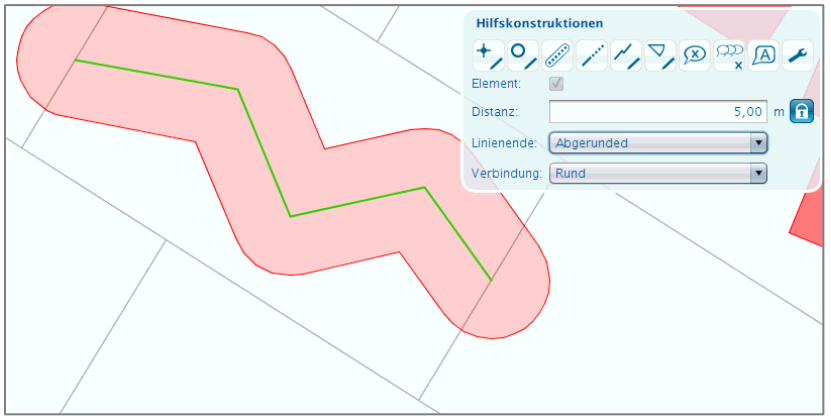


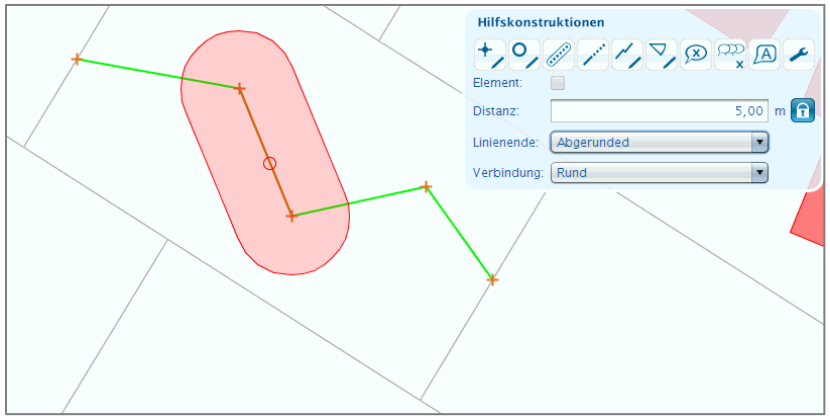
GeoMedia® Smart Client – CAD tools embedded

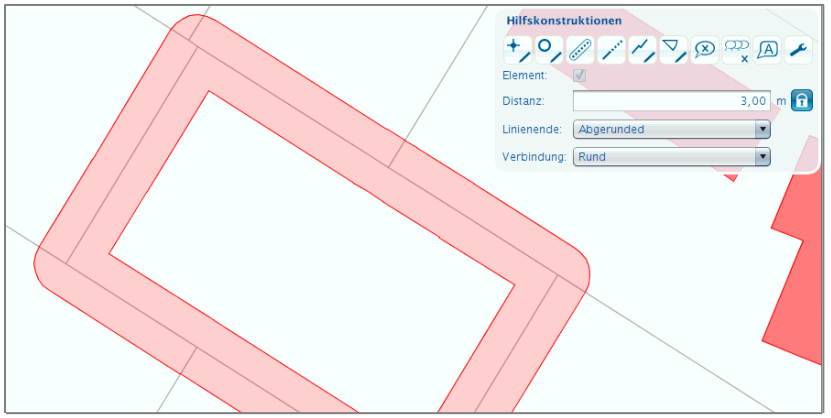


GeoMedia® Smart Client – Buffer functions



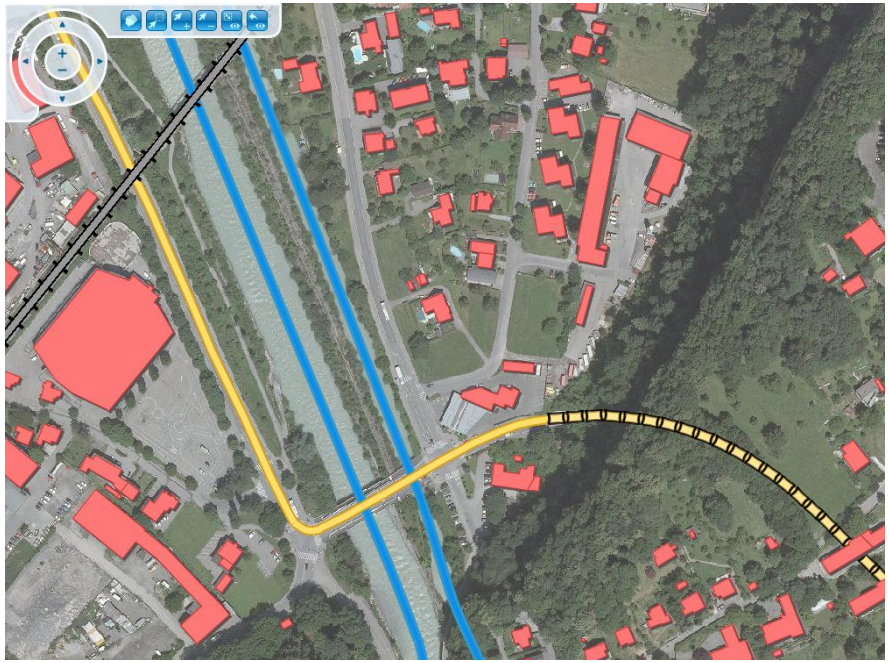


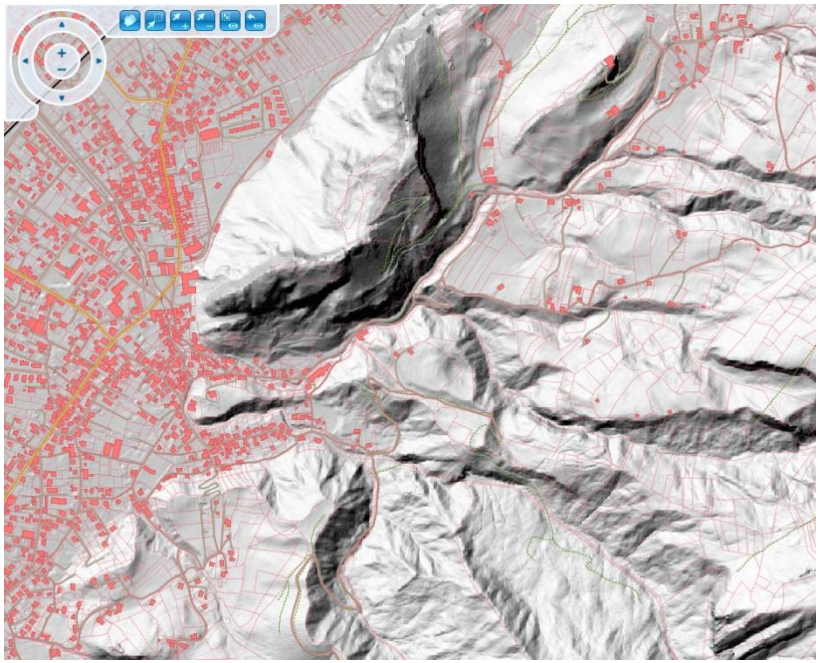




GeoMedia® Smart Client – high level cartographic map display

- Extended style capabilities for GeoMedia Smart Client based on **OGC standard “Symbology Encoding” (SE)**
- Definition of very complex and scale-dependent styles
- Use of SVG and GIF icons to style line strings and area fills
- Support of Rich Text Format (rtf) and halo effects
- Style Editor





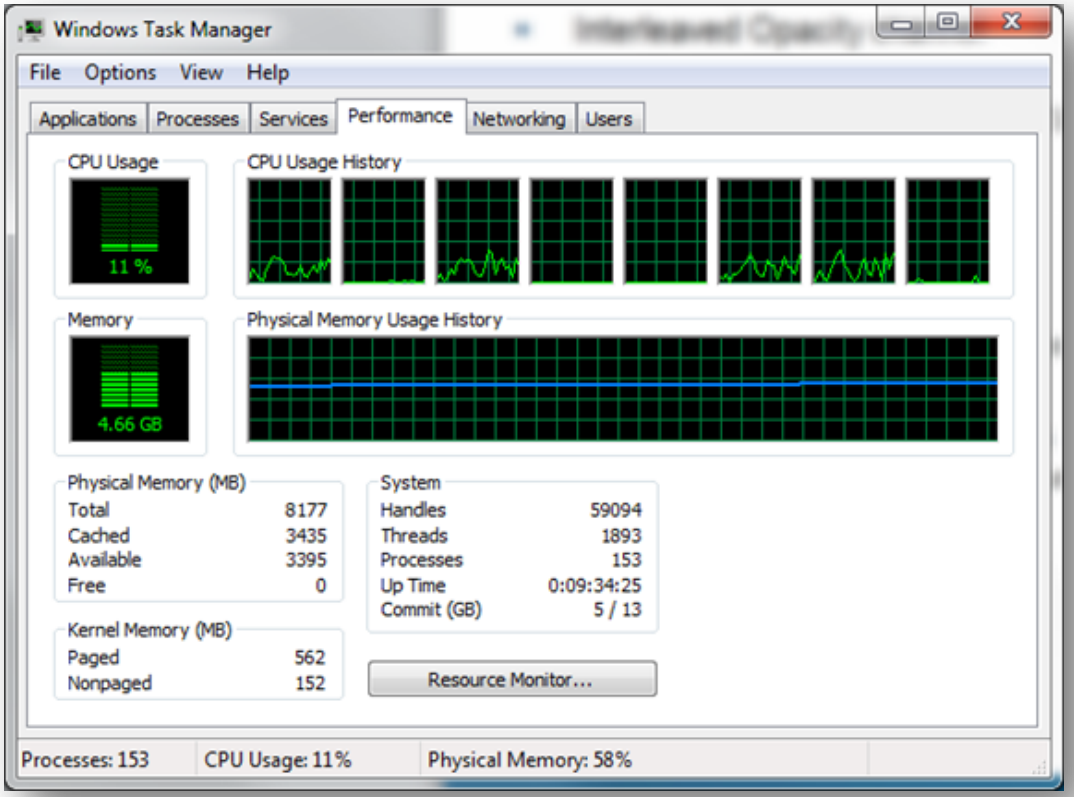
Mobile is Taking Geospatial to the Masses

- Mobile devices are the gateway to the cloud.
- Mobile Applications are simple, intuitive and built for specific purposes.
- Heavy computing can happen on the cloud.
- Crowd Sourcing applications such as Open Street Maps benefit everyone because of the contribution from the large number of users.

Give a Hint - Mapping Potholes in Kopenhagen

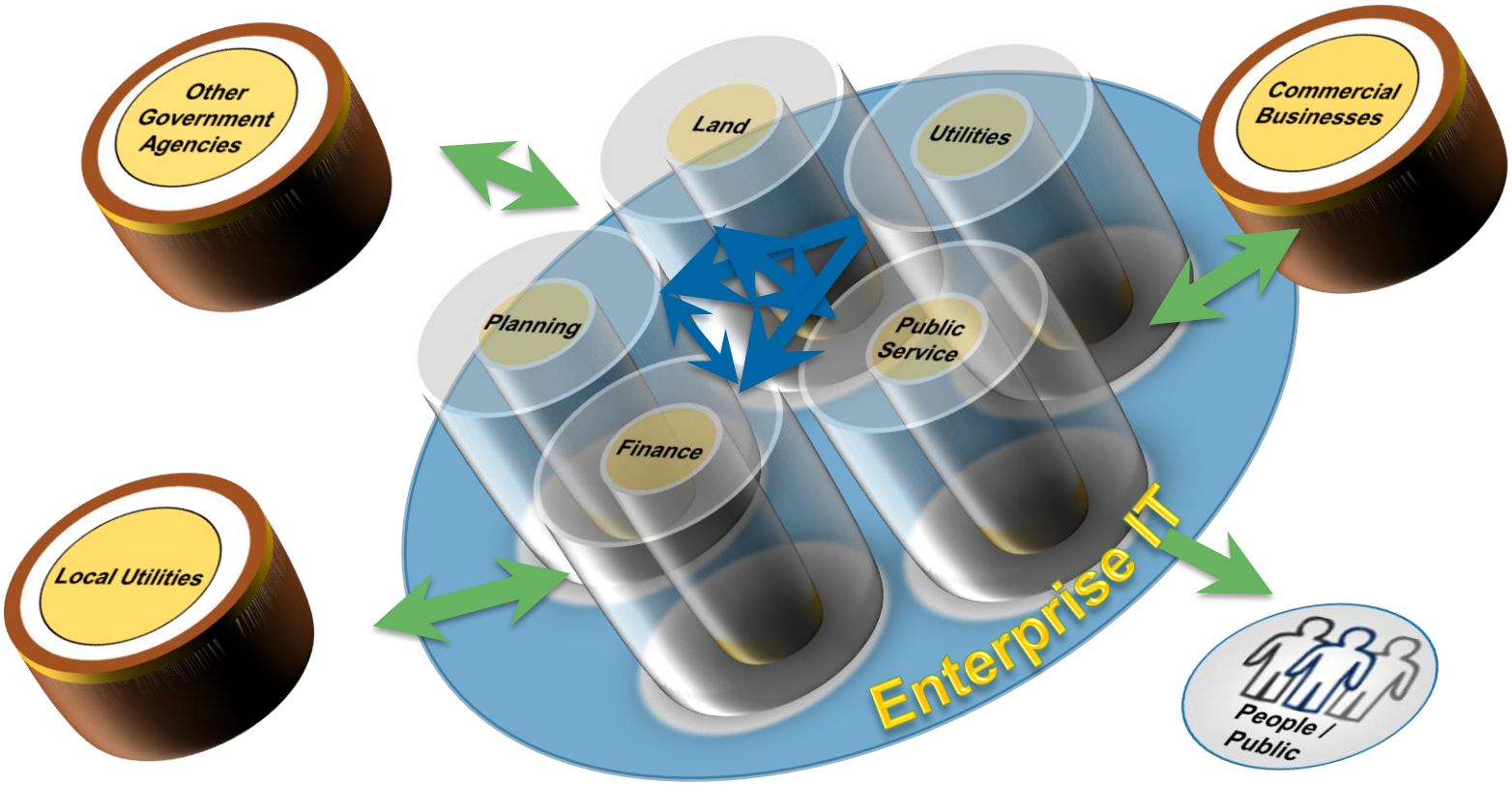
New - ECW v3

- 3 - 10x faster
- 20-35% smaller
- Multi-threaded
- Supports16-bit data



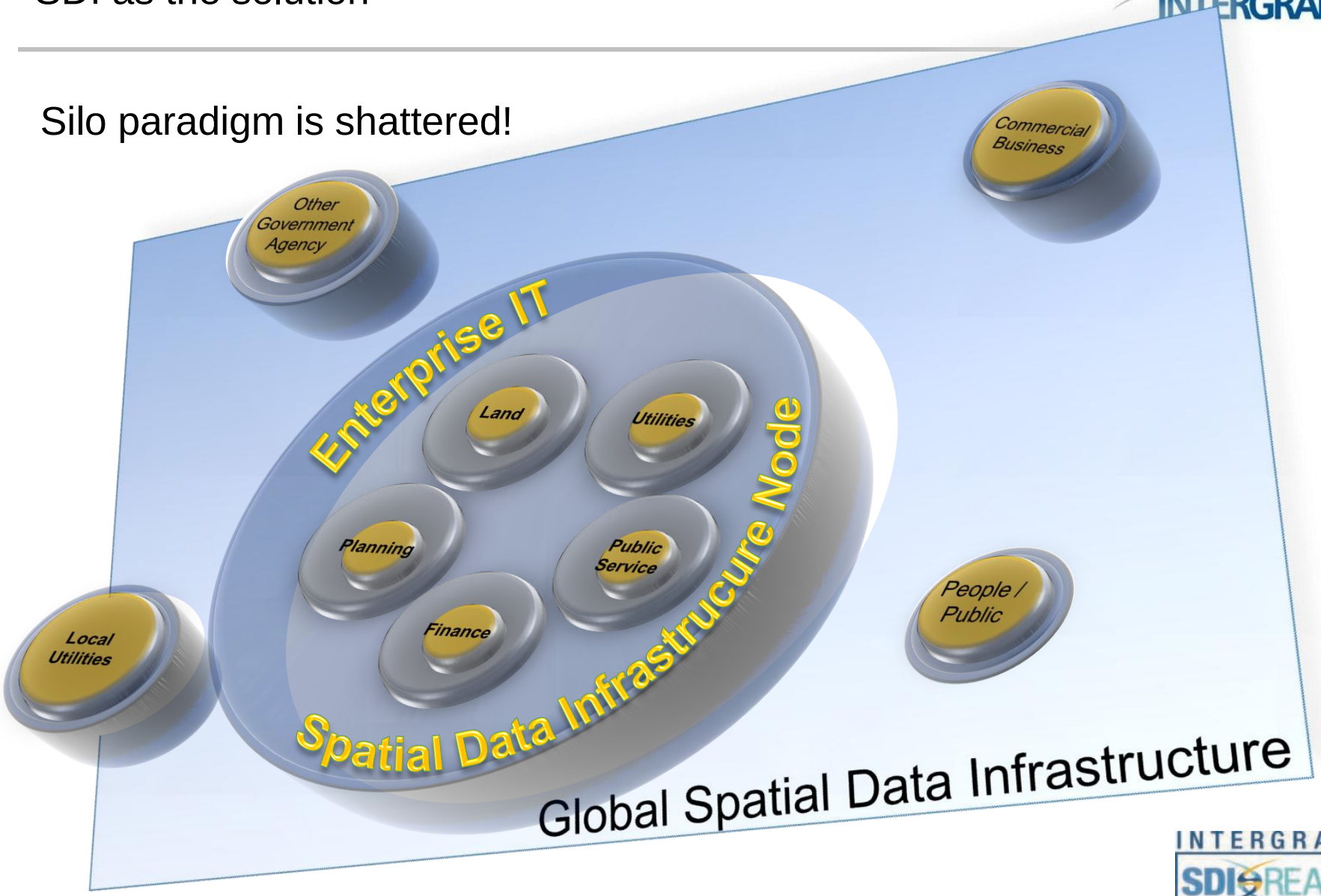
Data in Silos

Data in silos inhibits communication and **sharing** of geospatial data and functionality

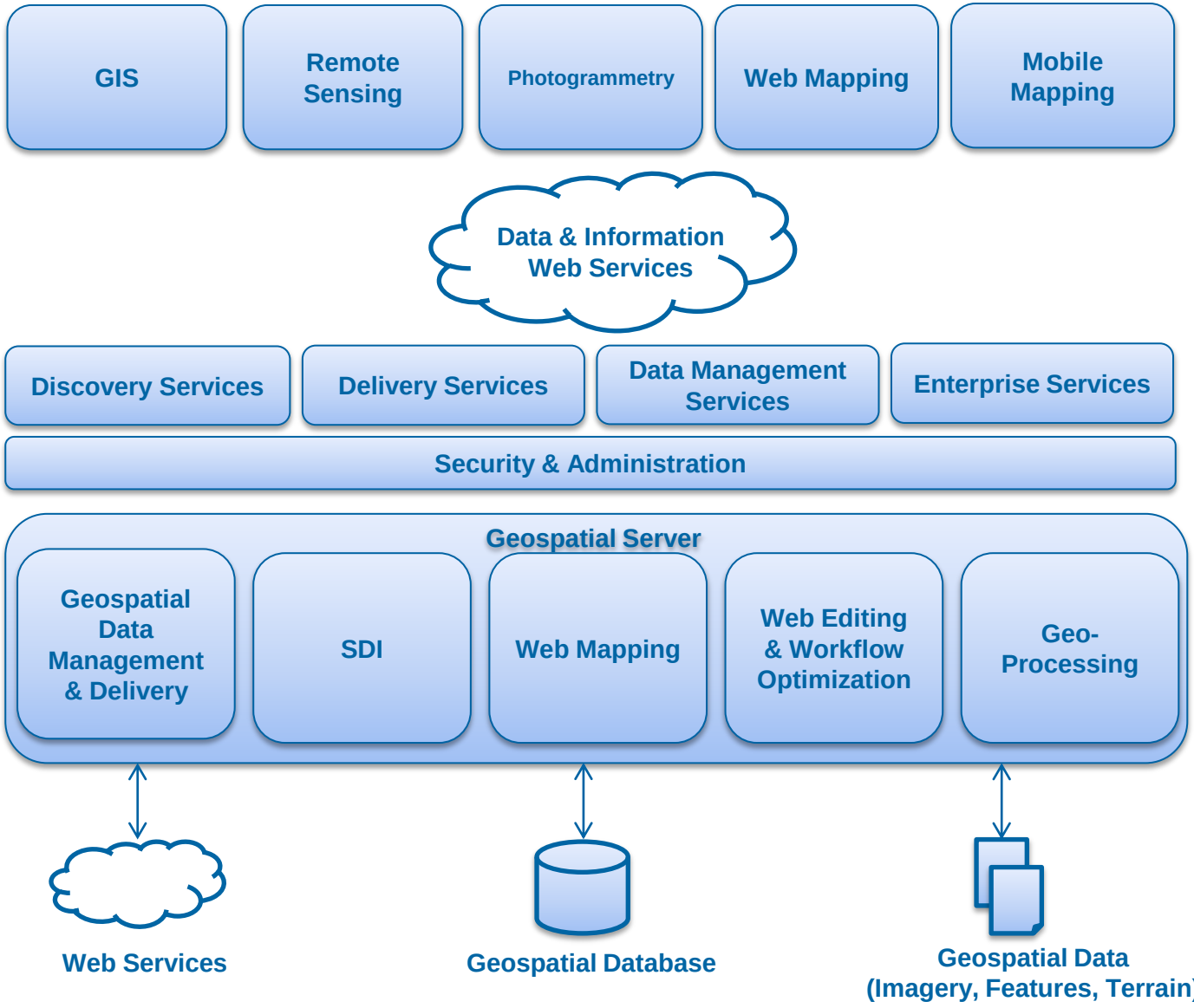


SDI as the solution

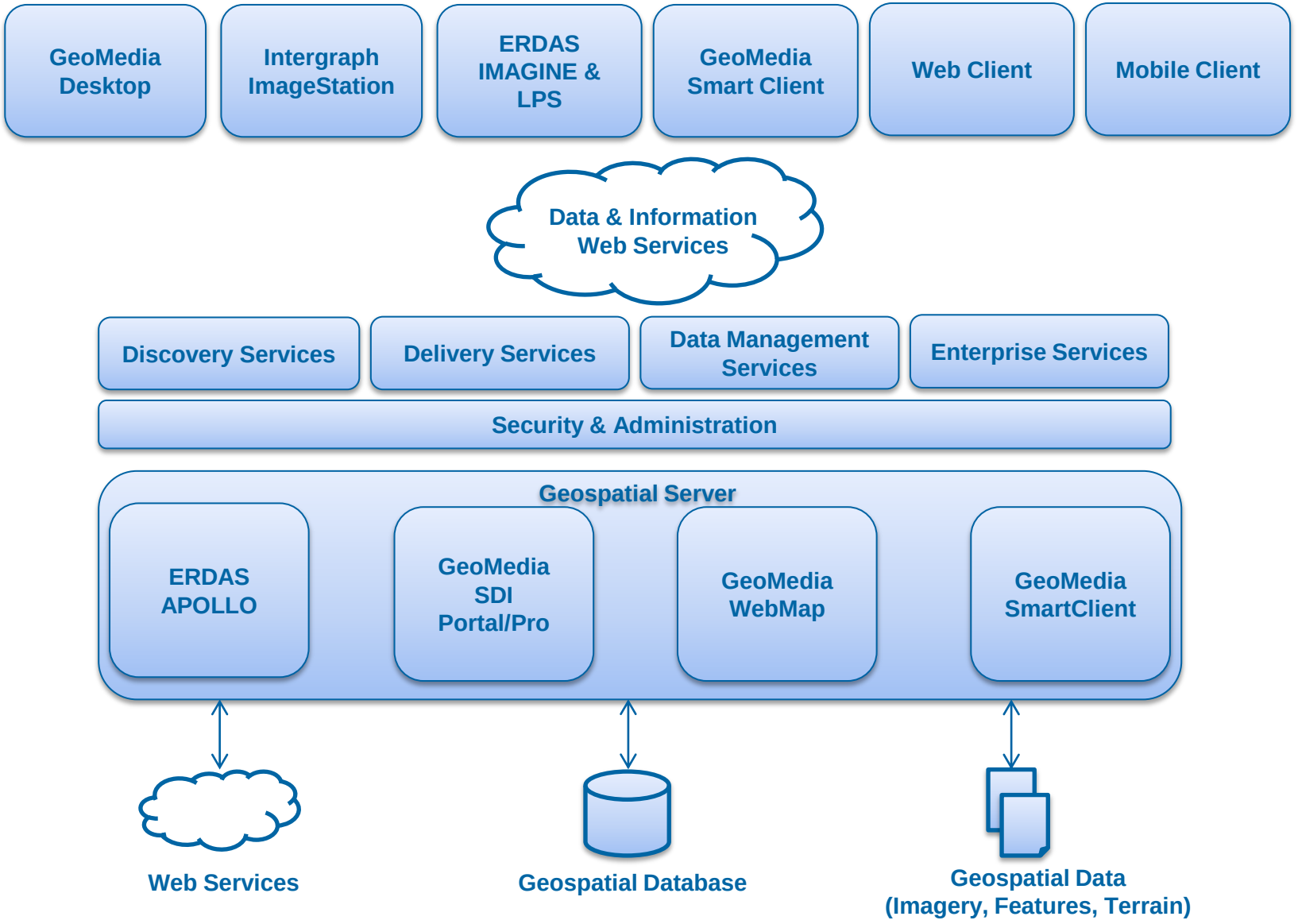
Silo paradigm is shattered!



Intergraph Geospatial Portfolio



Intergraph Geospatial Products



Data Management and Delivery Solution

ERDAS APOLLO

ERDAS APOLLO Workflow

Management:
- Harvest
- Catalog

Imagine Rasters (TIFF, NITF, TFRD etc…)

Digital Data (pdf, wmv, doc..)

LAS

Feature Data (Arc, SDO, FME)

ERDAS APOLLO Server

OGC Services

Tile Cache Service

ECWP Services

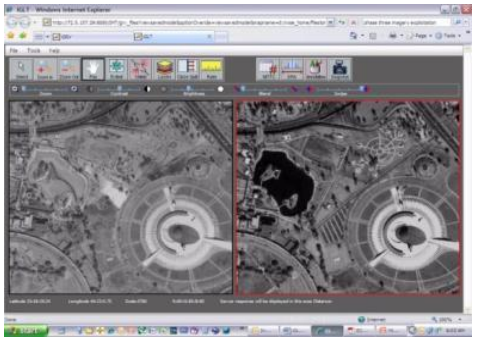
File Service

Internet or LAN

WFS-T

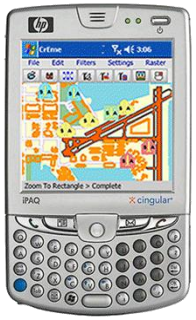
GeoSpatial Modeling Engines:
- WPS

- Discover
- View
- Download
- Create products



Analysis

Visualization and Collaboration



Feature Editing

Clip – Zip – Ship (CZS)

Multi-select

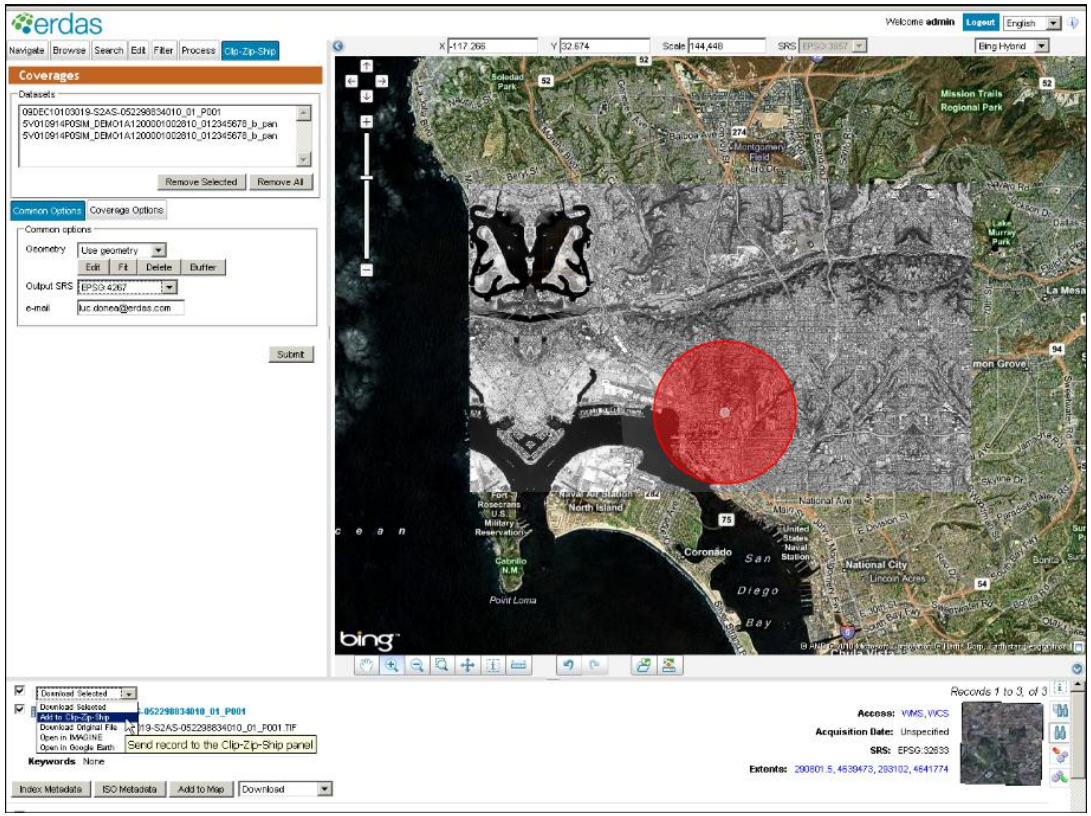
- and download bundle

Download options:

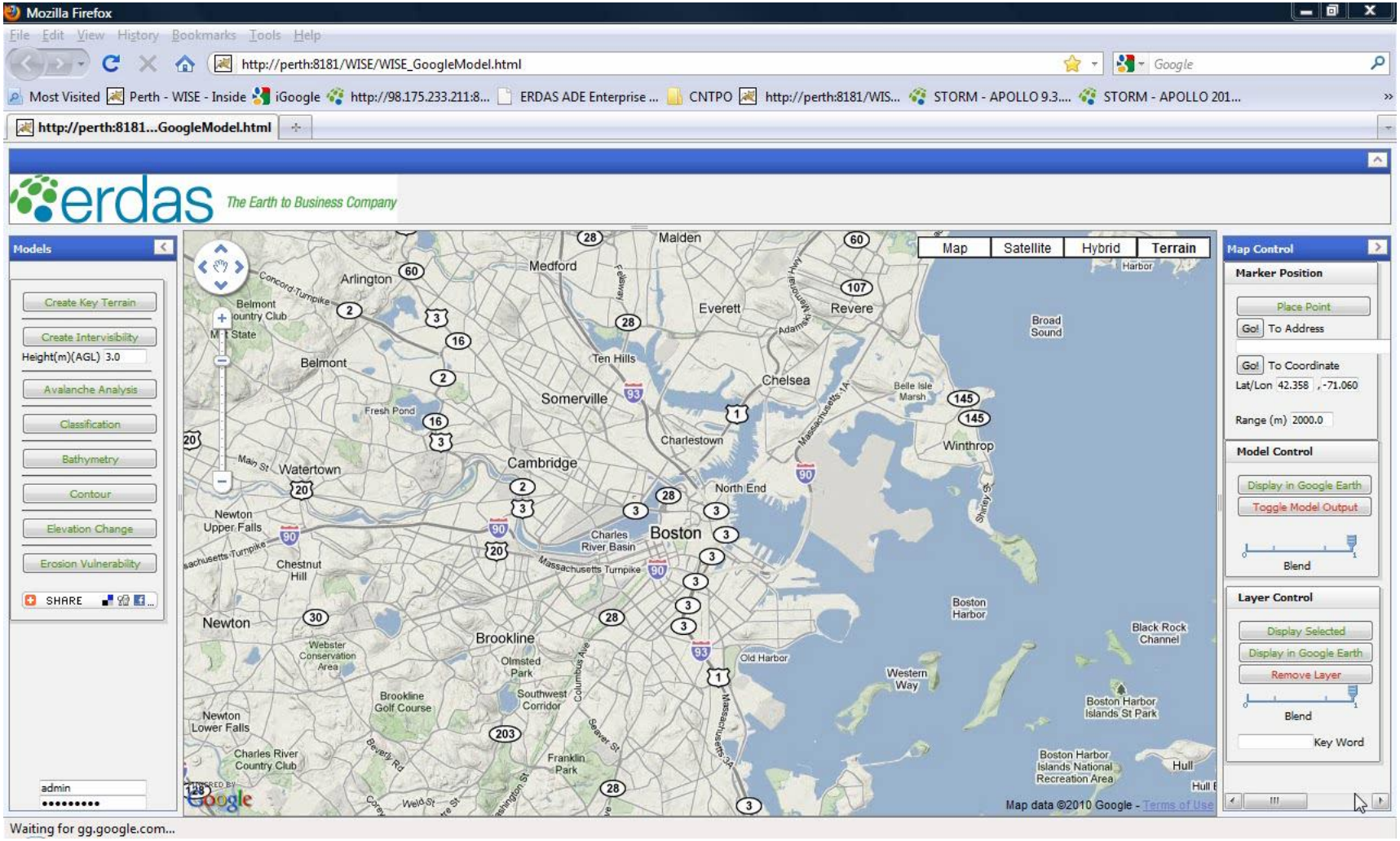
- Original files
- Send to CZS workflow
- KML to view in TITAN or Google Earth
- Shoebox to work in ERDAS IMAGINE

Common Options in CZS

- Use same geometry to clip entire bundle
- Set global SRS



Web Processing with ERDAS APOLLO



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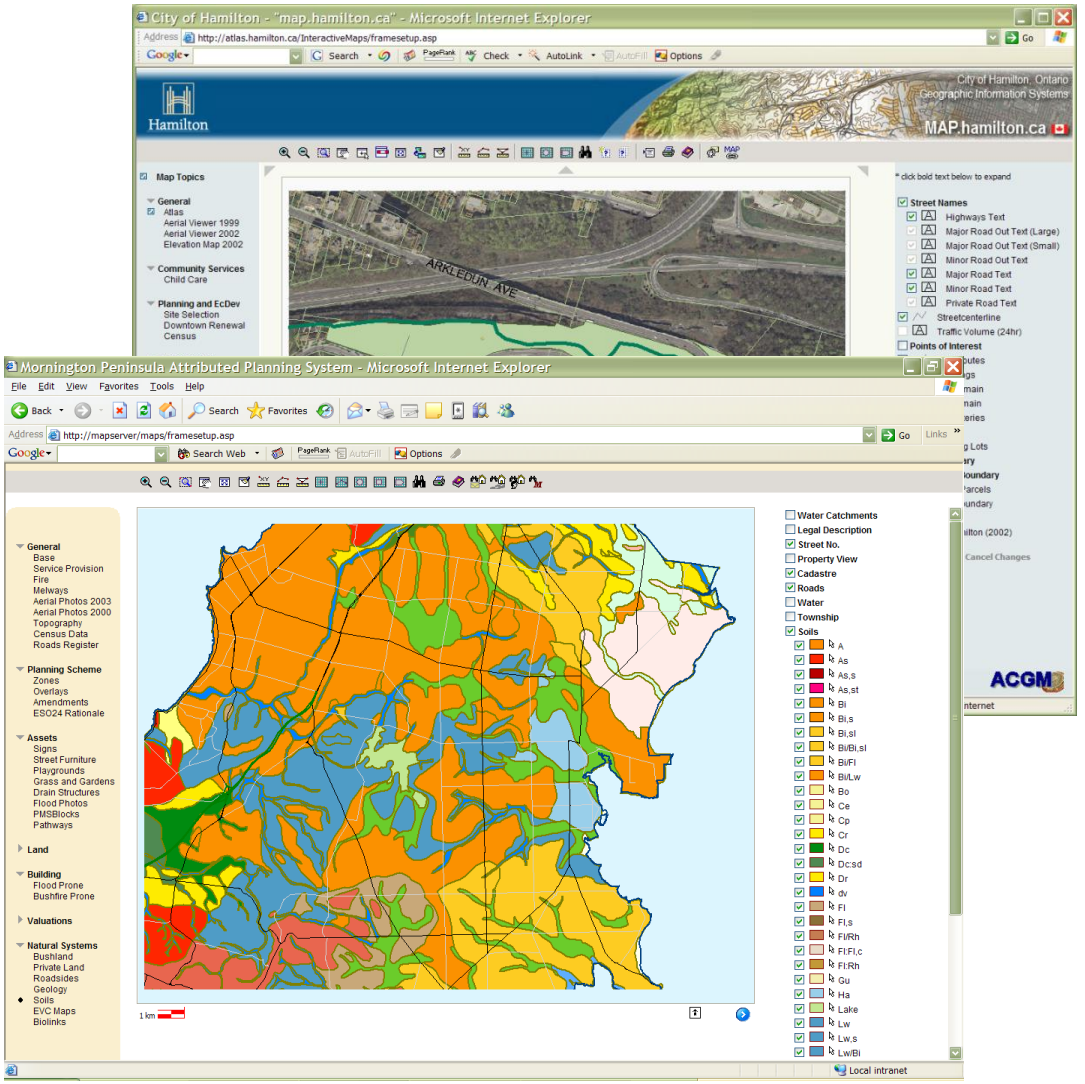
GeoMedia WebMap

- All about VISUALIZATION over the web
- Visualize your geospatial assets
- Visualize answers to your geospatial questions

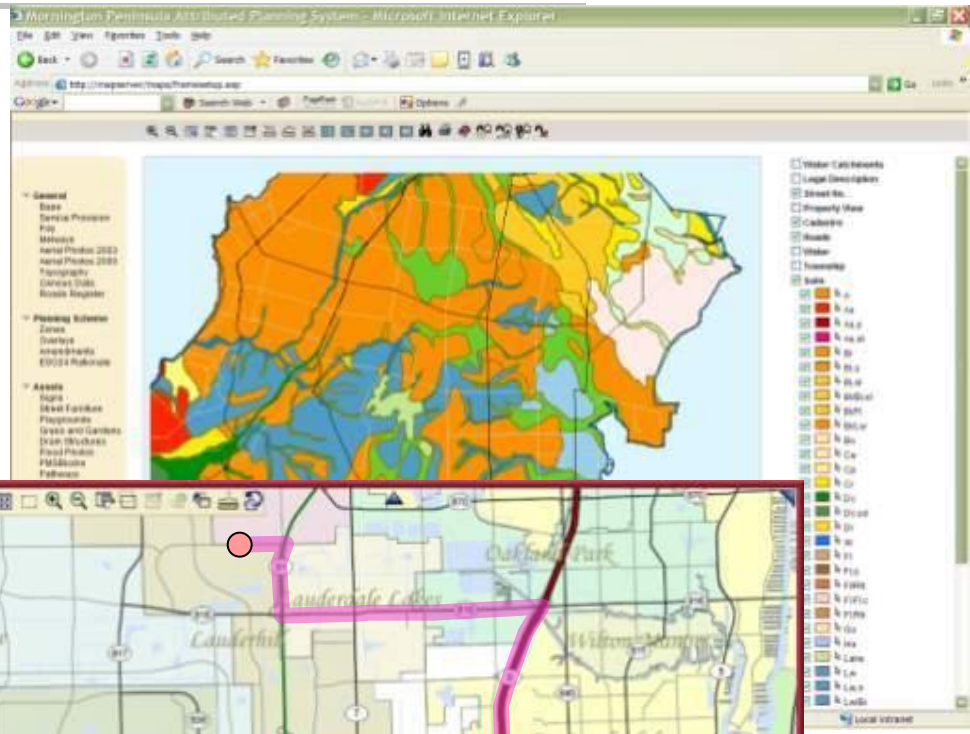
Platform/toolbox for building ***scalable*** ***server-side*** applications:

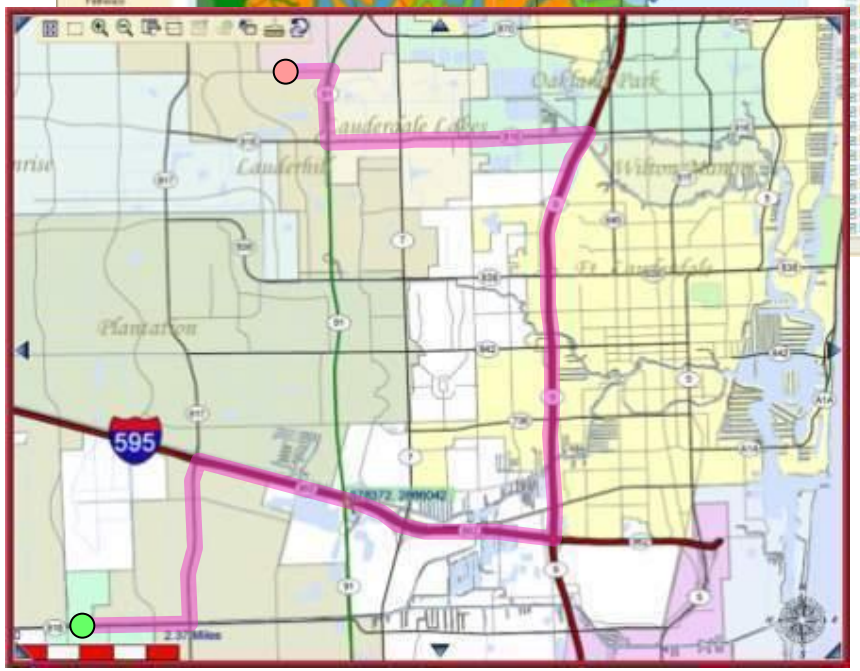
- web sites (thin-client apps)
- web services



GM WebMap Pro: Geospatial Analysis

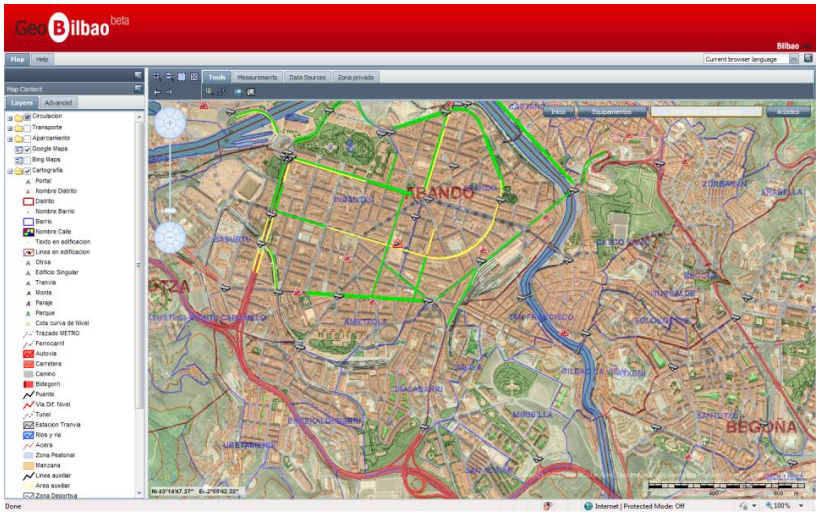
- Analyze data and perform complex what-if analysis using GeoMedia's query and pipe technology
  - Buffer zone
  - Analytical Merge, Aggregation
  - Spatial Difference, Spatial Intersection, Spatial Query
  - Functional attributes and expressions
  - Union, Join
  - Address Geocoding (and Reverse)
  - Routing
  - Dynamic Segmentation

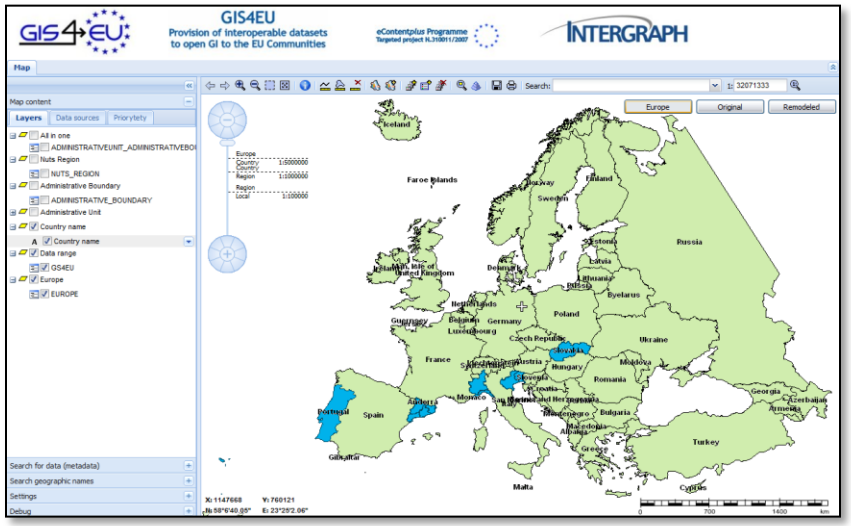




GeoMedia SDI Portal

- Ready-to-run web application to view and query SDI data sources
- Acts as a consumer/client of:
  - OGC W*S services (SDI)
  - Google Maps and Microsoft Bing Maps
- Highly configurable



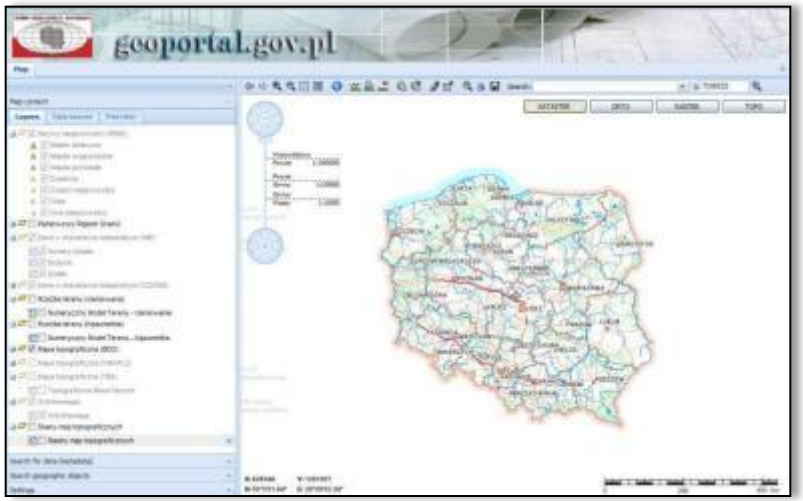


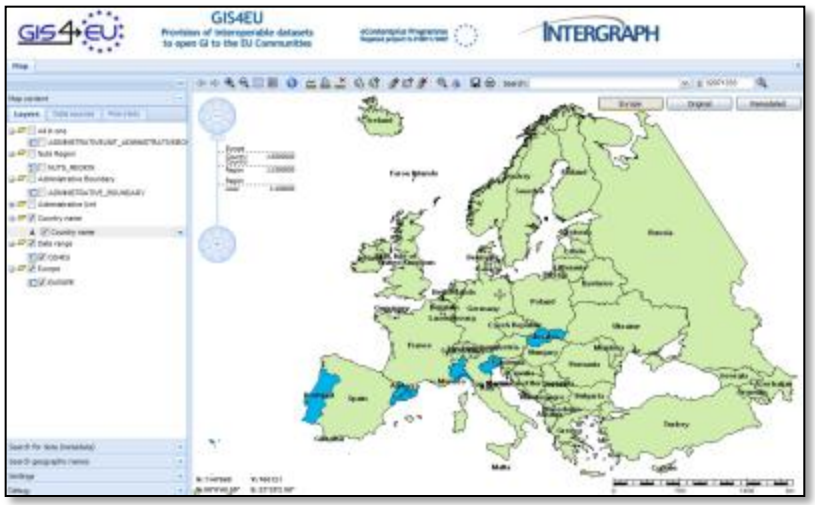
INTERGRAPH SDI READY

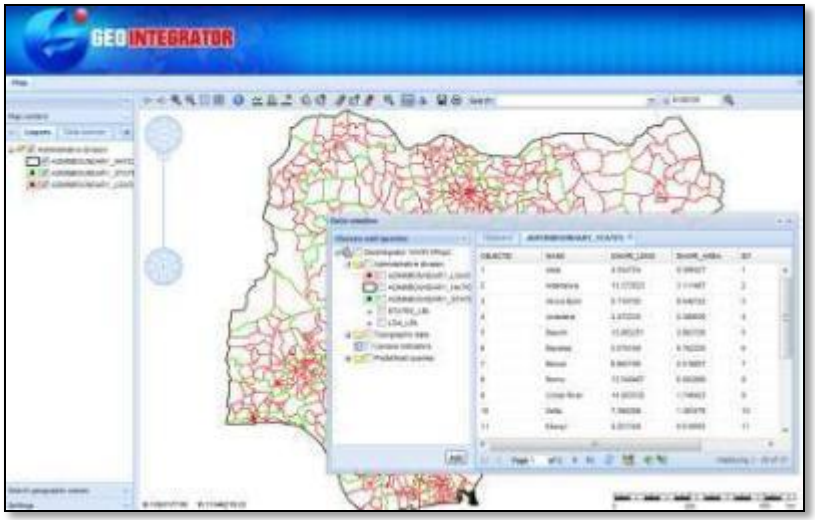
INSPIRE · Infrastructure for Spatial Information in Europe

OGC® Principal Member

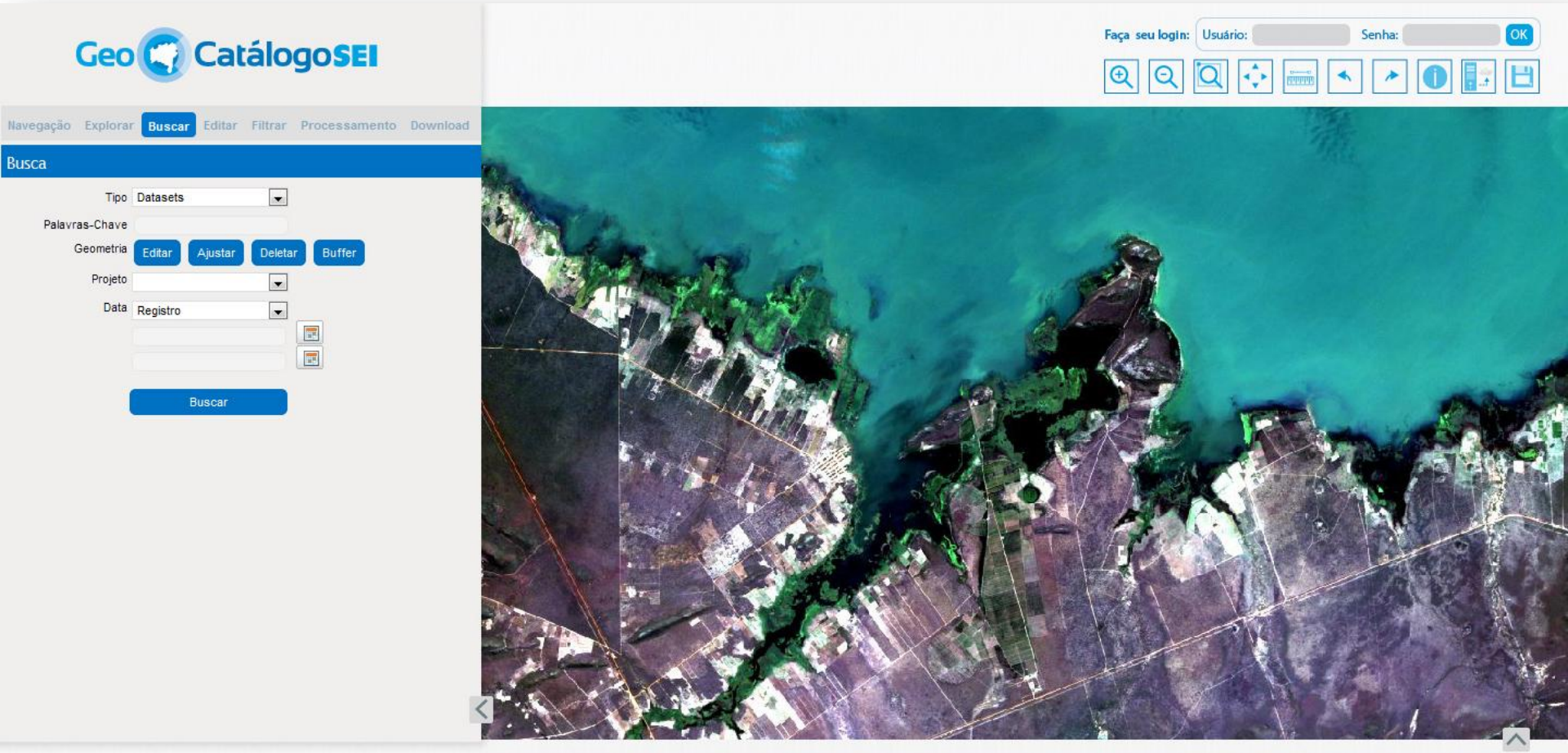
GeoMedia SDI Portal – skins/themes



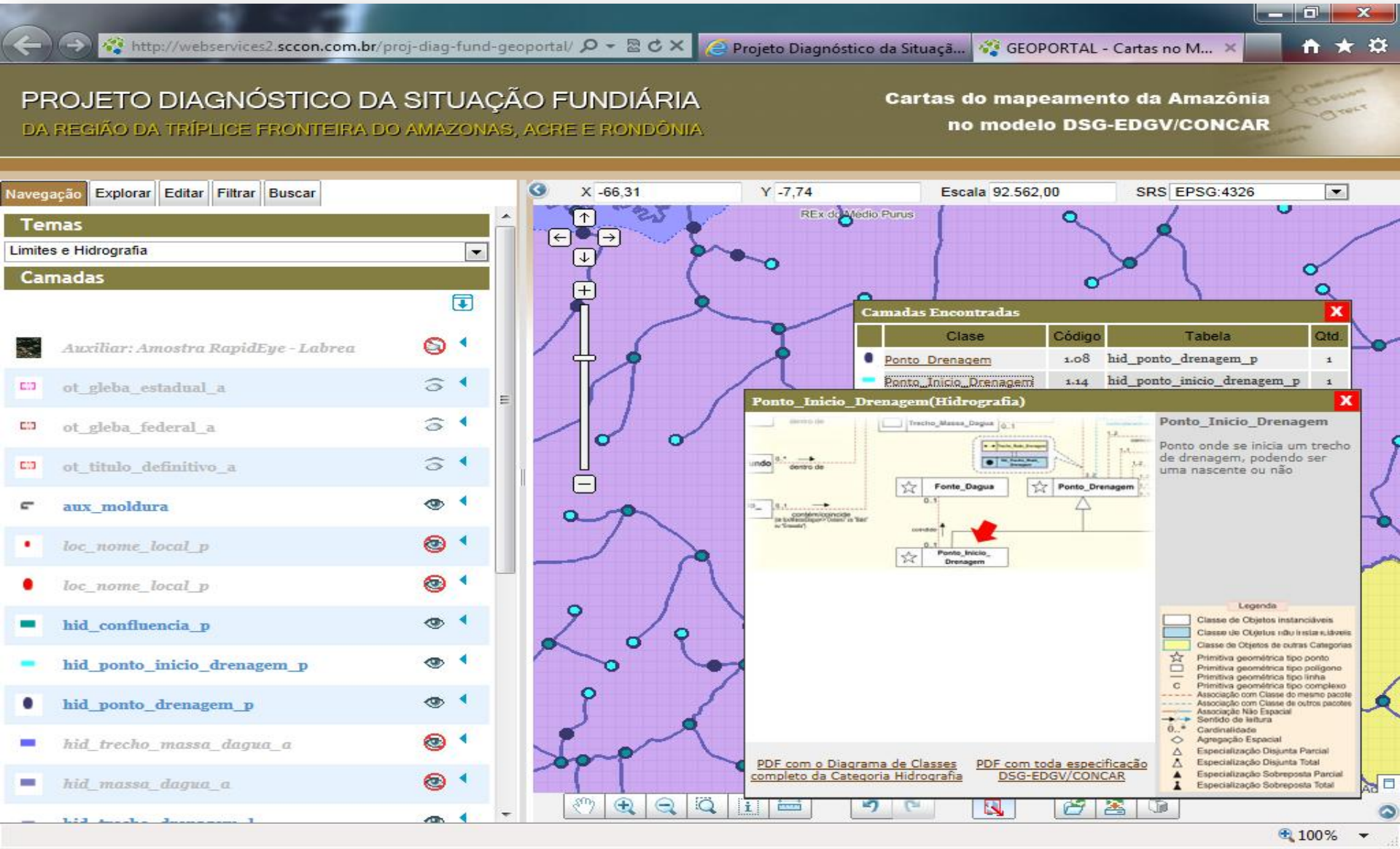




Geocatálogo de Imagens do Estado da Bahia

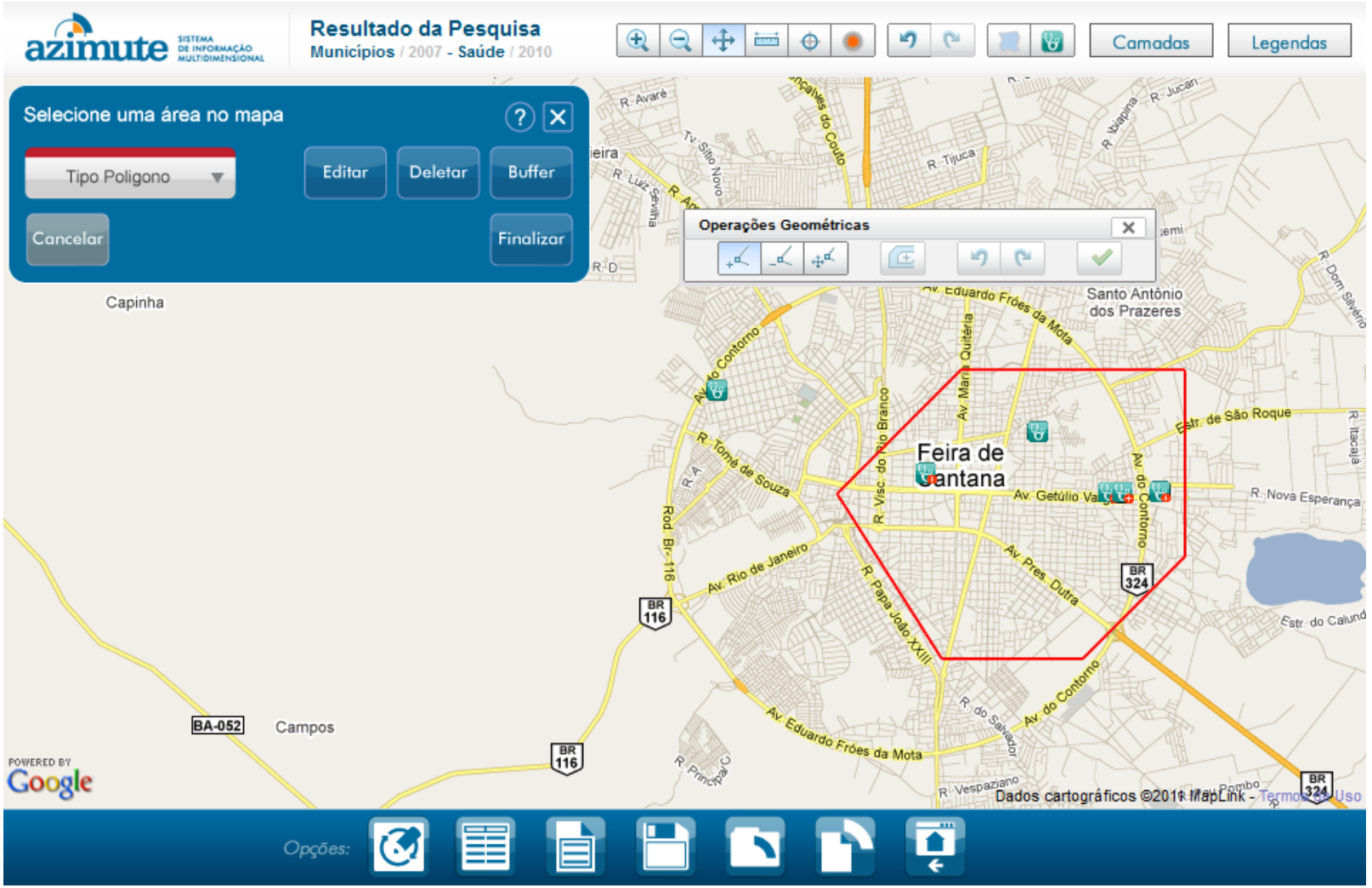


Geocatálogo e geoportal de informações para gestão de processos



Aplicação de Gestão Ambiental

Gerando serviços para consumidores e gestores para os segmentos de educação e saúde



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