

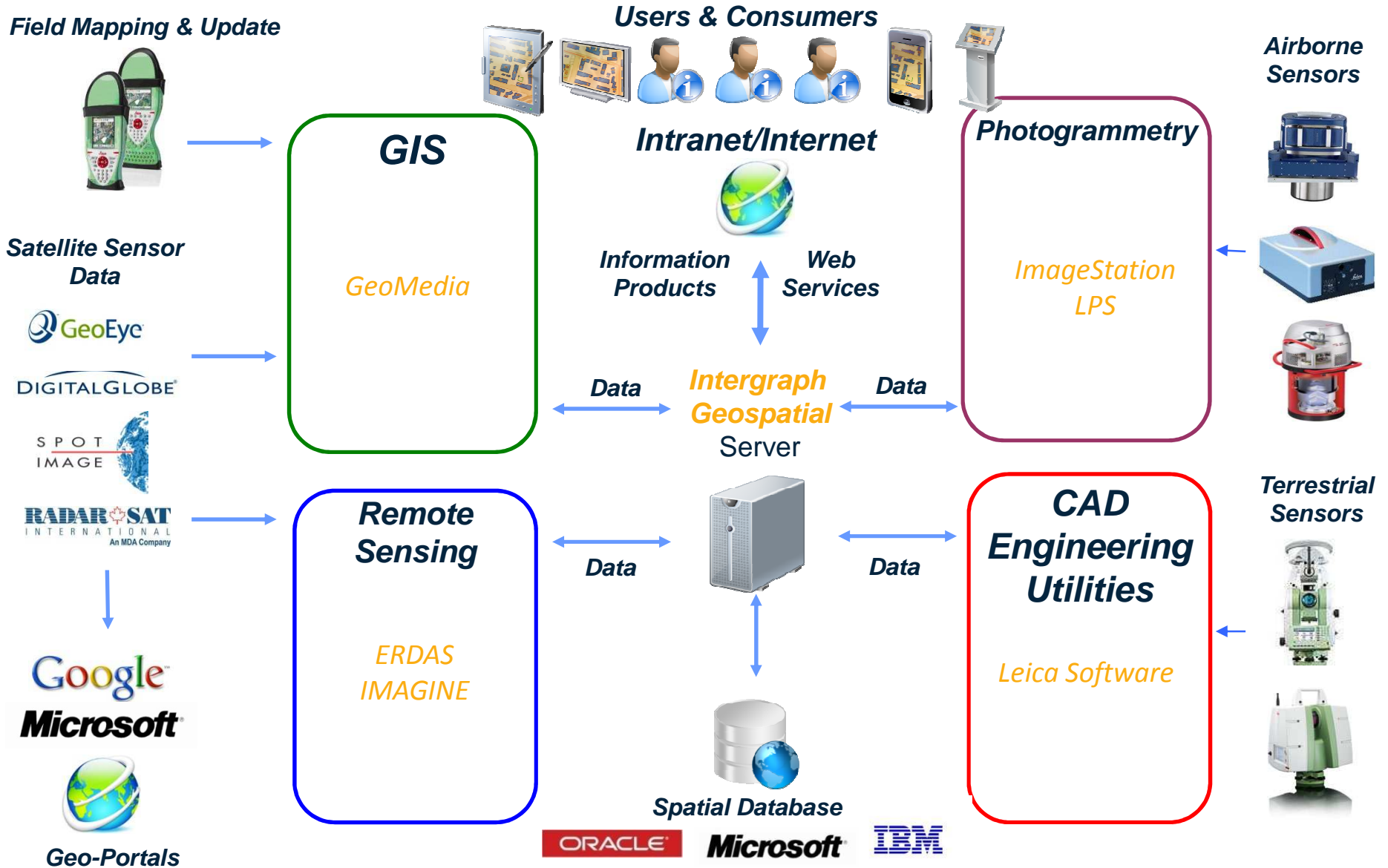
An aerial photograph of a coastal town and harbor. The town is built on a hillside overlooking a bay filled with numerous boats. The water is a deep blue-green color. The land is a mix of green vegetation and brownish patches, possibly agricultural fields or cleared land. The Intergraph logo is visible in the top right corner.

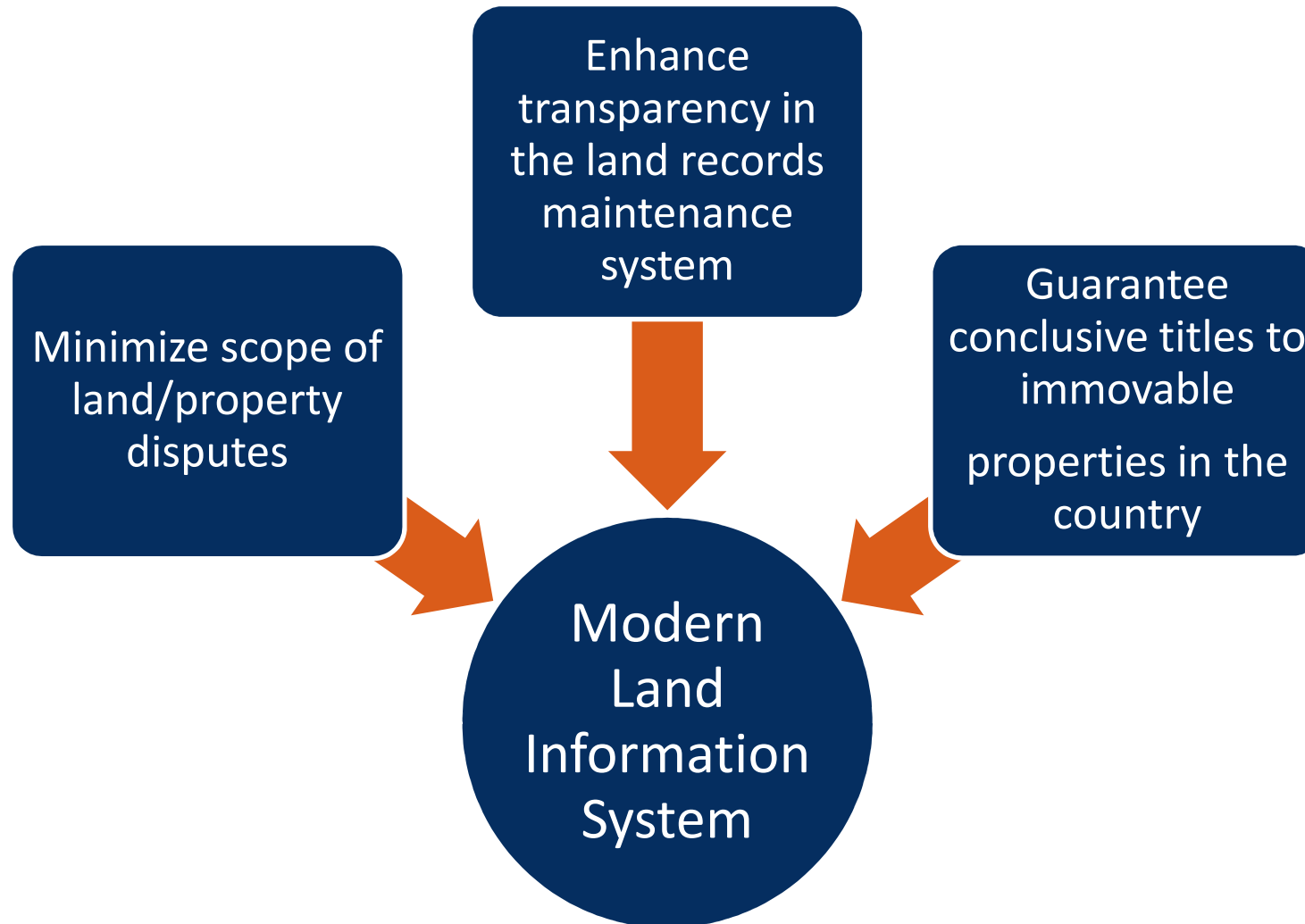
INTERGRAPH®

Land Information Management System
Intergraph Corporation, Security, Government & Infrastructure

Vishnu Boorla
23-Jan-2013

Hexagon Geospatial Portfolio



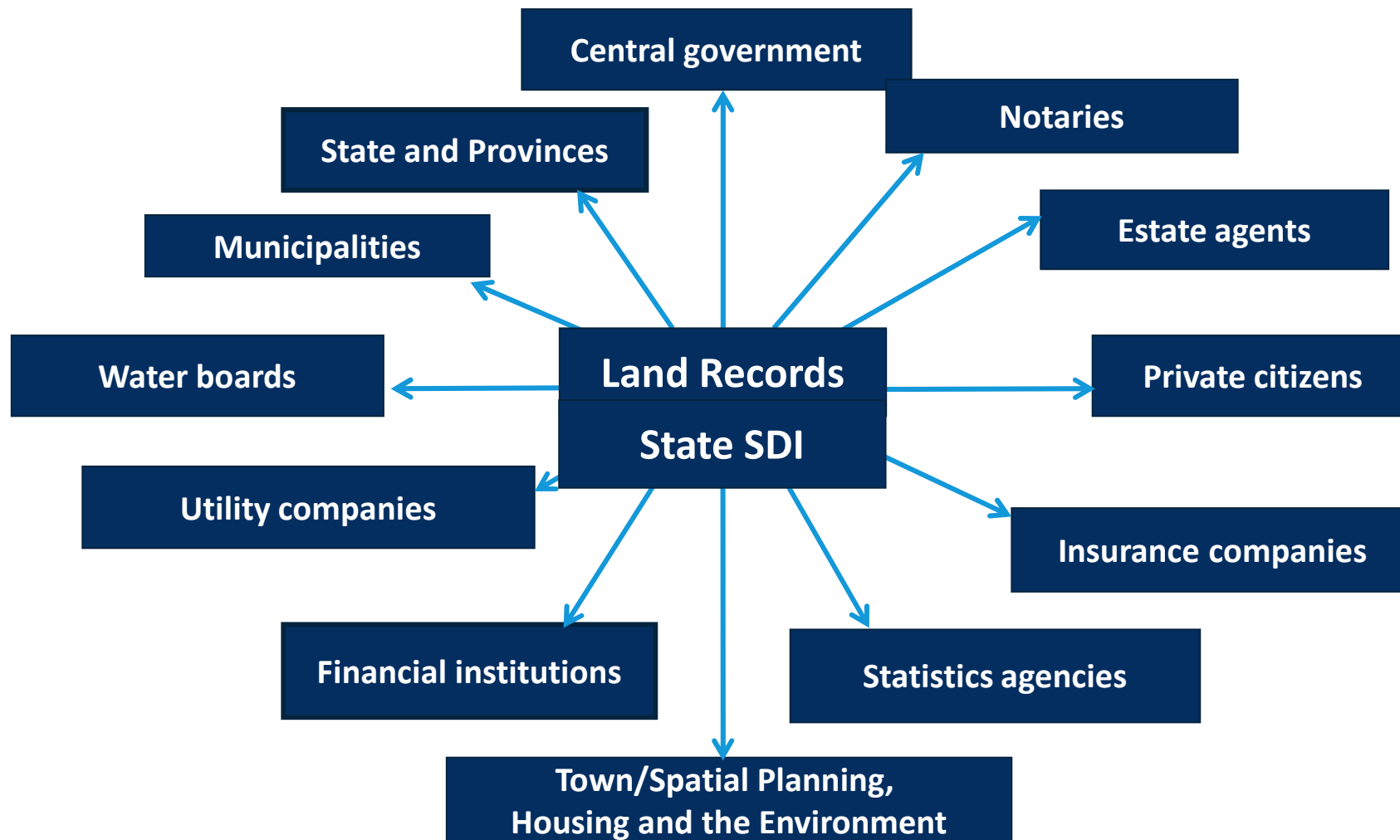


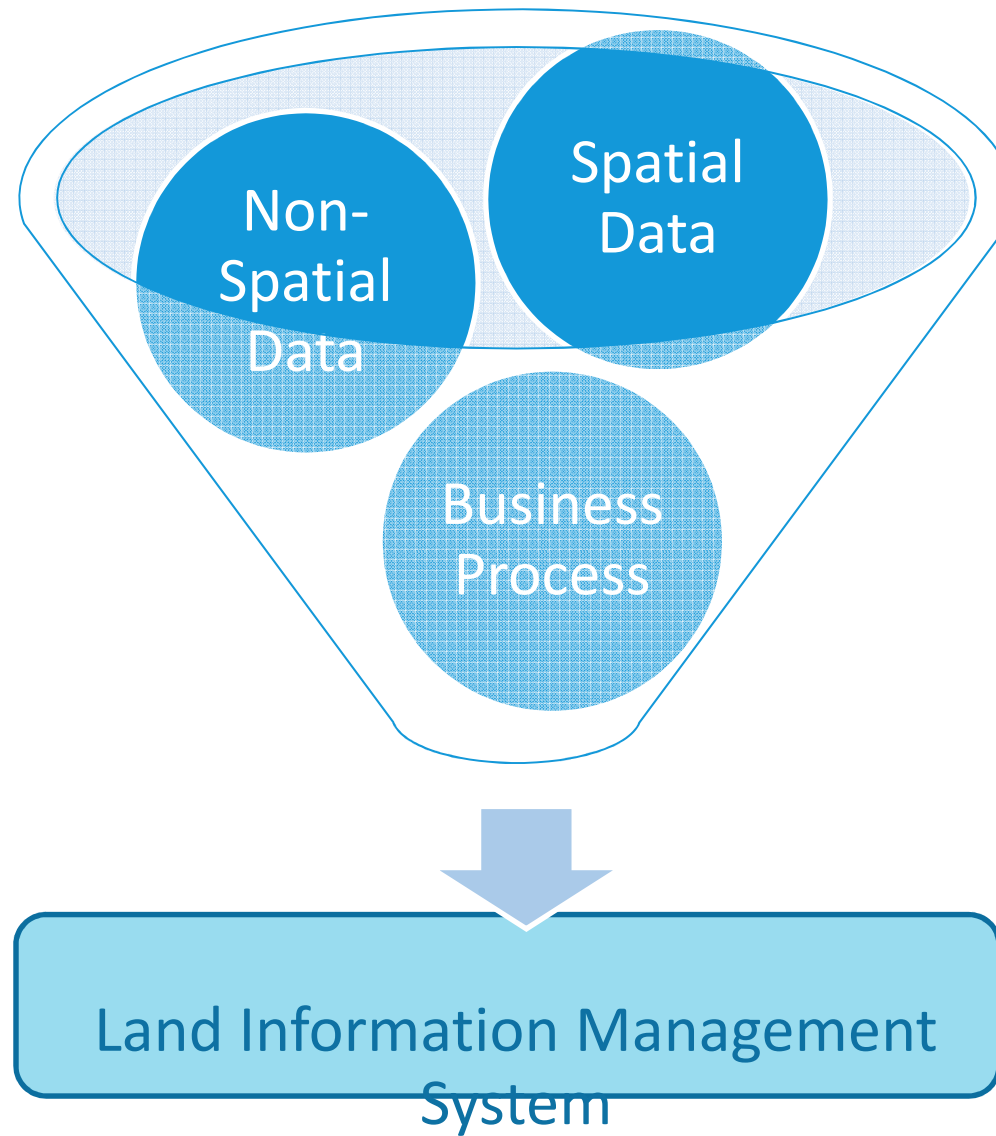
THE CHALLENGE:

- Update National Land Records database and integrate cadastral data into its state / local government geographic management systems to provide more accurate information for taxes and urban planning.
- Setup a framework for a Multi Purpose Land Information Cadaster database

OBJECTIVES:

- Upgrade cadastral data at source (making it as up-to-date and accurate as possible)
- Deliver upgraded data to multiple government systems at minimal cost
- Improve data accuracy by IT-enabling the flow of data between government and the region's cadastre agency
- Develop a suite of software to display and analyse cadastral information, integrating it with local authority cartographic data



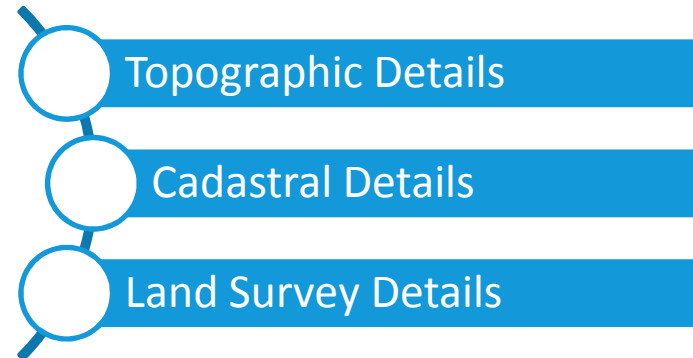


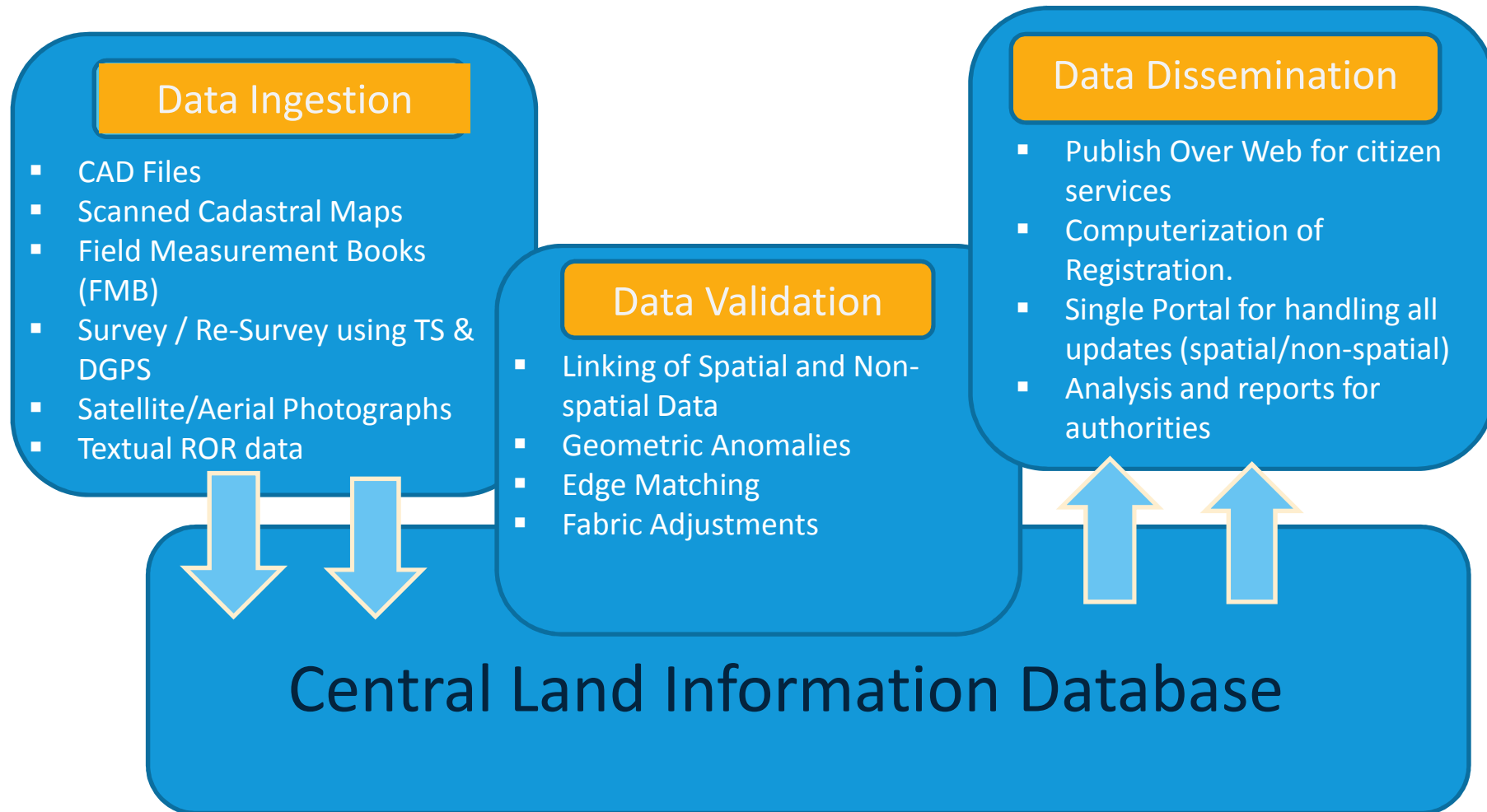
Type of Data

Spatial

Non-Spatial

- Ownership details
- Market Value
- Land Use
- Tax Value
- Legal Authority in-charge of the parcel
- Past Ownership details
- Encumbrance details
- Demographic details for each parcel (No. of Persons/ Household, Gender ratio etc.)
- Socio-economic details (like Average Family Income, Employment etc.)





Capture
Data into a
common
RDBMS
using
following
techniques

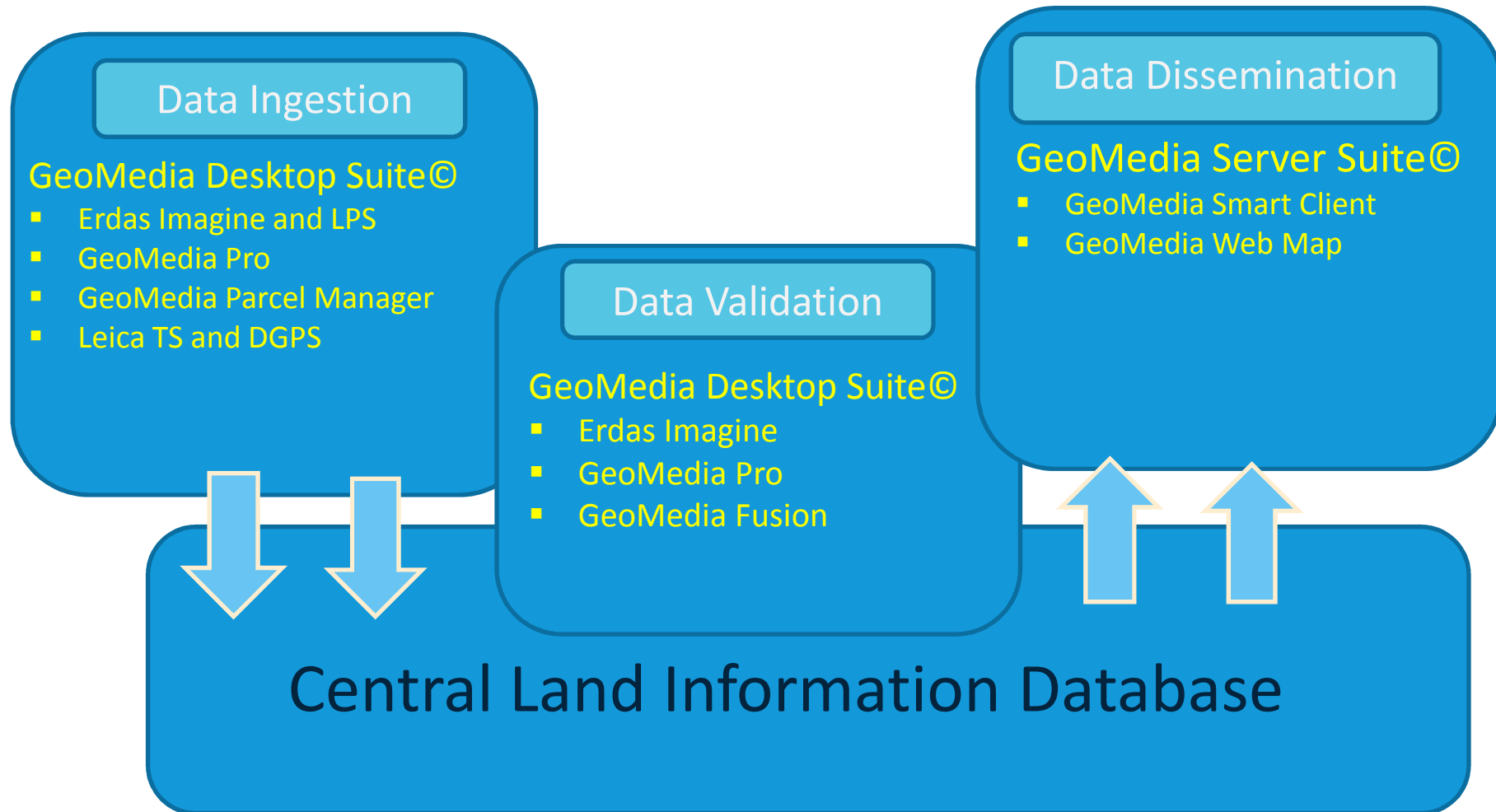
Satellite Imagery

Photogrammetry Workflows

Import of existing data from CAD formats

Import of Data from FMBs (Field
Measurement Books)

Land Survey using Total Stations(TS) and
GPS



Proportioning

COGO

Adjustments

Querying

Labeling

Productivity Tools

Select by Polygon

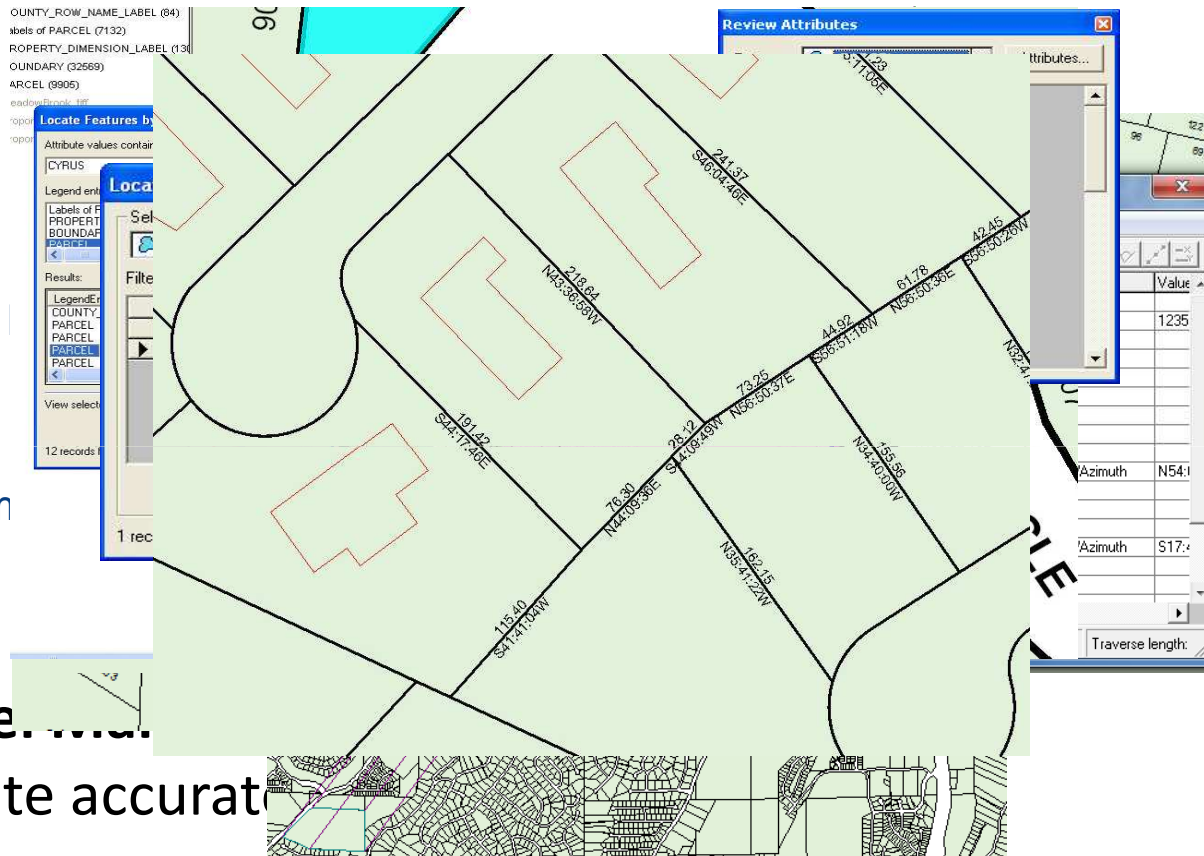
Square Geometry

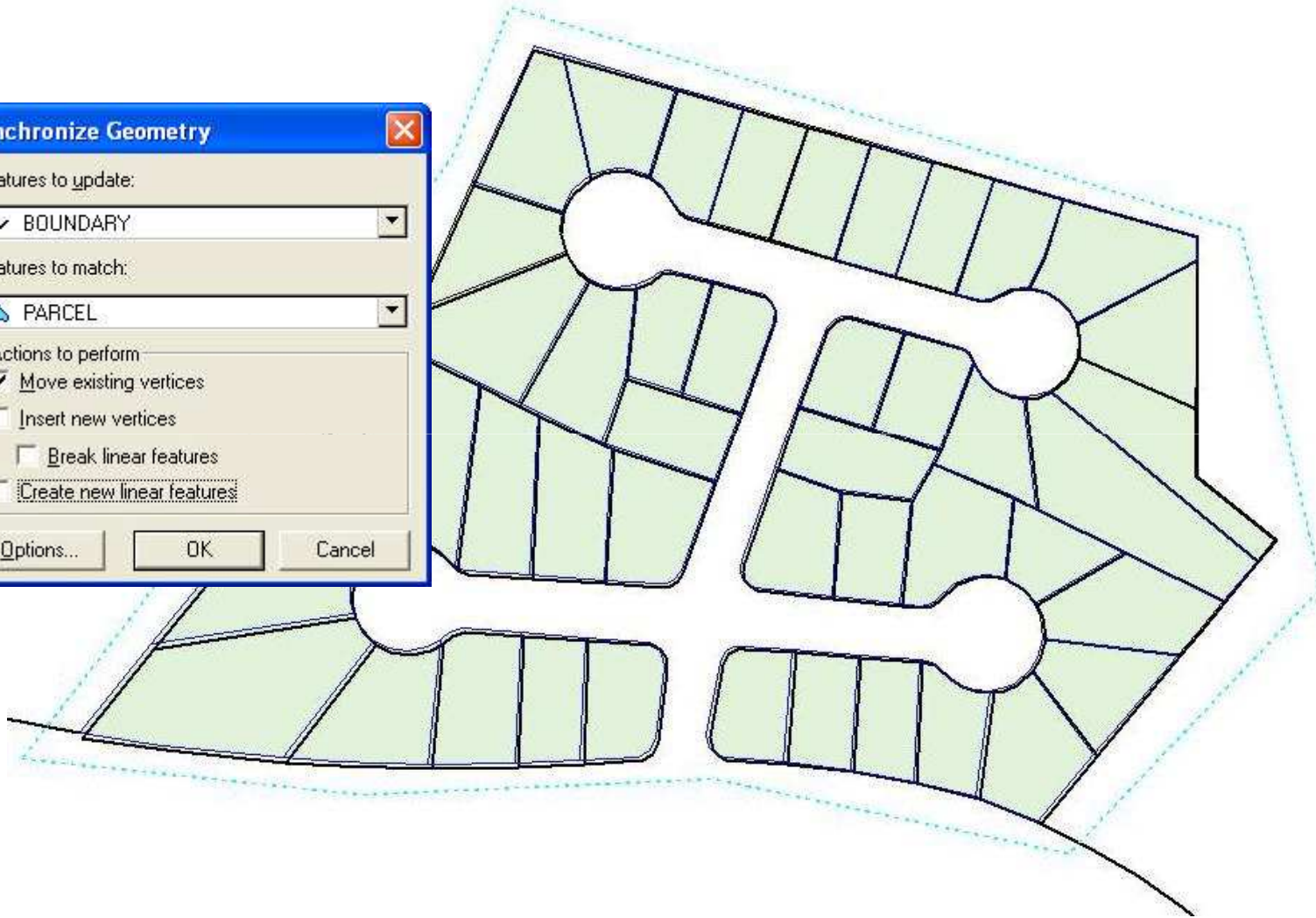
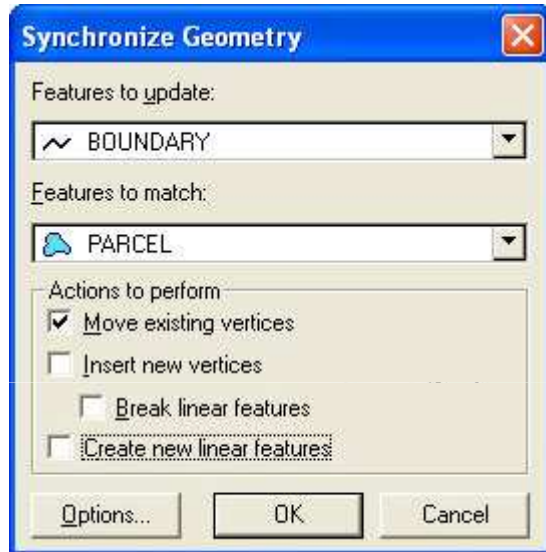
Topo Select

Synchronize Geom

GeoMedia Parcel Manager

ability to generate accurate
in the timely manner



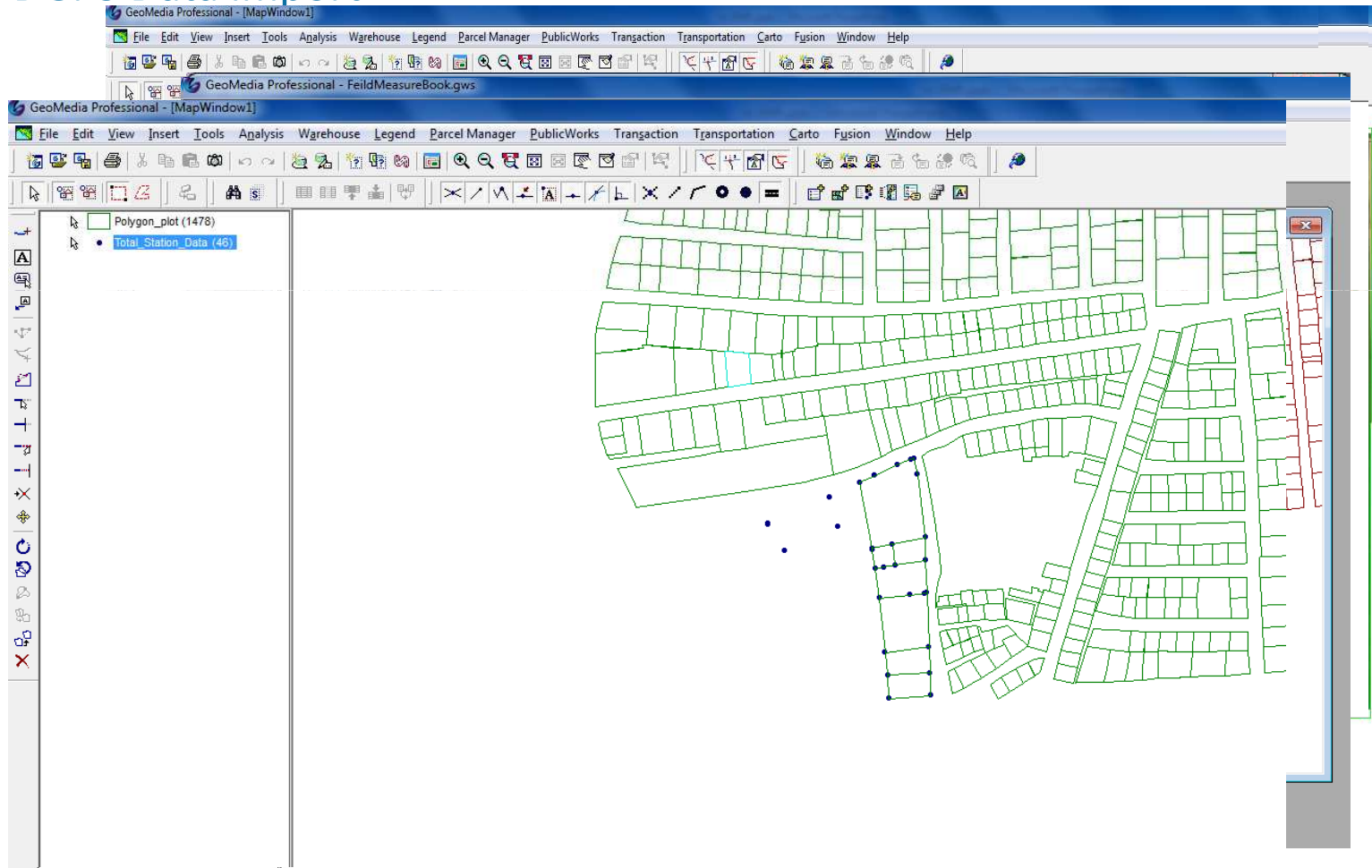


Cadastral Map Digitization

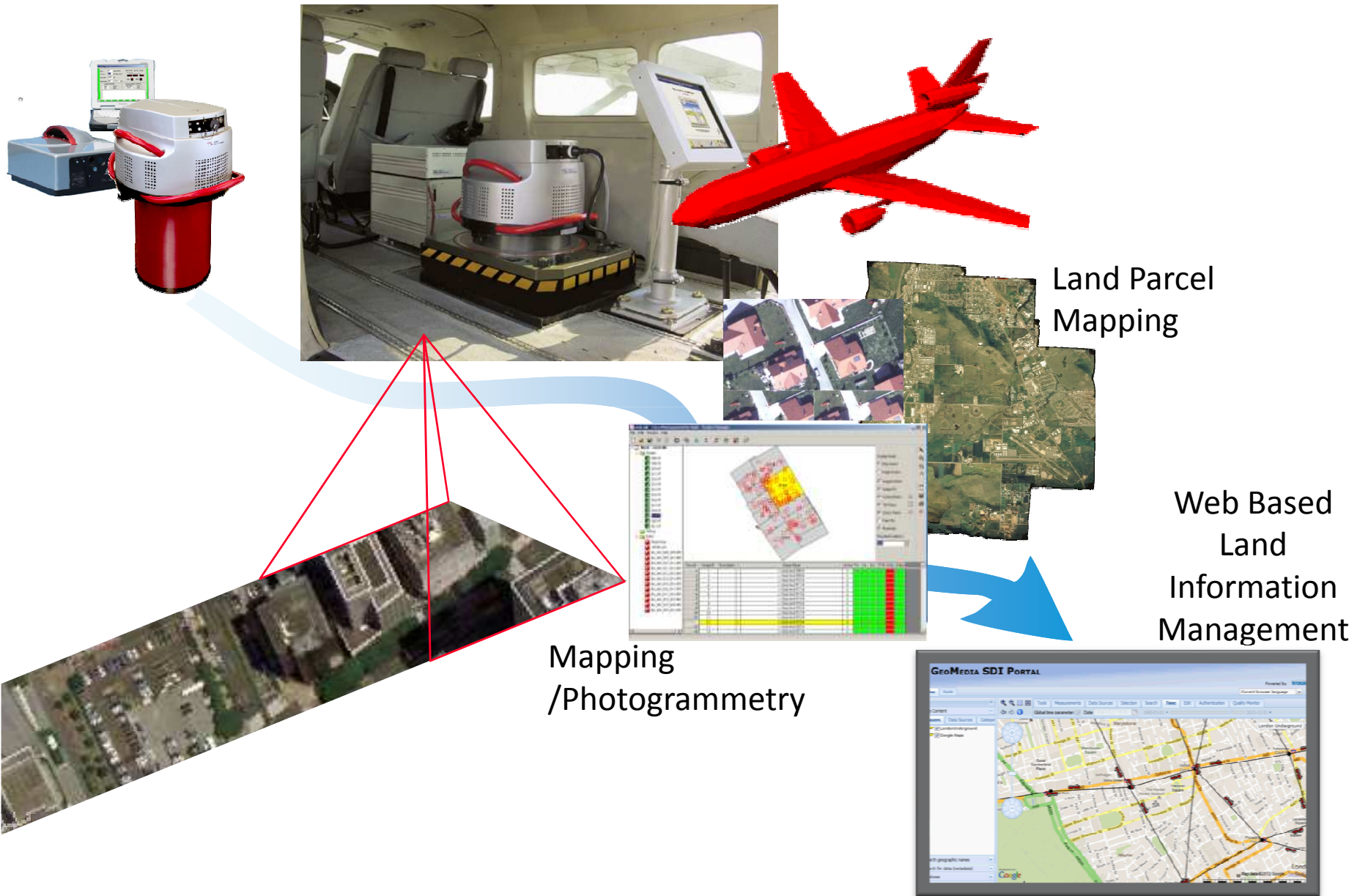
Fabric Adjustments

Data from Field Measurement Book (FMB) (in-the-field or in-house)

TS and DGPS Data import



From Photogrammetry Data Capture to the Web Based solution



The Smart Client proposition in an organization

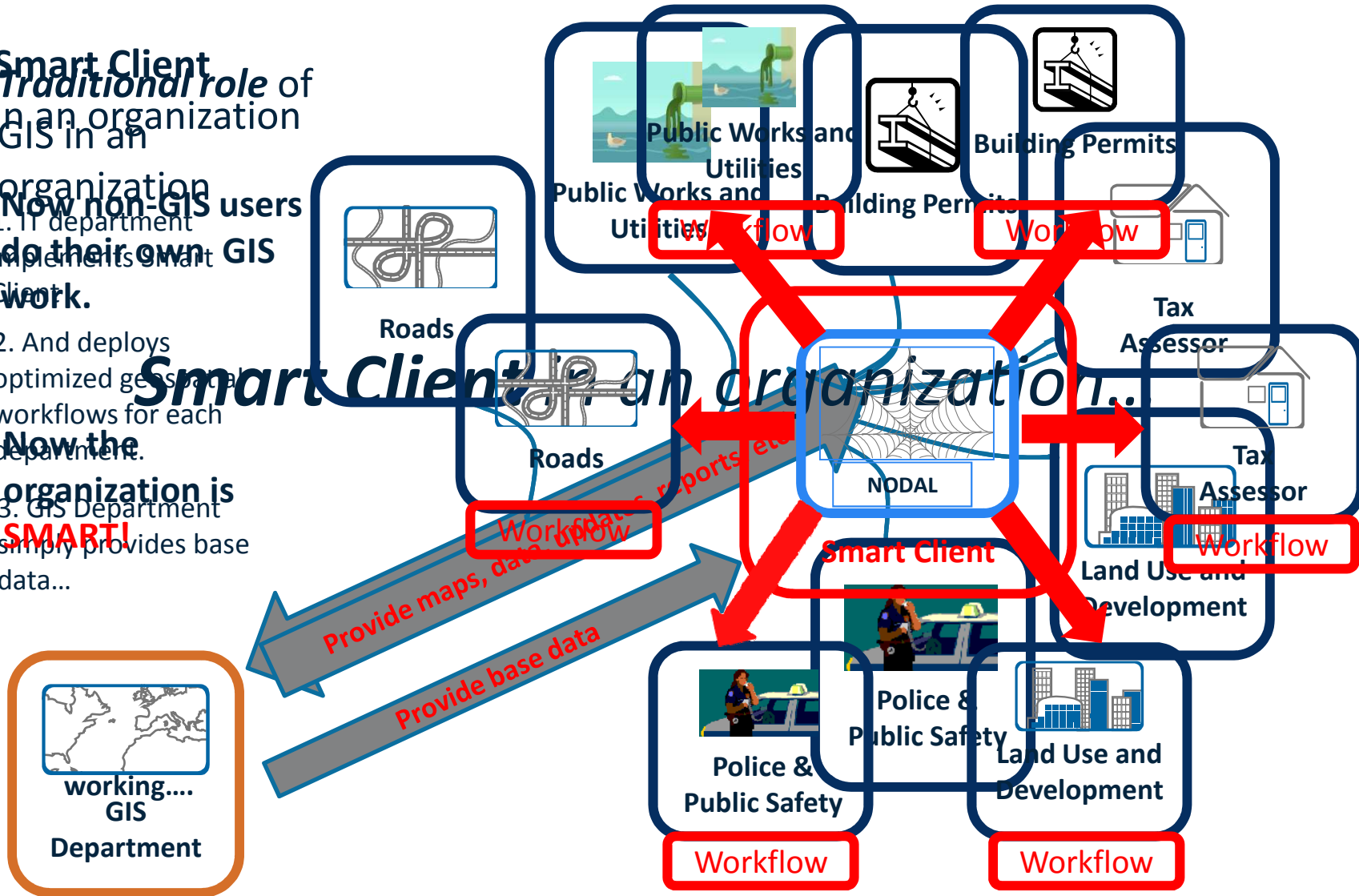
Smart Client
Traditional role of
in an organization
GIS in an

organization
Now non-GIS users
do their own GIS

1. IT department
implements Smart
GIS work.

2. And deploys
optimized geospatial
workflows for each
department.

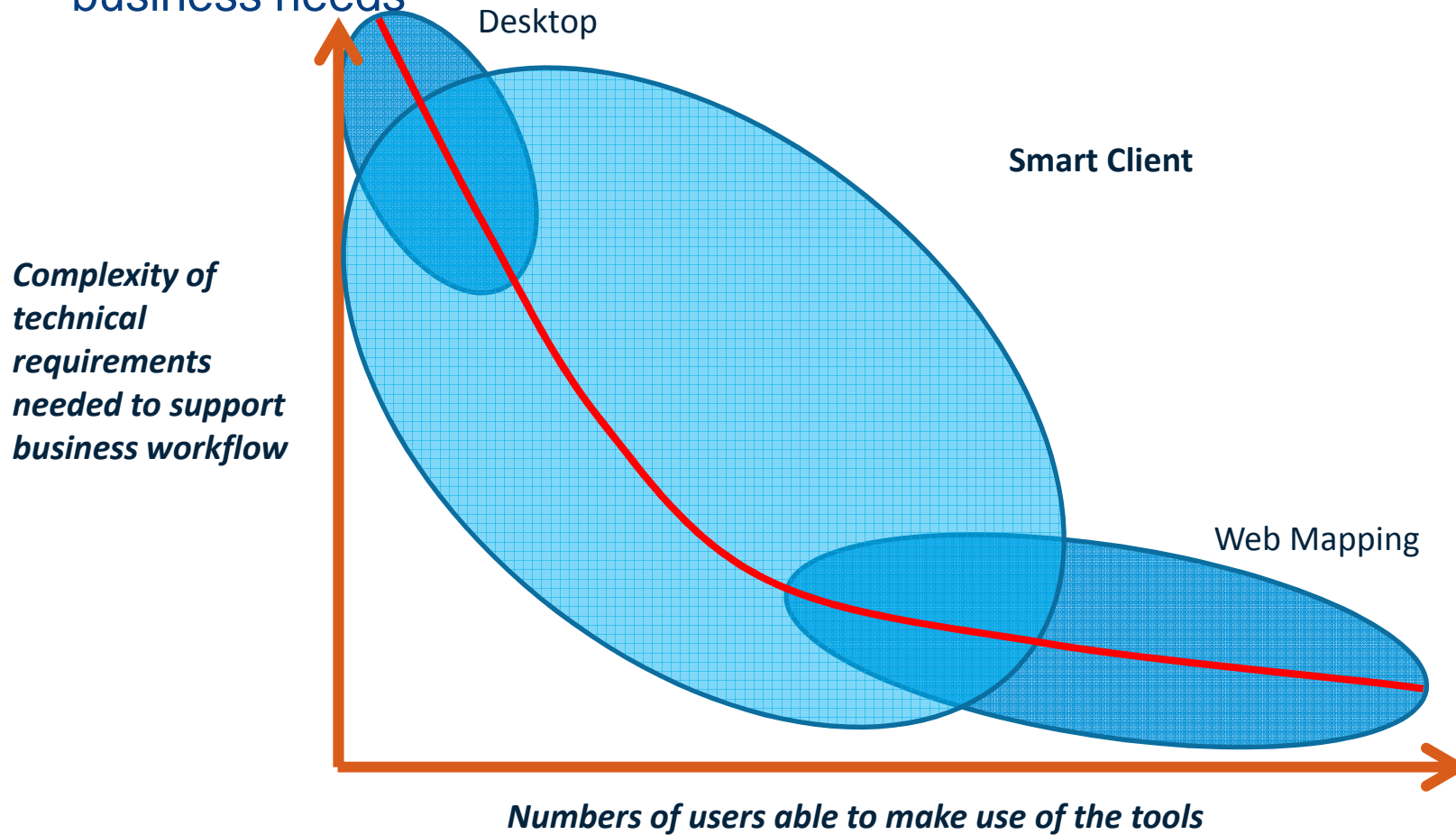
Now the
organization is
SMART!
3. GIS Department
simply provides base
data...



Introducing GeoMedia® Smart Client

Geospatially enabling your business workflows

Matching the delivery of spatial functionality to users' abilities and business needs



ROL - Scenariusz - Wgląd w mapę - Microsoft Internet Explorer

Mapa ewidencyjna

- Granica parafialna
- Granica województwa
- Granica powiatu
- Granica obszaru gminy
- Granica obszaru obręgu
- Nazwa jednostki ewidencyjnej
- Numer obręgu
- Obręb - maska
- Punkt założenia granicy stob.
- Punkt założenia granicy niezab.
- Nazwa ulicy
- Budynek
- Numer adresowy
- Działka ewidencyjna
- Opis budynku
- Numer działki
- Granica konturu klasyfikacyjnego
- Kontur klasyfikacyjny - maska
- Opis konturu klasyfikacyjnego
- Granica konturu użytku gruntowego
- Kontur użytku gruntowego - maska
- Nazwa użytku

Nominalna skala mapy: ---Wszystkie---

Zapisz legendę z obca mapy

Podziałka: 0 5 km Skala 1:

Dane budynku: 020301_1.0010.8_BUD

Fun. użyt.: 4 - budynki handlowo-usługowe

Jedn. rej.: 4.309 - poleceń

Nr ewid. bud.: 0

Nr zabudowy: 1198[m-kw]

Liczba kond. nadz.: 1

Liczba lok. odrębnych:

Liczba lok. innych:

Pow. użyt. lokalni:

KW lub cz. innych dokw:

Rek. budowy: 2002

Wartość: 0 zł

Metraż zemu: mur

Pow. użyt.:

Liczba kond. podz.: 0

Numer y lok. adresnych:

Numer y lok. innych:

Pow. pom. przynals:

Data oddania do użytku:

Ref. zabytków:

Data wyceny:

Drżaki | Skale | Adresy | Dokumenty | Uwagi | Załączniki | Zmiany | Historia

Id.	Dz. g.	Jedn. ewid.	Obręb	Arkusz	SR	Nr dz.	Adres	Opis
1	F	Poleceń	raperni - 0019	9	6.200	10/11	SŁOCÓW, OWIACZYSTA 1A, 1B	Pokaż Jedn. rej.

Automatyczne wylogowanie z systemu nastąpi za: 00:54:02

ZAMKNIJ

Integration of Intergraph software and Leica Geosystems CS25 For Field Data Updates and Editing



- ❑ A network of continuously operating GPS reference stations is more efficient than a traditional triangulation and traverse network.
- ❑ The stations can be set up at convenient locations in areas
- ❑ Network geometry is not as critical as with traditional networks, and the accuracy is higher and more consistent.
- ❑ Users set up their field receivers in the areas in which they are working, download reference station data via the Internet, and compute their positions.
- ❑ The stations can also transmit RTK and DGPS data for direct use by RTK and GIS field rover equipment.
- ❑ Such a network can be of almost any size. Whilst one or two stand-alone reference stations may be all that is required for a local area, town, municipality, opencast mine or engineering site, a multi-station network will usually be needed to provide full GPS service coverage for a state or entire country.

❑ Selection of Technology for NLRMP

1. Survey is definitely the most accurate BUT Total time to execute a land consolidation project is too long!
2. Need to use aerial Photogrammetry aggressively. This is proven across the work for land cadaster

❑ Cost of survey jobs to vendors is low. Does not allow modern technologies or high accuracy survey and GPS to be used.



Questions?

SMARTERDECISIONS