Seamless Geospatial Computing

Making Geospatially Enabled Business Process Reality

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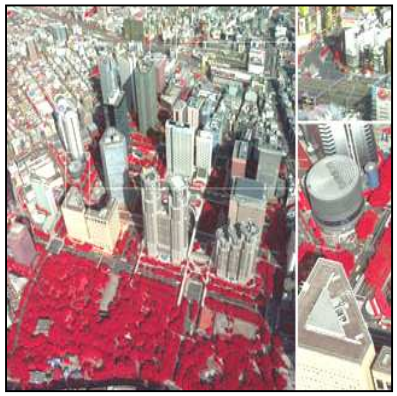


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Agenda

A. Geospatial Information Management

- Bridging the Knowledge Gap

B. Seamless Geospatial Computing

- Making Geospatial Business Process reality

C. Return on Investment

- Challenges for new Busines Models

Geospatial Information Management .





A New Mindset - To Stop Isolating GIS Databases and Apps

Where we began:
GIS Centric Thinking



What we should achieve: Information Centric Thinking

GeoSpatial Sphere of Influence

Geospatial Infusion

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GIS

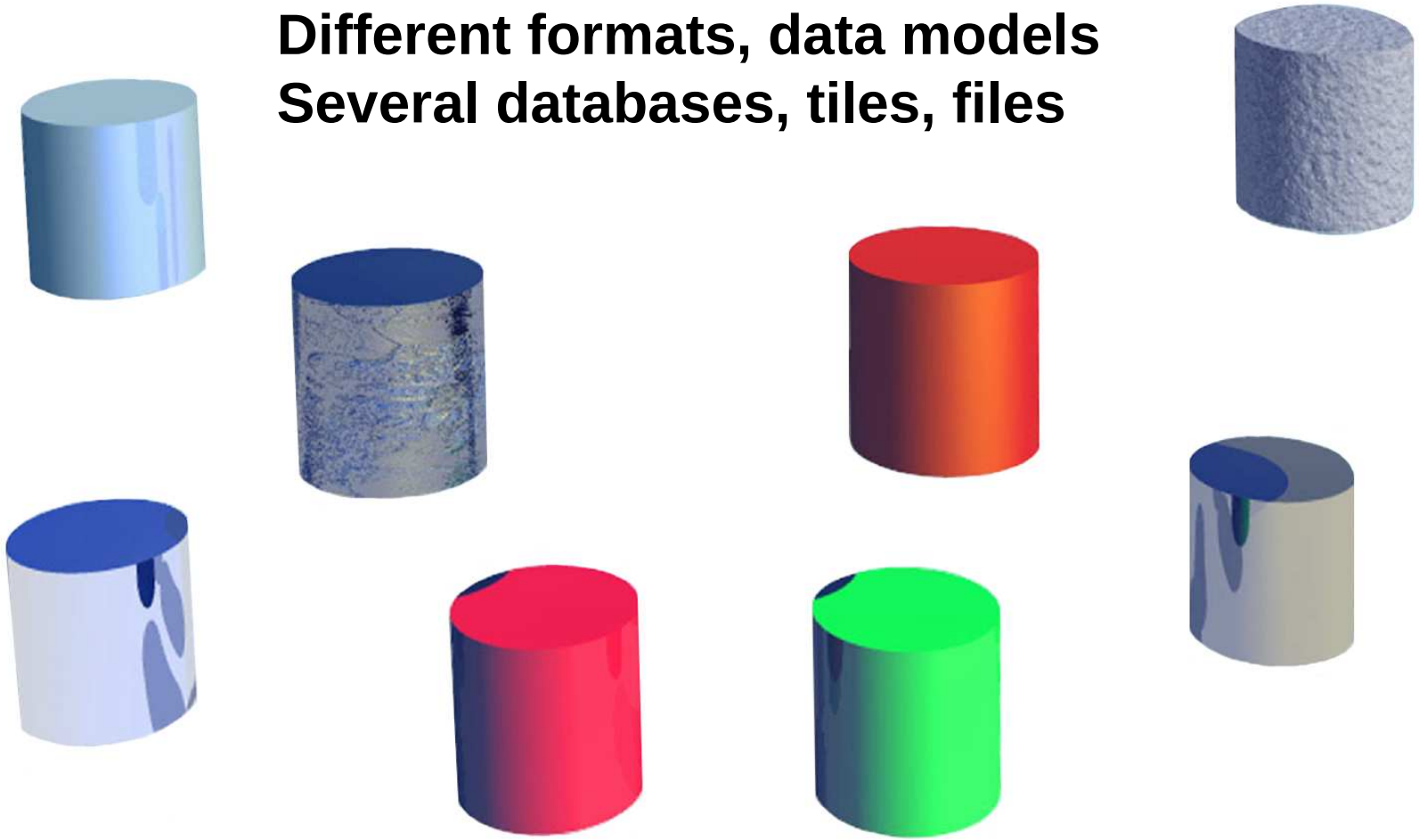


Information systems



Issues of Geospatial Databases: Closed Formats Continue

Different formats, data models
Several databases, tiles, files



The Power of Sensors and Sensor Web In the Future

- Imagine
  - a world of sensors
  - the rich data content
  - Real-time and online availability
  - Inherent location information
  - The amazing applications!

- "The Sensor Web is to sensors what the Internet is to computers…"

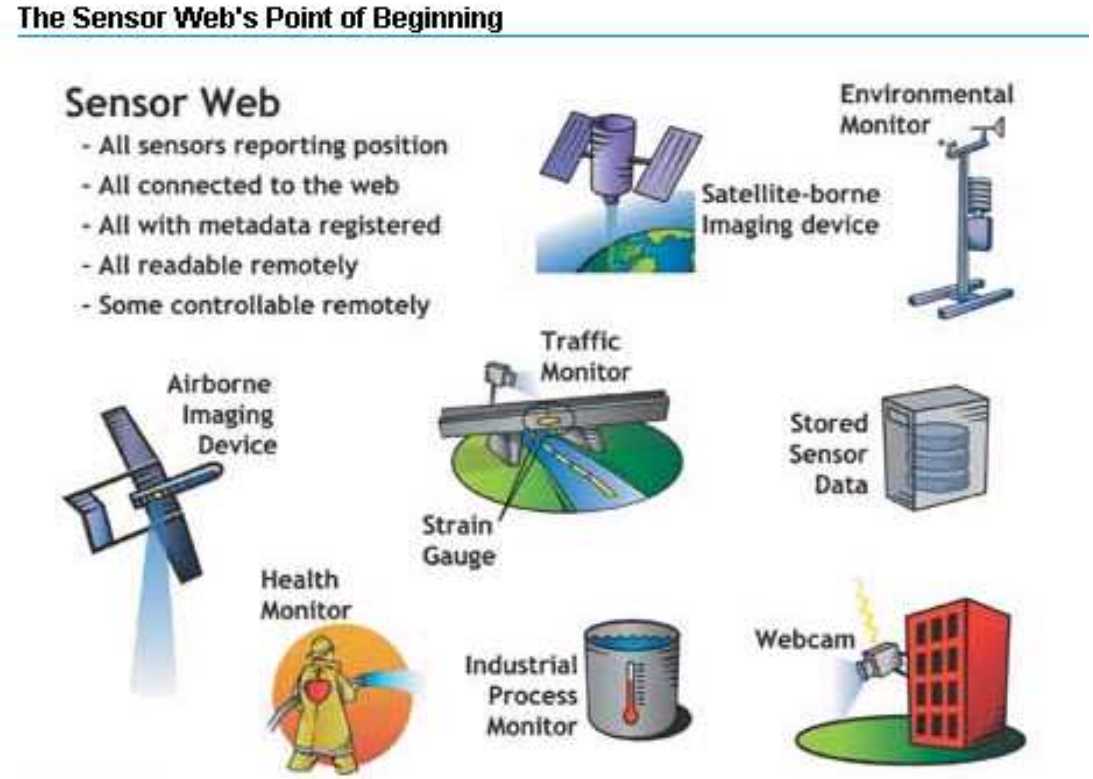


FIGURE 1 The Sensor Web will comprise diverse, location-aware environmental sensing devices that report data about their surroundings in real time.

Courtesy: Mark Reichardt, OGC

Interoperability Broadens Use of Geospatial Data

- Data interoperability
- Application interoperability
- Critical to information sharing and collaboration

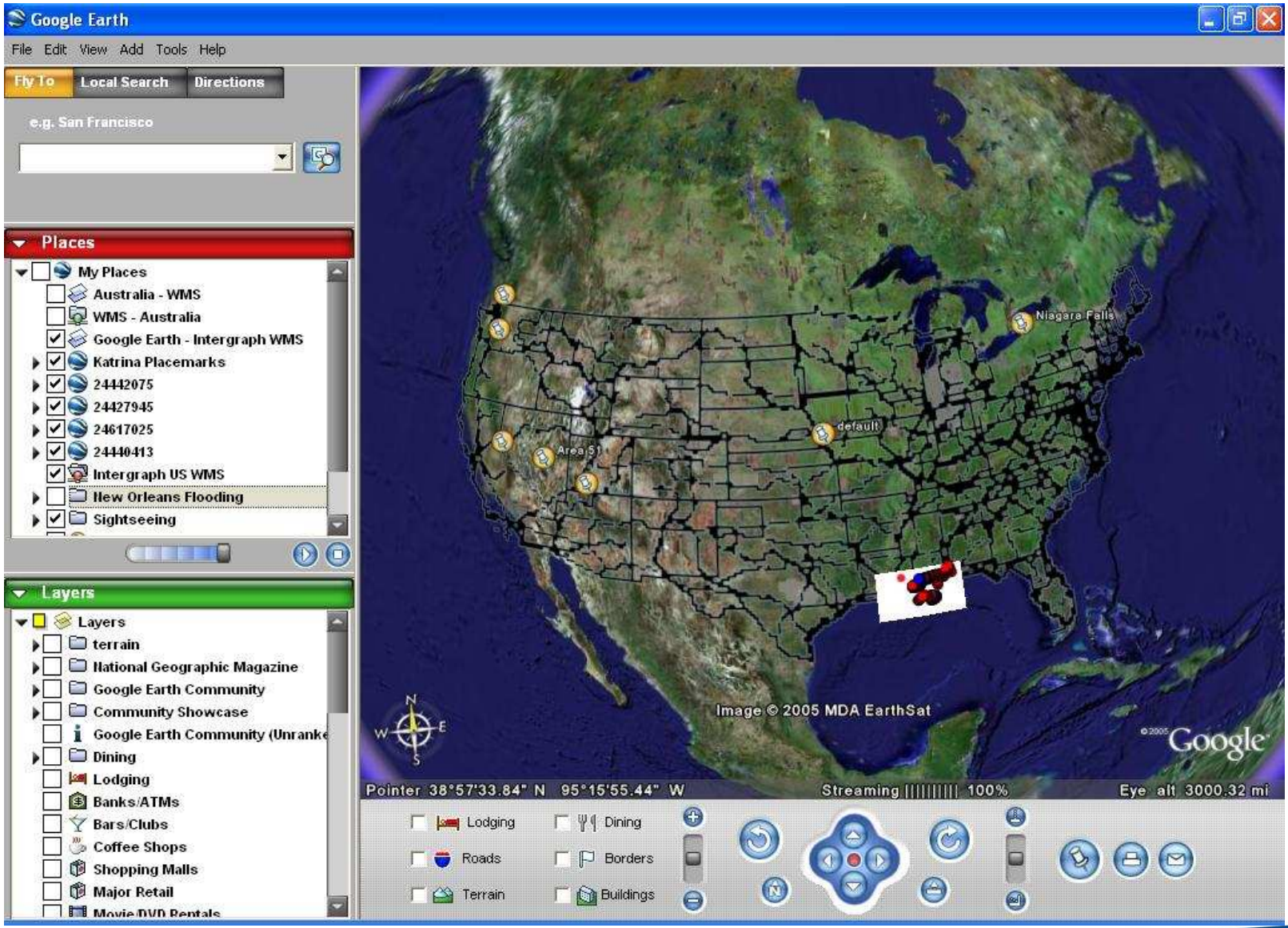




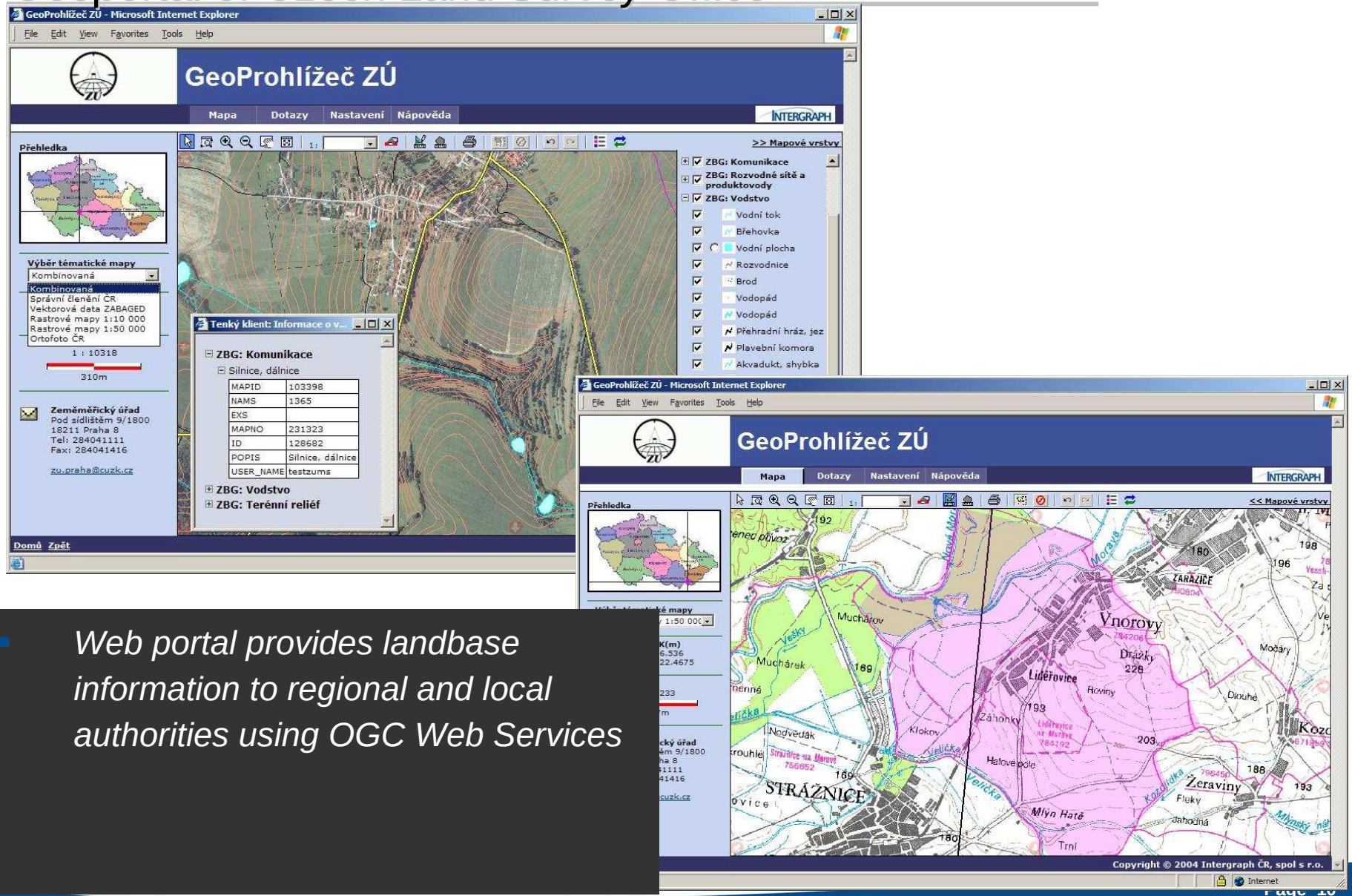
OGC Web Services – addressing the growing demands for data access

OGC™
Open GIS Consortium, Inc.

Case Study – Put your data on Google Earth via OGC!



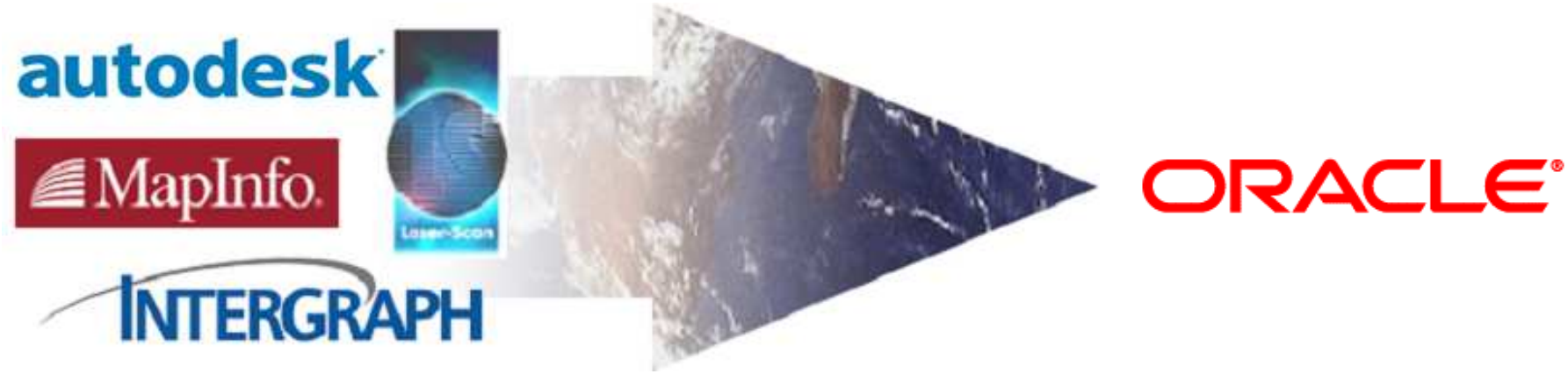
Geoportal of Czech Land Survey Office



- *Web portal provides landbase information to regional and local authorities using OGC Web Services*

Industry Interoperability Initiative

- Intergraph collaborates with other industry leaders and OGC members on interoperability
- Customers drive industry leaders to produce interoperability kits for multi-application enterprise based on Oracle Spatial



"… vendors are coming together to serve customers. …in this industry, it's been rare…. Second…the vendors are taking responsibility, together for interoperability….."

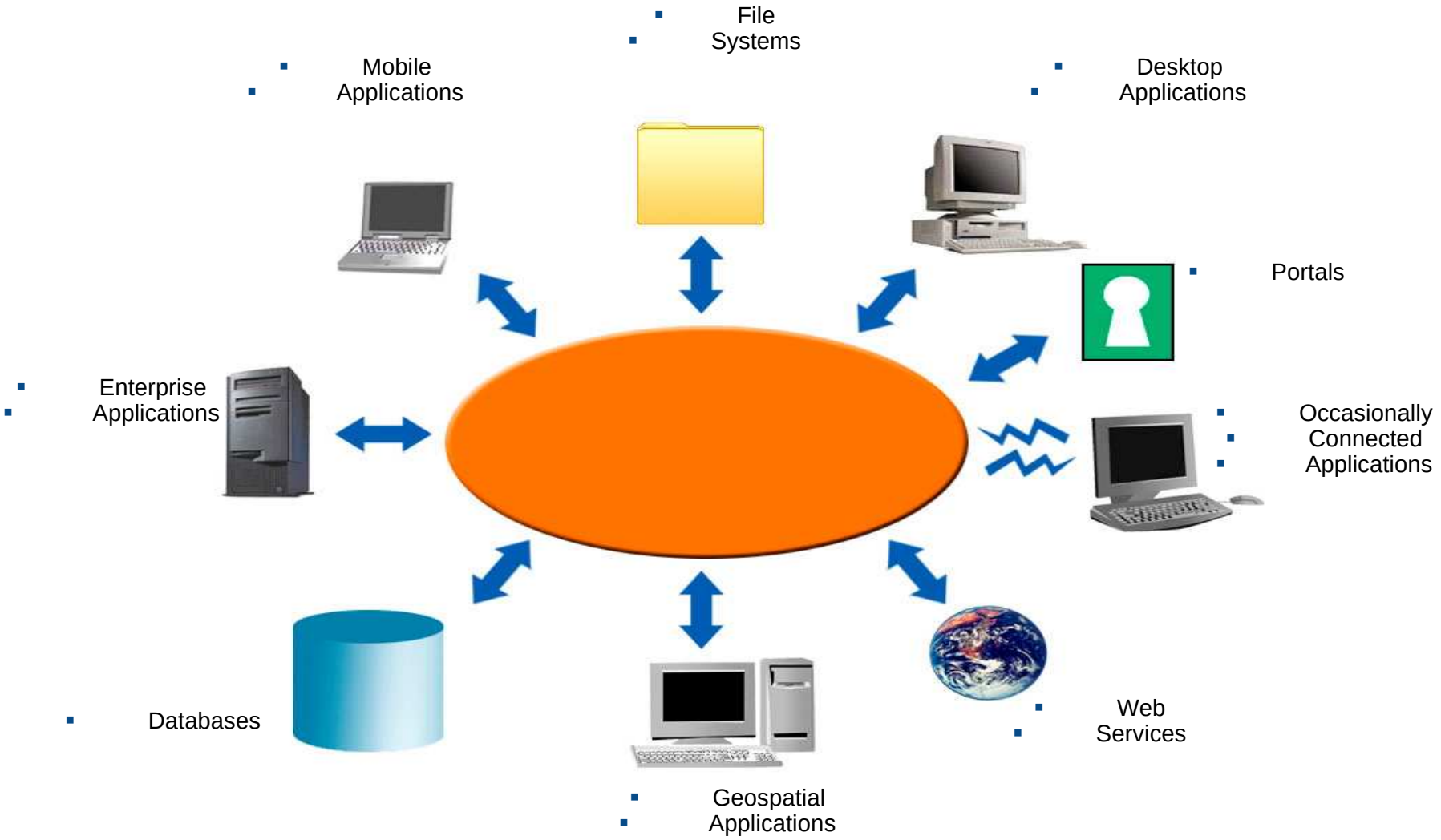
Adena Schutzberg, *GIS Monitor*

Making Geospatially Enabled Business Process Reality



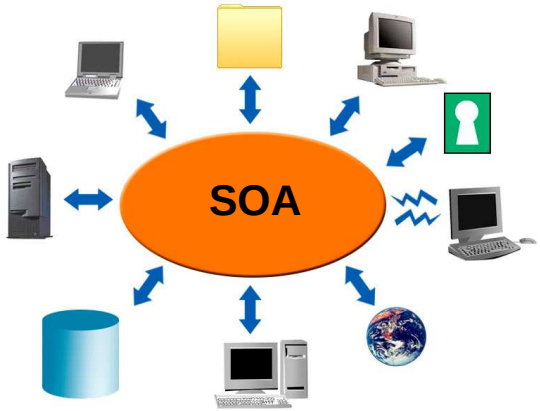


(Geospatial) Computing Environment



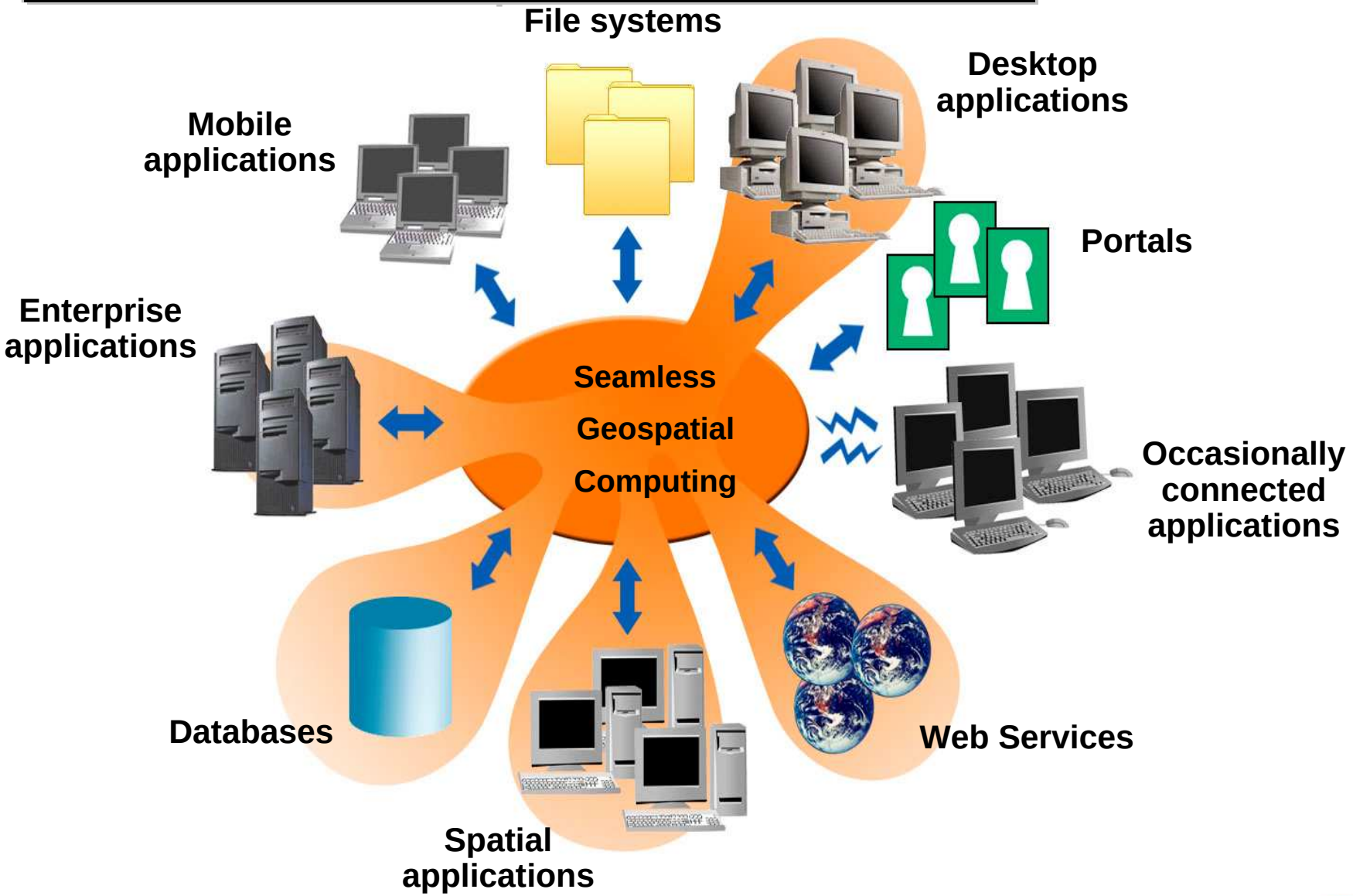
Services Oriented Architecture (SOA)

- New Architectural Paradigm of Building Composite Architecture
  - Collection of loosely coupled stateless services
- Services
  - Normalized
  - Executed by reusable SW components
  - Abstracted away from application
  - Can be:
    - INVOKED
    - PUBLISHED
    - DISCOVERED

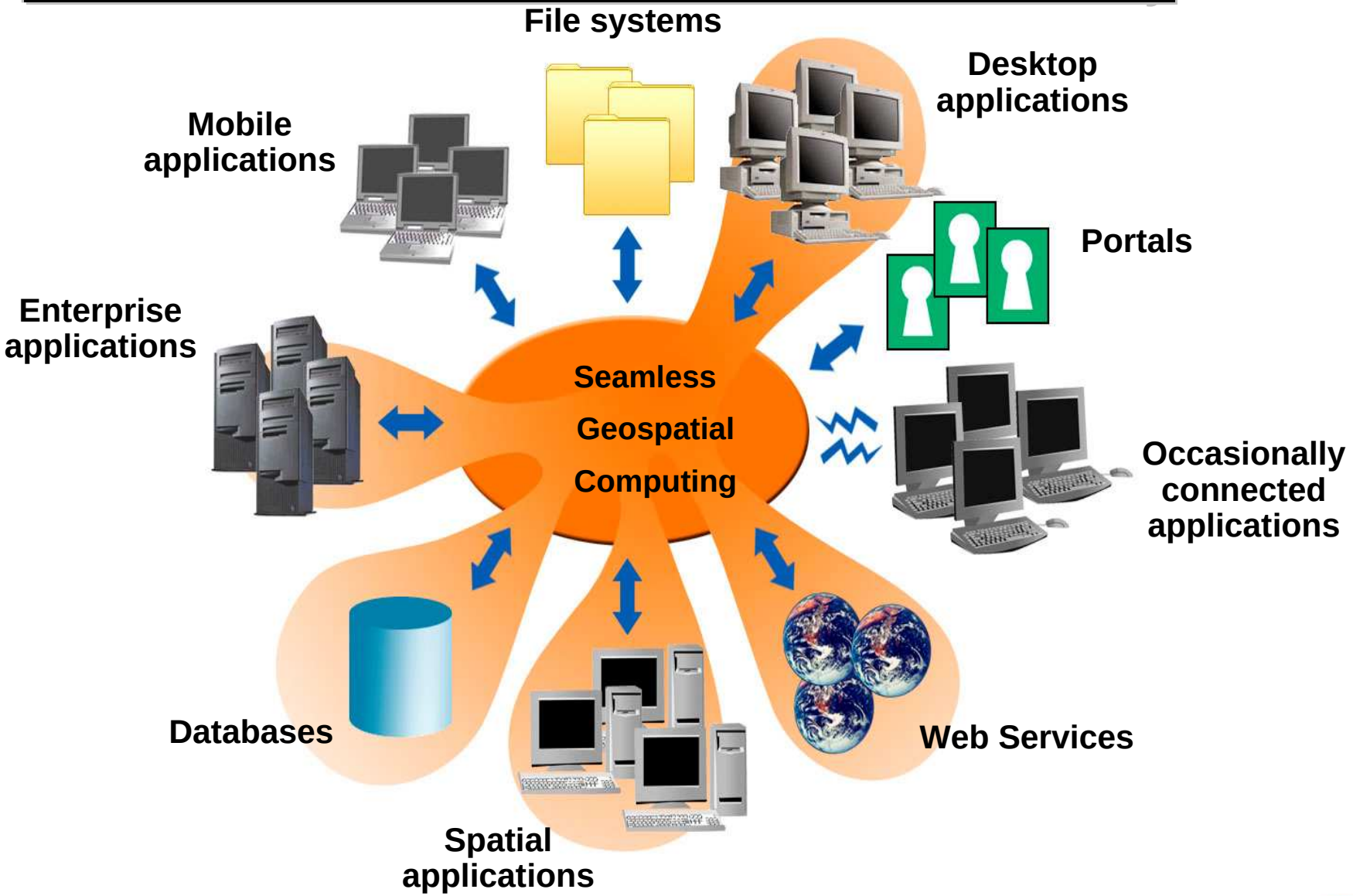


- Composite applications
  - Built by combining services to perform Complex business processes
  - Mutli-layer (data repository, business model, user interface, enterprise service bus)
  - Interoperability across enterpsices

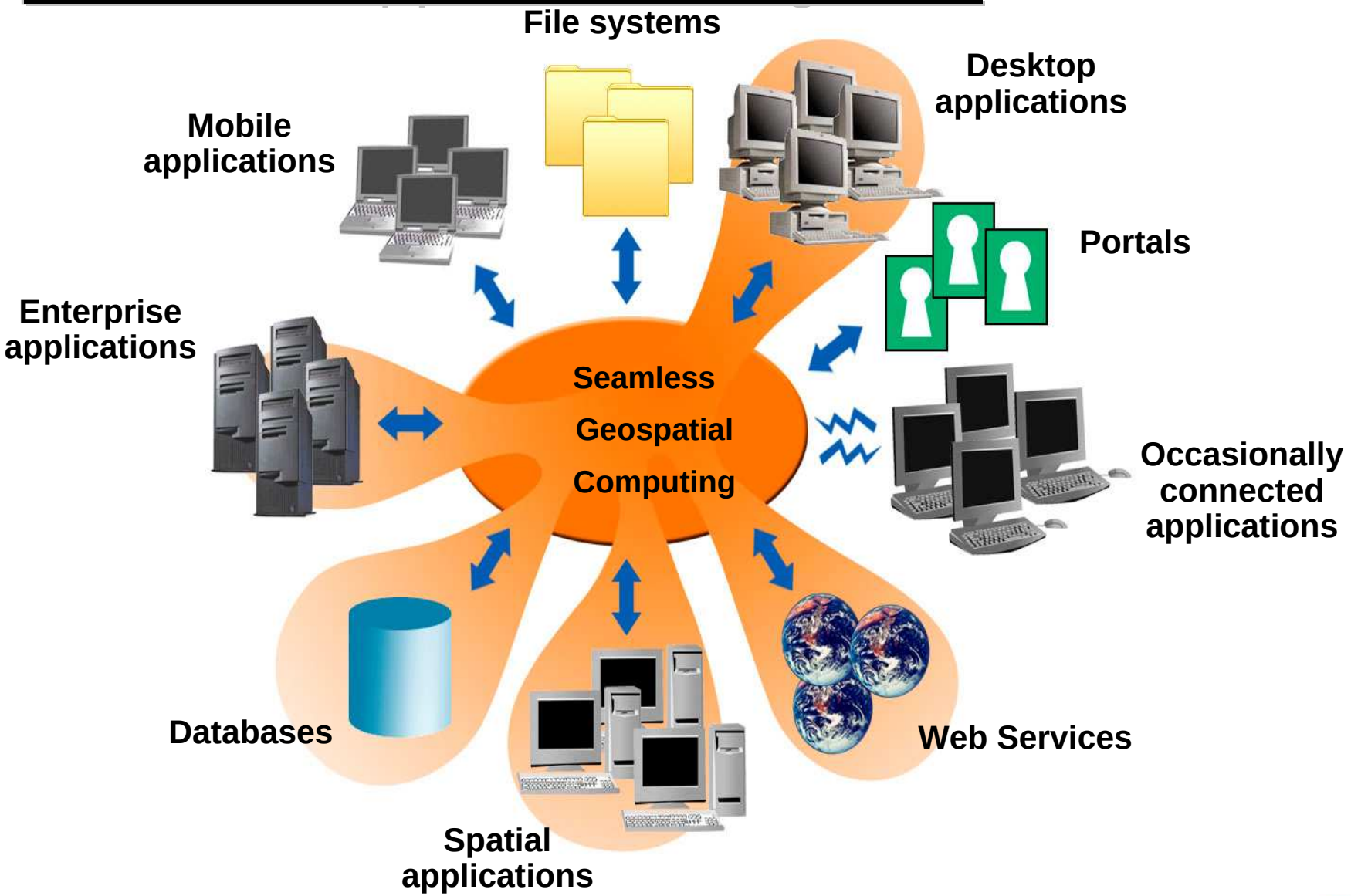
Seamless Geospatial Data Access



Seamless Client Access and Scalability

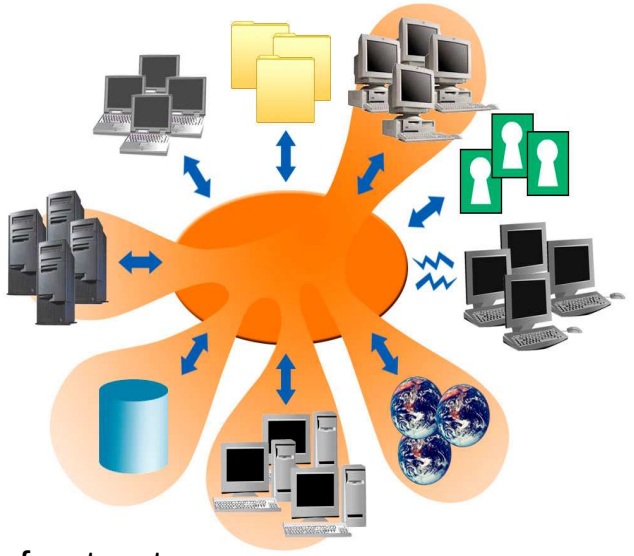


Seamless Application Integration



Business Benefits of Seamless Geospatial Computing

- Organizations respond faster
  - To changes in their business environments
  - Ability to create quickly new business processes and apps.
  - Common services reduce complexity and maintenance cost



- Services and Data Providers – increased ROI
  - Increased potential markets
  - Increased business flexibility
  - Pre-built reusable services

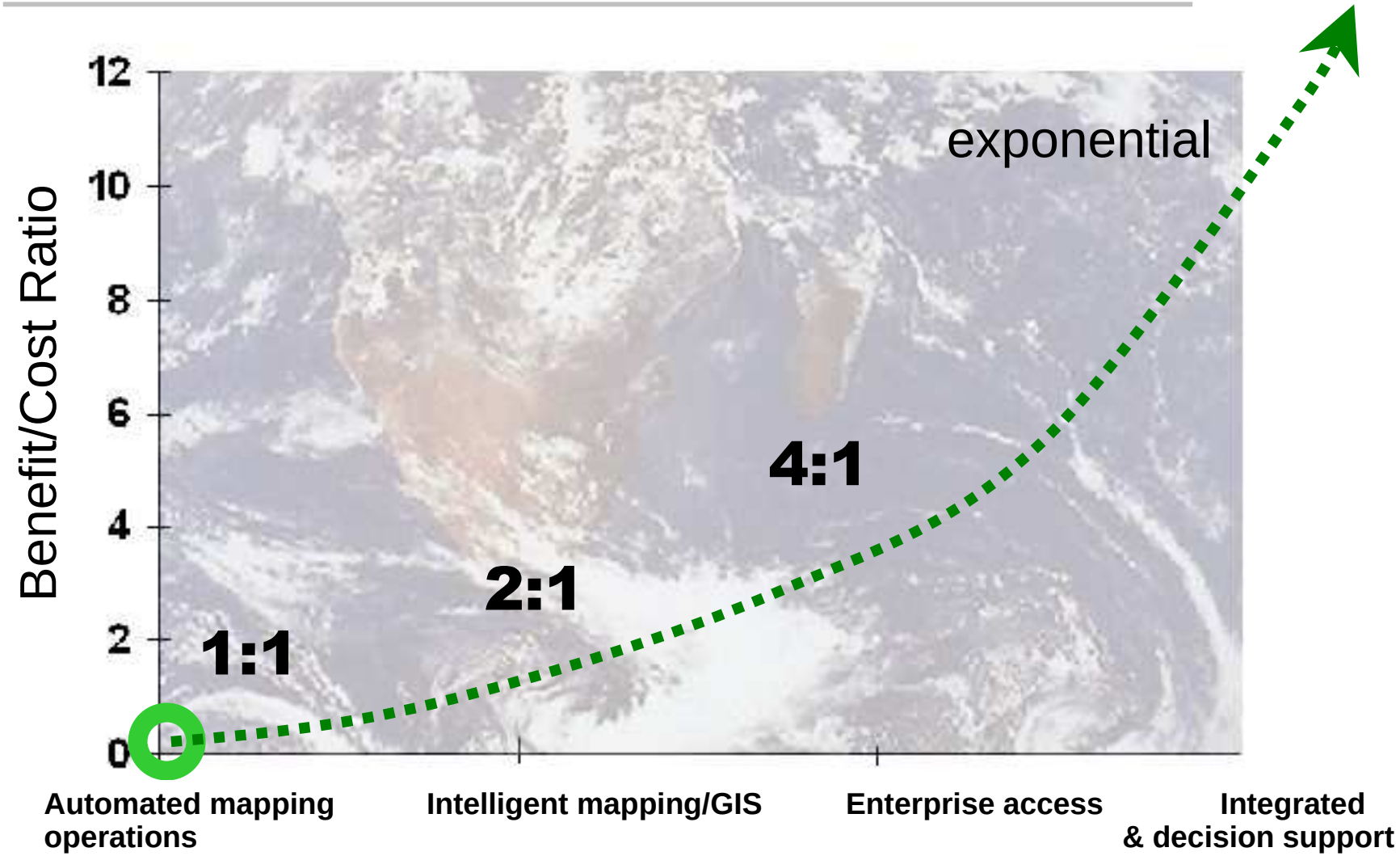
- Customer services improvement
  - Data and Services Availability regardless of existing IT infrastructure
  - No need for further IT infrastructure investment

Challenges for New Business Models





ROI: Provide The Real Benefits of Geospatial Technology



Local, Regional, European and Global Cooperation

Research

Implementation  **Development**



Thank You!

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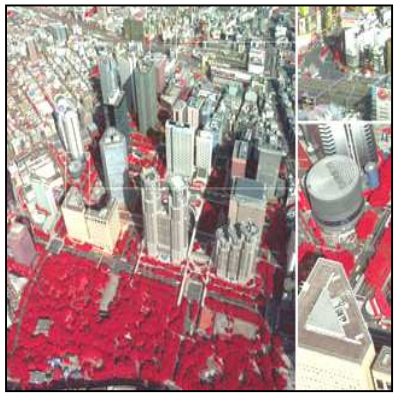


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