Data models, Query Languages, Implemented Systems and Applications of Linked Geospatial Data

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Tutorial Organization

- **14:00 – 14:15** Introduction
- **14:15 – 15:00** Background in geospatial data modeling
- **15:00 – 15:30** Geospatial data in the Semantic Web – stSPARQL
- **15:30 – 16:00** Coffee break
- **16:00- 16:30** Geospatial data in the Semantic Web – GeoSPARQL
- **16:30 – 17:00** Implemented systems and applications
- **17:00 – 17:15** Conclusions, questions, discussion
- **17:15 – 17:30** Demo of Strabon

Introduction

Presenter: Manolis Koubarakis

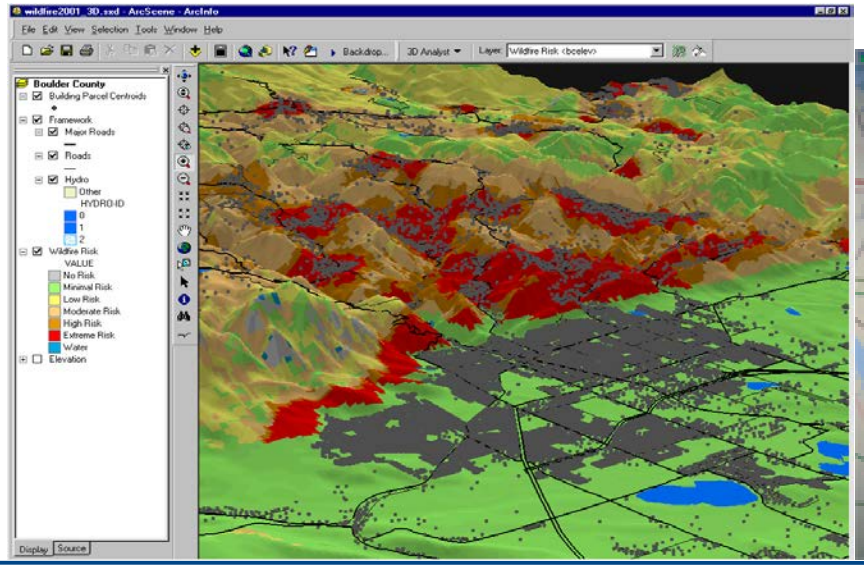
Outline

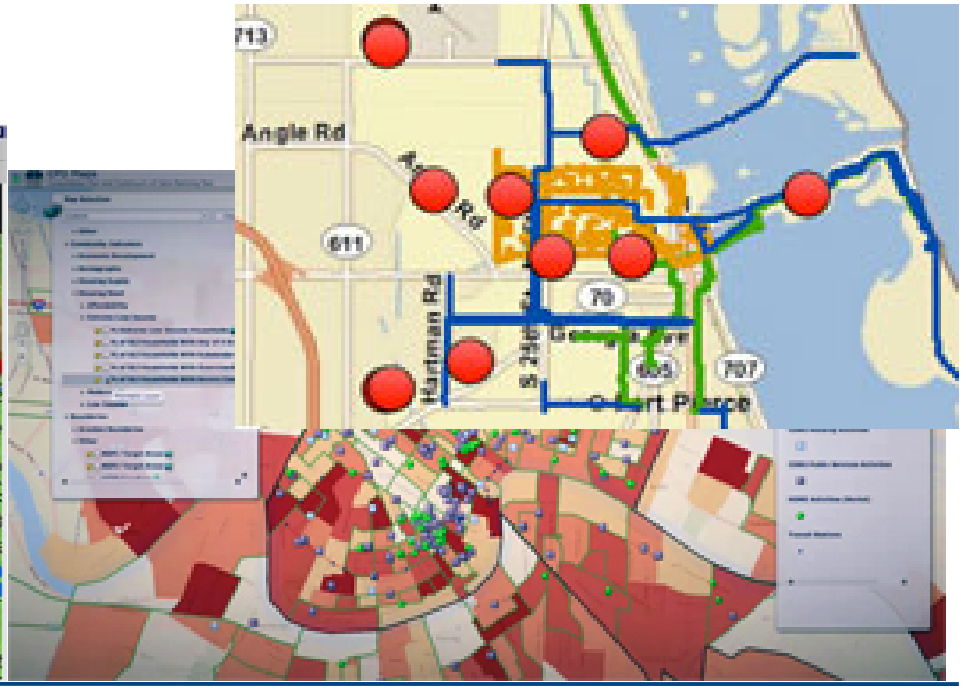
- Why geospatial information?
- Geographical Information Science and Systems
- Why this tutorial?

Why Geospatial Information?

- **Geospatial,** and in general **geographical,** information is very important in reality: everything that happens, happens somewhere (**location**).

- **Decision making can be substantially improved** if we know where things take place.





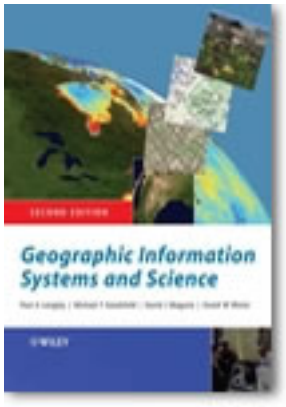
Geography

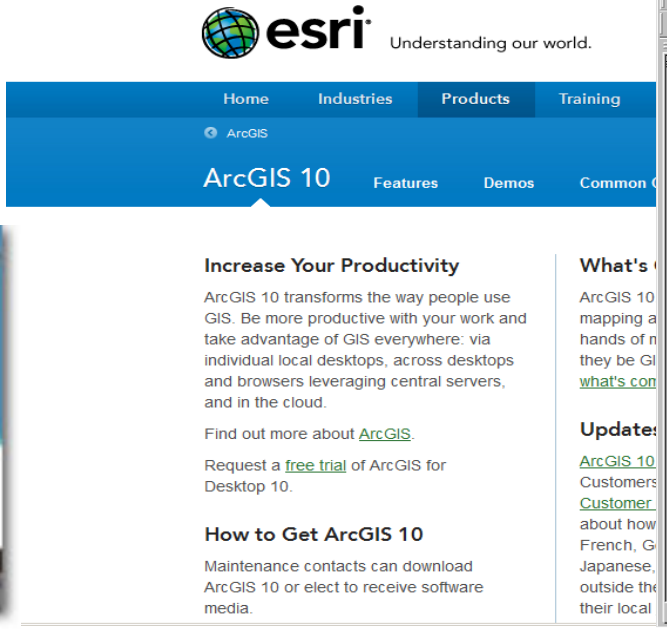
- From http://en.wikipedia.org/wiki/Geography
  - **Geography** is the science that studies the lands, the features, the inhabitants and the phenomena of the Earth.
  - From the Greek word **γεωγραφία (geographia)** which means “describing the Earth”.

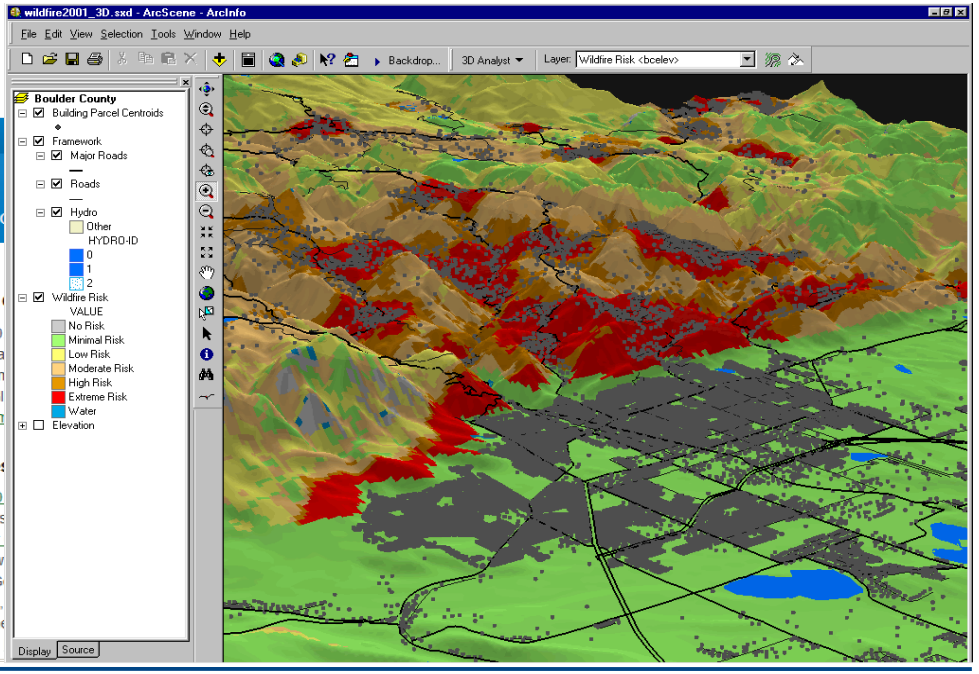
Geographical Information Systems and Science

- A **geographical information system (GIS)** is a system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data.

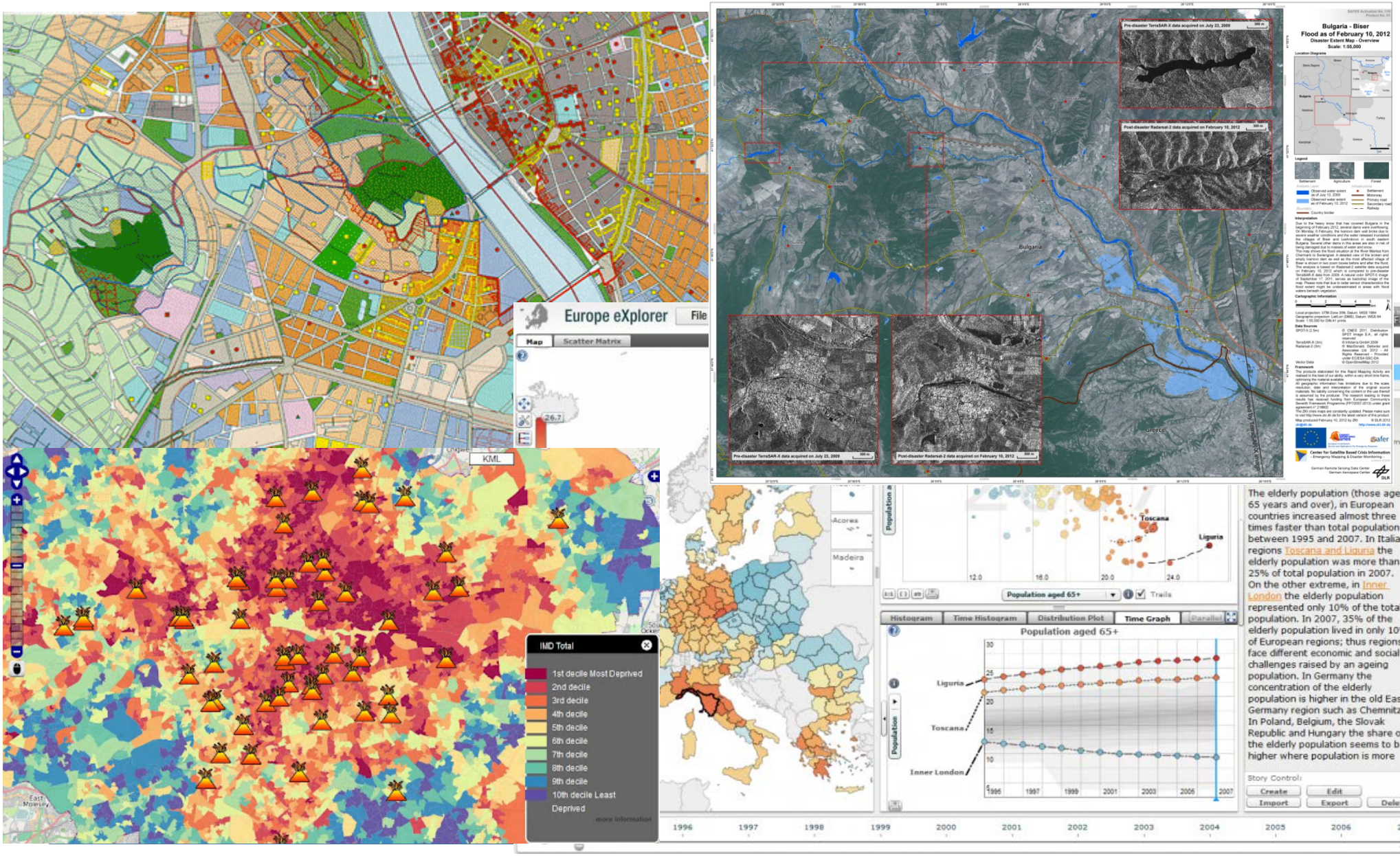
- **GIS science** is the field of study for developing and using GIS.







Combining GIS Data for Decision Making



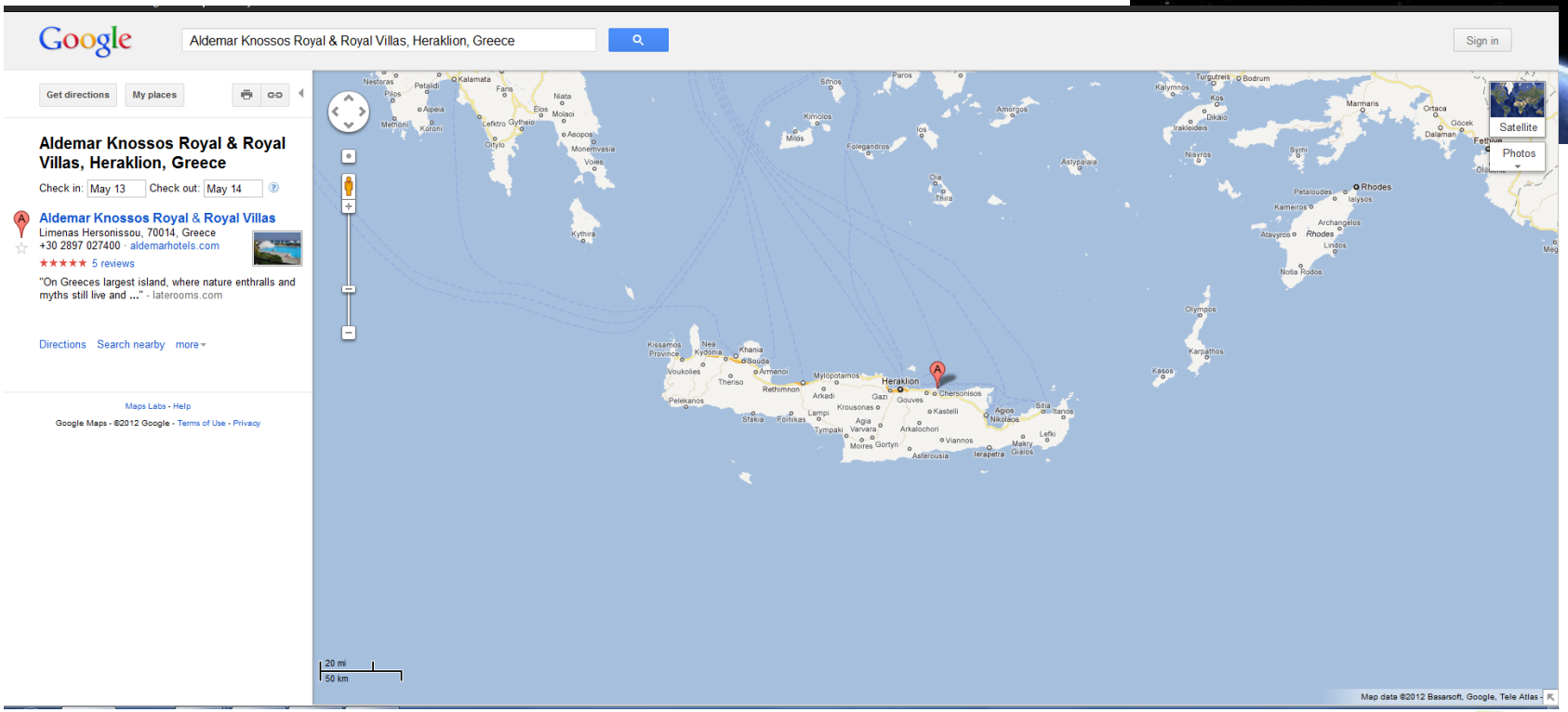
Why this tutorial?

- Lots of **geospatial data is available on the Web** today.
- Lots of **public data** coming out of open government initiatives is **geospatial**.
- Lots of this public data is quickly being **transformed into linked data!**
- People have started building **applications** utilizing linked data.

Geospatial data on the Web

Google Maps

Google earth



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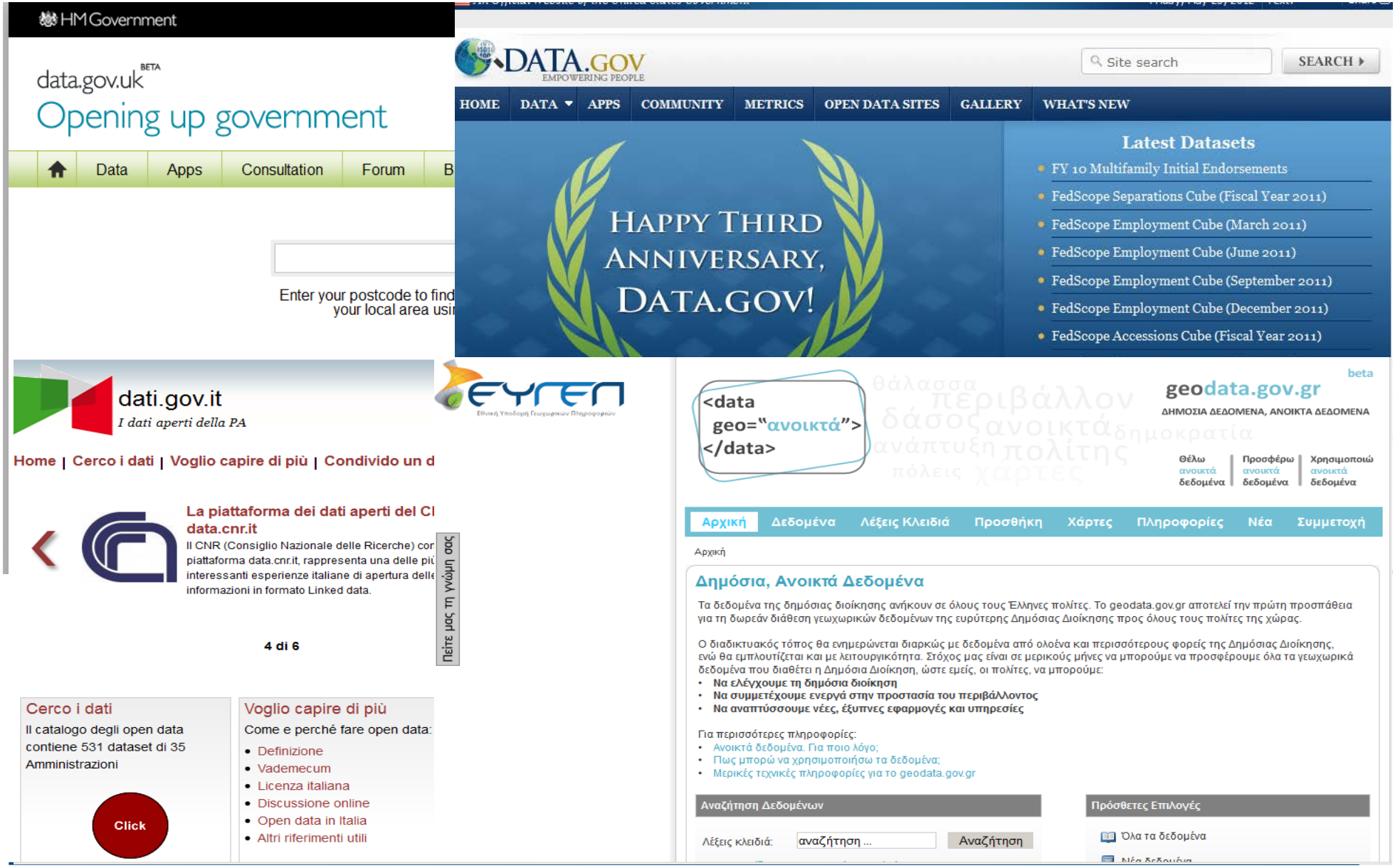
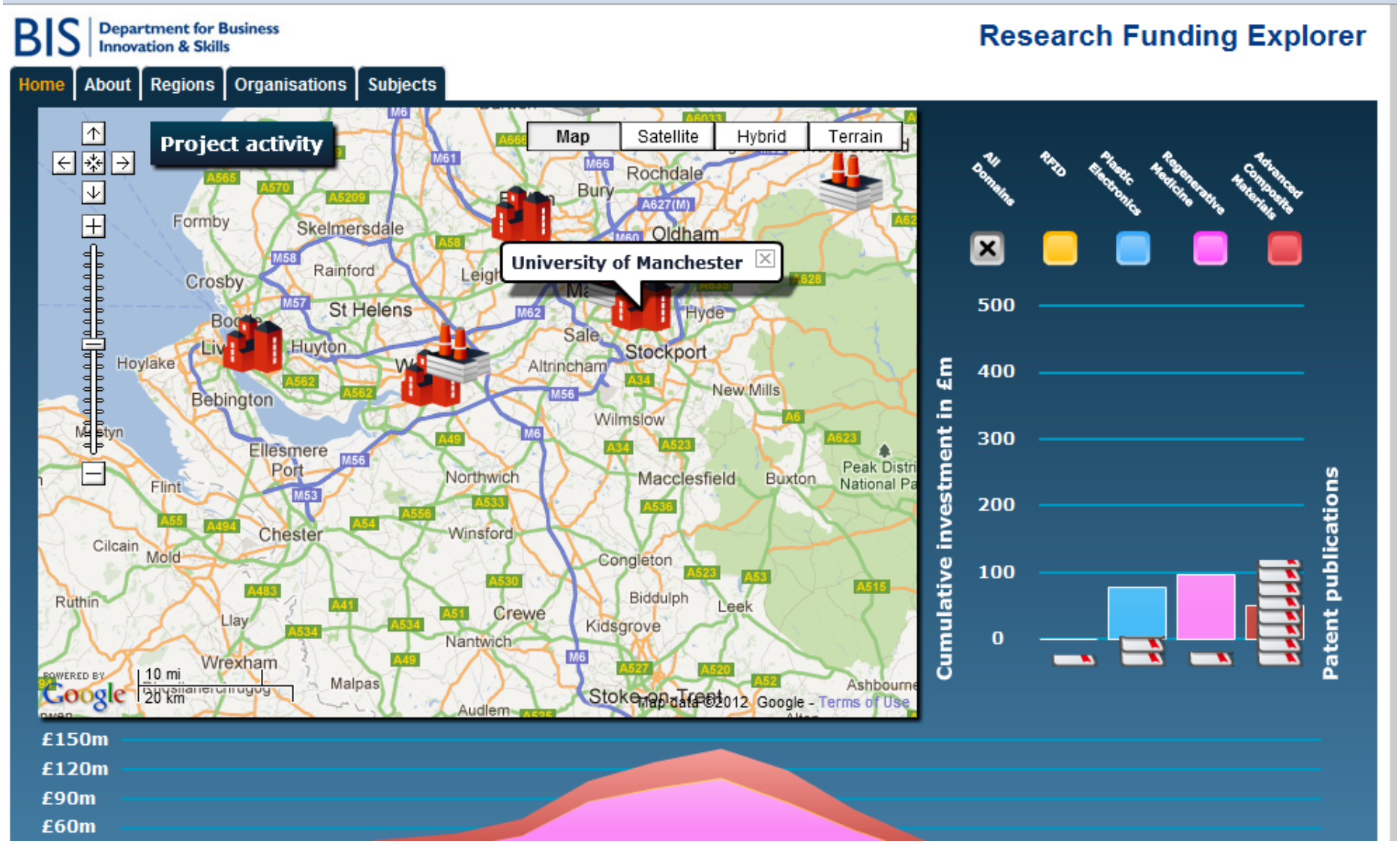
Open Government Data



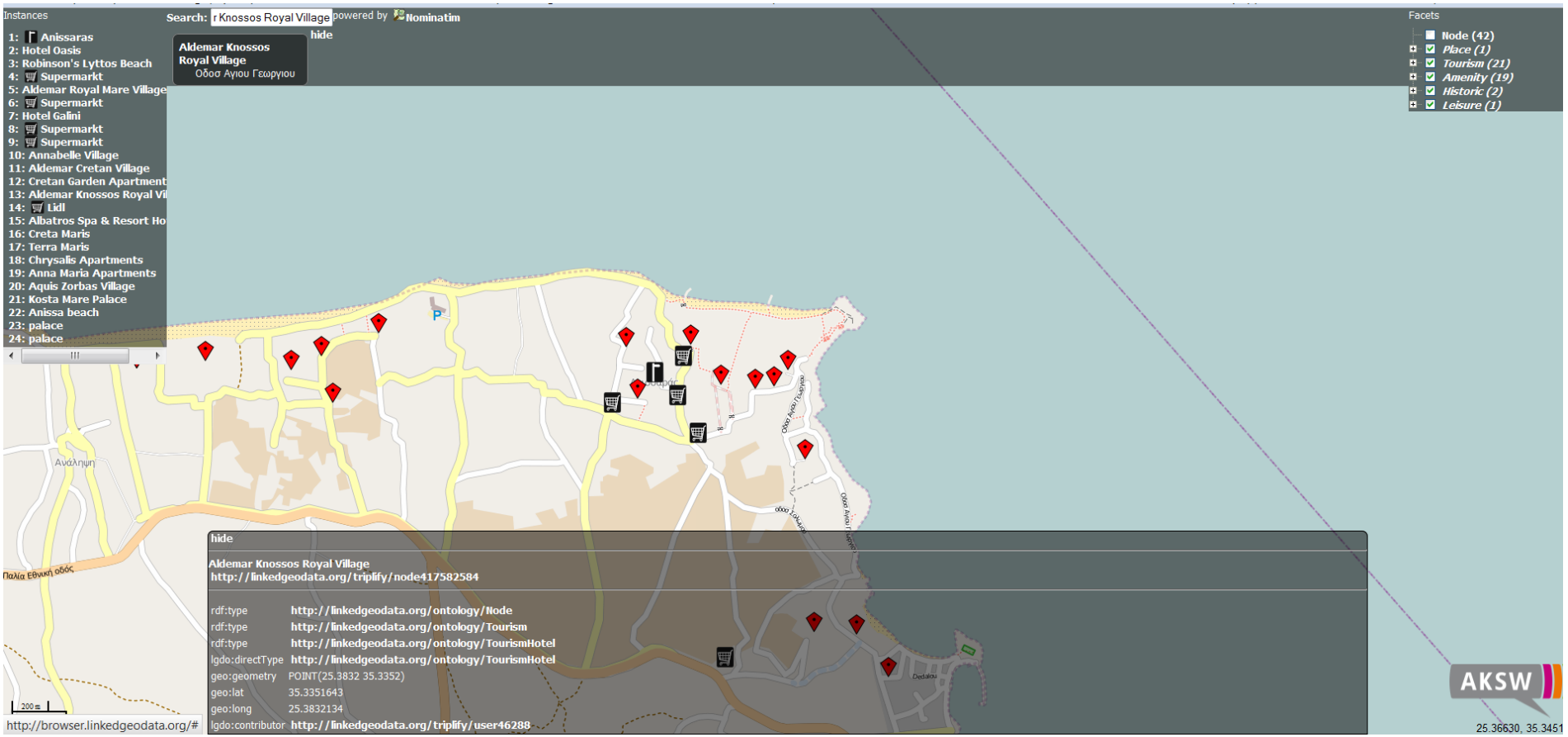
Linked geospatial data – Ordnance Survey

Linked geospatial data – Research Funding Explorer



Linked geospatial data – Spain

Linked geospatial data – Open Street Map



Conclusions

- **Introduction**
  - Why geospatial information?
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- **Next topic:** Background in geospatial data modeling