

Publishing Value Added EO Products as Linked Data

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Planetek Group



Roma



Bari



Athens



Key Numbers

Planetek Group



SME

year **1994**



people **55**



M€/y **5**



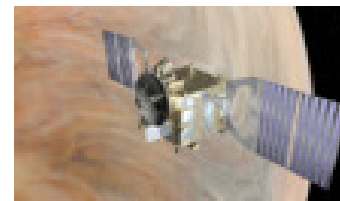
Key Technologies

Remote sensing

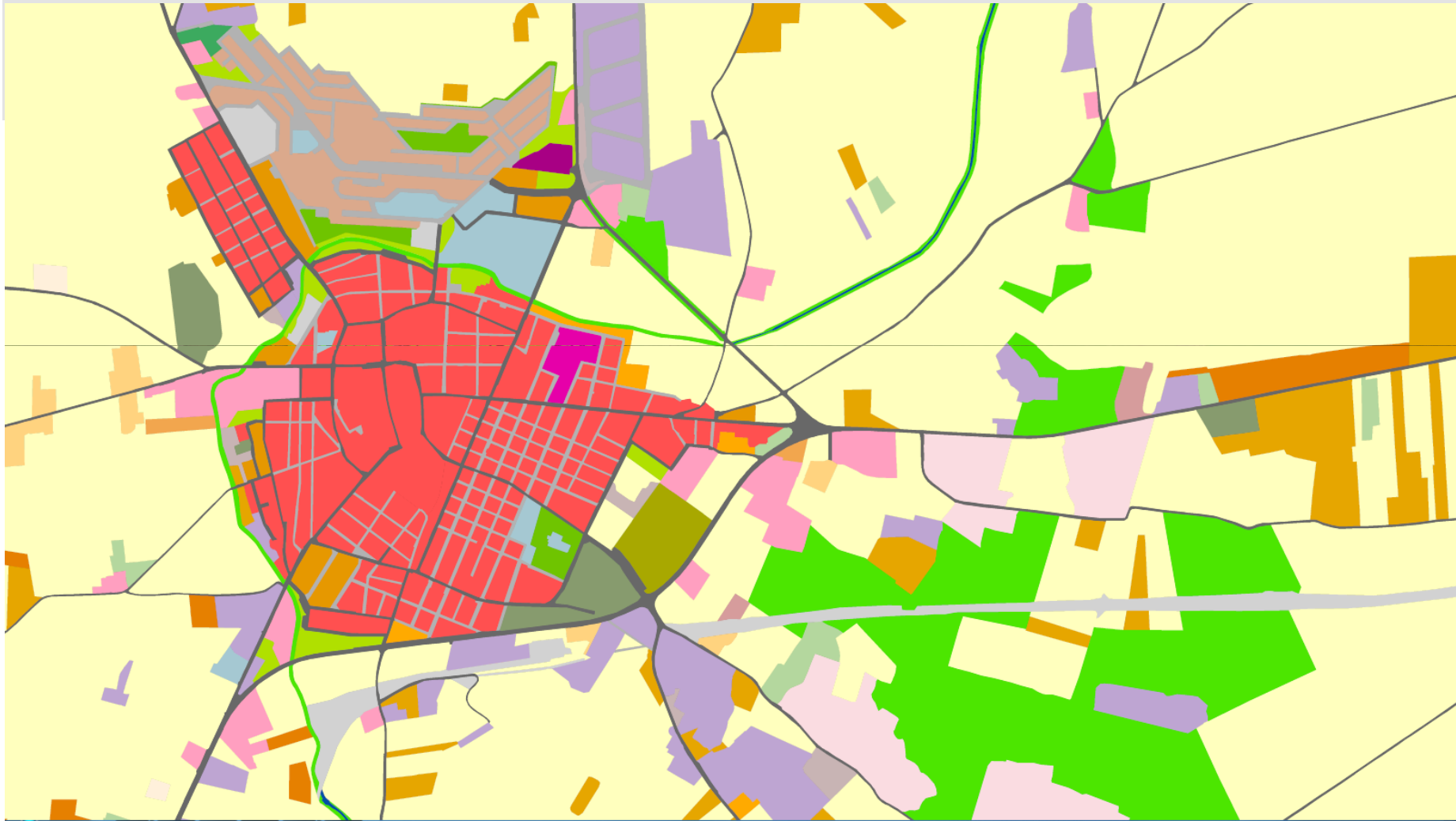
Spatial Data Infrastructure

Location Based Systems

Space Software



Value Added EO Products : Urban Atlas



Value Added EO Products : Soil Sealing



Linked Open Data...

- Data, if isolated, have little value.
- The value of data increases when different data sets, produced and published independently by different individuals, they can be crossed freely – by third parties.
- The generation of dataset in RDF format (Linked Data) increases the value of the data allowing connections among themselves and with external dataset!

Linked Open Data... and GeoData

- In order to offer a really useful service to citizens, institutions and companies, you need to aggregate, process data and offer them as services.
- The reuse of common ontologies allows to move from one conceptual dataset to another.
- **Ontologies** are considered one of the pillars of the Semantic Web.

From GetLOD...

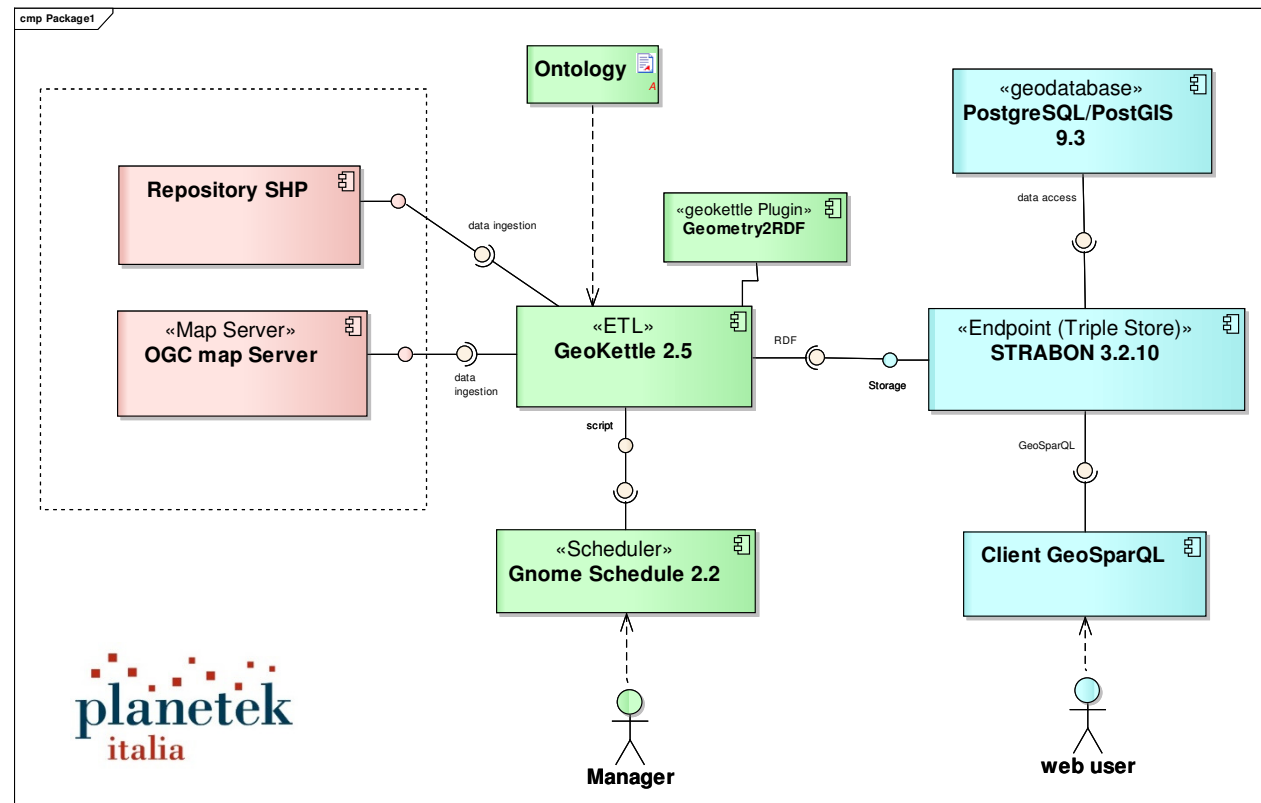
- GetLOD is an open and reusable solution for publishing geographic data on the Web as Linked Open Data, according to the standard RDF / XML.
- GetLOD thus ensures the Web publication of geospatial data as open and linkable data, starting from traditional cartographic webservice.
- It is integrated with the Spatial Data Infrastructure thanks to the standards defined by the Open Geospatial Consortium (OGC®) WFS and CS-W.



GetLOD is a solution jointly designed and developed by Planetek Italia and Sinergis during the the evolutive developments of the Geoportal of Emilia Romagna Region.
<http://www.planetek.it/eng/getlod>

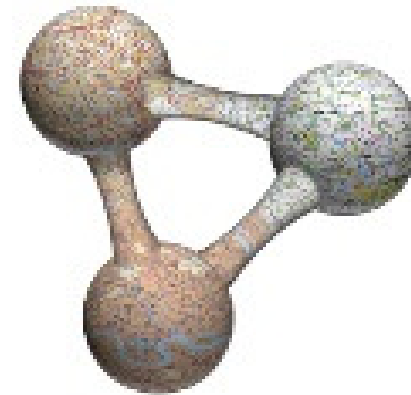
...to LOD⁴SDI

- **Triple-Store**
Strabon 3.2.10
- **ETL**
GeoKettle 2.5
- **Geokettle plugin**
Geometry2RDF
- **Geodatabase**
PostgreSQL /
PostGIS 9.3
- **Scheduler**
Gnome Schedule 2.2



R&D : triple stores

- **Strabon** - Strabon is a semantic spatiotemporal RDF store. Strabon is a full implementation of stSPARQL and the GeoSPARQL Core, Geometry extension and Geometry topology extension components.
- **Parliament** - A geospatial RDF store that implements the GeoSPARQL Core, Geometry extension and Geometry topology extension
- **uSeekM** - A geospatial RDF store that implements the GeoSPARQL Core, Geometry extension and Geometry topology extension.
- **Virtuoso** - A semantic repository enhanced with geospatial capabilities that allows the representation of point geometries and offers vocabulary for a subset of the ISO 13249 SQL/MM standard.
- **AllegroGraph** - is one of the first RDF stores that provided support for geospatial data.
- **Oracle Spatial and Graph**- <http://www.oracle.com> - Starting from version 12c, Oracle provides a full implementation of GeoSPARQL.



Spatial Data Infrastructures

Where are we today?



Beyond the SDI → Linked Open Data & RDF
GetLOD & LOD4SDI

Linked geospatial data

Where are we today?



Beyond the SDI → Linked Open Data & RDF
GetLOD & LOD⁴SDI



Ontologies for INSPIRE data themes
common ontologies and geographical data standardization

Linked geospatial data

Where are we today?



Beyond the SDI → Linked Open Data & RDF
GetLOD & LOD⁴SDI



Ontologies for INSPIRE data themes
common ontologies and geographical data standardization



Crowdmapping
openstreetmap and neogeography



Resources:

- GetLOD: www.planetek.it/eng/products/all_products/getlod
- INSPIRE and Ontologies: http://www.ie-lks.org/ojs/index.php/Je-LKS_EN/article/view/914
- Openstreetmap: www.openstreetmap.org

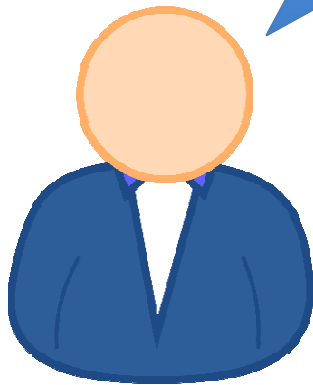
Where do we go now?

- SDI for Smart Cities enabling data interlinking
need for semantics in opengeodata
- SDI for spatially enabled Citizens
citizens re-use and produce geospatial information

Meet us @ booth 26A



Thank you for your attention!



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