

The GITTA Open Educational Research Approach or “how to provide e-lessons for everyone?”

GIS tasks: managing data

Geodata collection has a long history. Beginning in the 15th century people started to create maps, especially for orientation and navigation on land and sea, later on to mark off private property and political sovereignty, eventually creating the ground surveying.

In recent years however, there has been a transition from the static maps to dynamically generated and interactive views of the world. This transition is driven by information technology, application areas for GIS include environmental science, hydrology and urban planning. Kinds of data such as population numbers and land use data today forms the core of any information system.

Data types: Raster

In a GIS, we can differentiate space, each stored as a grid of pixel-filled cells (country boundaries, elevation, etc.). Raster data types can be categorized by precision.



Relation in space

Often, we are not only interested in the location of a feature, but also want to know about the spatial relationships between features.



Adjacency: Which parts of the area are adjacent to each other?



Containment / Proximity: Which buildings in Bern are inside the identified flood plains flooding by the Aare?

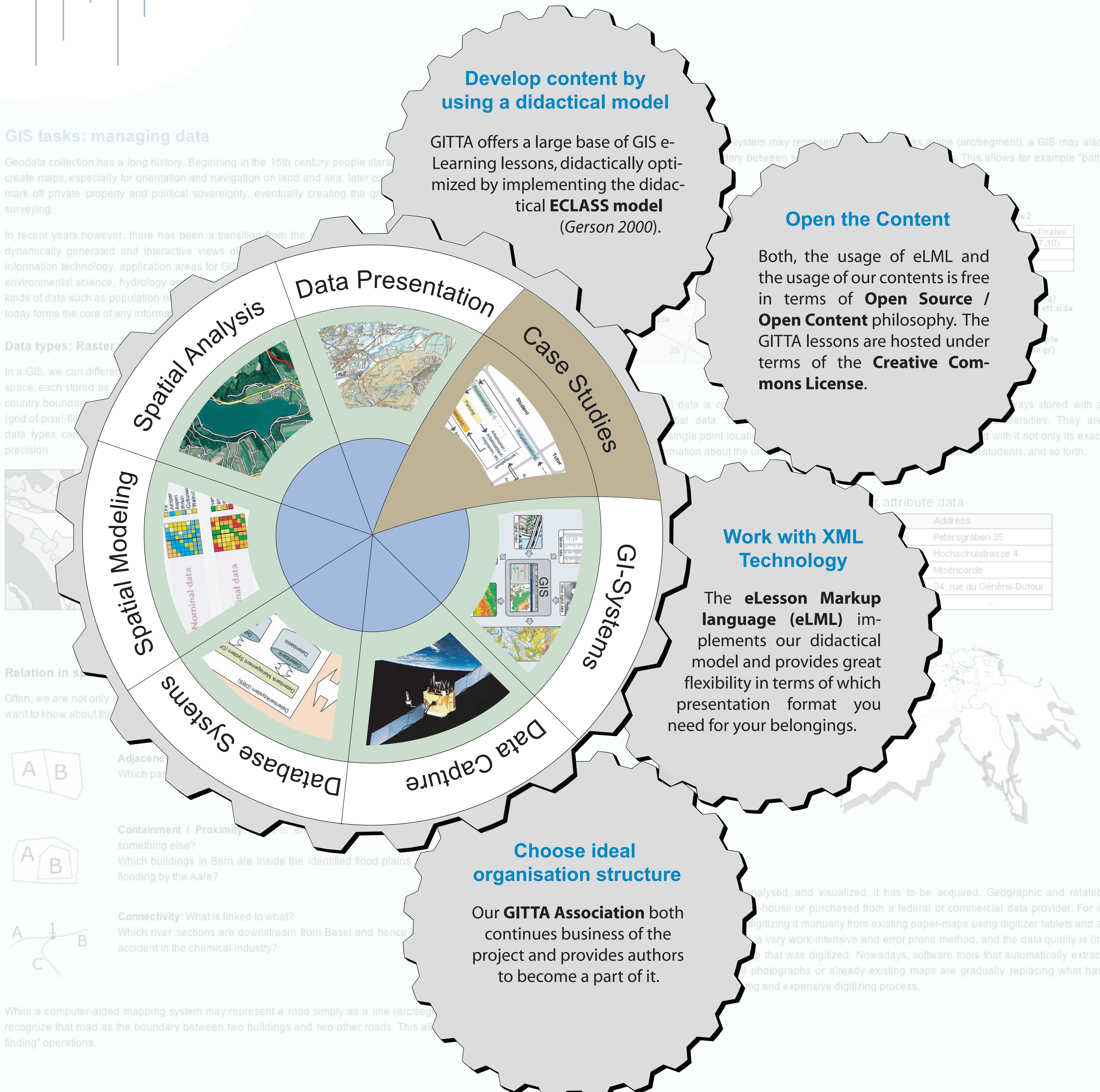
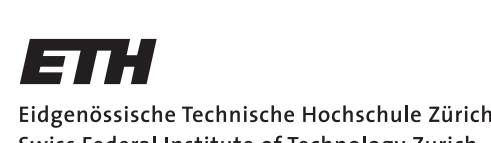


Connectivity: What is linked to what?

Which river sections are downstream from Basel and hence at risk of an accident in the chemical industry?

While a computer-aided mapping system may represent a road simply as a line (arc/segment), a GIS recognizes that road as the boundary between two buildings and two other roads. This allows for “finding” operations.

Project partners



Develop content by using a didactical model

GITTA offers a large base of GIS e-Learning lessons, didactically optimized by implementing the didactical **ECLASS model** (Gerson 2000).

Open the Content

Both, the usage of eLML and the usage of our contents is free in terms of **Open Source / Open Content** philosophy. The GITTA lessons are hosted under terms of the **Creative Commons License**.

Work with XML Technology

The **eLesson Markup language (eLML)** implements our didactical model and provides great flexibility in terms of which presentation format you need for your belongings.

Choose ideal organisation structure

Our **GITTA Association** both continues business of the project and provides authors to become a part of it.

attribute data	
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