

Course code: **GEOEXT**

Course title: **GeoExt – creating interactive maps on Web pages**

Days: 2

## Description:

### Course intended for:

The training objective is to get the participants familiar with the theoretical and practical issues of development of Web map applications using the GeoExt library.

The training participants will learn to:

- Use and extend the GeoExt library
- Read the metadata of spatial services using the GeoExt library
- Create an interactive map and integrate it with other Web technologies
- Manipulate the mode of interaction of the user with the map and the scope of information displayed

After the training, the participants will have the knowledge enabling them to develop Web applications in form of interactive maps using GeoExt.

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## Requirements:

The training participants are required to have the basic knowledge of JavaScript and development of Web applications. Understanding of the issues discussed will be easier thanks to basic familiarity with GIS and ExtJS library issues.

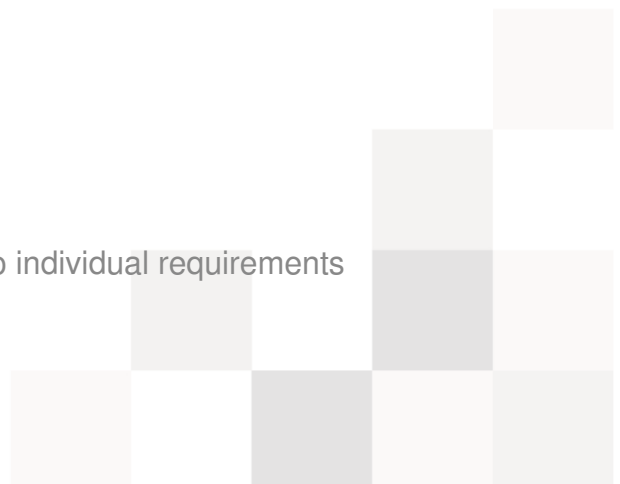
## Course parameters:

2 days 8 hours each

## Course curriculum:

Introduction to technology (GeoExt, ExtJS, OpenLayers)

1. Installation of GeoExt
2. Programming with GeoExt – object oriented programming (OOP)
3. Components
  - Syntax and configuration
  - Map panel
  - Layer tree
  - Legend
  - Printout panel
  - Mini Map
4. Layer tree configuration
  - Data loading
    - Base layers container
    - Coverage layers container
    - Adaptation of the container to individual requirements



- Layer tree styling
- Interaction
  - Change in the order of layers displayed on the map (Drag and drop)
  - Layer visibility
  - Transparency configuration

## 5. Map configuration

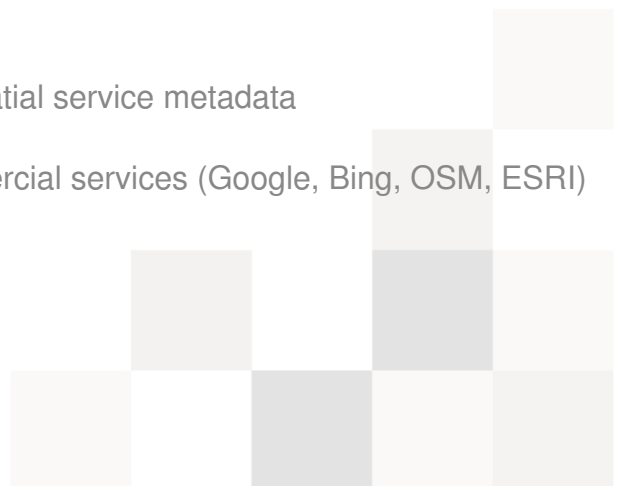
- Modes of transmission of parameters
- Spatial range
- Interaction with map – flashes
- Configuration of static layers
- Systems of coordinates
- Management of many maps on a single page

## 6. Reading of data on spatial services

- Discussing of OGC specification
- Readout and use of metadata of services WMS (WMSCapabilities)
- Readout and use of metadata of services WFS (WFSCapabilities)
- Readout and use of metadata of services CSW (CSWModel)
- Readout and use of metadata of single service (DescribeLayer)
- Readout and use of attributes of service (AttributeModel)

## 7. Adding data to map

- Building of layers on the basis of spatial service metadata
- Building of base layers using commercial services (Google, Bing, OSM, ESRI)
- Building of vector layers



- Dynamic adding of layers to map

## 8. Display of information

- Popup window
- Information on vector objects (FeatureInfo)
- Information on objects from WMS function (WmsFeatureInfo)

## 9. The modes of printing of map content

## 10. Map styling using the CSS

Putting components together to build an interactive map.

