

# PRESENTATION DE LA FORMATION

## CAPACITY BUILDING WORKSHOP GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

*Boost your performance in your field of activity thanks to the GIS tool. Become a strategic pillar in your structure or organization.*



## I- CONTEXT

You are a player in the new energy market; you carried out environmental impact studies and surveys; whether you are in charge of prospecting or managing clients or their portfolios, managing the electoral process, managing natural resources, waste collection or agriculture and the oil industry; whether you work in the management of natural and humanitarian disasters, in the military field (defense and intelligence), in the field of health, development or the operation of infrastructures related to the distribution of energy, 'water, communication and also transport, in the tourism sector and regional and municipal planning: you need a GIS solution allowing you to carry out your projects.

Geographic Information Systems (GIS) is a universal visual language that allows us to change our understanding of the world.

A Geographic Information System (GIS) has the power to speak to all people and unite members of any organization and people around the world through a common visual language. Today, millions of organizations, regardless of their sphere of activity, are leveraging the incredible potential of GIS to create maps that allow them to communicate a message, perform analysis, share information. and solve complex problems. This phenomenon is literally changing the face of the world.

In order to be on the margins of new space technologies and allow those who already have GIS prerequisites to strengthen their knowledge, the Ego-training group specializing in Geomatics and training, organized in partnership with the Multiple group. Invest Training UK in London, **a practical online Geographic Information System (GIS) training and capacity building workshop.**

## II- LEARNING OBJECTIVES GIS ET RESULTS EXPECTED

This training aims to allow participants to master the different functions of GIS, to acquire theoretical and practical knowledge but also to know how to use geographic information systems for visualization, analysis,

The interpretation and presentation of geospatial data as part of their activities.

More specifically, it is about:

- Master the collection of geo-localized data from the GIS mobile application
- Acquire fundamental knowledge on participatory GIS
- Master the use of a free GIS
- Master the manipulation, archiving and display of spatial data
- Make spatial queries in the taxpayer database

At the end of this training, participants will be able to:

- Understand GIS: their components, processes, uses and types of data;
- Be autonomous on mobile GIS geolocation tools and data collection and supervision techniques;
- Model and set up a GEODATABASE;
- Carry out thematic analyzes by categorization to facilitate decision-making;
- Produce maps by theme
- Design and produce thematic and interactive maps on ArcGis Online

### III- TARGET AUDIENCE

This workshop is open to all audiences. Indeed, students, professionals, researchers, etc. from all fields of activity can attend this seminar to train themselves but also to acquire new skills in Geographic Information Systems.

### IV- OUR OFFER

At the end of this workshop, participants will have:

- a certificate of end of training;

- Course materials;
- Continuous follow-up after the training;

## V- REQUIREMENT

- Have basic computer skills;
- Have a laptop and an Android phone

## VI- TRAINING MODULES

### Module 1: Introduction to GIS (theory)

- “What is a GIS and what is it for?”
- How is GIS applied in the area of the participants?
- Introduction to the Global Navigation Satellite System (GNSS) and data collection;
- “What is a projection and its importance?”
- Introduction to the spatial dataset

### Module 2: Getting started with GIS software

- Presentation of the software interface
- Geo-referencing of a raster image
- Digitization and creation of attribute tables
- Joining tables and spatial / attribute queries
- Creation and configuration of a data collection form in QGIS.

### Module 3: Real-time data collection technique

- Synchronization of forms in the GIS INPUT mobile application
- Getting started with INPUT
- Practical phase of data collection in the field
- Supervision of real-time data collection
- Synchronization of data collected in QGIS software

### Module 4: Geoprocessing and data analysis

- Correction of topology errors
- Creation and management of a Geo-database
- Spatial queries
- Creation of buffers, extraction or fusion of a zone
- Data analysis and interpretation

## **Module 5: Layout of the results obtained**

- Graphic semiology: single symbol, graduated color, proportional symbol, etc.
- Labeling of layers
- Presentation of layout tools
- Insertion of elements (objects) in the layout space
- Settings for a "Map" object
- Parameters of a "Scale bar" object
- Settings for a "Legend" object
- Settings for a "Label" object
- Settings for an "Image" object
- Settings for an "Attribute table" object
- Settings for an "HTML frame" object
- Exporting and printing the map
- Generation of map atlases

## BONUS MODULE: Production of an Interactive Map on ArcGis Online

### VII- TOOLS AND SOFTWARES

During this training, we will equip participants in the handling of Open Source tools and software such as:

- Mobile GIS tools: mobile application Input: Input is a simple survey application allowing users to capture data in the field. Forms and data preparation can be done in QGIS software and synchronized with the Input app using the plugin and the Mergin platform





Une capture d'écran de la source (disponible pour Android, Windows, iOS)

- QGIS Open Source Software: Launched in 2002, QGIS is an open source Geographic Information System, freely accessible and therefore free, distributed under the GNU General Public License. This program is known for its wide range of tools, the multitude of supported formats and the simplicity of its interface. Among its qualities, we highlight the access to the functionalities of other free software included during installation (eg GRASS and SAGA) or added independently (eg PostgreSQL). QGIS is compatible with Linux, Unix, Mac OS X and Windows.

## VIII- TIME

The workshop is scheduled from Monday 06 to Saturday 11 December 2021 from 7:00 p.m. to 9:00 p.m. (GMT). 6 days of intense capitalization.

## IX- WORKSHOP PROGRAM

DATE	HOURS	ACTIVITIES
Monday 06th Décembre 2021	19h00 – 21h00 (GMT)	<b>Module 1 :</b> <b>Introduction to GIS (theory)</b>



Tuesday 07th Décembre 2021	19h00 – 21h00 (GMT)	<b>Module 2: Getting started with GIS software</b>
Wednesday 08 Décembre 2021	19h00 – 21h00(GMT)	<b>Module 3: Real-time data collection technique</b>
Jeudi 09 Décembre 2021	19h00 – 21h00(GMT)	<b>Module 4: Geoprocessing and data analysis</b>
Vendredi 10 Décembre 2021	19h00 – 21h00 (GMT)	<b>Module 5: Layout of the results obtained</b>
Samedi 11 Décembre 2021	19h00 – 21h00(GMT)	<b>BONUS MODULE: Production of an Interactive Map on ArcGis Online</b>

## X- LOCATION

The training will be organized online on zoom.

## XI- COST OF TRAINING

Cost of training: **\$ 90**

NB: Number of places limited to 10 to facilitate assimilation and participation of all participants.

## XII- REGISTRATION AND PAYMENT TERMS

- Registration is done by paying the **\$ 90** fee by the available payment methods: stripe, paypal, debit card, wiretransfer.
- Registrations are made online before and during the training

Those registered will receive an identification form, a profile as well as their expectations in order to better adapt the training according to their areas of expertise and their needs.