



D2.5 GIS cartographic viewer implemented

CIT

Document Number	D2.5
Work Package	2
Document Title	D2.5 GIS cartographic viewer implemented
Version	2.0
Status	Final
Deliverable Type	Web sites, digital tools, etc.
Contractual Date of Delivery	01.08.2020
Actual Date of Delivery	04.09.2020
Contributors	CIT Yvonne O' Byrne, John Hobbs & John Swanton
Keyword List	Digital tools, cartographic viewer, mapping
Dissemination level	Public

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Change History

Version	Date	Status	Author (Partner)	Description
1.0	25.08.2020	Draft	CIT	First draft
2.0	03.09.2020	Draft	UVIGO-CdM	Final

Quality Check

Version Reviewed	Date	Reviewer (Partner)	Description
2.0	03.09.2020	UVIGO-CdM	Final

Abbreviations

EXECUTIVE SUMMARY

This document presents the methods and description of the geographic information system (GIS), implemented to support the digital tools developed as part of the “Atlantic Maritime Ecosystem Network”, MarENet project, which is funded by the Executive Agency for Small and Medium-size Enterprise (EASME) under Grant Agreement N°863595. MarENet seeks to strengthen the cooperation between maritime business and academia with the aim to match training and labour market demands and promote blue careers paths and job opportunities. The information outlined in this document relates to Work Package 2 of the project - “Analysis of training and labour market mismatch: demands on re-training skills”.

In order to assess the current training offering, a catalogue of available training courses related to the maritime industry across the Atlantic Basin was compiled by the consortium. To present this catalogue a digital courses online mapping tool was developed and made available on the project web page to publicly disseminate all the available maritime training offerings delivered by both academic institutions and private training centres across the three consortium countries, Ireland, France and Spain. This site allows users to search and filter courses related to the maritime industry based on their preferences in terms of location, maritime sector, type of course, qualification level, delivery style (classroom/online/blended) and duration. The GIS viewer supports this digital tool by mapping all available courses based on the coordinates of the academic institution/training centre, making it easier for users to search for courses in their preferred location.

The web page address is: <http://www.marenet.org/> . The courses tool with accompanying GIS cartographic viewer is available at: <http://www.marenet.org/home/index.php/tools/#!/course>.

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1. INTRODUCTION

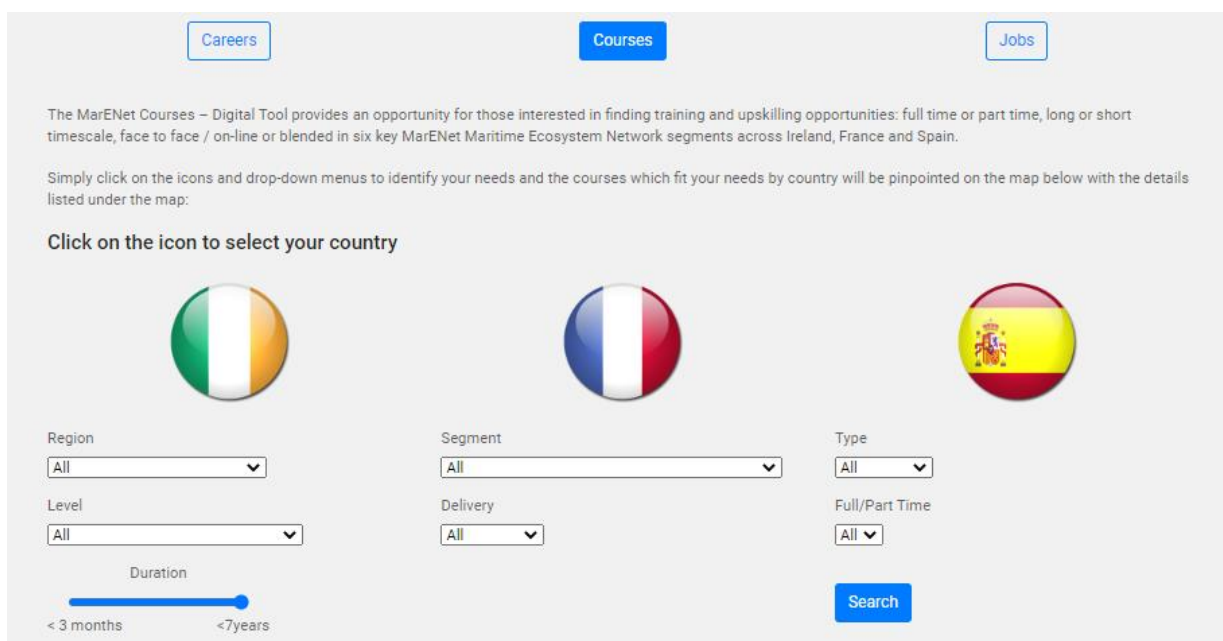
Under the framework of the Atlantic Maritime Ecosystem Network (MarENet) project, funded by the Executive Agency for Small and Medium-size Enterprise (EASME) under Grant Agreement N°863595 – the consortium composed by 8 entities localised in Ireland, France and Spain, seeks to strengthen the cooperation between maritime business and academia with the aim to match training and labour market demands and promote blue careers paths and job opportunities.

As part of Work Package 2, “Analysis of training and labour market mismatch: demands on re-training skills”, the project developed a series of digital tools to support the analysis of the training and labour market mismatch in the Atlantic Basin, and to promote Blue Careers, primarily in the economic maritime sectors of shipbuilding, port and logistics, and fisheries. As part of WP2, a series of digital tools were developed, including a course finder tool, which provides a catalogue of all available maritime training itineraries available across the consortium countries. Users can search this catalogue using a series of filters to identify suitable courses based on their preferences. To support this tool, a geographic information system (GIS) cartographic viewer was developed to provide an interactive visualization of all training options available within the targeted ecosystem.

The MarENet courses digital tool with accompanying GIS cartographic viewer can be accessed by entering the following URL address: <http://www.marenet.org/home/index.php/tools/#!/course>

2. DIGITAL TOOL DESIGN

The GIS cartographic viewer, which is integrated within the digital courses tool to provide a visualisation of all training options available within the targeted ecosystem has been designed using Wordpress and Google Maps. The web page and navigation menu for the digital courses tool, as presented below, is simple and direct and provides users with a set of search options to filter the course catalogue to suit their preferences.

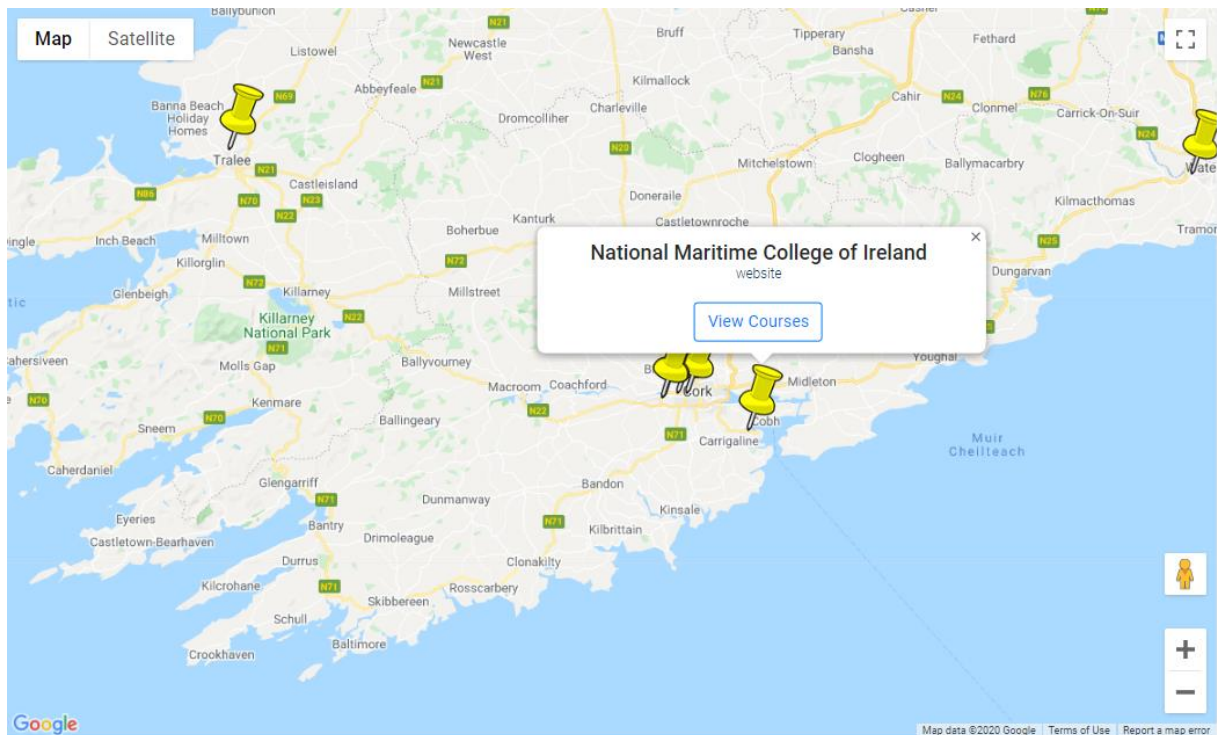


The screenshot shows the 'Courses' section of the MarENet digital tool. At the top, there are three navigation buttons: 'Careers', 'Courses' (highlighted in blue), and 'Jobs'. Below the navigation is a descriptive paragraph about the tool. Underneath, there is a text instruction: 'Click on the icon to select your country'. Three circular icons representing the flags of Ireland, France, and Spain are displayed. Below the icons are several filter options: 'Region' (dropdown menu set to 'All'), 'Level' (dropdown menu set to 'All'), 'Duration' (slider bar from '< 3 months' to '<7years'), 'Segment' (dropdown menu set to 'All'), 'Delivery' (dropdown menu set to 'All'), 'Type' (dropdown menu set to 'All'), and 'Full/Part Time' (dropdown menu set to 'All'). A blue 'Search' button is located at the bottom right of the filter section.

The GIS cartographic viewer (D2.5) supports the digital courses tool by mapping all available courses using the geographic coordinates of the relevant academic institutions and training centres. This tool is integrated with google maps and shows the locations of all available courses using pins. This map is searchable, allowing users to use the zoom function (+/-) to view their desired location to search for courses in their locality. An autozoom function is also linked to the course search filters, meaning that when a user filters courses to a specific country or region, the map automatically zooms to show only courses in that location.



The map itself is interactive and can also act as a filter for users to search courses. Each yellow pin represents a different training centre or university. When users click on a pin, the map will zoom to centre that location and a dialogue box will appear identifying the relevant institution. The dialogue box also provides hyperlinks to both the institutions homepage by clicking on 'website' and all available courses offered by clicking on 'view courses' (see image below).



3. TECHNICAL COMMENTS

The GIS cartographic viewer was developed by CIT in collaboration with the consortium partners who all contributed to the compilation of the course datasets in an XLS file including coordinates (longitude and latitude) of training centres and universities in each country.

For the purpose of mapping, each course entered into the XLS file required a single set of corresponding coordinates. During the data compilation process, a challenge was presented when mapping a course that is delivered by one institution across a variety of locations. This was resolved by entering the relevant institution delivering the course into the data set multiple times with the annotation A/B/C, each with a different location and geographic coordinates. For example course 1 delivered at Campus do Mar A and course 1 delivered at Campus do Mar B, would both be entered into the data set in order to show both locations where course 1 is delivered.

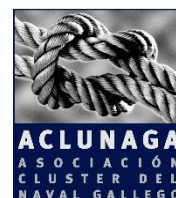
The GIS cartographic viewer is managed and updated by CIT each time the courses data set is updated by the partners (every three weeks). The digital tools have a separate login area and can only be accessed by CIT's software engineer who will make updates which are provided by the consortium once they all data has been validated and cleaned. It is expected that the database will be updated on an ongoing basis throughout the duration of the project, thus, it will become a living and dynamic tool that will serve not only for dissemination purposes during project's life time but also for sustainability reasons once the Atlantic Maritime Knowledge Network is established.

4. DATA COLLECTION

The data collection template for the compilation of maritime courses was prepared by CIT and disseminated to all partners to collect the relevant information required to catalogue and map courses for the MarENet Courses digital tool. Partners were responsible for compiling courses from both academic institutions and private training centres in their country and three separate excel data sheet (XLS) templates were prepared, one for each of the consortium countries. At regular intervals, partners send their updated XLS file to CIT. Once the data is validated and errors removed, it is uploaded to the web page to update the digital courses tool. The first round of data was collected in April 2020 and has been updated by the partners every 3 weeks to gradually build the database over time.

MAR ENET

Atlantic Maritime Ecosystem Network



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With the contribution of the European
Maritime and Fisheries Fund of the European