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# Occupational Profile Tool (OPT) EO4GEO Tools User guides



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#### About

The Occupational Profile Tool allows users to browse, create, edit and share occupational profiles in the field of Earth Observation and Geographic Information. Profiles are linked to the EO4GEO Body of Knowledge (BOK) for EO/GI-specific concepts and skills, to the <u>European</u> <u>Skills/Competences and Occupation (ESCO) classification</u> for transversal and cross-sectoral skills, to UNESCO's <u>International Standard Classification of Education: Fields of Education and Training (ISCED-F)</u> classification for the application field and to Cedefop's <u>European</u> <u>Qualifications Framework (EQF)</u> to define the knowledge level of the occupational profile.

The Occupational Profile Tool (OPT) is part of the EO4GEO ecosystem of tools, and was developed by the <u>Geospatial Technologies Research Group</u> (GEOTEC) from the Universitat Jaume I, Castelló de la Plana, Spain in the context of the Erasmus+ Sector Skills Alliance project <u>EO4GEO</u>.





### 1. Anonymous users, login & registration

The OPT works in view mode for anonymous users, and extended functionality is added for logged in users. Without being logged in, an anonymous user can see all public Educational Offers, search and share them. (See Home page section).

Figure 1 shows the login page for all EO4GEO BoK-related tools, including OPT. If you already have an account, type in your email (1), your password (2) and click button 'Login' (3).

If you forgot your password, type in your email (1) and click 'Forgot password?' (4). You will receive an email to recover your password. If you don't have an account click 'Register Now!' (5) and proceed to the Registration form (see Figure 2). It is also possible to sign in using a Google account (6).



Figure 1 EO4GEO Tools login page





To **create a new account**, fill in your email (1), your password (2) and repeat your password (3). The password you chose should contain at least 6 characters.

Then click the 'Register' button (4) and you will be immediately redirected to the Home page.



Figure 2 Registration form

When registering, if you see the error 'The email address is already in use by another account', it means your email is already registered. Write your email in the login part of the form and click 'Forgot password?' to receive a link with instructions to recover it.

#### 2. User details and organizations

After logging in, the user will be able to see his/her email address in the top navigation bar (Figure 3).



Figure 3 Navigation bar

Clicking in the email address (1) the user will be able to save his / her name and recover the password.





Clicking on 'Your organization' (2) the list of organizations a user belongs to is displayed. These organizations are important in order to be able to create content and to collaborative edit of content created in the tool, as users belonging to same organizations are able to edit content created by other users of this organizations. Also, private content can be seen by users belonging to the same organization; it cannot be seen by anonymous or other users.

To create new content the user needs to belong to at least one organization.

The 'Home' button (3) goes to the list page, overviewing all educational offers.

The 'Log Out' button (4) logs the user out and brings him/her to the login page.

To **join an organization**, click on the 'Your organization' button (2). In the organizations page (Figure 4) click on the dropdown (1) to search for the desired organization. You can type to filter by text. Once you find the desired organization, select it and click Join button (2).

You	r Organization	n(s	s) Details
Join an organization	1	•	Join 2
N You are not a membe	EARSC	rga	anization or create a new one to start!
	EO4GEO		
	Epsilon Italia srl		
	Faculty of Geodesy University o		
	Geografiska Informationsbyran		
	GISIG		

Figure 4 Dropdown in organizations page

You will be automatically added to that organization as a regular user. You can click on the **leave organization** button to be removed from it (1) (Figure 5Figure 5 A regular user being member of an organization).





EO4GEO	
E04GEO	Leave organization
EO4GEO aims to help bridging the skills gap between supply and demand of education and training in the ${\ensuremath{f}}$	

Figure 5 A regular user being member of an organization

If you want to **create an organization** select the 'Create a new one' option and click on the 'Join' button (1) (Figure 6). Since you've created the organization, you are automatically an admin user, with full rights to fill in your organization name and description (2) and save changes (3) or you can **delete your organization** (4).

To help in organizing the content inside your organization you can create 'Divisions' under an organization. As an Admin, you can **create or delete divisions**, by typing the name and 'Add division' button (5).

You can change a user role (Admin / Regular) inside your organization by clicking the associated button (6). An Admin can also **remove users** (7) of an organization.

Finally, you can **add users** to your organization by typing the email address they used to log in and click 'Add user' button (8). After an organization is created, new users can also join themselves.

	Join an organization	Create a new one	× •	Join
New Orgar	nization			
New Organization Organization Description	2			Save changes Delete organization
	Remove divisions to thi	s organization		
Divisio	on to add			Add division
Add /	Remove users or chang	ge permissions		-
Name	Ema	ail	Permission	Click to change Remove
Aida Mo	nfort aida	amonfort87@gmail.com	Admin	Admin Regular
User e	mail to add			Add user
				•

Figure 6 Creating a new organization





#### 3. Home page

Figure 7 shows the OPT's home page with a list of occupational profiles (1). Users see occupational profiles created under their organisation and the ones saved as public. If the user is not logged in, only public occupational profiles are shown. Per occupational profile its name, the organization that created it, its description and a summary of its content is shown.



#### Figure 7. Home page with list of OP

Each Occupational Profile (OP) has a toolbox menu (2), in which the user can find the following options from left to right: share, duplicate, edit and delete. Some actions may be disabled depending on the type of user (anonymous or logged in), see Figure 9.





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Login to b	e able to	duplica	te		
*	4	Ĩ	Ē		
Figure 9 Toolbox w	ith som Inonym			oled as in t	he

To **share an OP**, click the 'Share' option and select one of the alternatives (from left to right) 'copy link', 'export to pdf' or 'export to xml' format (Figure 8).



To **duplicate an OP**, the 'Duplicate' option creates a new OP which is prefilled with all information from the originating OP. You can then edit this information, rename the OP and save it. This new OP is owned by you, so you can later make modifications to it.

To **edit an existing OP**, the 'Edit' option allows the user to modify those OPs he/she, or a member of his/her organization, previously created. Finally, the 'Delete' option removes an OP. OPs created by other users outside your organizations cannot be edited nor deleted.

To create a new (blank) OP, click the 'New Occupation Profile' button (Figure 7, 3).

Occupational profiles can be filtered by typing in the search box (4). The **default search** looks for the text typed in title and description.

If you also need to search in knowledge and/or skills and/or transversal skills, click the ' **advanced search** ' button (5) (Figure 10). Then, enable the options OP fields you want to search in (i.e., knowledge, skills, transversal skills) by clicking on each switch and type in your search. Occupational profiles will be filtered according to your defined search criteria.





New Occupational Profile	Q spatial statistics	×	Advanced Search	Search by BoK concepts
		Knowledges	Skills	X Transversal skill
Sort by: 🔸 Last updated 🛛 🔸 Nar	me 🔸 Organization	All	content (My organizati	ion's content
Sort by: <b>Last updated Var</b>	me 🔸 Organization	All	v content My organizati	ion's content

Figure 10 Advanced search in skills

Finally, the OPT allows to search by BoK concepts (associated to OPs). Click the ' **search by BoK concept** ' (6), after which you can select one or more BoK concepts to be filtered by. This is done using the BoK Visualization and Search component, with which the BoK can be explored and searched. Once you have found the required concept, select it and continue searching for additional concepts, or click 'Finish' to show the filtered list of OPs.

To better find and organize the content, occupational profiles can be *filtered* by who created them. Click on the 'My content' or 'My organization's content' buttons (7) to **filter** by your own OPs or OPs created within your organization(s). You can also **sort** the content by the following criteria (8): 'Last updated', 'Name' and 'Organization'. Click on each criterion to sort the OP list ascending and click again to sort it descending.





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## 4. Occupational Profile detail view

The user can see the details of an occupational profile (Figure 11) by clicking it in the list of OPs.

Example profile: GIS specialist	3 Geographic information systems (GIS) (Physical sciences)
Seographic information systems specialists use specialised computer systems, engineering measures, and geological isually detailed digital maps and geomod 2 a reservoir. They convert technical information like soil density and pro governments, and stakeholders interested	concepts to process land, geographic, and geospatial information into
Knowledge  [AM5-6] Cartographic modeling [AM2-3] Spatial queries [CV4-9] Spatialization [DA4] Database design 5	Knowledge distribution AM - Analytical Methods 50% CV - Cartography and Visualization 25% DA - Design and Setup of GI Systems 25%
Skills ()	
[AM5-6] Describe the difference between prescriptive and descriptive cartographic models	
[AM5-6] Discuss the origins of cartographic modeling with reference to the work of Ian McHarg	
[AM5-6] Develop a flowchart of a cartographic model for a site suitability problem	
[AM2-3] Demonstrate the syntactic structure of spatial and temporal operators in SQL	
[AM2-3] Compare and contrast attribute query and spatial query	
[AM2-3] State questions that can be solved by selecting features based on location or spatial relationships	
[AM2-3] Construct a query statement to search for a specific spatial or temporal relationship	
[AM2-3] Construct a spatial query to extract all point objects that fall within a polygon	
[CV4-9] Explain how spatial metaphors can be used to illustrate the relationship among ideas	
[CV4-9] Create a pseudo-topographic surface to portray the relationships in a collection of documents	

Figure 11 Detail of an occupational profile

In the detailed view, the different fields of an occupational profile are shown: (1), description (2), field (3), EQF level (4), knowledge (5), skills (6) and transversal skills (7). The distribution of concepts (percentage) from different areas of knowledge contained in the BoK is presented with line bars (8).





### 5. Create or Edit an Occupational Profile

Clicking the 'New Occupational Profile' button allows you to create a new OP by filling in the presented form. When editing an existing OP the same form is prefilled with the current information. This form has 4 main sections: General information (Figure 12), the BoK Visualizer and Search component to search for Knowledge and Skills (Figure 13), the knowledge and skills already added (Figure 14), and transversal skills view (Figure 17).

Figure 12 shows the form for introducing general information about an OP. 'Save under organisation' (1) allows to save an OP under an organisation (only the organization to which the user belongs to are available). Saving under a division (2) allows to better organize OPs within an organization - division is not mandatory.

A user can **make a profile publicly available** for all users by switching on 'Visibility' from to Public (3). If 'Visibility' is set of private, the OP can only be seen by the user himself, and by other members of the organization it was saved under. 'Title' and 'Description' are free text fields. The 'Application domain' box (4) contains a list of the Fields of Education and Training by <u>UNESCO's ISCED-F</u>. Type to search by name of the Field and select the most suitable one(s). The EQF box (2) represents the European Qualification Framework (EQF) level required by this OP.

Save under organization	EO4GEO	1	× •	Division	2 * *	Sav
General Information 🕛						
Title					Visibility: Private 🔿 x Public 3	
Title					-	
Application domain			- 4			
Description						EQF 🕕
Description						1
					ĥ	

Figure 12 OP General Information form





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The next section of the OP is the 'Knowledge required' (Figure 13). This section contains the Body of Knowledge interactive graphical and textual browser to allow the user to associate required knowledge, in terms of BoK concepts, to the OP.

To **find BoK concepts**, there are two options: searching and browsing. To search, type your search term(s) in the search box (1) to filter BoK concepts containing the text either in the name or in the description. Matching concepts are highlighted in the graphical view (2) and shown as a result list in the textual view. Click on the 'Details' link (3) to see the full information of a concept.



Figure 13 Finding BoK concepts

To **browse the BoK**, click on any part of the graphical (2) or textual (3) representation of the BoK, and you will navigate through the concepts (Figure 14).





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Figure 14 Browsing the BoK

Once you find the concept you need (Figure 15), you can **add a selected concept and their related skills** by clicking the 'Add' button (1). The selected concept (2) and their related skills (3) will be automatically added to 'Knowledge required' (4) and 'Skills required' (5) respectively. Each added concept contains a code between brackets (originating from the

Search knowledge Associated skills will be automatically added 0	
You added one BoK concept as knowledge and 6 related s	kills.
Q Search Knowledg Add 1	< Back Knowledge [GD3-4] Linear referencing systems 2 Last Updated: Sun, 30 Jul 2006 18:00:00 GMT Description: Superconcepts [4] - Geographic Information Science and Technology - [GD1] Geospatial Data - [GD1] Geolocating Data to Earth - [GD3] Georeferencing systems
	Skills [6] 3 Describe an application in which a linear referencing system is particularly useful Discuss the magnitude and cause of error generated in the transformation from linear to planar coordinate systems Explain how a network can be used as the basis for reference as opposed to the more common rectangular coordinate systems Explain how the datum associated with a linear referencing system differs from a horizontal or vertical datum Identify several different linear referencing methods (e.g., mileposts, reference posts, link and node) and compare them to planar grid systems Identify the characteristics that all linear referencing systems have in common
Knowledge required 0	Skills required 🛈
× [GD3-4] Linear referencing systems	× [GD3-4] Identify the characteristics that all linear referencing systems have in common
Figu	ire 15 Selecting knowledge and skills as required





BoK) and its name. The colour of a concept refers to the Knowledge area (in the BoK) they belong to. To **remove a knowledge or a skill** that was previously added, click on the 'x' symbol at the left hand side of it, and the corresponding list of knowledge or skills will be automatically updated. If you remove a BoK concept under 'Knowledge required', the system will ask you whether to delete or keep all its associated 'Skills'.

You can **add a custom skill** (Figure 16) by writing them in the corresponding text box (1) and then clicking on 'Add Skill' button (2). Guidelines on how to define custom skills are available.

	Click to remove	
× [OI3b] Explain how privacy and commodit	ization of data impact influences decisions regarding	spatial data infrastructures
× [OI3b] Explain how clearing houses, meta	data, and standards can help faciling atial data sh	aring
If you cannot find the specified skill, you can also add your own skill here:	Custom skill	Add Skill 2
Carraiso ada your omrisian nere.	Please see the guidelines to define skills	

Figure 16 Add custom skill

To **add transversal skills** (Figure 177), the user can choose from a list that contains a useful selection of skills from the ESCO classification (1). Typing in the text box filters in the list. In case the desired transversal skill cannot be found, the user can click on the switch (2) to allow search in the full list of ESCO transversal skills. If a specific transversal skill is still not found, it can be added as a custom skill, by typing it in custom skill text box (3) and then clicking the 'Add transversal skill' button (4). To remove a transversal skill, click the 'x' symbol and the list will be updated (5).



Figure 17 Transversal skills





## **Glossary of terms**

ESCO. Classification of European Skills, Competences, Qualifications and Occupations

**EQF.** The European Qualifications Framework for Lifelong Learning. The core of the EQF concerns eight reference levels describing what a learner knows, understands and is able to do, ranging from basic (Level 1) to advanced (Level 8) https://ec.europa.eu/ploteus/sites/eac-eqf/files/broch\_en.pdf

Field. Term related to a specific area of study, following the ISCED-F classification

**ISCED-F**. International Standard Classification of Education: Fields of Education and Training 2013, maintained by UNESCO.

https://ec.europa.eu/esco/portal/escopedia/International Standard Classification of Educ ation 58 Fields of Education and Training 2013 40 ISCED-F 41

**Knowledge.** The body of facts, principles and theories and practices that is related to a field of work or study

**OPT**. Occupational Profile Tool

**Skills** means the ability to apply knowledge and use know-how to complete tasks and solve problems.

**Transversal Skills** are those typically considered as not specifically related to a particular job, task, academic discipline or area of knowledge but as skills that can be used in a wide variety of situations and work settings, since they are a combination of people skills, social skills, communication skills, character or personality traits, attitudes, career attributes, social intelligence and emotional intelligence quotients, among others, that enable people to navigate their environment, work well with others, perform well, and achieve their goals with complementing hard skills.