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EO4GEO – Towards an innovative strategy for skills  
development and capacity building in the space geo-  
information sector supporting Copernicus User  
Uptake

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# Job Offer Tool (JOT)

## EO4GEO Tools User guides



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## About

The [Job Offer Tool](#) (JOT) allows users to create job offers in the field of Earth Observation and Geographic Information. These job offers can be based on an existing occupational profile, previously created in the [Occupational Profile Tool](#) (OPT), or created from scratch. Job offers are linked to the EO4GEO Body of Knowledge (BoK) for EO/GI-specific concepts and skills, to the [European Skills/Competences and Occupation \(ESCO\) classification](#) for transversal skills, and to Cedefop's [European Qualifications Framework \(EQF\)](#) to define the knowledge level of the job offer.

The Job Offer Tool (JOT) is part of the EO4GEO ecosystem of tools , and was developed by the [Geospatial Technologies Research Group](#) (GEOTEC) from the Universitat Jaume I, Castelló de la Plana, Spain in the context of the Erasmus+ Sector Skills Alliance project [EO4GEO](#).

## 1. Anonymous users, login & registration

The JOT 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 JOT. If you already have an account, type in your email (1), your password (2) and click button 'Login' (3).

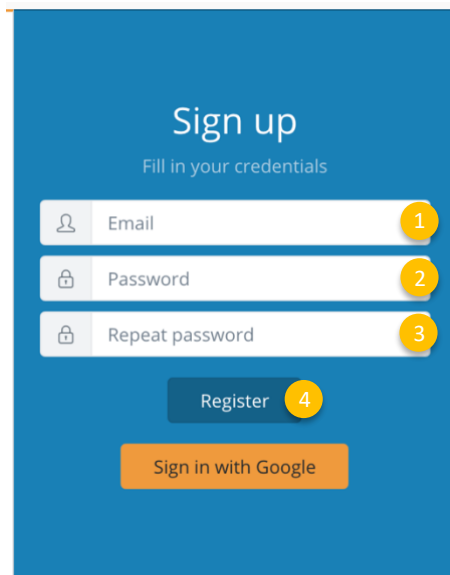
If you **forgot your password**, type in your email (1) and click 'Forgot password?' (4). You will receive an email to recover your password. If you don't have an account click 'Register Now!' (5) and proceed to the Registration form (see Figure 2). It is also possible to sign in using a Google account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



The registration form is titled "Sign up" and includes the instruction "Fill in your credentials". It contains three input fields: "Email" (marked with a person icon and callout 1), "Password" (marked with a lock icon and callout 2), and "Repeat password" (marked with a lock icon and callout 3). Below these fields is a dark blue "Register" button (marked with callout 4) and an orange "Sign in with Google" button.

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).

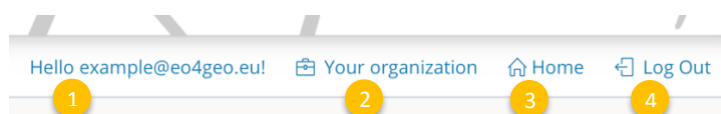


Figure 3 Navigation bar

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).

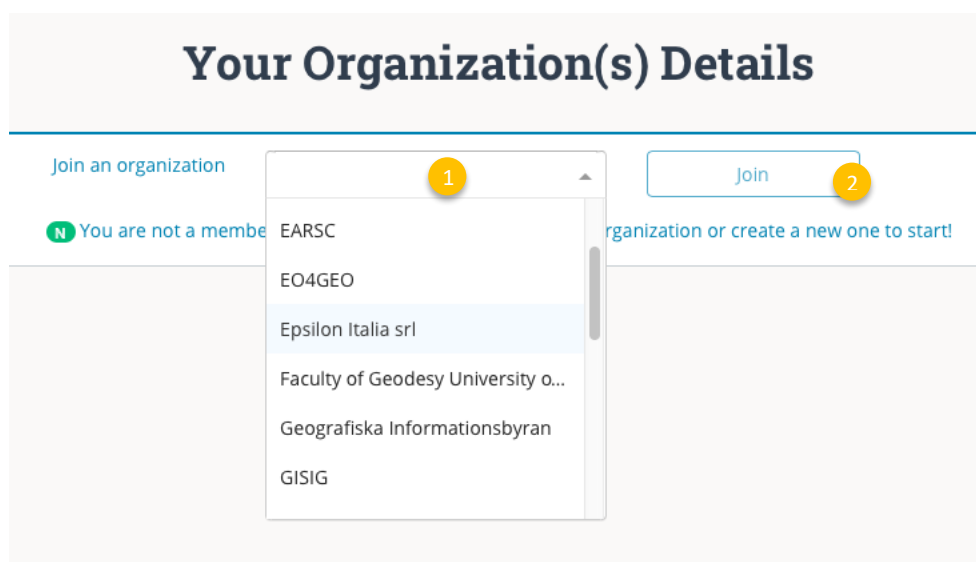


Figure 4 Dropdown in organizations page

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 5).

## EO4GEO

EO4GEO

Leave organization

EO4GEO aims to help bridging the skills gap between supply and demand of education and training in the E

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.

The screenshot shows the 'New Organization' form in the EO4GEO interface. At the top, there is a navigation bar with 'Join an organization' and a dropdown menu 'Create a new one' with a 'Join' button (1). The main form has two input fields: 'New Organization' (2) and 'Organization Description'. To the right of these fields are 'Save changes' (3) and 'Delete organization' (4) buttons. Below these is a section 'Add / Remove divisions to this organization' with a 'Division to add' input field and an 'Add division' button (5). Further down is a section 'Add / Remove users or change permissions' containing a table with columns: Name, Email, Permission, Click to change, and Remove. The table has one row for 'Aida Monfort' with email 'aidamonfort87@gmail.com' and permission 'Admin'. The 'Click to change' column has buttons for 'Admin' (6) and 'Regular'. The 'Remove' column has a trash icon button (7). Below the table is a 'User email to add' input field and an 'Add user' button (8).

Figure 6 Creating a new organization



### 3. Home page

Figure 3 shows the home page of the Job Offer Tool (JOT), with a list of job offers (1). Each job offer contains: its name, description, the organization that created it, how many BoK-related concepts (Knowledge) the offer is annotated with, how many transversal skills it has and its last update. For anonymous users, only job offers (JO) marked as public are shown. If the user is logged, job offers created by members of his/her organization will also appear in the list.



Figure 7 Home page view

Each job offer has a toolbox menu (2), in which the user can find the following options from left to right: share, duplicate, edit and delete (Figure 7). Some actions may be disabled depending on the type of user (anonymous or logged in), see Figure 8.

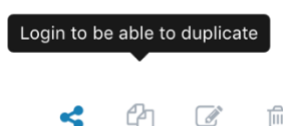


Figure 8 Toolbox with some actions disabled as in the anonymous view

To **share a JO**, 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 9).

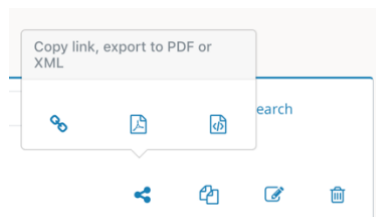


Figure 9 Options to share an OP

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

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

To **create a new (blank) JO**, click the 'New Job offer' button (3).

Job offers can be filtered by typing in the search box (Figure 7 - 4). The **default search** looks for the text typed in title and description.

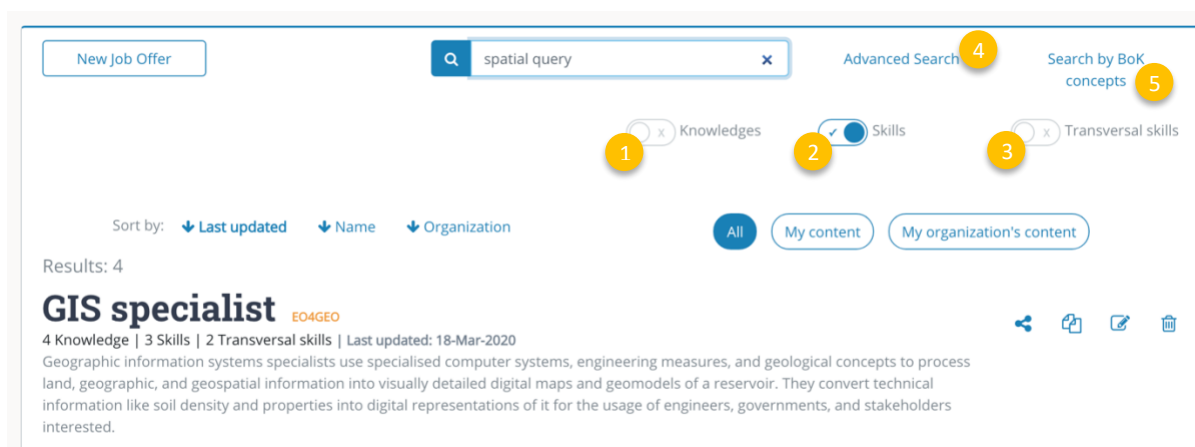


Figure 10 Advanced search

Using the '**advanced search**' button (4) (Figure 10), you can also search in knowledge (1) and/or skills (2) and/or transversal skills (3). The options to search in are enabled by clicking the corresponding sliders, after which job offers are filtered according to the selected search criteria.

Using the ‘**search by BoK concept**’ button (5) (Figure 10), you can explore the BoK and select one or more concepts to filter job offers by. BoK concepts are selected using the BoK Visualiser and Search component, by visually or textually exploring the BoK or by using the search functionality, and clicking the ‘select’ button. Once all desired BoK concepts have been selected, click on ‘Finish’ to show the filtered results.

## 4. Job offer detail view

The user can see the details of a job offer by clicking in its name in the list of job offers.

### GIS specialist EO4GEO

EQF 6

Geographic information systems specialists use specialised computer systems, engineering measures, and geological concepts to process land, geographic, and spatial information into visually detailed digital maps and geomodels of a reservoir. They convert technical information like soil density and properties into digital representations of it for the usage of engineers, governments, and stakeholders interested.

**Knowledge**

[AM5-6] Cartographic modeling

[AM2-3] Spatial queries

[CV4-9] Spatialization

[DA4] Database design

**Knowledge distribution**

AM - Analytical Methods	50%
CV - Cartography and Visualization	25%
DA - Design and Setup of Geographic Information Systems	25%

**Skills**

[AM5-6] Develop a flowchart of a cartographic model for a site suitability problem

[AM2-3] Construct a spatial query to extract all point objects that fall within a polygon

[CV4-9] Create a concept map that represents the contents and topology of a physical or social process

**Transversal skills**

Attend to detail

Think creatively

**Specific Information**

**Datasets required:**

Aqua Sentinel-3 A HY-2A

**Tools required:**

GPS-SDR-SIM ArcGIS for INSPIRE

**Language(s):**

Spanish English

**Location:** Castelló de la Plana

**Dedication:** Full Time

**Annual Salary Range (Min: 40000 - Max: 50000)**

**Additional Questions:**  
Any open source project published? ArcGIS competence?

**Years of experience:** 6

**Type of contract:** Internship

**Ask for motivation letter:** true

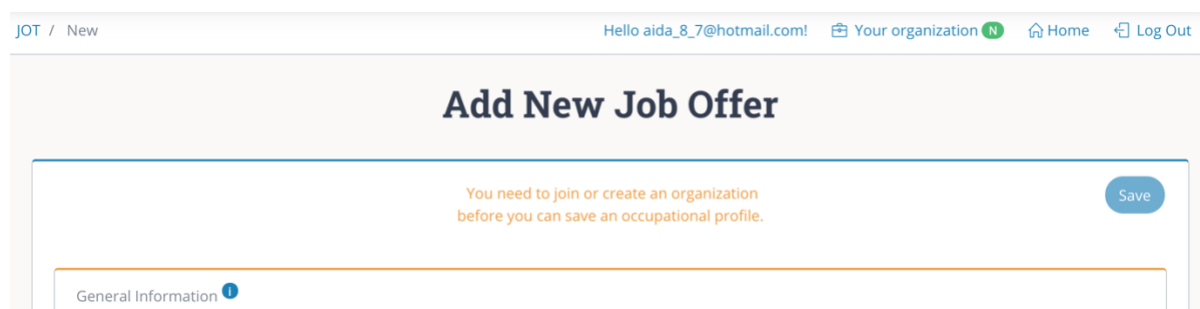
Figure 11 Job offer detail view

In the detailed view (Figure 11) the different fields of an occupational profile are shown: (1) description, (2) EQF level, (3) knowledge required (BoK concepts), (4) skills required (BoK skills), (5) transversal skills required, and (6) a set of specific information required for a job offer, including knowledge of datasets and tools which are required to perform the task, and other information such as the location of the job offer, salary range, etc. The distribution of concepts (knowledge) from different areas of knowledge contained in the BoK is presented with progress bars (7).

## 5. Create or Edit a Job offer

By clicking the '**New Job offer**' button the user creates a new job offer, where he can fill in all relevant fields. When duplicating or editing an existing JO, this form gets prefilled with the current information.

To be able to save job offers the user should be member of at least one organization, as explained in the section [User details and organizations](#). If the user does not belong to any organization, a message is displayed (Figure 12). Click on this message to go to the organization page and create a new organization or join an existing one to be able to continue.



The screenshot shows a web interface for adding a new job offer. At the top, there is a navigation bar with the text 'JOT / New' on the left and 'Hello aid\_a\_8\_7@hotmail.com!' followed by links for 'Your organization', 'Home', and 'Log Out' on the right. The main heading is 'Add New Job Offer'. Below this, a warning message in orange text states: 'You need to join or create an organization before you can save an occupational profile.' To the right of the message is a blue 'Save' button. Below the warning, there is a section titled 'General Information' with a blue circular icon containing a white 'i'.

Figure 12 Warning if a user does not belong to an organization

Once the user is member of an organization (Figure 13), the newly created job offer can be saved under that organization (1), and all members of the same organization will be able to see and edit it. Division (2) is not compulsory, but can help group job offers and keep the content organized.

Users can **create a new job offer based in existing occupational profile(s)**. To do so, use the dropdown menu 'Fill your job offer based on' and select the occupational profile(s) you want to base your job offer on. The data of the selected occupational profile(s) will be automatically

filled in in the job offer. You can later edit the job offer, update it and complete it with more information where needed.

Figure 13 Saving a JO under an organization

To fill in a job offer there are 4 main sections: General information (Figure 14), the Body of Knowledge browser to search for Knowledge and Skills (Figure 15), the knowledge and skills already added (Figure 16), transversal skills required (Figure 18) and Specific information (Figure 19).

Figure 14 General information for a JO

Figure 14 contains the fields to introduce general information about a JO. 'Title' and 'Description' are free text fields. The 'Application domain' box (1) contains a list of the Fields of Education and Training by [UNESCO's ISCED-F](#). Type to search by name of the Application domain and select the most suitable one(s). The EQF box (2) represents the level of knowledge/skills in terms of EQF level that is required by this JO. Lastly, the visibility switch (3) can be selected to make the offer public (publish) or private (draft). Note that draft (private) offers are always visible to members of the same organization the job offer was saved under.

The next section of the JO is 'Knowledge required' (Figure 15). This section contains the Body of Knowledge interactive graphical and textual browser which is used to **add required knowledge** and to **add required skills**.

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 (2).

To browse, click on any part of the graphical BoK (2) and you will navigate through the concepts. Alternatively, you can also browse using the links in the textual view (3). Click on the 'Details' link to see the full information of a concept.

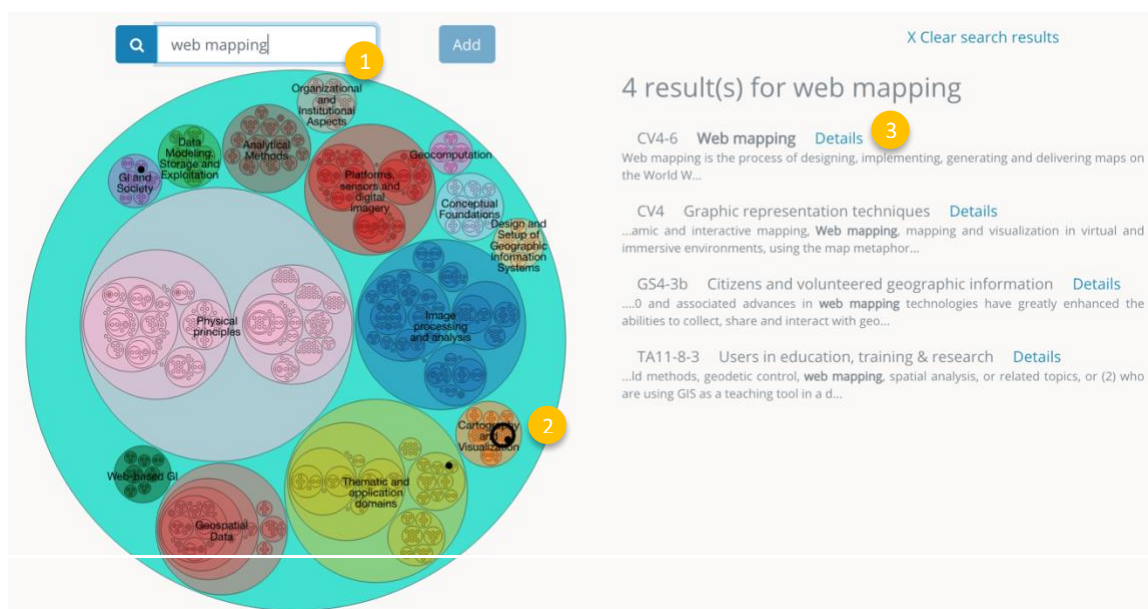


Figure 15 Finding BoK concepts

Once you find the concept you need, you can **add a selected concept and its related skills** by clicking the 'Add' button (Figure 16) (1). The selected concept (2) and its related skills (3) will be automatically added to 'Knowledge required' (4) and 'Skills required' (5) in your JO (Figure 16). Each concept and skill are represented as a code between brackets (originating from the 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 added previously, 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'.

Search knowledge Associated skills will be automatically added 1

You added one BoK concept as knowledge and 6 related skills.

Search Knowledge 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  
- [GD] 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 1  
x [GD3-4] Linear referencing systems 4

Skills required 1  
x [GD3-4] Identify the characteristics that all linear referencing systems have in common 5  
x [GD3-4] Identify several different linear referencing methods (e.g., mileposts, reference posts, link and node) and compare them to planar grid systems

Figure 16 Adding knowledge and skills from the BoK

You can **add a custom skill** by writing them in the text box (Figure 17) (1) and then clicking the 'Add Skill' button (2). Guidelines on how to define custom skills are available.

Skills required <sup>1</sup>

- ✗ [GD3-4] Identify the characteristics that all linear referencing systems have in common
- ✗ [GD3-4] Identify several different linear referencing methods (e.g., mileposts, reference posts, link and node) and compare them to planar grid systems
- ✗ [GD3-4] Explain how a network can be used as the basis for reference as opposed to the more common rectangular coordinate systems
- ✗ [GD3-4] Describe an application in which a linear referencing system is particularly useful

If you cannot find the specified skill, you can also add your own skill here:

My custom skill <sup>1</sup>

Add your custom skill.  
Add Skill <sup>2</sup>

Figure 17 Add a custom skill to a JO

cross-sector

create technical plans

<sup>1</sup> create thematic maps

create training materials

develop personalised massag...

type on electronic devices

create <sup>2</sup>

<sup>5</sup> Search full ESCO skills

✗ create thematic maps

This service uses the ESCO classification of the European Commission.

If you cannot find the specified transversal skill, you can also add your own here:

Custom transversal skill <sup>3</sup>

Add transversal skill <sup>4</sup>

Figure 18 Transversal skills

To **add transversal skills** (Figure 18), 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).

The 'Specific information' section contains concrete information particularly related with a particular job offer (Figure 19)

To **add required knowledge of a dataset**, select the datasets from a closed list (1) that contains the Datasets included in the [EO Handbook](#). To easily find a dataset, you can type in the field whereby the corresponding dataset will be matched.



To **add required knowledge of tools**, select the tools from a closed list (2) that contains the tools included in [INSPIRE](#) and [ESA Open Source Resources](#), which range from desktop/server software, libraries, plugins, online services or software resources for space downstream applications.

To **add languages** required select from the searchable dropdown list (3).

To remove a previously added dataset, tool or language, click the 'x' symbol of the item you want to delete.

The screenshot shows a web form titled 'Specific Information' with a help icon. It contains several sections with numbered callouts:

- 1**: 'Datasets Required' dropdown menu.
- 2**: 'Tools Required' dropdown menu.
- 3**: 'Language' dropdown menu.
- 4**: 'Dedication' section with radio buttons for 'Full time' and 'Part time'.
- 5**: 'Additional information / questions' text area.
- 6**: 'Contact details' text area.
- 7**: 'Ask for motivation letter' toggle switch.
- 8**: 'Type of contract' dropdown menu.

Other visible fields include 'Location', 'Years of experience' (with a value of 0), and 'Annual Salary Range (Min - Max)' (with values of 0 and 0).

Figure 19 Specific information

To **add further job offer details** such as location, Years of experience, Dedication, Annual salary range(4), and Additional information or questions (5), are free text fields. These fields are not mandatory, but a complete job offer is more attractive and can encourage people to apply.

To **add contact details** fill in the field (6) with details for the candidate to contact the company.



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A **request for a Motivation letter** can be activated/deactivated using the corresponding switch (7).

To **add the type of contract** (i.e., fixed, temporal, internship, scholarship), select one of the options available when the list is displayed (8).

## Glossary of terms

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

**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-egf/files/broch\\_en.pdf](https://ec.europa.eu/ploteus/sites/eac-egf/files/broch_en.pdf)

**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 Education 58 Fields of Education and Training 2013 40 ISCED-F 41](https://ec.europa.eu/esco/portal/escopedia/International%20Standard%20Classification%20of%20Education%2058%20Fields%20of%20Education%20and%20Training%202013%2040%20ISCED-F%2041)

**JOT.** Job Offer Tool

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

**Skills.** Skills represent the ability to apply knowledge and use know-how to complete tasks and solve problems in a certain occupational profile.

**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. Based on ESCO transversal and cross-sector skills