

Call for tenders for the design and development of the BlueCareers System of the ScienceDIVER project

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1. Introduction and basic info on the ScienceDIVER project

The following tender invitation is undertaken within the project ScienceDIVER. The overall aim of the project is to create a structured/permanent collaboration framework between marine industry and education for the benefit of young people. Among other project objectives, ScienceDIVER aspires to develop a job seeking platform, providing insights on market demands in terms of skills (i.e. input from the industry) and support matching with capacity offerings (i.e. from students/higher institutions, youth communities).

The project is co-funded by the EMFF-02-2018 Blue Careers program under the GA number 863674. ScienceDiver started 01/Nov/2019 and will last for 36 months. Therefore, **the expected end of the ScienceDIVER project will be on 31/Oct/2022 (subject to change in case of an extension)**.

ATLANTIS participates in the project as main partner while ARISTOTELIO PANEPISTIMIO THESSALONIKIS is the project coordinator. The consortium consists of the following partners:

- ARISTOTELIO PANEPISTIMIO THESSALONIKIS (Greece)
- ATLANTIS CONSULTING SA (Greece)
- UNIVERSITA DELLA CALABRIA (Italy)
- UNIVERSITAET STUTTGART (Germany)
- SCHILL RALPH (Germany)
- MARINE CLUSTER BULGARIA SDRUZHENIE (Bulgaria)
- DIVERS ALERT NETWORK EUROPE FOUNDATION (Malta)

Among other responsibilities, ATLANTIS is responsible for the development and deployment of the **BlueCareers Platform** for the benefit of both job seekers and employers, towards bridging the gap in the Blue Economy Sector (i.e. Scientific Diving and Blue Tech). The online platform will incorporate advanced techniques for job matchmaking using ranking algorithms and artificial intelligence, taking into account preferences and requirements of both parties.

The present invitation to tender concerns the preparation of the BlueCareers system. The Tender invitation is published by ATLANTIS, who will enter into a contract agreement with the successful tenderer.

2. Project Scope & Specification of Requirements

The project will design and develop the BlueCareers web-based platform. The Platform will facilitate both job seekers and employers, incorporating advanced techniques for job match making using ranking

algorithms and artificial intelligence, taking into account preferences and requirements of both parties. The following list of minimum requirements needs to be met:

Note: Whenever the term “platform” is used in isolation below, it refers to both the web-based platform and the mobile Apps. Also, when “Apps” is used in a singular form, it refers to both Apps (Android, iOS). Finally, when the term “system” is used, it refers to the full BlueCareers system as a collection of all the necessary components (web platform, mobile App, REST APIs, interfaces, back-end modules such as the Repository, the application server, agents, etc).

General requirements

- G1. Adequate training should be provided to ATLANTIS for uploading content into the BlueCareers system, during the contract’s duration and until the end of the ScienceDIVER project. Special training (and sufficient documentation) should be offered to ATLANTIS staff for the administration of the system.
- G2. GDPR should be enforced and applied throughout the platform operation, including content.
- G3. The tenderer should correct errors or weaknesses, or deficiencies identified during the trial of the BlueCareers system by the ScienceDIVER project partners.
- G4. The tenderer should provide full documentation of the work done for the design and development of the BlueCareers system.
- G5. The source code for the developed BlueCareers system should be delivered to Atlantis Consulting at the end of the subcontracting project in appropriate storage media (e.g. CD-ROM).
- G6. The Intellectual Property Rights (IPR) of the developed BlueCareers system should belong to Atlantis Consulting.
- G7. The tenderer should include in their financial calculations any costs for domain name registration for the BlueCareers system, as well as for WEB Hosting, at minimum until the end of the ScienceDIVER project. The owner of the domain name should be Atlantis Consulting.
- G8. The overall BlueCareers system should be provided with a **5-years full support at no additional cost**.
- G9. As the present tender cannot foresee all details of the platform’s operation, the successful Tenderer is expected to fully cooperate with the ScienceDIVER project team in developing the platform functionality, interface appearance; as well as to adjust individual functions as needed (e.g. should a need arises during testing activities).

System requirements

- S1. The BlueCareers system should be designed to meet all the expressed technical and non-technical requirements, in terms of software components or modules and interfaces. Should include at minimum (tenderers are encouraged to elaborate on their proposed solution in their technical offer) a Platform for the end-users, an Application Sever, a Repository, a domain model and a REST API, one or more Agent and/or Middleware(s).
- S2. The BlueCareers platform should be web based, using state of the art HMIs and interaction modalities for the front-end / user interface, and a reliable Repository at the back end.
- S3. The BlueCareers platform should be complimented by a mobile App (different App versions for Android and iOS) supported from a single codebase (i.e. with the web version of the platform). The

App(s) should also include native functions as needed, to preserve the user experience throughout the use of BlueCareers.

- S4. The App(s) should provide all the functionality of their web counterpart; having also additional functionality to facilitate commonly encountered features such as location awareness, notifications, etc.
- S5. The web platform should offer a user interface not only suitable for typical desktop web-browsers, but also optimised for web-access by browsers of mobile devices (minimum support for iOS and Android).
- S6. Each BlueCareers component should be easily containerized to support cloud deployment, distributed environments, scalability, and management of resources.
- S7. The BlueCareers system should offer connectivity with interested 3rd parties and expose public interfaces through a REST API and a well-documented domain model. This may be used by other developers interested to use BlueCareers for developing applications making use of the platform's content, business logic and algorithms (e.g. e-learning module developers).
- S8. The main targeted domains of the platform for categorizing skills, expertise, specialisation, etc. are the Scientific Diving and the Blue Technologies. Additional domains and categories within a domain, may be specified during the analysis phase of the project. Tenderers should specify a maximum limit in their tender-offer if they consider this important for their implementation capacity.
- S9. The platform should be accompanied by an intelligent agent or other appropriate ICT tools to search (offline in the backend) for companies which post job-offers in the targeted domains in other e-recruitment online platforms. The agent/tool should provide weekly comprehensive reports on this aspect (i.e. readable by a non-ICT expert).
- S10. The platform should provide statistics of available profiles in an anonymous way that match the market requirements; and indicate potential skill gaps detected. Furthermore, BlueCareers should be able to provide statistical reports from its use, both general (i.e. through pre-defined reporting templates) and tailor made (i.e. through user selection from available options).
- S11. The management of the whole system should be fully automatic. Furthermore, there will be no moderation for the content uploaded by the end-users.

Platform functionality requirements

- P1. The platform should facilitate typical authentication control for all types of supported users (i.e. username/password), at minimum for employer, job seeker, administrator. Authentication through Facebook and LinkedIn accounts should be also supported for job seekers.
- P2. The platform should offer a detailed registration facility for both job seekers and employers. The user profile during registration should include typical data for the addressed user profiles. Indicative list:
 - Job seeker: name, photo, date of birth, sex, address, profession, education, email, phone, place of current residence, work experience, availability for travels and remote missions, CV (to be uploaded, e.g. as PDF).
 - Employer: name, base, main activities, years of operation, email, phone, address.
- P3. The platform should support automatic text extraction on standard CV types (Europass) in order to extract relevant data and fill in certain user profile fields.
- P4. The platform should offer to the user (employer/job seeker) the opportunity to define (i.e. from pre-defined lists) preferences as an additional set of information to his/her profile.
- P5. The platform should support editing for the posts as well as for the uploaded content for all user types. Users should be able to enrich/edit profiles anytime, by adding more skills and/or required attributes.

- P6. The platform should enable deletion of posts for both employer and job seeker.
- P7. The platform should support the employers to publish a job post in a few steps and in a straightforward manner.
- P8. The platform should maintain an active link with e-learning Providers to support job seekers in acquiring additional skills required in the market.
- P9. The platform should categorize “interfaced” e-Learning modules and “decorate” / augment them with appropriate attributes or metadata in order to enable effective searches on their respective data-objects.
- P10. The platform should actively promote the available e-Learning modules to the users in the most unobtrusive and relevant way possible.
- P11. The platform should be able to automatically update the profiles of the job seekers by adding work-experience (e.g. from accepted jobs) and education (e.g. from interfaces with e-Learning modules).
- P12. The platform should support friendly interfaces for browsing offers of both types, as well as for searching based on specific criteria (i.e. 5-10 per user type).
- P13. The platform should enable the employer to request a matchmaking process to be executed in a single step, with a few clicks.
- P14. The platform should enable the jobseeker to request a matchmaking process to be executed in a single step, with a few clicks.
- P15. The platform should return matchmaking results in a simple and easy to browse ranked list in order of relevance/score. “Smart matching” algorithms should be applied making appropriate use of weights per relevant criterion.
- P16. The platform should use user profile data to produce a vector of profile properties which will then be used to match offered jobs.
- P17. The back end of the platform should include an AI-driven recommendation engine, supporting collaborative filtering (e.g. user-based profiling & filtering) and context-based filtering (location, rating, etc.) with self- learning capabilities. AI technologies should be used as a leverage factor to increase efficiency of the matching.
- P18. The platform should provide information to the user in relation to the level/degree of matching per criterion. E.g. the employer should be able to see how a job seeker scored in a specific criterion, similarly the job seeker.
- P19. The matchmaking process should produce a ranked list of jobs for which the jobseeker is deemed qualified. Similarly, for the employer.
- P20. The platform should allow the user in the matchmaking (ranked) results list to select/reject suggested entries by a single click (yes/no).
- P21. The platform may include in the search results slightly over or under-qualified job listings, according to user preferences.
- P22. When the platform presents job listings to the job seeker, in the cases where he/she is under-qualified, may suggest available e-Learning modules to follow in order to improve user position in the job market.
- P23. The platform should be able to package and send automatically search results to the user either through email or as notifications in the mobile App, whenever there are new matches. User preferences should be considered in this respect.

- P24. The platform should seek for the consent of the user in order to send a possible match to the employer including his/her CV. The user may also allow the platform to automatically send any match below a certain threshold level of mismatch allowance, e.g. 10%.
- P25. Employers should be able to see ONLY the matches which are explicitly approved by the job seekers. Exception: job seekers may give their consent to the platform to freely forward matches to employers without every time asking job seeker's consent.
- P26. The platform should offer a special "quick overview" function, for both user types reviewing quickly all the available offers. Selection of interesting offers should be intuitive (off/no: scroll to the right; on/yes: scroll to the left).
- P27. The platform should not allow direct communication between employers and job seekers until they mutually accept a suggested matching; and provide their explicit consent to the platform.
- P28. The platform should enable an employer to initiate or post a "search" defining certain criteria, without actively offering a job position (i.e. to assess potential recruitment opportunities).
- P29. The platform should offer to the candidates (job seekers) a report on his/her skills gap in relation to the jobs he has applied.
- P30. The platform must be able to accommodate and have an interphase with the basic functionalities of the Oviview System.
- P31. The platform must be able to support multilingual use and more specifically the following languages: Greek, English, Italian, German, Bulgarian and Maltese. The platform should be able to support each language and be fully operational from users of the related countries.
- P32. The platform, considering the requirement P31, should be able to adjust its layout (i.e. search blocks, buttons, site map etc.) when the user is changing a language.
- P33. The platform should facilitate a language content management tool to alert each language manager when and where a change occurs in the content of the main language (English).
- P34. An automatic translator should be integrated in the platform, so for the content to be automatically translated from the main language (English) to the others (as mentioned in P31). Moreover, the language managers must have access to the translated content in order to correct words/sentences before uploading and accepting the translated content.
- P35. Following the requirement P34, the automatic translator tool will also allow the users to edit their own translated content (in the abovementioned languages of the platform) for correcting potential mistakes (e.g. job listings, CVs, skills, competencies, etc.)

3. Duration of the Contract

The contract agreement between ATLANTIS Consulting and the successful tenderer will enter into force when both parties have signed the agreement. The subcontracting action (i.e. BlueCareers project) will start project implementation activities on the 1st day of the month when the contract agreement entered into force; and **will last for 10 months plus 18 months of free technical support for the optimisation of the platform.**

4. Deliverables

The following table lists the minimum required deliverables along with their expected delivery month:

#	Deliverable title	Delivery month
1	Architecture and functional and non-functional specifications of the BlueCareers system	1
2	Alpha version of the BlueCareers system (*)	3
3	Report on Alpha version validation findings and corrective actions applied	4
4	Beta version of the BlueCareers system (*)	6
5	Report on Beta version validation findings and corrective actions applied	7
6	Final version of the BlueCareers system	9
7	Report on Final version validation findings and any corrective actions applied	10
8	Report on training activities and administration manual	10
9	Documentation of the work done for the design and development of the BlueCareers system	10
10	Source code for the developed BlueCareers system in appropriate storage media (e.g. CD-ROM)	10

(*) Tenderers should specify in their technical offer which of the requirements above (if not all) will be addressed in the delivery.

5. Available Budget

The maximum available budget for the subcontracting action is **50.000€** excluding any applicable VAT.

6. Payment Schedule

Payments will be made as follows: in the period of 1 month 5.000€, on the 6th month the amount of 10.000 euros will be paid and upon delivery of the system the rest of the amount will be fully paid

Payments will be subject to approval of the work by ATLANTIS Consulting at each deliverable submission stage.

7. Deadline for Applications

The deadline for tenderers to submit their offer is the **30th of June 2020** (at 4:00PM; UTC + 02:00).

8. Tender procedure

Interested tenderers should submit their offer **in English**, by the given deadline. Submission is possible through:

- Email at the following email address (PDF files only): info@atlantisresearch.gr
- Paper delivery at the address: Steliou Kazantzidi 47, Thermi, GR- 57001 Thessaloniki, Greece. The envelope should bear “Call for Tenders for the BlueCareers System (ScienceDIVER project)” and the name of the tenderer.

The tender offer package should include:

1. **The Technical offer**
2. **The signed and stamped Financial offer**
3. **Short profile of the tenderer**
4. **Short bios (maximum three members of the project team)**
5. **A signed “Commitment of Conformance” to all the terms of the tender document**

General Instructions

- Each submitted Tender Offer shall indicate the details of the tenderer (full name, address, name of legal representative, VAT number).
- One all-inclusive price quote should be submitted in euro, exclusive of VAT. VAT will be indicated separately in the Financial Offer.
- In submitting a Tender Offer, the tenderer accepts in full and its entirety, the content of this Tender Document. Tenderers are expected to examine and fully understand the requirements of the tender.
- No account shall be taken of any reservation in the Tender as regards the Tender Document; any disagreement, contradiction, alteration, or deviation shall lead to the Tender offer not being considered further.
- A single contract will be concluded covering all the works involved.

All Tender Offers will be evaluated on the “best value for money” principle, following specific evaluation criteria. Only Tender Offers satisfying the eligibility criteria will be considered for the tender-evaluation phase.

9. Evaluation criteria

The following table defines the technical evaluation criteria along with their corresponding maximum points:

Criterion	Points
Efficiency of the proposed solution and understanding of system requirements	30
Time plan and proposed methodology for implementing the project	10
Experience of the tenderer in aspects addressed in the project	20
Quality of the team proposed to implement the project	10

The maximum total score will be 100 points. The technical evaluation will contribute maximum 70 points, while the financial evaluation will contribute maximum 30 points. Note that if a technical offer scores 80% below the maximum score points (i.e. threshold level), it will be rejected.

Financial Evaluation

The lowest evaluated Financial Proposal will be given the maximum financial score of 30 points. The formula for determining the financial scores of all other proposals is calculated as follows:

$$\text{Financial Score} = \frac{\text{The price of the lowest evaluated financial proposal}}{\text{The price under consideration}} \times 30$$

10. Eligibility Criteria

The invitation is open to legal entities that fulfil the following criteria.

1. Verifiable experience in web and mobile applications development for a period of at least three years.
2. Verifiable experience in implementing international projects.
3. Verifiable ability of the proposed team to communicate in the English language.