Call for applications to four officer positions of the ALADIN-LACE-HIRLAM unified Consortium

July 2020

After some 30 years of cooperation, the ALADIN, LACE and HIRLAM Numerical Weather Prediction Consortia have decided to reinforce their collaboration. At the end of 2020, twenty-six European National Meteorological Services will become Members of a new, unified Consortium, under this **Memorandum of Understanding – MoU** covering the period 2021-2025.

The Members have adopted an ambitious **2021-2025 Strategy** outlining their objectives in meteorological and computer science for this time period.

The development of all codes will continue, in order to support **world-leading operational NWP suites** operated by the Members, **with a priority on high resolution (from kilometric to hectometric grid size) and short-range (including nowcasting suites)**. Another priority of the Strategy is to **further increase the interoperability and portability of the codes**. The codes are currently grouped in three "Canonical System Configurations" (CSC AROME, ALARO and HARMONIE-AROME), and full interoperability is only achieved inside the CSCs. The Consortium will strive to increase interoperability across the CSCs. It will also work to make the codes portable on various computer architectures, in order to cope with the rapid evolution of HPC systems and encourage maximum competition in procurements of the Members.

The human resources provided by the Members for this work represent approximately 100 FTE. These staffs are employed by the Members and work at their premises, but meet regularly. All aspects of the work are coordinated internationally by a Management Group. For the first years of the Consortium, the list of officers is as follows:

- 1 Programme Manager (the "PM")
- 3 CSC Leaders
- 1 Integration Leader (provided by Météo-France).
- 8 Area Leaders ("AL")
- 1 Coordinator for the Data Assimilation starters KIT applications.
- 1 Scientific Secretary (provided by Météo-France)
- 1 Coordinator of Networking Activities ("CNA")

The Consortium will appoint these officers via two calls for applications.

The present call concerns the first four officer positions, namely the Programme Manager and the three CSC Leaders.

The remaining officer positions will be filled via a second call that will be issued in November 2020. The four officers selected via this call will participate in the panel in charge of ranking the applicants to the remaining officer positions.

Eligibility conditions to apply

- You must have a higher education in meteorology or computer science and a demonstrable experience in working on NWP operational suites or similar IT systems. An experience in international collaboration would be an advantage.
- Your application must be supported by one National Met Service Member of the Consortium, who is already your employer or commits to become your employer if you are selected for the job. Salary and other aspects of the position must be discussed with this Member.
- Good knowledge of English.

Calendar and selection process

The deadline to apply to the present call is 15 September 2020
Interviews will be organized in the following weeks
Appointments will be announced as soon as possible thereafter

How to apply:

- Applications (including references, C.V. and motivation letter) must be sent to Mrs Patricia Pottier, Météo-France, acting as Secretary: patricia.pottier@meteo.fr.
- A letter of support should be provided by the Director of the National Met Service who employs/will employ the applicant if selected.
- It is possible to apply simultaneously to different positions advertised in this call.

- Further questions can be asked to Mrs Patricia Pottier.

Specific Terms of Reference for the four positions

The Programme Manager (Full time, duration: 5 years)

The Programme Manager (PM) is the highest executive officer of the management structure of the Consortium. She/he reports directly to the Assembly and is generally responsible of the implementation of the Assembly decisions and of the progress of all activities of the Consortium.

The PM role represents a full-time position held by a single person.

The PM is appointed by the Assembly after a wide call for applications. Each application must be supported by one or several Members.

The mandate of the PM is normally for the duration of the MoU (five years).

The Terms of Reference of the Programme Manager read as follows:

- The PM reports to the Assembly and has authority on the Project and Support teams.
- The PM leads the Management Group and chairs its meetings. He/she can propose to the Assembly to reorganize the Management Group, Project team and Support team in order to increase efficiency.
- The PM establishes appropriate consultation and interaction mechanisms with the Members, via the LTMs, in order to enable smooth coordination and resolve day-to-day difficulties.
- The PM leads the preparation of the Rolling Work Plan ("RWP") and any Strategy document by the Management Group and makes the necessary arbitration between members of the Management Group. During this process, the PM has authority to exclude an item from the RWP if he/she feels that it is too far from priorities previously adopted by the Assembly.
- The PM manages the Consortium budget with the help of the Scientific Secretary.
- The PM monitors the human resources committed and actually delivered by Members, via the manpower register regularly updated by the scientific secretary.
- The PM attends all sessions of the governance bodies and the annual workshop of all staff. He/she formulates, with the help of the Scientific Secretary, the agenda proposals for these meetings.
- The PM produces with the help of the Management Group and the Scientific Secretary all preparatory documents for the above meetings.
- During the sessions of the governance bodies, the PM usually presents and comments the preparatory documents. He/she may delegate some of these presentations to other members of the Project team.
- The PM draws the attention of the governance bodies to any discrepancy between the manpower register and the progress of the RWP. More generally, he/she draws the attention of the governance bodies to any difficulties hindering the progress of the Consortium objectives.
- The PM regularly reviews the status of contributions to the T-codes[1] and reports to the Assembly as appropriate.
- The PM prepares and negotiates any co-operation agreement, taking into account guidelines from the Assembly, and the advice of designated committees.
- More generally, the PM strives to implement any decision or action required by the Assembly.

Personal skills:

- Ability to lead and coordinate a scientific and code engineering team across a wide variety of staff at an international scale
- Ability to propose an arbitration on scientific issues, based on expertise information
- Excellent communication skills with the ability to translate complex scientific or technical information into terminology facilitating discussion and decision-making at General Direction level
- Ability to manage a budget and manpower at a large project scale
- Ability to propose and monitor a Work Plan
- Ability to negotiate with Members on specific managerial issues, such as manpower or staffing

[1] The T-codes are the central repository of all codes produced by the Consortium.

The CSC Leaders (Half-time, duration 5 years)

The CSC leaders are responsible for the regular progress of their respective CSC, by adopting relevant elements of the new cycles of the common codes.

They maintain a permanent contact with the test-suite team for their CSC and with the Members using this CSC in operations, in order to collect experiences and views on the quality and performance of the common codes under their CSC.

The CSC leaders lead their respective CSC management structure or their specific CSC team. They are particularly responsible for maintaining Quality Assurance of their CSC, code engineering and integration within their CSC.

For the meteorological performance assessment, it is understood that a single reference domain is used. In case they need to solve quickly a quality problem, they can draw on the work force allocated to other aspects of the RWP after discussion with the Management Group.

They attend all meetings of the Management Group.

More specifically, the CSC Leaders will be responsible for:

- the physics developments specific to the CSC;
- planning and execution of the developments to prepare the CSCs for hectometric resolutions;
- the day-to-day execution of the improvement of the model forecast performance. All transversal strategic issues will be the responsibility of the PM;
- the development and maintenance of applied data assimilation setups for the CSCs using efficient, accurate and maintainable algorithms;
- the definition of the data assimilation algorithm of the CSC;
- the continuous effort on high-resolution observations. The novelty is the massive number of data from various sources (satellite, radar, aircraft, crowd-sourced data, …) and their quality control, exploring machine-learning. Consider the consequences of growing data volumes, in close collaboration with the DA leader;
- the implementation of the data handling for the data assimilation of the CSC;
- the definition of CSC related EPS systems and performance assessment for extreme weather, NWC range, sub-km resolutions;
- the meteorological quality of their CSC.

In addition:

- The HARMONIE CSC Leader will be responsible for the development and maintenance of the HARMONIE Reference System and for the short-term improvements in the HARMONIE scripting setups.
- The ALARO CSC Leader will be responsible for the implementation of SURFEX in ALARO.

Personal skills:

- Good knowledge of the ALADIN-LACE-HIRLAM NWP codes, including the process of building new code versions and the related challenges (or a firm will to be in touch with these issues)
- Excellent knowledge of the definition of their specific CSC, and of at least one local installation of that CSC (including Quality Assurance process)
- A good knowledge of cross-cutting scientific questions across the Consortium R&D activities, as well as of specific interoperability aspects, would be an advantage
- Good communication in an international context
- Ability for team work