

ECMWF enters into discussions with Bologna, Italy, about location of its new data centre

Official ECMWF Statement

First step in new international investment in Bologna for ECMWF's new data centre

[Web home page summary: ECMWF's Council has mandated Director-General Florence Rabier to prepare a high-level agreement with the Italian Government on the new data centre, for approval by Council at its next session.]

ECMWF's Council of Member States met on 28 February and 1 March 2017, in an extraordinary session to consider proposals to host ECMWF's data centre. This meeting took place at the end of an extensive process of evaluation by a panel of international experts and representatives of the Centre's Member States, who reviewed bids on criteria ranging from financial and technical aspects and environmental impact to capability to deliver.

Following the recommendation of its Evaluation Panel that the Italian proposal is considered the best from the point of view of the requirements and the overall interests of ECMWF, Council mandated Director-General Florence Rabier to prepare a high-level agreement with the Italian Government, for approval by Council at its next session.

The Italian proposal comes from the Emilia-Romagna Region in Italy and would see the future ECMWF data centre located in the 'Tecnopolo di Bologna'.

ECMWF's Director General Florence Rabier stated: "***It has been clear for a while now that the current data centre facility does not offer the required flexibility for future growth and changes in high-performance computing (HPC) technology. As laid out in our 2025 Strategy launched last September, we believe that continuing to improve weather predictions relies heavily on our ability to support our science with proportionate computing power.***

Intermediary goals to 2020 already require that the Centre's next supercomputers should provide a tenfold increase in our computational capacity. The three key components that will make up this increase are technology developments, scalability efficiency gains and additional processors. This latter point would require a significant expansion of our current data centre infrastructure, which unfortunately cannot be achieved in

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our current location. It is this constraint that triggered the process to identify a new site.

I was impressed by the quality of all the proposals we have received, and I now look forward to starting discussions with the Italian Government.”

The next few months will allow both sides to discuss the legal, financial and technical elements of the proposal in greater detail, ahead of the next session of Council.

ECMWF wants to acknowledge the support and commitment of its Member States over the process so far, and especially wishes to thank all the bidding teams for the significant efforts put into their proposals.

End.

Background information: ECMWF new data centre in Bologna

ECMWF received 7 bids from Member States offering to host its new data centre. The Italian proposal was considered the best from the point of view of the requirements and the overall interests of ECMWF.

Selection criteria leading to Council’s decision on 1 March 2017:

1. Meeting the technical requirements

The data centre will be located inside the existing structures and formed using the "box in box" principle allowing data halls to be formed and secured using modern well sealed materials. The building will be refurbished and supplemented to create a new facility having a 60-year life span.

Re-use of existing industrial buildings and regeneration of site.

- Solution provides a dedicated facility, which meets all of the spatial, power and cooling requirements of ECMWF.
- The site offers enough flexibility to meet future expansion requirements.
- The wider campus has an inner fibre distribution ring proposed allowing good connectivity back to local points of presence and up to three local service providers.
- The site utility supply allows for two fully rated electrical 10MW circuits with ability to upgrade to 20MW at a later date.
- The data centre cooling systems have been designed to minimise energy use through a mixture of ground water cooling and general air conditions.

2. Capability to deliver

The Emilia-Romagna region would provide the land, the existing building, the design and full delivery of the data centre as part of the regeneration and refurbishment of the site. The data centre would be constructed to meet the technical standards requested.

A design team has already been appointed by the Region and designs have been prepared to refurbish the complete site in a number of phases.

3. Operational model

Once constructed the Emilia-Romagna region would hand the operation of the facility over to ECMWF enabling the Centre to maintain all aspects of the operation. This includes the technical infrastructure as well as the management and operation of the IT infrastructure and HPC.

The Region will maintain the site and general services that would be shared with other users of the development, (cleaning, site security etc.).

Additional support services would be available from CINECA or other local providers.

4. Ownership model

Emilia-Romagna retains ownership of the data centre that will be provided to ECMWF free of charge during the contract period.

ECMWF will be charged an annual service charge for general services provided across the site by the Region, e.g. general cleaning and site security.

ECMWF will finance and manage all other services applicable to the specific data centre facility.