

Atos supercomputer boosts weather forecasting capacity for 'Croatian Meteorological and Hydrological Service' and supports fight against air pollution

Zagreb, Croatia, Paris, France, 20 October 2020 – Atos, a global leader in digital transformation, has signed a five-year contract worth over 10 million HRK (approximately 1.3 million EUR) with the **Croatian Meteorological and Hydrological Service (DHMZ)** to supply its BullSequana XH2000 supercomputer. The new system will multiply DHMZ's computing power by 4, compared to its current solution, to enable faster calculations for more frequent and accurate weather forecasting. It will also be used as part of the <u>AIRQ</u> <u>project</u> to improve and optimize the system which is used for managing and monitoring air quality in urban areas.

In addition to medium-term and long-term forecasts, DHMZ meteorologists and hydrologists will be able to more accurately predict and determine the intensity of severe weather events long before they occur. These include floods, thunderstorms, extremely strong winds and extreme temperatures. The supercomputer will also provide additional useful data to various industries and environmental protection organizations. It will be used as part of the <u>AIRO</u> <u>project</u> to develop a functional model to estimate ground-level pollutant concentrations.

"The modernization of our computer infrastructure is essential for DHMZ to fulfill its main task, which is to provide quality, timely and reliable meteorological and hydrological information and advance warnings of dangerous weather events. This information enables strategic decisions to be made - in society, across various branches of the economy, in food production, and in the protection of life and the environment, which is increasingly exposed to an increased risk of disasters as a result of climate change", said **Branka Ivančan-Picek, Director-General at DHMZ**. "The new computing system will enable an increase in the accuracy of the forecast of meteorological parameters in Croatia on a time scale from a few hours to long-term climate scenarios. The increased computing capacity brought to us by this system will be used to develop and put into operational use a chain of numerical prognostic models (meteorological and climatic models, dispersion models, hydrological and oceanographic models) and other applications."

"We are delighted that DHMZ has chosen us as its partner and procured a revolutionary supercomputer that no other national meteorological institute in the region has. This is another confirmation of the expertise and operational excellence of the Atos team in Croatia, which is needed to install, manage and run such a large system. It is the best technology in the category, which we deliver via our BullSequana XH2000 supercomputer. The new solution will optimize the computing process in DHMZ and enable significant improvements in numerical weather predictions", said **Pierre Barnabé, SEVP, Head of Global Big Data & Security, Atos.**

The system is planned to be installed at DHMZ by the end of April 2021. The contract includes the supply and installation of the new BullSequana XH2000, the migration and optimization of all existing DHMZ applications for weather forecasting calculations and five-year maintenance.

Additional note to editors:

Atos has successfully deployed BullSequana systems at many leading European supercomputing centres that either undertake production or research work into weather forecasting, earth systems and climate modelling including leading European numerical weather centre <u>ECMWF</u>, <u>Meteo France</u>, the <u>German Climate Computing Centre</u> (DKRZ), the Spanish AEMet, Royal Netherlands Meteorological Institute and Plymouth Marine Laboratory in the UK. Atos has also just announced a new Center of Excellence in HPC (High-Performance Computing), AI (Artificial Intelligence) and Quantum computing for Weather & Climate together with ECMWF to provide researchers access to emerging technologies to support work on medium and long-range weather forecasting and prediction and global climate modelling.

Atos is also a partner of the European Centre for Medium-Range Weather Forecasts (ECMWF) and other national weather centres in the ESCAPE2 and ESIWACE2 European projects developing next generation weather models which contribute to informing the future of atmospheric sciences.

The procurement of this supercomputer is part of the AIRQ project and relates to component 5: Upgrading the DHMZ computer infrastructure. The AIRQ project - Expansion and Modernisation of the National Network for Continuous Air Quality Monitoring is implemented by DHMZ in partnership with the Institute for Medical Research and Occupational Medicine. The total value of the project is 125.1 million HRK, of which 85% is financed from the European Regional Development Fund, and 15% from the Environmental Protection and Energy Efficiency Fund. The purpose of the project is to improve and optimize the system for managing and monitoring air quality in urban areas, zones and agglomerations.

About Atos

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