



Celebrating HPC Vega's second birthday

HPC Vega celebrated its second birthday on 19 April 2023. Up until today, Slovenia's most powerful supercomputer has hosted over 500 researchers, scientists, professors and students who require its computing and storage capacities for their work on various projects. Its computing power is used up to its full capacity as its hosting over 30 larger research projects from all over Europe, among them some really interesting ones from the area of personalised medicine, such as the development and use of a biophysical computer model of hormone-sensitive prostate cancer in the search for more effective treatments depending on the different genomic imprinting of the same cancer type, researching new methods of administering dosages and different irradiation particles in radiotherapy, or the development of a computer model of the skin barrier to help predict the permeability of drugs and cosmetic products. The World Health Organisation's priority list also contains the project for developing a revolutionary generation of universal antidotes against snakebites, the most neglected deadly tropical disease, with more than five million snakebites causing up to 138,000 deaths and 400,000 permanent disabilities and amputations annually. Of course, there is no shortage of projects in other scientific disciplines, notably chemical sciences and materials development, biochemistry, particle physics, astronomy, and a few commercial engineering projects. Many projects are based on the construction of digital twins that enable the replication of things from nature, as well as projects involving learning and the use of artificial intelligence, which is increasingly becoming a reality in the modern developed world.

With the HPC Vega supercomputer Slovenia has the opportunity to exploit its research and development potential, and it does, by making it easier for Slovenian researchers to apply for various projects, such as [SMASH](#), and participate in several centres of excellence, such as [MultiXscale](#) and [MaX3](#). Companies can acquire supercomputer competences free of charge through the [EuroCC SLING Competence Centre](#).

So far, we have presented HPC Vega live to over 500 visitors from all over Slovenia and also to foreigners, ranging from pupils to high-ranking EU representatives. We also kindly invite you to join us at the HPC Vega Open Day on Tuesday, 30 May 2023.