

SHAPE – Helping SMEs to get started with HPC

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SHAPE (SME HPC Adoption Programme in Europe) [1] is a pan-European initiative supported by the PRACE (Partnership for Advanced Computing in Europe) project. There are clearly benefits for SMEs in adopting HPC as part of their workflow. Benefits to SMEs can include improvements in the quality of their products via an enhanced performance and accuracy of their models, or by reducing time to delivery, or by providing innovative new services to their customers. Ultimately this can all increase the competitiveness of the SME. However, getting SMEs to adopt HPC can be challenging with SMEs facing a number of barriers. These may include a lack of in-house expertise or a lack of available manpower, SMEs may have little or no access to suitable hardware, and an SME may be unwilling to take on the risk of committing to HPC without prior experience.

SHAPE is there to help overcome the barriers faced by SMEs and allow them to get a foot on the HPC ladder. SHAPE calls are launched every six months where SMEs can apply for PRACE help from SHAPE via a lightweight application process with assistance being offered to SMEs at the application stage. Successful applicants to the programme are paired with an expert from a PRACE partner institution. In collaboration with the SME, the PRACE expert helps them try out their ideas for utilising HPC to enhance their business. Projects involve tasks such as the porting or parallelisation of the SME's code to allow running on an HPC system – SMEs get access to PRACE supercomputers and, where appropriate, to more novel hardware such as GPU nodes or visualisation suites – or may involve getting an SME up and running with a code already installed on an HPC system, or could involve optimising an already running code or a workflow for the SME's specific use case [2]. Many projects are just a way of getting SMEs to “try out” HPC with minimal risk if it turns out not to work out.

Since 2013 SHAPE has run 11 separate calls with 62 SMEs across 17 different countries having been awarded effort to assist with making use of HPC for their business. SMEs have come from a diverse range of subject areas, including some less traditional HPC areas such as finance and medicine. This talk will give a short introduction to the SHAPE programme in the context of other European HPC industry programmes, followed by some of the success stories from the SMEs across a variety of disciplines that have worked with PRACE. SHAPE is actively looking to increase the number of proposals received so that more SMEs can be helped and in particular is looking to broaden the number of countries from which proposals are received and the talk will include some of the initiatives being employed towards these goals.

[1] <https://prace-ri.eu/prace-for-industry/shape-access-for-smes/>

[2] <https://prace-ri.eu/training-support/technical-documentation/white-papers/shape-white-papers/>