



European
Commission

FORTISSIMO

The Principal objective of Fortissimo is to enable European manufacturing industries to benefit from the efficiency and competitive advantages inherent in the use of simulation, as practised successfully by numerous high-tech industries. The mechanism to achieve this is the provision of simulation services running on an HPC based cloud infrastructure. The importance of advanced simulation to increased competitiveness for both large and small companies is well established.

Project:
FORTISSIMO

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Website

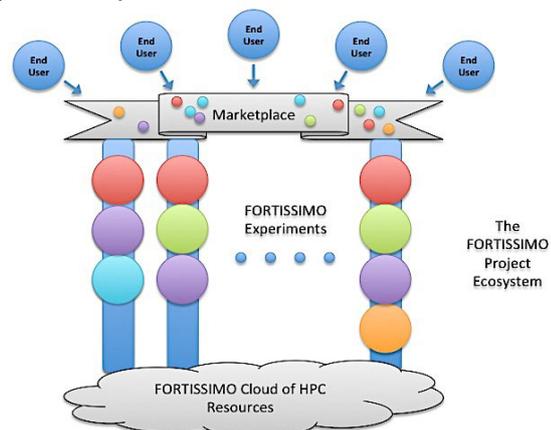
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The importance of advanced simulation to the competitiveness of both large and small companies is well established. The principal objective of Fortissimo is to enable European manufacturing, particularly small to medium enterprises (SMEs), to benefit from the efficiency and competitive advantage inherent in the use of simulation. However, the simulation of, for example, high-pressure gas cylinders, the moulding of plastics or the thermodynamic properties of hazardous materials requires enormous computing power and specialised software tools and services. Generally, large companies, which have a greater pool of skills and resources, find access to advanced simulation easier than SMEs which can neither afford expensive High Performance Computing equipment nor the licensing cost for the relevant tools.

This means that SMEs are not able to take advantage of advanced simulation, even

though it can clearly make them more competitive. The goal of Fortissimo is to overcome this impasse through the provision of simulation services running on a cloud infrastructure making use of High Performance Computing systems also making appropriate skills and tools available in a distributed, internet-based environment.

Fortissimo will make advanced simulation more easily accessible, particularly to SMEs, through the realisation of a “one-stop shop” where hardware, expertise, applications, visualisation and tools will be easily available and affordable on a pay-per-use basis. In doing this it will create and demonstrate a sustainable commercial ecosystem where actors at all levels in the value chain can realise sufficient commercial benefit to enable that ecosystem to persist independently of EU funding and continue to provide affordable services to manufacturing industry, particularly SMEs.



Fortissimo will be driven by end-user requirements where (~50) business-relevant application experiments will be used to develop, test and demonstrate both the infrastructure and the “one-stop pay-per-use shop”. The project participants represent all actors in the value chain. Not only will Fortissimo contribute to the increased competitiveness of European manufacturing industry through the innovative infrastructure that it will develop and test, but it will create commercial opportunities for European Independent Software Vendors, as well as for service and High Performance Computing infrastructure providers, through the creation of a new market for their products and services. Fortissimo places considerable emphasis on the exploitation of opportunities at all levels of the value chain ranging from the end-user to the High Performance Computing infrastructure provider.