HPC-Cloud-based design of high-voltage cables





The challenge of this case study was to satisfy the



need for **new and finer simulations** through the use of Cloud-based HPC 3-D simulations, together with an insight into how improved simulations could be exploited in a future business model. A further goal was to evaluate the potential of using open-source software in these simulations.

The Solution

- The resultant simulations have enabled Prysmian to improve the calculation of losses inside an energy cable, especially those induced by the magnetic field due to the load current.
- Prysmian is able to model better transfer of heat from the cable to the surrounding

environment.

 Cloud-based HPC modelling has enabled better, more detailed simulations to be made in a shorter time, that improved design capability significantly.



- The use of advanced 3-D model enables much better cables to be designed.
- Prysmian estimates that the use of a Cloud-based HPC system reduces the costs oppose to the investment in an in-house system.
- Further savings were also identified through the use

Organisations Involved



HPC Expert and Service Provider:





of expertise on-demand at the computer centre.





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