

## The World's First 1,000 mph Car

### HPC-Competence Center

High Performance Computing (HPC) Wales is Wales' national super-computing service provider. Host to the UK's largest national distributed supercomputing network, HPCWales provides businesses and researchers with local access to world-class technology and the support to fully exploit it.



### Enterprise

The Bloodhound project was launched in 2007 with the intention of building a rocketpowered car capable of attaining not just supersonic speeds but the next landmark speed: 1000 mph. The Bloodhound project also aims to inspire young people to take up careers in science and engineering making all of its research and design material available to teachers, students and visitors.

### How HPC makes the difference

The use of computer simulation has been essential in helping the Bloodhound SSC team to understand how the car would behave at supersonic speeds and thus optimise performance and safety at a very early stage in the design process.

Bloodhound SSC's Computational Fluid Dynamics (CFD) Engineer, Dr Ben Evans of Swansea University said:

"HPC Wales has been invaluable to us, simply because of the size of the machine and the amount of resource that we've got access to. It allows us to run simulations much quicker than we've ever been able to do before, which has allowed us to run more simulations than we've ever been able to do before. This has allowed us to understand this vehicle better than really we'd ever hoped to be able to do at this stage of the project."

Through the work of Dr Evans, HPC Wales is playing

an integral part in the success of the Bloodhound SSC project: building a car capable of travelling at over 1,000 mph and inspiring the next generation of scientists and engineers across Britain.

