LIGHT
ADDING LESS SAVES MORE

Innovate UK
Technology Strategy Board

LIGHT consortium to share project results on 26 April 2016

With a mission to inspire new design freedoms and find new solutions for the additive manufacturing (AM) of lightweight metal parts, the LIGHT consortium will be sharing its findings at a dissemination event at the Bloodhound Technical Centre in Bristol on 26 April 2016.

The design freedom offered by AM coupled with the promise of tool-less manufacturing, is compelling. However, additively manufacturing complex parts with overhanging geometries requires the use of sacrificial support structures to hold the part during the build. While necessary, these structures add constraints to the geometries that can be achieved using AM techniques.

Through the LIGHT project, the consortium has sought to implement and validate CAD/CAM solutions that facilitate the selective replacement of internal geometries with self-supporting, low density lattice structures. If these lattice structures can efficiently support internal and external overhanging geometries new design freedoms can be achieved.

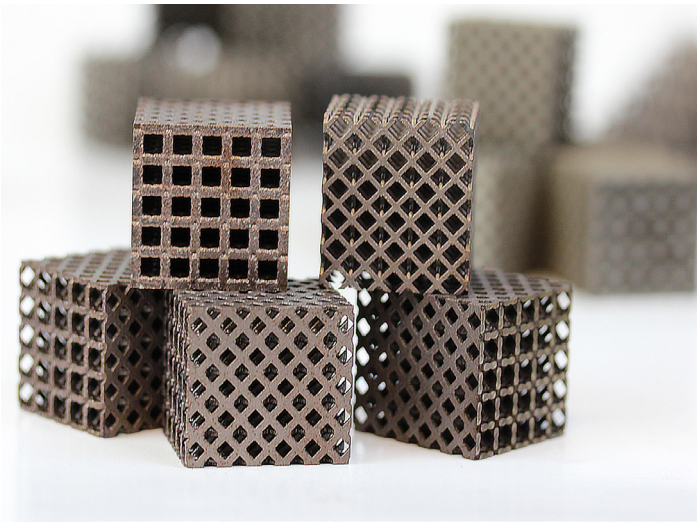
During the dissemination event the project partners will present case studies about the demonstrator parts created during the project. LIGHT tested the capabilities of additive manufacturing technologies to its limits by producing demonstrator parts that were engineered to withstand extreme conditions:

- A crushable earth re-entry capsule designed to protect planetary samples during atmospheric entry, descent and landing - designed by Magna Parva
- A jet engine thrust nozzle with operating conditions of 500°C - designed by HiETA
- An air brake door hinge that must withstand 50kN of force - designed by Bloodhound

Hosted by consortium members, Bloodhound SSC at the Bloodhound Technical Centre in Bristol, attendees will be able to take advantage of a tour of the 1,000mph Bloodhound car with chief engineer Mark Chapman. Delegates will also have the opportunity to network over lunch.

The LIGHT project has involved a consortium of seven organisations that, in addition to Bloodhound, includes Delcam, HiETA, CRDM/3DSystems, EOS, Simpleware and Magna Parva. All of the partners will be on hand at the event to share their experience of using software and hardware to produce lattices using metal AM techniques.

This event is free to attend but places are limited so registration is essential. Go to bit.ly/LIGHT_event to reserve your place.



Delcam
eos e-Manufacturing Solutions
magnaparva
simpleware
CRDM ENGINEERING SUCCESS
HiETA technologies

Follow us on Twitter @adding_less for the latest news and views from the LIGHT project.

For more information visit the website www.light-project.co.uk or send an email to info@light-project.co.uk.

Acknowledgements
As the UK's innovation agency, one of the main roles of the Technology Strategy Board is to achieve business and economic growth for the UK. One way the organisation supports this is through funding innovative Collaborative Research and Development (CR&D) projects. Collaborative research and development (R&D) encourages businesses and researchers to work together on innovative projects in strategically important areas of science, engineering and technology – from which successful new products, processes and services can emerge, contributing to business and economic growth. Find out more about the CR&D programme here:
https://www.gov.uk/guidance/innovation-apply-for-a-funding-award#find-an-innovation-funding-programme