

## Jewellery Industry Innovation Centre, Birmingham - 16/04/14 - Precious Project Gains Momentum Toward Establishing Benchmarks

The Precious Project recently held its second quarterly meeting at the Jewellery Industry Innovation Centre (JIIC), which is part of the Birmingham School of Jewellery. Comprising of five technical partners from the UK, this Technology Strategy Board funded project aims to demonstrate the commercial potential of precious metal additive manufacturing within the UK jewellery industry, from design and manufacturing through to finishing, polishing and final retail.

The JIIC updated project partners on the results of an additive manufacturing survey involving more than 500 jewellery design and manufacturing organisations. The survey established that there are seven 'mainstream' and 22 'peripheral' CAD software solutions currently in use by the jewellery industry. The solutions available today are functional and useable, but improvements will be welcomed by jewellery designers as additive manufacturing processes develop. At the end of the Precious Project the survey will be repeated to help the project evaluate the changes in knowledge about and attitudes towards additive manufacturing for jewellery.

Jewellery designer Lionel Dean presented revised design concepts for jewellery items that will be additively manufactured as part of the Precious Project. Having refined his designs since the first quarterly meeting to ensure that the project developments match the requirements of the jewellery industry, Lionel said: "Exotic geometry is relevant, but even more important is the story and personalisation element behind the scenes".



*Precious partners on a tour of the facilities at JIIC*

Delcam presented new functionalities for a new AM software package, including alignment of jewellery pieces onto the virtual platform and the subsequent creation of intelligent and editable fixturing that hold the parts to the platform. So far, two different test pieces have been printed in gold to test fixture effectiveness by looking at their size and geometry as well as assessing the surface quality when the pieces undergo their finishing process. Delcam, Cookson Precious Metals, and Finishing Techniques have been evaluating every stage of the additive manufacturing process in order to minimise the impact of fixtures on the jewellery parts through optimal orientation and placement. Further tests will be undertaken during the next quarter with the continued aim of improving surface quality.

An exciting event that the partners plan to host is a one day workshop during the Birmingham School of Jewellery's 125th anniversary celebrations in 2015 where they will share the Precious Project's developments and knowledge of precious metal additive manufacturing.

### **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.innovateuk.org/-/collaborative-r-d>

### **For more information:**

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