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Engaging with the Engineering of the Square Kilometre Array: an RAEng 'Ingenious' project

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This Jodrell Bank Discovery Centre project aimed to engage the public, and especially school pupils, with the UK's work on the exciting engineering challenges of the Square Kilometre Array (SKA), one of the world's greatest international science and engineering projects, using these as a route for inspiration and education for the engineers of the future.

The SKA is a colossal international engineering endeavour, constructing the largest radio telescope on the planet. It is overseen from the SKA Organisation headquarters, which are located at Jodrell Bank in the UK. However, the science and engineering development is carried out by the member states. The UK's work is being mostly delivered by research groups in the Universities of Manchester, Oxford and Cambridge.

Central to the project was the aim of developing public engagement skills and experience amongst the UK SKA 'engineering community' so that a 'culture' of public engagement would be fostered as the norm as this community grows both within the UK and worldwide.

During the project 38 engineers were involved in a variety of ways: developing engagement activities at collaborative workshops, being interviewed for online profiles and being involved in delivering outreach. Outreach took place in a range of conventional and unconventional settings - including at an SKA engineering themed 'Girls Night Out' evening event (specifically targeting young women and girls) and the bluedot festival (which explores the realms of music, science, technology and the arts) held at Jodrell Bank in July 2016. During engineers' direct participation in outreach activities an audience of approximately 16,000 people was reached, the entire project reaching an audience of over 33,000 in total.

Evaluation showed that 100% of engineers involved in the outreach delivery enjoyed the experience and found it rewarding. 82% reported that the experience boosted their outreach confidence and improved their communication skills.

I will present an overview of the project and the approach taken, outlining the difficulties encountered along the way and highlighting aspects of the project that were particularly successful.

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