



# BEACON-5G Workshop and End of Project Showcase Event Report

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**Location** – Bristol Research and Innovation Laboratory, Toshiba Europe Ltd., Bristol, BS1 4ND, UK

The BEACON-5G team organised a workshop and end of project showcase event aimed at exhibiting some of the key technological innovations for Open RAN. BEACON-5G is among the winners of the £30 million UK government funding, allocated as part of the Future Open RAN Competition (FRANC), to support 5G diversification strategy. The main objective of BEACON-5G project is to realise a high-performance multi-vendor 5G Open RAN system with native capabilities of openness, intelligence, resilience, reconfigurability, and democratisation, for operation in dense urban local/private as well as public/carrier deployments. The key project partners and suppliers include Thales, Accelleran, AttoCore, Benetel, and South Gloucestershire Council.

The showcase event saw participation from different sectors including vendors, system integrators, mobile network operators (MNOs), vertical industries, regulatory bodies, UK academia, government, and local authorities. The programme included keynote talks from industry, panel sessions with industry experts focusing on challenges of Open RAN and business exploitation, and technology demonstrations from project partners.



Adnan Aijaz, Programme Leader at Toshiba's Bristol Research and Innovation Laboratory and Project Leader for the BEACON-5G project gave a talk titled *Open RAN for 5G Supply Chain Diversification: The BEACON-5G Approach and Key Achievements*. The talk provided an overview of the BEACON-5G project, describing

its two-pronged strategy for multi-vendor 5G Open RAN systems with aforementioned capabilities, and the key achievements from system integration, RAN democratisation (xApps/rApps), interworking, marketplace, and field trial perspectives.



In his talk titled *Rakuten Symphony History and O-RAN Industry Challenges*, Jeremy Fletcher, Network Consultant at Rakuten Symphony, discussed the evolution of Rakuten Symphony, highlighting Rakuten’s mobile network deployments, and the challenges for Open RAN adoption and deployment, especially in terms of investment decisions, operator requirements, interoperability, and skillset.



Peter Davies, Director (Security Concepts) at Thales UK gave a talk titled *Attacking 5G in 5G O-RAN and other Disaggregated Supply Chain System*, discussing cyber attack vectors against 5G Open RAN and their wider implications. Some of the findings indicate heavy reliance on Open RAN system integrators who are not part of cyber monitoring and adaptation systems, limitations of O-RAN security standards in terms of not adequately addressing availability and performance aspects, and overall lack of capability for responding to attacks in a timely and effective manner.



The first panel session titled *Open RAN: Are we there yet?* was moderated by Mahesh Sooriyabandara, Managing Director of Toshiba's Bristol Research and Innovation Laboratory. The panellists included Jeff Land (Head of Sales and Business Development, Attocore and Co-founder Accelleran), Jyoti Bhasin (Director of New Products and Innovation, VIAVI Solutions), and Stephen McCarthy (Chief Engineer, National Composites Centre). Arjun Parekh, Senior Manager, BT, was also invited but he could not attend. The panel discussed the maturity of Open RAN and challenges and opportunities against the backdrop of standardisation, government policy initiatives, public/private investments, and technology trials.

The second panel session titled *Open RAN Business Exploitation and 5G Diversification* was moderated by Thomas Berton, Innovation Analyst at Toshiba's Bristol Research and Innovation Laboratory. The panellists included Adam Lowes, Head of Programme Development, DSIT, Jeremy Fletcher, Network Consultant at Rakuten Symphony, Alex Smith, VP Product Management, Antevia Networks, and Tom Arnold, Sales Manager, WSO2. The panel debated Open RAN market and business models, barriers to adoption, and the impact of open network programmes on supply chain.

There was also a dedicated speaking slot for key suppliers during with AttoCore and Benetel shared their experiences from the BEACON-5G project.

The demonstrations at the event included live multi-vendor 5G Open RAN systems, end-to-end network slicing and digital twin solutions, marketplace integration solutions, interworking of white-box and vendor-based system components, Open RAN cyber security solutions, and use-cases exploiting the capabilities of 5G in general and Open RAN in particular.



The participants showed significant interest in the field deployment of multi-vendor 5G Open RAN system by the BEACON-5G project. With a 4.3 km fronthaul link, this deployment is at one of the busiest traffic junctions in the South Gloucestershire region. The deployed local/private 5G network is currently operational in band n77. It provides connectivity for sensors, CCTV cameras and workforce, playing a crucial role in improving traffic management and road safety aspects as part of South Gloucestershire Council's digital transformation initiatives.

During the DSIT speaking slot, Adam Lowes discussed the objectives of ongoing and future open networks programmes and acknowledged some of the key achievements of the project and their impact from 5G diversification perspective.

The closing remarks were given by Mr. Masakazu Watanabe, Senior Vice President, Toshiba Europe Ltd. He thanked all the project partners for their contributions toward realising the vision of BEACON-5G and encouraged further collaboration. He also thanked the UK government (DSIT) for funding support and leadership in open networks programmes.

