

# Insights from cohort #1 and lessons learned



# Table of Contents

Document Reference Index	2
Glossary	3
Executive Summary	4
Cohort Overview	5
Engagement within the Ecosystem	6
Participant Feedback	7
Overall Engagement	7
Cohort #1 Testing and Measurement Activities	8
- Integration and Benchmarking insights	8
- Swap Testing insights	10
Summary Feedback of Cohort 1 Engagement	15
Conclusion Remarks and Future Work	17
Next steps for SONIC Labs	18

.....

## Glossary

3GPP	3rd Generation Partnership Project
5GC	5G Core
CoP	Community of Practice
CU	Centralised Unit
DSIT	Department for Science, Innovation and Technology
DU	Distributed Unit
E2E	End to End
eMBB	Enhanced Mobile Broadband
IOT	Interoperability Testing
MCS	Modulation Coding Scheme
MIB	Master Information Block
MNO	Mobile Network Operators
PDU	Protocol Data Unit
RAN	Radio Access Network
RIC	RAN Intelligent Controller
RU	Radio Unit
SA	Stand Alone
SIB	System Information Block
SISO system	Single-input and single-output system
SONIC Labs	SmartRAN Open Network Interoperability Centre
TIP	Telecoms Infra Project
UE	User Equipment

## Executive Summary

The Smart RAN Open Network Interoperability Centre Laboratories (SONIC Labs), is a partnership between Digital Catapult and Ofcom, and funded by the Department for Science, Innovation and Technology, (formally known as DCMS) was established to evaluate the maturity of the Open RAN products and the openness of the implementation of the interfaces specified by the O-RAN Alliance.

This report raises insights of participants and industry experts into the technical journey of Cohort #1, and the lessons learned, as well as the insights from the wider engagement with the vendors. Within the report there it covers how SONIC Labs has engaged within the ecosystem and the positivity of participant feedback has been taken into account and will be used to help benefit the wider programme.

This report forms part of a deliverable that builds on the body of work that was completed as part of the SONIC Labs activities on commissioning of Cohort #1 participants and looks to make informed insights from Cohort #1 testing and measurement activities.

This report is divided into the following sections:

- 1. Introduction to the SONIC Labs programme** - Background and objectives of this deliverable.
- 2. Cohort #1 Testing and Measurement Activities** - The announcement of the Cohort #1 vendors and outcomes of the test results from the Cohort #1 systems.
- 3. Swap Testing Insights** - An exploration of the ease of integration and switching of Open RAN components from different vendors, and how it is vital for the development of Open RAN.
- 4. Engagement and Innovation Lessons Learned** - Highlights from the Community of Practice sessions, ecosystem engagement and RAN Intelligent Controller (RIC) adoption as well as the interaction with the SONIC Labs team.
- 5. Conclusion Remarks and Future Work** - The results of the technical journey so far and the insights which must be implemented into future deployment.

.....

## Cohort Overview

In the context of the programme, a ‘cohort’ refers to a group of specific vendors engaged for a set time period to collaboratively test the integration of their products in a complete E2E Open RAN system in the SONIC Labs facilities. This report presents an overview on the test results coming out of the commissioning of Cohort #1 systems. The technical activities of Cohort #1 were carried out between August 2022 and February 2023.

Engagement with the Open RAN vendors began from February 2022 through the SONIC Labs team and since the beginning engagement, the development of the overall Open RAN ecosystem, specific products and vendors has improved.

## Introduction to the SONIC Labs Programme

The SmartRAN Open Network Interoperability Centre (SONIC Labs) has been established as a joint programme between DSIT (formally DCMS), Digital Catapult and Ofcom, as part of the UK Government’s [5G Diversification Strategy](#). This programme is working to foster the emergence of new solutions in the telecom supply chain in the UK, focusing on multi-vendor open, disaggregated and software-centric network products, solutions and services, starting with Open RAN.

With the SONIC Labs programme focussing on Open RAN, and the potential for disaggregated RAN to be a game-changing technology in the diversification of the telecoms supply chain, it offers the potential to drive investment and growth for the UK telecoms industry as well as the UK economy as a whole. The SONIC Labs programme aims to build upon the foundation of the first SONIC Labs project (SONIC-1) that took place in 2021, in driving the necessary industry learnings and conversations, as well as the technical innovations and policy environment required to achieve this.

The key issues that the SONIC Labs programme aims to address are the lack of diversity in telecoms providers and a notable underrepresentation from UK vendors as a key provider of 5G access hardware and software on the global stage. Diversification is focussed on in particular as it is regarded to be a driver of both price competition and choice to establish an ecosystem that offers choice in the market. Building the UK’s ecosystem and relationships in order to assist the emergence of the UK as a leader in 5G adoption, integration and solution provision is one of the primary ways in which these issues can be addressed, so as to benefit the UK telecoms industry and overall economy in both the near future and on a long term basis.



## Engagement within the ecosystem

Following the commencement of the programme in February 2022, outreach to potential vendors has been accelerated, with the team growing to support this, as well as to focus on engagement with key organisations.

The SONIC Labs programme engaged with 27 potential vendors of Open RAN products from the UK as well as international vendors to form the first cohort. In addition to this, other stakeholders were engaged with, both to gain their industry insights and to gauge interest.

Digital Catapult unveiled in 2022 the Open RAN vendors that have embarked on the SONIC Labs Cohort #1 technical journey:

- Cohort #1 Press Release (1) - [Digital Catapult unveils five companies to explore the potential of Open RAN technology on its SONIC Labs testbed](#)
- Cohort #1 Press Release (2) - [Digital Catapult reveals Capgemini in the UK as the latest company to join its SONIC Labs testbed](#)

In Cohort #1 of SONIC Labs the team had the pleasure of collaborating with companies that were part of SONIC-1 such as Benetel, Effnet and Phluido as well as welcoming new companies such as IS-Wireless located in Poland, Capgemini and Wireless Excellence (CableFree) from the UK.

The selection process of the six Open RAN vendors participating in Cohort #1 followed a process that was fair and consistent in line with the aims of the SONIC Labs programme. It should be noted that the engagement with the Open RAN vendors that were involved in Cohort #1 started in February 2022, with the activities being representative of the activities in future cohorts. This includes pre-integration engagement, initial technical engagement, agreement on low level design and proposed swapability experimentations.

The technical activities were carried out from August 2022 and February 2023.



The engagement activities and the technical journey of Cohort #1 are detailed below.

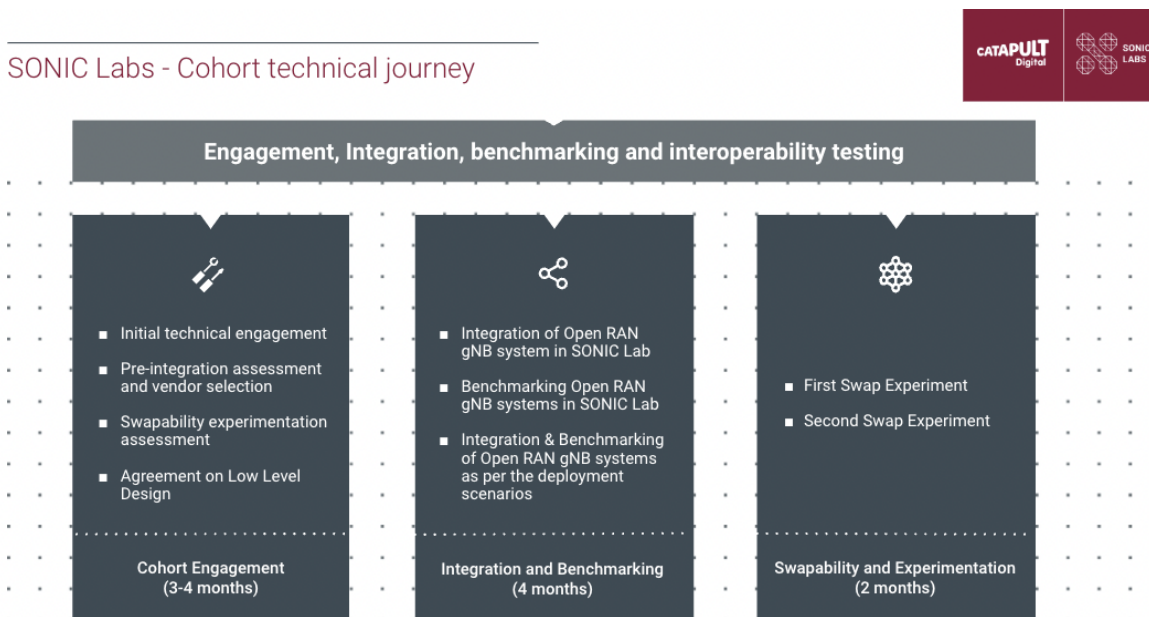


Fig. 1 - Cohort engagement and technical journey

## Participant feedback

SONIC Labs Cohort #1 discussions were carried out with the participants, through the ongoing seven months of the technical journey, including in community of practice sessions and Cohort interviews around broad topic areas:

- **Overall engagement with the programme**
- **Participants' technical plans and roadmaps**
- **Energy efficiency**
- **Market perspective/commercialisation plans**
- **Future engagement with the ecosystem**

## Overall engagement

Participants expressed a positive experience of the programme, particularly with regards to both the attitude and approach of the technical team, as well the interaction with the innovation team and The programme team's overall ability to address and solve any roadblocks, and bring the other participants together. With participants expressing that due to the high technical expertise of the SONIC Labs team, the technical journey has been successful.

# Cohort 1 Testing and Measurement Activities

## Integration and Benchmarking Insights

SONIC Labs Cohort #1 included testing of end to end functions and participants have shown their willingness to participate in the programme through a collaboration agreement. They have also provided their hardware and software to be integrated and tested in the SONIC Labs over the seven month process. Throughout the technical journey of Cohort #1, the selected organisations, along with Digital Catapult, who played the role of the system integrator built three Open RAN systems formed from eight Open RAN components. Each system was composed of an Open RAN radio unit (O-RU), distributed unit (O-DU), and central unit (O-CU), and also a 5G core (5GC). The deployments are based on 5G standalone architecture (5G SA), geographically located at Digital Catapult (London). A Druid 5G core network was used as well as an emulated 5G core network offered by one of the participants.

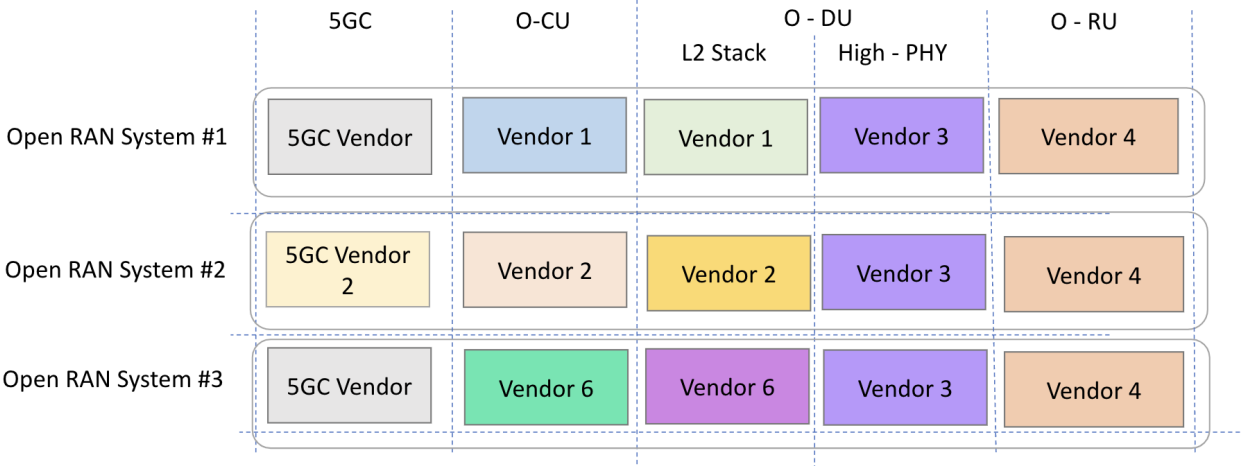


Fig. 2 - Cohort 1 Open RAN systems

### Cohort 1 Open RAN System #1:

The deployment of O-CU and O-DU for Cohort #1 Open RAN System #1 was straightforward as they were provided as containerised applications. The integration of Open RAN chain with 5GC was also straightforward and plug-and-play proved successful taking one day to complete.

The integration of the RU and DU was also quick, carried out in less than a week. The participants and SONIC Labs team mutually agreed that the layer1/layer2 logging tools are essential for testing control plane/user plane establishments (e.g. Keysight Nemo tool).

.....



The E2E performance testing had good results in terms of average throughput attained in downlink and uplink. The average latency was also close to the E2E latency expected for the testbed setup, similar to that observed in the SONIC-1 systems. However, the participants and SONIC Labs team agreed that there is room to improve the performance of the system to get closer to theoretical maximums.

The lesson learned related to the integration work for this system indicated that the accurately specifying frequency band in the handset might be essential for successful integration of the system. With small modifications in the configuration of the distributed unit such as changing the frequency band and the power level, the user equipment was able to scan the network, which was not possible before making these adjustments.

**Cohort #1 Open RAN System #2:**

A monolithic implementation of 5GC and O-CU in one container image enabled a more flexible solution and meant less integration efforts but at the expense of not being able to verify the N2/N3 interfaces. The F1 interface integration was once again straightforward (plug-and-play) as the CU and DU were provided by the same vendor. The E2E throughput was less than theoretically achievable performance for the used configuration, as indicated by the average throughput attained on the downlink and uplink. The average E2E latency was larger than the expected E2E latency of 5G systems, and this was an area requiring more work to improve and optimise the E2E system.

**Cohort #1 Open RAN System #3 :**

The O-DU and O-CU integration with the 5G core for this system was straightforward and plug-and-play, taking less than a day. The F1 integration was successful and straightforward as the O-CU and O-DU were provided by the same vendor.

For E2E performance testing of this Open RAN system, the average throughput attained on the downlink was noted to be satisfactory, but the uplink was below the theoretical peak, and the average E2E latency was again larger than the expected values for eMBB slices of 5G systems. These results indicated that the configurations of the system will require changes to improve the performance, particularly for the uplink throughput and latency.

The deployment of this system was on bare metal and not containerised, and as such both more challenging to deploy and manage.

In addition, it has been observed that the DU and CU need to adjust power levels to a certain level for the user equipment to receive system information block/master information block. The modulation and coding scheme (MCS) was not adaptive and fixed to specific configuration, i.e. if MCS is hardcoded with the higher scheme that cannot be supported for the given channel condition, initial cell setup may fail. Therefore, hardcoding of MCS should be avoided.



The slice differentiator parameter is an optional value, which adds another layer of differentiation in the slice. It was noted that if a 5G core does not support standard deviation parameters, it should be configured in O-DU/O-CU.

**Key takeaways from the integration work for the three Open RAN systems include:**

- SONIC Labs engagements helps vendors to accelerate their product maturity, e.g., the F1 interface for Vendor 1 was not initially ready, but then upgraded and passed the interoperability test cases during Cohort 1 engagements
- The integration with 5G core was straightforward for all the systems.
- The implementation and deployment of containerised applications is easier than the units that are provided as bare metal binaries.
- Where there are hardcoded parameters, there are more issues in bringing the system into operation
- For the E2E performance results (i.e., latency/throughput) to reach optimum (theoretical) values, further tuning and optimisation of Open RAN components are required

Following the integration testing of the Open RAN systems some vendors are already working on new software releases to be ready for the following cohorts.

## Swap Testing insights

The last stage of the cohort’s technical journey, as detailed in the diagram Fig. 1, was dedicated to the swap experimentation in which one or two Open RAN products that are part of the system are swapped (replaced) by another Open RAN product from the same vendor or other vendor in order to test the interoperability and conduct the E2E testing.

In Cohort #1, two different swap experiments were conducted using different Open RAN components from other vendors to explore the ease of integration of Open RAN components from different vendors; the ability of switching between them; and interdependencies of Open RAN technology building blocks.



The diagram below indicates the two sets of swap experiments for performed in Cohort 1:

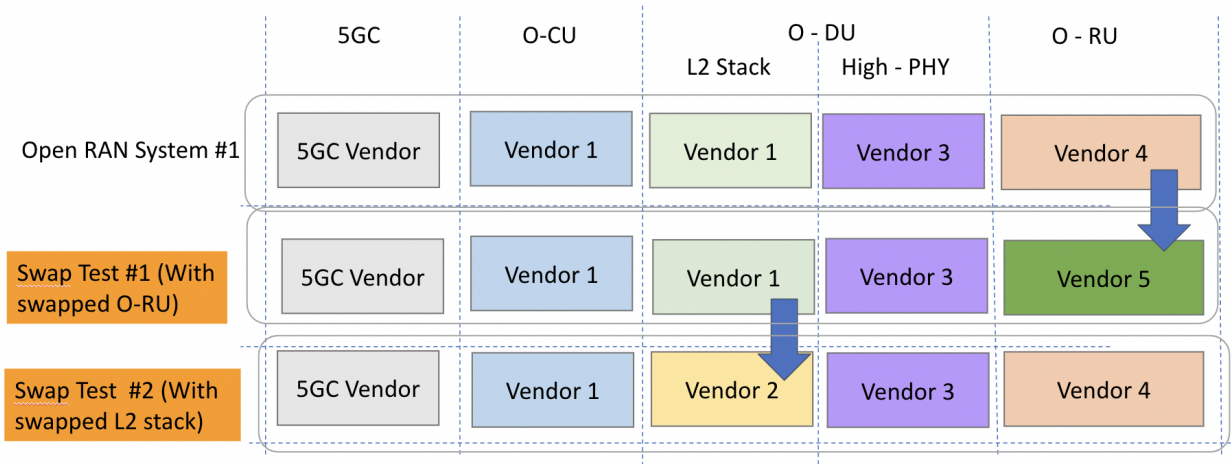


Fig. 3 Swap experiments: Swapping O-RU and L2 stack with products of different Open RAN vendors.

During the swap experimentation of the two systems it was noted that the swap testing process came with challenges and were not straightforward plug-and-play solutions, and as such, the systems require configuration changes before a successful integration of the whole stack.

Further insights from swap experimentation of the RUs noted that the swapped O-RU supports the upper band of the n77 frequency range (3.8 - 4.2 GHz). Although it is useful for the UK market to support shared network deployment models, there is not much user equipment available in the market to test this band in standalone mode. Furthermore, the IP address of O-RU and O-DU need to be configured for each other (i.e. in the configuration file of O-RU and O-DU) during the integration of each pair of devices under tests.

In addition, for the first swap test (the fronthaul interface), attempts were made to test a rooted Xiaomi UE with Druid core, and in this case the PDU session was not stable. All the partners involved in the testing suggested to use Open5GS core because the components were tested and working with this unit. To use Open5GS core, modifications of the network architecture (mainly N2/N3 interfaces) of the baseline system had taken place.

The integration of the second swap was not completed, as the F1 set-up was not entirely successful between the O-CU and O-DU, and as a result, further improvements will be required in the future.



**Key takeaways from the swap experimentation included the following :**

- For all three chains, O-CU implementation had no disaggregation between O-CU-CP and O-CU-UP (E1 implementation was not complete)
- The product swap testing was not plug and play and would therefore require further efforts such as configuration changes before successful integration of the whole stack. In conclusion, it is beneficial to bring integration and interoperability testing earlier in the product development lifecycle.
- The network functions for O-CU and O-DU were virtualised and docker images were provided by the Open RAN vendors participating in this programme. Additionally, the vendors also provided docker compose files which was beneficial in helping simplify the network deployment.
- At this stage of development, the implementations of Open RAN components are mainly command-line based.
- Despite of these swap testing challenges, we could successfully integrate the 5G protocol stack for fronthaul swap test, and conduct the related interoperability and performance testing

**Concluding Remarks**

The technical journey of Cohort #1 has provided the SONIC Labs team with the following insights and lessons to take away in future cohorts and in this continuous development of Open RAN:

- There is a need for some configuration changes and updates that the Open RAN vendors would need to look into in order to reach a successful integration of the whole stack, which participants have shown a willingness to do.
- The IP address of O-RUs and O-DUs need to be configured for each other during the integration of each pair of devices under tests in order to speed up the testing process and reduce the number of multiple command lines.
- From the conducted test campaign, the SONIC Labs Cohort #1 vendors made good progress and supported the team towards ease of integration between products of different vendors.

.....

## Engagement and innovation lessons learned

During the seven month Cohort #1 journey, The SONIC Labs team engaged with the vendors through weekly technical meetings, ad-hoc troubleshooting meetings and in other sessions through which vendors were able to provide feedback from the ongoing technical work, share best practice and discuss engagement improvements.

With this idea in mind, as an improvement from the SONIC-1, Community of Practice sessions were implemented to support participants in SONIC Labs by offering a collaborative space for sharing expertise and learnings that can be meaningful to all vendors. These sessions also sought to encourage dialogue, collaboration and building best practices useful for the SONIC Labs programme and its long-term impact.

Overall, the vendors acknowledged the importance of having SONIC Labs as a space for testing but also as a stage towards the commercialisation path of their products. The feedback provided by the Open RAN vendors confirmed the necessity of having a space in which vendors can showcase their products and connect with the wider ecosystem, MNOs and customers. The participants agreed that preparation work around the deployment of products is necessary to maintain the flow of the process in general.

Feedback was also received from the participants on the plug-and-play solutions used in experimentation. Participants noted that the set up of layer 1 vendors and fronthaul was successful, and that the DU and CU integration with different vendors is well positioned to progress. Positive feedback was also provided regarding vendors resolving integration issues. Creating resources such as low level design diagrams has helped to support set-up and finally the learnings to date will help provide the opportunity to go beyond plug and play for future cohorts.

There were of course suggestions on ways to improve such as a more dynamic approach should be considered to hard coding as opposed to relying on previous systems within SONIC Labs. The cohort also suggested that SONIC Labs should gradually progress further integrations with DU and CU vendors and awareness needs to be raised regarding E2E users who would often look at the DU as a monolithic block.

Regarding the interpretations of standards, the cohort's results showed that there were some achievements of standards defined by 3GPP/ORAN. The participants in Cohort #1 also found that the implementation suggestions provided by the O-RAN alliance had been beneficial and that there were a range of options in terms of interface and architecture through plug and play. Suggestions were made regarding the way to improve the interpretations of standards. It was suggested that SONIC Labs should look into testing RIC functionality alongside the standards (within RIC), and that there needs to be assurance that vendors are following the suggestions of the O-RAN alliance.

Exploring more opportunities in the fronthaul interface and the barriers and reluctance to open standards in Open RAN were deemed to be important factors for improvement and further development. Other relevant topics which are of importance to SONIC Labs included programme

.....

management and to discuss goals and expectations for the first phase of testing. It was also noted that it is of critical importance to continue the engagement with the four core mobile network operators and identify knowledge gaps.

Other valuable feedback received from the vendors was related to the importance of engaging with the ecosystem who could help vendors scale and expand the scope of operations, especially building relationships with system integrators, research and academia, UK public bodies and the MNOs.

The participants in Cohort #1 highlighted that it can be challenging to engage with the above-mentioned players of the ecosystem, especially when finding the right context for collaboration between vendors, an area in which it has been identified that SONIC Labs can provide value. There were suggestions from participants that SONIC Labs should provide an opportunity for vendors and alumni to collaborate outside of the programme. Creating more engagement opportunities with MNOs and deployment scenarios with future cohorts could also support the exploration of the Open RAN market.

The cohorts highlighted specific topics in which they could gain a better understanding from the wider ecosystem:

- Technical timelines and proximity to deployment for range of products
- Understanding the market fit of products and connections between different vendors
- Identifying an organisation’s motivations for going the Open RAN route to better understand how vendor solutions fit needs.

During these sessions we also learned that the connections between vendors were occurring through the system integration process and relationships formed through the Telecoms Infra Project groups. The [Telecoms Infra Project](#) is a global community of companies and organisations who work together to accelerate the development and deployment of open, disaggregated, and standards-based technology solutions.

On the topic of integration, it was noted that smaller vendors may not be able to provide the in-house integration skills that may be required, and that their product experience will result in different performance levels in third-party labs. There are still some knowledge gaps when it comes to the integration but participants agreed that some companies will not have complete understanding.

When it comes to integration and using different components from vendors it is not something that is considered common and this places greater value on how this is communicated out to less technical partners. Technical challenges found in this cohort include UE tools and bandwidth limitations, however the participants agreed that they are still early adopters so will need to deal with the ongoing work that needs to be completed. After completing existing processes in Cohort

.....

#1 such as better building and testing, the CU and DU vendors had more interactions than previously and these are considered more beneficial for long term sustainability. There was far more interaction with the DU and CU software vendors, which are mirroring some of the practices in SONIC Labs of non O-RAN systems, and there is always room to test these E2E in terms of performance.

It was highlighted that even though layer 1 vendors do not directly engage with the RIC itself, it is an area of importance to try and avoid any obstructions. Members suggested that it would be beneficial to understand how teams are built inside the organisations to improve how vendors collaborate, as well as the adoption of RIC. Creating those connections between teams and understanding their skill sets is essential for the future of Open RAN testing.

Feedback received from the participants highlighted that due to the novelty of Open RAN in 5G, there are understandable performance challenges. However, the participants in Cohort #1 are confident in its promise to the development of Open RAN.

In terms of RIC adoption, cohort participants agreed that RIC is an important function of Open RAN and has the potential to make RAN smarter, particularly in areas of automation and deployment. It is essential that the adoption of RIC increases exponentially over the next year amongst future cohort participants. It was also discovered that there is a growing amount of xApps on the market which help to support and test the interfaces. Members agreed it would be beneficial in the future to have a marketplace for these xApps.

## Summary feedback of Cohort 1 engagement

Participants noted that the benefits of the programme correlated with their expectations. They were able to receive positive exposure from the programme, which allowed them the opportunity to work with different participants. This particular opportunity to work with other Open RAN vendors was seen as an incredible benefit which SONIC Labs helped facilitate and ensured the focus was on multi vendors.

It was also noted by participant vendors that they gain significant exposure in the UK market, and would like more global market exposure, something that SONIC Labs is already in the process of working towards. It was also understood that participants see the participation in this programme as valuable and are aware that SONIC Labs mirrors other testbeds work in a commercial environment but with the advantage that SONIC labs is adding impartiality and verification, independent credibility.

As highlighted previously, the participants expressed that they would appreciate more exposure to the MNOs, and also agree that the participation in the programme has demonstrated that the E2E achieve features are working and as the Open RAN matures and more vendors will migrate to the O-RAN standards the market will see more enhanced plug and play features.



One insight that was gained was how the participants have learned on how to be flexible to integrate to third party solutions. Participants also remain pleased with the benefits, learnings and opportunities gained from the programme and as a result, have applied to participate in Cohorts 2 and 3.

Participants appreciated the opportunity to be part of SONIC Labs, with their expectations being met, and they expressed that they would like to have the chance to be part of more systems and swaps. Lastly, participants have expressed that the integration with Druid core was a quick integration and a significant benefit for vendors. Positive feedback from participants is that SONIC Labs should continue the engagement with the partners, share regularly the work that needs to be done for the benefit of the technical journey, all things that SONIC Labs remains committed to doing.

**Forward Look:**

The participants requested the forum to disseminate the massive knowledge base that the UK centred market community is creating and work on/with more complex scenarios. Participants would also like to see interoperability topics and multi vendors for testing and swap CUs. The capabilities of logs are particularly important to the participants, and some noted that the future SONIC labs could focus on performance and functionality.

Participants with RUs would appreciate being able to test different frequency bands and addressing different use cases. Participants will also focus their collaboration on partners that deliver something that is easy to install, with no pre-integration required. They have plans to work with partners that have already engaged, and to explore new engagements as well as seeing more street level tests and open field testing, as opposed to just lab testing. Participants would like to work together with all vendors including RIC xApps to observe the situation and improve the operation.

Participants have also expressed the belief that energy efficiency is one of the important topics, with ARM platforms believed to bring significant improvement in this area.

**Market Perspective:**

The vendors are continuing developing their solutions and looking for features that enable greenfield enterprise deployment. As well as additional features and enhancement features to their products with an aspiration of working with bigger operators in the more traditional macros space. The SONIC Labs programme has confirmed a commitment to commercialisation in future phases, and will continue to assist vendors in better understanding the UK market as demand grows domestically.

To maintain maximum flexibility and have products that are useful for the long run (hardware and software). It is noted that MNOs take much longer, potentially up to 10 years to establish as a supplier.

.....



**Certification:**

Participant vendors are planning to certify their products and some of them would like to get the O-RAN badge certification. Although the RU vendors will be more focused on emissions and safety, it is acknowledged that there are many different certifications going on, so the more markets you do the more certifications you need. Participants see the logic and value in the results of collaboration, more than the certification.

## Conclusion and future work

A clear conclusion from Cohort #1 is that the programme thus far has yielded multiple positive outcomes. In line with what was set out to be achieved at the inception of SONIC Labs, this part of the programme has delivered and demonstrated the need for integration of all systems with specific reference to the 5G core and plug-and-play.

It is understood that further work would need to be conducted for the E1 interface to be successful, meaning that the centralised unit would need to be disaggregated between the control plane and user plane, a task of which the SONIC Labs team plans to choreograph in order to both achieve this and showcase it at the earliest possible opportunity.

Further learning that can be concluded is the positive outcome related to the integration of the RU and DU. This clearly demonstrates that with what has been done on testing there is no more tolerance and resilience from testing.

What has been learned so far and will be further worked upon is that certain aspects, such as the user equipment, needed more attention and after collaboration throughout the required modifications allowed for a pragmatic solution.

What is evident from programme findings and lessons learned is that throughout the process the programme has benefited hugely from having this cohort available and it further underpins the relevance of the work being conducted by SONIC Labs and its partners.



## Next steps for SONIC Labs

Following the conclusion of Cohort #1’s technical journey, The SONIC Labs team will continue to engage with participants and external Open RAN vendors until the end of the programme. The team will continue to support them as well as the innovators with solutions at a higher Technology Readiness Level (TRL) with potential new routes to market including deployment of networks and technical testing. The team will also continue to provide brand exposure and access to potential clients, identify industry-led use cases and support industry and investors in understanding challenges and opportunities for implementation of Open RAN 5G.

As the majority of vendors have expressed their interest to engage with system integrators as well as with the MNOs to understand requirements, it will become essential for the SONIC Labs team to support the Open RAN vendors to meet with the wider ecosystem, and enhance their brand exposure.

In the upcoming months Cohort #1 vendors will be involved in new activities that are part of the ‘Commercialise’ stream. This stream was established in order to support vendors in growing their understanding of the UK Open RAN ecosystem, and how to effectively penetrate the market with their Open RAN products. Activities in this stream include the following:

- Providing opportunities to build brand exposure and grow connections to key ecosystem partners: MNOs, testing labs and other potential end users.
- Creating new connections that provide vendors with valuable insights into how to further develop their products to align with future customers’ needs once interoperability testing is complete, and to provide direct contacts in potential customer organisations.
- Identifying where Open RAN’s end users currently sit in the adoption cycle, and where targeted interventions could support users in investing more into Open RAN products
- Involving a variety of engagement methods, including webinars, roundtables, and interviews; and leveraging CoP sessions to give Open RAN suppliers exposure to different end users.

This will allow for greater understanding of the nuances within the UK market in comparison to other markets, all of these will help to enable and encourage innovative suppliers of 5G Open RAN products to participate in the UK telecoms ecosystem and facilitate a path towards deployment by UK mobile network operators of Open RAN technologies in UK mobile telecommunications networks by 2025 and standalone 5G coverage for all populated areas by 2030.

For more information on SONIC Labs, please visit the [SONIC Labs web page](#) to register your interest and a member of the team will be in touch.

