

Q1

What providers, broadband plans, performance metrics and services should we consider removing or adding to the testing programme?

What providers?

Sky believes the testing programme should include all providers, including new start-ups and smaller providers, subject to access and implementation being funded by the Commission.

Services

Sky believes the current SamKnows / MBNZ solution is no longer fit for purpose given the need to address changing technologies. Sky agrees with the Commission that the programme will need to add to the technologies it tests as well as the plans that are tested to monitor the development of the market and provide information to consumers to inform their decisions on which plans, and products are likely to best meet their needs. This should extend to testing of 5G Fixed Wireless services, satellite services and other technologies as they emerge in greater numbers in 2022 and Fibre with speeds greater than 1 Gbps. The Commission may wish to consider the willingness of Fixed Wireless customers (with capped plans) to participate / volunteer if any testing solution impacts data usage.

Wifi

We agree that in-home performance (or quality of experience) has become increasingly important, however our recommendation to the Commission is that WiFi performance should not be tested in customers' homes.

WiFi has too many environmental variables - a small difference in location of test devices can skew results. We don't believe testing could be accurately standardised given this variability.

While the MBNZ programme should continue with end-user testing for WAN performance, we recommend all included devices should be put through a set of lab tests to inform the creation of WiFi benchmarks.

Sky proposes the Commission consider funding independent lab-testing of end user devices, benchmarking their performance on a range of common devices with the goals of

- Generating an industry wide set comparative and easily understood ratings for customer devices, e.g. star rating

- Identifying if any devices are incompatible with plans, such as a device that can only support 2.4 ghz being bundled with a gigabit plan
- Creating a structure to separate out WAN and LAN/WiFi testing and metrics so consumers understand both parts of the equation when making a purchase decision

Sky proposes the tests include (not an exhaustive list):

- Peak performance testing in optimal conditions
- Load testing of 5, 10, 20, 50 devices
- Testing of devices with and without mesh
- A range of different sized simulation homes
- A range of different construction materials
- How the device performs through various numbers of walls
- How the devices perform at various ranges
- How the devices deal with interference from neighbouring devices
- Include raw speeds, max speeds, latency, jitter, uptime, power consumption
- Testing of both LAN and WiFi

Q2

How should we approach onboarding or adding new providers, products and technologies?

Sky agrees that to deliver to the Commission's objectives the solution needs a greater coverage of broadband providers, particularly smaller providers, with a clear pathway to add new providers as the market develops. Sky proposes the Commission should fully fund inclusion of new providers (beyond the current ISPs that were able to leverage the Samknows whitebox trial) to the testing programme, along with any cost impact to the current participating ISPs associated with changes to the current programme. We also propose the Commission should also ensure any measurement solution is easy to implement (low internal effort) and addresses challenges with implementing a speedy roll out to small customer base and, further consideration given to the challenges facing small / new ISPs in achieving wide geographic coverage.

The testing programme solution should address the current lag in measurement of new products.

Q3

Should we encourage greater collaboration between the testing provider and the broadband providers to facilitate the testing of new products?

Yes

Q4

What options should we consider, to recruit and maintain volunteers to support greater coverage of products, providers and plans?

We note the Commission advises recruiting and maintaining enough volunteers has been a challenge for the existing programme, with only Fibre 100/20 (NZ's most popular plan in

2021) and FibreMax (950/450 Mbps) regularly being able to show performance broken down by provider. This includes a number of larger ISPs with large customer bases and broad geographic coverage and also with Commission subsidised / funded roll-out of whiteboxes. Sky proposes recruitment should extend to staff and contractors of ISPs (testing solution should ensure independence of reported data) and the use of incentives for take up should be permitted and ideally also funded by the Commission, particularly to ensure the Commission's desire to include a larger group of ISPs, including new start-ups / smaller ISPs.

Q5

What level of support should providers offer to the programme and to volunteers to promote the programme?

Sky believes the Commission should fund access to / implementation of the testing programme by ISPs including incentivising take up by ISP customers.

Q6

Should we consider applying different reporting thresholds for some testing, for example smaller sample sizes, where it has been difficult to get enough volunteers?

Sky supports applying different reporting thresholds for some testing, potentially by reducing sample sizes to allow smaller providers to be included in the programme more easily and to cater to new technologies – eg Satellite.

Q7 How often do you think we should report test results? Why?

Sky supports retaining the existing quarterly approach. More regular reporting would be onerous in terms of effort / resourcing.

Q8

What changes should we make to our current testing and reporting to better support consumer choice?

Facilitate (fund) access / inclusion of all providers.

Q9

What are the practical, technical or commercial implications for providers of moving to an embedded software-based testing approach?

Sky acknowledges the embedded software approach may address the challenges of achieving sufficient volunteers (and the need to incentivise for take-up and geographic spread), however Sky favours the current 'in-home probe' physical method. This is on the basis the embedded software approach requires device manufacturer support, may well be a costly exercise, and may not be possible or otherwise costly to implement. As the Commission notes there could be privacy and / or security risks associated with this approach. It also doesn't address the BYOD model.

Q10

What implications would an embedded software-based testing approach have for licensing for modems/third party firmware, warranties, network load and modem capability?

As per above comments at Q9.

Q11

What implications does this approach have for privacy and trust for consumers and providers? What safeguards would need to be in place to ensure the privacy of consumer data including cybersecurity and privacy of consumer details?

As per above comments at Q9.