



5G Malaysia Demonstration Projects

Frequently Asked Questions

5G Demonstration Projects

1. What is the objective of 5G Demonstration Projects?

- The 5G Demonstration Projects aims in facilitating, developing and fostering the potential development of 5G use cases in real-time and subsequently, drive the growth of the 5G ecosystem in the country.
- It is also aims to create awareness and stimulate demand for the use of 5G technology.

2. When will the demonstration of 5G projects begin?

- The 5G Demonstration Projects will begin from October 2019 to March 2020, a total of six (6) months with 32 5G live sites in six (6) states and locations – Federal Territory of Kuala Lumpur, Kedah, Perak, Pulau Pinang, Selangor and Terengganu.

3. What are the criteria to participate in 5G Demonstration projects?

- Participation on 5G Demonstration Projects is subject to the following conditions:
 - ✓ Must be funded by industry
 - ✓ No spectrum obligation to MCMC
 - ✓ Abide to guidelines for experimental trials, experiments and demonstration systems
 - ✓ Comply with the 5G Demonstration Projects CFC Document Guidelines

4. What is the response from the industry players on 5G Demonstration Projects and how many companies have submitted their proposals?



- The response for 5G Demonstration Projects is overwhelming. Following our Call for Collaboration in July 11, 2019, 11 companies submitted their proposals.

5. What is the total sum of investment into 5G Demonstration Projects?

- Participating companies for the 5G Demonstration Projects are collectively investing close to RM116 million to run 32 live sites across six (6) states and locations in Malaysia.

6. What are the 5G use cases that will be showcased during the demonstration?

- About 55 use cases across nine (9) verticals - agriculture, education, entertainment/media, digital healthcare processing and manufacturing, smart transportation, oil and gas, smart city and tourism will be demonstrated by eight (8) participating companies.
- They are- Altel, Celcom, Digi, edotco, Maxis, Telekom Malaysia Bhd, U Mobile and Petronas.
- Some of the use cases include Remote Diagnosis, Medical Tourism, Robot Concierge, Augmented Reality, and Vehicle Tracking.

7. Where are the 32 live 5G sites in this 5G Demonstration Projects?

The 32 live 5G sites will be set up in the identified areas within the six (6) states and locations, Federal Territory of Kuala Lumpur, Kedah, Perak, Pulau Pinang, Selangor and Terengganu.

8. What's next after the 5G Demonstration Projects completed by next March?

- Potential 5G use cases will be identified and subject to commercialisation
- The move is expected to impact not only the country's economic competitiveness but also the realisation of Malaysia's aspiration to become the world's leading 5G technology frontier.



9. Now that we have eight (8) companies, 55 uses cases at 32 live sites in six (6) states and locations, will MCMC open for more interested companies to demonstrate their use cases? Can interested parties still can submit their proposals?

MCMC is willing to listen to any proposals for our further consideration.

10. How about other states' participation in 5G Demonstration Projects? Are they still keen to participate?

MCMC is willing to listen to any proposals for our further consideration.

11. What about government use cases? Are there any takers for government use cases?

No.

About 5G Malaysia

12. Why 5G is needed in Malaysia?

To further drive the economic growth of the country and to improve quality of life of the Rakyat.

13. Will 5G lower the cost of using mobile services?

It is still premature to identify the cost of 5G services at this moment.

14. Will 5G services made available in the rural areas?

- The National Fiberisation and Connectivity Plan, of which 5G is a component to it, is an inclusive and nationwide plan to fiberise and connect the whole country, including rural areas.
- MCMC and the Government will ensure no areas are left behind. We will continue to bridge any service gaps using the most suitable and available technology.



15. What are the economic impacts of 5G in Malaysia?

5G will be a vital catalyst that will enable us to take advantage of the opportunities and capabilities of Industry4WRD. 5G will stimulate the emergence of start-ups and small businesses, opening the door to create products and services unimaginable before. 5G will be able to meet the speed and connectivity that IoT demands, unlocking huge opportunities for businesses. Businesses will be able to more easily experiment with and leverage disruptive technologies such as drones, artificial intelligence, robotics and others.

Infrastructure

16. When 5G will be made available in Malaysia? What are the critical requirements to deliver 5G services?

- MCMC is working with multiple stakeholders including service providers to make 5G service available commercially in Malaysia from third quarter of 2020.
- Extensive and reliable backhaul network besides sufficient spectrum are key to this.
- From the legislative aspect, all industry sectors must update their regulations to enable the delivery of 5G services to the industries and public.

17. Implementing 5G means more sites need to be built or construct, would 5G infrastructure development be a part of the 2020 budget? Where would the funding come from?

- Generally, the individual licensees will take up rollout of infrastructure. To minimise costs and duplication, they will potentially be sharing the infrastructure amongst them.

18. What are the challenges that MCMC has to go through so far or foresee in order to implement 5G services by 2021?



- At this stage, we foresee investment and ease of regulatory approach for infrastructure deployment to be the main challenge. We will need to wait for the Final Report by the Task Force as the industry would know best about the impediments and proposed remedies for the deployment of 5G in Malaysia.

19. How much resources have been put into the research and development of 5G in terms of finance, manpower and technology?

- This is one of the deliverables for the Task Force in the Final Report, which will be shared once they conclude their findings.

Spectrum

20. When will the new spectrum band for 5G be made available?

- This depends on the outcome of the World Radiocommunication Conference (WRC), which is expected to convene this October in Egypt. MCMC as the National Regulatory Agency for Malaysia will participate in the meeting.

21. How will the MCMC allocate the spectrum bands?

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- MCMC will consider the proposals made by the 5G Task Force in its final report, as well as the outcome of the WRC-2019, before a final position on the relevant spectrum bands for 5G is made.
- The allocation process for spectrum will be undertaken in accordance to the relevant provisions of the Communications and Multimedia Act 1998 and the applicable subsidiary legislations.

22. Will Malaysia allocate the C-band spectrum fully for 5G and will the Commission or Government provide compensation to the satellite operators?



- To date, the 5G Task Force has identified C-band as one of the priority spectrum for 5G deployment in Malaysia. Final recommendation on the allocation of spectrums for 5G including C-band is expected to be finalised in October 2019.
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23. Has MEASAT raised any concern on the development of 5G in the C-band?

- The matter discussed in one of the work groups under the Task Force. The Commission will take into consideration MEASAT's concerns and make a decision that would be in the best interest of the nation, consumers and operators.

24. Will Malaysia terminate 2G or 3G services, similar to Singapore or Taiwan?

- There is no decision at this point as we have yet to study the matter.

Security

25. Does the Commission have any concerns on the use of HUAWEI equipment?

- The Commission guided by the announcement made by the Prime Minister on the use of HUAWEI equipment. From the Commission's perspective, security and privacy issues are not confined to HUAWEI alone. It should involve all network equipment or solution providers. Nevertheless, the Commission is collaborating with the relevant ministries, departments and agencies to monitor this issue and if required, will take the necessary action.

26. Will the Commission introduce any new standards with regards to 5G privacy & security issues to address public concerns on the use of HUAWEI equipment based on the Task Force recommendations?

- Several factors need to be taken into consideration for this matter. Although the Task Force may provide its recommendations, the Commission still need to liaise with the relevant ministries, departments



or agencies to evaluate its practicality and enforceability. The interest of the users will always be the top priority in our decisions and actions.

Health

27. Should there be any concerns over Electromagnetic Field (EMF) radiation from communication towers to the public?

- Studies have shown that exposure to Radio frequency Electromagnetic Fields (Radio Frequency Electromagnetic Field or RF-EMF) by communications system is below the limits recommended in the guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP).
- At the same time, the World Health Organization (WHO), based on 25,000 research articles published for the past 30 years concluded that existing evidence does not confirm the existence of any health impact as a result of low-rate exposure to EMF.
- EMF for communications are categorised as non-ionizing radiation, which does not have enough energy to break or interfere with the structure of a molecule compared to ionizing radiation.
- In this context, exposure to non-ionizing radiation only creates heating effect, but not enough to result in long-term damage to the tissues of the body.

5G Test Bed & Trials

28. Can you share with us on the test bed results held in April earlier this year? How big was the area covered for this purpose? Is it still ongoing or has it been stopped?

- 5G Test bed consists of 5G Showcase and 5G Technical trials. For the 5G Showcase, we had organised 5G Malaysia Showcase that was held in Perbadanan Putrajaya from 18 to 21 April 2019 where more than 25 5G



use cases were demonstrated. The showcase also managed to attract more than 10,000 visitors during the 4-day event.

- There were also technical trials that done before and during the 5G Malaysia Showcase where 5G networks live tested to deliver and support the 5G use cases. Some service providers continue to do the 5G technical trials in Cyberjaya and other locations as presented by MCMC.

29. Apart from Putrajaya & Cyberjaya, were there any other cities involved in this 5G test bed exercise? Can you name them?

- We are expanding the 5G test bed area beyond Putrajaya and Cyberjaya through 5G Demonstration Projects initiative. Based on the proposals that MCMC received so far, few cities in other states are being proposed, where MCMC will evaluate and finalise the locations.

30. What were the situations faced during the tests?

- The service providers have tested 5G technology from several aspects, such as the coverage for millimeter wave band, interoperability with its existing network, and co-existence between existing spectrum user in the C-band.

31. How has plans for 5G development progressed in other states such as Penang and Perak?

- The announcement made by Penang and Perak are based on the states' own initiatives. On our end, we will be guided by the recommendations coming from the Task Force in terms of the rollout plans for the development of 5G for the country.