Table 2 - List of Digital Inclusion Research

Code	Research Category and Gap Area	Research Title
DI-1	**Guided Research** for Adoption gap	Free-To-Air Television (myFreeview) Viewership in Sabah and Sarawak
DI-2	**Guided Research** for Policy and Regulation gap	Study on Malaysia's Ecosystem Compatibility and Envisaged Technologies for 5G by Regulation and Standardization Bodies
DI-3	**Guided Research** for Policy and Regulation gap	Study on Sectoral Policy Readiness to Catalyse 5G Adoption in Malaysia
DI-4	**Open Research** for Communication Strategies gap	Internet Access and Accessibility: Challenges and Potential Interventions in Adopting the New Norms
DI-5	**Guided Research** for Programme Evaluation, Assessment and Impact gap	An Impact Study of Pusat Internet Komuniti (PIK) and their Role in the Digital Inclusion of Community within the Pusat Perumahan Rakyat (PPR) Residences
DI-6	**Guided Research** for Programme Evaluation, Assessment and Impact gap	An Impact Study of Klik Dengan Bijak (KDB)
DI-7	**Guided Research** for Programme Evaluation, Assessment and Impact gap	An Impact Study of Malaysian ICT Volunteers Programme (MIV)
DI-8	**Guided Research** for Validation and Improvement gap	Mapping and Tracking of Malaysia's National Digital Policies and Plans vis-a-vis the ASEAN Digital Masterplan 2025

1. *DI-1: Free-To-Air Television (myFreeview) Viewership in Sabah and Sarawak*

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i. Category, Gap and Target Group

The research falls within the Guided Research Category addressing the gap area of **Adoption** and targets existing and potential myFreeview viewers in Sabah and/or Sarawak.

ii. <u>**Shortened Project Duration**</u>

No submitted research works should exceed a research duration of three (3) calendar months comprising literature review, research implementation, data collection and analysis, recommendations and submission of Final Report.

iii. <u>**Research Problem/Context**</u>

Malaysia's analog switch-off in 2019 and shift to digital transmission for free-to-air television broadcasting and subsequent supply of digital set top boxes to identified B40 has resulted in myFreeview becoming the sole free-to-air television delivery platform for viewers throughout Malaysia.

iv. <u>**Research Aims**</u>

Provide initial insights on audience metrics in Sabah and/or Sarawak ahead of the development of a nationwide Standardised Television Audience Measurement (STAM) targeted by end of 2021.

ii. <u>**Research Objectives**</u>

Potential researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO 1 – Investigate and provide insights on the take-up/non-take-up, extent and patterns of MyFreeview adoption and viewership behaviours (including content from other platforms i.e. subscription television, OTT etc.) in Sabah and/or Sarawak
b. RO 2 – Investigate and identify factors contributing to the take up/non-take-up and increased/decreased viewership of MyFreeview in Sabah and/or Sarawak
c. RO 3 – Make recommendations on how to encourage and catalyse take up and viewership according to demographic categories in Sabah and/or Sarawak

1. *DI-2: Study on Malaysia's Ecosystem Compatibility and Envisaged Technologies for 5G by Regulation and Standardization Bodies*
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i. <u>**Category, Gap and Target Group**</u>

The research falls within the Guided Research Category addressing the gap area of **Policy and Regulation** and targets potential players in the 5G ecosystem.

ii. **Shortened Project Duration**

No submitted research works should exceed a research duration of three (3) calendar months comprising literature review, research implementation, data collection and analysis, recommendations and submission of Final Report.

iii. **Research Problem/Context**

In 2019 and 2020, MCMC together with telecommunications providers and identified industry players representing various verticals embarked on stand-alone use case experiments to test the viability of adopting 5G.

In moving forward, MCMC wishes to build upon this earlier work to explore inter-operability and ecosystems compatibility requirements both within the upstream and downstream of respective industry verticals.

iv. **Research Aims**

The study aims to assess Malaysia's ecosystem compatibility and the envisaged technologies for 5G by regulators and standardization bodies focusing on its ecosystem requirement, advantage, demand and sustainability in making the relevant policies and regulations.

v. **Research Objectives**

Potential researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO 1 – Provide stocktake of envisaged technologies for 5G regulation and standardization bodies.
b. RO 2 – Identify ecosystem compatibility inter-operability requirements and challenges within and across various industry verticals.
c. RO 3 – Identify gap areas, criticality and recommendations for recommendations for consideration by regulatory and standardisation bodies.

3. DI-3: Study on Sectoral Policy Readiness to Catalyse 5G Adoption in Malaysia
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i. Category, Gap and Target Group

The research falls within the Guided Research Category addressing the gap area of **Policy and Regulation** and targets potential players as well as sectoral policy makers in the 5G ecosystem.

ii. Shortened Project Duration

No submitted research works should exceed a research duration of three (3) calendar months (comprising literature review, research implementation, data collection and analysis, recommendations and submission of Final Report.

iii. Research Problem/Context

MCMC issued the National 5G Task Force Report - 5G Key Challenges and 5G Nationwide Implementation Plan in December 2019. This document outlines the considerations and recommendations for deploying a holistic strategy for the deployment of the Fifth-Generation (5G) mobile internet in Malaysia. Given the intervening period after the issuance of this document it is timely to explore sectoral policy development and the readiness of different industry verticals in anticipation of and to in taking advantage of national 5G roll-outs beginning in 2021.

iv. Research Aims

Research aims to provide insights assessing the policy readiness of various sectors in catalysing the adoption of 5G in Malaysia.

v. Research Objectives

Researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO1 – Provide stocktake of various sectoral industry policy and/or plans to facilitate take ups of 5G services vis-à-vis identified industry verticals.
b. RO2 – Identify challenges faced by potential players in order to take up of 5G services vis-à-vis identified industry verticals.
c. RO 3 - Highlight opportunities that can be of advantage for industry players based on facilitations made available by sectoral policy makers according to their policies and plans in place.

4. DI-4: Internet Access and Accessibility: Challenges and Potential Interventions in Adopting the New Norms

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i. Category, Gap and Target Group

The research falls within the Open Research Category addressing the gap area of **Communication Strategies** and depending on proposal could target variably: children, students, B40, high risks groups.

ii. Research Problem/Context

It was reported that internet usage in Malaysia has spiked as the pandemic has pushed more people to go online, as they turned to the internet for the purpose of education, work, information seeking, entertainment and so on. According the e-Conomy SEA 2020 report, given that eight out of 10 users viewed technology as very helpful during the pandemic, it has become an indispensable part of people's daily lives.

In responding to issues and challenges of accessibility exacerbated by COVID-19, MCMC had undertaken the National Digital Infrastructure Lab. As a result, the Prime Minister had announced JENDELA on 29 August 2020, which addressed these challenges on coverage and quality of digital infrastructure that we had during COVID-19 measures (RO1 and RO3). The Lab report is available at myjendela.my.

This calls for us to map and understand the accessibility of the internet among specific groups in the society, namely children, students, B40 and high risk groups during the lockdown period.

iii. Research Aims

This Call for Proposal is desirous of eliciting research proposals providing an understanding of internet accessibility among the identified groups, namely children, students, B40, high risks groups and their pattern of usage and the challenges faced during the pandemic.

iv. Research Objectives

Researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO 1 - To understand the pattern of internet usage and accessibility among the identified groups during the pandemic;
b. RO 2 - To identify challenges, coping mechanism and potential stressors faced during the pandemic among the identified group; and

c. RO 3 - To recommend and develop intervention to address the challenges.

5. DI-5: An Impact Study of Pusat Internet Komuniti (PIK) and their Role in the Digital Inclusion of Community within the Pusat Perumahan Rakyat (PPR) Residences

i. Category, Gap and Target Group

The research falls within the Guided Research Category addressing the gap area of **Programme Evaluation, Assessment and Impact** and targets PIK users at PPRs.

ii. Research Problem/Context

Against the backdrop of continued work at improving connectivity and quality of service, there is a continued need to ensure community connectivity for underserved groups and areas. This role in provisioning community access and delivery of digital competences is delivered via the various Community Internet Centres (Pusat Internet Komuniti or PIKs) found across the country.

As MCMC and industry continues to improve connectivity nationwide, it is important to assess the impact of these PIKs.

Prior research work has indicated a continuing need to provide access and services via PIKs and to improve the PIKs ability and role as an agent for socio-economic change, cultural preservation and facilitate community enrichment and engagement.

iii. Research Aims

This Call for Proposal is desirous of research providing insights on factors able to strengthen the PIK's role in narrowing the digital divide among the urban and rural populations by:

a. Providing inputs and contribute towards an improved understanding of the roles, functions and initiatives for the PIK in a given focus area; and

b. Obtain measurement to evaluate the community need and readiness at the PIK in relation to the following focus areas:

- Access;
- Adoption; and
- Application.

iv. **Research Objectives**

Researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO 1 - Investigate users' perception and explore needs of the community within the context of digital inclusion.
b. RO 2 - Examine factors that drive the usage/participation and satisfaction for the PIK services.
c. RO 3 - Evaluate the impact of the PIK on the PPR communities (strengths, weaknesses, opportunities and threats) so as to enhance the sense of belonging of the PIK to the communities.
d. RO 4 - Assess and provide recommendations for enhancing effectiveness of PIK and its role in enhancing digital inclusion within the community including sustainable business model(s) for PIKs located at PPR residences.

6. DI-6: An Impact Study of Klik Dengan Bijak (KDB) Programme
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i. **Category, Gap and Target Group**

The research falls within the Guided Research Category addressing the gap area of **Programme Evaluation, Assessment and Impact** and targets participants who have attended KDB training sessions.

ii. **Research Problem/Context**

The Internet has become an important medium for education, communication, information sharing, and personal growth of every individual including target groups such as adolescents etc. But along with its many positive uses and benefits, the ubiquity of internet connectivity has also seen risk-taking behaviours especially adolescents.

In order to promote positive usage and curtail undesirable online behaviours MCMC continues to run the *Klik Dengan Bijak* (Click Wisely) initiative aimed at educating and raising public awareness about Internet safety and security.

MCMC launched the KDB initiative in 2012 as a response to the need to raise awareness among Internet users in Malaysia and to curb online abuse. The initiative seeks to create awareness, promote, and educate the public on the positive and ethical use of the Internet while stressing on the importance of self-regulation. The programming of the initiative is based on Rukun Negara with the main thrust being safe, secure and responsible.

KDB implementation includes development of online safety modules, training of trainers with state offices and *Pusat Internet Komuniti* (PIKs) as well as public talks, contests, and offline and online promotions. From 2012 until 2020, KDB has achieved more than 6 million in audience reach, 85,000 followers on social media platforms, and trained 1,730 PIK staff at 873 PIKs. KDB covers topics such as Introduction to telecommunications technologies; user rights and the laws on online offences; cyber bully; online sexual grooming; digital parenting; parental control tools; oversharing; scam; false information; computer security; cyber terrorism; and self-regulation.

iii. **Research Aims**

Research findings are aimed at providing an understanding of the vital role of awareness and educating the public such as parents and young children etc.

In relation to this educational and outreach role MCMC is desirous of research to provide insights and recommendations on how to improve the KDB program and ensure a higher level of effectiveness amongst the public in the future.

iv. **Research Objectives**

Researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO 1 - Evaluate the effectiveness of the KDB programme.
b. RO 2 - Conduct comparative studies (benchmark, best practices and metrics and indicators for digital literacies) and models in other countries.
c. RO 3 - Examine whether the programme has brought about a positive change in the population's attitudes and has contributed to safe, secure and responsible use of the internet.
d. RO 4 - Assess and provide recommendations for enhancing the effectiveness of the KDB programme.

7. DI-7: An Impact Study of Malaysian ICT Volunteers (MIV) Programme
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i. **Category, Gap and Target Group**

The research falls within the Guided Research Category addressing the gap area of **Programme Evaluation, Assessment and Impact** and targets those that have served as MIV volunteers

ii. <u>**Research Problem/Context**</u>

There continues to be a persistent ICT Skills gap amongst underserved groups exacerbated by the rising need to fall back on online interaction and practise social distancing as numbers of those affected by the COVID-19 pandemic continues to rise. Thus in the age of digital dependence, there is a growing need for ICT Skills amongst all portions of society to be able to operate within the new norms.

Prior to the pandemic, MCMC had introduced a cadre of university volunteers known as the Malaysian ICT Volunteers (MIV) to act as communications technology ambassadors. Though the activities of these volunteers have been curtailed during the pandemic, MCMC is hopeful of effective new norm workarounds and approaches to ensure the continued role of MIVs as a human element in delivering awareness and ICT skills to ensure improved digital usage and adoption amongst identified communities.

Since 2016, MIV as an empowerment platform aims at increasing the level of digital literacy, promoting digital inclusion, developing digital champions, reducing the digital divide and empowering digital citizenship.

In working to achieving the above aims, MIVs mission is:

a. To develop competent digital citizens who are capable of developing and producing ICT applications and services, and create contents which are appropriate for communities and user groups that entails them to have control over all aspect of their life; and
b. To provide opportunities for volunteers (including youth, women and girls, and retired professionals) to gain and share knowledge and hands-on experience with other people at various levels.

iii. <u>**Research Aims**</u>

The research aims to measure, assess and evaluate the impact Malaysian ICT Volunteers (MIV) Programme which will provide holistic understanding of the:

a. Effectiveness of the MIV programme (including MIV roles and gap areas); and
b. Provide suggestion on effective ways to engage, ensure knowledge transfer and inculcation of positive elements to the community.

iv. <u>**Research Objectives**</u>

Potential researchers are invited to submit proposals guided by the following overarching research objectives (ROs):

a. RO 1 - Evaluate the effectiveness of the MIV programme.
b. RO 2 - Conduct comparative studies (benchmark, best practices and metrics and indicators for digital literacies) and models in other countries.
c. RO 3 - Examine whether the programme has brought about a change in the population's attitudes and usage of the Internet in a safe and positive manner.
d. RO 4 - Assess and provide recommendations for enhancing the effectiveness of the MIV programme.

8. DI-8: Mapping and Tracking of Malaysia's National Digital Policies and Plans vis-a-vis the ASEAN Digital Masterplan 2025

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i. **Category, Gap and Target Group**

The research falls within the Guided Research Category addressing the gap area of Validation and Improvement and targets ministries, agencies and regulators implementing and monitoring various aspects of Malaysia's implementation of the ASEAN Digital Masterplan 2025.

ii. **Research Problem/Context**

The lack of concrete indicators of the development and implementation of Malaysia's digital policies and plans vis-à-vis regional priorities and goals has resulted in a disconnect between National Digital Development Policies and Plans vis-à-vis regional development initiatives and plans. There is thus a need to clarify and understand the differences and similarities between Malaysia National Digital Policies and Plans vis-a-vis the ASEAN Digital Masterplan 2025.

iii. **Research Aim**

This Call for Proposal is to elicit research proposals, to study Malaysia's digital policies and plans in and its alignment to the ASEAN Digital Masterplan 2025. The primary research aims are to:

a. Enable the tracking of these domestic plans according to the ASEAN Digital Masterplan 2025 framework;
b. Identify and classify the desired outcomes of the various Malaysian digital policies and plans; and
c. Identify potential gaps within the various Malaysian digital policies and plans in relation to an overarching ASEAN Digital Framework

iv. <u>**Research Objectives**</u>

Researchers will be guided by the following research objectives but may propose improvements and additional research objective to better achieve limit or expand upon the identified research aims.

    a. RO1 - Identify and classify the various national digital policies and plans, respective owners, monitoring metrics and timeframes, and outputs and deliverables;

    b. R02 - Create a matrix mapping of Malaysia's digital plans and metrics against the desired outcomes and enabling action of the ASEAN Digital Masterplan 2025; and

    c. RO3 - Identify possible gaps and propose actions to narrow the gaps.

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