Guidelines

i-Connect Fintech in Islamic Finance

i-Connect

i-Connect is an industry-led collaborative network involving a quadruple helix (industry, academia, government, and civil society) for disruptive innovation.

It aims to create and nurture a conducive innovation ecosystem in Malaysia that will increase disruptive innovation. This will enable Malaysia to leverage new economic opportunities for Malaysian industries to enter emerging global markets.

INCEIF University has been appointed as the Neutral Entity for the i-Connect Fintech in Islamic Finance by the Academy of Sciences Malaysia (ASM), under the purview of the Ministry of Science, Technology, and Innovation (MOSTI).

INCEIF, as the Neutral Entity, is guiding a consortium of 18 Founding Members representing the industry, academia, government, and civil society to catalyze innovations, nurture talent, and develop homegrown, high-value innovations in Fintech for Islamic Finance.

Why?

- To develop homegrown high-value innovations in Fintech for Islamic Finance

How?

- By bridging the gap between R&D and business through knowledge based innovation

What?

- Establish a fund to foster innovation and collaboration
- Create a conducive innovation ecosystem to address the pain points that require demand-driven R&D.

Islamic Fintech Landscape

The i-Connect Islamic Fintech consortium is optimistic about developing the Malaysian Islamic Fintech from the current perceived landscape to the future envisioned end game.

Perceived Current Islamic Fintech Landscape	Envisioned Future Islamic Fintech Landscape
The market consists of a few small and new startups	Many established, new, large, and small Islamic fintech startups
The operating landscape is fragmented, and market stakeholders work in silos	A conducive innovation ecosystem to address the pain points that require demand-driven R&D
A dearth of smart partnerships among incumbent financial institutions, fintech startups, and research institutions	Meaningful and smart partnerships among IFIs, Islamic fintech startups, and research institutions
Moderate adoption of innovations in Islamic finance and social finance	Wide adoption of meaningful and beneficial innovations in Islamic finance and social finance

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Key Focus Area and Problem Statement

ISLAMIC DIGITAL BANKING INNOVATIVE SOLUTIONS

In line with the announcement of digital bank licenses by Bank Negara Malaysia (BNM), we would like to foster innovation projects within the paradigm of Fintech in Islamic Finance. With the spirit of Malaysia's Shared Prosperity Vision 2030 to have a decent standard of living for all Malaysians by 2030, one of the key economic growth areas is the Islamic Finance Hub 2.0, which emphasises the inclusivity and equitable growth of the nation. Hence, we are looking forward to potential solutions that are within the following six (6) areas to nurture innovation within the Fintech sector of the Islamic Finance ecosystem.

Relevant & Dynamic Objective & Key Results

- Asset-based contracts and transactions
- People, Planet, and Profit oriented
- Unique Customer Lifetime Value (CLV) for each type of customers' persona

- Creating relevant and dynamic Objective Key Results (OKRs), particularly for asset-based contracts and transactions.
- Thinking about people, planet, and profit-oriented business models.
- Introducing unique Customer Lifetime Value (CLV) approaches to solve issues for underserved and unserved segments.

Scaling via Alignments

- Shariah with Environment, Social, and Governance (ESG), or at least with ethical principles
- Value-Based banking & intermediation (VBI)
- Innovation & tech as a service (TaaS)
- Sponsor banking as a service

- Solution that can help Islamic Digital Bank scale up with Shariah principles and align with the Environment, Social, and Governance (ESG) concept.
- Embark to operationalise the value-based banking and intermediation.
- Introduce innovation and technology as a service (TaaS) as well as sponsor banking as a service and review the relevancy of the potential solution.

Ecosystem Focus

- Customer focus via bite-sized, personalized solutions
- "Collaborate and co-opetition" with other value-creators

- May cover not only just financial services, but also capital market, advisory, and other relevant aspect that could make as large an ecosystem as possible.
- Not only to have a large ecosystem, but also to build a customer-focused culture by introducing bite-sized, personalized solutions.

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- Most of the solutions are difficult to accept, which may be due to the board's lack of receptivity or the senior management's lack of openness to the solution.
- The approach to getting buy-in from key decision makers should be thought through for the solution to be acceptable in the market.

Innovative Board & Management

- Nimble organizational framework
- Tokenization of assets and liabilities for value creation and security
- Smart contract for all transactions, underwriting, and commitment with customers

Data-driven Risks & Pricing Framework

- Real time and near real-time relevant data (historical, alternative, and Machine Learning / Artificial Intelligence) for risk management
- Deploy RegTech for Governance, Risk, and Compliance (GRC) and Shariah compliance

- It has to be data-driven, particularly with a focus on the risks and pricing framework, because the potential solution may not work without data.
- The participant has to understand the data will not only be useful but also be able to comply with the necessary regulations, particularly when looking into deploying RegTech and Governance, Risk, and Compliance (GRC) and Shariah compliance.

- Showcase a creative narrative and approach, as well as how it could be relatable to various stakeholders.

Dynamic Narrative

- Data analytics as the main driver for narrative and Unique Value Proposition (UVP) management
- Objective and Key Results (OKR) based on the quality of productive relationships with all customers

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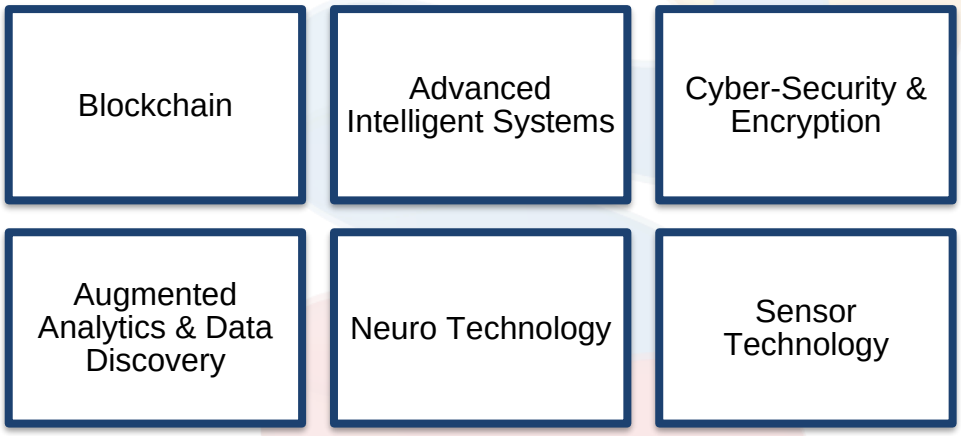
Guidance notes for projects applying for i-Connect Fintech in Islamic Finance 2022/2023

Original solutions that could be ‘sandboxed’	Customer-centric & stakeholder-focused technology solutions	Shariah-compliant industry infrastructure
Smart contract solutions for all banking underwriting	Data-driven decision-making modules for credit & Value-based Intermediation (VBI)	Governance, Risk, and Compliance (GRC) for risk and Shariah compliance management
Sponsor-banking concept for Islamic Digital Banking	Portable modular tech-based solutions	Alignment of Shariah principles with those of the Environment, Social, and Governance (ESG), ethics, and universal good values

Underlying Technology

The 10-10 Malaysian Science, Technology, Innovation and Economic (MySTIE) Framework is an integration of ten (10) key Malaysian socio-economic drivers with ten (10) global leading science and technology drivers that are aligned with our strengths and needs.

i-Connect Research and Development Grant is intended to be used to develop disruptive solutions based on one or more of the sciences and technology drivers listed below(for more information, see the Appendix):



The Grant is intended to be used to bridge the gap that often exists among Research, Development, and Deployment phases, i.e., Technology Readiness Level (TRL) 1 – 9 (Appendix 1).

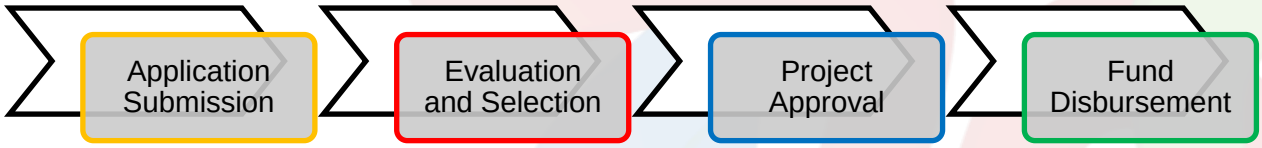
Research phase			Development phase			Deployment phase		
TRL1	TRL2	TRL3	TRL4	TRL5	TRL6	TRL7	TRL8	TRL9
Ideation	Innovation begins	Proof of concept	Component test	Prototype construction	Alpha testing	Beta testing	Technology demonstration	Commercial

Regardless of the initial technology readiness level of the project, all applicants must achieve/exceed TRL 8 within the funding timeframe.

Eligibility Criteria

1. i-Connect Research and Development Grant is open to all applicants.
2. The application involves at least one (1) local Malaysian company/organization in collaboration with at least one (1) local Malaysian university or research center.
3. The project must be completed within 12 months with the Malaysian company/organization (industry) as the project lead and within 12 months of product commercialization.
4. Roles and responsibilities, contributions, and ownership of the project outcomes shall be addressed and agreed upon by the project partners prior to execution of the collaboration.

Grant Application Process



Eligible Expenditure

The Grant may be used for the following activities:

- Product design, development, and improvement
- Solution (i.e., hardware and/or software) development and testing
- Rental of equipment/machinery that is directly related to the project
- A 12-month license for software that is directly related to the project Bill of Materials
- Consultation fee for Subject Matter Expert(s)
- Analytical validation study, i.e., to demonstrate the accuracy, precision, and reproducibility of the test
- Market validation and a pilot run
- Relevant Certification cost
- Intellectual Property (IP) filling

Note:

1. To be eligible for the funding, the Grant Applicant must fund at least 50% of the total project cost. Contributions from the Applicant in the form of financial funds, expertise, equipment, services, etc. need to be translated into the value of a financial contribution.
2. Terms and conditions of the grant, and timing of disbursement will be set out in a Project Agreement. INCEIF and ASM reserve the right to terminate grant funding for the project if agreed-upon milestones are not met.
3. No minimum/maximum amount for the grant application. The granting amount would be relative to the project size and complexity and the extent to which it meets the project milestones, deliverables, and timeline.
4. i-Connect is an initiative of MOSTI. Hence, for more details on the list of activities, please refer to "*Garis Panduan"* MOSTI.

Garis Panduan MOSTI.pdf

Merit Criteria

To be qualified for the i-Connect Fintech in Islamic Finance Grant, applicants will need to address all merit criteria in their application. The amount of detail and supporting evidence should be relative to the project size, complexity, and grant amount requested.

Criterion 1

Technology Readiness Level (TRL). The initial technology readiness level of the project shall be between TRL 3 and TRL 9 inclusively. Priority will be given to project that will be working at TRL 6 and above to expedite the Development and Deployment phases. TRL indicators can be found in the Appendix.

Criterion 2

Alignment with the 10-10 *My*STIE Framework. The Framework provides a systematic approach to transforming Malaysia into a knowledge-intensive economy by design. It aims to generate shared economic prosperity across the diverse ecosystems in the country and shift Malaysia up the global innovation value chain.

Criterion 3

Demonstration of Advanced Characteristics. The Project describes how the Islamic finance industry transformation can be achieved through implementing one, or a combination of, the following traits:

- Advanced knowledge: ability to develop and refine research questions and methods specific to targeted discipline
- Advanced process: focus on using state-of-the-art technology, familiarity with digitalization
- Business model innovation:
    - Examine the competitive environment
    - Determine the sources of long-term cost and differentiation advantage
    - Link product adoption to revenue models and investment strategies

Create a product pipeline for strategic market disruption

Reporting Obligations

As the Neutral Entity for the i-Connect Islamic Fintech, INCEIF may gather feedback through an interactive survey among end-users and partners and publish a case study covering an overview of the challenges addressed, the approach, solution/learnings, as well as the planned benefits and general findings observed in the i-Connect Islamic Fintech project.

INCEIF may also produce a final report that reviews project processes, learnings, workforce training, IP, and firm-level outcomes. The final report will be distributed to all 18 Founding Members.

INCEIF and/or Founding Members may request performance metrics on market share, entry into new markets, sales, or other data for one (1) year after the completion of the project.

Founding Members and end-users of the applications will be required to provide timely feedback (or upon request). INCEIF will prepare a written summary of the feedback for further discussion to enhance corrective actions.

Promotion

INCEIF and the Founding Members will promote the i-Connect Islamic Fintech projects and partners via media releases, social media channels, INCEIF website, and other relevant networks.

INCEIF will continually promote the i-Connect Islamic Fintech projects and encourage funding agencies / venture capitals to contact INCEIF for additional funding for the projects.

Appendices

Technology Readiness Level (TRL) definition and description:

Phase	TRL	Definition	Description
Research phase	TRL1 **Ideation**	Basic principles observed and reported	Scientific knowledge generated underlies the basic properties of software architecture
	TRL2 **Innovation begins**	Basic principles observed for the formulation of practical applications	Practical applications are identified and basic properties of algorithms, representations, and concepts are defined.
	TRL3 **Proof of concept**	Analytical and laboratory investigations are required to determine the viability of the technology	Development of limited functionality to validate critical properties and predictions using non-integrated software components.

	TRL5 **Prototype construction**	Laboratory testing of the integrated system	End-to-end software elements are implemented and interfaced with existing systems/simulations conforming to the target environment. End-to-end software system, tested in a relevant environment, meeting predicted performance. Operational environment performance is predicted. Prototype implementations are developed.
	TRL6 **Alpha testing**	Prototype system demonstrated in an operational environment	Prototype implementations of the software are demonstrated on full-scale, realistic problems, partially integrated with existing hardware/software systems. Limited documentation is available.
Deployment phase	TRL7 **Beta testing**	The completed design is tested in a real environment	Prototype software exists with all key functionality available for demonstration and testing, well integrated with operational hardware/software systems, demonstrating operational feasibility. Most software bugs are removed.
	TRL8 **Technology demonstration & Certification**	Proven to work under its expected conditions and certified to be used	All software has been thoroughly debugged and fully integrated with all operational hardware and software systems. All user documentation, training documentation, and maintenance documentation are complete. All functionality is successfully demonstrated in simulated operational scenarios. Verification

			and validation are complete.
	TRL9 **System proven to successfully function**	Ready for commercial deployment	All software has been thoroughly debugged and fully integrated with all operational hardware/software systems. All documentation has been completed. Sustaining software engineering support is in place. The system has been successfully operated in the operational environment.

Examples of 10-10 MySTIE drivers and explanation:

Technology Driver	Explanation
Blockchain	A digital ledger system that is democratic, incorruptible, efficient, verifiable, and holds a permanent record of every transaction of value among multiple economic agents.
Advanced Intelligent Systems	Encompasses big data processing, advanced robotics, artificial intelligence, machine learning, directed self-assembly, neuromorphic engineering, and quantum computing to enable flexibility, adaptability, precision, and efficiency in analyses, information processing, and response.
Cyber-Security & Encryption	Technologies, processes, practices, and methods for protecting information and communication systems (networks, devices, and data) against risks of malicious attack, digital hijacking, unauthorised access, and damage to systems and data.
Augmented Analytics & Data Discovery	Advanced data discovery methods that enable users to gain insights into patterns of the data generated using various statistical methods, pattern recognition, machine learning, natural learning, and other advanced data analysis tools.

Neuro Technology	Technology that enables the study of brain processes, brain-computer interface, decision-making, behavior, and neurological disorders.
Sensor Technology	High-performance sensors, including microelectromechanical systems (MEMS), magnetic materials and piezoceramics, wearable biosensors, and printable wearable electrochemical sensors.

References:

10-10 Malaysian Science, Technology, Innovation and Economy (*My*STIE) Framework, Academy of Sciences Malaysia 2020.