KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

2 Years of Accelerating Innovations

NATIONAL TECHNOLOGY & INNOVATION SANDBOX

Foreword

Message from
Yang Berhormat Minister of Science, Technology and Innovation of Malaysia

Moving Forward As One

Innovation is one of the key tentpoles of the Malaysia Madani concept, which also emphasises the values of sustainability, care and compassion, respect, prosperity and trust. We need to make radical changes to capitalise on the Fourth Industrial Revolution. The way we work and live will change with the increased application of artificial intelligence, robotics, automation, big data, advanced analytics and other disruptive digital technologies.

In line with the National Science, Technology and Innovation Policy (DSTIN) 2021-2030, the National Technology and Innovation Sandbox (NTIS) was launched in 2020 with the goal of creating a conducive environment for technology and innovation to flourish in Malaysia. We wanted to provide a platform for entrepreneurs, researchers, innovators and companies to test and validate their ideas and to turn these ideas into successful businesses.

The NTIS is aligned with MOSTI's initiatives to reduce dependency on low skilled foreign labour, increase job opportunities for Malaysians, increase Gross Domestic Product (GDP) and Gross National Income (GNI), and elevate the participation, investment and collaboration in research with the private sector as well as increase the national commercialisation rate.

A Launchpad to Accelerate Commercialisation

Public investments in research and development are foundational in driving a country's economic growth. By investing in research, governments provide the building blocks for technological advancements and innovative products.

This means we need to increase our Gross Expenditure on R&D (GERD), which stands at 1.44% in 2019, lower than South Korea at 4.55%, Switzerland at 3.37% and Taiwan at 3.3%.

Since its launch, the NTIS has received 631 applicants and approved 169. It has also approved RM79.2 million in funding.

One of the key success factors of the NTIS has been its ability to provide a range of services and support to entrepreneurs, researchers, innovators and companies. This includes access to funding, mentorship and networking opportunities, as well as the provision of legal, regulatory and technical support.

Source : International Comparison of R&D Expenditure as a Percentage of GDP | Malaysian Science and Technology Information Centre

Collaborate and Celebrate

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MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

The relaxations in some regulatory requirements has been frequently appealed by many start-ups and innovators and we are glad NTIS is providing a solution to redress this. To date, NTIS has facilitated 43 regulatory cases through collaboration with 18 ministries.

Another important factor has been the collaboration between the public and private sectors. We have seen a number of partnerships and collaborations between government agencies, research institutions and private companies, which have been instrumental in driving the commercialisation of technology in Malaysia. Today, there is a strong community of 50 innovation acceleration network (IAN) partners.

In the past, the journey from idea to commercialisation would see start-ups engaging individual players to translate their ideas into viable products such as R&D, regulation, funding and market access agencies. What the NTIS does is bring the right people together to clear the bottlenecks for high potential start-ups to reach commercialisation.

The government's on-going efforts are putting Malaysia on the global stage as a destination for technology and innovation, attracting foreign investors and multinational companies to establish their operations in the country. However, to continue attracting investment, we need to strengthen its innovation ecosystem and infrastructure. This is where the NTIS comes in, by supporting and empowering local innovators to bring in investment and building Malaysia's reputation as a leader in technology and innovation.

I would like to express my gratitude to all the stakeholders who have been involved in the NTIS, in particular the Secretariat led by Malaysian Research Accelerator for Technology & Innovation (MRANTI), the National Applied R&D Centre (MIMOS), Futurise and the Malaysian Technology Development Corporation (MTDC).

I am confident that with the continued support of the government, industry, and academic partners, we will be able to build on this success in the years to come to create a more innovative, sustainable and prosperous future for Malaysia.

Warm regards,

YB Chang Lih Kang
Minister of Science, Technology and Innovation of Malaysia

Message from Secretary General, MOSTI

Accelerating Growth & Maximising Growth

At the Ministry of Science, Technology and Innovation (MOSTI), we are a strong believer in leveraging technology and innovation to improve the wealth and well-being of the Rakyat. In Malaysia, we are very blessed with a young and burgeoning population, but we are a long way off from making innovation more broadly available, affordable and accessible to everyone. We still look to other developed nations for the latest and most innovative technologies, when we should be inculcating our own.

So how do we cultivate an innovation-producing society? It is by creating a safe and encouraging environment for it to thrive. We need to provide a clear road to travel from just an idea to materialising those ideas to market; to take a sapling and grow it into a great tree that will someday turn into a forest.

To foster this progress, the Ministry developed the National Science, Technology and Innovation Policy (DSTIN) with the aim of achieving an innovation-driven economy, an extension of a knowledge-based economy. Found within the DSTIN is the Malaysian Science, Technology, Innovation and Economic Development Framework (MySTIE 10-10). The MySTIE 10-10 framework is designed to ensure our cadre of innovators receive the necessary support to push the commercialisation of scientific, technological and innovative solutions. It integrates 10 global science and technology drivers with 10 socio-economic drivers in the country to drive the path for a better tomorrow.

Innovation for Growth

The National Technology and Innovation Sandbox (NTIS) came at the right time back in 2020 in building an innovation-driven economy. It is one of the key instruments to realise the goals set out in the 12th Malaysia Plan's policy enabler on 'Accelerating Technology Adoption and Innovation'. Here, 6 targets have been set - including the commercialisation of 500 products and solutions through the NTIS and Malaysia Commercial Year (MCY) by 2025.

NTIS will also kickstart a cycle of revenue generation that can be used to sustain future innovations. I am pleased to share that from more than 600 applicants that we have received by the end of 2022, almost half of these approved projects are related to developing Advanced Intelligence Systems products and solutions. In terms of application, 50 percent of the approved projects are designed to serve the Medical & Healthcare, Agriculture & Forestry and Smart Cities & Transportation sectors.

The NTIS ensures that Malaysia doesn't just adopt but creates and commercialises solutions using emerging and advanced technologies. It moves products along the technology readiness tranches in an expedient manner, from ideas to invention and implementation - and onwards to commercialisation. What we really want to do is remove obstacles and encumbrances that weigh down on innovators, enabling them to take their products to market, fast.

In just two years, many local companies have been fast-tracked from the prototype and testing stages, to the deployment and commercialisation stages, through our Sandboxes. From agriculture to biotechnology using advanced technology systems and more, a spectrum of Malaysian-bred innovations are in motion. You will read more about them in the sections that follow, and we are proud to have made a real difference in their journey.

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Innovation for Impact

Through the NTIS, many Sandbox test sites have been created across the country - including in Sabah, FELDA plantations and even in the Institut Sukan Negara. These test sites provide a platform for groundbreaking and innovative technologies to be validated before making a real change to the way we move, learn, work and our daily lives in general.

I would like to commend the NTIS Secretariat, in particular the Malaysian Research Accelerator for Technology & Innovation (MRANTI), the National Applied R&D Centre (MIMOS) and Futurise, as well as the Malaysian Technology Development Corporation (MTDC), for continuously expediting engagement among the ecosystem stakeholders, setting up a robust Sandbox environment, and facilitating discussions with regulators and site owners, so that the inventions can be safely tested and prototyped for successful commercialisation.

We are glad that there continues to be strong interest in the NTIS and we have the systems, processes and support to take more companies forward, accepting applications all year round.

The milestones that we have achieved are not without the support from the 50 organisations who are part of our Innovation Acceleration Network (IAN). With these partners, we have been able to reimagine what our future looks like and develop many exciting solutions - and we welcome more.

The value of innovation is always increasing as it contributes to our prosperity and quality of life. To ensure sustained progress, we must extend our efforts beyond just academic or laboratory settings and bring innovative technology into the market where it can be put to practical and profitable use.

MOSTI is devoted to bolstering the ecosystem, and we are driving forward with great momentum to hasten the rate of innovation and commercialization. It's a race and we are in it to win it!

Thank you.

YBhg. Datuk Ts. Dr. Hj. Aminuddin Hassim
Secretary General, Ministry of Science, Technology and Innovation (MOSTI)

Message from Lead Secretariat

Momentum to Compete, Speed to Succeed

When the National Technology and Innovation Sandbox (NTIS) was announced in 2020 by the government to spur the innovation ecosystem, it outlined our ambitions to connect all key players to ideate, test, validate and accelerate the commercialisation of technology solutions. The NTIS would up the ante in building our security of innovation supply, placing Malaysia as a competitive force globally.

With the government's support for "live" test environments, innovators and technology developers were able to stress-test and adjust parameters for their products to be ready for industry adoption, and to scale, bringing out the best for Malaysians, by Malaysians.

However, in the wake of the pandemic, just as the programme was picking up momentum, testing at many of these Sandboxes were curtailed.

In spite of the challenges, our cadre of astute innovators took to Thomas A. Edison's words: "*I will not say I failed 1,000 times, I will say that I discovered there are 1,000 ways that do not work.*"

Momentum to Compete

It was through this new normal, we sparked novel approaches in which our Sandboxes can be created, managed, reviewed and run. This brought much learning - about the limitations and possibilities of our endeavours. In spite of the restrictions imposed during the movement control order (MCO), we also orchestrated the launch of several new virtual Sandboxes - bringing it altogether to 10 today.

During this period, the Secretariat continued to support as many companies as possible to complete their milestones. Recently, we marked another significant achievement as 24 companies successfully transitioned to the commercialisation stage, with substantial support from buyers who recognise and appreciate the value of Malaysian-made technologies.

The volume, variety and quality of applications have improved. Innovators are approaching us to push their ideas further, not purely for funding but also for marketing, matchmaking, Intellectual Property consultancy and more.

Speed to Succeed

NATIONAL TECHNOLOGY & INNOVATION SANDBOX

Truth be told, we believe there are so many more of such great ideas to be harvested and in order to do this, we need to enlarge our funnel of innovation supply towards attaining a high-income nation status.

Through the 29 NTIS cohorts in the past two years, about 26 percent of the 631 completed applications were funnelled in for progress - from dronetech, agritech, medtech and more. The funding support and collaboration with 18 Ministries in this period for regulatory cases cannot be understated as critical factors to achieve our targets.

Our pursuit is about creating a tipping point - a collective mass of products and services and innovators with a drive to scale and succeed.

Today, the NTIS continues to enlist innovators focused on creating socio-economic value and those seeking to improve the lives and livelihood of Malaysians. In time, through their inventions, we believe that solutions for healthcare, food, security and many other services will become more available, affordable and accessible.

At present (2023), 75 applications are being facilitated for funding at the Executive Steering Committee while others which have yet to reach the minimum Technology Readiness Level (TRL) 6 threshold are streamlined for support through various other programmes.

I am extremely proud of the NTIS team who conscientiously and courageously pursued various avenues to ensure we maintain a steady stream of outputs and outcomes for innovation impact. The team has been engaging more local companies, government agencies, corporate and academic organisations which today boasts the support of 50 Innovation Acceleration Network (IAN) partners.

We are shifting our trajectory in 2023, focusing on creating more in-roads with key stakeholders in the mix to fast track more viable solutions to be commercialised.

Our focus will be aligning these with the public sector's needs, imbued with a sense of urgency.

With this in mind and with earnesty, we will achieve all that the NTIS has set out to accomplish.

Dzuleira Abu Bakar

Chief Executive Officer
Malaysian Research Accelerator for Technology and Innovation (MRANTI)

Message from the Secretariat

"NTIS allows companies to test new technologies and innovations in a controlled environment. This can foster the development of new technologies, encourage entrepreneurship and drive economic growth. It can also help regulators stay up to date with emerging technologies and better understanding of their potential impacts, enabling them to craft more effective and targeted regulations as needed."

Rosihan Zain
Chief Executive Officer
Futurise

"For the past two years via our NTIS Fund, MTDC has supported innovative Malaysian companies to validate & commercialise high potential technologies. We have celebrated many achievements of our NTIS Fund recipient companies, especially in high impact sectors such as automation, healthcare and agriculture which have resulted in many positive outcomes towards technology development for the country. We look forward to further successes and to continue our collaboration with the NTIS programme as a key driver of innovation and technology commercialisation for our Nation."

Haji Mohammad Hazani
Chief Executive Officer
MTDC

"The companies that had successfully graduated from NTIS have demonstrated strong leadership and a strong entrepreneurial spirit. We hope that their success will inspire further growth and success within the STI ecosystem, industries and beyond Malaysia's borders".

Dr. Iskandar Samad
President and Chief Executive Officer
MIMOS

2 Years in a Snapshot

631
Complete Applications Received

29
Cohorts

169
Approved Applications

43
Regulatory Cases Facilitated with 18 Ministries Collaborations

50
Innovation Acceleration Network Partners

RM 79.2M
Funding Approved

10 National Sandbox Sites

- Agriculture with **FELDA**
- Robotics & Automation with **DRZ Iskandar**
- Logistics with **Capital A** (AirAsia)
- Drone Tech with **MRANTI**
- Hightech Education with **Multimedia University (MMU)**
- Sports Tech with **Institut Sukan Negara**
- Smart Highway with **PLUS Berhad**
- Digital IoT with **Kementerian Sains, Teknologi dan Inovasi Sabah**
- Sustainable Smart Cities with **Sunway iLabs**
- Healthtech Hub with **Kementerian Kesihatan Malaysia (KKM)**

Testbeds that Fast-Track Local Innovations

NTIS Sandbox Sites

Felda Mempaga
Hospital Al-Sultan Abdullah, UiTM
Pusat Perubatan Universiti Malaya
Sunway FutureX Duplex
National Sports Institute
Hospital Tunku Azizah
MRANTI Park
Persada Plus
Hospital Putrajaya
Institut Kanser Negara
MMU Cyberjaya
Cyberjaya
Hospital Rembau
Hospital Bera

Kementerian Sains, Teknologi dan Inovasi Sabah

Aerodyne

- Managed to reduce bagworm population at below economic threshold level (ETL).
- Spraying time for a hectare of oil palm plantation is 24-25 minutes.
- Twice as efficient compared to using ground spraying covering 10-13 hectares per day.
- Better spraying penetration.

MSD Innovation

- IoT-Based Smart Farming in collaboration with the Faculty of Engineering.
- Incorporated digital tools for smart farming to monitor water levels, the amount of nutrients that crops need to optimally grow, soil samples, fertilizer inputs and more.

Genomas

Currently collecting and processing the genetic samples of 10,000 Malaysian population to create the first major template of Malaysia genetic data grid.

Data8

- Launched EM Watch at Hospital Kuala Lumpur and Hospital Sungai Buloh.
- EM Watch is a post hospital care program that provides follow-up examinations by doctors, e-prescription of medicine, medical certificates and more.

Hospital Tunku Azizah
Hospital Putrajaya
Institut Kanser Negara
Hospital Bera
Hospital Rembau
Hospital Al-Sultan Abdullah, UiTM
Pusat Perubatan Universiti Malaya

Drone And Robotics Zone (DRZ) Medini, Iskandar Puteri

Forging Partnerships to Accelerate Innovations

Sandbox Partners

- FELDA
- DRZ Iskandar
- airasia
- Technology Park Malaysia
- AREA57
- MMU Multimedia University
- KBS
- Institut Sukan Negara
- PLUS
- KSTI
- LABS
- SUNWAY

Subject Matter Partners

- Akademi Sains Malaysia
- Deloitte.
- malaysia airlines
- UNDP
- maxis
- SUNWAY
- CREST
- PETRONAS
- TNB RESEARCH
- FELCRA
- FWD Insurance
- IOI GROUP
- Grab
- 500
- EPSOM College in Malaysia
- Digital Penang
- PABLO AIR
- Malaysia Smart Cities Alliance

Technology Partners

- Microsoft
- TM Research & Development
- digi
- ALTAIR
- ProximaX
- SNAT Sabah Net

Facility Partners

- CYBERVIEW
- maxis
- SUNWAY
- malaysia airlines
- EPSOM College in Malaysia
- Tabung Ekonomi Gagasan Anak Sarawak

Regulatory Partners

- CAAM
- ZICO law
- NAQIZ PARTNERS

Funding Partners

- MTDC Malaysian Technology Development Corporation
- maxis
- Ficus Venture Capital
- 1337 Ventures
- midf

Market Access Partners

- airasia
- SUNWAY
- malaysia airlines
- maxis
- IOI GROUP
- Edgenta NXT
- Malaysia Smart Cities Alliance
- FUNDNEL
- Tabung Ekonomi Gagasan Anak Sarawak
- FELDA
- Ficus Venture Capital
- DHL
- Iskandar Investment

Meet the Trailblazers of Innovation

Poladrone Solutions Sdn. Bhd. (Aonic)

Total amount commercialised:
More than
RM 16mil.

Sales Potential/Projection:
RM 20mil.

Technology Driver
Other

Socio-Economic Sector
Agriculture & Forestry

Solution	Agriculture Drone developed and manufactured locally in Malaysia for upskilling of Agriculture Industry and job creation.
Testing Location	• Futurise, Cyberjaya • Universiti Putra Malaysia - Collaboration with Department of Biological and Agriculture Engineering • FELDA Mempaga
Challenges	• Difficulty in launching R&D efforts without the necessary capital. • Holidays overseas caused delay in shipment of raw materials.
NTIS Intervention	• Access to funds which helps in manufacturing homegrown agriculture drones & prevent shortage of materials during production. • Assistance for Unmanned Aircraft Systems (UAS) Operations guidelines and Civil Aviation Directives (CAD) Agricultural UAS Operations to grant the Aerial Work Certificate (AWC).
Outcome/Progress	• Produced and sold more than 200 units of drones. • Created more than 30 jobs. • Opened 7 service centres in Malaysia.

The support we received from NTIS was instrumental in accelerating the commercialisation of our agriculture drones. They provided with funding for hiring, connections to agriculture industry leaders, and sandbox for technological validation. Now, we're working with 9 out of 10 oil palm plantations in Malaysia, established more than fifteen 3S (Sales, Service and Spare Parts) Centres across the region, and grew to become 100+ people strong.

Cheong Jin Xi | Founder

Billion Prima Sdn. Bhd.

Total amount commercialised:
RM 14.6mil.

Sales Potential/Projection:
RM 53.1mil.

Technology Driver

- **Advanced Intelligence Systems**
- **Others**

Socio-Economic Sector

- **Smart Engineering & Manufacturing**

Solution Tested	• Cargo and Vehicle X-Ray Scanner • Baggage and Parcel X-Ray Scanner
Location Tested	Kulai, Johor
Challenges	• Acquiring the recognition, certification and approval from the Malaysia authority to supply the baggage X-ray scanner to the Malaysia Airport. • Access to work together with Civil Aviation Authority of Malaysia (CAAM) and NTIS to test and certify our local R&D product. • Instil the awareness to potential customers such as Royal Malaysian Customs Department, airport and security sector that Malaysia has such a good and high-tech product. • Priority to the local R&D security product in the government procurement or tender.
NTIS Intervention	Provision of funding for production and R&D of materials.
Outcome	• Successfully commercialised 1 unit of patented cargo scanner to Bea Cukai Indonesia and 5 units of baggage scanner in domestic and international market during the pandemic. • Target to ink another RM 53 million of sale contract with the overseas customers in 2023.

NTIS has given recognition to the high technology product developed locally by our company. This recognition enables our product to gain more product visibility in the local market, increase our market share and propelled our products to the international market. All entrepreneurs starting their journey should take the opportunity to fully utilise the ecosystem provided by NTIS in order to further enhance their capability.

Tan Sri Dr. Alies Anor Abdul | Founder

Nexagate Sdn. Bhd.

Total amount commercialised:
RM 8.8mil.

Sales Potential/Projection:
RM 20mil.

Technology Driver
Cyber-Security & Encryption

Socio-Economic Sector
Smart Technology And Systems
(Next-Generation Engineering & Manufacturing)

Solution	NSI v4.0 for IoT. A trusted IoT cyber security solution.
Testing Location	Virtual Instrument & System Innovation (VISI Sdn. Bhd.)
Challenges	• Rising security concerns for IoT implementers/users. • Expensive IoT security solutions and budget constraints among traditional enterprises/ manufacturers. • Growing need for IoT cyber security solutions • Lack of standardization for IoT solutions. • Required resources for development of specialized version of NSI for IoT sectors, additional developers to the existing team, acquiring servers needed for the sandbox environment and procurement of sensors and IoT gateways for sandbox test.
NTIS Intervention	Provision of fund.
Outcome/ Progress	• Developed a sandbox virtualised environment to analyse malware, threats and communication packets between IoT devices and gateways. • Developed an NSI Star Rating implementation within NSI Cybersafe Sandbox IoT environment. • Combined best practices from years of cyber security experiences and leveraging tools that used and developed throughout the sandbox timeline in delivering security maturity score that enterprises, IoT vendors and manufacturers can refer to in securing their environment.

The NTIS funding enabled us to expand our NSI platform to meet the emerging IOT cybersecurity demands.

Khairil Effendy | Managing Director

Naluri Hidup Sdn. Bhd.

Total amount commercialised:
RM 6.13mil.

Sales Potential/Projection:
RM 11.5mil.

Technology Driver

Advanced Intelligence Systems

Others

Socio-Economic Sector

Smart Engineering & Manufacturing

Solution Tested	Naluri; a human-driven, AI augmented digital disease management program that delivers quantifiable health outcomes via mobile application and clinical assessment through bluetooth devices.
Testing Location	• Petronas • RHB Bank • SME Bank
Challenges	Lack of financial resources that can potentially delay product development.
NTIS Intervention	Provided the financial support to purchase the blood pressure monitors that would be integrated in this project and fund to complete this project without majorly impacting resources.
Outcome	• Completed Food AI that can now detect an additional 130 food classes at least an 80% accuracy. • Successfully integrated a Bluetooth Connected Blood Pressure Machine and a Bluetooth Connected Glucometer in its offering and will be able to monitor patients through these devices. • The Depression Detection algorithm now capable of operating in Bahasa Malaysia.

Based on the sandbox project with NTIS, we now have confidence that the technology developed can be commercialised as we have already secured additional contracts from clients with the utilisation of this technology. We aim to be the number 1 behavioural health company in Malaysia, and eventually, Southeast Asia. We believe that we will be able to 5x our revenue, positioning us for a strong Series B round.

Azran Osman Rani | CEO and Co-Founder

Meraque Services Sdn. Bhd.

Total amount commercialised:
RM 6.1mil.

Sales Potential/Projection:
RM 24mil.

Technology Driver
Other

Socio-Economic Sector
Agriculture

Solution	Malaysia's 1st Hybrid Drone Spraying technology for the agriculture sector which will help to reduce costs, increase efficiency and improve crop yields while reducing the environmental impact of traditional spraying methods.
Testing Location	Nationwide Major Plantations
Challenges	Faster permit approval needed to address any immediate request from clients or any emergency situation which requires immediate spraying to avoid crop damage.
NTIS Intervention	• Provision of funding via MTDC. • Civil Aviation Directive 6011 part (II) Agriculture.
Outcome/Progress	• Generation of RM6mil revenue by Q2 of 2022. • Revenue of RM3,763,320.84 in 19 months due to reduce numbers of seedlings moved to immature plantation. • Completed the training session with Sime Darby Plantations with 12 Proteges. • Completed 20 local talents with on-job training. • Production of 12 hybrid drone with 3 versions of upgrading and in the midst of improving the drone capabilities. • Spraying efficiency is 17,000 seedlings per day and in the midst of improving to achieve the KPI. • Production of 24 hybrid drones. • Training of 15 local workers as Drone Operators. • Increase spraying efficiency from 4,000 seedlings per day (manual spraying) to 20,000 seedlings per day (drone spraying). • Provision of spraying services at 28 Sime Darby Nurseries in Central, Northern and Southern Regions.

We are grateful for the support from NTIS as we are able to pivot and scale our business which has brought huge impact to our partners as well as generate critical job opportunities to young talents all over the country during the pandemic period. Our team's perseverance is true testament to the saying that difficult times often inspire the greatest creativity and innovation. The company now lives by that mantra and we will continue to innovate and disrupt the status quo and inspire our Meraque Aviators to keep building great solutions that will solve the world's problems and bring positive social and economic impact.

Mohammad Razali bin Ismail | CEO

MySpatial Sdn. Bhd.

Total amount commercialised:
RM 3.46mil.

Sales Potential/Projection:
RM 5mil.

Technology Driver

- **Advanced Intelligence Systems**
- **Others**

Socio-Economic Sector

- **Agriculture & Forestry**
- **Smart Engineering & Manufacturing**

Solution Tested	Advanced 3D Geospatial Solution for Agriculture, Construction and Engineering.
Testing Location	• Test Site for Agriculture (Oil palm): Sarawak Land Consolidation and Rehabilitation Authority (SALCRA)'s Plantations in Sarawak • Test Site for Construction and Engineering (Highway Operator): PLUS Berhad's – North South Highway
Challenges	• Required a suitable environment to test solution. • Needed funds for adequate manpower, sophisticated equipment and a robust marketing plan.
NTIS Intervention	• Provision of funding. • Facilitated collaboration with Sarawak Land Consolidation & Rehabilitation Authority (SALCRA) and PLUS Berhad for testing sites.
Outcome	• Successfully increased the accuracy of 'Design and Planning for Opening New Plantation / Replanting' for oil palm applications from a range of 60-70 percent to 90-99 percent. • Highway Operators can meet the requirements and conditions set by the Malaysian Highway Authority (MHA) through digitisation of asset information and visualisation in 3D, the real situation on every highway in Malaysia. • By fully integrating advanced 3D geospatial and artificial intelligence technologies, the plantation and agricultural companies could potentially be assisted to reduce their dependence on foreign labour.

The NTIS ultimately accelerates the implementation of our innovative Geospatial solution for Agriculture, Construction and Engineering. With the collaboration of key clients for testing sites, we have been able to spread the use of our solution across the country and in a promising way. Provision of NTIS funding for operations, equipment and marketing has helped us achieve our sales revenue target more than 5 times.

Mohd Syarmy Shamsuddin | Managing Director

Ribe Power Sdn. Bhd.

Total amount commercialised:
RM 3mil.

Sales Potential/Projection:
RM 6mil.

Technology Driver

- **Advanced Intelligence Systems**
- **Others**

Socio-Economic Sector

- **Smart Engineering & Manufacturing**

Solution Tested	New products to promote usage of high capacity conductors in Smart Grid power transmission line.
Location Tested	Veiki-VNL Electric Large Laboratories Ltd, Budapest, Hungary
Challenges	Funds for design tests in an independent and accredited laboratory.
NTIS Intervention	Provision of funds.
Outcome	• Won a project in Nigeria worth $650,000. To supply in March 2023. • Successfully penetrating Indonesia market winning a small project with value of US$20,000. • Qualified and bid for projects in Iraq worth US$500,000. • Qualified and bid for projects in Netherland value EUR150,000.

The NTIS grant helped us to grow our business further not only in ASEAN countries but also in ASIA.

Latif Lehan | Managing Director

MSD Innovation Sdn. Bhd.

Total amount commercialised:
RM 2.5mil.

Sales Potential/Projection:
RM 3.5mil.

Technology Driver
Sensor Technology

Socio-Economic Sector
Water & Food

Solution Tested	Smart Farming solution for indoor and outdoor purposes which is driven by IoT to manage farms and optimise growth through precision farming, use of sensors, controllers and automation to ensure a conducive and controlled environment for maximum yield.
Testing Location	• Shoplot at Taman Lestari Perdana, Seri Kembangan, Selangor • Shoplot at Plaza Serdang Raya, Serdang Selangor • Faculty of Engineering, MMU Cyberjaya • MMU Campus Grounds, Cyberjaya, Selangor • Kebun Komuniti Taman Puchong Intan • Shoplot at Pusat Bandar Puchong, Puchong, Selangor
Challenges	• Increase of setting up costs and the operating expenditure of the Smart Urban Farming system due to the pandemic. • Need for new specific categories for licensing for smart indoor farming in buildings or commercial shophouses by the Municipal Councils. • Need for engagement with TNB to accord agriculture rates for smart indoor farms instead of commercial rates for smart farming activities in buildings/premises.
NTIS Intervention	• Provision of soft landing to be able to roll out and pilot the Smart Urban Farming solutions. • Genuine user feedback by stakeholders in the sandbox. • 70% funding assistance. • Access for collaborations with multiple stakeholders.
Outcome	• Successful development of a Smart Urban Farming Training Manual ("SUF Manual"). • Successfully provided training for selected B40 and Asnaf participants using SUF Manual ranging from those in their 20s up to 60 years old. • Identified and obtained 6 separate sites to roll out the Smart Urban Farming system for the B40 participants. • Developed and created digital dashboards and mobile apps in-house. • Engaged with TNB in order to request for a change in tariff category for Smart Urban Farms.

The NTIS has been a catalyst in the development of our technology and has helped us towards commercialisation. The NTIS has proven to be an ideal platform and conducive environment for us to learn and improve in preparation towards commercialisation. With transparent processes adopted by the NTIS Committee and organisers, participating in the NTIS is a badge of honour which makes participating companies more attractive to potential investors and credible to potential clients.

Adrian Abdul Ghani | Director

iRadar Sdn. Bhd.

Total amount commercialised:
RM 1.76mil.

Sales Potential/Projection:
RM 960,000

Technology Driver
Sensor Technology

Socio-Economic Sector
Smart Cities & Transportation
Environment & Biodiversity

Solution Tested	Ground Based Synthetic Aperture Radar (GBSAR) for Surface Deformation Monitoring and Detection.
Testing Location	• iRadar Sdn. Bhd. factory • Multimedia University Melaka Campus
Challenges	• Unclear regulatory requirement on the spectrum used (17.2GHz). • Clarity needed on the frequency usage in this spectrum range by the regulatory body such as Malaysian Communications and Multimedia Commission (MCMC).
NTIS Intervention	• Provided the platform to discuss and connect with MCMC for application of larger bandwidth for GBSAR operation. • Obtained the apparatus assignment of operating the GBSAR at 16.8GHz and bandwidth of 1GHz.
Outcome/Progress	The testing of the GBSAR was completed and still ongoing and the overall performance of the system has been verified.

If you believe what you do is RIGHT, keep going and never give up! We are grateful that NTIS gave us a hand along our journey that enabled us to keep moving forward.

Ir. Prof. Dr. Koo Voon Chet | CEO

UMCH Technology Sdn. Bhd.

Total amount commercialised:
RM 1.5mil.
Sales Potential/Projection:
RM 15mil.
sales within 18 months

Technology Driver
Advanced Intelligence Systems

Socio-Economic Sector
Smart Engineering & Manufacturing
Medical & Healthcare

Solution	WeHealth – A Remote Health Monitoring solution among ambulatory care patients with chronic diseases and Connected Health Data Analytics Technology
Location Tested	• Pusat Perubatan Universiti Malaya (PPUM) • Universiti Malaya (UM)
Challenges	• Requires piloting to review the system enhancement and user acceptance test (UAT) progress with our team and users. • Need to get feedback from pilot patients for the app, transition from manual recording on paper to digital recording on app for daily readings. • Requests to provide subscription at affordable price.
NTIS Intervention	• Provision of fund to support doctor & patient honorarium, project members salary and purchase of smart devices for patients. Future funding will focus on commercialization and business & market development. • Facilitation between UEM Edgenta team & UMCH team with good progress and signed MEMORANDUM OF BUSINESS EXPLORATION (MOBE) with UEM Edgenta Group to establish and commercialize WeHealth solution in their Edgenta NXT platform. • HealthTech Hub on research partnership with public hospitals & Regulatory MoH & MDA application.
Outcome	• MREC & Care plans for diabetes and hypertension were developed. • 17 doctors from Rawatan Utama Klinik Am (RUKA) and Endocrine Clinic were enrolled to recruit 104 patients who completed monitoring using WeHealth. • Achieved 81.2% acceptance for Doctor on functionality & usability. • 84.6% acceptance for Patients Post-Monitoring & 100% uptime. • Appointment Based Clinic System & integration with iPesakit System implemented at RUKA clinics.

Thank you NTIS, for believing in WeHealth solutions and providing great support to us to disrupt and transform healthcare delivery from sick care to preventive care with enhanced quality of care. We aim to bring affordable, accessible and attainable healthcare to Malaysians nationwide through the digitalization of the healthcare system that is preventive, participatory, and personalised.

Teoh Seng Jing | CEO

Ideasparq Robotics Sdn. Bhd.

Total amount commercialised:
RM 1.26mil.

Sales Potential/Projection:
RM 6.63mil.

Technology Driver

Advanced Intelligence Systems

Others

Socio-Economic Sector

Smart Engineering & Manufacturing

Solution Tested	Autonomous Robots • Autonomous Floor Scrubber • Delivery Bot • Fogger • Sprayer
Testing Location	• MAEPS Quarantine Centre, Selangor • Pasar Ayam Amanjaya Ipoh, Perak • Pasar Besar Seremban, Negeri Sembilan
Challenges	• Product testing in a live environment and qualifying for grants to bring those products to market. • Require assistance in regulatory requirements.
NTIS Intervention	• Assistance in deployment of robots in MAEPS Quarantine Centre during the start of the pandemic. • Funding access for the deployment of robots in wet markets in 2 states.
Outcome	• Reduced dependence on manpower while encouraging the use of artificial intelligence (AI) in the daily operations of Pasar Ayam Amanjaya Ipoh, Perak. • Provided effective, simple and low operating cost healthcare robots. • Reduced the risk of infection among frontline workers by helping to minimize the number of workers needed for non-clinical purposes. • Successfully deployed 3 units of robots to assist in MAEPS Serdang • Received endorsement from Pusat Kuarantin dan Rawatan COVID-19 (PKRC) on effectiveness of the robots. • Job Creation : 10-50 new staff. • Investment : RM 3.3mil.

NTIS has assisted us in our development of innovative products and solutions, in view of high technology adoption as well as commercialization support and funding in preparation for entering a larger and more competitive market. To all young entrepreneurs starting your journey, you must avoid chasing new opportunities before you have fully given yourself a chance to exploit the ones you are currently chasing. Focus!.

Asyraf Abdul Rahman | Founder & Managing Director

Biogenes Technologies Sdn. Bhd.

Total amount commercialised:
RM 1mil.

Sales Potential/Projection:
RM 2.5mil.

Technology Driver

- **4D/5D Printing**
- **5G / 6G**
- **Advanced Materials**
- **Bioscience Technology**
- **Sensor Technology**
- **Others**

Socio-Economic Sector

- **Culture Arts & Tourism**
- **Medical & Healthcare**
- **Smart Engineering & Manufacturing**

Solution Tested	APTSENS Rapid Disease Diagnostic Kit.
Location Tested	• Universiti Malaya (UM) • Upcoming test sites at the hospitals within the MRANTI healthtech cluster.
Challenges	Acceptance of Malaysian made novel diagnostic solutions.
NTIS Intervention	• Introduction to MDA and assistance to connect with the Ministry of Health on adopting local solutions. • Provision of test site at UM Medical Faculty. • Funding Support.
Outcome	• First-in-world translate an aptamer designed using Biogenes APTCAD software to a product (APTSENS) that was tested and validated in Malaysia and USA. • Biogenes successfully produced 3 readers & 2,000 biosensor tests for trial in UM. • Performed pre-clinical & clinical studies on COVID-19 disease using APTSENS platform called COVIDSENS.

NTIS is a one-of-its-kind program that has enabled Biogenes to explore the usage of Malaysian-made diagnostic solutions in a healthcare setting. NTIS gives you a sandbox to test, iterate and develop ideas until it can see a commercial use-case and eventually commercialise. Fail forward in the face of obstacles.

Adrian, Tang & Cheng | CCO / CEO / Co-founders

Wise AI Sdn. Bhd.

Total amount commercialised:
Over
RM 1mil.

Sales Potential/Projection:
Over
RM 20mil.

Technology Driver

Advanced Intelligence Systems

Socio-Economic Sector

Business & Financial Services

Smart Cities & Transportation

Testing Location	Bandar Sunway
Challenges	Lack of funding to build a complex AI model to tackle various identity fraud and identity spoofing attempts and limited data sources.
NTIS Intervention	Funding Support.
Outcome/Progress	• To build and protect 650 million digital identities in Southeast Asia. • Successfully tested and verified by independent third party. • User friendly verification method. • Raised RM2 million investment.

Aiming to build and protect the digital identity for 650 millions Southeast Asians.

Lim Tao Cheng | Founder & CEO

Archtron R&D Sdn. Bhd.

Total amount commercialised:
More than
RM 800,000

Sales Potential/Projection:
RM 1-2mil.
in the next 12-24 months

Technology Driver

- **Advanced Intelligence Systems**
- **Sensor Technology**

Socio-Economic Sector

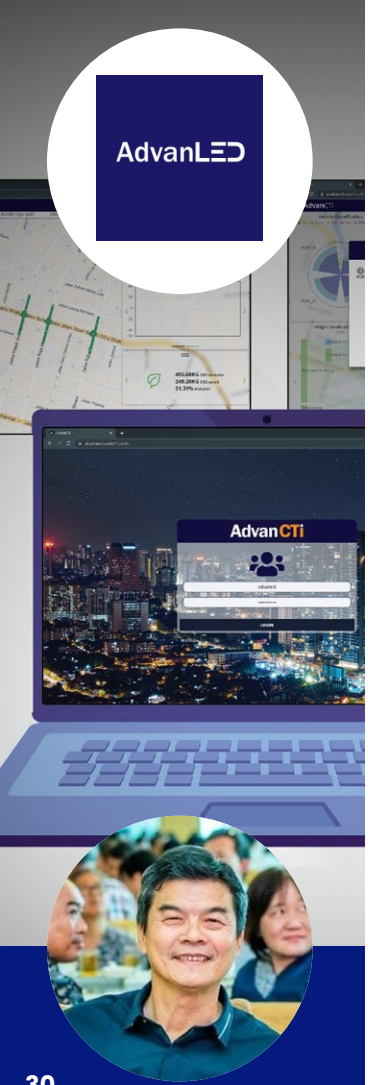
- **Smart Cities & Transportation**

Solution Tested	Internet of Things (IoT) based smart home system using Artificial Intelligence (Bluguard-AI).
Testing Location	Gamuda Twenty-Five Seven
Challenges	Entering the market on time and stiff competition in the industry.
NTIS Intervention	• Sandbox sites to conduct testing, technology validation and verification for regulators compliance such as SIRIM and CE certification before full commercial deployment. • Assistance to speed up commercialisation to capture high-end market share. • Testing and functional validation in Sandbox Site. • Product design, molding fabrication, product development and regulatory facilitation.
Outcome	• Reduction of time to go to market from conventional 24 months to 12 months. • Launched product 1 year ahead of schedule. • Completed the design, manufacturing, CE, and SIRIM compliances phase. • Now, the subsequent milestone is to focus on market promotion activities. • Actively talking to Malaysia's top-tier developers to market the proposal to bundle the Bluguard Ximple W3 as the standard package under their housing project.

We are grateful to be working with the NTIS team who are helpful, professional, and accommodating especially during the application process, development, and Commercialization phase. NTIS provides Sandbox sites for us to conduct testing, technology validation, and verification before full commercial deployment in the following 12 months fueled and supported by MTDC commercialisation funding through NTIS.

Ultimately, it is very beneficial for a startup or SME companies to get on board with NTIS Sandbox as the participation and comprehensive strategy and support provided by NTIS Sandbox would get the company transformed rapidly from the product design phase to the commercialization phase. Companies must generate revenue for long-term sustainable competitiveness in the industry.

Yap Thiah Huat | Chief Operating Officer



LED Vision Sdn. Bhd.

Total amount commercialised:
RM 700,000

Sales Potential/Projection:
RM 5mil.

Technology Driver

- **Advanced Intelligence Systems**
- **Others**

Socio-Economic Sector

- **Smart Cities & Transportation**

Solution Tested	Traffic junction video analytics and system for smart city.
Challenges	• Lack of funds to develop Smart Traffic Solution further. • Obtaining a test site for the system's proof of concept.
NTIS Intervention	• Assisting in getting approval from authority for validation. • Provision of fund. • Sandbox site.
Outcome	• Safety validated AI enabled traffic signal controller. • Certified final closure with JKR Melaka .

It is our utmost pleasure to be funded under the NTIS program as it has provided us with an opportunity to develop our Smart Traffic Solution. The NTIS program has helped us greatly in terms of obtaining a testing site for our system's proof of concept, opening doors in achieving market penetration. Moving towards IR 4.0, this is a stepping stone for our technology to go one step further in competing in the ever-evolving market.

James Wong | Director

Evenesis (Y Us Sdn. Bhd.)

Total amount commercialised:
RM 500,000

Sales Potential/Projection:
RM 2mil.

Technology Driver

- **Advanced Intelligence Systems**
- **Others**

Socio-Economic Sector

- **Culture Arts & Tourism**
- **Smart Engineering & Manufacturing**

Solution Tested	AI-Powered Facial Recognition for Events with Virtual Reality (VR) and Contact Tracing in Travel & Tourism.
Location Tested	• Selangor International Business Summit (SIBS) 2021 • Virtual Exhibition by Berjaya University College
Challenges	• Development and deployment of attendee tracking in events during the pandemic requires validation from a test site especially for federal and state government events. • Data protection issues.
NTIS Intervention	Provision of two test sites for solution validation.
Outcome	• Successful deployment and commercialisation of the solution. • Completion of Facial Recognition Integration feature. • Completion of VR and content management system. • Completion of Contact Tracing/Scanning feature for physical/hybrid events. • Deployment of the platform. • Completion of Evenesis integration with VR & AI in events .

NTIS tremendously helped us to bring our product to market quickly by allowing us to validate on two sites with great outcomes and testimonials. My advice for the young innovators is to build your MVP and quickly test it to get market feedback. With or without funds or grants, hustle your way and ensure the product and service meets the needs of your customers and clients.

Ts. Mohd Yusno Bin Mohd Yunos | CEO & Founder

Alphaswift Industries Sdn. Bhd.

Total amount commercialised:
RM 500,000

Sales Potential/Projection:
RM 10mil.

Technology Driver

- **Advanced Intelligence Systems**
- **Advanced Materials**

Socio-Economic Sector

- **Smart Cities & Transportation**

Solution Tested	Cargo delivery with unmanned aerial vehicles.
Testing Location	DRZ Medini, Johor
Challenges	Regulatory hurdles, challenges for operation and equipment reliability.
NTIS Intervention	• Sandbox Test Site. • Provision of fund. • Regulatory Assistance .
Outcome	• 400 hours of flight hours. • 11000 km of flight distance. • Concept of Operations tested and verified. • CAAM approved.

NTIS has been a good platform for us to test and validate our drone solutions. By utilising the facilities offered by NTIS, we can further strengthen our product development and bring the solution one step closer to commercialisation.

Dr. Shian Lee | CEO

Nomatech Sdn. Bhd.

Total amount commercialised:
RM 336,211

Sales Potential/Projection:
RM 3,926,632

Technology Driver
Bioscience Technology

Socio-Economic Sector
Agriculture & Forestry
Water & Food

Solution Tested	Paddy Variety UKMRC-9: Low GI and High Antioxidant Rice.
Location Tested	• Kampung Padang Labi, Changlun, Kedah • Charuk Landak, Baling, Kedah • Teluk Perah, Baling, Kedah
Challenges	• Needed a reference to the Ministry of Agriculture and Food Industries (MAFI)to get approval for export permit which requires approval to commercially plant UKMRC-9. • Intervention by NTIS is needed through MOSTI to expedite the approval.
NTIS Intervention	• Multisites - Production of UKMRC-9 paddy variety at 3 locations. • Product safety testing. • Assessment of ability for local farmers to follow planting SOPs. • Obtaining approval from the Ministry of Agriculture and Food Industries (MAFI) for commercial planting of red rice.
Outcome	• Successful production of UKMRC-9 at multiple planting locations. • Complete Evaluation of risks involved in planting of red rice varieties including heavy metals, microbiology and shelf-life analysis. • Received approval for commercial planting of UKMRC-9 red rice from the Ministry of Agriculture and Food Industries (MAFI).

Understand weaknesses and build on strengths. Never burn bridges in business.

Prof. Dr. Wickneswari Ratnam
Managing Director

Failure is not a step backward; it's an excellent stepping stone to success. We never learn to move out of our comfort zone if we don't overcome our fear of failure. Sandbox 2 funding was timely to expand our field locations and product Stock Keeping Units (SKUs) to secure regulatory approvals.

Sharifah Nur Rahimah Bt Syed Alias
Director

3 Little Fish Sdn. Bhd.

Total amount commercialised:
RM 260,800

Sales Potential/Projection:
RM 1.8mil.

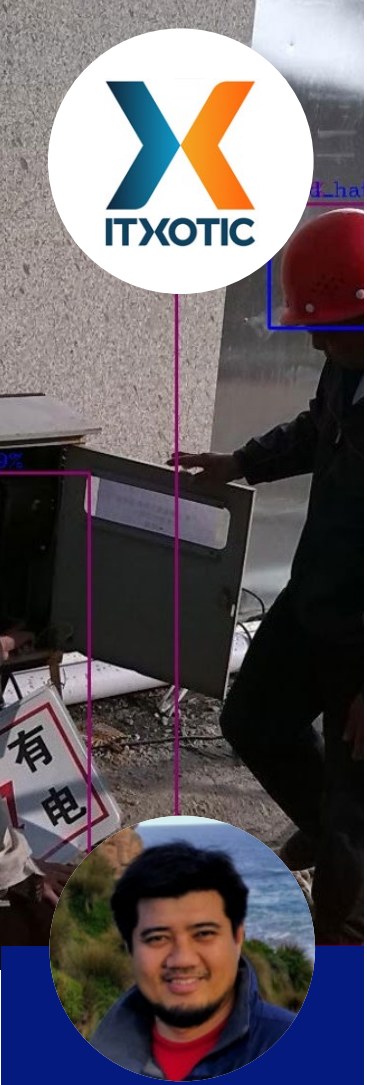
Technology Driver
Bioscience Technology

Socio-Economic Sector
Water & Food
Environment & Biodiversity

Solution Tested	A novel device to reduce marine leech parasite infestation on commercial sea cage farmed fishes.
Location Tested	• Pulau Ketam, Selangor • Pulau Pangkor, Perak • Offshore Sg Udang/Juru, Penang
Challenges	Lack of fund for manufacturing of mould and devices.
NTIS Intervention	Provision of funds.
Outcome	• Produce 1000 units of BP2 device. • Completion of 2 mould with 4 insert to produce 8 sets of tube with different diameters. • Deployment of 3 proposed site. • Market validation report. • Interest regionally in Brunei, Thailand and Singapore and Vietnam. • RM300K investment.

It's good to have more platforms or exposure that allows researchers within the industry to showcase their inventions to potential business partners and other relevant stakeholders. Why import innovation when there is so much local talent to be tapped into.

Sugania Vijayan | Director



Itxotic Sdn. Bhd.

Total amount commercialised:
RM 194,000

Sales Potential/Projection:
RM 1.6mil.
in 2023

Technology Driver

- **Advanced Intelligence Systems**
- **Augmented Analytics & Data Discovery**

Socio-Economic Sector

- **Smart Cities & Transportation**
- **Agriculture & Forestry**
- **Smart Engineering & Manufacturing**

Solution Tested	Real-time monitoring of customized objects using visual analytics platform for industrial safety and inspection.
Location Tested	• Pasar Ayam Aman Jaya, Ipoh • Pasar Besar Seremban
Challenges	• Inspection for safety in the oil & gas industry is time consuming and difficult to scale due to reliance on human power. • Lack of funds and location for testing.
NTIS Intervention	Test site to improve visual analytics platform (ITXprotect) in a live environment for client demonstration in the oil & gas industry.
Outcome	• Rapid deployment in 2 sandbox sites; Pasar Ayam Ipoh & Pasar Besar Seremban. • Successful detection & monitoring of custom objects. • Non-disruptive over-the-air updates of software & AI algorithm. • Generated new sales with PETRONAS & Teras Teknologi (PLUS). • On track for more than 3 times year-on-year growth.

The sandbox program under NTIS allowed ITXOTIC to rapidly test and improve our AI platform to commercial grade level in a controlled live environment. It boosted our confidence to get out of stealth mode & helped us go to market faster.

Ammar Zolkipli | Founder/CEO

Farmotic Sdn. Bhd.

Total amount commercialised:
RM 165,000

Sales Potential/Projection:
RM 1mil.

Technology Driver

Advanced Intelligence Systems

Others

Socio-Economic Sector

Smart Engineering & Manufacturing

Solution Tested	Farmo (Farm Assist Robot for Multi Operation). Agriculture robots that cover small land to big plantations.
Challenges	• Very low demand from targeted farmers due to an increase in agricultural input such as fertiliser and pesticide. • Many farmers who previously intended to use Farmo robots have delayed the purchase due to the increase in agricultural inputs.
NTIS Intervention	• Assistance in easing the process in obtaining all necessary approvals while saving time on tedious procedures like documentation and paperwork. • Provision of funding. • Market access through exhibitions.
Outcome	More prototypes built and increased production.

NTIS not only provides financial assistance but opens up opportunities to explore new markets. To all entrepreneurs, especially technopreneurs. Founding and growing new technology to transform any industrial sector is probably one of the hardest things anyone could ever do, and the hardest part about it is that nobody has done your job ever before.

Jefri Efendi Bin Mohd Salih | Director

UniDLT Sdn. Bhd.

Total amount commercialised:
RM 106,790

Sales Potential/Projection:
RM 1.25mil.
anually

Technology Driver
Blockchain

Socio-Economic Sector
Education

Solution Tested	E-Scroll Blockchain Technology System.
Location Tested	International Islamic University of Malaysia
Challenges	• System improvement required. • Lack of market access to universities and institutions. • Lack of skilled manpower in the field and infrastructure to support large-scale systems. • Financial constraints.
NTIS Intervention	Provision of funding to improve the system and mobilise activities to market E-Scroll to local public and private universities.
Outcome	• The improvement of the system features and nearing completion following the initial proposed schedule. • The E-Scroll system with full features is targeted to be ready by early 2023. • The E-Scroll solution has also been rolled out to several public and private universities until now.

NTIS gave us the funds to move to the next phase and further boost to strategically position and commercialise our product. For budding entrepreneurs, it is very important to identify and position your product strategically. NTIS is the one place where you can be helped and guided.

Prof. Dato' Dr. Norbik Bashah Idris | Business Advisor

Nitium Technology Sdn. Bhd.

Total amount commercialised:
RM 46,740

Sales Potential/Projection:
RM 400,000
(for year 2023)

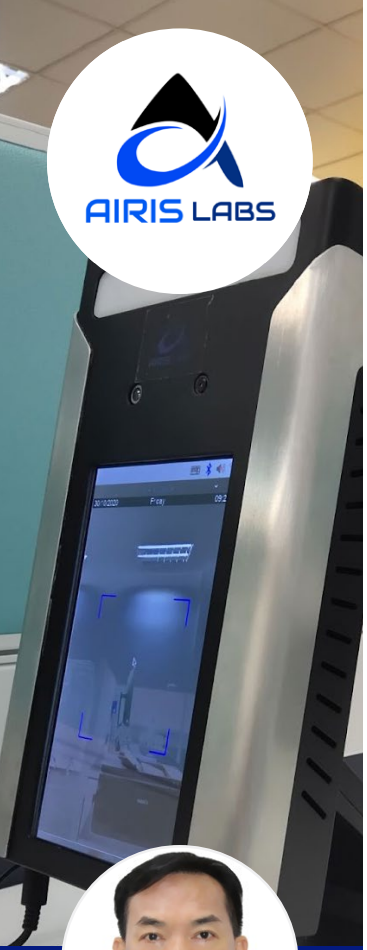
Technology Driver
Advanced Materials

Socio-Economic Sector
Medical & Healthcare

Solution Tested	Porous nitinol dental implant system.
Location Tested	Faculty of Dentistry at: • UiTM • UKM • UM
Challenges	• Unavailability of locally developed dental implant systems in Southeast Asia at the time; hence lack of reference and benchmark. • High cost to develop dental implant systems.
NTIS Intervention	Provision of funding which is needed to develop other components for the porous nitinol dental implant system.
Outcome	Malaysia's first dental implant surgical kit was developed. Apart from that, Malaysia's first polyvinyl siloxane (PVS) dental impression materials have been successfully registered with the MDA.

Through MTDC, the NTIS assisted us in developing a functional product that can be used in a clinical setting. Under Sandbox 1, we have also developed a product catalogue and animated surgical videos. A medical innovator is a missionary, not a mercenary. Anyone embarking on the path to becoming a medical device innovator should be aware that the higher the risk of the device, the longer it will take to commercialise the innovation. While typical entrepreneurship is primarily concerned with making money and becoming wealthy, technopreneurship is concerned with disrupting the status quo in order to create a better future.

Asif Khushaini | Managing Director



Airis Labs Sdn. Bhd.

Total amount commercialised:
RM 21,000

Sales Potential/Projection:
RM 500,000

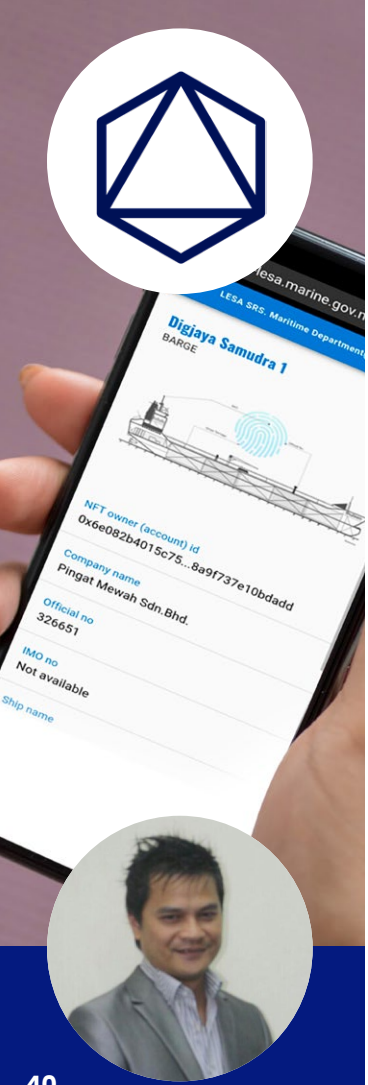
Technology Driver
Advanced Intelligence Systems

Socio-Economic Sector
Smart Engineering & Manufacturing

Solution Tested	AIRIS Sense - Abnormal Temperature Detection and AI Facial Recognition Data Logger System. This system enables body temperature measurement, facial recognition and record visitors data contactlessly and quickly.
Location Tested	Emerald System Sdn Bhd, Penang and NTI Penang (Cedec Campus & USM Campus)
Challenges	Required financial support to build the AIRIS Sense, the Abnormal Temperature Detection and AI Facial Recognition Data Logger System.
NTIS Intervention	Funding Support.
Outcome	Successfully built the initial 100 units of AIRIS Sense for sales.

The NTIS has provided the support, which enabled AIRIS Labs to build the first batch of our company growth's project, AIRIS Sense, the Abnormal Temperature Detection and AI Facial Recognition Data Logger System. This allows AIRIS Labs to speed up our business growth. To other new entrepreneurs, there are many organizations, including NTIS, willing to provide help and support to grow your company. Sandbox application process is not difficult and NTIS team members are very helpful and supportive.

Lee Chun Keat | Chief Operating Officer



Thuleen Sdn. Bhd.

Status
Project Completed

Technology Driver

- **Blockchain**
- **Cyber-Security & Encryption**

Socio-Economic Sector

- **Agriculture & Forestry**
- **Business & Financial Services**
- **Culture Arts & Tourism**
- **Education**
- **Medical & Healthcare**

Solution Tested	• LESA - a blockchain framework that helps to issue assets such as licenses, permits, and certificates as non-fungible tokens which can be verified on a blockchain network. • Ship Registry Certificate or "SPK" for Marine Department Malaysia.
Challenges	Maintaining human capital in the area of software development.
NTIS Intervention	Funding Support.
Outcome	• Built a ship registry certificate (decentralized) or "SPK" application for the Marine Department Malaysia. • Installed a verifier application for the SPK at MOSTI. • Installed and set up an Ethereum blockchain network at MAMPU for the use of SPK.

LESA is the most advanced, trusted, yet acceptable solution.

Zairosezary Mat Jenoldin | Managing Director

Ikhlas Jati Sdn. Bhd.

Status
Project Completed

Technology Driver
Advanced Intelligence Systems

Socio-Economic Sector
Smart Engineering & Manufacturing

Solution Tested	Senslar Smart Floating, Tilting & Rotating Modular Solar Panel Platform.
Location Tested	UNITEN Lake
Challenges	Funding needed for the pilot project and bringing the solution to industry players.
NTIS Intervention	Provision of fund and industry matching.
Outcome	Successful completion of 25kW pilot project at UNITEN Lake, Bangi. Translated into a real-time application.

The NTIS has helped a lot by providing us the grant for us to complete the 25kW pilot project at UNITEN Lake. We are currently requesting another round of grant that will help bring our solution to the industry players.

Shanmuganathan Sakruvathy | Chief Executive Director

Prostrain Technologies Sdn. Bhd.

Status
Project Completed

Technology Driver
Advanced Intelligence Systems

Socio-Economic Sector
Smart Engineering & Manufacturing
Medical & Healthcare

Solution Tested	Healthcare mobile telepresence robot.
Location Tested	• Sirim Electromagnetic Compatibility (EMC) Lab • Sultan Ahmad Shah Medical Centre, Kuantan (SASMEC)
Challenges	• Costly certification test which involves a number of sample robots for testing purposes. • Certification and approval by Medical Device Authority Malaysia (MDA) in order to test solutions in a live environment.
NTIS Intervention	• Provision of funding for the certification test conducted by SIRIM. • Ease of the certification requirement of the robot so that it can be tested in the hospital in a controlled environment.
Outcome	• Fabrication of 3 units of Medibot V4 for testing purposes. • Passed the medical standard test for Electromagnetic Compatibility (EMC) as per IEC 60601-1-2. • Completed on-site test at Sultan Ahmad Shah Medical Centre (SASMEC), Kuantan. • 2 units sold (RM150K) - 2022. • 7 units (proposed to 4 clients). • Projection for 2023: 10 units. • Currently self funded.

NTIS has helped the company to accelerate the development process by providing access to the real testing environment.

Mohd Hirzi Amirrudin | Technical Director

Meet the Team Powering Innovation

NTIS

Front, from left - **Syarah, Haziq, Maisarah, Hafiz**

Back, from left - **Fauzan, Afiq, Ryzal, Aizat, Nadhirah**

MTDC

From left - **Hidayu, Shafiq, Syafiqah, Ameer**
Sitting - **Dr. Raihana**

MIMOS

From left - **Fitri, Sahida, Siow Fhang, Wai Tong**

MRANTI Tech Assessor

Abdul Azim

FUTURISE

From top -

Dr Andi, Maizurah, Syaamil

NATIONAL TECHNOLOGY &
INNOVATION SANDBOX