

MANIPAL INTERNATIONAL UNIVERSITY (MIU)
MASTER PLAN FOR R&D
2021 - 2025

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Foreword

Research & Development and Innovation (RDI) are essential elements for sustaining the economic growth and propel our nation toward a developed status. Many developed nations have generated large and lasting returns for their economy through RDI over the years.

This five-year R&D strategic plan (2021 to 2025) is our first blueprint to provide the roadmap and guide us towards the growth of RDI for our university. This blueprint will allow us to drive successful research and innovation strategy with an impactful outcome for the community. The main theme from this blueprint has clearly define the need for all components of the university system to work seamlessly together to achieve the research outcomes in the next five years. We will internalize our research capabilities through effective collaborations among the universities with MAGE, universities within Malaysia and abroad, and industry sectors. MIU is committed in adopting a global benchmark in producing world-class students and academics who will continuously evolve and contribute to the Malaysian economy to the next level.

MIU will commit to long-term investments in RDI, starting with provision of internal grants as seed funding for young researchers and other research infrastructures and facilities to support different research clusters. External research funding from the industry and competitive government grants will be sourced to support our research initiatives. MIU is committed to develop its own research capabilities to achieve the targeted RDI outcomes as outlined in this blueprint. We are also committed to nurture a pipeline of research scholars, groom global leaders in niche areas of research and contribute productively towards the industries as well as foster the collaboration and mutual understanding and trust which will enable the whole ecosystem system to grow and to prosper over the next five years.

Professor Dr Patrick Kee

Vice Chancellor

Research and Development at Manipal International University (MIU) (2021 – 2025)

- MIU's Research and Development Blueprint strategy is a strategic plan to gear towards Research for the University
- Our aspiration is to score three (3) star in the MyRA and to join the QS Asia ratings and ranking beyond 2023.
- MIU has steadily been increasing its share of research outputs in engineering, biotechnology, business & management, and currently we have secured several active research projects in engineering, biotechnology, business and management.
- We have been consistently increasing our share of publications and citations over the years since our university inception in 2011.
- With members of academic staff spread across the three schools (School of Engineering, School of Biotechnology and School of Business and Management) engaged in R&D, there is tremendous scope in improving the number of publications and quality of research.
- The objective of our strategy is to provide support to researchers for all three Schools to commit and ensure that all our researchers are engaged in high scientific and management quality research with high ethical standards.
- We will also instil across all academic staff, schools, centres, support services and the University in its entirety, to actively engage in R&D and nurture a collaborative culture to work together.
- This strategy aims to envision a good and integrated and sustainable R&D environment for MIU

Introduction

MIU, our strategic planning towards R&D is to generate new knowledge through basic research with our expertise and at the same time to indulge in applied research leading towards commercialization to successfully implement our Master Plan on R & D for 2021-2025.

MIU realises the significance of engaging and equipping our students at the undergraduate and postgraduate levels with skills and knowledge to achieve our mission in order to survive in a competitive environment. This can only be achieved with a strategic Master Plan on R&D to gear our human, financial and physical resources to impact certain niche research areas that we are specialised in the engineering, biotechnology, business and management sectors.

For this, MIU recognises the importance to develop new strategies with state of the art resources in teaching & learning and research to enhance the ability of students to adopt to the innovation systems. In this connection, MIU is expected to equip students and researchers with current innovative and research skills in the medium and long term to sustain and contribute effectively to serve our local and global community in industrial and commercial entities.

As a result, our students and researchers will be positioned strategically to enter the job market locally and globally, thus strengthening the brand position of MIU.

Core Purpose

Vision

Our vision at Research Management Centre (RMC) of MIU is to focus on world-leading higher education to make the world a better place. Through our quality research and collaborations, our students and academic staff will acquire insights and solutions for the many diverse challenges faced globally. MIU will provide the necessary research culture to equip our talented students and researchers and this will make a significant contribution to serve the needs of the society globally.

Mission

Our mission at RMC of MIU is to be a Centre of Excellence in niche research areas of Engineering, Biotechnology, Business and Management offering the very best in research and innovation based on internationally accepted standards, delivered through up-to date intelligent technologies and research-based learning techniques.

KEY PRINCIPLES TO DELIVER OUR STRATEGIC VISION

PROVISION OF KNOWLEDGE TO INSPIRE AND IMPROVE – MIU is building a community of academics to become one of Malaysia’s leading private universities for research-enhanced learning, and to provide a learning environment that stimulates curiosity and supports intellectuals over time.

TO INFORM AND INNOVATE – MIU will enable good quality disciplinary and inter-disciplinary research, working with local and external collaborators to support global challenges. We need to showcase our research both nationally and internationally. We need to improve our research base by investing in engineering, biotechnology, business and management. We need to develop and attract best researchers to become among the best universities in Malaysia in terms of research quality. Our academics must connect and collaborate with other universities both private and public, locally, internationally also with Manipal Global Education (MaGE) in biotechnology, engineering, business and management to ensure that our research is having global impact.

TO SERVE TO SHAPE AND TRANSFORM - MIU will be known as the university that makes a significant and innovative contribution to society and to business, beyond education and research. MIU will be the university of choice for students and staff because of this contribution. Employers will actively seek MIU graduates, not only because they are subject experts, but also because they demonstrate a strong character and the wisdom to use their knowledge and research for the benefit of others. MIU research portfolio will have a demonstrable global impact on society beyond the university. Our comprehensive approach to education, research and service will mean MIU is the ‘go to’ institution for donors and philanthropists who are looking to address major global challenges.

WE BELONG TO AN INTERNATIONAL COMMUNITY THAT SERVES THE WORLD – MIU provides an internationalized curriculum and student experience that recognizes diversity and offers geographic mobility. We build and invest in strategic partnerships with world-class institutions to enrich our students’ experiences, increase the global impact of our research and reach new international communities. We govern all of our activities in an ethical and enabling environment. We build partnerships with universities both locally and internationally and also with MaGE, to consider shared challenges that will be most effectively addressed through coalition and collaboration. These partnerships will benefit society and the economy, reinforce our reputation and affirm MIU’s position at the heart of MaGE helping to making the world a better place. The MaGE Alliance will harness the collective research strengths of all our universities to address global issues under the broad theme of sustainable development. Combining the research capabilities and innovative educational approaches of our universities in different parts of the world, the MaGE Alliance will undertake cross-border research collaborations. These collaborations will tackle significant issues related to health, social justice, and sustainability in an innovative way. The research will be supported with related learning programmes, and the alliance will offer unique international study opportunities for students on campuses and online mode.

Guiding Principles

Our guiding principles will support, enlighten and regulate the implementation of our Strategic R & D Master Plan. These principles will guide and challenge the decision making at MIU from 2021 to 2025.

1. MIU will have a 5-year horizon that will focus on our education, research and service strategies at National and International level. By doing so, we will continuously refresh on academics, academic units and professional functions.
2. However, articulating the master plan is not in itself sufficient; we must enable ourselves to deliver it. By enabling, we mean making the very best use of the resources available to us. This is about creating a culture of delivery and empowering everyone within MIU to contribute to the realization of our R & D Master Plan.
3. To demonstrate our commitment to our R & D Master Plan, we have identified a number of transformative initiatives which are currently being implemented or are in the planning stages for delivery over the next few years.
4. This will require the implementation to improve and broaden MIU's base to include additional schools and academic-Industry models for healthcare, agriculture and other industrial sectors. In this case, we must extend our reach and access to deliver an extraordinary student experience and this will strengthen our desire to work well between staff and students.

OUR MOTTO TO DELIVER SHALL ENTAIL THE FOLLOWING:

1. To take a holistic and comprehensive approach to education, research and service to equip our students and staff to build character and wisdom for the benefit of society.
2. Be an outstanding institution of higher learning in all that we do, directing our efforts on excellence and making a unique contribution to society (**Inspired by Life**).
3. Generate an internalized environment where all our academics are valued and able to progress and succeed.
4. Build on the accomplishments and achievements of our predecessors and sustain the university for future generations by providing good and effective leadership.
5. To better connect between our students and staff to generate a porous boundary at local, national and international communities, between what we do and with those communities with which we engage.
6. Share an unrelenting ambition to deliver our Strategic Vision to make the world a better place (**Inspired by Life**)

OUR RESEARCH CLUSTERS AT MIU:

BIOTECHNOLOGY CLUSTER

Molecular Diagnostics

Our interest and improving knowledge of genomics and proteomics in the clinical area of diagnostic experimentation and testing is enhancing at a rapid rate. Such technologies frequently employed in the clinical laboratory have far outpaced clinical usage. The ultimate goal is to provide “personalised medicine” for patient management such that the clinical outcome improves the overall well-being of the patient.

It has been established that 20% of all human cancers are due to defined infectious agents, but indirect evidence suggests that infections may contribute to about 30% of all cancers. Therefore, the role of infectious agents in auto-immune disease remains to be settled and thus the urgent need for molecular microbial diagnostics. It is therefore certain that microbial molecular diagnostics will continue to revolutionize the way in which we diagnose and treat infections.

Bionanotechnology

Nanotechnology is the study and applications of unique structures -biomolecular nanoparticles (NP) having dimensions in the order of a billionth of a meter and this facilitates the ability of the novel size-controlled structures or nanoparticles to exhibit its catalytic properties much more efficiently. The development of nanotechnologically enabled biosensors for multiplex analysis will find critical applications in clinical diagnostics, environmental control and forensic applications. Biomolecular hybrid nanoparticles will become improved carriers for drugs, imaging agents and processing systems. This is executed via continued interdisciplinary research of chemistry, physics and life sciences.

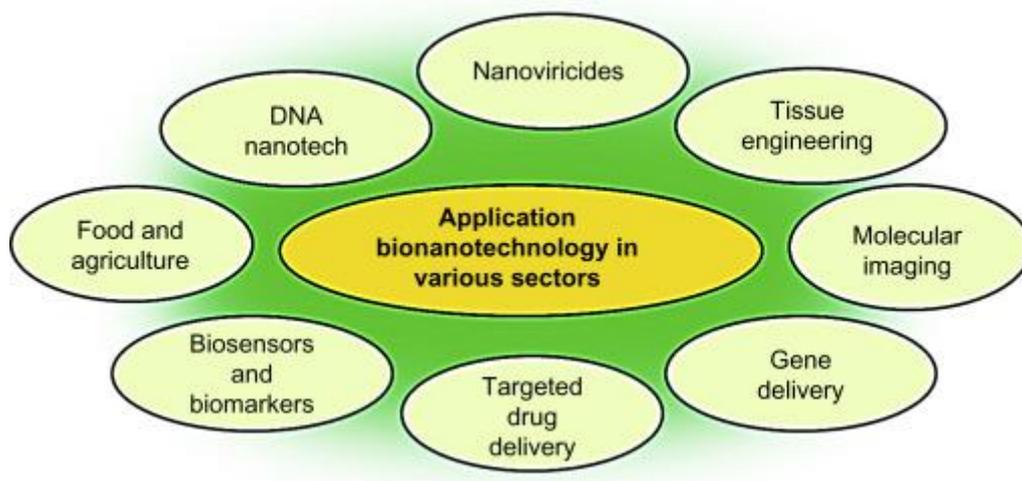


Figure1. Application of Bionanotechnology in all sectors of Biotechnology

Plant Biotechnology

The ultimate objective of this area of research is to assist plant breeders to generate superior genotypes of crop plants. This involves generation of molecular maps of crop genomes and the study of genome organisation to identify polymorphisms at particular loci which can be exploited as molecular markers if they are closely linked to a useful trait. Although transgenic technologies will not provide all the answers generating sustainable food production in the coming decades, however, gene revolution (CRISPR, precision farming, fertigation systems) will undoubtedly have more impact on all aspects of agriculture and biotechnology.

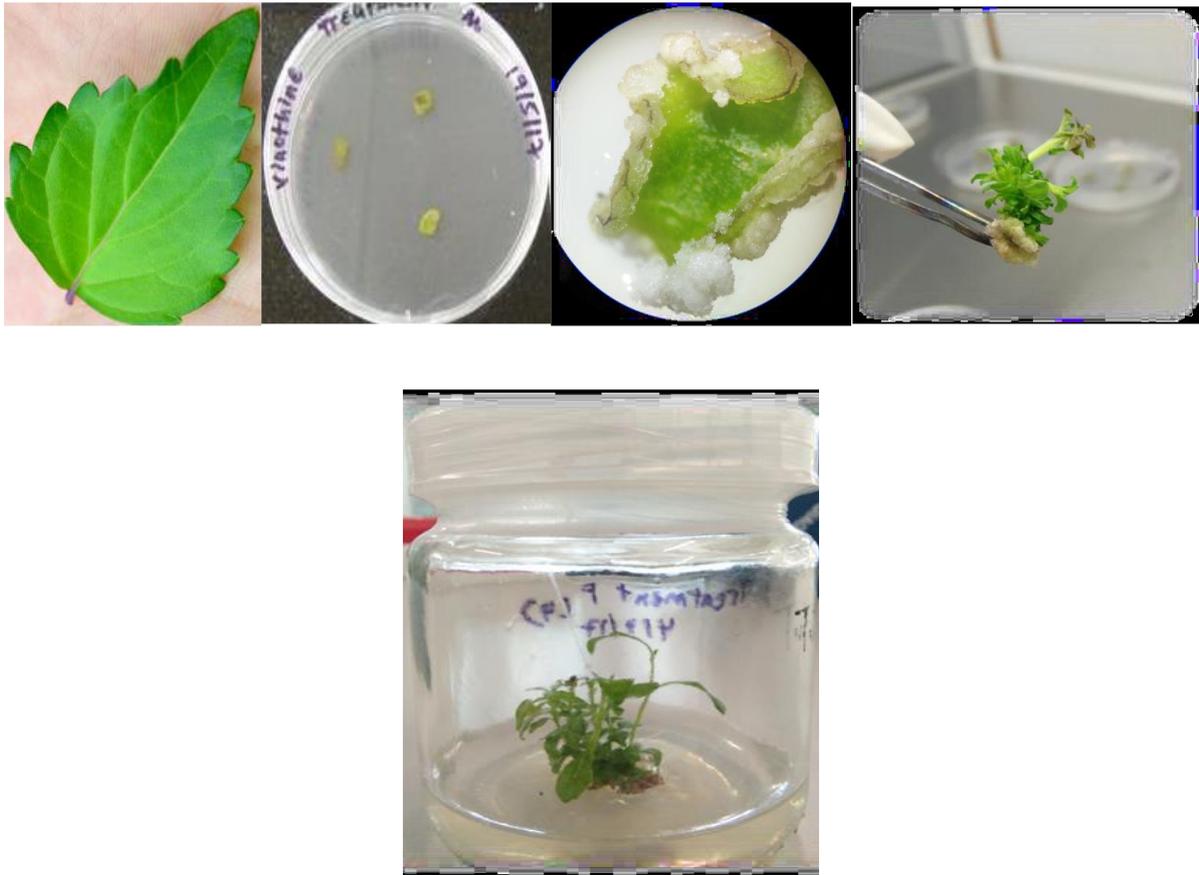


Figure 2. Regeneration of *Orthosiphon stamineus* using leaf explants

Immobilisation of Enzymes and Cells

Immobilisation methodology has expanded greatly in the past 50 years in a wide range of analytical, biotransformation and medical applications. Immobilisation of biological material has provided biological catalysts having individual variability, wide applicability and they exhibit greater diversity of inherent requirements of biological material.

Biofuels and Biotechnology

Among the most recently evolved research tools is what is collectively called as “omics” techniques- such as genomics, transcriptomics, proteomics, metabolomics and fluxomics. These emerging system biology “omics” tools can be applied to improve the biological processes involved in conversion of renewable plant and animal material to biofuels.



Figure 3. Jatropha curcas is a drought-resistant shrub as source for Biofuel

ENGINEERING AND TECHNOLOGY CLUSTER:

Intelligent Systems

Trends of engineering system evolution would suggest that an engineering system, starting with just its basic operating agent, will acquire over time, first the transmission system, next the energy source and ultimately the control system. Simply put, from trends observed of engineering systems in the past, it is understood that engineering systems naturally evolve into intelligent systems over time. Such is the importance of intelligent engineering systems and its research. Also fuelling interests in intelligent systems is the current 4th industrial revolution where real-time control systems, large sensor network, intelligent robotics, internet of things (IoT), artificial intelligence, machine learning, big data, data analytics etc are being deployed.

This research cluster is an interdisciplinary research cluster consisting of faculty from the department of computer science and engineering and the department of electrical and electronics engineering. This research cluster focuses on the research and development of algorithms for machine vision, autonomous navigation that incorporates artificial intelligence, intelligent controls, IoT, system automation, and autonomous systems associated with Industrial Revolution 4.0, advanced computing, data analytics, deep learning, natural language processing and image processing. Moreover, the research cluster also focuses on the design, creation, and control of real-time systems, large active sensor networks, and mobile robots.



Figure 4. Wearable technologies and smart automation

Sustainable Construction

The national agenda for the Construction Industry is to transform the industry into a highly productive and environmentally sustainable one. This so as to produce players capable of competing on the global stage without compromising on quality or safety standards. MIU embraces this agenda and aim to empower and strengthen the construction industry with relevant knowledge transfer in construction technology and method, materials and information and communications technology (ICT) that improves performance and competitiveness of the industry.

In term of construction materials, concrete is the second most widely used substance in the world after water. Cement, the primary ingredient in the making of concrete, involved the heating of limestone, a process that produces so much CO₂ it is said that if the cement industry were a country, it would be the third largest CO₂ emitter after China and the US. Though it is the most economical material for the construction industry it has other shortcomings other than its impact on the environment. Usage of polymer for construction is one such alternative. Polymer-based concrete has the advantage in term of its hardening time as compared to cement-based concrete. The flow property of polymer-based concrete is also very suitable for the application in the 3D concrete printing process. By using 3D printing, concrete structures could be completed much faster and will eliminate the need for some low skilled labour. Compared with ordinary cement concrete, the properties of polymer-based concrete, in term of strength, adhesion, watertightness, chemical and abrasion are improved with the inclusion of the polymer. Construction related research offers opportunities for researchers to explore the variety and diversity of current construction materials and materials technology such as timber for structural applications, use of waste materials in construction, materials for nuclear waste immobilization, cement hydration, durability of structures and materials testing.

Building Information Modelling (BIM) is recognized as advanced ICT, which has the potential to not only revolutionize the construction industry, starting with enhanced processes and management, but also to transform the construction industry by enhancing efficiency, productivity, and quality. In the era of digital empowerment and the availability of in-house expertise in information, sensor and electronics technology, MIU construction research cluster focuses mainly on BIM research. BIM research has gained increasing importance in the engineering and construction industry with recent research focusing on mobile and cloud computing, usage of laser scanner, sensor, virtual reality, and big data. BIM research further benefit from the adoption of artificial intelligence together with systems of sensor

network to provide technology for intelligent green and sustainable solutions as well as other aspects of BIM technology in construction industry. Digital construction is successfully operating globally. Increasing research in digitalization of the construction industry will bring significant change in all aspects of the construction industry ecosystem.



Figure 5. Sustainable construction design using commercial software tools

Sustainable Energy Systems

The usage of energy is the biggest source of greenhouse gas emission from human activities. In fact, two-thirds of global greenhouse gas emission is due to the burning of fossil fuel for energy. This has a massive impact on the environment and climate. The Paris Agreement, a global effort to mitigate climate change, cannot be achieved without a major overhaul of the global energy production and consumption. This research cluster primary focus is on sustainable energy systems – energy systems that can meet today's demand without depleting resources for future generations. More specifically, this research cluster focuses on research in renewable energy systems such as solar photovoltaic, wind, concentrated solar power and small-scale hydropower.

The amount of energy planet earth received from the sun in one hour is more than the total energy consumed by human civilisation in a year. The global energy crisis as we know it and the impact of fossil fuel has on the environment and climate will simply disappear if we have the technology to tap into the energy available from the sun. Though research in renewable energy at MIU is focused on solar, this research cluster also looks at other form of renewable energy especially small-scale hydropower where it is applicable.

Other than power generation, another important aspect of power is the reliability, security, and efficiency of distribution. The power grid we have today is a lot more decentralised while digital information and control technology are a lot more advanced making it very conducive for the development of smart grid

technology. Of the various aspect of smart grid technology, this research cluster focuses on the integration of renewable resources and the charging of electric vehicles.

In addition to the above research areas, this research team is also active in energy management, energy audit, energy efficiency technology and energy analysis.



Figure 6. Renewable energy and smart grid for future of sustainable and smart community

Manufacturing Technology

Manufacturing activities is the second largest contributor to the GDP of Malaysia. As such there is a need, not only to prepare graduates for the manufacturing industry but technology that will give manufacturers in Malaysia the added advantage it needs to compete globally. This research cluster focuses on advance manufacturing materials and processes with emphasis on nanoscale materials and additive manufacturing techniques. More specifically, this research cluster focuses on manufacturing technologies and material used in the biomedical sector as well as material used in the energy efficient green-building industries. With demand for green building on the rise, thus is the need for new material and the technology to manufacture these materials to achieving energy and material sustainability.

In addition to research, the team in this research cluster is also actively supporting small and mid-size manufacturers in their quest to adopt new manufacturing technology and processes, yield improvement etc.

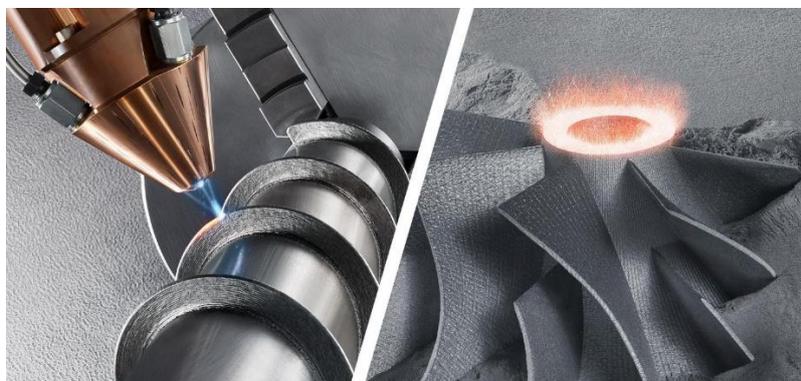


Figure 7. Advanced manufacturing technology and materials used in industry.

Waste Management

Water pollution from industrial and agricultural activities as well as human sewage, if not managed properly, can cause water-borne diseases leading to impact on a country's economy. Waste from agricultural activities can also be an alternative source of raw material. As such, this research cluster focuses on wastewater treatment and biochar.

Treatment of wastewater before being discharged by industry are frequently viewed as costs and are frequently ignore leading to water pollution that impact economy and even endanger lives. As such, cost effective means for wastewater treatment as well as treatment methods that do not introduce secondary challenges are important.

Hidden in agricultural waste are now seen as alternative source of raw material to produce food supplement, fabric, biochar etc. Malaysia being the second largest palm oil producer has within this sector palm oil mill that produces effluent and biomass. Technology for the treatment of effluent from these palm oil mills as well as alternative usage of these biomass are important for this sector of the industry to be sustainable.

MANAGEMENT AND BUSINESS CLUSTER

Tourism Marketing

The tourism marketing research programme at the School of Management and Business (SOMB) of MIU is devoted to conduct research in wide spectrum of tourism area which will provide significant academic contribution as well as practical implications to various publics; organisations, tourists , businesses and government institutions. The tourism marketing research programme undertakes research for the tourism related industries and seeks to improve connections between academia and industry. Our experienced and diverse team of researchers from various backgrounds generate research that informs policy, and assists practitioners, which enables them to keep up with the current need and trend of the industry.

Entrepreneurship

To achieve the developed nation, the Malaysian Government in its Twelfth Malaysia Plan (2021-2025) tries to develop and assist the growth as well as helping the Small Medium Industries (SMIs) to be more innovative and competitive. Thus, the main research focus of this programme is to help the government in facilitating and strategizing the SMIs to be more creative and innovative, market oriented via theoretical, empirical or case study and related advisory activities. It will be able to strengthen our researchers to access an array of networking opportunities that will promote MIU inventions and quality research work by developing a mutual understanding of goals and opportunities through integrated research.



Figure 8. Entrepreneurship consultation

Halal Marketing

The halal food products have become increasingly popular among non-Muslims worldwide, as the concept of halal is associated with what is good, healthy, safe and high quality assessment. As for that reason, Malaysia has expressed its aspiration to become a global hub for the production and distribution of halal goods and services years ago. Believing more business opportunities to be grasped, the government has recently announced the formation of the Halal Industry Development Corporation (HDC) and reaffirmed its determination to play a leading role in the halal industry. Thus, Halal research plays a role for the development of halal policies, and the latest trends to all stakeholders, especially to consumers.

Corporate Social Responsibility

To maximize the organizational positive impact on the social and environmental systems in which they operate, companies must develop coherent CSR strategies. This should be an essential part of the job of every CEO and board. Aligning CSR programmes must begin with an inventory and audit of existing initiatives. MIU research teams have the capability to study multiple business spectrums across geographics and different types of environmental setting to assist the decision makers as well as policy architects to align CSR efforts to achieve optimal sustainability for organization and the affected stakeholders.



Figure 9. Corporate Social Consultation

Human Resource

The study of human resource practices and activities gives the extent of success or failure of policies and practices. Research on HRM activities provides an understanding of what does work, what does not work, what needs change, the nature and the extent of change. HR research is, but not limited to, the task of searching for, and analyzing facts to the end that HR problems may be solved or principles and laws governing their solutions derived. The research team at MIU has the academic experts to conduct HR-related research to help students to develop new or extend the existing theories, and assist managers and decision makers in the organizations to launch effective and sustainable human resource management.



Figure 10. Human Resource Generation

STAGES OF IMPLEMENTATION

Phase 1 (2021-2022)

- To identify MIU's and MaGE talents or competencies focusing on increasing fundamental based research
- To internationalize our infrastructure and processes under MaGE
- To Increase the number of Principle Investigators under MaGE
- To focus on increasing our research publications under MaGE
- To establish three (3) main research clusters under RMC at MIU.

- To strengthen and increase the number of postgraduate programmes according to the three research clusters in MIU
- To attain MyRA score of least 1 star.

Phase 2 (2023-2024)

- Establishment of multidisciplinary and clustered based research at MIU.
- Establishment of niche areas under three research clusters at MIU.
- Achievement of KPIs for external and international research grant applications.
- Focusing on building high impact publications and citations.
- Integration framework for grant, postgraduate programmes and publications under MaGE.
- To attain MyRA score of least 2 stars.

Phase 3 (2025)

- International partnerships for R&D with world class research centres.
- Intellectual Property Rights.
- Industrial sponsorship and contract research.
- Policy driven research activities.
- Outstanding global leadership award in research.
- Establish at least one to two world class research facilities.
- To attain MyRA score of 3 stars.

Goal 1

The University's academic staff members are our key research and knowledge providers and therefore MIU's academics must be culturally competent with a global problem-solving mindset.

To achieve our commitment to conduct research and to provide knowledge exchange activity of the highest quality, both students and staff must acquire cultural competency at home, abroad and online. The University must be seen as an ideal environment for career development in which exceptionally talented researchers, students, knowledge exchange practitioners, support staff can pursue and fulfil their ambitions.

Outcome:

- Grow the number of academic staff engaged in research and innovation activities.
- Maximize the percentage of MIU academic staff with doctoral and post-doctoral level qualifications.
- Engage with academics in engineering, biotechnology, business and management across MAGE units.
- Assemble and coordinate active research projects across MaGE with MIU.

Goal 2

The University is committed towards providing internal research funds that will support research initiatives put forward by multidisciplinary teams of investigators across academic units under MIU and MAGE.

We need to address on investigative research, applied research leading towards innovation. By focusing on our planned activities that addresses societal issues, we can explore to secure for external grants which include both local and international grants.

Currently we have active Principal Investigators focusing on a range of cluster research areas. We need to coordinate our research projects across MaGE to ensure our researchers could benchmark to the global standard and one way of gaining the recognition is by securing internal and external grants, both from government agencies and private organizations.

Outcome:

- Increase the proportion of internal and external grants based on the performance matrix of each faculty and research cluster units at MIU and under MaGE
- Participation on external local grants such as FRGS, LRGS, TRGS, ERGS and PRGS provided by MoHE

Goal 3

The challenges facing industries related to healthcare, agriculture, engineering, industrial and business sectors are complicated in nature as reflected in the solutions they require. Therefore, our research priorities of the funding bodies require multi-disciplinary approach.

This can be achieved by integrating with MaGE and industries to promote greater collaboration across organisational and academic boundaries. We believe that research publishing by MIU and the institutions under MaGE would disseminate research findings with the maximum benefit for authors, in a transparent and cost-effective manner.

Outcome:

- All the publication works by MIU and under MaGE must move towards Tier One level (QS 1).
- Increase in the number of indexed publications (ISI, SCOPUS, ERA) as per the publication performance matrix for each school.
- An increase in the number of citations as per the publication performance matrix for each school.

Goal 4

The establishment of Research Management Centres to lead the Research Initiatives at MIU and MaGE Universities are signs of growth of niche areas with the Research Cluster Units within the Schools at MIU and under MaGE to achieve many different benefits.

These Research Management Centres must facilitate research and education at MIU and universities within MaGE. These establishments should facilitate and provide an intellectual environment that brings researchers together to solve societal problems in the niche areas.

Outcome:

The outcome will be measured based on RMC's deliverables on:

- Research outputs with international recognition.
- Generating new talent of academics and researchers to contribute towards niche areas under the three research cluster units.
- Attracting international grants to MIU.
- To attract postgraduate research students to enrol in Master and PhD programmes at MIU.
- Academic Outputs (IPR, publications, innovations)

Goal 5

MIU and its affiliated universities under MaGE shall explore its research talents to tackle the industrial and business concerns to provide innovative solutions to solve their problems via Research Collaborations Networking (RCN). Such collaborations shall transcribe and translate our knowledge and innovative ideas into outcomes that will change the productivity and sustainability of industrial concerns across nations.

MIU and universities within MaGE shall recognize the importance of collaborative work and partnership with other institutions worldwide. We shall explore our contributions in a sustainable manner globally through our collaborations. By this, we shall engage in joint projects, sharing of research facilities, infrastructure and networking, allowing researchers to access and exploit research data towards fast track discoveries. In this connection, the talents that we develop through collaborations, comes about via training and development of highly qualified personnel, through the co-supervision of Master and PhD students from other countries.

MIU and its affiliated universities under MaGE will aggressively focus on commercialization of its inventions for the next phase as the University's investment arm. The breakthrough innovation shall generate two units: New Product Development and New Business Development. The product

development team and the business development team shall identify and commercialise new technologies developed by our researchers so that business, industry and the community can benefit and profit from our innovative research. We do this by linking the MIU's and MaGE's consulting and contract research services to commercialise innovative technologies.

MIU and its affiliated universities under MaGE will actively encourage the dissemination and commercialisation of new inventions.

Outcome:

- RMC of MIU and MaGE shall render knowledge and expertise within its research clusters to assist industries and commercial entities.
- Explore Intellectual Property Rights to protect innovations and to commercialize innovations.

CONTACT US

Information about our Research and Development is available from Research and Management Centre (RMC) website at miu.edu.my.

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