



Window to Global Market

Innovation for Life"

With over 25 years of experience and legacy, we contribute our core technological competencies towards raising Malaysia's local, regional and international market competitiveness.







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### National R&D centre in ICT



MIMOS is a national leader in ICT innovations, pioneering new market creations for partners through patentable technologies for economic growth. We pursue exploratory and industry-driven applied research in ICT through multi-stakeholder smart partnerships with universities, research institutes, industries and the Government, with a focus on frontier technologies. With over 25 years of experience and legacy, we contribute our core technological competencies towards raising Malaysia's local, regional and international market competitiveness.



As Malaysia's lead R&D agency under the Ministry of Science, Technology and Innovation (MOSTI), we fulfil our role of supporting homegrown industries by developing globally-competitive technology platforms and related services. Our current core focus areas are: **Last Mile Solutions**, where we intend to bring the country to a higher degree of connectivity and redress the digital divide through technology implementation; **Enterprise Framework**, where we create a platform which enables connectivity, productivity and communication that aids development; and **Fusion Sensors**, where we innovate sensor technology for building a sustainable future through efficient energy harnessing and storage systems.

### **R&D** Areas

Our focus has been on a number of technology thrust areas which hold great potentials in bringing breakthrough innovations that will fundamentally shape the future. Currently, MIMOS is seeking innovative advances in the following technology thrust areas:

#### **Advanced Analysis & Modelling**



**Information Security** 

**Intelligent Informatics** 

**Knowledge Technology** 

Microenergy

**Microelectronics** 

**Nanoelectronics** 

**Psychometrics** 

**Wireless Communications** 













#### **Our industry frameworks include:**



#### **GOVERNMENT**

#### An open system that allows interoperability by governments and administrations

Some of our ongoing initiatives in partnership with the Government include trade facilitation and cost reduction through back-office reorganisation and information-sharing across organisations and levels of the Government; competency-based procurement made possible through system-integrated network support for direct engagement with agencies; information transmission to rural areas through wireless broadband technology offered in a community-based environment; and robust national technology infrastructure which will support the adoption of industry best practices, cross-country technology transfer as well as global partnerships.



#### **EDUCATION**

#### An interactive educational platform for private and public educational institutions

The advancement of ICT in Malaysia has been making dramatic impact upon learning and teaching processes, with changing consumer behaviour calling for more innovative media. New-age technology today presents new opportunities to develop innovative solutions that will not only access learning tools but also facilitate meaningful interaction with global citizens. MIMOS has been developing applications and platforms which can be used by educational institutions, learning organisations, government agencies and individuals in creating a seamless learning environment. These solutions can also help enhance the management and administrative capacity of educational bodies.



#### **AGRICULTURE**

#### A linked platform for agriculture producers, traders and stakeholders

We recognise Malaysia's fertile agricultural soils, rich marine and freshwater resources, and great potential as an agricultural economy; and we support the Government's vision to revitalise the sector through adoption of ICT solutions. We also understand the impending need to address major challenges of food security, environmental sustainability and economic opportunity. Our technological

know-how combined with capabilities of local farmers and entrepreneurs will continue to inspire new breakthroughs in the agricultural sector. Our aim has been to undertake meaningful research and development to enhance the productivity of crops, control plant and animal diseases; improve the quality of production, reduce costs; and more importantly, empower farming communities with technological expertise.



#### **HEALTHCARE**

#### A health information exchange that fits into private and government health facilities

Towards reducing the cost of healthcare and raise the overall standards of health in the country, MIMOS has been working in close partnership with the public sector to develop need-based, consumer-centric applications for greater operational efficiency. A Lifetime Health Record System is in its deployment stage, which will help reduce error rates on medication as well as turnaround time for diagnosis and treatments. The healthcare sector can also benefit from MIMOS' capabilities in Business Intelligence, Data Analysis and Integration Support, along with Sensor Technology, which has the potential to redefine excellence in patient care and quality services.



#### **ENTERPRISE**

#### A comprehensive information system that is deployable into commercial businesses

A sure sign of development is a world where people of all ages and background can communicate and share information; organisations can learn about each other for meaningful collaborations; and technologies can empower people to connect in a way which will foster relationships, support businesses and aid economic development. Our technological innovations and solutions encourage technology outreach beyond urban areas, to include semi-urban and rural populations. From multicasting technology to cloud computing solutions, we have devised platforms to enable the streaming of information with better quality, and with easier access to content applications, even in rural villages.



#### Our growing list of technology innovations includes:



#### **Mi-MSCAN**

Miniature sensors that detect physical or environmental conditions such as temperature, humidity, nitrate or potassium and relays this data through a wireless system that is centrally monitored by an online system called Precision Agriculture Management System (PAMS).



#### **Mi-Semantic**

Semantic platform with modular, web-enabled components used for development of integrated information systems that reduces development costs and schedules as well as supports integration with existing knowledge systems. This platform is W3C and SOA compliant.



#### Mi-iLMS

Intelligent learning management solution that enhances students' learning through student profiling and personalised content provision while educational administrative bodies can monitor student performance on dashboards available from student level right up to federal level.



#### Mi-SP

Surveillance platform with high-level video analytics that actively acquires and analyses live video feeds 24/7 from monitoring cameras, and alerts users of the system of suspicious events via an online system. It can be deployed to streamline security management for public and private infrastructure.



#### Mi-Dashboard

Knowledge management system that displays multiple application data from various information sources on a singular dashboard which views can be customised via drag-and-drop widgets. This system provides instant visibility of all information needed by a user in a single view.



#### Mi-I2P

Informatics platform that efficiently integrates disparate information sources and various applications thereby giving developers a tool to create applications that have abilities to aggregate and assess data and also being able to evaluate and make decisions in real-time.



#### **Mi-Page**

Web-based system that displays content and information services from the Internet direct to the user on computing devices such as desktops, notebooks, kiosks and other mobile gadgets via icon-based applications that can be customised to each user's preference.



#### **Mi-Market**

Web-based platform used to develop e-marketplaces for any business sector. This customisable platform comprises features such as buying, selling, offers, stock management, payment as well as a centralised information system with user administration and forum capabilities.



#### **Mi-Office**

Supply chain management solution with real-time updates on material movement, goods tracking as well as collaboration with partners and suppliers. Users of the solution can manage the entire supply chain from purchasing to production to delivery on a single dashboard.



#### Mi-laaS

Infrastructure as a Service platform that allows computing infrastructure to be hosted on the Internet and offered to the general public in the form of computing space and power. The platform is non-dependent on any specific cloud software or hardware and is integratable with most solutions in the market.



#### Mi-SaaS

Software as a Service platform for hosting of software applications on the Internet by service providers, which can be subscribed by anyone having an Internet connection and a basic computing device while applications are being managed and maintained offsite by the provider.



#### Mi-WiWi

Wireless platform that comprises multiple variants of broadband access devices with multicasting and IPv6 features that enable Internet access, mobility, VoIP and wireless IPTV. A Mi-WiWi Element Management System (WeMS) comes with this solution for centralised device administration, upgrade and maintenance.



#### **Mi-Secure**

Security platform suites with various built-in security elements to secure information ranging from data storage, data access and data transfer in web application programming. Each suite is unique for developers to cater for application encryption, application identity, data audit and data encryption.



#### **Mi-Trust**

Platform for pre-built security layer inside a computing system that provides a secured computing environment via virtual machine integrity, remote attestation and cryptographic keys for safe information transfer on client PCs, Internet cloud, servers and tokens.



#### **Mi-Tablet**

Multitouch tablet PC in a thin, compact and light form factor with simple navigation via an additional stylus input. Mi-Page is pre-installed for customisable access to various Internet services and portals.



#### Mi-Netbook

Netbook enhanced with Microsoft Student Innovation Suite that contains educational software, and a digital literacy curriculum for e-learning of computer basics and Internet. It also comes with Mi-Page pre-installed for customisable access to various Internet services and portals.

# MIMOS Technology Licensing Programme

At MIMOS we believe that innovation is only meaningful when it generates value. MIMOS provides the industry with an opportunity to commercialise MIMOS-developed technology platforms, products and solutions through Technology Licensing Agreements in line with our mission to grow globally-competitive homegrown industries. Our licensing opportunities are available to both small and large businesses - from startups to established companies. All Technology Recipient companies will be assisted through the multi-step operation of technology commercialisation for the efficient transfer of MIMOS discoveries to the marketplace; including the protection of the rights of investors via patents, copyrights or trademarks.

While MIMOS' cutting edge technologies are applicable to a wide variety of markets and applications, we also make sure that they have promising market potential. We welcome commercial partners who are passionate about developing our innovations and technology platforms into new products and solutions. To further explore our technology licensing opportunities and exciting commercialisation possibilities, please email us at: market@mimos.my

# Why leverage on MIMOS R&D

Companies can save significant costs on executing their own R&D and thereby lower their risks on R&D investment. We welcome companies to leverage on MIMOS research outputs to help achieve reduced time-to-market, lowered development costs and various other competitive advantages. We welcome the opportunity to learn more about your needs.

### FREQUENTLY-ASKED QUESTIONS ON MIMOS

#### What does MIMOS stand for? Is it an acronym?

MIMOS was first established in 1985 as the Malaysian Institute of Microelectronic Systems. Today, MIMOS has become a full-fledged government-owned company, and our research and development (R&D) activities expand beyond the realm of semiconductors. We still maintain the name MIMOS, as a standalone name and no longer as an acronym.

### Why was MIMOS established? What is the chief role of MIMOS?

When it was first established in 1985, MIMOS' purpose was to provide critical infrastructure for the advancement of the local electronics industry so that the nation can design, produce and market high-quality electronic products by local capabilities due to the importance of industrial and economic growth. Today, MIMOS pursues applied research in frontier technologies aimed at growing globally-competitive homegrown industries to move Malaysia up the value chain and ensure accelerated economic growth.

#### 3. What are the R&D areas that MIMOS is focusing on?

Our R&D efforts cover a wide range ICT-based technologies. As at 2012, the efforts are focused on 10 technology thrust areas, namely Advanced Analysis and Modelling, Advanced Computing, Information Security, Intelligent Informatics, Knowledge Technology, Microenergy, Microelectronics, Nanoelectronics, Psychometrics and Wireless Communications.

#### 4. Who are the beneficiaries of MIMOS technologies?

The technologies developed by MIMOS are created for the benefit of industries, universities and other research institutions, and the government. Most importantly, the technologies can be used by local SMEs in developing innovative products and applications which can be commercialised. Ultimately, people on the streets have benefited and will continue to benefit from our technologies.

### 5. Does MIMOS collaborate with international technology players?

Definitely. We have on-going collaborations with strong brand names in the industry such as Agilent, Altair, CISCO, Microsoft, SGI, Yahoo!, HP and Intel.





### 6. Are technologies developed by MIMOS up to par with those developed in more advanced countries?

MIMOS' researchers are of world-class standards. Many of them have worked on research and product development with international organisations such as Motorola, Intel and HP, to name a few. Also, many of our researchers own patents for their innovations. In fact, we make it a Key Performance Indicator (KPI) for each researcher to come up with patentable innovations. As our technologies are tailored more towards local market needs, they are much better compared to many foreign technologies, in terms of local market relevance.

### 7. Are the technologies developed in MIMOS applicable for local industries?

We always work closely with local industries to be aware of their needs and challenges. Many of the companies have become our technology recipients, whereby they build innovative products, services and applications on our technology platforms and subsequently offer them to the market. We have numerous success stories with local companies, among which are Biforst Holdings, Cloud Connect, Inforence, Mutiara.Com, Perfisio Solutions, Quantum Intellicode and VADS, to name a few.

### 8. What is frontier technology? Why is it important to carry out R&D in this field?

Frontier technology is a term we use to describe technologies in a new and emerging area of research. We believe that in order to maintain the country's competitive edge, we must strive to always be at the forefront of new technology and become the catalyst of technological advancement which will result in economic prosperity.



# 9. Does MIMOS provide funding for local companies to carry out technology commercialisation?

MIMOS does not carry out the function of disbursing R&D funds. However, we can work together with fund recipients to collaborate on developing technologies and platforms. MIMOS itself is fully funded by the government to churn out technology platforms to be utilised by local companies. As such, by collaborating with us, local companies can utilise all available platforms and applications that we have, saving them enormous amount of time and money they would otherwise have to spend on R&D.

# 10. What are some of MIMOS technologies that are now being used by the local industries?

Among the many technology products and platforms which are now being utilised by the industries include Intelligent Learning Management System (Mi-iLMS), Supply Chain Management Solution (Mi-Office), Precision Agriculture Sensors (Mi-MSCAN), Tablet PC (Mi-Tablet), Cloud Computing Platform (Mi-laaS) and Wireless Access Device technology (Mi-WiWi).









