



From **Ideas**  
to **Impact**

**SIRIM**  
**Berhad**  
Annual Report  
**2013**





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Annual Report  
**2013**

**From** Ideas  
**to** Impact

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SIRIM QAS International Sdn. Bhd.

SIRIM Training Services Sdn. Bhd.

SIRIM Standards Technology Sdn. Bhd.

National Precision Tooling Sdn Bhd.

# VISION AND MISSION

## VISION

A Premier Total Solution Provider in Quality and Technology Innovation



## MISSION

As a Leader in Quality and Technology Development, WE:

- Efficiently deliver customised technology and quality solutions to industry and government, and support inclusive growth through innovations
- Enhance customers' business competitiveness and growth through applied industrial research and technology
- Facilitate trade, and enhance health, safety, environment and customer confidence through quality, standards and conformity assessment

## ROLES

- The champion of quality
- A national research and technology development corporation
- A vehicle for technology transfer
- A provider of institutional and technical infrastructure for government



## OBJECTIVES

- To innovate and develop processes, products and technologies for industry
- To promote standardisation and quality
- To provide technical services for industry and the Public



## FUNCTIONS

- Plan, develop, operate and manage national strategic facilities and programmes
- Develop, operate and manage strategic research programmes
- Operate testing laboratories and quality assurance schemes
- Undertake development programmes for small and medium-scale enterprises



## BOARD OF DIRECTORS



### 1. Datuk Hjh. Jamaliah Kamis

Chairman



### 2. Dr. Zainal Abidin Mohd Yusof

### 3. Ahmad Shahab Din

### 4. Tan Sri Dato' Dr. Mohamed Salleh Mohamed Yasin

### 5. Datuk Dr. Ir. Abdul Rahim Hj. Hashim

### 6. Dato' Dr. Mohd Azhar Hj. Yahya

### 7. Puan Khalimatun Saadiah Mohd Khalid

### 8. Dato' Dr. Md. Khir Abdul Rahman

### 9. Dato' Syed Ahmad Idid Syed Abdullah Idid

## MANAGEMENT COMMITTEE



### 1. Dr. Zainal Abidin Mohd Yusof President and Chief Executive

### 4. Azim Ng Abdullah Vice President Technical Services Division

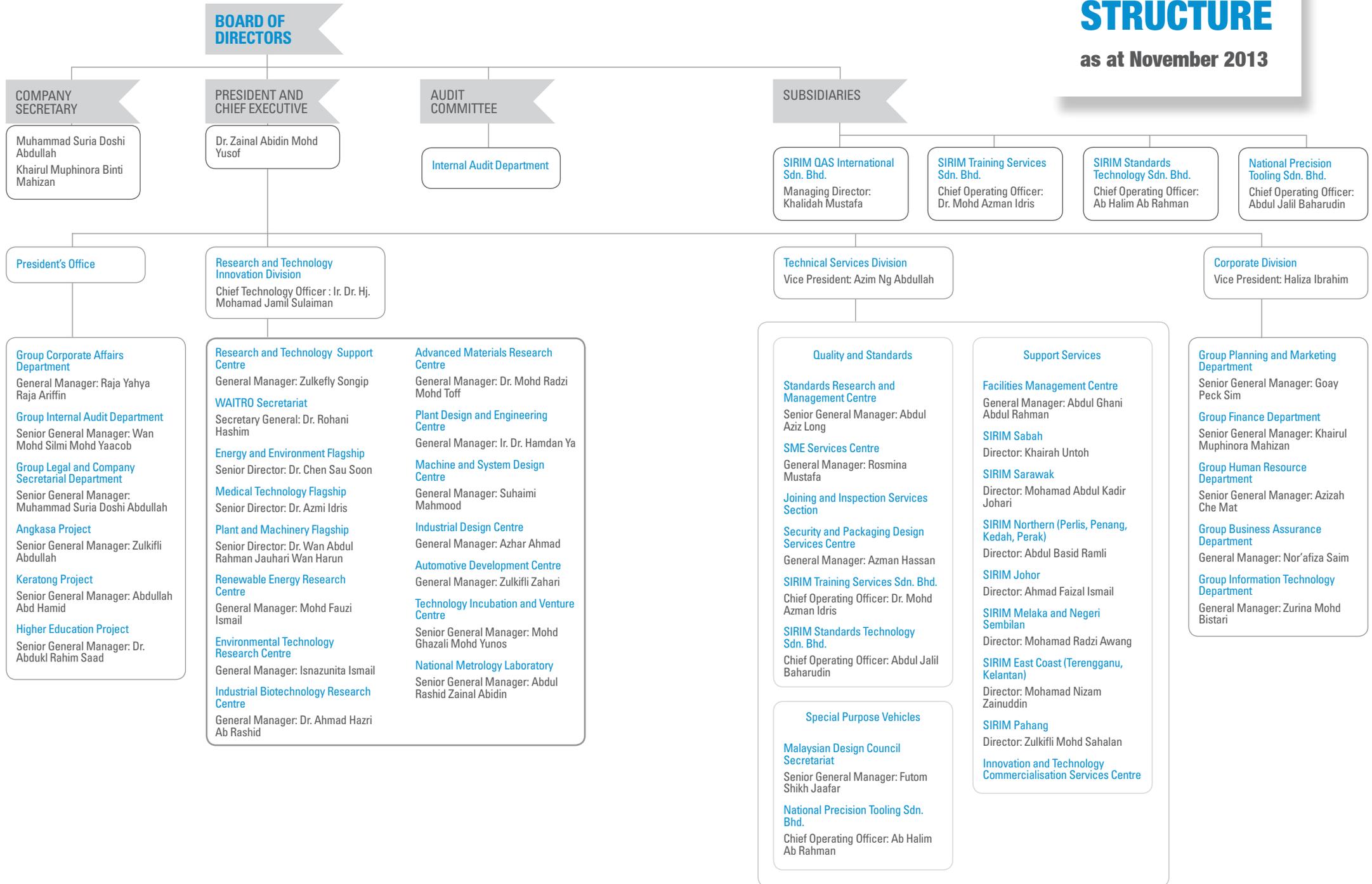
### 2. Haliza Ibrahim Vice President Corporate Division

### 5. Khalidah Mustafa Managing Director SIRIM QAS International Sdn. Bhd.

### 3. Ir. Dr. Mohamad Jamil Sulaiman Vice President Research and Technology Innovation Division

# ORGANISATIONAL STRUCTURE

as at November 2013



## CHAIRMAN'S ADDRESS

“SIRIM has evolved to become a more sustainable, responsive and efficient provider of integrated solutions.”



### FROM IDEAS TO IMPACT

Malaysia has identified the importance of scientific innovation in driving its transformation into a developed economy. A knowledge-based high-technology economy will require a constant stream of innovations in order to maintain a competitive edge on the increasingly globalised world stage. Having transformed itself to meet this challenge, SIRIM must continue to balance its activities to deliver positive impacts to both businesses and the community.

As the country moves towards its goal of becoming a high-income nation by 2020 in line with the National Economic Policy, technological innovation will be key to its growth. We envision SIRIM as one of the catalysts for driving the creation of a higher-income nation. A rejuvenated SIRIM will be able to lead the growth of technology firms, promoting solutions in quality and technological innovation for the industry.

SIRIM serves all Malaysians – companies as well as communities. As the nation's spearhead of research and innovation, SIRIM supports businesses with total solutions across the value chain, from ideation to prototyping and commercialisation. But we have a duty to do more than just deliver new products to the market; we must continue to find ways to bring technology's benefits to society as well.

Following the introduction of the Six Strategy Transformation Plan in 2012, I am pleased to report that SIRIM has evolved to become a more sustainable, responsive and efficient provider of integrated solutions. In 2013, SIRIM realigned and refocused its developmental activities into three Flagships: Energy and Environment, Medical Technology and Plant and Machinery.

SIRIM's flagships and centres will continue to be a pivotal part of the national science and technology ecosystem. Through strategic partnerships and collaborations with both the private sector and government, the company will drive innovation in National Key Economic Areas (NKEAs) such as Oil, Gas and Energy as well as Healthcare. These collaborations represent mutually beneficial opportunities:

SIRIM will gain a deeper understanding of the needs of the market even as it actively supports the capabilities and operations of its customers.

Malaysia's Ministry of Science, Technology and Innovation (MOSTI) declared 2014 as MOSTI Commercialisation Year, with the goal of increasing Malaysia's commercialisation rate and fostering the growth of high-technology entrepreneurs. SIRIM is positioned to meet this challenge with several successful projects that are now ready for commercialisation, including the BioNatural Gas (BioNG) project, and the Solaerator™, a solar-powered aquaculture aeration system launched in Simunjan, Sarawak.

These projects deliver benefits to the nation on multiple levels. The BioNG project taps into synergies between the palm oil sector and the national environmental and energy security agendas. The launch of the Solaerator supports Malaysia's aquaculture industry while at the same time benefitting the local community. Meanwhile, the research findings of SIRIM's Thin Film PV and wind Energy projects at Tip of Borneo, Kudat can be further developed on a large scale commercially and could contribute towards the use of renewable energy sources in Sabah.

Meanwhile, in the field of conformity assessment, SIRIM QAS International catered to the changing needs of the industry with the launch of two new schemes - the IECEX Certification of Personnel Competence for Explosive Atmospheres and the Road Traffic Safety Management System Certification (ISO 39001).

## Delivering expertise and insights

SIRIM has compiled concrete data into Economic Indicators (EI) that depict its achievements to date. The EI system serves to clearly identify and quantify SIRIM's contributions to both businesses and communities. For instance, we assisted a total of 7,658 companies in 2013 through various incubation centres, developmental and technology transfer projects, and technical and certification services. Based on feedback on incremental sales generated through SIRIM's assistance, companies gained an estimated RM8.73 billion in revenue in 2013. Our socioeconomic projects brought the benefits of technology and training to 20 communities to date, including but not limited to the execution of projects performed on behalf of MOSTI.

Malaysia's small and medium enterprises (SMEs) will continue to be a key area of emphasis for SIRIM. In 2013, the SME

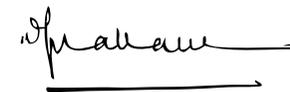
Services Centre contributed training and coaching services for 100 companies under MITI's Groom Big programme and another 28 companies under the East Coast Economic Region Development Council (ECERDC). Meanwhile, our Innocraft Centre in Melaka opened up a new platform for crafts-based entrepreneurs to expand their reach and benefit from SIRIM's technical expertise.

SIRIM continues to make crucial contributions towards the training and reskilling of the country's workforce. The company provides specialised training and development courses for workers in many of the industrial sectors listed in the National Occupational Skills Standard (NOSS) by the Department of Skills Development (DSD). SIRIM also lends expertise in welding, tooling, robotics and automation through the government's Industrial Skills Enhancement Programme (INSEP) for graduates across the country.

To strengthen our capabilities and gain insight from other technological organisations, SIRIM continues to fill key roles at the international

level. In 2013, we benefited from networking and knowledge-sharing as a result of our relationships with other leading regional R&D institutes and from our role as the secretariat of the World Association of Industrial and Technological Organisations (WAITRO).

SIRIM's transformation remains an ongoing process. Going forward, we will strive to sustain our focus on productivity and efficiency, while learning how to best serve the needs of businesses and communities. On behalf of the Board of SIRIM, I offer my sincere appreciation and thanks to the management and staff of the Group for their dedication and perseverance in carrying out the company's transformation agenda. It is my utmost hope that together we will further develop the SIRIM brand as Malaysia's leading light of excellence for technology and innovation.



DATUK HAJAH  
JAMALIAH KAMIS

Chairman  
Board of Directors

**SIRIM assisted a total of 7,658 companies in 2013. Companies gained an estimated RM8.73 billion in revenue as a result of incremental sales generated through SIRIM's assistance. Meanwhile, SIRIM's while its socioeconomic projects brought the benefits of technology to 20 communities.**

## PRESIDENT'S ADDRESS



“Our flagship focus has aligned our services to comprehensively address the needs of today’s businesses.”

### AIMING HIGHER

The year 2013 saw SIRIM in constant motion. Through our research initiatives and collaborative efforts in both the public and private sectors, we delivered innovative technical solutions to serve the needs of our customers and the market. At the same time, we dedicated our internal energies towards our company’s ongoing transformation, with the ultimate goal of becoming the nation’s premier solutions provider in quality and technology innovation.

SIRIM maintained its forward momentum from the very start of 2013 by executing a smooth roll-out for the three SIRIM Flagships of Energy and Environment, Medical Technology and Plant and Machinery. Under the flagships, SIRIM was able to propose, secure and deliver projects that are all closely aligned with key sectors under the Economic Transformation Plan (ETP), with the full support of MOSTI and other stakeholders. The flagship approach heralds a more focused direction for SIRIM’s research teams. The flagships promote closer collaboration not only with strategic partners in industry and research institutes, but also with other SIRIM researchers through multidisciplinary projects.

### Promoting competitive industries

Our flagship focus has aligned our services to comprehensively address the needs of today’s businesses. More than ever, SIRIM is able to offer research, development, design, engineering and standards under one roof, supporting local enterprises throughout the entire product cycle. These services are aimed at giving local innovators the ability to compete at the international level, complying with international standards.

Under the Energy and Environment Flagship, SIRIM achieved a renewable energy breakthrough with the first ever BioNatural Gas (BioNG) pilot plant in Southeast Asia and also launched a solar-powered aeration system for

aquaculture. SIRIM’s Techno Fund projects at Tip of Borneo, Kudat, Sabah represented new steps forward in research into solar thin film PV and wind energy generation. We collaborated with both government and industry on studies, programmes and training for energy efficiency and renewable energy adoption.

To support the government’s green agenda, particularly the pending green procurement initiative, SIRIM developed Carbon Footprint (CFP) labelling as well as eco-labelling criteria documents. We also expanded and upgraded our facilities to serve the needs of the National Ecolabelling Programme, promote Life Cycle Assessment (LCA) training and provide EcoDesign services.

The medical device industry benefited from our knowledge and expertise to gain a better understanding of Malaysia’s Medical Device Act 2012, which came into effect in 2013. Through the Medical Technology Flagship, SIRIM continued its medical R&D and provided seminars and workshops on the Act to lay stepping stones for the further development of the medical technology sector.

Under the Plant and Machinery Flagship, we set a new milestone in integrating SIRIM’s capabilities to support the oil and gas (O&G) industry. Our experts in engineering design, software engineering, foundry, machining, materials and testing came together to successfully manufacture components using low carbon stainless steel according to specifications by PETRONAS, bringing the O&G industry one step closer to its goal of ‘Malaysianisation.’

SIRIM's far-reaching research activities once again garnered industry recognitions, this time in the form of six gold, six silver and five bronze medals at national-level competitions. Our discoveries and innovations resulted in nine patent applications filed and five patent approvals received in 2013. As the national standards development organisation, SIRIM delivered a total of 254 Malaysian Standards,

comprising 156 new standards, 97 revised standards and one provisional standard. These achievements will once again advance the state of standards in the country and help meet the needs of local industries.

SIRIM's subsidiaries also found new ways to cater to customers. SIRIM QAS International launched new schemes for Certification

of Personnel Competence for Explosive Atmospheres as well as ISO 39001 Road Traffic Safety Management System Certification. The subsidiary became responsible for supporting the Energy Commission through the evaluation and validation of Test Reports and Certificates of Conformity on electrical and electronic equipment.

Meanwhile, SIRIM Training Services added new services, including the Customer Service Management (CSM) recognition scheme, ISO/IEC17020, ISO/IEC 17021, PSMB Approval as well as the ISO 9000 Lead Assessor Course.

Moving ahead, SIRIM will begin to take more proactive and aggressive measures to bring about performance improvements, starting from the top down. These measures will include right-sizing in SIRIM research programmes and state offices and facilities; introducing more objective evaluations to encourage sections, centres or subsidiaries that exceed their targets; and finding new revenue streams in SIRIM Research and Technology Innovation, Technical Services Division and subsidiaries.

The year ahead will show that SIRIM has what it takes to complete its transformation goals. Instead of settling into a comfort zone, we will take proactive measures to keep us in pace with Malaysia's rapidly changing economy. I have no doubt that we shall succeed in taking these bold moves as we proceed on the path towards becoming a highly competitive leader in research, technology, quality and standards.

## Ensuring sustainability

As we move into the second year of the five-year Transformation Plan, we have a unique opportunity to define a 'new normal' for SIRIM in which the company enjoys a higher level of efficiency, effectiveness and staff performance. SIRIM will need to take decisive action to meet this goal.



**DR ZAINAL ABIDIN  
MOHD YUSOF**  
President and Chief Executive

**1** project in Southeast Asia to turn industrial waste POME into high quality bio-methane.

**254** Malaysian Standards delivered.  
**9** patent applications.  
**5** patent approvals.

**2** renewable energy projects at Tip of Borneo, Kudat, Sabah.

Supported government's pending green procurement initiative by developing Carbon Footprint (CFP) labelling and eco-labelling criteria.

**6** gold medals  
**6** silver medals  
**5** bronze medals  
won at national-level competitions.

SIRIM Training Services introduced:

- Customer Service Management (CSM) Recognition Scheme

SIRIM QAS International introduced:

- Certification of Personnel Competence for Explosive Atmospheres
- Road Traffic Safety Management System Certification

# PRIORITISING RESEARCH AND TECHNOLOGY

## A MILESTONE YEAR FOR INNOVATION

In 2013, SIRIM Research and Technology Innovation Division continued to push the envelope of R&D in many different scientific fields, resulting in technologies that have been recognised on the international stage.

SIRIM researchers won 17 medals at various exhibitions, comprising five gold, four silver and one bronze medal at the International Invention, Innovation and Technology Exhibition (ITEX) 2013; one gold, one silver and four bronze medals at the Malaysia Technology Expo (MTE)

2013; and one silver medal at the BioMalaysia conference and Exhibition 2013.

In line with the five-year Strategic Plan unveiled in 2012, SIRIM refocused its energies to provide total solutions in quality and technology innovations, starting from the earliest stages of R&D. With its new structure firmly in place at the very start of 2013, the Group was able to seamlessly slot ongoing projects into the three SIRIM Flagships: Energy and Environment, Medical Technology and Plant and Machinery.

**SIRIM's researchers won 17 medals at various exhibitions, including five gold medals.**

## PLANT & MACHINERY FLAGSHIP



- Design and modelling
- Machine design
- Plant engineering
- System design
- Tooling and component development

## MEDICAL TECHNOLOGY FLAGSHIP



- Drug delivery systems
- Implants/prostheses
- Medical devices and equipment

## ENERGY & ENVIRONMENT FLAGSHIP



- Energy generation
- Energy storage
- Eco-product development
- Environmental technologies

## COMMERCIALISATION CHAMPIONS



CNG tank

SIRIM's aggressive pursuit of commercialisation has resulted in 10 complete solutions at the ready-for-market phase of development.

As the culmination of eight years of research, SIRIM's Techno Fund project on BioNatural Gas (BioNG) from Palm Oil Mill Effluent (POME) was completed on Carey Island in 2013. The project which turns industrial waste from palm oil mills into high-quality biomethane, is the first of its kind in Southeast Asia. Following the success of the pilot stage, the technology is now ready for commercialisation.

SIRIM's Compressed Natural Gas (CNG) Tank project serves as an ideal complement to the BioNG project as it provides strong and lightweight cylinders needed to store the gas for vehicles. These cylinders, created under the Plant and Machinery flagship using a filament winding process, will provide a convenient alternative to difficult-to-procure foreign components.

SIRIM's Tool & Cutter Grinder (**TCG 8**) also reached the commercialisation-ready stage in 2013. The portable and easy-to-use machining



TCG 8



Titanium implant

workstation provides opportunities for Malaysians to break into the high-precision tool industry.

The Solaerator is another MOSTI-funded project that has reached commercialisation-ready status under SIRIM's Energy and Environment flagship. The solar-powered aeration system for aquaculture proved its value to society in its first installation in a fish farming community in Simunjan, Sarawak.

In 2013, SIRIM brought two other eco-friendly innovations to commercialisation-ready status, namely Polymer BioComposite technology for making green furniture and EcoDesign Services.

SIRIM's Medical Technology flagship projects that have reached the commercialisation-ready stage consist of Craniofacial Reconstruction services, titanium implant technology and wound dressing products.

## RESEARCH IN PROGRESS

In 2013, SIRIM undertook R&D activities in several areas of environmental science to support the goals of the Energy and Environment flagship. The company participated in the European FP7 Framework Project to propagate photocatalytic technology in water and wastewater treatment.

SIRIM sought out new opportunities to enhance staff environmental expertise, including the signing of a MOU with National Institute of Advanced Industrial Science and Technology (AIST), Japan and a renewal of the existing collaboration with Korea Environmental Industry and Technology Institute (KEITI). Due to significant progress in Science Fund projects covering environmental modelling using geospatial analysis and the chemometric approach, the company will be able to expand its environmental services to industry.

SIRIM gave four talks on matters related to product safety at seminars and conferences

for the cosmetics and toiletries industry; manufacturers of industrial chemicals; the National Pharmaceutical Control Bureau, Ministry of Health; and the National Nanotechnology Directorate, MOSTI.

SIRIM partnered with the Department of Occupational Safety and Health in a series of seminars to raise industry awareness of the Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations, or CLASS Regulations.

Environmental lab activities remained an important part of SIRIM's services. The number of samples being tested doubled from just over 350 in 2012 to over 700 samples in 2013. SIRIM received funding of RM1.598 million from Ministry of Agriculture under NKEA EPP#1 (Herbal Sector) to upgrade lab facilities to comply with GLP requirements for pre-clinical studies in the areas of genotoxicity and dermal toxicity. The new lab capabilities include

“SIRIM continued to seek out opportunities to enhance staff environmental expertise.”

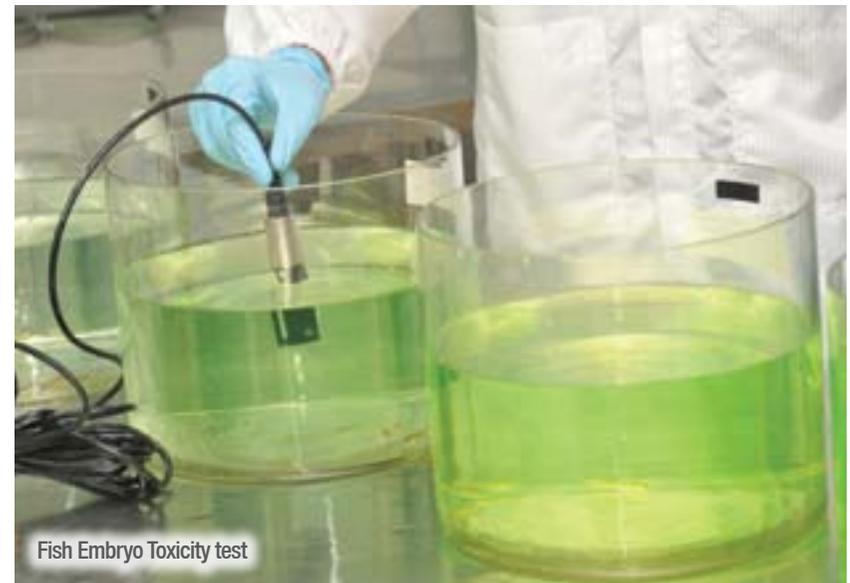
chromosome aberration testing and bacterial reverse mutation for genotoxic studies. In addition, the SCF project on Embryotoxicology was completed, which added additional staff competency to the GLP labs and will provide support for the newly developed Fish Embryo Toxicity test.

SIRIM actively marketed its GLP services to industries, government agencies and academic

and research institutes at three exhibitions (ASEAN Elenex, IGEM and BioMalaysia) and a seminar in conjunction with Herb Month 2013 (Program Bulan Herba 2013). These marketing efforts provided new insight regarding the local regulatory and industry needs for GLP data. In 2014, SIRIM plans to form strategic alliances to close the gap for registration of pesticides, which requires in vivo studies that the company cannot currently provide on its own.



Delegation from Korean Research Institute of Bioscience and Biotechnology



Fish Embryo Toxicity test

## Seeking energy security

Renewable energy continued to be an important area of SIRIM's strategic R&D drive. SIRIM commissioned two Techno Fund projects at Tip of Borneo, Kudat, Sabah for solar thin film PV and wind energy generation. The research findings could contribute towards the use of renewable energy sources in Sabah.

SIRIM aggressively promoted energy efficiency in commercial and industrial sectors by providing training and energy management consulting for compliance with the ISO 50001 Energy Management System standard. SIRIM successfully conducted training on resource efficiency and green production for 14 participants from nine countries under the Malaysian Technical Cooperation Programme (MTCP), with the aim of promoting green bilateral and multi-lateral business between Malaysia and the participating countries.

The company also conducted a two-week training course in Putrajaya with the cooperation of various government bodies, featuring topics such as cleaner production, energy efficiency,

Clean Development Mechanism, biogas production and the Renewable Energy Map for Malaysia.



**“SIRIM promoted energy efficiency in commercial and industrial sectors by providing training and energy management consulting for compliance with ISO 50001.”**

## Spearheading green practices

The national initiative to implement the Government Green Procurement Pilot Programme and MyHijau Labelling is one of SIRIM's most important environmental activities. In 2013, SIRIM completed a project to develop Carbon Footprint (CFP) labelling for materials and products for greenhouse gas management. The project, commissioned by the Ministry of Energy, Green Technology and Water (KeTTHA), covered a total of 30 CFP studies, established the first National Product Category Rules (PCRs) for three products/services and developed a pilot programme for these three PCRs. To lay groundwork for the government's pending green procurement initiative, SIRIM developed a further 11 eco-labelling criteria documents for various product categories, using a Life Cycle Assessment

(LCA) approach to identify the environmental performance aspects of products.

SIRIM also worked to expand the SIRIM Ecolabelling Scheme. To determine the readiness of selected manufacturing and service sectors for entering the local and global green markets, SIRIM conducted a study that identified priorities, industry expectations and recommended six strategies and 39 action plans to boost the production of green products by the Malaysian manufacturing industry. SIRIM received a total of RM5 million from PEMANDU to develop and upgrade laboratory facilities that will support the National Ecolabelling Programme and conduct R&D to improve product environmental performance. As of end 2013, SIRIM completed the first year milestone



of the pilot CFP labelling programme for local building materials manufacturers, funded by a grant under the EU Switch Asia Programme on Sustainable Consumption and Production. To date, the project has established 10 PCRs for building materials.

SIRIM remained at the forefront of LCA application development with its new Eco-Innovation Lab and LCA training facility, which expected to spur eco-product development by promoting eco-design and eco-material research in the Electrical and Electronic (E&E) sector.

The facility played an important role in closing gaps in LCA practices among ASEAN member countries during a workshop sponsored by the ASEAN COST Biofuel flagship. Industry players in the E&E sector, printing services and furniture industries received the same LCA training to enable them to conduct in-house CFP studies for future third-party CFP validation and certification. SIRIM also received approval for a Science Fund project to develop an environmentally-conscious benchmark tool that will enable product designers, engineers and LCA practitioners to identify optimum eco-design options.

## Engineering components of life

The Medical Technology flagship focused its research in the areas of implants and prostheses, delivery systems and medical equipment. Malaysia's Medical Device Act 2012 came into effect in July 2013, providing legislative framework for the medical device industry. SIRIM organised a total of seven seminars, workshops and conferences, including four seminars on the implementation of the Act as well as an international conference on biosensors. SIRIM is currently building a medical device testing facility to support the implementation of the Act.



MoU between SIRIM and Switch Asia on Sustainable Consumption and Production.



SIRIM continued its active engagement with international and local organisations in commercial biotechnology projects involving high-potential renewable bio-resources, such as the implementation of the Osteopaste synthetic bone cement project.

SIRIM participated in nine industrial biotechnology projects, published four

technical papers, filed two patents and obtained one patent in 2013.

SIRIM's aggressive pursuit of commercialisation resulted in three different products on the market, one product completing market validation, one product in the final stage of signing the licensing agreement, and another product in licensing negotiations.

“SIRIM contributed crucial technological solutions to support the nation's industries under the Plant and Machinery flagship.”

Rapid prototyping



## Delivering industrial innovations

In 2013, SIRIM contributed crucial technological solutions to support the nation's industries under the Plant and Machinery flagship. SIRIM demonstrated its product casting capabilities by manufacturing four 'Y-T Joint' units using low carbon stainless steel for the MLNG gas plant in Bintulu. This achievement paves the way for future involvement in the oil and gas industry in line with Petronas' 'Malaysianisation' concept.

SIRIM's ongoing Plant and Machinery research projects included the design and development of a modular perforating and folding machine, as well as a real-time error diagnostic and recovery system for CNC machine tools.

Biometrics continues to be an important technology for combating the growing threat of identity fraud. SIRIM, in collaboration with



Y-T Joint



industry partners, has incorporated biometric and smart card technologies in a Single Card Access project to develop a highly secured internet transmission platform. SIRIM filed a patent on the multi-layered security innovations developed for this project. SIRIM also offered IEEE Certified Biometrics Professional courses to help raise the level of expertise in the sector. Several participating engineers and researchers successfully became Certified Biometric Practitioners after completing IEEE examinations.

SIRIM engaged experts from University of Cairo, Egypt, to develop increase future capability planning in the area of Holy Quran Tajweed Learning and Teaching. SIRIM also helped to develop an Electronic Quality Management System (e-QMS) in ISO9001 for ANGKASA for managing all aspects of quality programs and continuous improvement all across its business.

Another collaboration involving The Carbon Trust (TCT) achieved success in developing the SIRIM Carbon Calculator, a web-based tool for calculating the carbon footprint of products.

SIRIM actively promoted and marketed its machine and system design expertise in 12 exhibitions in 2013, including ITEX 2013 and the 11th ASEAN Elenex. In addition to filing a patent on the Single Card Access project, SIRIM received approval for the RoboKit trademark and made a trademark filing to MyIPO for the Solaerator.



Hybrid solar-UV light photo catalytic treatments

## FRESH IDEAS

SIRIM leveraged the knowledge and capabilities gained from previous Techno Fund projects to secure new environmental technology projects, including the development of an air depollution system for recycled waste from the gypsum industry. In another research project, SIRIM applied hybrid solar-UV light photocatalytic treatments and phytoremediation to treat contaminants in wastewater. SIRIM's research proposal on the use of engineered nanomaterials in the aquatic environment was approved by MOSTI and the project was scheduled to commence in March 2014.

A newly-approved Science Fund project on the development of a benchmark tool for identifying optimum ecodesign options will provide a platform for product designers, engineers and LCA practitioners to work together on energy-consuming products with potential for technological improvement, wide usage and improved environmental impact.

In 2013, SIRIM undertook a National Project Secretariat (NPS) study to assess the steps taken by government and industry in preparation for solar thermal technology

## “Under the Medical Technology flagship, SIRIM received approval to initiate 10 new Science Fund projects in 2013.”

adoption. The results of the findings were shared in a National Seminar organised by SIRIM and UNIDO, which featured international speakers as well as over 150 participants from government bodies, industry and academia. SIRIM utilised MOSTI funds to develop new renewable energy projects, including pre-commercialisation of an uninterrupted battery-generated operator (UBOG)-assisted drying system for aquaculture, and a battery management system (BMS).

Under the Medical Technology flagship, SIRIM received approval to initiate 10 new Science Fund projects in 2013, including forging technology for cobalt-chrome alloy, a powder injection moulding process for a femoral hip stem, and three chitosan-based products. SIRIM has proposed a peritoneal dialysis machine as a possible R&D project for 2014.

To support biotechnology in local industries, SIRIM installed, tested and commissioned a pilot plant for the production of natural vinegar from pineapple fermentation.

SIRIM's expertise in the RFID sector was critical to the success of three projects in 2013: a proof of concept project commissioned by Malaysian Communications and Multimedia



Commission (MCMC) to determine the root cause of postal delivery delays, a project commissioned by MCMC to develop the code of practice for edible bird's nest traceability, and a feasibility study on the manufacturing of RFID tags and inlays in Malaysia. SIRIM also provided support and maintenance for

a project on the Seed Production Integrated System (SPITS) implemented in FELDA.

SIRIM successfully secured and delivered 10 commercial projects involving the development of embedded systems for robotics applications in 2013. The projects included activities such as training and consultancy, exhibitions and competitions, talks and workshops, and provision of SIRIM RoboKit® to government agencies, industries and the education sector. These technology activities were conducted through a wide range of promotional media.

The Machine and System Design Centre (MSDC) received approval by MOSTI for two Science Fund projects in 2013, including the

development of a high-speed, high-precision optical dicing machine. The centre proposed a number of future R&D projects, including housing demand prediction via artificial neural network, intelligent file tracking, near field communication (NFC), and a semi-automated smoke oven system in Belawai, Sarawak (under the Socio-Economic Fund) to eliminate unsustainable open burning procedures in the production of Sesar Unjur (traditional food). In addition, the Advanced Material Research Centre (AMREC) was granted 22 MOSTI Science Fund projects in 2013 and received more than 500 requests for technical services, testing services for ceramic materials as well as other testing services using high-end equipment.



# SERVING THE NATION

## PUTTING MALAYSIANS FIRST

Throughout Malaysia, SIRIM continued to work hand-in-hand with various government organisations to support community development.

These efforts included the ongoing collaboration between SIRIM and the Ministry of Industrial Development (MID) in Sabah to promote product quality and packaging design in the Sabah Entrepreneur Transformation (TRUS) programme. SIRIM also worked with the Yayasan Sabah Group to provide crafts training to over 100 youths.

In Sarawak, SIRIM implemented a government-funded socioeconomic project for the development of a detergent industry in the state and collaborated with MARA for the training of potential cosmetics entrepreneurs. SIRIM provided training support for the Groom Big Cosmetics and Herbal Programme under MITI, which has successfully trained about 400 cosmetic entrepreneurs throughout Malaysia and assisted them in developing their own cosmeceutical products based on local herbs.

The Seaweed Project, a collaboration between SIRIM and the Department of Fisheries, has

successfully developed 12 skincare products and is now moving into commercialisation.

SIRIM collaborated with the Ministry of International Trade and Industry (MITI) and the Cooperative Commission of Malaysia to develop a Groom Big portal ([www.groombig.biz](http://www.groombig.biz)), and provided website training for entrepreneurs under MOSTI Innospace Sabah and Negeri Sembilan Economic Planning Unit (UPEN).

The company also implemented a community project using the Solaerator system in collaboration with the Fisheries Research Institute of Gelang Patah, Johor, to help increase fish and prawn productivity and yield. The success of the Solaerator in Simunjan, Sarawak received national television coverage.

Local entrepreneurs and manufacturers were some of the most important beneficiaries of SIRIM's automation and robotics expertise. SIRIM in collaboration with FELDA and SME Corporation organised a workshop for small manufacturers to upgrade their manufacturing processes and products. The agencies involved are keen to repeat the success of the project with future batches of manufacturers.



Groom Big portal

SIRIM continued to provide training to future trainers, technopreneurs and the public in the areas of ceramics, photonics, plastics and polymer composites under various programs such as the GMI-KKTM, KISMEC, MID Sarawak, MID Sabah and Socio Economy Projects. Through AMREC, SIRIM also organised technological conferences, workshops and seminars on bioceramics, sol-gel, nano-characterisation, drug delivery, lithium-ion battery, fibreglass, composite materials design and fabrication, filament winding technology and photoluminance.

In 2013, SIRIM provided consultancy and coaching to SMEs through the SME Services

Centre. The Centre delivered consultancy, coaching and training to 100 companies under MITI's Groom Big programme as well as 28 companies under the East Coast Economic Region Development Council (ECERDC). The Centre introduced innovation consultancy services to instil innovation culture in SMEs and coach them in implementing their innovations, with the aim of achieving 1-Innocert certification from SME Corporation. In addition, SIRIM served as the lead consultant for the upgrading of the existing Halal Hub in Pengkalan Chepa Industrial Park, Kelantan. The company will also serve as the lead consultant for the building of the new Halal Collection Centre.



The year 2013 saw the opening of the Innocraft Centre in Batu Berendam, Melaka, a first-of-its-kind centre for innovation-based artistry conceived and developed by SIRIM with funding from MOSTI.

The Innocraft Centre showcases local crafts through exhibitions, sales and demonstrations, while at the same time supporting entrepreneurs with technical expertise.

“The Innocraft Centre in Batu Berendam, Melaka is a first-of-its kind centre for innovation-based artistry.”

## RAISING THE BAR FOR DESIGN

Throughout 2013, Malaysia Design Council (MDC) organised programmes in collaboration with various agencies, including Malaysian Industrial Authority Development (MIDA), Ministry of Education Malaysia, Sarawak Timber Industry Development Corporation and Malaysian Intellectual Property Office (MyIPO). MDC continued to promote high-quality product design through its core activity, the Malaysia Good Design Mark (MGDM) programme.

MDC's Design Innovation Exploration (DIX) programme for school children served as yet another platform to drive interest in innovative design. According to statistics gathered in Kelantan, Selangor, Perlis, Sarawak and Kedah, 90% of attendees reported that the exhibition

increased their understanding of innovation in the field of design. MDC also successfully organised the National University Design Challenge with the theme “Design in the Public Service Sector” to encourage the sharing of ideas between university students and the public sector.

As the champion of creative design, MDC also extended its efforts to the international stage by hosting the Asia Design Sharing Council Meeting, which was attended by six design organisations from Korea, Thailand, Philippines and Vietnam. MDC also brought 40 recipients of the Malaysia Good Design Mark (MGDM) to the World Best Design Products exhibition in Gwangju, Korea.



## FACILITATING INTERNATIONAL COOPERATION



SIRIM continued to play a key role on the international stage because of its expertise in standards, research and technology as well as its responsibilities as the Secretariat for the World Association of Industrial and Technological Research Organizations (WAITRO). SIRIM hosted the second WAITRO Management Programme (WMP) in June at its headquarters in Shah Alam. The nine participating organisations gained a deeper understanding of WAITRO's functions and activities while at the same time learning more about SIRIM's own activities and technologies.

SIRIM also hosted the Training on Resource Efficiency and Cleaner/Green Production for Sustainable Development under the Malaysian Technical Cooperation Programme (MTCP). A total of 14 participants from 10 countries gained a valuable introduction to cleaner production topics, took part in a hands-on cleaner/green production audit and visited three government agencies.

In 2013, SIRIM deepened its cooperation with the Thailand Institute of Scientific and Technological Research (TISTR). A delegation



led by TISTR Governor Mr Yongvut Saovapruk visited SIRIM in May. TISTR and SIRIM signed a Memorandum of Agreement on cooperation in several fields, including medical devices and laboratory in accordance to ISO 13485, biogas, bioethanol, GLP-OECD approval certification for toxico- and ecotoxicity laboratory in Thailand, non-destructive testing and failure investigation. SIRIM further strengthened this relationship in August by attending the 50th Anniversary Celebration of TISTR in Bangkok, Thailand. In conjunction with the celebration, TISTR hosted the 10th Biomass-Asia Workshop with the theme "Biomass Refinery to Community and Industrial Applications." SIRIM President and Chief Executive, Dr Zainal Abidin Mohd Yusof presented a paper at the

workshop, which also featured reports on biomass and alternative energy from various countries as well as information sharing on industrialisation of biotechnologies.

During the International Innovation and Achievement Matchmaking event held in Hangzhou, China in October, Dr Zainal Abidin presented a paper and also participated in the business matching session with local companies. During the conference, SIRIM Berhad and Uganda Industrial and Research Institute (UIRI) signed a Memorandum of Understanding (MoU) on collaboration in many technological fields, including technician training for petroleum operations and alternative energy systems.

**“In 2013, SIRIM deepened its cooperation with the Thailand Institute of Scientific and Technological Research (TISTR).”**

SIRIM participated in a Workshop on Technology Foresight co-organised by WAITRO and Islamic Educational Scientific and Culture Organization (ISESCO) in Indonesia in November. A total of 30 speakers and participants shared knowledge and experiences on topics related to technology foresight.

SIRIM was among 10 organisations from WAITRO to participate in the European Union (EU) 7th Framework Biowaste 4SP Project in South Africa, which focused on identifying the right technologies for converting African biowaste into value-added products. The

project provided a chance for participants such as the Malaysian SME Myagri to take part in networking and technology transfer.

The WAITRO Secretariat office in SIRIM Berhad, Shah Alam played host to a visit by Ms Christin Pfeiffer, the Secretary General for the International Network for Small Medium Industry (INSME). Both WAITRO and INSME agreed to work together in activities that may include membership exchange and information sharing. In addition, SIRIM Berhad and INSME discussed possible areas of cooperation such as technology incubation.



European Union (EU) 7th Framework Biowaste 4SP Project participants

## SUPPLYING TECHNICAL EXPERTISE

In 2013, SIRIM empowered clients with services for inspection, packaging design and intellectual property services, in line with its role as the mandated government vehicle for technology transfer. SIRIM Joining and Inspection Services achieved 4-star status as a Certified Skills Centre for non-destructive testing (NDT) courses.



SIRIM also secured a two-year contract with PETRONAS Refinery (Melaka) Sdn Bhd for failure analysis services, conducted a welding course for the National Youth Skills Institute, opened a satellite examination centre and provided a Certified Associate Welding Inspector course for a polytechnic institution.

sectors such as institutes of higher learning and supermarkets. Some clients, particularly local authorities, began to show more interest in value-added security features such as QR codes. The Selangor State Government appointed SIRIM to serve as consultant on

The Security Printing Centre (SPRINTEC) succeeded in attracting clients from new



its SME product packaging improvement programme. In addition, SIRIM provided packaging services to various federal government bodies, including the Ministry of Agriculture and Agro-based Industry, MARA, Ministry of Youth and Sports and the Ministry of Women, Family and Community Development.

SIRIM provided intellectual property (IP) services to major clients as well as SMEs and individual entrepreneurs through the Intellectual Property Services Section. The major clients included the Malaysian Agriculture Research and Development Institute (MARDI), the Ministry of Health (MOH), SME Corporation, Universiti Putra Malaysia (UPM) and the Malaysian Rubber Board. The other two sections under the Innovation and Technology Commercialisation Services Centre (ITCS) were repositioned to better meet the requirements of SIRIM as well as the industry, leaving only the Intellectual Property Services Section in the centre by the end of the year.

The Section conducted 159 searches covering patents, trademarks and industrial designs,

drafted 21 patent specifications covering various fields of technology and filed 53 patent applications, 163 trade mark applications, five industrial design applications and 16 copyright voluntary registration applications at the Malaysian Intellectual Property Office (MyIPO).

The SIRIM IP Policy entered its third year of implementation in 2013. The policy has put into place an incentive scheme to encourage SIRIM researchers to produce more inventions. SIRIM filed a total of nine patent applications and received approval for five patents in 2013. Its researchers received incentive awards totalling RM28,900 for disclosing their inventions and for patents granted locally and overseas.

SIRIM conducted IP awareness programmes and consultations throughout the year to help build awareness about intellectual property and on the use of patent information in research work. In 2014, the Intellectual Property Services Section will be placed directly under the Vice President's Office, Technical Services Division of SIRIM Berhad.

**“The SIRIM IP Policy entered its third year of implementation in 2013. The policy has put into place an incentive scheme to encourage SIRIM researchers to produce more inventions.”**

## PROMOTING STANDARDS AND MEASUREMENTS

The national repository of standards continued to grow under the watch of SIRIM's Standards Research and Management Centre (SRMC), which developed and delivered a total of 254 Malaysian Standards (MS) to the Department of Standards Malaysia (STANDARDS MALAYSIA), the national standards body for Malaysia, comprising 156 new standards, 97 revised standards and one provisional MS.

As the sales agent for Malaysian Standards (MS) as well as ISO and IEC standards, SIRIM continued to provide a valuable service to industry. In 2013, SIRIM sold and delivered a total of 10,306 MS to customers, along with a

total of 900 international and foreign standards/documents. A total of 12 customers, mostly from institutions of higher learning, subscribed to the MS Online System. More than 300 companies and associations currently enjoy the benefits of the SIRIM Library membership programme.

SIRIM organised nine workshops and MS development and was involved in 10 seminars for promoting the awareness and implementation of MS among the government and industry sectors. In the international standardisation arena, SIRIM through Department of Standards Malaysia currently



manages five international secretariats and manages Malaysian representation in 377 technical committees in ISO and IEC.

The national enquiry and notification point for World Trade Organization Technical Barriers to Trade (WTO/TBT) managed by SIRIM Berhad circulated 1,260 notifications of changing of regulations and standards in other countries. More than 310 local industries sent requests to SIRIM for early notifications through its Export Alert and the WTO/TBT Newsletter. SIRIM also managed and forwarded four Malaysian notifications to the WTO.

The National Metrology Laboratory (NML-SIRIM) upgraded and developed 11 measurement standards as well as calibration

and measurement capabilities in 2013. NML-SIRIM also participated in six inter-laboratory comparisons of measurement standards in areas such as measurement of borate buffer, viscosity, magnetic flux density and power sensor calibration.

NML-SIRIM participated in eight regional and international activities, published five papers and provided metrology training to institutions in Vietnam and Abu Dhabi. It also conducted six awareness programmes and roadshows, and provided measurement technology courses to numerous government agencies, industries and individuals in Malaysia.

NML-SIRIM received international visitors from the Sudanese Standards & Metrology

## NML-SIRIM upgraded and developed 11 measurement standards as well as calibration and measurement capabilities in 2013.

Organization (SSMO), Thailand Institute of Scientific and Technological Research (TISTR), International Division CHINO Corporation Japan, Weight & Measures Agency Tanzania and Department of Science and Technology Regional Metrology Laboratory (RML) Philippines as well as local visitors from government agencies, industry and universities.

NML-SIRIM will continue to take an active role in international inter-comparison programmes and capacity building in 2014. NML will expand its measurement capacities into new areas as well as promote measurement parameters and measurement technology through cooperation with other National Metrology Institutes.



## ACHIEVING CORPORATE SYNERGIES

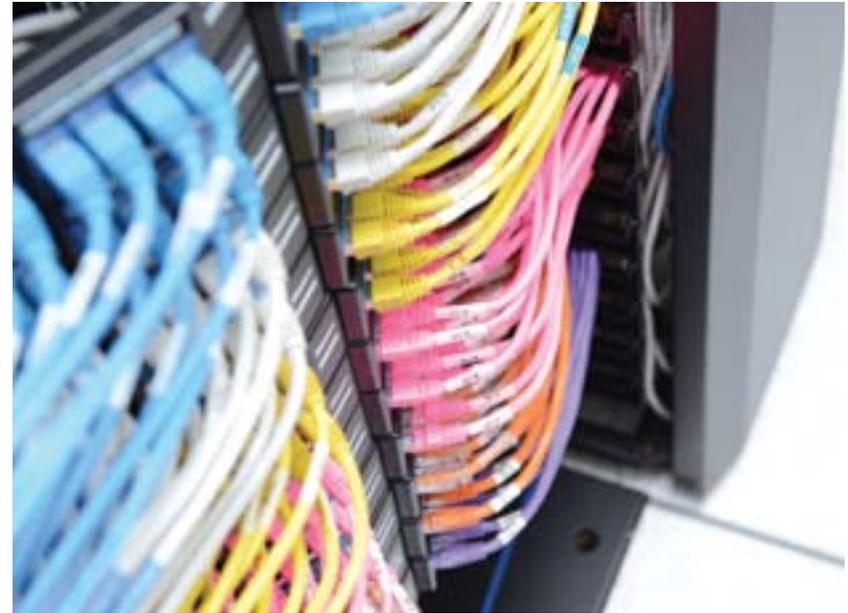
The Group's total workforce numbered 2,227 as of 31 December 2013, with another 101 new recruits in the process of being integrated into SIRIM.

As part of its human capital strategy, SIRIM invested RM0.6 million on staff training and development programmes. A total of 200 Development Programmes were organised for 2,477 staff, while 114 staff attended 103 Functional Training Programmes related to SIRIM's businesses. The Group Human Resources Department engaged two experts in Biomedical Materials and one expert in Design Engineering to expedite technology transfer to the relevant Technology Flagships within SIRIM. In addition, the Group sent staff for attachment programmes at the Advanced Medicine and Dentistry Institute and the School of Pharmaceutical Science in Universiti Sains Malaysia (USM); the National Institute of Advanced Industrial Science and Technology, Tsukuba; and Korea Advanced Institute of Science and Technology (KAIST).

The Group Business Assurance Department undertook a formal and structured risk management approach by developing procedures and guidelines consistent with the ISO 31000 Risk Management Standard, supplemented by the use of risk management software. Risk assessments were performed and reviewed for each SIRIM division on a quarterly basis and for each commercial project before signing of the agreement. The Group's continuous improvement methodologies paid off in 2013 when it exceeded its

quality objectives and targets, including the customer satisfaction index which exceeded its target by 9% and the internal service standard which exceeded its target by 12%. SIRIM's occupational safety and health (OSH) performance also improved, with lost time injury (LTI) frequency rate improving from 2.33 in 2012 to 1.12 in 2013. SIRIM's OSH management system was awarded Gold Class 1 in the Malaysian Society for Occupational Safety and Health, Malaysia (MSOSH) OSH Award 2013.

SIRIM conducted planning and marketing strategy studies with the aim of identifying new opportunities, developing economic indicators to showcase SIRIM's contributions



to the nation, and developing a sustainable model. The outputs from the studies were critical to SIRIM's future Business Plan and Budget. The Department also developed four technology roadmaps for the three flagships, worked on two joint venture projects, streamlined marketing activities, enhanced the SIRIM customer relationship management system, provided updates for MOSTI and the Cabinet, and engaged in outreach to industry associations and large local companies.

In 2013, the Group Information Technology Department continued to support the Group's business growth with the implementation of e-SIRIM. By switching to cloud-based email, the Department was able to guarantee 99.9% uptime, provide greater email capacity, and

support the mobile workforce more effectively. In addition, SIRIM replaced its fibre optic cabling and networking equipment across the nation in order to make a timely migration to IPv6 technology. The Group was expected to achieve full IPv6 compliance by the first quarter of 2014.

The GITD completed and deployed a comprehensive procurement application and a fully-integrated budget system for business planning. The Department enhanced SIRIM's project monitoring system to cover the complete monitoring of commercial and non-commercial/government projects. These systems will enable greater efficiency in performance tracking and monitoring, as well as business analysis.

# SUBSIDIARIES

## SIRIM QAS INTERNATIONAL SDN. BHD.

Since issuing the first certification for motorcyclist helmets in 1971, SIRIM QAS International has assisted more than 15,000 companies in gaining greater market access and in enhancing greater consumer confidence in their products and services through its certification, inspection and testing services. SIRIM QAS International also continues to play a pivotal role in ensuring the safety of Malaysian consumers through its Product Certification Scheme. The SIRIM mark is a widely recognised certification mark symbolising product quality and safety to Malaysian consumers.

Although the ISO 9001 certification remains the most popular management system certification scheme in Malaysian industry, there is also a steadily increasing demand for sustainability-related certification and personnel-related certification.

SIRIM QAS recently launched the IECEx Certification of Personnel Competence for Explosive Atmospheres, making it the only Asian-based IECEx Certification Body to offer such certification. SIRIM QAS International decided to offer this certification in response to requests from the Malaysian oil and gas industry to use Certificates of Personnel Competence (CoPC) as a means of demonstrating personnel competency. The certification provides confidence in



operating equipment in compliance with IECEx requirements and IEC standards related to explosive atmospheres, ensuring a safer work environment. The certification also goes in tandem with international practices in the oil and gas industry.

While helping to build the nation's human capital, SIRIM QAS International is also committed to nurturing its own human capital by strengthening its staff competency in line with its vision to be a leading Asian certification, inspection and testing body by 2020.

SIRIM QAS International further enhanced its energy efficiency testing facility with the installation of Goniophotometer test and

Photobiological test equipment, enabling it to provide comprehensive testing for lighting products. The state-of-the-art energy efficiency testing laboratory is now equipped to provide energy efficiency testing for lamps and lighting, refrigerators and air conditioners.

In 2013, SIRIM QAS International launched the Road Traffic Safety Management System Certification Scheme (ISO 39001). The certification scheme is based on ISO 39001:2012 "Road Traffic Safety Management Systems – Requirements with guidance for use." It is applicable to organisations that interact with road traffic systems such as transport, insurance, consultancy and car leasing companies. Implementation of the ISO 39001 standard will enable an organisation to develop an effective management system and control system for road traffic safety, improve awareness of road traffic safety for drivers in the organisation and ultimately, prevent road traffic accidents.

SIRIM QAS International also introduced the Business Continuity Management System Certification Scheme in 2013. The new scheme is based on ISO 22301, an international standard that will help organisations to manage overall business risks and develop the capability to plan for, respond to, and recover from disruptive incidents.

SIRIM QAS International continues to support regulatory bodies in the implementation of technical regulations. The Malaysian Telecommunications and Multimedia Commission (Suruhanjaya Komunikasi dan Multimedia Malaysia) renewed the appointment of SIRIM QAS International as a Certifying

Agency for communications and multimedia equipment pursuant to Regulation 11 of the Communications and Multimedia (Technical Standards) Regulations 2000. Meanwhile, the Energy Commission (Suruhanjaya Tenaga) renewed the registration of SIRIM QAS International as a Conformity Assessment Body under Electricity Supply Act 1990 (Regulation 97B). SIRIM QAS International added yet another feather in its cap when the Energy Commission appointed SIRIM QAS International to evaluate and validate Test Reports and Certificates of Conformity on electrical and electronic equipment.

The Medical Device Authority approved SIRIM QAS International as a Conformity Assessment Body (CAB) for the assessment of Quality Management Systems based on ISO 13485 and assessment of Good Distribution Practice for Medical Devices. With this appointment, SIRIM QAS International will be able to assist the Medical Device Authority in the enforcement of the Medical Device Regulations 2012 and the Medical Device Act 2012 (Act 737). As the major players in the certification of medical devices are mainly large multinational certification bodies, the appointment of SIRIM QAS International will provide the local industry with the choice of using the services of a local certification body, which should facilitate the process of applying for the necessary approvals from the Medical Device Authority.

Moving forward, SIRIM QAS International will continue to strive to provide greater professional and seamless services to facilitate market accessibility for its customers and to enhance consumer confidence in its customers' products and services.

## SIRIM TRAINING SERVICES SDN. BHD.

In 2013, SIRIM Training successfully organised 821 training sessions and courses attended by 13,256 participants from 1,578 organisations, including 270 SMEs. SIRIM Training also secured 43 new consultation projects and collaboration programmes.

SIRIM Training maintained its core activities in training and advisory services relating to quality, technology and best practices. Its quality services include training and consultancy services for standards-based management systems such as ISO 9001, MS 1900, ISO 14001, ISO/IEC 17025, ISO 27001, ISO 15189, ISO 13485, HACCP, ISO 22000, TS 16949, OHSAS 18001, Integrated Management System, GMP, GHP, and Halal.

In addition, SIRIM Training offers training and advisory services for tools, techniques and best practices such as TQM, TPM, 5S, Green 5S, 7QC Tools, SPC, Benchmarking, Value Engineering, ICC/QCC, 6-Sigma, Kaizen, Customer Service Management and Lean Manufacturing. SIRIM Training has also implemented technology-related training such as Certified Program on API, Certified Welding Engineers -AWS, Certified Program on NDT and CompTIA.

SIRIM Training continued its cooperation with the ministry in developing the Vendor Development Programme to help vendors from the automotive petroleum and gas industries.

New services introduced in 2013 included Innovation, Customer Service Management

(CSM) Recognition Scheme, ISO/IEC17020, ISO/IEC 17021, CompTIA, PSMB Approved ISO 9000 Lead Assessor Course as well as ISO 9000 Lead Assessor Course in Bahasa Malaysia.

SIRIM Training supported 18 organisations in achieving certification and recognition. Six organisations achieved ISO 9001 certification, three organisations were awarded Green 5S recognition, two organisations received MS 9001 certification, two organisations received ISO 50001 certification and two additional organisations achieved ISO 17025 certification. In addition, one organisation was recognised for SIRIM's Total Quality Fast Track Model (TQFTM) and another achieved CSM recognition. SIRIM Training also awarded GMP certification to one company in 2013.

SIRIM Training also successfully organised a Seminar on Quality, Standards and Best Practices which was attended by 263 participants.

In 2013, SIRIM Training successfully provided a series of training programmes for organisations in Oman and Brunei. These programmes served to expand the company's business at the international level.

## SIRIM STANDARDS TECHNOLOGY SDN. BHD.

SIRIM Standards Technology Sdn. Bhd. (SST) achieved a smooth transition in 2013, operating fully under SIRIM Berhad Group. There were no changes in company organisation and operational management.

Due to economic uncertainties at the local and international levels, the calibration business market did not expand as anticipated in 2013. The majority of multinational companies who are key customers chose to implement cost reduction exercises in view of this uncertainty. While the overall performance of the company was affected by the lower number of orders from the defence, automotive and healthcare industries as well as government departments, there was slight business improvement from the oil and gas services located at Pasir Gudang. Niche markets such as aviation and telecommunication also continued to grow.

In November 2013, the company head office was relocated from Subang Jaya to Section 15 in Shah Alam. This new strategic location provides ample space for new facilities and capabilities to support the company's future business expansion.

Moving forward into 2014, SST intends to set up a joint venture (JV) company with an instrument manufacturing ecosystem technology partner to expand its business market in radio frequency calibration and repair services. This JV company will also provide solutions to new technology sectors with tremendous business potential. In the coming year, the company will collaborate with a higher education institution to provide calibration services in the medical test instrument sector. The implementation of the Medical Device Act in 2013 will create a market for these services that will provide ample business opportunities for the Company.

SST's oil and gas services will expand to include the Failure Investigation and Non-Destructive Testing Section, which was previously under SIRIM's Joint Inspection Services Section.

SIRIM Standards Technology Sdn Bhd will continue to be the leading ISO 17025 accredited commercial calibration service provider in the country.

**The implementation of the Medical Device Act in 2013 will provide ample business opportunities for the Company.**

## NATIONAL PRECISION TOOLING SDN. BHD.

National Precision Tooling Sdn. Bhd. (“the Company”) is a special purpose vehicle mandated by the Government to be the lead collaborator to implement the “Development of Bumiputera Automotive Tool, Dies and Moulds (TDM) Industry” project (the TDM Project).

The main objectives of the TDM Project are to expedite the capability and capacity development and enhancement of the Bumiputera TDM industry clusters, and increase their participation in the TDM business, specifically with respect to opportunities presented by the local automotive manufacturing sector for import substitution, as well as export potential. These objectives are targeted to be achieved through the following development programmes:

- a. Equipment Acquisition Programmes;
- b. Human Capital Development (HCD) Programme; and

### c. Technical Assistance-Expert Attachment Programmes

The year saw the near-completion of the 1st phase of the TDM Project which had started in mid-2009 with an allocation of RM50 million provided by the Government. During this period, NPT implemented 29 Equipment Acquisition Programmes involving the procurement of 15 machinery and equipment. A total of 27 CAD/CAM/CAE Systems worth a total of RM38,426,087 were placed at and rented to 12 beneficiary companies.

Meanwhile, NPT also implemented 10 Human Capital Development Programmes, comprising five overseas training programmes involving the participation of 19 trainees from five beneficiary companies, and five local training programmes involving the participation of 77 trainees from eight beneficiary companies. The total cost of the 10 HCD programmes funded using the TDM Project allocation was RM3,475,644.

In addition, four Technical Assistance-Expert Attachment Programmes were implemented involving the attachment of eight experts at nine beneficiary companies and participation of 114 technical staff of the companies in the various technology transfer activities conducted by the experts. The total cost of these four programmes funded using the TDM Project allocation was RM4,273,282.

The outcome and impact of the various development programmes was monitored based on seven Key Performance Indicators, namely capability enhancement, capability enhancement, TDM manufacturing cost reduction, TDM manufacturing lead time reduction, increase in sales/output, reduction

in imports/outsourcing, and creation of pools of TDM engineers, designers and technicians.

While the beneficiary companies generally showed marked improvement in capabilities and capacities, there still exist gaps within the companies as well as within the Bumiputera TDM industry as a whole. These gaps need to be bridged in order to enable the industry to provide a more comprehensive range of services and products to their clients. With respect to this, the Company is expected in 2014 to fully utilise the additional allocation of RM30 million provided by the Government to evaluate, approve and implement more developing programmes for existing as well as new beneficiary companies.

**The main objectives of the TDM Project are to expedite the capability and capacity development and enhancement of the Bumiputera TDM industry clusters.**

# TIMELINE 2013

4 January 2013



## Official welcome of SIME-SIRIM Technologies staff

About 60 employees of new subsidiary company SIME-SIRIM Technologies (SST) Sdn. Bhd, led by Chief Operating Officer, Mr. Abdul Jalil Baharudin, were officially welcomed into the SIRIM Group. The staff of SIME-SIRIM Technologies Sdn Bhd were placed within the Technical Services Division.

4 January 2013



## "1 Pokok 1 Jabatan" in conjunction with SIRIM Green Day

This year's SIRIM Green Day Campaign was led by Mr. Fauzi Hj Ismail, General Manager of Renewable Energy Research Centre (RERC). Events included the "1 Pokok 1 Jabatan" tree planting event and awards ceremonies for the 3R and Building Energy Index (BEI) winners.

## CeTIM visits SIRIM Berhad

SIRIM received a delegation by Centre For Technology and Innovation Management (CeTIM) of France, represented by the Director of International CeTIM Mr. Richet and General Manager CeTIM International Engineering Services, Mr. Cloud Barile. The visit was aimed at identifying opportunities for cooperation.

16 January 2013



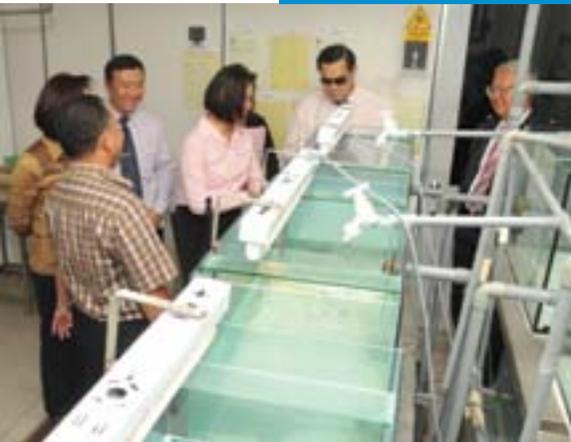
## Secretary-General of MOSTI visits the National Space Agency

YB. Dato' Dr. Madinah Mohamad, Secretary-General of MOSTI, undertook a field trip to the National Space Agency in Sungai Lang, Banting to see the latest developments in Projek ANGKASA undertaken by SIRIM. Dr. Zainal Abidin Mohd Yusof, President and Chief Executive of SIRIM Berhad presented the briefing.

23 January 2013



14-15 May 2013



### Technical cooperation programme with TISTR

A delegation from Thailand Institute of Scientific and Technological Research (TISTR) visited the laboratories of SIRIM's Research and Technological Innovation Division. In addition, TISTR and SIRIM Berhad signed an agreement for a technical cooperation that will cover training courses, R&D collaborations and information exchange in several fields.

11 June 2013



### Media team from Yemen visits SIRIM Berhad

A media team from Yemen visited SIRIM Berhad to highlight the importance of the agency's role in research and technology development. The media team held a recording session in the SIRIM gallery.

23 May 2013



### World Metrology Day 2013

This year's World Metrology Day 2013 was celebrated with the theme "Measurement in Everyday Life." Exhibits included imperial and traditional measuring devices. A total of 111 guests attended the event.

18 June 2013



### Training sessions for participants from Oman

A total of 26 participants from Oman attended training sessions at SIRIM Training Services Sdn. Bhd. The topics included "Initiating and Implementing Total Quality Management (TQM) Through Total Quality Fast Track Model" and "Strategic Planning Training."

1 July 2013



### Visit by Deputy Minister of Science, Technology and Innovation

The newly appointed Deputy Minister of Science, Technology and Innovation Datuk Dr. Abu Bakar Mohamad Diah visited SIRIM for the first time to support SIRIM's research and technology development activities. He was greeted by Datuk Hj Jamaliah Kamis, Chairman of SIRIM and Dr. Zainal Abidin Mohd Yusof, President and Chief Executive of SIRIM.

23 August 2013



### Seminar on Medical Device Act

SIRIM organised a seminar to prepare the healthcare industry for the requirements of the Medical Device Act, which came into force on 1 July 2013. The seminar provided a focal point for consultancy, training, technology, testing and standards in the medical industry.

12 July 2013



### American Welding Society (AWS) visits SIRIM Berhad

The Leadership Team of the American Welding Society (AWS) visited SIRIM Berhad to strengthen the existing ties between the two organisations and to discuss the development of action plans and skill improvement in the oil and gas industry.

3-4 September 2013



### National Quality Summit

The National Quality Summit, which brought together more than 150 participants, was held at the Sime Darby Convention Centre with the theme "Quality for the Global Consumer." A total of 13 papers were presented by international and local speakers, all icons of quality in their respective fields.

8 October 2013



### SIRIM Chairman visits BioNG pilot plant

Datuk Hajah Jamaliah Kamis, Chairman of SIRIM Berhad, visited the biomethane pilot plant on Carey Island, where palm oil mill effluent (POME) has been successfully converted into bionatural gas (BioNG) as an alternative fuel source for vehicles. The plant is the first of its kind in the country and represents the successful culmination of a project that began in 2007.



### SIRIM Industry Night 2013 celebrates quality and excellence

The SIRIM Quality Awards celebrated clients who succeeded in achieving the highest levels of quality management and product excellence. The awards were handed out at SIRIM Industry Night 2013, which was themed 'Human Capital Generating National Prosperity.'

15 November 2013



9 December 2013

### SIRIM completes renewable energy projects

SIRIM's two renewable energy projects at Tip of Borneo, Sabah were launched in a ceremony officiated by Datuk Dr. Ewon Ebin, Minister of Science, Technology and Innovation. Based on solar thin film PV and wind energy generation technologies, the projects pave the way for the wider adoption of renewable energy in Sabah.



# STATE OFFICES

## SIRIM NORTHERN REGION (PULAU PINANG OFFICE)

Lot PT 483 Mukim 6,  
Jalan Permatang Pauh,  
13500 Permatang Pauh,  
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Tel: +604 5377435  
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## SIRIM NORTHERN REGION (PERAK OFFICE)

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## SIRIM MELAKA

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## SIRIM JOHOR

No. 3, Jalan Teknologi 5,  
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81400 Senai,  
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## SIRIM EAST COAST REGION (PAHANG OFFICE)

Jalan Pintasan Kuantan-Kuala Terengganu,  
Kawasan Perindustrian Gebeng,  
26100 Kuantan,  
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Tel: +609 5836336 /  
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## SIRIM EAST COAST REGION (TERENGGANU OFFICE)

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Kawasan Perindustrian Chendering,  
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## SIRIM SARAWAK

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## SIRIM SABAH

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88450 Sabah

Tel: +6088 497082 / 490873  
Fax: +6088 496357

# OFF-CAMPUS FACILITIES

## SIRIM STANDARDS TECHNOLOGY

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