

Benchmark

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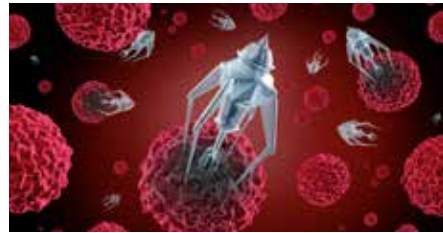
STANDARDS
MALAYSIA



THE FUTURE OF ISO 9001

THE WORLD'S MOST POPULAR
STANDARD WILL CONTINUE TO EVOLVE
TO BETTER SERVE USERS

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CHAIRMAN'S MESSAGE

WE bid you a warm welcome to the inaugural issue of the Benchmark Magazine. Benchmark reflects the crucial role of Standards Malaysia in support of the Malaysian Ministry's aspirations to use national standardisation as an economic driver, social progress and innovation in Malaysia.

As business practices become critically scrutinised by eco-conscious customers, the need to reinvent the wheel becomes ever more pressing. Green and sustainable practices, not just for the sake of customers, but also for the planet, needs to be espoused at a global scale.

In this issue, we address how Standards, setting a benchmark in business practices, impact the businesses themselves and also the end-users. This is to ensure the total protection of consumers including health, safety and welfare; promote industrial efficiency and development; further international cooperation; promote domestic and international trade and advance the national economy in the same heartbeat.

Some areas of development of standards include the services sector, encompassing social responsibility, financial planning, and tourism - one that has been the focus of the international standards community. Furthermore, the standardisation in field of science and technology such as nanotechnology, continues to be appraised. Not forgetting the F&B industry, where Standards are used to ensure the products are processed and manufactured in a safe and hygienic condition.

Being a member of the World Trade Organisation (WTO), Malaysia, subscribes to the policy of using International Standards as the basis for the development of Standards in Malaysia. While many initiatives are underway such as the introduction of the new Accreditation Programme on Antibribery Management Systems (ABMS) to the market, there is still a need for broader acceptance of accreditation activities, in order to achieve global recognition.

Yet, the Department of Standards Malaysia (DSM) faces challenges that impede the quick implementation of plans and strategies; non-compliance within a set timeframe is one such example.

Nevertheless, Standards Malaysia continues to address these issues in a timely manner. Priority is placed on training and capacity building so as to enhance and develop the right skills and knowledge of the human resource pool, including assessors that implement Standards Malaysia's accreditation programmes.

DATUK FADILAH BAHARIN

Director General,
Department of Standards Malaysia



ABOUT US



Department of Standards Malaysia

The Department of Standards Malaysia (Standards Malaysia) is the National Standards Body and the National Accreditation Body, providing confidence to various stakeholders, through credible standardisation and accreditation services for global competitiveness.

We enhance the quality of Malaysian products and services for both the nation as well as the world. Our continuing motive for businesses is to help improve efficiencies, reduce waste and enhance quality for greater marketability of their products and services locally and internationally. Our promise to the consumers is to deliver quality, safety, reliability, efficiency, compatibility, cost-effectiveness and sustainability in bringing product and service solutions across 25 sectors of the economy. As a purpose-driven institution, we are motivated and guided by our Vision, Mission & Values.



OUR MISSION

Accepted by Malaysians, recognised by the world.



OUR VISION

To provide credible standardisation and accreditation services to facilitate international trade, develop industry competitiveness towards enhancing economic growth, societal and environmental well-being.

What DRIVES Us Towards Greater Heights?



Resilient: Always Inspiring; Always Achieving

Dynamic: Ready for Challenges and Action



Integrity: Transparent and Trustworthy

Empowered: Cohesive in Teamwork



Visionary: Global in Approach

Our Pledge

We, honoured Malaysians, pledge to:

1. Behave in a professional manner while conducting our official duties, and make decisions with maturity
2. Strive to realise the department's vision: "Accepted by Malaysians; Recognised by the world"
3. Always greet each other warmly and respectfully
4. Be proactive in giving suggestions to improve the department
5. Willingly cooperate and assist each other to espouse the spirit of teamwork
6. Constantly promote the department of Standards Malaysia
7. Safeguard the department's image and treat customers with respect
8. Believe in the self and the department



New International Standard for Measuring the Performance of Cities Going Smart

City living is on the rise, having gone from 751 million of the world's population in 1950 to 4.2 billion in 2018. What's more, it's expected to reach 6.7 billion in 2050. How can cities adapt and prepare to ensure they provide adequate resources and a sustainable future? They can't improve what they can't measure. The latest in the ISO series of standards for smart cities aims to help.

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The ISO 37100 range of International Standards helps communities adopt strategies to become more sustainable and resilient. The newest in the series and just published, ISO 37122, Sustainable cities and communities - Indicators for smart cities, gives cities a set of indicators for measuring their performance across a number of areas, allowing them to draw comparative lessons from other cities around the world and find innovative solutions to the challenges they face.

The standard will complement ISO 37120, Sustainable cities and communities – Indicators for city services and quality of life, which outlines key measurements for evaluating a city's service delivery and quality of life. Together, they form a set of standardised indicators that provide a uniform approach to what is measured, and how that measurement is to be undertaken, that can be compared across city and country. The standards also provide guidance to cities on how to assess their performance towards contributing to the United Nations Sustainable Development Goals, the global roadmap for a more sustainable world.

Bernard Gindroz, Chair of ISO/TC 268, Sustainable cities and communities, the ISO technical committee that developed the standard, said ISO 37122 defines indicators as well as methods and practices that can make a rapid and significant difference to their social, economic and environmental sustainability.

"When used in conjunction with ISO 37101, which defines a management

"ISO 37122... OFFERS EFFECTIVE LEADERSHIP METHODS, LATEST TECHNOLOGIES AND PRACTICES THAT HELP THEM IMPROVE THE QUALITY OF LIFE OF THEIR CITIZENS"

system for sustainable development in communities, and ISO 37120, this standard helps cities implement smart city projects and projects across a range of areas," he said.

"These include those that respond to urbanisation issues such as population growth, climate change and political

and economic instability, through better engagement with their societies. It offers effective leadership methods, latest technologies and practices that help them improve the quality of life of their citizens and achieve their environmental goals, while facilitating innovation and growth.

ISO 37122 will be complemented by ISO 37123, Sustainable cities and communities – Indicators for resilient cities, which is due to be published later this year.

ISO 37122 was developed by technical committee ISO/TC 268, Sustainable cities and communities, the secretariat of which is held by AFNOR, ISO's member for France. It is available from your national ISO member or through the ISO Store.

New standards will set benchmarks for sustainable development in a bid to address climate change.



International Standard for Safety Signs Updated

SAFETY signs are essential for preventing accidents and injury. Symbols that are internationally agreed and globally used in safety signs ensure clarity and consistency, regardless of language, culture or setting. The ISO standard that is a reference for safety signs has just been updated to incorporate new safety signs that are in use around the world.



From no-go areas on construction sites to emergency exits, ISO 7010, Graphical symbols — Safety colours and safety signs — Registered safety signs, prescribes safety signs for the purposes of accident prevention, fire protection, health hazard information and emergency evacuation.

It features the shape and colour of the sign as referenced in ISO 3864-1, Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings, and the design of the symbol is according to ISO 3864-3, Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs.

Mr Jan-Bernd Stell, Chair of the ISO technical committee that developed the standard, said lack of harmonisation and standardisation in this area could lead to confusion and accidents.

“International standardisation of safety signs means everyone speaks



the same language when it comes to safety. This provides a simple solution for everyone, both in workplaces and public areas like airports where many nationalities converge.

Examples of safety signs documented in the standard include everything from warnings around deep water, electricity or barbed wire to instructions such as “do not walk or stand here”, or to “not use lifts in the event of a fire.”

ISO 7010 was developed by ISO subcommittee ISO/TC 145/SC 2, Safety identification, signs, shapes, symbols and colours, the secretariat of which is held by DIN, ISO’s member for Germany.

STANDARDS FOR SAFETY SIGNS:

ISO 3864-1:2011

Graphical symbols
Safety colours and safety signs
Part 1: Design principles for safety signs and safety markings

ISO 3864-2:2016

Graphical symbols
Safety colours and safety signs
Part 2: Design principles for product safety labels

ISO 7010:2019

Graphical symbols
Safety colours and safety signs
Registered safety signs

ISO/TC 145/SC 2

Safety identification, signs, shapes, symbols and colours





Addressing Workforce Problems in the Cleaning Industry

MALAYSIAN Association of Cleaning Contractors (MACC) wants the industry to do away with the practice of “headcount”; cleaning contractors penalised for failure to supply the required numbers of workers rather than the service rendered.

Manpower problems in the cleaning sector would be aggravated further if the customers are too concern about the number of manpower supplied and lost sight of the fact that the cleaning contractors’ responsibility is the cleanliness of the building. For failure to provide the numbers of workers as stated in the contract, cleaning contractors are sometimes slapped with a penalty of up to RM200 per worker per day, per shift.

NEED FOR PROPER ASSESSMENT

The justifications given by the customers for the use of “headcount” is the absence of a cleaning standard to determine “how clean is clean”. What is considered as clean by the cleaning contractors may not be so to customers. In the absence of a proper method of assessment, “headcount” is used to get value for money that is paid to the cleaning contractors. On the assumption that when the number of manpower supplied is according to the contract, cleaning would run smoothly and meet the standard required.

Indirectly, this has contributed to the phenomenal growth of cleaning contractors who have no or very little knowledge of cleaning, offering cleaning services. Cleaning services which should be treated as professional services has been turned into a service of providing manpower.

In view of these, Department of Standards Malaysia (Standards Malaysia) has developed MS 2550:2014 Cleaning Performance - Commercial and Public Buildings. However, its application in both public and private buildings are not widespread. In fact, many cleaning contractors, building and facility managers who are not aware of its existence.



Instead of increasing headcount, thinking that it would render a cleaner environment, the sector should leverage technology.



As such the practice of “headcount” cleaning contract is still being applied in assessing the performance of the cleaning contractors. As a result, cleaning contractors are still tied to the practice of supplying manpower so much so that they simply ignored other factors such as the use of technology and the latest innovation in cleaning, which can directly reduce the number of manpower needed. It is no wonder that cleaning contractors in Malaysia tend to be left behind in terms of adaptation of the latest technologies and innovations in cleaning.

CALLING FOR CHANGE

Singapore International Airport had started to use Robotic Scrubber machine, which does not require workers to operate. On the other hand, at the Penang International Airport, the cleaning contractor is still using the traditional mopping system and manual floor squeegee to clear the main public traffic area of excess water on the floor.

A paradigm shift is greatly needed in the cleaning industry, a shift from “headcount” to “performance-based” cleaning, to release the cleaning industry from being saddled with the workers’ recruitment issues particularly on the foreign workers and its related problems. For this purpose, MS 2550 should be implemented in both public and private buildings so that cleaning contractors will be assessed not on their ability to supply the required number of workers but on their cleaning performance or cleaning standard achieved.

For the owners and building and facility managers, the implementation of MS 2550 will not only enhance the cleaning quality of their buildings but will also facilitate the assessment management of the performance of their appointed cleaning contractors. The performance of the cleaning contractors will be based on the percentage of cleaning tasks which meet the required standard as being prescribed in the MS2550.

This would mean that in the event the contractor failed to achieve the required percentage, not only the payment of the contract price can be deducted but the contract can also be terminated if the percentage of performance achieved is consistently too low. In term of the selection of a capable contractor, the building owner or the building/facility manager would only need to look at the percentage of performance achieved over a certain period.

On the other hand, for the cleaning contractors, the implementation of MS 2550 would mean that they have the freedom to choose the best methodology and innovation for achieving the best quality of work without having to be bound with the required number of workers that they have to supply. It would motivate them to use the latest technologies and innovations in cleaning. Further, it would encourage the contractors to train their workers on cleaning as with the enhancement of the skills and productivity of their workers the number of workers to be deployed for cleaning can be reduced.

ISO Standards: The Origin

INTERNATIONAL standards make things work. They give world-class specifications for products, services and systems to ensure quality, safety and efficiency. These standards are instrumental in facilitating international trade. Since the International Standards Organisation (ISO) was established in 1946, it has published 21,000 international standards covering almost every industry from technology and manufacturing to food safety and agriculture. ISO standards are developed in response to a need in the market, a request from industry or other stakeholders such as consumer groups. They ensure consistency of essential features of goods and services such as quality, ecology, safety, economy, reliability, compatibility, efficiency and effectiveness.

ISO standards provide many benefits to the general public and to certified businesses. Economically, ISO standards have accounted for \$8.2 billion annual growth in GDP in the UK, and in Canada they have injected over \$91 billion into the economy since 1981. Governments can use ISO standards to draw on international expertise and experience and are vital sources of information when developing public policy. They help support public policy with expert opinion and they help to remove barriers to world trade, as the same specifications are adopted for use in different countries as national or regional standards.

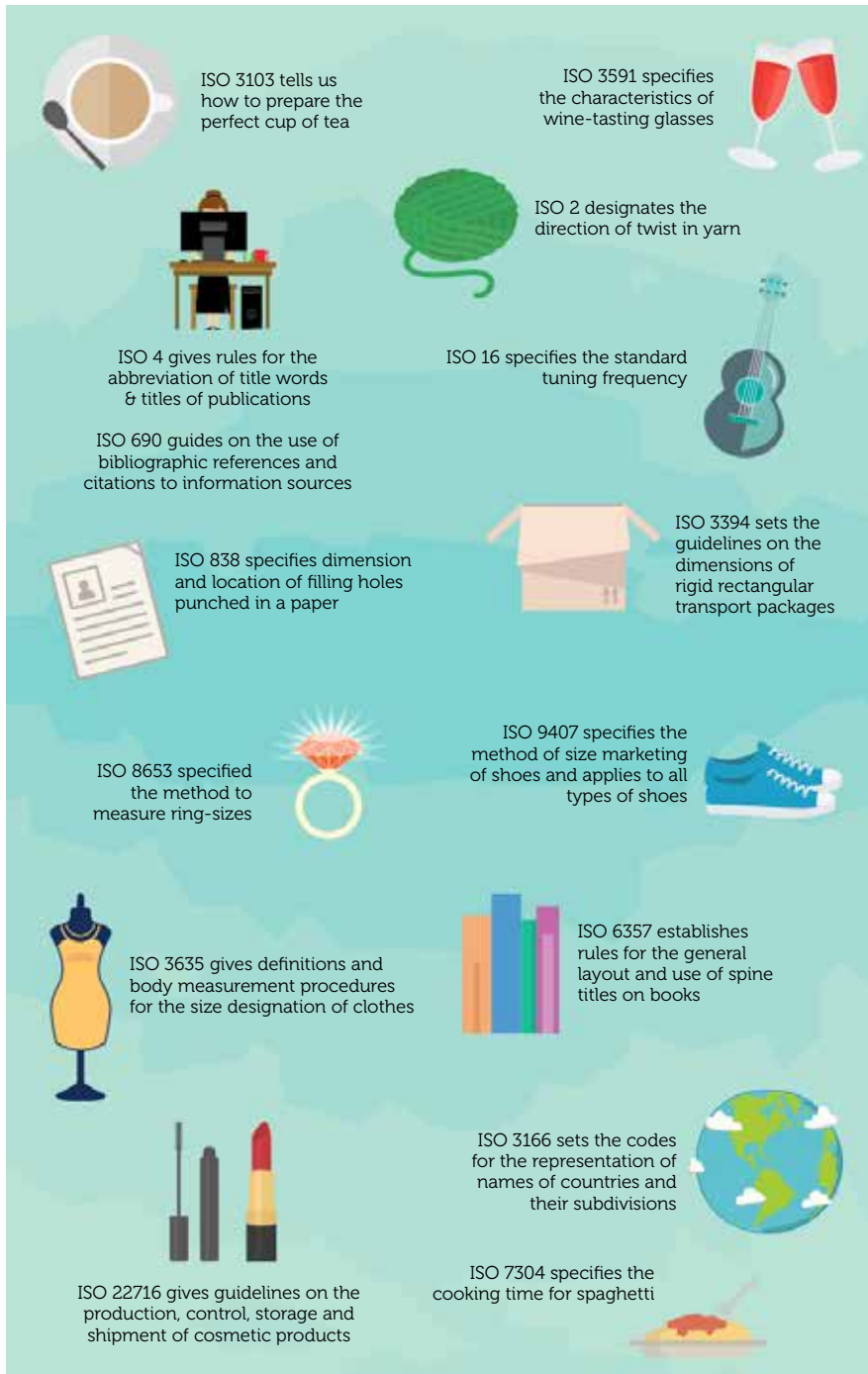


DID YOU KNOW?

History lesson... How and when the first standards came about.



DID YOU KNOW?



ISO Standards that have improved day to day life.

Businesses who are certified to ISO standards experience improved efficiency, reductions in costs as their systems and processes are improved. Customer satisfaction increases due to improved safety, quality and processes. Certified businesses also enjoy access to new markets ensuring the compatibility of products and services. ISO standards touch almost every aspect of a consumer's daily life. ISO standards ensure that products and services conform to international ideals, giving consumers the confidence that all products and services are safe, reliable and of good quality. Some ISO standards that have improved day-to-day life include:

With 1,462,303 combined ISO 14001 and ISO 9001 certificates issued worldwide in 2014, Environment, and Quality management system standards are some of the most successful and important ISO standards for businesses. These two were joined by the ISO 45001 for Occupational Health & Safety, released in 2017.

The environmental management system standard ISO 14001 provides a framework for the development of an environmental management system and supporting audit programme. This series of standards emerged primarily as a result of the Uruguay round of the GATT negotiations and the Rio Summit on the Environment in 1992. ISO 14001 was first published in 1996 with its most recent revision in 2015. This standard is applicable to any organisation that wishes to:

1. Implement, maintain and improve an EMS
2. Assure itself of its conformance with its own stated environmental policy
3. Demonstrate conformance
4. Ensure compliance with environmental laws and regulations
5. Seek certification of its EMS by an authorised external certification body
6. Make a self-determination of conformance

Since its inception more than 300,000 companies have been certified to ISO 14001 in 171 countries. The most recent revision has enhanced requirements including leadership, communication and an introduction

DID YOU KNOW?

of new concepts such as the product life cycle. Implementing ISO 14001 provides assurance to company management and employees, as well as external stakeholders, that environmental impacts are being assessed and mitigated.

The idea of quality assurance quickly spread beyond the military and the UK's first quality management standard was known as BS 5750. This standard specified how the manufacturing process should be managed, instead of looking at what is manufactured. In 1987, the ISO adopted BS 5750 as an international standard and it was renamed ISO 9001 with variants developed to cover different types of businesses.

Over the last few decades, ISO 9001 has been revised on four separate occasions. The 1994 revision focused on product assurance using preventive actions. The 2000 edition placed quality and process management at its core while also looking at how to continuously improve and track customer satisfaction. The 2008 version of the standard incorporated some changes to make the standard more consistent with ISO 14001. The

2015 revision of ISO 9001 brought the standard up-to-date reflecting the latest quality management practices and made it easier to integrate with other ISO management standards thanks to the introduction of a common framework: Annex SL.

Not currently an ISO standard, OHSAS 18001 was developed to bridge the gap for occupational health and safety and was designed to be compatible with ISO standards 14001 and 9001. Originally developed in 1999, the first version of OHSAS 18001 was based on a number of standards including BS 8800:1996, drawing the best from existing standards and schemes of the time. In 2017, a new Health & Safety standard ISO 45001 was published and replaced OHSAS 18001, bringing the main management system standards all under ISO. The new standard incorporates Annex SL making it easier to integrate with the 2015 versions of ISO 14001 and ISO 9001.

Whether we realise it or not, ISO standards have improved our day-to-day lives. The last 70 years have seen 21,000 standards published; all ranging from guidelines, to making

the perfect cup of tea, to the new Health & Safety standard currently under review. The ISO will continue to publish and improve upon these standards – who knows what additional benefits they will bring to certified businesses and end consumers alike over the coming years.

ISO 9001 include improvements to customer satisfaction and loyalty, increased employee motivation and productivity, and more efficient use of resources.





Standards for Eco-conscious Travellers

More than 1.4 billion tourists went somewhere last year, and that number is due to grow by 3-4% by the end of 2019, making tourism one of the fastest-growing economic sectors in the world. That's great for the tourism industry, but it also puts pressure on our planet's resources. Well managed tourism, however, can help preserve the natural and cultural highlights of any destination, and make a positive impact on the community.

SUSTAINABLE ACCOMMODATION

One of the first considerations when planning a holiday is where to stay. But wherever you decide to lay your head these holidays, make sure it is doing something positive for the planet and its people.

ISO 21401, Tourism and related services - Sustainability management system for accommodation establishments - Requirements, helps accommodation providers do just that by reducing their impact on the environment, promoting social exchange and making positive contributions to their local economies.





FESTIVAL FEVER!

Summer means music festivals, sporting events, open-air theatre and many other outdoor events that are good for both body and soul. Thanks to ISO 20121, Event sustainability management systems - Requirements with guidance for use, which was used for the London 2012 Olympics, organizers of any kind of event can manage their operations in a sustainable manner. This includes such things as effective use of resources, upholding workers' rights, and assessing impact the event has on the local community. A win-win situation for all.

DIVING INTO CLEAR WATERS

Planning on plunging deep into the sea this summer? ISO has a number of International Standards for recreational diving, including those for training programmes. The upcoming standard ISO 21416, Recreational diving services - Requirements and guidance on environmentally sustainable practices in recreational diving, for example, will help dive centres

and services be kind to the aquatic environment. It features international best practice such as deterring divers from feeding or removing aquatic life, or how to operate boats in an environmentally-friendly manner.

It will be joined by ISO 21417, Recreational diving services - Requirements for training on environmental awareness for recreational divers, which aims to educate divers on the environmental impact of their sport so that they are in a better position to reduce the risks of harming our waters.

OFF THE BEATEN TRACK

Looking to get back to nature? ISO 18065, Tourism and related services - Tourist services for public use provided by Natural Protected Areas Authorities - Requirements, helps the authorities of such nature hot spots as protected forests or conservation areas meet the needs of visitors while giving priority to their conservation objectives. Tourists can thus experience the natural environment while respecting it at the same time and learn more about the importance of conservation.

SUSTAINABLE ADVENTURES

Looking for a few thrills and spills when you travel? Adventure tourism is booming as tourists seek more challenging experiences. ISO 20611, Adventure tourism - Sustainability good practices - Requirements and recommendations, gives adventure tourism providers the guidance they need to minimise, or mitigate, the negative environmental, economic or social impacts of tourism and enhance the positive ones.

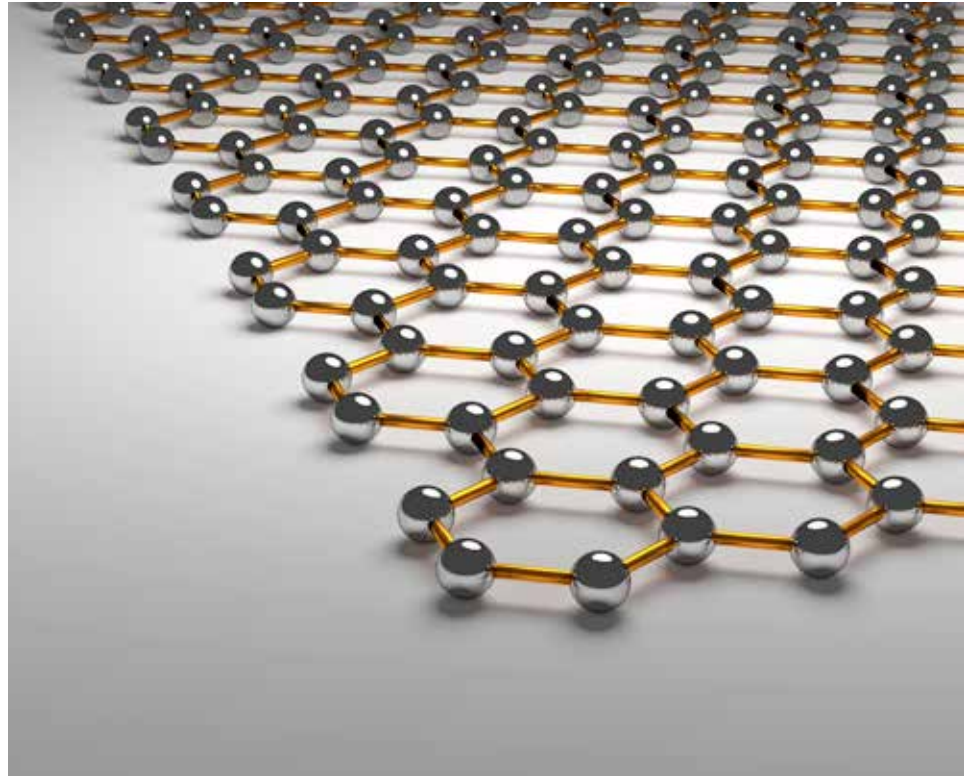


Controlling Atomic and Molecular Matter - Standards in Nanotech

Regulating nanotechnology remains a challenge because of the diversity of nanomaterials and their applications, the lack of characterisation data and a lack of standardisation in nomenclature and statutory authority.

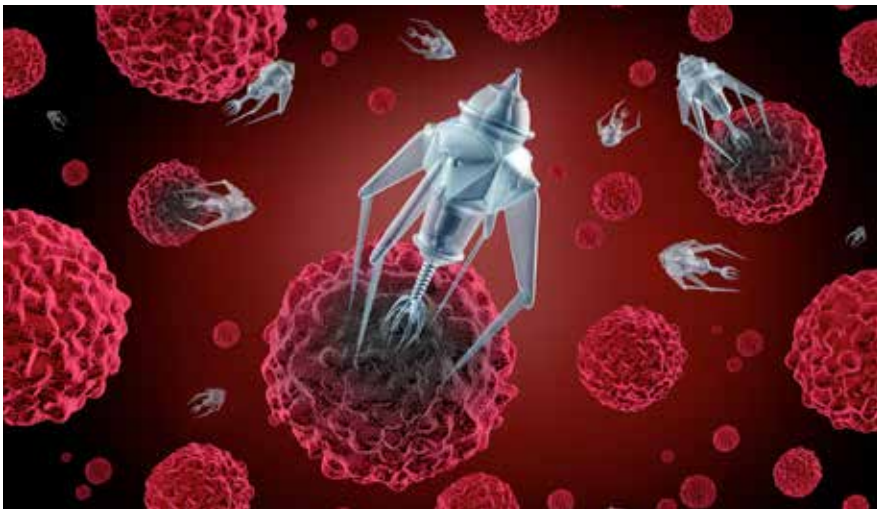
THE multidisciplinary nature of nanotechnology endeavours makes them difficult to communicate. Also, the information needed to adequately regulate nanotechnologies may be proprietary, and there are limited resources devoted to the task.

Nanotechnology and Its Definitions
Nanotechnology is an important and rapidly growing field of scientific and practical innovation that will fundamentally transform our understanding of how materials and devices interact with human and natural environments. These transformations may offer great benefits to society such as improvements in medical diagnostics and treatments, water and air pollution monitoring, solar photovoltaic energy, water and waste treatment systems, and many others.



Nanotechnology is used in the medical field as it is able to cross the blood-brain barrier to administer targeted medication.

Nanotechnology refers to the development and application of materials, devices and systems with fundamentally new properties and functions that derive from their small size structure (in the range of about 1 to 100 nanometers) and from the recent ability to work with and manipulate materials at this scale.



“LACK OF COMMON TERMINOLOGY AND THE DIFFICULTY RELATING IT TO REGULATORS AND DECISION-MAKERS IN COMPANIES MAKES IT A CHALLENGE TO GRASP.”

At the nanoscale, the physical, chemical, and biological properties of materials differ in fundamental and valuable ways from the properties of individual atoms and molecules or bulk matter. Downsized material structures of the same chemical elements change their mechanical, optical, magnetic and electronic properties, as well as their chemical reactivity, leading to novel applications for industry, healthcare and consumer goods.

Defining nanomaterials for regulatory purposes is a significant hurdle that has yet to be overcome. Some have defined the upper limit of nanomaterials as being those that measure 1000 nanometers, which covers many nano-size products already on the market. In contrast, the National Nanotechnology Initiative (NNI) and the FDA define that upper limit as being 100 nm.

Lack of common terminology and the difficulty relating it to regulators and decision-makers in companies makes it a challenge to grasp. How

Nanotechnology is used in electronics to enable enhanced performance and even more data storage.

nanotechnology is defined, certainly affects how they are regulated.

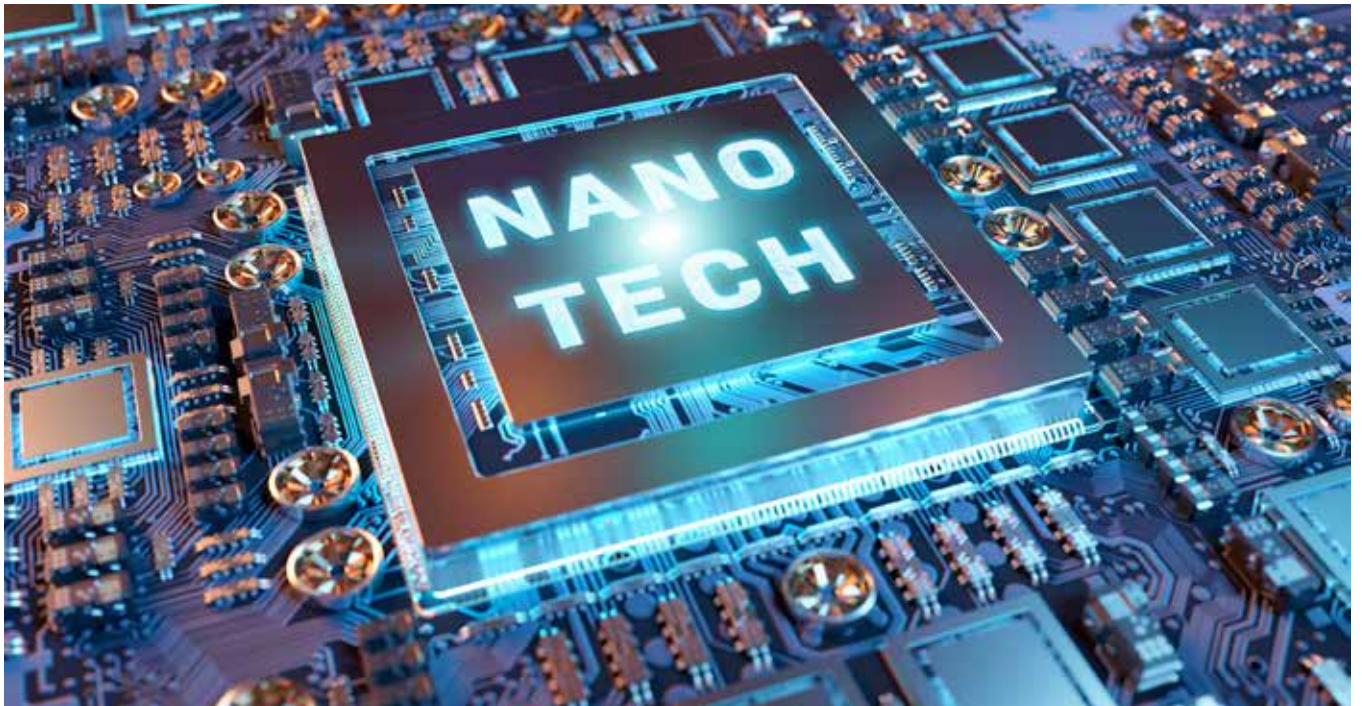
THE GOOD AND THE BAD

It is beyond doubt that Nanotechnology has the potential to deliver important health, safety and environment benefits such as curing, managing or preventing diseases; offering new safety enhancing materials that are stronger, self-repairing, and able to adapt to provide protection; efficiently reduce energy consumption; reduce the impact of pollution and assist in clean-up efforts; reduce greenhouse gas emission and remediating environment damage.

Its uses in the medical field is not short of groundbreaking - Nanoscale silver, which is a highly effective antibacterial agent, can be used in wound dressings to expedite recovering and keep the wound clean. However, there are always two sides to the coin. Experts have expressed concerns that widespread dispersion of nanoscale silver in the environment could kill microbes that are vital to wastewater treatment plants and to ecosystems. Some beneficial bacteria, for example, break down organic matter, remove nitrogen from water, aid in animal digestion, protect against fungal infestations and even aid some animals in defence against predators.

“NANOTECHNOLOGY HAS THE POTENTIAL TO DELIVER IMPORTANT HEALTH, SAFETY AND ENVIRONMENT BENEFITS SUCH AS CURING, MANAGING OR PREVENTING DISEASES; OFFERING NEW SAFETY ENHANCING MATERIALS THAT ARE STRONGER, SELF-REPAIRING, AND ABLE TO ADAPT TO PROVIDE PROTECTION”

Another benefit is that nanoscale particles - being minuscule - are said to be able to cross the blood-brain barrier. This allows the administration of targeted medication to treat brain tumours. While the potential for this is favourable, one must remember that the effects of nanoscale particles on humans have yet to be thoroughly studied.





Aside from that, nanotechnology can be applied to E&E and the manufacturing sector. Memory devices, electronics, conductors, sensors and batteries are among the few components that can benefit from this technology.

To leverage on its benefits and address its challenges, the Malaysian government has established well-equipped Nanoscience research centres such as Institute of Micro-engineering and nanotechnology (IMEN), Universiti Kebangsaan Malaysia; Advanced Materials Research Centre (AMREC) of SIRIM Bhd; and the Combinatorial Technology and Catalysis Research Centre (COM-BICAT), Universiti Malaya.

As one of the priority areas in STEM education, there is an ever-increasing number of postgraduates in nanoscience/advanced materials. The government has introduced the National Science Fellowship (NSF) scheme, which is open to post-graduate studies in nanoscience and technology.

CALLS FOR STANDARDISATION

There are several calls for standardisation in terminology and metrics as having an appropriately descriptive

term in the label insert of nanomedicine is vital for clinicians to make informed decisions.

Definition of nanotechnology needs to be flexible. There may be therapeutic benefits found in products much smaller than their traditional form but fall short of the 100nm size-range limit of technology. Can this then be classified as nanomaterials? Hence, size should not be an issue. This also means that new tests will be required to assess the risks derived from new materials or new conformations of existing materials.

NANOMATERIAL STANDARDS

The Council for the Advancement of Standards (CAS) has made a significant stride in developing nanotechnology standards. So far, 21 standards have been published for nanoscience and nanotechnology in China, three of which were adopted by the International Standards Organisation (ISO).

The ISO has defined and created standards for different nanotechnologies, but these will not be broadly applicable to all areas. Once again, experts have stressed the need to limit definitions for nanotech in

Conflicting terminologies and lack standardisation makes regulating nanotechnology a challenge.

sectors that apply. Any materials or consumer products that require a specific definition for regulation, should be conceived within the sector and not spill over to other sectors.

However, it is noted that there is a lack of standards for what types of tests needed for nanomedicines. Procedurally, the tests are put together to build an understanding of the product in a bid to assure the regulatory agencies of why these tests are needed. On the other hand, for nanomedicines that are injected, the regulatory framework is well-established.

There need to be incentives to produce and communicate risk data in a “regulator-ready” form so it not only reaches the government officials who need to consume the information, but it is written such that they can understand it and can incorporate it into their decision making.



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STANDARDS
MALAYSIA

Standardisation in the Food and Beverage (F&B) Sector Creates Consumer Confidence

As consumers, how do we know whether the food we select is suitable, of good quality and safe for human consumption? This is where standards in the F&B sector comes steps in. Standards help ensure that safety requirements are met and implemented accordingly, thus easing our worries.



STANDARDS on food and beverages are widely used by the industries voluntarily, such as in testing and certification purposes, due to the requirements by vendors and buyers. Furthermore, standards are used to ensure the products are processed and manufactured in a safe and hygienic condition.

ASSURING CONSUMERS OF FOOD QUALITY

Compliance to standards through certification can be used as a marketing tool to enhance customers' confidence in the products and assure the consumer that the products are of quality, safe and free from hazards. The Food Safety and Quality Division, the Ministry of Health is responsible to ensure that food processing activities are managed according to the required hygiene and safety requirements.

All food products marketed in Malaysia are subjected to the requirements of the Malaysian Food Act 1983 and Malaysian Food Regulations 1985, which prescribed requirements for food. At the international level, Malaysia is actively involved in Codex Alimentarius Commission (CODEX), an intergovernmental organisation under UN's Food and Agriculture Organization (FAO) and the World Health Organization (WHO). These bodies are responsible for the development of International Food Standards.

“COMPLIANCE TO STANDARDS THROUGH CERTIFICATION CAN BE USED AS A MARKETING TOOL TO ENHANCE CUSTOMERS' CONFIDENCE IN THE PRODUCTS AND ASSURE THE CONSUMER THAT THE PRODUCTS ARE OF QUALITY, SAFE AND FREE FROM HAZARDS.”



Malaysian food culture is best experienced at night bazaars, where a wide range of selections and tastes are available.

Malaysia has been a member of CO-DEX since 1971, where the Standards and Industrial Research Institute of Malaysia (SIRIM) at that time, was the National CODEX contact point before the function was transferred to the Ministry of Health in 1996. In addition, Malaysia is also involved in ISO technical committees related to food since the 1990s.

In the Department of Standards Malaysia, the Malaysian Standard development for F&B sector is under the purview of Industrial Sector Com-

mittee (ISC) on Food, Food Products and Food Safety (ISC U). The scope of ISC U is “standardisation in the field of food, food products and food safety”.

STANDARDS AND CERTIFICATIONS

As of November 2016, there are 24 technical committees and working groups established by ISC U covering various subjects. Over the years, the number of standards published has gradually increased. Currently, a total of 451 standards have been devel-

oped and published for the sector. Most of them are standards which have been developed for specific products and of indigenous type. Only about 25% of the standards are total adoption of international standards, i.e ISO Standards and these are mainly standards on test methods.

Besides product standards, there are a number of prominent horizontal standards that are commonly used for food and beverage industry which include:

- MS 1480 on Food Safety According to Hazards Analysis and Critical Control Point (HACCP);
- MS 1500 on Halal food - Production, Preparation, Handling and Storage - General Guidelines;
- MS 1514 on Good Manufacturing Practice for Food; and
- MS ISO 22000 Food Safety Management Systems.

A total of 68.4% of MS-related to food and beverages are recorded as saleable standards, and this is among the highest figure of saleable MS in comparison to other sectors. MS 1514 on GMP and MS 1480 on HACCP were the top two highest sold MS within the ISCs for three consecutive years (2009-2011).

For export purposes, usually, industries need to demonstrate compliance with standards related to food safety. Although HACCP is not mandatory, it is recognised as a tool to control potential hazards in food preparation. The preventive approach of HACCP not only improves food safety management but also 1 Source - SIRIM Berhad complements other quality management systems.

This has encouraged industries to apply for HACCP certification as this is highly sought after by purchasers. The Ministry of Health Malaysia has officially launched HACCP Certification Scheme in 2001 with the

objective to grant official recognition to food premises that managed to adopt and maintain a HACCP system for food products themselves. Standards Malaysia has also accredited four certification bodies that offer HACCP certification programme to assist the industries in obtaining certificates.

Standards ensure food preparation and handling is safe and meet all hygiene requirements.





HALAL CERTIFICATION LABEL FOR HALAL FOOD

MALAYSIA, AS THE GLOBAL HALAL HUB

As more than half the Malaysian population are Muslims, the demand for halal foods has increased over the years. The awareness and observance of halal have been highest within food and beverage, making halal compliance in this area to be of great importance. It is also interesting to note that Malaysian-made food, especially those carrying the halal logo, is gaining huge popularity in the overseas market, especially in the middle-east.

The food sector makes up over 60% of the global market for halal products. This includes primary meat, processed goods, bakery food and confectionary, with processed goods contributing around 35%

of the total. With the increase in global halal trade, many countries are taking initiatives to capitalise on the growth potential. Malaysia, as a Muslim country, is well-positioned to be the centre for the promotion, distribution and production of Halal food. Throughout the industry, halal requirements must be complied with at all stages of the production and supply chain, including procurement of raw materials and ingredients, logistics and transportation, packaging and labelling.

“THE AWARENESS AND OBSERVANCE OF HALAL HAVE BEEN HIGHEST WITHIN FOOD AND BEVERAGE, MAKING HALAL COMPLIANCE IN THIS AREA TO BE OF GREAT IMPORTANCE.”

Malaysian-made food carrying the halal logo is gaining popularity in the Middle East.

JAKIM (Jabatan Kemajuan Islam Malaysia) is responsible for the issuance of halal certificate to the industry in Malaysia whereby MS 1500 on Halal food - Production, preparation, handling and storage - general guidelines, is used as a basis for this purpose. MS 1500 provides practical guidance for the food industry on the preparation and handling of halal food (including nutrient supplements) and to serve as a basic requirement for halal food product and food trade or business in Malaysia.

This standard is also used to support the government's initiatives to promote Malaysia to become a Global Halal Hub for food and to be in the forefront of marketing, certification and reference for halal food products. MS 1500 covers various aspects that are necessary for food production including GMP and HACCP which make it a comprehensive standard to be used by food manufacturers.

New Standard ISO 14001 of Great Boon to SMEs

Implementing an environmental management system (EMS) based on ISO 14001 might seem like a big task, but that doesn't mean it is just for the bigger players in the market. Breaking it down into phases is the key. A newly revised guidance document just published helps businesses of all shapes and sizes put an EMS in place in the way that suits them - and reap the benefits every step of the way

THE environment is changing rapidly and businesses need to keep on top of what this means for them in order to survive - and thrive. An environmental management system (EMS) based on ISO 14001 helps organisations effectively manage the risks and capitalise on the opportunities that our changing world brings.

Implementing an EMS provides a number of benefits such as more efficient use of natural resources and energy, enhanced compliance with legal requirements and better relations with customers.

Improving environmental performance is made easier with formal systems in place. However, small and medium-sized enterprises (SMEs)

often find EMS implementation difficult due to fewer staff and resources. ISO 14005, Environmental management systems - Guidelines for a flexible approach to phased implementation, provides SMEs with a means to overcome this by enabling them to meet the requirements of an EMS in a phased, flexible way that is adapted to their specific needs. It allows them to start to benefit from





The Environmental Management System based on ISO 14001 will allow for more efficient use of natural resources.

the very beginning while ultimately meeting the requirements of ISO 14001. The standard has just been revised to ensure it is up-to-date and continues to meet market needs.

Martin Baxter, Chair of the ISO subcommittee that developed the standard, said ISO 14005 allows companies to easily measure the business value and benefits of implementing an EMS and ensuring they get a return on their investment.

“There are many advantages of taking a phased approach,” he said.

“ISO 14005 ALLOWS COMPANIES TO EASILY MEASURE THE BUSINESS VALUE AND BENEFITS OF IMPLEMENTING AN EMS AND ENSURING THEY GET A RETURN ON THEIR INVESTMENT.”

“Companies could start with specific projects that are most relevant or urgent, such as improving energy efficiency or resource productivity. When they know that these projects are delivering business success, they can build their system as the needs arise, incorporating customer environmental requirements or engaging more of their employees in enhancing environmental performance, to eventually address all the requirements of the EMS.”

ISO 14005 was developed by technical committee ISO/TC 207, Environmental management, subcommittee SC 1, Environmental management systems, the secretariat of which is held by BSI, ISO’s member for the United Kingdom.

STANDARDS FOR ENVIRONMENTAL MANAGEMENT SYSTEMS:

ISO 14005:2019
Environmental management systems
Guidelines for a flexible approach to
phased implementation

ISO/TC 207/SC 1
Environmental management systems

Natural Wellness Industries Sdn Bhd

Standards are worth every penny

“THROUGH THE ADOPTION OF STANDARDS, NATURAL WELLNESS SDN BHD IS ABLE TO EXPAND AND BECAME A RESPECTED MULTI-SEGMENTED PLAYER IN THE HEALTHCARE INDUSTRY.”

NATURAL Wellness Sdn Bhd is the fastest-growing Cosmeceutical and Nutraceutical company in Malaysia; it is an ISO 9001 (Quality Management Systems) and MS1500 (Halal Certification) accredited manufacturer. The established company is known for its Islamic management model. The company ensures that Islamic values are embedded in all of its business microtransactions, hoping to set an example to Muslim communities across the globe. Other than producing over-the-counter products, the company is also known for its wide range of Halal certified products including cosmetics, supplements, health food and beverages.

Company name: Natural Wellness Industries Sdn Bhd

Country: Malaysia

Industry: Cosmeceutical and Nutraceutical Manufacturing

Main products/services: Cosmetics, supplements, food & beverages, over the counter products and generic pharmaceuticals.

Main use of standards:

- Manufacturing
- Marketing & sales
- Production, quality assurance

Most important standards used:

- MS 1900:2005, Quality Management Systems: Requirements from an Islamic Perspective
- MS 1500:2009 / MS 2200:2008 (Halal Certification - Production, Preparation, Handling & Storage - General Guidelines)
- ISO 9001:2009, Quality Management Systems
- GMP No.: MALLP20131493 /
- MS 22000:2005, Food Safety Management Systems
- MS 1480:2007, Food Safety According to Hazard Analysis and Critical Control Point System (HACCP)
- MS 1514:2009, Good Manufacturing Practice (GMP)

What were the major benefits for Natural Wellness Sdn Bhd of using standards?

By adopting Standards, Natural Wellness was able to:

- Improve its customer satisfaction levels drastically in Malaysia, Australia, Japan, China, Hong Kong, Indonesia, Thailand, Singapore and the Middle East
- Increase the confidence level of its customers that resulted in a 50% increase in sales
- Open up new markets in the Philippines and help to break the trade barriers. This can be further illustrated by a reduction of inventory held by 50%
- Remains free of borrowings and long term liabilities, with a 100% increase in total assets

HOW DID STANDARDS LEAD TO THESE BENEFITS?

Through the adoption of Standards, Natural Wellness Sdn Bhd was able to expand and become a respected multi-segmented player in the Healthcare industry. Moreover, since the adoption of Standards, the company has been parallel with its mission to provide high quality, affordable and up-to-date healthcare products to their customers, worldwide.



NEC Corporation of Malaysia

Standards for Retaining Valuable Customers

NEC Corporation of Malaysia Sdn Bhd (NECoMAL) is an award-winning integrated IT solutions and services provider servicing corporations and helping businesses worldwide. Today, they are an established and preferred company in the telephony and communications space, owing to its strong work ethics and “quality”, which is at the core of everything they do.

Company Name: NEC Corporation of Malaysia Sdn Bhd (NECoMAL)

Country: Malaysia

Industry: It solutions and service provider

No. of employees: 115,000 employees globally in 5 continents and 46 countries.

Main products/services: IP Telephony, LCD Monitor, Projector, Thin Client, Public Communication Network, POS, Server and Storage, NEC Notebook, ERP, Business Intelligence & Data, Warehouse Solution, Digital Signage, Hospitality Solutions, Mobility, Retail, RFID Solutions, Security Solutions, Unified Communications, and Virtual PC Centre.

Main use of standards: Marketing and sales Policy, Procurement

Most important standards used: ISO 9001:2018, Quality Management systems ISO2700, Services

What were the major benefits of NEC of using standards?

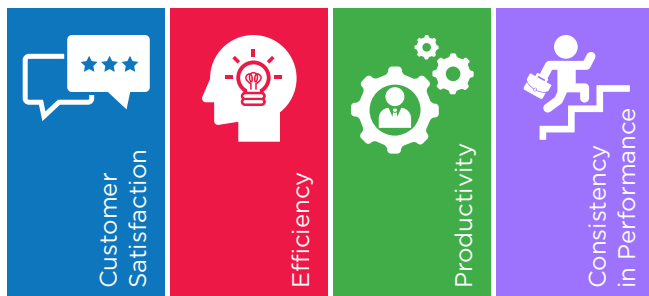
By adopting Standards, NEC is able to:

- Increase high levels of customer satisfaction
- Improve its efficiencies and overall productivity
- Unify its strategies and implementation, thus contributes to consistency in their company performances

HOW DID STANDARDS LEAD TO THESE BENEFITS?

The ISO 9001 quality management system plays a key role in defining fundamental guidelines. With quality and standards in place, NECoMAL has confidently and actively ventured into areas such as cloud computing, environmental and energy-related technologies. By using standard, they believe NEC can become profoundly well regarded by people throughout the world.

Standards Increase



UCSI University

Standards for safety and education quality

UCSI University, a private educator in Malaysia, is an ISO 9001:2008 (Quality Management System) and OHSAS18001:2007 (Occupational Safety and Health) certified private university that offers 90 leading programmes and hosts 9,000 students from over 80 countries. The university was founded by Dato’ Peter Ng in 1986 and is currently led by Senior Professor Dato’ Dr Khalid Yusoff. The University enjoys a 28-year track record of excellence and is the first university to implement formal industrial training programmes that require students to undergo internship.

Company name: UCSI University

Country: Malaysia

Industry: Private Education Provider

Main products & services: Educational and industrial programmes

Main use of standards:

- Production, quality assurance
- Procurement
- Research

Most important standards used:

- ISO9001:2008, Quality Management Systems
- OHSAS18001:2007, Occupational Safety and Health

What are the major benefits for UCSI University of using standards?

By adopting Standards, UCSI University is able to:

- Send out early notification on events and quick dissemination of post-event press releases also resulted in extra publicity for UCSIU over the years.
- Provide a safe environment for students to utilise their laboratories.

HOW DID STANDARDS LEAD TO THESE BENEFITS?

In regards to performance and ideal practices, the UCSIU’s Student Enrolment Centre (SEC) implemented Standard of Procedures (SOPs) to engage and forge new partnerships with foreign universities. Standards had eased business transactions and management procedures between universities. In addition, by implementing their safety standard, they were also able to create a safe environment for their laboratories.

“STANDARDS HAVE EASED BUSINESS TRANSACTIONS AND MANAGEMENT PROCEDURES BETWEEN UNIVERSITIES.”

The adoption of Standards was carried out successfully with the support of the management and staff. We had sufficient information at all stages of the adoption of standards which benefitted the overall business. It did not impose any additional costs to UCSIU.

More Choices of Safe and Quality Products for Consumers



AGRICULTURE is one of the priority sectors for Malaysia and is identified under the National Key Economic Area (NKEA) focus. The NKEA has been instrumental in enabling large players while empowering small players to drive private sector participation in the industry, helping to support overall economic activity.

Based on the study report on Malaysian Standards (MS) Usage in 2012, Industry Standards Committee (ISC) A on Agriculture is reported to be the second-highest ISC with most saleable MS, with 81.7% saleable MS and 19% mandatory implementation of MS. This was due to strong market forces for voluntary MS, which has contributed to the high sales and

usage of MS under ISC A. As of November 2016, ISC A has a total collection of 213 MS, and out of this 46 MS (22%) are referred in Act or regulation, i.e. 42 are mandated by FAMA, 2 are mandated by LKM, 1 mandated by MOH and 1 mandated by MPOB.

The implementation of standards in the agriculture activity, such as the Malaysian Good Agriculture Practices (myGAP) and myOrganic has resulted in improved quality of food products and provided consumers with a better choice of products.

MALAYSIAN GOOD AGRICULTURAL PRACTICES (MYGAP)

MyGAP was launched by the Minister of Agriculture and Agro-based

Malaysian food culture is best experienced at night bazaars, where a wide range of selections and tastes are available.

Industry on 28 August 2013. MyGAP is a comprehensive certification scheme for agricultural, aquaculture and livestock sector. To date, a total of 1,813 farms have been certified to myGAP which covers an area of 19,680 hectares.

AGRICULTURE

MyGAP is implemented based on Malaysian Standard (MS); MS 1784:2005 Crop Commodities - Good Agricultural Practice is used for agricultural sector module and MS 1998:2007 Good Aquaculture Practice (GAqP) - Aquaculture Farm - General Guidelines and MS 2467:2012 -Code of Practice for Seaweed Cultivation used for aquaculture sector module whereas MS 2027:2006 Good Animal Husbandry Practice is for the livestock sector.

As of December 2016, Department of Standards Malaysia (Standards Malaysia) has revised the standard - MS 1784 - GAP on Crop Commodities; which will be referred by the Ministry of Agriculture and Agro-based Industry (MoA) for implementation and issuance of Malaysian Good Agricultural Practices (MyGAP) certification.

MYORGANIC

MyOrganic is a rebranding of the organic certification scheme drawn up by the Ministry of Agriculture

which combines crops, livestock and aquaculture subsectors to recognise farms that practice organic farming according to the conditions and criteria:

1. Organic certification schemes for crops (formerly known as Skim Organik - SOM) implemented by the Department of Agriculture since 2003, is based on MS 1529:2015, Plant-based organically produced food - Requirement for production, processing, handling, labelling and marketing (First revision).
2. Organic certification schemes for livestock and aquaculture subsectors based on standards will be developed by the Department of Veterinary Services and the Department of Fisheries.
3. Veterinary Services Department has developed guidelines for the production of organic chicken (GL 002:2014) to provide information on the basic requirements

for organic poultry farming. The poultry products from organic farms are free from hormone/vaccines/antibiotics that are commonly used in conventional poultry.

MyOrganic promotes consumer acceptance of organic products under one brand. MyOrganic standard also includes the terms and criteria for hazard control that have an impact on the environment, food safety and health safety of workers.

Implementation of standards in the agricultural sector has led to improved yield and crop quality.



STANDARDS
MALAYSIA

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