

CARVING A NICHE

Quality and standards development will be a major pillar in Singapore's future economy

BY MINDY TAN & VIVIEN SHIAO

EVEN as Singapore's quality and standards (Q&S) development celebrates its golden jubilee this year, it has been handed the lofty task of being a major pillar in the country's future economy.

This new Q&S vision was announced by Deputy Prime Minister Tharman Shanmugaratnam at the Q&S Anniversary Gala Dinner in July this year. He also announced that a budget of up to S\$100 million will be made available over the next five years to enhance Singapore's Q&S ecosystem and to support small and medium-sized enterprises (SMEs) through standards adoption projects.

Q&S has contributed to 50 years of nation building and economic development, and the use of such standards is expected to be an increasingly integral part of global trade. As more regulators and businesses around the world increasingly use standards as supplier requirements, SMEs that adopt these standards will be at an advantage over their peers.

It is not just in established

industries that standards play an important role.

As global trends such as urbanisation and new technologies change the way that businesses operate across various sectors, Q&S plays a key role in building trust, supporting innovation and ensuring that sustainability acts as a key enabler to help Singapore differentiate itself from the competition in the future economy.

The push for Q&S under an overall strategy to make it a key pillar of the future economy focuses on four key areas: emerging areas; industry transformation; extending the reach of our Q&S network through international and regional forums; and developing a Q&S-competent workforce.

We will, in the coming pages, take a more in-depth look at each of these strategies, and share the stories from two forward-thinking SMEs – Takatack and Zyllem – which have leveraged on standards as a strategic tool to build capabilities and gain a competitive edge.

HAVING a robust Quality and Standards (Q&S) ecosystem has been integral to enhancing Singapore's infrastructure and ensuring that Singapore's products and services meet international standards for quality and safety. That Spring Singapore, together with the Singapore Standards Council and the Singapore Accreditation Council, is commemorating the 50th year of the Singapore Standardisation Programme and the 30th year of the Singapore Accreditation Programme this year is a significant milestone. But they now have to undertake the vision of becoming a key pillar of the future economy, and it is necessary to refine the process.

The four strategies to be implemented by Spring were unveiled by S Iswaran, Minister for Trade and Industry, at the Quality & Standards Conference on July 27.

Says Choy Sauw Kook, assistant chief executive, quality and excellence, Spring Singapore: "If we look at the past 50 years, the Q&S have contributed much to the economic development of Singapore. As we go forward, trends like rapid urbanisation and increasing global interconnectedness presents both opportunities and also challenges."

This is a shift from the existing model of the Q&S efforts which were focused on growth industries and areas such as improving productivity and resource efficiency.

"We looked at how standards can support these areas along our 12 standards committees. These committees are more or less aligned with our economic structure, for example you have manufacturing, chemical, IT . . . While these sectors remain important, going forward we have to look beyond to also consider emerging areas such as the Smart Nation initiative and the Future of Manufacturing, and how quality and standards can play a part."

PLANNING AHEAD

The Future of Manufacturing (FoM) cluster, which is driven by Spring and the Economic Development Board (EDB), is an example of an area that is essentially unmapped. To allow for "smarter" manufacturing, in which there is interconnectedness and interoperability, an industrial Internet of Things (IoT) will be needed to lay the foundation for seamless sensor networks and system interfaces between multiple devices and machines. Spring is working on the development of a Q&S roadmap for the FoM cluster, covering areas ranging from IoT and nanomaterials, to 3D printing and advanced robotics.

But the work is more than just planning ahead for sectors, it is also about implementing Q&S further upstream.

"In the past, industry players and government agencies may come in and say 'hey, we need you to tackle a particular pain-point'. This is then raised with one of our standards committees to review. But now we are deliberately planning ahead, sitting down with key stakeholders and having that conversation of what is of

priority for that sector. From these, we can determine – we are moving in this direction, how can Q&S come in and support and facilitate the industry transformation? That's one big difference," says Ms Choy.

Spring has kick-started this process with the establishment of a Testing, Inspection and Certification (TIC) Taskforce in May, which comprises TIC companies, trade associations and government agencies.

The TIC Taskforce has since come up with two key recommendations to support the development of new TIC services for emerging areas – the formation of an industry-led TIC subcommittee; and to put in place a collaborative framework where government agencies with new initiatives or manufacturers with new products which require new TIC services can involve the TIC players early during research and development, product development or test-bedding projects.

For a start, the Taskforce will focus on forging collaborations in the areas of smart health care and smart transportation. These include the development of TIC services to assess the safety of autonomous vehicles and service robots.

As at the end of July, the TIC Taskforce is working with the Singapore Manufacturing Federation to form an industry-led subcommittee to identify industry needs in the area of TIC and develop services to address these needs.

It is of course not just for emerging sectors that Q&S is catered to. It can also play a critical role in industry transformation efforts.

TRANSFORMING INDUSTRY

In April this year, the logistics sector in Singapore welcomed the launch of a world's first standard TR46 on Last Mile Delivery – eCommerce Data Interchange. TR46:2016 provides guidelines for companies to adopt a common dataset to boost efficiency by reducing time, minimising errors in the process chain, and providing a seamless transactional experience for customers.

TR46 was launched by the Singapore Manufacturing Federation-Standards Development Organisation, Infocomm Development Authority of Singapore (IDA), and Spring Singapore, and was the outcome of a cross-sectoral effort in Singapore.

Last mile fulfilment, which relies on effective logistic services, is critical for the continued boom of the fast-growing e-commerce industry in Singapore. That being said, e-commerce retailers and logistics service providers continue to face challenges in the last mile delivery as businesses switch between many dataset formats when working with different partners, resulting in high switching costs.

Takatack is one of the companies that has implemented TR46 and benefited from the process. Takatack Technologies was founded in 2010 to enable SMEs and businesses to easily set up their online shops.

Dickson Gregory Choong, the chief executive officer of Takatack Technologies, says that what sets its platform apart is that it focuses on three pain

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points commonly faced by businesses: the setting up; the managing of the store; and the marketing of the store. Takatack was acquired by PLDT, the largest telco in the region, in 2015 and is today the digital innovations unit of PLDT and Smart Communications Inc.

The company had in fact started to integrate its backend system with that of its logistics service provider in the Philippines when IDA issued a call for collaboration to bring together retailers, e-commerce solution providers and logistics service providers to develop integrated solutions in 2014.

“Our experience in Philippines served as a good platform,” says Mr Choong. “When we want to build something, it has to be based on the value you want to bring – from the merchants’ perspective, how can we make it better for you? With that mindset, we ask ourselves a number of questions. For instance, does it take too many steps to move from finishing the sale to calling for courier service? If so we will reduce the number of steps. Ultimately, TR46 has to be useful and should be easy to adopt,” says Mr Choong.

According to Mr Choong, linking up with courier partners who adhere to the same standards can reduce the amount of time taken to link up their application programme interface (API) by half.

“Today, in Singapore, we have integrated two main courier services – Zyllem and TA-Q-BIN. We are currently in talks to integrate with two other courier services,” says Mr Choong.

Takatack and Singapore-based logistics innovator Zyllem were involved in the initial planning stage for TR46 through to the trial period. They announced their partnership to provide a platform that offers courier service options to merchants of TackThis!, Takatack’s online store creator after the launch of TR46.

It is not just in Singapore that Takatack is building its presence. It already has an established presence in the Philippines and Malaysia, and is also looking at expanding into Indonesia.

DEVELOPING FRAMEWORK

Zyllem is another example of a company that has benefited from standards.

Zyllem provides a technology platform that connects delivery companies and freelancers with businesses or individuals who require such point-to-point delivery services. CEO and co-founder Noam Berda had observed back in 2013 that the courier market in Asia was fragmented and there was a gap

in the delivery eco-system. Zyllem was started to bridge this divide.

In order to meet rising consumer expectations, retailers and logistics providers are being put under growing pressure to offer more efficient delivery services, while not compromising on customer service. He explains that many retailers have extensive logistics needs which cannot be met by any one service provider, and without standards such as TR46, an online retailer that wanted to offer a range of price and service options would find it expensive and difficult to handle multiple logistics providers.

But by integrating with a TR46 compliant logistics provider such as Zyllem, Mr Berda says that online retailers would find it a “walk in the park” to integrate with additional ones as everything they did for the first integration can be re-used. “Of course each logistics company wants to offer something unique and can add their own flavour, but the core of the integration will be the same, keeping things super simple for the retailer.”

Mr Berda believes that the advantages of TR46 are manifold for companies in the logistics sector. With the adoption of such standards, the efficiency of on-demand delivery and fulfilment will be greatly increased. In addition, business costs can be reduced as there will be fewer mistakes associated with the differing data formats and procedures.

Furthermore, in land-scarce Singapore where rentals are high, the implementation of TR46 helps to make it easy for small businesses to kickstart their journey through online stores. “Developed to meet the challenges in last mile delivery, the TR46 will provide a one-stop solution for retailers who are keen to set up an e-commerce arm, and it will also set high uniform standards for retail services in Singapore,” sums up Mr Berda.

LEVERAGING ON GLOBAL STANDARDS

In a well-connected world, having globally recognised accreditation gives consumers the assurance that products and services meet international standards. But Spring Singapore does not intend to just be a passive follower. It is intending to take things one step further by being one of the players that will shape the global Q&S scene.

Singapore may be making progress in helping SMEs adopt and harness Q&S as a business strategy, but there is a need to further extend its roots in the

global Q&S arena.

To remain relevant, the country needs to have a voice and get involved in the global Q&S conversation through increased participation in international and regional economic fora. Not only will this boost the competitiveness of our industries, tapping on global networks will help companies meet importing markets’ requirements and also gain first mover advantage.

For example, in June, Singapore was recently elected as chair of the Pacific Accreditation Cooperation, an association of accreditation bodies and other interested parties to facilitate trade and commerce among economies in the Asia-Pacific region. Such roles help Singapore position itself as a thought leader to promote acceptance of conformity assessments across the globe while helping to advance Singapore’s interest in Q&S.

Singapore is also demonstrating its commitment in key Q&S bodies such as the International Organization for Standardization (ISO) through the anchoring of the ISO regional

office in Singapore, the first outside of its headquarters in Geneva, Switzerland.

Alan Morrell, ISO, director of Regional Engagement – Asia, says that the ISO office here will allow the organisation to develop a greater focus on the opportunities and challenges faced by its members in Asia.

The Regional Engagement Initiative (REI) in Asia aims to support ISO members in the region by enhancing communication and collaboration, and increasing advocacy of standardisation in Asia. “ISO also hopes the work of the Singapore office will help countries in this region better participate in ISO activities and promote greater use of ISO standards,” he says.

Not only does it work with individual members, the ISO REI also facilitates close relationships with key regional organisations such as the Pacific Area Standards Congress, Asean, Apec and the World Bank. It also supports regional economic integration goals of the Asean Economic Community through harmonisation with international standards. “This will not only facilitate trade but also promote more participation in global value chains,” he adds.

The ISO also seeks to help support emerging sectors in Singapore and the region by working with partners to develop standards in a timely manner that are relevant and practical for their use.

Mr Morrell observes that given the increasing

integration of today’s products and systems, standards support inter-operability so as to realise the full potential and wider application of the new technologies. He points out that the Asian countries tend to be early adopters of emerging technologies and products, and companies here are also a source of innovation. “The effective development of standards can make a difference that will benefit companies and consumers across the region,” he says.

According to Mr Morrell, Singapore is a “strong and effective player” in international standardisation activities. He singles out Spring Singapore for its active participation in more than 160 technical committees, backed by strong involvement of the Singapore industry, which has given the country a voice in setting the global agenda.

He adds that achieving similar high levels of participation from elsewhere in Asia, will ensure that their standards are globally representative and help achieve their objective of their standards being “used everywhere”.

SUPPORTING EMERGING INDUSTRIES

To further support emerging industries, the TIC sector forms the crucial backbone of the Q&S framework.

Xiao Jian Hua, chairman of the International Accreditation Forum (IAF), says that accreditation is part of an ecosystem that assesses if a product, service, business process or an organisation conforms to specific standards. He adds that this is an important part of the Q&S infrastructure.

He says that accreditation bodies such as the Singapore Accreditation Council (SAC) independently assess the competencies of testing, inspection and certification service providers, providing the assurance that they conform to international standards for their services rendered.

Accreditation also helps to increase the credibility of test reports and certifications. Peter Unger, chairman of International Laboratory Accreditation Cooperation (ILAC), points out that businesses can gain commercial benefits from the products and services offered. “This is particularly important at this stage where we are at the threshold of a future economy, where future industries are developing at a rapid pace,” says Mr Unger.

To remain relevant to Singapore’s future industries, he says the TIC sector needs to be even more plugged in to the development of these sectors, especially during the research, development and test-bedding phases.

Spring Singapore points out several examples of how the TIC

sector has been supporting the country’s needs.

Bureau Veritas Singapore’s Consumer Products Services division was accredited under the SAC-Singapore Laboratory Accreditation Scheme (SAC-SINGLAS) in 1997. It provides testing and inspection services for consumer products such as toys, electronics and apparel from across the world.

According to Spring Singapore, this is because the SAC accreditation is recognised around the world as a sign of quality and scientific excellence, which demonstrates a commitment to high standards in product safety and quality.

Another example is Ugene Laboratory Services, which is accredited by the SAC-SINGLAS to ISO/IEC 17025, which is the main standard used by testing and calibration laboratories in most countries to demonstrate technical competence.

Founded in 1997, Ugene Lab provides microbiological testing services for general food products and traditional Chinese medicines, using innovative diagnostic tests. The company also conducts environmental testing, water and food testing for food manufacturers, restaurants and hotels in Singapore.

In the field of traditional Chinese medicine where various herbs and ingredients are used to make medicinal products, accredited test reports provide safety and quality assurance to customers.

DEVELOPING A COMPETENT WORKFORCE

Finally, all the above strategies would be for naught without a competent and able workforce equipped with the expertise and know-how to capitalise on Q&S as a strategic business tool for growth.

Spring Singapore’s efforts to develop such a competent workforce will go hand-in-hand with the new Skills Framework that comes under the SkillsFuture initiative.

This will again mean partnering stakeholders such as institutes of higher learning and standards development organisations to incorporate Q&S modules into the Skills Framework for the various sectors if relevant.

Ultimately, with all the different strategies at play, it is hoped that the emphasis on Q&S can help businesses gain trust, accelerate innovation through a common platform, and boost competitiveness through quality, and not just on cost. ■

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This year, SPRING Singapore, together with the Singapore Standards Council and the Singapore Accreditation Council, is celebrating 50 years of our nation’s quality journey. Our robust Quality & Standards ecosystem has helped local companies build trust and enhance business competitiveness to grow globally.



WORKING TOGETHER
Takatack Technologies CEO Dickson Gregory Choong (right) with Zyllem CEO Noam Berda (left); Takatack and Zyllem were involved in the initial planning stage for TR46 through to the trial period

In our July/August issue, we reported that Seng Heng Engineering is the only fastener company in Singapore and South-east Asia to be certified by the American Petroleum Institute (API) to its API Q1 standard level. This is incorrect. Seng Heng Engineering was the first fastener company in Singapore and South-east Asia to be certified with API 20E Monogram by the American Petroleum Institute (API). Today it is one of 16 companies in the world to achieve this certification.