Sparking Technology Innovation

Technology innovation can be a key competitive strategy that sets SMEs apart from other players in the market.

BRINGING RESEARCH TO MARKET
PathGEN Dx’s groundbreaking diagnostic chip is the result of taking an innovative research project to the next level.

WASHING SMARTER, FASTER & BETTER
Funding support from SPRING Singapore enabled Zero Spot Laundry to develop a management information system which improved its processes.
SPRING Singapore is an agency under the Ministry of Trade and Industry responsible for helping Singapore enterprises grow and building trust in Singapore products and services. As the enterprise development agency, SPRING works with partners to help enterprises in financing, capability and management development, technology and innovation, and access to markets. As the national standards and accreditation body, SPRING develops and promotes an internationally-recognised standards and quality assurance infrastructure. SPRING also oversees the safety of general consumer goods in Singapore.

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Commonwealth Travel Service Corporation (CTC Travel) received the Singapore Service Class certification from Mr Lee Yi Shyan, Senior Minister of State for Trade & Industry and National Development, on 15 August. The first travel company to be certified, CTC travel had embarked on a 16-month Customer Centric Initiative (CCI) project to improve its service performance, which doubled its customer advocacy rate, or the number of customers who will actively promote its services to family and friends.

The travel agency hosted a CCI Learning Journey on the same day, showcasing its service initiatives to an audience of service leaders from the travel, retail and other service-related industries.

Mr Lee also announced the launch of a new interactive customer service toolkit developed by SPRING Singapore for SMEs in the service-related sectors. The toolkit is available online at the EnterpriseOne portal, and contains quizzes and simulated service scenarios for an engaging learning experience.

SPRING and IE Singapore Reviewing SME Strategies

SMEs can look forward to a streamlined and simplified application process for government assistance schemes and greater support in seeking out business opportunities abroad. These areas are being looked at in an SME Review jointly undertaken by SPRING Singapore and International Enterprise (IE) Singapore.

Mr Teo Ser Luck, Minister of State for Trade & Industry, who is leading the SME Review, announced this at the 14th SME Conference organised by the Singapore Chinese Chamber of Commerce and Industry (SCCCI) on 23 August, which was attended by more than 2,000 SME representatives. The findings from the SME Review are likely to be announced at Budget 2013.

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New Online Toolkit for SMEs to Build Financial Know-how

The Association of Banks in Singapore (ABS), with support from SPRING Singapore, has developed a financial management toolkit to help small and medium enterprises (SMEs) enhance their knowledge and capabilities in financial management. The toolkit was officially launched by Mr Lee Yi Shyan, and Mr Piyush Gupta, Chairman of The Association of Banks Singapore, on 15 August.

SPRING Chief Executive, Mr Png Cheong Boon, said it is crucial for SMEs to manage their finances well and tap appropriate sources of capital in order to grow and expand their businesses. The Financial Management Toolkit aims to provide SMEs with the tools to help them understand their financial needs and strengthen their financial management capabilities.

The toolkit is available to SMEs free of charge. It is targeted at SMEs three to five years old with a sales turnover of not more than $3 million. SMEs may access the toolkit at http://smetoolkit.abs.org.sg/

Inaugural Logistics & Transportation Conference 2012

Some 120 representatives from the logistics sector gathered for the conference, which was held on 22 and 23 August. Themed “Gearing Up for World Trade and Movement”, the conference provided participants with insights on the trends, opportunities and challenges for the logistics sector.

At the opening, Mr Png Cheong Boon launched the Logistics Productivity Toolkit, which SPRING developed with industry partners. Designed to help SMEs kick start their productivity journey, the toolkit can be customised to address each company’s needs and help measure productivity levels in logistics operations and supply chain management activities.

The conference was organised by the Container Depot Association (Singapore) with the support of the Singapore Logistics Association (SLA) and SPRING, IE Singapore, Infocomm Development Authority and the Port of Singapore Authority.

Teckwah Breaks New Ground with S$27 Million Printing Services Centre

Teckwah Industrial Corp is setting up Pixel Red, a one-stop printing centre, at Paya Lebar iPark. The new facility, with five floors and a built-up area of 23,000 sq m, will provide end-to-end supply chain services.

Mr Lee Yi Shyan was the Guest-of-Honour at the ground-breaking ceremony held on 10 August. He noted that the printing industry is an important sector employing more than 17,000 workers and contributing about S$1.3 billion to the economy.

Expected to cost more than S$27 million, Pixel Red will be completed by 2014. Teckwah will rent out about half of the development to complementary businesses.
HELPING SMEs ACHIEVE BETTER FINANCIAL HEALTH

A sound financial structure is an essential foundation for any successful business. In order to provide SMEs with a self-help platform to enhance their knowledge and capabilities in financial management, the Association of Banks in Singapore (ABS) has commissioned the ABS SME Financial Management Toolkit. It was developed with the expertise of Stone Forest Corporate Advisory Pte Ltd and supported by SPRING Singapore.

“

The Toolkit is the banking industry’s response to our SMEs’ need for knowledge-based assistance to help them overcome their ‘growing pains’ in accessing financing.”

Mrs Ong-Ang Ai Boon, Director, The Association of Banks in Singapore

UNDERSTANDING ONE’S FINANCIAL POSITION TO BETTER OPTIMISE RESOURCES

At Barclyne College International, Principal and Managing Director Mr. Jackie Liu and his team strive to provide a holistic learning environment for their students. Mr. Liu believes in providing “education from the heart”, thus requiring his team to ensure that they properly understand their financial situation in order to make the best possible use of their capital. The SME Financial Management Toolkit helps the company assess its position and take better financial control. “It’s useful, high-standard and gives us greater confidence when using it,” said Mr. Liu of his experience with the toolkit.

ESTABLISHING STRONG FINANCIAL HEALTH TO CULTIVATE CONTINUOUS GROWTH

Growing progressively from supplying tableware to commissioning modular kitchens for clients, Steward’s Solution has carved a niche in the market, providing equipment rental in the F&B industry. With its sights set on expansion, Managing Director Mr. Michael Lian understands the need for a strong financial position to move forward. “The SME Financial Management Toolkit helps us plan our business growth and prepare us before we approach the banks,” said Mr. Lian. His team found the generated report easy to understand and it provided insights on the company’s financial standing. With the report, the company can more confidently carry out its future business plans.

SMEs can access the toolkit at http://smetoolkit.abs.org.sg
Sparking Technology Innovation

Technology innovation can be a key competitive strategy that sets SMEs apart from other players in the market.
Technology has a vital role to play in helping businesses to create new products and services, improve existing processes, drive cost efficiencies and increase productivity. For small and medium-sized enterprises (SMEs), technology innovation can be a key competitive strategy that sets them apart from other players in the market.

While technology offers many benefits to businesses, the lack of know-how and funds to undertake research and development are major obstacles to innovation for SMEs. Recognising this, SPRING Singapore started the Technology Innovation Programme (TIP) to address the resource challenges that SMEs face in acquiring new technologies or commercialising their technology ideas.

Companies can receive a grant from SPRING to defray some of the costs of technology projects to develop and improve their products, processes and business models.

Environmental solutions provider Hydroemission is one of the 2,500 SMEs that have benefited from the TIP since it was launched in 2006. TIP funding helped the company to scale up the manufacturing process for its controlled release technology to be applied to water and waste treatment, ambient scented and aquaculture. Hydroemission now holds international patents on its core technology and plans to expand beyond B2B into B2C business by launching its own product lines.

**SPRING defrays the cost of seconding local and overseas experts to SMEs to help them build up their in-house technology capabilities. They are instrumental in helping SMEs to develop and commercialise new technologies.**

**Increasing Support for SMEs**

The government has set aside $320 million to help 3,500 SMEs to engage in technology innovation over the next five years. This is a $100 million boost to the $220 million previously committed for the programme.

“We are happy that the TIP has achieved good results and brought significant benefits to our SMEs. The new tranche will allow us to extend our efforts and accelerate technology innovation among SMEs to help them become more productive and competitive,” says SPRING’s deputy chief executive Tan Kai Hoe.

Part of the increased funding will be used to help SMEs to develop their own intellectual property and as seed money for technology startups, which often face difficulties in commercialising their novel concepts and developing them into new products and businesses. SPRING’s Technology Enterprise Commercialisation Scheme (TECS) addresses this by providing early-stage funding for proof-of-concept and proof-of-value technology projects. Some 120 TECS projects have been completed to date, with six out of 10 companies securing their first customers or third-party funding.

**Building Innovation Capacity**

For SMEs that are unsure of how to get started with technology innovation, the Innovation & Capability Voucher (ICV) scheme provides them with a $5,000 e-voucher that can be used for a range of services, including diagnostics, feasibility studies, process upgrading, and product or services development. The voucher can be redeemed at service providers participating in the scheme.

SPRING also defrays the cost of seconding local and overseas experts to SMEs to help them build up their in-house technology capabilities, which will belong to the SMEs after the secondment period.

In addition, SPRING has set up centres of innovation (COIs) in partnership with polytechnics and research institutes to bring technology closer to SMEs. The one-stop COIs provide laboratory facilities, technology consultancy and training courses for SMEs to develop their technology projects. There are currently six COIs catering to SMEs in the food, electronics, environment and water, supply chain management, marine and offshore, and precision engineering industries.

These efforts will ensure that companies build up a sustainable capacity for technology innovation.

**Upgrading Capabilities through Innovation**

Find out how Asia Marine Products and Zimplistic leveraged SPRING’s TIP to upgrade their capabilities through technology. For more information on how to start or expand your company’s technology innovation capacity, please visit www.spring.gov.sg/enterpriseindustry/tip.
Moving in the Right Direction

For a company originally focused on providing the marine industry with safety equipment and energy-efficient lighting solutions, developing an industrial fan blower may seem an unlikely undertaking.

Nonetheless, Mr Chung Cheong Woh (above left), Director of Asia Marine Products, and his partner, Mr Lin Weng Siang (above right), saw the need to improve the energy efficiency of such blowers and decided to pursue the opportunity. Used to ventilate confined spaces on ships under repair, fan blowers are switched on for long periods of time and consume large amounts of energy.

“We got this idea from one of our customers, who asked whether the energy efficiency of the blowers they were using in their shipyard could be improved,” explains Mr Lin. “With more than 100 fan blowers used round the clock in a shipyard, there was plenty of room to improve the efficiency.”

Jumpstarting innovation

With this in mind, Asia Marine applied for SPRING’s Innovation Voucher Scheme (IVS)*, which connects small and medium enterprises (SMEs) with knowledge institutions to develop their innovative ideas. SMEs can redeem the $5,000 vouchers for services ranging from process upgrading to the development of products and services.

The grant enabled Asia Marine to tap the expertise of the Marine & Offshore Technology Centre of Innovation (MOT COI) at Ngee Ann Polytechnic.

“The IVS was very helpful because it paid for the feasibility study. It gave us the confidence that our idea was feasible,” says Mr Lin.

After proving the feasibility of its idea with the IVS grant, Asia Marine applied to SPRING’s Technology Innovation Programme to develop it into a market-ready product. “SMEs face resource constraints and thus having funding at the right time can be critical to how an idea eventually pans out,” adds Mr Lin.

The collaboration with the MOT COI resulted in a more energy-efficient design that delivers about 40 per cent more air despite using a smaller motor. In addition, the main body of Asia Marine’s blower is made of fibreglass-reinforced plastic, which is lighter and more corrosion-resistant than conventional steel blowers.

“With this improved design, more air is supplied through the outlets. Therefore, fewer trunkings are required for ventilation, which helps save costs and increases productivity,” notes Mr Lin.

Besides helping Asia Marine improve the design of the fan blower, the centre also measured and validated the blower performance and helped the company to test the product on a smaller scale before scaling up for commercial production.

“We found the technical support and technology consultancy provided by the COI very beneficial. We were able to discuss the technical aspects of our idea with the staff, who are experienced in marine and offshore technology,” says Mr Lin.

Expansion plans

With the improved blower successfully commercialised, Asia Marine is now planning to set up a facility to produce it on a larger scale to cope with anticipated demand.

Mr Chung notes: “This will be very different from what Asia Marine has been focusing on. Previously, we were bringing in products developed by other companies and providing technical support to our customers. Now, we are going into innovation and product development. Technology innovation has helped us to move up the value chain.”

*On 1 June 2012, the Innovation Voucher Scheme was renamed the Innovation & Capability Voucher and expanded to cover three new areas: productivity, human resources and financial management. For more information, please visit www.spring.gov.sg/icv.

SMEs can adopt technology innovation to create innovative, value-added products that meet market needs. Find out how you can take the first step to upgrading your company’s capabilities with SPRING’s Innovation & Capability Voucher at www.spring.gov.sg/icv.

Asia Marine Products adopted technology innovation to bring a high-efficiency industrial fan blower to market.
For millions of people around the world, rotis are an important part of their daily diet. A type of unleavened flatbread, rotis are typically made with just flour and water. Yet, despite the simple ingredients, many people feel that making rotis is too time-consuming, says Ms Pranoti Israni (below), founder and chief technology officer at Zimplistic.

Enter the Rotimatic. With the touch of a button, this unique device can produce hot, fresh rotis right in your kitchen. “It’s really fast. It’s like a printer – it prints rotis. You just take and eat,” says Ms Israni, describing the machine that she has spent the past four years developing.

Persevering and paying the bills
While the Rotimatic can cook the perfect roti in only one minute, perfecting the appliance has been a long journey for Ms Israni – four years after starting on her first prototype, the tweaking continues. Now that Zimplistic has a manufacturing partner, mass production of the Rotimatic is expected to start soon. However, to reach this point the company had to overcome one of the biggest challenges facing innovators: finding money to turn a brilliant idea into reality.

“There is no revenue until you start selling the product, so we haven’t started making money yet,” says Ms Israni. To get her business idea off the ground, she had to be creative in finding sources of funding. Starting out in 2008 with about $20,000 in personal savings, she managed to build her first Rotimatic prototype within three months. From there, she pushed ahead and slowly built the Zimplistic team with additional funding, including prize money from winning the 2009 StartUp@Singapore competition, a Young Entrepreneurs Scheme for Startups (YES! Startups) grant from SPRING Singapore, and investment from an angel investor.

In 2010, when the company was making good progress in perfecting the Rotimatic, Zimplistic applied for a grant under SPRING’s Technology Innovation Programme (TIP).

Putting the funding to good use
After submitting a detailed proposal listing its expected expenses in further developing the Rotimatic, Zimplistic was awarded a TIP grant, which it put towards refining the prototype, paying salaries and purchasing equipment – major expenses for any company developing a new product.

Ms Israni explains that a single Rotimatic prototype costs about $10,000 because every part is individually machined. Every time the Zimplistic team tweaks the Rotimatic’s design, a computer-aided design (CAD) file has to be sent to a prototype maker who then makes the new part based on the revised blueprint.

Despite the obstacles and business risks in investing significant time and resources, Ms Israni is full of confidence when discussing the Rotimatic’s prospects. When asked what comes next once the Rotimatic hits the market, her eyes light up: “It’s important to keep innovating, staying ahead of the competition, and making sure the product evolves with changing customer needs.”

The Long Road to Market

The idea for a new invention can come in an instant, but developing it into a market-ready product is a long process that requires dedication and resources.

“It’s important to keep innovating, staying ahead of the competition, and making sure the product evolves with changing customer needs.”

Ms Pranoti Israni

Bringing a new product to market requires perseverance, time and resources, but companies that succeed stand to benefit greatly. Visit www.spring.gov.sg/enterprise/industry/tip to find out how you can tap SPRING’s Technology Innovation Programme (TIP) to further your technology innovation efforts.
Washing Smarter, Faster & Better

Funding support from SPRING Singapore enabled Zero Spot Laundry to develop a management information system and improve its processes.

At Zero Spot Laundry, technology plays an important role in helping it process large volumes of laundry.

The company, which has three service plants across Singapore, provides laundry and dry cleaning services to various hospitality and healthcare organisations. Incorporated in 1987, it now counts The Fullerton Hotel, InterContinental Hotel and Marina Bay Sands as major clients.

With more than 100 tonnes of linen to launder daily, Zero Spot saw the opportunity to boost its output and productivity. Besides investing in state-of-the-art laundry equipment, Zero Spot applied for SPRING’s Technology Innovation Programme (TIP) to develop a management information system.

“We wanted to develop an IT support system to better manage our operations and track productivity,” says Mr Alex Teo (below), general manager of Zero Spot Laundry.

Boosting productivity

The system provides an overview of the output and productivity levels of its staff on a single platform. For example, each employee updates the system after they have completed a task such as ironing or folding. This information is necessary for the staff in the sales department to generate billing invoices for its customers at the end of the month.

“Previously, we had to update all our delivery orders manually. Someone had to count the total linen that had been processed for the day. Now, the new system lists the total daily output according to hotel, machine and plant. As such, human error is reduced,” explains Mr Teo.

Overcoming manpower constraints

Besides boosting productivity, the TIP-supported management information system has also helped Zero Spot address the manpower challenges that it had to grapple with in recent years.

To attract and retain employees, the company implemented a performance-based incentive programme.

“The system allows us to track the performance of each employee. This, in turn, helps us in the reward and recognition of employees who have performed well. Hopefully, we can attract more people with the incentives,” says Mr Teo.

The success of Zero Spot’s productivity and technology adoption efforts is evident – for example, the company made the list of 50 most enterprising companies in Singapore at the annual Singapore Enterprise 50 Awards in 2011.

Building on the momentum

While the company’s success is encouraging, Mr Teo is not resting on his laurels. Zero Spot has now set its sights on overseas markets for further growth. It plans to expand into China, Indonesia and Malaysia in the near future.

“We are still discussing this with potential investors, but one of the things we are looking at is to provide professional know-how and technical training to help other laundry companies manage their operations,” says Mr Teo.

Looking ahead, Zero Spot aims to continue leveraging technology to enhance its internal capabilities. For instance, the company recently rolled out an automated conveyor system with RFID recognition for sorting staff uniforms. It has plans to assist some of its customers with adopting this technology, so as to reduce the time needed to process laundry.

“Technology has been a key enabler for growing the business and streamlining our processes. We adopted technology innovation because we wanted to differentiate Zero Spot from other laundry services in the market. Going forward, we will continue to look for new ways to improve our processes,” says Mr Teo.

Companies can leverage technology to reap cost savings, reduce reliance on manual labour and achieve greater efficiency in processes. Find out how SPRING’s Technology Innovation Programme can help you to improve business processes or develop new capabilities through the use of technology at www.spring.gov.sg/enterpriseindustry/tip.
When Drs Christopher Wong (right), Martin Hibberd, Ken Sung and Charlie Lee took on a research project just after SARS hit in 2003, they had no idea that it would lead to them forming a company to produce a groundbreaking pathogen-identification technology. Yet this is exactly where they are today, as the founders of PathGEN Dx, which was spun off from the Agency for Science, Technology and Research (A*StAR) last year.

Building on genomics-based research to identify the SARS virus in patients, the four researchers from the Genome Institute of Singapore (GIS) developed an innovative chip that could detect 35 different pathogens. “We had a very nice paper looking at applying this pathogen chip discovery to clinical samples. Typically, as an academic, once you publish the paper you’re kind of done. However, we realised that the project looked very promising: It was a very novel concept in the infectious disease field for making a diagnosis, and we saw the potential for it to be commercialised,” explains Dr Hibberd.

Exploiting the opportunity
To realise this potential, Dr Wong applied for a grant from Exploit Technologies, A*STAR’s technology transfer arm. He received a $5 million flagship grant, which was to be split over two different projects, with one being the pathogen chip research.

“We had a very nice paper looking at applying this pathogen chip discovery to clinical samples. Typically, as an academic, once you publish the paper you’re kind of done. However, we realised that the project looked very promising and we saw the potential for it to be commercialised.” Dr Martin Hibberd

With the funding in place, the team refined its technology and expanded the chip’s capabilities from identifying 35 viruses to covering every virus that infects humans. This made it a product that truly stood out in the market. The next challenge was how to take this product to market. After spending a year looking for partners to work with, the team decided to do it themselves and approached SPRING Singapore for assistance. They successfully applied for a $500,000 Proof of Value grant under the Technology Enterprise Commercialisation Scheme (TECS), a competitive grant scheme for technology startups.

Getting down to business
“SPRING’s funding is specifically to get our product ready for clinical use and FDA [the US Food and Drug Administration] approval,” explains Dr Hibberd. “SPRING was very rigorous with the application process, and this really helped us to think about how the company should be operated and pushed us to build up the business model.”

Work is progressing well as PathGEN Dx continues to move its product closer to wide-scale distribution. A key development is the recent signing of an agreement with Affymetrix, one of the world’s largest micro-array companies. The agreement gives PathGEN Dx critical hardware support for its product and allows it to tap Affymetrix’s worldwide marketing and distribution network.

Currently, the company sells its PathGEN chip to researchers and generates enough sales to remain cash flow positive, says Dr Wong. However, the target is the clinical market, where doctors will use the chip to identify viruses that patients are infected with. With clinical trials nearing completion in hospitals in the US, Europe and Asia, the company will be in a much stronger position once results validating the product are published by the end of the year.

Dr Wong is optimistic, while noting that securing further investment and FDA approval will be critical to the company’s success. He says, “We hope the results of the clinical trials will encourage potential customers to use the chips. With increased awareness, we will be able to expand the user base. We are expecting a good year ahead.”

Bringing innovative research to market allows companies to differentiate themselves from their competitors and gain a critical business advantage. Visit www.spring.gov.sg/tecs to find out how SPRING’s Technology Enterprise Commercialisation Scheme (TECS) can help you turn technology innovations into businesses.
Bringing Technology to Market

The Action Community for Entrepreneurship (ACE) set up the ACE Tech-Connect Task Force to help connect technology ideas with the market. SPRINGnews speaks with Mr Philip Lim (below), CEO of Exploit Technologies (ETPL) and Co-Chairman of the ACE Tech-Connect Task Force, to find out more about what is being done to nurture tech-driven startups and help researchers commercialise their technologies.

SPRINGnews: Why was the ACE Tech-Connect Task Force established?
Mr Lim: Singapore has invested significantly in R&D and patent filings are up, but the number of tech-related startups is not keeping pace. There’s a gap between the two that needs to be bridged. We’re not seeing the returns on our R&D investment. ACE formed the Task Force to synergise efforts to help commercialise intellectual property (IP).

SPRINGnews: What is the Task Force doing to address the challenges of commercialising technology?
Mr Lim: Our role is to seek feedback from stakeholders and make recommendations to improve the IP landscape for startups and enterprises. ACE Tech-Connect is now working with agencies and institutions to secure their participation in the discussion and gather their insights on the issues. We will work together with stakeholders to find solutions that are meaningful.

We have regular meetings to raise common issues faced by SMEs, technology transfer offices, venture capitalists and accelerators. Some areas discussed include how we can make the pool of IP generated by institutions of higher learning and research institutes more accessible to enterprises, how to make the development of IP more relevant to enterprises, and how to improve companies’ access to funding.

SPRINGnews: What are some of the results you hope to see come out of the Task Force’s efforts?
Mr Lim: We aim to nurture tech-focused SME clusters built upon Singapore’s growing pool of R&D capabilities and IP, leading to job and wealth creation in the longer term. To achieve this, it is important for businesses to leverage technology and IP to gain a competitive advantage and be scalable. Hence, the Task Force hopes to bring technology ideas and entrepreneurs together, and support IP licensing and the spin-off of technology companies from R&D institutions.

SPRINGnews: How will entrepreneurs benefit from the Task Force’s activities?
Mr Lim: Among the key recommendations raised by the Task Force is for the respective agencies to organise more networking sessions and forums for aspiring entrepreneurs, venture capitalists, angel investors and accelerators to meet and build a more holistic understanding of the technology start-up landscape. A recent example is the inaugural Investor Forum 2012, which ACE and ETPL organised on 1 June.

A group of technology startups from A*STAR research institutes and the private sector had the opportunity to pitch to more than 20 local and foreign investors. These startups included Endomaster, a collaboration between NUS and NTU researchers, which won the “Best Pitch” award for its robot-assisted technology for endoscopy surgery.

Such platforms are vital to allow startups to come together and learn from each other, enable interested parties to look at early-stage technology, and for scientists to receive validation on the industry relevance of their work. We will be organising more of such events in the future.

The Task Force will be organising events to allow startups to come together and learn from each other, enable interested parties to look at early-stage technology, and for scientists to receive validation on the industry relevance of their work.”
Technology Innovation Programme

Grow your business through technology innovation.
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Visit www.spring.gov.sg/tip for more information.
Besides being a major contributor of economic growth and job creation, the retail sector also plays a key role in shaping Singapore’s image as a leading travel destination and an attractive place to live and work.

Yet, despite registering some $37 billion in operating receipts in 2010, productivity growth in this sector is still inching along at a snail’s pace. The productivity, or value added (VA), per worker in the retail industry currently stands at $37,000, which is only 40 per cent of the VA for the economy as a whole. Recognising that productivity is the key differentiating factor for achieving success in a competitive sector, the government committed $86 million in 2011 to help retailers tap a range of tools and schemes to enhance productivity over the next five years.

Improving business processes with technology

As part of the retail productivity plan, SPRING Singapore aims to drive technology adoption in the sector to improve business processes and raise the VA per worker by about 25 per cent by 2015. Technologies such as enterprise resource planning systems, integrated point-of-sales systems and customer relationship management systems can help retailers streamline their operational processes.

For example, department store Robinsons developed an automated system that has improved the efficiency of its procurement process. The system, which allows its suppliers to process all orders and invoices on a single interface, has resulted in a reduction in processing and invoice matching times by 33 and 95 per cent, respectively. Meanwhile, supermarket chain NTUC FairPrice has implemented electronic shelf-labelling systems in some of its outlets. These systems have eliminated the need for staff to manually slot printed price labels onto the shelves, saving the store at least 50 man hours per month.

Developing highly skilled workers

Besides technology adoption, retailers can also raise productivity by enhancing the capabilities of their staff.

“The high-touch nature of retail requires human resources that cannot be easily replaced by technology. The natural solution is, therefore, to enhance staff productivity,” says Mr Tan Jek Min, Director at the Singapore Institute of Retail Studies (SIRS). For home-grown footwear and accessories retailer Charles & Keith, staff training is an important aspect of its operations. The company aims to train every employee on the role that they can play in improving work productivity.

“To enhance the retail process, the company will be introducing measurable KPIs and compulsory training to equip all frontline staff with the skills and knowledge to boost productivity,” shares Mr Tan.

Companies can take advantage of the wide range of productivity programmes offered by SIRS, including Retail Workforce Skills Qualification (WSQ) modules and the Productivity Manager Programme, to upgrade the capabilities of their staff.

Improving service standards

Providing a positive customer service experience is another key ingredient of success.

“In retail, the difference between a ‘transactional’ service and one with the ‘wow’ factor depends heavily on the service delivered,” notes Mr Tan.

Spearheaded by SPRING, the National Trades Union Congress, Workforce Development Agency, Singapore Tourism Board and the Institute of Service Excellence, the Customer-Centric Initiative (CCI) offers assistance for retailers to upgrade their service standards. Retailers can receive funding support of up to 70 per cent to develop service strategies, leverage technology innovation and conduct service audits under the CCI.

The Soo Kee Jewellery Group is one company that has seen an improvement in profits and productivity after embarking on the CCI. The company, which has implemented a customer relationship management system and organises frequent focus group sessions to gather customer feedback, saw its productivity rise by 20 per cent and its sales increase by 33 per cent.

Take action to boost productivity

Despite the potential benefits, Mr Tan believes that productivity may not be at the top of the agenda for many retailers due to a lack of resources and knowledge.

“Many retailers are slow to embrace productivity because of a misconception of what it entails. The lack of resources is also a challenge for them. Retailers need awareness, knowledge and know-how,” says Mr Tan.

To help businesses to “Be Aware, Get Trained and Take Action”, enterprises can make a first stop at the Productivity@Work portal. On this website, businesses can use the Integrated Management of Productivity Activities (IMPACT) assessment tool to identify gaps in productivity management. They can also get advice from advisors at five Enterprise Development Centres (EDCs) who can assist them in productivity-related matters and projects.

To find out more about productivity training programmes offered by SIRS, call 6222 7477 or email upskill@sirs.edu.sg.

For more information on IMPACT, log on to www.productivity.business.gov.sg or visit any of the Enterprise Development Centres (EDCs) today.
Pertama Merchandising Pte Ltd (Pertama) is the retail chain which carries electronics, computers, furniture and bedding products from the Australian brand, Harvey Norman. Out of 5,000 home deliveries a month, one in five are items which have been purchased from the retail outlets, sent back to the warehouse, and then despatched to the customers who bought them. Pertama believed the delivery process could be made more efficient. They also wanted to minimise the storage space for bulky items at the retail store, which sometimes posed inconvenience and were a potential safety hazard to customers.

With this in mind, the company sent three executives, who have been identified as “productivity champions”, on an eight-day Certified Productivity Practitioner (CPP) course conducted by the Singapore Productivity Association (SPA). The CPP course is designed to teach the participants to identify, analyse and develop practical solutions to address productivity issues. During the course, the executives identified the company’s Internal Transfer Network (ITN) operations as one of the processes where productivity could be improved on. They then consulted the SPA trainers, who suggested the PDCA (Plan, Do, Check, Action) technique to improve the efficiency of the current process. After analysing the data gathered from its retail outlets, the consultants came up with several suggestions to improve productivity. These include: increasing the number of trucks and manpower; preparing the ITN stock in advance at the retail store so that the drivers do not waste time waiting unnecessarily; stocking bulky goods at the warehouse instead of at the retail outlets; and enhancing the inventory management skills for store managers.

The company implemented the suggestions, with very positive results. The time spent collecting items from the retail stores was reduced by 33%, from 45 minutes to 30 minutes. By streamlining the process, they were also able to reduce the number of trips made per driver per day, from three trips to two, thus saving on manpower. Customers will also find fewer bulky items being stored at Harvey Norman outlets, which make the shopping experience safer and more pleasant.
All the tools your SME needs to measure up to Service Excellence. Now online!

With interactive scenarios and case studies accompanied by guided worksheets, tools and templates. Raise the bar of your service standards and turn complaints into compliments at

apps.enterpriseone.gov.sg/servicetoolkit
With more than two billion Internet users worldwide, businesses cannot afford to ignore the significant growth opportunities available online, says Mr. Harry Hee (above), Director of Pyxis Communications & Consultancy.

While Pyxis was doing well in its core business of providing advertising and marketing solutions, Mr. Hee realised that it could not depend solely on a single revenue stream for sustainable growth. Recognising the need to reach out to its potential customers worldwide, the company launched an Internet TV portal named iTV.sg in December 2011. The portal streams Chinese-language programmes ranging from lifestyle and gourmet features to current affairs, music and entertainment content. In addition, users can interact with presenters during live broadcasts through a chat box on the website.

“We started iTV because we wanted to expand our business offerings and reach out to web-savvy customers, who often get their news from online sources,” says Mr. Hee.

He adds: “The idea of an Internet TV portal is still quite new in Singapore. Instead of just starting another radio channel, we believe that people want to be able to put a face to the voice behind the microphone. iTV.sg provides the best of both worlds.”

**Access to professional advice**

To further drive its expansion plans, Mr. Hee tapped SPRING’s Business Advisors Programme (BAP). By matching companies with experienced professionals on short-term advisory projects lasting up to six months, the BAP enables small and medium enterprises to draw on the experience and expertise of advisors to improve their businesses.

Through the BAP, Pyxis was matched with Mr. Lim Yew Huat, a veteran disc jockey whose experience enabled Pyxis to raise iTV to another level.

**A rewarding experience**

Mr. Hee shared that the consultancy and industry experience provided by Mr. Lim enabled Pyxis to plan iTV more effectively.

“With Mr. Lim’s assistance, we were able to address our concerns more quickly, by tapping his experience and expertise in this area. He helped to provide direction for iTV. This was very useful as it gave us the assurance that we are on the correct path,” says Mr. Hee.

Launched only seven months ago, iTV has already attracted more than 70,000 unique visitors. Looking ahead, the company aims to improve the quality and variety of its programmes.

“We aim to develop more travel programmes in the near future. We also hope to bring our content to new markets in Asia,” says Mr. Hee.

■ Understanding your customers is critical before entering new markets, as needs evolve over time.
Visit http://bap.sim.edu.sg to find out how you can tap the expertise of a business advisor under SPRING’s Business Advisors Programme to help you grow your business.
**ANGEL INVESTORS TAX DEDUCTION SCHEME**

**WHAT IS IT?**
This is a tax incentive which aims to stimulate business angel investments into Singapore-based start-ups and encourage more angel investors to add value to these start-ups.

**WHAT LEVEL OF SUPPORT?**
An individual should apply for the scheme before committing a minimum of S$100,000 of qualifying investment in a qualifying start-up. An approved angel investor can enjoy a tax deduction equal to 50% of their investment amount at the end of a two-year investment holding period. The tax deduction will be subjected to a cap of S$250,000 for each Year of Assessment (YA), and will be offset against the total taxable income.

**HOW TO QUALIFY?**
Individual investors must fulfill the following:
- Make the investment at the individual level
- Demonstrate the ability to nurture investee companies by possessing at least one of the following characteristics:
  - Experienced angel investor with experience in early-stage investments
  - Experienced/serial entrepreneur with an entrepreneurial track record
  - Senior management professional/execute with corporate senior management experience

Invetees companies must fulfill the following:
- Be a Private Limited Company incorporated in Singapore for no more than 3 years from the date of first investment
- Have at least 50% of its total issued share capital beneficially held by no more than 20 individual shareholders
- Does not hold more than 25% of the issued share capital or 25% of the debt capital within a period of 2 years prior to the date of first investment
- Have business operations in Singapore and be a Singapore tax resident for the entire holding period of the investment

**HOW TO APPLY?**
For more information on AITD, visit www.spring.gov.sg/aitd

<table>
<thead>
<tr>
<th>Investment Amount</th>
<th>AITD Tax Deduction</th>
<th>Taxable Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>50% x Investment of $100,000 = $50,000</td>
<td>$600,000</td>
</tr>
</tbody>
</table>

**Example:**
Investment Amount $100,000
AITD Tax Deduction 50% x Investment of $100,000 = $50,000
Taxable Income $600,000
Taxable Income after AITD Tax Deduction at the end of two-year investment holding period $400,000 – $50,000 = $550,000

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**TECHNOLOGY ENTERPRISE COMMERCIALISATION SCHEME**

**WHAT IS IT?**
This scheme aims to catalyse the formation and growth of technology-based startups with strong Intellectual Property (IP) and scalable business models. By addressing early-stage funding gaps, TECS can help technology start-ups and entrepreneurs in Singapore grow past their embryonic phase, secure third-party funding and achieve growing revenues.

**HOW TO QUALIFY?**
Proposals in the following areas are welcome:
- Electronics, Photonics and Device Technologies
- Chemicals, Advanced Materials and Micro/ Nanotechnology
- Information and Communication Technology
- Biomedical Sciences (excluding Drug Discovery)
- Water Technology

The project or idea should:
- Clearly demonstrate the science/technological challenges and risks involved, and how science/technology will be developed and applied
- Lead to or build on proprietary know-how/ Intellectual Property
- Have the potential to disrupt and replace an existing market, or even create a new market/niche
- Be commercially viable

Proposals are evaluated based on both technical and commercial merits by a panel of reviewers.

Applicants should:
- Be registered for less than five years at time of award
- Be incorporated and located in Singapore
- Have at least 30% local shareholding
- Have group annual sales of not more than S$100 million or group employment size of not more than 200 employees
- Have at least one in-house research scientist or engineer

**HOW TO APPLY?**
For more information on TECS, visit www.spring.gov.sg/tecsportal.

For general and application enquiries, contact EnterpriseOne Tel: +65 6898 1800 Email: enterpriseone@spring.gov.sg Website: www.enterpriseone.gov.sg

For project-specific enquiries, email ida_startup@ida.gov.sg (ICT area) pub_ewit@pub.gov.sg (water technology area) tecs@spring.gov.sg (all other areas)

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**BIOMEDICAL SCIENCES ACCELERATOR**

**WHAT IS IT?**
The objective of the Biomedical Sciences Accelerator (BSA) is to accelerate the growth of Singapore-based biomedical sciences start-ups with an initial focus on the medical technology (MedTech) subsector. SPRING SEEDS Capital works closely with two pre-approved accelerator operators to co-invest in and nurture growth-oriented, innovative MedTech start-ups.

If the start-up is able to attract investment interest and commitment from any of the two BSA Operators, SPRING SEEDS Capital could match the intended investment dollar-for-dollar, up to a maximum of S$4 million. Both SPRING SEEDS Capital and the BSA Operator will take equity stakes in the company in proportion to their investments.

**HOW TO QUALIFY?**
Applicants should:
- Have at least 50% of its total issued share capital beneficially held by no more than 20 individual shareholders
- Does not hold more than 25% of the issued share capital or 25% of the debt capital within a period of 2 years prior to the date of first investment
- Have business operations in Singapore and be a Singapore tax resident for the entire holding period of the investment

**HOW TO APPLY?**
Contact any of the accelerator managers below to find out more.

Clearbridge BSA Pte Ltd
Mr Johnson Chen
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Email: johnson@clearbridgeaccelerator.com
Website: www.clearbridgeaccelerator.com

Singapore Medtech Accelerator Pte Ltd
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Standards Development Organisations

Singapore Manufacturers’ Federation
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Website: www.sma.sg

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Website: www.sma.sg

Singapore Chemical Industry Council
Standards Development Organisation
8 Jurong Town Hall Road
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