In Pursuit of Business Excellence

The Business Excellence framework helps organisations to assess and improve their performance for long-term success.

SUSTAINING BUSINESS EXCELLENCE
Find out from this year’s winners how the Business Excellence framework helps them stay at the forefront of market developments and build a sustainable, long-term competitive advantage.

UPGRADING TO MEET MARKET DEMANDS
With the help of the Capability Development Grant (CDG), Microwave Packaging invested in new equipment that speeds up its production of environmentally friendly paper lunchboxes.
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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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$30 Million Set Aside to Grow Medical and Clean Tech Start-ups

$30 million has been set aside for the formation and growth of start-ups in emerging sectors such as medical and clean technology. This is the second tranche of funding under the Research, Innovation and Enterprise 2015 (RIE 2015) plan, and the fund will be managed by SPRING SEEDS Capital (SSC) under the Sector Specific Accelerator (SSA) programme. The additional funding will help to give a boost to the medical and clean technology sectors by encouraging the formation of more innovative start-ups and commercialising intellectual property in these sectors.

Under the RIE 2015 plan, $40 million was first committed in 2011 under the SSA to encourage the formation and growth of start-ups in medical technology. Two accelerators, Clearbridge BSA and Singapore Medtech Accelerator, were appointed in May 2012 to identify and co-invest with SSC in high-potential medical technology start-ups. Besides co-investing, the accelerators take a hands-on approach to help the start-ups build up their management teams, meet regulatory requirements and connect with potential customers. To date, three investments have been made.

JCS-Echigo Expands into New Market Segments

Mr Teo Ser Luck, Minister of State for Trade and Industry, visited JCS-Echigo on 8 November and praised the company as an excellent example of a SME willing to experiment and take calculated risks to explore alternative revenue streams to grow its business.

Through SPRING Singapore’s Capability Development Grant (CDG), JCS-Echigo can now venture into a new market segment to target the food and beverage (F&B) sector. Previously focused in the design and manufacturing of precision cleaning systems for the hard disk drive industry, the company managed to tap their core competency in cleaning process know-how to develop proprietary equipment to clean and wash wares for the F&B sector. The new equipment will allow an F&B outlet to wash up to 3,000 items in an hour – a sixfold increase compared to a manual process.

With the promise of productivity gains through automation and innovation, JCS-Echigo hopes to capitalise on their new technology to cater to the entire spectrum of F&B operations, from restaurants and hotels to in-flight catering services.

Launch of A*STAR’s Technology Adoption Programme

A*STAR launched its Technology Adoption Programme (TAP) on 12 November 2013, with Guest-of-Honour Minister S. Iswaran, Minister in Prime Minister’s Office, and Second Minister for Home Affairs and Trade & Industry. TAP will provide SMEs with greater access to affordable technology solutions to pursue productivity growth. Under the programme, experienced technology intermediaries match local companies with technology implementers from both the public and private sectors to meet their needs.

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In today’s challenging business environment, many business leaders are mired in daily operational challenges, leaving little time to focus sufficient attention on long-term planning and understanding and addressing the shifts in industry, technology and consumer trends. Yet, it is the companies that systematically plan and invest in their people and resources, and build innovative and productive capabilities that ultimately emerge as the winners. These are the companies that will be able to sustain long-term business excellence.

To support companies on this journey, SPRING Singapore’s internationally benchmarked Business Excellence (BE) framework was introduced in 1994. It helps organisations strengthen their management practices and achieve sustainable improvements in productivity and performance. The framework covers seven key aspects of managing an organisation – leadership, planning, information, people, processes, customers and results – allowing organisations to analyse their current performance, set priorities, implement initiatives and evaluate results for each area.

“The BE framework is a proven enabler for organisations to drive their business strategy effectively through investing in people, technology and sound management processes to deliver higher customer value and business results. The continuous learning and innovation helps improve performance and hone competitiveness,” says Professor Cham Tao Soon, Chairman, Singapore Quality Award Governing Council.

In fact, companies that have implemented the BE framework were found to perform better than their industry counterparts according to a 2012 study of 220 BE-certified companies conducted by the National University of Singapore. It found that between 2008 and 2011, labour productivity at BE-certified organisations was on average 11.5% higher than that of their industry counterparts, and that their profit margin was on average 13.5% higher.

**Leading the way**

At the Business Excellence Awards Ceremony in October this year, Mr Teo Chee Hean, Deputy Prime Minister, Coordinating Minister for National Security and Minister for Home Affairs, highlighted the importance of visionary leaders who articulate desired outcomes, and set directions and strategies to achieve them. “They focus not just on immediate opportunities and challenges, but also on building capabilities for the future. Such leaders rally all their
stakeholders, whether shareholders or customers, employees or partners, to move together, in pursuit of excellence,” he said.

This holds true at both a company and industry level – leaders must set their companies on a course for excellence, but also need to ensure that their network of stakeholders in the wider industry are able to support the company on this journey.

Reaching out to stakeholders thus plays a key role in ensuring the sustainability of any BE initiative. By supporting improvement in partners and suppliers, and educating customers, an organisation can instil the values needed to create a robust ecosystem of excellence.

To support this approach, the Partnerships for Capability Transformation (PACT) programme was expanded this year to include additional manufacturing and non-manufacturing sectors. PACT encourages large organisations to upgrade the skills and capabilities of their SME suppliers and subcontractors. The programme supports collaboration projects in the areas of knowledge transfer, capability upgrading and co-innovation.

At this year’s Business Excellence Awards Ceremony, it was announced that 20 BE-certified organisations, including several past award winners, have formed a group called the PACT Circle. They have committed to projects that aim to benefit some 100 SMEs within the next year. This is an important step, as a recent World Management Survey found that while Singapore ranked 6th among 22 countries for its overall adoption of sound management practices, our SME sector fared less favourably. SMEs showed less developed practices among senior management in instilling a talent mindset, tracking and communication of key performance indicators, and setting goals that strike a balance between financial and non-financial objectives.

The BE journey

Over the years, many of Singapore’s leading companies and organisations have taken part in the BE initiative. This year’s Business Excellence Award winners are Systems on Silicon Manufacturing Company Pte Ltd, the Building and Construction Authority, Nanyang Girls’ High School, Tiong Seng Contractors Pte Ltd, Biosensors Interventional Technologies Pte Ltd, and Qian Hu Corporation Ltd. Read on to discover what they have done to achieve excellence.

To start your own BE journey, your organisation can consult experienced practitioners or assessors through SPRING’s Business Excellence Clinics. Briefings will be conducted to give interested organisations an introduction to BE standards and requirements. More information can be found at www.spring.gov.sg/be.

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Professor Cham Tao Soon, Chairman, Singapore Quality Award Governing Council
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In the highly cyclical and competitive semiconductor industry, continuous improvement is a business imperative. For Singapore-based Systems on Silicon Manufacturing Company (SSMC), it is the holistic and nonstop pursuit of operational, service, innovation and people excellence that has enabled the company to become the best-in-class foundry services provider in the world.

SSMC was awarded the Singapore Quality Award (SQA) in 2005 in recognition of its world-class business management capabilities. Eight years on, SSMC was awarded the SQA with Special Commendation this year, reflecting the company’s success in scaling even greater heights in its never-ending business excellence journey.

“In our business as a foundry, prices are always eroding because the industry is highly competitive. Therefore, the only way we can remain profitable is to innovate, automate and boost productivity,” says Mr Jagadish CV, Chief Executive Officer of SSMC.

Being innovative makes business sense
No matter how well a company is performing, there is always room to raise the bar. Whether it is the result of proactive efforts or a response to external factors, productivity can almost always be boosted with some out-of-the-box thinking.

To illustrate this point, Mr Jagadish provides the example of SSMC’s use of nitric oxide, a gas used in the wafer manufacturing process. In 2007, the company was facing difficulties in obtaining a sufficient supply of high-purity nitric oxide to keep pace with...
its increased wafer production. This was a problem. Without access to more nitric oxide – which at the time accounted for about 8–10% of the cost for each specialised wafer produced – the company would be unable to increase production.

Faced with this challenge, Mr Jagadish assembled a team to look at the problem from three different angles. First, is it possible to consume less gas per wafer? Second, is it possible to use gas with a lower level of purity – for instance, 99.99% purity rather than 99.999% purity? Third, can alternate sources be found?

“The team was so innovative that within about six months, we managed to do all three things. As a result, the cost of nitric oxide per specialised wafer was reduced by 80% and today, the gas accounts for less than 1% of our production cost per wafer. For me, that’s innovation and productivity!” says Mr Jagadish.

A culture of excellence
One key to SSMC’s success is that it has managed to get the entire company involved. Rather than the senior management team being solely responsible for the pursuit of business excellence, all employees are encouraged to suggest innovative ideas and potential productivity improvements. These suggestions are channelled through the company’s Transform Portal, an online platform for capturing and sharing bright ideas.

“For example, employees can use the Transform Portal to submit a ‘10k Idea’, which is an idea for how the company can achieve cost savings of $10,000. This is a concept that we have learnt from PUB, a winner of the Innovation Excellence Award. In return for successful ideas, employees are recognised and rewarded by the company. The Transform Portal thus helps to create a culture of productivity, innovation, continuous improvement, sharing and learning, all as part of our business excellence journey,” explains Mr Jagadish.

All of the hundreds of suggestions submitted annually via the Transform Portal are reviewed and assessed to determine whether it is practical to implement them. The best of the best are then showcased at the company’s annual Transform & National Innovation and Quality Circle (NIQC) Convention.

With the entire workforce on the lookout for ways to improve and a company-wide commitment to business excellence, it is no surprise that SSMC continues to grow from strength to strength.
From Regulator to Leader

Innovation and talent development help the Building and Construction Authority to play a greater role in improving Singapore’s built environment.

Wherever you go in Singapore, whether you are driving down the KPE tunnel or sitting at home in your living room, you can be sure that the Building and Construction Authority (BCA) has had a hand in the development of your surroundings. This is because the BCA is responsible for regulating Singapore’s built environment – the physical infrastructure that you see around you every day.

BCA, however, has in recent years moved beyond its basic role of regulating building safety to also become a champion of key issues and new approaches in the built environment sector. These include areas such as sustainability, quality, accessibility and productivity, all of which are key ingredients of a future-ready built environment. It has made good progress to date.

Through the Green Mark Scheme, for example, BCA is driving the greening of Singapore’s built environment. Currently, 21.4% of all buildings in Singapore meet the minimum Green Mark standards and the goal is to increase this to 80% by 2030. BCA’s relentless pursuit of environmental sustainability and the effectiveness of its successive Green Building masterplans have attracted a lot of international attention and led to BCA being recognised as a global leader in green building in the tropics.

Productivity is another key area in which the BCA provides guidance and support to industry players – a large proportion of which are SMEs. Through various incentive schemes, it has set aside $250 million to encourage and facilitate companies’ efforts to adopt productivity-enhancing construction methods and technologies and reduce their reliance on low-cost foreign labour.

“We are not just regulating the industry, but also leading the changes within it and setting its future direction,” shares Dr John Keung, BCA’s Chief Executive. “As our role has evolved, we have had to change the mindset within the organisation to become more innovative, proactive and forward-thinking. This is a necessary change in our mindset to ensure that our built environment is future-ready.”

Nurturing innovation
BCA’s innovation journey started about four to five years ago with the introduction of a variety of initiatives. These include the Chairman’s Innovation Challenge Award, which recognises staff achievements in innovation and the setting up of SPARKS and SPICE teams.

The SPARKS and SPICE programmes are efforts to draw on the ideas and capabilities of the entire organisation, says Dr Keung. “We designate a promising officer as a leader to oversee a team and tackle certain challenges, and then open it to all in BCA to volunteer their participation. It is encouraging to see so many staff volunteering to work on the projects. It shows that there is a great deal of passion and talent within the organisation.”

BCA’s senior management also regularly host informal tea sessions with smaller groups of staff from across the organisation. These provide an opportunity for senior managers to get an on-the-ground perspective of what staff do, the challenges they face, and the ideas they may have for improvements.

A focus on people
Indeed, BCA’s staff are its single most important resource, not just for ideas, but also for carrying out day-to-day operations.

“The Business Excellence framework’s focus on continuous improvement helps to drive our innovation efforts, as everyone in the organisation understands that we need to be constantly looking for ways to do things better and to make our built environment future-ready.”

Dr John Keung, Chief Executive of BCA
Recognising this, BCA has implemented a number of staff development programmes to ensure its people are in a position to lead the industry’s transformation.

A core competency framework has been developed to grade the technical competence of staff at one of four levels: foundation, intermediate, advanced or expert. The aim is to have a progression framework for the professional and technical development of staff, offering support for training and development along the way. This dovetails with BCA’s Associate Professional and Talent Management programmes, which aim to help managerial, professional, technical and non-technical officers advance their careers through stretch assignments and local and overseas training. Staff are also regularly seconded to construction projects around the region and the world, to gain insights into the latest building and construction processes and technologies.

“All of these efforts help to keep our people and the BCA as a whole at the forefront of the industry. If we are not the experts, how can we possibly regulate the industry, let alone lead its development?” says Dr Keung.

Dr Keung sees the Business Excellence framework and the winning of the Singapore Quality Award this year as an important part of the BCA’s transformation from a regulator to a leader.

“There is nothing better than having a systematic way of achieving excellence. The framework is a valuable tool for the management team and helps to motivate and focus staff on the specific areas that need to be improved,” says Dr Keung. “Its focus on continuous improvement also helps to drive our innovation efforts, as everyone in the organisation understands that we need to be constantly looking for ways to do things better.”
Top of the Class

Nanyang Girls’ High School uses benchmarking and a structured approach to improvement to ensure it remains a premier institution.

Over the past 96 years, Nanyang Girls’ High School (NYGH) has demonstrated a firm commitment to offering the best education environment and opportunities to young women. Its focus on developing a culture of innovation and improvement has seen NYGH emerge as a premier girls’ school, recognised for grooming capable young leaders who believe in community before self.

Achieving this success has not come by chance. Indeed, NYGH has a clearly defined approach to innovation and improvement to ensure that it is always looking for new and better ways to run the school and educate its students. This approach is closely aligned to the principles of the Business Excellence framework and helped NYGH to win the Singapore Quality Award (SQA) this year.

“Business excellence is a journey that involves assessing our systems, processes and performance to achieve continuous improvements,” says Mrs Wong Sioe Hong, Chairlady of the Board of Directors at NYGH. “Inherent in this journey is the spirit of innovation, contribution and excellence.”

Casting a wide net

Comparative studies and benchmarking exercises are an integral part of NYGH’s continual improvement process, notes Mdm Heng Boey Hong, NYGH’s Principal. She stresses that such exercises are not limited only to other educational institutions, but include organisations from other industries that are the best in their respective fields. This benchmarking approach shapes many of the developments in the school’s offerings.

One example is the enhancement NYGH has made to its bicultural programme through the introduction of a Chinese Philosophy component. This change was made based on the benchmarking and subsequent adoption of best practices at other institutions.

To add further structure to the process, NYGH uses a rigorous Strategic Thinking Model that involves “far-outside-in scanning” and forward planning to bring about strategic innovations.

“Our Prototype 21st Century Class (P21C2), which has gained much attention from educators from all around the world, is an example of how our Strategic Thinking Model led us to harness 1-1 computing. This has transformed our learning environment to facilitate students’ learning in the 21st century, where one has to critically examine the information gathered and be a knowledge co-constructor,” explains Mdm Heng.

Sustaining excellence

Winning the SQA this year is testament to the efforts of NYGH’s staff over the years, says Mdm Heng. “The SQA boosts our staff confidence that they have been on the right track. They are convinced that adopting a robust Business Excellence framework is the way to go to ensure sustainable improvement.”
“The spirit of innovation and benchmarking is inherent in NYGH’s work ethos. Benchmarking, comparative studies, continuous learning and active sharing are all part and parcel of our staff work processes and professional expectations,” she adds.

To ensure staff development keeps up with the needs of an ever-changing world, the school has implemented a Professional Excellence at NYGH (PX@NY) framework to focus on staff learning. Under the framework, a systematic development process is tailored for various staff groups.

“We also encourage and empower staff to launch new initiatives that will help the organisation, even if they may be initially perceived as radical and complex,” says Mdm Heng. “For example, our senior teachers are empowered to study the feasibility of having a personalised curriculum that will further enhance our students’ individual learning.”

Innovations such as these, together with the frameworks and processes to support them, will play a key role in keeping NYGH at the forefront of education for many years to come. “This is exceptionally important to a school, whose core business is to educate the next generation and keep them relevant on a global platform,” says Mrs Wong.
Building a Competitive Advantage

A focus on partnerships and people has helped Tiong Seng Contractors to stand out in a crowded market.

Singapore’s construction industry is not for the faint-hearted. “With fierce competition and the lowest price often determining the winners, 10 years ago, we were going head to head on pricing to win jobs,” explains Mr Pek Lian Guan, CEO of construction company Tiong Seng Contractors. “This situation led us to look for a way to differentiate ourselves and avoid this unhealthy form of competition.”

Tiong Seng participated in the Business Excellence Initiative and adopted it as a strategy to ensure that best business practices and new business models could flourish within the company to achieve a higher level of performance. “For us, business excellence means finding ways to differentiate ourselves. It’s about quality and innovation, rather than competing on the lowest cost,” says Mr Pek. “The Business Excellence framework has helped us to focus, set goals, and look at areas that we may have overlooked in the past.”

Tiong Seng has been on the business excellence journey for the past 10 years. It first received Singapore Quality Class certification in 2002. This year, the company decided to move forward in its business excellence journey and applied for the Singapore Quality Award (SQA), which it duly won.

Learning from the best
To discover the best practices and new technologies being used in the industry, Tiong Seng formed partnerships with several reputable international construction companies and advanced construction technology providers. These collaborations included teaming up with Kajima Oversea Asia from Japan, Samsung C & T Corporation from Korea, and various partners from Europe and the United States.

To maintain its core competency in the field of building construction and civil engineering,
the two key developments from Tiong Seng’s partnerships was its adoption of precast automation and advanced formwork technologies, which it learnt from European partners; Germany’s Vollert-Weckermann and PERI. The precast automation technology allows the production of prefabricated building components in a controlled environment, which are subsequently transported to the construction site for assembly. Tiong Seng’s investment in the latest formwork technology also contributed to better finishing quality, higher productivity, environmental friendliness and greater stability. These techniques improve quality and consistency, while streamlining the construction process so that less time and manpower is required. Labour efficiency has since improved by around 20% to 30% – an important development given rising labour costs and tightening labour supply, notes Mr Pek.

“The adoption of precast techniques changed our business operation methods,” explains Mr Pek. “With a different cost structure from our competitors, and a more efficient and higher quality offering, we are no longer competing solely on price, but also on the ‘ingredients’ of our offering.”

Intensifying its focus on partnerships and collaborations, Tiong Seng also recently joined the PACT (Partnerships for Capability Transformation) Circle, a group of companies that have taken the lead to initiate and implement collaborations with their SME partners through capability development, knowledge transfer and co-innovations.

**Enabling excellence**

While new construction techniques may reduce the reliance on labour for some projects, having the right people with the right skills and experience remains critical to the company’s success, says Mr Pek. “Developing our people is critical to our sustained excellence. One of our key initiatives in this respect is our ‘Charge Hand Grooming’ programme, where we proactively identify individuals with potential and groom them to become future leaders.

Tiong Seng also works closely with its subcontractors to ensure that they have the right skills and capabilities to support its projects. For example, the company brought over engineers from PERI Germany to train two of its subcontractors on the use of off-form finishes, a technique that Tiong Seng expects to use more in the future.

These examples are all part of Tiong Seng’s ongoing efforts to create a sustainable competitive advantage, and much of it is driven by the Business Excellence framework, says Mr Pek. “The framework keeps us focused on continuous improvement, which leads to excellence, improved business efficiency and winning more business.”

“The recognition that comes with winning the SQA is certainly welcome, but it is the changes that allowed us to win the award that will have the biggest impact, as they have transformed the business to become more cost-efficient and competitive,” he adds.
In the highly competitive medical technology (medtech) industry, resting on one’s laurels is ill-advised as success is often short-lived. Whenever a company introduces a breakthrough product, it is only a matter of time before its competitors catch up or leap ahead.

“In this industry, if we don’t continually innovate, we will quickly become irrelevant. We need to be constantly pushing boundaries,” explains Mr Alex Budiman, Vice President of New Product Development at Biosensors, a Singapore-based company that develops innovative medical devices for interventional cardiology and critical care procedures.

Fortunately, innovation is an area in which Biosensors excels. The company was awarded the Innovation Excellence Award this year for its ongoing commitment to breaking new ground. Its pioneering medtech products have helped the company grow from a local SME to a global player with a market reach spanning countries in Europe and Asia Pacific. Today, Biosensors is the fourth-largest player in the drug eluting stent market, competing with world-class companies such as Abbott Laboratories, Boston Scientific and Medtronic.

**Built to innovate**
Mr Yoh Chie Lu, Biosensors’ founder, recognised that innovation would be the most important ingredient determining the success of his company and thus made it a cornerstone of the company from the start.

“Biosensors can only be excellent in business by being excellent in innovation.”

Mr Alex Budiman, Vice President of New Product Development at Biosensors
Such insights influenced the restructuring of the company’s R&D efforts in 2011 into three specialised areas: Advanced Research, New Technologies and New Product Development. This specialisation supports Biosensors’ innovation efforts by allowing it to focus on different aspects of R&D from concept creation to product commercialisation. Since implementing the changes, the company has more than tripled its headcount and number of projects, reduced product development and approval lead times, and increased its speed to market.

“2013 has been our most productive year in terms of product development. The average lead time for product development without a clinical study is at least 1.5 years; with a clinical study, this is at least double. Yet this year we have managed to obtain regulatory approvals for four new products, with the fifth one right around the corner,” notes Mr Budiman.

**Fresh talent, new ideas**

As part of its commitment to innovation and to ensure a steady flow of fresh ideas, Biosensors hires most of its new engineers straight out of university. Of the roughly 500 staff based in Singapore, 68% have been with the company for less than three years and most of them are in their first job. Mr Budiman adds, “We believe our staff are attracted to join Biosensors because of this industry’s growth potential and the ability to affect people’s lives. We mould our staff to fit into the structure and norms of our company, but without limiting their potential and creativity.”

While the policy of hiring only fresh graduates to join the R&D team may be an unusual strategy in this industry, it fits right in with Biosensors’ commitment to blazing its own trail. And given the company’s success to date, it certainly seems to be a winning strategy.
Fishing for Winning Ideas

A company-wide approach to innovation has made Qian Hu an industry leader.

If you never try, you will never fail – but you will also never make groundbreaking progress. Fortunately, innovation is a central component of the corporate culture at Qian Hu, a Singapore-based company specialising in ornamental fish farming, fish import/export and manufacturing of aquarium accessories. By encouraging everyone throughout the company to propose ideas for improving the business, Qian Hu is regularly boosting productivity through better processes and introducing new products to the market.

This willingness to try new things and transform failures into learning opportunities lies at the heart of Qian Hu’s business excellence journey and is a key driver of the company’s success. In recognition for its ongoing commitment to innovation, Qian Hu was awarded the Innovation Excellence Award this year.

According to Mr Kenny Yap, Executive Chairman and Managing Director of Qian Hu, there is no doubt that embracing innovation and the pursuit of business excellence has strengthened the company. “Adopting the Business Excellence framework has helped us to be more resilient and ensured alignment in achieving our business objectives. We have gone through several economic cycles in recent years, and each time we have come out stronger and more prepared for the future. This has given us confidence to advance further into the global market.”

Innovative by design
Qian Hu did not develop a culture of innovation by accident. Instead, it was created over time through the deployment of a strategy aimed at transforming Qian Hu from a traditional fish farm into a technology and knowledge-driven business by enhancing the company’s capabilities, boosting productivity and encouraging a problem-solving mindset.

To support this, staff from throughout the organisation – from executives and supervisors to junior staff – collaborate on work improvement teams and project teams. There is also a formal staff suggestion scheme to gather suggestions to improve work processes and a system for rewarding productivity improvements.

Reaping the benefits
“We strongly believe that the Business Excellence framework will make any organisation more resilient and help it to survive, compete and grow in the changing business environment,” says Mr Yap. He believes that adopting a structured approach to innovation and business excellence has helped Qian Hu achieve rapid and tangible results.

For example, Qian Hu introduced the ‘Creating Value from Mistakes’ programme in 2009 to encourage tolerance for mistakes and, more importantly, learn from them. This helped to free staff from a risk-averse mentality, which can hamper innovation. At the same time, it also established a research and development division to create new products and services through advancements in genetic fish breeding and fish-related technologies.

Getting everyone in the company involved and working towards the same goals is crucial.

We strongly believe that the Business Excellence framework will make any organisation more resilient and help it to survive, compete and grow in the changing business environment.
packing – a change that has boosted the accuracy of inventory procedures and enabled the company to achieve zero errors in the processing of export orders.

In addition, Qian Hu’s forward-looking R&D efforts have led to the development of innovative new products. These include the contemporary LUMI’Q fish tanks, which feature variable LED lighting and an iPhone docking station, and the advanced Hydra filtration system, which uses patented technology developed by Qian Hu to ensure optimum water quality.

Since adopting a culture of innovation, Mr Yap has seen confidence rising amongst staff, customers, suppliers and corporate partners. He notes, “Our staff have increased their knowledge, enabling them to take on higher value jobs. Our suppliers and partners share our enthusiasm as they have moved up the value chain with us. Finally, our customers benefit from higher quality products and services. Everyone wins.”
GREENING THE FOOD PACKAGING INDUSTRY

Investing in new equipment has sped up Microwave Packaging’s production of environmentally friendly paper lunchboxes.

It’s no secret that Singaporeans love their food, and many buy meals from their favourite hawker stall or restaurant as takeaways to enjoy on the go, or in the comfort of their own home. Indeed, there are some 600 million pieces of disposable food packaging used every year in Singapore, largely made of foam or plastic.

For Mr Leonard Lau, Managing Director of Microwave Packaging, this represents a huge opportunity to make the F&B industry more environmentally friendly and make Singapore a greener place. His company produces food packaging made of paper sourced from renewable reforestation plantations. It can be washed and reused, or easily recycled, he notes.

“Our paper-based packaging is not only better for the environment, it also keeps food warm longer as paper, like wood, is a natural insulation fibre. It can also be reheated in a microwave without any worry about chemicals, as no glue is used in its construction,” explains Mr Lau.

Microwave Packaging’s food boxes and bowls are constructed using a unique ultra-sonic welding technique that ensures they are both strong and watertight. Producing them requires specialised machinery that Mr Lau developed himself in partnership with an overseas engineering consultant.

The company is also flexible in its production volumes, accepting orders as small as 5,000 pieces, even with customised branding on the packages. This gives it an advantage over paper container producers from overseas, who usually start at a 30,000-piece minimum.

These qualities and capabilities have given Microwave Packaging a clear advantage and allowed it to develop a strong niche in the market, says Mr Lau. “We have grown every year since we started in 2004 and we continue to see more demand as customers see the quality of our products and the value of going green.”

Keeping up with demand
Last year, this growing demand forced Mr Lau to look at ways to increase production. Three limitations he faced were a space limitation at his production facility, the slow speed of the production machines, and the fact that they could not produce a wide range of box formats. To address these issues, he started work on the design for the next generation of production machines. However, the costs of developing and building the machines proved to be quite high.

Mr Lau then approached SPRING Singapore for assistance and was given a grant for the building of the machines under the Capability Development Grant (CDG). “With SPRING’s support we were able to explore a new opportunity and take the important step of building these new machines,” notes Mr Lau.

In August this year, Microwave Packaging started using the first of the new production machines and has seen a significant improvement in productivity as a result. The new machines are more than 10% faster than the previous ones and are also fully automated, meaning that the existing staff can operate them alongside the older machines.

“The new machines have allowed us to increase production capacity without increasing headcount. This has lowered our unit costs and helped us to compete on price with plastic containers,” says Mr Lau.

The new machines are 30% smaller than their predecessors, so no additional production space was required. They are also able to produce multiple box formats – an important feature as the company expands its variety of products.

All these improvements have made Microwave Packaging’s operations much more efficient. On top of the productivity gains, the new machines have opened doors to a new revenue stream for the company: licensing the new machinery developed.

“We are currently developing a computerised system, with further support from SPRING, that will allow us to implement this licensed manufacturing model. It is a natural next step as we move up the value chain from production to providing the production technology to others,” he says.

“By giving others access to our production technology, we hope to see greater adoption of environmentally friendly paper packaging in the F&B industry in Singapore. It can be much greener than it is today, and we hope we can play a role in facilitating this change,” he adds.

KEY TAKEAWAYS

• Investing in new equipment can lead to significant productivity gains, helping to reduce manpower requirements and increase price competitiveness.
• To find out how SPRING Singapore can support your productivity improvement initiatives, please visit www.spring.gov.sg/CDG.
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