

nano-imprint technology to create a consumable (a disposable single-use product, similar to blood testing kits) for the biomedical sector. Wangi plans to launch it worldwide in July.

When asked why Wangi decided to embark on this string of innovations, Mr Chew says: “With the industry facing the challenge of recruiting bright individuals while being hit hard by the global economic slowdown, being innovative and transiting to proprietary higher-value manufacturing is the only way we can avoid being displaced.”

Road to discovery

Wangi is a good example of a business that has strived to come up with solutions that are patented and can be marketed on a large scale. But the journey was not easy, shares Mr Chew.

Several years ago, a customer asked the company to produce a complex form of high-end optics that was not available in the market. The company found a machine that was being used for a different purpose and modified it to solve the customer’s problem.

To their dismay, the customer got Wangi Industrial’s competitor to buy the same machine and make the same modifications but at a lower price. “That was our first encounter with dealing with intellectual property (IP) issues,” Mr Chew says. “Having a patent on the process would have helped us avoid that scenario.”

He explains that customers are often cost-sensitive and will always be on the lookout for cheaper alternatives.

If a company focuses only on producing goods for sale, it will eventually land up in a vicious cycle of having to push down prices in order to retain these customers.

“That really forced us to think about how we can differentiate ourselves and gain that competitive advantage,” he adds. “To do that, we needed value-added activities, such as research and development (R&D) and IP protection.”

The interesting thing about Wangi’s business structure is that it does not have a dedicated in-house R&D team.

Instead, its pool of manufacturing engineers are encouraged to come up with new solutions through systematic trials and errors. The same engineering team is also empowered to take ownership of their own innovations and IP submissions.

Beyond that, the company also taps on research institutions to help with R&D and IP research.

“We train our engineers using problem-solving methods, such as the plan-do-check-act cycle, which is a model for continuous improvement, design of experiment and data analysis. In addition, they are trained

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Mr Chew Ker Yee
Vice-President of Business Operations, Wangi Industrial



to collaborate effectively, learn from mistakes and give feedback,” Mr Chew explains.

Success in innovation

While SPRING Singapore’s Capability Development Grant has helped Wangi buffer some costs for the first two innovations, the company attributes much of its success in innovation to the network of partnerships and collaborations that it has built. Establishing connections with partners and research institutes have helped Wangi gain access to resources and

widen the scope of its research.

For example, the company was able to glean expertise from a seconded A*STAR researcher with SPRING’s help for its third innovation.

It also allowed the company to spread its risks, reduce the cost of innovation and shortened the time for its innovations to enter the market. This is in line with the Committee on the Future Economy’s report, which proposes strengthening Singapore’s IP ecosystem to better support innovation and technology.

Strategy for growth

For Wangi, obtaining patents is crucial for its business, as it means owning a solution that nobody else has. Having an IP also means that the company has the right to use and sell the product without any obstruction from competitors. Consumers buy more confidently as they know that the product is unique.

Within the company, there has been a boost in staff morale and pride as they see their hard work coming into fruition, he says. “Our product development strategy is to create products and protect it with patents and, eventually, establish a dominant market share,” Mr Chew adds.

Additionally, it has brought about performance improvement within the company and cost-savings. “Traditionally, manufacturers have a profit margin of about 3% to 5%. However, if a company has its own unique solutions, profit margins can go up to about 20%.”

Mr Chew realises that some of the company’s innovations are high-risk and require a large investment. Therefore, he points out that companies should have a “portfolio of innovations” to balance things out.

“Businesses should maintain their bread and butter as a dependable source of income, so that they can be in a better position to venture into both low- and high-risk innovation activities, ultimately to find new and sustainable sources of revenue,” he advises. ■

keytakeaways

- Having a good IP strategy can help to safeguard your business and maintain a competitive edge over your competitors.
- Visit www.spring.gov.sg/CDG to find out how SPRING can help your business’ IP efforts.