

Making continuous R&D a business habit

The push towards a Smart Nation should include the cultivation of smart businesses

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Singapore is striving to be the world's first "Smart Nation" and has attracted overseas companies to introduce or test-bed their latest innovations in the island state. Since then, several new initiatives including self-driving vehicles, satellite-linked devices for dynamic road tolls and public car park charging and pneumatic waste conveyance system for HDB flats were announced.

However, to help Singapore achieve its vision of becoming a Smart Nation, encouraging Singaporeans to be effective users of innovations is not sufficient.

To begin with, a Smart Nation should include "smart businesses". We are not talking literacy or paper qualifications. Instead, we should encourage the wider business population to partake in the development of innovations. This can be done by cultivating an open minded culture of self-review to develop solutions to fill gaps in the market.

How can we do better or be different?

While the education system seeks to encourage a shift in mindset in our younger generation, what about the government agencies, local companies and the current workforce? How can we encourage them to embrace innovation? How can the government agencies participate? How can we encourage businesses to start the process?

KPMG's recent pre-Budget 2017 poll of 123 business leaders indicated that despite the gloomy economic outlook, businesses are still preparing for the long term by looking at new markets or creating new products or services as their top two strategies. This shows that businesses desire to innovate.



However, innovation development is not always clear. It carries risks, but yet, ultimately is crucial in building a sustainable competitive advantage for Singapore's continued growth.

In the past, research and development (R&D) was the basis for generating breakthrough innovations and valuable intellectual property. However, today's R&D environment is completely different - businesses need to undertake "continuous R&D" because product life cycles are so short, while intellectual property becomes less important as businesses find a need for "open innovation".

Hence, the R&D of today is not about finding the next breakthrough product but rather, how businesses can **create the greatest value by "innovating continuously"**.



Cultivating continuous innovation

One can find on the internet many recipes for the different ways to cook Laksa, a local dish. The ability to cook Laksa used to be a differentiation factor. However, in this day and age, the ability is no longer a differentiating factor.

To find a distinctive market niche, you can either choose to invent another unique dish, or find new ways to improve your current dish. The latter should also be equally encouraged, as it could involve innovations such as low fat variations, packaging for long life or even a central kitchen concept to enable franchising.

Cars were not invented by the Japanese, televisions were not invented by the Koreans and smartphones were not invented by the Chinese.

Innovation is not about being the first to introduce the next revolutionary product. It also involves the constant drive to improve an existing product with differentiation factors, which propel our businesses to make a name for themselves on the international stage.

If local companies are tasked to develop the next breakthrough in science or technology, it would be an insurmountable challenge and can back fire. Most of them would not even attempt the task. However, asking them to improve on their existing systems or products could be an easier option.

A new Innovation tax credit

We can start by encouraging companies to “try out” broad-based policy tools such as the Research and Development (R&D) tax incentive that would incentivise them to undertake development of innovative solutions.

With the expiry of the Productivity and Innovation Credit (PIC) scheme, current R&D incentives should be revamped by introducing a new Innovation Tax Credit. This could take the form of a 45 per cent tax credit, with the option to convert to cash benefits.

Proposed Innovation tax credit scheme:

	Proposed Benefits	Current Scheme (Post-PIC)
SMEs	45% (Option to convert to cash benefits)	25.5%
Non-SMEs	30%	25.5%

For example, if an SME spends \$100,000 on R&D, it will receive \$45,000 in tax benefits. If it does not have any taxable income, it would receive \$45,000 in cash benefits to offset future R&D spending or R&D headcount.



Innovation is a continuous journey

It would be easier to promote a shift in mindset if companies **are not judged on whether their projects involve successful breakthroughs.**

Ultimately, the goal of the government incentive schemes should be to support innovation, and the government should recognise that innovation is a journey rather than a destination. If a company can demonstrate concrete innovation initiatives with its products or processes, it should be encouraged rather than assessed based only on outcomes.

Providing a partial safety net even if they fail would definitely encourage companies to take the first step. With a combination of targeted and broad-based policy tools, a company is more willing to take the plunge if they are given the freedom to decide the areas of innovations in their business.

Some have criticised the government's earlier development policies of "picking winners", or focusing support on selected industry clusters. Our proposed Innovation Tax Credit scheme will prevent this, and is beneficial to companies as they recognise their market position, offerings, strengths and weaknesses.

From our experience talking to business owners, one disadvantage of the current schemes and grants is the application process requires a lot of time and effort. If grant approval has to be obtained before they can start developing innovations for their existing products, Singapore companies will definitely lag behind their global counterparts.

A need to relook at incentive schemes

The life cycle of products can no longer be measured as they are continuously evolving with new features and functions.

The assessment criteria for the incentive schemes should, therefore, consider the big picture of innovation development and its commercial and practical benefits. For the commercial industry, the focus on patents, publications and headline news can be secondary.

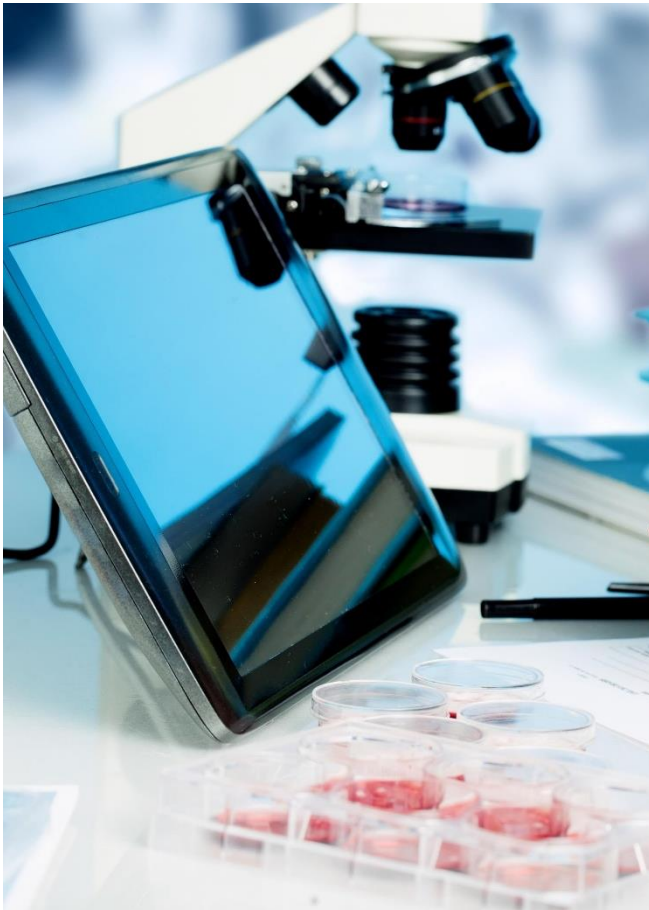
For example, a vaccine developed for malaria in Singapore that showed promising results in animal studies would receive news coverage and be featured in academic journals. Although the vaccine is not ready for public use, the research work would have been celebrated as a success of Singapore's focus on R&D and innovative capabilities.

In comparison, locally developed paints with anti-mosquito or anti-viral capabilities which are available to the commercial market do not receive such attention. Such innovations by Singaporean companies should be equally supported and recognised, whether or not the developmental efforts are more complex.

The above examples highlight the gap between the understanding of innovation in commercial R&D and academic R&D within our current policies.

There is also a lack of collaboration among agencies administering the various incentive schemes. A central body under the direction of the National Research Foundation (NRF) such as A*Star should administer all the science or technology development incentive schemes to bridge the understanding of academic and commercial R&D. It can also drive the collaboration between academic institutions and the industry.

Our current incentive schemes focus too much on the "outcomes" and the "hows". We should instead **incentivise based on the "why"** – why



did Company A decide to invest in developing product A when there is a similar product in other countries; why did they decide to hire their own R&D team instead of simply buying an off-the-shelf product?

We do not always have to push for “world’s firsts”. We should instead encourage the continual process of innovation even if it results in small improvements.

It is now time for the government agencies to have a shift in mindset in the implementation of our innovation policies to appreciate the concept of continuous innovation within the commercial sector.

Our companies and local workforce should not simply rest on their laurels. They should come up with their own unique products or intellectual property that can set them apart and give them a competitive edge in the long run.

It won’t be easy but the push towards a sustainable Smart Nation should include the cultivation of smart businesses.

How we can help

As a committed tax advisor to our clients, we welcome any opportunity to discuss the relevance of the above matters to your business.

Contact us

Chiu Wu Hong

Head of Tax

T: +65 6213 2569

E: wchiu@kpmg.com.sg

Harvey Koenig

Head of R&D Incentives Advisory

T: +65 6213 7383

E: harveykoenig@kpmg.com.sg

KPMG

16 Raffles Quay

#22-00 Hong Leong Building

Singapore 048581

T: +65 6213 3388

F: +65 6227 1297

E: tax@kpmg.com.sg

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