

# CULTIVATING INNOVATION THROUGH REGULATORY SANDBOXES

The rapid growth of innovation has forced Governments all over the world to adapt and reconsider the traditional way of regulation. The inability to fit policies and regulatory frameworks to cater to emerging industries have resulted in ineffective and inconsistent regulatory controls. The classic case of *Uber* for public transportation and *Airbnb* for tourist accommodation signified the 'writing on the wall' for the impending regulatory revolution. In this article, Mohamad Izahar Mohamad Izham and Amiza Ahmad Murad of the Corporate & Government Advisory Practice of Zaid Ibrahim & Co. (a member of ZICO Law) look into regulatory sandboxes as a means to balance business innovation and regulatory oversight.

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## INTRODUCTION

On 15 June 2020, the Prime Minister of Malaysia announced the formation of the National Technology and Innovation Sandbox or 'NTIS' as part of the Economic Recovery Plan ("PENJANA") with the country facing economic challenges due to the COVID-19 pandemic. In order to stimulate economic growth and transformation, the Government has, through the NTIS, been encouraging businesses to quickly adapt to technological developments and innovations.

The NTIS operates by relaxing all or selected processes and regulatory requirements in order to accelerate the development of innovative solutions from the research and development stage to being ready for the market. It also provides opportunities, through the use of disruptive technology such as artificial intelligence, robotics, drone technology, sensor technology and 5G infrastructure, to solve the nation's problems

that include food security risk, healthcare and inequality of internet access as well as digital infrastructure coverage. As a start, the Government through the Ministry of Science, Technology and Innovation ("MOSTI") has allocated RM100 million to encourage technology and innovation as well as to take steps in enhancing new research and development.

At present, several pilot projects have already been identified under the NTIS, such as the Farm Assist Robot for Multi Operation used in the agriculture sector and Rehabilitation Robots for hospitals used in the healthcare sector. Applications for the NTIS officially opened on 15 July 2020 in which to date, the NTIS has since received 1770 applications from various industries. For more information, please visit the official NTIS website at <https://sandbox.gov.my/>.

## HISTORY OF REGULATORY SANDBOXES

One of the early proponents of the regulatory sandbox originated from the United States Consumer Financial Protection Bureau (CFPB) under Project Catalyst in 2012 which was created with the aim to promote consumer friendly innovative products. It was then followed by the United Kingdom's Financial Conduct Authority (FCA) under Project Innovate in 2014 which included the use of regulatory sandboxes as one of its methods to regulate FinTech.

On the local front, Malaysia has seen the regulatory sandbox approach adopted by several regulators emerging in recent years. In 2015, the Securities Commission ("SC") through its 'Alliance of FinTech Community' initiated a regulatory sandbox to catalyse interest towards the development of emerging technology-driven innovations in financial services. This model imposed regulations on a graduated scale in line with the growth of the market and complexity of the product.

The following year in 2016, and arguably the most prominent regulatory sandbox in Malaysia to date, the Central Bank of Malaysia ("BNM") launched the Financial Technology Regulatory Sandbox Framework for FinTech companies that operate within the purview of financial services laws. The Framework caters for FinTech products and services where the innovation to be deployed is tested in a 'live environment', within specified parameters and timeframes. Taking a holistic approach, BNM also established a Financial Technology Enabler Group (FTEG) consisting of a cross-functional group within BNM to develop and strengthen regulatory policies in respect of technological

innovations in the Malaysian financial services sector.

Subsequently, following the announcement of Budget 2018, SC announced that it would conduct a regulatory sandbox under the SC's FinTech Innovation Lab that focuses on the development of an Alternative Trading System ("ATS") in Malaysia. Interested parties were given the opportunity to submit a proposal describing, among others, features of the proposed market including the products to be traded, users, operating rules and procedures, post-trade arrangements and value proposition to the overall capital market. Within the same year, the National Regulatory Sandbox ("NRS") was introduced by the Ministry of Finance ("MOF") headed by the Futurise Centre. The industries tested in the NRS covered multiple areas including, among others, technology, healthcare, smart city, transportation, and tourism.

In early 2020, the Ministry of Transport ("MOT") announced that it would conduct a "Proof of Concept" (POC) pilot project for the 'bike-hailing' industry. The POC allowed bike-hailing companies such as multi-national operator, Grab and domestic operator, Dego Ride to test the feasibility of providing bike-hailing services within specific and defined parameters set by the Land Public Transport Agency (APAD) and MOT. Finally, the most recent regulatory sandbox would be the Government's launch of the NTIS in August 2020 as a PENJANA initiative spearheaded by MOSTI to help tackle COVID-19 issues through innovation. The immediate focus sectors for NTIS are medical technology, manufacturing, agriculture, education and travel & tourism.

## CHRONOLOGY OF REGULATORY SANDBOXES IN MALAYSIA

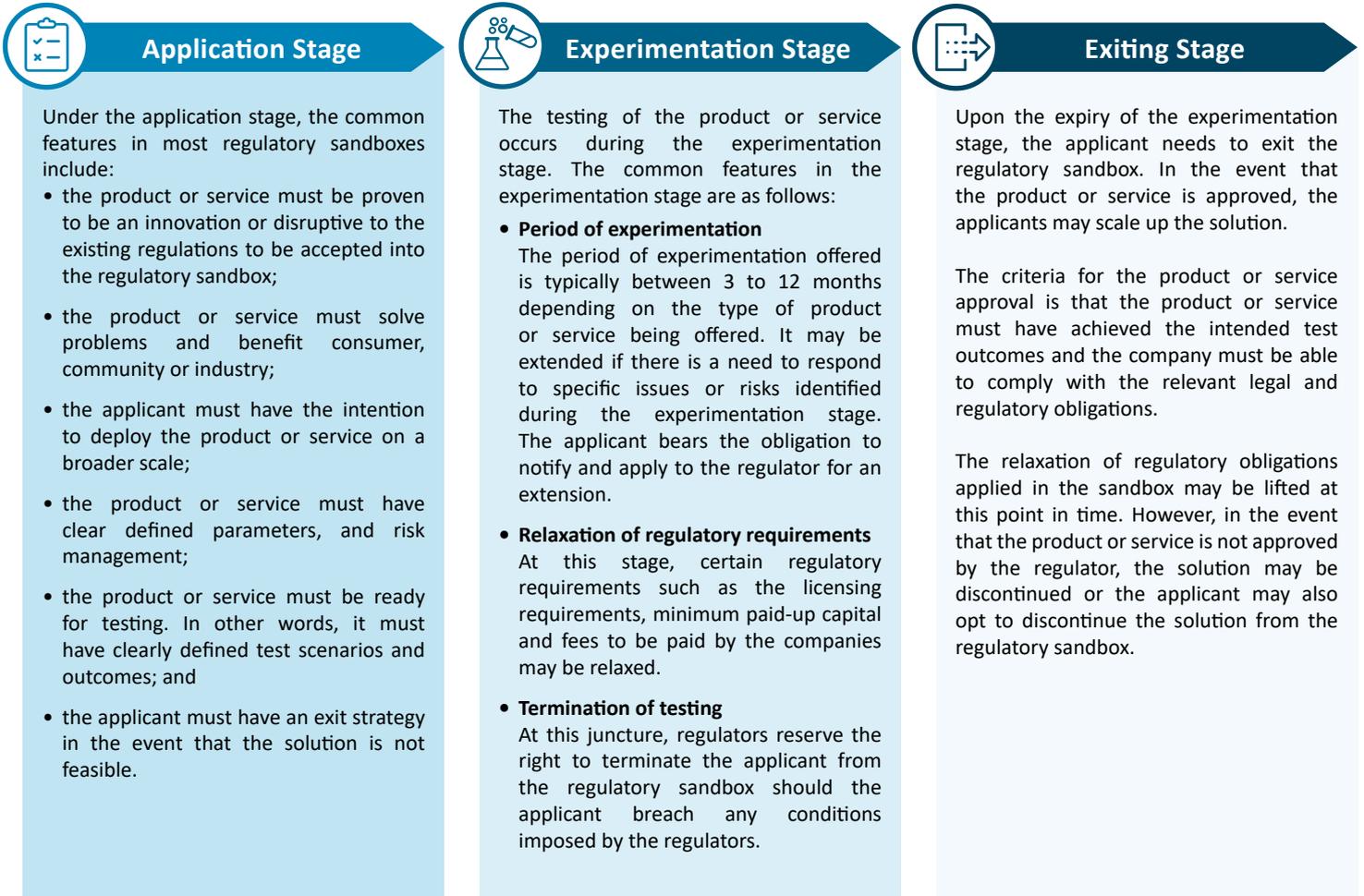


## REGULATORY SANDBOXES IN ASEAN COUNTRIES

| Regulatory Sandbox  |   |   |
|---|---|---|
| <br><b>BRUNEI</b>      | <p>In 2017, the Monetary Authority of Brunei Darussalam (AMBD) established a FinTech Regulatory Sandbox. It enabled qualified companies or businesses to experiment with innovative FinTech solutions in a relaxed regulatory environment, for a limited period of time and legal parameters.</p> <p>In 2020, the Authority for Info-Communications Technology Industry (AITI) established a 5G Regulatory Sandbox which provides opportunities for qualified companies to carry out trials on 5G technology and its innovations.</p>   |   |
| <br><b>INDONESIA</b>   | <p>In 2017, Bank Indonesia, the central bank of Indonesia launched a FinTech Regulatory Sandbox with payment system services being the primary focus.</p> <p>In 2018, the Financial Services Authority (OJK) established the OJK Regulatory Sandbox with the primary focus on financial services, both banking and non-bank products.</p>   |   |
| <br><b>PHILIPPINES</b> | <p>In 2018, the Bangko Sentral ng Pilipinas, the central bank of Philippines, launched the Philippines Regulatory Sandbox with primary focus on financial services for both banking and non-banking products.</p> <p>In 2020, the Insurance Commission launched a Regulatory Sandbox involving insurance with the primary focus on insurance technology innovations.</p>  |   |
| <br><b>SINGAPORE</b>  | <p>In 2016, the Monetary Authority Singapore (MAS), the central bank of Singapore, launched the FinTech Regulatory Sandbox with the primary focus on FinTech where it allows FinTech players to experiment with innovative financial products or services in the production environment but within a well-defined space and duration.</p> <p>In 2019, the Energy Market Authority (EMA) launched the Regulatory Sandbox for Energy Sector with the primary focus on electricity and gas sectors innovation.</p>   |   |
| <br><b>THAILAND</b>  | <p>In 2017, the Bank of Thailand, the central bank of Thailand, launched the Bank of Thailand Regulatory Sandbox with the primary focus on FinTech and targeted to FinTech developers, including financial and non-financial institutions.</p> <p>In the same year, the Thailand Office of Insurance Committee (OIC) launched the Thailand Insurtech Sandbox with the primary focus on developing digital insurance solutions in the country.</p>   |   |
| <br><b>VIETNAM</b>   | <p>In June 2020, the State Bank of Vietnam released a draft decree providing for a FinTech regulatory sandbox in the banking sector for public opinion that allows credit institutions, FinTech solutions providers and other innovative organizations to directly test the FinTech products and services in a closely controlled environment supervised by relevant state bodies.</p> <p>The financial services open for the FinTech test run include payment, credit, P2P lending, KYC supports, Open API, solutions applying innovative technologies (e.g., block chain), and other services supporting banking activities (e.g., credit scoring, savings, fundraising).</p> |   |
| <br><b>CAMBODIA</b>  | <br><b>LAOS</b>  | <br><b>MYANMAR</b> |
| N/A   |   |   |

## COMMON FEATURES OF A REGULATORY SANDBOX

A Regulatory Sandbox is commonly divided into three stages, namely the application stage, experimentation stage, and exiting stage.



## PROS AND CONS OF REGULATORY SANDBOXES

### Pros

- Encourage innovation and competition for the betterment of consumers**  
By reducing the regulatory requirements and barriers to entry, it intensifies competition which will ultimately translate into better products and services for end consumers.
- Provide security and legal certainty to innovative companies**  
Regulatory sandbox is an ideal instrument for enabling regulators to keep an eye on the newest innovations and to foster a mutual learning process relating to the risks and opportunities posed by the use of new technologies in new business models.

### Cons

- May contribute as competitive disadvantage to companies who are not accepted into the regulatory sandbox**  
As there are entry restrictions for most regulatory sandboxes, only companies that meet the criteria provided by the regulator can participate in a regulatory sandbox which in turn puts other companies having the same type of innovation at a disadvantage.
- Sends a negative signal for the consumers as regulatory sandbox may indicate risks to consumers**  
Given that innovations amplify threats to consumers such as data privacy breaches and cyber security risks, a regulatory sandbox that does not provide for a dispute resolution or compensation scheme for consumers may deter consumers from participating with the companies in the regulatory sandbox.

### 3 Increase in supply and quality of innovative products and services

Regulatory sandbox facilitates entry of new and innovative products and services into the market, all of which ultimately benefits end consumers.

In addition, many entrepreneurs analyse a country's regulatory framework to gauge the ease of launching their start ups. To this end, regulatory sandbox may encourage and help to prevent an exodus of talent from a country.

### 4 Enables innovators and regulators to discuss outcomes of sandbox environments and possible regulatory changes

The discussion in regulatory sandbox provides regulators with a set of tools to facilitate testing of innovative ideas and gives potential players regulatory knowledge during the discourse between them and regulators.

### 5 Attracts Investment

Regulatory sandboxes helps the country position itself as an international hub for foreign investment in the innovative sector where countries such as the United Kingdom, Australia, Japan, Canada, Hong Kong and Singapore already are at the forefront.

### 3 Regulators may be under a disclosure burden to provide transparency to consumers through the period of regulatory sandbox

One of the main advantages of a regulatory sandbox is the transparency in the licensing or application process. In a similar vein, regulators may feel pressured to document the process or parameters achieved by the participants, especially so when there are many participants but limited resources on the side of the regulators.

### 4 Difficulty in finding equilibrium in encouraging innovation and protecting consumers

The concept of a regulatory sandbox is easy to imitate but effective implementation is more challenging. This is especially so for regulators who do not have sufficient experience or insights to protect consumers or other stakeholders from risk of adoption.

### 5 May not be effective in assisting regulators to understand the technology

Regulatory sandbox imposes caps on the number of customers that companies may serve and the number of products or services to be provided to the public to limit the risks. Hence, the regulators may not be able to understand the technology as a whole, specifically as to whether it could destabilise or pose any threat to the industry as the technology may be considered premature.

## LESSONS LEARNED

The lessons learned are based on the experience of regulatory sandboxes in Malaysia as well as observations of best practices in other countries.

### 1. THEMATIC VS MULTI-INDUSTRY REGULATORY SANDBOX

The comparison between the regulatory sandboxes in Malaysia can be seen in terms of the number of industries accepted in each regulatory sandbox. BNM, SC, and MOT have used the approach of focusing its regulatory sandbox to a *'theme'* or industry, specifically relating to financial services and transportation respectively. This is not a peculiar approach in Malaysia only as other ASEAN countries observed have been consistent in focusing on a single industry which predominantly has been in the financial services sector.

On the other hand, the latter regulatory sandboxes such as the NRS and the NTIS have taken a *'multi-industry'* approach. The determining factor whether to focus on a theme or multiple industries in regulatory sandbox designs depends on the objectives that the regulators intend to achieve. For example, BNM and SC had specific objectives to only develop Fintech when they established their regulatory sandbox, while MOSTI's primary objective in developing a regulatory sandbox is to generally alleviate the economy through technological innovation from multiple industries.

One of the challenges that may result from a multi-industry regulatory sandbox is that the *'owner'* of the regulatory sandbox may not be the

same as the enforcement or implementing agencies. Hence, this may pose difficulties when the time comes to obtain regulatory relaxation for the participants of the regulatory sandbox. As a consequence, the *'owner'* of the regulatory sandbox may need to engage and obtain buy-in from the relevant implementing agencies before it can develop a regulatory framework that fits the innovation.

A solution to this issue is to have a collaborative platform between all the ministries to encourage regulators to establish an open channel of discussion to handle issues relating to innovation within its respective purview. Moreover, the regulators may also consider establishing a cross-functional group consisting of representatives having multiple expertise from different regulators which encourages not only co-operation but also invites different perspectives to be shared in developing regulatory requirements. A cross-functional group is able to analyse innovation from different areas such as how it could impact consumer behavior to monetary policy, making it important in producing sound solutions and is especially important for technologies involving cross-industry products and services such as for example medical drones and agriculture robots.

## 2. UNFAIR COMPETITION BETWEEN WELL-FUNDED COMPANIES AND NON-FUNDED COMPANIES

It is a well-known fact that an advantage of one company could serve as a disadvantage to others, especially its competitors. In this context, there are regulatory sandboxes that impose stringent financial eligibility criteria to its applicants, such as, it must already have investors lined up, innovation must already be tested in a laboratory (such as achieve Technology Readiness Level 6) and there must be a compensation scheme ready for consumers in case accidents occur during the testing period.

As such when two companies that have the same innovation apply to enter the regulatory sandbox, it is more likely than not that the well-funded company that can meet the listed requirements will be accepted in lieu of the other. As a matter of perception, companies accepted into the regulatory sandbox are also seen to be *'endorsed'*

by the regulators which in turn may increase their credibility with consumers widening the gap of competition between those who are accepted and not accepted.

A consideration in addressing this issue is by having stakeholder consultation with the emerging industries before designing the eligibility criteria of the regulatory sandbox. The regulators need to understand the *'on the ground'* capacity of companies involved in the industry to ensure that the eligibility criteria of the regulatory sandbox itself does not unintentionally discriminate any interested companies. It must be noted that the true objective of having a regulatory sandbox is essentially to encourage innovation which could be lost in spirit when companies are discriminated and eventually deterred due to, among others, their lack of financial capacity.

## 3. MANDATORY CONSUMER PROTECTION MEASURES

Consumer protection is central to any regulatory sandbox in view of the uncertainties and risks of a new product or service to the consumers. In order to encourage consumers to participate in the regulatory sandbox, it is pertinent for regulators to ensure that there are consumer protection measures in place before accepting participants in the regulatory sandbox.



### Mandating companies to undertake insurance for losses that may accrue during experimentation to consumers

Although not all companies can afford to take up insurance for its products or innovation, this is an important consideration to ensure that the insurance could cover any losses that may occur either unto the companies or the consumers. The adequacy of an insurance covered should be proportionate to the risks involved based on, among others, the maximum exposure to a single consumer, number of claims from a single event and number of claims during the policy period.



### Providing caps in the regulatory sandbox to reduce liability

Maintaining some form of control through caps or limits on the operations of a participant can be put in place to mitigate and reduce the risk of failed innovations including in relation to:

- consumer losses;
- target consumer type; and
- number of consumers.



### Ensuring that consumers understand the associated risks

The associated risks needs to be clearly disclosed and understood by consumers and consumers must willingly agree to participate in the regulatory sandbox notwithstanding the risks present.



### Providing a mechanism for timely and fair compensation of consumers' financial losses due to failures of the trials

The regulators should ensure that the company is able to protect consumers such as having a compensation plan and means to compensate the consumer when deciding whether to allow a company to participate in the regulatory sandbox.



### Allowing consumers to withdraw from the trial

In the event that consumers no longer have confidence with the products or services, the consumers should be given the option to withdraw from the regulatory sandbox. In the spirit of protecting consumers, there should be adequate measures adopted by the regulators to ensure that technologies are able to evolve without putting consumers at risk.

## 4. ENABLING DATA SHARING TO ACCELERATE INNOVATION

At present, a sandbox that allows the sharing of data to explore innovative use of personal data or better known as a 'Data Sharing Sandbox' does not exist. Countries such as Singapore have started to tackle this issue by setting up a Data Sharing Sandbox to catalyse data driven innovations and ease information exchange. The idea behind this model is to ensure that businesses can create a more detailed picture of their product or service and build products or services that enhance benefits for consumers by using real-time data. The United Kingdom's Financial Conduct Authority (FCA) Lessons Learned Report relating to Regulatory Sandbox describes that a data-sharing experiment relating to the current account transaction data between a large firm and FinTech company has successfully increased consumers' savings. The accuracy of

real-time data provided to companies through data sharing has proved to be a contributing factor in the growth of innovative products and services in a regulatory sandbox model.

Notwithstanding its success, it should be noted that consent for use of data in the Data Sharing Sandbox in Singapore must be given by the owner and ultimately the regulator must weigh the benefits and risks of the innovation before disbursing the data to any company. Although the absence of a data sharing sandbox may conceptually be seen as a disadvantage, regulators need to proceed with caution in this area in upholding individuals' rights and privacy before a data sharing framework can be adopted.

## 5. DISCLOSURE OF INFORMATION AND REPORT ON FINDINGS

A findings report or better known as a '*Lessons Learned Report*' contains, among others, disclosure of information relating to the operation of the regulatory sandbox, impact on the market, insights from testing, and limitations that companies faced during the testing period. It is important to not only the participants of the regulatory sandbox but also to other organisations that were not accepted to learn and build on the experience of those that have benefited from the regulatory sandbox.

In Malaysia, there are no specific obligations that require regulators to practice disclosure of information or findings of the regulatory

sandbox to the public. This is inconsistent with the principle of transparency in ensuring that the public is informed especially when the funding of the regulatory sandbox is obtained from the Government. A regulator that has practised full transparency in its regulatory sandbox model is the United Kingdom's Financial Conduct Authority (FCA) as it produces Lessons Learned Report at the end of the year covering, among others, the proposition tested, perceived opportunities and limitations. Such information is important especially to innovators as it provides an opportunity to organisations, large and small alike that may have been rejected to learn from the limitations and opportunities of the participants in the regulatory sandbox.

## CONCLUSION

Disruptive technology will continue to challenge our regulatory landscape and regulators must be well equipped to respond to the growing needs of emerging industries. The way we do business is continuously evolving at a rapid pace where regulatory frameworks are constantly playing catch up to what is being shaped and re-shaped as the '*new norm*'. The Government must then consider the best way to ensure that innovation and disruptive technology are not stifled by archaic legislation.

One approach in leveling the playing field is to test innovations in regulatory sandboxes. A regulatory sandbox provides the opportunity for innovators to stretch the boundaries of traditional regulatory frameworks while giving regulators the time to develop specific laws

and policies. An all-inclusive regulatory sandbox model will not only bring benefits to innovators, investors, consumers, and regulators but also have a distributive effect to the country as a whole from an economic perspective.

The notion of providing a '*safe space*' for innovations while placating regulatory constraints is necessary at a time where economies are slowly emerging from the impact of the COVID-19 pandemic. It is hoped that the growing acceptance of regulators in adopting a regulatory sandbox approach is evidence of recognition in the importance of digitalisation and technology not for the future, but for the present day. In the words of the Prime Minister, "*technology mastery is the way to becoming a high-income nation*".

If you have any questions or require any additional information, you may contact Mohamad Izahar Mohamad Izham, Amiza Ahmad Murad or the Zaid Ibrahim & Co. partner you usually deal with.



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by origin and passion