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Introduction

Emerging technologies such as artificial intelligence will impact all areas of social and economic activities, including transportation, education, finance, and health care. While offering great promise, they also present unique challenges for regulators who seek to strike a balance between promoting productivity and innovation and maintaining important health, safety, and environmental protections.

For nearly two decades, APEC has been at the forefront of international discussions on the importance of Good Regulatory Practices (GRP) to trade and investment. Building on the results of GRP11 in Papua New Guinea in 2018, this conference aims to improve mutual understanding about how regulatory policy itself is affected by the digital economy and, in turn, how policymakers can improve regulatory systems (design and delivery) as well as agile regulation to promote technological innovation.

The 13th Conference on Good Regulatory Practices (GRP13) was set to take place virtually due to the outbreak of COVID-19 that hit the economies and communities worldwide. Malaysia has changed the conventional way of hosting the GRP conference into the virtual format by utilising online meeting application, *Zoom Meeting* platform.

This conference gathered 171 online participants from 17 APEC member economies[1], 2 non-member[2] participation including 13 experts (3 moderators and 10 speakers), who have shared their expert knowledge and experience in regulatory design, delivery and reform with regards to the new and emerging technologies. The participated experts in this conference are coming from: government officials, private sectors, and international organisation; Canada; Malaysia; New Zealand; the United States and the Organisation for Economic Co-operation and Development (OECD).

This GRP13 conference is divided into three (3) sessions, in which 10 expert presentations were delivered, representing the perspectives and experiences of the international experts and industry players, including initiatives and approaches by the Government and Private Sectors in using GRP tools in regulatory design, delivery and recommendations on GRP

[1] Australia; Brunei; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Malaysia; Mexico; New Zealand; Peru; The Republic of the Philippines; Russia; Singapore; Chinese Taipei; Thailand; United States

[2] OECD and ERIA.

tools to fit in emerging technologies. The speakers had also linked the relevance of their recommendations to the challenges faced by the economies due to COVID-19 pandemic. Participants were provided with insights on GRP tools and approaches in addressing the challenges of the new and emerging technologies era. The governments in particular were suggested to further explore and strengthen of utilizing GRP tools for new and emerging technologies by looking at opportunities and challenges that policymakers may face when considering regulatory approaches for emerging technologies in relevant sectors of the economy , without compromising the goal of promoting innovation and economic growth, and protecting human health, safety, and the environment.

The conference aims to foster the exchange of good practices and mutual learning among APEC economies' policy makers to build capacity on regulatory approaches to new and emerging digital technologies. It supports two of the APEC Internet and Digital Economy Roadmap (AIDER) key focus areas, which are: development of holistic government policy frameworks for the Internet and Digital Economy; and promoting coherence and cooperation of regulatory approaches affecting the Internet and Digital Economy, which are also a part of the Informal Roadmap Group (IRG)'s work plan to support the AIDER. This project is in line with the overall function of EC to undertake robust, comprehensive and ambitious structural reforms to reduce inequality and stimulate growth in their respective economies, and contribute to APEC's overarching goal to promote balanced, inclusive, sustainable, innovative and secure growth through measures that are aligned with these three pillars: (a) more open, well-functioning, transparent and competitive markets; (b) deeper participation in those markets by all segments of society, including MSMEs, women, youth, older workers and people with disabilities; and (c) sustainable social policies that promote the objectives, enhance economic resiliency, and are well-targeted, effective and non-discriminatory.

Note:

The copies of the speakers' presentations at Appendix 1 and can be downloaded also through:
https://drive.google.com/drive/folders/1EWuNB47FNB7BZqEBF08LzjGu5VNfReO0?usp=sharing

Summary of the Sessions

Session 1: GRP tools – Regulatory Design in the new and emerging technologies era, 25 November 2020

Zahid Ismail, Deputy Director General of Malaysia Productivity Corporation, in his opening remarks highlighted that while technologies offer benefits and opportunities, they also present unique challenges for regulators to strike a balance between promoting productivity and innovation, and in protecting health, safety, and the environment. He also shared Malaysia's experience in responding to the COVID-19 crisis through an initiative called #*MyMUDAH* (or Malaysia Easy) that is dedicated to support business recovery by reducing regulatory burdens on businesses, and the establishment of Digital Economy and Fourth Industrial Forward (4IR) Council that is aimed to set the policy, implementation and monitoring of the strategy and initiative for Digital Economy and Fourth Industrial Revolution. He also continued by highlighting that adopting technologies is no longer an option but rather a necessity for policymakers and regulators, in the new and emerging technologies era.

In the first session, the speakers talked about how new business model and emerging technologies pose a number of opportunities and challenges for policy makers and regulators. More often than not, policy makers and regulators are struggling to keep pace between the rapidly advancing technologies and the need to design regulatory and non-regulatory approaches to facilitate technology innovation, ensure an open and non-discriminatory, predictable business environment, consumers' and workers' protection, while tackling the potential and unintended consequence of potential disruption caused by the emerging technologies. The speakers have also touched on new challenges posed by the COVID-19 crisis in their discussion.

Nick Malyshev, Head of the Regulatory Policy Division of OECD, via a recorded video started the session by highlighting the issues of pacing problem, designing "fit for purpose" regulatory frameworks, regulatory enforcement and trans-boundary challenge. He shared some considerations in designing regulatory frameworks for emerging technologies in the future and the new normal; with emphasis given for policy makers and regulators to think and change dynamically as the emerging technologies are changing dynamically, and the challenges are becoming intense with the current COVID-19 pandemic. Some of the examples given include reliance on industry-led standards, experimentation through sandboxes, incentives and real time evaluations for considerations by the government in support of innovations and for the industry to do the right thing. Nick also emphasized on designing regulation that is fit for its purpose, including adapting the use of regulatory

management tools and addressing the abolition of borders through international regulatory cooperation (IRC). He concluded that the challenges faced by APEC and OECD members or other economies in designing regulations are similar. In the era of emerging technologies, regulators should consider enhancing GRP and adjusting their Regulatory Impact Analysis (RIA) to design and implement a regulation that produces the desired results as cost-effectively as possible. Nick shared OECD in-depth survey on 9 jurisdictions where all were adjusting RIA processes to address emerging technologies, aimed at ensuring that new legislation is "fit for purpose", "future proof" and "technology friendly". Emerging technology such as big data analysis can be used to improve RIA processes by strengthening evidence base and enhancing efficiency. He cited the examples of EU's RIA guidance being adjusted to better reflect emerging technologies and introduction of a digital check, Denmark's new requirement for federal level authorities to assess new business-oriented regulation following Principles for Agile Business-Oriented Regulation, and Brazil's large-scale data collection and analysis used for updating regulations on interstate passenger transport.

Alexander Hunt, Chief of Information Policy Branch of Office of Information and Regulatory Affairs (OIRA), the United States provided the United States government approach in encouraging innovation through Executive Order 12866 (1993) and Executive Order 13859 (2019). OIRA follows the principles of regulations established by the executive orders in its review of regulations and in developing and overseeing government-wide policies in the areas of information collection, information policy, privacy, and statistical and science policy. The Executive Order 13859 specifically sets on maintaining the United States leadership on Artificial Intelligence (AI) whereby the Office of Management and Budget (OMB) is required to issue a memorandum that provides guidance to agencies, among others, to inform them on the development of regulatory and non-regulatory approaches regarding technologies and industrial sectors that are empowered or enabled by AI and to consider ways to reduce barriers to the development and adoption of AI technologies. OIRA's principles in the stewardship of AI applications include public trust and participation, flexibility, fairness and non-discrimination, safety and security, disclosure, transparency, interagency coordination, risk assessment and management, scientific integrity and information quality.

Mahathir Aziz of Malaysia presented how a private organization played its role in a strategic collaboration with the Government, academia, industries, and entrepreneurs in supporting the potential of emerging technologies and to enable commercialization into the economy. Its sandbox initiative called the "National Regulatory Sandbox" (NSR) received more than a hundred submissions in two years since 2018, involving sectors such as transportation

(particularly, the land and civil aviation), agriculture, construction, energy and healthcare. Its main objective is to expedite progressive and anticipatory regulatory intervention to enable commercialization of innovation and technology solutions into Malaysia's future digital economy.

Finally, Mohamad Izahar of Zaid & Co. talked about a case of the emerging home sharing economy or short-term rental accommodation (STRA) in Malaysia, deliberating on considerations and lessons learned in developing an effective regulatory framework. He also shared about the role of a public-private partnership as one of the key components in developing the STRA guideline, through the establishment of a working group that brought together the stakeholders into the discussions. Some lessons learned that are worth considering when developing the regulatory framework on sharing economy (the case of Malaysia) include consideration of: an all-inclusive government structure, testing of the framework using pilot projects, having robust stakeholders' engagements, determining the policy based on GRP tools or benchmarks, and aligning with the government's aspiration for digital transformation and the development of digital economy.

Session 2: GRP tools – Regulatory Delivery in the new and emerging technologies era, 26 November 2020

In this second Session, the speakers talked about delivering regulation is vitally important in facilitating the business of emerging technologies to grow. As technologies evolve dynamically, existing regulatory approaches may no longer suit the emerging technologies, hence requiring policy makers and regulators to change and adapt their delivery of regulations, quickly adopt the digital technologies by focusing on reducing regulatory burdens imposed by legacy policies and regulations that hinder productivity, innovation, business growth and competitiveness. In addition, the policy makers and regulators around the globe need to also consider the challenges posed by current COVID-19 pandemic, examine their regulatory delivery and how the emerging technologies could support their regulatory delivery.

The first speaker of the session, Srikanth Mangalam from the Public Risk Management Institute of Canada presented his views on modernizing regulatory delivery via resilient regulatory delivery models and principles that can be considered in the new and emerging technologies, post COVID-19 approach. He quoted the example of UK Regulatory Delivery Model, Canadian UL 2984 standard for Management of Public Risks and Guidelines, Ethical Business Regulations (EBR), and also shared some key considerations when building a

resilient regulatory delivery that include: to acknowledge the interconnectedness of systems and associated risks, to have the passion to engage, consult, trust, empathize and collaborate, to strive to experiment and innovate, and to recognize the social and economic inequities. In delivering regulations in the post pandemic world, regulators should look back and check whether the mandate given is clear, the regulations are still fit for purpose, the right governance in place and delivery framework supports collaboration between inter-agencies, private sectors and other stakeholders, and whether the institution's strategy supports capacity building.

Matt Roberts from Oracle in the United States talked about international standards in trade and for developing and harnessing Artificial Intelligence, in particular how governments can use standards to achieve their goals, considering the value of international standards in creating policy frameworks. Matt also shared how private sector companies can contribute to policy development in the new emerging technologies era and how governments could leverage on private sector resources in ensuring future proof and resilient regulatory frameworks. Digital technologies are global, developed by global companies through a global chain, leveraging on global networks of technology and people. So, in a rapidly changing new and emerging technologies, there is a need of global cooperation for a group of people or economies to work together. Taking an example of US ANSI[3], Matt shared on how international standards can be an ideal tool for policy makers to address new and emerging technology regulatory frameworks because they are dynamic and flexible, and able to facilitate wide stakeholder engagement, involving all possible relevant stakeholders (government, regulators, policy professionals, academics, technology experts, innovators, trade associations, users and consumers, etc.) and tap into on global community The key principles of international standards are transparency, openness, impartiality and consensus. International standards development provides a critical platform for public-private cooperation and can support building a robust, dynamic and resilient policy framework. Matt concluded that international standards are an essential tool for supporting innovation and protecting consumer interests, eliminating unnecessary barriers to trade, fostering regulatory approach that can address today's and future challenges. He also emphasized that governments play a vital role in voluntary standards development both by participating and encouraging participation and gain benefit from the private sector contribution into the international standards process.

[3] American National Standards Institute – The example given is on the ISO/IEC JTC 1 Sub-Committee 42 (Project ISO/IEC 24027)

The third speaker of the session, Tammy Switucha from Canadian Food Inspection Agency (CFIA) shared on Canadian's experience in moving from a prescriptive regulation to a 'modern' performance-based regulation, consolidating 14 commodity-based regulations into a single act known Safe food for Canadians Act (SFCA) that came into force in January 15, 2019. The act eliminated, to certain extent, large amounts of detailed, prescriptive standards to enable innovation by specifying the outcomes and giving the flexibility for the industry to select the most appropriate measures to achieve the outcomes set. Specifying the outcome rather than describing how it must be met will allow businesses to introduce new technologies, processes and procedures, and respond to emerging risks and threats. Nevertheless, some prescriptive requirements that cannot be comprised were remained due to certain level of risks related to safety and protection of standards associated with regulated parties' activities. Sometimes, prescriptive regulation is necessary and appropriate, but in general, it creates undue burden and lead to more frequent regulatory changes than necessary. The key benefits of a performance-based regulatory framework may include flexibility through performance rules, transparency through engagement, increased due diligence, and creation of a dynamic and responsive environment with new regulatory tools. The results based on CFIA experience (of specifying the outcome for business to meet) have reduced risks and prevented the industry from making costly renovations that may not be necessary.

The last speaker, Julie Nind from the New Zealand's Ministry of Business Innovation and Employment made a presentation about International Regulatory Cooperation (IRC) and its relevance in the regulatory design and delivery – a topic that is timely in the emerging technologies era and even more so now in the global COVID-19 crisis. Julie highlighted that IRC broad concept takes into various stages of regulatory design, monitoring, delivery and enforcement; and economies can deliberate on IRC to address the areas that they want to prioritize on. The cooperation spectrum is wide, ranging from unilateral action, informal cooperation to formal cooperation; economies may consider IRC to lower the barriers to trade and investment, increase effectiveness of policies and regulations across the economies, intensify cross-border activity, reduce costs of compliance, enhance participation in the global value chains and make entry (of goods, people or services) in multiple markets easier. Through the cooperation, regulatory capacity and capability can be further enhanced while confidence, trust and influence in international context (for example, in setting the technology or industry standards) are therefore, easily established. Julie highlighted that New Zealand will be hosting the next GRP conference and that the discussion on IRC will be elaborated further. She concluded by sharing New Zealand's work

on an APEC-OECD IRC resource, that is being developed to: provide practical guidance and evidence base for economies to refer to in their decision on IRC; enhance collaboration between trade and regulatory officials; improve awareness, share thinking and experience from APEC economies and the OECD; support the implementation of APEC-OECD Integrated Checklist on Regulatory Reform, and populate the resource with case-studies of APEC initiatives or initiatives involving APEC economies.

Session 3: Discussion on the recommendation of GRP tools to fit in emerging technologies (Open to delegates from the APEC economies, invited ministries and speakers and subject matter experts only), 26 November 2020

This last session of the two-day conference was dedicated for the APEC economies to discuss on the relevance and effectiveness of GRP management tools in the emerging technologies era, by listening to two international speakers on their presentation about emerging technologies and the role of international regulatory co-operation as one of the GRP tools to fit in emerging technologies.

The first speaker, Marianna Karttunen, Policy Analyst of OECD Regulatory Policy Division made a presentation about the role of international regulatory co-operation and how it fits in with GRP. IRC was included under the Principle 12[4] of the OECD's 2012 Recommendation on Regulatory Policy and Governance. Principle 12 underscores IRC as a key pillar of quality laws and regulations in a globalised context**.** In an interconnected world, traditional regulatory frameworks are struggling to keep up with the dynamic of emerging technologies where regulatory fragmentation (different laws and regulations in different economies) leaves space for regulatory arbitrage and this fragmentation creates barriers to fluid flow of innovation and trade. IRC benefits the economies when compliance costs are reduced as fragmentations caused by the differences in laws or regulations and standards are streamlined or eliminated; economies can better manage risks and externalities across borders through aligned approaches, gain greater administrative efficiency and knowledge flow from peer learning; create a level playing field and effective compliance for businesses, in which these would help economies to better regulate innovation. She highlighted 3 ways in which regulators may engage in IRC, and these are – unilaterally, by bringing international

[4] ***Principle 12:*** *"In developing regulatory measures,* ***give consideration to all relevant international standards and frameworks for co-operation*** *in the same field and, where appropriate, their likely effects on parties outside the jurisdiction."*

angle into their domestic policies with evidence and expertise from abroad or international bodies; or bilaterally or regional basis by cooperating with peers or partner economies through high level political agreements, trade agreements, mutual recognition agreement; or multilaterally through multilateral organizations such as OECD and APEC. Economies are encouraged to refer to the APEC-OECD IRC Resource and other documents related to IRC from OECD website at www.oecd.org/gov/regulatory-policy/IRC to further assist the economies' understanding and help them in their deliberation to embark on IRC.

The second speaker, Jason Hill from The United States Department of Transportation (Lead Shepherd to the APEC Transportation Working Group) made his presentation on emerging transportation technologies, in identifying regulatory approaches that enable successful transportation systems in the emerging technologies (including responding to the recent COVID-19 crisis that hit the economies, globally). He particularly shared the work of APEC TPT-WG[5], which is set to implementing policies and creating regulatory frameworks that contribute to a *safe, well-performing transportation* system; enhance transport systems to encourage trade and economic development that enables economic growth and opportunity for the APEC region's transportation services. Jason highlighted the observations on existence of regulatory inconsistencies that impede the growth of emerging technologies and innovators, government "picking winners" as opposed to consumer driven, overregulating that distorts market, and economies losing focus on the goals to a safe, well-performing system that contributes to economic growth and opportunity. He concluded with a necessity to develop APEC best practices and guiding principles on automated vehicles in working at the best solution for emerging technologies; using data and performance to drive the development of standards and regulations, neutral technology to foster continued innovation, rational standards and testing approaches to avoid premature or unnecessary regulations and frequent dialogue between public and private stakeholders to ensure growth of emerging technologies to their full potential.

In the discussion, Marianna commented that the initiative by TPT-WG presented by Jason Hill is a good example of an IRC within APEC; and mentioned three broad needs as a basis for IRC to take place, in the wake of COVID-19 crisis are: (a) The need for exchange of scientific knowledge and information on a constant basis for example in the development of vaccines, policies that are affecting all the economies, and etc.; (b) To ensure resilience of

[5] APEC Transportation Working Group (TPT WG)

global value chain, for example, continuous supply of essential goods such as medical supplies and food products despite huge disruption to production capacities and barriers to trade that have emerged within the crisis situation because of unilateral measures (as an example); and (c) To ensure interoperability of essential services, for example, the international transportation that's affected drastically by the pandemic (giving example of an initiative on international guidance on safety standards to reinforce trust and encourage safe transportation is resumed during the crisis). Marianna also responded to a question from Malaysia that it is good to learn from other economies' experiences and that there is a need to have an ongoing, long term collaboration between economies, that is systematized so that it will be easier to seek assistance and share knowledge or practices among the parties.

On the question whether to prioritize on regulatory design or regulatory delivery during the pandemic, Jason recommended for regulators to *be flexible and quickly respond* to the changes, giving the case of smart mobility in goods delivery, movement of vaccines, supply chains and applications using UAS (drones); and to build public-private-partnership and hold discussions with all stakeholders to better understand innovators and the role of their products in the economies.

Alex Hunt of the United States commented that all GRPs remain relevant and applicable to regulating the emerging technologies, citing the international regulatory cooperation (IRC), and engagement with private sectors in developing standards as important tools in the emerging technologies era. In the case of AI, one of the challenges is around building trusts and making AI algorithms understandable by both experts and non-experts; and using experimentation that allows exemption of regulation while pilot testing will enable collection of data which can be used in the rule-making process. Regulators may also adopt voluntary consensus standards developed by private sector in lieu of government unique standards. There is also an opportunity for regulators to participate in the discussions on industry standards and tap on expertise outside the government in their effort to address regulatory challenges of the emerging technologies.

Wan Fazlin Wan Nadia of Malaysia Productivity Corporation highlighted on Malaysia's continuous efforts on Reducing Unnecessary Regulatory Burdens (RURB) on businesses, realizing on the fact that Good Regulatory Practice (GRP) is one of the enablers for economic growth. Malaysia Productivity Corporation, through public-private sector collaboration had carried out various initiatives to ease doing business (domestically) and reduce unnecessary regulatory compliance costs that were burdensome to business

operators; and as part of RURB initiative, Nadia shared Malaysia's experience in developing GRP tools using technology, where a digital platform known as Unified Public Consultation (UPC) portal was developed to facilitate stakeholder's engagement in the rule-making process, as well as fulfilling one of RIA elements, that is public consultation. The digital platform provides an easy access to regulatory consultations through a single website, that is open to all (regulators, businesses, other interested parties and public at large). Businesses are especially encouraged to submit their concerns on regulatory issues that hinder efficiency and innovation (creativity), which are affecting their productivity and business growth. The UPC becomes a seamless platform for business community to register their concerns on regulatory burdens to be taken up by *#MyMUDAH* team to further analyse and conduct discussions between private and public sectors to deliberate on recommendations and decisions to solve the issues at the highest level. *#MyMUDAH* is a recent initiative by the Government of Malaysia to quickly address and reduce unnecessary regulatory burdens that impede businesses, particularly the sectors that are badly affected by the COVID-19 pandemic and help them in their business recovery. The RURB discussions and engagement sessions to find solutions were mostly conducted by *#MyMUDAH* between all concerned parties through online meetings or webinars due to the movement control order periods that were imposed by the government to break the spread of COVID-19. The initiative on UPC that supports RURB process further enhances and helps contribute in achieving the government commitment towards *accountability*, *transparency* and *inclusiveness*.

In conclusion, Dato' Abdul Latif Bin Haji Abu Seman, Director General of Malaysia Productivity Corporation, as the session moderator, wrapped up by emphasizing on the importance of GRP management tools in addressing challenges of emerging technologies; and in ensuring required regulations are put in place to support economic growth, regulators need to strike a balance between promoting productivity and innovation, whilst safeguarding the aspects of health, safety and environmental. He also recognized that regulating emerging technologies require different approaches and some existing regulatory tools may need to be adjusted to better reflect the emerging technologies, to be more agile, outcome-based and digitizing regulatory delivery to support productivity and innovation. Moving forward, he encouraged economies to leverage on digital technology as an enabler - to support innovation and contribute towards productivity and economic growth. He concluded that, in the borderless world, IRC is one of the important tools to better regulate innovation.

Conclusions

In short, the outcomes of the conference are as follows:

- Adjusting RIA processes to address emerging technologies. In designing regulations for emerging technologies, Regulatory Impact Analysis (RIA) remains valid and is empirical in producing the desired results, as efficiently and cost-effectively as possible, to maximize benefits.
  - RIA furnishes empirical data that can be used to make wise regulatory decisions.
  - New approaches such as experimentation, self-regulation, and outcome-based regulation can be adopted by regulators in their efforts to adjust regulatory policy to better reflect of emerging technologies.
  - Technology can also be used to improve RIA processes by strengthening evidence base and enhancing efficiency (e.g., through big data analysis).
  - Improve regulatory quality to be more effective, efficient, and digital-ready.

- Collaboration with private sectors and engaging with the experts. Policy makers and regulators should collaborate with industry, engage in discussions to better understand the emerging needs; develop a public-private partnership and tapping on expert knowledge to build the best solution for emerging technologies.
  - Governments can play a role by participating with businesses in in the development of voluntary consensus standards for emerging technologies as these technologies have relevance for all economies. By encouraging and jointly participating in the initiative, both government and the private sector may gain benefits .

- Outcome-based regulation promotes innovation. Outcome-based regulation provides flexibility and creativity in the way the business may comply, which promotes innovation. Outcome-based regulation may also reduce unnecessary burdens on businesses caused by an overly prescriptive regulation.

- Experimentation / Regulatory sandbox to facilitate innovation. Traditional ways of regulating may no longer be suitable to regulate the emerging technologies that are evolving; regulators may consider experimentation or regulatory sandbox to create a controlled environment that allows emerging technologies to be nurtured while developing progressive and anticipatory regulatory intervention to facilitate and expedite commercialization of innovation.

- International regulatory co-operation (IRC) as a regulatory management tool. There is a challenge in designing regulation that fits its purpose as regulators are often faced with keeping pace between the rapidly advancing technologies in the borderless world and the need to design regulatory (and non-regulatory) approaches to facilitate innovation.
  - Adapting the use of regulatory management tools and addressing policy issues that cross borders become key. International regulatory co-operation may be considered as one of the regulatory management tools to address this.

  - IRC as a tool to eliminate regulatory fragmentation, whereby economies engaging in IRC can work to address regulatory fragmentation caused by the differences in laws or regulations or standards and remove barrier to the fluid flow of innovation and trade across borders.

- Right governance and clear mandate. Besides ensuring regulations are still fit for purpose, regulators are to also check that the mandate given to them is clear, the right governance is in place and the delivery framework supports collaboration between inter-agencies, private sectors and other stakeholders; and to ensure the strategy supports capacity building that addresses skills and competencies issue.

- International standard as a tool in developing policy framework (for emerging technologies). Reliance on international standards in new and emerging technology regulatory frameworks can facilitate trade across borders and support an economy's private sector to operate in the global market.

- Share best practices and guiding principle. The APEC economies may further develop or share best practices and guiding principles in regulating emerging technologies through mutual learning, and the APEC-OECD IRC resource may also provide examples for economies to consider.

- Think dynamically, be flexible and responsive. In the era of emerging technologies, regulators and policy makers need to think dynamically in designing and delivering regulations, be flexible and quickly respond to the changes and challenges. APEC economies should hold frequent dialogue between public and private stakeholders to better respond and understand the growth of emerging technologies and facilitate their full potential.

- Data is key. Using data (including data derived through experimental approaches) and performance- based approaches in the development of standards and regulations may avoid premature or unnecessary regulations of the emerging technologies.

Recommendations

The topics on enhanced GRP initiatives through RIA at regulation design stage, and regulatory management tools in regulating emerging technologies, reducing unnecessary regulatory burdens (RURB) on business and the need to address cross borders issues (at the administration and enforcement side) are becoming hot topics, particularly on regulating emerging technologies, as the economies across the globe are hit hard by the COVID-19 pandemic and reliance on technology is prevalent.

At the design stage, it is recommended for the governments to adjust their regulatory policy to better reflect emerging technologies and take new approaches such as experimentation, self-regulation, and outcome-based regulation. Members may consider looking at the OECD case examples of how EU, Denmark and Brazil were adjusting their RIA processes to address emerging technologies, aimed at ensuring that new legislation is "fit for purpose", "future proof" and "technology friendly", i.e., by way of updating RIA guideline to reflect emerging technologies, adopting principles for agile business-oriented regulation and using large-scale data collection and analysis for updating regulations. In administering and enforcing regulation, economies may continuously improve on RURB approach to nurture the growth of emerging technologies or facilitate business recovery by "relaxing" on current regulations with intention to boost economic activities, i.e., by reducing the burdens on regulatory compliance even more either temporarily or permanently, especially in current COVID-19 crisis —citing an example of #*MyMUDAH* initiative by Malaysia.

In addition, the initiative led by New Zealand on APEC-OECD Resource on International Regulatory Co-operation (IRC) showed how IRC can be used by the economies as an important tool to better regulate, harmonize regulatory fragmentation and thus, enhance cross border trade and investment among members. So, beside the lessons learned from regulating emerging technologies through *outcome-based regulation*, *experimentation* and *regulatory sandbox*, we are recommending members of the APEC economies to explore the APEC-OECD IRC's case studies and lessons learned from OECD's work on international

regulatory co-operation as one of GRP management tools to address the emerging issues in regulating future economy, across borders.

In relation to the IRC, we would recommend APEC economies to populate the APEC-OECD IRC resource by sharing their GRP experiences and lessons learned in regulating the new and emerging technologies; this is to support a more comprehensive analysis on APEC-OECD IRC project that will be presented at the next GRP conference, under the presidency of New Zealand. This initial sharing will allow further discussion on next steps or future works, which will also ensure the work on capacity building on the area of the GRP will be sustained.