

APEC Public-Private Dialogue on Challenges, Opportunities, and Digitally-enabled Recovery in the Post-COVID Era

APEC Policy Partnership for Science, Technology and Innovation

April 2024



**Asia-Pacific
Economic Cooperation**



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APEC Policy Partnership for Science, Technology and Innovation

April 2024

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PART ONE EXECUTIVE SUMMARY

This report summarizes a series of cases presented at two seminars held under the auspices of the *APEC Public-Private Dialogue on Challenges, Opportunities, and Digitally-enabled Recovery in the Post-COVID Era* (hereinafter abbreviated as the Project). The objective of the Project is to help APEC member economies leverage sharing-economy development and digital technology in support of APEC's vision of building an inclusive APEC community by 2030.

The seminars were held in Thailand in 2022 and online in 2023 respectively. 168 attendees from 19 economies, including Australia; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; The Republic of the Philippines; The Russian Federation; Singapore; Chinese Taipei; Thailand; United States, exchanged opinions during the two seminars. 17 best practices were presented and discussed. Meanwhile, given the Project's key effort on gender balance, it is worth noting that 57.1% of attendees are female.

The first seminar, *APEC Public-Private Dialogue: Capitalize on Digital Technologies and Economy towards an Inclusive and Equitable Recovery*, was carried out in August 2022 in Thailand (hereafter referred to as Seminar 2022). Seminar 2022 focused on bringing together private and public actors with experience in digital technology and transformation to identify challenges and opportunities emerging from COVID-19 and providing suggestions on accelerating recovery through enhancing digital collaboration and connectivity between government, academia, and industry.

The second seminar, *APEC Public Private Dialogue: Fostering Collaboration and Innovation to Drive Resilient and Inclusive Recovery (online)*, was carried out in July 2023 online (hereafter referred to as Seminar 2023). Seminar 2023 focused on figuring out how cross-sector and -industry collaboration plays an increasingly important part in driving disruptive innovation against the background of unprecedented social and economic challenges caused by COVID-19.

The two seminars were sub-themed according to priorities of APEC Connectivity Blueprint for 2015–2025: a) Physical Connectivity: Digital infrastructure financing bottleneck through public private partnerships (PPPs); b) Institutional Connectivity: Regulatory outlook for sharing economy and more secure and trusted digital economy ecosystem; c) People-to-People Connectivity: Platforms and enabling technologies for people mobility in digital future.

The two seminars yielded five sets of policy recommendations as follows: a) ensure digital inclusion; b) foster a culture of innovation; c) adopt a collaborative and innovative mindset; d) integrate ethical and sustainable considerations on policy-making; and e) incentive flexibility and resilience.

PART TWO INTRODUCTION

2.1 Digitally-enabled Recovery in the Post-COVID Era

The outbreak of COVID-19 has brought about challenges to the world, including economic sluggish, governance dysfunction, social disparities, and economic disintegration. This project seeks to draw people's attention to the concept that digital technologies has been increasingly growing as a new instrument to sustain people's daily life, boost economy recovery and promote multilateral cooperation during and post COVID-19. Against the background of "COVID new normality", digital technologies and tools are massively adopted to tele-connect people all around the world in an effective and safe way. Those industries characterized by digital technologies has proved their flexibility and resilience in responding to social pandemic and crisis. It is expected that digitally-enabled economy is a key driver of recovery and growth in the aftermath of COVID-19.

2.2 The Project

The Project *APEC Public-Private Dialogue on Challenges, Opportunities, and Digitally-enabled Recovery in the Post-COVID Era* (APEC Project Number: PPSTI 07 2021A) comprises two seminars. These seminars focused digital innovation and post-COVID recovery issues, with a view to developing policy recommendations. The Project supports APEC's vision for an open, dynamic, resilient and inclusive Asia-Pacific community by 2040. It supports the vision by developing a public-private cross-sector approach to developing a sharing economy with digital technology connectivity, calling for stronger public-private partnerships (PPPs) which foster emerging engines of economic growth and inclusion and meet challenges such as disruptions in industrial transformation and ineffective digital technology innovation.

The Project invited all member economies in the Policy Partnership for Science, Technology and Innovation (PPSTI) to nominate best practices and invited experts (with public-private project experience) from both the public and private sectors to discuss specific cases, extract common visions, and develop policy recommendations which will help all members, especially developing economies, to achieve economic growth matters as digital technologies, gender equality and inclusion in innovation to make APEC a more inclusive community.

The Project addresses the capacity building needs of public and private sectors in tackling opportunities and challenges presented by COVID-19. It also enables female participants to speak out the challenges they are confronted with and take advantage of policies and tools for an equal development. Each seminar was organized around three sub-themes covered according to priorities specified in the APEC Connectivity Blueprint for 2015–2025, including: a) physical connectivity (i.e., digital infrastructure), b) institutional connectivity (i.e., a regulatory outlook as well as a more secure and trusted digital economy ecosystem), and c) people-to-people connectivity (i.e., platforms and enabling technology for personal mobility).

PART THREE SUMMARY AND ANALYSIS OF CASES FROM TWO SEMINARS

Seminar 2022: APEC Public-Private Dialogue: Capitalize on Digital Technologies and Economy towards an Inclusive and Equitable Recovery(hybrid), held in August 2022, in Thailand, comprised ten cases.

Seminar 2023: APEC Public-Private Dialogue: Fostering Collaboration and Innovation to Drive Resilient and Inclusive Recovery (online), held in July 2023, comprised seven cases.

Altogether, 17 cases were presented and each is summarized and analyzed individually below.

3.1. Summary and Analysis of Cases Presented in Seminar 2022

Mr. MA Leju, Head of Public Affairs, made a welcoming speech on behalf of the host organization, DiDi Global Inc. He thanked Republic of Korea; Malaysia; Thailand for co-sponsoring the project and welcomed all participants to participate in the seminar discussion. He welcomed all participants to actively contribute to discussion of the “APEC Public-Private Dialogue: Capitalize on Digital Technologies and Economy towards an Inclusive and Equitable Recovery” event.

He reoriented his introduction to stress that COVID-19 outbreak has brought many new circumstances at economic levels: In this context, digital technologies have been used extensively to recover people’s lives. Along the same lines, different industries have proven flexibility and resilience in response to the crisis. He also remarks that APEC has attached great importance to the digital economy and its cooperation. In 2017 APEC leaders realized the potential of the Internet and the digital economy and started working on a digital economy roadmap with guidance on key areas and actions to facilitate technological and policy exchanges, particularly to promote innovative, inclusive, and sustainable growth and to breach the digital divide in the APEC region.

This present dialogue aims to bring together private and public actors with experience in digital technology and transformation to identify challenges and opportunities emerging from COVID-19 and providing suggestions on accelerating recovery through enhancing digital collaboration and connectivity between government, academia, and industry. He further explained that member economies should work together to share the benefits of the digital industry. This event’s objective is to promote cooperation in digital technologies and the digital economy and propose valuable policy recommendations.

Ms. Yang Xuemei, PPSTI Chair & Division Director, Department of International Cooperation, Ministry of Science and Technology, People’s Republic of China, made an online keynote address. She welcomed all participants to the seminar, addressing the challenges posed by COVID-19 such as economic slowdown, governance issues, and social disparities. Emphasizing the growing significance of digital technologies during and post-COVID, she highlighted their role as a crucial tool connecting people globally in a safe and effective manner. Industries leveraging digital technologies showcased enhanced flexibility and resilience, playing a key role in economic recovery.

Looking ahead, she stated that around seventy percent of new economic value over the next decade is expected to be derived from digitally-enabled platforms. APEC has prioritized digital technologies and the digital economy, evident in the APEC Internet and Digital Economy Roadmap adopted in 2017 by APEC Leaders. The roadmap guides key areas and actions to foster technological and policy exchanges among member economies, promoting innovation, inclusivity, sustainable growth, and bridging the digital divide in the APEC region. Ms. Yang highlighted the significance of the ongoing dialogues, allowing member economies to discuss domestic challenges and opportunities arising from COVID, with suggestions to accelerate recovery through enhanced digital collaboration.

Encouraging collaboration among governments, academia, and industry, she invited participants to contribute their experiences and professional insights. Ms. Yang emphasized the value of information exchange, collaborative innovation, and proposing policy recommendations to advance digital technology and the digital economy.

Dr. Pasit Lorterapong, Deputy Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, Thailand also greeted all the attendants and explained the importance of participating in this event and connecting with the representatives from different economies. He mentioned that digital technologies have allowed more opportunities for delegates and colleagues to communicate. He further explained that this dialogue aims to bring together public and private delegates from APEC member economies, to evaluate domestic challenges and emerging opportunities in the field of digital economy and transformation in COVID-19 new normal, as well as in aspects such as restarting the economic growth and shaping it to be more inclusive and resilient through digitalization, research, and business investment. He stressed that this dialogue has the chance to become a stage where participants can share best practices and policies and gain a better understanding of the digital economy and its role in post COVID recovery as well as recognize challenges and opportunities in the private and public sector. He also mentioned the opportunity to establish a network to cooperate and enhance digital capabilities. As conclusion, he added that Thailand has recognized the importance of digital transformation and has initiated various programs under the Thailand 4.0 policy to accelerate and support digital transformation for secure, balanced, sustainable, and inclusive growth.

Session 1 (morning): Building up COVID-19 New Normality via integrating Digital Technologies into All Sectors.

3.1.1. Case 1/10: Innovation Research and Collaboration for Digital Transformation by Ministry of Science, Technology, Knowledge and Innovation, Chile

Dr. Flavio Salazar-Onfray, Chile's Minister of Science, Technology, Knowledge, and Innovation, presented a comprehensive case focusing on three pivotal factors for transitioning to a knowledge society: universal education, diverse knowledge promotion, and international collaboration for global challenges. He highlighted Chile's commitment to increase research and development funding to 1% of GDP in the coming years. Emphasizing the significance of the newly formed Ministry, he outlined its role in supporting COVID-19 research and providing data for pandemic management. Noteworthy were Dataset Repositories, exemplified by those for Climate Change and COVID-19 statistics, offering vital information for informed decision-making.

Dr. Salazar-Onfray spotlighted Chile's pioneering National Artificial Intelligence policy, emphasizing the need for public-private collaboration and international cooperation in its implementation. The presentation touched upon OBSERVA, a Dataset Repository supporting policy

decisions in science and technology. The importance of Chile's natural laboratories in fields like Astronomy and Oceanography was underscored. The National Development Plan, geared towards sustainable development, highlighted principles such as sustainability, collaboration, and gender equality.

Critical pillars for scientific and technological advancement included strengthening the STI system, developing regional research nodes, ensuring domestic sovereignty in scientific capabilities, and democratizing knowledge. Flagship Projects, like local vaccine production and aerospace research, were presented, alongside upcoming programs addressing lithium, big data, climate change, and ecological crises.

The discussion delved into data governance, open research, and fostering innovation, particularly within small technology-based companies. Dr. Salazar-Onfray stressed ongoing support programs for startups and SMEs, with future plans to enhance collaboration with international partners. Equality, inclusion, and decentralization of research capacities were highlighted, with a call for improved conditions for women in science and technology. The presentation identified challenges in data management, ethical AI implementation, and the ongoing need for collaborative efforts in international cooperation and digital transformation.

3.1.2. Case 2/10: Early Warning and Early Action: WMO's initiatives by World Meteorological Organization

Mr. Jun Yu, Regional Officer from the World Meteorological Organization's Regional Office for Asia and South-West Pacific Development and Regional Activities Department, presented the second case. He highlighted the prevalence of weather, water, or climate-related disasters, constituting 79% of global disasters between 1970 and 2019. Despite decreasing casualties due to improved preparedness, economic losses are on the rise, accounting for 56% of deaths and 75% of related losses. Notably, 'The Global Risks Report 2022' forecasts severe global risks, including Climate Action Failure, Extreme Weather, and Biodiversity Loss.

Focusing on Sustainable Development Goal No. 13, "Climate Action", Mr. Yu expressed concerns about unmet targets despite the 2015 Paris Agreement. Increasing greenhouse gases and temperatures persist, with consequences like heatwaves and wildfires affecting Europe, Africa, and Asia. The alarming rise in global temperatures, recorded as the warmest in the last decade, contributes to extreme weather events impacting various economic sectors.

Mr. Yu emphasized the significance of Early Warning Systems, citing the 'Adapt Now' report, indicating a potential 30% reduction in damages from storms or heatwaves. However, one in three people globally lacks early warning coverage. He introduced a UN initiative to protect every person through early warning systems within five years, proposing a WMO Integrated Global Observing system for global weather predictions.

Highlighting region-specific climate reports for Asia and the South-West Pacific, Mr. Yu stressed the importance of early warning systems not only for weather but also for potential biological hazards like COVID-19. In conclusion, he underscored the continued impact of climate change on economies, emphasizing the urgent need for improved climate action, supported by new data, shared technological solutions, and global observing systems.

3.1.3. Case 3/10: Digital Transformation Journey of Upstream Energy towards Sustainability by PTT Exploration and Production, Thailand

Mr. Chatchai Kongdachudomkul, Vice President for Transformation at PTT Exploration and Production in Thailand, presented a case on the digital transformation of the oil business. Acknowledging challenges like the pandemic, economic crises, and fossil fuel concerns, he highlighted the potential of emerging technologies. The importance of transformation in an adaptive mode, characterized by agility and resilience, was emphasized over survival mode's strength and stability. PTT's strategic framework aims to reduce greenhouse gas production significantly by 2030, 2040, and achieve net zero emissions by 2050 through initiatives like Carbon Capture & Utilization (CCU) and Carbon Capture and Storage (CCS) projects.

The focus shifted to competitive performance and long-term value creation, emphasizing digital initiatives for organizational transformation. The speaker stressed the need to change mindsets and capabilities, transforming the workplace with smart technologies. Digital Transformation, he argued, should yield cash benefits (revenue uplift and cost reduction) and non-cash benefits (cost avoidance). Initiatives and key enablers were outlined, emphasizing the importance of people's capability, culture, and mindset over technology tools, promoting the "Head-Heart-Hand" model for digital innovation incubation.

This case underscored that Digital Transformation is a journey requiring leadership, purpose, and cultural mindset shifts before technological changes. It highlighted the necessity of managing change to adapt mindsets, culture, and capabilities in member economies to navigate a potentially more volatile and complex environment shaped by digital technologies.

3.1.4. Case 4/10: Digital Technologies for the Sustainable Transformation of Agri-food Systems by Food and Agriculture Organization

The fourth case, presented by Mr. Dejan Jakovljevic, Director and Chief Information Officer of the Digitalization and Informatics Division at the Food and Agriculture Organization (FAO), addressed the impact of the COVID-19 pandemic on agri-food systems and the subsequent rise in world hunger in 2022. Despite global commitments to eradicate hunger by 2030, world food prices hit an all-time high in March 2022. Projections indicate that around 670 million people will still face hunger in 2030 due to various factors like war, climate events, and local disruptions. The speaker emphasized the role of digital technologies in agri-food systems, acting as accelerators to bridge gaps and enable transformative actions. Affordable access to digital networks and public goods is crucial for rural communities.

The presentation proposed strengthening FAO's role in promoting digital technologies for inclusive and sustainable food systems. This involves improving real-time information access, engaging farmers in technology benefits, enhancing market access through digital tools, and digitalizing emergency interventions. The UN Secretary-General's Digital Cooperation Roadmap, focusing on digital public goods and global cooperation, was highlighted. Specific examples, such as the Hand in Hand Geospatial platform and the Digital Villages Initiative in Asia and the Pacific, demonstrated the practical application of digital tools. The FAO COVID-19 Response and Recovery Program, with a focus on digitalization, was discussed.

In light of rising food prices, exacerbated by inflation and supply chain challenges, collaborative efforts across economies are imperative for sustainable agri-food systems, supported by digital technologies.

3.1.5. Case 5/10: Acceleration of the Digitalization against COVID-19, by Science and Technology Policy Institute (STEPI), Republic of Korea

The fifth case, presented by Ms. So Hyun Kwon, Senior Researcher from the Science and Technology Policy Institute, Republic of Korea, highlighted the accelerated shift towards a cashless society due to COVID-19. The global e-commerce revenue surged by nearly 25% from 2019 to 2020 and an additional 17% from 2020 to 2021. New contactless services and digital technologies emerged, including video conferencing, telehealth, distance learning, online shopping, video streaming, and autonomous services like unattended stores and drone delivery.

The speaker emphasized the drastic increase in overall technology adoption, reaching almost 95% in 2021 from approximately 75% in 2019. The presentation focused on businesses' efforts to meet evolving demands, revealing that digital customer interactions are three years ahead globally, possibly accelerating digital transformation by seven years globally and ten years in the Asia-Pacific region. The pandemic exposed economic unpreparedness for shocks, deepening disparities between developed and developing economies, exacerbating existing socioeconomic inequalities.

Asia Pacific leads global changes in future technologies, such as artificial intelligence and fintech, but regional differences in readiness and regulatory capacities persist. Digitalization, crucial for economic recovery, necessitates public policies addressing digital divides. The case highlighted the importance of policy cooperation within APEC, advocating for a focus on digital inclusion through convergence, collaboration, and effective cooperation channels between governments, private companies, and experts.

Session 2 (afternoon): Digital Transformation post COVID-19.

3.1.6. Case 6/10: Digital Inclusion in DEPA and other FTAs by the Ministry of Foreign Affairs and Trade, New Zealand

The sixth case, presented by Mr. Chris Barber, Services Trade Specialist from the Ministry of Foreign Affairs and Trade, New Zealand, shared his economy's vision for Digital Inclusion outlined in the upcoming 'Digital Strategy of Aotearoa'. This strategy, featuring Inclusion, Trust, and Growth as its pillars, outlines priorities for the next 2-5 years with extended outcomes until 2032.

Mr. Barber emphasized three domestic initiatives in New Zealand. The first targets rural broadband connectivity, ensuring 99.8% of citizens have access to ultra-fast broadband by 2023. The second initiative supports remote learning during COVID-19, providing devices and internet connections to unconnected households. The third involves digital skills training and SME support, including advisory services, digital skills training investment, and funding for public libraries.

He highlighted the integration of digital inclusion language in trade agreements, such as the Digital Economy Partnership Agreement (DEPA) with Chile and Singapore. The digital module within

DEPA covers inclusion, interoperability, and cooperation, addressing themes like women, rural communities, Maori, SMEs, e-payments, data protection, and emerging technologies.

The speaker emphasized cooperation in sharing best practices, exchanging experts, and collaborating with various stakeholders. During the Q&A, he discussed negotiating provisions, including digital inclusion in non-traditional trade policy areas, and the importance of setting achievable challenges. Regarding older trade agreements, he acknowledged the need for upgrades. Responding to questions about measuring success, he underscored the early stage of digital inclusion efforts, focusing on fostering collaboration initially.

Looking ahead, the challenge is to implement DEPA, seek additional members, and advocate for changes within the WTO, balancing privacy and public policy protection with trade facilitation.

3.1.7. Case 7/10: RPA+AI Empowers Digital Transformation in Enterprises in Asia Pacific by Cyclone Robotics, Singapore

The seventh case, presented by Mr. Bryan Tan, APAC Regional Marketing Director at Cyclone Robotics, Singapore, delved into the definition, impact, scenarios, and application cases of RPA & AI. Mr. Tan initiated his presentation by defining Robotic Process Automation (RPA) and highlighting its positive impacts on businesses, emphasizing its role in sustainability, cost reduction, increased productivity, and improved data quality. He stressed that automation, especially in the context of the COVID-19 pandemic, is crucial for businesses aiming to remain relevant and efficient. The speaker introduced the concept of Hyper Automation, where RPA collaborates with Machine Learning and Artificial Intelligence, illustrating typical application scenarios across various business functions.

The presentation further discussed the transition from RPA to Hyper Automation, emphasizing factors like digitalizing repetitive tasks, connecting information silos, adopting Agile IT architecture, and reducing manual labor. Actual examples of RPA applications in the financial, energy, healthcare, and manufacturing sectors were presented, showcasing improved efficiency, reduced errors, and enhanced business resiliency through the combination of RPA and AI.

In the subsequent discussion, Mr. Tan addressed steps to achieve Hyper Automation, emphasizing the identification of business pain points, focusing on areas with quick transformation potential, and conducting proofs of concept. He clarified concerns about job displacement, emphasizing that digital solutions are complementary to human work, enhancing rather than replacing jobs. Ethical considerations in the medical field were also discussed, highlighting applications like patient record validation and prescription preparation using AI to improve legibility.

Overall, the presentation shed light on the practical applications of RPA and AI, emphasizing their collaborative potential to drive business efficiency and resilience. Ethical considerations and the human-centric approach to technology integration were central to the discussion.

3.1.8. Case 8/10: Fintech Ecosystem in Peru and Regulatory Outlook by Embassy of Peru in China, Peru

The eighth case, presented by Mr. Ivan Tello, Head of Science and Technology at the Embassy of Peru in China, delved into the rise of the Fintech market and its implications in Peru during the COVID-19 pandemic.

Commencing with a definition of Fintech, Mr. Tello elucidated its three components: Financial Sector, Business Model, and Technology. Notable applications span foreign exchange, lending, payments, traditional banking, SME banking, and insurance. Emphasizing the transformative impact in China by non-financial tech giants like Alibaba and Tencent, the speaker highlighted opportunities for traditional financial institutions to collaborate with Fintech.

Factors driving the Fintech surge included decreasing technology costs, the rise of digital payments, cross-border payment systems, and increased adaptability to technologies. The speaker stressed the importance of flexible and proportional regulation, focusing on aspects like money laundering, cybersecurity, and data privacy. Excessive regulation, if not aligned with technology developments, was deemed potentially hazardous.

Insights into Peru's Fintech landscape revealed it ranks sixth/seventh in Fintech ventures in Latin America. The COVID-19 pandemic accelerated Fintech adoption, particularly benefiting the unbanked population and SMEs. Most sought-after services included loans, payments, remittances, and asset management. Challenges in Peru encompassed limited Fintech knowledge, concentration in urban areas, and early-stage developments. Collaboration with traditional financial institutions, more flexible regulations, and technology investment were identified as key drivers for future growth.

Addressing questions, Mr. Tello foresaw continued Fintech growth in Peru and highlighted the government's collaboration with Fintech during the pandemic for financial aid distribution. He underscored the need for fair and flexible regulations, cautioning against excessive measures that could hinder development while emphasizing the importance of ethical considerations in handling vast amounts of information.

3.1.9. Case 9/10: Vaccine Management and Vaccination Certificate Ecosystem by MIMOS Berhad, Malaysia

In the ninth case, Mr. Ng Kang Siong, Principal Researcher & Head of the Information Security Laboratory at MIMOS Berhad, Malaysia, addressed the Health Care sector's challenges and lessons in the vaccination ecosystem and certification processes during the COVID-19 pandemic. Initiating with a detailed overview of the vaccination process, the speaker emphasized the potential presented by the crisis to leverage technology for comprehensive online tracking of vaccine logistics. This encompassed various stages, from commissioning to dispensing, recipient consent, vaccination location, and event details, culminating in a vaccination certificate binding recipient ID with traceable vaccine information.

Further elucidation on the vaccination certificate ecosystem included the vaccine management server, private blockchain, certificate server, hardware security module, and the vaccination certificate verifier (VCV) app. The system aimed to manage vaccine distribution, prevent counterfeit vaccines, curb the black market, ensure authentic certificates for movement control, and guarantee robust

privacy and security controls. The app's role in vaccine traceability and certificate verification was emphasized, with features developed by the private sector, including integration with multiple vaccination centers and user access control.

The speaker underscored the importance of a cross-border vaccination certificate recognition system and the need for international collaboration on standards for offline verification mechanisms. Addressing challenges, he highlighted the management of diverse sources and forms of vaccines, privacy protection, and the pivotal role of blockchain for vaccine traceability.

Audience queries focused on the app's adaptability for future pandemics and potential use in health data collection. The speaker affirmed its successful verification and outlined plans for further traceability in 2025. He also suggested potential uses for the app in tracing other medications or vaccines, contingent upon data standardization. Final remarks emphasized the importance of involving multiple stakeholders for successful development, with key factors being robust privacy protection, security controls, and the development of international standards for offline verification mechanisms.

3.1.10. Case 10/10: APEC Closing the Digital Skills Gap Initiative by Wiley, the United States

In the tenth case, Mr. Chor Meng Tan, Senior Director at Wiley, USA, presented a roadmap addressing the digital skills gap in the APEC region by 2030. Emphasizing the exacerbated gap due to the COVID-19 pandemic, the speaker underscored the collective responsibility of stakeholders—governments, employers, academia, and training providers—to invest in digital upskilling. He recalled the 25th APEC Economic Leaders meeting statement supporting upskilling for workers' employability in the digital age.

Wiley's involvement in closing the gap was elucidated through a six-year roadmap initiated with the APEC Human Resources Development working group. Project DARE, launched in 2017, engaged stakeholders from 18 Asia-Pacific economies to develop APEC Data Science & Analytics (DSA) competencies. The initiative gained momentum during the pandemic, emphasizing the urgency to meet the 2030 goals. Noteworthy actions included the Digital Readiness Checklist, a website launch, and the Trends and Insights Report. Deliverables encompassed 10 recommended APEC DSA competencies, a readiness checklist, a Digital Skills Gap Index, and the APEC Closing the Digital Skills Report.

Future goals included laying out a common definition of digital skills, setting targets, and detailing APEC-wide actions by 2030. The speaker presented the goal for 2025 to halve the digital skills gap and improve readiness by 50%, culminating in full readiness by 2030. Key recommendations highlighted understanding employee needs, leveraging government policies for digital skills investment, and emphasizing career pathways in the evolving learning landscape.

Responding to audience queries, the speaker clarified the roles of the Digital Readiness Checklist and Digital Skills Gap Index, emphasizing their reference nature for stakeholders to develop policies or programs and assess the preparedness of economies, respectively.

3.2. Summary and Analysis of Cases Presented in Seminar 2023

Mrs. Silvia Forero made an introduction speech on behalf of the host organization. She focused on the importance of collaboration and innovation between the different sectors, emphasizing that it is not possible to face the complex challenges by acting alone, thus, this dialogue will serve as a platform to exchange ideas and practices seeking a collective response to these issues. She thanked all participants for contributing to the “APEC Public-Private Dialogue: Fostering Collaboration and Innovation to Drive Resilient and Inclusive Recovery” event.

Mr. Taj Meadows, Head External Affairs International Business Group DiDi also greeted all the attendants and explained the importance of participating in this event and connecting with the representatives from different economies. The speaker highlighted the transformative potential of adopting a collaborative and innovative mindset to address unprecedented challenges faced globally. Emphasizing historical examples, the speaker noted humanity’s progress stemmed from collaboration and innovation, even amidst initial apprehensions and fears about new technologies such as cars and robotics. The speech underscored the need to work collectively, transcending individual opportunities, and overcome uncertainties to find solutions. Acknowledging the enormity of current challenges, including managing advanced technologies and mitigating climate change, the speaker expressed optimism in humanity’s ability to innovate and collaborate effectively. The workshop’s purpose was outlined: exploring ways to foster collaboration and innovation to create resilient and inclusive societies. The speaker expressed gratitude for participants’ contributions, expressing confidence that collective expertise, insights, and ideas would pave the way for a more inclusive and resilient future. The address concluded with a call to embark together on the journey of knowledge sharing and forging new paths toward the desired future.

Mr. Sergio Cabrera, Colombian Ambassador in China, extended a warm welcome to the public and acknowledged the profound changes accelerated by new technologies; he emphasized the need for extensive coordination among governments, academia, and the private sector to assimilate new developmental processes. International cooperation was highlighted as pivotal in capitalizing efforts for domestic economies, facilitating foreign investment and knowledge transfer.

Furthermore, he remarked the Colombian-Chinese commercial relationship as a successful example of persevering and strengthening during the pandemic. From a governmental perspective, the promotion of investment is considered a cornerstone for reindustrialization, enhancing the quality of manufacturing and the resilience of productive sectors. Infrastructure expansion and climate-adaptive adjustments are deemed essential to boost productivity and competitiveness.

Likewise, he emphasized on diversification of the export portfolio, focusing on digitalization, technification, and the creation of innovation ecosystems across various sectors. China’s role as Colombia’s second commercial partner in Asia underscores the importance of increasing commercial exchanges to develop value-oriented sectors with international standardization, predictability, efficiency, and adaptability. In addition, cooperation is advocated in sectors like health, industry, information technology, and energy transition. He mentioned the importance of the learnings from China, particularly regarding three aspects of improving the innovation environment through collaboration, consolidating global value chains, and facilitating economic openness with social and environmental responsibility. He hoped this dialogue fosters integration and mutual benefits for both economies and societies.

Mr. Marcos Llinás, Director of the Division of Production, Productivity and Management of the Economic Commission for Latin America and the Caribbean (ECLAC), expressed gratitude for the opportunity to discuss collaboration and innovation in a public-private dialogue. He highlighted the urgent need for a new development model in Latin America and the Caribbean, emphasizing the necessity of inclusive and sustainable productive transformation amid significant challenges like poverty, inequality, education, and health issues. The region's low growth, primarily due to stagnant productivity, was identified as a major concern, leading to economic dualism and inefficient resource allocation.

To address these challenges, he advocated for industrial policies focusing on economic upgrading and diversification. In addition, he stressed that these policies require a trial-and-error approach, learning from failures and successes. Furthermore, he highlighted the importance of local-level interventions, emphasizing tailored solutions and empowering local actors. Governance, seen as the coordination of efforts, actors, and resources, was deemed crucial for effective productive development policies, requiring various forms of coordination such as public-private, public-public, private-private, and central-regional authorities.

Mr. Marcos Llinás proposed cluster initiatives as a strategic approach, bringing together multiple actors to improve the productivity of specific economic agglomerations. While acknowledging existing initiatives in several Latin American economies, he highlighted the need for better articulation of regional policy development. In the face of limited fiscal resources, collaboration between public and private sectors, academia, and economies have to be considered as essential. Finally, he called for organizations to support these collaborations and adapt to the challenges ahead.

Afterwards, Mrs. Forero introduced the participation of Mr. Gaspar Morgado, Vice Director of Innovation at VID University of Chile, who acted as moderator for the first session of the day "Driving Disruptive Innovation through Cross-Sector and -Industry Collaboration". The main goals of this session were to share experiences and insights from different sectors and industries experts on driving disruptive innovation through collaboration, and understanding how collaboration can drive innovation and resilience by highlighting successful examples of cross-sector and industry collaboration.

Session 1 (morning): Driving Disruptive Innovation through Cross-Sector and -Industry Collaboration.

3.2.1 Case 1/7: Cross-Sector Partnerships and Digital Technology to Drive Innovation

Mr. Jorge Fernando Negrete, President and founding partner of Digital Policy & Law Group México, presented this first case. He expressed gratitude for the opportunity to address the audience, highlighting the exceptional nature of the gathering and the distinguished speakers. The presentation delved into the pivotal role of the ongoing digital revolution in reshaping societal, economic, and cultural landscapes. Additionally, he emphasized the transformative power of technologies like mobile communication, internet, broadband, and artificial intelligence, the speaker traced the evolution of digital telecommunications through various generations.

Furthermore, the speaker remarked that the advent of 4G marked a significant shift, erasing distinctions between information technology and telecommunications in legal realms. However, the

speaker underscored the tension arising from attempts to reconcile old legal frameworks with the innovations and business models brought forth by this digital era, particularly in the context of human rights and economic competition.

Finally, the speaker anticipated the imminent challenges posed by the maturation of 5G technology, emphasizing the need for a nuanced understanding of the legal frameworks governing the evolving digital landscape and its associated infrastructural and business model changes.

3.2.2. Case 2/7 Promoting inclusion: Growth and Digital Disruption

Mr. Raimundo Morales, CEO, Yape Peru, presented the second case. The speaker expressed gratitude for the invitation and proceeded to discuss Yape's role in financial inclusion in Peru. Yape, a peer-to-peer mobile payment system, was introduced in 2016, offering functionalities such as merchant payments via telephone numbers or QR codes. He shared a video showcasing Yape's usage and outlined its evolution over the years, emphasizing its simple yet continuously evolving nature.

With over 12 million users, Yape has become a significant payment network in Peru, handling a substantial number of transactions. Notably, Yape has played a crucial role in financial inclusion, bringing over 2 million unbanked individuals into the financial system. The speaker highlighted the application's positive impact, making it one of the top digital brands in Peru.

In addition, he talked about the lessons learned during Yape's journey, which included embracing uncertainty, prioritizing simplicity, adapting to changing circumstances, and successfully disrupting traditional banking models. The speaker also discussed navigating the challenges of disrupting within a long-established institution like Banco de Crédito del Perú (BCP). Looking ahead, Yape aspires to evolve from financial to digital inclusion, aiming to be the preferred app for daily needs among Peruvians.

3.2.3. Case 3/7: Public Sector Innovation, Business Productivity and Competitiveness Improve Efficiency and Resilience

The third case was presented by Mrs. Mónica Ortiz, Technical Director of Innovation and Business Development, National Planning Department of Colombia. The speaker thanked to the Asia-Pacific Economic Cooperation and the Digital Diplomacy Team for the invitation to discuss collaboration and innovation post-COVID in Colombia. The National Planning Department (DNP) was introduced as the government entity responsible for coordinating planning, policy cycles, and resource allocation. The DNP's primary role, in the initial phase of the new government, involved constructing a domestic development plan for the next four years, incorporating innovative approaches.

The speaker emphasized the innovative nature of the plan, which involved engaging with citizens in different territories through dialogues. This process aimed to identify regional concerns and contributed to designing a development plan with a regional focus. The plan focused on five major transformations, highlighting the importance of land use, human welfare, and regional convergence.

Innovation and competitiveness were particularly emphasized in two transformations, mainly targeting popular economy groups (which includes grassroots economies and microbusinesses) and productive transformation through industrialization policies. The speaker underscored the

significance of impact evaluation, citing the example of the Productivity Factories program, demonstrating that small firms benefited more significantly from interventions.

The relevance of impact indicators in strategic public policies was stressed, exemplified by the Reindustrialization policy. This policy, spanning ten years, aimed at achieving productive transformation in Colombia, with goals such as reducing productive gaps and diversifying the internal supply and exports. The importance of long-term impact measurement and the emphasis on knowledge, productivity, sustainability, and inclusiveness were highlighted.

The speaker outlined five strategic sectors: energy transition, agro-industry, provision of modern services, defense, and territorial sectors. These sectors represented an innovative approach to policymaking, considering regional needs in a bottom-up manner. Additionally, building a culture of innovation within the public sector was deemed crucial for testing and improving ideas systematically.

Finally, the speaker outlined four dimensions to strengthen capabilities for experimentation: updating regulations, removing barriers, providing high-end infrastructure, and offering incentives. The overall message conveyed was that consulting communities, implementing an evaluation agenda, and fostering a culture of innovation through updated regulations and incentives contribute to more inclusive, adaptable, and effective public policies.

Session 2 (afternoon): Driving Disruptive Innovation through Cross-Sector and -Industry Collaboration

3.2.4. Case 4/7: From a Gender Perspective: Promote Innovative, Inclusive and Sustainable Societies

The fourth case was presented by Mrs. Cristina Paez, CEO, IPSOS Ecuador. She underscored the honor of participation and conveyed appreciation for the audience's time and the opportunity to discuss a crucial theme. With a background in gender perspectives, she delved into the challenge of promoting innovation, inclusion, and sustainability in the Latin American context, reflecting on the urgency of achieving balanced societies. The speaker drew from personal experiences and data to highlight rejection of initiatives addressing inequality, emphasizing the societal bias hindering capable women from reaching leadership positions.

Presenting global survey results on gender equality perceptions, the speaker noted a commitment to the cause but highlighted skepticism about its pace and impact on men. Concerns emerge about initiatives being perceived negatively, contributing to societal resistance. Latin American economies exhibited heightened challenges, with survey responses indicating resistance to further equality initiatives and beliefs that men face discrimination. The speaker identified barriers to action, including skepticism, lack of knowledge, perceived irrelevance, and fear of physical threats.

Finally, she proposed initiatives to address these challenges, such as promoting women's entrepreneurship, enhancing women's roles in agriculture, incorporating technology for inclusivity, advocating sustainable practices, and prioritizing girls' education. The imperative of narrowing educational gaps and implementing gender-responsive urban planning is highlighted. The speaker called for collective action from business, academic, and NGO leaders to ensure the safety and freedom of girls and women in Latin America. The presentation encapsulated a call to action to accelerate progress in gender equality.

3.2.5. Case 5/7: Exploring the impact of Telecommunications and the Internet in Resilient Societies

Dr. Roslyn Layton, Senior Vice President, Strand Consult, who expressed gratitude and enthusiasm for the gathering, acknowledging organizers and colleagues, presented the seventh case. She addressed the economic implications of broadband for inclusion, particularly post-pandemic. Emphasizing the transformative role of telecommunications, she highlighted the USD2 trillion gap in network investment globally, affecting half the world's population. Focusing on the gender aspect, the speaker underscored the importance of women's online presence, linking it to family improvement and societal progress.

Referring to a UN report, the speaker contends that prevailing broadband business models are outdated and suggested incorporating major content providers into financing models. She advocated for a shift in business strategies involving leading technology platforms, citing regulatory proceedings in various economies, including Korea. The speaker introduced the concept of broadband cost recovery, a linear process to identify and resolve gaps in network infrastructure, engaging technology companies for sustainable solutions. She also remarked the urgency of addressing these issues to ensure universal connectivity and digital inclusion, especially for women.

3.2.6. Case 6/7: Promoting Inclusion: Building Trade Negotiations and Collaboration

The sixth case was presented by Mrs. Marcela Otero, General Director for Multilateral Economic Affairs, Sub Secretariat for International Relations of Chile, who expressed gratitude for the opportunity, emphasizing their commitment to promoting inclusion and gender equality, aligning with the priorities of the Chilean government. Stressing the economic and social benefits of gender equality, the speaker cited data indicating women's positive impact on local communities and social development. She also discussed the nexus between women's empowerment, trade, and economic growth, highlighting research from the World Bank and the World Trade Organization.

The speaker delved into the challenges faced by women exporters, focusing on discriminatory practices and barriers to internationalization. In addition, she emphasized the importance of addressing these barriers for gender-inclusive trade policies. Furthermore, she presented initiatives undertaken by Chile, including the incorporation of trade and gender chapters in various Free Trade Agreements (FTAs) with economies like the U.S., Canada, Argentina, and the European Union. The provisions aimed to recognize and rectify gender inequalities in international trade, outlining frameworks for promoting women's economic empowerment. Finally, the speaker acknowledged the limited representation of women-led companies in Chilean exports and underscored ongoing efforts to gather more precise data for informed policy decisions.

3.2.7. Case 7/7: Drive Disruptive Innovation through Cross-sector and -industry Collaboration

The seventh case was presented by Mr. Saul Kattan, Chairman of the board of directors of Ecopetrol, currently responsible for the digital transformation and cybersecurity of the Colombian Government. The speaker underscored the longstanding economic disparity between large and small economies

and perceives a current window of opportunity for innovation through cross-economy and cross-industry collaboration. Emphasizing the critical role of technology in the past decade's progress, the focus is on fostering collaboration, particularly through enhanced connectivity. In Colombia, the strategy involves viewing connectivity not as a luxury but as a necessity, intending to bridge the economic gap. Key initiatives include bolstering connectivity infrastructure with technologies like optic fiber and satellites. The second prong of this approach targets digital transformation education, viewed as a catalyst for short-term change. The argument extends to the socio-economic impact, asserting that improved connectivity can mitigate factors leading to violence and crime, particularly among the economically disadvantaged in Colombia. The overarching aim is to showcase tangible results within three to five years, fostering collaboration with APEC member economies.

PART FOUR DISCUSSION AND FINDINGS

4.1. Seminar 2022

Throughout the day, key conclusions and reflections emerged from diverse presentations and discussions. First and foremost, the significance of people's mindsets was underscored. The advent of COVID-19 compelled widespread use of advanced devices and software that were previously overlooked. Convincing individuals to embrace this transformation necessitates compelling arguments, emphasizing the need to move beyond comfort zones. Acknowledging the inherent difficulty of any transformation involving people, there was a unanimous agreement on the necessity of clarity about its purpose, value, and benefits for success.

Parallely, the potential of communities to harness the benefits of the digital economy and solutions was emphasized for immediate positive outcomes. Examples ranged from direct market connections through e-commerce, eliminating intermediaries, to utilizing technologies like remote sensing, geospatial, big data, and artificial intelligence. However, a cautious approach was advised, urging adaptation of digital technologies to community needs and active community involvement in the transformation process. It was stressed that building a comprehensive ecosystem around these services is equally crucial.

Another pivotal aspect related to people was the significance of monitoring and forecasting to prevent weather-related disasters. Leveraging technology for data collection, sharing, and analysis at both global and local levels was identified as vital for providing early warnings, enhancing preparedness, and mitigating impacts on lives and finances.

The glaring issue of the unequal distribution of digital transformation, especially during and after the pandemic, was highlighted. Digital technologies enabled only those with access to function during lockdowns. Addressing this, it was emphasized that technology adoption must be inclusive, considering aspects such as gender inclusion to address inequalities. Noteworthy examples of digital inclusion, such as those in Trade Agreements, the APEC roadmap for closing digital skills gaps, and the use of blockchain in various sectors, were presented.

Innovations in the education sector, particularly in online education for companies and workers, necessitated finding ways to upgrade and retrain workers in digital skills. Suggestions included public-private partnerships for educating teenagers about RPA and digital transformation. The public sector's role in creating programs for human capital development was highlighted, recognizing COVID-19 as evidence of the digital gap and the need to make the ecosystem more inclusive, starting with education.

In the realm of international cooperation, the importance of avoiding data silos and sharing public and private data for disaster prevention was stressed. Proposals included a move towards a data-sharing or open data platform within APEC, considering data privacy and ethical use. The role of open data in Research, Development, and Innovation for increased resilience to climate change and crises was emphasized. Joint preparation of multi-hazard early warning systems and a collaborative knowledge-sharing platform were proposed.

The significance of partnership and collaboration, especially public-private collaboration, was highlighted between government, academia, and the private sector. Governments were urged to address issues like standardization and private sector involvement, ensuring the protection of the public interest.

In conclusion, discussions revolved around achieving a compromise and marriage between policy, people, process, and technology in addressing organizational transformation. The consensus was that all these elements should be considered in the planning and implementation phase of a Digital Transformation case. Participants agreed on adapting different experiences to other economies in the context of international cooperation, emphasizing APEC economies advising and collaborating to share digital benefits and expedite recovery.

4.2. Seminar 2023

The seven cases featured notable speakers emphasizing the importance of collaboration and innovation in addressing global challenges. Discussions included the need for extensive coordination among governments, academia, and the private sector to assimilate new developmental processes. Cases presented highlighted initiatives promoting gender equality, digital inclusion, and resilient societies, emphasizing the imperative of cross-sector and cross-industry collaboration. The importance of inclusive trade policies, digital transformation education, and sustainable practices to address societal challenges was underscored. The overarching goal was to explore policies and practices fostering collaboration and innovation for a more inclusive and resilient future.

Regarding industry collaboration and gender disparities, the speakers highlighted the importance of inclusive policies, trial-and-error approaches, and collaboration between public and private sectors. Challenges in implementing gender-inclusive policies include societal bias, resistance to equality initiatives, and discriminatory practices. Overcoming these challenges involves promoting women's entrepreneurship, enhancing women's roles in various sectors, and fostering a culture of innovation within the public sector.

Technology and digital innovation were seen as catalysts for gender equality. Dr. Roslyn Layton emphasized the transformative role of telecommunications in societal progress and advocated for business strategy shifts. The importance of technology in promoting gender equality, inclusion, and sustainability was underscored, with the need for updated regulations, incentives, and community consultation. Overall, the event presented a comprehensive exploration of strategies and initiatives, contributing significantly to the discourse on resilient, inclusive, and innovative societies.

To promote gender equality and inclusion in innovation, speakers advocated for specific policies and practices. Initiatives included promoting women's entrepreneurship, enhancing roles in agriculture, incorporating technology for inclusivity, advocating sustainable practices, and prioritizing girls' education. Industry collaboration was seen as instrumental in supporting the implementation of such policies by fostering partnerships between public and private sectors, academia, and regions.

Organizations can ensure gender diversity by implementing strategies such as updating regulations, removing barriers, providing high-end infrastructure, and offering incentives. Additionally, collaborative efforts between public and private sectors, academia, and regions are crucial for overcoming challenges in implementing gender-inclusive and sustainable policies.

In conclusion, the event underscored the importance of collaboration, innovation, and inclusivity across various sectors. Speakers provided valuable insights into promoting gender equality, implementing inclusive policies, and leveraging technology for sustainable and innovative development.

PART FIVE POLICY RECOMMENDATIONS

Based on the summary and analysis of all cases presented in the two seminars, the following policy recommendations are provided as to how relevant actors can foster closer PPPs in the sharing economy and digital technology connectivity within APEC economies and beyond.

Nevertheless, the proposed suggestions and policy recommendations are not intended as rigid, sequential directives. It is crucial to acknowledge that effective policymaking requires a comprehensive consideration of unique conditions within each economy. Instead, these suggestions and policy recommendations are conceived as guiding principles. They aim to empower policymakers, encouraging them to navigate the diverse actors within their jurisdictions or remit towards more interconnected and profound Public-Private Partnerships (PPPs). The arrangement of entries in the provided list highlights the interrelationships between the recommendations:

5.1 Ensure digital inclusion, especially for women and low-prioritized communities

It will become even more essential to strengthen infrastructure to achieve universal connectivity, with a particular focus on educating and facilitating digital transformation. The impact of such efforts could extend to various socioeconomic aspects, potentially leading to a decrease in violence and crime. Regarding digital education, upskilling through e-learning will be imperative. Both APEC and the EU are either in the process of implementing or have already established a framework to enable the recognition of online micro-credentials across universities and economies. These policies, in the future, have the potential to tackle unemployment and address inequalities, especially in emerging economies.

5.2 Foster a culture of innovation for updating regulations and set effective public policies

The process shall involve engaging with (and consulting to) communities, conducting systematic evaluations and creating plans with a regional emphasis. It is crucial to update legal frameworks and introduce novel and innovative business models to enhance economic competition. Furthermore, these policies should consider technology transfer and innovation within both the public and private sectors, aiming to embrace a new economic development model in emerging economies, especially in Latin America and the Caribbean. Additionally, each economy should incorporate gender-inclusive trade policies when establishing free-trade agreements or implementing gender-responsive urban planning. Lastly, the public sector shall embrace a culture of innovation to systematically test and enhance projects and initiatives.

5.3 Adopt a collaborative and innovative mindset to address global challenges, including climate change, poverty, inequality, education and health issues

To address global challenges, uncertainty has to be embraced but also overcome. Here, it has been key for mankind to collaborate and innovate, thus transcending from individual to a collective impact. Also, it has to be expected to face changing circumstances, which would be understood as opportunities to disrupt on traditional industries and incorporate new business models, including in the banking sector. For instance, financial and digital inclusion were addressed even at emerging economies during post-pandemic. Likewise, climate change will require a comprehensive and intensive collaborative effort from society, politics, industry and other stakeholders to be addressed.

Several uncertainties must be navigated when tackling global challenges, including climate change, poverty, inequality, education, and health issues. To effectively address global challenges, it is crucial to acknowledge and confront uncertainty. In doing so, collaboration and innovation become essential tools, facilitating a transition from individual endeavors to a collective force. Historical examples abound, illustrating how society overcame apprehensions during significant transitions, such as the advent of cars or robotics.

Moreover, anticipating and adapting to changing circumstances is key, presenting opportunities to disrupt traditional industries and integrate new business models, even within sectors like banking. A notable example is the post-pandemic focus on financial and digital inclusion, extending even to emerging economies. Likewise, combatting climate change will demand a comprehensive and intensive collaborative effort among multiple stakeholders.

5.4 Integrate ethical and sustainable considerations on policy-making to manage advance technologies

The rapid advancement of technologies requires appropriate regulations and new policies to address emerging ethical and sustainable considerations. Automation and Artificial Intelligence are rapidly transforming various industrial sectors, underscoring the importance for thoughtful reflection on their potential consequences. The limits and future societal impact of these new technologies remain uncertain. Therefore, engaging in discussions regarding advantages and disadvantages, privacy concerns, social and personal benefits, and other relevant aspects becomes essential. Policy-making should consider the insights derived from the aforementioned debate and corresponding conclusions.

5.5 Incentive flexibility and resilience across industries to address a crisis

Different industries have demonstrated adaptability and resilience in reacting to global or regional crises. An excellent illustration of this was seen during the COVID-19 pandemic, which induced technological acceleration, particularly in digitalization, across industries. This transformation even reached emerging economies where technification is not as widespread at the public and industrial levels.

In addressing future crisis scenarios, the restart of economic growth must prioritize inclusion and resilience through digitalization, research and development (R&D), and business investments. This is particularly crucial for integrating technologies into policy-making processes. For instance, implementing proactive or reactive measures, such as minimizing impacts or establishing early alerts, can play a significant role in navigating future challenges.

References

Council of the European Union (2022). Proposal for a Council Recommendation on a European approach to micro-credentials for lifelong learning and employability. Accessed at:

<https://data.consilium.europa.eu/doc/document/ST-9237-2022-INIT/en/pdf>

Digital Future Society (2020). Un marco para medir la inclusión digital a nivel mundial. Accessed at:

https://digitalfuturesociety.com/app/uploads/2020/05/DFS_Medir_marginaci%C3%B3n_marco_inclusion_digital.pdf

Inter-American Development Bank (2021). Diagnóstico sobre las brechas de inclusión digital en Chile. Accessed at:

<https://publications.iadb.org/publications/spanish/viewer/Diagnostico-sobre-las-brechas-de-inclusion-digital-en-Chile.pdf>

UNESCO (2023). Short courses, micro-credentials, and flexible learning pathways: a blueprint for policy development and action: policy paper. Accessed at:

<https://unesdoc.unesco.org/ark:/48223/pf0000384326>

UNICEF (2023). A global review of selected digital inclusion policies. Key findings and policy requirements for greater digital equality of children. Accessed at:

<https://www.unicef.org/globalinsight/media/3076/file/UNICEF-Innocenti-Digital-Inclusion-Global-Policy-Review-2023.pdf>

United Nations (2023). Global Sustainable Development Report (GSDR) 2023. Accessed at:

https://sdgs.un.org/sites/default/files/2023-09/FINAL%20GSDR%202023-Digital%20-110923_1.pdf

Urquiza et al. (2021). An Integrated Framework to Streamline Resilience in the Context of Urban Climate Risk Assessment. Accessed at:

<https://doi.org/10.1029/2020EF001508>

World Bank Group (2019). Policy and Regulatory Issues with Digital Businesses. Accessed at:

<https://documents1.worldbank.org/curated/en/675241563969185669/pdf/Policy-and-Regulatory-Issues-with-Digital-Businesses.pdf>