Workshop Report

CAREC Digital Economy

June 2024

Disclaimer

This report is the outcome of the CAREC Digital Economy training program and drafted by Rovshan Mahmudov, Acting Chief of Capacity Building Division and contributed by Gary Huang, E-learning Specialist, CAREC Institute.

Acknowledgment

Contents

Abbreviations

ADB	Asian Development Bank
CAREC	Central Asia Regional Economic Cooperation
CI	CAREC Institute
CiSDG	Center for International Studies on Development and Governance, Zhejiang University
CWRC	Regional Cooperation and Operations Coordination Division
RKSI	ADB-PRC Regional Knowledge Sharing Initiative
ZIBS	Zhejiang University International Business School

I.   Summary

The global economy is changing rapidly. New technologies are emerging that are making our products more resource-efficient, our societies more inclusive, and our environment cleaner. These changes are giving us a chance to achieve the Sustainable Development Goals (SDGs) by 2030.

Digital technologies are at the heart of this transformation. They are already having a big impact on our lives, and their influence is only going to grow. Digital technologies can help us to reduce poverty, improve health care, create jobs, and protect the environment.

The COVID-19 pandemic has accelerated the digital transformation. As we have moved to remote work and online learning, we have become more reliant on digital tools. This has shown us the potential of digital technologies to connect people and businesses, even in the midst of a crisis. We are at a critical juncture in history. We have the opportunity to use digital technologies to build a more sustainable and equitable future. However, the CAREC region (Afghanistan, Azerbaijan, Georgia, the People's Republic of China, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, Uzbekistan)—with the notable exception of the People's Republic of China (PRC)—has not fully benefited from the digital economy transformation yet. One of the biggest challenges is inadequate digital infrastructure.

Many CAREC countries have low levels of internet penetration and connectivity. This makes it difficult for businesses and individuals to access digital services and participate in the digital economy. Another challenge is the lack of clear regulations and policies governing the digital economy. This can lead to uncertainty and risk for businesses and investors. The CAREC region also faces challenges in terms of digital security, data protection, intellectual property rights, and consumer protection. These challenges need to be addressed in order to create a safe and secure environment for the digital economy.

Aligning with the CAREC Digital Strategy 2030

Recognizing the transformative potential of digital technologies, the CAREC Secretariat supported by the Asian Development Bank (ADB) and partnered with the CAREC Institute, and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) prepared the CAREC Digital Strategy 2030. This critical strategy serves as a roadmap for accelerating digital transformation and unlocking the immense potential of the digital economy within the region.

This workshop directly aligns with the Strategy's vision and mission, aiming to equip member countries with the knowledge and tools necessary to harness the digital economy's full potential for inclusive economic growth, social well-being, and enhanced regional competitiveness.

As a knowledge arm in the CAREC region, the CAREC Institute, since 2019, in collaboration with the CAREC Secretariat, ADB and Islamic Development Bank, has launched a series of research projects on digitalization in the CAREC region. Based on these research findings, has held a series of activities to engage CAREC policymakers and interested stakeholders in policy dialogues. The People's Republic of China, ranking the second largest global economy, recognized digital economy as its major growth engine. By 2021, the value of China's digital economy had reached 6.5 trillion US dollars, accounting for nearly 40 percent of its GDP, according to the white paper titled "Jointly Build a Community with a Shared Future in Cyberspace" which was released by the State Council Information Office, PRC. In light of this, the CAREC Institute will continue its effort to promote digital economy in the CAREC region by collaborating with ADB-PRC Regional Knowledge Sharing Initiative (RKSI), CAREC Secretariat, the Ministry of Industry and Information Technology, PRC, the Zhejiang Provincial

Government, and Zhejiang University and launching a capacity building program to enhance digital economy cooperation and promote digital connectivity.

Program Purpose and Approach

The primary goal of this seminar is to facilitate participants' understanding of the current status and experiences related to China's digital economy development, encompassing digital trade, digital governance, digital finance, intelligent manufacturing, industrial Internet, and related fields. The seminar seeks to enhance participants' professional knowledge in the digital economy and other pertinent areas, offering substantial support for their future endeavors.

Key proposed outcomes of the program are that:

a) Gaining in-depth knowledge of China's digital economy model, focusing on practices, experiences, and challenges, as well as understanding China's approach to information and communication infrastructure development, including historical context, future directions and studying successful applications of digital technologies like Artificial Intelligence, Metaverse, Cloud Computing, and Intelligent Manufacturing.
b) Fostering networking and knowledge exchange among policymakers from CAREC and ASEAN countries to identify digital gaps within their respective economies.
c) Identifying actionable strategies to bridge these digital divides, aligning with the CAREC Digital Strategy 2030 vision and the CAREC Institute's research findings.
d) Supporting countries' policy and regulatory frameworks in alignment with the CAREC Digital Strategy's objectives, such as encouraging investment in digital infrastructure, harmonizing data and digital legislation, and developing digital skills as well as leveraging insights from Chinese experience to attract talent, reduce trade barriers, and establish interoperable digital platforms within the CAREC region.
e) Facilitating the creation of a dedicated network for policymakers within the CAREC and ASEAN regions, enabling ongoing communication and knowledge sharing to support regional digital transformation efforts.

Course components

In-person Course

A two-week, residential training program delivered from 20 May – 2 June 2024 in Hangzhou, the PRC. The workshop warmly welcomed talented individuals engaged in digital development from CAREC and ASEAN member countries, including representatives from government, industry, and academia and included comprehensive sessions delivered by a team of global experts.

On-site Visit

A diverse series of site visits including research institutes, technical corporates, global e-commerce platforms and innovative culture companies are arranged to provide participants with a direct experience of digital development.

II.   Content and Participant Summary

The content of this workshop, designed by CiSDG esteemed teaching faculty, comprises distinguished scholars in China's digital economy, industry leaders of high repute, and government officials. It encompasses a comprehensive learning approach, incorporating classroom teaching, on-site training, collaborative teamwork, and report preparation. Renowned scholars will guide participants to review the history and experience of China's information and communication infrastructure construction. Experienced project experts will introduce cutting-edge technologies in the world and their potential application to digital economy development. In addition, exceptional digital enterprises and institutions will offer in-depth on-site visits, allowing participants to experience the changes brought about by digital development. Participants will be grouped to discuss digital economy development in their countries, with presentations later in the workshop. The classroom sessions are conducted at Zhejiang University's Zijingang and Haining campuses, recognized as one of foremost institutions of higher learning in China.

Content across the core components of the program includes:

- The opening ceremony (4 workshop hours)
- Thematic activities (88 workshop hours in total)
    o 58 workshop hours of special topic seminars
    o 30 workshop hours of on-site exchanges
- A closing ceremony (4 workshop hours)
- Networking sessions and group reports (16 workshop hours)
- Digital economy-focused industry tours, etc. (16 workshop hours)

Curriculum involves (i) digital industrialization; (ii) industrial digitalization, and (iii) digital government and governance.

The course agenda is included as Annex A to this report.

Welcome remarks were also delivered by:

- Mr. ZHOU Jianghong, Vice President of Zhejiang University - Speech
- Mr. Kabir Jurazoda, Director, CAREC Institute – Speech
- Mr. MA Shuzhong, Dean and Distinguished Qiu Shi Professor of the China Academy of Digital Trade at Zhejiang University – Overview of the Workshop

The opening ceremony, led by Mr. GONG Sen, Director and Professor at Zhejiang University's Center for International Studies on Development and Governance (CiSDG), highlighted the course's strong backing from key regional agencies and institutions. This support underscores the program's role in driving greater action on the digital economy across the region.

To ensure the course's content reflects the latest trends and regional needs, a panel of renowned experts was assembled. These specialists hail from globally recognized organizations and companies, bringing their extensive experience and knowledge of the digital landscape in the region.

The expert team included:

- Dorothea Lazaro, Senior Regional Cooperation Specialist, Central and West Asia Department, ADB
- Rovshan Mahmudov, Senior Capacity Building Specialist, CAREC Institute
- CAI Yuezhou, Director and Researcher of the Digital Economy Research Office, Institute of Quantitative & Technical Economics at Chinese Academy of Social Sciences

- LEI Jun, Professor-level Senior Engineer, Specially Appointed Expert of the China Association for Science and Technology's "Hai Zhi" program, Technology Review Expert in Zhejiang Province, Leading Talent in Hangzhou
- ZHANG Xuguang, President of the Zhejiang Association for Science, Technology and Innovation, Distinguished Researcher of the Intelligent Education Research Center at Zhejiang University
- WU Fei, Director and Qiu Shi Distinguished Professor of Institute of Artificial Intelligence at Zhejiang University
- Yoonee Jeong, Senior Digital Tech Specialist (Digital Infra & Economy), Climate Change and Sustainable Development Department (CCSD), ADB
- LIU Wenge, Dean and Professor of the School of International Economics and Politics at Liaoning University
- TANG Yongchuan, Deputy Director of China Digital Creative Technology Equipment Innovation Industrial Alliance, Professor of the School of Computer Science and Technology at Zhejiang University
- WEI Wenting, Private Sector Specialist of the World Bank,
- SHEN Yongsheng, General Manager of Zhejiang Daily Digital Technology (Zhejiang) Co. Ltd, General Manager of Hangzhou City Brain Co, Ltd
- FANG Lijie, Professor of the School of Social Research at the Renmin University of China
- HUANG Xianhai, Changjiang Distinguished Professor and Vice President of Zhejiang University
- RONG Ying, Research Fellow, Former Vise President of China Institute of International Studies
- WU Zhong, Secretary-General of the Finance Center for South-South Cooperation, Senior Advisor of Micro Connect and Chairman of Hong Kong Oriental Patron Financial Group
- BEN Shenglin, Dean and Professor of Zhejiang University International Business School (ZIBS), Dean of Academy of Internet Finance (AIF), Zhejiang University

These experts worked collaboratively to ensure that content was integrated so that the emphasis on the requirements for system approaches were clear.

The concluding session and commencement of the workshop was concluded by GONG Sen, Director and Professor of the CiSDG.

The closing remarks were also delivered by:

- BEN Shenglin, Dean and Professor of Zhejiang University International Business School (ZIBS)
- Akiko Terada-Hagiwara, Principal Country Specialist, East Asia Department, ADB
- Kuat Akizhanov, Deputy Director Two, CAREC Institute,
- Organizers, co-organizers, representatives from all member countries

Course content was delivered through a combination of Chinese and English with slides presented in both languages and simultaneous translation available throughout the course.

All course presentations are included as Annex B of this report. Course photos and recordings of presentations are included as Annex C of this report.

Participants

We carefully selected participants for the course's three components, targeting talented individuals from CAREC and ASEAN countries actively involved in digital development. This included government officials, industry professionals, and academics. Ideally, participants would have experience in digital economy, digital management, and e-governance. To foster a rich learning environment, we encouraged the formation of multi-disciplinary teams.

The CAREC countries allocation for the course was as follow:

- Azerbaijan – 2 representatives
- PRC – 1 representative
- Georgia – 2 representatives
- Kazakhstan – 2 representatives
- Kyrgyz Republic – 2 representatives
- Mongolia - 4 representatives (2 representatives based on ADB TA for Mongolia)
- Pakistan – 2 representatives (one representative joined later due to visa issue)
- Tajikistan – 2 representatives (1 nominee was unavailable at late notice)
- Turkmenistan – 2 representatives
- Uzbekistan – 1 representative

In addition to the 20 government officials from CAREC countries, there were 17 participants from ASEAN countries.

Pleasingly the engagement and participation from each country was outstanding. The cross-disciplinary allocation was also successful, with multiple agencies, ministries and organizations in attendance.

In total, the course realized the following levels of engagement:

- In-person course: 20 participants drawn from the ten CAREC member countries including representatives from multiple agencies in each country.
- Online community of practice: ongoing engagement with online platform and establishment of WeChat group for further collaboration.

There was a brief issue relating to the visa issue of representative from Pakistan to the in-person course, however this was rectified, and he was engaged in the program by the end of first week.

A full list of participants is included as Annex D to this report.

III.   Program Assessment

A workshop evaluation was disseminated following the completion of in-person event. This was completed by most of the course participants.

The program received extremely positive feedback, highlighting the success of the program. This is represented in summary table below:
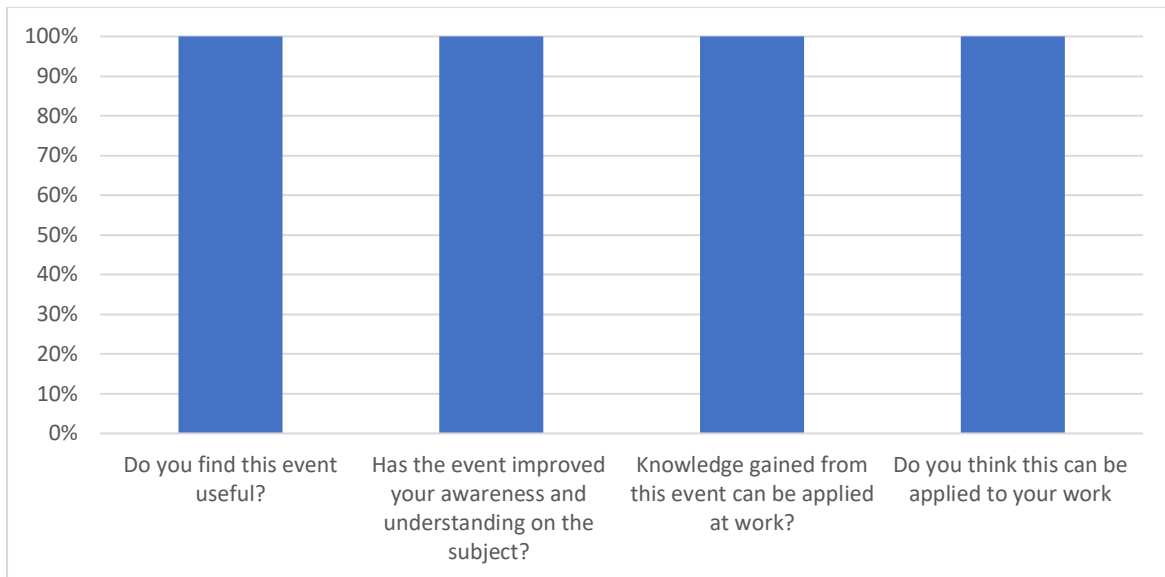
Positive Feedback:

- Content: Participants appreciated the program's content and takeaways.
- Organization: The organization and hard work of the local committee were recognized.
- Networking: The opportunity to learn from diverse participants (ASEAN, CAREC, China) was valued.
- Logistics: A clearer disclose of administrative arrangements was needed to keep participants posted. Punctuality during on-site visits was much appreciated. And providing materials in advance would make participants more prepared.

Pleasingly the evaluation also outlined a range of ways that participants would directly apply learning in their work, which indicated that participants were able to see direct relevance of learning to their activities.

A range of further topics were raised as useful to include in future trainings, including but not limited to:

- Economic growth and prospects, economic transformations, special economic zones
- Digital economy, e-commerce, mobile and driverless technology, fintech, digital currency, internet of things
- Environmental sustainability and protection, ecological civilization
- Regional cooperation, trade
- Climate change, decarbonization, carbon capture and mitigation
- Green and sustainable development, smart and livable cities, green finance
- Aging, elderly care
- Poverty reduction, rural development
- Technical and vocation, and other education

IV.   Recommendations

The following recommendations are outlined in consideration of future opportunities:

Areas for Improvement:

- Schedule:
  - The schedule was considered too packed.
  - Night sessions were seen as draining participant interest.
  - Weekday daytime training with a Saturday cultural visit was preferred.
- Activities:
  - More practical activities, case studies, and interactive sessions were desired.
  - Free sessions for group report preparation were suggested.
- Location: Closer proximity between accommodation and event venue was requested.
- Food:
  - More variety, particularly for participants with dietary restrictions (halal).
- Selection:
  - Improved participant selection based on profiles and pre-distributed agenda was suggested.
  - Language proficiency should be a basic criterion.
- Delivery:
  - Shorter in-class sessions with Q&A discussions were preferred.
  - Policymaker and industry expert talks were requested.
  - Adult learning approach with breaks and shorter sessions was recommended.
  - Contents should be tailored to accommodate the needs of governments officials and industry professionals.

Additional Suggestions:

- Include lecturer profiles with photos and detailed daily schedules beforehand.
- Focus a program on entrepreneurs, startups, and venture capital connecting with the Chinese private sector.
- Consider offering practical, hands-on user experience visits.
- Explore inviting participants from CAREC and ASEAN countries and catering to their cuisine preferences.

V.   Summary of Presentations

1. Introduction to CAREC Digital Strategy 2030 (online) delivered by Dorothea Lazaro, Senior Regional Cooperation Specialist, ADB Central and West Asia Department

The presentation on the CAREC Digital Strategy 2030, delivered by Dorothea Lazaro, outlined a comprehensive plan for digital transformation across the CAREC region. Lazaro introduced the strategy's vision of fostering inclusive economic growth and improving regional competitiveness through digital means. She detailed the five interconnected pillars that form the strategy's foundation: leadership and governance, digital policy enablers, broadband infrastructure, digital skills, and digital innovation. The presentation highlighted key implementation priorities and various supporting initiatives. Lazaro emphasized several key messages: 1) enabling a relevant environment aligned with international conventions and best practices to increase consumer confidence and support e-commerce ecosystem growth; 2) cultivating a culture of trust and regional interoperability; 3) focusing on digital infrastructure development, including backbone networks, internet exchange points, and data centers; 4) expanding payment systems capacity, logistics services, and cross-border connectivity; 5) supporting start-up ecosystems; and 6) building strong regional cooperation through harmonization, mutual trust, and participation in international platforms like CAREC and UNNEXT. Information about the strategy and related initiatives is available at https://digital.carecprogram.org and www.startupcarec.org.

2. **CAREC Digital Economy Development: Challenges and Policy Recommendations delivered by Rovshan Mahmudov, acting chief of capacity building division, CAREC Institute**

In his presentation, Rovshan Mahmudov provided a comprehensive overview of the digital economy in the CAREC region, focusing on key indices such as the E-Government Development Index (EGDI) and the Network Readiness Index (NRI). It highlighted the progress and challenges faced by CAREC countries in various aspects of digital development, including internet access, e-commerce, digital payments, and cybersecurity. The analysis revealed significant disparities among member countries, with China and Kazakhstan often leading in digital adoption, while countries like Afghanistan, Tajikistan, and Pakistan facing more substantial challenges. The presentation also outlined policy recommendations to address these challenges, emphasizing the need for infrastructure development, improved internet affordability, enhanced digital security measures, and supportive regulatory frameworks.

The presentation outlined a comprehensive set of recommendations to address the digital challenges in the CAREC region. For infrastructure and internet access, it suggested increasing household access to computers through consumer loans and tax breaks on ICT equipment, introducing affordable internet packages, and conducting awareness campaigns to promote digital literacy. To improve internet affordability, it recommended regularizing internet costs to less than 2% of Gross National Income, implementing sales tax waivers on internet packages, and developing national policies for affordable internet. For e-commerce development, key recommendations included creating dedicated e-commerce frameworks aligned with SDGs, supporting funding for e-commerce startups, developing standardized cross-border e-commerce platforms, and strengthening consumer protection measures. To enhance digital payments, the presentation suggested ensuring compatibility with major global payment methods, strengthening legal frameworks for cashless payments, and promoting digital technologies in social spheres. Digital security recommendations focused on implementing and regularly updating cybersecurity regulations, increasing the number of secure internet servers, and establishing dedicated cybersecurity agencies within governments. For improving regulations and governance, it emphasized creating a conducive environment through efficient legal systems, consistent digital policies, and allocating specific budgets for digital infrastructure in underdeveloped areas. The presentation stressed the importance of public-private partnerships in implementing these recommendations, particularly in areas like cybersecurity and digital infrastructure development.

3. **New Technological Revolution, Digital Economy, and China's Practice delivered by CAI Yuezhou, Director and Researcher of the Digital Economy Research Office, Institute of Quantitative & Technical Economics at Chinese Academy of Social Sciences**

This presentation on "New Technological Revolution, Digital Economy, and China's Practice" provided crucial insights for CAREC and ASEAN policymakers navigating the complexities of the digital era. It highlighted China's remarkable progress in digital infrastructure development, exemplified by the deployment of over 2.64 million 5G base stations and 620 million 5G users by 2023, positioning the country as a global leader in digital economy advancement. The presentation underscored the transformative potential of digital technologies across various sectors, from manufacturing to poverty alleviation, while also addressing key challenges. These included the critical need for integrating Information Technology (IT) with Operational Technology (OT), particularly in manufacturing; the scarcity of digital talent; and financial constraints hindering digital transformation, especially for SMEs. The discussion extended to the foundational issues of the digital economy, including the need for alignment between data processing capabilities, energy consumption, and transmission capacities. It also delved into the complexities of data governance, cross-border data flows, and the emerging implications of Artificial Intelligence (AI). Drawing insights from China's experiences and good

practices in digital economy development, policymakers from CAREC and ASEAN countries should consider the following approaches: (1) Strategic investment in digital infrastructure, ensuring its scalability and alignment with economic activities; (2) Developing comprehensive programs to foster IT-OT integration and cultivate digital talents, potentially through industry-academia partnerships; (3) Establishing robust data governance frameworks that balance innovation with security and ethical considerations; (4) Implementing targeted financial and technical support mechanisms for SMEs to accelerate their digital transformation; (5) Preparing for the socio-economic impacts of AI, including potential job displacement and the need for reskilling programs; and (6) Engaging in international cooperation to address global challenges in data flow and digital trade. By proactively addressing these areas, policymakers can position their nations to thrive in the digital economy while mitigating associated risks and ensuring inclusive growth.

4. **China's Information and Communication Infrastructure Construction: History and Experience delivered by LEI Jun, Professor-level Senior Engineer, Specially Appointed Expert of the China Association for Science and Technology's "Hai Zhi" program. Technology Review Expert in Zhejiang Province, Leading Talent in Hangzhou.**

In this presentation, Professor Lei Jun emphasized that China has emerged as a global leader in information and communication infrastructure development, demonstrating remarkable progress across multiple domains. The nation has established the world's largest cellular Internet of Things (IoT) network, boasting approximately 2.6 billion cellular IoT terminal users. By the end of 2022, China's IoT industry surpassed 3 trillion yuan in scale, with the industrial IoT connection ratio reaching 53.8% as of April 2023. In mobile communications, China has achieved significant 5G deployment, with networks now covering all county-level urban areas, fulfilling the "5G Coverage for Every County" objective. Fixed broadband infrastructure has also seen substantial improvements, with China ranking second globally in average available speed at 226.77 Mbps. The country has over 10 million users with gigabit fiber-optic connections, and 96% of fixed broadband users now have fiber-optic access.

China's advancements extend to satellite communication, with the BeiDou Satellite Navigation System providing global coverage since 2020. The nation is also making strides in high-throughput satellite communication and satellite internet systems, although further development is needed to match international capabilities. In artificial intelligence, China is progressing through what it terms the "AI 3.0 Era," focusing on expanding AI from products to industry-wide applications. The data center industry has seen rapid growth, with revenue reaching 150 billion yuan in 2021 and projections exceeding 500 billion yuan by 2027.

These infrastructural developments are complemented by innovative applications like the Video Computational Network, which integrates mobile communication networks, IPv6 deployment, fixed broadband, IoT, and AI to enable extensive video-based connectivity and interaction. China is also pushing boundaries in areas such as smart IoT devices, including AI-powered cameras and pet robots, showcasing practical applications of these technologies.

China's comprehensive approach to digital infrastructure development, encompassing networks, satellites, AI, and data centers, is crucial in supporting the country's economic transformation and technological innovation. This positions China at the forefront of the global digital economy and sets a foundation for future advancements in areas like integrated air-space information networks. However, challenges remain in certain areas, such as satellite internet and high-throughput satellite communication, where China aims to close the gap in collaboration with international counterparts.

5. **The Application of Metaverse Technology in the Digital Economy Era delivered by ZHANG Xuguang, President of the Zhejiang Association for Science, Technology and Innovation, Distinguished Researcher of the Intelligent Education Research Center at Zhejiang University**

The presentation highlighted China's strategic focus on digital economy development and transformation. It explored a range of emerging technologies poised to shape future industries, including artificial intelligence, metaverse applications, quantum computing, and digital twins. Particular emphasis was placed on recent advancements in AI, such as large language models like ChatGPT-3 and ChatGPT-4, which are expected to revolutionize various sectors from manufacturing to finance and customer service. The concept of an 'industrial metaverse' was introduced, envisioning the integration of digital twin technology and extended reality (XR) to create more efficient industrial ecosystems. The growing prevalence of digital humans and AI-generated content (AIGC) was discussed as a new paradigm for interaction and content creation. Overall, the presentation underscored the transformative potential of these technologies across industries, emphasizing innovation and technological advancement as cornerstones for future economic development and societal progress.

6. **From ChatGPT to Sora: Trend and Challenges of the New Generation of Artificial Intelligence delivered by WU Fei, Director and Qiu Shi Distinguished Professor of Institute of Artificial Intelligence at Zhejiang University**

In the presentation, the presenter provided comprehensive information about the artificial intelligence (AI). It has evolved significantly, from early symbolic approaches to today's deep learning and large language models. Recent breakthroughs like ChatGPT mark an "iPhone moment" for AI, signaling broad societal impacts. AI is emerging as a general-purpose technology with the potential to drive economic growth across sectors, similar to past innovations like steam engines or electricity. There's a growing trend towards developing large AI models tailored for specific domains such as finance, law, and education. AI is also transforming scientific research paradigms, enabling new data-driven approaches. While AI offers immense potential, it also presents challenges including potential biases, security concerns, and the need for responsible development. To leverage AI's benefits, there's a critical need for AI education and talent development, with efforts underway to integrate AI into university curricula.

As AI becomes a general-purpose technology driving economic growth, policymakers should prioritize several key areas. First, investing in AI education and talent development is crucial to build a workforce capable of developing and working alongside AI systems. Second, establishing responsible AI governance frameworks can help mitigate risks and ensure ethical development. Third, fostering public-private partnerships can accelerate the development of beneficial AI applications across sectors. Finally, strategic investments in AI research and development, as well as supporting infrastructure, can help position countries as leaders in the AI-driven economy. By taking a proactive approach, policymakers can help harness the transformative potential of AI while ensuring these systems are developed safely, ethically, and in alignment with human values and societal needs. As AI continues to advance, balancing innovation with ethical considerations and societal impacts will be crucial for policymakers and researchers alike.

7. **Practices, Experiences and Challenges in the Development of Digital Economy in Asian, CAREC and ASEAN Economies delivered by Yoonee Jeong, Senior Digital Tech Specialist (Digital Infra&Economy), Climate Change and Sustainable Development Department (CCSD), ADB**

The presentation highlighted the growing impact of the digital sector on economies across Asia and the Pacific, with digital industries outpacing traditional sectors in both growth and job creation. E-commerce stands out as the largest digital segment, experiencing significant expansion throughout

the region. However, a persistent digital divide remains, with issues of access, affordability, and digital literacy presenting substantial barriers to inclusion.

Also, the provided data indicated that ADB is taking a holistic approach to digital integration, recognizing the potential of digital technologies to enhance development outcomes across various sectors. It's notable that even traditionally non-tech sectors like agriculture and water services have significant numbers of projects with digital components, highlighting the increasing importance of digital solutions in all areas of development.

As cloud adoption accelerates and critical services increasingly migrate to digital platforms, the development of robust digital infrastructure, particularly data centers, has become crucial. Yet many developing countries lag in this area, and the environmental impact of these energy-intensive facilities poses additional challenges. The presentation emphasizes the urgent need for reskilling and upskilling initiatives to address the tech talent shortage and ensure widespread digital inclusion.

In light of these trends, policymakers are encouraged to adopt a multifaceted approach to digital development. This includes promoting connectivity and infrastructure expansion, with a focus on underserved areas and sustainable technologies. Support for digital industries and tech startups should be prioritized to drive innovation and economic growth. Governments are advised to invest in digital public infrastructure and services, enhancing efficiency and citizen engagement while facilitating digital trade and e-commerce.

Education and skills development, particularly in areas like AI literacy, should be at the forefront of policy agendas. An integrated, cross-sector approach to digital strategies is recommended, tailored to the specific needs and readiness levels of different regions or countries. Ensuring digital inclusion and implementing robust safeguards for data protection and responsible tech use are critical components of this strategy.

Policymakers should also reconsider traditional regulatory frameworks to accommodate the evolving nature of digital markets and business models, ensuring that regulations foster innovation rather than hinder it. Investment in critical digital infrastructure like data centers should balance economic considerations with environmental impacts. Exploring innovative financing models and public-private partnerships can help bridge infrastructure gaps.

Finally, the presentation underscored the importance of regional cooperation in harmonizing digital policies and sharing prosperity, particularly in regions like CAREC and GMS. By implementing these recommendations, policymakers can work towards creating an inclusive, resilient, and sustainable digital economy that benefits all segments of society across Asia and the Pacific.

8. **Intelligent Transformation of Manufacturing Industry delivered by LIU Wenge, Dean and Professor of the School of International Economics and Politics at Liaoning University**

The presentation explored the intersection of the digital economy, data as a production factor, and the intelligent transformation of manufacturing. It highlighted the rapid growth of the digital economy globally and in China, introduces data as a crucial new production factor, and examines how these elements drive the evolution of manufacturing towards intelligence. The presentation used case studies, including BYD's intelligent supply chain transformation, to illustrate practical implementations.

To address the challenges and opportunities presented, policymakers should focus on several key areas to build an effective digital economy governance system. First, strengthen the legal and

regulatory framework for digital platforms and AI in manufacturing, while providing appropriate guidance and policy support for intelligent manufacturing transformation. Second, promote balanced regional development of digital capabilities by accelerating the overall layout of digitalization, especially in central and western regions, and establishing robust industrial internet and digital infrastructure systems. Third, increase investment in core technologies for intelligent manufacturing, enhancing independent R&D capabilities and promoting the integration of advanced information and intelligent technologies across all aspects of production. Fourth, emphasize high-quality talent cultivation through education reform, industry-academia collaboration, and vocational training to upskill the existing workforce. Additionally, provide financial incentives for enterprises, especially SMEs, to adopt intelligent manufacturing technologies; establish comprehensive standards; foster industry collaboration through alliances and platforms; promote international cooperation; support pilot projects and demonstrations; and develop robust data governance policies. These measures collectively aim to create a supportive environment for the intelligent transformation of manufacturing, addressing critical challenges in technology, talent development, regional disparities, and regulatory frameworks while leveraging the opportunities presented by the digital economy and data-driven production.

9. **Exemplary Cases of Intelligent System Design delivered by TANG Yongchuan, Deputy Director of China Digital Creative Technology Equipment Innovation Industrial Alliance, Professor of the School of Computer Science and Technology at Zhejiang University**

The presentation provided an extensive overview of intelligent system designs across multiple sectors in China, including healthcare, transportation, manufacturing, logistics, energy, public services, and scientific research. It highlights advanced AI and IoT applications from leading Chinese tech companies such as Alibaba, Huawei, Geely, DiDi, JD, and Hikvision. The systems employ key technologies like cloud computing, big data analytics, computer vision, natural language processing, digital twins, robotics, and large language models to enhance efficiency, safety, decision-making, and user experiences in their respective domains. There's a strong emphasis on integrating AI with industry-specific knowledge and processes to create tailored solutions, often leveraging IoT sensors, edge computing, and cloud platforms for real-time data collection, analysis, and automated responses. Digital twin technology is prominently used to create virtual replicas of physical systems for monitoring, simulation, and optimization, with several systems incorporating AR/VR capabilities for enhanced visualization and interaction.

The presentation concluded with recommendations to further advance intelligent systems in China, including fostering cross-industry collaborations, investing in AI talent development, strengthening data governance frameworks, promoting open standards and interoperability, increasing focus on explainable AI, investing in edge AI capabilities, exploring more applications of large language models, developing human-AI collaborative systems, prioritizing cybersecurity, conducting rigorous testing and validation, considering environmental impact and sustainability, and increasing efforts to make intelligent systems more accessible to small and medium enterprises.

10. **Digitalization of Government Services for a Better Business Environment in China: A case study on the Reform Experience of Zhejiang Province delivered by WEI Wenting, Private Sector Specialist of the World Bank**

This presentation highlighted that China has made significant progress in digitalizing government services, particularly in streamlining Government-to-Business (G2B) services to improve the business environment. Zhejiang Province stands out as a leading subnational innovator in both business environment and e-government reforms, transitioning to an integrated online government service platform. The success of these reforms has been driven by commitment and joint efforts from all key

players, with administrative and institutional reforms laying the foundation for online government services. The reforms in Zhejiang include redesigning administrative procedures, reducing required permits and approvals, deploying digital technologies, and implementing a real-time G2B performance monitoring system.

For policymakers looking to implement similar reforms, several recommendations emerge: First, adopt a user-centric approach when designing digital government services. Second, focus on standardizing and simplifying administrative procedures to facilitate their digitalization. Third, cultivate strong political support to drive reforms, as seen in Zhejiang where both the provincial party secretary and governor championed the initiatives. Fourth, establish a robust monitoring and evaluation system to ensure accountability and track progress. Fifth, collaborate with the private sector to develop and implement advanced digital solutions, leveraging their expertise and resources. Additionally, policymakers should be prepared to address challenges such as uneven progress across government agencies, data sharing issues, privacy and cybersecurity concerns, and the need for ongoing regulatory reforms to support innovation at the subnational level. Finally, strengthening stakeholder participation mechanisms can help ensure reforms meet the needs of businesses and citizens.

11. The Construction Process of Digitalization of Government Services in Zhejiang delivered by SHEN Yongsheng, General Manager of Zhejiang Daily Digital Technology (Zhejiang) Co., Ltd., General Manager of Hangzhou City Brain Co., Ltd

The presentation outlined Zhejiang's journey in digital government transformation, showcasing the "All in one go" reform and the development of the Hangzhou City Brain. Led by Dr. Shen Yongsheng and his team at Hangzhou City Brain Co., Ltd., these initiatives have revolutionized public service delivery and urban management. Key achievements include the Zheliban APP, which unifies government services, and the "Go Hangzhou" app for the Asian Games, demonstrating the versatility of digital solutions. The reforms have significantly streamlined government processes, reducing bureaucratic hurdles for citizens and businesses. By leveraging electronic documentation, data sharing, unified payment systems, and AI-driven guidance, the "All in one go" reform has made government interactions more efficient and user-friendly. The success of the City Brain project in Hangzhou has led to its replication in other cities, indicating its scalability and effectiveness. Recommendations drawn from this experience include prioritizing user experience, investing in cross-departmental data integration, developing proactive service models, implementing credit-based systems for trusted users, and utilizing AI and big data for urban management. The presentation underscores the potential of digital technologies to transform government operations and improve citizen services when implemented with a focus on user needs and systematic planning.

12. Sustainable Social Innovation and Governance of Digital Divide delivered by FANG Lijie, Professor of the School of Social Research at the Renmin University of China

This presentation explored sustainable social innovation and digital empowerment, focusing on two case studies from Tencent. The first case examined Tencent's Corporate Social Responsibility project, the Social Emergency Response Platform, while the second analysed WeChat Pay as a commercial product with significant social impact. The presentation highlighted the evolving nature of social innovation in the digital age, where technological solutions are increasingly applied to complex social issues. It introduced an analytical framework based on the "3A" model (Aim, Approach, Action) to evaluate the sustainability of social innovation projects. The WeChat Pay case study demonstrated how digital platforms can create social value beyond their primary commercial functions, progressing through stages of tool creation, platform building, and social value exploration. The presentation emphasized the importance of aligning business strategies with social needs and the potential for

digital platforms to address social challenges while maintaining commercial viability. Recommendations emerging from this analysis include: 1) Businesses should consider integrating social value creation into their core operations rather than treating it as a separate CSR activity. 2) Social innovation projects should be designed with sustainability in mind, considering long-term resource allocation and impact measurement. 3) Digital platforms have unique potential to address social issues at scale, and companies should explore ways to leverage their technological capabilities for social good. 4) There's a need for frameworks to evaluate and guide the social impact of commercial digital products, as demonstrated by the analysis of WeChat Pay's evolution.

13. Constructing Rules for an Opened Global Digital Economy System delivered by HUANG Xianhai, Changjiang Distinguished Professor and Vice President of Zhejiang University

The presentation highlighted the growing importance of the digital economy as a key driver of global economic development, with China emerging as a major player, second only to the United States. It emphasized the critical role of data as a new factor of production and the need for evolving global rules on cross-border data flows. The shift towards digital trade has created new demands for regulatory frameworks and rule systems, prompting major countries and organizations to formulate policies aimed at gaining competitive advantages in this arena. The presentation outlined different approaches to digital economy regulation among leading countries, contrasting the U.S.'s open market model with the EU's privacy-focused approach and China's managed open model prioritizing secure data sharing.

China faces significant challenges in aligning with high-standard international digital trade rules, particularly in areas such as cross-border data flows, market access, and intellectual property protection. To address these challenges, the presentation recommended a multi-faceted approach. This included active participation in multilateral and bilateral digital trade agreement negotiations, accelerating domestic legislative reform, and advocating for an open and inclusive global digital trade rule system while seeking flexibility on more challenging clauses. The establishment of a comprehensive policy system for digital industry chain development is proposed, encompassing the promotion of new digital infrastructure, creation of an international data trading center, cultivation of digital supply chain leaders, implementation of tiered intellectual property protection, and building a unified domestic digital market.

The presentation also suggested enhancing the penetration of digital services across industries, stimulating digital consumption, and deepening integration between digital and traditional sectors through cloud adoption and industry-academia partnerships. It recommended using free trade zones as testing grounds for digital trade rule implementation, improving data classification and trading mechanisms, and developing a digital innovation ecosystem. These policy recommendations aim to position China advantageously in the evolving digital trade landscape while managing potential risks and challenges, ultimately supporting high-quality economic development through the symbiosis of digital and traditional industries.

14. China's Digital Policy and the Digital One Belt and One Road delivered by RONG Ying, Research Fellow, Former Vice President of China Institute of International Studies

The presentation discussed China's digital strategy, the Digital Silk Road (DSR) initiative, and China's position on global digital governance. China has launched a comprehensive plan for "Digital China," aiming to become a global leader in digital development by 2035. The plan emphasizes independent innovation, integration of digital technology with the real economy, and the development of digital infrastructure. The Digital Silk Road, an extension of the Belt and Road Initiative, focuses on digital infrastructure, smart cities, and cross-border e-commerce. China has signed numerous agreements

with countries to promote digital cooperation. However, challenges remain, including the global digital governance deficit and the politicization of technology issues.

In terms of policy recommendations, the presentation suggested that China should continue to uphold multilateralism and promote fairness in global digital governance. It emphasized the need for increased dialogue and cooperation to improve the global digital governance system. China supports the United Nations' leading role in this area and is willing to explore solutions to prominent issues in digital development. The country is also actively participating in regional and global engagements on digital governance through various international forums and is applying to join relevant international agreements. To address the challenges, there is a need to bridge the digital divide, develop talent and expertise (especially in developing countries), and work towards depoliticizing technology and economic issues in the digital sphere. Finally, the presentation recommends continuing to put forward innovative initiatives to shape debates on the digital economy, as China did with the "Digital Economy Development and Cooperation Initiative" at the G20 summit in 2016.

15. **Financial Innovation in the Context of Digitalization – Micro Connect: The Wall Street for SMEs delivered by WU Zhong, Secretary-General of the Finance Center for South-South Cooperation, Senior Advisor of Micro Connect and Chairman of Hong Kong Oriental Patron Financial Group**

The presentation discussed the importance of small and medium-sized enterprises (SMEs) in economic development and the challenges they face, including difficulties in obtaining financing, small scale, weak competitiveness, and short business life cycles. It highlighted the role of digital technologies, particularly Software as a Service (SaaS), in helping SMEs improve their management and operations. SaaS provides interconnected enterprise-level solutions, flexible settings, data portability, and built-in analytics, which can significantly benefit SMEs. The presentation then introduced Micro Connect, a new financial technology platform that aims to connect global capital with China's grassroots economy, particularly SMEs in the consumer sector. Micro Connect utilizes a novel investment model called Daily Revenue Contracts (DRC), which allows investors to share in a store's daily revenue without taking equity or requiring fixed repayments. The platform leverages digital technologies, blockchain, and AI to automate investment processes, risk assessment, and revenue sharing.

Key innovations include the establishment of the world's first exchange for revenue-sharing products in Macau and the development of a comprehensive ecosystem to support SME financing. The presentation highlighted Micro Connect's significant investment progress as of March 2024: a contract value of 5.12 billion yuan, 991 contracted brands, 137 sectors covered, and 15,117 contracted stores across 33 provincial regions and 300 cities in China. Additionally, over 3,200 brands are in negotiation. The investment is distributed across various sectors, with retail accounting for 40% of stores and 42% of investment amount, followed by food service at 29% of stores and 26% of investment amount, and culture & sports at 23% of stores and 16% of investment amount.

Policy recommendations include: 1) Encouraging the development of innovative fintech solutions to address SME financing gaps; 2) Creating regulatory frameworks that support new investment models like revenue-sharing; 3) Promoting the use of digital technologies, SaaS, and AI in financial services to increase efficiency and reduce risks for SMEs; 4) Fostering collaboration between traditional financial institutions, fintech companies, and SaaS providers to expand access to capital and improve management tools for SMEs; 5) Supporting the establishment of specialized financial markets or exchanges focused on SME financing to increase liquidity and investor participation in this sector; and 6) Developing programs to educate and support SMEs in adopting digital technologies and SaaS solutions to enhance their competitiveness and operational efficiency.

16. **Digital Transformation, Global Fintech Trends & Opportunities for Emerging Markets delivered by BEN Shenglin, Dean and Professor of Zhejiang University International Business School (ZIBS), Dean of Academy of Internet Finance (AIF), Zhejiang University**

This presentation underscored that the global economic landscape is shifting, with China's rise as a major economic and technological power. The presentation highlighted China's growing GDP, patent output, and representation among Fortune 500 companies. Key global trends shaping the future include regional globalization, digitalization enabling micro-multinational enterprises, aging populations, and a focus on green and sustainable development. In the technology and financial sectors, competition between the US and China is intensifying, with both countries dominating lists of top companies by market capitalization and leading global fintech hubs.

The digital economy is creating new opportunities, with data becoming a crucial asset and new players emerging in e-commerce and digital services. Chinese companies like Shein, Tecno, and J&T are expanding globally, particularly in emerging markets. The fintech sector presents significant opportunities for Chinese banks and securities companies to innovate and expand internationally.

Policy recommendations focused on fostering innovation and digital transformation, particularly in emerging markets. Governments should support the development of fintech hubs and create regulatory frameworks that encourage responsible innovation. International cooperation in areas like green technology and addressing demographic challenges should be prioritized. Policies supporting micro-multinational enterprises and cross-border e-commerce could help drive economic growth. Additionally, investment in education and skills development is crucial to prepare workforces for the digital economy and to maintain competitiveness in high-tech industries.

17. **Group Presentations**

The participants were divided into four groups. Each group created its own name, logo and slogan and prepared a group presentation to summarize what was learned from this workshop.

The presentations introduced digital economy development involving areas of digital infrastructure, e-governance, e-commerce, SAAS solutions , legislation in CAREC and ASEAN countries. Based on the presentations, it reveals that more CAREC countries mentioned the development of digital public services and challenges and divide of infrastructure particularly in rural areas. While more ASEAN countries have more specific challenges such as digital talent, cyber security, trust in e-payment systems and digitalization of MSMEs.

Group 1: The presentation provided an overview of digital economy developments in several countries, including Azerbaijan, Brunei Darussalam, Indonesia, Laos, Mongolia, Pakistan, and lessons from China. Key themes across these countries included the expansion of e-commerce, advancements in fintech, improvements in digital infrastructure, and the challenges of digital adoption.

China's digital economy was highlighted as a leader, with significant growth in e-commerce, fintech innovations like the Digital Yuan, and investments in emerging technologies such as AI, 5G, and quantum computing. The presentation noted China's regulatory measures to curb monopolistic practices and ensure data privacy, as well as its efforts to strengthen digital trade partnerships globally.

Brunei Darussalam was noted for its high mobile coverage and fixed broadband penetration, as well as initiatives like Digital ID and a National Information Hub. Pakistan was described as having a

rapidly growing e-commerce market and digital transaction volume but faced challenges such as inadequate digital infrastructure and a significant digital divide.

Key recommendations and lessons drawn from the presentation included:

1. Investing in digital infrastructure to improve connectivity and reduce the digital divide.
2. Promoting fintech innovations and digital payment systems to boost e-commerce and financial inclusion.
3. Developing comprehensive regulatory frameworks that balance innovation with data privacy and security concerns.
4. Focusing on digital skills development to ensure the workforce could participate in the digital economy.
5. Encouraging public-private partnerships to accelerate digital adoption, especially among MSMEs.
6. Implementing "One Government" apps to streamline public services, while addressing challenges of inter-agency collaboration.
7. Considering Software as a Service (SaaS) models to help MSMEs adopt digital technologies more easily.
8. Prioritizing green digital economy initiatives to ensure sustainable growth.
9. Addressing affordability issues for digital devices and services to increase adoption rates.
10. Fostering international partnerships and knowledge exchange to learn from successful digital economy models.

Group 2: The presentation compared the digital economies of Indonesia and Georgia, highlighting their current states, challenges, and potential for growth. Indonesia, with its large population and diverse geography, is experiencing rapid digital economic growth, contributing 6.12% to GDP in 2021. The country has implemented various digital masterplans and roadmaps to foster development, aiming to become a major digital power in Southeast Asia. However, Indonesia faced challenges such as being primarily a technology consumer, slow startup ecosystem growth, and low digital adoption in key sectors.

Georgia, while smaller in scale, is making significant strides in developing its digital infrastructure through initiatives like "Digital Georgia." The country is focusing on e-commerce growth and improving online infrastructure, but faced challenges in digital adoption by businesses, limited innovation capacity, and difficulties in startup fundraising.

Key recommendations for developing the digital economy in ASEAN and CAREC countries included:

1. Fostering digital infrastructure development, particularly in cybersecurity, cloud computing, and emerging technologies.
2. Establishing a comprehensive policy framework for digitalization across ASEAN and CAREC countries, providing guidelines for digital transformation.
3. Strengthening digital skills and entrepreneurship through research and innovation, promoting new models or upgrading existing digital industries.
4. Preparing and harmonizing legal frameworks to support digitalization, with a focus on intellectual property rights and creating ecosystems that promote startup growth.
5. Promoting funding and investment by attracting investors from outside ASEAN and CAREC regions to support digital industry development.

Group 3: The presentation outlined key messages and recommendations across China, ASEAN, and CAREC regions. China's digital economy has significantly expanded, reaching 39.2 trillion yuan in 2023,

accounting for 38.6% of the national GDP. Key players in this space include tech giants such as Alibaba, Tencent, and Baidu, alongside innovative startups like NIO and Ant Group supported by government initiatives such as the Digital Silk Road and Made in China 2025. The presentation emphasized the influence of emerging technologies such as 5G, AI, and big data analytics on new business models and industry ecosystems. ASEAN showcases strong digital growth, with Indonesia leading through contributions like the National Digital Literacy program and MSME Go Digital, and other countries such as Vietnam and Singapore advancing in digital finance and e-commerce.

In the CAREC region, countries like Kazakhstan, Uzbekistan, and Azerbaijan focused on enhancing digital infrastructure, governance, and regional connectivity. Initiatives in these countries include digital trade facilitation, e-government services, and investment in broadband infrastructure to bridge the digital divide.

Key messages included the rapid growth of digital economies, the importance of government initiatives in fostering digital development, and the emergence of new business models and technologies. The presentation emphasizes the role of digital literacy programs, support for MSMEs, and smart city initiatives in driving digital transformation.

Recommendations based on the presentation included:

1. Invest in digital infrastructure to support economic growth and innovation.
2. Implement comprehensive digital literacy programs to enhance workforce skills.
3. Support MSMEs in digital adoption to boost competitiveness and market access.
4. Develop smart city initiatives to improve urban management and quality of life.
5. Strengthen cybersecurity measures to protect digital assets and build trust.
6. Foster regional cooperation to harmonize digital policies and standards.
7. Encourage public-private partnerships to accelerate digital innovation.
8. Focus on inclusive digital growth to bridge the digital divide within and between countries.
9. Adapt regulatory frameworks to keep pace with technological advancements.
10. Invest in emerging technologies like AI, IoT, and 5G to stay competitive in the global digital economy.

Group 4: The presentation provided an overview of digital economy development in Asia, CAREC, and ASEAN economies. It highlighted the rapid growth of e-commerce in Asia, projected to reach 6.95% of sales, with local businesses like Alibaba and Shopee driving 80% of Asian sales. The digital economy in ASEAN is expected to reach $360 billion by 2025 and $2 trillion by 2030, making it the world's fastest-growing internet market.

Key practices and experiences shared included Pakistan's implementation of digital systems for identity verification, company formation, and citizen engagement. Mongolia focused on digital inclusion, e-government services, and fostering tech startups. Turkmenistan has introduced 4G internet, e-government portals, and interdepartmental electronic information exchange. Malaysia has achieved 97.4% internet penetration and is focusing on IoT, cybersecurity, and AI governance. Indonesia's digital economy is projected to reach $146 billion by 2025, with a strong e-commerce presence.

Common challenges across these economies included digital infrastructure gaps, digital literacy, regulatory uncertainty, and cybersecurity concerns. Kazakhstan stands out with 92% of government services available online and a strong focus on digital transformation and AI legislation.

Recommendations based on the presentation included:

1. Prioritize development of robust digital infrastructure to support growth.
2. Invest in digital skills training to address talent gaps and improve digital literacy.
3. Implement clear regulatory frameworks to provide certainty for businesses and protect consumers.
4. Foster public-private partnerships to accelerate digital innovation and adoption.
5. Focus on cybersecurity measures to build trust in digital systems.
6. Adopt a bottom-up policy approach, using pilot projects to inform broader initiatives.
7. Align efforts with comprehensive national digital strategies, similar to UAE's Digital Economy Strategy.
8. Encourage regional cooperation, following examples like the ASEAN Digital Masterplan 2025.

These steps can help countries in the region capitalize on the immense potential of the digital economy while addressing key challenges.

## VI.	Participants' Voices

1. Interview with Azerbaijani participant

Azerbaijani participant Mr. Agil Azizov was interviewed by China News Service in the opening ceremony. Agil mentioned this was his first time to China, he would like to visit Alibaba to see how digital technologies are applied to its work and how cross-border e-commerce platform is working based on his experience with 1688.com, which is an international e-commerce platform under Alibaba. Mr. Azizov also expressed his interest in Chinese EV industry.

In another interview with Mr. Agil Azizov, he mentioned that there was so much information during the sessions, what he saw would provide ideas to his government,

I can't say like bring the full knowledge from here, but some ideas to home country to tell the municipalities, to tell by several government agencies that what is going on in China, how we can develop it, how we can learn experiences, how we'll take the Chinese cases to home countries.

2. Interview with Kyrgyz participant

On 25 May, the participants visited a rural livestream E-commerce based. The purpose of this visit was to explore how livestream is helping to promote pearl sales. During the visit Mr. Asylbek Zhunusov was interviewed by China News Service, he was amazed by the power of livestream and shared his own experiences with different e-commerce platforms. Mr. Zhunusov brought a few suggestions on how to make the app more friendly to users.

3. Interview with Cambodian delegate

Cambodian delegate Ms. Sreynit Hort expressed her appreciation after the visit to Alibaba and an animation show. She said she wouldn't have known that culture industry was an area of digital economy if the team hasn't come to the show, in which AI and other emerging technologies are applied in animation production.

4. Interview with Pakistani delegate

In an interviewed with Pakistani delegate Mr. Usama Khan Jadoon, who worked for the State Bank of Pakistan, he said,

So, it provided us with the combined experience and combined knowledge of the China infrastructure on digital landscape and for me, for us for especially coming from the central bank background and working on the Pakistan's instant payment system. We did have some trouble in digitization. And so there was a lot of lesson from the today's lecture specifically, which focused on, you know, there was a use case studies of WeChat Pay, how WeChat Pay entered the market.

Mr. Jadoon further explained Pakistan's own experience developing International Payment System, he thought Pakistan could learn something from the case of WeChat Pay.

VII. Annexes

Annex A – Course Agenda

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Joint CAREC-China Digital Economy Workshop

& 2nd ASEAN-China Digital Economy Workshop

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Day 1	20 May (Monday)
Morning	**Opening Ceremony** • **Zhoushan Jianghong**, Vice President of Zhejiang University • **Kabir Jurazoda**, Director, CAREC Institute (Online) • **Shuzhong Ma,** Dean and Distinguished Qiu Shi Professor of the China Academy of Digital Trade at Zhejiang University Moderator: **Gong Sen**, Director, Center for International Studies on Development and Governance (CiSDG), Zhejiang University
	CAREC Digital Strategy 2030 (Online) **Dorothea Lazaro,** Senior Regional Cooperation Specialist, ADB Central and West Asia Department *CAREC Digital Economy Development: challenges and policy recommendations* **Rovshan Mahmudov,** Senior Capacity Building Specialist, CAREC Institute
Afternoon	*Practice and Pathway in China's Development of Digital Economy* **Yuezhou Cai,** Director and Researcher of the Digital Economy Research Office, Institute of Quantitative & Technical Economics at Chinese Academy of Social Sciences
Night	**Ice-breaking** Participants will introduce themselves, express their expectations on the Workshop and raise their questions concerning digital economy. Participants will be grouped, and each group will prepare for delivering a presentation on Day 12.
Day 2	21 May (Tuesday)
Morning	**On-site:** *Zhejiang's Information and Communication Infrastructure Construction* **China Mobile (Zhejiang) Innovation Research Institute**

	China's Information and Communication Infrastructure Construction: History and Experience
	Jun Lei, Senior Project Expert and Senior Engineer of the Smart Home Operations Centre and Integrated Communication Systems Department of China Mobile Ltd
Afternoon	*The Application of Metaverse Technology in the Digital Economy Era*
	Xuguang Zhang, President of the Zhejiang Association for Science, Technology and Innovation, Distinguished Researcher of the Intelligent Education Research Centre at Zhejiang University
Night	*The New Generation of Artificial Intelligence: from AlphaGo to ChatGPT*
	Fei Wu, Director and Qiu Shi Distinguished Professor of Institute of Artificial Intelligence at Zhejiang University
Day 3	**22 May (Wednesday)**
Morning	**On-site:**
	Evolution towards Intelligent Education Transformation
	Xianghu Future School and Hailiang Limited Co., Ltd.
Afternoon	**On-site:**
	Metaverse Technology, Digital Collectibles and Global Distribution of Digital Content
	Zhejiang Zoland Animation Co., Ltd.
Night	*Practices, Experiences and Challenges in the Development of Digital Economy in Asian, CAREC and ASEAN Economies*
	Yoonee Jeong, Senior Digital Tech Specialist (Digital Infra & Economy), Climate Change and Sustainable Development Department (CCSD), ADB
Day 4	**23 May (Thursday)**
Morning	**On-site:**
	Cloud Computing: Current Landscape and Future Directions - From Emulation to Innovation
	Alibaba Cloud Computing Co., Ltd. - Hangzhou Branch
Afternoon	*Intelligent Transformation of Manufacturing Industry*
	Wenge Liu, Dean and Professor of the School of International Economics and Politics at Liaoning University

Day 5	24 May (Friday)
Morning	**On-site:** ***3D+AI Tools for Propelling the Global Fashion Industry's Digital and Innovative Evolution*** **Zhejiang Linctex Digital Technology Ltd.（Style3D）**
Afternoon	***Exemplary Cases of Intelligent System Design*** **Yongchuan Tang,** Deputy Director of China Digital Creative Technology Equipment Innovation Industrial Alliance, Professor of the School of Computer Science and Technology at Zhejiang University
Night	**Networking:** ***Global Digital Economic Cooperation, Digital Economic Development Opportunities and Digital Technology Solutions*** **(Arranged by the World Digital Economy Forum (WDEF), Hangzhou Digital Ecological Building and representative enterprises in the area of digital technology solutions)**
Day 6	**25 May (Saturday)**
Daytime	***Digital Economy-focused Industry Tour to Shaoxing:*** ***Enterprise Digital Transformation, Rural Livestream E-commerce and Traditional Culture*** **Zhejiang Toman Intelligent Technology Co., Ltd——Lunch——China Pearls and Jewelry International City——The China Shaoxing Wine Museum——Dinner** **(Arranged by Shaoxing Council of China Council for the Promotion of International Trade (CCPIT), Shaoxing Chamber of International Commerce and representative enterprises in Shaoxing)**
Day 7	**26 May (Sunday)**
	Off
Day 8	**27 May (Monday)**
Morning	***Digitalization of Government Services for a Better Business Environment in China: A Case Study on the Reform Experience of Zhejiang Province*** **Wenting Wei,** Private Sector Specialist, World Bank in China ***The Construction Process of Digitalization of Government Services in Zhejiang*** **Yongsheng Shen,** General Manager of Zhejiang Daily Digital Technology (Zhejiang) Co.,Ltd., General Manager of Hangzhou City Brain Co.,Ltd.
Afternoon	**On-site:**

	1. **Zhejiang's Practice in Building a Digital Government** **Hangzhou City Brain** *2.* **Zhejiang's Practice in Intelligent Industrial Transformation** **Zhejiang Top Cloud-agri Technology Co., Ltd**
Day 9	**28 May (Tuesday)**
Morning	*Sustainable Social Innovation and Governance of Digital Divide* **Lijie Fang**, Professor of the School of Social Research at the Renmin University of China
Afternoon	*Constructing Rules for an Opened Global Digital Economy System* **Xianhai Huang,** Changjiang Distinguished Professor and Vice President of Zhejiang University
Night	**Networking:** *Integration and Cooperation of Asian Civilisations in the Digital Age* **(Arranged by Zhejiang University International Business School (ZIBS) and the International Campus of Zhejiang University)**
Day 10	**29 May (Wednsday)**
Morning	*Financial Innovation in the Context of Digitalization - Micro Connect: The Wall Street for SMEs* **Zhong Wu,** Secretary-General of the Finance Center for South-South Cooperation, Senior Advisor of Micro Connect and Chairman of Hong Kong Oriental Patron Financial Group
Afternoon	**Networking:** *Global Trade of Cultural Goods and Services in the Digital Era* **(Arranged by the 20th China International Cartoon & Animation Festival (CICAF), Zhejiang Digital Culture International Cooperation Zone and representative enterprises in the area of international cultural goods and services)**
Night	**On-site:** *Digital Industry Investment and Live Streaming Economy*
Day 11	**30 May (Thursday)**
Morning	**On-site:** *Zhejiang's Footprint in E-commerce: A Dive into the Corporate Ecosystem and Development Experiences*

	1688.com and Taobao of Alibaba Group
Afternoon	*Digital Transformation, Global FinTech Trends & Opportunities for Emerging Markets* **Shenglin Ben,** Dean and Professor of the International Business School, Director of the Fintech Research Institute at Zhejiang University
Night	**Networking:** **(Arranged by Zhejiang University International Business School (ZIBS), the International Campus of Zhejiang University and representative enterprises in Jiaxing)**
Day 12	**31 May (Friday)**
Morning	*Experiences and Practices in the Development of Digital Economy in CAREC and ASEAN Economies, Insights from the Workshop and Suggestions* Group Reports by the Workshop Participants
Afternoon	**Concluding Session and Commencement of the Workshop** **Sen Gong**, Director and Professor of the Centre for International Studies on Development and Governance at Zhejiang and Zhejiang University (CiSDG)
Night	**Closing Ceremony** **Sen Gong**, Director and Professor of the Centre for International Studies on Development and Governance at Zhejiang and Zhejiang University (CiSDG) **Akiko Terada-Hagiwara**, Principal Country Specialist, East Asia Department, ADB **Kuat Akizhanov**, Deputy Director Two, CAREC Institute - ASEAN Secretariat
Day 13	**1 June (Saturday)**
Daytime	*Digital Economy-focused Industry Tour to Yiwu* **Participants will explore the Zhejiang China Commodities City Group Co., Ltd., and other digital economy infrastructure projects. Participants will also explore the eWTP Public Service Platform and the integrated online-offline services of the China Goods digital trade platform to gain insights into the opportunities and challenges that Yiwu's procurement and trade industry faces in the digital era.**
Day 14	**2 June (Sunday)**
	Off

Annex B – Course Content

The course online platform can be found here: [Digital Economy Workshop-CAREC Institute E-Learning](#)
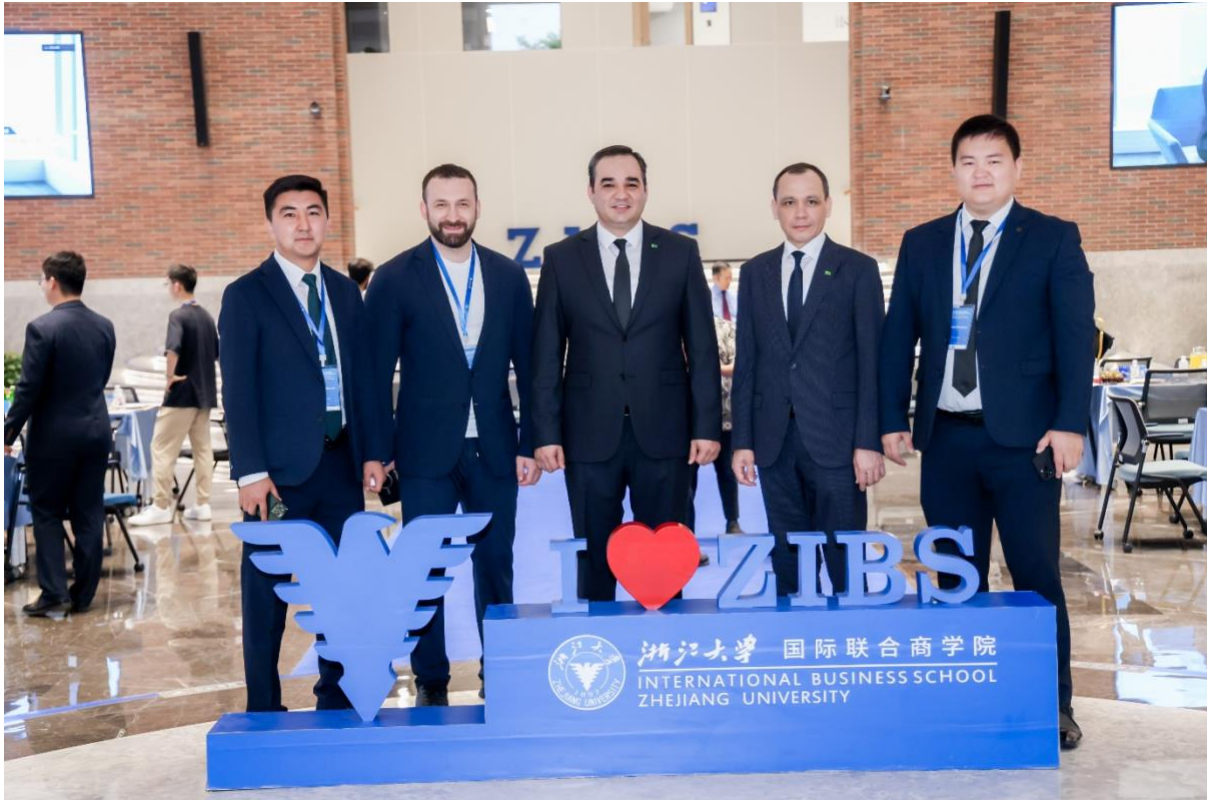
This includes all presentations delivered during the in-person course.

Annex C – Photos and Recordings

A selection of course photos can be found here:

More photos could be found at [Digital Economy Workshop-CAREC Institute E-Learning](#)

Annex D – List of Participants

Country representatives

Azerbaijan

1. Mr. Agil Azizov, Internal Auditor, Economic Zones Development Agency, Ministry of Economy
2. Ms. Durdana Ahadova, Head of Digital Projects Division, Digital Management Department, Ministry of Economy

Georgia

3. Mr. Nikoloz Tabatadze, Junior Specialist, Communications, Information and Modern Technologies Department, Ministry of Economy and Sustainable Development
4. Mr. Tornike Chakvetadze, Deputy Head of Web Resources Management Division of the IT Center of the Georgia Revenue Service, Ministry of Finance

People's Republic of China

5. Mr. Kelu Shi, Deputy Division Director, Ministry of Finance

Kazakhstan

6. Mr. Nurzhan Bazhayev, Chief Analyst of State Technical Service, Ministry of Digital Development
7. Ms. Gulmira Mautkhanova, Head of Division of Digitalization of State Bodies, Ministry of Digital Development

Kyrgyz Republic

8. Mr. Adilet Akylbekov, Leading Specialist of Business Environment Policy Department, Ministry of Economy and Commerce
9. Mr. Asylbek Zhunusov, Chief Expert of Infrastructure Department, Ministry of Digital Development

Mongolia

10. Ms. Zendmene Tamir, officer, Trade and Economic Cooperation Policy department, Ministry of Economy and Development
11. Mr. Chuluunbat Khuyag, consultant, Macroeconomic policy department, Ministry of Economy and Development
12. Ms. Asyljan Karivai, officer, Freezone division, Trade and Economic Cooperation Policy department, Ministry of Economy and Development
13. Ms. Michidmaa Basan, consultant, Integrated Policy and Planning department, Ministry of Economy and Development

Pakistan

14. Mr. Husnain Ali, Assistant Director, Securities and Exchange Commission of Pakistan (SECP)
15. Mr. Usama Khan Jadoon, Deputy Director, Digital Innovation and Settlements Department, State Bank of Pakistan

Tajikistan

16. Mr. Rustam Rasulov, Head of finance and economics department, Agency of innovation and digital technologies under the President
17. Mr. Masrur Niyozov, Head of automated systems sector, Department of Digital Economy Development, Ministry of Economic Development and Trade

Turkmenistan

18. Mr. Vepa Gurbanov, Head of Division for Development of Digital Technologies in Economy and Coordination of International Technical Assistance, Cabinet of Ministers
19. Mr. Guvanch Shamuhammedov, Head of Computer Technologies Division, Ministry of Finance and Economy

Uzbekistan

20. Mr. Firuz Khodjimatov, Chief Specialist of the Department for Tariff and Non-Tariff Regulation Measures, Ministry of Investment, Industry and Trade

Brunei

21. Wan Harris Zaky Bin Haji Ibrahim, Senior System Analyst, E-Government National Centre
22. Mohammad Norelham Bin Haji Zaini, Manager of Digital Business Adoption and New Industry, the Authority for Info-communications Technology Industry of Brunei Darussalam

Cambodia

23. Sreynit HORT, Deputy Chief of ASEAN Affairs Bureau, Ministry of Post and Telecommunications
24. Vitou TRY, Head of Department, Cambodia Academy of Digital Technology

Indonesia

25. Ardi Putra Baramuli, Consultant Financial Institutions Group East Asia, World Bank Group, Bisabola.Id (Sport-Tech Ecosystem)
26. Tirta Dhany, Cooperation Analyst, Centre for International Affairs, Ministry of Communications and Informatics
27. Ryan Narendra, CEO & Co-founder, CALLISTA
28. Anugrah Nurrewa, CEO, PT Jaramba Mobilitas Nusantara
29. Mustika Alam Rustomo, Head of Legal, PT AJ Central Asia Raya
30. Fadli Yuliansyah, Policy Analyst, Centre for International Affairs, Ministry of Communications and Informatics

Laos

31. Xayyachack SOUNVORAVONG, Deputy Head of Department, ICT Institute, Ministry of Technology and Communications
32. Vongsipaseuth THAMMAVONG, Deputy Head of Division, Department of Planning and Finance

Malaysia

33. Prabagaran Ganapathy, Principal assistant secretary, Digital Technology Division in the Ministry of Digital Malaysia
34. Norlizawati Binti Ghazali, Acting manager, Malaysia Digital Economy Corporation

Timor-Leste

35. Rogerio Paulo Chaves, Education Attache at China, Ministry of Hight Education Siens and Culture

United Arab Emirates

36. Genanew Bekele, Director for the Undergraduate Programs, Dubai Business School
37. Arij Lahmar, Assistant Professor, University of Dubai

Resource persons

1. Ms. Lei Jun, Professor - level Senior Engineer, Technology Review Expert in Zhejiang Province, Leading Talent in Hangzhou, China Mobile (Zhejiang) Innovation Research Institute
2. Mr. Zhang Xuguang, President of the Zhejiang Association for Science, Technology and Innovation, Distinguished Researcher, the Intelligent Education Research Centre, Zhejiang University
3. Mr. Wu Fei, Director and Qiushi Distinguished Professor of Institute of Artificial Intelligence, Zhejiang University
4. Ms. Yoonee Jeong, Senior Digital Tech Specialist (Digital Infra & Economy), Climate Change and Sustainable Development Department (CCSD), ADB
5. Mr. Liu Wenge, Dean and Professor of the School of International Economics and Politics, Liaoning University

6. Mr. Tang Yongchuan, Deputy Director of China Digital Creative Technology Equipment Innovation Industrial Alliance, Professor of the School of Computer Science and Technology, Zhejiang University
7. Ms. Wei Wenting, Private Sector Specialist, World Bank
8. Mr. Shen Yongsheng, General Manager of Zhejiang Daily Digital Technology (Zhejiang) Co.Ltd., General Manager of Hangzhou City Brain Co.,Ltd.
9. Ms. Fang Lijie, Professor of the School of Social Research at the Renmin University of China
10. Mr. Huang Xianhai, Changjiang Distinguished Professor and Vice President of Zhejiang University
11. Mr. Rong Ying, Research Fellow, Former Vice President of China Institute of International Studies
12. Mr. Wu Zhong, Secretary-General, the Finance Centre for South-South Cooperation

CiSDG

1. Mr. Gong Sen, Director
2. Ms. Li Jia, Associate Professor
3. Mr. Chai Yuxi,
4. Ms. Gong Wuxia,

ZIBS

1. Mr. Ben Shenglin, Dean
2. Ms. Xu Shengdan, program manager
3. Mr. Liu Yizhe, program manager

RKSI

1. Ms. Akiko Hagiwara, Country Specialist
2. Ms. Wang Dan (Winnie), Senior Knowledge Service Coordinator

CAREC Institute

1. Mr. Rovshan Mahmudov, Acting Chief of Capacity Building Division
2. Mr. Huang He (Gary), Capacity Building Specialist

Annex E – Course Evaluation Summary

After the completion of the workshop, participants were requested to provide their feedback with an online questionnaire to gauge their experience. The overall consensus from the feedback is overwhelmingly positive, highlighting the success of the workshop. Additionally, insightful suggestions for potential areas of improvement for future workshops were also noted, underscoring the commitment to continual enhancement and refinement.

How do you think this can be applied to your work?

- The knowledge can be applied when preparing negotiation material within international affairs related to ICT sector
- I have learnt the key factors of digitalization is data, how to transform data to binary, how to do fast processing including using AI to retrieve or manipulate data.
- As an educator, I will encourage students to fucus on cloud and ai to integrate in the project at school and competition.

- I also share some good practice that I gain to my colleague who always involve in policy making related to digital technology.
- Overview of China has presented has some useful cases that can be incorporated in our local landscape and maybe even partnership with Chinese entities.
- Establishment of an innovation ecosystem, comprising talent development and empowerment, as well as R&D initiatives.
- Rapid integration of emerging technologies to enhance efficiency and productivity.
- underscored the importance of integrating digitalization and data-driven approaches in economy. This approach will enhance efficiency, innovation, and effectiveness in our organizational practices.
- Increase the awareness of the importance of the digitalization, extending it to the rural areas

Do you have any suggestions for us to improve future events?

- The hours of in-class could be shortened and there could be more Q/A sessions. More practical activities could be applied.
- Even better if more practical cases were included.

Knowledge Demand Survey: Please state other topics that are of interest to you.

- E-commerce
- Emerging Digital Technologies
- Regional cooperation, trade in goods/services
- E-governance
- Startup ecosystem
- Green Economy