KEEP
CALM
AND
REACTIVATE
THE ECONOMY
WITH AI

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ROUNDTABLE SERIES

ACKNOWLEDGMENTS

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Head of Anti-Corruption, Rule of Law and Digitalisation Policy at Foreign and Commonwealth Office at the British Embassy in Mexico.

Carlos Amador
Head of Integrity Policy and Digitalization at the British Embassy in Mexico.

Iralki Beridze
Director of the Center for AI and Robotics at the United Nations Interregional Crime and Justice Research Institute (UNICRI).

Odhran McCarthy
Program Manager (AI) of the UNICRI Center for AI and Robotics.

Ana Rodriguez Tamayo
Intern at the UNICRI Center for AI and Robotics

We also thank the 57 experts who participated in this series of round tables. Their names are listed in Annexe #1.

For any questions or comments about the project, please contact info@cminds.co.

ABOUT THE EON RESILIENCE LAB OF C MINDS

The Eon Resilience Lab is the area of C Minds committed to preparing individuals for the future, given the accelerated changes generated by new technologies. We achieve this goal by supporting public and private institutions in the acquisition of new skills and the creation of strategies to navigate an ever-changing present, affected by AI and other digital technologies.

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ABOUT THE BRITISH EMBASSY IN MEXICO

The British Embassy in Mexico City maintains and develops relations between the United Kingdom of Great Britain and Northern Ireland and the United Mexican States. In particular, the Foreign, Commonwealth and Development Office pursues British national interests and projects the United Kingdom as a force for good in the world. It seeks to reduce poverty, promote sustainable economic development, effective rule of law for citizens and address global challenges with international and domestic partners.

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INTRODUCTION

The COVID-19 pandemic changed the world as we knew it, both in the short and long term. Projections for 2022 estimate that, despite best efforts, the pre-pandemic global Gross Domestic Product (GDP) scenario will not be reached. The best-case scenario for Q4 2022 represents a 0.4% drop from the pre-pandemic projection and, realistically, the Organization for Economic Cooperation and Development (OECD) estimates that it will fall to 2.5%, if not 4.6% in the worst-case scenario.

At a country level, the National Institute of Statistics and Geography (INEGI) in Mexico reports that the country suffered the largest quarterly retraction of GDP in its history, with a 17.3% drop in the second quarter of 2020. It is estimated that Mexico's GDP will be 6% lower than what was predicted before the pandemic, ranking us as the fifth hardest hit economy by the pandemic among the world's major powers, behind India, Indonesia, Spain, and South Africa. Looking at employability data, 1.8 million people lost their jobs at the start of the pandemic and were still unemployed by January 2021.

The country's economic recovery threatens to be a complicated challenge especially considering that Mexico's economic response to the pandemic is among the most moderate ones in the world according to the International Monetary Fund (IMF). With this in mind, how can a decent economic recovery be achieved, betting on the best-case economic scenario? According to the OECD, the best economic policy to promote growth and job creation is accelerating vaccination status. However, Mexico is also below the global and regional average in this area. It is therefore is necessary to look for alternative means to boost recovery.
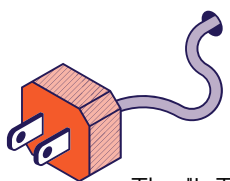
In order to identify these alternative methods, C Minds' Eon Resilience Lab and the British Embassy in Mexico carried out a series of roundtables with high-level stakeholders, mainly from Mexico and the United Kingdom. These focused on four priority topics: Artificial Intelligence (AI), crime and justice; trust in AI systems; the future of work and education; and future pandemic management.

The objective of this exercise was to generate information on the opportunities, current progress, needs, potential, and social and environmental challenges of AI in order to accelerate Mexico's post-pandemic economic recovery.

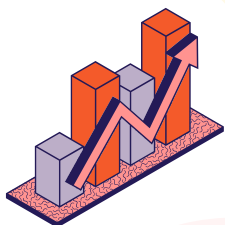# AN OVERVIEW OF AI AND EMERGING TECHNOLOGIES IN MEXICO

The following section contains key and insightful data on the state of emerging technologies and AI in Mexico today.
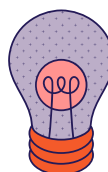
IoT

- The Mexican Industrial Internet of Things (IIoT) market is expected to grow from US$1.6 billion in 2018 to US$4 billion in 2022.
- The "IoT Survey Mexico" highlights that 33% of companies in Mexico and the US use the IoT and 44% of people in management positions are concerned about finding corresponding talent.

AI and Tech in Mexico

- By increasing investment in R&D and education, and by fostering a technologically enabled society, the economy could generate more than $245 billion in cumulative GDP growth from 2018 to 2025.
- The accelerated adoption of AI-related technologies could translate into an additional 1% overall sustained growth in GDP over the next decade.
- The new Federal Law for Industrial Property Protection aims to foster technological tools such as Blockchain and AI in Mexican companies during 2021.
- In May 2019, Mexico was part of the 42 signatory countries of OECD's Principles on AI.

- In 2019, the IA2030Mx Coalition conducted a National AI Survey (over 1,500 respondents) :
  - 93% were enthusiastic or curious about AI.
  - 80% believed that AI would have a positive effect on their lives.
  - 53% believed that AI would reduce employment.
  - 45% thought that AI may decrease the privacy and security of their personal data.
  - 45% said they were concerned about AI's ethical implications.
- In 2020, this Coalition published the Mexican AI National Agenda.

AI and the Industry

- Mexico's entrepreneurship ecosystem is among the most prepared to leverage AI for social good.
- 58% of CEOs believe AI could transform their business.
- 38% see the benefits of using AI but are not yet working with it.
- Only 39% of companies with AI systems have qualified staff, while 26% hire external talent and 22% do not have the maturity to use them.
- Hiring for AI-related positions has increased by 74%.
- In the next decade, 19% to 53% of jobs in Mexico could be impacted by AI.

Round Tables

1. AI for Crime Prevention and Justice in Latin America

2. How much can we trust AI systems?

3. The Future of Work and Education in Mexico

4. Future Pandemic Management

TABLE #1 - 22.10.2020

AI FOR CRIME PREVENTION AND JUSTICE IN LATIN AMERICA

In collaboration with

UNICRI
United Nations
Interregional Crime and Justice
Research Institute

CENTRE FOR ARTIFICIAL INTELLIGENCE AND ROBOTICS

AI FOR CRIME PREVENTION AND JUSTICE IN LATIN AMERICA

Main Recommendations:

- Ensure that the development of new technologies benefits everyone in society by promoting an ethical and responsible use that places human rights at the centre.
- Generate more conversations around the development and application of new technologies such as AI for justice and crime prevention.
- Create or follow protocols and ethical measures in the development and use of AI systems for justice and crime prevention that protect citizens from possible abuses.
- Develop fair and inclusive standards for the development and use of AI, such as:
  - Accountability by the people behind the algorithms;
  - Respect for rights such as privacy;
  - Transparency and explainability within the processes to be trusted by citizens;
  - Data and new technologies governance.
- Promote transparency in government institutions and reduce the digital gap in Latin America's justice system.
- Promote the creation of high-quality open data.

Latin American use cases:

Courts and Justice

- **PretorIA** (Colombia) is the first predictive AI system in the world to be implemented at a Supreme Court level. It is used as an auxiliary justice system in the Constitutional Court of Colombia.
- **Prometea** (Argentina) is an AI system capable of creating documents, performing searches, and assisting in data control. It is being used to assist judges in the management of sentences.

Crime prevention

- **Homicide Monitor** (Latin America) is a data visualisation platform that displays the distribution, dimensions, and dynamics of homicidal violence in an interactive and visual way.
- **Security Modelling and Analysis Centre (Centro Análisis y Modelamiento en Seguridad, CEAMOS)** (Chile), developed models that predict the area of possible crimes in the capital city, Santiago, for the national police force (carabineros).
- **CrimeRadar** (Brazil) predicts the location of potential crime in Rio de Janeiro.
- **Cop Cast** (Brazil) is a mobile application that turns mobile phones into police cameras in Rio de Janeiro.

ROUNDTABLE #2 - 28.01.2021

HOW MUCH CAN WE TRUST AI SYSTEMS?

HOW MUCH CAN WE TRUST AI SYSTEMS?

1) Main Recommendations:

- Raise awareness of the risks related to AI systems, from their development to their use.
- Create campaigns to raise public awareness on these issues so that citizens can identify when their rights are being violated.
- Promote a change of mindset among governments and other actors so that AI ethics are understood as an active responsibility and for these actors to actively seek ways to mitigate the violation of fundamental rights.
- Build the necessary foundations and regulations to re-orient the whole process behind AI systems towards a more ethical use.
- Promote the existence of ethical principles such as transparency, traceability, and explainability to raise awareness and mitigate potential risks around the use of AI systems.
- Strengthen and create new laws that protect people from possible biases and injustices caused by the use of AI systems.
- Implement specific programs for the inclusion of minorities and vulnerable groups, e.g., digital literacy programs and the creation of digital content for indigenous communities.
  - Algorithms are agnostic to society so legal enforcement should focus on not perpetuating any type of discrimination.
- Strengthen legislation with higher penalties and a scheme of clear responsibilities, without falling into over-regulation that interferes with innovation.

2) UK's Leading Practices:

In 2020 The Alan Turing Institute and the UK Information Commissioner's Office (ICO) published a guide called "Explaining decisions made by AI", aimed at helping all types of organisations and individuals increase the explainability of their AI systems in a way that goes beyond regulatory compliance. This guide is divided into 3 parts; **1) The basics of explaining AI ; 2) Explaining AI in practice and 3) What explaining AI means for your organisation.** This document emphasizes that transparency and explainability are not so much an explanation about how the system works, but rather a set of different types of explanations.

To explain the decisions made by an AI system, the authors suggest: **1)** select priority explanations by considering the domain, use case, and impact on the individual; **2)** collect and pre-process your data in an explanation-aware manner; **3)** Build your system to ensure you are able to extract relevant information for a range of explanation types; **4)** translate the rationale of your system's results into useable and easily understandable reasons; **5)** Prepare implementers to deploy your AI system and; **6)** consider how to build and present your explanation. Finally, one should also consider where the responsibility lies.

ROUNDTABLE #3- 10.02.2021

THE FUTURE OF WORK AND EDUCATION IN MEXICO

THE FUTURE OF WORK AND EDUCATION IN MEXICO

1) Main Recommendations:

- Strengthen the foundations and reduce inequalities in education and employment.
- Join efforts to reduce job informality and the unemployment rate.
- Provide the necessary skills to both teachers and students to face the future of work.
  - Continue to promote the implementation of programming classes within the basic education system from an early stage onwards.
- Invest in the entire education value chain to achieve an open, flexible, resilient, and accessible education system for all and that is capable of adapting to the digital world.
- Establish the necessary mechanisms and regulation to protect underage students' data on the digital platforms used for education.
- Promote STEM careers among girls and women to reduce the gender gap.
- Promote the inclusion and participation of women in the workplace.
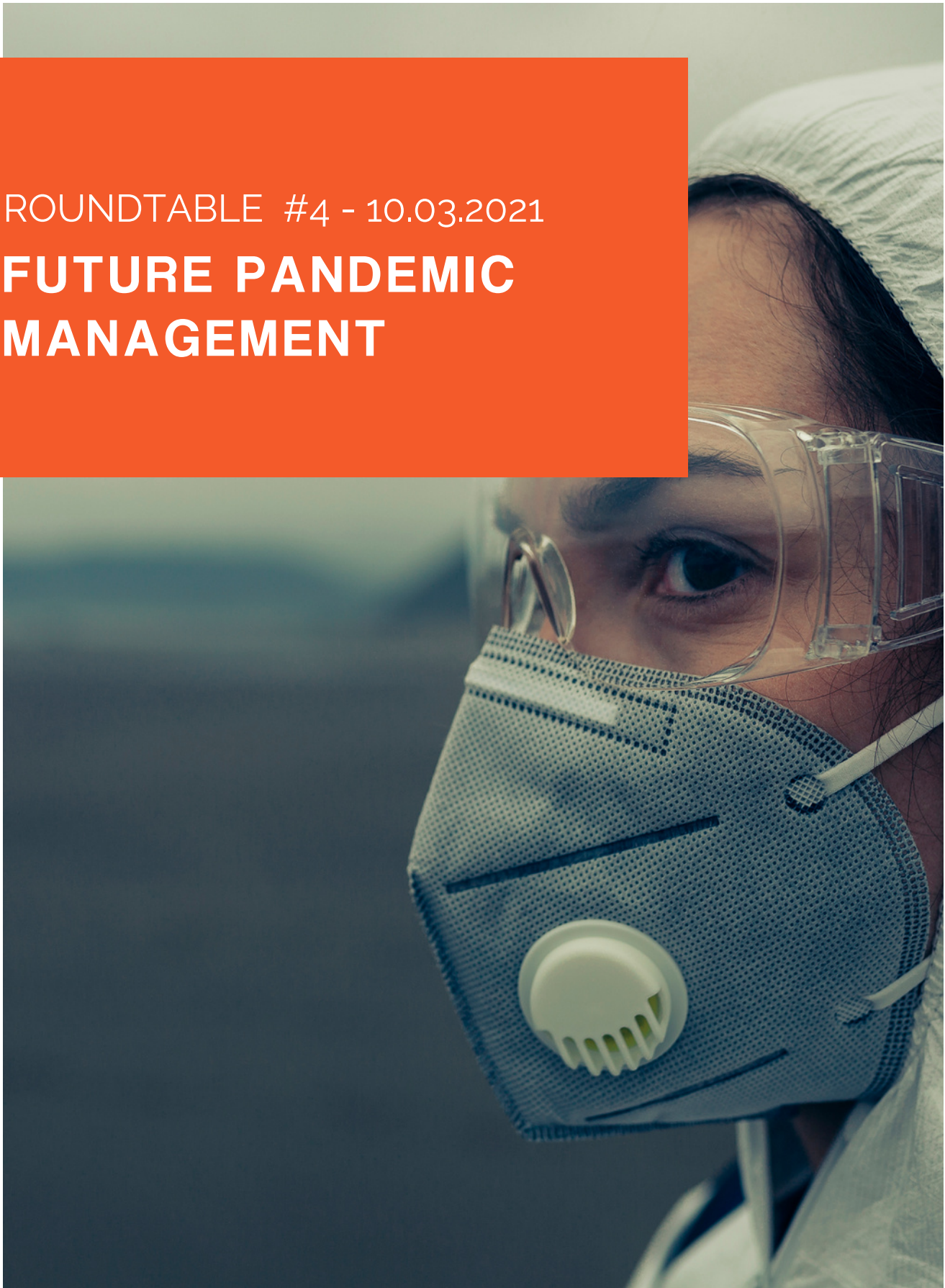
2) Latin American use cases:

- **Skills for Prosperity** is a program by the British Embassy in Mexico that seeks to prepare students for the transition between the classroom and the workforce by providing them with the most relevant skills for today's world and labour market. This is done through public-private collaboration models that allow students to access better quality jobs and higher incomes. This is in line with the British Industrial Strategy, as one of its main pillars is the digitalisation and the use of AI, taking into consideration people's needs and potential. From there, it generates national and international cooperation related to investment, development, and skills in cities.

- **Digital empowerment of workers and migrants** is a project carried out by a research team from the National Autonomous University of Mexico (UNAM) and West Virginia University. The project uses a system of bots to guide migrants and workers to develop digital skills, thus being able to apply to better jobs and improving their quality of life.

- **Secure Schools Online** is an initiative by the Inter-American Development Bank (IDB) and C Minds' Eon Resilience Lab that aims to facilitate the secure transition of educational institutions to the digital world. The focus is on protecting children's data privacy, an objective the collaborators are contributing to with a guide for schools and public policy recommendations for Ministries of Education in Latin America.

ROUNDTABLE #4 - 10.03.2021

FUTURE PANDEMIC MANAGEMENT

FUTURE PANDEMIC MANAGEMENT

1) Main Recommendations:

- Encourage and promote the importance of healthcare.
- Promote plans with a long-term vision with updated methodologies that persist regardless of changes in government administration.
- Develop strategies based on global and local trends to properly target efforts.
- ⚥ Incorporate women and minority groups into plans for recovery from the current pandemic and for the prevention of future pandemics in order to prevent a disproportionate impact on those groups, as happened with this pandemic.
- ⚥ Incorporate gender perspective into all socio-economic and cultural issues.
- Strengthen existing efforts and initiatives for the prevention and early detection of diseases through equitable and accessible health systems.
  - Develop modern, efficient, and equitable health systems with universal access.
- Strengthen the resilience of these systems, especially in terms of infrastructure, to be able to deal with this type of health crisis. At the beginning of the current crisis, Mexico's health infrastructure was just a third of Germany's.
- Adopt innovative and intelligent technologies to manage the cost and health services related to the pandemic, minimise risks, and identify needs effectively.
- Promote international cooperation ensuring that all countries can overcome this situation by creating global solutions.
- Use data generated by COVID-19 to inform and shape future policies to address impending pandemics.

2) International use cases:

Poland

- **Genomtec** is a Polish company that created products capable of carrying out an entire diagnostics process on a single platform and using only saliva, allowing for faster and more affordable diagnostics.

Malaysia

- **AIME** is a Malaysian company that developed QR codes to obtain relevant data and information on the spread of COVID-19 in the country, thus allowing for the creation of solutions to monitor infections and predict peaks.

ANNEXES

ANNEXE A. PARTICIPANTS PER ROUNDTABLE

1) AI for Justice and Crime Prevention in Latin America

Geographic scope: Latin America and the Caribbean and the United Kingdom.

All participants, alphabetically:
Ana Rodríguez Tamayo, Research Intern at UNICRI (The Netherlands); **Carlos Gershenson**, Researcher at the Research Institute for Applied Mathematics and Systems Research IIMAS-UNAM (Mexico); **Cecilia Danesi**, Professor and Researcher in AI and Law at the Buenos Aires University (Argentina); **Dale Joseph**, Cybercrime Policy Specialist at CARICOM IMPACS (Trinidad and Tobago); **David Pérez Esparza**, Head of the National Information Centre of the Mexican Government (Mexico); **Diego Flores**, Director for New Technologies and National Security Affairs at the Mexican Ministry of Foreign Affairs (Mexico); **Enrique Betancourt**, Director of the Violence and Crime Prevention Initiative at Chemonics International (United States); **Enrique Cáceres Nieto**, Researcher at the National Autonomous University of Mexico (UNAM) (Mexico).

2) How much can we Trust AI Systems?

Geographic scope: Mexico the United Kingdom.

All participants, alphabetically:
Ana Rodriguez Tamayo, Expert on the impact of new technologies on the law (Mexico); **Carl Wiper**, Group Manager in the Innovation Department of the Information Commissioner's Office (ICO) (UK); **Carla Crespo**, Lawyer at Transparencia Mexicana (Mexico); **Carla Vázquez Wallach**, Founder of Legal + Innovation (Mexico); **Claudia Flores**, Research Fellow at Facebook and the National Autonomous University of Mexico (UNAM) (Mexico); **David Lamb de Valdés**, Head of the Planning, Connecting and International Affairs Unit at the Federal Commission for National Competitiveness (COFECE) (Mexico); **Enrico Robles del Río**, Director of Intelligence at Endeavor (Mexico); **Eleonor Duhs**, Director (Barrister) in Fieldfisher's Privacy and Information Law Group (UK); **Grecia Macías**, Lawyer at the Network for the Defense of Digital Rights (r3d) (México); **Hannah McCausland**, Group Manager, International at the ICO (UK); **Jonathan Mendoza,** Secretary for Personal Data Protection at the National Institute for Transparency, Access to Information and Personal Data Protection (INAI) (Mexico); **Rolando Menchaca,** Director of Technology at the Ministry of Public Administration (SFP); **Vitelio Ruiz Bernal**, Director for Private Sector Research and Oversight at INAI (Mexico); and **Walter Pasquarelli,** AI Readiness and Data Policy Lead at Oxford Insights.

3) Future of Work and Education in Mexico

Geographic scope: Mexico

All participants, alphabetically:
Ana Karen Ramírez, Founder of Epic Queen (Mexico); **Ana Victoria Martín del Campo**, Tech Philosopher at C Minds (Mexico); **Carlos Toxtli**, Researcher at West Virginia University and the National Autonomous University of Mexico (UNAM) (United States and Mexico); **Elena Arias**, Senior Education Specialist at the Inter-American Development Bank (IDB) (Costa Rica); **Ingrid Chávez**, Public Policy Researcher at the Mexican Institute for Competitiveness (IMCO) (Mexico); **Juan Alberto González**, Director of the Innovation Centre at the Universidad Panamericana (Mexico); **Leticia Gasca**, Future of Work Insights Manager at Faethm AI (United States); **Lydia Nava**, Vice President of Social Development of the Mexican Employers' Confederation (COPARMEX) (Mexico); **María Estela del Valle**, Director General of Institutional Development at the Undersecretary of Education of the State of Mexico (Mexico); **Patricia González**, Labour Consultant on Union Democracy Issues (Mexico); **Patricio Bichara**, CEO and Cofounder of Collective Academy (Mexico); **Roberto Martínez**, Director of the OECD Mexico Centre for Latin America and the Caribbean (Mexico); **Silvia Velasco,** Leader of the Skills for Prosperity Program in Mexico by the British Embassy (Mexico).

4) Future Pandemic Management

Geographic scope: Malaysia, Mexico, the United Kingdom, and the European Union.

All participants, alphabetically:
Amrita Bahri, Assistant Professor at Mexico's Autonomous Technological Institute (ITAM) & CO-Chair for Mexico in the WTO Chair Program (Mexico); **Bernd Rhode**, Managing Director at Hannover Fairs Mexico (Mexico); **Boleslaw Charles Winiarski**, Chief Operating Officer at Genomtec (Poland); **Carlos Fernández**, Sales Manager at Salesforce (Mexico); **Claudia Quirós**, Forecasting Director and Future Strategist at Orâkolo Think (Mexico); **Cristina Campero**, Co-founder and Director of Medical Solutions PROSPERia (Mexico); **Helmi Zakariah**, Chief Executive Officer of AIME (Malaysia); **Mariana Rodríguez Mier y Terán**, Congresswoman (Mexico); and **Sofía Ramírez**, Executive Director at México, ¿cómo vamos? (Mexico).