



EXPERT GROUP MEETING ON EXPONENTIAL TECHNOLOGICAL CHANGE,  
AUTOMATION, AND THEIR POLICY IMPLICATIONS FOR SUSTAINABLE  
DEVELOPMENT  
CONFERENCE ROOM JOSÉ GOROSTIZA, MINISTRY OF FOREIGN AFFAIRS OF MEXICO  
MEXICO CITY, DECEMBER 6 TO 8, 2016

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## **PROGRAMME**

### **Tuesday, 6 December 2016**

#### **10:00 – 10:30 Opening**

##### **Welcome remarks:**

- Mr. Richard Alexander Roehrl, Senior Economic Affairs Officer, UN Department for Economic and Social Affairs, New York
- Mr. Hugo Eduardo Beteta, Director, ECLAC Sub regional headquarters in Mexico

##### **Opening remarks:**

- H.E. Mr. Miguel Ruíz Cabañas, Undersecretary for Multilateral Affairs and Human Rights, Ministry of Foreign Affairs, Mexico

#### **10:30 – 10:45 Coffee break**

#### **10:45 – 11:00 Setting the stage: Objectives of the meeting and context - UN Technology Facilitation Mechanism, STI Forum, and UN Regional Fora on Sustainable Development**

##### **Presentation:**

- Mr. Clovis Freire, Economic Affairs Officer, UN Department for Economic and Social Affairs, New York

##### **Q&A**

#### **11:00 – 12:30 Session 1: Exponential technological change**

**Key questions:** *What characterizes exponential technology change and does it differ from past patterns of technology change? If so how does it differ (e.g., in terms of pace, scope and potential impact)?*

##### **Moderator:**

- Mr. Sergio M. Alcocer, President, México Exponencial



### **Panellists:**

- Mr. Jose Ramon Lopez-Portillo, Professor, Oxford University
- Ms. Faye Duchin, Professor of Economics at Rensselaer Polytechnic Institute, USA
- Mr. Xingquan Wang, Associate Professor, Director of Research Center on Knowledge Management and Chief Expert of Think Tank “Creative Economy”, Institute of Information Sciences, Shanghai Academy of Social Sciences
- Ms. Ann Kingiri, Senior Research Fellow, African Centre for Technology Studies, Kenya
- Mr. Rob Atkinson, President, Information Technology and Innovation Foundation **(by video)**

### **Q&A and plenary discussion**

#### **12:30 – 14:30 Lunch break**

#### **14:30 – 16:00 Session 2: Emerging technologies and their applications**

**Key question:** *What are the key existing and emerging automation technologies? Where are they currently being used?*

#### **Moderator:**

- Ms. Norma Munguía, Director General for Global Issues, Ministry of Foreign Affairs of Mexico

#### **Panellists:**

- Ms. Laura Palomares, Professor, Institute of Biotechnology, UNAM
- Mr. Andrew Maynard, Professor, School for the Future of Innovation in Society in Arizona State University
- Edgar Barroso, Professor, Instituto Tecnológico de Estudios Superiores de Monterrey, Campus Santa Fe, Mexico

### **Q&A and plenary discussion**

#### **16:00 – 16:15 Coffee break**

#### **16:15 – 17:45 Session 3: Exponential technology change and automation - potential impacts on development and sustainability in key areas of concern (e.g., sustainable consumption and production, poverty, agriculture, infrastructure, ICTs)**

**Key question:** *What are the potential impacts of automation technologies on development and sustainability in general and on the achievement of the SDGs in particular?*



### **Moderator:**

- Mr. Richard Alexander Roehrl, Senior Economic Affairs Officer, UN Department for Economic and Social Affairs (DESA), New York

### **Panellists:**

- Ms. Bitrina Diyamett, Executive Director, Science, Technology and Innovation Policy Research Organization, Tanzania
- Ms. Faye Duchin, Professor of Economics at Rensselaer Polytechnic Institute, USA
- Mr. Zhang Chenggang, Professor & Vice dean, School of Social Sciences, Director, Research Center for Social Innovation and Risk Management, Tsinghua university, Beijing

### **Q&A and plenary discussion**

**Wednesday, 7 December 2016**

#### **9:00 – 10:30 Session 4: Possible scenarios of development, dissemination and adoption of automation technologies**

**Key questions:** *Based on the historical evidence, what are plausible scenarios related to the development, dissemination and adoption of automation technologies in the production base of developed and developing countries? What do these scenarios mean for sustainable development sustainable development aspirations?*

### **Moderator:**

- Mr. Richard Alexander Roehrl, Senior Economic Affairs Officer, UN Department for Economic and Social Affairs (DESA), New York

### **Panellists:**

- Mr. Jose Ramon Lopez-Portillo, Professor, Oxford University
- Ms. Faye Duchin, Professor of Economics at Rensselaer Polytechnic Institute, USA
- Mr. Edmundo Molina, Professor, Instituto Tecnológico de Estudios Superiores de Monterrey, Campus Santa Fe, Mexico
- Mr. Xingquan Wang, Associate Professor, Director of Research Center on Knowledge Management and Chief Expert of Think Tank “Creative Economy”, Institute of Information Sciences, Shanghai Academy of Social Sciences

### **Q&A and plenary discussion**

**10:30 – 11:00 Coffee break**

**11:00 – 12:30 Session 5: Innovation and technological unemployment**



**Key questions:** *What are the mechanisms through which technological change impacts employment? To which extent has innovation caused technological unemployment? Will the future be different because of emerging automation technologies?*

**Moderator:**

- Mr. Clovis Freire, Economic Affairs Officer, DSD, DESA

**Panellists:**

- Mr. Jose Ramon Lopez-Portillo, Professor, Oxford University
- Mr. James Bessen, Lecturer in Law at the Boston University School of Law **(by video)**
- Ms. Gabriela Dutrénit Bielous, Professor, Universidad Autonoma Metropolitana, Mexico
- Prof. Bart Verspagen, Director-Dean of the Maastricht Graduate School of Governance (MGSoG) at Maastricht University and Director of United Nations University – Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT)

**Q&A and plenary discussion**

**12:30 – 14:30 Lunch break**

**14:30 – 16:00 Session 6: Potential effect on employment in developed and developing countries**

**Key questions:** *How will emerging automation technologies impact employment in countries at different stages of development?*

**Moderator:**

- Mr. Wilson Perés, Senior Economic Affairs Officer, Division of Production, Productivity and Management at ECLAC

**Panellists:**

- Ms. Ann Kingiri, Senior Research Fellow, African Centre for Technology Studies (ACTS), Kenya
- Prof. Zhang Chenggang, Professor&Vice dean, School of Social Sciences, Director, Research Center for Social Innovation and Risk Management, Tsinghua University
- Ms. Bitrina Diyamett, Executive Director, Science, Technology and Innovation Policy Research Organization, Tanzania
- Mr. Raymond Torres, Director, International Institute of Labour Studies (by video, tbc)
- Mr. Ludovico Alcorta, Director, Research and Statistics Branch of the United Nations Industrial Development Programme (UNIDO)
- Mr. Edmundo Molina, Professor, Instituto Tecnológico de Estudios Superiores de Monterrey, Campus Santa Fe, Mexico



## Q&A and plenary discussion

### **16:00 – 16:15 Coffee break**

### **16:15 – 17:45 Session 6 continued....**

Thursday, 8 December 2016

### **9:00 – 10:30 Session 7: Implications for structural transformation, sustainable industrialization and catch up**

**Key questions:** *What are your views on the potential effects of emerging automation technologies on industrialization and structural transformation in developing and least developed countries, taking into account historical experiences?*

**Moderator:**

- Mr. Arturo Borja, Deputy Director General, CONACYT

**Panellists:**

- Mr. Ludovico Alcorta, Director, Research and Statistics Branch of the United Nations Industrial Development Programme (UNIDO)
- Ms. Gabriela Dutrénit Bielous, Professor, Universidad Autonoma Metropolitana, Mexico
- Prof. Bart Verspagen, Director-Dean of the Maastricht Graduate School of Governance (MGSoG) at Maastricht University and Director of United Nations University – Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT)

## Q&A and plenary discussion

### **10:30 – 11:00 Coffee break**

### **11:00 – 12:30 Session 8: Implications for reducing inequality**

**Key questions:** *What are your views on potential effects of automation technologies on various segments of population in developed and developing countries? What does this mean in terms of inequality within and across countries?*

**Moderator:**

- Ms. Julia Tagüeña, Deputy Director General, CONACYT



### **Panellists:**

- Mr. Michael Zichy, Assistant Professor, Department of Philosophy at the Faculty of Catholic Theology, University of Salzburg
- Mr. James Bessen, Lecturer in Law at the Boston University School of Law **(by video)**
- Mr. Rob Atkinson, President, Information Technology and Innovation Foundation **(by video)**
- Ms. Ann Kingiri, Senior Research Fellow, African Centre for Technology Studies, Kenya (TBC)
- Prof. Zhang Chenggang, Professor&Vice dean, School of Social Sciences, Director, Research Center for Social Innovation and Risk Management, Tsinghua University (TBC)

### **Q&A and plenary discussion**

#### **12:30 – 14:30 Lunch break**

#### **14:30 – 16:00 Session 9: Key policy recommendations relevant to the STI Forum**

**Key questions:** *What are the key policy actions (if any) to address the challenges and harness the opportunities you have identified? In particular, which of these policy actions should be considered by the UN Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs and/or the Forum of the Countries of Latin America and the Caribbean on Sustainable Development?*

### **Moderator:**

- H.E. Mr. Miguel Ruíz Cabañas, Undersecretary for Multilateral Affairs and Human Rights, Ministry of Foreign Affairs, Mexico

### **Panellists:**

- Mr. Lenni Montiel, Assistant Secretary-General for Economic Development, DESA
- Ms. Bitrina Diyamett, Executive Director, Science, Technology and Innovation Policy Research Organization, Tanzania
- Mr. Xingquan Wang, Associate Professor, Director of Research Center on Knowledge Management and Chief Expert of Think Tank “Creative Economy”, Institute of Information Sciences, Shanghai Academy of Social Sciences
- Mr. Víctor Carreón, Deputy Director General, CONACYT
- Mr. Wilson Perés, Senior Economic Affairs Officer, Division of Production, Productivity and Management, ECLAC

### **Plenary discussion**

#### **16:00 – 16:10 Group photo**



**16:10 – 16:30 Closing session**

- Mr. Lenni Montiel, Assistant Secretary-General for Economic Development, DESA
- H.E. Mr. Miguel Ruíz Cabañas, Undersecretary for Multilateral Affairs and Human Rights, Ministry of Foreign Affairs, Mexico