Global Executive Programme
The Future of Manufacturing: Trends and Policy Options
17-21 October 2016 - Warsaw, Poland
About the UNIDO Institute

Inclusive and sustainable industrial development is widely recognized as a primary driver of sustained economic growth and sustainable development. Increasing the capacities of modern manufacturing industries and industry-related services for value addition, economic diversification, employment creation and technological progress remains a priority of strategies at national, regional and global level.

As countries seek to reap the benefits of globalization, innovation and the digital economy through sound economic and industrial policies, these are likely to be insufficient without effective institutions and a supporting regulatory framework. This requires policymakers and government leaders who can strategically formulate policies in a complex environment and implement decisions responsibly. The need to understand critical global issues related to industrial development and the social, economic and environmental implications of current and future trends is pivotal for translating industrial policy into implementable government strategies.

If industrialization is to unleash the full potential of the productive sectors to contribute to the achievement of national sustainable development plans, public sector leaders must be well-equipped to provide the type of expertise needed for effective and innovative policy frameworks that accelerate economic development while also delivering sustained prosperity, environmental safeguards and collective wellbeing.

To build the skills and capacities for tomorrow, we must start today

The UNIDO Institute aims to enhance Member States’ industrial policymaking capabilities by generating, disseminating and sharing world-class knowledge resources, and build capacities for the formulation and implementation of strategies towards creating shared prosperity, advancing economic competitiveness and safeguarding the environment.
The Institute therefore:

1. Promotes UNIDO’s development knowledge and disseminates its expertise, experience and practical approach;
2. Advocates new solutions to industrial development challenges and best practices, and builds capacities for more effective policy management;
3. Develops research and policy analysis capabilities by enhancing the potential of government officials to plan sustainable industrial development processes and improve their capacities to implement policy reforms.

All of the Institute’s programmes rest on three pillars: (1) policy dialogue and training, (2) research and analysis, and (3) a global community of practice.
The spikes in recent economic crises and joblessness have spurred a renewed debate over the future of manufacturing as a means of boosting employment rates, economic growth and innovation. The emergence of new smart industrial applications, production technologies and business models associated with the so-called “new industrial revolution”, “Industry 4.0”, etc. and progress being made in the fields of information technology and advanced manufacturing present a new range of opportunities for industrial diversification, resource efficiency, production optimization and global market integration.

Improving industrial performance in this dynamic landscape requires in-depth understanding of these industrial policy processes as well as of the socio-economic impacts of such developments. This calls for policymakers who keep abreast of the intellectual and academic debate, as well as the economic, technological, environmental and social policy trends that influence industrial development and the evolution of manufacturing.

Manufacturing is about turning ideas and opportunities into products and services and underpins growth in developing and advanced economies

From 17 – 21 October 2016, the UNIDO Institute, in close collaboration with the Government of Poland, is organizing its next edition of the Global Executive Programme, which provides fresh insights from thought-leaders and industry experts, and delivers practical tools for designing and implementing evidence-based policies aimed at boosting the performance and competitiveness of their respective national industries.
Course Modules

Module 1: Megatrends driving change in global manufacturing
This module explores global trends and recent technological advancements as well as the key drivers of competitiveness in the manufacturing sector of developing countries. Participants will examine the dynamics as well as the technological and organizational changes in 21st century manufacturing, while analysing some innovative business models and strategies that respond to the rapidly evolving manufacturing landscape.

Module 2: Inclusive and sustainable industrial development
This module reviews the arguments supporting the unique role of manufacturing as an innovation diffusor, as an “engine of growth” and as a primary generator of employment. It further examines the impact of manufacturing on employment and the environment and analyses world trade and investment patterns for the development of the manufacturing sector.

Module 3: Policy options in 21st century manufacturing - scenarios for the future
In this module, participants will gain insights on diverse industrial policy packages that can boost the performance and competitiveness of the manufacturing sector in developing countries. In addition, a case study exercise will encourage discussions among participants about the effectiveness of industrial policies under varying external conditions.

Module 4: Tailoring industrial policy - experiences and key takeaways
In this module, participants are provided a series of industrial policy instruments being applied and an in-depth understanding of the main challenges, using relevant experiences from developing countries. Participants will subsequently be invited to engage in a discussion on the role of government and the different policy options available to them, particularly in the context of rapid technological development and the increasing difficulties this poses for developing countries to participate and compete in the global economy.
Agenda

Sunday, 16 October

19:00  Informal dinner

Monday, 17 October

9:30 - 10:00  Introduction to UNIDO
             J. Cukrowski
10:00 - 10:30  Opening remarks
              J. Wronecka, F. Haidara
10:30 - 11:00  Course introduction
               L. Alcorta
11:00 - 11:30  Coffee break
11:30 - 13:00  Global patterns of industrial structural change
               L. Alcorta
13:00 - 14:00  Lunch
14:00 - 15:30  Technological enablers of future manufacturing competitiveness
               P. Markillie
15:30 - 16:00  Coffee break
16:00 - 17:30  Current developments in manufacturing and ‘megatrends’ affecting its evolution
               M. Gregory
18:30 - 19:30  Dinner
19:30 - 20:30  Evening talk: The implications of Industry 4.0 for developing countries
               D. Zuehlke, M. Gregory, P. Markillie
               Moderator: L. Alcorta
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 9:00 - 10:30 | Life-cycle based sustainable materials management, resource efficiency and sustainable supply chain management in the manufacturing sector  
M. Stanislaus |
| 10:30 - 11:00 | Coffee break |
| 11:00 - 12:30 | Global trade and investment patterns: Consequences for the manufacturing sector  
J. Weiss |
| 12:30 - 13:30 | Lunch |
| 13:30 - 15:00 | Technology, innovation and organizational change in 21st century manufacturing and its implication for industrial policymaking  
P. Marsh |
| 15:00 - 15:30 | Coffee break |
| 15:30 - 17:00 | Group work exercise part I: Analysis  
Moderator: M. Clara |
| 17:00 - 17:45 | Break |
| 17:45 - 19:00 | Polish private sector evening |
| 19:00 - 20:30 | Dinner |
Wednesday, 19 October - Field trip

9:00  Departure from Manor House Hotel
10:00 - 10:30  Presentation of Starachowice Special Economic Zone (SEZ)
10:30 - 12:00  SEZ study tour and company visits
12:00 - 13:00  Transfer to Regional Science-Technology Centre (RSTC)
13:00 - 13:30  Presentation of RSTC and Biobank Project
13:30 - 14:30  Lunch
14:30 - 15:00  Transfer to Kielce Technology Park (KTP)
15:00 - 15:30  Presentation of KTP
15:30 - 17:00  KTP study tour and company visits
17:00 - 18:00  Transfer to Manor House Hotel
18:45 - 20:00  Dinner
### Thursday, 20 October

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 10:30</td>
<td><strong>Industrial policies to develop the manufacturing sector:</strong> A global overview</td>
</tr>
<tr>
<td></td>
<td><em>J. Zysman</em></td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:00 - 12:30</td>
<td><strong>Industrial policy options for Latin American countries</strong></td>
</tr>
<tr>
<td></td>
<td><em>W. Peres</em></td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:30 - 15:00</td>
<td><strong>The implementation of industrial policy instruments to foster innovation and technology in manufacturing: The cases of Turkey and Slovenia</strong></td>
</tr>
<tr>
<td></td>
<td><em>T. Petrin</em></td>
</tr>
<tr>
<td>15:00 - 15:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>15:30 - 17:00</td>
<td><strong>Group work exercise part II: Policy responses</strong></td>
</tr>
<tr>
<td></td>
<td><em>Moderator: M. Clara</em></td>
</tr>
<tr>
<td>18:45 - 20:00</td>
<td>Dinner</td>
</tr>
<tr>
<td>20:00 - 21:00</td>
<td><strong>Evening talk: What challenges will future technological changes pose to policymakers in developing countries?</strong></td>
</tr>
<tr>
<td></td>
<td><em>A. Maira, W. Peres, G. Strachan</em></td>
</tr>
<tr>
<td></td>
<td><em>Moderator: P. Marsh</em></td>
</tr>
</tbody>
</table>
Friday, 21 October

9:00 - 10:30  Implementing industrial policy: The case of the Republic of Korea  
J.-K. Choi

10:30 - 11:00  Coffee break

11:00 - 12:30  Policy responses to global innovation in manufacturing: The case of India  
A. Maira

12:30 - 13:30  Lunch

13:30 - 15:00  Industrial policy and industrial development: The South African experience  
G. Strachan

15:00 - 15:30  Coffee break

15:30 - 16:30  Group work exercise: Discussion of results  
Moderator: M. Clara

16:30 - 17:00  Group work exercise: Experts' comments  
J.-K. Choi (tbc), T. Petrin (tbc)

17:00 - 17:30  Final remarks and feedback  
L. Alcorta

18:45  Closing ceremony and dinner
Saturday, 22 October - Sightseeing (optional)

9:00 - 9:30  Departure from Manor House
9:30 - 11:00  Transfer to Warsaw Chopin Airport / Courtyard Warsaw Airport
11:00 - 11:30  Check-in at Courtyard by Marriott Warsaw Airport
11:30 - 12:00  Transfer to Warsaw city centre
12:00 - 14:00  **Warsaw Panoramic Tour**
14:00 - 15:00  Lunch
15:00 - 17:00  Free time
17:00 - 18:00  Transfer to Courtyard by Marriott Warsaw Airport
18:45 - 20:00  Dinner
Field trip

Starachowice Special Economic Zone Inc.
www.sse.com.pl

Starachowice Special Economic Zone (SEZ) is one of 14 SEZs in Poland, which are the result of successful synthesis between the needs of investors with those of the particular regions where they are located. Starachowice SEZ territory mainly covers Świętokrzyski Region and, like each zone, it is a separate administratively part of Polish territory, allocated for running businesses on preferential terms.

Upon entering a SEZ, a business has the assurance of tax benefits and an additional benefit is the fact that they can begin trading on a specially prepared site, fully equipped with the necessary utilities.

Starachowice SEZ has been set up for the purpose of:

- accelerating the development of the Polish regions,
- developing and utilizing new technical and technological solutions in the national economy,
- increasing the competitiveness of goods and services,
- developing the potential of industry and the infrastructure,
- creating new work places.

Kielce Technology Park
www.technopark.kielce.pl

The Kielce Technology Park focuses on innovation and creativity and, above all, is open to cooperation with entrepreneurs from Poland and abroad. The Park provides modern and professionally prepared infrastructure and fully developed investment areas covered by the operation of the “Starachowice” Special Economic Zone - "Kielce" subzone. The companies operating in the KTP can benefit from both the park's facilities and the tax advantages. The primary objective is to respond to the individual needs of potential collaborators.

Development services offered by KTP:

- general and specialized trainings, workshops, conferences
- guidance on patent and intellectual property, commercialization of knowledge, strategic planning and management of innovative products
- marketing and technical audits
- evaluation of project market potential
assistance in preparing business plans
assistance in obtaining external funding sources
finding business partners
providing R&D services
contact database.

Regional Science-Technology Centre
www.rcnt.pl

The Regional Science-Technology Centre (RS-TC) aims to concentrate activities and local and regional initiatives for economic development of the Świętokrzyskie Province and to stimulate cooperation between universities, scientific entities, business environment institutions and companies, with a special focus on the transfer of modern technologies and the development of entrepreneurship.

The Regional Science-Technology Centre creates organizational, material and logistical conditions for transferring scientific achievements and modern technologies to companies and research implementation activities. Fostering investment processes is an important element of RS-TC operations, as is the creation of optimum conditions for investment.

BIOBANK Project

Biobank’s objective is to collect biological material (DNA, serum, plasma) for scientific purposes. A fully automated RCNT biobank and laboratories cooperating with it ensure the protection of health of the inhabitants of the Świętokrzyskie Province in a modern way. The test results, Biobank’s main output, focus on increasing the pro-health awareness of the region’s inhabitants. The result will be an effective reduction in the incidence of disease by indicating and eliminating hazards responsible for modern-age diseases.

The complex of research implementation laboratories includes:

- The Świętokrzyskie Biobank along with the Public Bank for Stem Cells
- The Research Laboratory for Medical Genetics
- The Biomarker Laboratory with an autoimmune laboratory
- The Laboratory for New Biotechnologies
- The Studio for Bioinformatics.
Venue and location

The programme will take place at the Manor House SPA Hotel, located in the proximity of Warsaw, Poland.

The Manor House SPA is a beautiful hotel complex surrounding the historical Odrowąż Palace, which dates back to the 17th century. It is one of the oldest palaces in Poland and is situated in a scenic park which is part of Poland’s most treasured landscapes inscribed in the national heritage list. A large 10 hectare area, together with diversified greenery, rich fauna and numerous natural monuments make the Manor House a pleasant place for learning and working in a relaxed environment.

Manor House SPA Hotel
Odrowąż Palace
26-510 Chlewiska near Szydłowiec;
56 Czachowskiego Street
Poland
Phone: (+48) 48 628 70 61
https://www.manorhouse.pl
Speakers' biographies

Joann Wronecka
Deputy Minister of Foreign Affairs of Poland

Deputy Minister Joanna Wronecka is a diplomat and graduate of the Faculty of Arabic Studies of the University of Warsaw. In 1985, she successfully defended her doctoral thesis in Arab-Muslim philosophy at the Faculty of Modern Languages of the University of Warsaw. She took part in scholarship programmes in Algeria, Egypt and France.

Joanna Wronecka has worked in the Foreign Service since 1993, moving up the career ladder from an expert to Adviser to the Minister, Head of Section, Deputy Director and Director of the Department, up to the post of Ambassador. In 1996-1998, she was Deputy Director of the Department of the United Nations System, and from 1998 to 1999, Director of the Department of Africa and the Middle East. In 2003-2005, she held the position of the Minister’s Secretariat Director. She served as Ambassador in Cairo for four years (1999-2003), and as Ambassador in Rabat from 2005-2010.

In September 2010, the High Representative for Common Foreign and Security Policy appointed Ambassador Joanna Wronecka as Head of Delegation of the European Union in Amman, Jordan. Since September 2015, she has served as Adviser for Arab states, the Middle East peace process and Iran issues in the Department of Africa and the Middle East.

Fatou Haidara
Managing Director, UNIDO

Fatou Haidara is Managing Director of UNIDO’s Policy and Programme Support (PPS) and Director ad interim of the Department of Human Resources Management. She is responsible for setting and implementing the strategic direction and goals of PPS in line with organizational objectives and provides leadership and effective and efficient management for all services and activities of PPS. She also assists the Director General in promoting cooperation, coherence and partnership with other organizations, particularly those in the UN system.

Previously, Fatou Haidara served as Director of the Policymaking Organs Secretariat (PMO), where she coordinated with the Government of Peru the historical 15th General Conference of UNIDO which culminated with the adoption of the landmark Lima Declaration.

Before joining UNIDO, she served for 8 years the Government of Mali in several ministerial positions including as Minister of Employment and Vocational Training; Minister of Tourism
and Artisanal Industries and Minister of Industry, Trade and Private Sector Development. In these capacities, she participated actively in the strategic negotiations between the Government of Mali and Bretton Woods institutions (IMF and The World Bank) and other development partners. She led many ministerial delegations at international forums, in particular the first WTO ministerial Conference in Seattle (United States of America).

Fatou Haidara has a Master degree in Economics from the University of Reims, France.

Augusto Alcorta
Director, UNIDO

Augusto Alcorta is the Director of UNIDO’s Policy, Research and Statistics Department. Prior to joining UNIDO, he served as Professor in Economics of Technology and Innovation and as Associate Dean for Research at the Maastricht School of Management. He was a Research Fellow at the Institute for New Technologies at the United Nations University and worked as an Economist for Latin America at the Economist Intelligence Unit and Midland Bank (part of the HSBC group). He has also performed consultancy work for various UN Agencies.

Alcorta is an Affiliated Professor at the Dusseldorf Business School; Universidad Católica del Peru in Lima; University of International Business and Economics in Beijing; and the University of Maastricht. Alcorta is currently a member of the Advisory Board, Technology and Management for Development Centre, University of Oxford, UK. He has published extensively in the areas of new technologies, innovation, industrialization and development. He has recently co-edited Pathways to Industrialization in the Twenty-First Century: New Challenges and Emerging Paradigms, Oxford University Press, 2013. Alcorta holds a Bachelor and Master in Economics from Universidad del Pacifico, Lima, as well as a MPhil in Development Studies and a PhD both from the University of Sussex, Brighton, UK.

Paul Markillie
Editor, The Economist, UK

Paul Markillie is Innovation Editor of The Economist. He specializes in writing about emerging and disruptive technologies. His special report “The Third Industrial Revolution” was published by The Economist in 2012 as a cover story and attracted international interest.
Other more recent reports include "Knit me a car", a special report on new materials in manufacturing. His previous special reports have included carmaking, aerospace and logistics. Paul was The Economist’s first Asian Business Correspondent, based in Hong Kong, and also served as Asia Editor.

Mathy Stanislaus
Assistant Administrator for the Office of Land and Emergency Management, Environmental Protection Agency, United States of America

Mathy Stanislaus is the Assistant Administrator for Land and Emergency Management at the U.S. Environmental Protection Agency. As Assistant Administrator for the Office of Land and Emergency Management (OLEM), Mr. Stanislaus leads EPA’s programmes to manage solid and hazardous wastes, and to revitalize communities through the cleanup and redevelopment of contaminated sites. He also oversees other federal agencies’ cleanup of contaminated properties, and is responsible for chemical plant safety, emergency response, oil spill prevention and underground storage tank regulation.

Mr. Stanislaus is leading efforts to further the use of life-cycle based sustainable materials management approaches in government and business decisions. In this capacity, he represents the U.S. at G7 deliberations and in the G7 Alliance for Resource Efficiency to promote best practices and foster innovation that address the challenges of resource efficiency. This Alliance provides a forum for businesses and stakeholders from the public sector, research institutions, and academia and for consumers to advance resource efficiency goals.

Mr. Stanislaus leads OLEM’s actions to advance the President’s Climate Action Plan and EPA’s efforts to advance the Obama Administration’s Investing in Manufacturing Communities Partnership. He also has served on the White House Council on Auto Communities and Workers. He is a tri-chair of the Obama Administration Chemical Facility Safety and Security Working Group and serves on the interagency working group for the White House Initiative on Asian Americans and Pacific Islanders. Mr. Stanislaus led EPA’s response to the Deep Water Horizon BP Spill in 2010. He also served on the U.S. Department of Interior’s Ocean Energy Safety Advisory Committee.

Mr. Stanislaus is a chemical engineer and environmental lawyer who received his law degree from Chicago Kent Law School and chemical engineering degree from the City College of New York. He has over 20 years of private and public sector experience in the environmental field, advising other federal government agencies, Congress and the United Nations.
Mike Gregory
Head of Division, University of Cambridge, UK

Mike Gregory is Head of the Manufacturing and Management Division of the University Engineering Department and of the Institute for Manufacturing (IfM) at the University of Cambridge, UK. He was a founding member of the team which established the Manufacturing Engineering Tripos, a senior undergraduate programme covering marketing, design, production, distribution and service with very close industrial engagement.

Mike Gregory’s work continues to be closely linked with industry and government, and he has published in the areas of manufacturing strategy, technology management, international manufacturing and manufacturing policy. External activities include membership of various government and institutional committees. He served as Executive Director of the Cambridge MIT Institute from 2005 to 2008, and was Springer Visiting Professor at UC Berkeley in 2008/2009. He chairs the UK Manufacturing Professors Forum and is a member of the UK government’s Analytical Group on Manufacturing.

Detlef Zühlke
Professor, German Research Center for Artificial Intelligence DFKI, Germany

Detlef Zühlke received his MS in electrical engineering and computer sciences and a PhD in robotics both from RWTH Aachen/Germany. Currently, he is Professor of Production Automation at the University of Kaiserslautern and Director of the research department Innovative Factory Systems (IFS) at the German Research Center for Artificial Intelligence (DFKI). He is also Executive Chairman of the SmartFactoryKL, Advisory Board Member of the VDI/VDE-Society for Measurement and Automatic Control and member of the advisory panel of Springer publishing. He has held several management positions in the International Federation of Automatic Control IFAC. Furthermore, he is a member of the Board of Governors of the Manufacturing Leadership Council.

His research interests are industrial control architectures, factory planning and operation and human-machine-systems for industrial applications.

He was honoured by the Doctor honoris cause of the Lucian Blaga Universtity Sibiu/Romania and the Badge of Honour of the German Society of Engineers VDI for outstanding contributions in the field of engineering.
John Weiss
Emeritus Professor, University of Bradford, UK

John Weiss is Emeritus Professor of Development Economics at the University of Bradford, UK and an independent economic consultant. He has written extensively on issues of industrialization and industrial policy, publishing several textbooks, including most recently The Economics of Industrial Development, Routledge 2011.

He is Joint Editor of the Routledge Handbook on Industry and Development, Routledge, 2015. He has worked on industrial policy in, amongst others, Mozambique and Ethiopia (for the World Bank), in Mexico (for the government) and in Mongolia (for UNIDO). He has collaborated with UNIDO over many years and was a reviewer for the last two Industrial Development Reports. He is the author of Practical Appraisal of Industrial Projects, UNIDO 1980.

Peter Marsh
Former Editor, Financial Times, UK

Peter Marsh has a degree in Chemistry from Nottingham University, UK, and worked as a journalist for the Financial Times for 29 years. He left the newspaper in March 2013. In the latter part of this period, he was FT Manufacturing Editor and was the author of “The New Industrial Revolution: Consumers, Globalization and the End of Mass Production”, published in 2012 by Yale University Press. The book describes how global manufacturing has evolved and how it works in the twenty-first century.

Peter now writes and lectures on new manufacturing trends around the world, and directs a website on this topic: MADEHERENOW.com.

His FT career involved coverage of technology, economics, the chemicals and automotive sectors as well as other parts of manufacturing. Previous books have focused on the topics of microchips, robotics and the space industry.
John Zysman
Professor, University of California, Berkeley, US

John Zysman is Professor of Political Science at the University of California, Berkeley and Co-Founder of the Berkeley Roundtable on the International Economy (BRIE). He received his B.A at Harvard and his PhD at MIT. He has written extensively on European and Japanese policy and corporate strategy. His interests also include comparative politics, Western European politics, political economy and energy policy.

His publications include “The Highest Stakes: The Economic Foundations of the Next Security System” (Oxford University Press, 1992), “Manufacturing Matters: The Myth of the Post-Industrial Economy” (Basic Books, 1987) and “Governments, Markets, and Growth: Finance and the Politics of Industrial Change” (Cornell University Press, 1983). John Zysman has been a member of the Steering Committee, University of California, Industry-University Cooperative Research Program. He has been on the Editorial Boards of “The New Political Economy”, “Industrial and Corporate Change” and “Industry and Innovation”. He was a member of the Faculty Executive Board, Clausen Center for International Business and Policy, Haas School of Business, University of California, Berkeley. He is also a Council Member of the Council on Foreign Relations and of the Pacific Council on International Policy. Previously, John Zysman has served on the Director’s Advisory Board, Lawrence Livermore National Laboratory, the Industrial Advisory Board, Los Alamos National Laboratories and the Scientific Board, Centre D’Etudes Prospectives et D’Informations Internationales.

Wilson Peres
Consultant, UN Economic Commission for Latin America and the Caribbean (ECLAC), Chile

Wilson Peres is a Consultant to the Division of Production, Productivity and Management of the UN Economic Commission for Latin America and the Caribbean (ECLAC) in Santiago de Chile. He was previously Chief of ECLAC’s Industrial and Technological Development Unit, Investment and Corporate Strategies Unit, and Innovation and ICT Unit. He has been a Consultant for the OECD Development Center, the Organization of American States and the Mexican government, as well as a visiting Research Fellow and Lecturer at the University of California, San Diego (UCSD), and Professor of Industrial Organization and Theory of the Firm at the CIDE in Mexico City.

Tea Petrin
Former Minister of Economy, Slovenia

Tea Petrin is Professor Emeritus, University of Ljubljana, Affiliate Coordinator of Study Programmes in South Eastern Europe Faculty of Economics, University of Ljubljana, Slovenia, and member of the Board of Directors of Academic Industrial Research Network, member of Academic Advisors of the European Forum on Entrepreneurship Research, member of the UN Committee for the Development Policy as well member of the awarded EU Horizon 2020 research project (Innovative, sustainable and inclusive growth, 2015-2018).

Other previous positions include: Head of the Entrepreneurship Department at the Faculty of Economics, Senator at the University of Ljubljana, visiting Professor at the Haas School of Business, University of California and at the University of Massachusetts at Amherst, Fulbright Professor at the Institute of International Studies, University of California, Berkeley, and Center for Industrial Competitiveness, University of Massachusetts, guest speaker at universities in the United States, Europe, Japan and Hong Kong. In Slovenia and the former Yugoslavia, her papers and major works represent the very foundation of studies on small business, entrepreneurship, proactive industrial policy and competitiveness policy. She has been a member of the editorial board of Review of Industrial Organization and the European Association for Industrial Economics Research.

She has acted as an Advisor/Senior Expert for multilateral institutions (UNDP/UNIDO, IBRD, FAO, the WB) and for the European Commission (European Cluster Policy Group-chair, Synergies Expert Group-member, and High Level Group on education-member), for the EC-funded project Development of Cluster-Based Industrial Policy in Turkey, and as senior researcher within the EU CEC-funded ClusterCOOP project.

She is former Minister for Economic Affairs (and later Minister of Economy) of the Government of Slovenia (1999-2004). During her term, she introduced a new Industrial Competitiveness and Entrepreneurship Policy. She was also Ambassador of the Republic of Slovenia to the Netherlands (2004-2008).
Garth Strachan
Deputy Director General, Department of Trade and Industry, South Africa

Garth Strachan is currently the Deputy Director General of Industrial Development from the Department of Trade and Industry of the Republic of South Africa. He holds a Master of Science Degree in Public Finance from the School of Oriental and African Studies, University of London. He serves on the Board of Directors of Trade and Industrial Policy Studies (TIPS) – a not-for-profit research and policy organization.


Joong-Kyung Choi
Former Minister of Knowledge Economy, Republic of Korea

Mr. Joong-Kyung Choi was former Minister, Ministry of Knowledge Economy of the Republic of Korea (now Ministry of Trade, Industry and Energy) during the Lee Myung-bak Administration. He also served as the Senior Secretary to the President for Economic Affairs at the Office of the President.

He started his career as a government officer at the Ministry of Finance and Economy (now Ministry of Strategy and Finance) in 1978. He went on to be Vice Minister of Strategy and Finance after serving as Director of the International Finance Bureau. After the financial crisis in the late 1990s, he played a key role to restructure Korean financial institutions and system. An Emergency Measure for Swift Underwriting of Corporate Bonds based on his idea was one of the effective government interventions in corporate bond markets to prevent a credit crunch after the crisis. He also had a successful career path in international affairs. He worked for the World Bank Group as an Executive Director and was Ambassador of the Republic of Korea to the Philippines for two years.

Tapping his experience to develop and restructure the economic, financial and industrial system in the Republic of Korea, he wrote a book titled “Upside Down Success Story of Korea’s Economic Development”, which became a text book for government officers in the Republic of Korea as well as from developing countries. He was elected President of the Korean Institute of Certified Public Accountants (KICPA) in June 2016. He holds a Bachelor and Master degree in Business Administration from Seoul National University, Republic of Korea, and a PhD in Economics from the University of Hawaii.
Arun Maira
Former Member, Planning Commission, India

Arun Maira has been a member of the Planning Commission chaired by the Prime Minister of India. He was responsible for facilitating the shaping of policies and programmes related to industrialization and urbanization in the country and of tourism. Previously, he was part of Tata Administrative Services for 25 years and worked in various high-level positions in the Tata Group till 1989. He was Board Member of Tata Motors from 1981 to 1989. He also worked for Arthur D. Little for 10 years where he was Leader of Global Organization Practice and Managing Director of Innovation Associates, a subsidiary of Arthur D. Little.

In 2000, Maira returned to India and held the position of Chairman of Boston Consulting Group in India till April 2008. Maira has been a member of the Confederation of Indian Industry’s (CII) National Council for many years. He has also been Chairman of several of CII’s National Councils, including the National Council for Corporate Governance and Chairman of CII’s Leadership Summit. He was also Chairman of Axis Bank Foundation and Save the Children, India.

Michele Clara
Senior Coordinator, UNIDO

Michele Clara has been serving as Industrial Development Officer at the Vienna HQ of the United Nations Industrial Development Organization since April 2000. He holds a Master degree in Development Economics from the University of Cambridge (UK), where he completed his PhD on the development of SME clusters in March 1998 under the supervision of Dr. Ha Joon Chang.

Earlier in his career at UNIDO, he was involved in the design and implementation of value chain and cluster development initiatives in India, Pakistan, Iran and Viet Nam. He is one of the authors of the UNIDO methodology on cluster development and he has acted as faculty in training programmes for cluster brokers from Asia and Northern Africa in collaboration with the ILO, ADB, OECD and several UN Regional Commissions. Together with Doyle Baker from FAO, he co-chaired the working group on value chains under the framework of the Donor Committee for Enterprise Development.

Since May 2010, he has coordinated the work of the Research and Policy Advice Group at UNIDO. In his current function, he has been involved in the production of several research documents, including the UNIDO Industrial Report series. He is also responsible for the policy advice services that UNIDO provides to its Member States, both at the country and at the regional level. In this capacity, he has advised governments in Africa and Asia on issues of diversification and industrial policies.
Jacek Cukrowski
Chief, Regional Division - Europe and Central Asia, UNIDO

Jacek Cukrowski is Chief of UNIDO’s Regional Division for Europe and Central Asia. Previously he served as Chief of the UNIDO Institute for Capacity Development. Before joining UNIDO he worked for United Nations Development Programme (UNDP) as an adviser and a team leader at Regional Center for Europe and Commonwealth of Independent States.

Previously he was with the Center for Social and Economic Research (CASE) in Poland and earlier with the Economic Institute of Academy of Science of the Czech Republic. His academic background includes MSc in system engineering, PhD in computer science and PhD and habilitation (i.e., a senior post-doctoral qualification) in economics. He has extensive teaching and research experience in international trade, development economics and macroeconomics.

He is an author or co-author of numerous publications in refereed international journals and books and chapters in books. In 2009, in recognition of sustained professional and academic excellence he received the title of Professor conferred by the President of Poland upon a motion of the Central Commission for Academic Degrees and Titles of the Republic of Poland.
<table>
<thead>
<tr>
<th>Country</th>
<th>Name and Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>Mr. Marco Patrice Da Silva Victor, Director General, Institute for Industrial Development, Ministry of Industry</td>
</tr>
<tr>
<td>Bhutan</td>
<td>Mr. Phuntsho Tobgay, Director General, Department of Geology and Mines, Ministry of Economic Affairs</td>
</tr>
<tr>
<td>Brazil</td>
<td>Mr. Igor Nogueira Calvet, Secretary, Industrial Development and Competitiveness, Ministry of Industry, Trade and Services</td>
</tr>
<tr>
<td>China</td>
<td>Mr. Guangda Du, Director, Department of Planning, Ministry of Industry and Information</td>
</tr>
<tr>
<td>Colombia</td>
<td>Ms. Claudia Bedoya Zapata, General Manager, Productive Transformation Programme, Ministry of Commerce, Industry and Tourism</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Mr. Carlos Mora Gómez, Vice-Minister, Ministry of Economy, Industry and Commerce</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Mr. Juan Carlos Parra, Vice-Minister of Industry and Productivity</td>
</tr>
<tr>
<td>Guatemala</td>
<td>Mr. Enrique Lacs Palomo, Vice-Minister of Integration and Foreign Trade, Minister of Economy</td>
</tr>
<tr>
<td>India</td>
<td>Ms. Sunita Yadav, Director, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry</td>
</tr>
<tr>
<td>Iraq</td>
<td>Mr. Mohammed Ali Dheyab, Director General, Planning Directorate, Ministry of Industry</td>
</tr>
<tr>
<td>Jamaica</td>
<td>Mr. Stephen Wedderburn, Chief Technical Director, Ministry of Industry, Commerce, Agriculture and Fisheries</td>
</tr>
<tr>
<td>Lao</td>
<td>Mr. Sirisamphanh Vorachith, Director General, Planning and Cooperation Department, Ministry of Industry</td>
</tr>
<tr>
<td>Lesotho</td>
<td>Mr. Fusi Edwin Notoane, Principal Secretary, Ministry of Trade and Industry</td>
</tr>
<tr>
<td>Country</td>
<td>Name</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Mr. Periasamy Gunasekaran</td>
</tr>
<tr>
<td>Pakistan</td>
<td>Mr. Arif Ibrahim</td>
</tr>
<tr>
<td>Peru</td>
<td>Mr. Mauricio Moscoso</td>
</tr>
<tr>
<td>Philippines</td>
<td>Mr. Ceferino Rodolfo</td>
</tr>
<tr>
<td>Russia</td>
<td>Mr. Gleb S. Nikitin</td>
</tr>
<tr>
<td>Saint Lucia</td>
<td>Mr. Bradly Felix</td>
</tr>
<tr>
<td>Samoa</td>
<td>Mr. Lautafi Fio Selafi Purcell</td>
</tr>
<tr>
<td>Senegal</td>
<td>Mr. Mamadou Kebe</td>
</tr>
<tr>
<td>South Africa</td>
<td>Ms. Anneline Chetty</td>
</tr>
<tr>
<td>Sudan</td>
<td>Mr. Elamin Ahmed Osman Ahmed</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>Mr. Filipus Nino Pereira</td>
</tr>
<tr>
<td>Tunisia</td>
<td>Mr. Brahim Chebili</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Mr. Le Huu Phuc</td>
</tr>
<tr>
<td>Yemen</td>
<td>Mr. Salem Mohamed Salman</td>
</tr>
</tbody>
</table>
Contact

For further information or if you have any queries regarding the programme, please contact the coordinators of the 2016 edition of the Global Executive Programme:

Ms. Irene Pirca  
Phone: (+43) (1) 260263587  
E-mail: i.pircagarcia@unido.org

Mr. Franz Brugger  
Phone: (+43) (1) 260263373  
E-mail: f.brugger@unido.org

UNIDO Institute  
Vienna International Centre  
Office D2047, 1400 Vienna  
Austria