

# Global Trade & Innovation Policy Alliance Summit

---

## Disruptive Technologies

*Do they Worsen the Digital Divide?*



**Syed Munir Khasru**

Chairman

The Institute for Policy, Advocacy and Governance (IPAG)

May 17, 2018

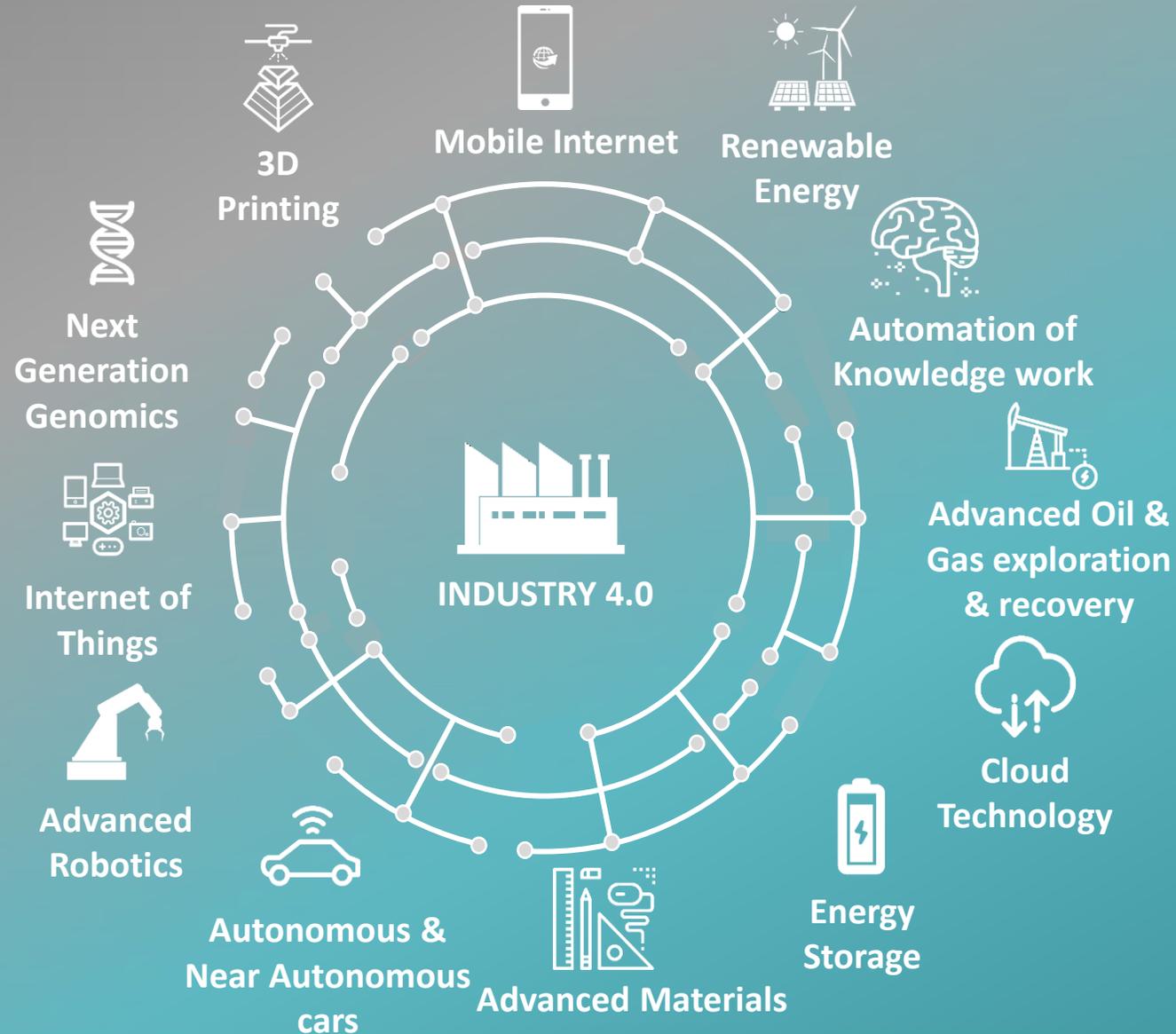
# Mental Mapping

- **Audio Visual**
- **Disruptive Technologies**
- **Stages of Digital Divide**
- **How Technology is Overtaking Jobs**
- **Artificial Intelligence and Digital Divide**
- **Global Aspects of Digital Technologies**
  - ✓ **Developing Countries**
  - ✓ **Developed Countries**

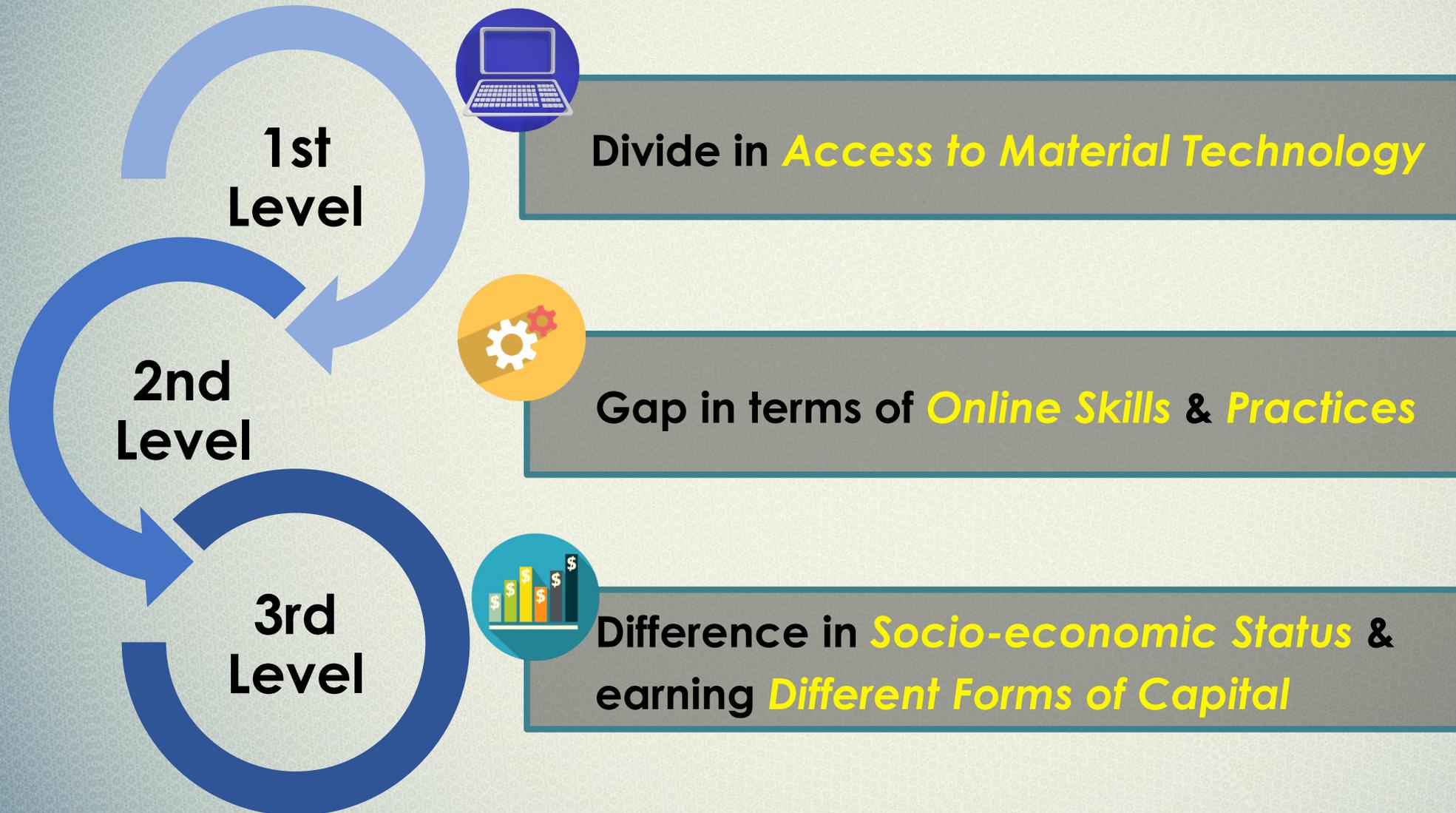
- **Country Case Studies: Disruptive Technologies & Industry 4.0**
  - ✓ **US**
  - ✓ **South Korea**
  - ✓ **Bangladesh**
- **Policy Measures**
  - ✓ **Role of Policymakers**
  - ✓ **Role of Stakeholders**



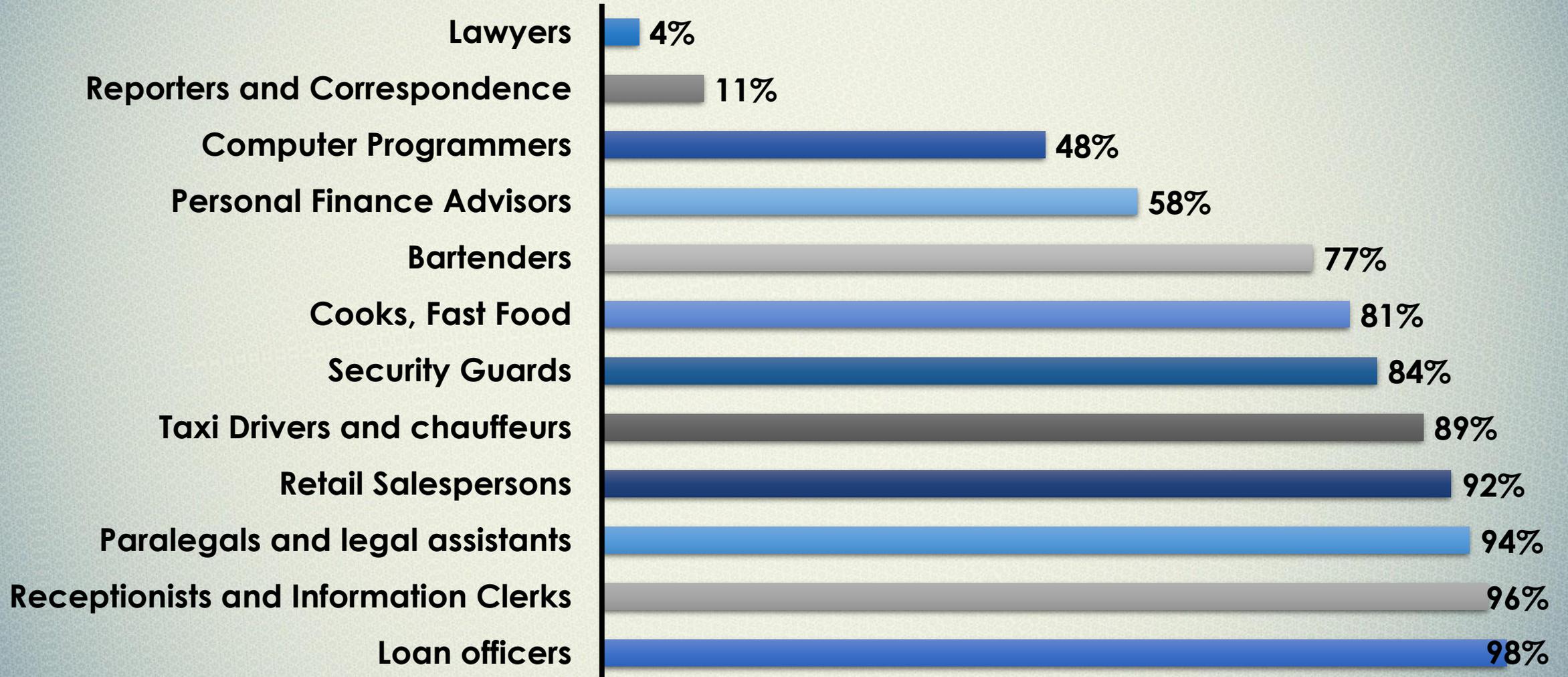
# Disruptive Technologies



# Stages of Digital Divide



# How Technology is Overtaking Jobs



*Probability of a Job becoming Automatable*

# Artificial Intelligence and Digital Divide



**Reliance of AI** in big data & computer power is more likely to **Amplify Existing Inequalities, Increasing Disparities in Access to Technology & Skills.**



AI “**haves**” can **Optimize their Operations, Automate Processes & Innovate**, while the “**have-nots**” are being **Left Behind** in world’s digital evolution.



AI Technologies are being **Developed & Deployed Faster** in the **Global North, Enhancing Inequalities** among region



AI might **Exacerbate the Digital Divide** in significant ways that would have **Geopolitical Implications.**

# *Global Aspects of Disruptive Technologies*

*Case of Developing and  
Developed Economies*

# Developing Countries

 Estimated that **More than Two-thirds** of **Existing Jobs** could be at **Risk of Automation**

 **Higher Costs** of **Acquiring Necessary Devices** and **Services** result in a **Challenge of Affordability** rather than **Availability**

 **High Internet Penetration, Low Education & High Poverty** : **Facilitates a Propaganda Manipulated Environment**

 **Workers lack** the required **Technological Skills**, resulting in **Greater Inequality** rather than efficiency

# Developed Countries

**25 countries will Benefit from Changing Production Nature & Disruptive Technologies due to:**

Singapore



Conducive Business & Innovation Environment

Sweden



Large Knowledge Intensive & Digital Ready Workforce

Finland



Enabling Political & Regulatory Frameworks

Finland



Affordable Access to Technology (Finland)

Norway



Vast use of Digital in Education System

US



Developed Sound Digital Infrastructure (US)

# *Industry 4.0 and Disruptive Technologies*

## *Country Case Studies*

# US



As of **2016**, approximately **11.5%** of the Population **did not have Internet Access.**



**Digital Divide** currently **Costs over \$130 Million in Daily Economic Activity.**



**Over 60 million People do not have access to Online Education & Employment Opportunities**



**Despite govt & social service programs, High Costs & Technological Glitches have Stymied Progress.**

# South Korea



**Successful Government-Driven Industrial Promotion of Technology-intensive Sectors**



**Proactive Steps to support Smooth Transition to Economy Bolstered by New Technologies**



**Cultivation of Professional Human resources in the fast-developing fields of industry 4.0**



**Facilitation of Commercialization of New Inventions & Investment in Developing New Skills**

# Bangladesh



*Industrial Automation will Shift Manufacturing to Developed Economies closer to Consumers.*



*China's use of new technology & advanced robotics is trapping BD at lower end of supply chain*



*Shifting Major Industrial Tasks to Robots will create Mass Unemployment & Underemployment*



*Possibility of Job Cuts due to Loss of Comparative Advantage & Fall of Foreign Investment*

***Policy Measures***

***Role of Policymakers and  
Stakeholders***

# Role of Policymakers



Establish *Policy Dialogues* between *Governments* and *Within Countries*



Facilitate *Better Understanding* of Industry 4.0 among *Affected Parties*



Invest in *Better Data Collection & Management* to *Establish Sound Long-term Policy*



Promote *Nationwide Training Programs* to Facilitate *Positive Perception*



Provide *Special Policy Support* for Certain Industries. E.g. *the RMG Sector in Bangladesh*



Ensure that *Potential Gains* are *Widely Shared & Brunt* of *Negative Effects* are *Minimized*

# Role of Stakeholders

*Shifting employment landscape* has *Significant Implications for Industrial Companies, Education Systems, and Governments.*



## Industrial Companies

*Retrain workforces, revamp organization models & develop strategic approaches to workforce planning.*



## Education Systems

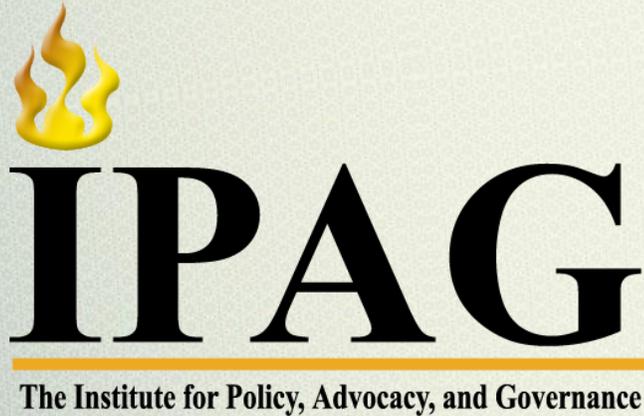
*Close the Impending Gap in IT skills & Develop broader Business & Social Skill Sets*



## Governments

*Implement Robust Industrial Internet of Things Policies & Coordinate Initiatives to promote Job Creation*

# THANK YOU



<http://www.ipag.org/>



[ipag@ipag.org](mailto:ipag@ipag.org)



[https://twitter.com/ipag\\_org](https://twitter.com/ipag_org)



<https://www.facebook.com/ipag.org/>