

# PROFESSOR PAOLA PISANO

## Summary

Professor of Economy and Innovation Management, AI consultant for private and public organizations, key note speaker, she was former Italian Minister of Technological Innovation and Digitalization and former Councilor of the city of Torino for Innovation and Smart City. She was adviser for digital economy and technological innovation for the Italian Minister of Foreign Affairs, Italian Ministry of Public Administration. Her inclusive and multidisciplinary approach plays a vital role in ensuring that everyone works together towards the common goal of progress. With an extensive professional background in both the private and public sectors, she has enhanced project management and leadership skills on AI and emerging technologies.

## ONGOING POSITION

**2006-to present. University of Torino. Associate professor of Economic and Innovation Management at the Department of "Economic and Statistic"**

**Courses:** Innovation and new technology in green economy (PHD level); **Governance and disruptive technologies (Master level)**; Business and innovation management, Business and business model innovation (bachelor level)

The courses focus is to explain AI technical part, tools, new frontier of AI, countries strategies and regulations and business applications.

## AI Research Projects.

### 1. **Predictive Diplomacy: Early Warning System based on transformer AI to predict future conflicts, unrest events and violence in 190 countries.**

1. **Output:** early warning system; research papers
2. **Application:**
  - **Italian Ministry of foreign affairs and international cooperation is testing the system to predict unrest event**
  - **NATO Defense college Foundation** is using the system to understand the relationship between rare hearths, predicting wars and value chains evolution in the field of advanced technologies
  - **Intesa Sanpaolo Bank:** linking unrest event prediction with the bank activities
  - **Collaboration:** with *Department of Peace and Conflict Research*, Uppsala University, Sweden;

### 2. **Bringing transparency and Ethical approach in Artificial Intelligence (AI) systems development**

1. **Output:** methodology definition to increase transparency in AI projects and research paper on Investigating Integrated Gradients for Multivariate Timeseries Transformers

2. Collaboration with *Intesa Sanpaolo Bank*, *UNESCO*. Notre Dame University
3. **Enhancing the value of the Italian cultural heritage through a policy analysis definition and implementation:** in collaboration with Italian Ministry of Cultural Heritage; *Cloudif.ai Srl*, leader in new technologies and methodologies of Artificial Intelligence and Data Science; *University Sapienza*, Rome; *University Suor Orsola*, Naples and other Italian Universities.

#### **Projects founded and my role.**

1. **Data and AI.** The relationship between geopolitical changes and value chains evolution in the field of advanced technologies. Founded by Compagnia di SanPaolo Foundation (bank foundation). Principal investigator.
2. **Predictive Diplomacy-Breaking the Trend.** Anomaly Detection Models for Early Warning of Socio-Political Unrest. Founded by University of Torino. Principal investigator.
3. **Investigating Integrated Gradients as XAI Methods for Multivariate Timeseries Transformers.** Founded by Notre Dame-IBM Technology Ethics Lab. Principal Investigator
4. **DigImpact.** Impact analysis evaluation of the Italian National Strategy for cultural heritage digitization. Founded by the Ministry of Cultural Heritage. Principal Investigator.
5. **Nodes.** Supporting digital and ecological transition. Founded by Next Generation EU-National Recovery and Resilience Plan. Team Leader.
6. **Roboapp:** Robotic in the logistics: Economic environmental and social impact of artificial intelligence and robotic in the organization
7. **5G4C.A.P.10100 (Circuito. Auto. Pilota)** Discovering Ayrton: il 5G per vivere il Circuito, l'Auto e il Pilota. Co-leader with Computer science department
8. **Under review:** Regional project AIDA with Politecnico of Torino STmicroelettronica : Designing Microchip with AI technology

#### **Challenge participation:**

IEWS Prediction Challenge 2023/2024

<https://viewsforecasting.org/news/first-results-from-the-views-prediction-challenge-2023-2024/>

**Publications: More than 100 national and international academic journal publications and author of 2 books** <http://bit.ly/41XW33H>

#### **Last Publication**

- Breaking the trend: Anomaly detection models for early warning of socio-political unrest  
Luca Macis, Marco Tagliapietra, Rosa Meo , and Paola Pisano, *Technological Forecasting and Social Change* Volume 206, September 2024, 123495,  
<https://doi.org/10.1016/j.techfore.2024.123495>
- Integrating XAI for Predictive Conflict Analytics, Luca Macis, Marco Tagliapietra, Alessandro Castelnovo, Daniele Regoli, Greta Greco, Andrea Claudio Cosentini and Paola Pisano, Edoardo Carrocetto, xAI-2024, 2nd World Conference on eXplainable Artificial Intelligence, Valletta, Malta, 17-19 of July, 2024.

- Violence Index: a new data-driven proposal to conflict monitoring. Macis, L.; Pisano, P.; Siletti, E.; Tagliapietra, M. 2024. In: 6th International Conference on Advanced Research Methods and Analytics (CARMA 2024). Valencia, 26-28 June 2024. <https://doi.org/10.4995/CARMA2024.2024.17831>
- XAI with Temporal Transformers for Conflict Prediction: An Integrated Gradients Approach  
Luca Macis, Marco Tagliapietra, and Paola Pisano. White Paper for Notredame University to implementing the principle of the [Rome call for AI Ethics](http://www.ai4future.unito.it) ( project website [www.ai4future.unito.it](http://www.ai4future.unito.it))

#### **2024 - to present Director of big data and AI laboratory**

The lab, supported by the University of Turin and private organizations (Tim, Oracle, Google), aims at developing research and business application projects focused on new AI approaches. The laboratory is focus on different activities from base researches on the development of more reasoning GEnAI, to applied researches on several industries - health care; education; cultural&heritage; Policy and Public Administration- to enhance organizations' competitive value.

#### **2021- to present. keynote speaker**

Keynote speaker for private and public events on Artificial Intelligence, emerging technologies, new and future perspectives, regulations, countries approach. (Eg: Tim, Oracle, Ambrosetti Forum, Intesa SanPaolo, Salesforce, McKinsey, Next Tech summit 2023-MIT Dubai, UN, Telefono Azzurro, etc..)

#### **2016 - to present. University of Torino. Director of "Smart City Laboratory"**

An interdepartmental laboratory for smart city technologies to make life easier for citizens and to reduce digital divide.

#### **2019 - to present. Digital Library, organization owned by Italian Ministry of Culture in charge for the digitalization of Italian cultural heritage. Member of the Board of Directors**

#### **2021 - to present. Corriere della Sera, Italian newspaper, MIT Business Technology Review Italy, EastWest. Geopolitical and technology, Start up Italia. Writer**

#### **2022 - to present. Radio Radicale, National Radio. Collaboration on a program on new technologies and emerging trend**

#### **2023 - to present. UNESCO. Member of the bureau Women4Ethical AI platform**

The objective of the platform is to put in practice the UNESCO Recommendation on AI Ethics, with a specific focus on gender diversity and women empowerment.

**2024- to present. Member of the Scientific Committee of European Digital SME.**

**2024-to present. President of dell’advisory board Fondazione Randstad Italia AI & Humanities**

## **PROFESSIONAL EXPERIENCE – PUBLIC SECTOR**

**2021- 2022. Italian Ministry of Foreign Affairs and International Cooperation. Minister adviser for digital economy and technological innovation**

### **Main Achievements**

- Digital and technological innovation strategy based on reinforcing the Ministry international position in the digital and technological field, using technologies to support diplomatic activities and improving technical skills on AI and other technologies.
- Definition of a national cyber capacity building ecosystem.
- Developing an Early Warning System based on AI to predict conflicts and unrest even.
- Designing and starting up of misinformation and disinformation unit.
- Training diplomats on AI, tools, applications and policy definitions.

**2021-2022. Ministry of Public Administration. Minister adviser for digital services and new technologies in the Public Administration**

### **Main Achievements**

- Supporting the Minister on international, national policy and regulation in the technological and digital field.
- Principal delegate of Italy to the Public Governance Committee of the OECD, and high level Representative for the Open Government Partnership

**2021-2022. FORMEZ, public administration study center. Scientific expert for the digitalization of the Public Administration**

Increasing competences and skills on new technologies and digital applications in the public administration.

**2021-2022. OECD. Italian Representative**

Defining and supporting Italian position on projects concerning artificial intelligence and new technologies with OECD Partner. Reinforcing democracy using digital services and technologies.

**2021-2022. Italian Government. Italian Representative in “UNESCO drafting committee for the Recommendation on the Ethics of Artificial Intelligence” (adopted by the UNESCO General Conference at its 41st session)**

As Italy's representative in the "UNESCO Drafting Committee for the Recommendation on the Ethics of Artificial Intelligence" (adopted by the UNESCO General Conference at its 41st session), I focus on the pressing issue of mass surveillance and social scoring. Moreover, I concentrated on finding means to foster discussion and joint projects between governments, civil society organizations, and social media companies to develop protocols to review the functioning of "recommender systems" to avoid potentially harmful effects.

## **2019-2021. Government of Italy. Minister of Technological Innovation and Digitalization**

### **Main Achievements**

1. **Ministry start up.** It was the first time that Italian Government decided to have a Ministry of Technological innovation and digitalization so I had the privilege to set it up from the scratch: recruiting over 100 professionals with a multidisciplinary background, promoting gender equality in the hiring process and achieving 50% gender parity, introducing fully digital procedures and adopting an agile approach with specialized micro-teams.
2. **National and international projects on AI.**
  - Setting up a national working group for "AI ethical framework indicators definition" to select AI service providers for the Italian Public Administration.
  - Signing, on behalf of Italian Government, the "Rome Call for AI Ethics" together with the UN FAO Director General, the President of Microsoft and the Vice President of IBM, an initiative to guide the ethical development of AI.
  - Joining the Global Partnership on Artificial Intelligence (GPAI) for the development of AI applications.
  - Developing a free platform for training all citizen on AI (<https://www.elementsofai.it/>)
3. **All the following strategic plan and regulations were defined and approved.**
  - "Strategy for technology innovation and digitalization"
  - "Information technology for public administration. Three years plan", with guidelines and criteria to monitor progress of any ICT projects.
  - "National Strategy on Digital Competency and its implementation plan".
  - "Regulatory framework" to foster innovation and sustain digitalization, security and data privacy.
  - "Legal framework for public data interoperability and secure National Cloud infrastructure" to preserve Public Administration strategic data and services.
  - "New procurement regulations for ICT" to encourage and simplify access to tender for start-ups and SMEs along with big companies.
4. **Development of digital infrastructures and services for citizens and private/public organizations.**
  - Introducing the adoption of "digital-identity-as-a-service", developing and launching of the application "IO": a single mobile channel to access to all PA's digital services; electronic payments.
  - Ultra-Broadband connection and national cloud development
5. **Inspiring digital solidarity to contrast the Covid-19 pandemic.**

- “Digital Solidarity initiative” to provide free digital services to citizens, scholars, professionals and companies. The initiative received 758 free offers.
- “Connected neighborhoods - Digital services for the local economy”. Local small businesses that were negatively affected by Covid-19 were supported in e-commerce adoption.

#### 6. **Leading Italy toward Innovative technologies.**

- “Sperimentazione Italia” (Italia Experimentation), an agile legal framework to allow the development of frontier innovations not covered by regulations and encouraging the government to create the regulatory framework.
- “Smarter Italy Program” to provide innovative digital services and infrastructures to 11 Italian cities and 12 small villages.

#### 7. **Awards and special acknowledgments.**

- Immuni, a digital application designed, developed and launched to track Covid-19 diffusion, was rated by the Massachusetts Institute of Technology (MIT) in Boston with the highest score and receiving positive evaluation from the Council of Europe.
- In December 2020, as Minister for Technological Innovation and Digitalization, I was nominated among the world’s 50 most influential people for pioneering innovation in the public sector by Apolitical and the “Global Future Council on Agile Governance” of the World Economic Forum.

### **2016-2019. City of Turin. Councilor for Innovation, Smart City and city engagement**

#### **Main Achievements**

##### **1. Technology and digital innovation.**

- Launching the initiative “Torino city lab” to support innovators in scaling up their initiatives at national or international level. Involving more than 80 partners, Torino city lab is focused on AI, smart and autonomous mobility, robotics, 5G technology.
- Obtaining 7,5 ml of Euro government funding to attract and support companies in testing and scaling their innovations.
- Some projects are listed below:
  - 2018 and 2019: 200 and then 300 drones flew autonomously over the city. It was the highest number of drones flying autonomously in the center of a European city testing AI and 5G technology.
  - 2018-2019: An autonomous bus was tested on the United Nations campus in Turin, and a path for autonomous cars was created in the city.
  - Use of AI for underground traffic management.
- Reinforcing the use of digitalization inside the Public administration (e.g. cloud based application, public data interoperability, public services digitalization ).

##### **2. Social innovation.**

- Developing and launching of “DEcidi Torino” a citizen engagement platform. Thanks to a very proficiency collaboration among Madrid, Barcelona and Torino, Torino developed a platform that allowed citizens to debate on the city and propose ideas. The Municipality had the duty to economically support the development of the idea that reached 1% of the users’ support

- Launching “Torino Social Impact”, a framework to support social innovation. More than 170 companies, institutions, financial operators, charities, foundations contributed to the project implementation aimed at solving emerging social problems.
- Some projects are listed below:
  - “Homes4All”: to address the housing emergency.
  - “Fooding”: to fight food waste using perishable food and food surpluses for disadvantaged families and homeless people.

**2014-2016. University of Torino ICxT, Interdepartmental Technological Innovation Center for technology transfer to SMEs. Founder and Director**

**Main Achievements**

- I contributed to the creation and was the first director of the innovative center ICxT (Information and Communications for Technology) at the University of Turin.
- I promoted an interdisciplinary approach by involving ten different departments of the University (Economic and Social Department, Mathematical-Statistical Sciences, Management, Political Culture and Society, Life Sciences and Systems Biology, Computer Science, Law, Psychology, Economics and Statistics, Chemistry and Philosophy and Education Sciences), besides national and international companies and public entities.
- To date, ICxT includes over 40 members in terms of researchers and professors, over 50 corporate partners and other institutional partners.

**PROFESSIONAL EXPERIENCE: PRIVATE SECTOR**

**2011-2012. 3H partner, consulting company London UK, Innovative entrepreneurial solutions provider. Senior consultant**

I lead a consultant project on the “Use of new technologies and corporate reorganization” for Pfizer in London. The project, completed by a multidisciplinary team, concerned the animal care business unit and veterinary clinics and had the goal to implement a technological system for evaluating the performance of the clinics and professional development of the veterinarians.

**2005- 2009. ESCP Business School, Paris, London, Berlin, Torino. Senior consultant**

I contributed to the start-up of the ESCP Business School or ESCP (formerly École supérieure de commerce de Paris) Torino Business School. I was responsible for the definition of the training path for Managers, the creation of a Tourism Academy for the training of personnel in the Tourism sector in the Piedmont region and for the strategic analysis of an hospital hub development in Piedmont. I worked with a multicultural team from Germany, France and Poland, as well as with the Dean of the Business School

**1999-2005. A&G consulting group. Senior consultant.**

Main working experiences:

-Fashion industry: Versace-Milano/Novara: “Industrial plan and Versace reorganization”

-Finance industry: Uniriscossione - Torino/ Verona/ Milano: “Internal Reorganization e downsize”; -

Banca MedioCredito - Torino: “migration in a new IT system”; Conrit - Torino: "Digitization and digital payment”;

- ICT industry: CSI - Consorzio Tecnologico "new administrative system implementation"; Click for Talent: "Online recruiting system";
- Publishing industry: Paravia - Milano "processes digitalization"..