

EMN Luxembourg & EMN France

Forecasting and New Technologies in Migration and Asylum Governance: State of Play and New Developments

5 November 2025, Paris

EMN France and EMN Luxembourg organized on 5 November 2025 in Paris a EMN workshop on *“Forecasting and new technologies in migration and asylum governance: state of play and new developments”*.

The workshop was organized through four panels dedicated respectively to new technologies and Communication in Migration Management from the institutional perspective (Panel 1), from a state perspective (Panel 2), from an academic perspective (Panel 3) while the the fourth panel focused on Forecasting Migration Flows and new developments.

Presentations by representatives of national and European institutional authorities, researchers and academics provided an opportunity to outline the current legal frameworks and discuss the challenges and best practices identified in the development of new technological tools to facilitate migration management and improve the forecasting of migration flows.

Key points

- ✚ Research and experimentation with technological tools to better manage and prevent migration are increasingly developing in Europe, pursuing a logic of interoperability.
- ✚ Speakers presented promising methodologies and models, some of which are already operational, for transcribing asylum interviews, forecasting flows and assisting officials in their work.
- ✚ Humans must maintain control over artificial intelligence tools for migration management.
- ✚ The protection of the fundamental rights of migrants and refugees must remain a guiding principle for researchers and policy makers
- ✚ New models for forecasting migration flows based on machine learning are being developed in the research community, but few countries are yet willing to use them in their national projections

Panel 1: New technologies and Communication in Migration Management (Institutional Perspective)

The first panel was moderated by Adolfo Sommarribas, from EMN Luxembourg.

Mathieu TARTAR, Policy officer with the DG Home (European Commission), focused on the current framework and future projects led by the EU in the field of digitisation and the use of AI in migration management. In particular, it highlighted the creation of a European migration forecasting model, which will provide annual input for the report required under the new Pact on Asylum and Migration. A new European law also plans to classify AI systems by risk level.

Zsuzsa PETHŐ, Specialist within the Integrated Operational Services Unit and member of the Travel Intelligence Team with Europol, presented Europol's view on developments in the EU security landscape, emphasising in particular the importance of making the technological tools developed by the Union

available to Europol. This European interoperability, with the support of third countries, would make it possible to better prevent security problems and conduct criminal investigations more effectively through the exchange of data.

Constantinos MELACHRINOS, Senior Analyst with the Situational Awareness Unit within the European Union Agency for Asylum (EUAA) presented the EU's early warning system and the mixed approach used by the agency to understand migration forecasts in the EU. This method is based on a variety of statistical models (traditional time series models, machine learning models, etc.) and analyses of events in countries of origin. The results of the forecasts are then discussed by a group of experts from the Member States in order to establish scenarios with varying degrees of probability. Mr Melachrinos emphasised the importance of taking expert opinions into account to ensure the quality of these studies.

Panel 2: New Technologies, Digitalisation and Use of Artificial Intelligence in Migration Management (State Perspectives)

The second panel, focusing on state perspectives on new technologies and communication in migration management, was moderated by Izabela Grabowska, Full Professor of Social Sciences and Director of the CRASH Centre for Social Science and Mobility Research at Kozminski University in Poland. This panel highlighted promising research conducted by Germany, Norway, France and the Netherlands on the development of AI tools to facilitate asylum interviews and combat document fraud.

Joannes Wenisch, from the German Federal Office for Migration and Refugees (BAMF) presented two systems to assist with the processing of applications for international protection: the dialect identification system and the security report assistance system for asylum interviews developed by the BAMF. He emphasised the current challenges in implementing these systems, in particular the poor quality of automatic transcription of oral interviews.

Christophe LANCELOT, from the National Division for the fight against documentary and identity fraud, within the French National Directorate of the Border Police, presented ProfID, a database used by 15 European countries that uses AI to detect document fraud committed by criminal groups and help dismantle them. The system makes it possible to quickly compare civil status documents and determine whether they are forged and mass-produced. The final decision rests with a human expert, who verifies whether or not the document is part of a series of forged documents. The alert is then shared with other countries and authorities using the Europol channel.

Berit Gravdhal, Senior Adviser with the Statistics and Analysis Unit within the Norwegian Directorate of Immigration, shared the main AI-integrated projects carried out in Norway in the field of migration management, such as the RAG project for automatic document categorisation to feed into the country of origin database and a pilot project to convert speech into text during asylum interviews. This pilot project has been identified as a good practice, particularly with regard to decibel smoothing to better isolate sound, which has helped to avoid loss, but difficulties have been noted in the quality of the transcription of proper names and places. For 2026, the establishment of a dedicated AI team with an allocated budget and AI mandates is planned.

Jaap BEKKERING, Innovation Manager with the Immigration and Naturalisation Service of the Ministry of Asylum and Migration of the Netherlands, presented several AI tools, currently being tested, aimed at increasing the efficiency of public services in the area of family reunification, including: a decision support system, automation of DNA analysis to prove parentage, identification for conducting remote interviews with the applicant's family, and a hyper-automated communication system for evaluating documents. Other experiments, such as a real-time machine translation tool and optical recognition, are also underway.

Panel 3: New Technologies, Digitalisation and Use of Artificial Intelligence in Migration Management (Academic Perspectives)

Christelle Caporali-Petit, EMN France's coordinator, moderated the third panel which highlighted the risks posed by these new tools to fundamental rights, as well as opportunities for improvement.

Sarah PERRET, Associate Professor in Political Science, ESPOL, with the Catholic University of Lille (France), shared a series of reflections on how to rethink digital governance of mobility, beyond technical efficiency. The development of border control infrastructure is managed by an oligopoly of three companies. This privatisation of digital sovereignty has led to a political choice to prioritise speed at the expense, in some cases, of processing accuracy. This governance also creates an asymmetry between the machine and the asylum seeker, placing the burden of proof on the latter when fraud is suspected. Faced with this situation, Ms Perret proposes moving towards more ethical, humane and effective AI models, without falling into technophobia. In particular, she suggests making the choice of control algorithm parameters public, creating new digital rights, reversing the logic of proof and developing public digital sovereignty.

Ms Alice Fill, PhD student in international relations and international law at the École Normale Supérieure in Paris and Roma Tre University in Italy, presented the main findings of her research on 'Forecasting and new technologies in migration and asylum management: current situation and new developments'. It was emphasised that the development of technological tools at borders has become a real mode of European governance, motivated by the migration crisis. However, Ms Fill warned that these approaches based on anticipation, surveillance and pre-border deterrence have consequences for fundamental rights and the dangerous nature of migration routes. Finally, she stressed that the outsourcing of migration management, particularly to Africa, has created a legal vacuum that raises questions about respect for the rule of law.

These consequences on the fundamental rights of migrants and refugees were shared by Ms Sandrine Turgis, senior lecturer in public law at the University of Rennes (France), who focused her presentation on the digitisation of the migrant and refugee journey, the risks associated with it and the need for better protection of their rights. She highlighted the increased use of digital and biometric tools at borders and before asylum authorities, as well as the use of AI in European projects such as IBorderCtrl. This border security has consequences for the protection of personal data and the digital divide, due to the dematerialisation of procedures. However, the legal framework makes it possible to mitigate these risks, in particular through instruments such as the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, adopted on 17 May 2024.

Finally, **Tuba BIRCAN**, Associate Professor and Head of IAMS Lab (AI, Migration and society) at the Vrije University of Brussels (Belgium) focused her presentation on the benefits of using Big Data and AI in migration research. Big Data offers greater data granularity and makes it easier to fill in missing data. For example, AI-related tools can be used to predict international migration based on online keyword searches, via Google Trend Index, for example. It also allows for instant monitoring of migration flows based on geolocated data, as well as assessing public opinion or hate speech towards immigrants via social networks such as X (formerly Twitter). Nevertheless, ethical and legal challenges remain. Big Data sources pose real risks to migrants' right to privacy. Sources from the Internet are also affected by user selection biases. Finally, Big Data carries risks of surveillance and even control, and is fuelled by algorithms used by private companies that lack transparency. Ms Bircan calls for better collaboration between different sectors and for an approach that is innovative but also, as her counterparts have emphasised, ethical and human-centred. She advises devoting more effort to improving data quality rather than increasing the amount of data.

Panel 4: Forecasting Migration Flows – New developments

The fourth panel was moderated by Guillaume Mordant, Head of Department for studies and statistics with the French Ministry of the Interior, highlighted the advances and challenges in research on new methodologies and models for forecasting migration flows.

Claudio Bosco, Project Manager at the European Commission's Joint Research Centre (JRC), introduced the panel with an explanation of the migration forecasting methodology deployed by the JRC for the Commission over the past two years. It is based on a machine learning model trained on two sets of data: historical data series on asylum applications and irregular border crossings, and expert analytical considerations on future trends. The final model thus makes it possible to integrate into the forecast the evolution of various non-quantifiable factors (political, social or the evolution of migrant trafficking) that could have an impact on migration patterns. According to Mr Bosco, the very promising results obtained with this method justify its inclusion in the report planned under the new Pact on Asylum and Migration as a migration forecasting model used at European level.


Haodong Qi, Researcher at the University of Malmo (Sweden) emphasised the importance of data selection for migration modelling, particularly in the context of the CLIMB project, which aims to better understand and predict climate-induced migration in Africa. In this regard, he raised several questions concerning the use of unofficial Big Data. For example, migration intentions measured via Google Trends do not correspond to actual migration flows and therefore do not allow for accurate forecasting of these flows. On the other hand, the inclusion of numerous predictive factors from Big Data (events reported in the media, climate factors at a very fine geolocation level, etc.) in machine learning models is more effective in predicting flows between Somalia and the EU.

Jonathan Chaloff, policy analyst in the OECD's International Migration Division, presented the migration forecasting methods discussed within the OECD's Migration Anticipation and Preparedness (MAP) working group, which brings together government officials, international organisations and researchers. Going beyond forecasting asylum applications and irregular border crossings, the working group also focused on labour, family and student migration. The OECD adopted an approach that distinguishes between different categories of migration to be predicted, in contrast to the traditional approach, which most often focuses on migration as a whole. Mr Chaloff then presented the different uses of forecasting methods in the United States (family migration and naturalisations), the United Kingdom (student migration), and South Korea and Japan (labour migration).

Yves Breem, Research Project Director at the Department for studies and statistics (DSED) with the French Ministry of the Interior, concluded the fourth panel. He presented the methodology used by the DSED to forecast asylum applications in 2024 and the projects currently underway to overhaul the forecasting system. The aim of this work is to develop a new model for forecasting different categories of migration flows, starting with asylum applications in France. In order to refine its methodology, the DSED has joined networks of actors specialising in migration forecasting (specialised groups from the OECD, DG Home and the Joint Research Centre (JRC) of the European Commission, the EUAA and the General Directors' Immigration Services Conference (GDISC)). The objective set for early 2027 is to create a system of monthly forecasts over a two-year horizon. To this end, the DSED is developing econometric models best suited to each type of migration, including the most predictive determinants and improving their quality by taking into account expert opinions via dedicated surveys.

CONCLUSION

Adolfo Sommaribas highlighted the quality of the discussions and the diversity of the speakers, which demonstrated that modelling and new technologies for managing and forecasting migration are the subject of much debate. The important thing is to continue to question the systems and listen to the criticisms of researchers, without which no progress will be possible. Several challenges were raised:

-  The need for better communication between academics and policy-makers;

- ✚ Forecasting is not an exact science, so it is essential that forecasters engage in regular dialogue with policy-makers and migration system managers;
- ✚ AI should be used as a tool to assist, not replace, human decision-making. And, beyond the results, it is also crucial to ensure data quality and the transparency of models and algorithms.

Guillaume Mordant also emphasised that the instruments presented during the conference raised political, philosophical and legal questions, such as respect for fundamental rights. He therefore stressed the need to take these considerations into account from the design stage onwards. He added that AI models and uses must be adapted to the data being examined, depending on the flows, at European and national level.