EMN GEORGIA AND EMN ESTONIA JOINT CONFERENCE ON DATA-DRIVEN POLICY-MAKING IN MIGRATION MANAGEMENT

20 September 2022, 09.30-16.00 (GMT+4h)

Tbilisi, Georgia

Summary

In recent decades, international migration flows have not only been increasing in numbers, but become increasingly complex, creating new challenges for migration management for governments around the world. Consequently, new technological solutions and approaches have been developed and adapted to allow countries to deal better with the permanently changing realities of international migration.

A central pillar of those is the better use of data to run migration management systems effectively and to make smarter and context-relevant decisions. The EMN Georgia and EMN Estonia joint conference on data-driven policy-making in migration management explored the ways in which data can be used to enrich decision-making processes in migration management and how to facilitate the development of a data-driven decision-making culture in the field.

OPENING REMARKS

The conference started with opening remarks by Tamar Tkeshelashvili (first Deputy Minister of Justice of Georgia), Veiko Kommusaar (Undersecretary of the Estonian Ministry of the Interior for Internal Security, Law Enforcement, and Migration Policy), Magnus Ovilius (Head of Sector EMN DG HOME, European Commission), and Avtandil Kasradze (Chairman of the Georgian Innovation and Technology Agency (GITA)).

Tamar Tkeshelashvili (first Deputy Minister of Justice of Georgia) thanked the Estonian colleagues for co-organising this conference. She emphasised that nowadays, at the background of contemporary developments worldwide, a proper understanding and an effective management of migratory processes are more and more depending on application of modern technologies, which have become an integral part of our lives and daily activities. In such a reality digital transformation has an important role to play, highlighting our common goal to introduce and shift to new technologies, along with gaining the knowledge on using them properly, and what is important - minimizing the risks they could be associated with. Further on she underlined that in this context the discussion within the conference will be concentrated on data-driven decision-making, which is the process of organizational decision-making, based on the analysis of the real data, rather than focusing on the results of observation, expert assessment or intuition. Thus, the idea of proposed discussions is inter-alia to analyse the ability of data-driven decision-making to do

decisions more confidently than ever before and make the organization capable to manage its data properly by observing all (especially moral) norms and standards.

Veiko Kommusaar (Undersecretary of the Estonian Ministry of the Interior for Internal Security, Law Enforcement, and Migration Policy) emphasised the role that technological solutions play in improving migration management, especially in a context where mobility is on the rise, after the halt imposed by the COVID-19 pandemic. Estonia offers good examples in this area. For instance, it has recently introduced automated systems to manage visa and citizenships applications. Estonia has also invested in creating a flourishing environment for start-ups to grow in and to support technological innovation applied in the area of migration more in general. For example, the introduction of the Digital Nomad Visa has substantially increased the number of migrants now working remotely (mostly) in the areas of communication and IT, while being based in Estonia. The crisis triggered by the Russian war in Ukraine also showed the importance of finding effective digital tools for the identification and issuance of residence documents. Solutions need to ensure accurate and safe collection and processing of data.

Magnus Ovilius (Head of Sector EMN DG HOME, European Commission) noted that this conference is extremely timely for both EU and national level institutions. He thanked EMN Georgia and EMN Estonia for having made the event possible.

Data management in migration encompasses two important dimensions:

- The use of new technologies (e.g., digitalisation processes and the use of artificial intelligence).
- Data management governance.

It is of paramount importance that data protection compliance is ensured, including when it involves transmission of data across borders. Privacy and ownership of data are fundamental considerations. Digital solutions are also fundamental to stream fact-based narratives about migration.

In the implementation of digitalisation processes, it is essential to ensure that digital solutions are ethically sound and in full compliance with fundamental rights. It is therefore essential that the element of human decision-making remains at the heart of decision making, albeit automated processes can help make processes more effective. This is also key to ensure that digitalisation does not result in unfair and unethical divides, whereby different digital literacy levels might impair access to digital solutions.

Avtandil Kasradze (Chairman of the Georgian Innovation and Technology Agency (GITA)) explained that digital technology solutions are high on Georgia's agenda, and that these contribute to facilitating the economy's digital transformation.

Georgia follows the path to meet the UN sustainable development goals and to enhance institutional effectiveness. Reforms and incentives have been put in place to encourage the set-up of start-ups and enterprises in the field of technology and to create an innovation eco-system. Advantageous trade agreements, free industrial and virtual trade zone areas, low tax levels, modern and effective infrastructure are only some of the advantages presented by Georgia. Such an innovative eco-system supports sustainable industrial development, research and development and facilitates networking among entrepreneurs. In this respect GITA is expressing readiness to be involved in the processes related to innovation in migration management and contribute to the teamwork with its knowledge and expertise.

SESSION I. TRANSACTIONAL SYSTEMS

The first session focused on transactional systems, which capture, store, and process data from transactions in real time and are employed to optimise procedures and to ensure data integrity when dealing with increasingly complex systems and numbers.

EU BORDER MANAGEMENT IT-SYSTEMS: EES, ETIAS AND INTEROPERABILITY ARCHITECTURE

Ave Poom (Senior Policy Officer, European Union Agency for the Operational Management of Large-Scale IT Systems (eu-LISA)) presented the EU border management IT-systems (EES, ETIAS and interoperability architecture) supported by eu-LISA:

- The Entry/Exit System (EES), entering into force in May 2023, will store the individual files of entry and exit records of third-country nationals to and from the Schengen area and will replace the stamping of passports in order to facilitate the identification of overstayers. It will include both fingerprints and facial images.
- The European Travel Information and Authorisation System (ETIAS): comparable to the US ESTA system, ETIAS will require that visa-exempted third-country nationals request a pre-authorisation to enter the EU. Frontex will manage the ETIAS central unit, which should be available in November 2023. Verifications will be conducted against eu-LISA, Europol and Interpol databases.
- The interoperability of existing and new systems will enhance information sharing and ensure that end-users have fast and seamless access to data stored in all the eu-LISA systems for cross-checking (based on respective legal bases). This system will improve detection of irregular migrants, facilitate detection of multiple identities and facilitate the processing of visa and asylum applications. One of the interoperability components is the Central Repository for Reporting and Statistics (CRRS). It is established to support the objectives of the EES, Visa Information System (VIS), ETIAS and Schengen Information System (SIS), with the aim to provide cross-system statistical data and analytical reporting for policy, operational and data quality purposes, with a view to having comprehensive statistical reporting.

Other two projects are under development:

- The revised Visa Information System (VIS), which currently only includes short-term visas but will come to include Schengen long-stay visas and residence permits, thus closing an information gap for internal security authorities (ETIAS will complement VIS for visa exempt third-country nationals).
- And the e-Visa platform, which envisages the use of a digital platform for submitting and processing visa applications and issuing visas in a digital format.

DEVELOPING A NEW MIGRATION INFORMATION SYSTEM FOR ESTONIA

Liis Valk (Police and Border Guard Board Estonia) provided an overview of migration management systems in Estonia. The Police and Border Guard Board are currently implementing several IT projects in the field of migration (ETIAS, migration information system RIS, migration surveillance system MIGIS, visa information system VIISA 2.0 and international protection system RAKS2). In particular, the RIS, a migration information system, includes two databases related to: (1) residence permits and (2) short-term employment.

These databases already existed but presented a monolithic architecture that did not meet the current needs and allow further developments. In response to these challenges, a new migration information system RIS is under development, with a

view to improving short-term employment registration and residence permit applications.

The development stages for this tool include:

1. Redesigning the process: moving forward, this will be an event-driven process. So that when an employer registers a third-country national, there will be no need to visit different authorities, nor run the risk to forget some of these steps.
2. Micro-services will ensure that the system is better managed.
3. The self-service portal will allow to submit applications, monitor the application process and allow applicants to communicate with case handlers and receive inquiries, as well as receive decisions from the self-service portal.

The aim of this information system is to automate all the different phases above from different databases. The decision-making process is also being automated, with a view to obtaining higher quality data and managing risk profiles.

DATA DRIVEN APPROACH TO AUTOMATING PERMIT AND CITIZENSHIP PROCESSES AT THE FINNISH IMMIGRATION SERVICES

Niklas Hämäläinen (Senior Specialist in Automation at the Finnish Immigration Services) presented the experience of the Finnish Immigration Services' experience in improving automation and fostering digital transformation. Finland has a long experience in automating processes. Currently, users are asked to confirm decision drafts (full automation of processes is not guaranteed), but the Finnish government is advancing legislative changes so that decisions will be automatically confirmed.

For automation and processing, data is gathered and stored in the UMA system, which is the registration and case management system for all asylum, residence permit and citizenship applications, and the management system for return decision and prohibitions of entry. Automated pre-requisites are currently the basis of case handling and can be broken down in a decision tree. The requirements for an application can be "broken down" into logical "true/false" or "larger/smaller than" operations within a rule. Rules are created and maintained by the process owner. Machine learning is not in use. Regarding integrations, over ten automatic registry checks are conducted within every case. The analysis of results in all registry checks is automated. Only cases where something discretionary is found in the results are manually evaluated.

The aim for the Finnish Immigration Service Migri to have 'Enter Finland', an electronic web service as the main channel for applications and other communication. The goal is to reach to the level of 90% online appliations by 2023. The data received from 'Enter Finland' is transferred to electronic case management system UMA, where it is used in automatic decision-making and prerequisite checks. In the current operating model for case handling, the initiation, the pre-requisites and registry checks are automated as well as the proposal of a decision draft. For the time being, users confirm the decision, but in 2023, it is foreseen that the approval will be fully automated.

The impact of automation is satisfactory. It was found that while the number of applications had increased by more than 74% in a year, through automation, the processing time is decreasing, customer satisfaction remains high and decisions are processed as they come.

CITIZENSHIP AND MIGRATION ELECTRONIC MANAGEMENT SYSTEM AND GEOCONSUL SYSTEM (GEORGIA)

Ada Tabatadze (Senior Specialist at the Citizenship and Migration Unit of the Public Service Development Agency (PSDA)) provided an overview of the Georgian Citizenship and Migration Electronic Management System – DCM, the software system developed in 2009 that is used to review cases and make respective decisions electronically.

The main purpose of developing the DCM was to enhance e-governance at the PSDA, aiming to significantly save time and human resources of the relevant unit in-charge as well as improve administrative procedures and the quality of customer service. It is a fully electronic programme, which has the option to store, arrange and analyse relevant information about different migration related cases and at the same time contribute to the decision-making based on real data. It allows to process statistical information by different filter types (such as residence permit and citizenship types, date, gender, age, nationality, place of birth, etc.). Applications can be submitted to the PSDA (through the DCM) via Public Service Halls and the consular posts, or electronic applications can be filled via the PSDA website. Once applications are submitted, they are registered and sent electronically to the Citizenship and Migration Unit for consideration. Following to registration, applicants receive a registration number and code through which they can consult interim and final decisions electronically. Registered applications and attached documents are forwarded to the relevant administrative bodies for the feedback and are then verified with the database of PSDA and other agencies. Certain decisions are made automatically. Information is sent and received electronically. Thanks to an integrated messaging system applicants receive automatic text messages on case processing status.

Maia Bartaia (Deputy Director of the Consular Department of the Ministry of Foreign Affairs of Georgia (MFA) described how digital transformation improved the quality of consular service and increased the effectiveness of the consular activities, such as the protection of the rights and legal interests of Georgian citizens and legal entities abroad, as well as providing them with efficient and fast services through the electronic procession of consular functions. In order to modernize the consular service, rise accountability and decrease bureaucracy, the Consular Department launched the Consular Service Management Electronic System (Geoconsul www.geoconsul.gov.ge) on January 1, 2014. The first system module introduced was Emergency Travel Document. Since that point, Consular Department made huge efforts and succeeded in eventually integrating almost all Consular Services in the electronic system, never ending search for useful improvements. The Geoconsul-system was developed with the assistance of International Organization for Migration (IOM). The Geoconsul-system is carrier of complete information on consular service and it is possible to receive the entire spectrum of consular services via it. Furthermore, the system reduced the bureaucratical procedures to minimum and in terms of efficiency, made it easier for consular staff to operate. The program is constructed so that it ensures coordinated interaction between the Center and the Missions, as well as between MFA and other stakeholder agencies involved (MIA, PSDA). Geoconsul provides the following services: consular registration, travel documents to return to Georgia, issuance of visas of Georgia, scheduling an appointment to the consular office, travel advice, and others consular functions defined by Law. MFA Georgia has launched e-Visa portal allowing short-term visitors to get a visa in effortless way. Prospective travelers have a possibility to obtain the short-term visa without visiting Georgian Embassy or Consular Office. It takes 5 working days to make a decision on a visa application. The Readmission Case Management Electronic System (RCMES) was introduced as a technical support and

implementation tool for the Agreement between Georgia and the European Union on the Readmission of Persons Residing Without Authorization. It was introduced to the EU member states in June 2013 and is currently used by 22 European states. The system is web-based (no need for installation), its working language is English. Menu is user-friendly, includes Help and Video Lessons. The electronic program includes all stages of readmission: receiving applications - review – planning an interview – response to the application - request of the travel document - providing information about the readmitted person. In addition, system users can communicate through an internal integrated communicator. If the readmission application is submitted through the RCMES the Electronic Travel Document is issued for readmission purposes. A significant element of the system is a video call that makes possible to organize an interview with a person to be readmitted remotely via video call and avoid requesting state from administrative expenses related to an interview of a person to be readmitted.

Stavros Piotopoulos (Head of Statistics and IIS Management Department, Hellenic Ministry of Interior) introduced the Greek Nationality Code, which was ratified and entered into force in 2004, and underwent three major amendments in 2010, 2015, 2019-2021. Greece experienced a sharp increase of citizenship applications especially since 2006, in response to the introduction of the expert system to assist state officials in examining citizenship applications and the Greek Integrated Informational Citizenship System (Gr.I.I.C.S).

The decision is assisted by Gr.I.I.C.S. as follows. Citizenship cases depend on two sets of data: static (category specific, the law requirements based on which a checklist is created) and dynamic (case specific, the supporting documents that are checked across the checklist). The two sets are compared and the system presents a recommendation whether the application should be accepted or rejected. The final decision is however always human based. Gr.I.I.C.S interoperates with other systems like the Criminal Records Database, the Police or the Migration System to obtain relevant data for the examination of a case.

In terms of impact, on the one hand, the automation of processes increases productivity, errors are minimised and low-level tasks are automated, thus reducing processing time. On the other hand, rapporteurs may depend "too much" on the system's recommendations. In addition, the system cannot be easily upgraded to adapt to new technological advancements.

The General Secretariat for Citizenship created in 2021 a new portal for managing the new Knowledge Competency Test for Naturalisation. It would be useful to merge the Gr.I.I.C.S architecture with the new on-line portal to further digitalise procedures related to the granting of citizenship, and interoperate with other administration systems to automate more low-level tasks.

SESSION II: ANALYTICAL SYSTEMS

The second session focused on analytical systems, which use complex queries to analyse aggregated historical data from transactional systems to help countries to facilitate better data-driven decision-making by validating a course of action before committing to it.

BIG DATA AND INNOVATION TO SUPPORT IOM PROGRAMMING AND POLICY – MOBILITY DATA ANALYSIS IN UKRAINE

Damien Jusselme (Head of the Data & Impact Analytics Unit of IOM Global Migration Data Analysis Centre, IOM GMDAC) focused on big data and innovation to support the IOM programming and policy, specifically regarding mobility data analysis in Ukraine. He explained that the Big Data for Migration Alliance is a joint

research centre that is constantly adjusting to the need for data in decision-making processes. The centre works within the IOM, but also within the broader context through partnerships, such as with phone data providers to gather information, branching out into non-traditional data sources to explore mobility forecasting. Systems IOM have been using specifically for Ukraine include Meta (Facebook) to estimate the population who left Ukraine to Europe. Log-in data from Facebook was used to track movement by assessing those who logged into Facebook from Ukraine and then who logged into another country later. Movement was visible to Poland and onwards onto France and Germany, noting that such data can be particularly useful to assess secondary movements. Additionally, a computer-assisted telephone survey was used to estimate internal displacement in Ukraine through random digit dials. The speaker then returned to the point on ethics of data collection that was highlighted in the opening remarks, emphasising the importance of discussing the issue as we begin to increasingly use data to make estimates on intentions and forecasting. It is important to reflect on the ethics of the data collections, particularly as the data being used was not initially intended for this kind of purpose. There is a need to focus on consent, with consideration of physical security. GDPR is a useful start, but there is a lot of work that still needs to be done on data protection while moving forward.

AI/ML TO INFORM HUMANITARIAN STRATEGIC PLANNING AND RESPONSE – PREDICTING FORCED DISPLACEMENT

Alexander Kjærum (Global Advisor-Senior Analyst, Danish Refugee Council (DRC)) spoke next on artificial intelligence (AI) and machine learning (ML) to inform humanitarian strategic planning and response, with the focus on predicting forced displacement. It was highlighted that DRC focuses on how to use technologies to reinforce protection and human security rather than for border protection. The data and models that are produced are available to the wider public. One of the main models used focuses on macro-level factors that indicate root causes and pre-disposition for displacement, micro-level factors to estimate precipitating factors, combined with mediating factors that impact displacement. The model covers 26 countries with estimates of how many people are currently and will be globally displaced in the coming years. While the model is not yet finalised, it has performed better than UN projections in Human Response Plans, which have a greater tendency to underestimate displacement. A higher change in displacement leads to higher forecasting inaccuracy. For instance, estimates for Burkina Faso and Venezuela showed high rates of inaccuracy in forecasting. It was noted that assessing scenario-based forecasting that takes into account qualitative assessments, such as conflict and drought displacement in Afghanistan, made for much more accurate estimates, despite the actual number of displaced persons still tends to be higher than estimates. It was suggested to build a series of different tools that have better forecasting of what will happen in the future, with a greater variety of inputs, especially if it is to be used for decision-making processes. Research ought to be more tightly linked with decision-making to make use of its efforts and trigger early action from both internal and external actors.

IT TOOLS FOR MANAGING MIGRATION FLOWS" (ITFLOWS) PROJECT: THE ROLE OF EMERGING PREDICTIVE IT TOOLS IN EFFECTIVE MIGRATION GOVERNANCE

Colleen Boland (ITFLOWS project, Researcher at the Autonomous University of Barcelona) presented the project on IT tools for managing migration flows (ITFLOWS), explaining the role of emerging predictive IT tools in effective migration governance. The tool assesses mixed migration flows in the EU on resettlement and reintegration. The project aims to provide accurate predictions on migration and asylum flows, policy solutions for the migration management and integration of

refugees in the EU, and to propose solutions on how to reduce potential tensions between migrants and EU citizens. It thus presents a complex, evidence-based IT solution to better manage the flows and integration following arrival into EU Member States. The project places particular attention on aiding humanitarian actors receiving migrants, as well as municipalities and local governments on integration. The study is taking place over the course of 36 months and includes 14 partners from eight EU Member States (Bulgaria, Denmark, Greece, Holland, Italy, Poland, Spain, and Sweden). Additionally, civil society organisations and international organisations have been providing feedback to validate the tool. The speaker also demonstrated the interface of the online platform to show how they are working to present the complex data in an user-friendly manner. For instance, maps 1) indicating conflict zones, nearby refugee camps, and the number of people in these camps during the past five years and 2) giving a geographic overview of sentiments gathered towards migration based on Twitter analysis. Three semi-annual reports are projected for the case studies completed so far, noting to the added value such projects can bring in the process of decision-making. Data sources and predicting mixed migration flows have been some of the major challenges, in addition to ensuring the application of the legal and ethical requirements that these tools demand. The presentation was concluded by highlighting the importance of multi-stakeholder cooperation.

GEORGIAN UNIFIED MIGRATION DATA ANALYTICAL SYSTEM (GE-PSDA)

Niko Nikuradze (Secretary for Data Collection and Processing PSDA / SCMI Secretariat) and **Teona Mchedlidze** (Analyst PSDA / SCMI Secretariat) provided an introduction to the Georgian Unified Migration Data Analytical System (UMAS). They began by looking into the concept of data-driven decision-making in general with its purpose and benefits, then more specifically its compounding elements, followed by Georgia's solution UMAS. They highlighted that its main purpose is informed policy-making. They reminded that data is unstructured content before it is put into context. Once put into context, it becomes information, that can become useful to transform into knowledge that informs policy decisions. They reviewed the circular process of data-driven decision-making, from formulating questions, data collection and analysis, communication with decision-makers, process improvement and refinement, to beginning the process again as new questions arise from previous action. The speakers stressed the importance of interlinking the data collected by agencies, including the creation of a common standard for the collection of mandatory data fields for all migration related agencies. They highlighted that good quality data can be derived from good sources, which results in better decision-making. In Georgia, authorities agreed to collect and process migration related data for analytical purposes through UMAS. It went into operation in 2018 and has been continuously undergoing updates and integrating various data sources. The end result of UMAS is a series of analytical reports on migration that support decision-making, leading to actions that in turn change the environment.

SESSION III. DATA-DRIVEN DECISION-MAKING IN MIGRATION MANAGEMENT: MORE OPPORTUNITIES OR CHALLENGES?

The third session was opened with a keynote by Prof. Mathias Czaika who talked about quantifying migration scenarios and data framing. Then a discussion followed with participation of speakers from previous sessions:

- Mr. Damien Jusselme who is the Head of the Data & Impact Analytics Unit at IOM GMDAC;
- Mr. Alexander Kjærum who is the Global Advisor-Senior Analyst at the Danish Refugee Council;
- Ms. Liis Valk from Estonian Police and Border Guard Board;

- with the moderation by Ms. Nino Ghvinadze who is an independent migration data analyst in Georgia.

First, **Prof. Dr. Mathias Czaika** (Danube University, Krems) gave a keynote speech on migration governance in the context of uncertainty and data-driven decision-making in migration management. Despite the numerous data sources available on migration, the need for new data sources for migration policy and management is continuous. The reason for this is threefold: (1) the complexity and multitude of policy-related questions on migration, (2) the need to improve data quality, and the fact that (3) analytical evidence is inherent to social change.

In the last years, research on migration has expanded rapidly, and so have the research methods diversified, bringing innovation in the way data is collected, analysed and stored. However, questions on the reliability of data for informing policy-making persist. What is considered as being evidence-based, might at best be preliminary evidence, the results of which are largely affected by the research methods that were chosen. What we know about migration is affected by epistemic and aleatory uncertainties. Epistemic uncertainty derives from the lack of knowledge of a parameter, phenomenon or process. Aleatory uncertainty refers to the inherent uncertainty due to the probabilistic variability or other types of randomness. Research can tackle epistemic uncertainty, which is related to our limited knowledge. Aleatory uncertainties are by definition unpredictable.

Sources of migration data can be grouped into three categories: (1) statistical data sources, (2) administrative data sources and (3) innovative data sources - such as big data and the use of social media data. There is a large amount of data that is still quite uneven in scope, and the reason for this is that data is based on social and political constructs. Information available is increasing, but on a more selective basis and data gaps still persist.

Recently, increasing emphasis has been put on data-driven decision-making. There is a need for sound and reliable research evidence, which is based on systematic observation. However, scientific evidence is not sufficient because political decisions are not rational. Instead, they are affected by heuristics and cognitive biases. Quality data and advanced analytic capacity cannot guarantee that governments make effective, data-driven and reliable/long-term decisions. The way data gets to the political realm is important - for example, face-to-face meetings are still considered to be the most effective method for data knowledge transfer – but it is also important to note that migration management is challenging not only because of uncertainty, but because policy-making is uncertain and erratic in itself.

In order to enhance capacity for data-informed migration management, quality data should be collected and analysed to address epistemic uncertainty. Data diversity should be ensured to inform policy-making and migration policy conception and analysis should be improved, and so should skills for monitoring, data collection, knowledge development, scenario planning and analysis of epistemic and aleatoric uncertainty. Improving the understanding of human behaviour and (migration) decisions is also of great importance – this should translate into enhanced communication, sensibilisation to 'evidence-based' discourses and increased governance of multilevel networks on data.

DISCUSSION:

Moderator **Nino Ghvinadze** (Georgian Migration Data Expert) asked panellists' to elaborate on multiple aspects related to data, innovation and inclusiveness. Regarding the automation of decision-making, speakers stressed that human decision-making cannot be entirely replaced by automation. There were invitations

to strike a balance between the production of data and the 'do no harm' principle, especially in humanitarian contexts (Alexander Kjærum). AI is there to stay, but a strong focus on ethics is key. A suggestion to introduce a UN review board integrating ethical considerations was made (Damien Jusselme). Automation is intended to simplify processes and needs to be credible, but human-decision makers cannot be replaced by machines (Liis Valk). Human decision-making and interpretation of evidence is needed to make better informed decisions and reduce epistemic uncertainty (Prof. Mathias Czaika).

Considerations about bringing forward innovation were also made, noting that some organisations (including the UN) are less agile and might face more constraints when trying to introduce innovative changes (e.g., due to resources, time constraints etc.). Partnering with academia and the private sector can foster innovation (Damien Jusselme). Professor Czaika noted that the enthusiasm about innovative research methods including big data, AI-generated and social media data has translated into the joining of data scientists and engineers in the field of migration research and analysis. This is a significant and enriching trend.

In terms of data quality and comparability, professor Czaika noted that innovation should not come at the expense of quality data and the application of rigorous research methods allowing for statistical generalisation and replicability. Considerations should also be made with regards to the way research is designed, but also how data is collected – including the interface used and the way consent to participate in data collection is sought and obtained (Damien Jusselme). Liis Valk emphasised the importance of data reliability, stressing the trend in the past few years of moving towards 'declaration data' and national databases.

Speakers also made considerations on the importance of involvement of migrants in migration-related research and analysis, noting that involvement should not be detrimental to them. The creation of predictive models should not come at the expense of communities. It is important that these are part of the decisions that are made (Alexander Kjærum). Digital literacy should also be taken into consideration when asking for migrants' consent in participating in research (Damien Jusselme). Professor Czaika emphasised that awareness of biases and blind spots is important, as this presents implications for resource allocation and visibility of the groups that are overseen in a given data system. Asked about the relevance of policy briefs for policy-making, Professor Czaika commented that according to literature, while face-to-face communication was reported as being the most effective means to transfer data knowledge, policy briefs and technical papers are relevant instruments for engaging with policy decision-makers.

CLOSING REMARKS

Barbara Orloff, EMN Estonia Coordinator, thanked speakers for their insights, participants for joining and Georgian colleagues for co-organising. She then presented some takeaways from the conference. First, she highlighted how transactional systems can be beneficial to migration management, from border management to citizenship processes. Secondly, how analytical systems and machine learning can be used for forecasting and understand forced migration, including in the context of Ukraine. Thirdly, awareness is needed to strike a balance between the advantages and disadvantages of data-driven decision-making for both countries and migrants. Ethical considerations and data quality concerns should be addressed. Moving forward, a balance should be found between human interaction and automation of processes, always retaining the human element in decision-making.