IOM INTERNATIONAL ORGANIZATION FOR MIGRATION

STANDING COMMITTEE ON PROGRAMMES AND FINANCE

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LEVERAGING TECHNOLOGICAL CHANGE

TO BUILD BETTER REGULAR MIGRATION PATHWAYS

**LEVERAGING TECHNOLOGICAL CHANGE
TO BUILD BETTER REGULAR MIGRATION PATHWAYS**

1.   Technology significantly contributes to regular migration by making pathways more efficient, accessible and secure. In an interconnected global economy where technology is reshaping labour markets, its role in migration governance has become more pronounced. Technological advancements impact a broad range of critical areas, including access to legal identity, equitable access to health care, skills matching and labour mobility, visa application and resettlement processes, border governance and protection mechanisms for migrants. The integration of digital tools, artificial intelligence and data analytics into migration management systems has opened new avenues to shape global mobility.

2.   This document explores how technological changes are affecting regular migration pathways and how various stakeholders, including IOM, can harness technology to establish, expand and enhance regular migration pathways.

Technology as an enabler of better migration pathways

3.   Digital tools help to streamline administrative procedures thus enhancing transparency, as well as ensuring orderly and predictable migration movements. The proliferation of online resources has also empowered migrants by providing access to vital information regarding employment rights, legal advice and settlement services.[1] Websites, social media, mobile applications and online forums offer guidance on various aspects of migration, including job seeking, housing and legal assistance. This guidance helps migrants to make informed decisions and better adapt to their new surroundings. However, there are also risks associated with online resources. Migrants might come across fraudulent job offers and other misleading information that could be linked to trafficking and other illicit activities. In order to take full advantage of regular migration opportunities, it is crucial to balance the advantages of technological progress in migration with obstacles such as the ability to verify the credibility of information and sources.

4.   As one of the key prerequisites for the establishment of regular pathways, legal identity systems are inherently tied to technology and digital infrastructure. With over 850 million people worldwide lacking proof of identity, the need for robust civil registration systems and identity management platforms is more critical than ever.[2] These systems ensure that migrants have verifiable proof of identity, which is essential for accessing visas, residency permits and other prerequisites for regular migration pathways. The integration of biometric data and secure digital platforms into these systems streamlines the process and significantly reduces the risk of identity theft and fraud.

5.   Technology also presents opportunities to advance equitable access to health services since digital tools and innovative care delivery can improve health outcomes for migrants, with the benefits also being felt by their host communities. The use of artificial intelligence in health systems that provide services to migrants can further enhance the efficiency and accuracy of health screenings, disease surveillance and personalized care, thereby improving the overall health of migrants, along with public health outcomes. Within migration processes, the use of mobile health applications allows for the seamless transfer of medical information across borders. These tools are particularly valuable in pre-departure health assessments and for ensuring continuity of care for migrants as they move

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[1]   See, for example, the O-Canada App, which was developed by IOM to provide relevant, accurate and targeted information to improve integration outcomes for refugees resettling in Canada; or the IOM-supported Open South America platform, which provides migrants and stakeholders in South America with updated and reliable information on government measures concerning human mobility and health.

[2]   The importance of legal identity is underscored by target 16.9 of the United Nations Sustainable Development Goals, which aims to provide legal identity for all by 2030, including birth registration.

between countries. For example, the use of telemedicine, including teleradiology, enables migrants to receive medical care and monitoring from a distance, which is particularly important for those facing barriers related to language, transportation or legal status.

6.   The digitalization of immigration and visa procedures has, in general, led to a simplification of the standard procedures, thus improving the applicant's experience. The COVID-19 pandemic heightened the need to introduce visa applications that allow applicants to initiate processes remotely. The introduction of these remote solutions helps to reduce costs for visa issuing authorities. Governments are also testing the integration of artificial intelligence into some of the preliminary processes for visa decision-making, where advanced data analytics allow for the recognition of patterns, facilitating informed decisions.

7.   Labour and skills mobility are closely tied to technological advancements, which are rapidly transforming how labour markets operate. Artificial intelligence and data analytics are at the forefront of this transformation as they are revolutionizing job matching processes. These technologies enable employers to connect with potential employees across borders with unprecedented accuracy and efficiency. Platforms using artificial intelligence not only expedite the recruitment process but also enhance the ability to predict future labour market needs, allowing for more targeted and responsive migration policies. Private and government websites and specialized job boards will allow employers to post job vacancies that can be accessed globally. An example of such a job board is the European Union's Talent Pool, an online platform designed to match profiles of jobseekers from outside the European Union with job vacancies for shortage occupations with employers throughout the Union.[3]

8.   The growing demand for digital skills in the labour market is also shaping migration patterns. As technology continues to drive economic growth, there is a heightened need for workers with advanced technical skills. This demand is influencing immigration policies, with countries like Australia and Canada implementing specific visa programmes to attract skilled workers in high-demand sectors such as software development, data science and engineering. For example, the Canadian Global Talent Stream and the Australian Global Talent Independent Program offer expedited immigration processing and pathways to permanent residency for technology professionals.

9.   The shift towards digital and high-tech industries is also influencing the types of skills in demand, with the green and just transition creating new opportunities for workers in renewable energy, sustainable development and environmental management. These emerging sectors require a new set of skills, leading to increased demand for specialized training and education. Another example of recent trends within labour migration is the rise in digital nomad visas, which allow individuals to work remotely from foreign countries. By 2022, over 28 countries had introduced digital nomad visas, including Barbados, Estonia and Portugal, with several other countries planning similar measures.[4]

10.   Border governance is another critical area where technology is having a significant impact. In this sphere, artificial intelligence can assist governments in developing and updating data-informed policies and evidence-based strategies, helping to harmonize approaches at the national, bilateral and multilateral levels. This can help to address common issues related to regular and irregular migration, border security and cross-border trade, ultimately fostering international relations. Artificial intelligence can improve the efficiency and security of border management information systems by, for example, automating processes such as identity verification and risk assessment, and expediting processes for the clearance of travellers and goods. These systems can analyse vast amounts of data in real time, identify trends, predict outcomes and suggest actions to constantly and rapidly adapt

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[3]   Refer to the IOM and International Labour Organization joint report entitled *Promoting fair and ethical recruitment in a digital world: Lessons and policy options* for additional examples of State-facilitated digital recruitment platforms.

[4]   Organisation for Economic Co-operation and Development (OECD), *Migration Policy Debates: Should OECD countries develop new Digital Nomad Visas?*, (Paris, OECD Publishing, 2022).

front-line border control procedures and second-line border management operations. This is especially valuable for managing large-scale migration and ensuring secure border management in exceptional circumstances with sudden influxes of migrants.

11.   When it comes to addressing irregular migration, widespread access to the Internet and mobile technologies has become a feature of transnational organized crime, including for migrant smuggling and trafficking in persons networks. However, the same technologies also provide powerful tools to prevent and counter these illicit activities by supporting law enforcement and judicial authorities in investigating, disrupting and prosecuting transnational crime implicated in irregular migration, while facilitating assistance for smuggled migrants and the protection of victims of trafficking. Initiatives that leverage technology to gather and analyse data, coupled with the political will of various countries to share such data across borders, are crucial for analysing trends and developing more effective methods for preventing and countering migrant smuggling.

12.   Advancements like digital identity, digital visa applications, electronic health records, skills and job matching platforms and biometric systems have bolstered transparency and simplified administrative processes by reducing processing times and decreasing the likelihood of errors. However, the increased reliance on artificial intelligence, automation and technology in general within migration governance also raises concerns about ethics, privacy, data security and the potential for bias in fully automated decision-making processes. These concerns must be addressed to ensure that human rights, accessibility, transparency and appeal processes are duly considered when developing and deploying technology and solutions driven by artificial intelligence.

The role of IOM in leveraging technology for regular pathways

13.   As the United Nations migration agency, IOM plays a crucial role in advising Member States to integrate technological components into their migration management and governance strategies. These solutions range from border management information systems to vaccination and passport examination applications, international recruitment, resettlement processing and visa application platforms – all of which are designed to streamline migration processes and enhance the security, reliability and accessibility of regular migration pathways.

14.   IOM has decades of experience developing technological tools that can help States better manage migration. One of these technological innovations is the Migration Information and Data Analysis System (MIDAS). It is a comprehensive border management information system that helps streamline these processes and enhance security, ranging from pre-departure procedures, such as electronic visa (eVisa) applications, to the registration of undocumented migrants for regularization purposes. IOM also developed the Visa and Immigration Application (VIA) Ecosystem, which enhances the overall transparency and efficiency of visa application processes through secure and easy to navigate public interfaces, back-end data, document management and case tracking.

Box 1. Pathways Assistance Tracking Hub (PATH)

From the VIA Ecosystem, IOM designed and deployed the Pathways Assistance Tracking Hub (PATH) – the technology tool supporting the Safe Mobility Office (SMO) initiative. In collaboration with the Government of the United States of America, the Office of the United Nations High Commissioner for Refugees (UNHCR) and other partners, IOM has implemented the programme in four countries in South and Central America to facilitate access for individuals in vulnerable situations to specific regular pathways to the United States of America. PATH has played a key role in the registration, processing and referral of the beneficiaries of the programme. It has also enabled IOM to gather and analyse data that is facilitating informed decision-making and future planning and cooperation within and outside the region.

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15.   IOM also develops digital platforms for use by migrants and other stakeholders to support regular pathways. iDiaspora is one such example, empowering diaspora communities to engage with each other and contribute to both their host and home societies by providing access to valuable information and support networks. Following a multi-stakeholder approach, iDiaspora offers a comprehensive digital solution to maximize the impact of diaspora engagement, serving as a one-stop shop to streamline efforts, foster collaboration and facilitate peer learning and economies of scale. Driven by diaspora communities and youth diaspora leaders, iDiaspora is transforming into a social media platform, the first of its kind in the United Nations system.

16.   These types of digital platforms are increasingly being leveraged by governments, with IOM support, to facilitate the employment of their nationals abroad. For example, the Sri Lankan Integrated Guidance and Referral System (IGRS) is an IOM-supported information and communications technology solution that brings together stakeholders involved in foreign employment to provide end-to-end services, including self-registration, skills screening and referrals to upskilling programmes.[5]

17.   From a capacity development perspective, IOM also provides direct technological assistance to governments to strengthen their migration management systems. As a prerequisite to regular migration, IOM supports governments with the establishment and proof of legal identity by, amongst others, developing robust civil registration and identity management systems, and strengthening their capacity to issue and verify secure and recognized documentation. This work includes supporting consulates and embassies in establishing proof of legal identity and advocating for policies that promote universal access to identity documentation. By implementing programmes that improve legal identity processes – such as digitizing paper records and exploring digital identity systems – IOM ensures that individuals have the necessary documents to engage in regular migration.

Box 2. IOM applications supporting regular migration

O-Canada application: This mobile application developed by IOM helps soon-to-be resettled refugees access pre-departure orientation information anytime, anywhere. It enhances their chances of successful integration once they arrive in Canada by offering interactive activities in eight languages, including English, French and Arabic.

IOM electronic personal health record (e-PHR): A digital tool that allows migrants to carry their medical records, ensuring continuity of care across borders. It supports seamless health information transfer, reducing the need for duplicate tests and improving care for migrants.

IOM vaccine application: This application provides electronic vaccine records and reminders, empowering migrants by ensuring they stay up-to-date with vaccinations, thus improving health security during migration processes.

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18.   IOM actively engages with the private sector to ensure that good migration governance is bolstered by available technological tools. Technology companies have a key role to play in promoting inclusive and accessible regular migration pathways. Strengthening partnerships with these companies is key for many aspects of migration management, including to enhance the protection of migrants and counter trafficking in persons. Data aggregation and analysis, blockchain for traceability and artificial intelligence are some of the technologies being used by law enforcement, non-governmental organizations, academia and the private sector to combat trafficking in persons. IOM has partnered with Microsoft as part of the Tech Against Trafficking programme to develop an innovative approach to anonymizing and safeguarding trafficking data using synthetic data generated by an algorithm. This partnership highlights the potential of technology to address complex migration challenges while ensuring the protection of personal data.

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[5]   See the Sri Lankan Ministry of Labour and Foreign Employment webpage on the Integrated Guidance and Referral System (IGRS).

Box. 3 IOM as a convener: Technology and migration management

IOM organizes the Border Management and Identity Conference (BMIC) every two years in Thailand to stay abreast of the latest innovations. This international conference provides a platform for private companies to showcase cutting-edge technologies and offers governments the opportunity to explore effective and efficient solutions for managing regular migration pathways.

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19.   The private sector's involvement is also crucial in addressing the digital divide, which remains a significant barrier to the effective use of technology in migration governance. Ensuring that all migrants have access to digital tools and the Internet is essential for creating equitable migration pathways. Job matching services can also help migrants adapt to their new environments, effectively supporting their integration. Private companies can play a role in expanding access to technology, particularly in low-income countries, through initiatives that provide affordable Internet access and digital literacy training. This is critical because, despite the rapid growth in Internet usage, a significant digital divide still exists between high-income and low-income countries.[6]

Recommendations

20.   IOM efforts to integrate technology into migration governance are part of a broader strategy to enhance the efficiency and transparency of migration processes. Leveraging technological tools helps to improve the efficiency and transparency of migration procedures, reducing some of the administrative burden associated with facilitating regular pathways, and rendering these processes less time-consuming for both governments and migrants. Likewise, ensuring that all migrants have access to the digital tools and resources they need to navigate migration pathways is essential to create an equitable migration system.

21.   As technology continues to advance, it is essential for stakeholders, including governments, international organizations and the private sector, to work together to ensure that these innovations are used ethically and effectively.

Recommendations for Member States:

- Prioritize the development and expansion of robust digital infrastructure to support innovations in migration management, particularly for implementing effective legal and digital identity systems, which are critical for accessing regular migration pathways.

- Establish and enforce ethical guidelines for the use of artificial intelligence and data analytics in migration processes. This includes ensuring transparency, accountability and human oversight in automated decision-making, protecting migrants' privacy and actively working to eliminate bias from systems driven by artificial intelligence.

- Collaborate with other countries and international organizations to develop secure and efficient data-sharing frameworks while safeguarding personal information and upholding data protection standards.

- Engage with partners to co-develop innovative solutions that enhance regular migration pathways, ranging from creating platforms for job matching, language training, legal advice and integration support, to leveraging the expertise and resources of the private sector.

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[6]   According to World Bank data, more than 66 per cent of the global population used the Internet in 2022, with 90 per cent of residents in high-income countries using the Internet, compared to just 25 per cent in low-income countries. World Bank, *Digital Progress and Trends Report 2023*, (Washington, World Bank, 2024).

Recommendations for the private sector:

- Prioritize investment in technology to automate and streamline the migration application process. This can reduce time and costs for both migrants and host countries by facilitating document submission, verification and communication, making the process more user-friendly.

- Utilize existing platforms that accurately match migrants' skills with labour market needs. This approach can increase employment opportunities for migrants and help employers to fill critical skill gaps without the need to develop new systems from scratch.

- Address data security and privacy concerns by implementing strong security protocols to protect sensitive personal information. This includes safeguarding against data breaches and ensuring compliance with privacy regulations to build trust with migrant communities.

Recommendations for IOM:

- Strengthen partnerships with leading technology companies to innovate and scale up digital solutions for migration management. These partnerships could prioritize the development of advanced tools for data analysis by leveraging the expertise and resources of large technology companies.

- Expand the provision to Member States of technical assistance, digital tools and training on the integration of technology in migration governance. This should include best practices for managing digital infrastructure, utilizing artificial intelligence and implementing robust cybersecurity measures to protect migrants' data.

- Advocate for initiatives that address the digital divide, ensuring that all migrants, regardless of their socioeconomic background, have access to the digital tools necessary for safe, orderly and regular migration. This could include partnerships to provide affordable Internet access and digital literacy programmes in lower-income regions.

22.   IOM stands ready to serve as a convener, scaling up its operational expertise and current partnerships and establishing new alliances to leverage the digital transformation to facilitate regular pathways.