MARCH 2023

The Expanding Use of Technology to Manage Migration

Case Studies from Central America and West and North Africa

AUTHORS
Marti Flacks
Erol Yayboke
Lauren Burke
Anastasia Strouboulis

A Report of the CSIS Human Rights Initiative and the CSIS Project on Fragility and Mobility

CSIS | CENTER FOR STRATEGIC & INTERNATIONAL STUDIES

The Expanding Use of Technology to Manage Migration

Case Studies from Central America and West and North Africa

AUTHORS
Marti Flacks
Erol Yayboke
Lauren Burke
Anastasia Strouboulis

CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

About CSIS

The Center for Strategic and International Studies (CSIS) is a bipartisan, nonprofit policy research organization dedicated to advancing practical ideas to address the world's greatest challenges.

Thomas J. Pritzker was named chairman of the CSIS Board of Trustees in 2015, succeeding former U.S. senator Sam Nunn (D-GA). Founded in 1962, CSIS is led by John J. Hamre, who has served as president and chief executive officer since 2000.

CSIS's purpose is to define the future of national security. We are guided by a distinct set of values—nonpartisanship, independent thought, innovative thinking, cross-disciplinary scholarship, integrity and professionalism, and talent development. CSIS's values work in concert toward the goal of making real-world impact.

CSIS scholars bring their policy expertise, judgment, and robust networks to their research, analysis, and recommendations. We organize conferences, publish, lecture, and make media appearances that aim to increase the knowledge, awareness, and salience of policy issues with relevant stakeholders and the interested public.

CSIS has impact when our research helps to inform the decisionmaking of key policymakers and the thinking of key influencers. We work toward a vision of a safer and more prosperous world.

CSIS does not take specific policy positions; accordingly, all views expressed herein should be understood to be solely those of the author(s).

Acknowledgments

Contents

Executive Summary

S eeking to manage growing flows of migrants, the United States and European Union have dramatically expanded their engagement with migration origin and transit countries, including in providing and supporting the deployment of sophisticated technology to understand, monitor, and influence the movement of people across borders.

In recent years, the U.S. government has deployed a host of tools and resources to address the unprecedented immigration situation on the southern U.S. border, including the deployment of new technologies.[1] The U.S. government is encouraging migrants, for example, to use the CBP One app to file paperwork from their home countries–seeking authorization in advance for parole in the United States for certain eligible populations–rather than applying upon arrival.[2] U.S. Customs and Border Protection (CBP) and U.S. Immigration and Customs Enforcement (ICE) have deployed drones and utilized cell phone data to track and analyze the movement of people across borders, as well as people already in the United States, and have dramatically expanded collection of information about travelers both to and from the United States.[3]

Countries in Europe have also increasingly utilized technology to address the volume of migrants seeking to enter their countries.[4] Frontex, also known as the European Border and Coast Guard Agency, relies heavily on data collection from EU member states and non-EU partners, organizations, and open sources and has established third-country partnerships, such as the Africa-Frontex Intelligence Community, to monitor irregular migration and human smuggling.[5] Frontex also routinely deploys surveillance airplanes and drones for real-time monitoring of land and sea borders and provides assistance to EU member states in their own operations, which it is able to do remotely.[6] At the same time, the European Union has launched eu-LISA–the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice–which is meant to increase the interoperability of the European Union's security, border, and migration management systems.[7]

Importantly, these efforts do not end at the borders of the United States or the European Union. Both have increasingly exported migration management technologies to their neighbors, including some of the major migration origin countries, expanding the spheres of U.S. and EU interest to include the movement of people within their respective regions. In some cases, migrants are tracked long before they arrive at their ultimate destination.[8]

Through two case studies of migration–(1) toward the United States from Central America and (2) toward Europe from West and North Africa–this report analyzes the use and exportation of migration management technologies by origin countries, as well as their motivations in doing so, including the growing influence of destination countries. It then assesses the human rights risks associated with these uses and provides recommendations for origin, transit, and destination governments as well as businesses supplying technology for migration management.

As home, transit, and destination country governments continue to expand their use of technology–which is highly likely–stronger guardrails against the misuse of that technology, and the data it generates, are necessary. This could include domestic policy reforms, such as stronger up-front human rights due diligence, as well as agreements among provider states on the appropriate bounds of the use of this technology.

As home, transit, and destination country governments continue to expand their use of technology—which is highly likely—stronger guardrails against the misuse of that technology, and the data it generates, are necessary.

1

Historical Deployment of Technology in Migration Management

Governments have been using available technology to track the movement of people across borders for decades. However, the terrorist attacks of September 11, 2001, followed by successive migration "crises" in Europe and North America, set the stage for more than two decades of rapid expansion of technology to manage migration.[9] These technologies aim to reduce the burden on governments of monitoring and processing an ever-increasing volume of people on the move while also enhancing governments' ability to understand who is moving and why. But this convenience comes with risks, particularly with respect to the rights of migrants to control and manage their personal information, and the ability of governments to misuse technology to violate privacy and other rights.[10]

Securing the Border

For destination governments–especially the United States and EU countries–border management and immigration policy in the 2000s were viewed primarily through a national security lens, built to prevent would-be terrorists from moving across international borders to carry out attacks. Technology deployment followed this objective.

In the United States, the Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (PATRIOT) Act and the Intelligence Reform and Terrorism Prevention Act of 2004 provided the legal framework for the U.S. government to begin collecting biometric data from arriving visitors or immigrants, ushering in a new area of information gathering and sharing. Beginning in 2002, the National Security Entry-Exit Registration System (NSEERS) required noncitizen males from Muslim-majority countries to submit biographic information and biometrics when attempting to enter the United States, and in 2004, data collection was expanded to include migrants of all nationalities through the U.S. Visitor and Immigrant Status Indicator Technology (US-VISIT)

program.[11] These systems were designed to ensure the U.S. government had visibility into who was seeking to enter the United States and, in principle, when they would depart. This provided the legal framework for the U.S. government to begin collecting biometric data from arriving visitors and immigrants, ushering in a new area of information gathering and sharing.[12]

Europe took a similar approach, beginning after September 11 and ramping up following the Madrid and London bombings in 2004 and 2005, with the EU Counter-Terrorism Strategy published in December 2005. In 2015, the European Council approved additional counterterrorism measures specifically to secure external borders. In 2004, Frontex was established to monitor external EU borders, thereby increasing security and improving migration management.[13] The agency relies heavily on data collection and sharing from member states through the European Border Surveillance System (Eurosur) and non-EU partners, organizations, and open sources, to achieve its aims.[14] It has established several third-country partnerships to monitor migrant smuggling and human trafficking, including the Africa-Frontex Intelligence Community (AFIC), established in 2010.[15] Under AFIC, Frontex currently runs five risk analysis cells–based in Ghana, Gambia, Niger, Nigeria, and Senegal– intended to facilitate "the exchange of information."[16] Frontex also routinely deploys surveillance airplanes and drones for real-time monitoring of land and sea borders and provides assistance to member states in their own operations, which it is able to do remotely.[17] Through eu-LISA, the European Union also began to increase data sharing across security, border, and migration management systems, including existing systems–such as the Schengen Information System (SIS), Eurodac, and the Visa Information System (VIS)–and new systems currently being developed–such as the Entry/Exit System (EES), the European Travel Information and Authorisation System (ETIAS), and the European Criminal Record Information System (ECRIS-TCN system). One of the primary goals of this new approach is to help the institutions managing migrants to "detect people who are hiding criminal or terrorist activities behind false identities."[18]

These approaches were not without criticism. The American Civil Liberties Union (ACLU) and other rights organizations repeatedly challenged the Patriot Act in U.S. courts, citing violations of the First, Fourth, and Fifth Amendments, including protection from unreasonable search and seizure and the right to due process.[19] While these concerns applied to everyone, including U.S. citizens, NSEERS specifically prompted allegations of racial profiling against migrants.[20] In 2013, ICE began using a Risk Classification Assessment Tool for detention-related decisionmaking. Although this technology allowed two decision choices to be made–detention or release–the New York Civil Liberties Union discovered that ICE removed the release decision from the automated process, leading to detention as the only possible decision.[21] Such manipulation is easier to execute and more difficult to detect when hidden behind automated systems and algorithms. In Europe, the pervasive surveillance of migrants–both those en route to Europe and those already residing there–has long also been a major concern for rights organizations, as has Frontex's close collaboration with countries with poor human rights records.[22]

Volume Control

In the 2010s, the global scale of human mobility–including refugees, internally displaced persons, asylum seekers, and migrants–increased exponentially to levels not seen since World War II, sparked by violent conflict, political unrest, growing inequality, and the increasing effects of climate change. The devastating conflicts in Syria, Afghanistan, and Iraq triggered dramatically increased migration to Europe between 2015 and 2016; more than one million people arrived in 2015 alone.[23] The Americas also experienced a marked increase in migration during the 2010s, driven by struggling economies, worsening environmental conditions, endemic violence, and political instability in parts of Latin America.[24] Destination countries accordingly

expanded their technology focus to identify solutions to process the sheer volume of people moving across borders more efficiently. This launched a new era of technology deployment among governments and migration organizations.

In the United States, the Immigration and Naturalization Service, and later the Department of Homeland Security (DHS), began using the Automated Biometric Identification System (IDENT) identity management system to collect, store, and process biographic and biometric information from potential migrants attempting to travel to the United States at 115 airports, 15 seaports, 100 land border stations, and 211 visa offices around the world, as well as from some partner governments.[25] Six of the eight DHS component entities now collect and use biometrics, including fingerprints, facial recognition, iris, voice, and DNA.[26] As of November 2020, IDENT stored about 3.2 billion fingerprint images, 3.5 million iris pairs, and approximately 800 million face images, totaling more than 260 million unique identities.[27] Beginning in 2020, the DHS began to roll out the Homeland Advanced Recognition Technology System (HART), a more sophisticated system that will include biographic and biometric information for up to 500 million people and can collect additional data, including voice prints and DNA profiles, if desired.[28] As a digital profile repository, HART's enhanced capacity will enable it to store, process, and manage multi-model biometric data as well as additional biographic information, derogatory information such as warrants and criminal records, border encounter data, and personal comments from DHS officials, including with some partner governments in Central America and Mexico.[29] HART is designed for scalability, given the volume of data it is projected to store. The DHS estimated that it would have more than 260 million profiles in the HART database by 2022.[30]

Building on the 2009 Stockholm Programme, which asserted that "Technology can play a key role in improving and reinforcing the system of external border controls," EU countries have also adopted several new technology-driven initiatives during this period.[31] In May 2015, the European Commission issued the European Agenda of Migration, which proposed new measures to coordinate regional and national responses to the so-called "migration crisis" and stressed coordinated migration management while also seeking to address the root causes of migration.[32] Technology featured as a key component within these policy responses, compensating for the European Commission's lack of authority to fully harmonize asylum and migration policies across the European Union. The agenda further institutionalized this policy initiative by adopting "smart borders" to manage irregular migration.[33]

Programs such as the European Union Emergency Trust Fund for Stability and Addressing Root Causes of Irregular Migration and Displaced Persons in Africa (EUTF) were launched to provide assistance in migration management to partner governments and to support economic development initiatives to promote improved governance and prevent conflict.[34] In October 2016, Frontex was officially launched, extending the reach of EU border management beyond Europe's physical borders. Within its Third Country Analysis Sector, Frontex has established four key information-sharing partnerships: the Western Balkans Risk Analysis Network (WB-RAN), the Eastern Partnership Risk Analysis Network (EaP-RAN), the Turkey-Frontex Risk Analysis Network (TU-RAN), and AFIC.[35] For example, through its five risk analysis cells in Africa, AFIC employ local analysts trained by Frontex.[36]

Pushing Borders Out

In the late 2010s and early 2020s, both the European Union and United States adopted a "neighborhood approach," establishing and expanding mechanisms for direct cooperation and coordination with migration origin and transit countries.[37] These destination countries have drawn an increasingly wide circle of interest;

no longer satisfied to wait until migrants arrive at their borders, the United States and European Union are increasingly monitoring and gathering data about migrants moving throughout their home regions. In the Americas, this includes migrants moving throughout Central America and Mexico, while European governments are particularly focused on migrants departing from Africa and the Middle East.

Among the primary goals of such approaches are formalizing the movement of migrations and minimizing "irregular" migration, as articulated within policy frameworks such as the U.S. Strategy for Addressing the Root Causes of Migration in Central America, released in July 2021, and the European Union's New Pact on Migration and Asylum, released in September 2020.[38] These documents affirm a broad interest among destination countries to regularize movement by tracking not just those attempting to cross their borders but also those who may try to do so in the future. To achieve this broad understanding of migration patterns, the United States and European Union rely on data collected by partner governments, often using technology provided by or funded through U.S. and EU foreign assistance or security cooperation.

This border externalization has resulted in the United States and European Union promoting complementary and interoperable systems throughout migrant source countries. Initiatives such as the United States' Biometric Data Sharing Program Arrangements with Northern Triangle countries and the European Union's EUTF and mobility partnerships with African countries exchange technology transfers for data-sharing arrangements, enabling information sharing about migration patterns and individual migrants.[39] Six EU data systems–SIS, Eurodac, VIS, EES, ETIAS, and ECRIS-TCN–are being made interoperable, and a new European search portal will "allow authorities to search multiple information systems simultaneously," including a biometric matching service that enables fingerprints and facial images to be cross-checked and a multiple identity detector that will alert authorities to identity fraud.[40] In exchange for this technology, some recipient states sign data-sharing agreements that improve donor countries' capacity to identify security threats but also to identify who is moving where and when they are moving.

Origin and transit governments adopt this technology to serve their own perceived security, political, and economic interests, with the understanding that destination governments will also benefit from its use. This expanded use of technology–which not only tracks aggregate movements of people but also collects detailed information about individual travelers–carries human rights risks that have only partially been addressed.

Home and Transit Country Participation

Migrant home and transit countries have their own motivations for adopting new technology and cooperating with destination countries. Some governments believe they benefit from the institutional capacity development that accompanies an influx of migration management equipment and training.[41] Security and political elites also leverage donor interests to bolster agencies and organs of government they control, cherry-picking the programs whose political and regional framing most align with their interests.[42] Political leaders often have their own interests in managing migration as well, as is evident in the Central America case study below. Often, the interests of home, transit, and destination countries align, with each benefiting from the regularization of movement and the political, security, and economic benefits it confers. Origin and transit country governments have therefore in some cases proactively asked for support from external donors to help improve their technical capabilities for population and border management, including technology for domestic service delivery such as digital IDs.[43]

Data Collected by Migration Management Technology

- Biometric Data: unique physical characteristics tied to a person's identity, including fingerprints, iris scans, facial images, or other biometry that can be used to verify identity.

- Biographic Data: personal information, such as name, address, gender, marital status, nationality, and date of birth.

- Entry-Exit Data: information such as a person's name, travel document number, and biometric data, used to monitor where and when people enter and exit a country's borders.

- Travel Documents: digital documentation or copies of identity documents issued by a government or international entity that enable individuals to cross borders.

- Geolocation Data: data from an electronic device that can be used to determine the physical location of a person or object.

- Aerial Imagery: aerial photography and imagery captured by remotely piloted aircraft.

2

The Human Rights Risks

Migration management technologies, which include biometric data collection and the use of artificial intelligence (AI), carry inherent risk to the rights of migrants whose data or movement is being collected and analyzed. The most salient risks include violations of privacy rights (including opacity in how data is used), discrimination (including the potential for automation bias in data processing), threats to physical safety, and difficulties in accessing remedies for violations that occur.[44]

Right to Privacy

The right to privacy is enshrined in the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, and in the foundational documents of regional organizations such as the European Union.[45] Informed consent–defined as an "Agreement to an interaction or action rendered with knowledge of relevant facts, such as the risks involved or any available alternatives"–is a consistent feature across domestic privacy regimes.[46] Its applicability to noncitizens, including migrants, however, varies by jurisdiction and is hotly debated.

The risks associated with the use of technology by unaccountable governments to surveil migrants have been well established. The Business & Human Rights Resource Centre (Resource Centre) recorded 25 allegations of abuse linked to these technologies around the world between July 2017 and July 2022.[47] In 2020, the Department of State issued due diligence guidance to companies seeking to export surveillance technology, urging them to follow a risk assessment process in line with the UN Guiding Principles on Business and Human Rights to prevent their products or services from being misused by governments to commit human rights abuses.[48] The scale of abuse of these technologies is so widespread that in August 2021, following a broad investigation, a group of UN experts called for a "global moratorium on the sale and transfer of surveillance technology" until an international regulatory regime is in place to ensure compliance with human rights standards.[49]

Only a subset of the information-gathering technology shared by destination governments and used by home and transit governments technically falls into the category of surveillance technology. However, the data-collection tools used by these governments in the migration management space bear many similarities in terms of risk profile, including the collection of sensitive personal information, difficulty in securing informed consent for its collection or use, and opacity in how it is stored, shared, and used by both the collecting and partner governments.

In July 2022, the Resource Centre conducted a survey of 24 companies that were alleged to have sold surveillance technologies to countries in the Middle East and Nort Africa (MENA) region for use in migration management to find out what, if any, human rights safeguards companies had put in place.[50] None of the 24 companies, including the 5 companies that responded to the survey, disclosed which governments they had supplied technology to, or which technologies they provided. Only a handful of companies reported carrying out human rights due diligence in advance of providing technology to governments (none disclosed their actual due diligence policy) or consulting with affected stakeholders from civil society, including representatives from migrant communities. In additional research commissioned by the Center for Strategic and International Studies (CSIS), the Resource Centre surveyed abuses associated with the use of technology for migration management in 12 identified countries in Central America and West and North Africa. In response to CSIS's request, the Resource Centre identified 10 instances where companies sold technology to governments that had previously used similar technologies to facilitate human rights abuses.

In North Africa (7 of the 10 identified instances), six cases of concern were related to surveillance technologies that can be used to monitor—and therefore intercept and detain—migrants. Civil society organizations report that migrants intercepted and returned to North Africa using this surveillance technology have been abused by local authorities upon arrival.[51] They have also alleged that the Libyan government has used surveillance technology provided to prevent irregular migration instead to crack down on dissent. These allegations repeat a troubling history; in 2007 and 2001, companies sold surveillance technology to the Gaddafi regime, which in turn used it to track dissidents who were later tortured.[52] In 2022, one company's former CEO was charged with "complicity in acts of torture" in French court as a result of these ties.[53]

In the Northern Triangle (3 of the 10 cases identified by the Resource Centre), concerns centered around the use of biometric identity systems and the potential those technologies have to violate migrants' right to privacy. These cases primarily involved technology transfers and U.S. funding to Mexico, which was given with the expectation that data collected would be shared. Migrants passing through these data collection points may not be aware of why their data is being collected, how it will be used, when (if ever) it will be deleted, and who it is being shared with.[54] They often cannot access their own data. In other cases, access to aid requires utilization of technologies that collect highly personal data.[55] Concerns about privacy have increased as governments have expanded the collection of migrant data from basic biographical information to detailed biometric data and created systems capable of collecting even more intrusive information such as DNA.

Right to Nondiscrimination

The right to nondiscrimination is implicated in governments' use of algorithmic systems to help manage migration. AI can be used to discern additional personal information about individuals, infringing their right to privacy as well as facilitating government identification or targeting of populations based on traits such as ethnicity, sexuality, political orientation, and health. (For example, if an airline passenger repeatedly requests special assistance, automation processes can be used to determine whether this individual has health

issues.)[56] Some uses of AI carry greater risks than others. For example, software to help aid organizations more accurately predict large population movements in order to more efficiently distribute resources carries less risk than the use of AI tools to evaluate individuals' visa applications or claims to asylum. Additionally, European governments have started to input their displacement and migration data into machine learning algorithms to forecast how events such as wars, conflicts, and pandemics will impact the number of asylum applications.[57] However, when carried out without adequate human rights due diligence and mitigation measures, even these uses can contribute to abuses. All uses of AI require an assessment of human rights risks and plans to mitigate and remedy any potential violations.

A November 2020 report by the United Nations Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia, and Related Intolerance found that "Governments and non-State actors are developing and deploying emerging digital technologies in ways that are uniquely experimental, dangerous and discriminatory in the border and immigration enforcement context," particularly with respect to border processes that rely on machine learning, automated decisionmaking, and predictive analytics.[58] Most governments' immigration and refugee decisionmaking processes rely to some extent on the judgment of officials to interpret the applicability of eligibility criteria and, in particular, to assess credibility. However, automated immigration processes can introduce additional biases or replicate and exacerbate biases already embedded in immigration systems, as has been well-established with the use of some facial recognition systems.[59]

In 2021, the European Union Court of Justice called for greater transparency in the iBorderCtrl project, an EU-funded experiment seeking to digitalize border management using automated lie detection by combining biometric verification, deception detection, document authentication, and risk assessment.[60] Several organizations, lawmakers, and human rights groups voiced concerns over the technology's ability to fairly assess people's intentions when migrating as well as its potential for discriminating and racially profiling travelers.[61] Building on iBorderCtrl's work, the TRESSPASS project, funded by the European Union's Horizon 2020 program, tried to create a "multimodel border crossing risk-based security solution" that can be used for land and airport border control.[62] TRESSPASS indicated that the use of behavioral analysis technology during interviews with border and customs officers potentially increased the correctness of interview outcomes. However, many questions remain regarding the ethical implications of these technologies, such as their ability to accurately assess human behavior across people and their different identities. The German and Turkish governments have also tested speech recognition technologies to detect migrants' countries and regions of origin. In Germany, the Asylum Act authorizes the use of technology that can identify an individual's dialect, but only with the individual's consent. In Turkey, the director general for migration management received EU funding to create an AI-based language analysis system to identify Uyghur and Uzbek speakers.[63] Similar to German efforts, the Turkish AI-based accent recognition system accurately determined dialects in only up to 70 percent of cases.[64]

In addition to posing risks, technology can be used to safeguard human rights. For example, some governments have started to review AI models to uncover and minimize bias and discrimination. After facing backlash from its own efforts to use algorithms to process visitor visa applications, the UK government now requires all public sector agencies to conduct an impact assessment and record any potential or anticipated bias due to AI decisionmaking prior to using it. The agencies must also document all uses of algorithms and continue to monitor the outcomes of these algorithms once they are implemented; if the data show unintended biases compared to real-world data, the algorithms can be altered to achieve more equitable outcomes. Using well-trained AI decisionmaking, governments can detect biases in visa and other screening processes and then decrease their prevalence.

Right to Life, Liberty, and Security

Technology has also been used to facilitate other abuses of migrant rights. In particular, migrants' rights to "life, liberty, and security of person" are put at risk when they are subject to arbitrary detention or placed in dangerous conditions as a result of the deployment of technology.[65] For example, law enforcement and intelligence services increasingly use algorithms and facial recognition technology to determine who should be subject to detention.[66] These uses of technology create clear risks for migrants in both the United State and Europe. Since the U.S. government began using more technology to secure the United States-Mexico border–including introducing AI-driven surveillance towers and drones–migrant deaths along the border have actually significantly increased as migrants seek out the smaller number of unmonitored routes, which are more remote and challenging to navigate.[67] In the Mediterranean, drones and other surveillance technology increase the number of ships carrying migrants intercepted before they reach European waters and return them to Libya where migrants are known to be subject to detention in inhumane conditions.

Access to Remedy

Access to remedy is often used to justify the assumption of human rights risk, including in the case of privacy concerns related to data collection and sharing. However, access to remedy is particularly difficult in the case of human rights violations related to technology for migrants. The lack of transparency in how data is collected and used, the transitory and sometimes undocumented status of the victims of violations, and the gaps in national and international law to clarify these rights combine to make the possibility of remediation remote at best.[68] Attempting to access remedy for even serious violations can be costly and time consuming: on January 24, 2023, a group of 21 migrants sued the U.S. government over a November data leak that caused personal information of more than 6,000 migrants being held in detention facilities to be posted publicly on the ICE website, exposing the names, nationalities, and locations of these migrants, some of whom were asylum seekers fleeing torture and persecution.[69] The leak, the plaintiffs claim, has put their short- and long-term safety at risk and is an example of the possible consequences of collecting and storing highly sensitive data. The case will likely take years to adjudicate.[70] Data-sharing agreements between the United States and the governments of Mexico and Guatemala (described in more detail in the case study below) rely on an assumption of access to remedy through direct appeals to the relevant government agencies in each country to mitigate relevant human rights risks. However, there is little publicly available data on how often remediation has been attempted or secured, making it impossible to assess the validity of this assumption.

3
—

Use Cases of Migration Management Technology in Central America and West and North Africa

I n order to better understand the relationships between origin, transit, and destination countries in their decisions about use of technology, the study team identified two case studies where these relationships are already well developed: the migration corridors between Central America and the United States, and between West Africa, North Africa, and Western Europe.

In both cases, destination countries have increased their engagement with origin and transit countries to better anticipate, deter, and stop the movement of irregular migrants, including providing technology and training to do so. In the Americas, much of this effort is undertaken by law enforcement-oriented agencies, including the DHS and the Department of State's Bureau of International Narcotics and Law Enforcement. In Europe, much of the funding for capacity building on technology comes from the EUTF. In the Americas, data sharing between the United States, Mexico, and Northern Triangle countries is emerging as an important component of this relationship; although nascent, there is a growing expectation that data collected on individual migrants moving through Central America will be accessible to U.S. government agencies. In West and North Africa, this expectation has yet to emerge, though it may in the future. In that sense, lessons learned from the experience in the Americas may be useful for governments and civil society organizations in West and North Africa as well.

Case Study: The Northern Triangle, Mexico, and the United States

This case study reviews the approaches to migration-related technology in Mexico and the Northern Triangle countries of Guatemala, Honduras, and El Salvador, as well as cooperation among these countries and with the United States, as the region's major migrant destination country, on data sharing and other migration technology issues.

REGIONAL MIGRATION TRENDS

Over the last 30 years, migration from the Northern Triangle countries to Mexico and the United States has accelerated, fueled by economic instability, political crises, and systemic violence. Since 2014, over two million people have fled El Salvador, Guatemala, and Honduras traveling north in search of new opportunities.[71] Many seek to reach the United States–in fiscal year (FY) 2022, CBP had more than 2.3 million encounters at the U.S. southern land border with Mexico, including 521,000 foreign nationals from the Northern Triangle countries, including 199,000 Hondurans, 228,000 Guatemalans, and 93,000 Salvadorans.[72]

Over the last 30 years, migration from the Northern Triangle countries to Mexico and the United States has accelerated, fueled by economic instability, political crises, and systemic violence.

However, Mexico is no longer just a transit point for migrants on their journey to the United States; it has become one of the world's most popular destinations for asylum seekers and other migrants. The 2020 Mexican census identified 1.2 million people in Mexico who were born in another country, up 20 percent since 2020, while only 15 percent of the international migrant population in Mexico indicated they were heading to another final destination country.[73] In 2021, nearly 130,000 people applied for asylum in Mexico–the third-highest number of any country in the world, and more than 100 times the figure for 2013.[74]

The vast majority of these migrants arrived in Mexico via its southern border with Guatemala, many from neighboring Northern Triangle countries and others coming from as far away as Cameroon. Under the Central American Free Mobility Agreement, citizens from the Northern Triangle countries and Nicaragua do not require a passport or visa to move within the Central America region, and travelers and migrants have been able to cross borders with only an official ID.[75] However, because migrants from the Northern Triangle countries do require a visa to enter Mexico, most enter the country through unofficial channels with undocumented status.

REGIONAL APPROACHES TO MIGRATION MANAGEMENT AND POLICY ALIGNMENT

The U.S. government's desire to stem the flow of migrants across its southern border has led to a widening circle of interest in migration flows throughout the region, including migrants moving through Central America and Mexico, with an aim to detect patterns and deploy prevention strategies long before migrants arrive at the United States' southern border. This approach has driven the United States to expand its engagement with regional governments on migration management, including supporting the deployment of new technology. In July 2021, the Biden administration released its Collaborative Migration Management Strategy, which seeks to create a regional framework for "safe, orderly, and humane migration" in North and Central America.[76] The strategy includes secure borders and humane border management as key lines of effort, which involves providing support for modernizing border infrastructure and technology in Mexico and the Northern Triangle.

Due to the volume of migrants who now see Mexico as their final destination, interests are aligning between the United States and Mexico. Both governments realize the efficiency gains of better managing Mexico's 541-mile southern border with Guatemala compared to the challenge of managing its 1,951-mile northern border with the United States. Former assistant secretary of state for the Bureau of International Narcotics and Law Enforcement, Ambassador William Brownfield, stressed in a 2018 interview that "from the U.S. side, we accepted and understood

that it is a lot easier, cheaper and more efficient to manage migrant flows from Central America to the U.S. at Mexico's much smaller southern border than at our longer and more complicated [U.S.-Mexico] border."[77]

Due to the volume of migrants who now see Mexico as their final destination, interests are aligning between the United States and Mexico.

Upon taking office in 2018, Mexican president Andrew Manuel Lopez Obrador advocated for a coordinated approach to the migration surge among governments to its north and south, with a particular focus on addressing the root causes of migration. However, record-setting arrival figures and pressure from both domestic constituencies and the U.S. government soon led to a narrowing in focus toward stemming the flow of migrants into Mexico and on to the United States.[78] The June 2022 announcement that Mexico would spend $1.5 billion in border infrastructure between 2022 and 2024, complementing the $3.4 billion included in the U.S. Bipartisan Infrastructure Law for construction and modernization products at the border, is one component of this approach, but it is not the only one.[79]

In implementing an approach to border management that emphasizes law enforcement, the Mexican government has deployed new resources to prevent migrants from entering the country illegally, as well as to process and manage those who do enter Mexico. Much of this response has been focused on a surge of more than 12,000 personnel to Mexico's southern border, though the government has indicated it will ramp up its focus on technology as well.[80] This includes investments already made in biometric identity management (at the border and at detention centers) as well as drones and other technology to monitor Mexico's borders with Guatemala and El Salvador.[81]

This assertive ramp up of security has come at a cost. As The Guardian reported, "Human rights activists say soldiers, police officers and immigration officials are . . . guilty of crimes against migrants, ranging from robbery to extortion and kidnap for ransom."[82] It has also had the unintended impact of pushing migrants toward evermore dangerous–and less-monitored–routes in order to avoid detection. This has led to an increasing number of deaths due to exposure to the elements.

Regional governments are taking other steps to enhance their use of technology in managing migration as well, many at U.S. urging. In El Salvador, the government established a border patrol with support from the Department of State's Bureau of International Narcotics and Law Enforcement Affairs–the only one of the three Northern Triangle countries to have done so–and it is focused on monitoring irregular crossing points on the borders with Honduras and Guatemala. In Honduras, despite worsening relations with the United States, the government has set up 12 additional checkpoints along migratory routes as a deterrent to irregular migration and is also investing in facial recognition technology to be implemented at the new Comayagua International Airport, scheduled to serve about 1.5 million people each year.[83] Countries also engage in international cooperation initiatives, such as the Joint Border Intelligence Group (GCIF), which enables participant countries to share their criminal databases and records with CBP and U.S. law enforcement in order to track and monitor the movement of gangs and criminal groups across and along the U.S. border.[84] The GCIF personnel come from El Salvador, Guatemala, Honduras, Mexico, Canada, Australia, Spain, and the United States.

Beyond the sharing of equipment and training of security forces, the United States has expanded its sharing of biographic and biometric information with foreign governments, both in the Americas and with other partner governments. Through bilateral agreements with visa waiver countries, multilateral agreements with strategic partners, and the Biometric Data Sharing Program (BDSP), the United States is receiving data collected by partner governments and entering it into the IDENT system (soon to transition to HART).[89] This includes information collected by foreign governments in the course of both law enforcement operations and immigration-related actions.

As early as 2011, the United States and Mexico agreed to cooperate on immigration-related information sharing. A series of agreements in 2011, 2013, and 2017 established a system for exchange of biometric information on migrants moving to and through their countries.[90] In 2019, this cooperation extended to signed agreements between the DHS and the governments of Guatemala, Honduras, and El Salvador to exchange biometric data and biographic information.[91] These efforts have borne some fruit: according to the Department of State, "Since January 2021 this and other border security programs have resulted in . . . a tripling in the number of migrants checked against U.S. criminal and terrorist databases."[92]

While much of the focus of these data exchanges is on preventing criminal or terrorist activity by identifying potential perpetrators attempting to enter the United States, programs in the Americas include an explicit intent to use the data to better understand and manage migration, including through collecting data on migrants not suspected or accused of committing crimes. For example, one stated purpose of the BDSP is to receive "fingerprint submissions from Mexico to help clarify migration patterns within that country potentially affecting the United States."[93]

WORRYING GAPS IN THE SYSTEM

In privacy impact assessments undertaken for the IDENT and HART systems, the DHS addressed numerous risks associated with the collection, storage, and use of biometric information by migrants. With respect to data sharing with partner governments, the DHS acknowledges that it is "difficult . . . to externally impose the same controls that govern the data internally" and points to audit and redress provisions implemented by partner

governments to mitigate these risks. As noted above, access to remedy is particularly important in respect to abuses related to the collection and use of private data, especially for migrant populations. Absent regular monitoring and transparency in the use of redress mechanisms, including the disposition of cases, it is difficult to assess how successful these partnerships have been at preventing and mitigating human rights abuses.

Case Study: West and North Africa and Europe

This case study reviews the approaches to migration-related technology deployment adopted by governments in West and North Africa. It has a specific focus on Senegal, as an origin and transit country, and Morocco, as a main transit country for migrants seeking to enter Europe, though the lessons are likely relevant to other similar countries. It also examines the cooperative relationships between these countries and the European Union and its member states. The case study explores areas of potential concern, including whether and how human rights are considered as part of these efforts.

REGIONAL MIGRATION TRENDS

There is a strong pattern of regular and seasonal labor migration among North and West African countries and from West Africa to Western Europe through North Africa. In 2022, EU member states reported 133,748 irregular border crossings on the Western and Central Mediterranean migration routes, representing 75.7 percent of the detected irregular crossings that year.[94] As a result, there is a strong incentive for African countries and the European Union and its member states to cooperate in monitoring and managing migration, particularly with respect to migrants seeking to enter Europe. Technology plays an important role in that relationship.

EUROPEAN APPROACHES TO MIGRATION MANAGEMENT

The European Union and its member states provide African governments with financing, training, and direct technology transfer to support their management of migration flows.

Although migration agreements existed prior to the "crisis," the November 2015 Joint Valetta Action Plan (JVAP) initiated a new period of cooperation between European and African leaders on migration management.[95] Participants in the Valletta Summit established the EUTF to improve stability and address the root causes of irregular migration and displaced persons in Africa. With border management being one of the EUTF's core objectives, this mechanism has facilitated a significant transfer of funds, equipment, and training to support border security projects across West and North Africa. To achieve this objective, EUTF funding has concentrated on establishing and building upon the capacity of institutions in Sahelian and West African states, specifically through technological advancement.

For example, the EUTF Border Management Programme for the Maghreb region, which primarily focuses on Morocco and Tunisia, is a €55 million ($58.8 million) effort to "mitigate vulnerabilities arising from irregular migration and to combat irregular migration."[96] The 2013 EU-Moroccan mobility partnership agreement lays out a framework for the European Union to provide technical and financial support to Morocco for irregular migration management. An objective of the integrated border management system in Morocco is to develop a robust information technology infrastructure that collects, archives, and identifies migrants' biometric data. The initiative also aims to strengthen the Moroccan government's surveillance, intervention, and internal communications capabilities by providing aerial technologies and other mobile units.

Additionally, in 2016, the EUTF began funding the West Africa Police Information System (WAPIS), which was established in 2013 to "provide local law enforcement authorities with national police data systems allowing

them to create, manage, and share files" to counter transnational crime and terrorism.[97] WAPIS is currently financed under the 11th European Development Fund mechanism and is being implemented in 16 West African countries by Interpol.[98] At the national level, Interpol supports the digitalization of law enforcement data and the management of national police data. Interpol is also facilitating the integration of biometric data into national WAPIS systems through the Automated Fingerprint Identification Systems (AFIS) to overcome challenges related to misidentification, identity fraud, and "generally weak civil registry and identity systems."[99] AFIS technology is being developed by Thales Group–a technology company partially owned by the French government–which is linking fingerprints with face and iris recognition data.[100]

Under the national WAPIS Programme, local law enforcement databases are connected to Interpol's global databases through its I-24/7 system. Participating governments, including Senegal, and Interpol signed a memorandum of understanding that links national WAPIS databases to I-24/7. While this link is not direct and countries have ownership over police data, interoperability between databases is clearly the end goal for the European Commission. For example, two of the key objectives of AFIS are to "wherever feasible" connect with national WAPIS databases and I-24/7 and to "allow interfacing with other relevant databases," including migration management databases such as the U.S.-funded PISCES and the International Organization for Migration's Migration Information and Data Analysis System (MIDAS).[101] While there are legitimate law enforcement concerns related to human smuggling and weapons trafficking, there is limited transparency on when, how, and to whom data is being shared, and whether migrants across the region understand the ways in which their biometric data is being shared faster than they are traveling. In fact, it is unclear if human rights concerns were even considered during initial design and funding of the AFIS, WAPIS, and I-24/7 systems.

DRIVERS OF SENEGALESE AND MOROCCAN MIGRATION PRIORITIES

In part because of the economic benefit that migration brings to Senegal (primarily through remittances), the Senegalese government does not seek to restrict migration flows. It is, however, focused on making sure migration occurs in a safe and regular manner. For its citizens abroad, a major focus of the Senegalese government is successful repatriation of citizens who are stranded abroad in places such as Libya, where imprisoned migrants are frequently held in inhumane conditions and even tortured.[102]

Migration management technologies are also useful for Senegal to achieve its goals of stronger regional integration. In October 2016, Senegal became the first country in the Economic Community of West African States (ECOWAS) to launch biometric ID cards for citizens.[103] In 2017, the EUTF allocated €28 million (about $30 million) to a biometric identity system in Senegal that can be used for migration management and general identification services.[104] These systems collect personal information and physical characteristics, such as fingerprints, face data, and iris scans, to then link these data to an identity card or number.[105] The project's stated goal is to provide recognition of identities, an objective backed by Senegal's national migration policy, which aims to modernize public administration and improve the reliability, coherence, and useability of migration data while promoting national data sovereignty.[106]

For its part, Morocco has leveraged its geostrategically important location to exert outsized influence on the policies of the European Union and beyond. The presence of the Spanish cities of Melilla and Ceuta on the African continent means that there is a land border between the European Union and Africa (and more specifically Morocco). Meanwhile, citizens of many African nations, including Senegal, can travel to Morocco visa-free. That means that migrants wishing to enter the European Union can get all the way to the border of Spain through regular channels. If they manage to cross the land border into Melilla or Ceuta, they can then travel throughout the Schengen Area without going through any border controls. For some migrants, this is a particularly attractive option compared to more perilous sea routes.

For the European Union (and Spain in particular), this reality means heavy investment in guarding its land borders and supporting Morocco to do the same; in 2018, Morocco deployed 13,000 personnel along its borders, spending about €102 million ($109 million)per year in border management.[107] Morocco generally cooperates with Spain to patrol these borders, but a dispute in 2021 over Morocco's claims to Western Sahara soured relations between the two countries. In an apparent retaliation, Moroccan authorities allowed about 10,000 migrants to cross into Ceuta unimpeded.[108] While this particular incident was not directly related to the technologies the two countries use to control their borders, it suggests a willingness to selectively deploy migration management efforts in a way that uses migrant access to Spain as a bargaining chip in conversations on other geopolitical issues.

THE EUROPEAN OMBUDSMAN RULING ON HUMAN RIGHTS DUE DILIGENCE BY THE EUTF

The EUTF is a large-scale EU mechanism developed to provide technical support to address migration to Europe from African countries.[109] It does so by deploying mainly development and humanitarian funds to support partner governments in a range of migration-related issues, both in addressing root causes such as economic insecurity and in tracking and monitoring migrants.

The latter component–tracking and monitoring–has resulted in a large investment of EUTF support for the adoption of new technology by governments in West and North Africa. In 2019, for example, the European Union reported that it supported the rollout of online civil registry systems and biometric databases for travel and identity documents in Senegal, Mali, Cabo Verde, Guinea, and Cote D'Ivoire.[110] In Niger, the EUTF provided €11.5 million ($12.3 million) to support the deployment of surveillance drones, cameras, and software, along with technology to monitor mobile phones.[111] Countries also provide training assistance on online surveillance techniques, both through the EUTF and other mechanisms, including how to access and analyze individuals' cell phone and social media data.

In November 2022, in response to a complaint filed by six civil society organizations, the European Ombudsman found that the EUTF maintains an obligation to carry out human rights due diligence to assess risks associated with its projects and failed to do so with regard to its migration-related assistance in Africa.[112] Although some projects, such as the Border Management Programme for the Maghreb, included acknowledgments of the obligation to "promote, respect and protect the human rights of individuals at the border" and committed to work toward standardization of border procedures in alignment with international standards, the European Ombudsman found no indication that human rights impact assessments were conducted during the development of the program and that in only a handful of cases were specific risks and corresponding mitigation measures identified in the program documents.[113] Importantly, the European Ombudsman also found no record that external stakeholders, such as civil society organizations that would be in a particularly strong position to identify human rights risks, were consulted in the design of the projects. While the European Ombudsman does not have the authority to impose changes on the EUTF's process, she issued a strong recommendation that the European Commission's "guidelines concerning the evaluation of EU Trust Fund projects . . . require that an assessment of the potential human rights impacts of projects" and that those results "be presented together with corresponding mitigation measures."[114]

In November 2022, in response to a complaint filed by six civil society organizations, the European Ombudsman found that the EUTF maintains an obligation to carry out human rights due diligence to assess risks associated with its projects and failed to do so with regard to its migration-related assistance in Africa.

POLICY ALIGNMENT AND NONALIGNMENT

The European Union and Senegal have differing overall incentives to deploy migration management technologies. They look at the questions of data collection and sharing specifically through different lenses. Europeans want access to the biometric data in Senegalese databases in part because it could help them identify terrorists and other bad actors and in part because it could assist them in identifying, and eventually deporting, irregular migrants. Senegal's goals are to facilitate safer and more legal pathways for its citizens to travel and work abroad.[115]

The Senegalese government has welcomed EU financial and technical assistance but has not shared the data it collects with other governments, in part due to a lack of informed consent from citizens to share it when it was collected. Interviewees in Dakar did raise concerns with the authors that private contractors involved in developing the national ID database would have had the ability to access and copy personal data, though no information is available to suggest this has occurred. An additional concern was voiced about the personal data of applicants for European visas. Embassies of many European countries utilize private companies to process visa applications. In Senegal, for example, the embassies of eight EU nations, China, and five other countries utilize VFS Global, a private company that handles visa- and passport-related tasks, and eight EU and three non-EU countries do the same in Morocco.[116] VFS Global claims to adhere to the security and data protection regulations of all client governments, and according to their website, the company "does not store any personal data related to a visa application" and purges all collected data from their systems "30 days after a case is closed or as directed by client governments."[117] Access to personal data is also restricted to individuals authorized by client governments. Despite these safeguards, concerns remain about having a third-party private company collecting and handling sensitive citizen data. The question of with whom the embassy shares data is also a sensitive one for migrants. Particularly in cases where an individual applies for a visa and is rejected, if that individual later tries to migrate irregularly, there is a concern that if they interact with other government agencies (in transit and in the destination country), they will be identified and deported.

While EU and Senegalese incentives may be different, they can lead to areas of cooperation. The protection of migrant rights should be one such common denominator, but this is not always the case. For example, international organizations have warned that national biometric identity systems could be connected with return case management systems (RECAMAS)–electronic registers which allow EU member states to submit applications for migrant deportation, including by cross-referencing EU data with that of the intended state of return.[118] What happens in Senegal could set a precedent for other countries in the region that choose to adopt these systems.

WORRYING GAPS IN THE SYSTEM

The authors of this report did not find many public allegations of abuse of migration management technologies by Senegalese, Moroccan, or European governments. However, several gaps in the system remain that will require vigilance to ensure that technologies are deployed for their intended purposes and according to human rights protection principles. The most potentially troublesome of these gaps relates to the protection of interoperable and regional databases with sensitive biometric data. There is also the concern that technology intended to monitor migration, such as drones, biometric databases, and spyware, could be abused and repurposed to keep tabs on journalists, political dissidents, and opponents.[119]

4
—

Recommendations

The potential benefits of using technology to more efficiently monitor and manage migration must be carefully weighed against the attendant human rights risks. Some nongovernmental organizations have argued strongly for a moratorium on the use of most or all advanced technology in this space. Others, including the European Commission via the Artificial Intelligence Act, have focused on a ban on the use of specific products such as facial recognition software, both by private and public entities, unless and until additional safeguards are in place.[120] Despite these calls, most governments continue to test and deploy these technologies. With that reality in mind, the following recommendations provide a path for governments to deploy migration management technology, develop expertise, fund new initiatives, and share data with greater attention to and mitigation of inherent human rights risks.

1. **Mainstream the conduct of regular upstream and downstream human rights due diligence for each potential project involving migration-related technology.**

   - Evaluate the human rights records of companies providing hardware, software, and services for any project.
   - Assess the human rights risks associated with the use and misuse of the technology by the specific partner government and different migration contexts.
   - Constantly evaluate how technology is being used in practice by partner governments, including through human rights risk assessments and evaluation of complaint and remedy mechanisms.

2. **Develop a consistent and comprehensive approach to due diligence for migration-related technology engagement across departments and agencies (in the case of the United States), member countries (in the case of the European Union), and international partnerships.**

- In the United States, multiple departments and agencies engage in migration-related sharing of technology, capacity-building expertise, and data, including the Department of State, Department of Homeland Security, and the U.S. Agency for International Development, and each agency deploys its own approach to human rights due diligence (for this and other sectors)[121]. There is no government-wide policy on best practices for government agencies and private companies on the use of the relevant technologies in the migration space. Development of such guidance could be extremely helpful in addressing a range of human rights risks, not just privacy, and could also draw significantly on the Department of State's 2020 guidance to companies seeking to export surveillance technology.

- The European Ombudsman's report (see "Data Collected by Migration Management Technology" text box) on the EUTF showcased similar deficiencies across EU member states and responsible EU agencies. Though the focus of that report was on the lack of human rights due diligence at the design and initial implementation stages of EUTF projects, policymakers should also incorporate regular assessments, ideally in collaboration with civil society, after technologies are deployed.

- Although each data-sharing partner will be deferential to its own laws and regulations regarding data privacy, partners should agree on a minimum floor of protection for all data, including data security standards and human rights protections, in line with international norms. This includes agreements on collection of the minimum amount of data necessary for the intended use, storage for only the necessary amount of time, and a common understanding of informed consent standards. Specifically, a clear understanding should be adopted among all partners about what privacy standards apply to noncitizens in each data collecting country, as these are often vague or differ significantly from the standards applicable to citizens. In some respects, the forthcoming Export Controls and Human Rights Initiative, expected to be announced by the United States and eight partner countries at the 2023 Summit for Democracy, could provide a forum and template for cooperation on this issue among some destination, origin, and transit countries.

3. **Create structures to involve affected stakeholders from civil society, including migrant rights organizations, in program design and execution, as well as assessment, monitoring, and evaluation efforts.**

- The deployment of migration management technology is usually approached as a law enforcement exercise. However, the majority of individuals who encounter or are impacted by these technologies are neither criminals nor suspected terrorists; they are people seeking to move through regular or irregular channels across international borders. Incorporating the experiences and expertise of stakeholders that work with these populations into the design of migration monitoring and analysis programs can both increase the effectiveness of the deployment as well as the likelihood that programs are designed and carried out in a rights-respecting manner. Such an approach can also increase the use of available remedy mechanisms by populations negatively impacted by technology.

4. **Increase transparency in how technology is being deployed and its impacts.**

- Although some uses and outcomes of technology in migration management involve sensitive law enforcement or national security information and should not be shared publicly, other information does not share these risks. Examples include aggregative information on data being transferred between partner countries and the number and disposition of complaints and requests for remedy. This information can help migrant rights organizations assess risk and deploy tools to help migrants understand and protect their rights.

About the Authors

Marti Flacks is the Khosravi Chair in Principled Internationalism and director of the Human Rights Initiative at the Center for Strategic and International Studies (CSIS). The initiative seeks to bring innovative thinking and a multidisciplinary approach to tackle pressing global human rights challenges and better integrate human rights across foreign policy priorities. Ms. Flacks spent more than a decade in the U.S. government, most recently serving at the National Security Council (NSC) as director of African affairs from 2015 to 17, where she coordinated U.S. policy across East and Southern Africa and on continent-wide trade and economic issues. Prior to the NSC, Ms. Flacks spent three years as deputy director of the Office of Energy Programs at the U.S. State Department, leading the department's work on energy transparency and good governance, and four years working for the U.S. special envoy for Sudan on implementation of the Comprehensive Peace Agreement and the independence of South Sudan. She joined the U.S. government through the Presidential Management Fellows program at the Department of Homeland Security. Prior to joining CSIS, Ms. Flacks served as deputy director & head of the North America office at the Business & Human Rights Resource Centre, a human rights organization focused on the role of business in respecting human rights. Ms. Flacks received a BS in foreign service from Georgetown University, a master's degree from the Fletcher School at Tufts University, and a JD from Columbia Law School. She is originally from Solon, Ohio.

Erol Yayboke is a director of the Project on Fragility and Mobility and senior fellow with the International Security Program at the Center for Strategic and International Studies (CSIS). His specific research interests include migration and forced displacement, violent conflict and global fragility, conflict-aware stabilization, violent extremism, climate change, civil-military cooperation, and disruptive technologies. Previously, he was a senior fellow and deputy director with the CSIS Project on Prosperity and Development. Prior to CSIS, Mr. Yayboke served on the Hillary Clinton presidential campaign as well as the Evidence for Policy Design team at the Center for International Development at Harvard University's Kennedy School of Government. Mr. Yayboke

has long-term field experience working for organizations (Global Communities, Save the Children, and AECOM International Development) in Iraq, Afghanistan, South Sudan, and the Somali Region of Ethiopia, serving in various senior management roles. Mr. Yayboke teaches a graduate level course on global fragility and resilience at the Maxwell School of Citizenship and Public Affairs at Syracuse University and is a member of the board of directors for the Andi Leadership Institute for Young Women, a Washington, D.C.-based nonprofit focused on developing the next generation of women peacebuilders. He holds an M.P.A. from the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin and a B.B.A. in international business, also from the University of Texas at Austin. He is fluent in Turkish and Spanish.

Lauren Burke is the program manager and research associate for the Human Rights Initiative at the Center for Strategic and International Studies (CSIS). Prior to joining CSIS, she spent four years as the senior program coordinator for the German Marshall Fund (GMF) Cities program, where she played a critical role in managing the Young Transatlantic Innovation Leaders Initiative (YTILI) and launching the Cities Fortifying Democracy project. Before joining the GMF, Ms. Burke worked as a program assistant on the Middle East and North Africa team at the Center for International Private Enterprise, where her portfolio included business association development in Jordan and Palestine, business advocacy in Lebanon, and promoting enterprise ecosystems in Syria. She also interned at Management Systems International, the International Foundation for Electoral Systems, and the Irish parliament. Ms. Burke holds a Master of Arts in democracy and governance from Georgetown University and a Bachelor of Arts in political science from Illinois Wesleyan University.

Anastasia Strouboulis is a former research assistant with the CSIS Project on Fragility and Mobility. She analyzed fragile contexts and provided recommendations on building resilience and aligning national security interests with human security frameworks. Before joining CSIS, she was a research assistant with the National Counterterrorism Innovation, Technology, and Education Center, a Department of Homeland Security (DHS) Center of Excellence. Anastasia is currently a Presidential Management Fellow. She holds a BA in government and politics from the University of Maryland, College Park, and an MA in security policy studies from George Washington University.

Endnotes

1   Hannah Tyler, "The Increasing Use of Artificial Intelligence in Border Zones Prompts Privacy Questions," Migration Policy Institute, February 22, 2022, https://www.migrationpolicy.org/article/artificial-intelligence-border-zones-privacy.

2   "CBP One™ Mobile Application," U.S. Customs and Border Protection, January 31, 2023, https://www.cbp.gov/about/mobile-apps-directory/cbpone.

3   "CBP Small Drones Program," U.S. Customs and Border Protection, November 9, 2020, https://www.cbp.gov/frontline/cbp-small-drones-program; and Alexia Ramirez, "ICE Records Confirm that Immigration Enforcement Agencies Are Using Invasive Cell Phone Surveillance Devices," American Civil Liberties Union, May 27, 2020, https://www.aclu.org/news/immigrants-rights/ice-records-confirm-that-immigration-enforcement-agencies-are-using-invasive-cell-phone-surveillance-devices.

4   Kaamil Ahmed and Lorenzo Tondo, "Fortress Europe: The Millions Spent on Military-Grade Tech to Deter Refugees," *The Guardian,* December 6, 2021, https://www.theguardian.com/global-development/2021/dec/06/fortress-europe-the-millions-spent-on-military-grade-tech-to-deter-refugees.

5   "Frontex," Frontex, n.d., https://frontex.europa.eu/; "Situational Awareness and Monitoring," Frontex, n.d., https://frontex.europa.eu/we-know/situational-awareness-and-monitoring/monitoring-risk-analysis/; "Other Partners and Projects," Frontex, n.d., https://frontex.europa.eu/we-build/other-partners-and-projects/non-eu-countries/; and "Africa-Frontex Intelligence Community Meets in Senegal," Frontex, December 2, 2021, https://frontex.europa.eu/media-centre/news/news-release/africa-frontex-intelligence-community-meets-in-senegal-sRP1tC.

6   "EU-Wide Picture," Frontex, n.d., https://frontex.europa.eu/we-know/eu-wide-picture/.

7   "Interoperability," eu-LISA, n.d., https://www.eulisa.europa.eu/Activities/Interoperability; and "Security Union: Closing Information Gaps," European Commission, April 2019, https://home-affairs.ec.europa.eu/

system/files_en?file=2019-04/20190416_agenda-security-factsheet-closing-information-gaps_en.pdf.

8   Giacomo Zandonini, "Biometrics: The New Frontier of EU Migration Policy in Niger," *The New Humanitarian,* June 6, 2019, https://www.thenewhumanitarian.org/news-feature/2019/06/06/biometrics-new-frontier-eu-migration-policy-niger.

9   Giulia Pines, "The Contentious History of the Passport," *National Geographic,* May 16, 2017, https://www.nationalgeographic.com/travel/article/a-history-of-the-passport.

10   "Migration and Data Protection," Migration Data Portal, June 7, 2022, https://www.migrationdataportal.org/themes/migration-and-data-protection.

11   Muzaffar Chishti and Claire Bergeron, "DHS Announces End of Controversial Post-9/11 Immigrant Registration and Tracking Program," Migration Policy Institute, May 17, 2011, https://www.migrationpolicy.org/article/dhs-announces-end-controversial-post-911-immigrant-registration-and-tracking-program; and "US-Visit," U.S. Department of Homeland Security, August 2007, https://www.dhs.gov/xlibrary/assets/usvisit/usvisit_edu_traveler_brochure_english.pdf.

12   *Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT Act) Act of 2001,* Public Law 107–56, October 26, 2001, https://www.govinfo.gov/content/pkg/PLAW-107publ56/pdf/PLAW-107publ56.pdf; and "The Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA)," U.S. Department of Justice Bureau of Justice Assistance, n.d., https://bja.ojp.gov/program/it/privacy-civil-liberties/authorities/statutes/1282#background.

13   "Who We Are," Frontex, n.d., https://frontex.europa.eu/about-frontex/who-we-are/tasks-mission/.

14   "Eurosur," European Commission, n.d., https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/border-crossing/eurosur_en.

15   "Other Partners and Projects," Frontex, n.d., https://frontex.europa.eu/we-build/other-partners-and-projects/non-eu-countries/; and "Africa-Frontex Intelligence Community Meets in Senegal," Frontex, December 2, 2021, https://frontex.europa.eu/media-centre/news/news-release/africa-frontex-intelligence-community-meets-in-senegal-sRP1tC.

16   "Africa-Frontex Intelligence Community Meets in Senegal," Frontex, December 2, 2021, https://frontex.europa.eu/media-centre/news/news-release/africa-frontex-intelligence-community-meets-in-senegal-sRP1tC.

17   "EU-Wide Picture," Frontex, n.d., https://frontex.europa.eu/we-know/eu-wide-picture/.

18   "Security Union," European Commission.

19   "Surveillance under the USA/Patriot Act," American Civil Liberties Union (ACLU), n.d., https://www.aclu.org/other/surveillance-under-usapatriot-act.

20   Chris Rickerd, "Homeland Security Suspends Ineffective Discriminatory Immigration Program," American Civil Liberties Union, May 6, 2011, https://www.aclu.org/news/immigrants-rights/homeland-security-suspends-ineffective-discriminatory-immigration-program; and "U.N. Human Rights Body Issues Decisive Observations on Racial Discrimination in U.S.," American Civil Liberties Union, October 8, 2009, https://www.aclu.org/press-releases/un-human-rights-body-issues-decisive-observations-racial-discrimination-us-.

21   "Jose L. Velesaca v. Decker et al.," New York Civil Liberties Union, n.d., https://www.nyclu.org/en/cases/jose-l-velesaca-v-decker-et-al.

22   "Monitoring Secondary Movements and Hotspots: Frontex Is Now an Internal Surveillance Agency," Statewatch, December 16, 2019, https://www.statewatch.org/analyses/2019/monitoring-secondary-

movements-and-hotspots-frontex-is-now-an-internal-surveillance-agency/; and Alvise Armellini, "EU's Frontex 'Complicit' in Forced Migrant Returns to Libya – HRW," Reuters, December 12, 2022, https://www.reuters.com/world/europe/eus-frontex-complicit-forced-migrant-returns-libya-hrw-2022-12-12/.

23 "Migrant Crisis: Migration to Europe Explained in Seven Charts," BBC, March 4, 2016, https://www.bbc.com/news/world-europe-34131911.

24 "Modern Immigration Wave Brings 59 Million to U.S., Driving Population Growth and Change through 2065," Pew Research Center, September 28, 2015, https://www.pewresearch.org/hispanic/2015/09/28/modern-immigration-wave-brings-59-million-to-u-s-driving-population-growth-and-change-through-2065/.

25 "DHS/OBIM/PIA-001 Automated Biometric Identification System," U.S. Department of Homeland Security, September 7, 2022, https://www.dhs.gov/publication/dhsnppdpia-002-automated-biometric-identification-system; and "DHS's Automated Biometric Identification System IDENT – the Heart of Biometric Visitor Identification in the USA," Thales Group, January 19, 2021, https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/customer-cases/ident-automated-biometric-identification-system.

26 U.S. Homeland Security Advisory Council, *Final Report of the Biometrics Subcommittee* (Washington, DC: Department of Homeland Security, November 2020), https://www.dhs.gov/sites/default/files/publications/final_hsac_biometrics_subcommittee_report_11-12-2020.pdf.

27 Ibid; and "Biometrics," U.S. Department of Homeland Security, December 14, 2021, https://www.dhs.gov/biometrics.

28 "DHS's Automated Biometric Identification System IDENT," Thales Group.

29 "Privacy Impact Assessment for the Homeland Advanced Recognition Technology System (HART) Increment 1 PIA," U.S. Department of Homeland Security, February 24, 2020, https://www.dhs.gov/sites/default/files/publications/privacy-pia-obim004-hartincrement1-february2020_0.pdf.

30 Justin Rohrlich, "DHS Expected to Have Biometrics on 260 Million People by 2022," Quartz, November 7, 2019, https://qz.com/1744400/dhs-expected-to-have-biometrics-on-260-million-people-by-2022.

31 "The Stockholm Programme – An Open and Secure Europe Serving and Protecting the Citizens," Council of the European Union, December 2, 2009, https://data.consilium.europa.eu/doc/document/ST-17024-2009-INIT/en/pdf.

32 "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A European Agenda on Migration," European Commission, May 13, 2015, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0240&from=EN.

33 Ibid.

34 "EU Emergency Trust Fund for Africa," European Commission, n.d., https://ec.europa.eu/trustfundforafrica/index_en; and Arne Disch et al., *Mid-Term Evaluation of the European Union Emergency Trust Fund for Stability and Addressing Root Causes of Irregular Migration and Displaced Persons in Africa 2015-2019 – Final Report* (Brussels: European Commission, October 2020), https://ec.europa.eu/trustfundforafrica/sites/default/files/mtr_final_report_1.pdf.

35 "Other Partners and Projects," Frontex; and "Africa-Frontex Intelligence Community Meets in Senegal," Frontex.

36 "Africa-Frontex Intelligence Community Meets in Senegal," Frontex.

37 "Migration flows in the Central Mediterranean route," Council of the European Union, February 7, 2023,

https://www.consilium.europa.eu/en/policies/eu-migration-policy/central-mediterranean-route/.

38   "Communication from the Commission on a New Pact on Migration and Asylum," European Commission, September 23, 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0609; and "U.S. Strategy for Addressing the Root Causes of Migration in Central America," U.S. National Security Council, July 2021, https://www.whitehouse.gov/wp-content/uploads/2021/07/Root-Causes-Strategy.pdf.

39   "EU Emergency Trust Fund for Africa," European Commission, n.d., https://ec.europa.eu/trustfundforafrica/index_en; "Africa-EU Partnership on Migration Mobility and Employment," International Organization for Migration, 2007, https://www.iom.int/africa-eu-partnership-migration-mobility-and-employment-mme; and "U.S. and El Salvador Sign Arrangements on Security & Information Sharing; Gives Salvadorans with TPS More Time," U.S. Embassy San Salvador, October 28, 2019, https://sv.usembassy.gov/arrangements-on-security-information-sharing-give-salvadorans-with-tps-more-time/.

40   "The EU's Work to Tackle Terrorism," Council of the European Union, August 3, 2022, https://www.consilium.europa.eu/en/eu-response-to-terrorism/.

41   "Modernización Tecnológica del INM" [Technological Modernization of the INM], Dirección General de Tecnologías de la Información y Comunicaciones [General Directive for Information and Communication Technologies], November 30, 2012, http://www.inm.gob.mx/static/transparencia/rendicion_de_cuentas/MD_DGTIC_05OCT12.pdf.

42   Melissa Mouthaan, "Unpacking Domestic Preferences in the Policy-'Receiving' State: the EU's Migration Cooperation with Senegal and Ghana," *Comparative Migration Studies* 7, no. 35 (August 2019), doi:10.1186/s40878-019-0141-7.

43   "EU Trust Fund Action Document for Operational Committee Decisions: T05-EUTF-SAH-REG-03," EU Trust Fund, n.d., https://ec.europa.eu/trustfundforafrica/sites/default/files/annex_ii_t05-eutf-sah-reg-03_gg19lkv.pdf.

44   Jessica Bither and Astrid Ziebarth, *AI, Digital Identities, Biometrics, Blockchain: A Primer on the Use of Technology in Migration Management* (Berlin: Robert Bosch Stiftung, June 2020) https://www.bosch-stiftung.de/sites/default/files/publications/pdf/202006/Bither%20%26%20Ziebarth%20%E2%80%93%202020%20-%20technology%20in%20migration%20management%20primer.pdf.

45   "Universal Declaration of Human Rights," United Nations, n.d., https://www.un.org/en/about-us/universal-declaration-of-human-rights; United Nations General Assembly, "International Covenant on Civil and Political Rights," *Treaty Series* 999, December 1966, 171, https://treaties.un.org/doc/publication/unts/volume%20999/volume-999-i-14668-english.pdf; and Pauline Veron, *Digitalisation in humanitarian aid: Opportunities and challenges in forgotten crises* (Pays Bas, Netherlands: ecdpm, January 2022), https://ecdpm.org/application/files/1616/5536/7924/Digitalisation-humanitarian-aid-ECDPM-Briefing-note-143-2022.pdf.

46   "Informed Consent," Cornell Law School Legal Information Institute, December 2020, https://www.law.cornell.edu/wex/informed_consent.

47   Business & Human Rights Resource Centre (BHRRC), *Scrutinising Migration Surveillance: Human Rights Responsibilities of Tech Companies Operating in MENA* (London: September 2022), https://www.business-humanrights.org/en/from-us/briefings/scrutinising-migration-surveillance-human-rights-responsibilities-of-tech-companies-operating-in-mena/.

48   Bureau of Democracy, Human Rights, and Labor, *Guidance on Implementing the UN Guiding Principles for Transactions Linked to Foreign Government End-Users for Products or Services with Surveillance Capabilities* (Washington, DC: U.S. Department of State, September 2020), https://www.state.gov/wp-content/uploads/2020/09/DRL-Industry-Guidance-Project-FINAL-508.pdf.

49   United Nations Human Rights: Office of the High Commissioner, "Spyware Scandal: UN Experts Call for Moratorium on Sale of 'Life Threatening' Surveillance Tech," Press Release, August 12, 2021, https://www.ohchr.org/en/press-releases/2021/08/spyware-scandal-un-experts-call-moratorium-sale-life-threatening#:~:text=GENEVA%20%2812%20August%202021%29%20-%20UN%20human%20rights,use%20in%20compliance%20with%20international%20human%20rights%20standards.

50   BHRRC, *Scrutinising Migration Surveillance.*

51   "Complaint to the European Ombudsman under Article 228 TFEU: EU Transfers of Surveillance Capabilities to Third Countries," European Ombudsman, 2021, https://privacyinternational.org/sites/default/files/2021-10/21.10.19_EU_Ombudsman_Complaint_Final.pdf.

52   Sarah Elzas, "French executives face torture charges for selling spy gear to Libya, Egypt," RFI, June 26, 2021, https://www.rfi.fr/en/france/20210622-french-executives-face-torture-charges-for-selling-spy-gear-to-libya-egypt-amesys-nexa-human-rights.

53   Ibid.

54   Amy K. Lehr and William Crumpler, *Facing the Risk Part 2: Mapping the Human Rights Risks in the Deployment of Facial Recognition Technology* (Washington, DC: CSIS, July 2021), https://www.csis.org/analysis/facing-risk; and Bither and Ziebarth, *AI, digital identities, biometrics, blockchain.*

55   Bethan Staton, "Eye Spy: Biometric Aid System Trials in Jordan," *The New Humanitarian,* May 18, 2016, https://www.thenewhumanitarian.org/analysis/2016/05/18/eye-spy-biometric-aid-system-trials-jordan.

56   Parmy Olson, "The Quiet Growth of Race-Detection Software Sparks Concerns over Bias," Wall Street Journal, August 14, 2020, https://www.wsj.com/articles/the-quiet-growth-of-race-detection-software-sparks-concerns-over-bias-11597378154; "Row over AI That 'Identifies Gay Faces'," BBC, September 11, 2017, https://www.bbc.com/news/technology-41188560; and ibid.

57   Ecorys, *Feasibility Study on a Forecasting and Early Warning Tool for Migration Based on Artificial Intelligence Technology: Executive Summary* (Brussels: European Commission, November 2021), https://data.europa.eu/doi/10.2837/222662.

58   UN Secretariat, *Report of the Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance* (New York, NY: United Nations, November 10, 2020), https://www.ohchr.org/en/newyork/Documents/A-75-590-AUV.docx.

59   Lehr and Crumpler, *Facing the Risk.*

60   "Project Summary," iBorder Ctrl, n.d., https://www.iborderctrl.eu/.

61   Derya Ozkul, *Automating Immigration and Asylum: The Uses of New Technologies in Migration and Asylum Governance in Europe* (Oxford, UK: University of Oxford, Refugee Studies Centre, 2023), https://www.rsc.ox.ac.uk/publications/automating-immigration-and-asylum-the-uses-of-new-technologies-in-migration-and-asylum-governance-in-europe.

62   "robusT Risk basEd Screening and alert System for PASSengers and luggage," CORDIS EU, last updated July 26, 2022, https://cordis.europa.eu/project/id/787120; and "Horizon 2020," European Commission, n.d., https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-2020_en.

63   Ozkul, *Automating Immigration and Asylum.*

64   Ibid.

65　"Universal Declaration of Human Rights," United Nations.

66　Khari Johnson, "The Hidden Role of Facial Recognition Tech in Many Arrests," *Wired,* March 2022, https://www.wired.com/story/hidden-role-facial-recognition-tech-arrests/.

67　U.S. Government Accountability Office*, Secure Border Initiative: Technology Deployment Delays Persist and the Impact of Border Fencing Has Not Been Assessed* (Washington, DC: 2009), https://www.gao.gov/assets/gao-09-896.pdf; Avi Asher-Schapiro, "Surveillance Tech Makes U.S.-Mexico Border Even Deadlier," Context, November 23, 2022, https://www.context.news/surveillance/surveillance-tech-makes-us-mexico-border-even-deadlier; and Geoffrey Alan Boyce, Samuel N. Chambers, and Sarah Launius, "Democrats' 'Smart Border' Technology Is Not a 'Humane' Alternative to Trump's Wall," The Hill, 2019, https://thehill.com/opinion/immigration/429454-democrats-smart-border-technology-is-not-a-humane-alternative-to-trumps/.

68　"Disturbing Lack of Transparency Implicates Government Data Reliability," Think Immigration, November 15, 2019, https://thinkimmigration.org/blog/2019/11/15/disturbing-lack-of-transparency-implicates-government-data-reliability/.

69　Julian Resendiz, "Asylum-Seekers Sue Feds over Ice Data Leak," BorderReport, January 2023, https://www.borderreport.com/immigration/migrant-centers/asylum-seekers-sue-feds-over-ice-data-leak.

70　Abraham Jewett, "Asylum Seeker Class Action Alleges ICE Data Breach Compromises Safety," Top Class Actions, January 2023, https://topclassactions.com/military-government-political/asylum-seeker-class-action-alleges-ice-data-breach-compromises-safety/.

71　Amelia Cheatham and Diana Roy, "Central America's Turbulent Northern Triangle," Council on Foreign Relations, June 2022, https://www.cfr.org/backgrounder/central-americas-turbulent-northern-triangle.

72　"Southwest Land Border Encounters," U.S. Customs and Border Protection, 2023, https://www.cbp.gov/newsroom/stats/southwest-land-border-encounters; Peter Meyer, "Central American Migration: Root Causes and U.S. Policy," Congressional Research Service, December 2022, https://sgp.fas.org/crs/row/IF11151.pdf.

73　"Banco de Indicadores Inegi" [INEGI Bank Indicators], Instituto Nacional de Estadística y Geografía [National Institute for Statistics and Geography], accessed February 3, 2023, http://en.www.inegi.org.mx/app/indicadores/?p=3001&ag=00#D130.

74　Alto Comisionado de las Naciones Unidas para los Refugiados [United Nations High Commissioner for Refugees], *Principales Resultados de Acnur en México en 2021: Protección y Soluciones en Pandemia [UNHCR Principal Outcomes in Mexico in 2021: Protections and Solutions in a Pandemic]* (Geneva: United Nations High Commissioner for Refugees, 2022), https://www.acnur.org/es-mx/publications/pub_inf/6261d3ee4/principales-resultados-de-acnur-en-mexico-en-2021-proteccion-y-soluciones.html; and Comisión Mexicana de Ayuda a Refugiados [Mexican Commission for Refugee Aid], "La COMAR en Números" [The COMAR in Numbers], Gobierno de Mexico, August 2022, https://www.gob.mx/comar/articulos/la-comar-en-numeros-313659?idiom=es; and "US Looking for Regional Help to Curb Migration at Mexico Border," Al Jazeera, March 15, 2022, https://www.aljazeera.com/news/2022/3/15/us-seeks-regional-approach-to-migration-and-asylum-seekers/.

75　"El Convenio Centroamericano de Libre Movilidad (CA-4)" [Central America-4 Free Mobility Agreement], SICA, 2021, https://www.sica.int/ocam/ca4.

76　"Fact Sheet: The Collaborative Migration Management Strategy," The White House, July 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/29/fact-sheet-the-collaborative-migration-management-strategy/.

77   Joshua Partlow and Nick Miroff, "U.S. Gathers Data on Migrants Deep in Mexico, a Sensitive Program Trump's Rhetoric Could Put at Risk," *Washington Post,* April 2018, https://www.washingtonpost.com/world/national-security/us-gathers-data-on-migrants-deep-in-mexico-a-sensitive-program-trumps-rhetoric-could-put-at-risk/2018/04/06/31a8605a-38f3-11e8-b57c-9445cc4dfa5e_story.html.

78   Kevin Sieff and Scott Clement, "Unauthorized Immigrants Face Public Backlash in Mexico, Survey Finds," Washington Post, July 18, 2019, https://www.washingtonpost.com/world/the_americas/unauthorized-immigrants-face-public-backlash-in-mexico-survey-finds/2019/07/16/f7fc5d12-a75e-11e9-a3a6-ab670962db05_story.html; and Noe Torres and Anthony Esposito, "How Trump's Trade Tariff Tweet Put Mexico's Back to the Wall," Reuters, May 31, 2019, https://www.reuters.com/article/us-usa-trade-mexico-seade-idUSKCN1T10SS.

79   "Fact Sheet: 2022 U.S. – Mexico High-Level Economic Dialogue," The White House, September 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/12/fact-sheet-2022-u-s-mexico-high-level-economic-dialogue/.

80   "Action the Biden-Harris Administration Has Taken to Address the Border Challenge," U.S. Embassy Guatemala, June 16, 2021, https://gt.usembassy.gov/action-the-biden-harris-administration-has-taken-to-address-the-border-challenge/.

81   Ibid.; "CBP Announces New Facial Biometric Comparison Technology at San Ysidro, Otay Mesa Border Crossings," U.S. Customs and Border Protection, January 15, 2021, https://www.cbp.gov/newsroom/national-media-release/cbp-announces-new-facial-biometric-comparison-technology-san-ysidro; Joshua Partlow and Nick Miroff, "Mexico Letting U.S. Get Migrants' Biometric Data," *Seattle Times,* April 7, 2018, https://www.seattletimes.com/nation-world/mexico-letting-u-s-get-migrants-biometric-data/; and Maria Verza, "Mexico Cracks down on Its Own Southern Border as U.S. Faces Migrant Pressures," *Los Angeles Times,* March 22, 2021, https://www.latimes.com/world-nation/story/2021-03-22/mexico-limits-nonessential-travel-border-guatemala.

82   David Agren, "Mexico's Vow to Tighten Border Fails to Deter US-Bound Migrants," *The Guardian,* April 14, 2021, https://www.theguardian.com/global-development/2021/apr/14/on-mexicos-southern-border-its-business-as-usual-as-us-bound-migrants-trudge-north.

83   "Press Briefing by Press Secretary Jen Psaki," The White House, April 12, 2021, https://www.whitehouse.gov/briefing-room/press-briefings/2021/04/12/press-briefing-by-press-secretary-jen-psaki-april-12-2021/; and "Innovatrics to Provide Facial Recognition for Palmerola International Airport," Innovatrics, October 6, 2021, https://www.innovatrics.com/news/innovatrics-smartface-will-provide-facial-recognition-for-palmerola-international-airport-in-honduras.

84   "Bureau of International Narcotics and Law Enforcement Affairs: El Salvador Summary," U.S. Department of State, December 1, 2020, https://2017-2021.state.gov/bureau-of-international-narcotics-and-law-enforcement-affairs-work-by-country/el-salvador-summary/index.html.

85   Clare Ribando Seelke and Kristin Finklea, *U.S.-Mexican Security Cooperation: The Merida Initiative and Beyond,* CRS Report No. R41349 (Washington, DC: Congressional Research Service, June 2017), https://sgp.fas.org/crs/row/R41349.pdf.

86   Bureau for International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report* (Washington, DC: U.S. Department of State, March 2019), https://www.state.gov/wp-content/uploads/2019/04/INCSR-Vol-INCSR-Vol.-I-1.pdf; and Maureen Meyer and Adam Isacson, "Mexico's Crackdown on Migration at Its Southern Border," WOLA, March 2020, https://www.wola.org/analysis/mexico-southern-border-report/.

87   Partlow and Miroff, "U.S. Gathers Data on Migrants Deep in Mexico, a Sensitive Program Trump's Rhetoric Could Put at Risk."

88 Ibid.

89 Homeland Security Advisory Council, *Final Report of the Biometrics Subcommittee* (U.S. Department of Homeland Security, November 2020), https://www.dhs.gov/sites/default/files/publications/final_hsac_biometrics_subcommittee_report_11-12-2020.pdf.

90 U.S. Department of Homeland Security, *Privacy Impact Assessment for the United States – Mexico Entry/Exit Data Sharing Initiative* (Washington, DC: U.S. Department of Homeland Security, December 2017), https://www.dhs.gov/sites/default/files/publications/privacy-pia-cbp-usmexicoentryexitdatasharinginitiative-december2017.pdf.

91 "Fact Sheet: DHS Agreements with Guatemala Honduras and El Salvador," U.S. Department of Homeland Security, October 2019, https://www.dhs.gov/publication/fact-sheet-dhs-agreements-guatemala-honduras-and-el-salvador.

92 "Report on the U.S. Strategy for Addressing the Root Causes of Migration in Central America," The White House, April 19, 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/19/report-on-the-u-s-strategy-for-addressing-the-root-causes-of-migration-in-central-america/.

93 Office of Biometric Identity Management (OBIM), *An Update on DHS Biometric Identity Services* (Washington, DC: U.S. Department of Homeland Security, September 2020), https://www.biometricsinstitute.org/?smd_process_download=1&download_id=6982.

94 "Migration Flows: Eastern, Central and Western Routes," European Council, January 19, 2023, https://www.consilium.europa.eu/en/infographics/migration-flows-to-europe/.

95 "Valletta Summit, 11-12 November 2015 - Action Plan," European Council, November 2015, https://www.consilium.europa.eu/media/21839/action_plan_en.pdf.

96 "The European Union Emergency Trust Fund for Stability and Addressing the Root Causes of Irregular Migration and Displaced Persons in Africa - Action Document," European Commission, April 2021, https://ec.europa.eu/trustfundforafrica/sites/default/files/t05-eutf-noa-reg-07.pdf.

97 "WAPIS Programme," Interpol, 2022, https://www.interpol.int/en/How-we-work/Capacity-building/WAPIS-Programme.

98 Ibid.

99 Ibid.

100 "About Thales," Thales Group, 2023, https://www.thalesgroup.com/en/global/group; and "Automated Fingerprint Identification System (AFIS) Overview - a Short History," Thales Group, 2022, https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/biometrics/afis-history.

101 "Introduction of Criminal Automated Fingerprint Identification Systems (AFIS) in West African Countries," International Criminal Police Organization, October 2022, https://www.interpol.int/How-we-work/Capacity-building/WAPIS-Programme/WAPIS-AFIS-Project; "AFIS (Automated Fingerprint Identification System)," Innovatrics, n.d., https://www.innovatrics.com/glossary/afis-automated-fingerprint-identification-system/; and "Migration Information and Database Analysis System: A Comprehensive and Affordable Border Management Information System," International Organization for Migration, n.d., https://www.iom.int/sites/g/files/tmzbdl486/files/our_work/DMM/IBM/updated/midas-brochure18-v7-en_digital-2606.pdf.

102 United Nations Support Mission in Libya, *Desperate and Dangerous: Report on the Human Rights Situation of Migrants and Refugees in Libya* (Tunis, Tunisia: United Nations, December 2018), https://unsmil.unmissions.org/sites/default/files/libya-migration-report-18dec2018.pdf.

103 "Senegal First ECOWAS Member to Begin Issuance of Biometric IDs," FindBiometrics, October 2016, https://findbiometrics.com/archive/senegal-biometric-id-310071/.

104 "Programme d'appui AU Renforcement du Système d'information de L'état Civil et à La Création d'un Fichier National d'identité Biométrique" [Support Program for the Strengthening of the Civil Status Information System and the Creation of a National Biometric Identity File], EU Emergency Trust Fund for Africa, European Commission, December 1, 2022, https://ec.europa.eu/trustfundforafrica/region/sahel-lake-chad/senegal/programme-dappui-au-renforcement-du-systeme-dinformation-de-letat_en.

105 "Here's How a Well-Connected Security Company Is Quietly Building Mass Biometric Databases in West Africa with EU Aid Funds," Privacy International, 2020, https://privacyinternational.org/news-analysis/4290/heres-how-well-connected-security-company-quietly-building-mass-biometric.

106 Ayang Macdonald, "National Digital ID to Be Launched by Senegal, Legislative Foundation Proposed for Finland," Biometric Update, June 27, 2022, https://www.biometricupdate.com/202206/national-digital-id-to-be-launched-by-senegal-legislative-foundation-proposed-for-finland.

107 Martin Arostegui, "EU Turns Attention to Morocco in Bid to Slow African Migrant Flow," Voice of America, October 25, 2018, https://www.voanews.com/a/eu-turns-attention-to-morocco-in-bid-to-slow-african-migrant-flow/4628726.html; and "The EU Is Boosting Its Support to Morocco with New Programmes Worth €389 Million," European Commission, December 2019, https://ec.europa.eu/commission/presscorner/detail/en/IP_19_6810.

108 "Spain Starts Returning Moroccan Minors after Ceuta Migration Crisis," Reuters, August 13, 2021, https://www.reuters.com/world/europe/spain-starts-returning-moroccan-minors-after-ceuta-migration-crisis-2021-08-13/.

109 "EU Emergency Trust Fund for Africa," EU Emergency Trust Fund for Africa, European Commission, 2022, https://ec.europa.eu/trustfundforafrica/index_en; and "The European Union Emergency Trust Fund for Stability and Addressing the Root Causes of Irregular Migration and Displaced Persons in Africa - Action Document," European Commission, 2021, https://ec.europa.eu/trustfundforafrica/sites/default/files/t05-eutf-noa-reg-07.pdf.

110 Altai Consulting, *EUTF Monitoring and Learning System SLC* (Paris: European Union, June 2020, https://ec.europa.eu/trustfundforafrica/sites/default/files/eutf_slc_2019-q4_annual_report_.pdf; Gemma Hennessey, *Migration-Relevant Policies in Cabo Verde* (Oslo: MIGNEX, June 2021), https://www.mignex.org/sites/default/files/2021-06/D053b-MBP-MIGNEX-policy-review-Cabo-Verde-v2-2021-06-18.pdf; and "The Future of the EU Trust Fund for Africa," Privacy International, September 2019, https://privacyinternational.org/sites/default/files/2019-09/EUTF%20Policy%20Briefing.pdf.

111 "Complementary Written Questions to Commissioner Urpilainen," European Parliament, December 2020, https://www.europarl.europa.eu/cmsdata/216813/Replies-Compl-Questions-CONT%20Questionnaire_Urpilainen.pdf.

112 "Decision on How the European Commission Assessed the Human Rights Impact before Providing Support to African Countries to Develop Surveillance Capabilities," European Ombudsman, November 2021, https://www.ombudsman.europa.eu/en/decision/en/163491.

113 "The European Union Emergency Trust Fund for Stability and Addressing the Root Causes of Irregular Migration and Displaced Persons in Africa - Action Document," European Commission.

114 "Decision on How the European Commission Assessed the Human Rights Impact before Providing Support to Africa Countries to Develop Surveillance Capabilities," European Ombudsman.

115 "About VFS Global," VFS Global, 2023, https://www.vfsglobal.com/en/general/about.html?from_section=0.

116 Ibid.

117 Ibid.

118 "Senegal: Biometric Population Database Will Facilitate Deportations, Restricted EU Document Confirms," Statewatch, April 2021, https://www.statewatch.org/news/2021/april/senegal-biometric-population-database-will-facilitate-deportations-restricted-eu-document-confirms/.

119 "NSO Group Spyware Used against Moroccan Journalist Days after Company Pledged to Respect Human Rights," Amnesty International, June 22, 2020, https://www.amnesty.org/en/latest/news/2020/06/nso-spyware-used-against-moroccan-journalist/.

120 "The Artificial Intelligence Act," The AI Act, n.d., https://artificialintelligenceact.eu/; Bureau of Democracy, Human Rights, and Labor, *Guidance on Implementing the UN Guiding Principles for Transactions Linked to Foreign Government End-Users for Products or Services with Surveillance Capabilities*; and BHRRC, *Scrutinising migration surveillance.*

121 Marti Flacks, "Priorities for the U.S. National Action Plan on Responsible Business Conduct," CSIS, *White Paper,* February 21, 2023, https://www.csis.org/analysis/priorities-us-national-action-plan-responsible-business-conduct.

CSIS | CENTER FOR STRATEGIC & INTERNATIONAL STUDIES