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The impact of digitalization on migration processes. The European Union and a case study of Syrian migration.

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Abstract

This research paper analyses the impact of technology on the world of migration. It aims to show how the advent of digital technologies has completely revolutionized the way people migrate. The dualistic background of the paper seeks to shed light on its two recurring macro themes. Firstly, an attempt is made to highlight the digital practices implemented on the international scene, with a focus on Europe. In recent years, migration has become a focal point in the European Union, driven by a combination of technological advances, changing migration patterns and political imperatives. This digital transformation encompasses various aspects of migration management, including border control, asylum processing and integration efforts.

The second theme that emerges focuses on the digitalization of migration from the perspective of new migration practices. The advent of digital technology, especially smartphones and social media platforms, has revolutionized the way migrants approach migration and stay in touch with each other. Migrants have quickly adopted new media and become savvy users, sparking debates about the necessity of smartphones for refugees during their journeys.

To conclude and support this argument, it was necessary to examine the case study of Syrian migration to Europe. This was one of the most significant humanitarian crises of the 21st century, with profound implications not only for the migrants themselves, but also for their host countries and communities. In this scenario, the emergence of digital technologies has reshaped the migration experience from the outset, affecting the way refugees plan, navigate and communicate during their journeys.

Introduction

In recent years, the intersection of migration and digitalization has emerged as a dynamic and transformative phenomenon, reshaping the landscape of human movement across borders. The advent of digital technologies has revolutionized various aspects of migration, from the initial decision-making processes to the integration of migrants into new societies. This convergence of migration and digitalization has not only accelerated the pace and scale of global mobility, but also created new opportunities and challenges for migrants, governments, and societies at large. The digitalization of migration encompasses a wide range of technologies and practices, including but not limited to digital platforms for information dissemination, biometric identification systems, mobile applications for migrant assistance and data analytics for border management. These technological advances have fundamentally changed the dynamics by facilitating access to information, improving communication channels, and streamlining administrative procedures. Moreover, the digitalization of migration has blurred the boundaries between physical and virtual spaces, enabling migrants to navigate complex migration processes with greater ease and efficiency. Digital platforms have significantly reduced the logistical barriers associated with migration, thereby democratizing access to opportunities across borders.

However, alongside its transformative potential, the digitalization of migration also poses a myriad of challenges, ranging from privacy concerns to digital exclusion and the exacerbation of existing inequalities. As governments and policymakers grapple with the ethical and regulatory implications of digital technologies in migration management, issues of data security, algorithmic bias and digital rights have come to the forefront of public discourse. In this rapidly evolving landscape, understanding the multifaceted implications of the digitalization of migration is paramount to promoting inclusive and sustainable migration policies. By harnessing the potential of digital technologies while upholding the rights and dignity of migrants, societies can harness the transformative power of digitalization to create more equitable and humane migration systems for the future.

The aim of this work is to understand how technological development has become such an active and invasive part of the world that it has transformed international politics and, by extension, migration policy. The latter has been fundamentally altered both in the management and control of borders through the use of new media and new technologies for data collection and management. In order to provide a complete picture of the issue, the

paper does not stop there, but also aims to show how the digital age has created a new common sense among people who decide to embark on a migration journey, who, adapting to the times, have used digital technologies as tools both for their approach to the journey and to their new life in a foreign country.

The first chapter moves from the general to the specific. It analyses the evolution of digitalization over time, focusing on the Fourth Industrial Revolution and its impact on society. This leads to the development of digital diplomacy and international cooperation in this field. It then focuses on the use of digitalization, first in the field of human rights and finally in its impact on today's international migration scenario.

The second chapter focuses on the digitalization of migration in the European context. The chapter begins with a description of migration management at the European level, then moves on to the phase of management through the use of new technologies and how these have brought both benefits and risks to the international migration scenario. The last parts of the second chapter focus on the new management of European borders with the development of new management technologies. In order to conclude and obtain a complete picture, it has proved necessary to include the perspective of migrants and the practices they use to approach migration in the digital age.

Finally, the last chapter is a case study of Syrian migration to Europe in the digital age, which aims to present a two-pronged approach: on the one hand, Syrian migration to Europe and the practices that migrants implement through the use of modern digital tools, both in terms of their approach to migration and the practices used to improve everyday life in the foreign state. On the other hand, the chapter seeks to explore the response that Europe has been able to give to the Syrian crisis. This part is analyzed firstly by learning the methods of effective migration management, without neglecting the importance that Turkey has had in this field through its agreements with Europe. Lastly, it was necessary to consider the digital practices that Europe has put in place with regard to this crisis, while also trying to extrapolate the future perspectives that the digital world will bring to the field of international politics.

Chapter 1. From digitalization to digitalization of migration

This chapter aims to demonstrate how the digital age has had a profound impact on all aspects of people's lives. Globalization is at the heart of the digital age, which aims to change processes also thanks to the introduction of new technologies that have made it possible, above all, to create a highly interconnected world. The combination of digitalization and globalization can be seen as a process that leads to a change in standard patterns of thinking, introducing new rules of behavior that are in line with the changes that have taken place in the contemporary world. [1]

Social networks are losing their boundaries, and a single social space is emerging, based on online social networks, where culture and thought mix. On the one hand, there is an advantage in the unification of different points of view that intersect between different parts of the world and are exchanged in seconds and from kilometers away via the social platforms that have developed; on the other hand, these web spaces can lead to false interactions, promoting conflicts of various kinds of international scope that are beyond the control of the entities concerned.

The evolution of digitalization has profoundly impacted various aspects of human life, including migration. While digitalization refers to the general process of integrating digital technologies into various aspects of society, the digitalization of migration specifically focuses on the application of digital technologies to migration processes and management. Digitalization has transformed the way migration is perceived, experienced, and managed. From the use of electronic visas and biometric identification systems to the development of online platforms for visa applications and border control, digital technologies have revolutionized the migration landscape.

Overall, while the digitalization of migration holds great promise for enhancing migration processes and outcomes, it is essential to address the challenges and risks associated with it. By promoting transparency, accountability, and respect for human rights in the design and implementation of digital migration systems, stakeholders can harness the potential of digital technologies to create more inclusive, equitable, and rights-based migration policies and practices.[2]

[1] Atoyan, V., Hovyan, V., Movsisyan, N., Hovyan, V. (2023), "Digitalization as a sociocultural characteristic of the globalization era", in *Saudi Journal of Humanities and Social Sciences*, pp. 296–299.

[2] McAuliffe, M. (2021), ""International migration and digital technology: an overview", in *Research Handbook on International Migration and Digital Technology*, Cheltenham, Edward Elgar Publishing Limited, pp.1-13.

The chapter, first of all, aims to provide a clear definition of the concept of digital development by focusing on its evolution, initially historical and then political. The second section develops the concept of cyber diplomacy and the management of international cooperation in the new networked world, particularly through the use of information technologies. The last two sections narrow the circle further. The first deals with the world of technology and human rights, noting the need for change and modernization of international and intergovernmental agreements. Finally, the last paragraph deals specifically with the digitalization of migration. The path to explaining this global phenomenon begins with the definition of migrants and migration and ends with their transformation in the digital age. Consideration is given to the changes that technology has brought directly to the lives of these individuals, but also to the new role of borders, which must interface with a new way of governing.

1.1 History of digitalization

Defining digitalization is certainly not easy. It is common to give a dualistic definition of digitization and digitalization. This is fundamental because there is a connection and interdependence between these two aspects. Digitization is essentially the capture of information in analogue form and its encoding into ones and zeros to enable computers to process and store the information. Some researchers have provided their own definitions. Gartner stated that 'digitization is the process of moving from analogue to digital form[3]". On the other hand, digitization has no clear definition. It is common sense to use digitization and digitalization as the same term.[4] Legner, on the other hand, gave a strictly divided definition of the two. Digitization is seen as "[...] the technical process of converting analogue signals into digital form and ultimately into binary digits". Legner then proposed the definition of digitalization as "[...] the multiple socio-technical phenomena and processes of adoption and use of these technologies in broader individual, organizational and social contexts.[5]"

In general terms, digitization is essentially the transformation from analogue to digital. Digitalization is therefore the socio-technical circumstance of the adoption of digital technologies in the context of individual and societal impacts.

[3] Bloomberg, J. (2018), "Digitization, digitalization, and digital transformation: confuse them at your peril", in *Forbes*.
[4] Ibidem.
[5] Frenzel, A., Muench, J. C., Bruckner, M., Veit, D. J. (2021), "Digitization or digitalization? – Toward an understanding of definitions, use and application in IS research", in *ResearchGate*, AMCIS 2021.

The history of digitalization is often described as a 'revolution', based on evidence that technology has brought about radical changes worldwide. Historical events are characterized by a renewed perception of the world, triggering significant modifications in social and economic systems. The first major industrial revolution is related to the agrarian revolution. This one saw the union of labor forces between men and animals, which led to the development of communication and transportation. This led to the migration of people from rural areas to urban centers, resulting in the growth of cities.[6] The first Industrial Revolution began in the second half of the 18th century and was followed by a number of industrial revolutions in subsequent centuries. The earliest was based on the development of railroads and the invention of mechanical production. The second was characterized by the use of electricity. The third, also known as the 'digital revolution', began in the 1960s with the development of computers and culminated in the birth of the internet in the 1990s. The 21st century is part of the fourth industrial revolution, which builds upon the previous digital revolution.[7] the latter is linked to the third, although the two are in fact mainly distinguished by three key elements that characterize current technological development. these three elements are: the speed of development of these innovations; the extent to which they have affected all areas of production, management and governance in all countries; and the impact on systems. These three elements are: firstly, the speed of development of these innovations; secondly, the extent to which they have covered all areas of production, management and governance in all countries; and finally, the impact on systems. In addition, there is no single vision of the impact of the Fourth Industrial Revolution that would help to respond positively to it and derive maximum benefit from it.

The current revolution is characterized by real innovations such as nanotechnology, renewable energy, quantum computing and the convergence of these fields, and is also known as Industry 4.0, which refers to the transformation of goods and services resulting from the latest wave of technological innovations.[8] Some of the main revolutionary elements of the current era can be mentioned, such as the cloud, which provides computing resources, processes data and facilitates collaboration and has made it possible to store, process and analyze vast amounts of data quickly and efficiently, paving the way for new business opportunities, digital services and

[6] Schwab, K. (2017), *The Fourth Industrial Revolution* p. 11, New York, Crown Business.
[7] Ivi, p. 12.
[8] Caruso, L. (2017), "Digital innovation and the fourth industrial revolution: epochal social changes?", in Springer Link, *AI & SOCIETY*, vol.*33*, n. 3, pp 379–392.

consumption models. Then the big data, which involves the collection and processing of large amounts of data, transforming it from an under-utilized resource into a key pillar for innovating and competing. But also, the integration of physical and digital systems into everyday life, for example through the use of the Internet. Thanks to the Internet of Things (IoT), millions of physical devices and objects are now connected and able to communicate with each other, enabling a wide range of intelligent and automated applications. Sensors embedded in devices collect and transmit data in real time, enabling remote monitoring and control of industrial processes, critical infrastructure, and urban systems. Ubiquitous access to the Internet via mobile devices has enabled anytime, anywhere connectivity, radically changing the way we work, learn, entertain, and engage with the world around us. Ultimately, the Fourth Industrial Revolution has made the Internet a fundamental pillar of our daily lives, permeating every aspect of modern society and shaping the future of work, innovation, and global connectivity.[9]

The revolution is widely regarded as one of the most significant and powerful events in contemporary history, despite some limiting factors. The international institutional framework responsible for managing the diffusion of innovation is generally inadequate or absent. As a result, the level of leadership required to fully understand technological change is low compared to the need of rethinking systems in a technological sense.

1.2 Cyber Diplomacy

In general, cyber diplomacy involves managing international organizations in the digital domain based on challenges in the field of cyber security and digital trade.

Cyber diplomacy is the diplomatic strategy used by countries to address issues related to cyberspace. Cyber systems are closely related to cyber diplomacy because cyberspace provides essential digital tools for implementing diplomatic strategies. Cyber diplomacy has been around since the early 2000s, most notably with the cyber-attack on Estonia in 2007, when attackers from Russia launched attacks in both the private and public sectors in response to the removal of a Soviet war memorial in the center of Tallinn. For weeks, government websites, including those of the ministries of foreign affairs and defense, as well as the private sector, such as

[9] Castells, M., (2010), *The Rise of the Network Society: Second edition with a new preface*, Wiley Blackwell Publication.

social media, were targeted. The increase in these types of attacks has highlighted the need for governments to develop a national cyber security strategy, which has become a top international policy concern.[10]

Given the prominent role of cyberspace in international affairs, each nation is developing its own global strategy, which requires the implementation of a range of tactics to achieve key objectives.[11]. Cyber diplomacy occurs in cyberspace, a global domain that connects people and nations worldwide. The compressed nature of cyberspace, compared to governance and international relations, is what makes it unique. The need for sophisticated development on the subject is increasing due to the difficulty of creating international cohesion and coordination. States continuously focus on the cyber domain and its implications for policy making. Although cyberspace is based on common international goals, concrete cooperation has been separated and based on ad-hoc decisions. In reality, the nature of cyberspace, as an intangible area with a continually changing identity, suggests the necessity for a multi-stakeholder diplomatic approach[12]. Cyber diplomacy is the use of diplomatic tools to secure a state's national interest in cyberspace through national security strategies. It involves the reorganization of foreign affairs departments, prioritizing cyberspace.

The technological revolutions of the 19th and 20th centuries brought about significant changes in communication, including diplomatic communication. The advent of railways and merchant ships made it common for diplomats to travel and for direct communication between governments, embassies, and foreign ministries. In the 20th century, the development of long-distance airlines and information technology (IT) further increased the speed and ease of communication and travel. The use of digital media in diplomacy can be traced back to the early days of radio. This marked a significant shift in the practice of diplomacy, leading to what is now commonly known as digital diplomacy. The Bolshevik and Nazi revolutions further advanced the use of digital media for mass propaganda. Public diplomacy refers purely to the processes by which countries achieve their foreign policy goals. The communication revolution began at the end of the Second World War and has evolved to such an extent that even today, digital communication makes possible the instantaneous transmission of information while ignoring national borders. The conclusion of the Cold War signaled the rise of democracy, disseminating its

[10] Attatfa, A., Renaud, K., De Paoli, S. (2020), "Cyber Diplomacy: A Systematic Literature Review", in *Procedia Computer Science*, Vol. *176*, pp. 60–69.

[11]Maulana, Y. I., Fajar, I. (2023), "Analysis of Cyber Diplomacy and its Challenges for the Digital Era Community", in *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, Vol. 4, n. 2, pp. 169–177.

[12] Manantan, M. B. (2021), "*Defining Cyber Diplomacy - Australian Institute of International Affairs*", in Australian Institute of International Affairs.

fundamental principles to a significant portion of the world and thereby enhancing people's access to global information.[13] In addition to traditional diplomacy and public diplomacy, there is another form of diplomacy: social diplomacy. The latter allows the sovereign state to move from states to citizens by creating space for non-state actors such as international or non-governmental organizations. In fact, people have realized that by using the resources of NGOs or international organizations, it is possible to lobby for issues they want to support. Another form of social diplomacy can be related to lobbying, a practice used in America and more recently in Europe. Lobbyists use their position to influence the implementation of certain policies.

Finally, it was only at the end of the 20th century that a completely new form of diplomacy emerged, linked to the changing times. This is digital diplomacy, which is based on making foreign ministries internationally digital, with the ultimate aim of disseminating and expanding different types of diplomacy through the use of technological information.[14] Diplomats identify the development of digital diplomacy with the advent of the Arab Spring. During the latter, activists used social media to spread images and footage of the various revolutions and subsequent political unrest in the Middle East, although in reality the use of digital media in diplomacy had already begun in the early 2000s. In fact, the Internet is held responsible for the recruitment of young people within Jihadist movements as of 2008. Al-Quadea mobilized its troops and recruited new members through the use of social networks, generating a reaction from the American state, which launched initiatives via Facebook to counter recruitment.

A next step in the development of this new discipline was the WikiLeaks scandal. WikiLeaks is in fact a kind of Wikipedia that aims to publish analyses of secret documents, thus making secret information public for the public to judge. The platform has indeed brought to light inexorable facts about world politics and the real management of foreign policy, causing an international scandal. The latter opened eyes to the freedom of information that the digital age has taken to its extreme and which therefore requires new regulations and procedures.[15]

Foreign policy today is based on managing national and international relations in an increasingly fast, technological and interconnected global framework. This framework has made it necessary to adapt its tools and replace them with digital ones. Heads of state, public administrations and religious leaders have begun to use new

[13] Rashica, V. (2018), "The benefits and risks of digital diplomacy", in *SEEU Review*, vol. 13, n. 1, pp. 75–89.
[14] Ibidem.
[15] Ibidem.

global platforms to reach more and more users. Social media has become the largest arena for information exchange, revolutionizing the way diplomacy handles information and, more importantly, bilateral relations and international negotiations, creating a new practice for international political relations.[16]

All countries are adopting a new perspective on foreign policy, especially through the creation of IT platforms. Twitter is the most widely used social network by senior state officials, who have transformed access to unfiltered foreign policy information worldwide.[17]

Digital diplomacy is now at the heart of foreign policy. Cyberspace is now home to more than 3 billion people, making it the best place for a country to try to achieve its goals, especially those related to foreign policy, by acting in a "place" with international reach, with a greater scope of influence that can never be reduced in traditional diplomacy.

Digital technologies have proven to be useful for both national and international diplomacy in the field of information processing, e.g. in the consular field for the communication of emergency situations.

It is important to bear in mind that this new approach to diplomacy does not completely replace traditional diplomacy; on the contrary, it remains the basis of the work of foreign ministries, which use digital platforms to strengthen their work in international relations in an easy and inexpensive way.[18] Traditional diplomacy was fundamentally based on representation, and its highest exponent was the ambassador, who had the authority to negotiate and conclude treaties with a foreign country on behalf of his or her country. Today, with the advent of information and communication technologies (ICTs), the role of the embassy, although still one of the most important figures in foreign policy, has become less important, but at the same time its role vis-à-vis foreign populations has increased.

The various Internet sites and, in particular, social networks have given diplomats and embassies greater scope for direct contact with foreign populations and for establishing a genuine relationship of exchange between them. Digital diplomacy allows the role of traditional diplomacy to be enhanced through a direct relationship with citizens at the international level.[19]This new diplomacy, which can also be defined as modern democracy,

[16] Redazione. (2020), *"*Twitter Diplomacy": la politica delle relazioni internazionali al tempo dei social media", in *European Affairs Magazine*.
[17] Barrinha, A., Renard, T. (2017), "Cyber-diplomacy: the making of an international society in the digital age", in *Global Affairs*, vol. *3*, pp. 353–364.
[18]Adesina, O. S. (2017), "Foreign policy in an era of digital diplomacy", in *Cogent Social Sciences*, vol. *3*, n. 1.
[19] Eggeling, K. A. (2023), "Digital diplomacy", in *Oxford Research Encyclopedia of International Studies*.

ultimately seeks to promote a country's image abroad, and this action is currently referred to as nation branding. Foreign ministries are using social media as their main medium to implement this international branding policy for their countries.

1.2.1 Cooperation and cyberspace

When considering cyber diplomacy, it is crucial to integrate the concept on which it is built cooperation based on the diplomatic commitment of the parties involved. Cyber space is identified as a 'domain of resources to which all nations have legal access'[20]. This implies that there is a need for normative regulation of this space to guarantee access to all states and international organizations, thus attempting to avoid possible conflicts.

Despite this, each state independently promotes cyberspace based on their own visions and interests, which can lead to conflicts. The complexity of cyberspace and international cyber relations requires the use of international diplomacy. International dialogue and regulation are necessary to promote joint cooperation between states and avoid potential crisis situations, even unintentional ones, in cyberspace.

Cooperation in cyberspace has facilitated the sharing of cybersecurity information, intelligence and best practices. By working together to assess threats, respond to incidents and disclose vulnerabilities, countries and organizations can strengthen their collective defences against cyber threats and attacks. This cooperative effort has helped promote stability and trust among nations. By establishing standards of responsible behavior, promoting transparency, and taking confidence-building measures, countries can reduce the risk of misunderstanding, miscalculation, and conflict in cyberspace.

The governance structures of cyberspace have evolved over the years, making the logic of diplomacy in this realm a new phenomenon. Initially, the internet was unregulated and relied on informal governance, with no involvement from states. Instead, scientific and engineering entities that had given birth to cyberspace were responsible.

As the internet's importance grew, so did the need for agreements between governments, who became increasingly involved in the subject. Forums on cyber issues were established, consisting of government technical

[20] Buck, S. J. (2017), *The Global Commons*. London: Routledge eBooks.

experts from various ministries who would discuss topics such as cyber security, online crime, and primary cyber issues. In 2003, the UN launched the World Summit on the Information Society (WSIS), which was attended by 175 countries and international organizations, including the European Union, the OSCE, and the Council of Europe. These developments paved the way for cyber diplomacy.[21]

It is possible to say that cyber diplomacy does not derive solely from the development of cyberspace, but also from its internationalization. Cyber diplomacy has become a pivotal topic in foreign policy.

Significant growth in the field of cyber security occurred at the beginning of the 21st century. Major powers such as the United States and Great Britain published their first policy review of cyberspace and strategies for maintaining cyber security during this time, these documents focused on the internal aspects of cyber security and, in particular, the domestic development of cyber capabilities. The international cyber issue was still in its infancy and was only partially integrated as the need to find international partners for cyber development.

As far as the international side of things is concerned, it is worth mentioning the meetings of the United Nations Group of Governmental Experts (UN GGE), which were established following the UN General Assembly resolution (66/24) in 2010. The UN GGE aimed to collaborate and decrease cyber-attacks by identifying specific rules for regulating cyberspace.[22]

Cooperation in cyberspace can take many forms, including the sharing of information and intelligence on threats, the development of common norms and principles for the governance of digital space, and cooperation in cyber emergency management. In addition, promoting trust and transparency among nations through bilateral and multilateral dialogues and agreements is essential to prevent conflict and ensure stability in cyberspace. Finally, cooperation in cyberspace is essential to promote a secure, open and inclusive digital environment where all stakeholders can benefit from the opportunities offered by the digital revolution.

1.2.2 Risks and benefits

The new era of diplomacy, such as digital diplomacy, which is bringing about profound changes in the governance of states and foreign policy implications, has created a number of benefits and risks for society.

[21]Barrinha, A., Renard, T. (2017).
[22]Ibidem.

The major risks that this new world has created are primarily related to the world of social networks, which now involve every sphere of society, from the individual to state and international relations. The Internet is not only used as a means of direct thought communication with citizens and communities of interest for charitable purposes, but several times in today's digital age extremist or terrorist groups have tried to carry out their own destructive campaigns through the use of these platforms, spreading values and goals, but also recruiting real members in order to have a network of control that extends to different parts of the globe. The Internet is structured in such a way that it is able to multiply ideologies of international political interest at an unprecedented speed, undermining international decision-making and thus reducing the control of any one country. To cite one example, a statistical study showed that between 2015 and 2017, Twitter was forced to close more than 1.2 million accounts in relation to the prevention of terrorism because they were considered dangerous.

In order to manage the risks associated with the power of social networks, foreign ministries in charge of cyber diplomacy and cybersecurity must be ready and prepared for this new crisis scenario, and therefore have a good knowledge of digital communication and the whole world around it.

The misuse of the Internet and the world of social networks has created another risk factor, which is the fear of attacks on institutions through hacking. This is generally considered to be the main risk in digital diplomacy, as it directly attacks institutions, and many diplomats or governments around the world have already suffered this type of cyber activity.

Hacking is basically the cyber-attack on a country's institutional websites or computers in order to extract sensitive information that could then benefit another state or another office within the same state. In general, when private information is made public, it can cause profound changes in world affairs. These phenomena give rise to cybersecurity, which aims to create national security strategies at the cyber level and is adopted not only by states themselves, but also by international organizations such as the UN, NATO and the OSCE.[23]

The digital age has revolutionized the way we communicate and interpret the world, making everyone much more aware of the positive and negative effects that a single word thrown onto the net can have in a very short time.

The current era of globalization has led to an increase in political, cultural and economic interactions that far transcend national borders as the world can be defined as constantly interconnected.

[23] Rashica, V. (2018).

The current century cannot only be defined through political state actors, but all international spheres such as non-governmental organizations and bodies, and also multinational corporations that have a significant bearing on political affairs, and the foreign networks that the internet age has generated must be taken into account.

Cyber-diplomacy, which has added value to the traditional diplomacy that characterized the pre-digital era, must be used as a primary resource to pursue foreign policy objectives and expand international interdependence to involve everyone globally.

The state must therefore exploit the possibility of having very rapid and direct communication with its public through the use of technology and especially ICTs. Digital technologies are extremely useful in rapid communication especially when it concerns matters of extreme urgency, for example, when there are crisis situations, consulates or embassies can communicate directly with their compatriots through platforms such as Facebook or WhatsApp having direct communication.

Media coverage can be defined as instantaneous and can also be useful for individuals within regime states that lack free expression and through internet channels this limitation can be lifted.

This increasing proximity to the public has brought great benefits as foreign ministers, ambassadors or consuls can better communicate and observe events and gather important information.

It must also be said that the costs of using these new technologies are gradually decreasing due to their own internal progress. Digital diplomacy generally does not need much funding and thus brings a reduction in costs, making it very attractive to governments as it avoids causing budgetary damage.[24]

The advantages should be understood not only between states and citizens of the world, but also internationally. First of all, because of the network of exchanges that can be created between the various consulates and ambassadors around the world, where an open dialogue is sought between the various diplomats, who can open discussions even with nations that can be defined as hostile. Something that was not possible with the old methods of diplomatic communication. This new diplomacy therefore removes physical barriers by facilitating international negotiations between heavyweights that are no longer conditioned by physical distance, a few essentials are required, only an Internet connection.[25]

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[24] Ibidem.

[25] Bhattacharya, A. (2022). "Cyber-diplomacy in International Negotiations: Rules, Risks, and Rewards" in *Advocacy Unified Network*.

1.3 Implications of digital technology on Human Rights

During the early stages of the development of international treaties and organizations, digitalization was still in its nascent phase. At that time, only a handful of treaties had taken into account the impact of technology on human rights. Today, the scenario has undergone a significant change with the implementation of various committees aimed at upholding human rights, particularly those related to the United Nations. These committees consistently address the issue of digitalization and its impact on human rights. Although, it is commonly recognized that the relationship between human rights and the digital realm requires further attention.[26]

The Convention on the Rights of the Child of 1989 (CRC) is a significant convention that acknowledges the impact of digitalization and media on human rights. It is worth noting, however, that this convention was established during a time when digitalization was still in its early stages. Therefore, the media referred to in the convention are not equivalent to those of today. The proposal aims to safeguard children from potential adverse effects of media usage. Furthermore, it presents constructive suggestions for utilizing mass media to enhance learning and development.[27] The CRC Committee resulting from the Convention has had a notable impact on human rights, influencing the development of new committees that have addressed the issue of digitization and its effects on individuals' legal status over time. The UN human rights bodies have collectively recognized that the internet, particularly social media, can serve as valuable platforms for discussion. This is due to the fact that the liberties and entitlements afforded to individuals should extend to the online realm. 2012 UN Human Rights Council: 'the same rights that people have offline must also be protected on line, in particular, freedom of expression, which is applicable regardless of frontiers and through any media of one's choice.[28]'.

It is worth noting that various human rights conventions, including the United Nations General Assembly, the European Union Agency for Fundamental Rights, the Court of Justice of the European Union, and the European Court of Human Rights, have consistently aimed to ensure the protection of online rights, such as freedom of communication, thought, and privacy. Nevertheless, it is possible that these efforts may be perceived as

[26] Schmahl, S. (2022). "Digitalisation and international Human Rights Law: opportunities and critical challenges", In *Nomos Verlagsgesellschaft mbH & Co. KG eBooks*, pp. 135–178.
[27] Ivi, p.136.
[28] UN Human Rights Council (2012), *The promotion, protection, and enjoyment of human rights on the Internet*, HRC/RES/20/8, Promotion and protection of all human rights, civil, political, economic, social, and cultural rights, including the right to development, para. 1.

insufficient by the international human rights regime, as they could be seen as a mere interpretation of the guarantees already established in the Vienna Treaty on the Law of Treaties of 1969.[29]

As previously stated, current legislation's cyberspace rights and protection methods are insufficient for the modern world. Therefore, there is a need to modernize and revise the mechanisms concerning these issues.

According to researchers like N. Borisov[30] and J. Coccoli[31], most privacy violations by governments or private individuals have been carried out through surveillance technologies. These technologies are typically used as an effective tool for law enforcement, while adhering to international human rights standards. In many instances, software is utilized to monitor particular communication channels and to employ facial recognition technology. However, the use of such technology can result in the infringement of human rights on a global level.

Today, there is an increasing awareness that the global network and digitalization, in general, have led to the development of problems related to the violation of human rights. The access to the internet and its associated activities has resulted in a new set of behaviors, which require legal regulation. The state and international organizations are faced with significant new challenges.[32] In general, digital rights should be interpreted as an extension of universal human rights to meet the needs of an information-based society. Digital rights can encompass a wide range of fundamental rights that must be implemented in the digital world. Digital rights are derived from a wide range of information rights, including the right to access information, digital platforms, and personal data. They also encompass the right to digital access.

In a broader perspective, digitalization expands the sphere of human rights through cultural and social processes.[33] The term digital law has become a significant topic in global policy debates, leading to the creation of international statements, reports, and projects.

The UN World Summit on the Information Society, held between 2003 and 2005, was the first global effort to establish the status of human rights principles in the development and global governance of the information

[29]Bhattacharya, A. (2022).

[30] Nilizadeh, Sh., Jahid, S., Mittal, P., Borisov, N., Kapadia, A. (2012). "Cachet: A decentralized architecture for privacy preserving social networking with caching", in *CoNEXT 12: Proceedings of the 8th international conference on Emerging networking experiments and technologies,* New York: Association for Computing Machinery, pp. 337-348.

[31] Coccoli, J. (2017). "The challenges of new technologies in the implementation of human rights: An analysis of some critical issues in the digital era", in *Peace Human Rights Governance*, vol. 1, n. 2, pp. 223-250.

[32] Petryshyn, O. V., Hyliaka, O. (2021). "Human rights in the digital age: Challenges, threats and prospects", in *Vìsnik Akademìï Pravovih Nauk Ukraïni*, vol. 28, n. 1, pp. 15–23.

[33] Ivi, p. 18.

society. This summit resulted in declarations on law and freedom in the digital age for both states and international organizations.

The purpose of implementing these declarations is not to suggest that human rights were previously neglected or not being upheld in practice. Rather, it is to acknowledge that in the digital age, human rights are increasingly at risk due to concerns about new forms of control and widespread online surveillance practices.[34]

The political and regulatory decisions made regarding the impact of digital technology on human rights have been crucial, particularly in relation to issues such as freedom of expression, access to information, and privacy. In addition to these legal issues, there has been a search for regulation with respect to the principles of human rights that interface with broader issues. This is particularly relevant to the future and development of digital media governance, including equal access to the internet, corporations' control over international data flows, and the growing power of internet platforms.

Human rights provide a solid foundation for addressing digital and technological issues, as well as human rights concerns. However, current debates have failed to establish a unified approach, resulting in governance imbalances and disagreements. Therefore, new human rights and institutions are needed to enforce rights in the new international digital context.[35]

1.3.1 The Universal Declaration of Human Rights (UDHR) and the United Nations World Summit on the Information Society (WSIS)

As far as human rights are concerned, the 21st century has a new objective: it is no longer to create them, but to protect them. The United Nations, the ultimate exponent of the protection of fundamental human rights, has changed its work overtime and the organization’s efforts have become increasingly specific and concrete.

As for the extension of the rules for the protection of human rights to the electronic world, the exponential growth and importance they have received is evident.

The digital world and human rights are closely linked for a number of key reasons: firstly, non-governmental associations or individuals have always fought for the protection of human rights through the use of the Internet

[34] Karppinen, K. (2017). “Human rights and the digital”, in *Routledge eBooks*, pp. 95–103.
[35] Ibidem.

and social networks; and, more generally, a targeted use of technology can generate new human rights related to freedom of expression and the right of access to culture.[36]

On 10 December 1948, the United Nations General Assembly adopted the Universal Declaration of Human Rights. In the course of time, issues related to respect for human rights and the development of technology have arisen, giving rise to a technological interpretation of this historic document. It is possible to address some macro areas of interest where the technological age has generated the need for change and implementation. First and foremost are the general rights relating to the prohibition of discrimination against any human activity or thought, which are adapted to the right of equal access to the Internet, to information technology and to the free expression of freedom of thought, ideology, religion and culture. This is followed by a new approach to rights relating to discrimination and torture, and then to discrimination by the judiciary. This is followed by a wide range of rights such as the protection of freedom of expression and thought and freedom of movement. In general, the need for access to information is a right that is recognized as fundamental to informing people of their rights in order to be protected as individuals.[37]

The link between technology and human rights was also recognized by the first UN World Summit on the Information Society in 2003. This summit created a kind of constitution for cyberspace to bring the technological development of the new information society into line with recognized human rights standards.

The WSIS implicitly refers to the Universal Declaration of Human Rights, stating that its purpose is to create a shared commitment to the development of today's information society, which is people-centered and cyberspace-centered, where individuals have access to information, enabling them to develop their full potential for sustainable growth and improved quality of life. The underlying goals of the World Summit are the total eradication of poverty, the reduction of child mortality, the promotion of gender equality, access to social and health services and universal primary education, all of which can be summed up in the need to create a peaceful and just world. The focus must be on the impact of technology on developing countries and on the protection of groups considered to be most vulnerable. There is indeed a technology gap, commonly referred to as the digital divide, which represents the real disparity that the technological revolution has brought to the world between

[36] Ziccardi, G. (2013), "Resistance, liberation technology and human rights in the digital age", in *Law, governance and technology series*.
[37] Ibidem.

developed and developing countries. This project aims to transform this divide in order to create equal opportunities throughout the world, including those groups identified as minority or marginalized.

These categories within the information society require more attention as the WSIS aims to focus on the needs and requirements of minority groups such as migrants, displaced and refugee groups, but also other types of minorities such as nomads, as well as the elderly and people with disabilities.[38]

Developing countries and their populations need special attention in this area, including heavily indebted countries, countries in occupied territories, countries recovering from conflict and countries with special needs in general. The document calls for a special role for the media and information technologies in general, as they have a fundamental role to play in today's information society by helping to reduce international imbalances in the media themselves. Finally, ICTs must respect the human rights and fundamental freedoms of all, in accordance with the relevant international instruments.

1.3.2 Digitalization of Human Rights challenges

The implications of digital technology on human rights present a myriad of challenges that demand careful consideration. Foremost among these challenges is the erosion of privacy rights and the proliferation of surveillance practices.

Mass surveillance programs, facial recognition technologies, and predictive algorithms threaten individual autonomy, chilling free expression and inhibiting dissent. Additionally, ensuring the protection and security of personal data in an era of ubiquitous digital connectivity remains a critical challenge. Data breaches, cyberattacks, and vulnerabilities in digital infrastructure expose individuals to the risk of identity theft and financial fraud.

Moreover, the digital divide persists as a significant challenge, exacerbating existing inequalities and hindering marginalized communities' ability to fully enjoy their rights. Disparities in internet access, digital literacy, and technological infrastructure perpetuate systemic inequalities, further marginalizing vulnerable groups.

Furthermore, the proliferation of misinformation and disinformation on digital platforms poses significant threats to human rights, including freedom of expression and access to information. Manipulative content and fake news

[38] Ibidem.

distort public discourse, undermining trust in institutions and fueling social polarization. The spread of disinformation undermines democratic governance, impairing citizens' ability to make informed decisions and participate meaningfully in political processes.

Addressing these challenges requires comprehensive and coordinated responses from policymakers, technologists, civil society, and other stakeholders. Efforts to promote transparency, accountability, and respect for human rights in the design and deployment of digital technologies are essential. By safeguarding privacy rights, enhancing data protection measures, bridging digital divides, and combating misinformation and disinformation, stakeholders can work together to ensure that the promise of digital innovation is realized without compromising individual dignity and autonomy.[39]

1.4 Implication of digital technology on migration

In the modern world, digital technologies are increasingly integrated into migration processes, leading to a modernization of migration governance and having a major impact on the world of human rights and, more specifically, on the human rights of migrants and refugees worldwide.[40] The various studies on international migration have produced a body of knowledge on the technological impact of migration throughout history, which shows that these two elements must be considered as closely linked, as they can influence each other. The digitalization of this phenomenon has led to improvements that can be more clearly identified in terms of border control and the management of migrants at their points of arrival, with the implementation of databases and the use of computers for the management of so-called hot spots. On the other hand, the digitalization of the migration phenomenon has contributed to widening the gap between those who have access to the Internet and the possibility of using a whole range of facilities offered by the new digital programs, and those who do not, while at the same time increasing violations of the privacy of various migrants, including asylum seekers.[41]

Research on the technological impact of migration is still growing, with the first real studies appearing in the late 1990s and only consolidating in recent years.

[39] Bhattacharya, A. (2022).
[40] OHCHR (2023), *Digital technologies at borders: A threat to people on the move.*
[41] McAuliffe, M. (2021), pp. 18-20.

Migration, like all sectors of the economy and society, has therefore undergone a transformation dictated by the digital age, through qualitative changes but also through new organizational and management processes.

It is the development of the digital economy itself that has facilitated migration by creating opportunities for participation in small businesses that are accessible to migrants, who generally do not have much start-up capital to create their own businesses. It is worth mentioning blockchain, which can be defined as a database mechanism that allows for the unfiltered exchange of information within a business network, which allows for the creation of greater trust, an essential element for migrants who find themselves catapulted into realities different from those to which they are accustomed. Staying on the economic level, another digital innovation concerns, for example, the mobile phone Alipay, developed in China, or M-Pesa in Kenya, implemented for microfinance transfers, making it possible to transfer money without the need to have a bank account, which is generally exploited by irregular migrants who do not have the possibility to join a bank. The impact of the digitalization of migrants on the issue of economic opportunities has widened considerably and has a strong impact both in the host country and in the country of origin.

In the social sphere, the development of technologies, especially ICT, has disrupted the migratory condition. On the one hand, the migrant can maintain direct contact with his or her family (also for possible future family reunification), thus maintaining his or her relationship with the country of origin and instead merging it with the general culture of the host country, thus creating a better migratory environment.

However, it can be said that the use of technology in relation to migration is more developed in relation to border management and the migration journey.[42]

The most common methods are based on the use of databases and biometric recognition, but also the use of satellites and drones to gain concrete knowledge of the situation in border areas.[43] Abstract Data Types (ADTs) are increasingly being used to improve migration processes. An example of this is the development of an interactive map called the Migration Tech Tracker, which is based on ADT sources from online searches, press

[42] Skorodumova, O., Melikov, I., Tabasaranskiy, R. S. (2022), "Problems of migration management in the conditions of global digitalization of Society", in *Communications in computer and information science*, pp. 174–185.

[43] Glouftsios, G., Scheel, S. (2020), "An inquiry into the digitisation of border and migration management: performativity, contestation and heterogeneous engineering", in*Third World Quarterly*, vol. *42*, n. 1, pp. 123–140.

releases, public reports from governmental and non-governmental institutions such as international organizations, and digital technology companies.[44]

1.4.1 Migration, migrants, and drivers

The word migration does not necessarily evoke a clear definition, mainly because migration is an ever-changing phenomenon. In order to clarify this concept, several explanations can be considered that identify migration as a continuous movement activity or as a very large-scale, long-lasting movement that differs from the normal daily activities of an individual.[45]

A more comprehensive definition that can be adopted as a basic definition to identify migration and even more specifically the migrant is given by the International Organization for Migration (IOM): "a migrant is a person who moves or has moved across an international border or within a state, away from his or her country or within his or her place of habitual residence, regardless of the person's legal status, whether the movement is voluntary or involuntary, what the reason for the movement is, what the causes of the movement are or what the length of stay is.[46]"

The reality is more complex and even this definition, which attempts to give a clearer and more complete idea of the phenomenon, is not completely exhaustive, since it does not take into account an even more complex concept, namely the definition of the migrant, the one who migrates. The concept of migrant can encompass a wide range of individuals that vary over time and space. Migrants are classified by labels that vary according to their motivation for migrating, their destination and their legal status in the country of destination.[47] The factors used to distinguish one type of migrant from another are based on a number of parameters to be taken into account, such as the motives that drive a person to migrate, the characteristics of the migrants themselves and the geography of migration.[48]

The IOM classifies the different types of migrants as:

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[44] Nalbandian, L., Dreher, N. (2023), "Current methodological approaches in studying the use of advanced digital technologies in migration management", in *Frontiers in Human Dynamics*, vol. 5.
[45] Dingle, H., Drake, V. A. (2007), "What is migration?" in *BioScience*, vol. *57*, n. 2, pp. 113–121.
[46] International Organization for migration (2021), *Global annual report, 2021 operations and emergencies*, Geneva.
[47] Scholten, P., Pisarevskaya, A., & Levy, N. (2022), "An introduction to migration studies: the rise and coming of age of a research field", in *IMISCOE research series*, pp. 3–24.
[48] Ibidem.

(a) Migrant, a person who moves to a country other than that of his or her nationality or habitual residence, so that the country of destination effectively becomes his or her new country of habitual residence[49].

(b) Asylum seekers, who are defined as individuals seeking internal protection. An asylum seeker is therefore a person who is awaiting a response to his or her application for asylum from the requesting country. If an asylum seeker makes an application, there is no guarantee that it will be accepted, so this status is identifiable as a transitional status whereby the asylum seeker could become a political refugee[50].

(c) A political refugee is a person who is seeking protection from the Office of the High Commissioner for Refugees and who has the UNHCR status, which makes it clear that a refugee is identified as such, whether or not he or she is in a country which is a party to the 1951 Geneva Convention. The Convention gives a comprehensive definition of a refugee, defining him as "a person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country, or who, not having a nationality and being as a result of such events outside the country of his former habitual residence, is unable or, owing to such fear, is unwilling to return to it[51]".

(d) Environmental migrants are individuals or groups of individuals who are forced to move because sudden changes in climate have adversely affected their living conditions, forcing them to move within or outside their country of origin[52].

(e) Labor migrant, defined as the movement of persons from their home State to another State for the purpose of employment[53].

Defining an individual as a migrant may be reductive, since an individual cannot be labelled solely on the basis of a single action in his or her life, but it has become necessary to attach this adjective to certain individuals precisely because categorization is deemed necessary for the purposes of governance and because the study of migration is now classified as a field in its own right. Therefore, in order to analyze and understand the

[49] Adapted from United Nations Department of Economic and Social Affairs (1998), *Recommendations on Statistics of International Migration,* Revision 1 p. 10, definition of "long-term migrants".
[50] United Nations High Commissioner for Refugees (2006), *Master Glossary of Terms*.
[51] Convention relating to the Status of Refugees (adopted 28 July 1951, entered into force 22 April 1954) 189 UNTS 137) Art. 1A (2).
[52] Council of the International Organization for Migration (2007), *Migration and the Environment*, MC/INF/288.
[53] *Labour Migration, International Organization for Migration*. International Organization for Migration.

phenomenon of migration, it is necessary to limit the field to the pre-established categorization of these individuals.[54]

In order to understand the phenomenon of migration, it is necessary to start with the reasons for migration, which can be many and varied. Migration researchers have identified numerous contexts and factors that have determined both the destinations and the motivations for individuals to make this change in their lives. The most common factors are usually economic, political, cultural, social, demographic, and environmental.

The most common work that can be undertaken to provide a more comprehensive explanation of migration contexts is to create a macro-division between external and internal drivers of migration.

External drivers generally refer to the historical international migration from rural to urban areas, which has now been transformed into purely economic migration. Where there is economic insecurity within the country, migration tends to increase. This suggests that individuals tend to migrate because of the economic opportunities available in their chosen destination and the lack of such opportunities in their place of origin.

The second element to be taken into account is the political situation in a given country and thus the level of welfare that the country offers its citizens. In general, this type of migration is carried out by so-called low-skilled migrants, who try to find a better situation thanks to the social benefits guaranteed by the state, thus encouraging migration from developing to developed countries. In addition, there is the validation of the state through health insurance and good insurance protection. Finally, quality education is identified as a driving force for migration to more developed countries, covering a wide range of sub-categories of migrants such as international students, unaccompanied minors, and irregular migrants. However, this leitmotif is less important than factors such as market security or good prospects of obtaining citizenship or residency.

Two other external factors can be identified as key elements in the migration process. The first is related to situations of conflict and war, including violence and torture in violation of human rights. In this scenario, migrants who are recognized as asylum seekers and refugees appear more strongly, but also generate masses of irregular migrants who try to escape such hardship. This type of migration includes both individuals who flee because they feel individually threatened, and masses as a result of a generalized sense of insecurity. The most

[54] Schrover, M. (2022), "Migration Histories", in *IMISCOE research series*, pp. 25–46.

in-depth studies on this topic tend to concern African or Middle Eastern countries such as Afghanistan, Iraq and Syria.

The last external factor is a new one: climate and environmental degradation. Slow climate change is closely linked to emigration and includes more countries with an agricultural or rural majority, although this motivation is identified as indirect, as it is climate change that directly leads to economic degradation, food insecurity and livelihood opportunities.[55]

Internal indicators focus mainly on the role of family size and family structure patterns in migration processes. The household can influence both internal and international migration. In general, it can be observed that in many cases migration takes place in a norm where the man migrates first and then the family members migrate through reunification. Marriage is thus used as a means of circumventing the barriers to migration. The family is not the only framework that facilitates the movement of individuals; there are also so-called migratory networks. These provide an indirect link between citizens who share a similar or the same cultural heritage and therefore the same way of thinking, religion and lifestyle. This phenomenon generates international migratory flows in which people from the same areas and regions of the world generally follow the same routes in order to reproduce a climate of 'home' and cultural sharing in the host country.

1.4.2 International control of borders

In an era marked by globalization and increased mobility, the management of borders has become a paramount concern for nations worldwide. Traditional methods of border control, reliant on manual inspection and paper-based documentation, have proven inadequate in addressing the complexities of contemporary migration flows. In response, governments are turning to digital solutions to enhance their border management capabilities.

Digital control of borders relies on a sophisticated array of technologies to facilitate the efficient and secure movement of people across international boundaries. Central to this approach is the integration of biometric identification systems, which leverage unique physiological traits such as fingerprints, facial features, and iris

[55] Ibidem.

patterns to verify the identity of travelers. Biometric data, stored in electronic passports or dedicated databases, serves as a reliable means of authentication, enabling rapid and accurate identity verification at border crossings.[56] Furthermore, electronic visa (e-visa) systems and electronic travel authorization (e-TA) programs have revolutionized the visa application process, allowing travelers to apply for entry online before embarking on their journey. These digital platforms streamline administrative procedures, reduce processing times, and enhance transparency in visa issuance.

Automated border control gates equipped with biometric scanners represent another cornerstone of digital border management. These gates employ facial recognition technology and document authentication algorithms to expedite the processing of pre-approved travelers while maintaining robust security protocols. By automating routine identity checks, border control agencies can optimize operational efficiency and allocate resources more effectively.[57]

Digital control of borders is underpinned by comprehensive operational frameworks that encompass data collection, analysis, and decision-making processes. Central to these frameworks is the concept of risk-based screening, wherein travelers are assessed using advanced algorithms that analyze a multitude of factors, including travel history, visa status, and biometric data. By stratifying travelers based on their perceived risk level, border control agencies can prioritize inspections and allocate resources, accordingly, thereby enhancing security while minimizing disruptions to legitimate travel.[58]

The adoption of digital control mechanisms offers a multitude of benefits for both governments and travelers alike. Foremost among these is enhanced border security, achieved through the deployment of advanced biometric technologies and risk-based screening algorithms. By leveraging digital tools to identify and mitigate security risks, nations can fortify their borders against illicit activities and safeguard national sovereignty.

Moreover, digital border management enhances operational efficiency by streamlining administrative processes and reducing processing times for travelers. E-visa systems and automated border control gates expedite the

[56] Saunders, N. (2023), "Security, digital border technologies, and immigration admissions: Challenges of and to non-discrimination, liberty and equality", in *European Journal of Political Theory*.
[57] Thales Group. (n.d.), eVisa Portal.
[58] Saunders, N. (2023).

movement of people across borders, thereby enhancing the overall travel experience and promoting tourism and commerce.

Despite its many advantages, digital control of borders presents several challenges that warrant careful consideration. Chief among these is the potential for privacy infringements and data misuse. The collection and storage of biometric information raise concerns regarding individual privacy rights and the risk of unauthorized access or data breaches. To mitigate these risks, governments must implement robust data protection measures and adhere to stringent privacy standards.

Digital control of borders represents a paradigm shift in the field of migration management, offering governments unprecedented capabilities to secure their borders, facilitate legitimate travel, and combat transnational threats. By harnessing the power of biometric identification, data integration, and risk-based screening, nations can achieve a delicate balance between security imperatives and the facilitation of international mobility. However, realizing the full potential of digital border management requires a concerted effort to address the associated challenges, including privacy concerns, algorithmic biases, and cross-border cooperation.[59]

1.4.3 How migrants and refugees are transformed by technology.

In recent years, the intersection of migration and technology has led to profound transformations in the *experiences*, opportunities, and challenges faced by migrants and refugees worldwide. From access to information and communication tools to the utilization of digital platforms for essential services, technology has become an integral aspect of the migration journey.

One of the most significant ways in which technology has transformed the experiences of migrants and refugees is through increased access to information and communication channels. Mobile devices, internet connectivity, and social media platforms have empowered migrants to stay informed about migration routes, access legal resources, and maintain contact with their families and communities. By providing real-time updates on border conditions, asylum procedures, and support services, technology has enhanced migrants' ability to navigate complex migration pathways and make informed decisions about their journeys. Technology has also played a

[59] Conti, E., Sartori, N., Squadrani, S. (2022). "L'impatto della digitalizzazione sui processi migratori: tra rischi e opportunità", in *Mondo Internazionale*.

crucial role in promoting financial inclusion among migrants and refugees. Mobile banking services, digital payment platforms, and remittance apps have facilitated secure and efficient financial transactions, enabling migrants to send money to their families back home, access banking services, and manage their finances more effectively. By reducing reliance on cash-based transactions and informal remittance channels, technology has contributed to greater financial stability and resilience among migrant populations.[60]

While technology offers numerous benefits for migrants and refugees, it also presents significant challenges and risks. Digital exclusion, limited access to technology, and disparities in digital literacy skills can exacerbate existing inequalities and marginalize vulnerable populations. Moreover, concerns about data privacy, cybersecurity, and digital surveillance pose serious risks to the safety and security of migrants, particularly those in transit or living in precarious situations. Additionally, the spread of misinformation and online exploitation can further compound the vulnerabilities faced by migrants and refugees in their digital interactions.[61]

The transformation of migrants and refugees through technology underscores the complex interplay between migration dynamics and technological advancements in the contemporary world. While technology has the potential to empower migrants, enhance their resilience, and facilitate their integration into host societies, it also poses significant challenges and risks that must be addressed through collaborative efforts by governments, civil society organizations, and the private sector.[62]

Final remarks

At the end of this chapter, a complex web of connections and reflections emerges, prompting us to look beyond the surface of technological transformations. The evolution of technology, from its simple digitalization to its involvement in migration processes, is revealed as an intricate journey through multiple dimensions of contemporary society. An analysis of key points explores the ways in which technology not only transforms everyday experiences, but also impacts crucial areas such as diplomacy, human rights and migration dynamics.

[60] Casswell, J. (2024), "The Digital Lives of Refugees: how displaced populations use mobile phones and what gets in the way", in *Mobile for Development*, GSMA.
[61] Alencar, A. (2023), "Technology can be transformative for refugees, but it can also hold them back", in *Migration policy institute.*
[62] Casswell, J., Downer, M., Khan, M., & Baah, B. (2021), "The digital lives of refugees: How displaced populations use mobile phones and what gets in the way" in *GSM Association.*

Cyber-diplomacy is emerging as a new frontier in the management of international relations, while the implementation of technology in human rights raises crucial questions about privacy, justice and data protection. However, it is in the application of technology to migration that we find one of the most complex and contested contexts. While digital innovations promise to improve the integration and protection of migrants, they also raise concerns about security, discrimination, and marginalization. It is clear that the use of technology in migration processes cannot be considered in isolation from the ethical, social and political issues that permeate this phenomenon. It is therefore necessary not only to celebrate the opportunities offered by technology, but also to be aware of the challenges and risks it poses. Only through a critical and inclusive approach can we hope to successfully navigate the complex terrain of digitalization and migration.

Chapter 2. Focus on the digitalization of migration in the European Union

The digitalization of migration in the European Union (EU) has become a focal point in recent years, driven by a combination of technological advances, changing migration patterns and political imperatives. This digital transformation encompasses various aspects of migration management, including border control, asylum processing and integration efforts.

This chapter focuses on new needs in migration and asylum, which offer European policymakers some opportunities to make better use of digital technologies in implementing the new legal framework and in reassessing the increasing use of technology in asylum and migration systems. Digital tools can be used to facilitate the relocation of asylum seekers and refugees between Member States, in line with the objectives set out in the Pact.

Digital technologies can also support the return and reintegration processes of those found to be inadmissible. One of the paragraphs focuses on investment in digital case management platforms, which could improve the tracking of migrants' cases from the return decision to the country of origin. Such platforms could also facilitate cooperation between EU and non-EU actors involved in return and reintegration efforts, allowing for more personalized reintegration assistance. In addition, digital tools could help address one of the most complex and controversial aspects of the Pact: the screening of new arrivals and the processing of certain asylum claims at the border. Automation tools could help to screen new arrivals and allocate them to the appropriate procedures, be it regular asylum procedures, border procedures or return procedures.[63]

The EU's weaknesses were highlighted by the 'migration crisis' that erupted in 2015 and 2016 in the aftermath of the Syrian war and continues today, albeit in a different context. Despite the EU's political and diplomatic efforts towards migrants' countries of origin and transit, there is still a significant influx of migrants from Afghanistan and sub-Saharan Africa. The integration of legal migrants, asylum seekers and returnees who are not in need of international protection remains a major challenge within the European Union. This paper focuses on the legal, operational, and institutional dimensions of EU anti-discrimination policies and explores how digital innovation

[63] Beirens, L. S. H. (2023), "What Role Could Digital Technologies Play in the New EU Pact on Migration and Asylum?", in *Migration policy institute.*

can facilitate the integration of migrants. The analysis considers perspectives not only from public administration, but also from migrants themselves.

It analyses how ensuring correct identification is a prerequisite for efficient interaction between people and public administrations. In this context, the EU has established legal foundations, such as Regulation (EU) No 910/2014, also known as EIDAS, which covers electronic identification and trust services for electronic transactions in the internal market. This regulation aims to facilitate secure electronic interactions between citizens, businesses, and public administrations. In addition, efforts are underway to strengthen this framework through new legislative proposals currently being negotiated by the European Parliament and the Council. The proposed changes aim to improve access to highly secure and trustworthy electronic identity solutions that can be relied upon by both public and private services. In addition, individuals, both natural and legal persons, will be able to use digital identity solutions that allow selective sharing of identity data depending on the specific service being accessed.

Digitizing migration in the EU is a holistic approach to improving migration management while respecting ethical principles and safeguarding individual rights. By harnessing the power of technology, the EU aims to address migration challenges more effectively and ensure the humane treatment and integration of migrants in its digitalized migration landscape.

To illustrate this, the chapter attempts to explain how Europe is attempting to manage new migration through digital control. It begins with an initial definition of migrant and migration and a brief analysis of the current legal framework for migration management. In order to deepen the analysis, there is a section devoted entirely to the study of border management through the new technological means used. Finally, the chapter concludes with a different point of view, that of the migrant, considering the digital practices that the latter uses to approach the migratory path.

2.1 EU immigration policies and Human Rights

At the heart of the European Union, immigration and human rights are intertwined in a complex dialogue between public policies, fundamental values, and social realities. The EU, an entity founded on the principles of solidarity, equality, and respect for human rights, faces unprecedented challenges in managing migration flows from different parts of the world. Immigration to the EU has historically been a factor of change and diversity.

However, European migration policies have often oscillated between welcome and control, reflecting the tension between the need to manage migration flows and respect for the human rights of migrants.

Europe began to attract migrants as early as the end of the Second World War, thanks to the post-war economic recovery, and after the development of the European Single Market in the 1980s, the issue of migration gradually became more pressing and required a supranational dimension.

As a result, EU migration policy was not always dealt with at EU level, but initially only at national level. This changed with the implementation of the Maastricht Treaty in 1992, which created the need for intergovernmental cooperation in the field of Justice and Home Affairs (JHA). Subsequently, the Treaty of Amsterdam established an integrated European area of freedom, security, and justice (AFSJ).[64]

From that moment on, the need for external border management also emerged. With the White Paper on the completion of the Single European Market in 1985, new directives were needed at European level to regulate the status of non-EU residents and to officially identify the status of political asylum seekers and refugees.

With the effective collapse of the Soviet Union, migration gained even more legitimacy. The Dublin Convention of 1990 confirms this, as it is based on the need to make each State responsible for processing asylum applications, creating a general idea of migration management and making actual management systems increasingly similar.

The interdependence of national migration policies has been strengthened by new information technologies, increased support for human rights and greater public scrutiny of state authorities.[65]

However, Europe has always been reluctant to tackle the sensitive issue of migration management, and, in fact, intergovernmentalism has prevailed over a supranational regime, except for visas.

The Treaty of Amsterdam in 1997 marked the official turning point and the beginning of real cooperation between states, with the implementation of the Schengen Agreement and the associated rules on entry visas and residence permits.

In 1999, the European Parliament set up the European Migration Forum, which tried to push for communitarization, but without much success. In the same year, the Tampere European Council developed a genuine European policy on both internal and external migration, which was outlined in several points: firstly,

[64]Czaika, M., & De Haas, H. (2013), "The effectiveness of immigration policies", in *Population and Development Review*, vol. *3,* n. 3, pp. 487–508.

[65]Cellamare, G. (2006), *La disciplina dell'immigrazione nell'Unione Europea*, Torino: Giappichelli.

the need for a unified approach to the migration phenomenon in order to find a policy of cooperation between states. The second point is based on the common asylum policy, then the fair treatment of third country nationals and finally the general management of migration flows.[66]

But it was not until the early 2000s that a breakthrough was achieved with the implementation of the legal texts that form the basis of EU asylum law: the Reception Directive of 2003, the Qualification Directive of 2004, the Procedures Directive of 2005 and, finally, the Dublin I and II Regulations.

Then, in 2007, the Lisbon Treaty officially stated that AFSJ must remain a shared competence between the states and the EU. States remain responsible for border control, integration policies and admission of migrants for work purposes, but they apply an EU policy on issuing visas and short-term residence permits, and the European Parliament and the Council also have the power to negotiate incentives to support states. The treaty also created a common European asylum system and temporary cooperation on the joint management of certain external borders.[67]

Although the EU's competence will be shared with its member states, the treaty removes the minimalist rules that were considered implicit in the Amsterdam Treaty and creates a platform for the creation of truly comprehensive rules. 2015 marked a turning point, the European Agenda for Migration (EAM) was established by the Commission, due to the uncontrolled increase of arrivals in the Mediterranean. The latter is developed around four areas of interest, namely, irregular migration, regular migration, asylum policies, and border management. The EU's responses since 2015 have been added proportionally to the increased differentiation imposed by member states.[68]

2.1.1 Current legal framework

The European legal basis for migration and asylum can be found in Title V of the Treaty on the Functioning of the European Union, more specifically in Articles 78-79-80.

Article 79 (1) states that:

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[66] Consiglio europeo di Tampere (1999), *Conclusioni della presidenza*, European Parliament.
[67] Favilli, C. (2010), "Il Trattato di Lisbona e la politica dell'Unione europea in materia di visti, asilo e immigrazione", in *Diritto, Immigrazione E Cittadinanza*, vol. *2*, pp. 13–35.
[68] Niemann, A., Zaun, N. (2023), "Introduction: EU external migration policy and EU migration governance", in *Journal of Ethnic and Migration Studies*, vol. 49, n.12, pp. 2965–2985.

> "The Union shall develop a common immigration policy aimed at ensuring, at all stages, the efficient management of migration flows, fair treatment of third-country nationals residing legally in Member States, and the prevention of, and enhanced measures to combat, illegal immigration and trafficking in human beings[69]".

Despite the ratification of several instruments consolidating migration policy, the EU is still far from establishing real cooperation in this area. National migration laws continue to be relied upon, leaving the regulation of the admission and residence of third country nationals on EU territory at EU level. This peculiarity is particularly evident in the case of some countries, such as Denmark and Ireland, which have adopted opt-out clauses allowing them to disregard the directives generated by the TFEU articles on migration.

In order to better understand this phenomenon, it is necessary to focus on the three main aspects of migration. First, the functioning and regulation of regular migration. With the Treaty of Amsterdam, the European Union had already given an impetus to legal instruments in this area, with an instrument allowing family reunification, long-term student status, but also visas for highly qualified workers.

The current legal immigration policy is based on the above-mentioned Article 79, the main purpose of which is to establish a common immigration policy, i.e. essentially the need to adopt measures concerning the possibility or otherwise of entering and possibly residing in the EU. In addition, it seeks to regulate the definition of third country nationals legally resident on European territory, including freedom of movement for such persons within the EU States, and finally it seeks to combat illegal immigration by also combating illegal trafficking in human beings.

In addition, one of the main objectives of European migration policy concerns irregular immigration. The fight against this type of migration is still one of the main objectives of the common policy.

Migration is a general term used to describe a wide range of internal phenomena. In general terms, an illegal immigrant is a person who enters one of the territories of the European Union by land, sea or air using false documents or through networks of criminal organizations, but it also refers to people who have entered Europe

[69] Treaty on the Functioning on the European Union (2012), *Official Journal of the European Union*.

legally and stayed on after the expiry of their authorization. Finally, it includes asylum seekers who have not been granted refugee status but who remain on European soil.[70]

The legal instruments that have been implemented and used are essentially the Return Directive and readmission agreements. The former was adopted in 2008 and promotes minimum standards for return procedures for irregular immigrants residing illegally on the territory of Member States. This procedure has been challenged because it is accused of compromising the fundamental rights of migrants, instead promoting only efficient migration and border control. For this reason, the EU tends to favor so-called voluntary returns rather than forced returns, giving irregular migrants a maximum period of time to leave the EU, and then forcing them back if this period exceeds a few days.

The other instrument used is readmission agreements. These agreements are based on the premise that the contracting parties undertake to readmit their own nationals when they no longer qualify to remain on foreign soil. However, this instrument, like the first one, has been widely criticized on human rights grounds, as the European Union is handing over responsibility to third parties.[71]

Finally, it is necessary to examine migration policy with regard to asylum seekers. At its core, the system is built on a foundation of common standards and cooperation, ensuring that people seeking protection are treated equally and fairly, regardless of where they apply for asylum within the EU. Central to the operation of the system are five legislative instruments, each carefully crafted to address specific facets of the asylum process. The Asylum Procedures Directive sets the framework for fair, timely and high-quality asylum decisions, recognizing the importance of providing tailored support to asylum seekers with special needs, such as unaccompanied minors and victims of torture. This Directive serves as a cornerstone in promoting a system where each individual's voice is heard, and their claims are assessed with care and diligence.

The Asylum Procedures Directive is complemented by the Reception Conditions Directive, which sets common standards for reception conditions for asylum seekers across the EU. From access to housing and healthcare to opportunities for education and employment, this Directive ensures that asylum seekers are granted a dignified standard of living in line with the fundamental rights enshrined in the EU Charter. By upholding these standards,

[70] Besharov, D. J., López, M. H. (2016), "Adjusting to a world in motion: Trends in Global Migration and Migration Policy", in *Oxford University Press*, pp. 171-172.
[71] Ivi, p. 173.

Member States reaffirm their commitment to treating asylum seekers with respect and compassion, regardless of their circumstances. The system is further strengthened by the Qualification Directive, which clarifies the criteria for granting international protection and provides beneficiaries with access to basic rights and integration measures. This Directive not only strengthens the asylum decision-making process, but also promotes the successful integration of beneficiaries into their host communities, thereby fostering social cohesion and solidarity across the EU. It ensures that asylum seekers receive timely and consistent treatment regardless of where they first seek refuge in the EU. The Dublin Regulation is supported by the EURODAC Regulation, which helps to identify responsible Member States and allows law enforcement authorities to access fingerprint data under strict conditions. By using technology and cooperation, this Regulation enhances security measures while safeguarding the rights of asylum seekers within the EU. Finally, the European Union Asylum Agency plays a key role in improving the functioning and implementation of the Common European Asylum System. Through operational and technical assistance, the Agency supports Member States in the assessment of asylum applications, ensuring consistency and fairness across Europe.[72]

However, many issues remain unresolved. The situation of migrants at the EU's external borders, particularly in the Mediterranean, continues to raise concerns about human rights violations and a lack of solidarity between Member States. The humanitarian refugee crisis has been a crucial test of the EU's core values and has highlighted the need to strengthen the European asylum system and improve solidarity between Member States.

Immigration in the EU is a complex issue that requires a balanced approach that takes into account the needs of migration management and respect for human rights. The EU has made significant progress in promoting a more humane and inclusive migration policy, but much remains to be done to ensure that the human rights of all migrants are fully respected and protected.

2.2 Digital Migration governance in the Mediterranean region

In the ever-evolving landscape of global migration, the Mediterranean region stands as a crossroads where the complexities of human movement intersect with the challenges and opportunities presented by digital

[72] Migration and Home Affairs, *Common European Asylum System.*

technologies. As nations grapple with the management of migration flows, the role of digital governance emerges as a critical factor shaping policies, practices, and outcomes in the Mediterranean context.

At the heart of digital migration governance is the complex interplay between technology and migration dynamics. Digital platforms, data analytics and communication tools have revolutionized the way migrants navigate their journeys, access information, and connect with support networks. From social media platforms that provide real-time updates on migration routes to mobile applications that facilitate communication with loved ones and service providers, digital technologies have become indispensable tools for migrants seeking safety and opportunity in the Mediterranean. However, the proliferation of digital technologies also brings with it a myriad of challenges and complexities for migration governance. The digital realm is rife with misinformation, exploitation, and risk, exacerbating the vulnerability of migrant populations. Moreover, the use of digital surveillance and biometric technologies by state actors raises concerns about privacy, security, and human rights violations, further complicating the governance landscape.[73] The fact that the increasingly widespread use of new technologies in migration management raises concerns about the protection of internationally recognized rights is linked to the idea that there is a lack of an integrated regulatory framework at the global level that specifically addresses the use of automated technologies in migration management. While discussions about the ethical implications of these technologies are widespread, there are limited mechanisms for enforcement.

The framework of international human rights law (IHRL) is essential for addressing potential harms associated with the use of technology, given the global and transnational nature of technological development. IHRL requires states to prevent violations, establish monitoring mechanisms, and provide remedies for violations to hold perpetrators accountable. This framework also extends to the protection of individuals from harms caused by third parties, including private entities. However, states may be inclined to experiment with unregulated technologies in migration management due to the discretionary nature of decision-making in this area.

Furthermore, migration management involves not only states, but also international organizations such as the UNHCR, which operate globally under different legal authorities and regulations. As non-state actors, these organizations wield power in migration management, but may not have the same legal responsibilities as states

[73] Jandl, M. (Ed.). (2007), *Innovative Concepts for Alternative Migration Policies: Ten Innovative Approaches to the Challenges of Migration in the 21st Century*, Amsterdam University Press.

to protect human rights. Thus, the accountability of both states and international organizations in protecting rights in the context of technological advances in migration management needs to be addressed.[74]

In response to these challenges, stakeholders across the Mediterranean are grappling with the task of formulating comprehensive and responsive digital migration governance frameworks. At the national level, governments are increasingly recognizing the need to harness digital technologies to improve border management, asylum processing and integration efforts. Strategies such as digital border controls, biometric registration systems and online asylum application platforms are being implemented to streamline processes and enhance security measures.

At the same time, civil society organizations, advocacy groups and humanitarian agencies are using digital platforms to amplify migrants' voices, advocate for their rights and provide essential services and support. From online legal aid services to virtual language courses and community networks, these initiatives are harnessing the power of technology to empower migrants and promote inclusivity in the digital space. In navigating the complexities of digital migration governance in the Mediterranean region, it is imperative to adopt a holistic and rights-based approach that balances the opportunities and risks inherent in digital technologies. By fostering collaboration, innovation, and dialogue among stakeholders, the Mediterranean region can harness the transformative potential of digital governance to create a more inclusive, equitable, and humane migration system for all.[75]

Over the past decade, migration cooperation in the Euro-Mediterranean region has witnessed a dual trend: the strengthening of the EU's external borders and the delegation of European migration management to neighboring countries in order to stem the flow of refugees. This shift has taken place against a backdrop of rising anti-immigrant sentiment within the EU, leading to increasingly hardline policies. As a result, a 'new grand compromise' has emerged in which Middle Eastern states take advantage of European concerns stemming from the 2015 refugee crisis. These developments entrust control and, from a European perspective, responsibility for the welfare of migrants primarily to Europe's neighbors. Scholars argue that Middle Eastern states are not passive recipients of migratory flows, but strategic actors who carefully shape their policies in line with their domestic

[74] Molnar, P. (2020), "AI and Migration Management", in *Oxford Academic*, pp. 768-787. (p. 782)
[75] Mouzourakis, M. (2020), *EU migration governance in the Mediterranean*: *The perils of pragmatic cooperation*, Routledge.

and foreign policy objectives. Therefore, a thorough assessment of the risks faced by migrants and the related challenges for European migration governance beyond its borders is imperative.[76]

2.2.1 Risks in digital migration governance

The advent of digitalization presents both migrants and governments with a wealth of opportunities and challenges. For migrants, especially those in remote areas, digital platforms provide real-time information on migration routes, enabling them to compare prices, share experiences and improve safety during their journeys. Similarly, humanitarian organizations are using digital tools to improve their response. For example, the United Nations High Commissioner for Refugees (UNHCR) has highlighted the role of social media in informing humanitarian responses in crisis contexts, while the International Organization for Migration (IOM) launched the 'Bosla' platform in Egypt to provide migrants in North Africa with easy access to vital information.

In parallel, governments are using digital technologies to monitor, analyze and manage migration flows. A study by the European Migration Network found that many EU member states are using forecasting methods based on open-source data, and there have been calls at both the EU and UN levels to use big data analytics for policy purposes. Satellite data, phone records and GPS-based movement data allow governments to collect and process large amounts of data to help formulate and manage migration policies. However, opinions on the effectiveness of big data in predicting migration flows vary, with some experts optimistic about its potential and others cautioning against inflated expectations.

Despite the promise of digital technologies in migration, it is imperative to recognize and address the risks involved. With virtually every migrant equipped with digital tools, an overly optimistic view of digitized migration overlooks potential dangers. Risk factors associated with the digitalization of migration can be categorized into four dimensions: internal population control and abuse by non-state actors within countries in Europe's Southern Neighborhood, external flow control and the diplomatic weaponization of migration.

Internally, host countries in the Southern Mediterranean can use digital surveillance tactics to exert control over migrant communities, while non-state actors exploit migrants' vulnerability through extortion and misinformation

[76] Miehe, L. (2022), "Between promise and peril: Digitalised migration in the Euro-Mediterranean region", in *European Institution for the Mediterranean*.

campaigns. Externally, states use digital means to monitor migration flows at borders, posing risks to migrants' security, especially in fragile contexts. In addition, states can weaponize migration data to gain political leverage in diplomatic negotiations.

In fact, while digitalization offers many benefits for migrants and governments, it also poses significant risks that require attention. Understanding and addressing these risks is essential to ensure that digital technologies serve as tools for empowerment and protection rather than instruments of surveillance and control in the context of migration, particularly in the Euro-Mediterranean region.[77]

2.2.2 Non-state actors in the management of digitalized migration

The rapid evolution of digital transformation, defined as the integration of digital technologies across the public and private sectors and its subsequent impacts, has attracted interest in both academic and policy circles. However, the literature highlights that this transformation is a double-edged sword, offering benefits but also raising concerns, particularly in the area of migration management policies.

From a security perspective, some literature emphasizes the benefits of using new digital technologies and methods to achieve policy goals in migration management. Digitalization, which involves the conversion of physical information into digital formats, is seen as increasing efficiency in both quantitative and qualitative terms. For example, the EU has developed "smart" borders, using digital technologies to improve the interoperability of information systems and law enforcement at its borders. Digital technologies can process vast amounts of data through algorithms, providing real-time insights into migration flows and facilitating predictions of future patterns and behaviors. In addition, digital technologies have enabled the development of digital identities, improving the ability of the humanitarian system to respond more effectively to the needs of displaced populations.

For states and supranational actors such as the EU, regaining agency and legitimacy is crucial. However, the process of externalization and remote border control has also empowered non-state actors (NSAs), including private companies and militia groups, in migration and border management activities. This involvement of NSAs raises concerns about accountability for human rights violations, as states remain the primary subjects of

[77] Ibidem.

humanitarian law. In addition, the digital transition adds complexity to decision-making processes, potentially leading to opacity and challenges to accountability.

Digitalization applied to migration and border management also raises doubts about its potential downsides. It reconfigures border security and management practices, affecting power dynamics between authorities, mobile individuals and NSAs. These changes require careful assessment in order to mitigate negative outcomes. Given the pitfalls of digitalization and the uncertainty surrounding the role of NSAs, the EU should avoid over-reliance on automated decision-making when managing migration flows in the Mediterranean.[78]

The influence of non-state actors (NSAs) such as organized armed groups, organized crime groups and terrorist organizations in the Middle East and North Africa (MENA) region has a twofold impact. First, they contribute to instability, crime, violence, and armed conflict in the region, which in turn act as push factors for illegal migration towards Europe. As a result, the European Union's response to migration is evolving, leading to a recalibration of related security policies. European states are now seeking a different balance between human rights and security, showing a shift towards more pragmatic and formalistic approaches, reminiscent of certain features of US-style security policies.

Organized armed groups (OAGs), as defined by the International Committee of the Red Cross (ICRC), are collective entities, other than state armed forces, that possess a sufficient level of military organization to engage in hostilities on behalf of a party to a conflict. The UN Convention against Transnational Organized Crime (UNCTOC) provides a comprehensive definition of Organized Crime Groups (OCGs), describing them as structured groups of three or more individuals acting in concert to commit serious crimes for financial or material gain. Although the UNCTOC is primarily concerned with transnational organized crime, OCGs involved in illegal migration activities in Europe and the MENA region fall within its scope due to their transnational nature. The influence of NSAs in the MENA region underscores the need for a nuanced understanding of their activities and their impact on migration and security policies, requiring a delicate balance between human rights and security considerations.[79]

[78] Belaïd, J. (2022), "The role of Non-State Actors in Digitised Migration Management. The Impacts and Limits of Digitalisation on the EU's Externalised Migration control In the Mediterranean" in *EUROMESCO – Euro-Mediterranean Research, Dialogue, Advocacy*.

[79] Bargiacchi P. (2019), "Non-State actors and illegal migration: a new European approach to security policies" in *Южно-российский журнал социальных наук*, vol. 1, pp. 24-39.

The rapid development of digital technologies, including the internet, social media platforms and smartphones, has revolutionized communication, access to information and everyday activities. However, alongside these benefits, there is a dark side to the use of information and communication technologies (ICTs), with a marked increase in crimes facilitated or enabled by digital means, such as online fraud, stalking, harassment, grooming and various cyber manifestations of organized crime and terrorism.

While the use of ICT in these criminal activities has garnered significant attention from policymakers and law enforcement agencies, there remains limited empirical evidence regarding its implications in human smuggling—an activity strongly opposed by the public, despite concerns for the well-being of irregular migrants. Traditionally, human smuggling has been viewed as a business exploiting individuals fleeing conflict, economic hardship, and poor life prospects. The use of ICT, primarily the internet and social media, by smugglers to recruit clients, arrange transportation, provide fraudulent documents, and manage payments, adds a new layer of sophistication to the smuggling trade. However, the extent of ICT's role in facilitating irregular migration and its impact on decision-making among migrants remains underexplored. Concerns about the risks and vulnerabilities migrants face en route to their destinations, particularly highlighted by the surge in irregular migration flows to Europe from Asia and Africa, underscore the significance of understanding the role of ICT in human smuggling. While ICT facilitates migrants' access to smugglers' services, it also inadvertently involves other individuals in the smuggling process, raising ethical and legal concerns.[80]

2.3 Digitalization in the control of borders

Digitalization has revolutionized border control in Europe, fundamentally transforming traditional methods into advanced technological solutions. This transformation has brought significant benefits, challenges and implications for security, mobility, and governance across the continent.

One of the most pronounced benefits of digitalization is its contribution to enhancing border security measures. Technologies such as biometric identification systems, automated passport readers and facial recognition software have greatly improved the accuracy and reliability of identity verification. These systems not only

[80] Diba, P., Papanicolaou, G., & Antonopoulos, G. A. (2019), "The digital routes of human smuggling? Evidence from the UK", in *Crime Prevention and Community Safety*, vol. *21*, n. 2, pp. 159–175.

streamline the process for legitimate travelers, but also enable authorities to more effectively identify individuals with fraudulent documents or suspicious backgrounds. Digitalization has also facilitated greater information sharing and coordination between European Union member states through platforms such as the Schengen Information System (SIS). The SIS acts as a central database for the exchange of real-time information on wanted persons, missing persons, stolen property, and other security-related alerts. This seamless communication and cooperation between law enforcement agencies across borders is crucial in preventing cross-border crime, terrorism, and illegal immigration.[81]

In addition to enhancing security, digitalization has also helped improve the efficiency and convenience of border crossings for legitimate travelers. Automated border control gates equipped with e-passport readers and biometric scanners allow for faster processing of passengers, reducing waiting times and congestion at checkpoints. In addition, electronic visa systems and online pre-registration platforms allow travelers to obtain the necessary permits and clearances in advance, streamlining the entry process and improving the overall travel experience.

The European Travel Information and Authorization System (ETIAS), which will soon be operational, is an example of the continent's commitment to using digital technologies to facilitate legitimate travel while maintaining security standards. ETIAS will serve as an online visa waiver program, requiring travelers from visa waiver countries to obtain prior authorization before entering the Schengen area. By automating the screening process and pre-screening travelers, ETIAS aims to enhance border security without placing an undue burden on travelers.[82]

Despite the many benefits of digitalization in border control, there are also challenges and considerations to be considered. Privacy concerns regarding the collection and use of biometric data, potential risks of data breaches or cyber-attacks, and disparities in technological infrastructure between Member States are among the key issues that need to be addressed. In addition, the increasing reliance on automated systems raises questions about accountability, transparency and the potential for algorithmic bias or error in decision-making processes.

Digitalization has emerged as a transformative force in border control in Europe, offering a range of benefits in terms of enhanced security, facilitation of legitimate travel and operational efficiency. However, realizing the full

[81] Migration and Home Affairs, *Smart borders*.
[82] Broeders, D., & Hampshire, J. (2013), "Dreaming of seamless borders: ICTs and the Pre-Emptive Governance of Mobility in Europe", in *Journal of Ethnic and Migration Studies*, vol. *39*, n.8, pp. 1201–1218.

potential of digital border control requires careful consideration of privacy implications, technological vulnerabilities, and the need for effective governance frameworks to ensure transparency, accountability, and compliance with legal and ethical standards. By harnessing the power of digital technologies while addressing these challenges, Europe can continue to strengthen its borders, foster regional integration, and facilitate safe and seamless mobility across its diverse landscapes.[83]

Digital tools have become an indispensable part of European border control, enabling authorities to enhance security, streamline processes and facilitate legitimate travel. By using advanced technologies such as Application Programming Interface (API) systems, Automated Border Control (ABC) gates and ETA/ETIAS platforms, European countries are better equipped to manage migration flows and address security challenges in an increasingly interconnected world. However, it is imperative to strike a balance between security imperatives and respect for individual rights to ensure that border control measures remain effective, efficient, and ethical in the digital age.

The chapter consists of four sections that attempt to explain the transformation of European migration in the digital age. The first part looks at how migration control has evolved in Europe, with reference to the current legal framework. The focus then shifts to the changes that digitalization has brought to European governance, particularly in the Mediterranean, considering the benefits but also the risks it has created. Part of the section mentions the management by non-state actors such as smugglers.

The chapter then examines the new technologies that are actually part of migration management, such as the Migrant Registration System, the Schengen Information System, EURODAC, Artificial Intelligence and the Biometric Matching System. Finally, it is necessary to change the perspective and examine the behaviour of migrants in relation to their digital practices through the use of smartphones.

2.3.1 Migrant registration system

In the complex landscape of migration, Europe stands as a beacon of diversity and inclusiveness, attracting people seeking refuge, opportunity, and a better life. However, managing the influx of migrants is a multi-faceted

[83]Bigo, D. (2022), "The Digitalisation of Border Controls and their Corporate Actors", In *Oxford University Press eBooks*, pp. 229-C12.P80.

challenge that requires a robust registration system. This system serves as the cornerstone of Europe's approach to migration, ensuring both the efficient processing of migrants and the protection of their rights.

At its core, Europe's migrant registration system is designed to provide order and structure in the face of mass migration flows. Upon arrival in a European country, migrants are required to undergo a registration process in which their personal data, including biometric information, is recorded. This data serves a variety of purposes, from facilitating the provision of essential services such as healthcare and education, to enabling authorities to track migration trends and patterns.

Efficiency is a key objective of the registration system, as it allows authorities to manage the influx of migrants in a timely and organized manner. By streamlining the registration process, European countries can quickly identify those in need of immediate assistance, such as asylum seekers fleeing conflict or persecution. An efficient registration system also helps prevent overcrowding in migrant reception centers and reduces the burden on local communities tasked with integrating newcomers.[84] However, in addition to efficiency, Europe's migrant registration system must uphold the principles of humanity and dignity. For many migrants, the registration process is their first interaction with European authorities, and as such it is crucial that they are treated with respect and empathy. Language barriers, cultural differences and the trauma of displacement can all pose challenges during the registration process, underlining the importance of providing adequate support and assistance to vulnerable persons. Furthermore, the registration system must prioritize the protection of migrants' rights, including their right to seek asylum and to be free from discrimination. This requires robust safeguards against arbitrary detention, deportation, or other forms of ill-treatment. In addition, data collected during the registration process must be handled responsibly, with strict adherence to data protection rules to ensure the privacy and security of migrants.[85]

In recent years, Europe has faced several challenges in managing migration, from political tensions to resource constraints. In the midst of these challenges, however, the migrant registration system remains a critical tool for ensuring order, fairness and respect for human rights. By continuously refining and improving this system,

[84] European Commission, *Migration and Home Affairs*.
[85] European Council on Refugees and Exiles (2021), *Access to Registration Procedures for Asylum Seekers and Refugees in Europe*.

Europe can uphold its commitment to provide protection and opportunity to those in need, while fostering social cohesion and integration within its diverse communities.

It is necessary to talk about one of the specific types of migrants, the asylum seekers. Upon arrival in a European country, asylum seekers are required to undergo a registration process to formally declare their intention to seek refuge. This process usually involves providing personal information, including biographical details and reasons for seeking asylum, to the relevant authorities. In many cases, asylum seekers must also undergo interviews to assess the credibility of their claims and determine their eligibility for refugee status. Traditionally, asylum seekers in Europe have had to navigate complex bureaucratic processes involving paper-based forms, manual data entry and long waiting times. However, the advent of digital technologies has transformed this landscape, paving the way for the development of online registration platforms, mobile applications, and biometric identification systems.[86]

Digital registration systems for asylum seekers allow individuals to submit their asylum claims electronically, providing key biographical information, supporting documents and evidence of persecution or risk. These systems often feature user-friendly interfaces, multilingual support, and real-time tracking capabilities, allowing asylum seekers to monitor the progress of their applications and receive timely updates on their status.

The move towards digital registration systems for asylum seekers offers a number of benefits for both asylum seekers and authorities. For asylum seekers, digital platforms offer greater convenience, accessibility, and autonomy in accessing asylum procedures, reducing the need for personal visits to registration centers and minimizing bureaucratic hurdles.

In addition, digital registration systems can improve the accuracy and efficiency of data collection and processing, enabling authorities to speed up the assessment of asylum claims, identify vulnerable individuals and allocate resources more effectively. By automating routine administrative tasks, digital technologies free up valuable time and resources for frontline staff to focus on providing essential support services and conducting in-depth assessments of asylum claims.

[86] European Union agency for asylum (2023), *EUAA Strategy on Digital Innovation in Asylum Procedures and Reception Systems*, May, Luxemburg.

Despite their potential benefits, digital systems for registering asylum seekers also present a number of challenges and considerations. A key challenge is to ensure that digital platforms are accessible to all asylum seekers, including those with limited literacy, digital skills, or access to technology. Efforts must be made to provide alternative means of registration and support for vulnerable or marginalized persons who may face barriers in using digital tools. In addition, privacy, security, and confidentiality concerns are paramount in the design and implementation of digital registration systems. Safeguards must be put in place to protect asylum seekers' personal data from unauthorized access, misuse, or exploitation, while ensuring compliance with relevant data protection legislation and international human rights standards.

Finally, the digital divide between European countries and regions, as well as differences in internet connectivity and infrastructure, may exacerbate inequalities in access to asylum procedures and support services. Efforts to bridge this divide and promote digital inclusion are essential to ensure that all asylum seekers can exercise their rights and access the protection to which they are entitled.[87]

2.3.2 Schengen Information System (SIS)

The Schengen area operates two comprehensive registration and surveillance systems: the Schengen Information System (SIS) and the Supplementary Information Request at National Entries (SIRENE). The SIS, which is currently in operation but is being renegotiated and redeveloped for the enlarged EU, consists of a central database (C-SIS) and national SIS bases (N-SIS) in all Schengen States. The SIS symbolizes the integration of man and machine in legal processes and has been extended over the years to cover more people and categories of data. Key principles of the SIS include defining access to the Schengen area on the basis of non-registration as 'undesirable', harmonizing visas between Member States and minimizing checks within the Schengen area once entry has been granted.

Its main purpose is to maintain public order and security by using the information transmitted by the system. The SIS stores information on persons and objects in five categories, focusing primarily on undesirable aliens for the purpose of refusing entry to the Schengen area and on lost or stolen identity documents. Data entered into the SIS

[87] Madon, S., Schoemaker, E. (2021), "Digital identity as a platform for improving refugee management", in *Information Systems Journal*, vol. 3, n. 6, pp. 929–953.

includes basic information such as name, date of birth, physical characteristics and reasons for the alert. The system operates on a hit/no hit basis, with hits triggering actions such as arrests or vehicle stops.

From March 2023, the Schengen Information System (SIS) will include different types of biometric data to authenticate and validate the identity of persons registered in the system. These include photographs, palm prints, fingerprints, finger marks, palm marks and DNA records (specifically for missing persons). Fingerprint, palm print, fingermarks and palm marks data are used for biometric searches through the SIS Automated Fingerprint Identification System. However, the SIS does not currently use photo and facial recognition technology. Before implementing this technology, the European Commission must submit a report assessing its availability, readiness, and reliability. The European Parliament will be consulted on this report. Once the photographic and facial recognition technology is integrated into the SIS, Member States will be able to use these tools at regular border crossings. Subsequently, the Commission may adopt delegated acts to define additional circumstances in which photographs and facial images may be used to identify persons.[88]

SIRENE, which is linked to the SIS, facilitates the exchange of complementary information, including biometric data and criminal intelligence, between Member States. Although not explicitly mentioned in the Schengen Convention, SIRENE complements the SIS by providing a means for more detailed data exchange. Both systems contribute to the management of irregular migration, with the SIS focusing in particular on identifying and refusing entry to irregular migrants. Despite its limitations, the SIS has become an indispensable tool for maintaining law and order and security, particularly in relation to illegal immigration. The plans for SIS II, which have been developed to accommodate new members and improve functionalities, include proposals for the integration of biometric data and increased access to the system. However, uncertainties remain about the exact functionalities and implementation costs, with estimates suggesting significant financial investments by Member States.[89]

[88] Migration and Home Affairs (2023), *What is SIS and how does it work?*

[89] Broeders, D. (2007), "The new digital Borders of Europe", in *International Sociology*, vol. *22*, n.1, pp. 71–92. (p.79).

2.3.3 The EURODAC system of identification

A key European database known as EURODAC, linked to the Dublin II Regulation and its predecessor, the Dublin Convention, plays a central role in managing asylum applications and preventing asylum shopping. Originally established in 1991, EURODAC underwent a long and politically charged development process before becoming operational in January 2003. Originally intended to store the fingerprints of asylum seekers only, its scope was extended to include the fingerprints of irregular migrants. Council Regulation (EC) No. 2725/2000, which established EURODAC for comparing fingerprints to enforce the Dublin Convention, was in effect until July 2015 when the new EURODAC Regulation was implemented. The old regulation recognized EURODAC's potential to facilitate Dublin Convention enforcement and asylum seeker identification but acknowledged the privacy and data protection concerns, necessitating safeguards like specific data retention periods and rules for data transmission.

EURODAC works by categorizing fingerprints into three groups: those of asylum seekers, those of irregular migrants apprehended at the external borders and those of aliens found illegally present within the Member States. While categories 1 and 2 are stored for future reference, category 3 data is checked but not stored. Data in EURODAC is automatically erased after the retention period or when certain conditions are met, such as the acquisition of citizenship or departure from the Member State. Recognized refugees' data is blocked or erased. The regulation also imposes safeguards to ensure lawful data collection, accuracy, and security, including restrictions on unauthorized access and rights for data subjects to access and correct their data. In 2008, the Commission proposed amendments to unblock data of recognized refugees, clarify transmission and erasure rules, and introduce more information in the system. The proposal to allow law enforcement access to EURODAC faced initial opposition but was eventually included in the 2012 final proposal.[90] Statistics from certain Member States indicated significant hit rates in databases containing asylum seekers' fingerprints, underscoring their relevance in law enforcement. However, concerns were raised regarding the impact on human rights and data protection, particularly in terms of supervision and transparency.

[90] Roots, L. (2015), "The new EURODAC regulation: Fingerprints as a source of informal discrimination", in *Baltic Journal of European Studies*, vol. *5*, n. 2, pp. 108–129.

Despite concerns, the implementation of EURODAC has been relatively cost-effective, with a community budget of €8.5 million for 2000 and around €1 million per year thereafter. Its effectiveness in supporting removal policies is evident, particularly in identifying irregular migrants whose lack of documentation poses a challenge to removal efforts. As EURODAC continues to accumulate data, its role in facilitating expulsion procedures is expected to increase, making it a valuable tool in European migration management.[91]

To understand the rules governing the collection and storage of fingerprints, it's important to understand how the EURODAC biometric system works. EURODAC collects fingerprints from all ten fingers of asylum seekers and immigrants aged 14 and over. These fingerprints are digitized and transmitted to the Central Unit, which stores them for comparison with previously transmitted data. If a match is found, the Central Unit determines which country should process the person's application, thus facilitating possible removal. The data stored in EURODAC include fingerprints, gender, date of fingerprinting and a reference number provided by the supplying State. While the person remains anonymous in terms of name and place of residence, the reference number allows the data to be linked to a specific individual, making it personal data under the European Data Protection Directive.

Fingerprints are favored in biometric systems because they are easy to copy and scan, but they must also be reliable and durable. Although they can be modified or copied, fingerprint databases such as EURODAC generally give good results with low error rates, especially when all ten fingers are used.

Biometric features such as fingerprints are universal, persistent, and unique identifiers, making them valuable for identity verification in several areas, including migration and asylum. Biometric systems such as EURODAC speed up asylum procedures by determining which country is responsible for an applicant on the basis of fingerprint matches, thus preventing applicants from moving between Member States without being claimed.[92]

The process of fingerprinting asylum seekers, whether for identification or verification purposes, is based on the assumption that identity is fixed and predetermined. Authorities seek to establish or confirm an individual's identity on the basis of official documents they carry or information they provide. However, rather than revealing pre-existing identities, these practices actually establish identities through a variety of methods, including

[91] Broeders, D. (2007), pp. 82-83.
[92] Roots, L. (2015).

investigations into the person's claimed origins, technical analysis of identity documents, and linguistic and psychological assessments.

Most of these methods are based on circumstantial evidence, often leaving immigration authorities with only the person's account to rely on. As a result, authorities are eager to find new ways to establish identity, making biometrics particularly attractive. Biometrics offer the potential to create an identity independent of a person's narrative, based solely on their physical attributes. While this may seem like a solution to the challenge of verifying the identity of asylum seekers, it raises significant civil and human rights concerns. Critics argue that the use of biometrics, which essentially uses people's bodies to identify them, violates fundamental rights. Biometric registration involves marking people's bodies with identifiers that can be read by specialized equipment, effectively stigmatizing them and potentially subjecting them to surveillance and control wherever they go. Concerns include potential invasions of privacy, disproportionate use of biometric data and the institutionalization of unconstitutional practices. The routine collection of fingerprints required by systems such as EURODAC is seen as a violation of privacy rights, especially when done without reasonable suspicion or proportionality. There are also concerns about the lack of limits on data retention and the potential for retaliation against refugees' countries of origin.

In the case of EURODAC, the fingerprinting of asylum seekers and immigrants turns their bodies into markers of legality or illegality. Once enrolled in the system, individuals' bodies become evidence of their immigration status, allowing authorities to track and potentially expel them from EU territory on the basis of biometric data.[93]

2.3.4 Artificial Intelligence

Artificial intelligence (AI) has the potential to revolutionize the way states and international organizations seek to manage international migration. AI is beginning to be used to carry out tasks such as identity checks, border security and control, and the analysis and processing of data on visa and asylum seekers.

The European Union and its member states are increasingly using Artificial Intelligence technologies as part of their strategy to improve border control and address security concerns related to cross-border terrorism and

[93] Van der Ploeg, I. (1999), "The illegal body: `Eurodac' and the politics of biometric identification", in *Ethics and Information Technology*, pp. 295–302.

serious crime. This reflects a wider trend towards making EU borders 'smarter', which includes not only the use of AI, but also the development and integration of large-scale centralized information systems. There's also the implementation of decentralized mechanisms for the exchange of border and security-related information. Over time, these systems have been extended and upgraded to cover a wider range of individuals, with the aim of closing 'information gaps' and processing a wider range of data, including a greater emphasis on biometric data processing.

Artificial Intelligence has the potential to significantly transform the management of international migration, with applications ranging from identity verification to border security and data analysis. Several countries are already using algorithmic decision-making in immigration processes. In the European Union, the revised Schengen Information System (SIS) will incorporate facial recognition, DNA, and biometric data to facilitate the return of irregular migrants. This trend reflects a growing reliance on AI and other technologies for migration management and border security.[94]

AI-enabled states could use predictive algorithms to anticipate future migration patterns more accurately, using different data sources such as Wi-Fi positioning and big data analytics. This could allow decision-makers to better prepare for large influxes of people, identifying and addressing gaps in reception facilities to meet international human rights obligations. However, there is a risk that AI technologies could be used to strengthen non-entry policies, preventing migrants and asylum seekers from accessing a state's territory. This could include measures such as visa controls and offshore identity checks, potentially leading to unlawful non-refoulement practices.

While AI technologies offer opportunities for innovation and cost-effectiveness in migration management, it is crucial that they are deployed within ethical and legal frameworks, in particular respecting international human rights law. Policymakers should conduct human rights impact assessments to ensure that AI solutions do not violate the rights of migrants and asylum seekers. In addition, states and international organizations should require due diligence assessments from companies developing AI solutions for migration management to mitigate

[94] Dumbrava, C. (2021), “Artificial Intelligence at EU Borders - European parliament”, in *European Parliamentary Research Service*.

potential harms. By adopting a human rights-based approach, AI technologies can modernize practices while protecting the rights of vulnerable populations.[95]

Facial recognition technologies have come under increased scrutiny due to fundamental rights concerns, particularly around bias and discrimination, as well as issues related to privacy and mass surveillance. While much attention has been focused on addressing bias and discrimination, it's important to recognize that even AI systems that are accurate and unbiased can still pose significant risks, including those related to data protection and privacy. The increasing use of biometrics in EU information systems increases the risk of unlawful profiling, such as the potential for facial images to reveal ethnic origin. In addition, even when profiling is not based on biometric or personal data, other types of data or combinations thereof used for algorithmic profiling may lead to discrimination on prohibited grounds. Current safeguards, such as human-in-the-loop safeguards requiring human interaction and the right to an explanation, may not be sufficient to address these risks. As demonstrated by a recent EU-funded research project focusing on the development of emotion recognition technologies, there is a clear need for increased transparency and oversight of EU funding for AI research, particularly in critical areas such as borders and security.[96]

2.3.5 Biometric Matching System (BMS)

The Biometric Matching System (BMS) is a pioneering initiative in identity verification and security infrastructure. Using state-of-the-art biometric technology, it aims to revolutionize the way authorities authenticate individuals, particularly in the context of border control, law enforcement and migration management. The Biometric Matching System (BMS) is a sophisticated database-driven platform designed to store and process biometric data, such as fingerprints and facial images, from large numbers of individuals. The system integrates advanced algorithms and technologies to accurately match and verify biometric information against stored records, enabling authorities to confirm the identity of individuals with unprecedented accuracy and efficiency. The BMS acts as a central repository, consolidating biometric data from various sources, including third country nationals, visa applicants and persons with criminal records. By harnessing this wealth of

[95] Beduschi, A. (2020), "International migration management in the age of artificial intelligence", in *Migration Studies*, vol. *9*, n. 3, pp. 576–596.
[96] Dumbrava, C. (2021).

information, the system facilitates seamless identity verification across multiple domains, enhancing security measures and strengthening the fight against identity fraud and illegal immigration. In addition, the BMS is designed to interface with existing EU databases and systems, such as the Schengen Information System (SIS), enabling interoperability and data sharing between different law enforcement and border control agencies. This interconnection will streamline information sharing and cooperation, promoting a more cohesive and coordinated approach to security and migration management within the European Union. Put simply, the new Biometric Matching System aims to become one of the largest biometric databases in the world, holding the fingerprints and facial images of over 400 million non-EU citizens. However, it has faced significant delays in implementation from June 2022. Once operational, the BMS will integrate with existing EU systems like the Schengen Information System (SIS) and the Visa Information System (VIS), making it easier for authorities to verify the identity of individuals and prevent overstays. It will also connect with other agencies and databases, like Interpol and Europol, to enhance migration and crime control efforts.

The purpose is to streamline identity verification processes across various domains, but critics argue that this integration poses risks, as different databases serve different purposes and have varying legal and policy objectives. There are concerns about potential violations of privacy and fundamental rights, especially regarding access to non-law enforcement information by law enforcement agencies.[97]

The Biometric Matching System represents a transformative leap forward in identity verification and security infrastructure. By harnessing the power of biometric technology and interoperability, this system promises to improve border control measures, strengthen law enforcement capabilities, and protect communities from emerging security threats. However, navigating the complex landscape of privacy, regulatory compliance and ethical considerations is paramount to realizing the full potential of BMS while upholding the rights and values of individuals.

[97] Martins, B. O., Lidén, K., Jumbert, M. G. (2022), "Border security and the digitalisation of sovereignty: insights from EU borderwork", in *European Security*, vol. 31, n. 3, pp. 475–494.

2.4 A different point of view: Digital practices of migrants

Throughout history, migrants have relied on various forms of media and communication technologies to stay connected to their families, communities, and places of origin. Before the digital age, transnational connections were maintained through letters, newspapers, telephone calls and remittances. Even in the 1960s and 1970s, labor migrants used voice recordings on cassettes to communicate, foreshadowing today's digital voice messages.

The advent of digital technology, particularly smartphones and social media platforms, has revolutionized the way migrants stay connected. Migrants have been quick to adopt new media and become adept users, sparking debates about the necessity of smartphones for refugees during their journeys. While smartphones provide connectivity and access to vital information, they also expose refugees to surveillance and control by authorities. The intersection of migration and ICTs has given rise to the field of digital migration studies, which focuses on how ICTs shape migration processes. Scholars explore migrants' everyday use of ICTs, state surveillance, and the construction of imagined communities through digital platforms. Digital diasporas, organized on the Internet, engage in political activism and cross-border initiatives.[98]

In today's interconnected world, digital technologies have become integral tools for migrants as they navigate the complexities of migration journeys, settlement processes, and integration into new societies. From accessing information and services to maintaining social connections and advocating for their rights, migrants' digital practices play a pivotal role in shaping their experiences and trajectories in host countries. At the heart of migrants' digital practices is the search for information and knowledge. Before embarking on their journeys, migrants often rely on digital platforms such as social media, messaging apps and online forums to gather information about migration routes, destination country policies and available resources. These platforms serve as virtual hubs where migrants can access real-time updates, share insights, and seek advice from fellow migrants, diaspora communities and humanitarian organizations.[99] During their journeys, digital technologies serve as lifelines for migrants, enabling them to stay connected with loved ones, access emergency assistance, and navigate unfamiliar terrain. Mobile devices equipped with GPS, translation apps, and mapping services facilitate communication and navigation, helping migrants overcome language barriers and find their way to safety. Moreover, social media

[98] Palmberger, M. (2022), "Migrants and new media", in *Oxford University Press eBooks*, pp. 163–176.
[99] Diminescu, D. (2008), "The Connected Migrant: An Epistemological Manifesto", in *Social Science Information*, vol. 47, n. 4, pp. 565–579.

platforms provide platforms for migrants to share their stories, seek support, and raise awareness about their plight, amplifying their voices and mobilizing solidarity across borders.

Online platforms serve as gateways to essential services such as housing, employment, education, and healthcare, enabling migrants to access information, submit applications and connect with service providers remotely. In addition, digital communication tools facilitate communication with government agencies, legal aid organizations and community groups, empowering migrants to navigate bureaucratic processes and advocate for their rights.

In addition to practical utility, digital technologies also serve as spaces for cultural expression, socialization, and community building among migrants. Social media platforms, online forums, and virtual communities provide avenues for migrants to connect with peers, share experiences, and celebrate their cultural heritage. These digital spaces serve as sources of support, solidarity, and resilience, fostering a sense of belonging and identity in the face of displacement and marginalization.[100]

However, alongside the opportunities presented by digital technologies, migrants also confront risks, challenges, and vulnerabilities in the digital realm. Concerns about privacy, security, and surveillance loom large as migrants navigate online spaces, particularly in contexts where state actors employ digital technologies for border control, data collection, and monitoring. Moreover, digital divides, language barriers, and limited access to technology exacerbate inequalities among migrant populations, hindering their ability to fully harness the potential of digital tools for empowerment and inclusion.[101]

2.4.1 The use of smartphones by migrants and refugees

Recent studies have highlighted the importance of smartphones for refugees during their journeys, as crucial for route planning and cost reduction. These studies highlight the key role of mobile mapping applications in enabling refugees from Afghanistan, Iran, and Syria to navigate borders using GPS and other technologies, reducing their reliance on smugglers. Refugees often describe these applications as indispensable tools that help them check their location, orient themselves to their next destinations, and ensure their safety during dangerous sea crossings. However, the use of smartphones by refugees also poses risks, as GPS applications can be exploited by state

[100] Madianou, M., Miller, D. (2013), *Migration and new media: Transnational Families and Polymedia*, Routledge.
[101] Karim, K. H., Al-Rawi, A. (2018), *Diaspora and media in Europe: Migration, Identity, and Integration*, Springer.

officials, traffickers, and smugglers to track their movements. Refugees may also face extortion and threats from thieves, traffickers and corrupt authorities demanding access to their phone contacts. Despite these challenges, smartphones are facilitating the expansion of migration networks, allowing refugees to gather information about asylum procedures and host countries, communicate with fellow migrants, and receive tips on how to navigate border crossings.

Social media platforms play a crucial role in connecting refugees and sharing information, but also pose risks of online fraud and misinformation. Refugees are often cautious about verifying the credibility of online information sources and adopt digital strategies to protect their identity and privacy. Despite the limitations of mobile access and connectivity, refugees maintain communication with family and friends through calls and texts, providing financial support and emotional comfort during their journeys. In addition, smartphones serve as distractions, helping refugees alleviate boredom and document their experiences along the way.[102]

The use of information technology has brought some benefits to the lives of migrants, particularly asylum seekers. The use of mobile technologies among resettled refugees has been linked to social inclusion and improved access to information vital to their daily lives. However, researchers note that barriers such as low digital literacy, socio-economic constraints, language barriers and cultural differences can impede refugees' effective use of ICTs and affect their social participation. In some cases, issues such as income, mobility and availability significantly limit the use of ICT among refugee migrant groups. In addition, refugees' perceptions of the usefulness and accessibility of mobile phones influence their adoption of these technologies.

Refugees are often stereotyped as vulnerable and lacking in autonomy, but these attributions are quite inaccurate. Mobile media literacy among refugees is crucial, enabling them to negotiate life's challenges and express themselves creatively through smartphones. In addition, mobile technologies have the potential to facilitate learning and skills development among refugees, both within and outside of educational settings. For example, smartphones facilitate administrative tasks and navigation through bureaucratic processes, helping refugees in their resettlement journey.

[102] Alencar, A. (2020), "Mobile communication and refugees: An analytical review of academic literature", in *Sociology Compass*, vol. *14*, n. 8, p. 4.

Attitudes and behaviors of the host society also influence refugees' use of smartphones. Discrimination and hostility experienced by refugees may lead to greater reliance on mobile phones for support and avoidance of direct interaction with the local community. However, refugees' desire for cultural integration may drive their use of mobile phones for language and cultural learning. Refugees' mobile phone practices are situated within the power structures of both home and host countries, enabling them to challenge authorities and maintain links with transnational networks. In the context of transnational family relations, mobile technologies play a paradoxical role, requiring emotional labor from resettled refugees. They feel obliged to remain constantly available to call family members but may also wish to disconnect to avoid distress.

Overall, while mobile technologies offer opportunities for social inclusion and support among resettled refugees, challenges remain in addressing digital literacy, social integration, and emotional well-being in host societies.[103]

Final remarks

At the end of this chapter, an overall picture emerges of the multiple dynamics that define the intersection between migration and digitalization in the European context. Through the analysis of European migration policies, we understand the attempt to harmonize different national perspectives and address the common challenges posed by migration. However, the emergence of digital governance of migration in the Mediterranean raises critical questions about transparency, accountability, and the protection of human rights in decision-making processes.

The digitalization of border control, on the other hand, offers new possibilities for monitoring and managing migration flows, but also raises concerns about privacy and data security. Finally, the digital practices adopted by migrants are redefining the dynamics of migration itself, enabling greater connectivity and access to resources, but also exposing individuals to new risks and vulnerabilities.

In this complex and evolving context, it is clear that the digitalization of migration in Europe is a multidimensional challenge that requires a holistic and collaborative approach. It is essential to promote policies that effectively balance security needs with respect for human rights, while ensuring equitable and inclusive access to technology for all stakeholders. Only through shared commitment and critical reflection can we hope

[103] Ivi, p. 7.

to shape a future in which digitalization can contribute positively to the management and integration of migration in Europe.

Chapter 3. Case study: Syrian migration to Europe and its digital implications

Syrian migration to Europe has been one of the most significant humanitarian crises of the 21st century, with profound implications not only for the migrants themselves, but also for their host countries and communities. This chapter seeks to explain how, in recent years, the digital revolution has had a profound impact on different aspects of migration, providing both opportunities and challenges for Syrian refugees seeking safety and stability in Europe.

It shows how the emergence of digital technologies has reshaped the migration experience from the outset, influencing the way refugees plan, navigate and communicate during their journey. In particular, a section of the chapter focuses on the use of mobile phones, which have become indispensable tools for Syrian migrants in particular, providing access to vital information, communication channels and digital mapping services. Through social media platforms, messaging apps and online forums, refugees can connect with family members, seek advice from peers and access real-time updates on border crossings and safe routes. In addition, digital technologies have facilitated access to essential services and support networks for Syrian migrants upon arrival in Europe. Online platforms and mobile applications developed by humanitarian organizations and government agencies provide information on asylum procedures, legal rights, health services, language courses and job opportunities. The focus is on digital tools that provide refugees with access to virtual counselling, psychosocial support, and educational resources to help them navigate the complex challenges of resettlement and integration. While there are real opportunities presented by this new era of globalization, it is recognized that the digitalization of Syrian migration also poses significant challenges. Concerns about online privacy, surveillance and security are widespread, particularly for vulnerable populations such as refugees. Migrants face inequalities in access to digital technologies and digital skills, which may exacerbate existing inequalities among refugee populations and limit their ability to take full advantage of digital resources and services.

Syrian migration to Europe in the digital age is a multifaceted phenomenon, shaped by the intersection of humanitarian crises and technological advances. By adopting a rights-based approach to digital migration governance, stakeholders can harness the transformative potential of digital technologies while safeguarding the rights and dignity of Syrian migrants on their digital journey to Europe.

This chapter attempts to intertwine the digital world and the world of Syrian migration, focusing on the latter through the practices that migrants and refugees from Syria engage in through the use of digital technologies of various kinds. Furthermore, the chapter aims to show how Europe has been able to respond to the new needs of increasingly technological migrants by installing new border technologies that are essential to ensure the security of migrants, but also of Europe itself.

3.1 Syrian migration to Europe

In March 2011, Syria faced unprecedented protests challenging the authoritarian rule of President Bashar al-Assad, sparked by demands for political reform and an end to repression. The Syrian government faced growing resentment over restrictions on freedoms and economic hardship, which feed public anger. Inspired by the successful uprisings in Tunisia and Egypt in 2011, Syrian pro-democracy activists took to the streets in peaceful protests, hoping for change. The protests were sparked by the arrest and torture of 15 boys for writing graffiti in support of the Arab Spring. Tragically, one of the boys, a 13-year-old, died after being brutally tortured. In response to the demonstrations, President Bashar al-Assad's regime unleashed a violent crackdown that resulted in hundreds of deaths and scores of arrests.

The formation of the Free Syrian Army by military defectors in July 2011 marked the escalation of the conflict, plunging Syria into a proper civil war.[104]

The Syrian war has resulted in a staggering 13 million displaced people, more than 60% of Syria's pre-war population. Some 5.6 million are international migrants or refugees, while 6.1 million are internally displaced within Syria. This internal displacement was often only the first stage, as many Syrians eventually migrated outside the country, giving rise to various categories of migrants, both formal and informal.

Syria's immediate neighbors, notably Turkey, Lebanon, Jordan and Iraq, host the largest number of Syrian refugees. The majority of refugees live outside formal refugee camps, with less than 10 per cent living in such facilities. Urban areas have absorbed most of the refugees, and an inadequate humanitarian response has left many refugees unemployed and without support.[105]

[104] The Editors of Encyclopaedia Britannica. (2024), "Syrian Civil War - Facts & timeline", in *Encyclopedia Britannica*.
[105] Valenta, M., Jakobsen, J., Župarić-Iljić, D., Halilovich, H. (2020), "Syrian refugee migration, transitions in migrant statuses and future scenarios of Syrian mobility", in *Refugee Survey Quarterly*, vol. *39*, n. 2, pp. 153–176

From 2014 to 2016, hundreds of thousands of Syrians sought asylum in Europe, challenging the structures and values of the European Union. Limited opportunities and deteriorating conditions in neighboring countries such as Lebanon, Jordan and Turkey accelerated this movement. The migration unfolded in stages, starting with internal displacement, followed by legal but difficult migration to neighboring countries, and finally many seeking refuge in Europe, particularly Germany and Sweden. The Aegean migratory route emerged as a major route, with over half a million people crossing into Europe by winter 2015. The Syrian conflict drove Syrian refugees to seek asylum in Europe via the Mediterranean coast of North African countries such as Tunisia, Libya and Egypt. Germany, under Chancellor Angela Merkel's welcoming policies and efficient asylum procedures, emerged as a preferred destination. The central Mediterranean route involved smuggling operations using large, derelict cargo vessels departing from North African countries. Syrians, along with other migrants, faced dangerous journeys on overcrowded boats, often organized by smugglers who took advantage of their desperation. By 2015, many Syrians were turning to the Aegean route from Turkey to Greece in search of a safer alternative. But this route also posed significant risks, with overcrowded rubber dinghies and dangerous sea crossings. Despite the dangers, hundreds of thousands of Syrians made the journey, hoping to reach Europe for a chance at a better life.[106]

3.1.1 Europe-Turkish deal for Syrian migration

One of the routes taken by Syrian migrants to Europe is the sea route via Greece, but especially Turkey. This crossing takes place illegally and by means wholly unsuitable to ensure an effective arrival at destination. In 2015, this type of route increased exponentially, causing major consequences. Resulting in hundreds of deaths at the beginning of the summer season. This tragedy underscores the consequences of the implementation of the EU-Turkey deal, which has made it harder to cross from Turkey to Greek islands. Due to the closure of the Balkan route and the EU-Turkey deal, refugees arriving in Greece are detained on the Greek islands with the threat of

[106]Hudson, L. (2018), "Syrian Refugees in Europe: Migration Dynamics and Political Challenges,", in *New England Journal of Public Policy*, Vol. 30, n. 2, Article 9.

deportation to Turkey, while those on the Greek mainland have little hope of leaving soon. These political changes have forced refugees to take the much riskier route via Libya.[107]

The agreement had several aims: Firstly, it aimed to ease the pressure on Europe's borders and discourage potential asylum seekers and migrants from undertaking risky journeys. Equally important was its aim to send a message, both internally and externally, that EU member states can present a united front on key issues facing the Union. Alongside the deal, there were also efforts to restrict migration to Europe, such as imposing restrictions along the Western Balkans migration route. Despite significant and sustained criticism from human rights groups and humanitarian organizations, leaders from both the EU and Turkey have shown a continued interest in maintaining at least some aspects of the basic principles of the agreement.

One of the key provisions of the deal was the establishment of a mechanism known as the 'one-to-one initiative'. Under this scheme, for every Syrian refugee returned to Turkey from the Greek islands, one Syrian refugee from Turkey would be resettled in a European Union (EU) member state. This approach was intended to discourage irregular migration by creating a more orderly process for refugee resettlement. In return for its cooperation in the management of migration flows, Turkey was promised several incentives by the EU. These included the liberalization of visa restrictions for Turkish citizens travelling to the EU and financial assistance through the Facility for Refugees in Turkey, amounting to around €3 billion. In addition, the EU pledged to help Turkey improve its security measures to prevent illegal migration routes from Turkey to the EU.

The EU-Turkey deal aimed to address the humanitarian crisis by supporting refugees in Turkey while controlling migration flows to Europe. By incentivizing the return of irregular migrants from Greece to Turkey and facilitating the resettlement of Syrian refugees from Turkey to EU member states, the deal sought to establish a more orderly and humane approach to managing refugee movements.[108]

The EU-Turkey agreement was criticized for sidestepping refugee protection obligations and faced scrutiny over Turkey's status as a safe country despite concerns about discrimination and judicial politicization. The suspension of the deal in 2020 underscored the fragility of the arrangement and the prioritization of strategic interests over

[107] Rygiel, K., Baban, F., Ilcan, S. (2016), "The Syrian refugee crisis: The EU-Turkey 'deal' and temporary protection", in *Global Social Policy*, vol. *16*, n. 3, pp. 315–320.
[108] The International Rescue Committee (2023), "What is the EU-Turkey deal?".

humanitarian principles. While the agreement facilitated resettlement processes and reduced irregular border crossings, it reflected a piecemeal approach driven by national interests rather than a unified response.

An examination of the EU-Turkey deal reveals both challenges and prospects. While the deal has been numerically successful in reducing the flow of refugees to Europe, its human impact cannot be captured by statistics alone. By closing the main smuggling routes, refugees are forced onto riskier and more expensive routes, which are exploited by smugglers. Rather than addressing the root causes of forced displacement, the agreement merely postpones the reality of the situation in Europe.

Furthermore, the deal operates on an exchange system between the EU and Turkey, prioritizing economically advantaged people for entry, often at the expense of vulnerable groups such as the elderly and children. Greece's asylum commissions have found Turkey unable to provide sustainable protection, and refugee returnees have faced appalling conditions in Greek detention centers and on islands. The deal has led to a surge in human rights abuses against asylum seekers, with some forcibly returned to Turkey without proper asylum procedures or the chance to appeal.

Despite its drawbacks, the EU-Turkey agreement has had notable successes. Cooperation with Turkish authorities has led to a significant decrease in irregular arrivals to the EU, with daily crossings falling from a peak of 10,000 in October 2015 to an average of around 43, and the number of deaths in the Aegean falling from 1,145 to 80 in the year following the deal. This drop in arrivals has disrupted illegal smuggling networks, prevented around one million people from embarking on dangerous routes and prevented over 1,000 deaths. The deal has become a key component of the EU's broader migration strategy, outlined in the European Agenda on Migration, which aims to improve rescue operations at sea, ensure the safety of those resettled and support vulnerable populations financially and through social initiatives. But while the deal has saved lives in Greece, it has shifted migration routes to other destinations, such as Italy, where the risks remain high.[109]

Recent years have shown that the European Union and Turkey have a complicated partnership, influenced not only by geography but also by political differences. While the agreement has encountered difficulties, particularly on the Turkish side, its central promise to Europe has largely been fulfilled. The influx of migrants and asylum

[109] عبدات, أ. (2018). "The EU-Turkey refugee deal: First Lessons for the EU's (Mediterranean) Neighborhood Strategy", in *academia.edu*.

seekers has decreased significantly, in part due to the deal, and the EU has remained cohesive. With the completion of the €6 billion aid package in December, there has been renewed interest in renegotiating the deal. Despite its shortcomings, the EU-Turkey declaration has become a model for Europe's approach to outsourcing migration management to neighboring countries. This article looks at the successes, challenges and costs associated with the 2016 deal.

3.1.2 Syrian crisis in Turkey

Turkey currently hosts the largest population of Syrian refugees compared to other neighboring countries. The Syrian conflict has led to an influx of Syrian refugees into Turkey, particularly into the border province of Hatay. The Turkish government initially adopted an open-door policy towards Syrian refugees, leading to a steady increase in arrivals. By September 2011, refugee camps had been established in several provinces, housing thousands of Syrians. Over the years, the number of registered Syrians in Turkey increased significantly, reaching around 2.2 million according to official figures. The influx of Syrians into Turkey was influenced by their geographical proximity to Turkey. Most Syrians entered through land border crossings along Turkey's southern border with Syria. The border region became a major hub for refugee movements and humanitarian activities due to its proximity to the conflict zones in northern Syria. The first arrivals in Turkey were mainly political activists fleeing government reprisals. However, as the conflict intensified and entire neighborhoods were targeted, a larger wave of refugees fled due to the destruction of their homes, the lack of basic necessities and the constant threat to their lives. Initially, most Syrians settled in refugee camps near the border, but a large proportion eventually dispersed throughout Turkey, especially in urban centers. Cities such as Istanbul, Gaziantep, Sanliurfa and Hatay have significant Syrian populations. In some areas, Syrians outnumber the local population, highlighting the profound impact of the refugee influx on host communities. Turkey's response to the Syrian refugee crisis has been characterized by the rapid establishment of refugee camps. These camps, located in ten cities, currently house more than 260,000 people. The Turkish government's approach has been characterized by pragmatism and efficiency, focusing on rapid implementation rather than prolonged deliberation.[110]

[110] Kirişci, k. (2014), "Syrian Refugees and Turkey's Challenges: Going beyond Hospitality", in *Brookings.*

Unlike neighboring countries, Turkey has maintained tight control over the delivery of aid to Syrians, limiting the involvement of international organizations such as the UNHCR. This control reflects Turkey's view of Syrian immigration as a sensitive political issue to be closely managed by national authorities and NGOs. While the UNHCR's role has expanded over time, particularly in the management of humanitarian services, the overall management of refugee camps remains under Turkish control.

Economic integration between Turkey and Syria, fostered by a free trade agreement signed in 2004, has facilitated the economic integration of Syrians into Turkish society. However, the cultural differences between the two countries are considerable. Despite some common religious ties, cultural similarities are limited. Travelling from Turkey to Europe has primarily been undertaken by educated Syrians seeking better job opportunities, rather than being a widespread phenomenon discussed in the research interviews. Middle class individuals, including engineers, academics, and doctors, are among those more likely to consider migration to Europe.

Looking at the living conditions of Syrians in Turkey, it is striking that they vary greatly, reflecting the diversity of Syrian society. While wealthy and educated Syrians may have better prospects for long-term success, impoverished farmers who have lost everything face greater challenges. Syrians in Turkey face a mixed situation, with relatively good provision for basic needs but limited opportunities for long-term livelihoods. This parallels the situation of refugees in Western Europe, with similar challenges such as language barriers, labor market issues and temporary residence permits. Upon arrival in Turkey, Syrians are registered by local authorities through a national system set up by the DGMM with the support of UNHCR. This registration process has been largely successful, with no access problems reported. Upon registration, Syrians receive a residence card, which gives them access to various services. They have freedom of movement within their registered area and can choose to live in camps or seek accommodation on the open market. However, only about 10 per cent of Syrians live in camps, as living in camps is generally considered the least preferred option, except for financial reasons.[111] The current camps are not at full capacity and residents are not compelled to remain in them, reflecting a policy of respecting individual choices about their living arrangements. Turkey's 26 refugee camps are located close to the Syrian border, mainly in the south-east. Despite the historic conflict in the region between the Turkish government and the Kurdish opposition, the management of Syrian refugees has not been significantly affected.

[111] Ibidem.

Basic services such as health care, education, vocational training, and recreational activities are provided in the camps under the supervision of the Disaster and Emergency Management Authority (AFAD).[112] Outside the camps, however, social services for Syrians are limited, leaving many to rely on dwindling savings and informal employment, which is technically illegal but widely tolerated.

Despite the challenges, a significant number of Syrians do not return to Syria from Turkey. Access to education and work permits are the most pressing concerns identified, hindering the long-term livelihood prospects of Syrians in Turkey.

3.2 Syrian refugees' passage to Europe in the digital era

Social media and mobile devices have become essential tools for migrants, including asylum seekers, facilitating various aspects of their migration journeys. Studies show that the majority of Syrian asylum seekers used social media before and during their migration to Europe. These technologies play a crucial role in providing access to information, aiding navigation and communication, shaping decisions about travel routes and methods, and potentially enhancing migrants' safety by enabling them to contact authorities in times of danger. In the digital age, Syrian refugees making the journey to Europe are navigating a landscape that is not only physically challenging, but also digitally surveilled. As they seek safety and opportunity in a new country, they encounter a myriad of obstacles and risks, both tangible and virtual. An important aspect of this journey is the use of digital technology, including smartphones and social media platforms. While these tools can serve as lifelines for communication, information gathering and navigation, they also expose refugees to various forms of surveillance and manipulation.

However, while social media and mobile devices offer opportunities for migrants to be more autonomous and less dependent on smugglers, a 'digital divide' still exists, with not all groups having equal access to these technologies. In addition, smugglers use social media to advertise their services. The passage of Syrian refugees to Europe in the digital age is further complicated by the spread of misinformation and propaganda online. Refugees may encounter false information about migration policies, routes, and conditions in destination

[112]The Global Compact on Refugees (2023), *Construction, coordination and management of temporary accommodation centres*, Emergency preparedness & response, *UNHCR*.

countries, leading to confusion and misinformation. They may also face online exploitation by human traffickers or fraudsters posing as legitimate aid organizations.

On the other hand, immigration authorities in receiving countries can use social media and mobile devices to communicate with migrants and offer deterrent narratives about the dangers of crossing the border illegally. In addition, authorities can analyze social media activity and mobile device content to verify or debunk claims made by asylum seekers about their identity, country of origin or travel route. This information can also be used to assess whether applicants pose a threat to national security or should be excluded from international protection.

Despite these challenges, digital technology also offers opportunities for refugees to access vital information, connect with support networks and document their experiences. Social media platforms serve as channels for sharing stories, raising awareness, and mobilizing support for the rights and needs of refugees. Digital tools also enable refugees to access language translation services, maps, and navigation apps to facilitate their journey and integration process.

However, the reliance on digital technologies also highlights disparities in access and digital literacy among refugees. Not all refugees have access to smartphones or reliable internet connectivity, which limits their ability to use digital tools effectively. In addition, language barriers and unfamiliarity with technology can hinder refugees' ability to navigate digital platforms and distinguish credible information from misinformation.

In conclusion, the passage of Syrian refugees to Europe in the digital age is characterized by both opportunities and challenges. While digital technology provides avenues for communication, information, and advocacy, it also exposes refugees to surveillance, misinformation, and exploitation. As refugees navigate this digital landscape, it is essential to address these challenges and ensure equitable access to digital resources and protection of their rights and safety.[113]

3.2.1 Social media in the migration decision-making

Migrants, particularly asylum seekers, face considerable uncertainty about their future due to factors such as war, political repression, and poverty in their home countries. Access to destination countries is challenging, often

[113] Bolhuis, M. (2020), "Seeking Asylum in the Digital Era: Social-Media and Mobile-Device Vetting in Asylum Procedures in Five European countries", in *Journal of Refugee Studies*, vol. *34*, n. 2, pp. 1595–1617.

involving irregular border crossings and reliance on smugglers. In this context, reliable information is crucial to migrants' decision-making processes. Social media has emerged as an important source of information, providing migrants with a low-cost and accessible means of long-distance communication.

The widespread use of smartphones and social media among migrants during the recent refugee crisis has attracted considerable interest. Although criticized in European public discourse, smartphones have proven to be invaluable tools for asylum seekers. They facilitate communication with family and friends, provide guidance during the journey, and offer access to vital information via social media. While these technologies empower migrants by reducing their dependence on smugglers, they also pose challenges such as restricted access and misinformation. Syrian refugees, in particular, represent a strategic group to study social media use, given their significant numbers and access to these technologies. Social media extend migrants' networks and provide diverse information about migration routes and destinations. However, while social media offer valuable opportunities, they also pose challenges, particularly for asylum seekers. These challenges include limited access to social media due to factors such as affordability, surveillance, and connectivity issues. In addition, the wealth of information available on social media does not always translate into better informed decisions. Migrants must navigate through a range of unverified or biased information, including rumors, which can influence their migration decisions.[114]

Nearly all individuals in the Middle East and North Africa use mobile phones, with a significant majority employing smartphones and accessing the internet regularly. Popular social media platforms like Facebook, Twitter, and Instagram are widely used for entertainment and communication purposes.

However, it's crucial to view those elements as dynamic and relational entities intertwined with people's practices and activities. Digital infrastructures are essential for refugees on their journeys. These infrastructures facilitate connectivity but also present challenges such as surveillance and privacy concerns.

Syrians' refugees, escaping repression, employ specific smartphone practices to safeguard their digital identities and communicate securely. They use closed social media groups and encryption tools to interact with smugglers

[114] Dekker, R., Engbersen, G., Klaver, J., Vonk, H. (2018), "Smart Refugees: How Syrian asylum migrants use social media information in Migration Decision-Making", in *Sage Journals,* vol. 4, n. 1.

and protect sensitive information. These practices highlight the importance of understanding how vulnerabilities like surveillance and technical failures shape smartphone infrastructures and impact refugees' experiences.

The use of smartphones generates specific affordances in refugees' digital journeys to Europe. This perspective sees mobile media as having fixed, defined communicative affordances such as portability, availability, and multimedia capabilities. Studies show that smartphone affordances are not static, but emerge, adapt, and evolve as individuals navigate different circumstances.

In many cases, refugees are forced to leave their homes abruptly, often with only their mobile phones and minimal funds to facilitate their journey to Europe. Digital connectivity plays a crucial role in supporting people during their migration. According to refugee aid workers, migrant deaths are most common in areas without mobile phone coverage, and rescue efforts are often initiated by migrants using their smartphones. When discussing the importance of smartphones in their journey to Europe, refugees highlighted three main aspects: mobility, traceability, and security. For many refugees, smartphones are indispensable tools for navigating their way to Europe, often relying on both smugglers and their smartphones in the absence of legal alternatives. Digital navigation and communication platforms are essential to verify their route and ensure their safety. The ability to communicate their location to coastguards, friends or family along the way is critical to safety and survival, allowing for remote assistance and coordination. Refugees also rely on digital solidarity networks to share information and support each other throughout their journey. These networks continue to provide support beyond the initial migration phase. Information from trusted sources such as family, friends and fellow refugees is more credible than mainstream media reports or official sources. Many refugees' express skepticism towards mainstream news outlets for migration-related information, preferring to rely on personal connections and first-hand accounts.

Overall, refugees exhibit sophisticated digital literacy, adeptly navigating various applications and platforms to gather information and communicate with each other. Their reliance on smartphones underscores the critical role of digital technology in facilitating and shaping refugee experiences during their passage to Europe.

There is an urgent need for states and international organizations to rethink how to effectively integrate smartphone applications into strategies and programs for the integration, care, protection, and assistance of refugees. However, it is crucial to recognize that access to reliable, relevant, trustworthy, and timely information

remains paramount to ensuring information security.[115] Social media and mobile devices have become essential tools for migrants, including asylum seekers, facilitating various aspects of their migration journey. Studies show that the majority of Syrian asylum seekers used social media before and during their migration to Europe. These technologies play a crucial role in providing access to information, aiding navigation and communication, shaping decision-making about travel routes and methods, and potentially enhancing migrants' safety by enabling them to contact authorities in times of danger.

However, while social media and mobile devices offer opportunities for migrants to be more autonomous and less dependent on smugglers, a 'digital divide' still exists, with not all groups having equal access to these technologies. In addition, smugglers use social media to advertise their services.

On the other hand, immigration authorities in receiving countries can use social media and mobile devices to communicate with migrants and offer deterrent narratives about the dangers of crossing the border illegally. In addition, authorities can analyze social media activity and mobile device content to verify or debunk claims made by asylum seekers about their identity, country of origin or travel route. This information can also be used to assess whether applicants pose a threat to national security or should be excluded from international protection.[116]

In recent years, smartphones have emerged as indispensable tools for a range of purposes, including social media engagement, internet browsing and personal safety, particularly for women. The escalating refugee crisis has underscored the importance of smartphones for refugee safety, as highlighted in a 2016 UNHCR report. In the broader regional context, media reports have documented how smartphones are helping Syrian refugees navigate the dangers of war and displacement, as well as facilitating their journeys across borders, whether legal or illegal. For example, refugees crossing the Aegean Sea from Turkey to Greece, often with the assistance of human smugglers, have used their phones to contact the Greek coastguard for rescue when their boats encountered life-threatening situations. Refugees have also used tools such as Google Maps to plan their journeys from Syria to Europe. As a result, the widespread ownership of smartphones among refugees, estimated at nearly 87%, has played a crucial role in facilitating their safe arrival in Europe.[117]

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[115] Gillespie, M., Osseiran, S., Cheesman, M. (2018), "Syrian Refugees and the Digital Passage to Europe: Smartphone Infrastructures and Affordances", in *Sage Journals*, vol. 4, n. 1.

[116] Bolhuis, M. (2020).

[117] Narli, N. (2018), "Life, Connectivity and Integration of Syrian Refugees in Turkey: Surviving through a Smartphone", in *Questions De Communication*, vol. *33*, pp. 269–286.

3.2.2 The use of technology in everyday life of Syrian migrants and refugees

The use of technology, particularly smartphones, has become an integral part of Syrian migrants' and refugees' daily lives, profoundly shaping their experiences before, during and after displacement. During conflict, technology serves as a lifeline, enabling communication, navigation, access to resources and social connections in ways previously unimaginable. Communication is at the heart of the technological engagement of Syrian migrants and refugees. Smartphones are indispensable tools for staying in touch with family, friends and support networks scattered across borders. Messaging applications such as WhatsApp and social media platforms such as Facebook provide a means of real-time communication, allowing individuals to share updates, seek help and maintain emotional connections despite physical separation. Video calls further bridge distance, enabling face-to-face interactions that reduce feelings of isolation and loneliness. In addition to facilitating communication, technology plays a critical role in navigation and access to information. Mapping applications such as Google Maps help migrants navigate unfamiliar areas, identify safe routes and locate essential services such as refugee camps, health facilities and legal aid organizations. Online resources provide valuable information on asylum procedures, legal rights and available support services in host countries, enabling individuals to make informed decisions and access necessary assistance.[118]

In moments of crisis and emergency, smartphones serve as essential safety tools for refugees facing dangerous situations during their journey. The ability to make emergency calls, contact rescue services or seek assistance from humanitarian organizations can mean the difference between life and death. GPS functionality allows authorities to quickly locate people in distress, facilitating timely intervention and rescue. Technology is also facilitating access to education and skills development for Syrian refugees seeking to rebuild their lives in a new environment. Mobile applications and online platforms offer language courses, educational materials, and vocational training programs, enabling individuals to acquire new skills and knowledge that improve their employability and integration prospects. Digital literacy initiatives further empower refugees to navigate the digital landscape and use technology for personal and professional growth.[119]

[118]Dubinsky, Z. (2015), "For Syrian refugees, smartphones are a lifeline — not a toy" in *CBC*.
[119] Göransson, M., Hultin, L., Mähring, M. (2020), "'The phone means everything.' Mobile phones, livelihoods, and social capital among Syrian refugees in informal tented settlements in Lebanon", in *Migration and Development*, vol. *9*, n. 3, pp. 331–351.

Financial management is another area where technology is playing a transformative role for Syrian migrants and refugees. Mobile banking applications enable individuals to manage their finances, send remittances and access financial services remotely, reducing reliance on cash and facilitating economic participation in the formal sector. Digital payment solutions provide a convenient and secure way to conduct transactions, pay bills and make purchases, thereby increasing financial autonomy and resilience. In addition, technology serves as a platform for social support and community building among Syrian refugees. Virtual communities and online forums provide a space for individuals to connect with others who share similar experiences, seek advice, and offer mutual support. Social media networks enable the formation of supportive communities where individuals can share stories, exchange information, and find solidarity amidst the challenges of displacement and resettlement.

As an example, in Turkey, government authorities have noted the high level of smartphone ownership among Syrian refugees, particularly in camps. It was reported that 90% of Syrian women in Turkey owned a mobile phone, with 91% using it to communicate with relatives both inside and outside the camps. Despite being separated from their husbands and other family members, many Syrian women in Turkey have kept in touch with relatives abroad through smartphones. Telecommunications companies have responded to the connectivity needs of Syrian refugees by improving their infrastructure and services. For example, Turkcell has installed mobile towers in more than 25 camps and employed Arabic-speaking staff in its shops along the border. To accommodate the growing number of Syrian refugees moving deeper into the country, including areas with limited intercultural experience and bilingual retail staff, Turkcell established an Arabic call center in 2014.[120]

In conclusion, the widespread use of technology, particularly smartphones, has revolutionized the daily lives of Syrian migrants and refugees, providing a lifeline for communication, navigation, access to resources, and social connection in the face of adversity. As technology continues to evolve, it is essential to ensure equitable access, promote digital literacy and mitigate the risks associated with online exploitation and misinformation in order to harness the full potential of technology to support the well-being and integration of refugees into host communities. Social media and mobile devices have become essential tools for migrants, including asylum seekers, facilitating various aspects of their migration journey. Studies show that the majority of Syrian asylum seekers used social media before and during their migration to Europe. These technologies play a crucial role in

[120] Narli, N. (2018).

providing access to information, aiding navigation and communication, shaping decision-making about travel routes and methods, and potentially enhancing migrants' safety by enabling them to contact authorities in times of danger.

However, while social media and mobile devices offer opportunities for migrants to be more autonomous and less dependent on smugglers, a 'digital divide' still exists, with not all groups having equal access to these technologies. In addition, smugglers use social media to advertise their services.

On the other hand, immigration authorities in receiving countries can use social media and mobile devices to communicate with migrants and offer deterrent narratives about the dangers of crossing the border illegally. In addition, authorities can analyze social media activity and mobile device content to verify or debunk claims made by asylum seekers about their identity, country of origin or travel route. This information can also be used to assess whether applicants pose a threat to national security or should be excluded from international protection.[121]

It is also important to highlight the technology gap that exists within Syrian refugee communities, especially in comparison to those displaced in Turkey who have the dream and goal of continuing their migratory journey to Europe. Syrian refugees' access to the internet and social media has improved significantly since their migration to Turkey. A greater proportion of migrants and refugees acquired mobile phones with internet access, leading to a decrease in internet non-users and an increase in daily internet use. This digital connectivity became essential for refugees, facilitated by the availability of Syrian-owned shops selling mobile devices and offering repair services at affordable prices. The most commonly used social media applications included WhatsApp, Facebook, YouTube and Instagram, with differences in usage patterns between age groups.

Despite this evidence, there are still gender differences, for example, fewer women than men have access to the internet. Older age groups and those with a lower level of education were also less likely to use the internet. Despite these disparities, overall internet use among displaced Syrians in Turkey exceeded that of both the Syrian and Turkish adult populations. However, certain subgroups, such as rural dwellers and the unemployed, had limited access to digital services due to financial constraints or cultural barriers.

Differences in the digital divide were also observed between different regions of Turkey. In urban areas such as Istanbul, gender differences in internet use were less pronounced than in economically disadvantaged regions.

[121] Bolhuis, M. (2020).

There were also differences among Syrians with different migration aspirations, with younger, highly educated individuals having higher rates of digital device ownership and expressing intentions to migrate to third countries. While digital connectivity plays an important role in the lives of displaced Syrians in Turkey, access to digital devices alone does not determine migration decisions. Despite the narrowing of the digital divide, disparities remain, highlighting the need for targeted interventions to ensure equitable access to technology among displaced populations.[122]

3.3 The European response to the Syrian refugee's crisis

The Syrian conflict and resulting refugee crisis unfolded against the backdrop of numerous challenges already facing the European Union, including financial instability, the rise of extremist populist parties, regional conflicts, and terrorism threats. Since 2011, the European Union (EU) has imposed sanctions on the Assad regime and its supporters in response to their violent repression of civilians. These sanctions aim to bring about a change in the regime's policies and behavior. In particular, they condemn actions such as land expropriation for political purposes and the use of chemical weapons, signaling the EU's refusal to tolerate such behavior. The aim is to encourage the Syrian regime to engage in negotiations for a lasting political solution to the crisis, in line with UN Security Council Resolution 2254.[123]

Although a definitive end to the conflict between the regime and the opposition would be the most immediate solution to stem the tide of refugees from Syria, the EU's ability to intervene is limited. Lacking its own military force and serving primarily as a supportive entity to the UN in political and diplomatic conflict resolution, the EU relies on the use of soft power tools to support Syria and its people. While the EU has taken significant steps to manage the refugee and migration challenge, such as strengthening institutions and introducing new approaches like the hotspot approach, it has not granted supranational institutions autonomous decision-making powers. Instead, the EU has relied on externalization to address the Schengen crisis, highlighting limitations in its ability to offer cohesive solutions as a political union.

[122] Jauhiainen, J. S., Özçürümez, S., Tursun, Ö. (2022), "Internet and social media uses, digital divides, and digitally mediated transnationalism in forced migration: Syrians in Turkey", in *Global Networks*, vol. 22, n. 2, pp. 197-210.
[123] *Factsheet - The EU and the Syria crisis (13.06.2023) - Syrian Arab Republic*. ReliefWeb.

The European Union (EU) has responded to the Syrian refugee crisis through initiatives such as the European Agenda on Migration and the New Pact on Migration and Asylum. These efforts aim to provide humanitarian assistance to Syrian refugees and support neighboring host countries. The EU and its Member States have allocated over 17 billion euros in aid since the conflict began, with significant contributions to the Madad Fund and other regional programs in Lebanon, Jordan, and Iraq. Brussels Conferences on Supporting the future of Syria and the region have been held since 2017 to mobilize humanitarian aid. The Brussels V Conference in March 2021 pledged 5.3 billion euros for Syria and neighboring countries, primarily from Europe. However, critics argue that these measures focus more on financial aid than on addressing the protection needs of refugees. Before the Syrian Uprising in 2011, the EU pursued a policy of constructive engagement with Syria, aiming for shared prosperity through economic development and dialogue. However, the uprising shifted the EU's stance towards opposing the Assad regime and prioritizing peace and security in the region.

The threat of terrorist groups like Da'esh in Syria prompted the EU to implement restrictive measures, including sanctions targeting individuals and entities associated with terrorism. Despite these efforts, the EU's response to the refugee crisis has been weakened by divisions among Member States, with some countries welcoming refugees while others refused entry. This discord was evident in debates over the arms embargo on Syrian rebels, highlighting Europe's divergent policy positions.

Ultimately, the EU's effectiveness in addressing the Syrian Civil War and refugee crisis depends on the unity and cooperation of its member states. The EU can only exert influence on the international stage if its constituent parts allow it to do so. Despite providing crucial humanitarian assistance and imposing sanctions to undermine the Assad regime, the EU's strategy has not been sufficient to resolve the conflict. The EU bears a significant portion of the humanitarian costs associated with the crisis, yet it has not played a decisive role in resolving it. The lack of unity among Member States and the complexity of EU policies further diminishes the EU's credibility as a regional and global player.

The debate over European integration is central to addressing these challenges. Internally, the EU must establish an integrated asylum system and better coordinate migration policy. Externally, it needs to coordinate a coherent Common Foreign and Security Policy (CFSP) and Common Security and Defence Policy (CSDP). Addressing

solidarity deficits among Member States and deciding on the future integration model are crucial for the EU to effectively respond to crises.[124]

For example, some responses from individual states, such as Italy, can be significant. The latter demonstrated solidarity with Syrian refugees in the aftermath of the crisis, mainly through two key initiatives: the government-led resettlement program and the humanitarian corridors facilitated by civil society. These efforts, which began in 2015, were not initially conceived as a direct response to the Syrian conflict but ended up benefiting many people fleeing the unrest in Syria and seeking refuge in neighboring countries.

Although Italy has historically implemented measures to deter asylum seekers and migrants from reaching its territory, its experience with resettlement prior to 2015 was sporadic and informal. However, it was only during the Syrian crisis that Italy took significant steps to formalize its resettlement program. Previous attempts to address asylum and humanitarian protection through legislative proposals were never approved by Parliament. Discussions on an Italian resettlement program began in 2005 when the Ministry of the Interior, in cooperation with the European Commission, funded a research project conducted by the IOM. This project, known as the 'Dante Plan', proposed the establishment of a resettlement program in which Italian local authorities would receive refugees in cooperation with NGOs. However, due to a lack of political will and institutional funding, the proposal was never implemented.

Italy's involvement in resettlement gained momentum with the EU's creation of the Asylum, Migration, and Integration Fund (AMIF) in 2014. This program offered financial incentives to member states to resettle refugees, prompting Italy to participate. Between 2015 and 2017, Italy committed to offer 1,989 places and resettled 1,612 people. In 2016, following the EU-Turkey declaration, Italy allocated part of its resettlement quota to Syrian refugees from Turkey. Subsequently, Italy committed to resettle 1,000 people in 2018 and eventually resettled 871 people.[125]

Finally, in 2017, the European Parliament and the Council reached a tentative agreement to review several key components of the Common European Asylum System (CEAS). This included the establishment of a dedicated EU Asylum Agency, reforming the Eurodac system, and reassessing various directives and regulations related to

[124] Balla, E. (2023), "The European Union's response to the Syrian refugee crisis.", in *E-International Relations.*
[125] Nannerini, A. (2023), "Italy's mixed response to the Syrian refugee crisis.", in *E-International Relations.*

asylum and migration. However, consensus was not achieved on overhauling the Dublin system and the Asylum Procedure Regulation. In response to ongoing challenges, the European Commission proposed a comprehensive approach known as the New Pact on Migration and Asylum in 2020. This pact aimed to address disparities in member states' responsibilities regarding migrant arrivals and streamline asylum procedures.

However, refugees' understanding of EU reception systems is often limited and their high hopes for what they will find in Europe are often dashed. Many arrive with high expectations, only to face harsh realities on arrival. Moreover, the journey to Europe can pose significant risks for those left behind, as family members separated during the migration process may struggle without the support they once had.

In this challenging context, it is imperative that humanitarian organizations and policymakers provide more support and information to Syrian refugees undertaking risky journeys. In addition, consistent evidence on refugees' intentions and reasons for staying or leaving can inform more effective programming and advocacy. A commitment to ongoing research and the establishment of coordination mechanisms can help to better protect those affected by the current migrant crisis through targeted protection programs and informed decision-making.[126]

3.3.1 The European digital response

In Europe, migration management remains in the hands of states at the intergovernmental and national levels, so the development of various digital initiatives to improve the migration situation comes directly from states themselves, private individuals, or non-governmental organizations. In the context of Syrian migration to Europe, a peculiar aspect emerges migrants leave everything in their home country except their mobile phone. This tool becomes an indispensable companion during the journey, at a time when digital technologies such as Facebook groups and mobile apps are having a significant impact. These digital tools, once used to organize protests and revolutions, are now essential for fleeing war, turning smartphones into tools not only for communication but also for survival. While SIM cards are now an object of desire, and there is no power socket without a phone to charge, Wi-Fi routers have become an almost ubiquitous presence in camps and rallying points. This is thanks to

[126] European University Institute, Migration Policy Centre, Achilli, L. (2016), “Tariq al-Euroba displacement trends of Syrian asylum seekers to the EU”, *European University Institute*.

activists such as those at Project Open Network, who install hotspots near camps, or initiatives such as Smurfs to the Rescue, which provides food, water and WIFI in makeshift camps. In addition, organizations such as DisasterTechLab intervene in emergencies by providing field computers and fast connectivity networks. This connectivity benefits both volunteers, who can coordinate more easily, and migrants, who now have access to a range of services designed specifically for them.

Digital solutions developed at this stage aim to save time and money by disseminating vital information on borders, asylum procedures and alternative routes. A unique example is InfoAid, an application that provides updates from the Hungarian border and neighboring countries in six different languages. Similarly, the Croatian Facebook page 'Dear Refugees: Welcome to Croatia' provides essential information such as train timetables and route maps, as well as practical advice for migrants. Once at their destination, migrants face a new set of challenges: finding a job, integrating into society and getting to know a new culture. In this context, platforms such as RefugeesWork.com facilitate job matching for refugees and highlight the potential contribution they can make to host societies. Similarly, sites such as 'I am not a refugee' aim to combat stereotypes and value refugees for what they are: individuals with talents and aspirations. Syrian migration to Europe has been characterized by the extensive use of digital technologies, which have played a key role in facilitating the journey, ensuring safety and facilitating the integration of migrants into host societies. However, challenges remain, such as equal access to technology and the need to protect migrants from online threats.[127]

In terms of initiatives that Europe has taken in coordination with states and as a supranational body, it is important to remember that the Syrian migration crisis has triggered a global response from the international community, with Europe at the forefront of efforts to provide aid and assistance to those affected. Central to these efforts has been the strategic use of digital technologies to streamline processes, improve coordination and deliver efficient humanitarian assistance to Syrian refugees. Digital registration systems have played a key role in managing the influx of refugees into European countries. These systems, integrated with biometric technology, allow authorities to accurately document and process asylum seekers. By digitizing registration processes, bureaucratic hurdles are minimized, duplication is reduced, and the allocation of resources and services becomes more efficient. Digital platforms facilitate collaboration between governments, humanitarian organizations and local

[127] Ruggiu, D. V. (2015), “Dalla Siria all’Europa con lo smartphone: l’hi-tech al servizio dei migranti.”. *La Repubblica*.

stakeholders. They enable real-time communication, sharing of resources and exchange of best practices. Whether through dedicated websites, online forums or social media channels, digital platforms improve coordination and enable stakeholders to respond quickly to evolving challenges on the ground. Crowdsourcing and crowdfunding initiatives use digital platforms to mobilize support for Syrian refugees. Through online campaigns, individuals and organizations can raise funds for humanitarian aid, medical assistance, education programs and shelter. These initiatives complement traditional funding mechanisms and encourage grassroots participation in refugee relief efforts. Digital education and skills development initiatives empower refugees for long-term integration. Online learning platforms provide flexible opportunities for refugees to acquire new skills, gain academic qualifications and prepare for employment. By harnessing technology, Europe is promoting lifelong learning and economic self-sufficiency for Syrian migrants. In conclusion, Europe's digital response to the Syrian migration crisis exemplifies the transformative potential of technology in humanitarian response. By harnessing digital innovation, Europe is improving the efficiency, effectiveness, and inclusiveness of its response to refugees. As the Syrian conflict and global displacement challenges continue, continued investment in digital solutions will be essential to support those affected by forced migration and promote their resilience and empowerment.[128]

3.4 Future scenarios

Looking ahead, there are several possible scenarios for Syrian migration to Europe. If the conflict in Syria continues or escalates, it is likely that the flow of refugees seeking safety in Europe will continue. This scenario would create ongoing challenges for European countries in managing refugee arrivals and providing humanitarian assistance. If diplomatic efforts lead to a resolution of the conflict in Syria and stability in the region, the need for Syrians to seek refuge in Europe may diminish. A possible 'long term' strategy is for the EU to focus on improving Syria's economic governance in order to attract private investors over time. For the latter approach to succeed, it's essential that host countries adopt transparent and effective policies to foster an investment-friendly environment, including human resource development and institutional reform. Achieving this in Syria, however,

[128] European Commission (2023), *DG EGHO policy framework for humanitarian digitalization,* Directorate-General for European Civil Protection and Humanitarian Aid Operations, March, Luxembourg.

poses a significant challenge, as it requires a diplomatic solution to the conflict, a peaceful political transition, and the cooperation of future governing bodies to promote transparency. This scenario would allow displaced Syrians to return home and reduce the pressure on European countries to absorb new arrivals. European countries could work with neighboring countries to facilitate the resettlement and integration of Syrian refugees in the region. This scenario could include supporting host countries such as Turkey, Lebanon, and Jordan, which currently host significant Syrian refugee populations, to enhance their capacity to provide long-term assistance and opportunities for integration.[129] There may be changes in migration routes, with Syrians exploring alternative routes to reach Europe, such as through North Africa or Eastern Europe. This scenario would require adaptation and coordination between European countries to address new migration patterns and challenges. Advances in digital technologies could play an important role in shaping the future of Syrian migration to Europe. Improved digital registration systems, communication platforms and data analytics could increase the efficiency and effectiveness of migration management processes, facilitating the identification of protection needs and the provision of targeted assistance to Syrian refugees. The successful integration of Syrian refugees into European societies could lead to positive outcomes for both refugees and host communities. Investment in language learning programs, education, vocational training, and employment opportunities can promote social cohesion and economic integration, contributing to the overall well-being and resilience of Syrian migrants in Europe. While Syrian migration to Europe poses challenges in terms of political, social, and economic implications, it also offers opportunities for solidarity, cooperation and mutual understanding among European countries and the international community. By addressing the root causes of migration, promoting peace and stability, and fostering inclusive policies and practices, Europe can work towards a future where Syrian migrants are welcomed, supported, and empowered to rebuild their lives and contribute to their host societies. [130]

Looking at future scenarios, a dynamic landscape of opportunities and challenges emerges that will shape the trajectory of humanitarian assistance, integration efforts and support mechanisms for migrants and refugees, including through the contribution of digital infrastructure, which continues to evolve globally. Syrian migrants and refugees are poised to benefit from increased access to information and services through digital channels. As

[129] Petillo, K. (2023), "From aid to inclusion: A better way to help Syrian refugees in Turkey, Lebanon, and Jordan", in *Middle East and North Africa*, European Council on Foreign Relations.
[130]Global Affairs and Strategic Studies (2023), *Global Affairs and Strategic Studies,* Facultad de Derecho.

digital infrastructure continues to develop globally, Syrian migrants and refugees are poised to benefit from increased access to information and services through digital channels. Mobile applications, online platforms and digital databases can provide essential resources such as language translation, legal assistance, educational opportunities, and health information. The future may also see the emergence of innovative technological solutions tailored to the specific challenges faced by Syrian migrants and refugees. Advances in language translation technology, virtual reality simulations for cultural orientation, blockchain-based identity verification systems, and AI-driven chatbots for personalized assistance could revolutionize the assistance landscape. In parallel, digital empowerment and advocacy are likely to play an increasingly important role in amplifying the voices of Syrian migrants and refugees. Social media platforms and digital advocacy campaigns have already proven influential in raising awareness, fostering connections, and advocating for rights. This trend is expected to continue, leading to greater engagement and mobilization within the migrant community.

Alongside these opportunities, however, are concerns about privacy and security. As reliance on digital platforms increases, the protection of sensitive personal information becomes paramount. Efforts to mitigate risks such as surveillance, identity theft and online harassment will be crucial to ensuring the safety and well-being of migrants and refugees in the digital sphere.[131]

Final remarks

The chapter concludes with a complex overview of the challenges, dynamics and responses associated with the Syrian migration flow. By analyzing the history of Syrian migration to Europe and the pact between Europe and Turkey, the complexity of international relations and political factors influencing the movement of people across borders is made understandable.

The transition of Syrians to Europe in the digital age has highlighted the crucial role of technology in facilitating and complicating migration pathways. The widespread use of social media as a tool for making the decision to travel to Europe has highlighted the importance of connectivity and information sharing for migrant communities.

[131] Petillo, K. (2022), "Stuck in limbo: How Europe can protect Syrian refugees", in *Middle East and North Africa*, European Council on Foreign Relations.

However, it has also highlighted the challenges of misinformation, exposure to illegal trafficking networks and the online vulnerability of people in transit.

The final aspect concerns the European response to this type of migration. While there are efforts to promote more inclusive and humanitarian policies, there are also growing pressures for increased border securitization and reduced access to rights and opportunities for migrants.

In conclusion, the case of Syrian migration to Europe provides an important insight into the challenges and opportunities that characterize contemporary migration flows. It is clear that an effective response to this complex reality requires an integrated and compassionate approach that takes into account both legitimate security concerns and the fundamental principles of solidarity, human rights and social justice.

Conclusions

Migration processes are increasingly influenced by digitalization, a trend that is expected to intensify in the future. The proliferation of affordable connectivity and hardware, coupled with the expansion of the middle class in various regions, suggests that digital technologies will play a more significant role in migration.

In the broader context of managing migration, the integration of computing technology with biometrics is increasingly being used to reduce administrative costs and improve coordination and integration of systems. For example, the UNHCR's proGres refugee registration platform, developed in partnership with Microsoft, is used in over 300 refugee camps in 75 countries to process asylum applications and provide essential services such as food and medical aid. Similarly, the EU's EURODAC database stores the fingerprints of asylum seekers from all member states. It's important to recognize that these technologies have both costs and benefits. For example, technologies used in maritime search and rescue (SAR) operations play a critical role in preventing the tragic loss of migrant lives in the Mediterranean. However, traffickers exploit governments' and NGOs' commitment to SAR by providing inadequate boats while equipping passengers with satellite phones to contact coastal patrols, putting migrants' lives at risk. These examples highlight the dual nature of technologies, with their impacts and benefits often influenced by the motivations of users and the wider social and political context, rather than the technology itself.

Technology with both military and civilian applications, known as ‘dual use’ technology, has played a significant role in government efforts to strengthen border controls. In recent years, there has been a notable increase in the scale and variety of such technology, leading to the emergence of the so-called 'border industrial complex', a market that is expected to grow to around $32.5 billion by 2024.

While surveillance technologies offer potential benefits for border control, they also raise significant privacy and human rights concerns. The wide reach of these technologies allows for extensive surveillance beyond border areas, affecting not only migrants but also residents. What's more, there is a risk that such technologies will be repurposed for domestic security surveillance unrelated to border control, further exacerbating privacy concerns. Blockchain, also known as distributed ledger technology, is still in its early stages of development but holds significant promise for improving the rights and welfare of migrants. One potential application is in digital

identity, particularly to address to one of the Sustainable Development Goal, which aims to provide legal identity to all individuals by 2030. Initiatives like ID2020, established in 2017, seek to create legal identities that are unique, portable, lifelong, and private using blockchain and biometric data. This approach enables the creation of a decentralized and global 'identity market' that prioritizes interoperability, allowing different systems to exchange data seamlessly. Similar combinations of blockchain and biometrics could be utilized in asylum applications and migrant integration processes, where proof of legal identity is essential. Blockchain's immutability and decentralized governance make it central to emerging efforts to increase financial inclusion for migrants and refugees, and to manage public spending on these groups. In addition, the blockchain records all transactions, allowing migrants and refugees to build a comprehensive financial history as they move across borders using the same virtual account. This consolidated financial history could facilitate their access to credit in destination countries. Blockchain technology has the potential to facilitate the secure and private transfer of remittances. However, the widespread adoption of blockchain in migration-related applications will depend on the broader attitude of financial institutions and regulators towards the technology, as its potential applications in migration are likely to follow from its wider use.

Migrants and refugees rely heavily on technology, especially mobile phones, the internet, and social media, collectively referred to as 'digital connectivity', to support and enhance their migration process. Over the past two decades, this technology has become increasingly accessible, including to economically disadvantaged people, due to the falling cost and widespread availability of mobile networks and applications. The use of information and communication technology (ICT) has a profound impact on every stage of migration, providing crucial information about destination countries, travel arrangements, financial support, resettlement and maintaining links with their home countries. For refugees, digital connectivity is often essential for survival, with many prioritizing spending on mobile phones over basic necessities such as food and shelter. However, there are disparities in access to technology based on income, gender, and age, leading to concerns about information insecurity and surveillance. Mobile phones play a critical role in facilitating the integration of migrants into new societies by providing access to essential services, language learning and connection to support networks. Despite their benefits, mobile phones are not a panacea for all the challenges migrants face, and there are significant concerns about privacy and government surveillance in both countries of origin and destination. For example,

some countries have expanded legal powers to search the phones of asylum seekers, citing the potential to expose inconsistencies in their stories. The use of technology in migration management presents a clear dichotomy: while some technologies promote well-being and enable the realization of rights and opportunities, others serve as tools to restrict and limit these rights. The market for border crossing technologies is rapidly expanding, with many offerings aimed at strengthening control over the movement of people and goods. However, these technologies often fall short of their intended effectiveness and efficiency. Migration information management systems increasingly rely on digital and biometric technologies that facilitate integration, but also reinforce migration management as a form of control, both at border checkpoints and within host countries. Blockchain and biometric technologies offer a potential alternative based on individual rights, providing migrants with more secure and portable identity documents that can facilitate their entry and settlement in transit and destination countries, as well as enhance financial inclusion.

Governments of destination countries should establish safeguards, including transparent public accountability mechanisms and oversight bodies, to monitor the further development and use of surveillance and border control technologies. This includes access to migrants' mobile phone data and immigration databases, while ensuring full protection of migrants' rights and privacy. Governments should prioritize the development of blockchain technologies for digital identification and financial transactions, with a particular focus on enhancing financial inclusion for migrants and the poor. This includes initiatives to facilitate cross-border remittances.

Bibliography:

Adapted from United Nations Department of Economic and Social Affairs, in *Recommendations on Statistics of International Migration,* Revision 1 (1998) p. 10, definition of "long-term migrants".

Adesina, O. S. (2017), "Foreign policy in an era of digital diplomacy", in *Cogent Social Sciences*, vol. *3*, n. 1. Internet: https://doi.org/10.1080/23311886.2017.1297175 (consulted on the 25th of January 2024)

Alencar, A. (2020), "Mobile communication and refugees: An analytical review of academic literature", in *Sociology Compass*, vol. *14*, n. 8, p. 4. Internet: https://doi.org/10.1111/soc4.12802 (consulted on the 17th of December 2023)

Alencar, A. (2023), "Technology can be transformative for refugees, but it can also hold them back", in *Migration policy institute.* Internet: https://www.migrationpolicy.org/article/digital-technology-refugees (consulted on on the 17 of December 2023)

Atoyan, V., Hovyan, V., Movsisyan, N., Hovyan, V. (2023), "Digitalization as a sociocultural characteristic of the globalization era", in *Saudi Journal of Humanities and Social Sciences*, pp. 296–299.internet: https://doi.org/10.36348/sjhss.2023.v08i09.008 (consulted on the 25th of January 2024)

Attatfa, A., Renaud, K., De Paoli, S. (2020), "Cyber Diplomacy: A Systematic Literature Review", in *Procedia Computer Science*, Vol. *176*, pp. 60–69. Internet: https://doi.org/10.1016/j.procs.2020.08.007 (consulted on the 17th of December 2023)

Balla, E. (2023), "The European Union's response to the Syrian refugee crisis.", in *E-International Relations.* Internet: https://www.e-ir.info/2023/04/22/the-european-unions-response-to-the-syrian-refugee-crisis/# (consulted on the 28th of January 2024)

Bargiacchi P. (2019), “Non-State actors and illegal migration: a new European approach to security policies” in *Южно-российский журнал социальных наук*, vol. 1, pp. 24-39. Internet: https://cyberleninka.ru/article/n/non-state-actors-and-illegal-migration-a-new-european-approach-to-security-policies (consulted on the 28th of January 2024)

Barrinha, A., Renard, T. (2017), “Cyber-diplomacy: the making of an international society in the digital age”, in *Global Affairs*, vol. 3, pp.353-364. Internet: https://doi.org/10.1080/23340460.2017.1414924 (consulted on 2nd of January)

Beduschi, A. (2020), “International migration management in the age of artificial intelligence”, in *Migration Studies*, vol. *9*, n. 3, pp. 576–596. Internet: https://doi.org/10.1093/migration/mnaa003 (consulted on the 2nd of January)

Beirens, L. S. H. (2023), “What Role Could Digital Technologies Play in the New EU Pact on Migration and Asylum*?*”, in *Migration policy institute.* Internet: https://www.migrationpolicy.org/research/digital-technologies-eu-pact-migration (consulted on the 28th of January 2024)

Belaïd, J. (2022), “The role of Non-State Actors in Digitised Migration Management. The Impacts and Limits of Digitalisation on the EU’s Externalised Migration control In the Mediterranean” in *EUROMESCO – Euro-Mediterranean Research, Dialogue, Advocacy*. Internet: https://www.euromesco.net/publication/the-role-of-non-state-actors-in-digitised-migration-management-the-impacts-and-limits-of-digitalisation-on-the-eus-externalised-migration-control-in-the-mediterranean/ (consulted on the 25th of January 2024)

Besharov, D. J., López, M. H. (2016), “Adjusting to a world in motion: Trends in Global Migration and Migration Policy”, in *Oxford University Press*, pp. 171-172.

Bhattacharya, A. (2022). “Cyber-diplomacy in International Negotiations: Rules, Risks, and Rewards” in *Advocacy Unified Network*. Internet: https://doi.org/10.57939/cb5e-r326 (consulted on the 25th of January 2024)

Bigo, D. (2022), “The Digitalisation of Border Controls and their Corporate Actors”, In *Oxford University Press eBooks*, pp. 229-C12.P80. Internet: https://doi.org/10.1093/oso/9780192857163.003.0013 (consulted on the 28th of January 2024)

Bloomberg, J. (2018). “Digitization, digitalization, and digital transformation: confuse them at your peril”, in *Forbes*. Internet: https://www.forbes.com/sites/jasonbloomberg/2018/04/29/digitization-digitalization-and-digital-transformation-confuse-them-at-your-peril/?sh=2b5675ca2f2c (consulted on the 28th of January 2024)

Bolhuis, M. (2020), “Seeking Asylum in the Digital Era: Social-Media and Mobile-Device Vetting in Asylum Procedures in Five European countries”, in *Journal of Refugee Studies*, vol. *34*, n. 2, pp. 1595–1617. Internet: https://doi.org/10.1093/jrs/feaa029 (consulted on the 17th of December 2023)

Broeders, D. (2007), “The new digital Borders of Europe”, in *International Sociology*, vol. *22*, n.1, pp. 71–92. Internet : https://doi.org/10.1177/0268580907070126 (consulted on the 25th of January 2024)

Broeders, D., & Hampshire, J. (2013), “Dreaming of seamless borders: ICTs and the Pre-Emptive Governance of Mobility in Europe”, in *Journal of Ethnic and Migration Studies*, vol. *39*, n.8, pp. 1201–1218. Internet : https://doi.org/10.1080/1369183x.2013.787512 (consulted on the 17th of December 2023)

Buck, S. J. (2017), *The Global Commons*. London: Routledge eBooks. Internet: https://doi.org/10.4324/9781315086415 (consulted on the 28th of January 2024)

Caruso, L. (2017), "Digital innovation and the fourth industrial revolution: epochal social changes?", in Springer Link, *AI & SOCIETY*, vol.*33*, n. 3, pp 379–392. internet: https://doi.org/10.1007/s00146-017-0736-1 (consulted on the 17th of December 2023)

Casswell, J. (2024), "The Digital Lives of Refugees: how displaced populations use mobile phones and what gets in the way", in *Mobile for Development*, GSMA.
Internet: https://www.gsma.com/mobilefordevelopment/programme/mobile-for-humanitarian-innovation/the-digital-lives-of-refugees-how-displaced-populations-use-mobile-phones-and-what-gets-in-the-way/ (consulted on the 2nd of January)

Casswell, J., Downer, M., Khan, M., & Baah, B. (2021), "The digital lives of refugees: How displaced populations use mobile phones and what gets in the way" in *GSM Association.* Internet: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/The-Digital-Lives-of-Refugees.pdf (consulted on the 2nd of January)

Castells, M., (2010), *The Rise of the Network Society: Second edition with a new preface*, Wiley Blackwell Publication. internet: https://urb.bme.hu/wp-content/uploads/2014/05/manuel_castells_the_rise_of_the_network_societybookfi-org.compressed.pdf (consulted on the 28th of January 2024)

Cellamare, G. (2006), *La disciplina dell'immigrazione nell'Unione Europea*, Torino: Giappichelli.

Coccoli, J. (2017). "The challenges of new technologies in the implementation of human rights: An analysis of some critical issues in the digital era", in *Peace Human Rights Governance*, vol. 1, n. 2, pp. 223-250.

Consiglio europeo di Tampere (1999)*, Conclusioni della presidenza*, European Parliament.
Internet: https://www.europarl.europa.eu/summits/tam_it.htm (consulted on the 25th of January 2024)

Council of the International Organization for Migration (2007), *Migration and the Environment*, MC/INF/288.

Czaika, M., & De Haas, H. (2013), "The effectiveness of immigration policies", in *Population and Development Review*, vol. *3,* n. 3, pp. 487–508. Internet https://doi.org/10.1111/j.1728-4457.2013.00613.x (consulted on the 2nd of January)

Dekker, R., Engbersen, G., Klaver, J., Vonk, H. (2018), "Smart Refugees: How Syrian asylum migrants use social media information in Migration Decision-Making", in *Sage Journals*, vol. 4, n. 1. Internet: https://doi.org/10.1177/2056305118764439 (consulted on the 25th of January 2024)

Diba, P., Papanicolaou, G., & Antonopoulos, G. A. (2019), "The digital routes of human smuggling? Evidence from the UK", in *Crime Prevention and Community Safety*, vol. *21*, n.2, pp. 159–175. Internet: https://doi.org/10.1057/s41300-019-00060-y (consulted on the 28th of January 2024)

Diminescu, D. (2008), "The Connected Migrant: An Epistemological Manifesto", in *Social Science Information*, vol. 47, n. 4, pp. 565–579.

Dingle, H., Drake, V. A. (2007), "What is migration?" in *BioScience*, vol. *57*, n. 2, pp. 113–121. Internet: https://doi.org/10.1641/b570206 (consulted on the 25th of January 2024)

Dubinsky, Z. (2015), "For Syrian refugees, smartphones are a lifeline — not a toy" in *CBC*. Internet: https://www.cbc.ca/news/world/for-syrian-refugees-smartphones-are-a-lifeline-not-a-toy-1.3221349 (consulted on the 2nd of January)

Dumbrava, C. (2021), "Artificial Intelligence at EU Borders - European parliament", in *European Parliamentary Research Service*.

Internet: https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/690706/EPRS_IDA(2021)690706_EN.pdf (consulted on the 25th of January 2024)

Eggeling, K. A. (2023), "Digital diplomacy", in *Oxford Research Encyclopedia of International Studies*. Internet: https://doi.org/10.1093/acrefore/9780190846626.013.790 (consulted on the 17th of December 2023)

European Commission (2023), *DG EGHO policy framework for humanitarian digitalization,* Directorate-General for European Civil Protection and Humanitarian Aid Operations, March, Luxembourg. Internet: https://civil-protection-humanitarian-aid.ec.europa.eu/system/files/2023-03/DG%20ECHO%20Policy%20Framework%20on%20Digitalisation%20-%20final_0.pdf (consulted on the 2nd of January)

European Commission*, Migration and Home Affairs*. Internet: https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/migration-and-home-affairs_en (consulted on the 13th of January)

European Council on Refugees and Exiles (2021), *Access to Registration Procedures for Asylum Seekers and Refugees in Europe*. Internet: https://ecre.org (consulted on the 13th of January)

European Union agency for asylum (2023), *EUAA Strategy on Digital Innovation in Asylum Procedures and Reception Systems*, May, Luxemburg. Internet: https://euaa.europa.eu/sites/default/files/publications/2023-10/2023_EUAA-Strategy-on-Digital-Innovation-in-Asylum-Procedures-and-Reception-Systems_EN.pdf. (consulted on the 2nd of January)

European University Institute, Migration Policy Centre, Achilli, L. (2016), "Tariq al-Euroba displacement trends of Syrian asylum seekers to the EU", *European University Institute*. Internet: https://data.europa.eu/doi/10.2870/974511 (consulted on the 17th of December 2023)

Factsheet - The EU and the Syria crisis (13.06.2023) - Syrian Arab Republic. ReliefWeb. Internet: https://reliefweb.int/report/syrian-arab-republic/factsheet-eu-and-syria-crisis-13062023#:~:text=The%20EU%20remains%20engaged%20with,host%20them%20in%20neighbouring%20countries (consulted on the 14th of February 2024)

Favilli, C. (2010), "Il Trattato di Lisbona e la politica dell'Unione europea in materia di visti, asilo e immigrazione", in *Diritto, Immigrazione E Cittadinanza*, vol. *2*, pp. 13–35. Internet: https://doi.org/10.3280/diri2010-002002 (consulted on the 17th of December 2023)

Frenzel, A., Muench, J. C., Bruckner, M., Veit, D. J. (2021), "Digitization or digitalization? – Toward an understanding of definitions, use and application in IS research", in *ResearchGate*, AMCIS 2021. Internet: https://www.researchgate.net/publication/354402700_Digitization_or_Digitalization_-_Toward_an_Understanding_of_Definitions_Use_and_Application_in_IS_Research (consulted on the 2nd of January)

Gillespie, M., Osseiran, S., Cheesman, M. (2018), "Syrian Refugees and the Digital Passage to Europe: Smartphone Infrastructures and Affordances", in *Sage Journals*, vol. 4, n. 1. Internet: https://doi.org/10.1177/2056305118764440 (consulted on the 14th of February 2024)

Global Affairs and Strategic Studies (2023), *Global Affairs and Strategic Studies,* Facultad de Derecho. Internet: https://www.unav.edu/web/global-affairs/detalle/-/blogs/the-eu-and-the-root-causes-of-syrian-migration (consulted on the 28th of January 2024)

Glouftsios, G., Scheel, S. (2020), "An inquiry into the digitisation of border and migration management: performativity, contestation and heterogeneous engineering", in*Third World Quarterly*, vol. *42*, n. 1, pp. 123–140. Internet: https://doi.org/10.1080/01436597.2020.1807929 (consulted on the 2nd of January)

Göransson, M., Hultin, L., Mähring, M. (2020), "'The phone means everything.' Mobile phones, livelihoods, and social capital among Syrian refugees in informal tented settlements in Lebanon", in *Migration and Development*, vol. *9*, n. 3, pp. 331–351. Internet: https://doi.org/10.1080/21632324.2020.1746029 (consulted on the 2nd of January)

Hudson, L. (2018), "Syrian Refugees in Europe: Migration Dynamics and Political Challenges,", in *New England Journal of Public Policy*, Vol. 30, n. 2, Article 9.
Internet: https://scholarworks.umb.edu/nejpp/vol30/iss2/9/ (consulted on the 14th of February 2024)

International Organization for migration (2021), *Global annual report, 2021 operations and emergencies*, Geneva. Internet: https://www.iom.int/iom-global-reports-operations-and-emergencies (consulted on the 13th of January)

Jandl, M. (Ed.). (2007), *Innovative Concepts for Alternative Migration Policies: Ten Innovative Approaches to the Challenges of Migration in the 21st Century*, Amsterdam University Press. Internet: http://www.jstor.org/stable/j.ctt46msqg (consulted on the 14th of February 2024)

Jauhiainen, J. S., Özçürümez, S., Tursun, Ö. (2022), "Internet and social media uses, digital divides, and digitally mediated transnationalism in forced migration: Syrians in Turkey", in *Global Networks*, vol. 22, n. 2, pp. 197-210. Internet: https://doi.org/10.1111/glob.12339 (consulted on the 14th of February 2024)

Karim, K. H., Al-Rawi, A. (2018), *Diaspora and media in Europe: Migration, Identity, and Integration*, Springer.

Karppinen, K. (2017). "Human rights and the digital", In *Routledge eBooks*, pp. 95–103.
Internet: https://doi.org/10.4324/9781315619835-9 (consulted on the 2nd of January)

Kirişci, k. (2014), "Syrian Refugees and Turkey's Challenges: Going beyond Hospitality", in *Brookings.* Internet: https://www.brookings.edu/articles/syrian-refugees-and-turkeys-challengesgoing-beyond-hospitality/ (consulted on the 14th of February 2024)

Labour Migration, International Organization for Migration. International Organization for Migration. Internet: https://www.iom.int/labour-migration (consulted on the 2nd of January)

Madianou, M., Miller, D. (2013), *Migration and new media: Transnational Families and Polymedia*, Routledge.

Madon, S., Schoemaker, E. (2021), "Digital identity as a platform for improving refugee management", in *Information Systems Journal*, vol. 3, n. 6, pp. 929–953. Internet: https://doi.org/10.1111/isj.12353 (consulted on the 14th of February 2024)

Manantan, M. B. (2021), "*Defining Cyber Diplomacy - Australian Institute of International Affairs*", in Australian Institute of International Affairs. Internet: https://www.internationalaffairs.org.au/australianoutlook/defining-cyber-diplomacy/ (consulted on the 13th of January)

Martins, B. O., Lidén, K., Jumbert, M. G. (2022), "Border security and the digitalisation of sovereignty: insights from EU borderwork", in *European Security*, vol. 31, n. 3, pp. 475–494. Internet: https://doi.org/10.1080/09662839.2022.2101884 (consulted on the 2nd of January)

Maulana, Y. I., Fajar, I. (2023), "Analysis of Cyber Diplomacy and its Challenges for the Digital Era Community", in *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, Vol. 4, n. 2, pp. 169–177. Internet: https://doi.org/10.34306/itsdi.v4i2.587 (consulted on the 2nd of January)

McAuliffe, M. (2021). "International migration and digital technology: an overview", in *Research Handbook on International Migration and Digital Technology*, Cheltenham, Edward Elgar Publishing Limited, pp.1-13.

Miehe, L. (2022), "Between promise and peril: Digitalised migration in the Euro-Mediterranean region", in *European Institution for the Mediterranean*. Internet: https://www.iemed.org/publication/between-promise-and-peril-digitalised-migration-in-the-euro-mediterranean-region/ (consulted on the 13th of January)

Migration and Home Affairs (2023), *What is SIS and how does it work?* Internet: https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/schengen-information-system/what-sis-and-how-does-it-work_en (consulted on the 13th of January)

Migration and Home Affairs, *Common European Asylum System.* Internet: https://home-affairs.ec.europa.eu/policies/migration-and-asylum/common-european-asylum-system_en (consulted on the 7th of February)

Migration and Home Affairs, *Smart borders*. Internet: https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/smart-borders_en (consulted on the 7th of February)

Molnar, P. (2020), "AI and Migration Management", in *Oxford Academic*, pp. 768-787. Internet: https://doi.org/10.1093/oxfordhb/9780190067397.013.49 (consulted on the 7th of February)

Mouzourakis, M. (2020), *EU migration governance in the Mediterranean*: *The perils of pragmatic cooperation*, Routledge.

Nalbandian, L., Dreher, N. (2023), “Current methodological approaches in studying the use of advanced digital technologies in migration management”, in *Frontiers in Human Dynamics*, vol. *5*.
Internet: https://doi.org/10.3389/fhumd.2023.1238605 (consulted on the 14th of February 2024)

Nannerini, A. (2023), “Italy’s mixed response to the Syrian refugee crisis.”, in *E-International Relations.*
Internet: https://www.e-ir.info/2023/05/03/italys-mixed-response-to-the-syrian-refugee-crisis/ (consulted on the 13th of January)

Narli, N. (2018), “Life, Connectivity and Integration of Syrian Refugees in Turkey: Surviving through a Smartphone”, in *Questions De Communication*, vol. *33*, pp. 269–286.
Internet: https://doi.org/10.4000/questionsdecommunication.12523 (consulted on the 3rd of February 2024)

Niemann, A., Zaun, N. (2023), “Introduction: EU external migration policy and EU migration governance”, in *Journal of Ethnic and Migration Studies*, vol. 49, n.12, pp. 2965–2985. Internet: https://doi.org/10.1080/1369183X.2023.2193710 (consulted on the 20th of February)

Nilizadeh, Sh., Jahid, S., Mittal, P., Borisov, N., Kapadia, A. (2012). “Cachet: A decentralized architecture for privacy preserving social networking with caching”, In *CoNEXT 12: Proceedings of the 8th international conference on Emerging networking experiments and technologies,* New York: Association for Computing Machinery, pp. 337-348.

OHCHR (2023), *Digital technologies at borders: A threat to people on the move*.
Internet: https://www.ohchr.org/en/stories/2023/10/digital-technologies-borders-threat-people-move (consulted on the 7th of February)

Palmberger, M. (2022), “Migrants and new media”, in *Oxford University Press eBooks*, pp. 163–176.
Internet: https://doi.org/10.1093/oxfordhb/9780197544938.013.17 (consulted on the 20th of February)

Petillo, K. (2022), "Stuck in limbo: How Europe can protect Syrian refugees", in *Middle East and North Africa*, European Council on Foreign Relations. Internet: https://ecfr.eu/article/stuck-in-limbo-how-europe-can-protect-syrian-refugees/ (consulted on 18th of February 2024)

Petillo, K. (2023), "From aid to inclusion: A better way to help Syrian refugees in Turkey, Lebanon, and Jordan", in *Middle East and North Africa*, European Council on Foreign Relations. Internet: https://ecfr.eu/publication/from-aid-to-inclusion-a-better-way-to-help-syrian-refugees-in-turkey-lebanon-and-jordan/ (consulted on the 18th of February 2024)

Petryshyn, O. V., Hyliaka, O. (2021). "Human rights in the digital age: Challenges, threats and prospects", in *Visnik Akademìï Pravovih Nauk Ukraïni*, vol. 28, n. 1, pp. 15–23. Internet: https://doi.org/10.37635/jnalsu.28(1).2021.15-23 (consulted on the 3rd of February 2024)

Rashica, V. (2018), "The benefits and risks of digital diplomacy", in *SEEU Review*, vol. 13, n. 1, pp. 75–89. Internet: https://doi.org/10.2478/seeur-2018-0008 (consulted on the 7th of February)

Redazione. (2020), "Twitter Diplomacy": la politica delle relazioni internazionali al tempo dei social media", in *European Affairs Magazine*. Internet: https://www.europeanaffairs.it/blog/2020/08/22/twitter-diplomacy-la-politica-delle-relazioni-internazionali-al-tempo-dei-social-media/ (consulted on the 3rd of February 2024)

Roots, L. (2015), "The new EURODAC regulation: Fingerprints as a source of informal discrimination", in *Baltic Journal of European Studies*, vol. *5*, n. 2, pp. 108–129. Internet: https://doi.org/10.1515/bjes-2015-0016 (consulted on the 3rd of February 2024)

Ruggiu, D. V. (2015), “Dalla Siria all’Europa con lo smartphone: l’hi-tech al servizio dei migranti.” in *La Repubblica*. Internet: https://www.repubblica.it/solidarieta/immigrazione/2015/10/12/news/hi-tech_al_servizio_dei_migranti-124892733/ (consulted on the 14th of February 2024)

Rygiel, K., Baban, F., Ilcan, S. (2016), “The Syrian refugee crisis: The EU-Turkey ‘deal’ and temporary protection”, in *Global Social Policy*, vol. *16*, n. 3, pp. 315–320.
Internet: https://doi.org/10.1177/1468018116666153 (consulted on the 14th of February 2024)

Saunders, N. (2023), “Security, digital border technologies, and immigration admissions: Challenges of and to non-discrimination, liberty and equality”, in *European Journal of Political Theory*.
Internet: https://doi.org/10.1177/14748851231203912 (consulted on the 3rd of February 2024)

Schmahl, S. (2022). “Digitalisation and international Human Rights Law: opportunities and critical challenges”, in *Nomos Verlagsgesellschaft mbH & Co. KG eBooks*, pp. 135–178).
Internet: https://doi.org/10.5771/9783748931638-135 (consulted on the 7th of February)

Scholten, P., Pisarevskaya, A., & Levy, N. (2022), “An introduction to migration studies: the rise and coming of age of a research field”, in *IMISCOE research series*, pp. 3–24. Internet: https://doi.org/10.1007/978-3-030-92377-8_1 (consulted on the 7th of February)

Schrover, M. (2022), “Migration Histories”, in *IMISCOE research series*, pp. 25–46.
Internet: https://doi.org/10.1007/978-3-030-92377-8_2 (consulted on the 14th of February 2024)

Schwab, K. (2017), *The Fourth Industrial Revolution* p. 11, New York, Crown Business.

Skorodumova, O., Melikov, I., Tabasaranskiy, R. S. (2022), "Problems of migration management in the conditions of global digitalization of Society", in *Communications in computer and information science*, pp. 174–185. Internet: https://doi.org/10.1007/978-3-031-04238-6_14 (consulted on the 20th of February)

Thales Group. (n.d.), eVisa Portal. Internet: https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/eborder/evisa-portal#:~:text=An%20eVisa%20system%20manages%20the,it%20is%20pending%20or%20validated (consulted on the 7th of February)

The Editors of Encyclopaedia Britannica. (2024), "Syrian Civil War - Facts & timeline", in *Encyclopedia Britannica*. Internet: https://www.britannica.com/event/Syrian-Civil-War (consulted on the 7th of February)

The Global Compact on Refugees (2023), *Construction, coordination and management of temporary accommodation centres*, Emergency preparedness & response, *UNHCR*. Internet: https://globalcompactrefugees.org/good-practices/construction-coordination-and-management-temporary-accommodation-centres (consulted on the 3rd of February 2024)

The International Rescue Committee (2023), "What is the EU-Turkey deal?". Internet: https://www.rescue.org/eu/article/what-eu-turkey-deal (consulted on the 18th of February 2024)

Treaty on the Functioning on the European Union (2012), Official Journal of the European Union. Internet: http://data.europa.eu/eli/treaty/tfeu_2012/oj (consulted on the 3rd of February 2024)

UN Human Rights Council (2012), *The promotion, protection, and enjoyment of human rights on the Internet*, HRC/RES/20/8, Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development, para. 1.

Valenta, M., Jakobsen, J., Župarić-Iljić, D., Halilovich, H. (2020), "Syrian refugee migration, transitions in migrant statuses and future scenarios of Syrian mobility", in *Refugee Survey Quarterly*, vol. *39*, n. 2, pp. 153–176. Internet: https://doi.org/10.1093/rsq/hdaa002 (consulted on the 16th of February 2024)

Van der Ploeg, I. (1999), "The illegal body: `Eurodac' and the politics of biometric identification", in *Ethics and Information Technology*, pp. 295–302. Internet: https://doi.org/10.1023/A:1010064613240 (consulted on the 3rd of February 2024)

Ziccardi, G. (2013), "Resistance, liberation technology and human rights in the digital age", in *Law, governance and technology series*.

عبدات, أ. (2018). "The EU-Turkey refugee deal: First Lessons for the EU's (Mediterranean) Neighborhood Strategy", in *academia.edu*. Internet: https://www.academia.edu/35807616/The_EU-Turkey_refugee_deal_First_Lessons_for_the_EUs_Mediterranean_Neighborhood_Strategy (consulted on the 14th of February 2024)

Department of Political Sciences
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The impact of digitalization on migration processes.

The European Union and a case study of Syrian migration.

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Table of contents:

summary

Recently, the intersection of migration and digitalization has emerged as a dynamic force that is fundamentally changing the landscape of human movement across borders. The advent of digital technologies has revolutionized various aspects of migration, from the initial decision-making process to the assimilation of migrants into new societies. This convergence of migration and digitalization has not only accelerated the speed and scale of global mobility, but also created new opportunities and challenges for migrants, governments, and wider societies.

Foreword:

what is digitalization of migration?

The digitalization of migration encompasses a wide range of technologies and practices, including digital platforms for disseminating information, biometric identification systems, mobile applications to assist migrants, and data analytics for border management. These technological advances have fundamentally changed the dynamics by facilitating access to information, improving communication channels, and simplifying administrative procedures. Moreover, the digitalization of migration has blurred the boundaries between the physical and virtual realms, enabling migrants to navigate complex migration processes more efficiently.

However, alongside its transformative potential, the digitalization of migration also poses numerous challenges, ranging from privacy concerns to digital exclusion and the exacerbation of existing inequalities. As governments and policymakers grapple with the ethical and regulatory implications of digital technologies in migration management, issues such as data security, algorithmic bias and digital rights have gained prominence in public discourse. In this rapidly evolving landscape, understanding the multifaceted implications of the digitalization of migration is crucial to promoting inclusive and sustainable migration policies. By harnessing the potential of digital technologies while upholding the rights and dignity of migrants, societies can harness the transformative power of digitalization to develop more equitable and compassionate migration systems for the future.

The aim:

How digitalization has transformed migration.

This research paper explores the transformative impact of technology on the field of migration. It seeks to illustrate how the introduction of digital technologies has completely overhauled the dynamics of migration for individuals around the world. The paper addresses two overarching themes. First, it examines the implementation of digital practices on a global scale, particularly within Europe. In recent times, migration has become a central focus within the European Union, driven by advances in technology, evolving migration patterns and political imperatives. This digital revolution encompasses various facets of migration management, ranging from border control to asylum processing and integration efforts.

The second theme focuses on the digitalization of migration from the perspective of emerging migration practices. The proliferation of digital technologies, especially smartphones and social media platforms, has revolutionized the way migrants approach migration and maintain connections with each other. Migrants have quickly embraced new media, becoming adept users and sparking discussions about the necessity of smartphones for refugees throughout their journeys. To support this argument, the paper looks at a case study of Syrian migration to Europe. This crisis is one of the most significant humanitarian challenges of the 21st century, with profound implications not only for the migrants themselves, but also for their host countries and communities. In this context, the advent of digital technologies has fundamentally reshaped the migration experience from the outset, influencing how refugees strategize, navigate and communicate throughout their journeys. Digital platforms have played an important role in reducing the logistical barriers associated with migration, democratizing access to opportunities across borders. However, despite its transformative potential, the digitalization of migration also raises various challenges, such as privacy concerns, digital exclusion, and the exacerbation of existing inequalities. As governments and policymakers grapple with the ethical and regulatory implications of digital technologies in migration management, issues such as data security, algorithmic bias and digital rights have gained prominence in public discourse.

In this rapidly changing landscape, it is crucial to understand the multiple impacts of the digitalization of migration in order to promote inclusive and sustainable migration policies. By harnessing technological and digital potential and upholding the rights and dignity of migrants, societies can harness the transformative power of digitalization to build fairer and more humane migration systems for the future.

To support this argument, the paper looks at a case study of Syrian migration to Europe. This crisis is one of the most significant humanitarian challenges of the 21st century, with profound implications not only for the migrants themselves, but also for their host countries and communities. In this context, the advent of digital technologies has fundamentally reshaped the migration experience from the outset, influencing how refugees' strategies, navigate and communicate throughout their journeys.

First chapter:

Evolution of digitalization and its implication on migration

The first chapter moves from the general to the specific. It analyses the evolution of digitalization over time, focusing on the Fourth Industrial Revolution and its impact on society. The digital age has profoundly affected every facet of human existence. At its core, the digital age is driven by globalization, which seeks to transform processes through the introduction of new technologies that have facilitated the creation of a highly interconnected global community. The confluence of digitalization and globalization can be seen as a process that causes a shift in conventional patterns of thinking and introduces new norms of behavior in line with the evolving dynamics of the modern world.

From this general point of view, the text then focuses on digital diplomacy and the need to establish cooperation between states at the international level in order to develop and manage the new cyber scenario. In essence, cyber diplomacy refers to the management of international affairs in the digital realm, addressing the challenges of cybersecurity and digital trade. It encompasses diplomatic strategies used by nations to manage issues in cyberspace. Cyber systems are an integral part of cyber diplomacy, serving as essential tools for the implementation of diplomatic approaches. Given the significant role of cyberspace in global

affairs, each country formulates its own strategic framework, necessitating the adoption of different tactics to achieve key objectives. Cyber diplomacy unfolds in cyberspace, a global domain that connects people and nations around the world. Its condensed nature makes it different from traditional governance and international relations. The complexity of promoting international cohesion and coordination in cyberspace underscores the growing need for advanced development in this area. States are increasingly focusing on the cyber domain and its implications for policymaking. While cyberspace is based on shared international objectives, concrete cooperation has often been fragmented and based on ad hoc decisions.

The chapter then examines the impact of the digital scenario on human rights, how states and international organizations have had to adapt to technological change, trying to reorganize existing international treaties, but also how to create genuinely new agreements given the global scope of digital change. There is now a growing recognition that the global interconnected network and digitalization in general have given rise to human rights issues. The availability of Internet access and related activities has given rise to a new set of behaviors that require legal regulation. This poses significant new challenges for both States and international organizations. Broadly speaking, digital rights should be understood as an extension of universal human rights, tailored to the needs of an information-driven society. They encompass a diverse set of fundamental rights that are essential for functioning in the digital realm. These rights derive from various information-related entitlements, such as the right to access information, digital platforms and personal data. They also include the right to digital access.

Finally, it analyses migration within this digital scenario. The section begins with a definition of migration and, more specifically, of the migrant, and then tries to show how technology has changed these definitions and the migration movement in general. In today's world, the integration of digital technologies into migration processes is becoming increasingly common, leading to the modernization of migration management and having a significant

impact on human rights, especially those of migrants and refugees worldwide. Various studies on international migration have generated a body of knowledge highlighting the impact of technology on migration throughout history, emphasizing the interconnectedness of the two and their mutual influence.

The digitalization of migration has led to tangible improvements, particularly in terms of border control and the management of migrants upon arrival. This includes the introduction of databases and the use of computers to manage designated areas known as 'hot spots'. At the same time, however, the digitalization of migration has widened the gap between those who have access to the internet and the services offered by new digital programs and those who do not. It has also raised concerns about violations of the privacy of various migrants, including asylum seekers.

Second chapter:

European union and digital migration.

The second chapter focuses on the digitalization of migration in the European context. The chapter begins with a description of migration management at the European level and then moves on to the phase of management through the use of new technologies and how these have brought both benefits and risks to the international migration scenario. In recent years, the digitalization of migration within the European Union (EU) has emerged as a major area of interest, driven by a combination of technological advances, changes in migration patterns and political demands. This digital transformation encompasses various facets of migration management, ranging from border control to asylum processing and integration initiatives.

This chapter takes a closer look at the evolving needs of migration and asylum and identifies opportunities for European policymakers to make better use of digital technologies in implementing the new legal framework and in reassessing the increasing use of technology in asylum and migration systems. Digital tools can play a crucial role in facilitating the relocation of asylum seekers and refugees between Member States, in line with the objectives outlined in recent years.

The last parts of the second chapter focus on the new management of European borders with the development of new management technologies such as the Migrant Registration System, the Schengen Information System, EURODAC, Artificial Intelligence and the Biometric Matching System. Biometric identification systems, automated passport readers and facial recognition software have significantly improved the accuracy and reliability of identity verification. These technologies not only simplify the process for genuine travelers, but also enable authorities to detect people using false documents more effectively or with questionable backgrounds.

In order to draw conclusions and obtain a complete picture, it has proved necessary to include the perspective of migrants and the practices they use to approach migration in the digital age. Digital platforms, data analytics and communication tools have changed the way migrants travel, access information and connect with support networks. Whether through social media platforms that provide up-to-date insights on migration routes, or mobile applications that facilitate communication with family members and service providers, digital technologies have become indispensable tools for migrants in search of safety and opportunity, particularly in the Mediterranean region. However, the widespread use of digital technologies also poses a number of challenges and complications for migration governance.

Third chapter:

The case study of Syrian migration to Europe

Finally, the final chapter is a case study of Syrian migration to Europe in the digital age, which aims to present a two-pronged approach: on the one hand, Syrian migration to Europe and the practices that migrants implement through the use of modern digital tools, both in terms of their approach to migration and the practices they use to improve everyday life in the foreign state. The chapter shows how the advent of digital technologies has fundamentally changed the migration experience from the outset, affecting how refugees strategize, navigate and communicate throughout their journeys. In particular, a section of the chapter focuses on the central role of mobile phones, which have become indispensable tools for Syrian migrants, providing access to vital information, communication channels and digital mapping services.

Through various social media platforms, messaging applications and online forums, refugees can connect with family members, seek guidance from peers and receive real-time updates on border crossings and safe routes. In addition, digital technologies have facilitated Syrian migrants' access to essential services and support networks upon arrival in Europe.

On the other hand, the chapter seeks to explore the response that Europe has been able to give to the Syrian crisis. This part will be analyzed first by learning the methods of effective migration management, without neglecting the importance that Turkey has had in this field through its agreements with Europe. The European Union (EU) has addressed the Syrian refugee crisis through various initiatives, including the European Agenda on Migration and the New Pact on Migration and Asylum. These efforts aim to provide humanitarian assistance to Syrian refugees and support to neighboring host countries.

Finally, it was necessary to consider the digital practices that Europe has put in place in relation to this crisis, while also trying to extrapolate the future perspectives that the digital world will bring to the field of international politics. The development of various digital initiatives to improve the situation of migrants comes directly from these states, private individuals, or non-governmental organizations. In the context of Syrian migration to Europe, an interesting aspect emerges migrants often leave all their belongings behind, except for their mobile phones. This device becomes an indispensable companion throughout their journey, especially as digital technologies such as Facebook groups and mobile applications exert a significant influence. These digital tools, once used to organize protests and revolutions, have now become indispensable for fleeing war, transforming smartphones not only into communication devices but also into survival tools.

Concluding remarks and future scenarion

Migration processes are increasingly being shaped by digitalization, a trend that is expected to increase in the future. The increasing accessibility and affordability of digital connectivity and devices, as well as the rise of the middle class in various regions, point to a growing role for digital technologies in migration. In migration management, computer technology

integrated with biometrics is increasingly being used to streamline administrative processes and improve system coordination. Examples include UNHCR's proGres refugee registration platform and the EU's EURODAC database, which stores the fingerprints of asylum seekers. However, these technologies have both advantages and disadvantages. For example, technologies used in maritime search and rescue (SAR) operations help prevent migrant casualties, but traffickers exploit SAR efforts, putting migrants' lives at risk. The proliferation of dual-use technologies that serve both military and civilian purposes has supported government efforts to strengthen border controls, contributing to the emergence of a "border industrial complex" market expected to reach $32.5 billion by 2024.

While surveillance technologies offer benefits for border control, they also raise privacy and human rights concerns. Blockchain technology holds promise for improving the well-being of migrants, particularly in digital identity initiatives such as ID2020, which aims to provide unique, portable, lifelong, and private identities.

Migrants rely heavily on technology, particularly mobile phones and the internet, to access essential services, learn languages and connect to support networks. However, disparities in access based on income, gender, and age lead to concerns about information insecurity and surveillance. While mobile phones facilitate migrants' integration into new societies, issues of privacy and state surveillance persist in both countries of origin and destination.

In sum, while some technologies benefit migrants, others restrict their rights. Destination countries should establish safeguards, including transparent accountability mechanisms, to monitor the development and use of surveillance and border control technologies. Prioritizing the development of blockchain technologies for digital identification and financial transactions can improve financial inclusion for migrants.

Bibliography:

Adapted from United Nations Department of Economic and Social Affairs, in *Recommendations on Statistics of International Migration,* Revision 1 (1998) p. 10, definition of "long-term migrants".

Adesina, O. S. (2017), "Foreign policy in an era of digital diplomacy", in *Cogent Social Sciences*, vol. *3*, n. 1. Internet: https://doi.org/10.1080/23311886.2017.1297175 (consulted on the 25th of January 2024)

Alencar, A. (2020), "Mobile communication and refugees: An analytical review of academic literature", in *Sociology Compass*, vol. *14*, n. 8, p. 4. Internet: https://doi.org/10.1111/soc4.12802 (consulted on the 17th of December 2023)

Alencar, A. (2023), "Technology can be transformative for refugees, but it can also hold them back", in *Migration policy institute.* Internet: https://www.migrationpolicy.org/article/digital-technology-refugees (consulted on on the 17 of December 2023)

Atoyan, V., Hovyan, V., Movsisyan, N., Hovyan, V. (2023), "Digitalization as a sociocultural characteristic of the globalization era", in *Saudi Journal of Humanities and Social Sciences*, pp. 296–299.internet: https://doi.org/10.36348/sjhss.2023.v08i09.008 (consulted on the 25th of January 2024)

Attatfa, A., Renaud, K., De Paoli, S. (2020), "Cyber Diplomacy: A Systematic Literature Review", in *Procedia Computer Science*, Vol. *176*, pp. 60–69. Internet: https://doi.org/10.1016/j.procs.2020.08.007 (consulted on the 17th of December 2023)

Balla, E. (2023), "The European Union's response to the Syrian refugee crisis.", in *E-International Relations.* Internet: https://www.e-ir.info/2023/04/22/the-european-unions-response-to-the-syrian-refugee-crisis/# (consulted on the 28th of January 2024)

Bargiacchi P. (2019), “Non-State actors and illegal migration: a new European approach to security policies” in *Южно-российский журнал социальных наук*, vol. 1, pp. 24-39. Internet: https://cyberleninka.ru/article/n/non-state-actors-and-illegal-migration-a-new-european-approach-to-security-policies (consulted on the 28th of January 2024)

Barrinha, A., Renard, T. (2017), “Cyber-diplomacy: the making of an international society in the digital age”, in *Global Affairs*, vol. 3, pp.353-364. Internet: https://doi.org/10.1080/23340460.2017.1414924 (consulted on

Beduschi, A. (2020), “International migration management in the age of artificial intelligence”, in *Migration Studies*, vol. *9*, n. 3, pp. 576–596. Internet: https://doi.org/10.1093/migration/mnaa003 (consulted on the 2nd of January)

Beirens, L. S. H. (2023), “What Role Could Digital Technologies Play in the New EU Pact on Migration and Asylum*?*”, in *Migration policy institute.* Internet: https://www.migrationpolicy.org/research/digital-technologies-eu-pact-migration (consulted on the 28th of January 2024)

Belaïd, J. (2022), “The role of Non-State Actors in Digitised Migration Management. The Impacts and Limits of Digitalisation on the EU’s Externalised Migration control In the Mediterranean” in *EUROMESCO – Euro-Mediterranean Research, Dialogue, Advocacy*. Internet: https://www.euromesco.net/publication/the-role-of-non-state-actors-in-digitised-migration-management-the-impacts-and-limits-of-digitalisation-on-the-eus-externalised-migration-control-in-the-mediterranean/ (consulted on the 25th of January 2024)

Besharov, D. J., López, M. H. (2016), “Adjusting to a world in motion: Trends in Global Migration and Migration Policy”, in *Oxford University Press*, pp. 171-172.

Bhattacharya, A. (2022). “Cyber-diplomacy in International Negotiations: Rules, Risks, and Rewards” in *Advocacy Unified Network*. Internet: https://doi.org/10.57939/cb5e-r326 (consulted on the 25th of January 2024)

Bigo, D. (2022), “The Digitalisation of Border Controls and their Corporate Actors”, In *Oxford University Press eBooks*, pp. 229-C12.P80. Internet: https://doi.org/10.1093/oso/9780192857163.003.0013 (consulted on the 28th of January 2024)

Bloomberg, J. (2018). “Digitization, digitalization, and digital transformation: confuse them at your peril”, in *Forbes*. Internet: https://www.forbes.com/sites/jasonbloomberg/2018/04/29/digitization-digitalization-and-digital-transformation-confuse-them-at-your-peril/?sh=2b5675ca2f2c (consulted on the 28th of January 2024)

Bolhuis, M. (2020), “Seeking Asylum in the Digital Era: Social-Media and Mobile-Device Vetting in Asylum Procedures in Five European countries”, in *Journal of Refugee Studies*, vol. *34*, n. 2, pp. 1595–1617. Internet: https://doi.org/10.1093/jrs/feaa029 (consulted on the 17th of December 2023)

Broeders, D. (2007), “The new digital Borders of Europe”, in *International Sociology*, vol. *22*, n.1, pp. 71–92. Internet : https://doi.org/10.1177/0268580907070126 (consulted on the 25th of January 2024)

Broeders, D., & Hampshire, J. (2013), “Dreaming of seamless borders: ICTs and the Pre-Emptive Governance of Mobility in Europe”, in *Journal of Ethnic and Migration Studies*, vol. *39*, n.8, pp. 1201–1218. Internet : https://doi.org/10.1080/1369183x.2013.787512 (consulted on the 17th of December 2023)

Buck, S. J. (2017), *The Global Commons*. London: Routledge eBooks. Internet: https://doi.org/10.4324/9781315086415 (consulted on the 28th of January 2024)

Caruso, L. (2017), "Digital innovation and the fourth industrial revolution: epochal social changes?", in Springer Link, *AI & SOCIETY*, vol.*33*, n. 3, pp 379–392. internet: https://doi.org/10.1007/s00146-017-0736-1 (consulted on the 17th of December 2023)

Casswell, J. (2024), "The Digital Lives of Refugees: how displaced populations use mobile phones and what gets in the way", in *Mobile for Development*, GSMA.
Internet: https://www.gsma.com/mobilefordevelopment/programme/mobile-for-humanitarian-innovation/the-digital-lives-of-refugees-how-displaced-populations-use-mobile-phones-and-what-gets-in-the-way/ (consulted on the 2nd of January)

Casswell, J., Downer, M., Khan, M., & Baah, B. (2021), "The digital lives of refugees: How displaced populations use mobile phones and what gets in the way" in *GSM Association.* Internet: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/The-Digital-Lives-of-Refugees.pdf (consulted on the 2nd of January)

Castells, M., (2010), *The Rise of the Network Society: Second edition with a new preface*, Wiley Blackwell Publication. internet: https://urb.bme.hu/wp-content/uploads/2014/05/manuel_castells_the_rise_of_the_network_societybookfi-org.compressed.pdf (consulted on the 28th of January 2024)

Cellamare, G. (2006), *La disciplina dell'immigrazione nell'Unione Europea*, Torino: Giappichelli.

Coccoli, J. (2017). "The challenges of new technologies in the implementation of human rights: An analysis of some critical issues in the digital era", in *Peace Human Rights Governance*, vol. 1, n. 2, pp. 223-250.

Consiglio europeo di Tampere (1999)*, Conclusioni della presidenza*, European Parliament.
Internet: https://www.europarl.europa.eu/summits/tam_it.htm (consulted on the 25th of January 2024)

Council of the International Organization for Migration (2007), *Migration and the Environment*, MC/INF/288.

Czaika, M., & De Haas, H. (2013), "The effectiveness of immigration policies", in *Population and Development Review*, vol. *3,* n. 3, pp. 487–508. Internet https://doi.org/10.1111/j.1728-4457.2013.00613.x (consulted on the 2nd of January)

Dekker, R., Engbersen, G., Klaver, J., Vonk, H. (2018), "Smart Refugees: How Syrian asylum migrants use social media information in Migration Decision-Making", in *Sage Journals*, vol. 4, n. 1. Internet: https://doi.org/10.1177/2056305118764439 (consulted on the 25th of January 2024)

Diba, P., Papanicolaou, G., & Antonopoulos, G. A. (2019), "The digital routes of human smuggling? Evidence from the UK", in *Crime Prevention and Community Safety*, vol. *21*, n.2, pp. 159–175. Internet: https://doi.org/10.1057/s41300-019-00060-y (consulted on the 28th of January 2024)

Diminescu, D. (2008), "The Connected Migrant: An Epistemological Manifesto", in *Social Science Information*, vol. 47, n. 4, pp. 565–579.

Dingle, H., Drake, V. A. (2007), "What is migration?" in *BioScience*, vol. *57*, n. 2, pp. 113–121. Internet: https://doi.org/10.1641/b570206 (consulted on the 25th of January 2024)

Dubinsky, Z. (2015), "For Syrian refugees, smartphones are a lifeline — not a toy" in *CBC*. Internet: https://www.cbc.ca/news/world/for-syrian-refugees-smartphones-are-a-lifeline-not-a-toy-1.3221349 (consulted on the 2nd of January)

Dumbrava, C. (2021), "Artificial Intelligence at EU Borders - European parliament", in *European Parliamentary Research Service*.

Internet: https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/690706/EPRS_IDA(2021)690706_EN.pdf (consulted on the 25th of January 2024)

Eggeling, K. A. (2023), "Digital diplomacy", in *Oxford Research Encyclopedia of International Studies*. Internet: https://doi.org/10.1093/acrefore/9780190846626.013.790 (consulted on the 17th of December 2023)

European Commission (2023), *DG EGHO policy framework for humanitarian digitalization,* Directorate-General for European Civil Protection and Humanitarian Aid Operations, March, Luxembourg. Internet: https://civil-protection-humanitarian-aid.ec.europa.eu/system/files/2023-03/DG%20ECHO%20Policy%20Framework%20on%20Digitalisation%20-%20final_0.pdf (consulted on the 2nd of January)

European Commission*, Migration and Home Affairs*. Internet: https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/migration-and-home-affairs_en (consulted on the 13th of January)

European Council on Refugees and Exiles (2021), *Access to Registration Procedures for Asylum Seekers and Refugees in Europe*. Internet: https://ecre.org (consulted on the 13th of January)

European Union agency for asylum (2023), *EUAA Strategy on Digital Innovation in Asylum Procedures and Reception Systems*, May, Luxemburg. Internet: https://euaa.europa.eu/sites/default/files/publications/2023-10/2023_EUAA-Strategy-on-Digital-Innovation-in-Asylum-Procedures-and-Reception-Systems_EN.pdf. (consulted on the 2nd of January)

European University Institute, Migration Policy Centre, Achilli, L. (2016), "Tariq al-Euroba displacement trends of Syrian asylum seekers to the EU", *European University Institute*. Internet: https://data.europa.eu/doi/10.2870/974511 (consulted on the 17th of December 2023)

Factsheet - The EU and the Syria crisis (13.06.2023) - Syrian Arab Republic. ReliefWeb. Internet: https://reliefweb.int/report/syrian-arab-republic/factsheet-eu-and-syria-crisis-13062023#:~:text=The%20EU%20remains%20engaged%20with,host%20them%20in%20neighbouring%20countries (consulted on the 14th of February 2024)

Favilli, C. (2010), "Il Trattato di Lisbona e la politica dell'Unione europea in materia di visti, asilo e immigrazione", in *Diritto, Immigrazione E Cittadinanza*, vol. *2*, pp. 13–35. Internet: https://doi.org/10.3280/diri2010-002002 (consulted on the 17th of December 2023)

Frenzel, A., Muench, J. C., Bruckner, M., Veit, D. J. (2021), "Digitization or digitalization? – Toward an understanding of definitions, use and application in IS research", in *ResearchGate*, AMCIS 2021. Internet: https://www.researchgate.net/publication/354402700_Digitization_or_Digitalization_-_Toward_an_Understanding_of_Definitions_Use_and_Application_in_IS_Research (consulted on the 2nd of January)

Gillespie, M., Osseiran, S., Cheesman, M. (2018), "Syrian Refugees and the Digital Passage to Europe: Smartphone Infrastructures and Affordances", in *Sage Journals*, vol. 4, n. 1. Internet: https://doi.org/10.1177/2056305118764440 (consulted on the 14th of February 2024)

Global Affairs and Strategic Studies (2023), *Global Affairs and Strategic Studies,* Facultad de Derecho. Internet: https://www.unav.edu/web/global-affairs/detalle/-/blogs/the-eu-and-the-root-causes-of-syrian-migration (consulted on the 28th of January 2024)

Glouftsios, G., Scheel, S. (2020), "An inquiry into the digitisation of border and migration management: performativity, contestation and heterogeneous engineering", in*Third World Quarterly*, vol. *42*, n. 1, pp. 123–140. Internet: https://doi.org/10.1080/01436597.2020.1807929 (consulted on the 2nd of January)

Göransson, M., Hultin, L., Mähring, M. (2020), "'The phone means everything.' Mobile phones, livelihoods, and social capital among Syrian refugees in informal tented settlements in Lebanon", in *Migration and Development*, vol. *9*, n. 3, pp. 331–351. Internet: https://doi.org/10.1080/21632324.2020.1746029 (consulted on the 2nd of January)

Hudson, L. (2018), "Syrian Refugees in Europe: Migration Dynamics and Political Challenges,", in *New England Journal of Public Policy*, Vol. 30, n. 2, Article 9.
Internet: https://scholarworks.umb.edu/nejpp/vol30/iss2/9/ (consulted on the 14th of February 2024)

International Organization for migration (2021), *Global annual report, 2021 operations and emergencies*, Geneva. Internet: https://www.iom.int/iom-global-reports-operations-and-emergencies (consulted on the 13th of January)

Jandl, M. (Ed.). (2007), *Innovative Concepts for Alternative Migration Policies: Ten Innovative Approaches to the Challenges of Migration in the 21st Century*, Amsterdam University Press. Internet: http://www.jstor.org/stable/j.ctt46msqg (consulted on the 14th of February 2024)

Jauhiainen, J. S., Özçürümez, S., Tursun, Ö. (2022), "Internet and social media uses, digital divides, and digitally mediated transnationalism in forced migration: Syrians in Turkey", in *Global Networks*, vol. 22, n. 2, pp. 197-210. Internet: https://doi.org/10.1111/glob.12339 (consulted on the 14th of February 2024)

Karim, K. H., Al-Rawi, A. (2018), *Diaspora and media in Europe: Migration, Identity, and Integration*, Springer.

Karppinen, K. (2017). "Human rights and the digital", In *Routledge eBooks*, pp. 95–103.
Internet: https://doi.org/10.4324/9781315619835-9 (consulted on the 2nd of January)

Kirişci, k. (2014), "Syrian Refugees and Turkey's Challenges: Going beyond Hospitality", in *Brookings.* Internet: https://www.brookings.edu/articles/syrian-refugees-and-turkeys-challengesgoing-beyond-hospitality/ (consulted on the 14th of February 2024)

Labour Migration, International Organization for Migration. International Organization for Migration. Internet: https://www.iom.int/labour-migration (consulted on the 2nd of January)

Madianou, M., Miller, D. (2013), *Migration and new media: Transnational Families and Polymedia*, Routledge.

Madon, S., Schoemaker, E. (2021), "Digital identity as a platform for improving refugee management", in *Information Systems Journal*, vol. 3, n. 6, pp. 929–953. Internet: https://doi.org/10.1111/isj.12353 (consulted on the 14th of February 2024)

Manantan, M. B. (2021), "*Defining Cyber Diplomacy - Australian Institute of International Affairs*", in Australian Institute of International Affairs. Internet: https://www.internationalaffairs.org.au/australianoutlook/defining-cyber-diplomacy/ (consulted on the 13th of January)

Martins, B. O., Lidén, K., Jumbert, M. G. (2022), "Border security and the digitalisation of sovereignty: insights from EU borderwork", in *European Security*, vol. 31, n. 3, pp. 475–494. Internet: https://doi.org/10.1080/09662839.2022.2101884 (consulted on the 2nd of January)

Maulana, Y. I., Fajar, I. (2023), "Analysis of Cyber Diplomacy and its Challenges for the Digital Era Community", in *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, Vol. 4, n. 2, pp. 169–177. Internet: https://doi.org/10.34306/itsdi.v4i2.587 (consulted on the 2nd of January)

McAuliffe, M. (2021). "International migration and digital technology: an overview", in *Research Handbook on International Migration and Digital Technology*, Cheltenham, Edward Elgar Publishing Limited, pp.1-13.

Miehe, L. (2022), "Between promise and peril: Digitalised migration in the Euro-Mediterranean region", in *European Institution for the Mediterranean*. Internet: https://www.iemed.org/publication/between-promise-and-peril-digitalised-migration-in-the-euro-mediterranean-region/ (consulted on the 13th of January)

Migration and Home Affairs (2023), *What is SIS and how does it work?* Internet: https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/schengen-information-system/what-sis-and-how-does-it-work_en (consulted on the 13th of January)

Migration and Home Affairs, *Common European Asylum System.* Internet: https://home-affairs.ec.europa.eu/policies/migration-and-asylum/common-european-asylum-system_en (consulted on the 7th of February)

Migration and Home Affairs, *Smart borders*. Internet: https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/smart-borders_en (consulted on the 7th of February)

Molnar, P. (2020), "AI and Migration Management", in *Oxford Academic*, pp. 768-787. Internet: https://doi.org/10.1093/oxfordhb/9780190067397.013.49 (consulted on the 7th of February)

Mouzourakis, M. (2020), *EU migration governance in the Mediterranean*: *The perils of pragmatic cooperation*, Routledge.

Nalbandian, L., Dreher, N. (2023), "Current methodological approaches in studying the use of advanced digital technologies in migration management", in *Frontiers in Human Dynamics*, vol. *5*.
Internet: https://doi.org/10.3389/fhumd.2023.1238605 (consulted on the 14th of February 2024)

Nannerini, A. (2023), "Italy's mixed response to the Syrian refugee crisis.", in *E-International Relations.*
Internet: https://www.e-ir.info/2023/05/03/italys-mixed-response-to-the-syrian-refugee-crisis/ (consulted on the 13th of January)

Narli, N. (2018), "Life, Connectivity and Integration of Syrian Refugees in Turkey: Surviving through a Smartphone", in *Questions De Communication*, vol. *33*, pp. 269–286.
Internet: https://doi.org/10.4000/questionsdecommunication.12523 (consulted on the 3rd of February 2024)

Niemann, A., Zaun, N. (2023), "Introduction: EU external migration policy and EU migration governance", in *Journal of Ethnic and Migration Studies*, vol. 49, n.12, pp. 2965–2985. Internet: https://doi.org/10.1080/1369183X.2023.2193710 (consulted on the 20th of February)

Nilizadeh, Sh., Jahid, S., Mittal, P., Borisov, N., Kapadia, A. (2012). "Cachet: A decentralized architecture for privacy preserving social networking with caching", In *CoNEXT 12: Proceedings of the 8th international conference on Emerging networking experiments and technologies,* New York: Association for Computing Machinery, pp. 337-348.

OHCHR (2023), *Digital technologies at borders: A threat to people on the move*.
Internet: https://www.ohchr.org/en/stories/2023/10/digital-technologies-borders-threat-people-move (consulted on the 7th of February)

Palmberger, M. (2022), "Migrants and new media", in *Oxford University Press eBooks*, pp. 163–176.
Internet: https://doi.org/10.1093/oxfordhb/9780197544938.013.17 (consulted on the 20th of February)

Petillo, K. (2022), "Stuck in limbo: How Europe can protect Syrian refugees", in *Middle East and North Africa*, European Council on Foreign Relations. Internet: https://ecfr.eu/article/stuck-in-limbo-how-europe-can-protect-syrian-refugees/ (consulted on 18th of February 2024)

Petillo, K. (2023), "From aid to inclusion: A better way to help Syrian refugees in Turkey, Lebanon, and Jordan", in *Middle East and North Africa*, European Council on Foreign Relations. Internet: https://ecfr.eu/publication/from-aid-to-inclusion-a-better-way-to-help-syrian-refugees-in-turkey-lebanon-and-jordan/ (consulted on the 18th of February 2024)

Petryshyn, O. V., Hyliaka, O. (2021). "Human rights in the digital age: Challenges, threats and prospects", in *Visnik Akademìï Pravovih Nauk Ukraïni*, vol. 28, n. 1, pp. 15–23. Internet: https://doi.org/10.37635/jnalsu.28(1).2021.15-23 (consulted on the 3rd of February 2024)

Rashica, V. (2018), "The benefits and risks of digital diplomacy", in *SEEU Review*, vol. 13, n. 1, pp. 75–89. Internet: https://doi.org/10.2478/seeur-2018-0008 (consulted on the 7th of February)

Redazione. (2020), "Twitter Diplomacy": la politica delle relazioni internazionali al tempo dei social media", in *European Affairs Magazine*. Internet: https://www.europeanaffairs.it/blog/2020/08/22/twitter-diplomacy-la-politica-delle-relazioni-internazionali-al-tempo-dei-social-media/ (consulted on the 3rd of February 2024)

Roots, L. (2015), "The new EURODAC regulation: Fingerprints as a source of informal discrimination", in *Baltic Journal of European Studies*, vol. *5*, n. 2, pp. 108–129. Internet: https://doi.org/10.1515/bjes-2015-0016 (consulted on the 3rd of February 2024)

Ruggiu, D. V. (2015), “Dalla Siria all’Europa con lo smartphone: l’hi-tech al servizio dei migranti.” in *La Repubblica*. Internet: https://www.repubblica.it/solidarieta/immigrazione/2015/10/12/news/hi-tech_al_servizio_dei_migranti-124892733/ (consulted on the 14th of February 2024)

Rygiel, K., Baban, F., Ilcan, S. (2016), “The Syrian refugee crisis: The EU-Turkey ‘deal’ and temporary protection”, in *Global Social Policy*, vol. *16*, n. 3, pp. 315–320.
Internet: https://doi.org/10.1177/1468018116666153 (consulted on the 14th of February 2024)

Saunders, N. (2023), “Security, digital border technologies, and immigration admissions: Challenges of and to non-discrimination, liberty and equality”, in *European Journal of Political Theory*.
Internet: https://doi.org/10.1177/14748851231203912 (consulted on the 3rd of February 2024)

Schmahl, S. (2022). “Digitalisation and international Human Rights Law: opportunities and critical challenges”, in *Nomos Verlagsgesellschaft mbH & Co. KG eBooks*, pp. 135–178).
Internet: https://doi.org/10.5771/9783748931638-135 (consulted on the 7th of February)

Scholten, P., Pisarevskaya, A., & Levy, N. (2022), “An introduction to migration studies: the rise and coming of age of a research field”, in *IMISCOE research series*, pp. 3–24. Internet: https://doi.org/10.1007/978-3-030-92377-8_1 (consulted on the 7th of February)

Schrover, M. (2022), “Migration Histories”, in *IMISCOE research series*, pp. 25–46.
Internet: https://doi.org/10.1007/978-3-030-92377-8_2 (consulted on the 14th of February 2024)

Schwab, K. (2017), *The Fourth Industrial Revolution* p. 11, New York, Crown Business.

Skorodumova, O., Melikov, I., Tabasaranskiy, R. S. (2022), "Problems of migration management in the conditions of global digitalization of Society", in *Communications in computer and information science*, pp. 174–185. Internet: https://doi.org/10.1007/978-3-031-04238-6_14 (consulted on the 20th of February)

Thales Group. (n.d.), eVisa Portal. Internet: https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/eborder/evisa-portal#:~:text=An%20eVisa%20system%20manages%20the,it%20is%20pending%20or%20validated (consulted on the 7th of February)

The Editors of Encyclopaedia Britannica. (2024), "Syrian Civil War - Facts & timeline", in *Encyclopedia Britannica*. Internet: https://www.britannica.com/event/Syrian-Civil-War (consulted on the 7th of February)

The Global Compact on Refugees (2023), *Construction, coordination and management of temporary accommodation centres*, Emergency preparedness & response, *UNHCR*. Internet: https://globalcompactrefugees.org/good-practices/construction-coordination-and-management-temporary-accommodation-centres (consulted on the 3rd of February 2024)

The International Rescue Committee (2023), "What is the EU-Turkey deal?". Internet: https://www.rescue.org/eu/article/what-eu-turkey-deal (consulted on the 18th of February 2024)

Treaty on the Functioning on the European Union (2012), Official Journal of the European Union. Internet: http://data.europa.eu/eli/treaty/tfeu_2012/oj (consulted on the 3rd of February 2024)

UN Human Rights Council (2012), *The promotion, protection, and enjoyment of human rights on the Internet*, HRC/RES/20/8, Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development, para. 1.

Valenta, M., Jakobsen, J., Župarić-Iljić, D., Halilovich, H. (2020), “Syrian refugee migration, transitions in migrant statuses and future scenarios of Syrian mobility”, in *Refugee Survey Quarterly*, vol. *39*, n. 2, pp. 153–176. Internet: https://doi.org/10.1093/rsq/hdaa002 (consulted on the 16th of February 2024)

Van der Ploeg, I. (1999), “The illegal body: `Eurodac' and the politics of biometric identification”, in *Ethics and Information Technology*, pp. 295–302. Internet: https://doi.org/10.1023/A:1010064613240 (consulted on the 3rd of February 2024)

Ziccardi, G. (2013), “Resistance, liberation technology and human rights in the digital age”, in *Law, governance and technology series*.

عبدات, أ. (2018). “The EU-Turkey refugee deal: First Lessons for the EU’s (Mediterranean) Neighborhood Strategy”, in *academia.edu*. Internet: https://www.academia.edu/35807616/The_EU-Turkey_refugee_deal_First_Lessons_for_the_EUs_Mediterranean_Neighborhood_Strategy (consulted on the 14th of February 2024)