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WORKING PAPER

The datafication of borders and management of refugees in the context of Europe

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Abstract

This report provides an overview of the datafication of borders and the management of refugees within the context of the EU. It analyses different reports, papers and systems that are part of the data processes confronted by refugees and asylum seekers. The report is focused on existing systems used by the EU and the UNHCR, but also draws on further studies on the use of Big Data in the context of refugees.

Contents

Acronyms

RSD – Refugee Status Determination
UN – United Nations
UNHCR – The UN High Commissioner for Refugees, also The UN Refugee Agency
PoC – People of Concern

1   Introduction: datafication of borders and management of refugees

The datafication of the governance of refugees occurs in different ways and at different stages of the migration trail. Sources can vary from human rights organizations and international agencies, press coverage, social networks, mobile use states and border authorities among others. At the same time, a common information source through their entire lives can be mobile data, social networks and emails.

We can divide the datafication of migration management in several stages that might not hold for all persons:

Figure 1: The refugee journey.

- Reports from the original country or region that conditions the qualification of a person applying for asylum.

- The identification and tracking of refugees during their life in temporal or permanent refugee camps.

- The journey of refugees through states, borders and territories.

- Borders control and asylum evaluation at the host country.

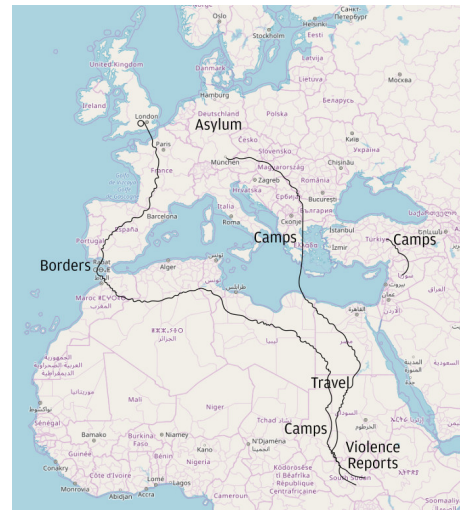- Identification and tracking of refugee status.

2   Registration and identity management by the UNHCR

This section describes the UNHCR identify and registration systems as well as where they are used. At the end of the section we identify the relevance of these systems in Europe and we summarize ongoing projects and discussions of biometric identify systems.

2.1   Population Registration and Identity Management EcoSystem (PRIMES)

UNHCR advocates that all refugees and asylum seekers be registered individually as a means to guarantee basic human rights to provide access to services but also to evaluate and track events. The agency is developing the Population Registration and Identity Management EcoSystem (PRIMES) trust and service platform that will be the single entry point[1] for all digital interaction between UNHCR and partners with the individuals who are registered[2]. This includes existing tools such as *proGres* v4 for case management, the UNHCR's Biometric Identity Management System (BIMS), and the newly developed Rapid Application (RApp) for mobile registration. PRIMES will initially be deployed in East and Horn of Africa, Middle East and North Africa and francophone Africa during 2018 and 2019[3]. Features of PRIMES are:

- *Registration (biographic and biometric) and certification*

- *Case-management (including the principal Protection aspects: Refugee Status Determination, Resettlement, Repatriation, Legal and Physical Protection, Child Protection, SGBV and others)*

- *Assistance (cash and in-kind)*

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[1]Previous version of *proGres* v3 consisted on 500 local databases instead of a centralised database.
[2]http://www.unhcr.org/uk/primes.html
[3]http://www.unhcr.org/blogs/countdown-accelerated-primes-roll-starting-may/

UNHCR PRIMES
(Population Registration and Identity Management Eco System)

State Civil Registry Systems
(CRVS and IPIS)

ProGres v4
Core Module

BIMS
Core Module

Rapid Application (RApp)
Core Module

Dataport
Core Module

People of Concern Access Tools

Other PoC Access Tools
PoC Messenger App
PoC Banking App
PoC Self Service
POC Identity Wallet

UNHCR Tools

GDT
CashAssist
RAIS
FTS File Tracking
Scheduler
IrisGuard
ProGres v3
Other UNHCR Tools
Project X

Partner Tools

PRIMERO
SCOPE
Other Partner Tools

Figure 2: The PRIMES ecosystem of tools (Source UNHCR https://www.unhcr.org/primes.html).

- *Data management, including reporting and sharing*

The PRIME platform is a collection of interoperable tools and databases for the registration of 'persons of concern' (this includes external partners tools)[4]:

> The Population Registration and Identity Management Eco-System (PRIMES) is a platform for all UNHCR registration and identity management tools and applications, including existing tools such as proGres, the Biometric Identity Management System (BIMS), the Global Distribution Tool (GDT), the Rapid Application (RApp), IrisGuard and RAIS, as well as those to be developed in the future. PRIMES applications are designed to work in offline, online and GSM environments, and will be interoperable with IT systems used by governments and partner organisations such as WFP (SCOPE) and Unicef (Primero). New PRIMES applications going forward will aim to promote direct access by persons of concern (e.g. access to personal data, entitlement accounts, identity wallet).

The *proGres* database software is already used in more than 70 countries and contains written details and photos of refugees (including case documentation), but it can be extended to the use of biometric data. According to the UN, the system covers 10% of refugee data. The registration process can be done directly by the UNHCR or by the host states. To do so, the UNHCR is
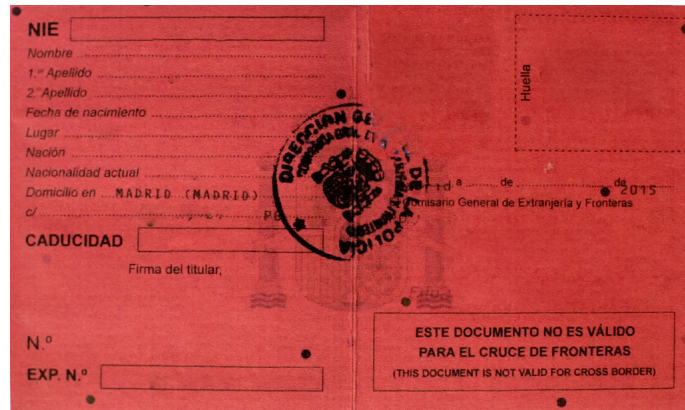
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[4]http://www.unhcr.org/registration-guidance/chapter2/registration-tools/

Figure 3: Examples of refugee ID cards in Spain (top) and the UK (bottom).

building extensive guidance on registration and identify management[56].

The host states are responsible of implementing refugees' registration and tracking in coordination with the UNHCR, otherwise the UNHCR performs direct data registration. However, disparate design of solutions is possible such as refugee status documentation in different countries (see Figure 3 for the examples of Spain and the UK).

More information and news can be found on the UNHCR online portal on registration[7] and their blog on digital inclusion[8]. Also, the agency has an extensive handbook on registration[9] (last published version is 2003). The website Biometric Update has a permanent section for UNHCR news on biometric identify management[10].

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[5] http://www.unhcr.org/registration-guidance/

[6] Note the UNHCR official web on registration presents numerous broken links of special relevant information such as procedures of people registration during emergencies.

[7] http://www.unhcr.org/uk/registration.html

[8] http://www.unhcr.org/blogs/digital-inclusion/

[9] http://www.unhcr.org/uk/publications/operations/4a278ea1d/unhcr-handbook-registration-provisional-release-september-2003-complete.html

[10] https://www.biometricupdate.com/tag/unhcr

The following sections describe the tools ecosystem of the UNHCR that are used both in refugee camps and host countries.

2.2 Datasets for registration

The UNHCR has developed five data sets which can be extended to match the needs of specific cases[11]. The agency encourages consideration for the necessity of gathering additional data. The table in Appendix A summarises datasets, variables and purposes of those datasets.

2.3 ProGres

Description

ProGres is 'the UNHCR's corporate, centralized, web-based case management software application. ProGres v4 supports operational functions ranging from the registration of individuals to a wide range of UNHCR case management functions including assistance, protection case management, protection interventions and the provision of documentation and cash-based assistance.'. The system implements role-based security access to implement sensitive information protection, not only for personal data, but also for case management. Appendix B lists some examples of case management with ProGres.*

Interaction with other systems

ProGres can be integrated with BIMS (biometric database), the GDT (food and assistance distribution), Data Port (reporting and data analysis) and financial service providers if cash assistance is required. ProGres is used by the UNHCR Demographic Projection Tool (DPTool)[12]. The DP-Tool provides predictions, in number and composition, of the evolution of the population of a refugee community that is used to plan durable solutions for camps. It combines demographics from ProGres with statistical techniques for population projection that considers several statistical variables, linked to a context, such as age and sex distribution, death rates, arrivals and departures among others. The tool is available on a public website[13] with predefined data but can be used with specific ProGres databases.

Where it is used

ProGres is aimed to be used globally. In Europe it is used in Belarus[14] and in Greece within the Greece Cash Alliance (GCA)[15] to manage the provision of cash assistance to refugees and asylum-seekers in the country. To implement the GCA, *proGres v4* is integrated with the UNHCR corporate cash assistance management system *CashAssist*. During September 2018, 54,545 refugees received cash assistance through the GCA[16].

2.4 The Rapid Application (RApp)

Description

RApp is an application for mobile devices and laptops that allows for the quick input of identity related data in off-line modus that can be later synchronised with the *proGres v4* and BIMS

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[11]http://www.unhcr.org/registration-guidance/chapter2/define-the-data-set/

[12]The UNHCR Demographic Projection Tool: estimating the future size and composition of forcibly displaced populations. http://www.unhcr.org/statistics/unhcrstats/5ae9ee747/unhcr-demographic-projection-tool-estimating-future-size-composition-forcibly.html

[13]http://demographicprojection.unhcr.org/

[14]http://www.unhcr.org/blogs/progres-version-4-is-now-live-in-belarus/

[15]The Greece Cash Alliance http://www.unhcr.org/5a14306a7.pdf and GREECE FACTSHEET January 2017 https://data2.unhcr.org/en/documents/download/54221

[16]https://data2.unhcr.org/en/documents/download/66253

databases. It allows data collection at individual and household level, including biometric data and connection of individuals with other registered groups.

Interaction with other systems

RApp synchronises registration and identity data with *proGres v4* and BIMS[17].

Where it is used

It will be rolled out as part of the ongoing PRIMES deployment, particularly in East and Horn of Africa, Middle East and North Africa and francophone Africa. It was first tested in South Africa in March 2018 and it is been tested with Venezuelan refugees in Brazil[18].

Figure 4: Registration team working on the field with the Rapp client, PRIMES offline component (Copyright UNHCR/Omotola Akindipe, source `http://www.unhcr.org/blogs/unhcr-renew-its-registration-and-identity-management-tools-in-angola/`)

2.5 Data Port

Description

The Data Port is a system used for reporting and data analysis of *proGres v4* data. It will become the repository of curated statistics and data generated by the various applications and elements of the PRIMES ecosystem. The new platform will be designed to serve all stakeholders, including providing data and analysis about PoC[19].

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[17]`http://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/05/RApp-FactSheet.pdf`
[18]`http://www.unhcr.org/blogs/countdown-accelerated-primes-roll-starting-may/`
[19]`http://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/05/Dataport_factsheet-v1.pdf`

Interaction with other systems

Data Port mainly works with *proGres v4*, but also works with the GDT, *proGres* v3, RAIS and other UNHCR population data management systems.

Where it is used

It is potentially used in any project managed with any of the tools of the PRIMES ecosystem.

2.6 Biometrics Identity Management System (BIMS)

Description

BIMS is UNHCR's principle biometric identity management system that is used globally[20]. Initially released in 2015, the system is built with Accenture's UISP (Unique Identity Service Platform)[21]. It uses all ten fingerprints and two irises from each individual to build a globally available biometric record that avoids multiple registration and data loss.

Interaction with other systems

BIMS interacts with *proGres v4*, RApp and the GDT.

Where it is used

BIMS is used in more than 40 countries worldwide. Since 2010 the UNHCR established the routine use of biometric data of refugee's identity management. In 2013 the BIMS system was first tested in Malawi[22].

2.7 IrisGuard

Description

IrisGuard[23] is the other primary biometric tool collecting two iris scans and a facial photo from each individual. It was initially applied to administering cash assistance for refugees. It introduced a technical framework, EyeCloud, that *'permits humanitarian partners and financial service providers to validate identity and qualification for assistance via their irises.'*[24].

Interaction with other systems

The UNHCR Jordan, IrisGuard and Cairo Amman Bank (CAB) started the EyeCloud project to provide financial assistance to refugees by relying exclusively on UNHCR biometric registration data through IrisGuard[25]. Within this system, the refugees no longer need to go to the bank to register and do not need ATM cards to use the CAB's ATM network[26]. The iris-enabled ATMs program started in 2012. Registration in the system is mandatory to obtain financial aid.

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[20]http://www.unhcr.org/550c304c9.pdf
[21]https://www.accenture.com/us-en/success-unhcr-innovative-identity-management-system
[22]http://www.unhcr.org/en-us/protection/basic/550c304c9/biometric-identity-management-system.html
[23]http://www.irisguard.com/
[24]http://www.unhcr.org/registration-guidance/chapter2/registration-tools/
[25]http://www.cab.jo/news/unhcr-cairo-amman-bank-and-irisguard-unveil-ground-breaking-technology-enhance-delivery-refugee
[26]http://www.irisguard.com/index.php/video/index/34

Figure 5: ATM with IrisGuard autentication (Source http://www.irisguard.com/index.php/news/index/2015/80).

Figure 6: EyePay device (Source http://www.irisguard.com/index.php/imagers).

IrisGuard is progressively integrated into more systems in an ethereum blockchain payment platform. The blockchain platform connects monetary NGOs resources to refugees for the acquisition of food in supermarkets and non-food items in camps[27]. Figures 5 and 6 shows the EyePay system that is currently used with refugees.

Where it is used

It was initially introduced to support the Syrian response in Jordan and later expanded throughout the Middle East sub-region.

2.8 Refugee Assistance Information System (RAIS)

Description

RAIS is a web management for tracking of assistance, coordination, and enhanced accountability. It '*supports many different procedures including vulnerability assessments, assessment management*

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[27]https://www.biometricupdate.com/201707/un-using-irisguard-ethereum-blockchain-payment-platform-for-refugees

and coordination, cash distribution, referrals and ticketing, offline functionalities and interoperability with applications of other agencies'[28].

Interaction with other systems

RAIS is synchronized daily with *proGres*: *'RAIS enables partners to search for cases and individuals registered with UNHCR. Partners, having signed the UNHCR data sharing agreement, can receive access in order to be able to view basic bio data of registered persons of concern, their address and documents, in addition to data on eligibility and assistance delivered by other implementing partners.'*[29].

Where it is used

RAIS was initially developed in the UNHCR section in Middle East and North Africa (MENA) and it is mainly used in that region.

2.9   The Global Distribution Tool (GDT)

Description

The GDT was launched with BIMS to allow the use biometrics to verify identities in food and assistance distribution scenarios. *'The GDT accepts food distribution lists or manifests from a variety of sources including proGres,and provides real-time reporting on exactly who has collected assistance by using a biometric verification with BIMS'*. The tool facilitates alternative food collectors for the households. The GDT 'Reports also provide detail on which households have been served, and the specifics of exactly which commodities have been distributed.'. The GDT includes an Android App to help the staff to track admission, and successfully record collection of assistance.[30].

Interaction with other systems

The GDT gets food distribution lists and manifests from *proGres*, but also from other sources. It interacts with BIMS to authenticate users.

Where it is used

In 2017 the UNHCR reported the GDT has been used with BIMS in three country operations (Burundi, Djibouti and Kenya) to distribute assistance by the World Food Programme.Use and relevance of PRIMES for Europe

In 2017 the UNHCR reported the GDT has been used with BIMS in three country operations (Burundi, Djibouti and Kenya) to distribute assistance by the World Food Programme[31].Use and relevance of PRIMES for Europe. In 2017 the UNHCR reported the GDT has been used with BIMS in three country operations (Burundi, Djibouti and Kenya) to distribute assistance by the World Food Programme.Use and relevance of PRIMES for Europe.

PRIMES is very relevant for the EU. First, the *proPres* database is used for refugee's resettlement in Europe[32] and for auditing the EU aiding programs. Second, some of the PRIMES tools are directly used in Europe to register refugees. The *proGres* version 4 is now live in the following European countries:

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[28]http://unhcr-mena.github.io/RAIS/
[29]http://www.coordinationtoolkit.org/wp-content/uploads/UNHCR-Managing-Information-in-the-Inter-Agency-Context1.pdf
[30]https://play.google.com/store/apps/details?id=org.unhcr.gdt4
[31]2017. Global Strategic Priorities. Progress Report available at http://www.unhcr.org/5b2b75e37.pdf.
[32]https://reliefweb.int/sites/reliefweb.int/files/resources/UNHCRTurkeyResettlementUpdate-July2017.pdf and http://www.unhcr.org/56fa35b16.pdf.

- Greece: it is used to register refugees and to provide cash assistance[33][34] (see Figure 7) in coordination with partners[35]. Refugees use a card and PIN to withdraw cash from cash points or to pay for goods and services in shops. Attempts of using cards outside Greece causes the card to be automatically blocked.

- Serbia[36]: it is used by the UNHCR and partners.

- Belarus[37]: it is used by the NGO 'Refugee Counselling Service', which is a partner of the UNHCR.
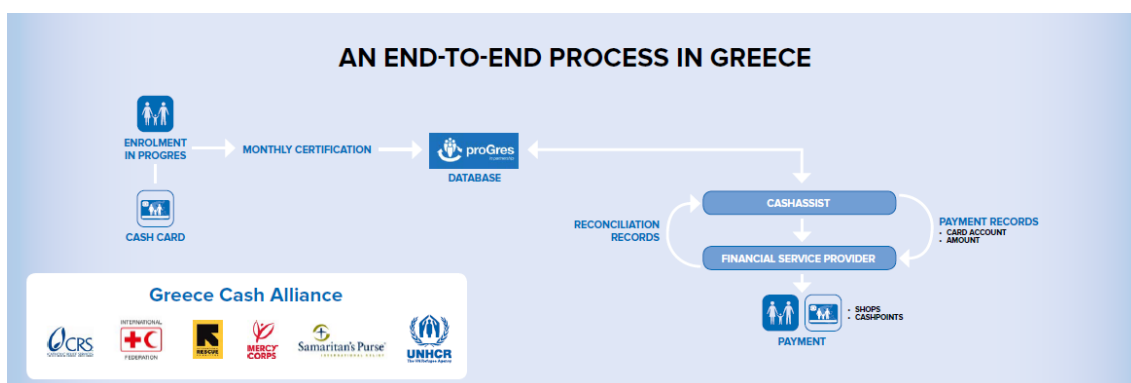

Figure 7: Greece Cash Alliance scheme overview (Source The Greece Cash Alliance).

2.10 The ID2020 project

The ID2020 project[38] aims at providing a global ID for the worldwide population (Cheesman, 2016), with special emphasis on refugees, developing countries and conflict zones. The UN considers identification systems a person's right that contributes to the guarantee of Human Rights. The project is presented as a strategic step to build on the framework of the Sustainable Development Goals of the UN. The alliance includes UN agencies such as UNCHR, NGOs, governments, and enterprises such as Accenture and Microsoft. The ID2020 project requires digital identity '*to meet the needs of governments, international organizations, businesses and individuals alike*', more precisely, it must satisfy the following features[39]:

- *Personal: unique to you and only you*
- *Persistent: lives with you from life to death*
- *Portable: accessible anywhere you happen to be*
- *Private: only you can give permission to use or view data*

They project website provide examples of limitations that refugees may face without a proper ID[40]:

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[33]UNHCR's Cash Assistance Management System in Greece http://www.unhcr.org/protection/operations/5a6600e57/cashassist-unhcrs-cash-assistance-management-system-greece.html

[34]http://donors.unhcr.gr/echo/en/cash_card_restores_dignity/

[35]The Greece Cash Alliance https://www.unhcr.org/5a14306a7.pdf

[36]European Refugee Situation in Serbia: Main developments and UNHCR response in numbers during the first half of 2017 https://data2.unhcr.org/fr/documents/download/58649 and https://data2.unhcr.org/en/documents/download/65008

[37]http://www.unhcr.org/blogs/progres-version-4-is-now-live-in-belarus/

[38]https://id2020.org/ and https://medium.com/@id2020

[39]https://id2020.org/partnership/

[40]https://medium.com/id2020/the-implications-of-mandatory-sim-registration-for-refugees-stateless-and-forcibly-displaced-9b0d47e9eaff

[...]

In Bangladesh, for example, the government has recently banned mobile phone operators from selling SIM cards to Rohingya refugees fleeing the violence in Myanmar, citing security concerns. The policy indicates that the form of identification held by the Rohingya is insufficient to meet valid identification requirements. The government is conducting a 6-month biometric registration process of the refugees, after which the ban could potentially be lifted.

[...]

While a number of countries currently recognize UNHCR-issued identification as acceptable proof-of-identity for SIM registration or KYC requirements (including Jordan, Iraq, Afghanistan, Egypt, Rwanda, Pakistan, the Philippines and Haiti), GSMA[41] advocates for broader recognition of the UNHCR-issued identification in order to enable refugees upon arrival to access mobile SIMs, wallets, SIM-based energy products, and more.

This conversation around SIM registration is emblematic of a larger conversation: how do we ensure that refugees and other forcibly displaced populations are able to portably, persistently and privately prove who they are?

Problems of previous (failed) attempts are identified as being related to 'market failure', which ID2020 will avoid with added value by '*Creating a market for such digital identity systems, ultimately resulting in increased private-sector attention, support, and contributions*' among other values.

In addition, Accenture, one of the partners of the ID2020 alliance, is testing the global ID system with their global workforce[42]:

Accenture, as a founding partner of the Alliance, is considering rolling out an interoperable, user-owned and controlled digital identity to their workforce, which numbers many hundreds of thousands of people worldwide. This would provide Accenture employees the benefits of digital identity, cut down on the high costs paid by the firm for background checks on Accenture employees sent to a new client site, and build momentum for digital identity to be recognized by a broadening sphere of actors.

2.11   Controversy and cautions about ID and biometric databases

Concerns have been raised about the potential dangers of global ID databases and biometrical databases such as the biometric identity management system (BIMS) of UNCHR[43]. An article in Wire exposes the specific negative implications of refugees database in the case of Rohingya refugees (Thomas, 2018). Also, an internal audit of the UN in 2016 questioned '*The ability of refugees in desperate need of aid to refuse consent for their biometric data to be collected*' drawing on cases from India, Thailand and the Democratic Republic of Congo (Thomas, 2018).

Because of the inherent risk of biometric databased, UNICEF has stopped collecting biometric data in their LMMS[44] system and have opened an internal debate and a review on the implications of biometric databases (Kondakhchyan, 2017). Further concerns have been raised about the possible vulnerability of biometric authentication systems. Last year the Samsung Galaxy Iris Scanner was hacked in the CCC conference[45]. This is not the same system used in BIMS, however the study pointed out the security problems that any system can potentially face. Previously in 2013,

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[41] https://www.gsma.com/publicpolicy/mandatory-registration-prepaid-sim-cards

[42] https://id2020.org/partnership/

[43] http://www.unhcr.org/uk/protection/basic/550c304c9/biometric-identity-management-system.html

[44] Last Mile Mobile Solutions (LMMS) https://www.wvi.org/disaster-management/last-mile-mobile-solution-lmms

[45] Hacking the Samsung Galaxy S8 Iris scanner, https://www.youtube.com/watch?v=gtQ4yzbsi-c

CCC broke the Apple Touch ID based on fingerprint[46] and more recently researchers were able to generate synthetic fingerprints that can fortuitously match with a large number of fingerprints thereby undermining the security afforded by fingerprint systems (Bontrager et al., 2017).

Finally, the UNHCR published report on Privacy Impact Assessment of their Cash Based Interventions (CBI) (Consulting, 2015). The report presents a risks and threats evaluation as well as a set of recommendations to meet PoC data protection obligations and minimise the risk to their fundamental right to privacy. The main key findings were grouped by:

- Privacy risks related to PoC lack of real choice to register in the systems, use of the data for other purposes other than that for which it was collected, the risk of collecting more sensitive data for the most vulnerable refugees, the need of minimising the access to personally identifiable information (PII), the problem of data retention and deletion for auditing that amplifies the privacy risks, the collection and sharing of data across CBIs which has resulting in the creation of multiple databases containing PII within UNHCR and partner organisations among others risks.

- Threat and vulnerability, which groups cyber espionage by governments and non-state actors, physical loss of data because of multiple external devices with refugee data, technical failures due to infrequent back-ups and inadequate protections, unauthorised acquisition by Governments from UNHCR or partners, lack of procedures to check partner abuse of PII, partner negligence (for instance the bank passes data to third party provider) and refugee complains and litigation (according to the report '*refugees are unhappy with how their data is collected, used or transferred; refugees are unhappy at their treatment at the hands of a UNHCR partner (e.g., a bank or supermarket)*').

3 Refugees registration and border control in the EU

3.1 Tools in use in the EU

3.1.1 Eurodac

Since 2003 the European Union has implemented the identification of asylum applicants through Eurodac[47]. Eurodac is an EU refugee fingerprint database, 'Automated Fingerprint Identification System' (AFIS), that centralises all the fingerprints of persons applying for asylum. When someone applies for asylum, no matter where they are in the EU, their fingerprints are transmitted to the Eurodac central system. The Eurodac was initially designed to meet the Regulation (EU) No. 604/20133 (a.k.a. 'Dublin Regulation'), which holds that refugees have to apply for protection in the first country of the EU they have entered. The regulation also aims to avoid multiple asylum seeker applications in different countries.

According to studies, in 2014 it held personal information of nearly 2.3 million individuals (Jones, 2014), and in 2015-2017 4.5 million of people were added[48]. Figure 8 shows the evolution of the number of transactions.

Apart from implementing the Dublin Regulation, the database also provides statistics on refugees for policy-making[49]. However, Eurodac was integrated later into the Europol databases so that the asylum fingerprints are contrasted with criminal records. The ongoing proposal on May 2016 of functionality extension '*Introduces the obligation to take fingerprints and an additional biometric identifier – a facial image – and it lowers the age of taking fingerprints to 6 years old;*'. It also '*Allows to store and compare all three categories of data and to retain fingerprint data for illegally staying*

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[46]Chaos Computer Club breaks Apple TouchID, https://www.ccc.de/en/updates/2013/ccc-breaks-apple-touchid

[47]https://ec.europa.eu/home-affairs/what-we-do/policies/asylum/identification-of-applicants_en

[48]https://www.eulisa.europa.eu/Publications/Reports/2017%20Eurodac%20Annual%20Report%20-%20Factsheet.pdf

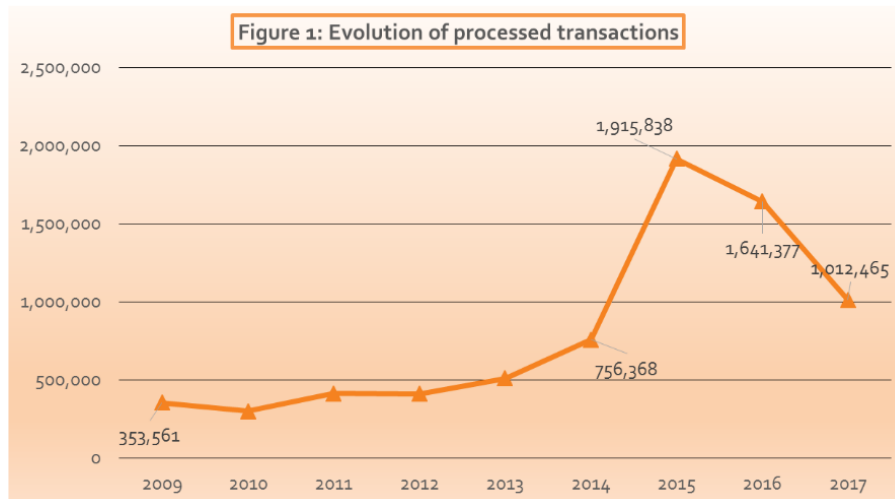[49]https://ec.europa.eu/home-affairs/what-we-do/policies/asylum/statistics_en

Figure 8: Evolution of procesed transactions by Eurodac (Source (eu LISA, 2018)).

third-country nationals or third –country nationals who have crossed an external border irregularly and who do not claim asylum for 5 years.'[50].

Eurodac, and more specifically the repurposing of its uses, has raised several claims that the system is violating Human Rights. Ferraris (2017) reports that member states' categorization of migrants is arbitrary, since the number of registers in each category suggest that different countries have different policies (see Figures 9 and 10).

Moreover, the German Institute for Human Rights (DIMR) has criticized Eurodac, identifying several concerns (Dernbach, 2015a,b):

- Information on asylum seekers remains in the database for 10 years.

- *'Eurodac was originally intended to prevent multiple asylum applications and unauthorised entry'*, however, access was extended to further authorities including Europol among others.

- The way refugees are recorded assimilated them with criminals: *'Storage in a database accessible to the police means they are treated like offenders or potential suspects'*.

- The collection of data can be problematic from a HR perspective, since persons refusing to have their fingerprints taken can be forced to do so.

Also, The Migrant Files[51] project reported that *'at least ten people a year are wrongly deported due to false system hits in the fingerprint ID scanning devices. The true number may be far higher.'*.

An extensive research report on Eurodac design and practices has also been done by the Mig@Net[52] research project on digital networks, migrants and gender. Through several interviews with practitioners, the authors *'break definitively with the idea that control technologies – in our case biometric identification technologies – are primarily technological'* (Vassilis and Kuster, 2012). As an illustrative example, they report that the system automatically plays the James Bond melody when a positive hit is found. Similarly to the critique advanced by DIMR, Vassilis and Kuster (2012) confirm the arbitrary use of categories in Eurodac: *'During our visit, we noticed that very often police officers would lack training and frequently they would still after eight years of experience ignore the meaning and difference of categories 1, 2, and 3.'*.

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[50]https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/proposal-implementation-package/docs/20160504/eurodac_proposal_en.pdf
[51]http://www.themigrantsfiles.com/
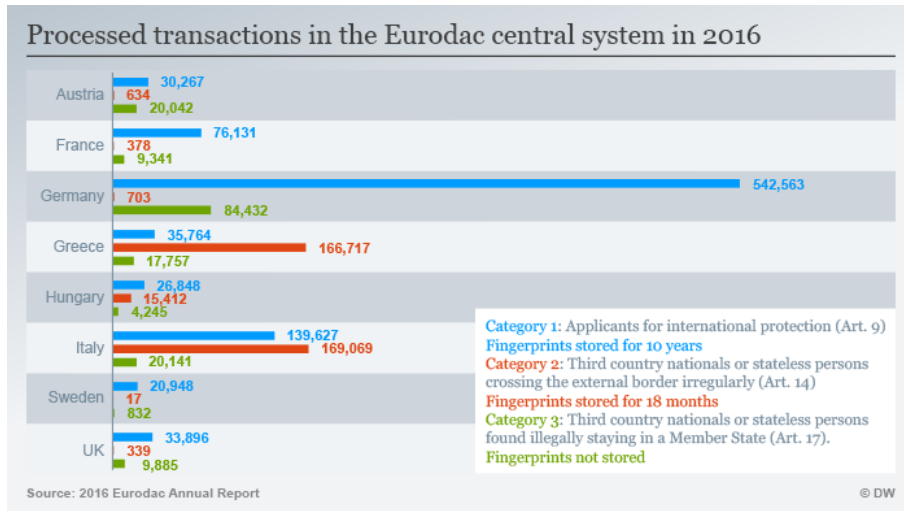[52]http://www.mignetproject.eu

Figure 9: Number of EURODAC transactions for each category and country (Source (Lyneham, 2017)).
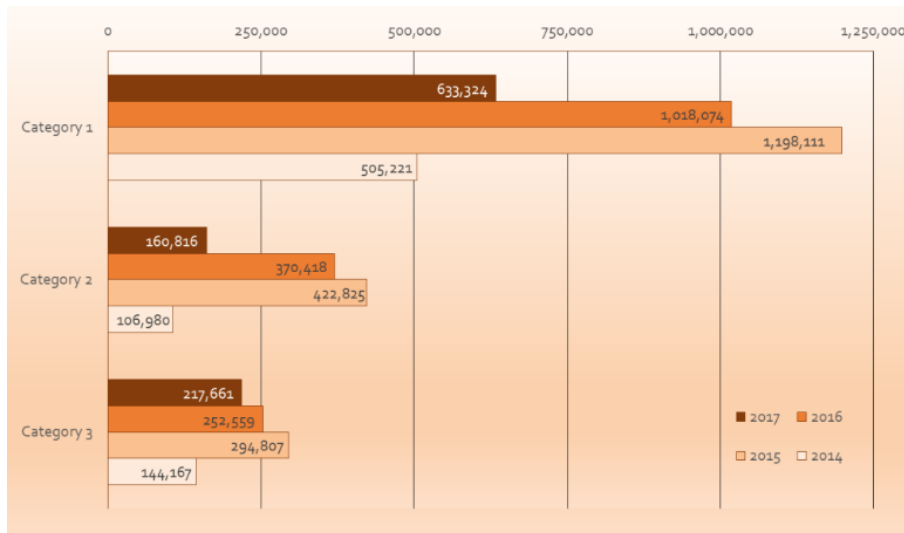

Figure 10: Number of transactions of Eurodac for each category and year (Source (eu LISA, 2018)).

3.1.2 AVATAR

AVATAR stands for Automated Virtual Agent Truth Assessment in Real Time[53]. AVATAR is being used experimentally in the Romanian Border since 2014[54]. There is as yet not information about the conclusions of these experiments.

In an extensive report (F. Nunamaker et al., 2013) the University of Arizona, who developed AVATAR before it was commercialised by EyeTech DS, provides a summary of the tool:

> The National Center for Border Security and Immigration (BORDERS) has developed the Automated Virtual Agent for Truth-Assessment in Real-Time (AVATAR), a kiosk-like system designed to automatically and independently conduct natural credibility

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[53]https://www.eyetechds.com/avatar-lie-detector.html
[54]https://btn.frontex.europa.eu/category/free-text-descriptors/avatar and https://btn.frontex.europa.eu/node/1792
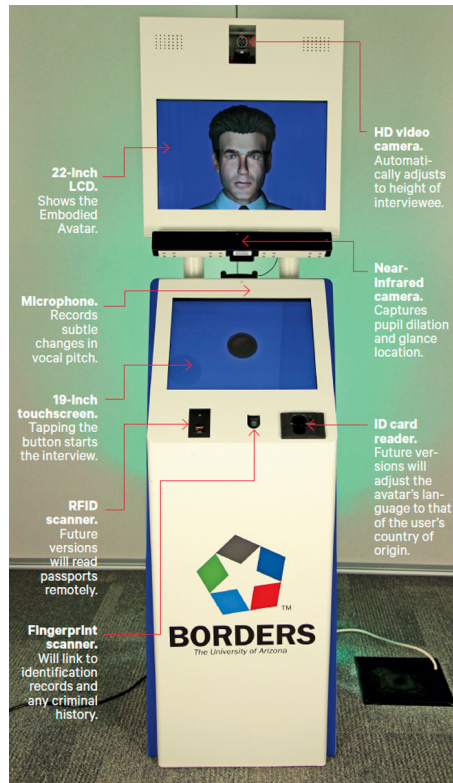
Figure 11: AVATAR virtual agent lie detector (Source EyeTech).

assessment interviews. AVATAR uses a virtual conversational agent to conduct interviews while simultaneously detecting potential anomalous behavior via analysis of data streams from noninvasive sensors such as cameras, microphones, and eye tracking systems. Potential indicators of deception are compared to an individual baseline - individuals are not flagged for simply being nervous about the interview. To ensure privacy, all data has been kept anonymous and only aggregate data is reported.

AVATAR collects information about interviewed persons to improve future accuracy of the system[55].

3.1.3   Smart deception detection by iBorderCtrl

The European Research project iBorderCtrl[56] has produced an Automated Deception Detection System (ADDS) intended to be used in border crossings. The prototype will be trialled in Hungary, Greece and Latvia. The EU-funded project '*is developing a way to speed up traffic at the EU's external borders and ramp up security using an automated border-control system that will put travellers to the test using lie-detecting avatars. It is introducing advanced analytics and risk-based management at border controls.*'[57].

The ADDS is implemented using Silent Talker[58], an artificial intelligence based deception detector (Rothwell et al., 2006) and a virtual agent asking questions about a migrant's background and intentions. The iBorderCtrl team created a training dataset of 32 people simulating border

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[55]https://techlaunch.arizona.edu/news/university-arizona-licenses-deception-detecting-avatar-startup

[56]https://www.iborderctrl.eu/

[57]http://ec.europa.eu/research/infocentre/article_en.cfm?artid=49726

[58]https://www.silent-talker.com/

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interviews and scenarios of truthful and deceptive situations. The situations consisted of different question/answer tests and a vector of 38 channels (features) was extracted to describe the non-verbal behaviour during a one second slot during each answer. The resulting data set was used to train an artificial neural network to label each person answer with low, medium and high risk of deception.

The announce of the ongoing tests of the ADDS in the EU has caused a public discussion in the media. *The Guardian* collected the opinion of several experts criticising the system as 'pseudo-science' by experts in forensic phycology and criminology who questioned the validity of facial micro-expressions as a measure of deception (Boffey, 2018). Also, the *New Scientist* reported that *'several independent experts contacted by New Scientist expressed strong reservations about the idea, questioning the accuracy of automated lie-detection systems in general'* (Heaven, 2018).

For this report we examined the scientific papers describing Silent Talker (Rothwell et al., 2006) and the ADDS (OrShea et al., 2018). Apart from the claims of the experts in physiology and criminology, we found several concerns regarding the experimental setup and quality of the machine learning models. First, the general setup of the experiments is questionable. It is difficult, if not impossible, to design an experiment to evaluate deception behaviour. In this case, the authors of ADDS asked some colleagues to perform different roles and scenarios. Their non-verbal activity was recorded to build a training dataset based exclusively on people performing a role. Second, the authors of the study claim that their system is sensitive to ethnic diversity, however the system has been trained with the micro-expressions of 32 persons. Third, the experimental validation consisted of a 10-fold cross validation with a mean accuracy of 75.5% for truthful detection and 73.6% for deception detection. This is the mean performance of ten runs for different train-test data folds. However, variability of the prediction accuracy is not considered in the report. From the tables in the paper, we can calculate the standard error (24.3% and 34.3% for truthful and deception respectively) that suggest that the mean performance is not a robust statistical estimator of the actual performance. Last, the stratification of the data split for train and test is problematic. The experimental validation divides the data in train and test sets to assert the performance considering all the vectors extracted from all the participants. This means that the data of a person will be present both in the training and testing sets. Therefore, the data used for model fitting is also used for model validation.

3.2 Research projects on smart borders and migration management

The Migrant Files[59] documents European research and industry projects related to border, migrant and refugee management up to 2016. In addition, Border TechNet (`https://btn.frontex.europa.eu/`) is a web-based platform for sharing, exchanging and disseminating information in the field of Research and Development in the border-security domain. The following recent and ongoing projects are related to migration management:

- *Scalable Measures for Automated Recognition Technologies (SMART): Scalable Measures for Automated Recognition Technologies (SMART) project aim is to evaluate the risk and opportunities inherent to the use of smart surveillance, develop number of technical, procedural and legal options for safeguards*[60].

- *SMILE proposes a novel mobility concept, using privacy by design principles, that will enable low cost secure exchange and processing of biometric data, addressing in parallel the aforementioned challenges by designing, implementing and evaluating in relevant environments (TRL6) prototype management architecture, for the accurate verification, automated control, monitoring and optimization of people' flows at Land Border Infrastructures*[61].

- *The goal of the PROTECT project is an enhanced biometric-based person identification system that works robustly across a range of border crossing types and that has strong user-centric features.*

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[59]http://www.themigrantsfiles.com/
[60]https://cordis.europa.eu/result/rcn/178069_en.html
[61]http://smile-h2020.eu/smile/blog/

The system will be deployed in Automated Border Control (ABC) areas supporting border guards to facilitate smooth and non-intrusive rapid crossing by travellers based on deployment of the next generation of biometric identification detection methods[62].

- *Prediction and Interpretation of human behaviour based on probabilistic structures and heterogeneous sensors (PROMETHEUS) project intends to establish a link between fundamental sensing tasks and automated cognition processes that concern the understanding of short-term prediction of human behaviour as well as complex human interaction. The analysis of human behaviour in unrestricted environments, including localization and tracking of multiple people and recognition of their activities, currently constitutes a topic of intensive research in the signal processing and computer vision communities. This research is driven by different important applications, including unattended surveillance and intelligent space monitoring.*

- *SURVEILLE. Surveillance: Ethical Issues, Legal Limitations, Efficiency (SURVEILLE) project aim is to analyze the ethical issues, legal limitations and efficiency of the use of surveillance technologies[63].*

- *IborderCtrl (Intelligent Portable Control System) is an innovative project that aims to enable faster and thorough border control for third country nationals crossing the land borders of EU Member States (MS), with technologies that adopt the future development of the Schengen Border Management. iBorderCtrl includes software and hardware technologies ranging from portable readers and scanners, various emerging and novel subsystems for automatic controls, highly reliable wireless networking for mobile controls, and secure backend storage and processing. One of the main goals of the project is to design and implement a comprehensive system that adopts mobility concepts and consists of a two-stage-procedure, designed to reduce cost and time spent per traveller at the border crossing station. iBorderCtrl also focuses on the land border crossing points: road, walkway, train stations. It addresses the better facilitation of thorough checking required for third country nationals that intend to cross EU borders.[64].*

3.3 Practices involving datafication and automated systems

3.3.1 Mobile and social networks data analysis for story verification

Several EU countries are using social network and mobile phone data analysis during the asylum evaluation interviews. It has been reported that the UK and Norway have previously searched asylum seekers' devices while more recently Germany[65], Denmark, Belgium and Austria are changing laws to allow for these procedures (Meaker, 2018). These practices are also common in the US[66] and Canada[67]. For instance, '*in Germany, only 40 per cent of asylum applicants in 2016 could provide official identification documents. In their absence, the nationalities of the other 60 per cent were verified through a mixture of language analysis — using human translators and computers to confirm whether their accent is authentic — and mobile phone data.*' (Meaker, 2018). The analysis of such data is used to look for inconsistencies in an applicant's story. For mobile data analysis, authorities are using a computer programme that combines technology made by two mobile forensic companies (T3K and MSAB). Mobile forensic programs obtain all type of data from devices such as contacts, SMS, instant messaging text and media, location records, browsing history, etc. These tools can access device information that a normal user cannot access to, even if this information has been deleted.

Apart from country or area of origin verification, other situations related to the asylum status are verified. Admission and exclusion of asylum seekers who have fled persecution based on

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[62] http://projectprotect.eu/
[63] https://btn.frontex.europa.eu/projects/external/surveille
[64] https://www.iborderctrl.eu/
[65] https://www.theverge.com/2017/3/3/14803852/germany-refugee-phone-data-law-privacy
[66] https://www.nbcnews.com/news/us-news/us-visitors-may-have-hand-over-social-media-passwords-kelly-n718216
[67] https://www.cbc.ca/news/canada/british-columbia/syrian-refugee-screening-will-be-a-challenge-but-one-canada-can-meet-1.3321889

their sexual orientation or gender identity is a concern in borders and interview evaluation. For instance, the UK is performing extensive interviews for LGTBI+ condition verification (Shephard, 2018). The media (Hall, 2013) and researchers (Lewis, 2014) have reported numerous cases of gay couples forced to provide photo and video evidences of their sexual activities to validate their sexuality. The UK Lesbian & Gay Immigration Group reported that only 1-2% queer asylum cases passed the initial interview stage, compared to 27% of other asylum claims (Yoshida, 2013).

Other 'hostile' policies have been studied on relationships between British and non-EU partners and families. Agusita (2018) studied issues of relation evidence by Non-European-Economic-Area migrants applying to join their British partners, '*this includes communications data sourced from multiple platforms and technologies, such as calling and messaging records.*'.

3.3.2 Minimisation of human interaction and automated interviews

Some countries are moving to automated or semi-automated systems to manage migrants and refugees' evaluation at the borders or camps (including the AVATAR system mentioned above).

In 2016, Greece implemented asylum evaluation interviews through a Skype line to replace asylum officials and official paperwork in the camps, often requiring repeated calls to get through (Kyrke-Smith, 2016).

The Netherlands is using an automated system for Dutch language skills evaluation of migrants. The tool was created by Pearson Education with fairness design criteria[68]. For instance, the scoring system was created combining speech of non-native Dutch speakers from 121 countries and Dutch native speakers.

Also related to language analysis, many countries are using language analysis for the determination of origin (LADO) as an instrument to determine the national or ethnic origin of the asylum seeker, through an evaluation of their language profile (Patrick et al., 2019). The rationale of the use of LADO is to assess the origin of the person in absence of documentation. Examples are Australia, Austria, Belgium, Canada, Finland, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland and the United Kingdom (Reath, 2004). The LADO performed by humans has been criticised by immigration lawyers, social scientists, as well as linguists (Eades et al., 2003). For example, even in the case of a perfect LADO evaluation, linguists warn about the issue of 'first language attrition', meaning the process of forgetting a native language in immigrants and bilinguals[69]. However, Germany has turned to the use of automatic speech analysis software to verify refugees' dialects, and consequently establish their origin in absence of identification or documents[70].

4 Humanitarian data collection and analysis

Migration statistics are essential to migration management but is a complex area of study with many difficulties due to the inherent nature of the problem. Traditional migration statistics gather information from censuses, population registers, surveys, several administrative sources and border statistics. Although these data are generally corrected with synthetic estimates and using multiple sources, it can still error prone whilst it is very costly to obtain compared to other data sources. Under these assumptions, a large set of proposals are addressing migration analysis and management based on Big Data, i.e. using mobile phone and social network data as information source (Hughes et al., 2016; Cheesman, 2017; De Backer, 2014). This includes call detail records, dairy mobile additional information (location, sensors data...) but also all kind of digital information including social network data, geotagged media data, web searches, etc. (Gilespie et al., 2016)

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[68]http://www.versanttest.com/solutions/Case%20Study%20-%20Dutch%20Immigration%20-%20CINOP.pdf
[69]https://languageattrition.org/
[70]https://www.dw.com/en/automatic-speech-analysis-software-used-to-verify-refugees-dialects/a-37980819

4.1 Governments and agencies

The report for the European Commission by Hughes et al. (2016) presents a review of research work using Big Data to track migrants in the EU context. It mainly focusses on solutions to improve demographic inference and movement of migrant populations rather than tracking specific persons. Also, the UN is actively promoting Big Data for use thorough the United Nations Global Pulse[71] and its open data and statistics web site[72]. The Office of Information and Communications Technology (OICT) of the UN is actively promoting data-driven decision-making[73], including, for instance, specific response design for climate conditions and movement of refugees[74] or host communities' sentiment toward people of concern (UN Global Pulse, UNHCR Innovation Service 2017). Other projects such as the UN program UNOSAT perform satellite based mapping of specific events related to forced displacements[75]. The World Economic Forum is also encouraging the use of Big Data to help migrants (Rango, 2015). Finally, the World Bank and the UNHCR have created the Joint Data Center on Forced Displacement that will be launched late 2018[76]. These actors previously collaborated in other data analytic projects, for instance, in a joint study on the welfare of Syrian refugees in Jordan and Lebanon. In this study, they used survey and registry data on Syrian refugees '*to assess their poverty and vulnerability status, understand the predictors of these statuses, evaluate the performance of existing policies toward refugees, and determine the potential for alternative policies*' (Verme, Paolo et al., 2016).

4.2 Academia and civil society

Several projects aim at contributing to refugee welfare though data analysis and technology based proposals. Examples are historical data visualization (see The Refugee Project[77] or Earth Time[78]), patterns of mobility (see Data-Pop Alliance[79]), tracking of migrant fatalities[80], knowledge sharing[81], humanitarian information tools[82] and apps specifically designed for refugees[83].

Also, data science competitions have been launched to help refugees, for instance the D4R Challenge[84] in Turkey (Salah et al., 2018):

> The Data for Refugees (D4R) Challenge is a non-profit challenge initiated to improve the conditions of the Syrian refugees in Turkey by providing a special database to scientific community for enabling research on urgent problems concerning refugees, including health, education, unemployment, safety, and social integration. The collected database is based on anonymised mobile Call Detail Record (CDR) of phone calls and SMS messages from one million Turk Telekom customers. It indicates broad activity and mobility patterns of refugees and citizens in Turkey for one year. The data collection period is from 1 January 2017 to 31 December 2017. The project is initiated by Turk Telekom, in partnership with the Turkish Academic and Research Council (TUBITAK) and Bogazici University, and in collaboration with several academic and

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[71] https://www.unglobalpulse.org/programme-type/humanitarian-action
[72] http://www.unhcr.org/data.html
[73] https://unite.un.org/analytics
[74] http://www.unhcr.org/uk/news/latest/2016/1/56a20b3c6/big-chill-threatens-refugees-unhcrs-winter-cell-responds.html
[75] http://www.unitar.org/unosat/
[76] https://www.worldbank.org/en/programs/forceddisplacement/brief/unhcr-world-bank-group-joint-data-center-on-forced-displacement-fact-sheet and http://blogs.worldbank.org/dev4peace/new-data-center-improve-global-response-forced-displacement
[77] http://www.therefugeeproject.org
[78] https://earthtime.org/stories/global_refugee_crisis_a_system_overburdened
[79] http://datapopalliance.org/research/migration-and-displacement/
[80] https://missingmigrants.iom.int/
[81] http://www.qzenobia.com/
[82] https://labs.reliefweb.int/
[83] http://appsforrefugees.com and http://www.infomigrants.net/en/post/2287/a-list-of-apps-for-refugees
[84] http://d4r.turktelekom.com.tr/

non-governmental organizations, including UNHCR Turkey, UNICEF, and International Organization for Migration.

Other institutions have released public datasets to encourage academia and civil society to gain insights from data. In Kaggle[85], a data science competitions web site, the UNHCR released the data on uprooted populations and asylum processing[86], the US Department of Homeland Security launched data to study which countries do most people granted refugee or asylum status come from[87] and Medicins Sains Frontieres created a competition on predicting the number of refugees entering Europe to proactively prepare assistance[88].

Further academic work has explored different types of data-driven solutions related to migration and refugees. For instance, the role of crowd-generated data is studied by (Curry et al., 2018). Also this year, the Imigration Policy Lab[89] developed a proposal to use Big Data to improve refugee resettlement (Bansak et al., 2018).

5 List of EU vendors for borders and migration/refugees management technology

This section lists some of the companies providing technology and products to manage borders and migration/refugees camps.

5.1 Securiport LLC

Securiport LLC[90] is an US based company that provides the following products:

- Biometric Identification Systems, including Multi-Modal Biometric Recognition (fingerprint, iris, and face recognition analyses).

- Automated Immigration Gates[91].

- Persons of Interest profiles matching using Big Data analytics[92], including the detection of potential terrorists that might be hidden in refugees moves[93]. This includes information fusion of international watch lists, Interpol databases, local security databases, advanced biometrics, identity controls and predictive analytics.

5.2 Crossmatch

Crossmatch[94] is a vendor of a fingerprint based identity system that is used in several contexts. The following are related to migration management:

- Border management though a biometric identity system that can interoperate with border agencies and INTERPOL[95].

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[85] https://www.kaggle.com/
[86] https://www.kaggle.com/unitednations/refugee-data
[87] https://www.kaggle.com/dhs/refugee-report/home
[88] https://www.kaggle.com/c/refugee-migration-data624-16b
[89] https://immigrationlab.org/project/harnessing-big-data-to-improve-refugee-resettlement/
[90] https://securiport.com/
[91] https://securiport.com/technology/automated-immigration-gates/
[92] https://securiport.com/solutions/persons-of-interest/
[93] https://securiport.com/impetus-changing-border-security-paradigms-stem-trans-regional-migration-crisis-global-open-border-terrorism-innovative-integrated-approach/ s
[94] https://www.crossmatch.com/
[95] https://www.crossmatch.com/biometric-identity-solutions/civil-government/border-management/

- Manage migrant identities, secure migrant camps and streamline delivery of humanitarian assistance through the use of biometrics[96].

5.3 Accenture

Accenture[97] is a global management consulting and professional services company, including for identity management:

- Accenture has developed the UNHCR biometric identity system (BIMS)[98].

- Accenture and Microsoft are leading the ID2020 Alliance[99].

5.4 Microsoft

Microsoft is a long-term partner of the UNHCR involved in several IT services:

- Microsoft is a partner in the ID2020 Alliance.

- Some PRIMES components are implemented using Microsoft Dynamics CRM.

- The UN is using Office 365 for electronic communications[100].

- The company is involved in refugees digital education[101].

5.5 Unisys

Unisys is an international company working in many domains. Their product LineSight™ is used in many borders in EU, as well as other countries such as Australia, as a border security tool[102]. It aggregates information from several sources to perform intelligence analysis for automated risk assessments for travellers, vessels, parcels or cargo shipments.

In a blog post in 2016 the company proposes the use of their solutions for law enforcement and border security to address asylum seekers management including risk analysis '*to face risks from terrorism and organized crime, as well as to community cohesion*', biometric and mobile identification, case management and data analytics (including predictive analytics) [103].

5.6 Vision-box

Vision-box is a provider of automated border control systems and electronic identify solutions. Their products include electronic gates based on facial recognition and virtual agents to fully automate border crossings[104]. Their products include electronic gates based on facial recognition and virtual agents to fully automate border crossings.

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[96]https://www.crossmatch.com/biometric-identity-solutions/civil-government/migrant/ and http://info.crossmatch.com/hubfs/brochure/migrant-refugee-identity-management.pdf

[97]https://www.accenture.com/

[98]https://www.accenture.com/us-en/success-unhcr-innovative-identity-management-system

[99]https://www.accenture.com/us-en/insight-blockchain-ID2020

[100]https://unite.un.org/

[101]https://www.unrefugees.org/news/unhcr-announces-a-partnership-with-microsoft-supporting-connected-education-opportunities-for-refugees/

[102]https://www.unisys.com/offerings/industry-solutions/public-sector-industry-solutions/justice-law-enforcement-and-border-security-solutions/linesight

[103]The European Refugee Crisis: A Way Forward http://blogs.unisys.com/onpoint/the-european-refugee-crisis-a-way-forward/

[104]https://www.vision-box.com/

5.7 Herta

Herta[105] is an international company based in Spain that provides facial recognition technologies including person identification and tracking even in crowded scenarios. The company is the vendor providing the facial recognition module in the automated border control system designed within the iBorderCtrl project.

5.8 EyeTech DS

EyeTech DS[106] is an US company that develops technology for eyes tracking. They are commercializing AVATAR, which was originally developed at the University of Arizona.

5.9 European arms industry

Several European arms industries are selling technologies such as radars to reinforce border control across the European Union, but also in externalized EU borders. Moreover, these companies are actively involved in European research projects on borders control and security. The report 'Border Wars. The arms dealers profiting from Europe's refugee tragedy' (Akkerman, 2016) identifies a long list of companies implementing these technologies (Airbus, ASD, Avio, Atos, BAE Systems, CEA, Conceptivity, CORTE, Diehl, Engineering Ingegneria Informatica, EOS, Finmeccanica, Fraunhofer, G4S, IBM, Indra, KEMEA, Raytheon, SAAB, Safran, Siemens, Smiths Detection, STM, Thales, TNO, Vitec).

6   Conclusions

This report covers most of the systems in use to manage refugees by the UNHCR and the EU. It outlines a variety of tools that are progressively being advanced for the purposes of distributed systems integration, interoperability with partners and type and amount of data related to refugees and migrants. Pertinently, this year the PRIMES system will be deployed on a global scale. In addition, the ID2020 project continues its development through a coalition of industry and the UN.

The EU is actively financing border control research projects based on an increased use of biometric data, databases integration, smart border systems and predictive tools among others. Meanwhile, Eurodac continues to grow through the collection of a variety of recorded information and the EU plans to increase the kind of people that must be registered within the system. Nevertheless, Eurodac functionality extensions are generating an increasing concern. Eurodac is a perfect example of systems that have been repurposed in a way that incorporates new surveillance activities. This raises concerns about the extent to which the mere creation of databases has implications for human rights.

Finally, aid projects present new issues for persons of concerns who are forced to give sensitive information to gain access to basic resources. This implicates humanitarian organisations and private companies as well, that are involved in the datafication of refugee management to provide aid and to improve their integration by means of technology.

7   Related projects, organizations, blogs

- http://www.mignetproject.eu/

- http://www.asylumineurope.org/

- http://www.statewatch.org/

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[105]https://www.hertasecurity.com
[106]https://www.eyetechds.com/

- https://www.ecre.org/

- Border Criminologies https://www.law.ox.ac.uk/research-subject-groups/centre-criminology/centreborder-criminologies/blog

- Mapping asylum procedures, reception conditions, detention and content of protection in Europe https://www.asylumineurope.org/

8 Open Databases and source code

1. https://ec.europa.eu/eurostat/web/asylum-and-managed-migration/data/database

2. http://www.europeansocialsurvey.org/

3. http://www.unhcr.org/data.html

4. UNHCR MENA at GitHub https://github.com/unhcr-mena

5. https://github.com/unhcr

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A Datasets for registration (UNHCR)

Dataset	Information	Purpose
Group pre-registration Collection of core data at the group level	- Group size - Age cohort/sex breakdown - Name of group focal point - Country of origin of group focal point - Specific needs within the group - Unique group identifier - Pre-registration date (optional) GPS coordinates	- Organizing movements of populations - Facilitating assistance distribution - Scheduling for individual registration - Establish the general profile of a population

Individual Emergency Registration (IER)
Collection of seven core data elements for each individual within a group

Group information:

- Date of arrival

- Registration date

- Group unique identifier

- Legal status

- Current CoA address (if available)

- Phone number (if available)

- Consent/prohibiti on to share information

From all individuals in the group:

- Individual names (full name)

- Sex

- Date of birth

- Relationship to group focal point

- Marital status

- Country of origin

- Specific needs

- Photo (strongly recommended)

- Biometrics (recommended)

- Issuing individual identity documents and entitlement documents as necessary

- Ascertaining individual identity

- Identifying persons with specific needs

- Targeting and referral to assistance and services

- Reliable planning and statistics

- Use in non-emergency contexts for a limited time to address backlog and other challenges resulting in excessive waiting times for registration and access to assistance.

Individual Basic Registration (IBR) Collection of basic biographical data relating to each individual within a group	Individual core data registration: • Individual names (full name) • Name of father and mother • Sex • Date of birth • Country of birth • Relationship to group focal point • Marital status • Country of origin • Citizenship(s) • CoA address and telephone number (current) • Date of arrival • Registration date • Specific needs • Legal status • (Highest) Education level • (Last) Occupation • Religion • Ethnicity • Photograph • Biometrics(recomm ended) • Consent/prohibiti on to collect, process, use and share information

Individual Comprehensive Registration (ICR) Collection of the complete set of biographical data on each individual within a group. ICR is the preferred data set for registration	Core Data if IBR plus: • Additional personal names • Place of birth • Complete education information • Complete occupation/skills information • Complete languages information • Reasons for flight (for RSD only) • Reasons for unwillingness/inability to return • Complete relatives information (spouse and children first, followed by other relevant relatives) • Complete documents information (Government-issue d, UNHCR-issued, others) • Address details (CoA, CoO, others as relevant) • Travel details (for RSD only)	• Protection monitoring and protection case management, including RSD processing and resettlement activities and pre-identificatio n for complementary pathways (e.g. humanitarian admission programmes, family reunification and opportunities for skilled migration, labor mobility and education). • Providing a baseline for all protection programming, including prevention of statelessness among refugee children (monitoring issuance of birth certificates), education and livelihood programming. • Targeting for assistance. • Other individual intervention.
Individual Enhanced Registration (IEhR)	Depending on the context	Different purposes in the context. Individual enhanced registration could include additional data relevant to targeting for assistance, a specific protection intervention, birth registration, RSD processing, resettlement, return or local integration

B Protection Case Management in proGres v4 (UNHCR)

List of cases managed in *proGres*[107]:
General Protection Incidents:

- Killing (Incl. Extra-judicial, Arbitrary or Summary Execution, Including Landmine or ERW)

- Other Arbitrary Deprivation of Life

- Physical Assault or Abuse

- Torture or Inhuman, Cruel or Degrading Treatment

- Maiming or Mutilation

- Neglect (Incl. Parental Refusal to Assume Parental Responsibility)

- Arrest and/or Detention

- Unlawful Conditions of Detention

- Abduction or Enforced Disappearance

- Recruitment Into Armed Forces / Groups

- Forced Labour or Slavery

- Asylum-seeker Denied Entry at Border/frontier

- Asylum-seeker Denied Access to Asylum Process After Entry

- Restrictions on Internal Movement

- Forced Internal Displacement

- Forced Return (IDP Only)

- Refoulement (Refugee/asylum-seeker Only)

- Denied Right of Return

- Denied Fair Trial (As the Accused and Victim)

- Denied Effective Remedy (As the Victim)

- Forced Eviction From Real Property (incl. Home, Land, Water & Pastoral Access Rights)

- Continued Occupation of Real Property

- Destruction of Real Property

- Theft, Extortion or Destruction of Personal Property (incl. Livestock)

- Denied Freedom of Thought / Conscience / Religion

- Denied Opinion / Expression / Information

- Denied Freedom of Association / Peaceful Assembly

- Denied Right to Vote or Participate in Government

- Family Separation (incl. Tracing Request)

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[107]Protection Case Management in *proGres* v4_14 Dec 2015 https://prezi.com/vp7uv5vedbzv/protection-case-management-in-progres-v4_14-dec-2015/

- Forced Marriage (incl. Early Marriage)

- Denied Right to Marry / Found a Family

- Lack or Denial of Birth Registration and/or Certificate

- Lack or Denial of Identity Documentation (Id)

- Arbitrary Denial of Nationality

- Arbitrary Deprivation of Nationality

- Lack of or Unequal Access to Food

- Lack of or Unequal Access to Water and/or Sanitation

- Lack of or Unequal Access to Shelter

- Lack of or Unequal Access to Health and HIV Services

- Lack of or Unequal Access to Education

- Humanitarians Denied Access to Civilians

- Civilian Denied Access to Humanitarian Assistance

- Injury or Death As a Result of Landmine or ERW

Sexual and Gender Based Violence:

- Rape

- Sexual Assault

- Physical Assault

- Forced Marriage

- Denial of resources, opportunities or services

- Psychological / Emotional Abuse

- Other SGBV

Protection Issues
Locally customizable for protection issues that are not incidents or human rights violations, including Family, Administrative, Legal, Social, Security or other protection matters. Examples might include:

- Divorce

- Lost ID documents

- Poverty

- Neglect