IT TOOLS AND METHODS FOR MANAGING MIGRATION FLOWS

D2.4

REPORT ON THE ITFLOWS REGULATORY MODEL

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Executive Summary

Deliverable D2.4 is devoted to the Regulatory Model specifically designed for ITFLOWS. Section 1 explains what a regulatory model is and what it entails as well as the purpose it serves. Section 2 defines the ITFLOWS Regulatory Model and provides the three steps that it consists of, which are addressed in detail in the subsequent sections. Section 3 refers to the first step of the ITFLOWS Regulatory Model, which is the 'Framework for Compliance' and lists the sources that shape such framework. Section 4 addresses the second step of the ITFLOWS Regulatory Framework ('Compliance through design technology') and includes the ethical, legal, societal and gender-related mitigation measures that have been recommended to ensure compliance of the EUMigraTool. Section 5 describes the last step of the ITFLOWS Regulatory Model, which is the 'Monitoring and enforcement strategy' and includes the measures that have been adopted at this stage of the project given the nature of the Regulatory Model, i.e., an ongoing process. Lastly, conclusions are provided and next steps that will be taken to effectively implement the ITFLOWS Regulatory Model according to the development of the research activities foreseen in the project are presented.

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Abbreviations

BUL: Brunel University London

CERTH: Ethniko Kentro Erevnas Kai Technologikis Anaptyxis

CSD: Center for the Study of Democracy

CtD: Compliance through Design

DPIA: Data Protection Impact Assessment

DPA: Data Protection Advisor

EMT: EUMigraTool

FIZ: FIZ Karlsruhe – Leibniz-Institut für Informationsinfrastrusktur GmbH

FIZ-IGR: Intellectual Property Rights Department of FIZ Karlsruhe – Leibniz-Institut für Informationsinfrastrusktur GmbH

FIZ-ISE: Information Service Engineering Department of FIZ Karlsruhe – Leibniz-Institut für Informationsinfrastrusktur GmbH

GAP: Gender Action Plan

GDPR: General Data Protection Regulation

HLEG: High-Level Expert Group on Artificial Intelligence of the European Commission

IAI: Istituto Affari Internazionali

IDT-UAB: Institute of Law and Technology of the Autonomous University of Barcelona

IEB: Independent Ethics Board

IGC: Independent Gender Committee

MTU: Munster Technological University

NGO: Non-Governmental Organisation

OCC: Associació Open Cultural Center

TRC: Terracom S.A.

UAB: Autonomous University of Barcelona

INTRODUCTION

A Regulatory Model is a conceptual model for legal and ethical governance. This Deliverable addresses the Regulatory Model that has been specifically designed for ITFLOWS. The purpose of the ITFLOWS Regulatory Model is twofold: i) to ensure legitimate, effective, and efficient legal and ethical compliance following the legal and ethical framework and the societal values identified as applicable to the project; and, ii) to strike a right and fair balance between the project's innovation goals and the protection of individuals' fundamental rights, especially in the context of EU Security Projects.

As a conceptual model, the ITFLOWS Regulatory Model must be operationalised. To this end, three clearly defined steps have been identified to put the ITFLOWS Regulatory Model into practice. These steps are: i) Framework for Compliance; ii) Compliance through Design (CtD) technology; and, iii) Monitoring and enforcement.

At this stage of the project, the first step – which entails the identification of legal and ethical sources that shape the ITFLOWS's framework for compliance – has been completed, as reflected in D2.1. The second, devoted to the technological tool that will be developed within ITFLOWS, and the third step, the monitoring and enforcement strategy, are ongoing steps that will last until the end of the project. This deliverable describes the current status of implementation of the ITFLOWS Regulatory Model, its outcomes and the next steps envisaged by WP2 partners to further implement the ITFLOWS Regulatory Model in the upcoming months. These will be properly reported in accordance with the project's developments.

SECTION 1. Regulatory conceptual models to achieve legal and ethical governance

Interaction between humans and computers is key in addressing societal challenges. Democracy and the rule of law can and should benefit from this synergy. The AI & Law community has been working on that for the past thirty-five years.[1] Especially with the evolution of the Internet into an omnipresent medium and the development of AI-enabled technologies, it becomes clear that law and programming become increasingly intertwined components of complex regulatory frameworks. These new frameworks are deemed to be *relational*, as they not only encompass binding norms and rules, but regulatory tools based on implicit or explicit agreements and the negotiated consent between all stakeholders, beyond the jurisdiction of national states.[2] In a way, technology turns national, international, and transnational legal instruments into relational tools, as the set of legal instruments created to regulate technological markets lean on machine-human and machine-machine interfaces.

Relational is a common property that emerges from the existing economic, social, and political bonds among agents as Internet users—in a broad sense: administrations, companies, corporations, consumers, and citizens. *Regulatory systems* are the social side of relational law, the way how "humanity in the loop" evolves interactively from "the human in the loop"[3]. As long as they also contain procedural ways to solve and manage conflicts, they shape relational systems of justice. *Relational justice* can therefore be defined as the type of justice emerging from the different practices and strategies within technological situated contexts.

[1] Bench-Capon, T., Araszkiewicz, M., Ashley, K., Atkinson, K., Bex, F., Borges, F., Bourcier, D., Bourgine, P., Conrad, J.G., Francesconi, E. and Gordon, T.F., 2012. A history of AI and Law in 50 papers: 25 years of the international conference on AI and Law. *Artificial Intelligence and Law*, *20*(3), pp.215-319.

[2] Casanovas, P., 2013. "Agreement and Relational Justice: A Perspective from Philosophy and Sociology of Law", Sascha Ossowski (Ed.) *Agreement Technologies*, LGTS n. 8, Springer Verlag, Dordrecht, Heidelberg, pp. 19-42.

[3] Hendler, J.A. ; Berners-Lee, T. (2010). "From the Semantic Web to social machines: A research challenge for AI on the World Wide Web", *Artificial Intelligence* 174, 2010, pp. 156–161.

Both regulatory systems and relational justice can be monitored by *regulatory models*. A *regulatory model* can be defined as the specific normative suit encased by platforms, applications, and digital devices built up to monitor a regulatory system—the specific structure of principles, values, norms, and rules guiding technical protocols, multi-layered relationships of organisations (multi-layered governance), and the interoperability of computer languages**.** Thus, regulatory models are designed to be applied to platforms, web services, semantic web services, and lately, to knowledge graphs.

ITFLOWS will use two general frameworks that will be worked out to enhance human and fundamental rights: (i) a general scheme for the rule of law through digital languages set as a meta-model for semantic web services (see Figure 1),[4] (ii) and a general framework for good governance set as a toolbox of legal governance for AI technologies.[5] The former framework is based on the enhancement of substantive rights under the rule of law, combining binding obligations (hard law) and social dialogue (soft law). The latter one is based on a middle-out functionality approach: "an intersection between top-down (hard law) and bottom-up options, coming to life as a network of rules that strikes the balance between technology, ethics, market, and social norms".[6]

[4] Poblet, Marta, Pompeu Casanovas, and Víctor Rodríguez-Doncel. (2019). *Linked Democracy: Foundations, tools, and applications*. Springer Nature. Briefs in Law. Open Access. https://www.springer.com/gp/book/9783030133627

[5] Pagallo, U., Aurucci, P., Casanovas, P., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Schafer, B. and Valcke, P., 2019. *AI4People-On Good AI Governance: 14 Priority Actions, a SMART Model of Governance, and a Regulatory Toolbox*. https://www.eismd.eu/wp-content/uploads/2019/11/AI4Peoples-Report-on-Good-AI-Governance_compressed.pdf. The SMART model was presented before the European Parliament on November 6th 2019.

[6] Ibid. p. 24.

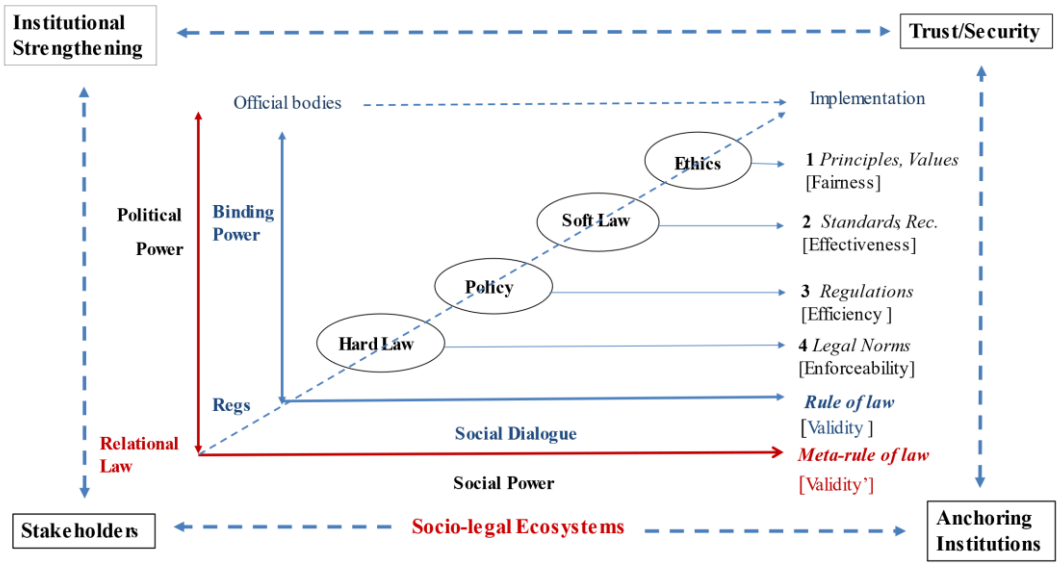


Figure 1. A general framework for the meta-rule of law[7]

It is worth mentioning that both frameworks—the meta-rule of law, and the scalable, modular, adaptable, reflexive, technologically-savvy SMART model—[8] encompass a strong ethical component as a fundamental pillar. Several developments have been launched in the last five years. Ethics for AI, information systems, semantic web services, and the Internet of Things are drawing at present much attention at the European level, following the collective effort carried out in the General Data Protection Regulation to provide a comprehensive legal framework for the protection of individual rights.[9] As explained in Section 4.1, ITFLOWS will also develop this ethical approach fostering the principles set out in the Assessment List for Trustworthy Artificial Intelligence for self-assessment of the High-Level Expert Group on Artificial Intelligence of the European Commission

[7] Poblet, Marta, Pompeu Casanovas, and Víctor Rodríguez-Doncel. (2019). *Linked Democracy: Foundations, tools, and applications,* op. cit.

[8] Pagallo, U., Aurucci, P., Casanovas, P., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Schafer, B. and Valcke, P., 2019. *AI4People-On Good AI Governance: 14 Priority Actions, a SMART Model of Governance, and a Regulatory Toolbox*. https://www.eismd.eu/wp-content/uploads/2019/11/AI4Peoples-Report-on-Good-AI-Governance_compressed.pdf. The SMART model was presented before the European Parliament on November 6th 2019.

[9] See (i) Brussels, 24.6.2020 COM(2020) 264 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL Data protection as a pillar of citizens' empowerment and the EU's approach to the digital transition - two years of application of the General Data Protection Regulation {SWD(2020) 115 final}, (ii) *White Paper on Artificial Intelligence - A European approach to excellence and trust* - COM/2020/65 final.

(HLEG)[10], the Ethics Guidelines on Trustworthy Artificial Intelligence of the HLEG[11], and the Ethically Aligned Design document developed by the IEEE[12]: i) Human Rights; ii) Well-being; iii) Privacy and data governance; iv) Transparency; v) Accountability; and, iv) Awareness of misuse.

[10] https://digital-strategy.ec.europa.eu/en/library/assessment-list-trustworthy-artificial-intelligence-altai-self-assessment
[11] https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai
[12] https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/ead1e.pdf

SECTION 2. Setting up legal and ethical governance in ITFLOWS: The ITFLOWS Regulatory Model

2.1 Definition and dimensions of the ITFLOWS Regulatory Model

The ITFLOWS Regulatory Model is a conceptual model of governance as explained in Section 1 which has been specifically designed for ensuring legal and ethical compliance. In ITFLOWS, compliance is embedded and enforced not only in all the research activities conducted within the project but also in its technological developments and outcomes, i.e., the EUMigraTool (EMT). The reasoning behind such a conceptual model of governance is twofold. First, ensuring legitimate, effective, and efficient legal and ethical compliance in accordance with the legal and ethical framework and the societal values identified as applicable to the project. Second, the need to strike a right and fair balance between advancement and innovation goals of the research foreseen in the project and the protection of individuals' fundamental rights, especially in the context of EU Security Projects.

Three different steps can be distinguished in terms of operationalising the ITFLOWS Regulatory Model. These steps are: i) Framework for Compliance; ii) Compliance through Design technology; and, iii) Monitoring and enforcement.

The following paragraphs provide detailed information regarding these three steps, focusing on their respective purpose and contribution to building up the ITFLOWS Regulatory Model.

STEP 1: Framework for Compliance

The first task is to identify, through an expert assessment, all the elements that are relevant in terms of defining the framework for compliance for the specific domain in which the model needs to be applied. The framework for compliance is composed of different levels of requirements: i) Legal constraints; ii) Outer policies; iii) Standards; iv) Inner policies; v) Best practices; and, vi) Social rules.

Legal constraints can be defined as a set of norms legally binding at the international, national, regional or local level. Treaties, International customs,

Directives, Laws, Regulations, Jurisprudence and Court decisions appear as the most usual hard law regulatory instruments capable of generating institutional strengthening. Combining all these different elements it is possible to obtain a clear picture of the body of law applicable in a given scenario, such as the one of Security on which the ITFLOWS project focuses.

As for the concept of **outer policies**, it is referred to policies provided by different types of entities such as public administration, regulatory agencies and supervisory bodies.[13] These policies are contained in a variety of instruments such as Declarations, Recommendations, Programs, Reports, Guidelines and Opinions. These outer policies address specific issues that: i) are not covered in hard law, ii) provide advice on how to interpret and apply hard law, iii) are not defined in hard law. Outer policies are one of the key elements of soft law.

The next level of instruments is that of **standards**. This can be broadly defined as rules or sets of rules that are proposed as the results of the consensus of different stakeholders in a concrete field such as ISO, STI, PCI-DSS, W3C, IEEE. The standardisation process has occurred in different domain such as the legal, technical and policy-making ones. These standards can be considered soft law instruments.

Inner policies constitute the next level of the framework for compliance. These types of policies are aimed at providing a framework for the decision-making process within a given organisation on different topics. This is a concept coming from the economic domain that is used both in public and private institutions. It can be considered as a result of a self-regulation process. Codes of conduct, White book or Protocols are examples of these policies.

In the case of **best practices,** the model refers to a set of techniques or methodologies that a given community has identified as adequate to achieve their goals in accordance with their values. These best practices are usually presented in the form of Codes or Professional Procedures and can be built through a formal or

[13] Unless these bodies, if provided by law, produce mandatory regulative acts, which should be considered hard law.

informal process. Again, we find a level of compliance that comes from self-regulation processes.

Social rules are duties, expectations, rights, norms or behaviours that have normative or non-normative power depending on whether society applies or not a consequence in case of infringement. This constitutes the last level of self-regulation.

STEP 2: Compliance through Design technology

In order to embed this framework for compliance in the definition of the requirements, the architecture and the implementation of the technology, a process is needed. The first step of this process consists of acquiring the relevant expert knowledge from the stakeholders and practitioners of the relevant domain. This knowledge allows for the identification of the risks that the proposed technology poses when confronted with the previously identified framework for compliance.

Taking into account the requirements extracted in the first task of this process and the risks identified in the second one, it is necessary to generate specific recommendations for ensuring compliance. If the developers of the technology introduce these recommendations, the result would be a compliant-through-design technology.

STEP 3: Monitoring and enforcement

The model is completed with a monitoring and enforcement dimension. The model ensures that the technology is compliant by design, but this of course leaves room for infringement for several actors and the possible misuse of the technology. In order to complete the model and provide certainty in those situations, a monitoring strategy is included in the model.

Within the ITFLOWS project, strong monitoring structures and procedures were designed from an internal and external perspective to ensure that research activities will be conducted in strict compliance with the EU and international human rights legal and ethical framework.

The **Ethical Board** and the **Internal Gender Committee** are the internal bodies that monitor ITFLOWS research activities from an internal perspective. The Ethical Board is composed of experts of IDT-UAB (ethics), BUL (human rights and societal impact) and FIZ (data protection). Its role entails providing specific advice and guidance on how to tackle legal, ethical and societal concerns that may raise ITFLOWS research activities. The task of the internal Gender Committee primarily involves ensuring that gender aspects are considered in all the WPs and throughout the lifecycle of the project.

The external bodies that have been appointed in ITFLOWS as part of the monitoring strategy designed for the project are: i) the **Independent Ethics Board (IEB)**. The main role of the IEB consists of providing independent advice to the Consortium on how to address ethical negative impacts posed by the research activities foreseen to be developed in ITFLOWS and that could lead to the infringement of fundamental rights; ii) a **Data Protection Advisor (DPA)**, who advises and supervises the adequate use and processing of personal data by the Consortium, in full compliance with the provisions laid down by the EU General Data Protection Regulation (GDPR)[14]; and, iii) lastly, the **Independent Gender Committee (IGC), which** was appointed following the ITFLOWS Consortium strategy of considering gender-specific disadvantages as well as the intersection of gender and other forms of discrimination on grounds of sexuality, race, religion, disability, age, among others deemed crucial for the research foreseen within the project. More specifically, the IGC identifies gendered drivers of migration in countries of origin, gendered limits and opportunities in the integration process, potential gender biases related to the design, implementation and results of the EUMigraTool and gender-specific policy outcomes and recommendations.

[14] https://eur-lex.europa.eu/eli/reg/2016/679/oj

This monitoring – as well as the enforcement of the framework for compliance in cases of infringement – is ultimately performed by the authorities with jurisdiction and powers in the matter. Authorities such as Data Protection Authorities, Courts or Arbitrators – among other – may be the ones responsible for the monitoring and enforcement of the framework for compliance.

SECTION 3. ITFLOWS Framework for Compliance

As mentioned in the previous section, all elements that are relevant for defining the framework for compliance specifically designed for the project must first be identified. The ITFLOWS framework for compliance, which was provided in D2.1, is divided as follows: i) hard law (see Figure 2); ii) soft law (see Figure 3); and, iii) self-regulation processes (see Figure 4).

3.1 Hard Law

HARD LAW	
INTERNATIONAL TREATIES	
Universal Declaration on Human Rights ([15])	Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children
International Covenant on Civil and Political Rights	Convention and Protocol relating to the Status of Refugees
International Covenant on Economic, Social and Cultural Rights	Security Council Resolution 1325 on women, peace and security
Convention against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment	European Convention on Human Rights
Convention on the Elimination of All Forms of Violence Against Women	Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence (Istanbul Convention)
Convention on the Rights of the Child	Council of Europe Framework Convention for the Protection of National Minorities
Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography	Council of Europe, European Social Charter
International Convention on the Elimination of All Forms of Racial Discrimination	International Labour Organisation, Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
International Convention on the Rights of Migrant Workers and their Families	Rome Statute of the International Criminal Court, done at Rome on 17 July 1998
UN Convention against Transnational Organized Crime and Protocol against the Smuggling of Migrants by Land, Sea and Air (Smuggling Protocol)	
Convention on the Rights of Persons with Disabilities	
EU LAW	
Treaty of the European Union	Directives:
Treaty on the Functioning of the European Union	Directive 2000/43/EC (*Equal Treatment Directive*)
Charter of Fundamental Rights of the European Union	Directive 2001/55/EC (*Temporary Protection Directive*)
Regulations:	Directive 2003/86/EC (*Family Reunification Directive*)
Regulation (EU) 603/2013 (*Eurodac Regulation*)	Directive 2008/115/EC (*Return Directive*)
Regulation (EU) 604/2013 (*Dublin III Regulation*)	Directive 2011/95/EU (*Qualification Directive*)
Regulation (EU) 656/2014 (Sea Borders *Regulation*)	Directive 2013/32/EU (*Asylum Procedure Directive*)
Regulation (EU) 2016/339 (*Schengen Borders Code)*	

[15] Although the Universal Declaration on Human Rights is not a treaty, it has acquired customary international law status.

Regulation (EU) 2016/679 (*General Data Protection Regulation*)	Directive 2013/33/EU (*Reception Directive*)
Regulation (EU) 2018/1725 (Data protection framework for EU institutions and agencies)	Directive (EU) 2016/680 (*Law Enforcement Data Protection Directive*)
Regulation (EU) 2019/1896 (*Frontex Regulation*)	

NATIONAL FRAMEWORK

Greece, *Greek National Referral Mechanism for the Protection of Victims of Human Trafficking (Joint Ministerial Decision 30840/2016)*

Greece, Law 4624/2019. Hellenic Data Protection Authority (HDPA), measures for implementing Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data, and transposition of Directive (EU) 2016/680 of the European Parliament and of the Council of 27 April 2016, and other provisions

Italy, *National Action Plan against the trafficking and serious exploitation of Human Beings*, approved by the Council of Ministries in February 2016

Italy, Decreto Legislativo 10 agosto 2018, n. 101. Disposizioni per l'adeguamento della normativa nazionale alle disposizioni del regolamento (UE) 2016/679 del Parlamento europeo e del Consiglio, del 27 aprile 2016, relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali, nonche' alla libera circolazione di tali dati e che abroga la direttiva 95/46/CE (regolamento generale sulla protezione dei dati). (18G00129) (GU Serie Generale n.205 del 04-09-2018).

Spain, *Protocolo Marco de Protección de las Víctimas de Trata de Seres Humanos*, adoptado mediante acuerdo de 28 de octubre de 2011 por los Ministerios de Justicia, del Interior, de Empleo y Seguridad Social y de Sanidad, Servicios Sociales e Igualdad, la Fiscalía General del Estado y el Consejo del Poder Judicial

Spain, Ley Orgánica 3/2018, de 5 de diciembre, de Protección de Datos Personales y garantía de los derechos digitales

CASE-LAW

European Court of Human Rights:	Court of Justice of the European Union:
Costello-Roberts v. the United Kingdom, Application no. 13134/87 (1993)	Joined cases C-199/12, C-200/12 and C-201/12, X., Y. and Z. v Minister voor Immigratie en Asiel, 7 November 2013
Botta v Italy, Application no. 21439/93 (1998)	Joined cases A (C-148/13), B (C-149/13), C (C-150/13) v Staatssecretaris van Veiligheid en Justitie, 2 December 2014
Amann v. Switzerland, Application no. 27798/95 (2000)	Case C-473/16 F, 25 January 2018
Maaouia v. France, Application no. 39652/98 (2000)	Case C-673/17, Planet49, 1 October 2019
Maslov v Austria, Application no. 1638/03 (2008)	
M.S.S. v. Belgium and Greece, Application no. 30696/09 (2011)	
Hirsi Jamaa and Others v. Italy, Application no. 27765/09 (2012)	
O.M. v. Hungary, Application no. 9912/15 (2016)	
Satakunnan Markkinapörssi Oy and Satamedia Oy v. Finland, Application no. 931/13 (2017)	

Figure 2. Hard Law

3.2 Soft Law

SOFT LAW

RESOLUTIONS, DECLARATIONS AND RECOMMENDATIONS

UN, Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities	Council of Europe, Recommendation CM/Rec (2019)1 on Preventing and Combating Sexism, adopted by the Committee of Ministers on 27 March 2019
UN, Entity for Gender Equality and the Empowerment of Women, The Beijing Platform for Action Turns 20	EU, Communication from the Commission to the European Parliament, the Council, the European

UN, Global Compact for Safe, Orderly and Regular Migration

UN, High Commissioner for Refugees Report of the Global Compact for Refugees

UN, Human Rights Council, The right to privacy in the digital age, A/HRC/34/L.7/Rev.1, 22 March 2017

UN, New York Declaration for Refugees and Migrants, resolution adopted by the General Assembly on 19 September 2016

UN, Resolution on the right to privacy in the digital age, A/RES/68/167, New York, 18 December 2013

UN, Revised draft resolution on the right to privacy in the digital age, A/C.3/69/L.26/Rev.1, New York, 19 November 2014

UN, Revised draft resolution on the right to privacy in the digital age, A/C.3/71/L.39/Rev.1, New York, 16 November 2016

UN, Transforming our world: the 2030 Agenda for Sustainable Development

Cartagena Declaration on Refugees, adopted in the Colloquium on the International Protection of Refugees in Central America, Mexico and Panama

Council of Europe, Action Plan on Protecting Refugee and Migrant Children in Europe (2017-2019)

Council of Europe, Key Standards on Gender Equality

Economic and Social Committee and the Committee of the Regions, 25 January 2012: Safeguarding Privacy in a Connected World. A European Data Protection Framework for the 21st Century, 2012

EU, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - A Roadmap for equality between women and men 2006-2010

EU, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Global Approach to Migration and Mobility

EU, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Roadmap to implement the New Pact on Migration and Asylum of the European Commission, Migration and Asylum Package: New Pact on Migration and Asylum documents adopted on 23 September 2020

EU, Communication from the Commission, A Strengthened Commitment to Equality between Women and Men: A Women's Charter

EU, Council conclusions of 7 March 2011 on European Pact for Gender Equality (2011-2020) (2011/C 155/02)

EU, European Commission, Strategic Engagement for Gender Equality (2016-2019)

Frontex, Technical and operational strategy for European integrated border management

European Integrated Border Management

OPINIONS AND GUIDELINES

UNHCR, Guidelines on International Protection: "Membership of a particular social group" within the context of Article 1A(2) of the 1951 Convention and/or its 1967 Protocol relating to the Status of Refugees, 2002

UNHCR, Guidelines on International Protection No. 9: "Claims to Refugee Status based on Sexual Orientation and/or Gender Identity" within the context of Article 1A(2) of the 1951 Convention and/or its 1967 Protocol relating to the Status of Refugees, 2012

UNHCR, Refugee Studies Centre, Queen Elizabeth House - University of Oxford. Ethical Guidelines for Good Research Practice, 2007

UN, Yogyakarta Principles, 2006

IASFM, Developing ethical guidelines for research, 2019

ALLEA, The European Code of Conduct for Research Integrity

European Commission, Ethics and Data Protection, 2018

European Commission, Ethics for Researchers, 2013

Article 29 Working Party, Opinion 4/2007 on the concept of personal data, WP 136, June 20, 2007

Article 29 Working Party, Opinion 01/2010 on the concepts of "controller" and "processor", WP 169, 2010

Article 29 Working Party, Opinion 3/2010 on the principle of accountability, WP 173, July 12, 2010

Article 29 Working Party, Advice paper on special categories of data ("sensitive data"), April 20, 2011

Article 29 Working Party, Opinion 03/2013 on purpose limitation, WP 203, April 2, 2013

Article 29 Working Party, Opinion 05/2014 on Anonymisation Techniques, WP216, April 10, 2014

Article 29 Working Party, Guidelines on the right to data portability, WP 242, December 2016, revised in April 2017

Article 29 Working Party, Guidelines on Data Protection Impact Assessment (DPIA) and determining whether processing is "likely to result in high risk" for the purposes of Regulation 2016/679, WP 248 rev.01, 4 October 2017

European Commission, Ethics in Social Science and Humanities, 2018	European Data Protection Supervisor, A Preliminary Opinion on data protection and scientific research, 2020
European Commission, Horizon 2020 Programme: Guidance How to Complete your Ethics Self-Assessment, 2019	European Data Protection Board, Guidelines 4/2019 on Article 25 Data Protection by Design and by Default, 2020
European Commission, H2020 Programme: Guidelines on FAIR Data Management in Horizon 2020, 2016	European Data Protection Board, Guidelines 05/2020 on consent under Regulation 2016/679 (Version 1.1), 2020
European Commission, Guidance Note – Research on Refugees, Asylum Seekers & Migrants, 2020	High-Level Expert Group on Artificial Intelligence, Assessment List for Trustworthy Artificial Intelligence for self-assessment
European Commission, Research Ethics and Responsible Research and Innovation, n/d	High-Level Expert Group on Artificial Intelligence. Ethics Guidelines on Trustworthy Artificial Intelligence of the HLEG
European Commission, Research Ethics in Ethnography/Anthropology, 2013	IEEE, Ethically Aligned Design
EASO, Guidance on reception conditions for unaccompanied children: Operational Standards and Indicators, European Asylum Support Office	
REPORTS AND HANDBOOKS	
UNHCR, Handbook on Procedures and Criteria for Determining Refugee Status under the 1951 Convention and the 1967 Protocol relating to the Status of Refugees, February 2019	European Union Agency for Fundamental Rights, Preventing unlawful profiling today and in the future: a guide, 2018
Translators without borders, Field Guide to Humanitarian Interpreting & Cultural Mediation, 2017	European Union Agency for Fundamental Rights, Handbook on European law relating to asylum, borders and migration, 2020
European Union Agency for Fundamental Rights, Handbook on European Data Protection Law, April 2018	European Resettlement Network, Cultural Mediation and volunteering to assist refugee arrivals, 2016
	International Committee of the Red Cross and Vrije Universiteit Brussel - Handbook on Data Protection In Humanitarian Action, 2020

Figure 3. Soft Law

3.3 Self-Regulation

SELF REGULATION	
INNER POLICIES	
ITFLOWS Gender Policy	Italian Red Cross, Manuale Antitratta: Metodologia e procedure di identificazione e risposta ai bisogni di persone migrant potenziali vittime di tratta (unpublished internal document)
British Red Cross, British Red Cross staff and volunteer guide to anti-trafficking: Helping people get the support they need in crisis	Italian Red Cross, Manuale RFL: Linee guida e procedure del servizio Restoring Family Links (unpublished internal document)
International Committee of the Red Cross, ICRC Rules on Personal Data Protection	Italian Red Cross, Safe Point della Croce Rossa Italiana: Guida operativa per l'istituzione e la gestione di "punti sicuri" per l'orientamento, la protezione e l'assistenza delle persone migranti (unpublished internal document)
International Committee of the Red Cross, Restoring Family Links Code of Conduct on Data Protection	Oxfam, Policy on Protection from Sexual Exploitation and Abuse (PSEA)
Italian Red Cross, Codice Etico - Provvedimenti Disciplinari e Collegi Disciplinari	Oxfam, Child Safeguarding Policy
Italian Red Cross, Codice di Condotta per la Prevenzione ed il Contrasto alle Molestie Sessuali	
Italian Red Cross, Safeguarding Children and Vulnerable Adults (unpublished internal document)	

Figure 4. Self-Regulation

SECTION 4. ITFLOWS Compliance through design technology

4.1 Ethical mitigation measures

The IDT-UAB is closely monitoring the development of the EMT to ensure that the system is ethically compliant. To this end, involvement in the tasks and deliverables of WP6 (Infrastructure – Models and EMT) is crucial to establish fluid communication with technical partners. The IDT-UAB has reviewed the progress of D6.1 (*Report on the specifications and architecture of the EMT platform*) with the aim of providing specific recommendations to mitigate ethical risks related to the technical development of the EMT. In particular, those concerning user requirements, data sources, the EMT architecture and the design principles. The ethical mitigation measures provided by the IDT-UAB can be summarised as follows:

1. The IDT-UAB has recommended including ethics design principles in this deliverable given that it is crucial to embed them into the EMT at the earliest stage possible. Following the Assessment List for Trustworthy Artificial Intelligence for self-assessment of the High-Level Expert Group on Artificial Intelligence of the European Commission (HLEG),[16] the Ethics Guidelines on Trustworthy Artificial Intelligence of the HLEG,[17] and the Ethically Aligned Design document developed by the IEEE,[18] the IDT-UAB has recommended embedding the following ethics design principles into the EMT:
    a. *Human Rights*: AI-enabled technologies should be designed and deployed to respect and promote human rights. Among other human rights, the EMT must ensure human dignity and autonomy, which also involves human oversight. In this regard, human oversight can only be meaningful if human-centric design principles and appropriate human-machine interfaces are embedded into the technology.

[16] https://digital-strategy.ec.europa.eu/en/library/assessment-list-trustworthy-artificial-intelligence-altai-self-assessment
[17] https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai
[18] https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/ead1e.pdf

b. *Well-being*: AI-enabled technologies should aim at benefitting society and the environment. The EMT must therefore be designed to strive for fairness and to prevent individual and societal harms and with sustainability and environmental friendliness in mind. Additionally, the EMT should be user-centric and designed in a way that it is usable and accessible to everyone regardless of their personal characteristics.

c. *Privacy and data governance*: the right to the protection of personal data must be preserved and promoted. Data quality and integrity must be ensured. The EMT must embed the principles of data protection by design and data protection by default laid down in the GDPR.

d. *Transparency*: transparency encompasses three elements: 1) traceability, 2) explainability and 3) open communication about the limitations of the AI system. Traceability implies that datasets and the technology underlying the EMT should be documented, e.g., the methods used for designing and developing the system, the methods used to test and validate it and the outcomes of the system. Given that traceability allows for the identification of the reasons behind systems' outcomes, it enables explainability. This means the ability to explain the outcomes made by the system intelligibly. To this end, the rationale behind a system's outcome should be understood and traced by humans. Lastly, communication channels must be established to raise awareness on the capabilities and limitations of the EMT.

e. *Accountability*: accountability requires the implementation of appropriate technical and organisational measures to report the system's performance and provide effective remedy and redress to the extent possible. Such measures include the assessment of design processes, the underlying technology and the data sets used, which allows for the auditability of the system. Auditability involves reporting the negative impacts of the system, identifying appropriate mitigation measures and feeding them into the system. These negative

impacts can be identified and assessed through comprehensive impact assessments that must be conducted regularly.

f. *Awareness of misuse*: developers should guard against the potential misuse of the EMT.

2. The IDT-UAB has advised on developing user requirements that effectively reflect their needs regarding the capabilities and functionalities of the EMT, rather than general statements. Additionally, it was noted that methodological explanations were needed as well as how priority levels were determined.

3. The IDT-UAB has requested clarifications on several aspects that remain unclear at this stage:
    - The types of models that are planned to be used to predict migration flows.
    - The types of metadata that are going to be extracted from the tweets.
    - The definition of hate speech in the context of ITFLOWS and the methods that will be used for analysis and classification.
    - How data quality will be ensured.
    - The use of images to extract features by using computer vision techniques must be clarified. In particular, its purpose and the types of features that will be extracted.
    - Indicators related to attitudes towards anti-migration, qualification and appraisal of all sentiments must be duly explained and well defined, and references must be included.

4.2 Societal mitigation measures

ITFLOWS recognises that the EMT will have a direct impact on society and in particular enforcement bodies, regional and local authorities as well as civil society organisations with an end goal to provide better and more targeted assistance to

refugees and migrants. This requires compliance through design methodology as outlined above as well as strong monitoring of any unintended impact of the tool created.

In line with 4.1, BUL will monitor the tasks and deliverables of WP6 (Infrastructure models – EMT), to ensure that the design of the EMT considers the potential societal impact of its use. The use of AI to predict migration flows, requires that the tool is designed to respect human rights provisions and ensure that human intervention in the application of the tool is embedded.

In particular, BUL will monitor that:

- the tool does not encourage discrimination, either direct or indirect, in law or in practice, structural or intersectional
- vulnerable characteristics of individuals are only identified and registered that is absolutely necessary for the positive outcomes of the project
- real quality is embedded in the design of the EMT
- the identified legal standards are applied.

BUL will also monitor that legal standards and human right principles are complied with during the design and development of the EMT. It is envisaged that the principles of non-refoulement and non-penalisation will not be prominent in this framework. However, the importance of socio-economic rights as minimum standards applying to all migrants and refugees that the project may affect has been discussed. Socio-economic rights are at the forefront of any integration policy; so any design and action must apply and protect the minimum standards as included in European and International Law frameworks. Human rights in general will have to form the minimum basis of all ITFLOWS actions and the EMT operation.

It is recognised that the EMT will be used for local authorities to predict the resources needed to host a certain number of migrant and refugee newcomers. In this respect, it needs to be monitored so that the socio-economic rights of the beneficiary group are not adversely affected by these tools through choices that

the local authorities may make on the basis of EMT. It is important to ensure that access to socio-economic services and tools are not applied in a discriminatory way. This has more to do with how the tool is used and by whom, rather than the tool itself. However, during the design process, simulations of the use of its predictions, will be helpful to establish any potential misuse of the tool.

The principle of non-discrimination is indeed very prominent in BUL monitoring. The processing of the data that will be used for the EMT as well as the EMT itself, will have to be scrutinised for any potential discrimination on the basis of any ground including (but not confined to) race, colour, sex, gender, sexual orientation, language, religion, political or other opinion, national or social origin, property, birth, disability, age and the intersectionality of the above. This will require a thorough analysis of the data and the sources from which the data is derived.

4.3 Data protection mitigation measures

ITFLOWS aims to achieve "compliance through design" on the technical level. From a data protection perspective, this means that the processing of data in the project should be designed in a way that ensures i) a sufficiently high level of protection of all data subjects that are subject to the data processing activities and ii) data protection principles are embedded in the design phase of the EMT as laid down in the GDPR. The regulatory model is a key instrument to achieve this goal.

As described in Section 2.1 this will be achieved through a cyclic three-step approach that will result in increasingly fine-grained requirements and solutions over time. This is necessary to reflect the ongoing research and development in other parts of the project (e.g. new user requirements, identification of novel processing techniques to increase accuracy). Ideally, this approach results in the most privacy-preserving data processing at any given time of the project in light of the current knowledge. This could also imply that primary analytical steps pursue a broader scope (e.g. use bigger datasets) in order to evaluate the accuracy of the approach itself and in support of a more privacy-preserving design later on.

Following the primary identification of data protection requirements (D2.1 and D2.3), the processing may need to be adapted to the requirements on a technical level. This means that the underlying design of the technology, here the EMT, needs to be constructed in a way that ensures compliance from the very beginning (data protection by design and by default approach).[19] To achieve this, the data protection experts will review, on a case-by-case basis, all approaches that may eventually be bundled within the EMT. Ideally, the compliance through design approach is fully embedded on the research level already. That being said, some of the analytical approaches in ITFLOWS are not developed from scratch and/or depend on pre-processing (e.g., aggregated data from other researchers/contexts). This may result in limited capabilities to change the "design" of the research approach because there are only limited data sources available. The upside is that *many approaches in ITFLOWS already rely on aggregated data that pose limited risks to natural persons*. However, *individual review is necessary* (1) to ensure data protection compliance during the research phase and (2) to ensure proper assessment of subsequent risks that may be raised by combination of datasets and use of data/approaches outside the research scope/context (e.g. by NGO end-users or municipalities). Within the project, these analytical approaches are located in WP3, WP4 and WP5 whereas WP6 aims to bundle the respective approaches in a single-tool/platform - the EMT. All work packages must make efforts to ensure compliance not only in their research but also in the context of EMT use-cases. On the other end, the legal supervision and guidance provided through the ITFLOWS Regulatory Model must equally encompass both contexts to enable the partners to achieve compliance through design.

It should be noted that this deliverable reflects the current status of the implementation process for the ITFLOWS Regulatory Model that is applied within the ITFLOWS project. The model is applied in the project in the first phase of the project and outcomes are already available through D2.1, D2.3 and within this deliverable. Since the approach itself is a continuous process, the outcomes reflect the current status and are subject to future developments within the project. This

[19] See Article 25 GDPR.

is necessary to reflect the necessary agility (e.g., change in data analysis approaches) in other work-packages of the project, as well as factual agility of the legal system (e.g., new laws or adapted case-law).

Framing the design process

The design of the ITFLOWS approach is governed by multiple considerations (see above). The regulatory model does hence not only need to provide legal and ethical guidance but also needs to encompass a level of agility to reflect the developments in the project. In ITFLOWS, the first months of the project were focused on the identification of relevant datasets/data sources that can be used in the project. This work has been conducted as part of WP6. Based on these findings, all datasets have been subject to preliminary review and checked for inherent risks as well as risks related to further processing. Main risks have already been identified in D2.1 and D2.3 are related in particular to:

- processing of interview data (inherent risk)
- processing of Twitter data (inherent risk)
- aggregation of different datasets (further processing risk)

In the next step, the (technical) partners face the challenge to conduct their research work with the identified datasets. To this end, it must be acknowledged that the processing in this context is often driven by experiments and subsequent comparison of outcomes. The regulatory model needs to reflect the needs for this kind of experimenting and avoid hindering research activity (e.g. through overly simplified and strict rules). Instead, the ITFLOWS regulatory model is implemented in a way that allows initial experimentation with different variables to identify which data actually needs to be processed to achieve the goals of the project - i.e. predict migration flows in a legally compliant way. In an intermediate step, FIZ-IGR accessed the majority of data sources used in the project to narrow down the findings of D2.1 and D2.3 to actual data points. Data sources used in ITFLOWS in principle can be broken down to (1) tabular data and (2) JSON data.

Driving Factors

1. **Data Types & Data Sources**

a. Tabular Data

Tabular data usually contains bulk datasets with each column reflecting a specific type of information. Figuratively speaking, this data will be approached from two sides. In a first step, the technical/research side of the project will assess each column of the dataset and evaluate if it is useful for the purposes of the conducted research. Simultaneously, the legal and ethical team reviews the columns for high-risk information that may need to be excluded from the processing to ensure legal compliance. If no high-risk information is identified, the research partners can start experimenting with the respective variables (i.e. columns). Based on the experiments conducted in this phase, the partners identify which variables are actually necessary and helpful to foster the goals of ITFLOWS. Narrowing down the required data already fosters compliance with the data minimisation principle. Based on that identification, the legal and ethical team will review the narrowed down data in the processing context.

Example:

Emergency Events Database (EM-DAT) used in WP3, D3.1

EM-DAT does not provide direct API access. Data can be accessed through public.emdat.be.

Output:

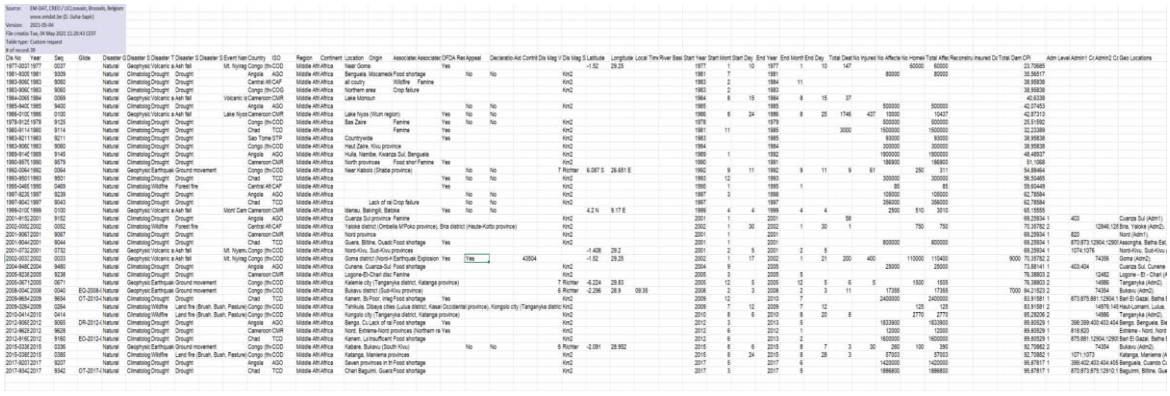


Figure 5. EMDAT-Dataset

b. JSON Data

JSON data is usually provided through APIs and contains structured information stored in key:value pairs. Through the standardised representation of information, this format is particularly effective. In contrast to tabular data, the content of a JSON-response is seldom bulk data and instead is driven by the technical request. Accessing information through APIs can hence help to reduce the data-load and thereby foster the data minimisation principle. However, the ability of APIs to handle specified requests and hence also provide specified output (i.e. responses) widely differs. Similar to tabular data, the initial data access will be relatively wide to allow for the necessary experimentation. FIZ-IGR, therefore already accessed the relevant APIs to oversee the basic responses (i.e. data that is provided) that can be retrieved. This data is checked for inherent high-risk data that may need to be excluded from the experimentation phase. From a data protection perspective, high-risk data is related to natural persons (i.e., personal data) and poses particular risks to the data subjects in the context of the project or the operational use of the EMT. The relevant partners are informed about these risks and urged to adapt their experiments accordingly. That being said, ITFLOWS widely uses well-recognized publicly available data sources that mainly provide aggregated data (e.g., Eurostat) that is expected to be sufficiently cleaned from personal data (i.e., does not contain data that is related to natural persons within the meaning of the GDPR). Based on the experiments with unspecified API-responses and the initial legal and ethical review, there are two paths to pursue. Where possible, *the API-requests need to be specified to only relate to relevant data*. As some simpler APIs only provide an "all or nothing" approach, this step will not always be possible. Where this is the case, *the API response should be cleaned according to the needs of the project* (e.g., by removing certain key-value pairs, by adding noise to certain values etc.). This process, again, is reviewed by the legal and ethical team.

Example:
Uppsala Conflict Data Program (UCPD) used in WP3, D3.1

*The UCPD provides an API with different outputs. The example response of the Georeferenced Event Dataset (gedevent) is the following:


```
{
 "TotalCount": 225385,
 "TotalPages": 225385,
 "PreviousPageUrl": "https://ucdpapi.pcr.uu.se/api/gedevents/20.1?pagesize=1&page=0",
 "NextPageUrl": "https://ucdpapi.pcr.uu.se/api/gedevents/20.1?pagesize=1&page=2",
 "Result": [
        {
        "id": 86148, => can become personal data if maintained in this object
        "relid": "IND-1989-3-1162-2", => can become personal data if maintained in this object
        "year": 1989,
        "active_year": true,
        "code_status": "Clear",
        "type_of_violence": 3,
        "conflict_dset_id": "319",
        "conflict_new_id": 519,
        "conflict_name": "Sikh insurgents - Civilians",
        "dyad_dset_id": "319",
        "dyad_new_id": 986,
        "dyad_name": "Sikh insurgents - Civilians", => Potentially personal data, depends on specificity of value
        "side_a_dset_id": "319",
        "side_a_new_id": 319,
        "side_a": "Sikh insurgents",
        "side_b_dset_id": "9999",
        "side_b_new_id": 1,
        "side_b": "Civilians",
        "number_of_sources": -1,
        "source_article": "Reuters 1/1/1989",
        "source_office": "",
        "source_date": "",
        "source_headline": "",
        "source_original": "police",
        "where_prec": 4,
        "where_coordinates": "Punjab State",
        "where_description": "Punjab state",
        "adm_1": "Punjab State",
        "adm_2": "",
        "latitude": 30.916670, => Potentially personal data, depending on context
        "longitude": 75.416670, => Potentially personal data, depending on context
        "geom_wkt": "POINT (75.416670 30.916670)", => Potentially personal data, depends on context
        "priogrid_gid": 174031,
        "country": "India",
        "country_id": 750,
        "region": "Asia",
        "event_clarity": 1,
        "date_prec": 1,
        "date_start": "1989-01-01T00:00:00",
        "date_end": "1989-01-01T00:00:00",
        "deaths_a": 0,
        "deaths_b": 0,
        "deaths_civilians": 5,
        "deaths_unknown": 0,
        "best": 5,
        "high": 5,
        "low": 5,
        "gwnoa": "",
        "gwnob": ""
        }
]
```


Figure 6. Uppsala Conflict Data Program Dataset

2. Processing Context

Risks only emerge where data is processed (e.g., stored, analysed, changed). As a consequence, not only the data itself but also the underlying processing architecture, as well as the context of the processing of that data, needs to be considered. In ITFLOWS a distinction can be made between (1) processing in the research and development context (One or more partners) and (2) Processing in the End-user context (EMT/ITFLOWS + End-user)

a. Research context

Within ITFLOWS, the internal project architecture needs to be considered to be able to evaluate risks. The ITFLOWS project consists of 14 partners that bring in different types of expertise. The individual expertise of all partners, of course, is intended to be combined in the outcomes of the project. With regard to the data processing, the initial research for the project will be conducted mostly by partners separately. In consequence, the internal architecture does not yet foresee interlinkage of research data as an initial goal. Data processing is hence currently separated between work packages and even institutions. The review-process that is embedded in the regulatory model is hence currently targeting individual processing approaches in the respective work packages (WP3/4/5) and the respective deliverables. That being said, the possible linkage of datasets and processing approaches that can occur at a later time in the project, is not ignored.

b. Tool provision

Besides the research conducted in the project itself, compliance-by-design also needs to be implemented in the outcomes of the project. In this processing scenario, the prior developed approaches (see research context) will be bundled to provide a single entry point for end-users (NGOs/Municipalities) to access the research outcomes - i.e. a comprehensive migration flow analysis and prediction - through a web-interface (EMT). In this context, the data protection experts need to review the architecture of the EMT and how it combines the data that have been/are provided through the other work packages.

Design adjustment

In light of the design process framed above, the design of the processing can be adapted to ensure legal and ethical compliance. As stated above, design considerations are not solely driven by legal considerations but also by different factors such as user-requirements and technical considerations. From the legal and ethical perspective, the necessary design-adjustment can be encompassed under the term "mitigation measures". Such mitigation measures describe technical or organisational measures to reduce the risks that come with the processing of data. The key measures that will become applicable in the design-process have been already largely identified in D2.3. The implementation of such measures - i.e. the adjustment of the design - is an ongoing process that needs to be conducted on a case-by-case basis. With increasing clarity and specificity in the processing approaches, these measures will also be specified towards the concrete circumstances in the project. Among the measures identified, we reiterate the importance of:

- **Deciding not to collect certain types of data in order to lower the risk of (re-) identification when different datasets are aggregated.** An example of types of data to be excluded are Twitter account names (processing of Twitter data). FIZ-Karlsruhe (IGR team) has already discussed this point with FIZ-ISE.[20] It has been recommended to avoid including certain search queries (e.g. :from, :to, :username) in the GET request to ensure the API-response only contains necessary information. As stated in D2.3, the Twitter API v2 specifically allows users to set parameters to conduct targeted queries and receive specific responses.[21]

  Furthermore, the decision not to collect certain types of data implies an attentive review of datasets, including publicly available datasets. As an example, it was decided that the analysis of sentiments based on Twitter data generally is not dependent on the usernames of Twitter Users. However, the omission of usernames in the analysis also means that an optional data point for the analysis of gender aspects is lost. It is hence necessary to discuss and balance the ethical and legal values in a way that

[20] Meeting held on December 17th, 2020.
[21] https://developer.twitter.com/en/docs/twitter-api/fields

ensures the maximum compliance with all different and partly diverging aspects and requirements. In this context, it was decided that the omission of usernames will be maintained for the sentiment analysis. However, to ensure gender aspects are sufficiently accounted for, a small, randomised subset of the Twitter dataset can be analysed with NLP techniques to get some insights on gender aspects of the dataset. Therefore, the approach complies with the principle of data minimisation while gender aspects are also taken into consideration. That being said, WP2 also urged all project members to acknowledge and account for the possible consequences of the balancing of different interests and requirements.

For example, let us have a look at D3.1, which aims to explain the causes and conditions for migration. Two key questions need to be addressed in this context. (1) When does irregular migration happen and (2) why does it happen? For the first question, FRONTEX data is used to get insights on migration flows, especially the number and time of irregular border crossings. The dataset does not necessarily indicate the number of persons crossing a border but rather the number of border crossings itself (i.e. one person could cross a border multiple times).

-	Border type or inland	Nationality	JAN2009	FEB2009	MAR2009	APR2009	MAY2009	JUN2009	JUL2009	AUG2009
Western Balkan Route	Land	Syria	0	0	0	0	0	0	0	0
Western Balkan Route	Land	Afghanistan	0	0	54	34	51	35	75	67
Western Balkan Route	Land	Palestine^	0	2	2	0	0	0	1	4
Western Balkan Route	Land	Morocco	0	0	0	2	0	0	0	0
Western Balkan Route	Land	Tunisia	1	0	0	0	0	0	0	0
Western Balkan Route	Land	Pakistan	0	0	0	0	0	1	0	0
Western Balkan Route	Land	Iran	0	0	2	0	4	2	0	13
Western Balkan Route	Land	Kosovo*	38	136	93	4	47	47	46	49
Western Balkan Route	Land	Turkey	3	4	3	0	4	5	9	6
Western Balkan Route	Land	Algeria	0	0	0	0	0	0	0	0
Western Balkan Route	Land	Egypt	1	0	1	0	0	0	0	0
Western Balkan Route	Land	Libya	0	0	0	0	0	0	0	0
Western Balkan Route	Land	Iraq	0	0	0	0	0	2	0	0
Western Balkan Route	Land	Kuwait	0	0	0	0	0	0	0	0
Western Balkan Route	Land	Somalia	0	0	0	0	0	0	0	0
Western Balkan Route	Land	Albania	10	1	3	6	9	3	11	1
Western Balkan Route	Land	Bosnia and Herzegovina	46	8	15	7	14	11	14	14
Western Balkan Route	Land	Stateless	0	2	0	0	0	0	1	2
Western Balkan Route	Land	Serbia	66	136	161	79	80	45	75	101

Figure 7. Frontex Dataset

The data contains the following information:

- Migration Route
- Border type (Land or Sea)
- Nationality of the migrating person
- Time at which the border is crossed (indicated by month)

While the dataset does not contain personal data, its initial creation might at least partly be based on personal data. As FRONTEX is an EU Institution, ITFLOWS expects the data to be lawfully collected based on Regulation EU 2018/1725.[22] Relations to natural persons in this case can only be drawn through connection with additional information. In the research context, further risks can hence arise due to connection with other datasets. This connection must be closely monitored. In the context of the EMT (i.e., end user), risks may be posed to individuals if the dataset is used to cause actions that affect natural persons (i.e. using the EMT to provide or evaluate possible migration circumstances to an asylum application).

While the dataset only reflects border crossings, it can provide indications regarding the number of persons crossing a border and provides the most detailed information from a "time" perspective in this area. Alternative data, data on asylum applications may be more precise in the actual numbers of persons, but do not provide proper indications as to the actual time of border crossings (e.g. an application could be filed 3 months after the crossing). Since the goal of this deliverable is the identification and analysis of conditions and causes for migration, the time aspect is of high importance. It was hence decided to begin with the FRONTEX dataset and not collect data on asylum applications that could potentially raise additional risks.

The second question (circumstances of irregular migration) will be addressed through the analysis of multiple types of datasets related to (1)

[22] c.f. https://frontex.europa.eu/about-frontex/data-protection/

conflict-data, (2) climate data and (3) political stability and governance data. To evaluate the information that is derived through the analysis of these datasets, (4) control-variables from the World-Bank Development Indicators will be used. Consequently, the design needs to consider all datasets and their respective correlation for the purpose of the processing.

If the reviewed datasets contain personal data and such personal data is not necessary to fulfil the legitimate purpose, the partner must exclude and not process this data. For example, if the UCPD dataset contains names of militants or civilians (as the key "dyad_name": "Sikh insurgents - Civilians" may suggest), this information may need to be excluded from processing activities. It hence needs to be evaluated if the aim of D3.1 (i.e. to explain causes and conditions for migration) requires the processing of this information. If this is the case, it needs to be discussed if there are more privacy-preserving approaches in comparison to the current approach. In the given example this could mean that relevant fields are run through a named-entity recognition system to replace names with privacy-preserving identifiers prior to further processing and analysis. This is valid for every dataset and every other processing activity and requires a case-by-case analysis and careful balancing of the involved legitimate interests against the data subjects' rights.

- **Adapting the scope of processing where necessary**. This decision has to be made taking into consideration the overall context of the processing and the specified purposes. As a general recommendation, it has been suggested to use smaller datasets for analysis, even if bigger datasets may provide slightly higher quality results. In relation to Twitter analysis, for example, a possibility would be to only use Tweet data where "data.public_metrics.retweet_count" is >= 50. As highlighted in D2.3, since part of the research could also be to identify if the respective field is relevant to a specific research question, the mitigation measure could also be applied when it becomes clear that the respective data has no influence on the research question. Reducing the scope of processing is also valid

when it comes to interviews: NGOs will follow the interview questionnaire and will collect only necessary information in accordance with the guidelines and recommendations provided by the ethics lead partner, the IEB and the DPA. Furthermore, the scope of processing needs to be continuously re-evaluated to ensure a proper balance between research needs, data protection and other legal and ethical requirements. To this end, WP2 members on 25 May, met with FIZ-ISE and MTU to discuss how and if gender-aspects can and should be included in the analysis of Twitter data. In this context, it was agreed that gender-aspects raise highly important (research) questions that, could be addressed in various ways. It was decided that full-scale analysis (e.g. NLP analysis of writing styles) to identify the gender of Twitter users would be outside the scope of the project. At the same time, it was agreed that a small subset of the dataset might be analysed to check if the male/female balance in the dataset is equal/comparable to the data by external sources (i.e., Statista: 70% male, 30% female). To ensure that gender aspects are sufficiently covered, the initial scope was slightly widened to allow research in this direction. However, the partners agreed that a full-scale analysis would be incompatible with the overall idea to keep the scope as limited as possible.

- **Reducing retention periods**. It has been recommended that the data collected in the project should only be stored as long as necessary for the specific purpose (storage limitation principle). Research exemptions regarding the retention and reuse of research data may apply, however, this could also mean that, even if initial data is only partly needed, superfluous data should be erased from the datasets. For Twitter data, this could mean that the controller has to overwrite certain fields in the collected JSON responses (e.g., the data.id field) after a certain amount of time. Concerning interviews, it has been decided that transcripts will be destroyed at latest at the end of the project.

- **Minimise the stored data.** ITFLOWS aims to manage the relevant data through a data repository (CKAN). This repository can be a valid source for

further research (e.g., linking datasets) as well as foundation for the use of data by the EMT. To this end, the stored data should be limited to what is necessary in the respective context (which is defined as part of the research in the respective WPs). This can mean that instead of bulk datasets (e.g., GDELT) only relevant bits of information are stored in CKAN - making the whole approach more efficient and privacy-friendly. To this end, it was already specified in D6.1 (Section 2.3.1) that python-scripts will be used to extract only the relevant information from the datasets.

- **Anonymisation and pseudonymisation where possible.** Both interview data and Twitter data contain general risks in relation to identification of natural persons, therefore it should be ensured that data are properly anonymised or pseudonymised to prevent data subjects' identification, in particular when datasets are connected in the central repository. Solutions may include the use of scrambling, masking or encryption techniques. A training workshop has been already offered to NGOs on the 24th of March. During the workshop, recommendations and proposals regarding suitable pseudonymisation and anonymisation techniques and procedures in relation to the processing of interview data were made. To ensure the implementation of this procedure the outcomes will further be checked by UAB/IAI prior to any processing analysis, as described in D10.3. The enforcement of the relevant measures should further be subject in line with the internal procedures of the respective partner. To this end, each partner is individually accountable for their data protection efforts and compliance with the GDPR. Concerning Twitter data, during a meeting with FIZ-ISE on December 17th, it has been recommended that Twitter account names will be excluded from the processing of Twitter data. In addition, where it does not undermine the analysis, identifiers that allow drawing conclusions on the users can be replaced with anonymous UUIDs prior to any analytical processing. Further conversations and evaluation (e.g., regarding T5.3) will be conducted as soon as the methodology is sufficiently clear.

- **Taking additional security measures**. In some contexts, additional security measures are particularly necessary, with this being dependent upon the data collected and processed. With regard to the interviews, it was decided that access to original transcripts is limited to the partners collecting the data, namely CRI, OCC, OIT, who will anonymise transcripts in a first step (i.e., removing any directly identifiable information, such as names). Access to the so anonymised transcripts is kept limited to the partners conducting the analysis (IAI and UAB). Prior to the analysis, the transcripts will be double-checked by IAI and UAB to ensure no personally identifiable information is contained (e.g., uncommon or unique experiences). Other partners, or third parties will hence have no possibility to relate the research findings to any natural person, especially in the context of vulnerable persons that may have been victims or witnesses of unlawful activities or have been subject to other traumatizing events (e.g., having insufficient means to eat, clothe oneself or wash) that interfere with the human dignity. With regard to the EUMigraTool, it has been already recommended in D2.3 to limit the access to the tool itself to certain actors (e.g., NGOs) and restrict the use by authorities with technical measures (e.g., user management to ensure only relevant/anonymised/low-risk data are available to certain actors). This has been also a user requirement for the EMT as reported in D6.1 (section 3.2), under "Information Misuse Prevention" and it will need further elaboration from a technical point of view. Furthermore, when data is managed in the central repository (CKAN), the connected databases as well as the connection to this data should be sufficiently secure. On the technical level, depending on the severity of the risk, this could result in the need for standard security measures such as TLS/SSL encryption; hashed password storage etc. It also means, for example, that certain datasets (e.g., interview data) need to be stored in encrypted form (e.g., AES-256), as recommended during the training workshop to NGOs organised by WP2 and WP3 partners in March, and access to the files (i.e., knowledge of the password) has to be limited to relevant persons. If there are risks to the integrity of the data (e.g., change of migration data in the datasets for political interests) measures could

reach from simple version control (c.f. Git) to blockchain-based data control to ensure the immutability of the data.

- **Training Staff to ensure risks are anticipated and managed**. Deliverables and internal communications and workshops serve this purpose. As an example, a training workshop for NGOs has been organised by WP2 and WP3 partners in March, in which data protection aspects were covered. The workshop mainly covered the data protection principles laid down in the GDPR and explained how NGOs can achieve compliance with these requirements through different methods (e.g., encryption of data). Where applicable, software solutions and best practices have been explained (i.e., encryption with AES-256 standard). In addition, a "step-by-step data protection guide", a detailed guiding document as well as a presentation have been provided to the partners. It was chosen to provide different guiding documents to reflect the different data protection expertise of the NGOs. The documents a) provide every partner/NGO with a suitable guidance option and b) ease initial access to data protection information by not overwhelming partners with excessive information.

Figure 8. Step-by-Step Guide + Detailed Guiding Document + Workshop presentation.

Training not only concerns technical partners but also potential users of the EMT (e.g., User Board) who will be fully informed about the advantages and limitations of the implemented approaches in order to evaluate the validity and significance of the EMT findings prior to any decision-making process.

- **Putting clear data sharing agreements into place.** Since in ITFLOWS the CKAN repository will be used to share and access databases within the project, all partners need to agree on the conditions to use this data. If personal data is involved, *it needs to be defined who/how/why the data can be used*. The datasets that will be shared through CKAN are not yet specified. Regarding the data sharing agreements, data protection details will be provided as part of the ongoing monitoring and guidance action as foreseen in the Grant Agreement. Furthermore, in line with other requirements, *the technological measures to enforce these agreements* should be implemented (e.g., setting up general user-management capabilities in the CKAN repository). As a first step, standard access control (managed by CERTH) already ensures that only necessary ITFLOWS members can access the data.

4.4 Gender mitigation measures

In terms of compliance by design as relates to gender, any identification of status related to gender or sexual orientation must be voluntary and by consent.

As to mitigation measures in place, the D2.2 Gender Action Plan, sections 3C "Gendering and actioning the EMT" and 3D "Gendering and actioning Big Data" outline the expectations, guidelines and recommendations for approaching gender and sexuality in the design, implementation and dissemination of the EMT. Section 3C in particular includes a gender and technology risk assessment. Moreover, the Plan also outlines gender actioning in other research related WPs (apart from technical WPs 3,5, and 6) that may feed data into the EMT.

Moreover, it has been stipulated in the monitoring section of D2.2 Gender Action Plan that all technical meetings related to the EMT will be attended by at least one member of the Gender Committee, to take note of gender considerations, to provide any relevant recommendations and to record any such discussions. For example, the gender dimension was flagged with regards to Twitter data used in WP3 and WP5, and a follow up discussion was held with the relevant partners, further detailed in sections 4.3 and 5.1.4.

SECTION 5. ITFLOWS Monitoring and enforcement strategy

5.1 Internal monitoring and enforcement

5.1.1 Ethics

In order to avoid or at least minimise the negative ethical impacts related to human participation, the following mitigation measures have been taken at the current stage of the project (Month 6):

1. Specific ethical guidelines have been provided to researchers in order to address challenging ethical issues that could arise in the interviews concerning i) the particular vulnerability of the participants; ii) the recruitment plan for the interviewing team and the research participants; iii) the protection of personal data; iv) the need to ensure voluntary participation; and v) the incidental findings policy to address potential incidental findings that may arise in the context of these interviews (see Section 1.4b of D2.1).

2. A recruitment plan has been designed and provided to the Consortium for conducting the interviews of T3.4.

3. An Incidental Finding Policy has been designed for the project (D10.1).

4. A Gender Policy has been designed for the project (D2.2).

5. A clear description of the anonymisation techniques used to protect personal data that will be gathered in the interviews has been provided.

6. Informed Consent Forms templates have been designed specifically to conduct the interviews and provided to the Consortium partners in charge of them.

7. In March 2021, WP2 and WP3 partners delivered a training session ('ITFLOWS Training Workshop') for the NGOs and their respective interviewing teams involved in conducting the interviews with migrants, refugees and asylum seekers. In this workshop, several ethical aspects that interviewing teams must consider were presented, and the importance of ethical compliance was stressed. In addition to the presentation, an Ethics Handbook was delivered as

a guide for the interviewing teams, which is available on Teams and is continuously updated (See Section 5.1.1.2).

8. Ethics approvals/positive opinions from the internal ethics committees/bodies of the NGOs in charge of conducting the interviews have been requested before the starting of the interviews.

9. The first draft of the conceptual paper (T3.1, Milestone 1), has been reviewed by the ethical lead partner. This paper aims to understand irregular migration trajectories from departure to the final destination, as well as to provide detailed information regarding the design of the interviews that will be conducted in T3.4.

10. An Informed Consent Template Form has been designed and provided to conduct T7.1 (an end-user board workshop to design visualisation mock-ups and indicative workflows to be implemented in the EUMigraTool, only attended by internal end-users). The aim of this informed consent template form was to obtain consent to record the live Zoom session and to take photographs.

11. Informed Consent Templates to conduct workshops with policy makers (T8.2) will be designed and provided to CSD/CEPS in M10. Ethical guidelines to conduct qualitative research activities have been provided by the ethical lead partner of the project to the Consortium (Section 5 of D.2.1).

12. The DPA, the IEB and FIZ -as the responsible partner for data protection issues in ITFLOWS- have monitored and provided approvals on relevant ethical guidelines, procedures, and policies mentioned above.

13. The Independent Gender Committee has provided a letter validating the Gender Action Plan and the Gender Policy specifically designed for the project.

As for the technological development of the EUMigraTool, the identified mitigation measures are the following:

1. The IDT-UAB attended the Users Board workshop to design visualisation mock-ups and indicative workflows to be implemented in the EUMigraTool (held virtually on January 2021), with the aim of gathering further information on: i) end- users' requirements; ii) and the EUMigraTool functional requirements.

2. The IDT-UAB jointly with the DPA and the IEB will provide recommendations on the EUMigraTool functional requirements contained in D.7.1 (Users Board Participatory Feedback Report) since these requirements will represent a key part of the input necessary to develop EUMigraTool specifications and architecture.

3. The IDT-UAB has closely monitored the first technical deliverable (D6.1 *Report on the specifications and architecture of the EMT platform*) and has requested clarifications on several aspects, such as the types of models to be used for prediction and data quality, among others. In addition, the IDT-UAB provided a set of recommendations to be followed by the technical partners, as stated in Section 4.1.

5.1.1.1 Ethics Handbook

The IDT-UAB developed an Ethics Handbook, which serves as a practical guide for the interviewing teams when conducting the interviews with migrants, refugees and asylum seekers. The purpose of this handbook is to stress the most important ethics aspects that interviewing teams must bear in mind. Importantly, the handbook contains basic information related to such ethical aspects. Therefore, interviewing teams must peruse and follow the documents that are referenced in the handbook, which provide more detailed information about these aspects. The Ethics Handbook is regularly updated and is available on Teams. The contents of this Ethics Handbook are the following: 1) General ethical principles; 2) Ethical principles governing the interviews; 3) Ethical guidelines to conduct the interviews; 4) Recruitment plan: interviewing team; 5) Recruitment plan: research participants; 6) Incidental findings policy; 7) Incidental findings policy: procedure; 8) Two-step incidental findings transcription procedure; and, 9) Gender Policy.

ITFLOWS TRAINING WORKSHOP

24th March 2021

(v2.0 - updated 21st May 2021)

IT TOOLS AND METHODS FOR MANAGING MIGRATION FLOWS

Ethics Handbook for the interviewing team

The aim of this ethics handbook is to highlight the most relevant ethics issues that must be taken into account before conducting the interviews with migrants, refugees and asylum-seekers in ITFLOWS. This handbook also provides general ethical tips to address ethical concerns that may arise during the interviews. The ultimate goal is to ensure the ethical compliance of this research activity.

This handbook only contains basic information regarding some relevant ethical requirements previously identified in the context of ITFLOWS interviews. This means that you must be familiar with the content of the documents referenced in this handbook: Deliverable 2.1 (Section 5), Recruitment plan, Incidental Findings Policy, Gender Action Plan, Informed consent procedures and template and the Anonymisation techniques document.

Andrea Guillén and Emma Teodoro (IDT-UAB)

Ethics Handbook

Ethical principles governing the interview research activity

1. Integrity
2. Reliability
3. Honesty
4. Respect
5. Accountability

General ethical principles

- All research activities foreseen within the Project should be conducted in strict compliance with the **general principle of integrity**.
- In addition to the principle of integrity, the following principles must be applied: **reliability, honesty, respect and accountability**.

(See Deliverable 2.1, Section 5, p. 157)

1. Autonomy
2. Doing no harm
3. Equity
4. Diversity
5. Competence
6. Voluntary participation
7. Confidentiality & privacy
8. Transparency & accountability

Ethical principles governing the interviews

ITFLOWS researchers involved in conducting qualitative research activities should also adhere to specific ethical principles. These principles have been identified and translated into ethical guidelines to be implemented by ITFLOWS interviewing teams in order to ensure that ITFLOWS interviews are conducted ethically.

- **Autonomy:** You should ensure the right of people to make their own decisions concerning their lives and particularly their participation in the Project.
- **Doing no harm:** You should prioritise the dignity, safety and well-being of participants as well as that of all members of the team. Individual or collective actions that may increase racism, discrimination, the criminalisation of migration or retraumatise migrants, refugees and asylum seekers should be avoided.
- **Equity:** You should take proactive actions to minimise potential negative impacts that may occur due to unbalanced power relationships.
- **Diversity:** You should respect cultural, ethnic, gender and sexual orientation differences. Ethnocentric research perspectives and behaviour must be avoided.
- **Competence**: Adequate training should be provided to the interviewing team. Profiles with expertise and empirical background in the field of migration should be prioritised.
- **Voluntary participation:** You must obtain participants' informed consent before their involvement in the interviews.
- **Confidentiality and privacy:** Processing of personal data must be compliant with the European and national data protection legal framework.
- **Transparency and accountability:** You should present the interview in a clear and accurate manner, avoiding biased and misleading information that makes it excessively attractive for the participants.

(See Deliverable 2.1, Section 5, p. 160-161)

Ethics Handbook

Human participation

Ethical guidelines to conduct the interviews

• You should **comply with the Guidance note on Research of refugees, asylum seekers and migrants** of the EU Directorate-General for Research and Innovation.[1]

• Do not create **unjustified expectations** in research participants about their future residence in the EU Member States, their status as asylum seekers or reward for their participation. Nevertheless, all research participants in the interviews will be provided with a small compensation with the aim of recognizing their time, effort and valuable participation.

• You should present the interview in an **unbiased manner** and free of misleading emphasis that makes it excessively appealing.

• Interviews must be conducted in a **comfortable and private setting** to favour the well-being of the research participant. Questions that could potentially cause distress, discomfort or fear should be carefully managed. If the described feelings are detected, the principles of autonomy and dignity should guide the actions to be taken by the interviewing team, e.g., to take a break or to avoid insisting on specific questions.

• Authorisations from national/local/reception centres authorities must be obtained before conducting the interviews.

(See Deliverable 2.1, Section 5, p. 162-164 and 'The roadmap of Human Rights and your Interview')

Recruitment plan: interviewing team

• NGOs will be responsible for ensuring the **adequate background and expertise** of the interviewing team. It is recommended to prioritise people with a refugee or migrant background, or from the same culture as the research participants.

• **Under no circumstances external organisations will conduct interviews**. However, in case of necessity, NGOs can rely on their contact networks with other associations in search of support. If support from external organisations was needed, prior communication to the ITFLOWS Ethical Lead Partner (UAB) and its corresponding approval will be required to ensure ethical and legal compliance.

• You can resort to **trustworthy contacts** in the field, such as community leaders, to enable the recruitment of participants and to set fluid communication channels with them.

• Anyone involved in any way in the interviews must sign a **confidentiality agreement**.

• When the research participant is a woman, the presence of **female interviewers** is strongly recommended. Nevertheless, you must take into consideration the opinion and preferences of the research participant.

• **Public health directions** will be followed at all times when conducting interviews. This may imply avoiding quarantine areas or any place that could entail any sort of risk for the interviewing teams and research participants.

• All interviews will be conducted following all **sanitary measures** to protect interviewing teams' and research participants' health. Particular emphasis will be placed on COVID-19 given the current global pandemic.

• Interviewing teams will fully adhere to the **internal guidelines and best-practices codes** of their organisations.

(See Recruitment plan)

[1] European Commission (2020). Guidance Note – Research on Refugees, Asylum Seekers & Migrants. Retrieved from https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/guide_research-refugees-migrants_en.pdf

Ethics Handbook

Human participation

Recruitment plan: research participants

• **No minors will be interviewed**. You will rely on the personal documentation of the candidates (for example, C3 for asylum seekers in Italy) or any other reliable mean to assure the legal age of the research participants. You can resort to trustworthy contacts in the field and community leaders to verify the age of the research participants. In doubtful cases in which the verification of the age is impossible, the candidate will necessarily be excluded from participation in the interview.

• People who are already identified as **especially vulnerable groups** will also be automatically excluded from participation in the interview. Especially vulnerable people includes people with evident health concerns and psychological traumas, as well as victims of human trafficking and genital mutilation, among others. See the Incidental Findings Policy (see below), which establishes action protocols for you to react to unexpected findings of this type. (See Incidental Findings Policy)

• Ensure **gender representativeness** in the interview sample. Gender parity will be guaranteed by ensuring a proportion of 1 woman per every three or four men. The objective is to ensure a proportion as close as possible to 1/3. (See Gender Action Plan)

• Participation must be **voluntary** and based on **free and informed consent**. You will inform research participants about the nature of the project and the interview, and about their rights. They will be able to withdraw their consent at any time or to momentarily interrupt the interview without any detriment. (See Informed consent procedures and template)

• Personal data from interviews will be **anonymised**. (See Anonymisation techniques document)

• Research participants in the interviews will be provided with a **small compensation**. In this regard, an acknowledgement of receipt proving the transmission of the small compensation must be signed. Each NGO partner in charge of conducting the interviews must decide and specify the type of compensation (monetary compensation, voucher or some gift) that will be offered to all research participants. This compensation will be subject to the approval of the Ethics Lead Partner (UAB). **As a general rule monetary compensation is highly discouraged**. In this respect, if one of the NGOs decides to consider monetary compensation, a specific request in this respect - justifying the suitability of this compensation - must be sent to the Ethics Lead Partner of the project (UAB). This request will be subject to the specific approval of the Independent Ethics Board (IEB) and the Data Protection Advisor (DPA).

(See Recruitment plan)

Incidental findings policy

• Incidental Findings refer to risks that may emerge in any research activity involving human participants, which are unrelated to the purpose of the research activity. In the context of the interviews, incidental findings may comprise indications of criminal activity and human rights violations. NGOs have evaluated **sexual and gender-based violence and trafficking in human beings** as **highly likely** to be incidental findings in the context of the interviews to be conducted in ITFLOWS.

• You must be familiarised with the **ITFLOWS Incidental Findings Policy** and strictly follow the **applicable national referral system**.

• You must **respect the autonomy of the research participant** to freely decide on the next steps to take, if any.

• You must comply with the ethical principles that govern the Incidental Findings Policy and its procedure: i) **protection of migrant's best interests**; ii) **do no harm**; iii) **zero-tolerance approach**; iv) **procedural fairness: accountability and transparency**; v) **fair benefit-sharing**; and, vi) **shared responsibility**.

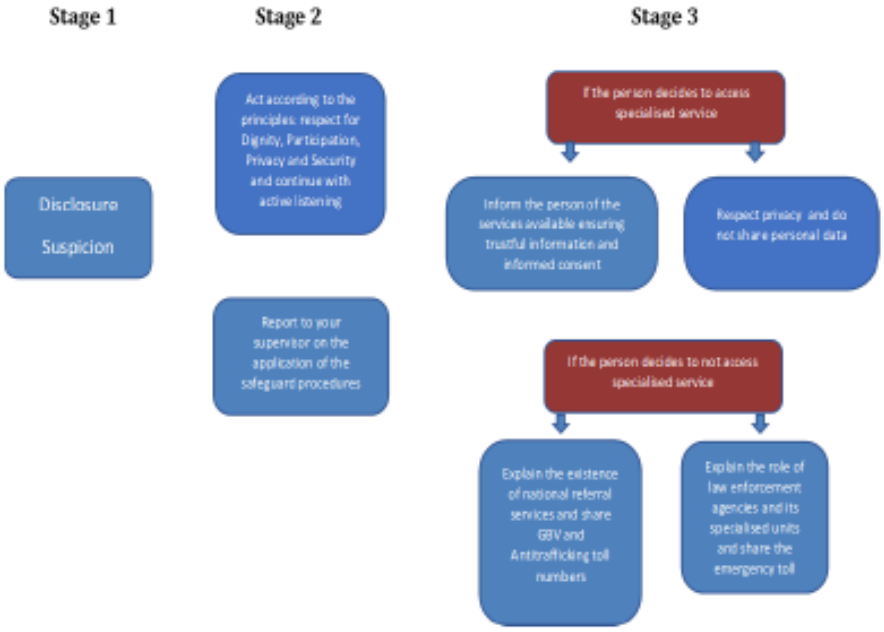
(See Incidental Findings Policy)

Ethics Handbook

Human participation

Incidental findings policy: procedure

- You must follow the **ITFLOWS Incidental Findings Procedure**:
  - Stage 1: You must **immediately report any disclosure or suspicion** of an incidental finding, or at least within the first 24 hours to the line manager. Such information can be provided verbally or in writing.
  - Stage 2: You will comply with the principles of respect **for dignity, participation, privacy and security** and continue with **active listening**. Safeguarding procedures must be applied and the action/decision to be taken in protecting the person is achieved within the team, considering the specific circumstances of the research participant and the **referral system of each country** where the interview is taking place.
  - Stage 3: You will provide **detailed information** to the research participant on the **specific services available** in the territory (following the applicable national referral system) and will maintain open communication with the research participant. Additionally, the **relevant phone numbers** within the applicable National Referral System must be provided to the research participant. **As a general rule**, you must **respect the autonomy of the research participant** to freely decide on the next steps to take, if any. The purpose of this approach is to avoid putting the research participant in danger and allow them to exercise their personal judgement as to the best course of action. Nevertheless, if the interviewing team considers that the **research participant is in concrete danger,** emergency services will be contacted to ensure their immediate protection and wellbeing.



(See Incidental Findings Policy)

Ethics Handbook

Human participation

Two-step incidental findings transcription procedure (I)

This general procedure applies to all interviews in which information regarding an incidental finding emerges. The purpose of this procedure is to establish clear guidelines for NGOs, interviewers and the partners involved in the analysis of the interview transcripts on how to proceed when information regarding an incidental finding is disclosed during the interviews. This procedure does not revolve around the Incidental Findings Policy but whether information disclosed during the interview related to an incidental finding should be included in or removed from the transcript, and in case of including it how to proceed from an ethical and data protection perspective.

The procedure consists of two steps:

Step 1: Determining whether the information about the incidental finding is relevant for analysis purposes within ITFLOWS. This step is divided into two stages:

1. Before the transcription of the interview, you must produce a **general summary** that should not contain any personal data and must send it to IAI and UAB. Under no circumstances will the original transcript be sent to IAI and UAB.

The following recommendations must be observed:

a) All interviewers must be properly trained in:
   • Ethics Handbook for the interviewing team and the ethical documents referred to in the handbook.
   • The ITFLOWS Incidental Finding Policy designed for the interviews.
   • The applicable referral system to deal with incidental findings in the country where interviews are conducted.
   • The anonymisation procedure to ensure that the general summary (if an incidental finding emerges) and the transcript does not contain personal data.

b) You must draw up the general summary **following the anonymisation procedure** in place to minimise the risk of including personal data.
c) You must submit jointly with the general summary **your personal opinion** on the relevance/irrelevance of the information related to an incidental finding disclosed during the interview.

2. Based on the general summary, **IAI and UAB will determine the relevance/irrelevance** of the information and will inform the NGO and the interviewer about their decision.

IAI and UAB assessment on the relevance of such information should be properly documented. The evaluation must take into consideration the opinion of the interviewer that conducted the interview. This decision-making process should be performed following a cautionary approach. This approach entails that if the relevance of the disclosed information cannot be determined, the information should be deemed irrelevant and should thus not be included in the transcript.

In case there is no unanimous assessment on the significance of the information disclosed in terms of relevance and necessity for the research purpose of the interviews: IAI decision, as leader of this task, will prevail. Dissenting opinions and the rationale behind the final decision must also be properly documented.

If the "do no harm" ethical principle is compromised in a particular case, the relevance/irrelevance check does not longer apply, and the information should not be included in the transcript.

Ethics Handbook

Human participation

Two-step incidental findings transcription procedure (II)

Step 2: There are two possible outcomes:

1. If IAI and UAB consider that the information is **relevant** → The two-step anonymisation approach applicable to all transcripts will be followed, i.e., you must anonymise the information related to the incidental finding, and IAI/UAB will double-check it.
2. If the information is deemed **irrelevant** → You should not include this information in the transcript.

Gender policy

ITFLOWS is committed to considering gender and sexuality as a major priority in project design, methodology, analysis, and dissemination of outputs, acknowledging that gender and sexuality are central to an intersectional analysis of migration flows. In addition, gender equality and balance among its participants forms part of this commitment.

• **Intersectionality**: Pursue an intersectional approach to migration research and analysis in order to understand the manner in which the EU migration and asylum systems create dynamics of in- and exclusions along lines of gender, race, ethnicity, social group, or sexuality – taking into consideration colonial legacies.

• **Gender-based violence and gender stereotyping:** Remain sensitive to migrants' experiences with gender-based and sexual violence (trafficking, female genital mutilation (FGM), rape or sexual assault, forced marriages etc.) and how gender stereotyping contributes to the marginalisation and stigmatising of women, girls as well as men, boys and LGBTQI+ persons.

• **Gender discrimination within the EU:** Be aware of gender and sexuality discrimination within the EU in the area of migration policies, laws, employment, education, health and with respect to COVID-19.

• **Gender and Technology:** Recognise that technology can intensify gender inequalities because women and girls may have less access to technological literacy due to socioeconomic disadvantages. The development of the EMT must be taken to actively mitigate bias, ensuring that (a) gender equality is considered a key principle in the research, (b) gender is included as a variable in the study design, and (c) data are presented in disaggregated fashion at all levels of intersectional analysis.

Useful resources:

- OECD: Addressing Emerging Human Trafficking Trends and Consequences of the COVID-19 Pandemic. https://www.osce.org/odihr/human-trafficking-COVID-19-report
- Key types of sexual and gender violence from UN Women. https://www.unwomen.org/en/what-we-do/ending-violence-against-women/faqs/types-of-violence
- Council of Europe Fact Sheet, Protecting the rights of migrant, refugee and asylum-seeking women and girls. https://edoc.coe.int/en/refugees/8053-protecting-the-rights-of-migrant-refugee-and-asylum-seeking-women-and-girls.html

(See Gender Action Plan)

5.1.2 Societal impact

In order to avoid societal risks regarding data that may lead to discriminatory choices based on characteristics, including (but not confined to) race, colour, sex, gender, sexual orientation, language, religion, political or other opinion, national or social origin, property, birth, disability, age and the intersectionality of the above, the following recommendations have been provided:

1. To ensure that the project and the EMT does not encourage discrimination, either direct or indirect, in law, in practice, structural or intersectional.

2. The need to identify the vulnerable groups affected, especially by the research activities foreseen to be conducted in each WP of the project;
   Grounds of vulnerability may include race, colour, sex, gender, sexual orientation, language, religion, political or other opinion, national or social origin, property, birth, disability, age, or other status.

3. To only identify and register vulnerable characteristics of individuals if and to the extent that is absolutely necessary for the positive outcomes of the project;

4. To take positive measures to mitigate and address any discrimination from the use of technology and ensure real equality.

5. To initiate dialog with migrants themselves and take into account the voices of the affected individuals in the use and delivery of technology.

As for minimising societal risks related to the use of the EUMigraTool for reducing or even discontinue funding and services, the following mitigation measures have been identified:

1. Advocacy through the dissemination (stakeholders' events, policy briefs, recommendations) and the recommendations of the project in order to ensure that EU funding continues to be distributed to the areas in need, to adequately manage migration flows;

2. To identify areas of possible discrimination and suggest solid mitigating measures;

3. To suggest in recommendations realistic clear positive policy measures;

4. To vocalise in the monitoring of the project any violations of states' obligations in the lifespan of the project;

5. To educate in monitoring and dissemination of the project the two-way aspect of integration that includes duties of the state for socio-economic relevant conditions.

Concerning the societal risks related to the fact that Member States may decide to make choices based on the size of inflows, rather than the individual characteristics; or that Member States may also decide to make collective decisions on asylum or focus only on humanitarian assistance, the measures to be taken are the following:

1. To continuously stress the importance of applying all legal frameworks and tools;

2. To disseminate, as far as possible, the importance of not making collective decisions for the migrants because of the project's results and the importance of their participation through academic publications, reports, and several policy briefs.

As for the societal risk identified with regard to the fact that Member States may use the data provided to create ghettos of migrants:

1. To reinforce through dissemination, as far as possible, the obligations of all bodies on non-discrimination and the possibility of positive measures to alleviate any detrimental effect;

2. To inform stakeholders through academic publications, reports, and several policy briefs.

Regarding the risks related to the role of enforcement bodies of using the EUMigraTool to tighten controls and make choices that may have detrimental effects on migrants, three mitigation measures have been proposed:

1. To recommend training of enforcement bodies and public authorities;

2. To recommend and highlight the on-site inspections of human rights compliance at the borders and all areas where migrants stay by the independent watchdogs and NGOs, especially while applying integration mechanisms;

3. To recommend regular focus groups with asylum seekers and migrants that systematically assess their treatment by law enforcement agencies and how decisions of national and local authorities affect them. The experts are convinced the participation of migrants in the measures that affect them is of paramount importance.

As for the risk that migrants and asylum seekers may be identified and sanctioned for irregularities, these are the mitigation measures identified:

1. Involvement of enforcement authorities and local authorities in the project in any capacity possible of the tolerance of the law towards some irregularities by migrants (e.g., lack of document papers);

2. To highlight and recommend the importance of the role of civil society in its capacity to monitor (in recommendations and in dissemination leaflets);

3. To monitor the effects of the project from a societal, legal and political perspective;

4. To recommend increased legal aid for asylum seekers;

5. To recommend specific training to judicial staff and enforcement bodies.

Concerning the risks of reinforcing fear and arguments against migration, or the increasing hate speech in areas where the inhabitants are informed that the inflows will move, the mitigating actions are:

1. Informative and awareness activities on the benefits of migration to a wide variety of stakeholders, particularly at the local level and in border regions;

2. To identify local partners that can support these activities as a positive voice in society.

3. To highlight positive effects of migration whenever possible.

In relation to the suspicions that the ITFLOWS project could raise in terms of restricting refugees and migrants' rights:

1. To continue to actively and effectively involve all interested parties throughout the lifetime of the project, e.g., migrants, asylum seekers and refugees but also civil society in the project;

2. To increase the provision of timely and systematic information on project goals, objectives and deliverables to key stakeholders.

Societal risks related to the lack of inclusion of refugees and migrants will be handled with the following mitigation measures:

1. To continue giving migrants and refugees ownership of the project through the interest groups;

2. To ensure that all actions of the project put their focus on the integration of migrants;

3. To monitor that the identified integration measures favour the dual approach (obligations by both the Member State and the migrants and refugees themselves)

Concerning the risks of changing facts due to new financial or environmental crises and COVID-related issues, the following specific mitigation measures have been suggested:

1. Advocacy through the dissemination (stakeholders' events, policy briefs, recommendations) and the recommendations of the project to ensure that EU funding continues to be distributed to areas that need to manage migration flows;

2. To identify areas of possible discrimination and suggest solid mitigating measures;

3. Continuous monitoring of the application of the legal standards;

4. Continuous checking of the project's actions with the interested parties.

5. Continuous emphasis on the importance of adequate allocation of funds.

The risks related to the implementation of the New Pact for Asylum and Migration in the context of the EU legal framework and policies on migration in terms of asylum seekers and migrants' human rights impacts will be addressed with the following mitigation measures:

1. Advocacy to ensure that the project and the EMT continue to respect the international human rights law standards even when the Pact and its interpretation may set lower standards;

2. Continuous use of the existing human rights standards in all phases of the project and in all communication with external persons;

3. Emphasis in dissemination of the importance of the conditions for any necessary restrictions of human rights (legality, legitimacy, proportionality);

4. Flexibility and continuing review of the project;

5. Formal and informal communication between all parties and with the European Commission.

Concerning the risks of limited resources that could entail that the project has no impact, the following mitigation measures have been envisaged:

1. To achieve the greatest impact possible, ITFLOWS participates in the 'Horizon Results Booster initiative'[23];

[23] https://www.horizonresultsbooster.eu/

2. Advocacy to ensure (increased) funding continues to be provided to areas receiving increased migration flows;

3. Monitoring continuously of the human rights effects of the project;

4. Dissemination of principles of substantive equality;

5. Communication with partners and interested parties in order to raise awareness on the importance of using the technology in the project constructively.

5.1.3 Data protection

As for ensuring data protection in ITFLOWS, the mitigation measures envisaged to minimise data protection risks identified are in place after examining the data processing foreseen for each research activity and taking into account the results of the Data Protection Impact Assessment conducted by FIZ and presented in Section 2 of D.2.3. These are the mitigation measures implemented by the ethical lead partner related to data protection in ITFLOWS:

1. The ITFLOWS DPA and the IEB will closely monitor the processing of Twitter data.

2. The ethical lead partner (IDT-UAB), jointly with FIZ, has assessed the potential risks regarding the protection of personal data that will be gathered from the interviews (e.g., informed consent, anonymisation techniques to protect personal data, encryption). In order to minimise protection of personal data concerns associated with the processing of personal data from the interviews, the following measures are in place:
    a. An Informed Consent Template has been provided to conduct the interviews.
    b. Anonymisation techniques to protect personal data gathered from the interviews have been reviewed and properly modified to address the risk of reidentification.
    c. Privacy policies of the NGOs in charge of conducting the interviews

and detailed information on the security and organisational measures that they have in place in their facilities have been requested by the ethics lead partner. This information has been provided in D10.3 (Annex 3) as part of the data protection requirements imposed by the European Commission. The ethics lead partner reviewed such policies and established additional safeguards, such as the ones included in D10.3 (e.g., anonymisation techniques, measures to protect vulnerable groups, lawful bases for processing).

d. The ITFLOWS DPA and the IEB have provided: i) recommendations on the measures mentioned already above that have been included in the final version of the documents delivered to the NGOs; ii) their formal validation that will be included in the Annex of D.10.1; D.10.2; D.10.3.

3. More detailed information regarding the data sources to be processed in Task 4.1 needs to be provided by the leading partner (CEPS). The ITFLOWS DPA will monitor upcoming clarifications on data sources to be used in T4.1.

4. The ethical lead partner (IDT-UAB), jointly with the ITFLOWS DPA, will request further information in order to clarify whether data from the European projects NIEM and MIPEX are public outcomes or primary data obtained in the context of such projects. The aim is to evaluate the hypothetical need to sign specific agreements for the reuse of such data before their processing in ITFLOWS.

5. The ethical lead partner, jointly with the ITFLOWS DPA and the IEB, will request further clarifications on how "georeferenced opinions of the masses" (extracted from Tweets) will be analysed. Hate-speech and non-hate speech analysis based on subclasses such as aggressiveness, offensiveness, stereotypes or racism will be closely monitored.

6. The ethics lead partner, jointly with the ITFLOWS DPA, will request further information regarding the processing purpose of news outlets/videos in Task 6.2. In line with the DPIA conducted by FIZ, further clarifications are needed to evaluate the processing of such data by CERTH to design the EUMigraTool simulation component.

7. The IDT-UAB, jointly with the ITFLOWS DPA, will request further information regarding data processing in the context of the EUMigraTool Final Pilot Validation in real environments in order to provide advice on the potential risks on data protection that this piloting activity may entail.

8. An Informed Consent Template Form has been designed and provided to conduct T7.1, which consisted of an end-user board's workshop to discuss design visualisation mock-ups and indicative workflows to be implemented in the EUMigraTool. As mentioned above, that workshop was attended only by internal end-users. The aim of the informed consent template form was to obtain consent to record the live Teams session and to take photographs.

9. Informed Consent Templates to conduct workshops with policy makers (T8.2) will be designed and provided to CSD/CEPS in M10.

5.1.4 Gender

The ITFLOWS Gender Committee is composed of both an internal body (ITFLOWS internal Gender Committee) as well as an Independent Gender Committee (IGC). This section will focus on the involvement, monitoring activities and recommendations of the ITFLOWS internal Gender Committee.

First, it goes over the activity that went into developing the ITFLOWS Gender Action Plan (GAP) and ITFLOWS Gender Policy, including IGC input, as both instruments provide the basis for the ITFLOWS project and the Gender Committee's ensuing monitoring, activities and involvement. It then overviews explicit monitoring activity and recommendations. Finally, it notes how the current gender balance within the ITFLOWS project reflects the priorities established by the ITFLOWS Gender Committee in the guiding documents (GAP and Policy).

The GAP and Gender Policy

The GAP ensures the mainstreaming of gender and sexuality in the project by serving as a reference guidebook for project partners, supporting research design, implementation, analysis and monitoring. It is a tool to assist and encourage ITFLOWS researchers and project partners in achieving ITFLOWS' commitment to the Horizon 2020 'Promoting Gender Equality in Research and Innovation' policy.

A living document, the GAP provides instruction as to gender and sexuality risk assessment of methodology, analysis, the use of technology, research team management, and monitoring, alongside specific Work Package related recommendations. Notably, the GAP's section on "Compliance and Monitoring" indicates how the Gender Committee will monitor the implementation of such recommendations throughout 3-year life cycle of project.

Annexed to the GAP is the ITFLOWS Gender Policy, a two-page document, signed by the IGC and by a representative from each ITFLOWS partner institution, which formally and briefly outlines the project's commitment to a) consider gender and sexuality as a priority in the project's design, methodology, analysis, and dissemination of outputs, underlining that gender and sexuality are central to an intersectional analysis of migration flows; and b) pursue gender equality and balance in project participation.

The ITFLOWS GAP and Gender Policy, drafted over the course of M1 to M5 of the project, received input from and a final review by the IGC.

Activities and Recommendations

In addition to regular meetings, the Gender Committee oversaw the incorporation of gender and sexuality in ITFLOWS, either through; participation activities and events, offering their feedback and recommendations, or supervising project activity:

- December 16, 2020, WP2/WP10: The Gender Committee checks Incidental Findings Policy and Recruitment Policy drafts for conformance with working Gender Action Plan.

• January 5, 2021, WP3, Conceptual Paper on Tasks 3.1 & 3.4: The Gender Committee comments on how to streamline Paper with Gender Action Plan.

• January 2021 WP7, Users Board Workshop and Survey: The Gender Committee provides feedback on preparation of the January 20 Workshop with the ITFLOWS Users Board, including revising the post-workshop survey.

• January 26, 2021 WP10, D10.1: Gender Committee provided feedback regarding the technical description of anonymisation techniques applied in WP3 interviews.

• February 1, 2021: WP4 provides gender indicators as part of a social indicators dataset for the for the WP6 Large Scale Model.

• March 18, 2021: The internal Gender Committee provides the IGC with the final submitted deliverable, 6-month report, and updated on upcoming events.

• March 24, 2021: The internal Gender Committee resends to ITFLOWS NGO partners gender and sexuality guidelines/gender policy for interviews to migrants as part of a WP2 Training.

• April 1, 2021: The Gender Committee's recommendations for the Task 3.4 Interviews are provided to the NGOs conducting the interviews with migrants. In particular, the Gender Committee indicated to the NGOs which questions required extra caution and sensitivity, as well as pointed them to the relevant parts of the Gender Action Plan for conducting their work. Finally, the NGO partners were asked to sign the Gender Policy. It was noted that these procedures should be conducted with any project collaborator that participates in administering the interviews.

• May 14, 2021: ITFLOWS Ethics informal lunch hour: As part of monthly, informal lunch hour sessions hosted by WP2 for the benefit of all project partners, the Gender Committee hosts the inaugural session in order to present the D2.2 Gender Action Plan (and Policy) to partners. At least one colleague from each partner institution attends to sign the ITFLOWS Gender Policy.

• May 25, 2021: The internal Gender Committee, researchers from WP3 and WP5 and FIZ discussed/consulted as to the possibility of including the gender dimension when working with big data/Twitter. Ultimately, it was concluded that in outputs related to big data/Twitter analysis, the primarily male use of social media among migrants in origin countries should be acknowledged; however, as it was not included in the WP3/WP5 work plan to begin with, as well as could

introduce gender bias, it would be outside of the scope (as well as potentially data protection incompliant) to attempt to detect and analyse the gender dimension via further processing of scraped Twitter data.

Gender Balance

Finally, as relates to the ITFLOWS gender balance committed to in the GAP and Gender Policy, as of May 31, 2021, the ITFLOWS leadership teams and advisory boards, including the Ethical Board, Expert Advisory Board, Independent Gender Committee and Steering Committee all reflect a gender composition of at least 50% female-identifying participants. Moreover, in the Users Board Workshop of January 20, 2021, more than 50% female identifying participants participated.

5.2 External monitoring and enforcement

The monitoring and enforcement strategy designed for the project by the ethics lead partner includes external monitoring structures and procedures that have been set up to strengthen compliance with the human rights, legal and ethical framework identified for the project in D2.1. The ITFLOWS external bodies that have been created to this end are: the Independent Ethics Board (IEB), the Data Protection Advisor (DPA) and the Independent Gender Committee (IGC).

5.2.1 Independent Ethics Board

The role of the IEB is to monitor the ethical compliance of ITFLOWS research activities and to advise the Consortium on appropriate mitigation measures and procedures to prevent or minimize ethical risks. The IEB tasks include reviewing all Deliverables that may pose ethical concerns and approving their content. Within the ethics WPs (WP2 and WP10) the IEB has reviewed all the Deliverables that have been submitted - D2.1, D2.3, D2.4, D10.1, D10.2 and D10.3 - and specific recommendations have been provided, for instance:

- **Development of the EUMigraTool** (D2.1 and D2.3):
    - As part of the tasks of the IEB related to the monitoring of the design, development and implementation of the EMT, the IEB highlighted

the importance of ensuring Privacy by Design from the early stages of the system's design.

- **Informed consent procedures and templates** (D10.1):
  - The IEB advocated for the use of clear and plain language to ensure that consent is genuinely informed, particularly given the vulnerability and circumstances of migrants, refugees and asylum seekers. The IEB agreed with the recording of the interviews. However, the IEB recommended allowing research participants to decide whether they consent to the audio recording of their interview or if they prefer note-taking. The IEB also strongly suggested determining clearly defined retention periods in compliance with the data minimisation and storage limitation principles set out in the GDPR.

- **Ethics approvals/positive opinions** (D10.2):
  - The IEB supported and approved the procedure followed by the IDT-UAB to comply with the imposed ethics requirement of obtaining ethics approvals/positive opinions from competent ethics authorities. The IEB agreed that the IDT-UAB approach overcomes the common difficulties of obtaining an ethics approval/opinion from a national competent authority for the research with humans.

- **Anonymisation techniques** (D10.3):
  - The IEB approved the anonymisation techniques adopted to prevent the identification of research participants in the interviews. They positively stressed that since the anonymisation procedure consists of two stages the risk of identification is minimised.

Since IEB tasks include reviewing all Deliverables that may pose ethical concerns, they have been requested by the ethical lead partner (IDT-UAB) to review D6.1 (*Report on the specifications and architecture of the EMT platform*), which describes the current state of the technical development of the EMT. In order to ensure

ethical and legal compliance and to mitigate potential ethical and legal risks arising from the technical development of the EMT, the IEB provided the following recommendations:

1. Following Art. 25 GDRP, Privacy by Design must be embedded into the EMT. Privacy by Design principles need to be threaded across the whole Deliverable by being up front and central from the executive summary onwards. A separate section devoted to Privacy by Design is recommended.

2. Refinement of Sections 4.1 (Design Principles) to emphasise how each of the actions contributes to Privacy by Design, how it meets Privacy by Design requirements both from a GDPR perspective and from a design and end-user perspective; and 7.1.3 (User Authentication system and user capabilities within the ITFLOWS Portal) to put Privacy by Design principles at its core.

3. Check whether Kibana (Section 7.1.4 EMT Interface) complies with Privacy by Design principles.

4. Inclusion (and enhancement where it was already included) of the methodology followed for the EMT. In particular, the rationale behind the choice of approaches, datasets and sources. Explanations on how the different datasets (e.g., REIGN, GDELT, World Bank Development Indicators) feed into the project and how do they inform the EMT are needed (or reference to other Deliverables where this is/will be explained).

5. Explanations on the use of big data in the project in general, and how it fits in the design process of the EMT. Need to add information on why data from Twitter and Google Trends have been selected and if there is agreement on the hashtags/keywords and the criteria for their selection (or reference to other Deliverables where this is/will be explained).

6. In particular, regarding the use of Twitter data, the following aspects have been highlighted as careful consideration is required:
    a. Existence of Twitter bots. Need to check them when analysing public attitudes towards migration and hate speech.

b. Revision of the number of actual Twitter users (excluded bots) in the countries considered is recommended.
c. Explanations on how it is planned to deal with data protection issues while extracting/collecting Twitter data are needed (or reference to other Deliverables where this is/will be explained, such as D10.3).

7. A brief description of the ethical principles governing AI-enabled technologies (e.g., human rights, well-being, privacy and data governance, transparency, accountability and awareness of misuse) should be included.

8. Analysis of the ethical, legal and societal risks associated with CKAN, the use of AI techniques and the predictive feature of the EMT.

9. Avoidance of certain terms (e.g., 'natives') and clear definitions (e.g., 'irregular migration', 'potential conflicts').

In addition to the review and approval of ethics-related Deliverables, the IEB cooperates closely with WP2 to ensure the ongoing monitoring of ITFLOWS research activities. to monitor the overall ethics-related issues. As part of such a close cooperation and the monitoring and enforcement strategy designed for the project, the IDT-UAB has requested the opinion and specific approval of the IEB on three occasions.

Firstly, IAI jointly with the partners involved in conducting the interviews elaborated and circulated the questionnaire to be followed by the interviewing teams at the interviews. The ethical lead partner submitted the questionnaire to the IEB for review. They provided some suggestions about the questions related to migrant smugglers and the questions that referred to one's gender identity and approved the questionnaire.

Secondly, Open Cultural Center (OCC) requested the IDT-UAB, as ethical lead partner, the possibility of providing monetary compensation to research participants. The rationale of this compensation was to recognise their time, effort

and valuable participation. Given the ethical concerns that this proposal raises, the IDT-UAB requested the opinion of the IEB on whether it was ethically acceptable to offer compensation to research participants.

The IEB strongly discouraged a monetary incentive but recommended other types of compensations. The IDT-UAB jointly with the IEB and with their corresponding approval set up a procedure when NGOs request a small compensation for research participants. This procedure entails that each NGO must decide and specify the type of compensation (monetary compensation, voucher or some gift) that will be offered to all research participants – which will be subject to the approval of the ethics lead partner. Although monetary compensation is highly discouraged, if NGOs consider this compensation necessary, they must justify its suitability and send the request to the IDT-UAB. This request will be subject to the specific approval of the IEB and the DPA. This measure aims at ensuring that the proposed monetary compensation is reasonable, fair and does not increase participants' vulnerability, undue influence, or cause disadvantaged situations for the research participants.

In this vein, one of the NGOs formally requested to offer each research participant a €20 food voucher usable in a nearby supermarket. The established procedure was followed and all members of the IEB approved this compensation.

Lastly, the IDT-UAB received an initial request from OCC asking for clarifications on how to proceed with the transcription of an interview where an incidental finding had been disclosed by the research participant. The request did not revolve around the Incidental Findings Policy – which was strictly followed – but whether information disclosed during the interview related to an incidental finding should be included in or removed from the transcript, and in case of including it how to proceed from an ethical and data protection perspective. A meeting with all concerned partners was arranged to discuss this issue and a general procedure, to be applied to all interviews in which information regarding an incidental finding emerges, was agreed upon.

The IDT-UAB formally asked the IEB to provide their opinion and approval on such a procedure. To this end, they were provided with an explanatory document that summarised the NGO's request, the discussions with the involved partners and the general procedure that was agreed upon to be applied to all interviews in which information regarding an incidental finding is disclosed.

The procedure that the IDT-UAB suggested consists of two steps. The first step entails determining whether the information about the incidental finding is relevant for analysis purposes within ITFLOWS. To this end, before the transcription of the interview, the interviewer must produce a generic summary that should not contain any personal data and must send it to IAI and UAB. Based on the generic summary, IAI and UAB will determine the relevance of the information and will inform the NGO about their decision. This leads to the second step, in which only two outcomes are possible:

1. If IAI and UAB consider that the information is relevant: the two-step anonymisation approach applicable to all transcripts will be followed, i.e., the NGO will anonymise the information related to the incidental finding, and IAI/UAB will double-check it.
2. If the information is deemed irrelevant: The NGO should not include this information in the transcript.

All IEB Members agreed with the general procedure and added some suggestions regarding the first step of the procedure. Their suggestions, which have been duly included in the procedure, are the following:

- To ensure that all interviewers are well trained in the Incidental Findings Policy and the applicable national referral system as well as in how to manage the transcription process.
- Interviewers must submit jointly with the general summary their opinion on the relevance/irrelevance of the information related to an incidental finding disclosed during the interview.
- IAI and UAB assessment on the relevance of such information should be properly documented.
- IAI and UAB assessment must take into consideration the opinion of the interviewer.

- IAI and UAB should follow a cautionary approach when assessing the relevance of the information. This means that if the outcome of the relevance assessment is not clear, the information should be deemed irrelevant and should thus not be included in the transcript.
- The IEB stressed the need to clearly define what would happen in case there is no unanimity between IAI and UAB on the relevance of the information. In this regard, it has been established that IAI decision will prevail given that they are leaders of this task. Dissenting opinions and the rationale behind the final decision must also be properly documented.
- The overarching ethical principle of "do no harm" must always prevail. If this ethical principle can potentially be infringed in a particular case, the relevance/irrelevance check does not longer apply, and the information should not be included in the transcript.

5.2.2 Data Protection Advisor

As stated in D10.3, the protection of personal data in ITFLOWS is carefully monitored by the ITFLOWS DPA, Dr. Jonathan Andrew. His role entails assisting and advising partners in any issue that may raise data protection concerns and supervising the data processing activities conducted within ITFLOWS throughout its entire lifespan. As part of his task regarding the revision of the deliverables that pose data protection risks, Dr. Andrew has reviewed all the Deliverables that have been submitted within the ethics WPs (WP2 and WP10) - D2.1, D2.3, D2.4, D10.1, D10.2 and D10.3 - and specific recommendations have been provided. For instance:

- **Informed consent procedures and templates (D10.1):**
    - To include in the informed consent form that if the research participant decides to contact any of the individuals listed as contact persons, the information will be treated confidentially.
    - Need to implement data security measures regarding the retention of consent forms.

- **Recruitment plan (D10.1):**
    - Conducting interviews in quarantine areas should be avoided given that they represent a very high risk.

- **Publicly available data (D10.3):**
    - It was highlighted that publicly available data is still personal data if it contains data that identifies a person or makes him/her identifiable. Therefore, he acknowledged that this has been already tackled with the anonymisation process that has been designed for Twitter data.

Given that the DPA tasks include reviewing all Deliverables that may raise data protection concerns, Dr. Andrew has been requested by the ethical lead partner (IDT-UAB) to review D6.1 (*Report on the specifications and architecture of the EMT platform*), which describes the current state of the technical development of the EMT. In order to ensure ethical and legal compliance and to mitigate potential ethical and legal risks arising from the technical development of the EMT, the DPA provided the following recommendations:

1. Countries of origin/receiving countries that will be take into account to design comprehensive models of irregular migration:
    a. Clarification on the scenarios/case studies (countries of origin/receiving countries)
    b. The need to define which conflicts will be considered as "potential conflicts" (e.g., armed conflicts; civil unrest) in order to include those countries in which these conflicts may arise.

2. Dr Andrew recommends the avoidance of certain terms and provides some alternatives:
    a. Regarding the background of the interview research participants interviews (e.g., race, class, ethnicity, sexual orientation and religion), it is suggested to replace sexuality with sexual orientation.
    b. Concerning explanatory variables, it is recommended to remove "people killed and affected" and replace it with "the number of deaths/causalities".

c. Under the user requirement of "Strengthening Protection in mixed flux of migrants", to replace "use of criminal organisations" with "illicit means/methods".

3. The need to rephrase this sentence: "We use Google Trends for around 200 different topical migration-related keywords in combination with all EU destination country names (e.g., "visa Germany"). He warned that the wording "visa Germany" also includes tourist visiting Germany on summer vacation, which is not the type of journeys that the EMT aims to predict.

4. Regarding the multilingual keywords to be used based on the languages of the source countries for extracting textual information and metadata from Twitter and the fact that such metadata contains geographical information, the DPA stressed the complexity of linking language to geography, and what 'story'/info the metadata provides.

5. Concerning the location of origin of the tweet, he advises to be careful with the metadata on location since it may not provide an accurate picture. For instance, depending on routing, use of mobile network and cellular IP address assigned by a cellular carrier - i.e., may show 'Paris' as location, when person is in Lyon.

6. To differentiate climate change from pre-existing factors i.e., droughts have been a cyclical push factor in sub-Saharan Africa for many decades, independent of the increased challenges due to climate change. I.e., certain weather events/natural disasters may not necessarily be linked to climate change, but still relevant factors.

7. The need to distinguish between migrants of different backgrounds e.g., there might be hostility toward people from certain countries migrating, but not others (in a specific EU country). How will this be shown? For instance, are the public of a certain country more receptive to a migrant from Iran or Zimbabwe than, say Burundi or Iraq? Where would settlement be smoothest for a person from these respective countries? Historical and diaspora connections can play a key role here, for example.

8. Dr Andrew advises to clarify certain aspects, such as the use of data on integration of migrants, the requirement of 'Information misuse prevention' (in particular, Registration & Data usage, Authentication and Authorization to avoid phishing attempts and possible spoofing of email domains, e.g., related to municipalities and NGOs). Detailed information regarding User Authentication is required.

As with the IEB, the opinion and specific approval of the DPA was requested on the same three ethical and legal issues: i) interview questionnaire; ii) compensation for research participants; and, iii) the transcription of information related to an incidental finding disclosed during the interview.

Regarding the interview questionnaire, the DPA considered that the structure of the questionnaire and its contents were compliant with the ethical and legal standards on data protection. Nevertheless, he added some terminological suggestions to increase the precision and clarity of the document, especially regarding the treatment of the gender, sexual and religious diversity of the research participants.

The DPA agreed with compensating research participants taking part in the interviews and with the procedure. As mentioned above, NGOs' monetary compensation requests will be subject to the specific approval of the IEB and the DPA. In this regard, the potential impact of monetary compensation on freely given consent is carefully assessed by the DPA. The ethical IDT-UAB submitted the proposal of offering a 20€ food voucher to reward research participants to the DPA, who approved this compensation.

Lastly, the DPA was also requested to provide his opinion and approval of the general procedure to be applied to all interviews in which information regarding an incidental finding is disclosed. Dr. Andrew stressed the importance of verifying the removal of personal data before sending the generic summary to IAI and UAB, which is achieved in the anonymisation procedure designed for the project (D10.3). The DPA approved the procedure.

5.2.3 Independent Gender Committee

As part of the ITFLOWS Gender Committee, the IGC has monitored ITFLOWS research activities from a gender perspective and provided expert independent recommendations. The activities in which the IGC has been involved are:

- September 24, 2020: IGC members presented on "Intersectionality" (Floya Anthias), and on "Gendered Migration Flows" (Eleonore Kofman) to the ITFLOWS Consortium, as part of the Gender Committee workshop in the ITFLOWS Kick-Off meeting.
- March 18, 2021: The internal Gender Committee provides the IGC with the final submitted deliverable, 6-month report, and updated on upcoming events.
- May 14, 2021: ITFLOWS Ethics informal lunch hour: As part of monthly, informal lunch hour sessions hosted by WP2 for the benefit of all project partners, the Gender Committee hosts the inaugural session in order to present the D2.2 Gender Action Plan (and Policy) to partners. At least one colleague from each partner institution attends to sign the ITFLOWS Gender Policy.

In particular, the IGC provided recommendations to the ITFLOWS GAP and Gender Policy, and they conducted the final review of both documents. Additionally, the members of the IGC signed the ITFLOWS Gender Policy.

5.2.4 Monitoring platform

The successful implementation of legal and ethical requirements into complex development and management scenarios depends on various factors that are reflected in the multi-step approach of the ITFLOWS regulatory model. The success of the regulatory model is dependent on successful and efficient collaboration of all project partners. The ITFLOWS regulatory model covers this need through multiple various communication channels (e.g., email, workshops, MSTeams). These traditional approaches will be accompanied by a novel, platform-driven, approach that will reinforce the regulatory model and the existing communication channels that are already in place in the project. To this end, the so-called *compliance-monitor platform* (CMP) provides a novel centralized and collaborative approach to manage, track and evaluate the legal, ethical, societal and gender-related requirements in research projects in an efficient manner.

The platform already reflects all steps of the regulatory model and can be further adapted towards the needs of the project. In contrast to static deliverables and reports, the platform allows all participants to directly create, share, solve and review requirements in an agile manner. This means, technical changes (e.g., a new anonymisation technique in a specific processing context) can be very easily added to the respective requirement without the need to rewrite complete sections of a report and share this section with all partners. Furthermore, the platform allows targeted sharing of requirements only with the relevant partners. This means, the respective partners will only be confronted with the requirements that are actually relevant in their work context. All the actions on the platform are included in a comprehensive audit-trail that can be used to demonstrate compliance efforts and, for example, provide an up-to-date basis for a report or deliverable. To achieve this, the CMP implemented a full-scale data model that aims to reflect the complexity of legal, ethical, societal and gender-related requirements and their implementation in a technical manner. The audit-trail data can also be used to give all partners as well as the public quick insight on the status of the legal and ethical efforts. To this end, the platform also provides a dashboard to visualise the respective steps for each requirement and makes all relevant information directly available to the responsible partners. Since the platform is not intended to force partners to use it, all requirements can also be shared through traditional means such as emails. In addition, the CMP provides an API that allows technical communication with the platform and thereby integration in other software and tools.

SECTION 6: Conclusions

Regulatory models include the intellectual toolkit for legal governance. In the previous Sections we have shown the different components that constitute the elements and general layout of the ITFLOWS Regulatory Model. In the next Section, we will define the next steps to be followed for its implementation.

We have defined (i) what are the components and roles of a regulatory model; (ii) what the ethical and legal framework of ITFLOWS Regulatory Model will be; (iii) the first step of the ITFLOWS Regulatory Model, which is the 'Framework for Compliance', specifying the sources that shape such framework.; (iv) the second step of the ITFLOWS Regulatory Framework ('Compliance through design technology'), including the ethical, legal, societal and gender-related mitigation measures that have been recommended to ensure compliance of the EUMigraTool; (v) the third step, the 'Monitoring and enforcement strategy', listing the measures that have been adopted at this stage of the project given the nature of the Regulatory Model as an ongoing process.

The three steps referred so far are: i) Framework for Compliance; ii) Compliance through design technology; and iii) Monitoring and enforcement.

We have specified legal and ethical constraints at the international, national, regional and local level. We have also singled out the applicable Treaties, International customs, Directives, Laws, Regulations, Jurisprudence and Court decisions. Moreover, this Deliverable has shown that the social and ethical issues raised by the ITFLOWS development can be overcome within the specification of outer and inner policies, standards and best practices shaping the technical and social behavior of the instruments regulating immigration flows.

It is worth mentioning that most dimensions of the ITFLOWS regulatory model cannot be hard-coded. A hybrid strategy (Human/Machine interaction) has been chosen instead, as many decisions are needed all along the project carried out by the Independent Ethics Board (IEB), the Data Protection Advisor (DPA) and the Independent Gender Committee (IGC).

This is an *institutionalization* process that ensure the ethical and legal validity of the project developments and the fair and correct functioning of the technical tools. A minimization risk strategy has also been put in place and aligned with a specific ethical design based on the most suitable principles for the EMT building, i.e. (i) Human Rights, (ii) Well-Being; (iii) Privacy and Data Governance, (iv) Transparency, (v) Accountability; (vi) and Awareness of Misuse.

Mitigation measures affecting theses six points are at the core of ITFLOWS Compliance *through* Design (CtD) approach. CtD cannot be equated with Compliance *by* Design (CbD). CbD entails the automation of production or business chains for corporate governance. CtD, on the contrary, requires the interpretation, shaping, monitoring, and implementation of these mitigation risk processes that are key to protect human rights and the societal impact of the toolkit, i.e., to avoid negative and unintended social effects.

Finally, because of the nature of the project and the particular vulnerability of the participants, we have adopted an *enforcement strategy*, described in detail in Section 5, including (i) a recruitment plan for conducting the interviews, (ii) an Incidental Finding Policy, (iii) a Gender Policy, (iv) a description of the anonymisation techniques used to protect personal data that will be gathered in the interviews, (v) and the Informed Consent Forms templates and training session ('ITFLOWS Training Workshop') for the NGOs and their respective interviewing teams. The IDT-UAB team has also produced an *Ethics Handbook* as a practical guide for the interviewing teams when conducting the interviews with migrants, refugees, and asylum seekers.

We should highlight that the mandatory character of these actions stands on the European *New Legislative Framework* legislation (NLF) policies—in opposition to the so-called Old Approach Legislation (OAL)—based on risk identification and mitigation to ensure the enactment of rights and the protection of citizens.[24] NLF

[24] Cf. *Digital Decade* (Digital Compass), *Data Governance Act* (Proposal for a Regulation on European data governance (Data Governance Act) COM/2020/767, *Open Data Directive* (Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and

relies on mandatory Regulations (such as the GDPR) directly applicable to all state members. The next Section will detail the steps that the Project will follow to comply with this regulatory approach.

the re-use of public sector information, PE/28/2019/REV/1, OJ L 172, 26.6.2019, p. 56–83.

SECTION 7: Further steps on the implementation of the ITFLOWS Regulatory Model

Given the nature of the Regulatory Model designed for ITFLOWS, IDT-UAB, BUL, FIZ and the internal Gender Committee monitoring activities are ongoing and will be conducted throughout the lifecycle of the project. This Section presents the next steps that will be taken from an internal perspective to ensure legal and ethical compliance and to prevent societal and gender-related concerns.

7.1 Ethics

From an ethical perspective, the IDT-UAB will mainly focus in the forthcoming months on two research activities. Firstly, the design, development and use of the EMT. This means to ensure that the EMT is compliant-through-design and to monitor the EMT at the development and use phases. Secondly, given that OCC has already started conducting the interviews and the rest of the NGOs plan to start soon, the interviews will be carefully monitored. In this regard, the IDT-UAB will continue to collaborate closely with NGOs as usual. In particular, these are the next steps that the IDT-UAB will take in the forthcoming months regarding both research activities:

1. Design, development and use of the EMT:
    - Monitoring that the ethical design principles (see section 4.1) are duly embedded into the EMT from the early stages of the design phase.
    - Monitoring that data protection by design and data protection by default principles are likewise embedded into the EMT from the onset.
    - Conducting an AI impact assessment following the Ethics Guidelines for Trustworthy AI of the HLEG[25].
    - Continuing with the close cooperation with the IEB and DPA to externally monitor that the EMT is ethically and legally compliant.

[25] https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai

2. Interviews with migrants, refugees and asylum-seekers:
    - General monitoring of the interviews that are being conducted to address any ethical concern that may arise (e.g., transcription of information related to an incidental finding).
    - Monitoring compliance with the general ethical principles, the ethical principles governing the interviews and the ethical guidelines to conduct the interviews (see D2.1).
    - Ensuring that the Recruitment plans (see D10.1) are appropriate and useful for NGOs and interviewing teams and whether modifications are needed.
    - Verifying that the Informed Consent Form (see D10.1) is easy to understand for research participants, or if otherwise there is any particular issue that is not clear and should be modified.
    - Assessing that the Incidental Findings Policy (see D10.1) is fit for purpose.
    - Checking that the anonymisation procedure (see D10.3) designed for the interviews ensures that no personal data is included in the transcripts.
    - Updating the Ethics Handbook according to the ethical concerns that may arise in the context of the interviews.
    - Continuing with the close cooperation with the IEB and DPA to externally monitor that interviews are ethically and legally compliant.

3. Awareness raising sessions on ITFLOWS ethical aspects addressed at the ITFLOWS Consortium.

7.2 Human rights and societal impact

From a human rights and societal impact perspective, BUL will closely follow the development of the EMT to ensure compliance with international human rights standards and mitigate any potential negative societal impact.

In the next steps BUL will work with the developers of the **EMT to ensure compliance through design**. This will be the main task for the next phase of the project, in so far, if the EMT is fully compliant the risk of adverse effects during the implementation of the tool will be minimised. In addition, BUL will also follow-up once the tool is created and perform a new evaluation of its compliance and potential negative societal impact. The design of the EMT will be evaluated and checked against potential negative effects, such as enabling states to make selective choices for migrants and refugees, violating socio-economic rights, affecting specific rights, such as access to health and education and to see if the EMT could have any adverse effects on the integration of refugees and migrants.

As for the **NGO interviews with migrants, refugees and asylum seekers**, BUL together with WP3 partners, will review the anonymized transcripts to ensure compliance with human rights standards. In particular, the anonymised transcripts will be examined for any discriminatory information, or put the person in risk of penalization as well as information that could put the person in risk in case of return. The anonymised transcripts will also clarify if, in their opinion, the project will have a positive impact on their lives and if, in their opinion, their views have been included in the design of the tools and in the implementation of the project.

Finally, BUL will work with WP leaders on the data collection systems and review the **data collected and processed for any possible breach of international or European human rights standards**. Among other, the data will be analysed for containing hate speech, discriminatory information as well as unintendedly promoting stereotypes, inhumane living conditions and poor quality of services.

7.3 Data protection

The regulatory framework has been defined in D2.1 and D2.3; integration process started with D2.3, continues with this deliverable and it is ongoing (flexibility of the process). Further steps need to be directed in particular towards the implementation of the monitoring and evaluation stages. Further steps include:

- **Fine-tune communications with technical partners**. Data protection guidance requires the respective experts to understand the technical side of the project. To achieve this, the underlying concepts relevant approaches need to be researched to provide a basis for fruitful discussions between legal and technical experts and a foundation for compelling solutions. Depending on the complexity of the approach, technical experts usually cannot fully cover this information need but rather enrich the information that the data protection experts already gathered in their own research activity. Following the initial research on technical approaches used in ITFLOWS, such as sentiment analysis and modelling approaches, the technical partners have already received initial guidance on how to comply with the legal, ethical and societal requirements in relation to their processing activities. The transfer of this information took place through deliverables and meetings so far provided and organised by WP2 partners. Therefore, technical partners are aware of the most important steps to be taken in order to mitigate possible risks related to the data processing. However, this does not mean that conversations are over or just limited to some specific occasions (e.g., the drafting of a deliverable, the arising of a doubt concerning specific processing activities). Communications between legal, ethical and technical partners need to be kept alive throughout the project's lifecycle; establishing a communication process that works for both parts is the key for the knocking down of knowledge barriers between partners with different expertise and the creation of an innovative and privacy preserving technology. Furthermore, regular communications improve monitoring, guidance (e.g., *ad hoc* advisories to address any data protection concern that may arise) and evaluation of the different processing activities to be conducted during the project. Therefore, partners of WP2 shall always be attentive and pre-emptive in this respect, and will find the suitable solutions for different needs and ways of working. In particular, FIZ (IGR team) is currently researching new communication strategies that could be beneficial for the project, and more specifically for the management and implementation of T2.2. Attention is particularly directed towards visual communication strategies. Visualisation of legal

information, in fact, has attested advantages in communications such as improving accessibility and memorability of information, avoiding information overload, enhancing engagement and information targeting etc.[26] Beyond the fulfillment of legal transparency requirements, this approach may also help to increase the general acceptance of the project and thereby also fosters sustainability of the related research and its outcomes.

- **Compliance monitor platform.** One of the solutions proposed to fine-tune communications and, consequently, improve monitoring of the manifold processing activities planned in the project is the implementation of the compliance-monitor platform (c.f. Section 5.2.4). Through cooperation with the providing company, the platform will be further developed to reflect the specific needs in EU Projects.

- **Monitor and evaluate specific DPIAs carried out by ITFLOWS controllers (i.e., members of the ITFLOWS consortium) concerning the research activity and the EMT.** FIZ-IGR will be conducting this activity as part of task T2.2, which covers the whole duration of the project; its methodology has been already presented in D2.3 (DPIA process).

- **Additional review of datasets**. Inherent risks as well as risks related to further processing need to be first evaluated by ITFLOWS partners processing data (including publicly available data). Secondarily WP2 partners will conduct an additional review of the datasets to make sure risks are efficiently mitigated.

- **Monitor of legal information design on the ITFLOWS website.** To ensure fully compliance with the transparency requirements of the GDPR, FIZ-IGR

[26] Rossi Arianna, Palmirani Monica, *Can Visual Design Provide Legal Transparency? The Challenges for Successful Implementation of Icons for Data Protection*, Massachusetts Institute of Technology, Design Issues (2020), 36 (3): 82–96, p. 84-85, available at https://direct.mit.edu/desi/article/36/3/82/94928/Can-Visual-Design-Provide-Legal-Transparency-The.

will continue monitoring that the website of the project adequately informs data subjects about the processing of personal data that takes place in the project. Such activity is also important in order to detect possible unintentional dark patterns (e.g., in cookies settings). In addition, outcomes of the research on visualisation approaches may be embedded on the website to increase transparency of the processing as well as of the efforts to mitigate related risks.

- **Gender aspects and Twitter data analysis.** Discussions on this topic started on May the 25th between WP2 members and FIZ-ISE and MTU. The initial discussion was raised by internal members of ITFLOWS Gender Committee. Since gender aspects are of high relevance, it was discussed how this dimension could possibly be included in the research on Twitter data. Since gender aspects also constitute personal data, the data protection experts joined the initial discussion. Twitter does not provide gender information on its own, therefore, multiple analytical approaches have been discussed. The technical experts explained how the analysis of writing styles (NLP) and profile information can, in principle, be used to identify gender of a Twitter user. However, to achieve a reasonable level of accuracy, the analysis should be conducted not only on single Tweets but on as many tweets of a respective user as possible. The analysis would thereby increase the amount of personal data processed in the project with the goal to identify if there are any biases towards a specific gender. To minimise the privacy infringements of Twitter users, FIZ suggested that the analysis could also be conducted on a small yet representative subset of the dataset. It was agreed that this approach could be successful in identifying the balance between male/female users in the dataset. This information can then be used to check if the male/female balance in the dataset is equal/comparable to the global balance of genders identified by external sources.[27] Further discussions on this topic will continue in the following months.

[27] https://www.statista.com/statistics/828092/distribution-of-users-on-twitter-worldwide-

- **Continuous research activity.** While the ITFLOWS regulatory model provides a clear structure regarding the legal sources, the interpretation of such sources in the area of data protection is often not fully harmonised and hence subject to discussion and further research. Continuous research activity is hence necessary.

7.4 Gender

Gender and sexuality monitoring will continue as indicated in the Gender Action Plan's section on gender monitoring oversight, where the internal Gender Committee and IGC roles and responsibilities are outlined. Concrete tasks can be divided into four categories: (1) providing mid-term (every 6 months) updates, as well as annual reports, on the gender aspects and issues emerging from the project, as part of the WP2 regulatory reporting; (2) reviewing project deliverables posing ethics issues in relation to gender (also reported as part of WP2); (3) communicating and consulting with the Consortium/partners if they raise gender concerns; and (4) attending the project's plenary meetings (virtually, with a minimum of one IGC member attending in person), as well as any relevant WP2, Gender Committee or EMT meetings.

In relation to these tasks, the first two categories of the Gender Committee's (1) reporting and (2) reviewing are the mechanisms by which the ITFLOWS project will be monitored for meeting its gender commitment. Mid-term reports and annual reports form part of the greater WP2 annual reports, and also function as a record of Gender Committee activities. These reports include: relevant considerations for gender and sexuality in any project deliverable and when they were provided; a note of any request to the Committee for consultation on gender and the feedback provided; and any Gender Committee organized activities or participation, including internal Committee meetings. The timeline for this reporting is every six months.

gender/

With regards to (2) deliverable review concerning gender matters, this is performed to ensure ethics compliance and that gender and sexuality issues are approached in accordance with the nature and aims of the project. Deliverables of particular relevance for gender and sexuality review have been indicated in the Gender Action Plan, and are illustrated in the below chart to be reviewed a month in advance of the deliverable deadline, along with the deadlines for mid-term and annual reporting. Those deliverables still to be reviewed in consecutive order include D2.5 Monitoring Legal, Societal Impact and Ethical (project month 11); D1.2 Interim Project Report (project month 17), D8.1 thematic policy briefs (project month 21); and D1.3 Final Project Report (project month 35).

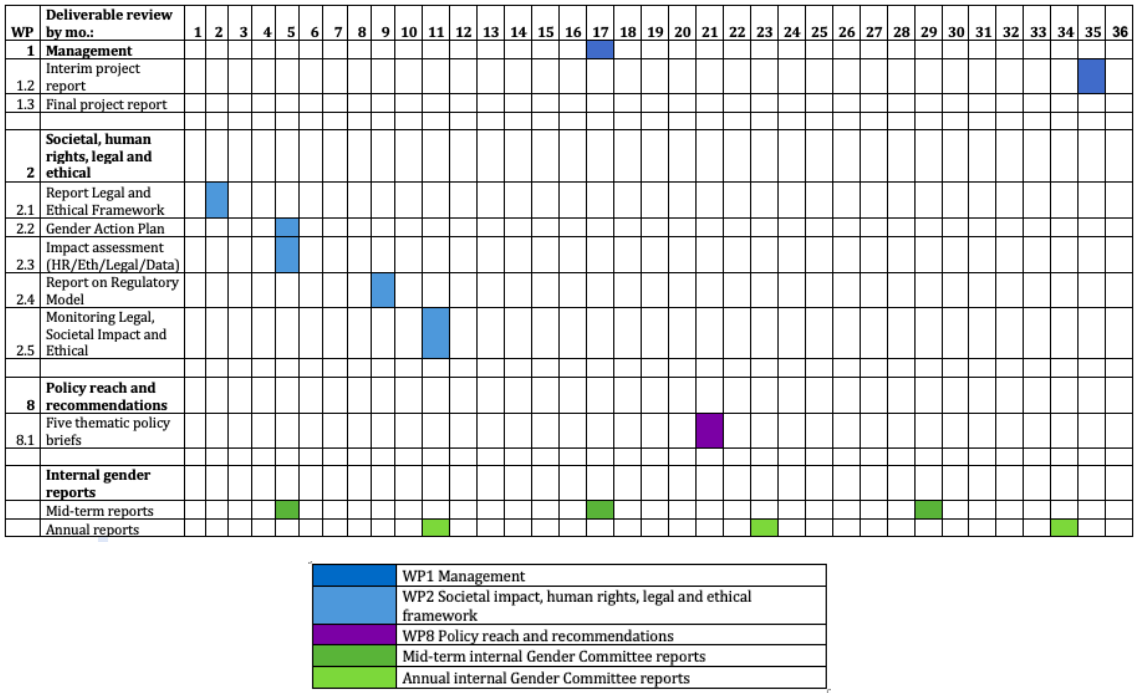


Figure 9. Gender Monitoring Gant Chart

In addition to the scheduled reporting and reviewing, it is important to note that there will be (3) a record of any consultation provided in relation to all work packages. In the overview of the Gender Action Plan and ITFLOWS Gender Policy provided to the project partners provided in a May 14, 2021, Ethics Session, it was communicated that the internal Gender Committee and IGC are readily available for any consultation or clarification regrading gender and sexuality issues.

Moreover, as part of (4) the commitment to regular meetings, the relevance of

monitoring the EMT and technical aspects of the project is emphasised in the Gender Action Plan in particular, as well as noted in this document's section 4.4. While the deliverable monitoring timeline does not include WP3, WP5 and WP6 technical meetings relating to the EMT, at least one member of the Gender Committee will attend these meetings in a monitoring/consultative capacity.

References

Legal Sources

- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation, GDPR). https://eur-lex.europa.eu/eli/reg/2016/679/oj

Ethical guidelines (Chronological Order)

- IEEE, 2019. *Ethically Aligned Design.* https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/ead1e.pdf

- High-Level Expert Group on Artificial Intelligence (AI HLEG), 2019. *Ethics guidelines for trustworthy AI* https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai

- High-Level Expert Group on Artificial Intelligence (AI HLEG), 2020. *Assessment List for Trustworthy Artificial Intelligence (ALTAI) for self-assessment.* https://digital-strategy.ec.europa.eu/en/library/assessment-list-trustworthy-artificial-intelligence-altai-self-assessment

- European Commission, 2020. *White Paper on Artificial Intelligence - A European approach to excellence and trust* https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

- European Commission, 2020. *Communication from the Commission to the European Parliament and the Council: Data protection as a pillar of citizens' empowerment and the EU's approach to the digital transition - two years of application of the General Data Protection Regulation {SWD(2020) 115 final}*. https://eur-lex.europa.eu/legal-

content/EN/TXT/?uri=CELEX%3A52020DC0264

Secondary Sources (Alphabetical Order)

- Bench-Capon, T., Araszkiewicz, M., Ashley, K., Atkinson, K., Bex, F., Borges, F., Bourcier, D., Bourgine, P., Conrad, J.G., Francesconi, E. and Gordon, T.F., 2012. "A history of AI and Law in 50 papers: 25 years of the international conference on AI and Law". *Artificial Intelligence and Law*, 20 (3),p.215-319.

- Casanovas, P., 2013. "Agreement and Relational Justice: A Perspective from Philosophy and Sociology of Law", Sascha Ossowski (Ed.). *Agreement Technologies*, LGTS n. 8. Dordrecht, Heidelberg: Springer Verlag pp. 19-42.

- Hendler, J.A., Berners-Lee, T., 2010. "From the Semantic Web to social machines: A research challenge for AI on the World Wide Web". *Artificial Intelligence*, 174, pp. 156–161.

- Pagallo, U., Aurucci, P., Casanovas, P., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Schafer, B. and Valcke, P., 2019. *AI4People-On Good AI Governance: 14 Priority Actions, a SMART Model of Governance, and a Regulatory Toolbox.* https://www.eismd.eu/wp-content/uploads/2019/11/AI4Peoples-Report-on-Good-AI-Governance_compressed.pdf.

- Poblet, M., Casanovas, P., and Rodríguez-Doncel, V., 2019. *Linked Democracy: Foundations, tools, and applications*. Springer Nature. Briefs in Law. Open Access. https://www.springer.com/gp/book/9783030133627

- Rossi, A., Palmirani, M., 2020. "Can Visual Design Provide Legal Transparency? The Challenges for Successful Implementation of Icons for Data Protection". *Massachusetts Institute of Technology, Design Issues,* 36 (3), pp. 82–96, available at https://direct.mit.edu/desi/article/36/3/82/94928/Can-Visual-Design-Provide-Legal-Transparency-The.