

Joint Migration Policy Whitepaper

TOWARDS ICT-ENABLED INTEGRATION OF MIGRANTS

MiICT

RB
Re_Build
ICT-enabled
integration facilitator
and life rebuilding guidance

NADINE

micado

easyRights

WELCOME



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Executive Summary

The six European projects: MIICT, REBUILD, NADINE, MICADO, EASYRIGHTS and WELCOME, which are funded under the European Union's Horizon 2020 research and innovation programme, organized Joint Migration Policy Roundtables between the 14th and the 16th of October, 2020. The outcome is this joint whitepaper, which reflects the common thematic lines of all the six projects. It is intended as a strategical input for shaping future migration policy of the EU.

The following recommendations relate to the common pillars of all the six (6) projects, which focus on (i) co-creation and participatory design, (ii) multi-stakeholder collaboration and (iii) ICT tools and digital services for supporting integration and are referred to the European Commission (EC). Relevant authorities, specific Ministries such as Ministry of Migration and Asylum, Ministry of Health, Ministry of Digital Governance, Ministry of Labour and Social Affairs, Asylum Service, Dublin Unit and prefectures are also key stakeholders that could benefit from the recommendations made in this whitepaper.

Definitions

We use “**migrants**”¹ as an umbrella term. It refers to mobile persons that fall into one of the following three categories that reflects the legal status of an individual:

- **Migrant:** A person who establishes his/her usual residence in the territory of an EU/EFTA Member State for a period that is, or is expected to be, of at least 12 months, having previously been usually resident in a third country.
- **Refugee:** Either a third-country national who, owing to a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership of a particular social group, is outside the country of nationality and is unable or, owing to such fear, is unwilling to avail themselves of the protection of that country, or a stateless person, who, being outside of the country of former habitual residence for the same reasons as mentioned above, is unable or, owing to such fear, unwilling to return to it, and to whom Art. 12 (Exclusion) of Directive 2011/95/EU (Recast Qualification Directive) does not apply.
- **Asylum Seeker:** A third-country national or stateless person who has made an application for protection under the Geneva Refugee Convention and Protocol in respect of which a final decision has not yet been taken.

Third-Country National (TCN): Any person who is not a citizen of the European Union within the meaning of Art. 20(1) of TFEU and who is not a person enjoying the European Union right to free movement, as defined in Art. 2(5) of the Regulation (EU) 2016/399 (Schengen Borders Code)².

Public administration: A government entity that implements government policies. A public administration would often have some responsibilities related to the definition and introduction of programs necessary to implement government policies. But mainly, a public administration is responsible for planning, organizing, directing, coordinating, and controlling government operations.

¹ https://ec.europa.eu/home-affairs/what-we-do/networks/european_migration_network/glossary_search/migrant_en

² Art. 3(1) of Directive 2008/115/EC (Return Directive), <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32008L0115>, Art. 2(6) of Regulation (EU) 2016/399 (Schengen Borders Code), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0399>.

Public authorities: Are a rich representation of institutions that work for the benefit of both incumbent and new residents of their respective cities by being engaged in the process of integrating newcomers in the local community as efficient and effective as possible. The public authorities include socially-focused entities (e.g. refugee agencies, social welfare operators, citizen service providers) and others (data and surveying agencies, statistical offices).

Local community: It is a group of interacting people sharing an environment. In human communities, intent, belief, resources, preferences, needs, risks, and a number of other conditions may be present and common, affecting the identity of the participants and their degree of cohesiveness (ex. local civil society organizations, business and other actors).

Integration: ECRE European Council on Refugees in Exile considers integration to be a process of change that is: a) dynamic and two-way: it places demands on both receiving societies and the individuals and/or the communities concerned. From a refugee perspective, integration requires a preparedness to adapt to the lifestyle of the host society without having to lose one's own cultural identity. From the point of view of the host society, it requires a willingness to adapt public institutions to changes in the population profile, accept refugees as part of the national community, and take action to facilitate access to resources and decision-making processes. b) long term: from a psychological perspective, it often starts at the time of arrival in the country of final destination and is concluded when a refugee becomes an active member of that society from a legal, social, economic, educational and cultural perspective. c) multi-dimensional: it relates both to the conditions for and actual participation in all aspects of the economic, social, cultural, civil and political life of the country of durable asylum as well as to refugees' own perception of acceptance by and membership in the host society.

Inclusion: An organisational effort and practice, in which different groups or individuals having different backgrounds are culturally and socially accepted and welcomed, and equally treated. These differences could be self-evident, such as national origin, age, race and ethnicity, religion/belief, gender, marital status and socioeconomic status or they could be more inherent, such as educational background, training, labour experience, organisational tenure, or personality. Practices can be isolated or part of different kinds of policies and provide equal access to opportunities and resources for people who might otherwise be excluded or marginalized.

Social inclusion is the process of improving the terms of participation in society for people who are disadvantaged based on age, sex, disability, race, ethnicity, origin, religion, or economic or another status, through enhanced opportunities, access to resources, voice, and respect of rights³. When referring to migrants, asylum seekers and refugees, social inclusion is defined as the process of *“interaction and mutual adaptation of migrants, asylum seekers, and beneficiaries of international protection as well as of the host society. The goal is to create societies with strong cohesion and achieve coexistence in terms of peace and mutual understanding. The integration of migrants, asylum seekers and refugees is a specific area and an integral part of the migration policy and the wider social policy of a state for its entire population”*⁴.

³ Ministry of Integration Policy (2018). Greece' National Strategy for Integration. 2018

⁴ Coley, J., Godin, M., Morrice, L., Phillimore, J., Tah, C., (2019). Integrating refugees: What works? What can work? What does not work? A summary of the evidence. London: Home Office.

Abbreviations

AI: Artificial Intelligence

API: Application Programming Interface

CSO: Civil Society Organizations

EASO: European Asylum Support Office

EC: European Commission

EFTA: European Free Trade Association

EU: European Union

GDPR: General Data Protection Regulation

IA: Innovation Action

ICT: Information and Communication Technologies

LESC: Local Experts Stakeholders Committee

LGBTQI+: Lesbian, Gay, Bisexual, Trans, Intersex and Queer

NGO: Non-Governmental Organizations

PSI: Public Sector Innovation

PUC: Pilot Use Case

SME: Small and Medium Enterprises

TCN: Third country national

UI: User Interface

Overview of the Projects



MIICT (ICT Enabled Services for Migration) was conceived with the goal of designing, developing and deploying tools that address the challenge of migrants' integration through the co-creation of improved ICT enabled services with migrants, refugees, asylum seekers, public sector services, NGOs (Non-Governmental-Organisations) and other interest groups. The project combines a user-centred design approach with elements of an 'agile' approach to software development enabling rapid prototyping and sustained pilot testing. The core objective of the project is to ensure that the solutions co-created throughout the duration of the project in each research phase deliver value and are meeting the social, economic, cultural and technological needs of the project's stakeholders.

www.miict.eu



REBUILD (ICT-enabled integration facilitator and life-rebuilding guidance) aims at designing and developing an ICT toolbox providing support to both migrants and refugees in Europe for accessing existing services, and local service providers interacting with migrants and refugees in enhancing their service provision. REBUILD

follows a user-centred and participated design approach, aiming at addressing properly real target users' needs, ethical and cross-cultural dimensions, and at monitoring and validating the socio-economic impact of the proposed solution. The technological ambition is to use AI-based solutions (user profiling, skills/needs matching, chatbots) for the development of a usable, accessible, smart ecosystem for both the target groups. The methodological challenge is to adopt a participatory co-design approach, involving both the target groups since the very early stage of the project, taking into consideration users' needs, expectations, perceived gaps, cultural differences.

www.rebuildeurope.eu

NADINE

NADINE is a platform to promote migrant inclusion. It aims to harness the potential of big data and artificial intelligence to better understand the supply and demand of skills brought to Europe through migration. The NADINE platform aims to use open data to gain a better understanding of migrant realities and the challenges associated with their integration. Data about local services and migrants will feed user-friendly tools for employability and career guidance, whilst assessing supply and demand of migrants' skills. The platform will also focus on the social, educational and cultural needs of migrants and how these fit to existing services offered by local hosts. Overall, the system will allow public authorities and guidance professionals to offer a personalised service to migrants based on real needs and the opportunities available to them. The NADINE system will be based around two key banks of data – a repository of information about host societies and migrants from which a range of services will be produced. As users access the services, more data will be captured to enhance the existing banks and feed reliable information into the system.

www.rebuildeurope.eu

micado

MICADO is an interdisciplinary international project that involves research institutions, public authority agencies and SMEs from Germany, Belgium, Italy, Spain and Austria, whose purpose is to co-develop a MICADO-“one-fits-all”-solution (generic solution) that can be adapted by the local actors to their respective local challenges and manage migration issues with a local solution. The generic solution will first be piloted in the MICADO-partner cities Hamburg, Bologna, Madrid, and Antwerp, and will then eventually be modified by the local communities. The outcome of the project will empower public authorities and local communities that attend migrants and refugees from their moment of arrival in the EU with more efficient and more effective digital services. It will also support migrants and refugees by enabling essential communication, orientation, and navigation within their new life environments. In the end, the MICADO solution shall be offered on an open-source platform and be transferable to communities in other European cities.

www.micadoproject.eu



EASYRIGHTS aims to combine co-creation and intelligent language-oriented technologies to make it easier for immigrants to understand and access the services they are entitled to. The project will be developed and deployed in four pilot locations including Birmingham, Larissa, Palermo and Malaga. The overarching objective of EASYRIGHTS is to develop a complex, multilevel co-creative ecosystem in which different actors belonging to the project partnership, the local governance system for service supply, and the innovation teams involved through hackathons, cooperate in increasing the quality and performance of digital public services available to the immigrants. The specific aims of the project are to improve the current personalization and contextualisation levels of some services to the migrants, empower prospective beneficiaries of existing services to get better access and fruition opportunities, and engage in that effort with various actors and stakeholders from a wide range of disciplines.

www.easyrights.eu



WELCOME (Multiple Intelligent Conversation Agent Services for Reception, Management and Integration of Third Country Nationals in the EU) aims to research and develop intelligent technologies for support of the reception and integration of migrants and refugees in Europe. WELCOME will offer a personalized and psychologically and socially competent solution for both migrants and refugees and public administrations. It will develop immersive and intelligent services, in which embodied intelligent multilingual agents will act as dedicated personalized assistants of migrants and refugees in contexts of registration, orientation, language teaching, civic education, and social and societal inclusion. The services will be validated in Catalonia, Spain, Germany and Greece in three Pilot Use Cases (PUCs). Each of the PUCs will focus on specific contexts.

www.welcome-h2020.eu

The 6 (six) projects answer to the DT-MIGRATION-06-2018-2019 topic (<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/dt-migration-06-2018-2019>) and their brief overview can be found on this dedicated page: https://ec.europa.eu/info/dt-migration-06-2018-2019-projects_en.

1. Introduction



In many Member States of the European Union and Associated Countries, the integration of migrants and refugees remains a challenge for both public authorities and local communities at national, regional, regional and local level. MIICT, Re-Build, NADINE, MICADO, WELCOME and EASYRIGHTS are Horizon 2020-co-funded innovation action (IA) projects, which work towards the development of ICT-enabled solutions and toolkits for the implementation of inclusion policies by public administrations and the civil society.

As efficient and effective integration of migrants and refugees can only be achieved by clearly understanding the individual situation and the social embedding. It needs as well the involvement of key stakeholders such as researchers, public authorities and civil society organizations as well as migrants and refugees themselves. The six projects apply a participatory co-creation methodology in the development of ICT-solutions and follow a collaborative approach not only involving migrants but also public authorities and further stakeholders for leveraging the tools and services.

From October 14 to October 16, 2020, the EU-projects **MIICT**, **REBUILD**, **NADINE**, **MICADO**, **EASYRIGHTS** and **WELCOME** organized a Joint Migration Policy Roundtable. Each of the three sessions of the roundtable put a dedicated focus on one of the common pillars of the projects:

- Co-creation and participatory design
- Multi-stakeholder collaboration
- ICT tools and digital services for supporting integration

These main thematic pillars are described in the following chapters of this consolidated Whitepaper, compiled by MIICT, REBUILD, NADINE, MICADO, EASYRIGHTS and WELCOME. The Whitepaper is intended as a strategical input for improving integration and shaping future migration policy in the EU.

2. Co-creation and participatory design



Co-creation proves to be crucial for innovating and adopting solutions for migrants and refugees, for increasing their visibility to cope with local service providers' needs and to foster citizen engagement. The purpose of this section is to summarize the lessons-learned of the DT-MIGRATION-06 project cluster on the co-creation approaches for the design of solutions that are providing services for migrants as a result of the activities performed in the projects.

2.1. Context

Co-creation specifically refers to an active involvement of end-users in the production process at various stages. The adoption of co-creation in the private sector is usually based on two drivers (Voorberg et al., 2015):

- 1. Cost-effectiveness**, with end-users performing specific tasks as co-producers in the production chain (Prahalad & Ramaswamy, 2000; Vargo & Lusch, 2004; Von Hippel, 2007);
- 2. Addition of value**, with end-users engaged as service designers and innovators through co-creation (Prahalad & Ramaswamy, 2000; Vargo & Lusch, 2004).

In the public sector, the end-users are often citizens. Recent contributions from theory (Kattel and Mazzucato, 2018; Juginger, 2017; Tönurist 2018) and practice (Howlett, 2012; Concilio, Deserti and Rizzo, 2014; Deserti and Rizzo, 2015) are recognising that public sector innovation based on top-down models of leading change as in the case of New Public Management promoted efficiency and performance in the public sector. A particular focus is put on cost-reduction and time-based performance indicators that originated in business and were directly applied to public services, failing in taking into account citizens' needs and societal challenges. As a response to these challenges many public administrations are trying to introduce co-creation as a new public service paradigm, with a particular emphasis on the development of a more human-centred approach to innovation to build a better society (Strokosch and Osborne, 2016).

With the 2017 Tallinn Declaration on eGovernment, thirty-two (32) states narrowed the focus on eight (8) basic principles or standards, the fulfilment of which in a context of digital public service delivery or existing service digitization that should ensure that citizens and businesses are genuinely placed at the centre of the newly built or redesigned public services. These principles are: (a) Digital interaction; (b) Accessibility, security, availability and usability; (c) Reduction of the administrative burden; (d) Digital delivery of public services; (e) Citizen engagement; (f) Incentives for digital service use; (g) Protection of personal data and privacy; and (h) Redress and complaint mechanisms.

According to the European Commission (2011; p. 30) "*social innovation mobilizes each citizen to become an active part of the innovation process*"; the annex "User-centricity principles for design and delivery of digital public services", of the above mentioned Tallin Declaration on eGovernment (2017); highlights how digital means should be used to involve citizens in the creation of public services as well as policy makers in providing better digital public services. The active involvement of citizens in policy definition, originally seen as a reaction to the distrust toward politics and representative democracy in the 1990ies (Moss &

Coleman, 2014; Bartoletti & Faccioli, 2016), is now perceived as a tool for improving the effectiveness, the quality and the adoption of policies and decisions addressing relevant and complex challenges in both global and local scale, ranging from climate change to the redesign of the welfare to territorial development or public services delivery.

Citizens are perceived as an important partner in developing and re-designing public services (Voorberg et al., 2015). The public sector is currently being transformed from a legal authority and a service provider to an arena of co-creation (Torfing et al., 2016), implying a new style of thinking regarding policy-making and public service delivery (OECD 2011).

Furthermore, digital tools are increasingly used as a core element to mobilise collective intelligence for the co-creation of public goods. This gives a radically new dimension to user-centricity in the public sector, social innovations and ecosystems, which can allow them to grow. Communication technologies create very large and open spaces for the self-organisation and mobilisation of society which enlarge the scope of civil society mobilisation and generate new issues of control and trust (BEPA, 2014).

2.2. Innovation and impacts

Innovation in the public sector is fundamental to **improving economic performance, social welfare and environmental sustainability** (Alves, 2013); innovations generate cost savings, boost citizen satisfaction, generate **better outcomes** (Bason, 2010), improve the image of the state sector in the perspective of citizens (Bloch et al., 2009; Vigoda-Gadot et al., 2008) and allow the definition of more **consistent, sustainable and appropriate** policies (Voorberg et al., 2015; McGann et al., 2018).

When involved, citizens feel that the innovations are created with them and not for them, and when there is a lack of acceptance among citizens for such services, it becomes easier to ensure that they gain **broad consensus**, as advocated by Bason (2010).

In countries interested by the phenomenon of migration, the involvement of local institutions in processes of social inclusion and integration of refugees and asylum seekers is key in developing projects on the ground that can bring about **positive and effective results** in coping with peoples' needs. The importance of ensuring an effective synergy among different actors (local institutions, government organizations, NGOs) has been underlined by the European Commission which has highlighted a series of good practices emerging from projects undertaken in EU countries (<https://ec.europa.eu/migrant-integration/integration-practices>).

2.3. Challenges from the field

This section focuses on summarizing findings and experiences coming from the actual project implementation by the six projects in the pilot regions addressed by their activities. Co-creation is a core element of all the six projects funded by DT-MIGRATION-06 call, and relevant elements emerged from their activities on the field, highlighting how this design approach can actually increase the perceived effectiveness, the users' acceptance and the potential adoption of the services proposed or digitally transformed.



REBUILD user research has been carried out by specialized operators and social scientists able to establish a relationship of **trust and reciprocity** with people of concern, to use an appropriate language (child friendly or gender neutral), and to keep in mind cultural markers and to manage any vulnerabilities. The **visual narratives** applied to scenario-based service design allowed to display the migrants and refugees' step-by step journey in a concise understandable and shareable narrative. Even though all the participants involved came from different countries and spoke different languages, through the visual representation of the interaction they were able to understand, discuss and revise the intelligent Chatbot services in order to clearly highlight problems, opportunities and what is most valuable in a service. The proposed service experiences were revised and redefined to **re-create the relationship and the dialogue between migrants and local operators**. In particular, the user experience co-design has perpetuated the details of how the REBUILD application works and how people would interact with services in order to accomplish their personal objectives.




EASYRIGHTS assumes co-design as the most sustainable approach to develop or improve public services in support of better integration of migrants in EU societies. In the context of the project services co-design plays a twin role in the innovation process: (i) that of a human oriented approach to innovation that considers end-users (citizens and other stakeholders, such as from the Quadruple Helix) as owners of fundamental expertise to tackle the problem/challenge at hand; (ii) that of a context-based approach to innovation that involves actors from the external environment and considers the existing tangible and intangible resources (people, processes, technologies, procedures, knowledge etc.) as enablers or barriers to the development of innovation. In the first respect, service co-design pursues the activation of the external innovation ecosystem as a key step in the process that moves from policies to their implementation through real services. In the second respect, service co-design gives a fundamental push to the development of a co-creation culture inside public administration, thanks to the adoption of co-design methodologies and tools in real usage contexts.


Challenges from the context are basically related to barriers at the macro and meso level of the ecosystems:

- national legislation can often prevent the introduction and use of co-creation methodologies especially from the bureaucratic point of view that quite often is related to silos that exist at different levels of governance. The process of co-creation never touches the different levels of governance that work separately on the same challenges. This implies that solutions that are elaborated at the national level can negatively interact with solutions that have been elaborated at the local city level. Co-creation should be extended beyond the limited notion of the end-users' involvement and be applied to all the involved stakeholders including the different governance level;
- the culture of the public administrations does not include the value of the user-centricity for the design and delivery of the public services. This challenge affects the level of the civil servant skills and internal organisation processes. Quite often the co-design intervention are conducted in projects that

do not affect the core of the public administrations and are conducted by people external to them: the consequence is that the experience and development of co-design projects rarely affect the core culture, competence and skills of these organisations.

To cope with this challenge at the local level EASYRIGHTS integrates service co-design with Kolb's (1984) model of experiential learning to set up and deploy processes of service design (from societal challenges to solutions) as a capacity building process within the public sector organisations involved in the partnership. This is expected to lead to the co-creation of user centred services for migrants' integration within the local network of co-producers including the participant municipalities.

 The **MIICT** partners applied the co-creation and participatory design methodology especially for the conception of the services that were intended to be included on the IMMERSE platform. By adopting a human-centered approach, the project aims to put the project's intended target groups at the centre of the design and development process, building a deep empathy with the people ICT solutions are designed for. For that purpose, co-creation workshops as well as longer piloting periods as part of the participatory design process were implemented in the three pilot countries, which are important first countries of arrival with large numbers of migrants arriving: Cyprus, Italy and Spain. One of the major challenges for the co-creation workshops preparation at an early stage of the project was the fact that it is actually quite difficult to engage both service providers and migrants in such processes. Regarding service providers, especially utilizing technologies has never been a priority and it was never part of their daily work. Hence the challenge was generally related to adopting technologies and hence the project partners needed some effort to highlight the benefits of co-created digital services. Regarding migrants, it became apparent that many were quite sceptical to participate because on the one hand, migrants fear surveillance from the authorities and are therefore worried in engaging with technology, and on the other hand the actual benefit was not clear for them – especially when it remains on a rather conceptual level without a real “showcase” that can be tested. MIICT mitigated this challenge by clearly communicating the objectives in the first language of migrants and with support of the local non-profit organisations, which also participated in the multi-stakeholder co-creation workshops, enabling them to be actively involved in the cyclical stages of questioning; reflecting; investigating; developing; implementing and refining.

 The **WELCOME** consortium adopts a multiple stage co-creation and co-design approach to developing technologies for supporting reception and integration. The first stage of this approach addresses to the user requirement acquisition, which should involve all relevant parties, including third-country nationals, authorities and non-governmental organizations. The main goal of this stage is to refine the identified requirements and co-design with the end-users the most suitable application for them. For that purpose, brainstorming sessions have been suitable of the user partners and the technical partners at a standard basis in the first phase of WELCOME. During these meetings, the discussions were dedicated to the specific needs that were highlighted by the user partners, which were occasionally guided by specific questions from the technical partners. The discussion among user and technical partners can be quite challenging due to the different backgrounds and when both try to highlight the differences, the commonalities, and the shared needs among the piloting countries (Spain, Germany and Greece) and maintain an open channel of communication to ensure that the developed tool does not fall short of meeting the specific needs of the user partners and end-users. The subsequent stages of the co-creation and co-design approach consist in an iterative assessment of the functionality of the prototypes of the WELCOME platform and revision/adaptation of the user requirements.



The **MICADO** project organised co-analyses and co-design workshops with policy makers, non-governmental organisations and migrant newcomer themselves, focusing on integration in four domains: health, education, employment and housing.

A challenge affecting results of co-analysis and co-creation in MICADO is the complexity of these processes. The need to translate the heterogeneity of needs that emerged into the product, the app, and the need to obtain results shared between different national contexts may undermine the results obtained with these methodologies.

Other challenges encountered were stimulating creativity of participants, to avoid turning the meetings into traditional focus groups. Furthermore, it was difficult to stimulate the co-creative interactivity between technical project partners and the target groups to align the technical development with integration needs.

Another issue emerging during co-creation is “cost-benefit problem” of co-design. While for some target groups sharing can be easily fulfilled at a minimum cost, for others, taking time to share knowledge and skills is a request accompanied by much higher costs. Clarity in explaining the potential of the process and the results that can be reached, openness to discussion and flexibility to redefine the participatory space and tools are crucial aspects that needed to be reinforced within these activities, allowing people to own them.

NADINE Co-creation is an essential aspect of the **NADINE** platform. The platform is directly involving the use cases; vulnerable migrants, asylum seekers and recognised refugees. Collecting their feedback and adapting the platform to their needs has proved challenging as we are faced with a wide variety of profiles with different needs. The level of education for example is usually lower in the case of vulnerable migrants. The NADINE team therefore needs to collect feedback from people with different levels of literacy, that is representative of all of their experiences with the platform. The feedback form takes this challenge into consideration. It uses simple language and a concise format to limit participants’ fatigue. The feedback from pilot participants feed into the design of the platform which presents a challenge in itself, as NADINE aims at being a tool which can be used independently by its three use cases. The interface thus, requires high levels of user-friendliness, to accommodate the needs of people with very different levels of education.

2.4. Policy recommendations

Understand migrants' and refugees' life as a prerequisite for participation

Knowledge on the social background and the migration journey is a key issue for preparing successful participatory design processes. Flexibility, agility and modularity needs to be included as qualities of the co-design approach intending to focus on migrants' dynamic and evolving condition. Furthermore, speaking about "migrants" tends to be a simplification of a complex group of people, including both migrants already in an integration process, with ambitions of social integration depending on their capacity to access to the labour market and the capacity of the host society itself; and the newly arrived or the ones in an irregular administrative situation, who are seeking to satisfy basic needs such as accommodation and food, and (legal aid in) regularising their status. Therefore, service design and strategies cannot aim at "one size fits all" solutions because peoples' conditions are different and diverse.

Address specific issues and challenges in a wider perspective

Projects and initiatives focusing on migrant's integration are often designed and implemented along mono-causal assumptions, undermining the overall effectiveness of any solution, and their actual mid- and long-term sustainability. The initiatives cannot address only separate groups, but should involve the entire local community, including citizenship, Public Authorities, civil society and other minorities. Given that all the sectors in society have diverse expectations and needs, solutions for integration might scale up and diversify accordingly. Large and extensive projects would also imply to consider time scalability in order to observe value, attitudes and behaviours' changes along time.

Recognize the necessity of co-design for trust building

Adopting co-design approaches allows collecting and identifying the perspectives of a multitude of stakeholders, building shared solutions and finding the way to involve at the same time local populations and migrants and refugees as novel residents. Furthermore, co-design aims for integration instead of separation, and does that by means of cooperation between migrants and local communities. Cooperation also means to eliminate the distrust and foster acceptance of the society and this could only be done via a transparent proposition and clear objectives and values.

Remove barriers to participation first

Barriers to participation of migrants needs to be reduced as much as possible. We recommend not to underestimate the cultural difference in conceiving participation of migrants on one side, and local service providers on the other. Since there might be barriers to participation, such as linguistic, technological and cultural ones as well as pragmatic and ordinary barriers that dictate actions beyond the provision of mobility and transportation fee in order to reach the research or project activity sites. Illiteracy and its impact on digital capabilities of migrants' users need to be taken into account, promoting alternative, visually rich modalities of communication and participation in the participatory design activities.

Pushing ahead participatory design

The current challenge of participation and engagement requires us to innovate the participatory design framework, at both at the theoretical and methodological levels. Traditional approaches to collaboratively design future solutions with the users and bringing their knowledge to the application might not be sufficient anymore for the complex nature of our societies.

Our advice for turning participation into action with new methodologies means to go beyond public consultation and to find new pathways for involving all the citizens as a first step to build a successful project.

Piloting the culture of co-design as an internal cultural change in public administrations

Recently, many initiatives have been established at different levels of governance - often in the form of Public Sector Innovation (PSI) and policy labs - focusing on experimenting new policy formulation and implementation practices, both directly and indirectly through service innovation. Service and policy innovations are in fact tightly interconnected: policies may also be seen as the umbrella under which societal value can be built and more effective services delivered. Services are on one hand influenced by policies and on the other hand operationalise policies. This is one of the reasons behind the experimentation of service design methods and tools for the design of policies. Policy labs are testing these methods and tools in a variety of places and situations (Tönurist, Kattel & Lember, 2017; McGann et al., 2018), conducting small-scale experiments in diverse sectors and facing the problem of connecting innovation activities on the ground with the transformation of policies and policy-making processes.

The development of policy lab and Lab for public sector innovation represents a relevant step toward the development of a culture of innovation focused on citizen's needs, the risk of implementing these dedicated structures outside the core areas of public administrations is the constitution of new silos with the largest part of the civil servant working on delivering services as usual and only a small part of them focus on developing user-centric innovation and the corresponding culture.

3. Multi-Stakeholder collaboration



The integration process for migrants consists of many components that need to be taken into account, such as health services, educational background, transport options, social integration, language skills, employment possibilities and political participation. It indeed, includes essential prerequisites (reception, housing, access to health, legal advice, access to places of worship, access to justice, education, social services and insurance, vocational reorientation, social and political participation, training, and adaptation to new professional conditions and requirements) as well as the gradual familiarity with attitudes, behaviours, and cultural exchanges with the host country's citizens.

When considering the implementation of new interventions, the integration process should be perceived in a coherent way by combining necessary actions to be successful. By using a multi-stakeholder approach, an engaging and balanced involvement of all relevant actors can prove to be critical in determining the success of a given policy action. Each entity has a valuable contribution in terms of situated knowledge, highlighting the issues they identify from their particular perspective⁵.

This section will illustrate how a multi-stakeholder approach is of crucial benefit when using ICT in supporting integration of migrants.

3.1. Context

The objectives of the projects are to employ ICT in supporting integration of migrants. This is developed through a multi-stakeholder approach using ICT technologies, which will enhance capabilities and access to labour market.

The inclusion of migrants is the responsibility of society as a whole and should be considered by different levels of government, different policy areas, and different kinds of relevant stakeholders including NGOs, researchers, citizens, civil society actors, refugee organisations and migrant associations etc.

A successful integration project should thereby be based on a multi-level and multi-stakeholder approach taking into consideration all level of action and involvement.

The role of multi-stakeholder platforms

To support the integration and skills development of the migrant communities, it is essential to provide digital services. However, the accessibility and skills necessary in order to benefit from digital services and tools may not be evenly distributed among all migrants. According to a report from the UNHCR (2020), marginalised groups of refugees such as women, children, elderly, LGBTQI+ and those with disabilities may in some cases face challenges in this sense. For migrants and refugees, global connectivity provided by digital technologies is foremost key to communicating across borders. Yet, very importantly digital technologies also help them identify and access basic services such as health care, education, or public administration as well as seek assistance or support in case of crisis⁶. However, the tendency is often that it can prove to be difficult to reach the end-users of such digital tools and therefore, communication of the existence and accessibility of such online tools and services could be improved. By having a multi-stakeholder collaboration with a focus on migrants and refugees, public authorities, policymakers, non-profit organisations, volunteers and researchers, the projects actively seek to consider the entire integration process.

⁵ Labour-INT 2017: Integration of Migrants And Refugees in the Labour Market through a Multistakeholder Approach. <http://www.labour-int.eu/wp-content/uploads/2018/09/Expert-Group-on-Skills-and-Migration-report.pdf>

⁶ Alam, Korshed 2015: "The Digital Divide and Social Inclusion among Refugee Migrants: A Case in Regional Australia"

3.2. Innovation and impacts

A major innovation of all migration projects is the approach to support multi-stakeholder cooperation through developing online platforms that address the needs and requirements of different stakeholder groups. In addition to the migrants, the tools and services are also aiming for the involvement of NGOs, who support migrants, by providing information and public service workers who provide services to migrants meaning all groups can benefit from having an EU-wide platform that supports their work in creating a mutually supportive local environment. This is facilitated by sharing good practices on multi-stakeholder involvement, learning from each other and on collaborating with local host communities as well as public authorities.

Deploying a multi-stakeholder platform is therefore crucial for the maintenance of multi-stakeholder partnerships, as well as in the continued action over the long term, including gradual expansion of activities. Stakeholders can then systematically identify key areas of potential synergy amongst partners. In this regard, a digital platform can be used to consolidate the collaboration through online knowledge-sharing tools, including practices for building, operationalizing, and maintaining effective partnerships, and improving governance, management, communication, and decision-making⁷.

3.3. Challenges from the field

Local authorities play a vital role in the integration process. Another example of a one stop shop platform is the European Platform of Integrating Cities which was initiated in 2006 and is currently running in eight cities. The aim is for local authorities and local NGOs to work together to understand the main needs and challenges at local level for migrant integration. It is a comprehensive approach, and the process tailoring takes around one year. As the development of the one stop shop platform is at EU level, the development process needs to have a consistent multi stakeholder approach to ensure co-ownership and co-creation. Local authorities must work closely together with the local NGOs in order to adjust policies to reflect local environments. Eventually, each city will learn from one-another by sharing their good practices.

Successful collaborations of any kind are ones where NGOs and local authorities have a common goal, a specific strategy and a clear division of responsibilities. When targeting politicians for potential collaborations, there is a need to tailor communication materials to their policy programme to identify these common goals. One of the bottlenecks identified is the absence of migrants participating in the design of relevant policy measures at local level. The involvement of migrants as co-creators of policies could bring them to expose their own vulnerabilities, among the other the lack of knowledge related to access to services and poor understanding of concepts, processes and regulations. This is specifically important in gateway countries in the Balkans, in the case of Bulgaria for example there is a lack of even acknowledging the presence of migrants and asylum seekers. Therefore, in the case of Bulgaria it would be essential to create an integration coordination body made up of public authority and NGO representatives along with migrants and refugees to create more transparency around the actual state of migration in the country. More specifically this could include the creation of a central referral point either an agency or an online information service.

⁷ Pathway to Prosperity 2020: Multi-stakeholder Partnerships Designed to Facilitate Immigrant Settlement and Integration in Canada



The multi-stakeholder approach has been adopted during the different phases of the project, from the inception to the final output. NADINE is organising three rounds of pilots to test the platform with migrants, in three different locations in Greece and Spain. The pilots aim at testing the platform with more than one hundred migrants. Recruiting pilot participants, with various backgrounds and profiles in order to obtain a representative sample has proven challenging. Indeed, migrant men are overrepresented and recruiting migrant women requires additional research and efforts. Collaboration between different stakeholders, namely the platform developers and local NGOs is crucial during the piloting phase, to ensure as many participants as necessary participate. While the platform developers have the technical knowledge to assist pilot runners, NGOs provide field expertise and contacts, valuable to recruit participants.

NADINE is adopting an essential multi-stakeholder approach for the end-users of the platform:

- Asylum Seekers, Recognised Refugees and Vulnerable migrants all over Europe, of all genders, ages and educational backgrounds
- Host authorities and guidance organisations will also benefit from data and technology that give a broader picture of skills supply.



WELCOME follows a multi-stakeholder approach on a European, national, local, regional and community level. Through the engagement of migrants' and refugees' service providers (public authorities and NGOs) and third-country nationals, WELCOME aims to close service gaps in measures and procedures of integration by using ICT technologies. The active involvement of authorities, migrants and refugees at all stages of programme design and implementation is crucial in order to adequately account for their unique cultures, strengths, needs and vulnerabilities, and identify challenges in the field in order to mitigate them. The synthesis of the consortium ensures the active participation of migrants and refugees through the pool attended by the NGOs /administrations from the consortium.

The following groups of persons will be end-users of the WELCOME platform:

1. TCNs with different profiles of vulnerability, different levels of and different degree of integration;
2. NGO volunteers/personnel;
3. Personnel from Public Administrations.



MIICT being grounded on the principles of codesign, mandates the participation of multi-disciplinary stakeholders in the design, development and deployment process to ensure the identification of needs and requirements from both the perspectives of migrants, public sector services and NGOs, the collaboration of cross-disciplinary expertise from academia, industry and the private-sector in the development of digital-services, and the realisation of improved service delivery via an extremely thorough and rigorous piloting and evaluation process.

Due to the strong representation of local organisations that are working with migrants as well as of local public authorities, in all three pilot countries (Cyprus, Italy and Spain), MIICT managed to get in-depth insights on the challenges and needs of stakeholders working on the ground during requirements elicitation at the inspiration phase of the project. These inputs were crucial for getting a clearer vision of what is actually possible and what are the limits due to a lack of resources and equipment. While the local stakeholders can identify the benefits of cooperation, the collaboration between local authorities and NGOs for example can be quite challenging due to bureaucratic issues, where for example physical documents are the only accepted means for communication and information exchange. Furthermore, many of the local organisations and authorities don't have a sufficient IT-infrastructure for supporting quick communication through e-mail – which is a major challenge for an efficient multi-stakeholder collaboration.



One basic principle of **MICADO** is the involvement of local stakeholders and experts to bring their experience and knowledge into the development of our IT solutions. MICADO should offer a real added value and for this their involvement is absolutely mandatory. The stakeholders originate mainly from the future user groups of public authorities, migrants and civil society organisations.

MICADO project delivers participatory formats that engage authorities and civil society organisations throughout the development process. In particular, the entire Consortium establishes local action groups involving key stakeholders, policymakers, migrants and civil society organisations that meet in each local group and receive information about MICADO's progress. One of the main tool exploited by the Consortium are the Local Expert and Stakeholder Committees (LESCs), through which each pilot country can collect external expertise and facilitate outreach to the relevant target groups, in order to improve more and more the ICT solution. The LESCs have proven to be an extremely successful means of substantially involving our diverse stakeholders. It is our special concern to let migrants themselves have their say in addition to institutions and organizations.

A certain outreach and participatory evaluation of the project is provided by LESC members via e-mail or questionnaire. The collaboration among all these actors is a crucial issue for the organization of such events. As a result, personnel change, identification of the relevant contact person, constant care of the relationship with the key stakeholders and IT-infrastructure used by the public authorities or civil society organisations are challenges to be addressed in everyday life of the project.



REBUILD experienced a positive attitude expressed by civil society organizations towards participating and contribute according to their capacities and specialties. The majority of the NGOs participating in the research and co-creation activities appreciated the approach and contributed actively, giving to the project a clear view of their work and needs. To their perspective, **digitalization of their services** is essential, although difficulties in resources combined with of competences by the end users have been aroused. Some of them reported **excessive workload** in their organization, which made participation more difficult; this should be considered for further activities engaging entities outside our project, and in general for a proper planning of co-creation processes.

Bureaucracy and lack of knowledge of the specificities of the end users still emerge as important challenges when involving Public Authorities. **Complex internal procedures** of the public bodies deter public servants from participating as representatives of their Bureaus in the activities. In some cases, there was some **resistance towards the development**, maintenance and updating of digital contents and services. The lack of constitutional framework and limited digital infrastructures have delayed the **development of a citizen-friendly services ecosystem**.



Within **EASYRIGHTS**, four pilot cities (Birmingham-UK, Larissa-EL, Málaga-ES and Palermo-IT) have been identified to showcase and experiment some technological innovations as described in the official DoA. The threefold aim is to improve the current personalisation and contextualisation of the local welfare services available to the (im)migrants, empower the latter in getting better access and fruition to those services, and activate Quadruple Helix ecosystems in joint, purposeful technology co-creation efforts, for the improvement of those services, facilitated by the use of hackathons (hackathons, as intended in EASYRIGHTS, are co-creation events involving not only programmers, but also relevant actors from the pilot communities).

In EASYRIGHTS, Quadruple Helix ecosystems are open socio-technical communities where the four actors involved (people, businesses, academics and institutions) share a similar transitional tension (vision) and contribute to the development of new practices, also benefiting from experience and knowledge related to the digital world. This transitional tension is considered the engine activating and (possibly) maintaining a Triple Loop Learning mode along the different levels of socio-technical systems: individual (at micro scale), institutional/organizational, societal.

3.4. Policy recommendations

The following recommendations related to a multi-stakeholder approach and the delivery of digital services identified during the session.

Towards a multi-stakeholder approach

Multi-stakeholder approach on migrant integration through ICT engage many key-partners in policy making and implementation. These include policy and decision-makers, local and regional authorities, national public authorities, civil society organizations (regional, national and international), academics and researchers, migrant associations and local communities.

The multi-stakeholder approach has to ensure that all relevant stakeholders are included. Each of these stakeholders will play a different role in migration policy through ICT. A clear understanding of who should be involved in the process, their objectives, roles and responsibilities is essential. The effectiveness of multi-stakeholder approach will be increased through political support. So, the multi-stakeholder partners should be able to seek for political support. This can be particularly challenging, as they should create legitimate and credible mechanisms in order to make it possible to negotiate and find common ground on a neutral basis.

The most successful multi-stakeholder initiatives are those that have included representatives from each of the key stakeholder groups. Migrant and refugee representation is not always achieved via migrant and refugees' representative bodies – other migrants and refugees should also be consulted while developing policies. There should be an increase in the involvement of migrant and refugees' associations and representatives in policy development- as well as in decision making processes which need to be supported by advocacy activities.

Successful multi-stakeholder approaches require the involvement of the local community, too. It is highly important to achieve the engagement of the people in the community and not just the associations, as well as the local residents and refugees. Local participation may be achieved by reaching out to local clubs, associations, schools, volunteer- and citizen groups as well as trade unions.

The collaboration between public authorities and policy makers, and the collaboration with civil society actors are important aspects towards a multi-stakeholder approach, too.

With the number of migrants and refugees living in urban areas in Europe constantly rising, cities are becoming key actors in the integration. The city interaction is highly important, as the diversity of populations is a reality in cities across Europe. There are many good practices across cities that clearly need to be shared. The voices of the cities and their experiences in welcoming and integrating migrants need to be exchanged. Results from the existing missions and initiatives, such as the use of cultural mediators, could be used to inform future integration policies, such as the use of cultural mediators. The involvement of a local administration in integration policies not only depends on the sectors for which they have competence, but also on the local political will and past experience. Cities with long-standing experience in hosting and integrating refugees and migrants are able to build on existing mechanisms to scale up their response and are better prepared in case of integration needs. Therefore, it is essential to share the good results.

Moreover, although the local level is very crucial for the inclusion of migrants and refugees, we should also address the regional level. Many regions in Europe have key competencies to foster the inclusion of third country nationals (TCNs), such as education or access to the labour market. The local level has direct contact with the TCNs and the regional level also plays a role in designing broader policies in key areas. Therefore, we need to combine and keep track of both.

The maintenance of the communication and collaboration between migrants and policy makers has an important role and could improve migrants' active participation in the society. Volunteering by migrants can attenuate the effects of relocation for migrants as they seek to regain social and human capital lost in the migration process. From this perspective, volunteering can create collective experiences by defeating stereotypes. Involving migrants in shaping their local community can help to demonstrate their positive contributions and to overcome trust barriers.

Local authorities need to work hand in hand with the civil society sector (NGOs, grass root organizations etc) for the development of the collaboration. The engagement of civil society in integration is a key element. Non-governmental organizations (NGOs) are usually well-aware and can help identifying the Day-to-Day needs and expectations of migrants in collaboration with local authorities and private companies. The expertise and co-ordination of different actors with whom local authorities have well-established relations can be of great benefit. A co-creation process should be adopted. The collaboration could be refined through the creation of digital tool for consultation and surveys.

During such collaborations, it is crucial to define common objectives early and dialogues that already exist can be brought to a place of efficiency. Successful collaborations are the ones where NGOs and local authorities have a common goal, specific plan and clear responsibilities. Working groups need to be set up along with a monitoring strategy and an evaluation plan. Also, there is a strong need to ensure effective representation of migrant communities through intermediaries. NGOs and public authorities need to work together to complement each other.

As mentioned earlier, the use of digital platforms enables an easier way of communicating between the different stakeholders. Indeed, digital communication provides benefits in terms of cost and time. A one-stop-shop approach would thus bring all the different stakeholders together, and allow them to share knowledge, best practices and liaise with each-other in an efficient way.

Towards the delivery of digital services to migrants and refugees

New ways of delivering services to meet the needs of migrants are emerging as a result of new changes in technology. Several recommendations towards the delivery of digital services to migrants are presented below:

The involvement of multiple stakeholders including migrants in the early design process as well as in the testing and validation is a prerequisite to establish a co-creation approach to ensure that migrants, and service providers are ingrained within a participatory design process and their needs will be identified. As digitization is the process of using tools and technology for enhancing the integration of migrants across Europe, it is important to create flexible tools with flexible outputs. Developing digital platforms that will be practical, user friendly and have efficient information available in many languages for migrants, will help to meet migrants' needs. Intelligent Personal Assistance of migrants should be increased and supported.

The lack of integration coordination bodies is a restriction, as single bodies are used as reference points both for migrants and refugees and public actors. Different agencies have specific areas of work and this creates a very fragmented environment. A centralised referral point with databases and tools would be essential. The EU could play a big role in promotion, coordination and motivation of such processes and in supporting the exchange of experiences and best practices. It is important to provide digital services in a one-stop shop environment where services are connected. The one-stop-shop is an essential approach because it responds to the problem that services provided to migrants and procedures to be undertaken are usually dispersed and normally provide independent responses, obliging the migrant to visit other institutions and undergo further, sometimes unnecessary, procedures. By bringing all these services together, a coherent and mainstreamed response is given to migrants.

As already mentioned above, there is a clear need to share good practices among stakeholders. From ICT perspective, a platform with different projects that gives the opportunity to share knowledge with other professionals, stakeholders across Europe and beyond will be useful. A collaborative environment will be established that enables the participants to exchange good practices.

In this framework, the following should be applied:

- ICT support of bi-and multilateral migration European programs.
- Socio-psychological dimensions of integration and ICT.
- ICT for cross-European migration service coordination.
- Support of authorities using AI.

Funding and Sustainability

Funding is important to take the action plans forward and to nurture the multi-stakeholder process. Funding is needed for initiating a multi-stakeholder process and at later stages for the implementation of action plans which are to result into sustainable outputs. The coordination of funding and support of sustainability for digital platforms that facilitate collaboration between stakeholders should be taken into account. Additionally, the knowledge on how to participate in a project to get funding and ensure sustainability should be shared among stakeholders. Another recommendation includes the increase in funding for relevant action, in order to ensure the integration of migration within this framework will remain sustainable.

The focus of the migration topic

There is a need for an integrated reception model to promote life coaching and not only have a limited emergency support model. In order to achieve this, a multi-level and multi-stakeholder government system based on collaboration between policy makers and public authorities should be applied at a country level in order to address migration issues in all relevant policy areas.

The diversity should be included as a fact in the policy making process. A common approach to emphasize the benefits of diversity is more essential than ever. It is important to embrace diversity as a given and set concrete, tangible inclusion goal. Diversity in society is not limited to migration background (intersectionality) and the inclusion of migrant is the responsibility of society as whole. Policies should be both issue and target based, as opposed as solely target based.

Policies should, also, include a gendered perspective. Applying a gender perspective across all migration policies with a focus on mitigating gender bias, recognising the difference in migration experiences of different genders, and acquiring a better approach to fight gender stereotypes can only be done via education and training.

The networking initiatives and platforms that are referred above need to be strengthened with the participation of regions as coordinators. Coaching and training public authorities to offer physical access to services ensures the enhancement of capacities for more effective services. Last but not least, there is a strong need to improve the formal qualifications of migrants and fight anti-migrant narratives. It is important to consider the target group since only looking at the issue may marginalise people and not paint a full picture of the situation in Europe.

Success stories for migration reception and integration

There is a strong need for evidence and data through strategic research during negotiations with public authorities and policy makers in order to engage them in understanding the national/local/regional features of migration and development.

NGOs have a responsibility to share the voice of the migrants they work with in order to be sure that their voices are heard. They need to incorporate education and dissemination campaigns that have a positive message to sensitize the society. It is also important that good results are shown in universities e.g. the young need to realise the role of migrants in our society.

Talking about migration as a natural phenomenon in our society and showing how things happen and how personal stories inform natural trends is really important. Publishing success stories in mainstream media at local level would probably sensitize the local community.

There is still a need for more local and both qualitative and quantitative data, as well as, for data that empowers migrants rather than making them more vulnerable and build resilience in order to change the negative narrative surrounding migration. Making better use of digital platforms and for example, social media to promote migrants' success stories.

Multi-stakeholder integration process

In order to ensure a smooth integration, a multi-stakeholder integration process has proven essential. Integration to European societies is made up of access to different spheres of life – healthcare, education, social life, work and housing. The different actors who play a role in these spheres should thus, be involved. Research shows that multi-stakeholder platforms are crucial in ensuring that all these actors collaborate to promote better knowledge sharing on good practices for migrant integration, and maintaining effective partnerships. The different challenges encountered by the projects show that involving migrants, public authorities and local NGOs is essential in ensuring ICT tools provide a tailored response to migrants' needs. To do so, good communication between the actors and sufficient funding are essential. Their involvement, of migrants especially, at the early stages of the design of digital services and sharing of good practices amongst stakeholders will foster better ICT-based support for migrants. Finally, policy-makers should make sure they address the spectrum of migration-related issues, such as language learning or gendered perspectives.

4. ICT tools and digital services for supporting integration



According to the last Digital Economy and Society Index report of 2019, demand for digital public services is growing, as 64% of EU residents have used public services online and the provision of government services online is also on the rise (European Commission, 2019e). Digitisation is also a priority for the European Union, which has allocated €9.3 billion to fund over 3,000 projects in ICT-related areas through its Research and Innovation Framework, Horizon2020.

Furthermore, several studies show that migrants are ICT users and their skills are similar or higher than natives (Guo et al., 2008; Kirschner & Bruyckere, 2017). They are more connected and are more frequent digital users, which is particularly true for newly arrived migrants. Migrants however mainly use ICT for information and communication rather than for social participation, looking for a job, or learning and education purposes.

Regarding the development of the ICT-services for migrants, the projects pay special attention to putting migrants and other users including NGOs at the core of all processes via their co-creative methodology. This includes the identification of needs, to the design, creation and piloting of the digital solutions. Especially co-designing and co-developing ICT tools and services are highly innovative practices that are applied by the migration projects for obtaining the inputs by migrants, NGOs and service providers for the creation of user-requirements-based digital tools and for ensuring the end-user engagement and general sustainability as well as the overall impacts of the projects.

4.1. Context

One of the major challenges when it comes to migrant integration policies in the EU is the lack of data, official statistics, transparency and comparable indicators at a regional and local level. There is a high potential to overcome this problem by implementing ICT solutions to support the delivery of public integration services, while at the same time provide the relevant data to the public authorities and CSOs while considering:

- improving the information flow between all stakeholder groups (top-down / bottom-up) by making existing data resources in administrations and authorities more accessible, and by securing data quality in all processes of transmission;
- generating new knowledge for the strategic and operational management of migration from the purposeful combination, analysis, and visualisation of available data;
- gathering new personal data protection compliant data, especially on migrants' personal background and skills, in order to support targeted and case-specific support.

The state of the art in digital solutions for migrants' integration in Europe in 2019 has been mapped recently and the map also includes the six projects funded under the DT-MIGRATION-06-2018-2019 call⁸. Most of the applications focus on necessities for immigrants and refugees (language, health, education, housing, legal aspects, among others). In addition, some of them include the possibility of creating communities and communicating between users with the same interests in order to share experiences and to help each other. Nevertheless, only very few applications are developed by public authorities or trusted entities such as well-known NGOs. This causes the information to be unreliable to the immigrant/refugee. In addition, many applications only provide the most basic services (Czerpes et al., 2019).

Digital technologies can be beneficial when seeking information on the jobs, the skills market and employment opportunities⁹. To participate in an informed and productive way in a society characterised by rapid changes in ICT, social inclusion is facilitated through access to and the use of digital technology. The 2015 report on **ICT for the Employability and Integration of Immigrants in the European Union**¹⁰ published by the European Commission emphasised the importance of ICT technologies in migrants' integration. Digital transformation in the field of integration is also one of the 7 main pillars of the **New EU Action Plan on Integration and Inclusion 2021-2027**¹¹, namely as "Enhance the use of new technologies and digital tools for integration and inclusion", particularly important especially due to the COVID-19 pandemic. Both documents therefore highlight that a lack of access or skills to participate online bring disadvantages in terms of being socially included in society and addressing social needs. Considering this, it is of the utmost importance to address the potential digital gap which refugees, asylum seekers and vulnerable migrants may face in their integration process and the effect it might have on their social inclusion.

For newly arrived migrants and/or refugees, the lack of information and inability to use technology due to insufficient access, skills, and proficiency in the language of the country of residence may lead to limited interaction with the new community and consequently to social exclusion¹². For migrants and refugees to be able to adopt an adequate level of ICT and have enhanced access to information for essentials to daily life, such as healthcare, education, and employment, the ICT needs and capabilities of migrants must be identified. The adoption of digital technologies must be a focal point of new migrant integration initiatives for people of various educational backgrounds, ages and genders. Older or less educated migrants have limited access to ICTs and increasing access and digital literacy should be a priority for the EU. The 2015 report by the EC highlights that migrants and refugees have a good command of ICT as a tool for staying in touch with their close ones at home, but do not use these tools for job search. In response, governments should more actively get involved in supporting migrant integration through digital inclusion. Governments could for example provide online access to information and services through user-friendly websites, and use social media – which migrants are already acquainted with – to promote them. The report suggests that digital literacy courses should be given to newly arrived migrants and refugees, as a part of the regular integration courses. It also highlights digital literacy courses could complement language courses, including e-learning tools.

⁸ http://micado.project.tuwien.ac.at/app_map/

⁹ Alam, Korshed 2015: "The Digital Divide and Social Inclusion among Refugee Migrants: A Case in Regional Australia"

¹⁰ European Commission, 'ICT for the Employability and Integration of Immigrants in the European Union', 2015, p. 6. see:

<https://publications.jrc.ec.europa.eu/repository/bitstream/JRC93966/jrc93966.pdf>

¹¹ https://ec.europa.eu/migrant-integration/?action=media_download&uuid=CDFE0088-C151-66D5-846F7C422DE2A423

¹² Alam, K., and Imran, S, 2015: The Digital Divide and Social Inclusion among Refugee Migrants: A Case in Regional Australia, Information Technology & People 28(2); DOI: 10.1108/ITP-04-2014-0083

4.2. Innovation and impacts

Digital Transformation in Public Authorities

Regarding the innovative actions in the field of ICT-services and digital government for migrants that could potentially be taken up by other governments in Europe, co-designing and co-developing ICT tools and services are highly innovative practices that are applied by the migration projects for obtaining the inputs by migrants, NGOs and service providers for the creation of user-requirements-based digital tools and for ensuring the end-user engagement and general sustainability as well as the overall impacts of the projects.

Digital transformation in public authorities is fundamental; digitalisation not only brings about substantial benefits in term of work efficiency, resource saving, and speed but fundamental new qualities. They provide entire new forms of outreach and access, of accountability, monitoring and control. Data-based digital processes enable an evidence-based approach in the provision as well as in the creation of new products and services for municipalities. The key resource “data” plays an eminent role - for archiving and back-tracking past events, for managing and operating ongoing processes, and also for anticipating and predicting future developments, given that valid algorithmic models and sufficient data bases are available. Before all, digital technologies allow the cross-connection of information from different domains (“Linked data”). The breaking of so-called data silos, and the skilful monitoring, analysis, and synthesis of data is a precondition for new value proposition from the side of public authorities.

Data Monitoring and Analysis

Related to public authorities and local communities, miscoordination of integration activities has been reported as a central concern (Central Refugee Coordination Council, Hamburg). Due to the rapid development of migration issues, public authorities as well as local helpers often lack an overview about the state of affairs in their area, especially in regard to bottom-up, informal help activities by the civic society, which – though unmanaged by public institutions – turned out to be a major driving force for integration success. Miscoordination and resulting inefficiency repeatedly lead to frustration on all stakeholders’ side, thus seriously off-setting societal capacity for integration. The migration projects address this challenge by developing ICT-tools that allow quick assessments, comprehensive monitoring, and fast reporting of relevant data through intuitive visualisations. In addition, as decision support tools, they inform the design of new integration strategies, measures, and policies.

Dashboards and Cockpits

A major digital and data-driven innovation of the past decade is the rise of data dashboards and cockpits. Clearly related to a swiftly growing body of data, the permanent monitoring and on-the-fly analysis of relevant key performance indicators for administrative processes has become a key approach in the digital transformation of the administration. In this context, dashboards have emerged as a main instrument for the visualisation and analysis of live or / and big data. Working on the basis of business intelligence systems, these (often complex) data panel do not only provide monitoring and supervision functionalities, but also allow new views and insights that support urban administrators, decision makers, and planners in their daily work. Best practices of urban data panels have been implemented e.g. in London, Vienna, or Dublin, in many cases in cooperation with research centres or academic institutions. Over the past years, scientists have investigated in depth the innovation potential of dashboards for the visualisation of relevant urban data, and the ways how to configure them into custom-tailored “cockpits” that combine information-density with effective procedures for decision making, planning, or business operations. (Gareth et. al. 2020).

Innovation in web accessibility and security


A further innovative aspect of the migration projects is the development approach through an accessible, intuitive UI framework and technology that runs on regular and mobile devices and that aims to assist in the integration of refugee and migrant populations through the provision of customised access to key public services. All projects are furthermore putting attention to the language needs of migrants and will therefore provide the content in different languages. For supporting the usability of the multi-lingual solutions, most tools are furthermore using icons, images and clear terminologies for a better user experience.

Regarding the innovations of digital tools, the variety of tools and services build on common interactive components as well as on a high level of security, full GDPR compliance and privacy by design principles for matching the needs and skills with offers from different fields. The services also provide information for supporting migrants as well as for acknowledging skills and certificates in order to enable better integration into job markets and societies.

4.3. Challenges from the field

 MIICT is developing an online platform that matches migrants' access to services such as education, welfare, employment and healthcare in host countries offered by help-organisations as well as public authorities. The technical framework will enable a convenient integration of the solution into the local, national and international public service providers' ICT environment. This is to facilitate the efforts of public administrations at EU, national and local levels to manage the integration of migrants.

One of the lessons-learned from the MIICT use cases, which are piloted in Cyprus, Italy and Spain, is that public authorities are generally very responsive and engaged. However, this does not translate into systemic changes in the 'system' which is dominated by bureaucracy as well as resistance to change and introduction of technology. One example from Cyprus is that social workers and supervisors on the one hand participate enthusiastically in EU project events (including those working to find technology enabled solutions like MIICT) contributing ideas and suggestions, but on the other hand most of them do not feel compelled to use even basic ICT tools such as email that could practically improve their daily activities. According to the MIICT experience, once the project methodology and planned activities had been explained to public services, they were also very engaged. This highlights the importance of detailing the form of participation that is relevant, such as the focus group and co-creation approach. Furthermore, the representatives of public services were often difficult to be approached due to high levels of bureaucracy (e.g. in the Italian public sector structure). It took some time to reach relevant contacts and it was necessary to approach and meet them face-to face, before the planned activities could actually start.

 In the MICADO project, dashboards and cockpits are used as novel tools for data visualisation and process management for specific migration management use cases of key user groups i.e. Public authorities, CSOs and migrants. Dashboards are "precisely designed information displays" (Noennig, 2020) that make essential information visible at a glance. Dashboards therefore present all essential data aggregated in a single interface, and in a visual manner, i.e., through diagrams or graphs. In MICADO, the needs of the partner cities (Hamburg, Bologna, Antwerp, and Madrid) were analysed in order to identify what kind of dashboards they demanded. One challenge was that the participating cities collect, monitor and are interested in different statistics and data on

migrants' integration. This challenge reflects in the development process, as different dashboards need different backend and thus additional development effort. Cockpits go “[...] beyond mere dashboard visualisations, cockpits imply higher levels of interaction and procedural steps leading to specific results and outcomes” (Noennig, 2020). The main feature of a cockpit is its individualized interactive information, using real-time data, and they offer well-guided procedures for interaction.

In MICADO one of the main cockpits offered is the Guided processes use case. These guided processes can describe procedures to get access to healthcare, school enrolment for children, access to education for adults, employment or housing. One challenge of developing the “Guided processes” cockpit is defining the content, which is very different in each pilot country or for each target group. The processes have to be defined and will require quite some effort on behalf of the public authorities. Furthermore, as these processes are currently taking place mostly offline, the employees in charge do not necessary possess the needed digital skills or the technical infrastructure.



Despite a positive attitude towards the proposed digital solutions, a large part of the public servants participating in **REBUILD** activities was reluctant that these solutions will ever be available to them because of bureaucratic barriers. Many of them highlighted a lack of ICT literacy in the administration, and the risk of low acceptance of digital transformation due to the fear of losing jobs due to the technology automations. Technology-related needs emerging from the interaction with final users were:

- Transparency, so that person-to-person bonds and relations are able to flourish.
- a standard classification for the identification of capacities / competencies, qualifications and occupations such as ESCO to facilitate both the profiling of the migrant and the matching with the employment possibilities
- Multilanguage capabilities in order to ensure the adoption of the proposed ICT solutions;
- Digital communication enabler for people of different cultures, with different languages, etc., such as the use of pictograms, multimedia resources and advanced chatbots
- The design and implementation of specific solutions for each actor in the ecosystem according to their own needs, such as the development of WEB solutions for public agencies as well as help organisations, and solutions based on mobile applications for migrants.

NADINE The NADINE platform will include a job recommender, that based on the result of users' skill assessment, will recommend different career paths to users. It will include job listings as well as trainings. This, however, presents some challenges, as the information in the recommender will require to be updated by public authorities or NGOs using it. They will thus, have to update the information communicated to users through the platform, which will require sufficient resources. Another challenge will be to ensure the technology behind the Chatbot and the NADINE recommend capture the needs of the wide range of profiles who will be using the platform. The technology should adapt to the individual needs of users, to provide tailored input, and become a one-stop shop for migrants. To do so, the piloting sessions are an essential step in ensuring the collection of feedback from all the different profiles who will use the platform.

- Simplified version of administrative pages presented in actionable sentences, what we defined being a pathway;
- Mobile domain-specific course;
- Web-learning platform for pronunciation exercises.

By doing this EASYRIGHTS covers three outstanding technological pillars: language technologies, personalization technologies and gamification strategies for establishing a human-in-the-loop process in order to exploit user feedback and further instruct and tune the proposed technologies. It uses three technologies namely i) a AI (based on Natural Language Processing) generator of easy instructions to lower the bureaucracy level for migrants that we called pathway generator; ii) a vocabulary course generator, and iii) a pronunciation training platform (the last two being developed ad hoc for specific services).

One of the major challenges for the WELCOME pilot use cases, which will be piloted in Spain, Germany and Greece, is the interaction between the Conversational Agent (CA) and the third-country national (TCN). The agent is planned to interact with the TCNs on topics related to their reception, integration and coaching. In order to be accepted and found useful, this interaction must be natural and appropriate. The most asserted way to achieve natural and appropriate interaction is to use as a blueprint the specific well-established patterns of trained human experts with users on the topics in question. However, the practice also shows that experts variate these patterns, adapting them to the specific profile of the user they interact with. This highlights the importance of socio-psychological dimensions that need to be taken into account (and that are intuitively taken into account by professionals) during the interaction with TCNs. The analysis of psychosocial backgrounds must thus be a main focus due to their importance in the context of interaction: There is a large variety of social and cultural backgrounds, different (very often traumatic) life experiences, expectations, etc. of the TCNs. Moreover, each TCN has his/her own communication skills, own traumata, needs and values, formal or informal educational background as well as individual capacities and capabilities. Therefore, the interaction of the agent with the users cannot be a “one-size-fits-all”. To ensure adequate service provision, WELCOME will identify and differentiate the most distinctive psychosocial features and take them into account in technologies development and implementation.

4.4. Policy recommendations

Digital transformation

For boosting the digital transformation and the support for migrants through innovative ICT-tools and services, the authors of this whitepaper recommend to the EC to encourage central governments, local authorities and public bodies to produce open APIs (software interfaces) and share open data. Private sectors and CSOs can create a diversity of user-focussed and user-requirements-based tools and services that cater for the variety of needs of migrants and refugees coming from different backgrounds. At the same time, it will safeguard transparency and democracy – while taking into account the GDPR regulation and respective legal frameworks or regulations.

In order to increase awareness of local authorities, to promote migrants' integration within hosting communities, the experience from the migration project shows that it is crucial that the EC supports innovative ICT-tools and services development such as serious gaming and other creative online tools. Such an offensive innovation approach however can only be implemented if the digital infrastructure in all regions in Europe is greatly extended by making affordable (or free) and secured internet access available for refugees, migrants and host communities.

Also, it is recommended to the EC to launch information and marketing campaigns for enhancing the diffusion of apps and tools that have been developed by EU projects. Related to that, the whitepaper also recommends that the EC should encourage Member States to create dedicated Ministries for Digitalisation (supported by EASO and other EU wider agencies), which might be strong partners on the national level for supporting the co-creation of innovative, tailored and user requirements-based ICT-solutions for supporting integration.

As for the long-term sustainability of innovative solutions, the whitepaper recommends to support future EC funding for projects, contracted procurement by EU wide consortia as well as by individual member states that could be done through national Ministries for Digitalisation (after the project has ended). Such an approach would offer projects a new “business model” that does not necessarily need to be exploited through the data market.

For ensuring transparency and privacy, it is recommended that the EC addresses proactively with and towards the member states the issue of surveillance. Only through a transparent communication, the common lack of trust of migrants in using state-provided technology can be tackled and countered. As part of this strategy, it is recommended to also address the paradox of data provision to for-profit companies and the data market through social media. Data security, storage and data use will be challenge. Trust about data use is a key issue for migrants and refugees. In addition, protection measures against cyberattacks will be crucial.

As a potential solution to this issue, the whitepaper recommends to support and promote the concept of a “Self-Sovereign Digital Identity”. It will help to boost the access to and use of digital services and at the same time to ensure the data ownership of the user, which will support trust building.

As a further recommendation to the EC, the whitepaper recommends the establishment of political and technical EU-wide digital government standards for enhancing and scaling up services and for enabling cross-country interoperability of technologies. This should go hand in hand with a strong support of experimental ICT solutions and technologies such as cloud computing while at the same time investigating issues such as privacy and security.

A major role of the EC could also focus on the encouragement of national governments to become an accelerator for innovation and digital transformation of public administrations and support systems. In order to be attractive for highly innovative companies, the EC however needs to support the development of new business models that are attractive for the private sector (as drivers of innovation) and at the same time avoid the exploitation of migrants' data on the data market and definitely prohibit any exploitation of data.

Innovation, research and development

Regarding future research and development, the whitepaper recommends the support of the development of apps for vulnerable asylum seekers, refugees and migrants since current apps are focussing generally on migrant integration and are often not reflecting the complexities related to refugees and other vulnerable groups.

For boosting the integration of migrants, it is emphasized by the whitepaper that the EC needs to recognize also the host communities and local societies as major stakeholders in the research and innovation activities. Hence, they should be addressed in information campaigns and also in the co-creation of ICT tools.

It is furthermore recommended to the EC to support research and development initiatives and projects that collaborate with EU and third-country initiatives in order to co-create innovative ICT solutions and services that aim to inform potential migrants, not only when they have already arrived in Europe, but before they even leave their country of origin. Such EU projects should however not be funded as a border security topic but it should rather be categorized as a future governance approach.

Digital education and infrastructure

For enhancing the ICT-skills of public authorities as well as of migrants, the whitepaper recommends to provide sufficient resources for supporting digital education and therefore the digital transformation in general. This is strongly related with the recommendation to the EC to support government entities financially and with know-how to utilize digital communication tools for enhancing "effective" virtual communications with migrants' populations for actual assistance and trust building.

The whitepaper recommends furthermore to the EC to promote a rights-based approach to ICT infrastructure among the EU-Member States. This will help to tackle the challenge of the digital divide by enhancing access for migrants and indigenous groups via the provision of free WIFI and parallel digital skills training.

Due to the fact that migrants are usually accessing services and tools at the premises of NGOs or CSO and help organisations, the white paper recommends to the EC to provide funding for allowing the establishment of an adequate ICT infrastructure and human resources of NGOs.

From an EU-policy perspective, the whitepaper sees the implementation of an integrated strategy, which makes use of established, existing technologies for supporting stakeholders and migrants, a promising approach when it is combined with social measures, communication, interaction and skills training.

Future integration policies

Regarding future integration policies, it is recommended by the whitepaper to shape future policies towards an integrated approach, which defines integration as an at least two-way social process that can be supported by ICT solutions (but which does not define ICT as the “lead” of integration, but as a supporting process).

For supporting such an approach, it is recommended that the EC published as soon as possible an EU-directive that promotes “interculturalism and multilingual immigrant information through ICT” to become a national law. For boosting the visibility and actual implementation on a national level, it is recommended that the directive is promoted through projects and through direct financial support to the member states, which will help to strengthen the integration services and support delivery at the national, regional and local level through ICT-tools.

Finally, the whitepaper also recommends to the EC the optimization of the use of resources by supporting the maintenance of already implemented solutions through further continued funding and financial support. This will allow to improve and extent existing ICT-tools, which have already been implemented technically, tested with end-users and promoted further, and will avoid that new ICT tools emerge with every new project but are abandoned when the project has ended. Continuity represents a strong base for technical sustainability.

5. Boosting the impact of the innovation actions



In addition to the topic-related policy recommendations, there are also more general recommendations that are aiming at supporting the impact, the exploitation and the long-term sustainability of the innovation actions. The following recommendations are mainly addressing how the EC could leverage the innovations and hence support the future roll-out.

First, it is recommended that the EC **supports the outreach activities of the projects** by having EU experts attending local and national events and promote the projects activities along with other key members of the European Commission network in order to aid the dissemination and communication of events.

Second, the EC could **work with practitioners** through country representations on digital literacy and with migrant populations by actually using the innovations developed in the projects.

Third, the EC might also **help with the engagement of public authorities** since they might respond to invitations from the EC better than from individual projects. This is especially relevant when it comes to the long-term roll-out of the solutions and services, which are and will be developed in projects for supporting migrant integration through ICT.

Fourth, for **boosting the uptake of the novel solutions** developed in the migration projects, the EC could also introduce Directives to the Member States to incorporate new technologies and display their affinity to innovation through incentives such as an “innovation badge” as a certificate or similar that the authorities can use for self-marketing.

Fifth, the EC could **present the migration projects** and their innovations at the European Integration Network, at the Urban Partnership on Inclusion of Migrants and Refugees and on the European Web Site on Integration.

Sixth, the EC could **bring the projects to the attention** of the European Institute of Public Administration and promote them on the European website on integration as well as by inviting researchers to present the projects at events organized on the EU level or by the EC in the Member States.

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