



# ▶ REFUGEE TECH IN THE EU

A SCOPING STUDY OF ICT TOOLS  
FOR LABOUR MARKET INTEGRATION  
OF REFUGEES AND MIGRANTS

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# EXECUTIVE SUMMARY

The 2015-2016 exodus of (mainly) Syrian refugees towards the EU has left a deep mark not only on EU's understanding of migration flows, but also on the way in which Information and Communications Technology (ICT) developers and innovators understood and still understand their call to action. In that period, an unprecedented wave of civic solidarity, together with the need of many organisations to find new solutions and tools to answer to refugees' pressing needs, triggered a sudden increase in ICT solutions for every stage of refugees' journey towards Europe (Benton and Glennie, 2016).

The idea behind this surge in "refugee tech" is that technology can help to mitigate some of the challenges that forcibly displaced people face (Culbertson et al., 2019), starting from pre-departure and journey arrangements to their socio-economic inclusion in destination countries. This sudden increase in ICT solutions for refugees has created a sort of "refugee tech bubble", which has now left, on one hand, a "digital litter" of failed apps and software, while on the other hand some developers have gained the experience and understanding (of both refugees', host communities' and local systems' needs) to create ICT solutions that are more fit to answer to refugees and, even more broadly, to migrants' problems.

The scoping report of the Expert Group on Skills and Migration<sup>1</sup> of the LABOUR INT 2 project builds on the research and work done in the framework of the first edition of the project and on the lessons generated by LABOUR INT pilot actions.

Our specific focus is on ICT-based practices devoted to facilitating labour market inclusion in European host countries of people who are experiencing the refugee gap. The aim of the report is to present the main results of an exploratory study conducted between February and November 2020, which mapped more than 40 ICT solutions for labour market integration. The scoping exercise was conducted through a review of the literature coupled with the input from the LABOUR INT Expert Group on Skills and Migration (June 2020) and with in-depth semi-structured interviews conducted with ICT developers and innovators around Europe. The research was slowed down during the first lockdown months in Italy due to the Covid-19 pandemic (March-May 2020) but resumed at intense pace in the summer.

The exploratory study highlighted that the ICT experiences developed in the field of labour market integration for refugees and third country nationals (TCNs) who are experiencing the refugee gap cover an array of issues. These range from IT and specialised language training (e.g., Hack your Future, Code Your Future, Powercoders) to skills assessment and skills certification (e.g., EU Skills Profile Tool for TCNs, European Qualification Passport for Refugees, SkillLab, blockchain and open badges technology), but also job coaching and job matching (e.g., Action Emploi Réfugiés, Worker). Some of these ICT tools also help newcomers navigate local services, like the apps developed (or currently being developed) by the Horizon 2020 projects SIRIUS and MICADO.

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<sup>1</sup> The Expert Group on Skills and Migration of the LABOUR INT project is coordinated by SGI Europe and FIERI and it is composed by: BusinessEurope, CEDEFOP, ETUC, EUROCHAMBERS, IOM, SMEUnited, OSCE, UNHCR.

Since 2015, and after many failed apps, the ICT community has been changing its approach towards the issue of integration of refugees and migrants. The most interesting and promising examples of ICT solutions for labour market integration of people struggling with the refugee gap are now developed with a view to, first of all, consider the centrality of the human factor, and, secondly, the need for a systemic approach to labour market integration.

The human-centric approach is reflected in a number of ICT-based practices that try to address issues that were overlooked during the booming phase of refugee tech (in the period 2015-2016) and which were the causes of failure of many start-ups in the field of refugee tech. Promising ICTs for labour market integration today respond to real refugees and migrants' needs, by connecting refugees and tech entrepreneurs and experts while also training refugees to become part of the solution (e.g., [Techfugees](#), [Powercoders](#)). Secondly, tech solutions take increasingly into consideration the need of social workers to be supported in their everyday work, for example when trying to assess and validate refugees and TCNs skills. [Skilllab](#) is one of these solutions and it is testing its mobile application for autonomous skills assessment with employment and career services in [Amsterdam and in other European cities](#) to ensure that the app really simplifies their work instead of adding a further layer of complexity. In discovering the need to deal with the human factor, some ICT-based practices are striving to ensure that the ICT solutions developed are accessible to everyone, not only to high-skilled but also low-skilled and illiterate people, as well as to small enterprises that do not know how to deal with refugees, by providing an off-line/in person service. As an example, the start-up [Action Emploi Réfugiés](#) has created a job-matching platform, which connects local businesses (both big and small) with refugees (and vice versa) while also providing an off line service to refugees (to write an effective CV and to prepare for a job interview) and to [businesses](#).

Regarding the systemic approach to asylum seekers, refugees and TCNs' labour market inclusion, ICT-based practices, like [MyGrants](#) and [Konexio](#), and the EU project [NADINE](#) are jointly addressing several barriers to labour market integration. As an example, MyGrants' app not only provides information, training, and skills assessment through a carefully constructed methodology based (among other things) on the gamification of the learning and testing experience, but it is also about to launch a job-matching platform, and another tool to support the creation of a credit line for the users of the app.

In sum, in an EU where the labour market integration of TCNs is a priority and where the Covid-19 pandemic is accelerating digitalisation processes (but also deepening pre-existing inequalities), the refugee tech can continue to offer promising solutions. Asylum seekers and refugees certainly remain a particularly vulnerable group, with specific needs and barriers hampering their satisfactory and sustainable access and inclusion in the labour market. However, being "the most tech-savvy population of migrants in history ... with smartphone penetration rates of up to 90%" (AbuJarour et al. 2019: 2), they also represent a huge untapped potential. Therefore, they can be (and should be seen as) not just targets and beneficiaries of innovation, but also catalysers and co-creators of ICT-based policy solutions scalable and transferable to other groups at risk of socio-economic marginalisation.

# 1. REFUGEE TECH

Large inflows in the 2015-2017 period had a significant and incontrovertible impact on the development of Information and Communication Technologies (ICTs) to facilitate refugees and Third Country Nationals (TCNs) integration in the EU. Peaks in arrivals of asylum seekers at EU shores and in EU countries – with Germany currently being the fifth main receiver of asylum seekers worldwide in absolute numbers (UNHCR, 2020) – affected deeply the way in which policymakers, civil society organisations and EU citizens more generally understood and interpreted challenges associated with migration. Unprecedented inflows triggered civil society mobilisation. A large array of civil society organisations, activists and ICT specialists have actively engaged in finding bottom-up solutions for the pressing problems of asylum seekers and refugees at every stage of their journeys, including innovative tech solutions: from pre-departure and journey arrangements, to the socio-economic inclusion in destination countries (Benton and Glennie, 2016).

The idea behind the surge in “refugee tech” in those years is that technology can help to mitigate some of the challenges that forcibly displaced people face (Culbertson et al., 2019). This sudden increase in ICT solutions for refugees has created a sort of “refugee tech bubble”. According to Mason (2018), “the burst of projects launched in late-2015 and early-2016 was unique in the history of digital social innovation” while at the same time “our research suggests that the majority of the 169 projects we know of have become inactive”. Indeed, Mason and colleagues at *betterplace lab*<sup>2</sup> compiled a unique mapping of the refugee tech available in the period 2015-2018 and monitored the activity of the mapped apps and software<sup>3</sup>, evidencing the problems related to this burst of tech solutions to refugees’ issues. This “refugee tech bubble” has thus left, on one hand, a “digital litter” of failed apps and software (Benton, 2019) (especially those aimed at mapping services for refugees in a certain destination country, that tend to get outdated quickly if not constantly updated), while on the other hand some developers have gained the experience and understanding (of refugees, host communities and local systems’ needs) to create ICT solutions that are more fit to answer to refugees and, even more broadly, to migrants’ problems.

Another issue is the actual uptake of these apps and software by refugees and TCNs, which depends on many factors including availability and affordability of hardware (e.g., smartphones, laptops) and internet connection but also refugees and TCNs’ preferences. On February 5, 2020, a Forbes’ article titled: “When It Comes To Tech, Refugees Need More Access, Not More Apps” (Ro, 2020). The main argument of the article is based on the findings of the Culberston et al. report (2019) that focused specifically on refugees and displaced people in refugee settlements. According to the report, refugees spend up to one third of their income in internet connection and data plans and struggle to have the necessary hardware to connect. Moreover, refugees seem to prefer apps that are widely used (e.g., Facebook, WhatsApp) instead of tailor-made apps, except for some that are very popular, such as the *Refugees Welcome*<sup>4</sup> app to find housing in the EU: “refugees reported little to no knowledge of existing technologies designed specifically for refugees, and when they did report knowledge, most said that the technology did not work or did not meet their needs” (Culberston, 2019: 22).

<sup>2</sup> See <https://www.betterplace-lab.org/>.

<sup>3</sup> Available at: <https://docs.google.com/spreadsheets/d/1t82LzxBH5GL2HOnEySZE6irLXLA16rogJ-r8Cf573yo/edit#gid=1052587333>.

<sup>4</sup> See: <https://www.refugees-welcome.net/>.

These are all cautionary tales that we need to keep into consideration in conducting our scoping exercise. This is of course not to deny that digital social innovation is or could be beneficial for refugees in many ways. At present, people who have been forced to flee their homes in this last decade, not only from Syria but also from many other countries (in the Middle East, Asia, Africa and Central and Latin America), have acquired a number of different legal statuses in the EU but they still share a common problem: the so-called “refugee gap”. While policy efforts in OECD countries have recently been strengthened in order to ensure social integration through labour market inclusion (OECD, 2020b), the latter remains a relevant issue for (former) asylum seekers and refugees/international protection holders. Indeed, studies have shown that labour market inclusion of refugees and people in situations of protracted displacement usually requires more time compared to other migrants. It takes them more years to reach the employment rates of natives while they are more likely to be unemployed and their wages remain significantly lower for many years (Fasani et al., 2018; Brell et al., 2020). In other words, the issue of labour market integration of refugees is a long-term one. This is why refugee tech might prove ever more valuable now, although in a changed context and with different constraints, than when the issue became an EU-wide priority five years ago.

The present scoping report builds on the research and work done in the framework of the Expert Group on Skills and Migration (EGSM) of the LABOUR INT 2 project, led by ETUC, and on the lessons generated by the first edition of LABOUR INT project and its pilot actions<sup>5</sup> (Salis and Pastore, 2017). Our specific focus is on ICT experiences and solutions devoted to facilitating labour market inclusion in European host countries of people who are experiencing the refugee gap and more in general for TCNs that struggle for a satisfactory and sustainable inclusion in the labour market. The aim of the report is to present the main results of an exploratory study conducted between February and November 2020, which mapped almost 50 ICT solutions for labour market integration.

In the next Section we provide a brief overview of EU policies and strategies concerning refugees and TCNs labour market integration and digitalisation, and we discuss the barriers to labour market integration that refugees and TCNs face, by building on the existing literature. We then present the methodology of the research (Section 3) to move on to presenting a classification of ICT solutions, based on the scoping exercise (Section 4). In the Section 5, we reflect on the most promising avenues for ICT solutions for refugees and TCNs labour market integration. Section 6 briefly considers the impact of the Covid-19 pandemic on the issue at hand and draws some conclusions. The report also includes a list of Recommendations and two Annexes containing the list of organisations that contributed to the present research and a summary of the ICT mapped solutions for refugees and TCNs’ labour market integration.

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<sup>5</sup> LABOUR INT 1 (HOME/2015/AMIF/AG-INTE/9085) and LABOUR INT 2 (AMIF-2017-AG-INTE-04 821506).

2.

## ▶ LABOUR MARKET INTEGRATION OF REFUGEES AND TCNs & DIGITALISATION IN THE EU

EU and Member States agendas have been increasingly addressing the issue of refugees and TCNs' socio-economic integration in the past five years, mainly as a consequence of and in response to the peaks in arrivals of the period 2015-2017 (Konle-Seidl, 2016). In particular, during these five years, the EU Commission has issued two Action Plans on Integration and Inclusion, namely one in 2016 and the second at the end of November 2020 (European Commission, 2016 and 2020a), due to "persisting challenges in relation to employment, education, access to basic services and to the social inclusion of migrants" that require further action from the side of the European Commission. In particular, for what concerns TCNs' labour market integration there are still significant gaps in the share of population in employment between natives (73,9 %) and migrants (64,2%), with migrant women being left even more behind (54,6% vs. 68,6% for native women), as highlighted by the Commission using Eurostat data. Moreover, 38,5% of adult migrants have a low level of education compared to 19,6% of adult natives. Finally, migrants have almost 40% risk of poverty or social exclusion while natives' rate, while also worrying, is much lower (19,5%).



The latest Action Plan is closely related to the New Pact on Migration and Asylum<sup>6</sup> and to the European Skills Agenda (European Commission, 2020c) for what concerns labour market integration issues. More specifically, the 2020 Integration Action Plan underlines the need for a “more effective and faster” assessment of migrants’ skills and a constant support to upskilling and reskilling “including through validation procedures for non-formal and informal learning” and promotes the use of the EU Skills Profile Tool for TCNs specifically at an early stage (European Commission, 2020a: 12; Testore et al., 2021). The Commission stresses also the need to foster migrant entrepreneurship and to continue promoting a multi-stakeholder approach, with specific attention to healthcare and housing services, to support migrants and especially migrant women’ integration in the labour market.

EU and member states agenda have been concerned also with another issue which is at the core of the present research: digitalisation and the preparation of EU labour markets for the ongoing technological revolution, which requires an intense commitment for the upskilling and reskilling of native and immigrant workers alike. The priority given to digitalisation implies also the urgent necessity to improve EU’s capacity to attract foreign talents who could help fill the numerous vacant positions requiring digital skills in the EU (European Commission, 2020b). According to the World Economic Forum, “In 10 years’ time, 50% of jobs will be changed by automation - but only 5% eliminated. 9 out of 10 jobs will require digital skills. Young, low-skilled and vulnerable people - all need help with upskilling” (van Eerd and Guo, 2020).

This is especially true for the large numbers of young asylum seekers, refugees and TCNs that arrived in the last years. Eurostat data on first time asylum applicants for the year 2019 show that more than three quarters of all applicants (77.3 %) were less than 35 years old and, more specifically, the age range 18-34 accounted for 47% of the total number of applicants, while another 30% of all applicants was composed of minors aged less than 18 years<sup>7</sup>.

All this has become even more urgent with the pandemic that, on the one hand, has deepened migration-related inequalities and, on the other, has highlighted the crucial role of immigrants as “essential workers” needed in the fight against Covid-19 and the subsequent recovery effort (Fasani and Mazza, 2020; OECD, 2020a).

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<sup>6</sup> See: [https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/new-pact-migration-and-asylum\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/new-pact-migration-and-asylum_en).

<sup>7</sup> See: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum\\_statistics#Age\\_and\\_gender\\_of\\_first-time\\_applicants](https://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics#Age_and_gender_of_first-time_applicants)

## 3.

# METHODOLOGICAL NOTE

This scoping exercise of ICT-based solutions to support labour market integration is not exhaustive and does not have the ambition to fully map the existent solutions. This research was conducted in the framework of the AMIF-funded LABOUR INT 2 project with the aim to explore the potential for technological innovation in TCNs integration into the labour market, exploring the ongoing innovative practices based on the use of ICTs. In agreement with LABOUR-INT 2's Expert Group on Skills and Migration (EGSM), we decided to broaden the scope of the originally envisaged research as to include not only ICT tools for skills assessment and validation, but more broadly meant to support labour market integration in the EU (plus UK).

The research was conducted between February and November 2020. It was slowed down in the months of the first lockdown in Italy due to the Covid-19 pandemic (March-May 2020) but was then resumed at an intense pace in the summer. The scoping exercise was conducted through a review of the literature, including grey literature, coupled with

- a) the input from a qualitative survey conducted among the members of LABOUR INT 2's EGSM and other stakeholders<sup>8</sup>;
- b) in-depth semi-structured interviews conducted with ICT developers and innovators around Europe<sup>9</sup>.

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<sup>8</sup> In this report, quotes from the survey are anonymised by using of the term "Survey respondent" followed by a number.

<sup>9</sup> In this report quotes from interviews are anonymised by using the term "Interviewee" followed by a number.

The survey carried out in June 2020 included not only the request to list and briefly describe ICTs of interest for the purposes of the research, but also questions on the perceived barriers to refugees and TCNs' labour market integration and on the impact of the Covid-19 pandemic on these barriers and on how ICT tools have been employed during the pandemic itself (see Annex 2). We received answers from national stakeholders from six different EU countries: Belgium, Bulgaria, France, Italy, Norway, and Slovenia. The survey respondents that agreed to be mentioned in the present report are listed in Annex 1. Organisations that were interviewed and expressed their consent to be mentioned in the research are listed in the same Annex.

Annex 3, instead, includes all digital experts and entrepreneurs that have been mapped during the research. The list only includes ICTs that are still active and constantly updated and that we assessed as particularly promising for refugees' and TCNs' labour market integration. The list also includes some EU projects that have been recently funded under the H2020 Innovation Action<sup>10</sup> on "Addressing the challenge of migrant integration through ICT-enabled solutions". The author would like to acknowledge that some of the items in Annex 2 have been retrieved from a very useful source, namely the map of digital inclusion projects and interventions for vulnerable groups developed in the framework partners of the MEDICI project, i.e., the Digital Inclusion Good Practices Atlas<sup>11</sup>. This Atlas contains "good practices" that "have been running long enough and have some evidence to suggest that they have made or will make a difference to the *digital exclusion* of vulnerable groups"<sup>12</sup>, including migrants.

One of the main limitations of the scoping exercise, which was set to include EU member states and UK, concerns the geographical coverage of the ICTs tools and projects mapped, which is a bias present also in some previous mapping efforts. While Mason's mapping of refugee tech in EU in 2018 mainly presented apps and software developed in Germany (not limited to ICT-based solutions for labour market integration), in our review somehow Italian cases are somehow overrepresented (followed by UK, Greece and Germany). This is partly explained with the snowballing technique that was used, mainly starting from Italy-based original contacts. However, the snowballing technique was not the only method used to gather data and information about existing ICTs. As already mentioned, the research has been enriched by conducting a survey among EGSM members and their networks. The use of the survey significantly broadened the geographical scope of the analysis and almost all EU countries are now represented in Annex 2 with at least one ICT tool and/or project.

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<sup>10</sup> Call MIGRATION (H2020-SC6-MIGRATION-2018-2019-2020). For more details on this closed call and the projects funded see: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/dt-migration-06-2018-2019>

<sup>11</sup> See <https://digitalinclusion.eu/>.

<sup>12</sup> Retrieved from: <https://digitalinclusion.eu/overview-map/>.

## 4.

# ICT SOLUTIONS FOR LABOUR MARKET INTEGRATION: DIFFERENT SERVICES TO OVERCOME DIFFERENT BARRIERS

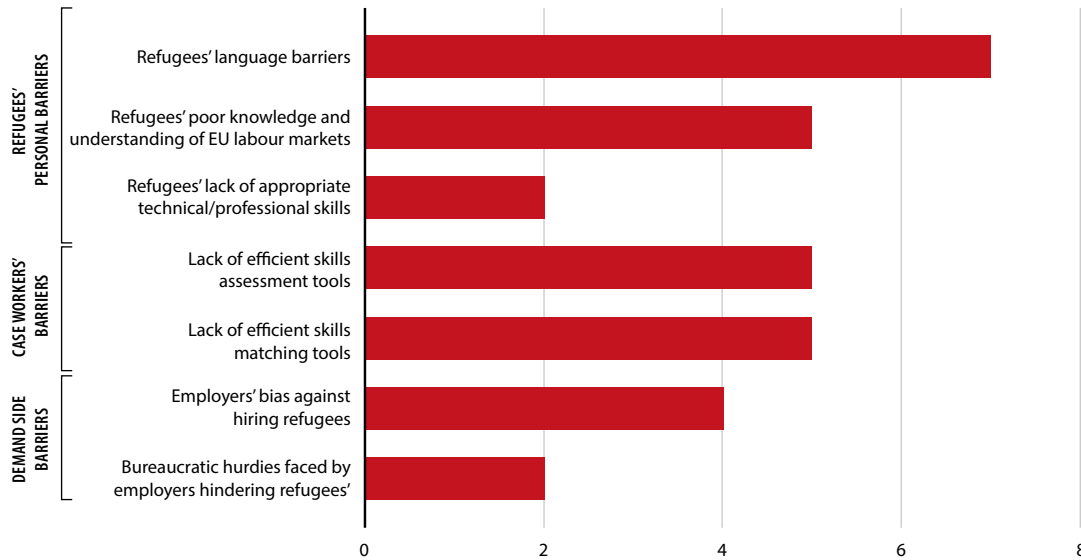
For the purposes of this study we decided, in agreement with EGSM members, that the target for the scoping exercise should not be limited to ICT-based tools meant for asylum seekers and refugees but include also those meant to target TCNs more generally. The main rationale for this choice was the following: forced migrants who arrived in Europe during the last decade now hold a wide variety of legal statuses but they all experienced, or are still experiencing, the so called “refugee gap” (see Section 1). The refugee gap implies lower employment rates, higher unemployment rates, underskilling and lower wages, not only compared to natives but also to other migrants (e.g., economic migrants).

Figure 1 shows what are the main reasons why refugees and recently arrived migrants experience the refugee gap according to our survey’s respondents. First and foremost, the greatest barrier to labour market integration, in our respondents’ perception, is the poor knowledge of the language of the destination country<sup>13</sup>, immediately followed by the poor understanding of EU labour markets rules and the workers’ rights and duties. It is interesting to notice that while survey respondents do not consider refugees to be generally lacking appropriate technical and/or professional skills, they believe, on the other hand, that the problems for refugees’ and TCNs’ access to the EU labour markets are determined by the tools employed by case workers and counsellors for skills assessment and skills matching. Moreover, survey respondents Overall, considering all the additional barriers that refugees have to face, as one of the interviewees said, finding solutions to facilitate refugees’ access and integration to the labour market is essential as it helps “levelling the playing field” (Interviewee 5).

<sup>13</sup> In the literature on the “refugee gap” language barriers are considered as difficulties that all migrants have to overcome, and thus not specific enough to explain the difference in labour market outcomes. On the contrary, lack of social capital along with additional barriers linked to their specific status (status uncertainty, restrictions on labour market access, ineligibility for some programs while application is processed; dispersal policies that isolate them in remote areas with no job opportunity) are identified as refugee-specific hurdles (Perino and Eve 2017; Fasani et al. 2018; Brell et al. 2020).

FIGURE 1:

► **BARRIERS TO LABOUR MARKET INTEGRATION FOR MIGRANTS EXPERIENCING THE REFUGEE GAP**

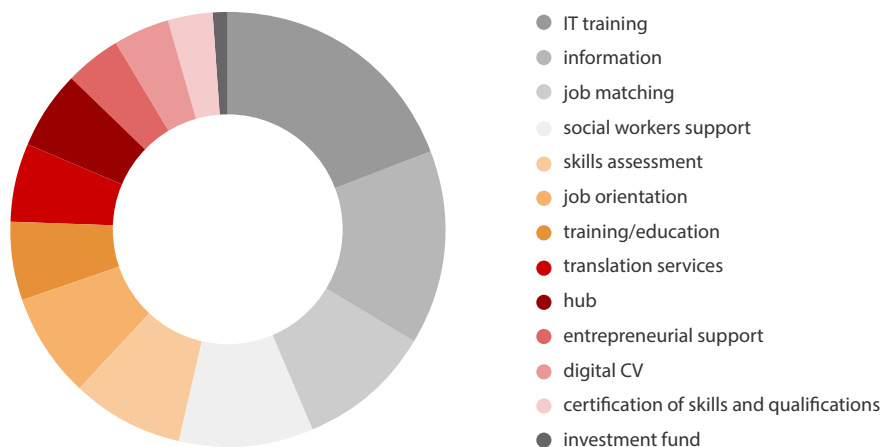


Source: authors' own elaboration on survey data

The exploratory study highlights that the researched ICT-based practices address an array of issues related to the refugee gap and to the various barriers to labour market integration presented above. From providing IT training to supporting entrepreneurship and providing translation services, all the solutions mapped, which are active at the time of finalising the report (December 2020), are functionally oriented at mitigating or eliminating one or more specific integration obstacles. The specific type of services at the core of the researched practices are illustrated below in Figure 2 (ordered by frequency). It must be noted that services are often combined in ICT practices (see Annex 2). For example, language training is usually combined with IT and Vocational Education and Training (VET) and it is indeed considered to be fundamental to move forward in the learning process (e.g., NewTalents4EU).

FIGURE 2:

► **ICTS' TYPE OF SERVICE**

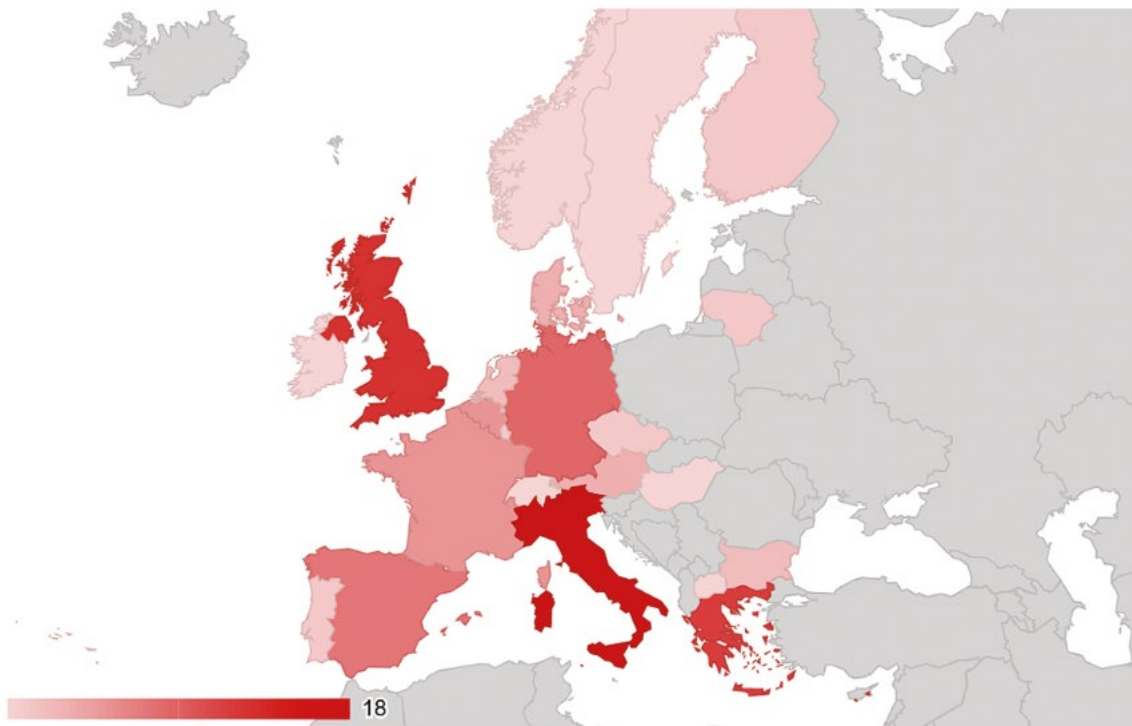


Source: authors' own elaboration

As for the geographical location of researched practices, it is illustrated in Figure 3. Besides Italy, also Greece – another major country of first arrival (Caponio, Giannetto, Ponzo, 2019) – stands out as a very important breeding ground for innovative practices not only on reception but also on socio-economic integration. A different situation emerges in Germany, which, already back in 2015, had a clearer governance of asylum and reception and could focus from the early stages on how to integrate the newcomers. This, combined with the fact that Germany received in 2015 almost ten times more the asylum applications received by Italy, and with a particularly strong wave of solidarity in the German society, can perhaps explain why Mason's mapping of refugee tech in 2018 showed a clear prevalence of apps and software developed in Germany as opposed to other EU countries. UK also has a high number of mapped ICT solutions, probably due also to a comparatively higher general concentration of developers and innovators. It is interesting to notice that also Bulgaria stands out as a particularly significant location of innovative practices.

FIGURE 3:

► ICTS' GEOGRAPHICAL DISTRIBUTION



Source: authors' own elaboration

Let us now move to a more specific focus on some of the four most frequent services delivered by the researched practices, namely IT training and specialised training, job matching, social/case workers' support, and skills assessment and validation.

The Boxes in this and in the next Section present some of the ICT-based practices that have been analysed in-depth and that are linked to the content of each paragraph: for IT training and specialised training there is *Powercoders*, an IT training organisation that is training and placing increasing numbers of refugees and TCNs in the ICT sector in Italy and Switzerland; for job matching, we selected *Action Emploi Réfugiés*, which combines the strength of an online job matching platform with off line services; for skills' assessment and validation, *MyGrants* is a particularly interesting organisation both for its skills' assessment methodology but also for its approach to the issue of refugees and TCNs' labour market integration; finally, for social/case workers support *SkillLab* is one of the first organisations focusing on testing its skills assessment tool with counsellors.

## IT TRAINING AND SPECIALISED TRAINING

The ICT sector in the EU is one with relevant employment potential in which well-trained refugees and TCNs have good chances to find a good-paying and steady job, as discussed in Section 2. At the same time, refugees, asylum seekers and TCNs who arrived in the period 2015-2017 are for the vast majority digital natives with a lot of time on their hands, particularly during the waiting period between the asylum application and the decision on their protection status which can last years (Interviewee 2). This is why so many IT training courses and coding schools have emerged all over the EU, offering free tuition and lasting on average between 3 and 9 months. These courses are often not only open to refugees and TCNs but also to youth of underserved communities, or unemployed people. Remains to notice that among refugees and TCNs, the percentage of women that participate in these courses is not high. According to the World Economic Forum, special attention has to be devoted specifically to training women in this sector (Madgavkar et al., 2020). Some ICT-based practices have also recognised the widespread lack of hardware and broadband connection that affects refugees, and underserved communities more in general, and coupled IT training with the provision of PCs, like the *Fast track to IT (FIT)* project in Ireland.

Along with IT training there are other types of training apps and software. Particularly interesting are the ICT solutions that use gamification techniques for training soft skills, like *Workeen*, developed by the H2020 SIRIUS project. The app *Workeen* is a “serious game”, which, through a gaming experience, helps TCNs understand the bureaucratic hurdles behind finding a job in a EU country while also training some of the soft skills necessary to be successful in the labour market. Other interesting ICT-based practices focus instead on VET, like *Kiron*, which provides online training to displaced people all over the world with the aim to giving them the opportunity to accessing the job market in UK and Germany.

### BOX 1: Powercoders (IT)

**MOTTO:** “Impacting Lives by Teaching how to Code”

**DESCRIPTION:**

Powercoders is a non-profit organisation that delivers free of charge coding courses. Powercoders started in Switzerland and is currently present also in Italy.

**ACTIVITIES:**

- ▶ IT training (3 months of bootcamp plus the internship)
- ▶ job orientation
- ▶ scouting of employers

**STRENGTHS:**

- ▶ very structured teaching method
- ▶ following-up on refugees’ needs and managing the relationship with the potential employers
- ▶ impact: 90% of participants get an internship thanks to the presence of two dedicated professional figures (i.e., Social Lead and Industry Lead)

**CHALLENGES AHEAD:**

- ▶ funding
- ▶ enrolment of candidates for the next edition of the courses due to the Covid-19 pandemic

**OTHER EXAMPLES OF ICT-BASED PRACTICES OR PROJECTS FOCUSING ON IT TRAINING:**

*Hack your Future, Code your Future, Simplon.co, NewTalents4EU, ICT4TCN.*

## ▶ JOB MATCHING

Numerous jobs' matching platforms have emerged in these last five years, promising to solve the issue of matching skills supply and demand at the local level. However, few of these experiments remain alive after the first one or two years. There are, however, some common patterns among the platforms that survive: first of all, an appropriate geographical coverage, as the potential for effective demand-supply matching is limited if the coverage is too narrow (or too wide). Second, the ability to scout and raise the awareness of small, medium and big enterprises. Third, their financial sustainability and, lastly, the trust and cooperation that they establish with local and national public services. A good job matching platform often offers other services such as the support to fill in a good CV or to prepare for an interview.

### BOX 2:

#### Action Emploi Réfugiés (FR)

**MOTTO:** "Une plate-forme de rapprochement entre réfugiés et employeurs en France"

#### DESCRIPTION:

Action Emploi Réfugiés (AERé) is a job matching service, bringing together employers and refugees in France since 2016. The association, mobilizes and informs companies looking for employees and it also contributes to giving a positive image of refugees, as a source of cultural enrichment and of talents.

#### ACTIVITIES:

- ▶ job matching through the online platform
- ▶ job orientation, information and preparation for the job market for refugees
- ▶ scouting of enterprises and awareness raising

#### STRENGTHS:

- ▶ job matching online services coupled with offline services for both refugees looking for a job (e.g., writing a CV, preparing for an interview, job orientation) and employers (e.g., information)

#### CHALLENGES AHEAD:

- ▶ scaling up to other regions in France and potentially in the rest of EU

#### OTHER EXAMPLES OF ICT-BASED PRACTICES OR PROJECTS FOCUSING ON JOB MATCHING:

*Workeer* (DE), *MyGrants* (IT), *Just Arrived* (SE) and job matching platforms for the agricultural sector that emerged recently in Italy (*HumusJob* and *Job in Country*)



## ► SKILLS' ASSESSMENT AND VALIDATION

In the past decade, EU policies and actors have been focused on solving the issue of having inadequate tools to unearth, assess and validate TCNs skills (Bogetti et al., 2017). One of the main outcomes of this effort was the creation of the EU Skills Profile Tool for TCNs, a multilingual online editor that has the goal of making TCNs skills visible for both potential employers and job counsellors and for themselves. However, as the LABOUR INT 2 report on the evaluation of the EU Skills Profile Tool for TCNs has shown (Testore et al., 2021), often times, the usefulness of these skills' assessment tools is misinterpreted by refugees and TCNs: either they do not see the point of using it and in losing so much time filling in a skills assessment tool, or they overestimate its usefulness and end up very frustrated and even disillusioned with the ability of social/case workers to support them in accessing the labour market. These feelings might dramatically damage the trust relationship between the social/case worker and the migrant. This is why other solutions have been tested by the refugee tech community in the past five years, first to assess and then to validate and certify refugees and TCNs skills and competences. Skills assessment methods are moving towards a greater use of Artificial Intelligence which adapts the skills assessment based on the inputs given by the user (e.g., *SkillLab*, *MyGrants*).

As for skills validation and certification of competences, an array of technologies, such as open badges and blockchain, has been put forward by developers and innovators. These experiences, however, seem to always get to a halt when it comes to integrating them into a broader and possibly public system of online credentialing, signalling a general unpreparedness of labour market public services to exploit the full potential of ICTs. In this regard, it must be noted that micro-credentialing is one of the objectives of the New EU Skills Agenda.

### BOX 3: MYGRANTS (IT)

**MOTTO:** "Opportunity in adversity"

#### DESCRIPTION:

**MyGrants is a for profit organisation created "by migrants for migrants" that recognises and uses the potential of big data to inform and train TCNs in Italy and to foster job and skills matching of TCNs in the Italian labour market. MyGrants' app has a carefully constructed methodology based, among other things, on adaptive micro-learning and the gamification of the learning experience (a "non-formal learning opportunity", as it is advertised on MyGrants website). Moreover, MyGrants is about to launch a job-matching platform (*Pickme*), and another platform to support the creation of a credit line for the users of the app.**

#### SERVICES:

- information
- adaptive micro-learning while tracking performance (skills assessment)
- dynamic online CV, constantly updated with app use (e.g., when the user completes a new module or quiz)
- suggestions for upskilling needs and opportunities

#### STRENGTHS:

- use of big data to gather information about the functioning of the Italian labour market (especially regarding skills' supply and demand) with refugees and asylum seekers
- gamification and adaptive micro-learning
- use of small and thick data to assess hard, soft, formal, non-formal and informal skills of users; no self-assessment
- the request to share personal information is always accompanied by the possibility to chose not to share it

#### CHALLENGES AHEAD:

- implementation of the job matching platform *Pickme* and of the platform to provide users with a credit line to ensure that they can actually show up on the first day of work
- funding

#### OTHER EXAMPLES OF ICT-BASED PRACTICES OR PROJECTS FOCUSING ON SKILLS' ASSESSMENT AND VALIDATION:

*MyGrants*, *SkillLab*, *Micado*, blockchain technologies (e.g., *TiiQu*) and open badges.

## ► SOCIAL/CASE WORKERS' SUPPORT

This type of service started recently to be addressed especially in EU projects aiming to coordinate public and private efforts to integrate refugees and TCNs in the labour market (Interviewee 1, Interviewee 11). Indeed, public services and social/case workers are often the gatekeepers of labour markets and thus the choice of the best skills assessment or skills matching tool falls on them. With the public sector being less prone to the use ICTs, the private sector is increasingly experimenting and testing ICT solutions that might work for case workers and counsellors, for example, by helping with the collection, storage and cataloguing of refugees and TCNs' certifications and diplomas, but also by monitoring the labour and skills demand from enterprises and the comparing it with the VET offer. This multi-stakeholder approach to ICTs could avoid the risk of duplication of work and help job counsellors and case workers concentrate on delivering more individualised and efficient services.

### BOX 4:

#### SkillLab (NL)

MOTTO: "Turn skills into careers"

#### DESCRIPTION:

SkillLab is a very dynamic organisation which employs Artificial Intelligence to decouple skills from job titles (i.e., by identifying skills based on past activity and not based on the job title), in order to ensure that users and counsellors recognise skills without the risk of misinterpretation, which is always looming when job titles are used to describe previous experiences. Making skills visible is the first step to ensure the best matching with job or training/education opportunities. SkillLab uses the European Skills, Competences, Qualifications and Occupations (ESCO) to first profile and assess refugees and TCNs' skills, which is the same framework used by the EU Skills Profile Tool for TCNs. It is currently being tested in Amsterdam (NL), various locations in Finland, Bristol (UK), Belgium (Flemish national employment service), Thessaloniki (GR), Canada, Iraq, and other countries outside the EU thanks to a collaboration with IOM. SkillLab is available in 26 European languages and Arabic.

#### SERVICES:

- ▶ skills assessment tool
- ▶ skill-based career orientation
- ▶ employment and career services' support (tested in Amsterdam and in other European cities)

#### STRENGTHS:

- ▶ bringing together case workers/job counsellors of local public services, refugees, and ICT developers
- ▶ adaptive skills assessment

#### CHALLENGES AHEAD:

- ▶ adapting the ICT solution to the needs of local employment and career services in multiple locations

#### OTHER EXAMPLES OF ICT-BASED PRACTICES OR PROJECTS FOCUSING ON SOCIAL/CASE WORKERS' SUPPORT:

H2020 funded projects such as *MiiCT*, *easyRights*, *WELCOME*, *NADINE*, *Re-Build*.

## 5. PROMISING AVENUES AND CHALLENGES FOR ICT SOLUTIONS FOR REFUGEES AND MIGRANTS' LABOUR MARKET INTEGRATION

Since 2015, on the basis of large-scale processes of grassroots trial and error, the ICT community has gradually changed its approach towards the issue of integration of refugees and migrants by adopting a more needs-based, human-centric and systemic approach. In 2015, it was already clear that ICTs “constitute an important resource for employability and integration of immigrants, and that immigrants are in fact using these resources at the same level or more than nationals” (Reichel et al., 2015: 123). However, access to hardware and broadband connection and access to ICTs is still not everyone’s right, even though multiple studies pointed out the need to address this issue (Reichel et al., 2015; Culbertson, 2019). On the contrary, with the Covid-19 pandemic, digital divides and their consequences have become even more evident and problematic. Moreover, especially in 2015-2016, a number of reports and studies underlined the need to focus more on tools that could help refugees enter multilingual classes with their peers in the host country, on alternative skills assessment and validation methodologies, on access to credit, but also on “how to better tailor information to people who may have limited institutional knowledge and understanding of how to navigate unfamiliar systems” (Reichel et al., 2015; Benton and Glennie, 2016; Benton, 2019). In 2019, it has become clear that refugee tech has grown out of proportion and that it is necessary to avoid the duplication of information platforms and to ensure that tech solutions “keep their digital administration in order” (Benton, 2019). ICTs that emerged in 2015 and 2016 (and survived the first two years of life) have mostly taken stock of these suggestions but also of failed experiences, while also a new generation of ICT practices is appearing. Both older and newer ICT practices depict some promising avenues to facilitate refugees and migrants’ labour market integration, taking into consideration, as mentioned at the beginning of this paragraph, the centrality of the human factor and the need for a systemic approach.

Let us start from what I call the “human factor”. The urgency to respond to both refugees and case workers’ needs brings to the fore the centrality of the human factor in developing ICT solutions for people affected by the refugee gap. This is something that was widely overlooked in the majority of ICT solutions devised for refugees in 2015; in those first years, developers and innovators looked at refugees’ problems from a purely technical and “cold” problem-solving perspective, without considering the social and human nature of the issue at hand (Interviewee 3).

The most interesting and promising examples of ICT solutions for labour market integration of people struggling with the refugee gap are now developed with a view to, first of all, respond to actual refugees' and migrants' needs by connecting refugees and tech entrepreneurs and experts, while also training refugees to become part of the solution (e.g., Techfugees - Box 5, Powercoders - Box 1). Secondly, recently developed tech solutions take increasingly into consideration the need of social workers to be supported in their everyday work, for example when trying to assess and validate the skills of refugees and TCNs while at the same time also having to consider the sensitivity of the situation and the different approaches that different targets require. *Skilllab* (Box 4) is a good example: its key practical goal is to simplify case workers and job counsellors' work instead of adding a further layer of complexity.

## BOX 5: Techfugees (UK)

**MOTTO:** "Empowering displaced people with technology"

### DESCRIPTION:

Techfugees is one of the first organisations in Europe to address refugees issues with tech solutions, but it is also the only organisation devoted to creating an ecosystem of innovation in which refugee tech can thrive.

### SERVICES:

- ▶ creating and supporting a community of ICT developers and innovators working in the field of #tech4refugees through hackatons and a web-based and mobile-friendly platform powered by Techfugees (i.e., Basefugees)
- ▶ IT training for women who are also refugees
- ▶ carrying out a collaborative data collection project on the effects of Covid-19 pandemic on the refugee community

### STRENGTHS:

- ▶ engaging refugees in the design of refugee tech, making them part of the solution
- ▶ sharing insights and knowledge with a worldwide community of developers
- ▶ providing IT training specifically targeting women

### CHALLENGES AHEAD:

- ▶ funding
- ▶ awareness raising

On a similar note, another issue that has been addressed by some ICT-based practices in the field of labour integration is ensuring that the technology is accessible to everyone, not only to high-skilled but also low-skilled and illiterate people, as well as to small enterprises that do not know how to deal with refugees, by providing both an online and an off-line/in person service. For instance, the start-up *Action Emploi Réfugiés* (Box 2) has created a job-matching platform, which connects local businesses (both big and small) with refugees (and vice versa) while also providing an off-line support service to both refugees (e.g., to write an effective CV and to prepare for a job interview) and businesses<sup>14</sup>.

<sup>14</sup> See: <https://infoemploirefugies.com/>.

Finally, yet importantly, organisations like *MyGrants* are developing a **systemic approach** to asylum seekers, refugees and migrants' labour market inclusion, by combining various services and addressing multiple barriers to labour market integration at once. Some of these services were already identified in 2015-2016 as important avenues for refugee tech development: build classrooms and trainings to be adaptable to refugees' needs and learning pace, streamline the recognition of credentials of people who might have acquired skills and experiences outside of the traditional education pathways, and facilitate refugees' access to credit (Benton and Glennie, 2016; Reichel et al., 2015).

The experience of *Konexio*, a French organisation offering training programs in digital and coding skills for refugees and disadvantaged groups, also highlights how adopting a systemic approach pays off: in this case, the IT training is connected with workshops on soft skills and a job matching service to ensure that both refugees and employers' expectations match reality, while at the same time working in cooperation with housing, health and administrative actors and services to address further barriers that may hinder refugees' integration in the labour market. This approach ensures that the matching is successful over time.

EU projects such as *NADINE* seem to have also embraced a systemic approach by capitalising on big data available on refugees and TCNs' skills and on the skill needs of the local labour market, combining it with the analysis of local services, to create a career guidance platform that supports case workers in the design of personalised socio-economic integration paths for refugees and TCNs.

Notwithstanding the steps forward that ICT developers have taken, learning from failed refugee tech, there are still some issues that need to be addressed. First of all, the lack of institutionalisation/coordination either at national and/or at EU level of ICT solutions, except for a few exceptions like *Check.work* in Germany (see Annex 3) or the *EU Skills Profile Tool for TCNs*, which however is not widely employed in the EU and still has some glitches (Testore et al., 2021). Overall, there is still a considerable multiplication of apps and software for refugees and TCNs integration, even though the pace at which new refugee tech is emerging seems slower than the period 2015-2016, when four new apps for refugees appeared every week (Mason, 2018).

Another crucial issue is funding, and thus sustainability, of refugee tech start-ups. Indeed, the boom of refugee tech of the past years was driven not only by solidarity and activism but also by the funding opportunities that burgeoned in the period 2015-2017. Nowadays we are in a very different situation, one in which people affected by the refugee gap are among the most affected by the pandemic in their quest for labour market integration (European Commission, 2020a) while at the same time the economic crisis forces member states to cut support to the very same organisations that have been active and prolific in pushing forward digital social innovation solutions in the past five to ten years. And the organisations working in refugee tech can rarely rely on significant amount of own capital, which they absolutely need, especially in the initial phase of development. *Worker*, for example, started as project for the Bachelor thesis of its founders.

Funding is also necessary to ensure that data protection of refugees and TCNs using dedicated apps or software is respected at all stages. This is a paramount requirement to avoid that safety is endangered, especially for potentially vulnerable users. During our interview, *TiiQu* representative stressed the need to ensure that data that are fully controlled by refugees and displaced people (i.e., with blockchain technology) without losing the advantages for the host society of using refugee tech; in the case of *TiiQu*, the blockchain technology developed gives the opportunity to public authorities to verify refugees' skills and identity, but also to monitor if the money spent in VET or in a specific labour market integration programme has had an impact.

Overall, a thorough study on the use and impact of these ICTs would be beneficial to decide which solutions are effective and efficient and should, in turn, be replicated and transferred across the EU.

## 6. FINAL REMARKS

The current situation of looming economic crisis due to the Covid-19 pandemic is clearly changing EU labour markets and even the perception of some specific professions and of the potential role of migrant workers in the recovery. This is clearly exemplified by the emergence of the term “key” or “essential” workers to define people employed in crucial sectors like healthcare and agriculture (JRC, 2020), sectors where TCNs and EU citizens with a migrant background are highly present, leaving them “more exposed to the pandemic” (European Commission, 2020a: 2). Nonetheless, both interviewees and survey respondents shared the conviction that the Covid-19 crisis only “sharpened problems that were already in place” (Survey Respondent 1). In particular, they highlighted the potential worsening of issues such as job insecurity, exploitation (especially in the key sectors mentioned above), difficulties in accessing public services and welfare measures, and, last but not least, lack of social safety nets. However, the lockdown highlighted also other problems related to the use of ICTs, often overlooked when it comes to TCNs and refugees in non-refugees’ settings, like internet access and availability of PCs and/or smartphones, crucial for training and education. One of the survey respondents reported: “In the case of migrants and refugees not only was the availability of ICT tools insufficient for them [during the lockdown], but also the low professional content of their jobs made the use of the same ICT tools of little use.” (Survey Respondent 4)

In sum, in an EU where the labour market integration of TCNs is a priority and where the Covid-19 pandemic is accelerating digitalisation processes (but also deepening pre-existing inequalities), the refugee tech can continue to offer promising solutions, not only for refugees and TCNs themselves but also for public services and enterprises that can experiment and hopefully get to fully harness the potential of ICTs.

People affected by the refugee gap certainly remain a particularly vulnerable group, with specific needs and barriers hampering their satisfactory and sustainable access and inclusion in the labour market. However, being “the most tech-savvy population of migrants in history ... with smartphone penetration rates of up to 90%” (AbuJarour et al. 2019: 2), they also represent a vast untapped potential. Therefore, they can be (and should be seen as) not just targets and beneficiaries of innovation, but also catalysers and co-creators of ICT-based policy solutions scalable and transferable to other groups at risk of socio-economic marginalisation.

## RECOMMENDATIONS

After exploring opportunities and challenges in the field of **technological innovation for refugees and TCNs' labour market integration**, here are 10 points for economic and social partners to enhance their role in this field.

1. Ensure access to quality connection and quality hardware: this aspect should be treated more and more as a fundamental right (NewTalents4EU project in Italy and Hungary: the problem for people attending the courses was access to personal laptops; this implied that trainings could not go on during lockdown).
2. Focus on the link between innovative ICT solutions and public services and improve the technical capacity of the social/case workers: skills assessment can be faster if the process is standardised, case workers trained, and information stored and catalogued in a way that is easy to access and easy to share among job matching services, training institutions and enterprises.
3. Support the development of ICT-based practices adopting a systemic approach to the issue of refugees and TCNs' integration (e.g., considering that successful labour market integration may critically depend on adequate housing and access to credit).
4. Involve refugees and TCNs in co-creating solutions that answer to their needs by continuing to promote IT training for refugees and TCNs, especially women, and by engaging them in the design process of refugee tech.
5. Fully exploit the potential of serious games, gamification techniques and artificial intelligence (AI) for training and education (e.g., promoting the use of adaptive learning techniques).
6. Support the adoption of easily adaptable digital CVs (like *Europass*) ensuring that recognition of acquired skills is automatic, secure and fully transferable (e.g., with open badges or blockchain technology).
7. Exploit the potential of big data for job matching (e.g., by monitoring skills' supply and demand) without forgetting that trust and the human factor is crucial in the hiring process and that refugees and TCNs need an in-person follow-up once in the job market, same as businesses that hire them (mixing online and offline).
8. Avoid multiplication of ICT solutions that might quickly become obsolete or are not widely used in order to avoid dispersion/fragmentation of funding.
9. Ensure that data protection is respected at all stages to avoid that the safety of refugees and TCNs who engage with ICTs is endangered.
10. Promote and support gender-sensitive ICT solutions and those that can be customised for different targets (e.g., for both high- and low-skilled migrants).

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We wish to thank also the survey respondent and their organisations together with the ICT developers and innovators who have dedicated their time to answering our questions.

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## ANNEX 1. ORGANISATIONS AND PROJECTS CONTRIBUTING TO THE RESEARCH<sup>15</sup>

### SURVEY

- Association of Free Trade Unions of Slovenia - ZSSS (Slovenia)
- Confederation Independent Trade Unions in Bulgaria - CITUB (Bulgaria)
- Confederazione Italiana Sindacati Lavoratori - CISL (Italy)
- Eurochambers (Belgium)
- Force Ouvrière - FO (France)
- LO Norge (Norway)
- Migrants CSC (Belgium)
- Unione Italia del Lavoro - UIL (Italy)

### INTERVIEWS

- Humus
- LanguageAid
- MyGrants
- Powercoders
- SkillLab
- Smart Bananas (MEDICI)
- Start Refugees
- Techfugees
- TiiQu
- University of Bologna (Micado)

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<sup>15</sup> The authors wish to thank all the organisations and people who contributed to the present research, including those that did not wish to appear in this list.

## ANNEX 2. QUESTIONNAIRE USED FOR THE EGSM SURVEY

### ICT TOOLS FOR REFUGEES' LABOUR MARKET INTEGRATION

#### MAPPING EXISTING EXPERIENCES IN THE EU

The present short questionnaire is developed within the framework of the Labour-INT2 project, co-financed by the European Commission (AMIF).

This form is divided into three sections:

- 1) general info on your organisation;
- 2) challenges faced by refugees and asylum seekers in gaining access to the EU labour market;
- 3) ICT solutions devised in the EU to tackle the abovementioned challenges.

Please share broadly within your constituencies.

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Data collected with the present form will be used solely for the purposes of the Labour-Int project and will be deleted once the project is concluded. Should you wish to have your data removed before the end of the Labour-Int project, please send an email to the following email address: [feri@feri.it](mailto:feri@feri.it)

Under the General Data Protection Regulation (GDPR) (EU) 2016/679, we have a legal duty to protect any information we collect from you. Information contained in this survey and any attachments may be privileged or confidential and intended for the exclusive use of the original recipient. No personal data will be collected nor analysed. If you have received the link to the survey by email by mistake, please advise the sender immediately and delete the email, including emptying your deleted email box.

The content of this survey represents the views of the author only and is his/her sole responsibility. The European Commission does not accept any responsibility for use that may be made of the information it contains.

**SECTION 1**

## YOUR ORGANISATION

Name of your organisation:

Is your organisation active in the field of labour market integration of refugees or migrants?

Yes

No

Other

Please let us know if your organisation wants to be cited as a contributor to the present research

Yes

No

Other

## SECTION 2

### CHALLENGES: WHAT HINDERS REFUGEES' INTEGRATION INTO THE EU LABOUR MARKET?

What are the main problems faced by refugees in gaining access and integrating into the EU labour market?

- Refugees' language barriers
- Refugees' poor knowledge and understanding of EU labour markets and EU work environments
- Refugees' lack of appropriate technical/professional skills
- Lack of efficient skills assessment tools (especially considering refugees' soft skills)
- Lack of efficient skills matching tools
- Employers' bias against hiring refugees
- Bureaucratic hurdles faced by employers hindering refugees' employability
- Other Discrimination and lack of effective pathways to refugees' integration

How will the main challenges for refugees' labour market integration change with the advent of the COVID-19 crisis?

## SECTION 3

### SOLUTIONS: ICT TOOLS DESIGNED TO OVERCOME REFUGEES' JOB-RELATED CHALLENGES

ICT tools for refugees and TCNs' labour market integration

This is the core of our mapping effort, so please help us by listing as many ICT tools and experiences that you know of in the field of refugees' (but also migrants/Third Country Nationals') labour market integration

Please send via email (at [leila.giannetto@feri.it](mailto:leila.giannetto@feri.it)) the Excel file provided listing the ICT tools and experiences that you are aware of in the EU and abroad (also available for download: <https://drive.google.com/file/d/1fMWlrq0NWm1Sx1zXHvJKGpmMHBE3ayAC/view?usp=sharing> ).

A few examples are provided in the spreadsheet.

You can also send other files, in any format, listing/describing ICT tools and experiences (max 5 files).

The ongoing COVID-19 pandemic is having a devastating (although uneven) labour market impact, including on migrants and refugees. Are you aware of any specific ICT solutions adopted or being planned to cope with this particular challenge? If so, please provide references or other information.

## ANNEX 3. SUMMARY TABLE OF RESEARCHED ICT-BASED PRACTICES FOR REFUGEES AND TCNS' LABOUR MARKET INTEGRATION

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
1	Skilllab	Skilllab	2016	<a href="https://skilllab.io/">https://skilllab.io/</a>	Online platform and skills assessment tool – “Artificial intelligence-based technology that assesses refugees’ skills and competencies and links that skill set with job profiles”	everyone - focus on newcomers	skills assessment, job orientation, supporting social workers, digital CV, information	The Netherlands, Finland, Greece, UK, but also “sending” countries (e.g., Iraq)
2	MyGrants	MyGrants	2017 (first prototype)	<a href="https://mygrants.it/">https://mygrants.it/</a>	App – MyGrants is a for profit organisation created “by migrants for migrants” that recognises and uses the potential of big data to inform and train TCNs in Italy and to foster job and skills matching of TCNs in the Italian labour market	Refugees and asylum seekers, TCNs	skills assessment	Italy
3	Techfugees	Techfugees	2015	<a href="https://techfugees.com/">https://techfugees.com/</a>	Online platform and IT training school – “Techfugees is an impact driven global organisation nurturing a sustainable ecosystem of tech solutions supporting the inclusion of displaced people. Techfugees exists to empower displaced people whilst supporting tech innovations designed by, with and for them”	forcibly displaced people	hub, IT training	Worldwide
4	Devugees - Digital Careers Institute	Devugees - Digital Careers Institute	2016	<a href="https://digitalcareerinstitute.org/">https://digitalcareerinstitute.org/</a>	IT training institution – “The Digital Career Institute was born as an initiative to integrate refugees into digital jobs. Today it is committed to train anyone who wants to pursue a tech career”	refugees, everyone	IT training	Germany
5	Code your future	Code your future	2017	<a href="https://codeyourfuture.io/">https://codeyourfuture.io/</a>	IT training institution – “CodeYourFuture (CYF) is a UK based non-profit organisation that trains refugees and other disadvantaged people to become web developers and helps them to find work in the tech industry. CYF students are trained in full-stack web development by professional volunteers developers from the industry, putting a strong emphasis on collaboration and product development through tech projects. CYF graduates work in companies like FT, BBC, STV, Ticketmaster and startups like Adzuna, Sensible Object, tlr and WeGotPop”	refugees and asylum seekers, disadvantaged people	IT training	UK, Italy

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
6	Hack your future	hack your future	2016	<a href="https://www.hackyourfuture.net/">https://www.hackyourfuture.net/</a>	IT training institution – “HackYourFuture is a free 7-month web development program for talented refugees and other disadvantaged groups with limited access to education and the labour market”	refugees and asylum seekers, disadvantaged groups	IT training	The Netherlands, Greece, Spain, UK
7	Mama Venture	Mama Venture	2018	<a href="https://mamaventure.it/chi-siamo/">https://mamaventure.it/chi-siamo/</a>	Online platform and investment fund for entrepreneurs with a migrant background – “Mama Venture is the first investment company that deals with providing financial opportunities and support to the business projects of migrant talents in the launch, development, and growth of their ideas through an absolutely innovative community process”	TCNs	investment fund, entrepreneurial support	Italy
8	Job in country	Coldiretti	2014	<a href="https://lavoro.coldiretti.it/">https://lavoro.coldiretti.it/</a>	Job matching platform for the agricultural sector – “Job in country, authorized by the Ministry of Labour to provide intermediation services, aims to bring together the needs of companies looking for employees with workers who aspire to new job placement opportunities, in a framework of absolute transparency and legality. It is a service that combines an efficient computerized system with personalized support and assistance to users”	people employed in the agricultural sector, seasonal workers, TCNs	job matching	Italy
9	HUMUSJOB	HUMUS	2019	<a href="https://humusjob.it">humusjob.it</a>	Job matching platform for the agricultural sector in Piedmont – “Humus is a social enterprise focusing not on profit but on the realisation of the job matching mission, by promoting the culture of legality, fighting exploitation and fostering the sustainable integration of seasonal and foreign workers in the agricultural sector”	people employed in the agricultural sector, seasonal workers, TCNs	job matching	Italy
10	Action Emploi Réfugiés	Action Emploi Réfugiés	2016	<a href="https://www.actionemploirefugies.com/">https://www.actionemploirefugies.com/</a>	Job matching platform – The platform is run by the start-up Action Emploi Réfugiés, which is active in Paris and Bordeaux and in the surrounding areas. Action Emploi Réfugiés combines online job matching services with the offline support to refugees and asylum seekers who need help with their CV, preparation to the interview, job guidance. The start-up scouts the employers and raises awareness among local enterprises	refugees	job matching, job orientation, information	Paris and Bordeaux (France)



	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
11	Workeer	Workeer	2015	<a href="https://workeer.de/ueber-workeer">https://workeer.de/ueber-workeer</a>	Training and job matching platform - "Workeer is the first training and job exchange in Germany specifically aimed at refugees. The platform is intended to create a suitable environment in which this particular group of job seekers can meet employers who are positive towards them. With the help of employer and applicant profiles, as well as numerous job offers in various industries and locations throughout Germany, we enable the first uncomplicated contact and exchange between refugees and employers"	refugees	job matching	Germany
12	Check.work	IHK Muenchen		<a href="https://www.ihk-muenchen.de/ausbildung/integration/check-work/">https://www.ihk-muenchen.de/ausbildung/integration/check-work/</a>	App and online skills assessment tool for refugees used by Chambers of Commerce across Germany – "The online-based tool 'check.work' helps to identify talents, skills and initial professional experience and to make them visible ... It has two modules: The image-based application can be used to show which professional experience has already been gained in the home countries. Consultants can thus quickly identify the existing qualifications in order to subsequently advise the participants individually and convey them to further integration measures in a targeted manner. ... As an extension of our competence check21, the tool is a scientifically sound test for recording job-relevant skills and personality traits. The online application consists of a performance test and a personality questionnaire for self-assessment. Module 2 can help counsellors to objectively and independently determine strengths and skills. In this way, the tool serves as a support for professional orientation"	refugees and TCNs	skills assessment, job orientating, supporting social workers	Germany
13	TiiQu	TiiQu Ltd.	2016	<a href="https://it.tiiqu.com/">https://it.tiiqu.com/</a>	Blockchain for competences' certification – "TiiQu Ltd., English startup active in the blockchain space, proposes an innovative solution that covers all the stages of the stay of the refugee from his/her arrival in the hosting country to all the possible integration steps ... This application of blockchain technology is able to give the refugee full control of their data and certificates, and, at the same time, to provide the society with a tool for verifying their identity, their skills, qualifications, and the public authorities with a reliable monitoring system on the use of the public resources allocated for the refugees"	refugees and TCNs, everyone	certification of skills and qualifications	Italy and UK

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
14	Powercoders	FGS social innovation and Le Wagon	2017 in Switzerland; 2019 in Italy	<a href="https://powercoders.org/">https://powercoders.org/</a>	IT training programme – “Powercoders is a non-profit association and the program is self-funded and free of charge for the selected participants ... Powercoders believes in promoting equal opportunities for diverse talents in the IT industry. We train women and men of diverse backgrounds to fulfil their potential in a digital future. We offer a 3-month coding boot camp, followed by an internship. The ultimate goal of Powercoders is the permanent placement of trained refugees & migrants in IT-companies and IT-departments”	refugees	IT training	Switzerland, Italy
15	Language Aid	KENN-bee/ Algoritmo Associates	2019	<a href="https://languageaid.org/">https://languageaid.org/</a>	Translation services for public/private organisations and individuals – “This platform aims to be a tool to overcome language barriers and its purpose is to help communicate in emergency situations, when knowledge becomes a fundamental factor for everyone’s safety. We are making a great effort to make it usable by everyone free of charge. The contribution of associations, organizations, etc. and native-speaking volunteers is essential”	TCNs	translation services	Italy
16	Language Aid	Languageaid Ltd		<a href="https://languageaid.co.uk/">https://languageaid.co.uk/</a>	Translation services for non-UK citizens useful to access public services	non-UK citizens	translation services	UK
17	Kiron	Kiron	2015	<a href="https://kiron.ngo/en/">https://kiron.ngo/en/</a>	Training school – “free online learning opportunities to refugees and underserved communities. We believe that education can change lives, transform communities, and build bridges. That’s why we created the online learning platform Kiron Campus, so we can ensure that our students receive free access to high-quality education for academic, professional and personal growth”	refugees and underserved communities	training	UK, Germany
18	Molengeek	Molengeek	2015	<a href="https://molengeek.com/">https://molengeek.com/</a>	IT training school (“Coding school”) and accelerator for start-ups and entrepreneurs	residents of Molenbeek, TCNs, second generation	entrepreneurial support, IT training	Belgium
19	BG information system for job placement (beta version)	Bulgarian Council on Refugees and Migrants		<a href="https://www.refugee-integration.bg/en/">https://www.refugee-integration.bg/en/</a>	Information platform – it offers access to user-friendly information and resources, facilitating the work of municipal staff and other stakeholders involved in the process of refugee integration; UNHCR is also involved	refugees and TCNs	job matching, information	Bulgaria

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
20	Orange	MELIUS/Cramaris	2018	<a href="http://www.orangecareer.it/">http://www.orangecareer.it/</a>	Carreer management platform - Orange Career Platform è una piattaforma online che mette in comunicazione utenti, enti di formazione e aziende permettendo una compilazione di un curriculum vitae che mette in evidenza le competenze acquisite durante gli studi e le esperienze lavorative	everyone	digital CV, information, job orientation, supporting social workers, job matching	Italy
21	Juma Map	ARCI, UNHCR	2018	<a href="https://www.jumamap.it/it/lavoro/">https://www.jumamap.it/it/lavoro/</a>	Information platform for refugee services with interactive map – "Refugees map services": geolocation of refugee services	refugees and asylum seekers	hub	Italy
22	CITUB	Confederation Independent Trade Unions in Bulgaria (CITUB)		<a href="http://mfwp.labour-bg.net/">http://mfwp.labour-bg.net/</a>	Information platform for refugee services – "Pathways to employment with nine thematic areas: 'I want to do a job'; 'I'm working'; 'Remuneration of my work'; 'Protection from hazards in the workplace and in life - compulsory insurance'; 'Once I started working to change anything?'; 'Who monitors the rights of workers?'"	refugees and asylum seekers, TCNs	information	Bulgaria
23	Makers Unite	Makers Unite	2016	<a href="https://www.makersunite.eu/">https://www.makersunite.eu/</a>	Platform to support makers – "globally recognised network of creative locals and newcomers, designing and co-creating a diversity of sustainable products. Production is led by our in-house tailor team of newcomers with refugee backgrounds"	refugees and asylum seekers, TCNs, newcomers	hub, entrepreneurial support	The Netherlands
24	Just Arrived	Just Arrived Bemanning AB	2016	<a href="https://www.justarrived.se/?lang=en">https://www.justarrived.se/?lang=en</a>	Job-matching platform and integration hub – "we work with the vision that foreign-born talent should have the same conditions for long-term employment as Swedes. Diversity contributes to better innovation power and profitability. Not only do we help you as a company utilize international talents for the best business benefits through tailor-made solutions. Since its start in 2016, Just Arrived has built up a talent pool of more than 20,000 candidates. We, therefore, have the opportunity to help companies in different types of industries with different types of jobs"	refugees and asylum seekers, TCNs, newcomers	job matching, job orientation, information, hub	Sweden
<b>EU funded projects and ICTs</b>								
25	EU skills profile tool for TCNs	European Commission	2017	<a href="https://ec.europa.eu/migrantskills/">https://ec.europa.eu/migrantskills/</a>	Skills assessment online tool – multilingual online editor "intended for use by organisations offering assistance to Third Country Nationals. It helps to map the skills, qualifications and work experiences of the third country nationals and to give them personalised advice on further steps, e.g. a referral to recognition of diplomas, skills validation, further training or employment support services"	TCNs	skills assessment, job orientation	Europe

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
26	European Qualifications Passport for Refugees	COE, UNHCR	2017	<a href="https://www.coe.int/en/web/education/recognition-of-refugees-qualifications">https://www.coe.int/en/web/education/recognition-of-refugees-qualifications</a>	Blockchain technology coupled with an in-person methodology to certify skills and recognise qualification – “The European Qualifications Passport for Refugees is a document providing an assessment of the higher education qualifications based on available documentation and a structured interview. It also presents information on the applicant’s work experience and language proficiency. The document provides reliable information for integration and progression towards employment and admission to further studies. It is a specially developed assessment scheme for refugees, even for those who cannot fully document their qualifications”	refugees and asylum seekers	skills assessment, certification of skills and qualifications	Europe
27	WORKEEN	SIRIUS project partners	2020	<a href="https://www.sirius-project.eu/news/work-keen-sirius-game-launched-today">https://www.sirius-project.eu/news/work-keen-sirius-game-launched-today</a>	App – serious game developed by the H2020 SIRIUS project, downloadable free of charge and can be used autonomously or “during individual or collective training sessions organised by employment agencies, migrant organisations and other stakeholders. ... The application guides job seekers through the two stages of job search and workplace integration. It provides extensive information on how to adjust to new or unknown work and social environments and provides interactive gaming scenarios to help users develop the soft skills they need to be successful”	refugees and asylum seekers, TCNs	training, information	EU (SIRIUS countries)
28	FUTURAE - progetto imprese migranti	Formaper	2020	<a href="https://www.formacamera.it/progetti/futur-ae-programma-imprese-migranti/">https://www.formacamera.it/progetti/futur-ae-programma-imprese-migranti/</a>	National project and online platform – “the project foresees that the 18 Chambers of Commerce, with the support of Unioncamere, take care of information activities at local level addressed to at least 2000 people (TCNs), the selection of future entrepreneurs (at least 1200 profiles), the provision of training services to at least 800 participants, aimed at improving the knowledge and operational and management skills for the implementation of business projects (including knowledge of the financial products available), the organization of the business plan and the credit accompanying phase (at least 400 participants), creation of an Observatory”	TCNs	information, training, entrepreneurial support	Italy

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
29	ERIAS - European Refugees Integration Action Scheme	Eurochambers	2016	<a href="https://www.erias.org">https://www.erias.org</a>	IT training and e-learning tools - involves Chambers of Commerce and Industry, public authorities, trade unions and NGOs in 5 EU countries. Objectives: developing a labour market integration path for TCN and online training courses in Greece. "Online training courses for TCNs will offer an overview of what is necessary to access the Greek labour market. These e-learning tools were designed to cover different aspects such as Greek language, EU law and refugee rights, skills assessment, job placement and work-based learning"	refugees and TCNs	training	Greece
30	Academia +	Academia + project partners	2018-2021	<a href="http://www.academiaplus.eu">www.academiaplus.eu</a>	EU project (Erasmus +) "counsellors' study and training exchange programme for key challenges of European labour markets and societies"; training counsellors and develop training programmes to address current key challenges in labour market and counselling. "In the current decisive phase of the development of labour markets in the European Union, the Academia+ project provides an opportunity to attend a 5-day research-based Study and Training Exchange Programmes"	counsellors working with migrants and refugees	supporting social workers	Germany, Portugal, UK, Luxembourg, Lithuania
31	ICT4TCN project	Youth Included (CZ) and other partners	2019-2021	<a href="http://www.diesis.coop/project/ict4tcn/">www.diesis.coop/project/ict4tcn/</a>	EU project - Facilitating access to the ICT labour market of third country nationals by further developing their existing skillset; free online IT training course	TCNs	IT training	Czech Republic, Belgium, Greece, Lithuania, Spain
32	MEDICI	diesis (BE) and other partners	2018-2020	<a href="https://digitalinclusion.eu/digital-map/">https://digitalinclusion.eu/digital-map/</a>	EU project and interactive map collecting digital inclusion initiatives aimed to vulnerable groups – "Mapping Digital Inclusion landscape to support Cohesion and Integration"	TCNs	hub	Italy, Belgium, UK
33	Micado	Free and Hanseatic City of Hamburg (DE) and other partners	2019-2022	<a href="http://www.micadoproject.eu/">www.micadoproject.eu/</a>	EU project – "Public administration, migration research and IT specialists connect to create a business intelligence solution that supports migrant arrival and participation process"	refugees and migrants (TCNs)	skills assessment, job orientation	Europe (Madrid, Bologna, Antwerp, Hamburg)

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
34	NewTalents4EU	diesis (BE) and other partners	2018-2020	<a href="https://newtalents4eu.eu/">https://newtalents4eu.eu/</a>	EU project – “NewTalents4EU project proposes to empower all refugees to program their future, making integration work now and more durably. Market-focused training schemes in coding/programming skills and enterprises networking will be implemented by social innovators across four EU countries, offering a skilled workforce in a demanding sector”	refugees	IT training	Italy, Belgium, France, Hungary
35	Re_Build	Università Telematica Internazionale UniNettuno (IT) and other partners	2019-2021	<a href="http://www.rebuildeuropa.eu/en/default.aspx">www.rebuildeuropa.eu/en/default.aspx</a>	EU project - REBUILD addresses immigrant integration through the provision of a toolbox of ICT-based solutions that will improve both the management procedures of the local authorities and the life quality of the migrants	migrants and refugees	supporting social workers, information, translation	Italy, Greece, Spain, Belgium, France
36	MiiCT	SHEFFIELD HALLAM UNIVERSITY and other partners	2018-2022	<a href="http://www.miiCT.eu/">www.miiCT.eu/</a>	MiiCT (ICT Enabled Public Services for Migration) was conceived with the goal of designing, developing and deploying tools that address the challenge of migrant integration. In service of this goal, the project undertakes to co-create improved ICT-enabled services with migrants, refugees, public sector services, NGOs (Non-Governmental Organisations) and other interest groups. By involving research-users at the centre of our approach we address the need to improve and customise the interfaces used to access key public services so that they better address the requirements of migrants and refugees.	TCNs, refugees and asylum seekers, public sector services, NGOs, stakeholders	supporting social workers	Italy, Spain, Cyprus, UK, Austria, Finland, Bulgaria, Greece, Republic of North Macedonia
37	NADINE	Script&Go (FR) and other partners	2018-2021	<a href="https://nadine-project.eu/">https://nadine-project.eu/</a>	EU project – “NADINE recognises that smooth access to employment is a key ingredient in successful integration of migrants in their new societies .. 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”	TCNs, refugees and asylum seekers, public sector services	job guidance, skills assessment, online CV, information, supporting social workers, training (gaming), translation services	France, Spain, the UK, Belgium, Italy, Luxembourg and Greece

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
38	WELCOME	Pompeu Fabra University and other partners	2020-2023	<a href="http://www.welcome-h2020.eu/">www.welcome-h2020.eu/</a>	EU project – “Multiple Intelligent Conversation Agent Services for Reception, Management and Integration of Third Country Nationals. Objectives: Development of service coordination and dialogue management technologies for intelligent conversational agents and development of multilingual language technologies”	TCNs, refugees and asylum seekers, public sector services	translation services, supporting social workers	Germany, Spain, Greece, UK, Czech Republic,
39	easyRights	Politecnico di Milano (IT) and other partners	2020-2022	<a href="http://www.easyrights.eu/">www.easyrights.eu/</a>	EU project – “Enabling immigrants to easily know and exercise their rights. Efforts to integrate immigrants at local level hinge on the necessity to provide them with good quality public services. Easy access to local services that avoids bureaucracy helps them feel and act with more autonomy and to facilitate their successful integration. The EU-funded EASYRIGHTS project intends to support the co-creation of a system by different local actors that increases the quantity and quality of public services offered to immigrants. It will deploy a platform envisaging the engagement of local stakeholders and to collect both online and offline services in four pilot cities. In addition, it will support immigrants to achieve knowledge and understanding for better and easier access to public services”	TCNs, refugees and asylum seekers, public actor services	information, supporting social workers	Pilots: Palermo and Malaga on labour market integration. Italy, Spain, Greece, UK, Austria, Denmark, Norway
<b>Retrieved from the MEDICI map of digital inclusion</b>								
40	Revive Greece	Revive Greece	2016	<a href="https://revivegreece.org/en/">https://revivegreece.org/en/</a>	IT training school – “Revive Greece is a registered non-profit organisation which runs in Athens a code school that re-skills Greek unemployed and refugees on computer programming through blended learning. Then we connect them with companies from the ICT sector for interviews and job placement as intern software developers. Outcomes: Trainees that successfully complete their training now possess certain certification that makes them eligible to work as programmers”	unemployed Greek, children and young adults, young asylum seekers and refugees, TCNs	IT training	Greece

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
41	It-guide	ALL DIGITAL AISBL	2007	<a href="http://www.unite-it.eu/page/gp-it-guide">www.unite-it.eu/page/gp-it-guide</a>	Online platform and e-inclusion network – “platform to exchange good practices, share resources and visions on digital competence for inclusion, as well as to take advantage of successful practices already in place. This portal is powered by ALL DIGITAL AISBL and contains a wealth of information on events, projects, stories, resources and good practices and policies in Europe on digital inclusion”	young adults, senior citizens/elderly, women, migrants, ethnic minorities, illiterate people, people with poor literacy, children at risk	hub, training, job orientation, IT training, job matching	Sweden
42	NetAcad curriculum	Cisco Networking Academy/CISCO	2015	<a href="http://www.netacad.com/">www.netacad.com/</a>	IT training school – “The NetAcad curriculum is designed to provide a blended learning experience that meets changing student and employer needs. This approach means students receive real experience and learn by doing, problem-solving, collaborating on projects, and with a total of 31 courses spanning more than 1200 hours of tuition, students are guaranteed a broad choice and in-depth instruction. The courses are available in over 20 languages, which has contributed to the massive take-up of the NetAcad courses in EU. The NetAcad courses are provided in three levels, from casual learner to professional qualifications”	everyone, multiple and intersectional vulnerable groups, refugees	IT training	France, UK, international
43	Start Project and Tech Talent School	Socialinnov	2016	<a href="https://www.socialinnov.gr/">https://www.socialinnov.gr/</a>	IT training programme – “The START Project is an educational outreach program that aims at bringing together community members under the umbrella of digital education. In its continuous effort to tackle the existing digital skills gap within the Greek society, Socialinnov is continuing to support this important initiative with the goal of creating invaluable digital competencies and employability for the target groups. The Tech Talent School (TTS) program launched in 2016 with the purpose to offer free digital skills and computer science education to everyone interested. As the main educational program of Socialinnov, TTS aims at redefining education through the digital upskilling of the public. TTS is focusing on youth, enabling them to acquire digital skills and enhance their employment prospects. High school and university students, recent graduates, unemployed people, members of underserved communities, immigrants and refugees are all beneficiaries”	Asylum seekers and refugees, TCNs, underserved communities	IT training	Greece



	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
44	ReDI School of Digital Integration	ReDI School of Digital Integration	2016	<a href="https://www.redi-school.org/">https://www.redi-school.org/</a>	IT training courses – “ReDI is a non-profit social enterprise that offers IT and programming courses, workshops, tech talks, company visits, conference visits, hackathon, HR summit, innovation projects, career counselling and employment matchmaking”	Refugees and TCNs who want to learn digital skills, companies and organisations looking to hire IT talent	IT training, job matching, job orientation, training	Germany, Denmark
45	Creative Coding School	Creative Coding School	2013	<a href="http://creativecodingschool.com/">http://creativecodingschool.com/</a>	IT training school – “The “Creative Coding School” seeks to engage refugees and other socially disadvantaged people in learning how to create digital products”	refugees and socially disadvantaged people	IT training, job matching	Germany
46	Konexio	Konexio	2016	<a href="http://www.konexio.eu/">www.konexio.eu/</a>	IT training school – “Welcoming refugees into the community through technology and innovation ‘Konexio is a hybrid non-profit and social start-up that provides tech skills training to disadvantaged populations, notably refugees and migrants. Konexio’s programmes empower young people through digital skills training and direct job placement. Many of Konexio’s trainees are refugees and migrants and face additional barriers in gaining employment. Konexio’s programmes take these barriers into account. The inclusion and integration of disadvantaged groups requires support in the social, professional and educational areas. Thanks to the strong community of partners chosen strategically, Konexio can provide these opportunities and facilitate the integration and inclusion of its learners with partners for administrative issues, housing, health, etc.”	refugees, TCNs	IT training, job matching	France
47	Digital Inclusion Centres	Programa Escolhas	2004	<a href="http://www.unite-it.eu/page/gp-centros-de-inclusao-digital-digital-inclusion-centr">http://www.unite-it.eu/page/gp-centros-de-inclusao-digital-digital-inclusion-centr</a>	IT training school – “The main activities of the Digital Inclusion Centres are linked with ICT certified training courses, promotion of ICT skills and competences, ICT exploration through informal activities, school homework, job readiness programme, information search and other leisure activities. The Digital Inclusion Centres work in order to promote e-literacy skills for all, per example trough the implementation of basic, medium and advanced ICT curriculums in several cities and locations across the country as well in the autonomous region (Azores and Madeira), establishing a vast network of Digital Inclusion Centres with the cooperation of all the local entities, with a special focus to the most disadvantaged and vulnerable groups in low social economical areas”	TCNs, youth from vulnerable groups	IT training	Portugal

	NAME OF ICT	DEVELOPER ORGANISATION	STARTING YEAR	WEBSITE	SHORT DESCRIPTION	TARGET GROUP	SERVICES	LOCATION
48	Fast track to IT (FIT)		1999	<a href="https://fit.ie/">https://fit.ie/</a>	IT training school providing hardware – FIT's mission is to promote an inclusive Smart Economy by creating a fast track to marketable technical ICT skills for those at risk of unemployment in the long term. As part of this on-going development of training provision FIT have also helped to equip marginalised communities with PCs and interactive whiteboard technologies. FIT Initiative collaborates with major indigenous and international companies along with Government departments and training agencies, namely FAS (Irish employment authority) and VECs (Ireland's vocational education committees) as well as local development organisations. FIT programmes are carefully tailored to give job seekers new marketable skills to compete for sustainable jobs in the emerging knowledge economy. FIT course are accessible and results are achievable even for people who may not have taken part in formal education for many years"	TCNs, vulnerable groups, unemployed people	IT training	Ireland
49	Simplon.co	Simplon.co	2013	<a href="https://simplon.co/">https://simplon.co/</a>	IT training programmes – "Simplon.co offers free of charge training programmes in the digital sector. It empowers and trains underprivileged and unemployed people to tech jobs (web development, mastery in digital technologies, etc.). The Foundation is dedicated to the promotion of digital learning initiatives for disadvantaged people and to the battle against the digital fracture in today's society. Simplon.co's innovative educational approach is based on learning by doing, learning by teaching, reverse mentoring and peer education to develop long-term professional and social skills. It focuses on coding and programming, with lessons that adapt to the rapid change in the digital sector, but it develops as well soft skills such as curiosity, creativity, self-learning, leadership and self-esteem. Simplon.co offers several tracks such as Web developer, Web integrator, Java developer etc."	TCNs, vulnerable groups, unemployed people, elderly and young people	IT training, job matching	France





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