

# CITIES, DATA, & REFUGEE NEEDS

A WORKSHOP ON THE UKRAINIAN CRISIS



# EXECUTIVE SUMMARY

On June 27 and 28<sup>th</sup>, 2022, Direct Relief and the CrisisReady collaboration with Harvard University School of Public Health led the “Cities, Data, and Refugee Needs: A Workshop on the Ukrainian Crisis” in Budapest, Hungary. With a principal goal to improve city-level analysis for refugee dynamics, needs and investment prompted by the war in Ukraine, the 2-day meeting convened 43 representatives of city governments, international agencies, non-profits, private sector data providers and researchers for collaborative, problem-solving sessions.

On the first day, participants reviewed city-level refugee conditions, principally in Budapest with an emphasis on needs assessment, data availability, and gaps. While Central and Eastern European (CEE) countries overall have received a large influx of Ukrainian refugees, refugees often congregate in cities because of higher likelihood of securing employment opportunities, housing support, and social integration resources. Given this migration pattern, cities often assume the responsibility to address immediate needs and long-term challenges of mass migration.

Geographically located in between Ukraine and Western Europe, Hungary serves as a direct conduit for refugees needing to flee the Ukrainian crisis while also an intermediate host country for those planning to move westward. Research from UNHCR and IOM suggest that most Ukrainian refugees do not intend to stay in Hungary. Those who stay face challenges with speaking the local language, finding accommodations in a saturated housing market and securing employment in a labor market comprised predominantly (particularly for non-Hungarian speakers) of low-skilled and seasonal jobs. The Boston Consulting Group (BCG) indicates that a majority of refugees have at least a college-level education and white-collar jobs, which contrast with the labor demand in most CEE cities, and poses challenges on both the labor supply and demand sides.

Mobility data and advanced analytic tools can inform refugee dynamics and movement patterns, which can in turn help to shape decisions on city-level planning and resource allocation. Refugees tend to choose their final destinations based on personal relationships. This finding was cited by both BCG and UNHCR. Because personal relationships shape refugees’ abilities to access housing, jobs, and integration services, social connectedness has been studied by Meta and the World Bank to assess migration flows between Ukrainian and CEE cities, which have found high correlations between metrics such as online platform friendship ties and refugee migration throughout the EU.

On the second day of the workshop, participants engaged in group discussions on priorities identified from the previous day. These four priorities including harmonizing needs assessment, addressing the education demand for school-aged children, identifying refugee-friendly job opportunities, and designing an early warning system for housing needs in anticipation of a winter migration surge. During these discussions, participants dissected key issues and proposed feasible workstreams and data sources.



The image shows the interior of a grand, ornate hall, likely a city council chamber or a similar formal space. A large, multi-tiered chandelier hangs from the ceiling, casting a warm glow. The walls are decorated with classical murals and frescoes, and the floor is made of polished wood. In the foreground, there are rows of dark wooden pews or benches, suggesting a seating area for an assembly. The overall atmosphere is one of historical grandeur and formal elegance.

# CITY-LEVEL CONDITIONS, OPPORTUNITIES & CHALLENGES AHEAD

The Ukrainian crisis is Europe's largest mass migration since World War II, prompting immediate challenges for Eastern and Central European (CEE) countries as direct recipients of as many as 7.7 million displaced Ukrainians.<sup>1</sup> While CEE federal governments assume responsibilities of managing borders and migration flows, it is often the responsibility of municipalities to assess needs, arrange shelter, and provide social integration services. Based on the notion that "refugees don't just come to nations, they move to cities," refugees gravitate towards economically developed regions because they have better likelihood of receiving social resources, volunteer-based support, and employment opportunities.<sup>2</sup>

## Data Limitations

In Budapest, refugee dynamics present a complex challenge because existing data infrastructure does not accurately represent nor fully capture the reality of the refugee situation, as highlighted by the deputy mayor's welcome address.<sup>3</sup> In turn, data gaps on refugees pose serious challenges to planning and resource allocation. An exact count of the current refugee population in Hungary is difficult to determine. The country officially estimates nearly 1.5 million refugees' arrival with approximately 24,000 having applied for temporary protection.<sup>4</sup> Most have passed through to other end destinations, but tens of thousands have stayed.<sup>5</sup> The difference between those arriving and remaining has raised concerns among city authorities who are unable to determine where refugees congregate and how many may be staying longer term in Budapest.

## Temporary Protection

While only a fraction of refugees exercised their rights of temporary protection and effectively claimed state benefits – residence permit, access to employment, banking services and much more – a larger number has not applied for temporary protection likely because of the 90-day, visa-free travel granted by the EU in 2017. According to a survey conducted by Boston Consulting Group (BCG), refugees who have recently fled Ukraine for 1 to 2 weeks hesitated to apply for temporary protection, whereas those who have left more than 1 month have already applied.<sup>6</sup> IOM research finding suggests that at least 15,400 third country nationals from Ukraine have obtained temporary protection with Poland, France, Portugal and Switzerland as top destinations.<sup>7</sup> Since temporary protection is a precursor for social integration, their decision to apply could indicate some level of commitment to remain in their host country.

## Labor Market Challenges

The decision to apply for temporary protection is linked to job prospects and financial security. Among the surveyed participants, BCG found that 75% have white-collar jobs and at least a college degree,<sup>8</sup> highlighting a potential economic scarcity in the CEE labor market in which most available jobs are low-skilled and seasonal. Though Budapest drives the labor market in Hungary, refugees without Hungarian fluency are restricted by language barriers. Despite offering promising economic opportunities, the city lacks an employment tracking system, which limits the city's understanding of current labor market demand. Coupled with the difficulty of coordinating with their federal counterparts, Budapest has limited access to more detailed national data which may shed light on refugee numbers, locations, and needs. External partnerships with international agencies, non-profits, and private data providers are therefore essential for effective localization of response efforts.

## The Importance of Social Network Ties

From the beginning of Ukrainian refugees' arrival in Budapest, civilians and NGOs were some of the first to welcome, provide support, donate goods at the central train stations, where most were arriving from the Ukrainian and Romania border. From coordinating aid delivery to shelter placement, NGOs established an early network of refugees, volunteers, and donors, which evolved into numerous decentralized entities and Facebook groups extending beyond Hungary. NGOs played an integral role in receiving refugees and are a strategic partner in understanding city-level needs, fostering refugee's social network, and reaching the diasporic community.

Surveys administered by UNHCR and BCG suggest that social connection informs mobility dynamics.<sup>9,10</sup> Because refugees often seek shelter from their social network, a main determinant of their final destinations is personal relationships with family and friends.. 29% of refugees in the BCG survey indicated the priority of friendship and familial ties in migration.<sup>11</sup> This finding complements UNHCR's survey, in which 34% reported family ties as the primary reason for leaving Hungary for another country.<sup>12</sup> Those intending to stay claimed family ties as their top three reasons to remain in Hungary.<sup>13</sup>

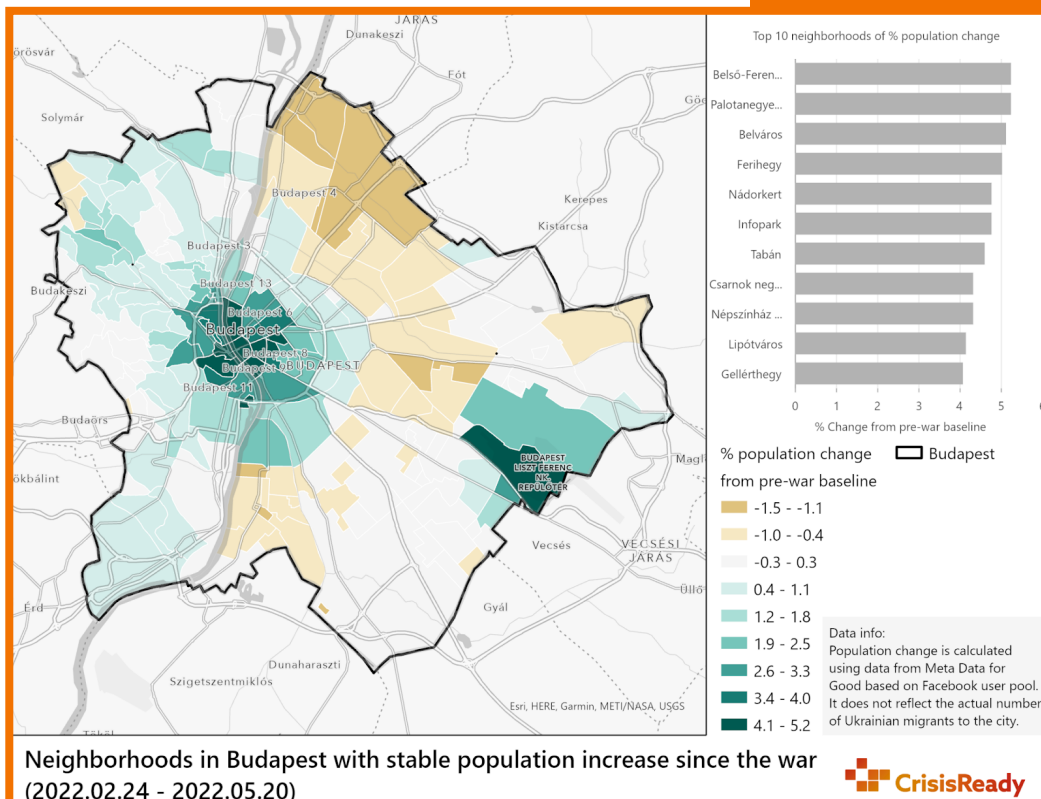


## Refugee Mobility Patterns

By leveraging social network and mobility data, municipal actors can assess movement patterns and become more equipped to design relevant responses. Mobility data encompasses a diverse set of data collection and analytical methodologies such as social media, mobile services, and traffic control. Providing real-time information about where people are going and congregating, mobility data can address needs at different scales. The Centre for Budapest

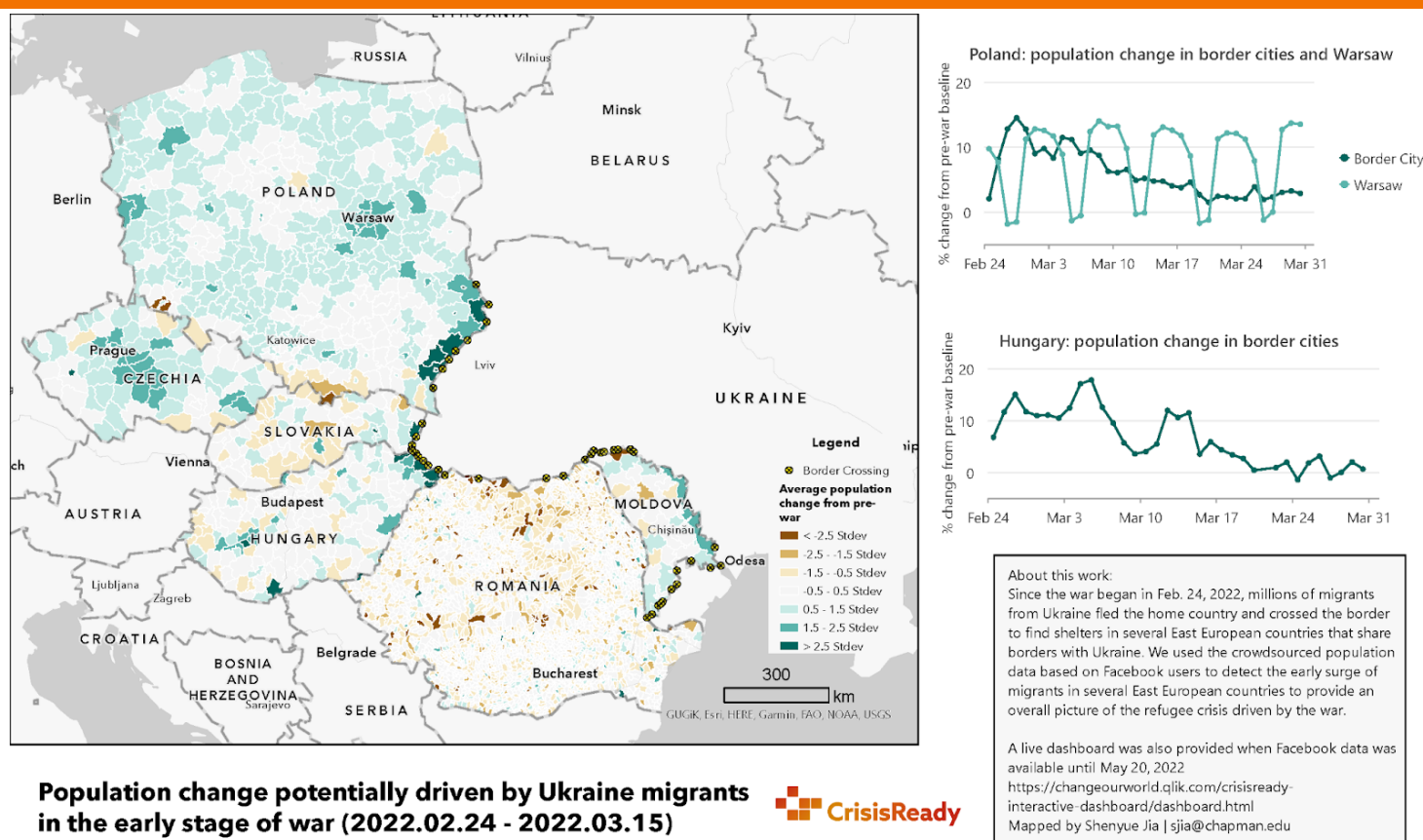
Transport (BKK) presented mobility data from vehicle count, tracking traffic flow in Budapest before and during the Ukrainian invasion. BKK cited a noticeable increase of vehicles per day since Russia's invasion, tripling during the assault of Kiev.<sup>14</sup> Among data analytic researchers were FluxVision which studies mobile data statistics for strategic business decisions; and TFLOWs which uses IT tools for managing migration flows and sustainable integration through sentiment analysis, event monitoring, and temporary protection directives.

A real-time, high-resolution data platform for crisis response, Meta's Data for Good offers a range of resources including maps, surveys, and digital campaign tools to inform response planning. Meta's Social Connectedness Index estimates the probability of friendship based on established networks between countries.<sup>15</sup> This can be paired with mobility data to validate refugees' movement and model migration patterns for determining resource allocation. Built during the COVID-19 pandemic, the Movement Range Maps tracks participant's movement within 600 sq meter to assess the effectiveness of economic shutdowns.<sup>16</sup> The tool has been used for crisis predictions based on movement's abnormality compared to baseline levels. Data for Good provides municipal authorities a diverse toolkit to study refugee dynamics such as the Displacement Maps, which monitors long-term displacement at a city-level, and the Relative Wealth Index, which rates a defined area's wealth within a country.<sup>17</sup>



The World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR) have used Data for Good's tools to predict the directionality of forced displacement and monitor population change at a county-level equivalent. Their preliminary analysis yields higher accuracy for monitoring short-term more than long-term population change.<sup>18</sup> From mapping social connectedness, they found high connectedness for Ukraine's neighboring countries: Poland, Moldova, Czechia, Slovakia, Estonia, Bulgaria, and Hungary.<sup>19</sup> On a municipality level, CEE cities' connectedness varies by different regions in Ukraine.<sup>20</sup> In addition to analyzing migration flows, this association can likely deduce demographics, education level, and employment history of incoming refugees.

Geographically located in between Ukraine and Western Europe, Hungary serves as a proximal haven for Ukrainians needing temporary shelter close to home while also being an intermediate host for those traveling westward. It is commonly believed that most Ukrainian refugees do not stay in Hungary, as more than half reported their intention to travel to another country or return to Ukraine in the UNHCR survey.<sup>21</sup> Among the respondents planning to leave, 56% of those planning to return to Ukraine are uncertain when they would move back compared to 89% of those planning to travel to another country intended to leave within one week.<sup>22</sup> Many plan to return once the situation in Ukraine has improved. In late May, IOM's General Population Survey has estimated around 4.48 million returnees, former internally displaced persons and those from abroad, in Ukraine.<sup>23</sup> This estimate is an increase of 60% from that of the previous month.<sup>24</sup> Among those who have returned to Ukraine, half of surveyed respondents reported their intention to stay while 27% planned short visits.<sup>25</sup> Although most refugees intend to leave Hungary, those applied for temporary protect warrant city-level coordination and long-term planning, particularly accommodation and employment.







# PROPOSED WORKSTREAMS

Based on the workshop's discussion from the first day, the following workstreams were identified: needs assessment harmonization, refugee's health and education, employment, and accommodations. On the second day, Direct Relief and CrisisReady facilitated four group discussions to further investigate and propose actions to address these priorities. These workstreams consider relevant response efforts through examining existing data sources, and if unavailable, proposing new data collection methods. The workstreams centered on the City of Budapest as a promising model for other Central and Eastern European cities.

# WORKSTREAM 1

## NEEDS ASSESSMENT

At this stage of the refugee response in Hungary, there is no single data source that can provide all the information needed for decision making while existing survey instruments have not been harmonized to holistically represent Ukrainian refugees' diverse needs and challenges. In order to effectively leverage current data tools for intervention design, participants acknowledged the value of harmonizing needs assessment surveys. Assessments are harmonized based on the similarity of survey questions, sample sizes, methodologies, and age limitations. The proposed action is to collect all relevant assessment survey administered in Hungary, which is followed by a systematic review of these instruments through DEEP.io, a research collaborative platform for assessing secondary data sources based on a pre-established analytical framework. The Budapest municipal authorities and international NGOs recognize the importance of harmonizing needs assessment, as this provides high-level insights on refugees' needs and challenges, allowing the city to identify and address data gaps.

## WORKSTREAM 2

### HEALTH AND EDUCATION

Since the invasion of Ukraine, refugee children's education has been deeply compromised with many needing to resort to online learning or discontinue their education altogether. Remote learning combined with the summer season have temporarily reduced demand for in-person schooling. However, refugees' families, who have sought or are planning to seek temporary protection, will likely enroll their children in school in the upcoming fall, when infectious diseases such as influenza, norovirus and the common cold also become more prevalent. Participants raised questions about how to quantify school enrollments and vaccination update for school- and work-related functions as measures that prepare schools for the incoming cohorts and prevent disease outbreaks. Among the top refugee health needs are mental health, pediatric care, maternal health, reproductive health, chronic disease, cancer, and infectious diseases such as HIV and TB. In regards to these services, participants raised concerns about care accessibility due to language barrier, costs of private care, and challenges with navigating a foreign health system.

To address questions about school enrollment, the proposed action is to use Facebook groups to identify schools that are accepting refugee children and use Google Trends to conduct an analysis of schools in the area. By consolidating existing assessments, leveraging school surveys, and coordinating with private organizations or NGOs that provide families with school supplies, municipal actors can identify schools that need additional support and resources to better integrate refugee children in the Hungarian education system. Providing refugees with accurate information on navigating the education and healthcare systems can support their integration.



# WORKSTREAM 3 EMPLOYMENT

Access to employment opportunities is a priority issue for refugees who intend to stay short- and long-term. However, the city of Budapest does not have aggregated data on current labor market demand. By fall, at the end of most refugees' visa-free 90-day stay, many will decide whether to apply for temporary protection and stay permanently. A pervasive key issue is the lack of understanding of Budapest's labor market, concerning how many refugees are seeking employment compared to how many jobs are available. There are also uncertainties about refugees' professional backgrounds, availability for remote versus in-person work, and childcare needs for working parents. Budapest's saturated housing market and transportation availability could greatly affect refugees' decision in choosing where to work.

To assess Budapest's labor market demand, participants proposed contacting private job listing for available data on refugee-friendly job offerings and fulfillments based on job categories and locations. Facebook and Google Trends can provide insights on trends in the job market. According to the World Bank's mobility data analysis, Ukrainian refugee's city origins can be deduced from their connection with those living in CEE cities. Identifying employee demographics from these regions can shed light on the skillsets refugees are bringing to Budapest.





# WORKSTREAM 4 ACCOMMODATION

Housing accommodation in Budapest is primarily driven by volunteers, private civilians, and the city. Migration Aid, a well-known NGO based in Budapest, has one shelter with 64 rooms and 216 beds. Shelter4Ukraine, an online housing platform, offers available shelters across CEE. The city manages three shelters in Budapest and two on the outskirts. A key issue expressed among participants is not having a clear understanding of housing demand and supply. Without knowing the exact count of refugees, their demographics or length of stay, it is difficult to assess housing demand. As for housing supply, the city has identified approximately 1,000 unutilized flats and non-residential buildings that could be converted into shelters. However, these revitalization projects would require significant investments that the city has not yet secured. While Hungarians civilians have offered their homes as shelters, questions about the sustainability of volunteer-driven efforts were raised. Recent news reports indicate civilians experiencing fatigue and constraints with housing refugee long-term in Poland.<sup>26</sup> Considering these challenges, addressing current housing needs is a difficult undertaking.

In anticipation of a migration surge in the winter, participants acknowledged the value of proposing an early warning system to detect housing needs from December to February. An early warning system is an adaptive measure designed to mitigate risk and reduce the likelihood of undesired outcomes. For housing needs, the early warning system aims to reduce homelessness by means of early risk detection which then informs timely interventions. Risk indicators can be sourced from social media and Google Trends, where refugees are likely to search for housing accommodations and social services. Reports from city authorities and NGOs not only could help define parameters of the early warning system, but, when combined with an active surveillance system through Facebook group surveys, these resources could signal abnormal levels of housing insecurity.





# ACKNOWLEDGEMENT

Direct Relief and CrisisReady thank the City of Budapest for coordinating and hosting this event at the Budapest Metropolitan Government Office, located at the heart of the city where the former town hall was built; and all participating organizations for contributing their data tools, research findings, and insights on the Ukrainian refugee crisis, which are Boston Consulting Group, Centre for Budapest Transport, City of Budapest, FluxVision, IOM, ITFLOWS, Meta's Data for Good, Pelion, Refugee Help Digital Network, UNHCR, and the World Bank. This report was written and designed by Phong Hồng, and edited by Andrew Schroeder with notes consolidated by the Direct Relief Data and Analytics Team.

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