

THE INVASION OF UKRAINE: THE IMPACT, IN NUMBERS

23 SEPTEMBER 2022

Data and analyses collected by the ETF from various sources.

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Overview

7.4m

**Refugees from Ukraine
recorded across Europe***

7.27m on 13/09

([UNCHR](#): 22/09/22)

2,551

**Damaged & destroyed
education facilities (8.11% of total)**

2,477 on 09/09

([Ukrainian MoES](#): accessed 23/09/22)

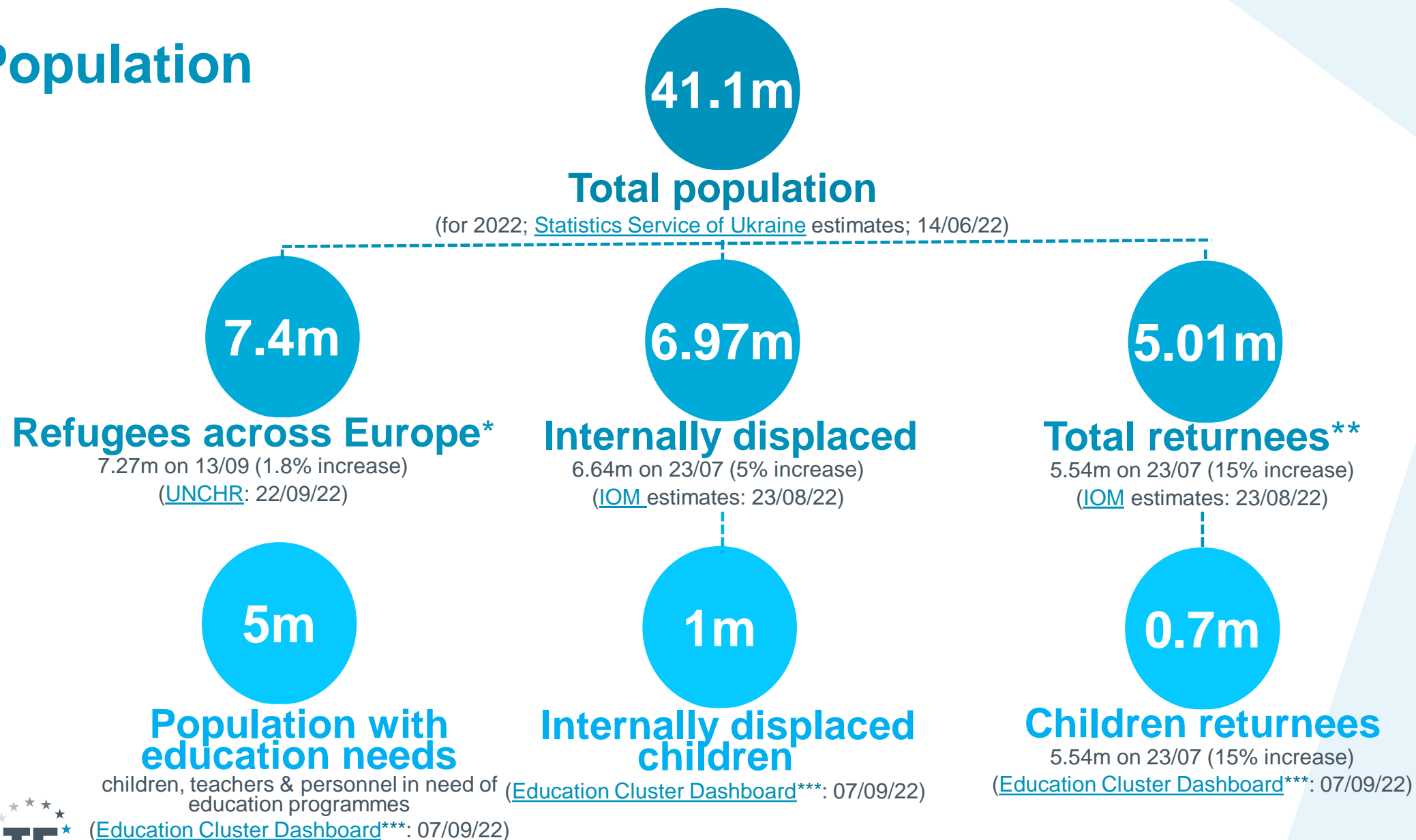
\$4.4b

**Direct damage estimates
in education infrastructure****

\$3.8b on 22/08

([Ukrainian MoE & KSE](#) 05/09/2022)

Population



* Individual refugees from Ukraine recorded across European countries, see [UNCHR](#).

** *Note:* Including returns of former IDPs from other locations within Ukraine, as well as self-reported returns from abroad (16%). See p.1 of [IOM](#)

*** Analytical figures available in [OCHA](#) (Aug 2022) and its [annex](#).

Damages, losses and reconstruction & recovery needs by sector

Damages (\$b)

114.5

Total

4.4

Education

9.7

Industry & business
services

Losses (\$b)

130.4

Total

2.1

Education

30.3

Industry & business
services

Reconstruction & recovery needs (\$b)

197.8

Total

5.4

Education

19.7

Industry & business
services

Human capital & education: impact on infrastructure

2,551

Damaged & destroyed education facilities (8.11% of total)*

2,260 damaged; 291 totally destroyed

4.4b
US\$

Direct damage estimates
in education infrastructure***

19

Destroyed VET schools

111

Damaged VET schools
(damaged + destroyed = 17.5% of total**)

Most damaged & destroyed education facilities
as % of total, per region*

61.5%

Donetsk

33.3%

Kharkiv

29.1%

Luhansk

20.7%

Mykolayiv

12.3%

Kyiv

12.2%

Chernihiv

Most damaged & destroyed VET education facilities
as % of total, per region**

77.2%

Donetsk

56%

Luhansk

46.1%

Kharkiv

35.4%

Mykolaiv

33.3%

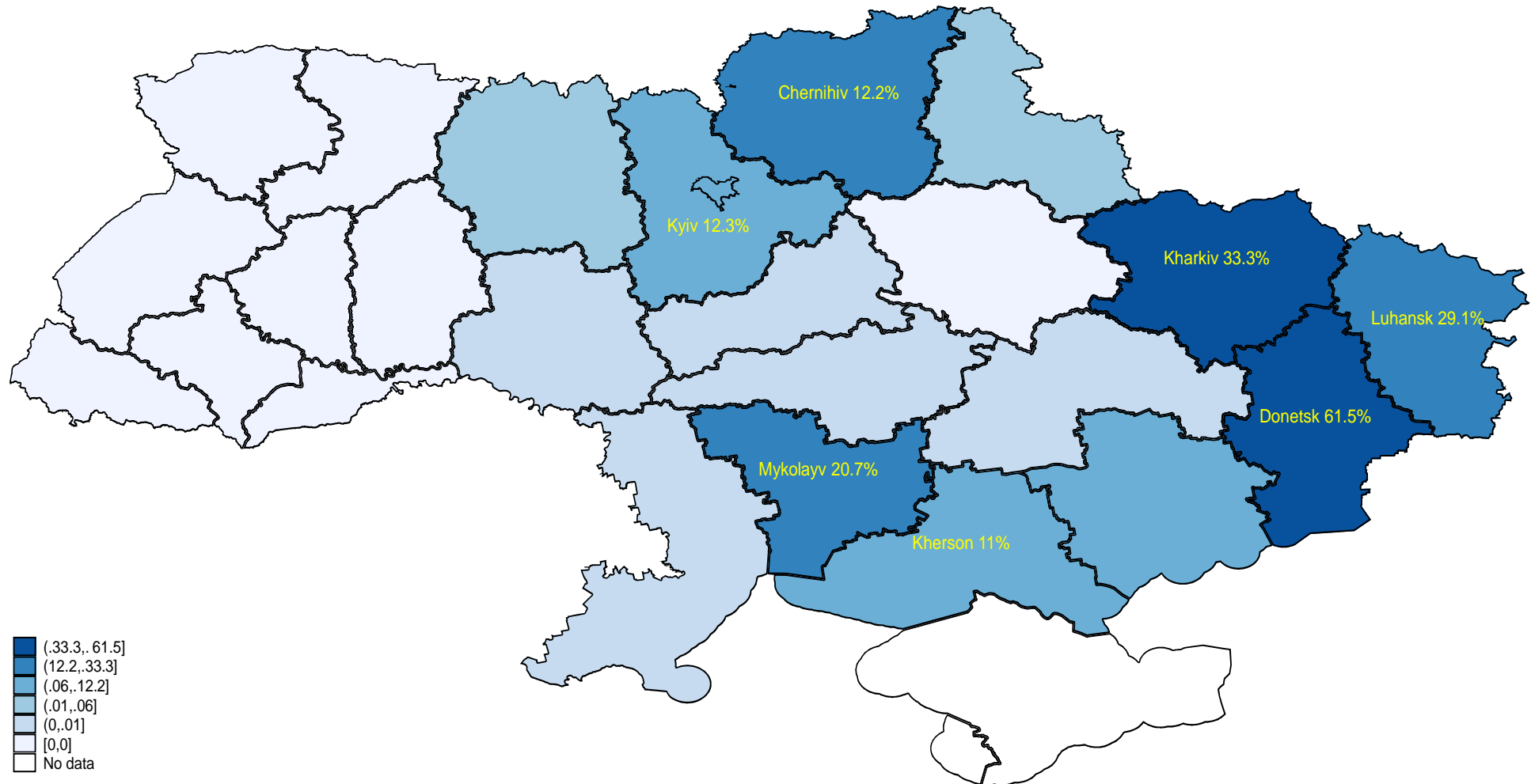
Chernihiv

30.7%

Kherson

Human capital & education: impact on infrastructure

damaged & destroyed education facilities (as % of total, per region)



Human capital & education: back to school

Current situation:

- Out of approx. **13,000 secondary schools** in the country **27%** returned to in-class learning, **30%** to a mixed mode (in-class & remote) and **43%** to remote only ([OCHA Sep 2022](#) & [MoES Aug 2022](#)).
- **164,000** internally displaced learners
- **>4000** education institutions are used for purposes other than education
- **25%** of teachers are involved in services other than education (humanitarian support, volunteer services, etc.)

Source : [Education Rapid Needs Assessment Survey](#)

Gaps:

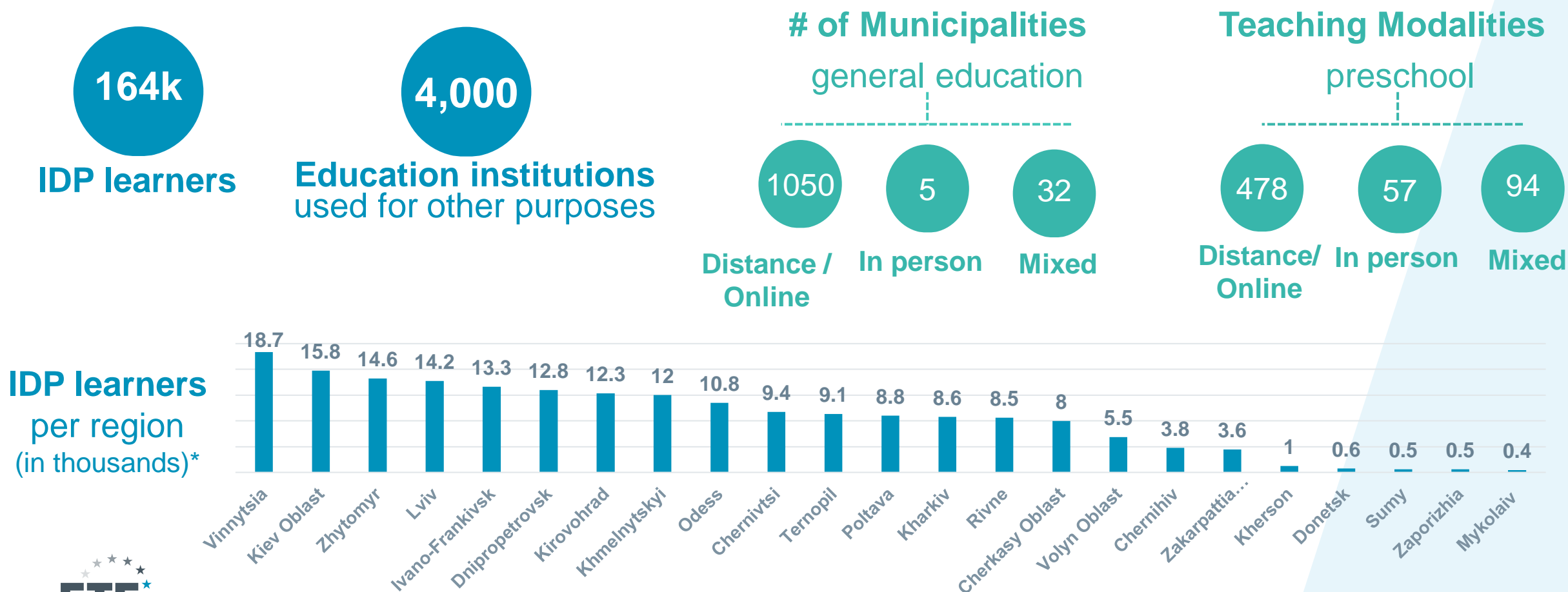
- **Current conflict** makes the full reopening of schools in-person unlikely; meaning the continued heavy reliance on online learning ([OCHA](#), Aug 2022)
- **Displacement**, the **damage and destruction** of educational facilities, and a **lack of access to technology & internet** connection have seriously affected students' ability to learn ([WB](#), May 2022)
- "Schools have been targeted or used by parties, resulting in **families not feeling safe to send their children to school**" ([UNICEF](#), Aug 2022)

Impact on Opportunity to Learn & Learning Outcomes:

- **School disruptions** due to war or pandemics can have; **persistent negative effects** on learning because they impact all elements of a student's opportunity to learn:
 - i. less time spent on learning, and
 - ii. lower quality of instruction via remote/online modalities, leading to
 - iii. less content covered during instruction.

Source: ([WB](#), May 2022)

Human capital & education: how and where teaching is being delivered



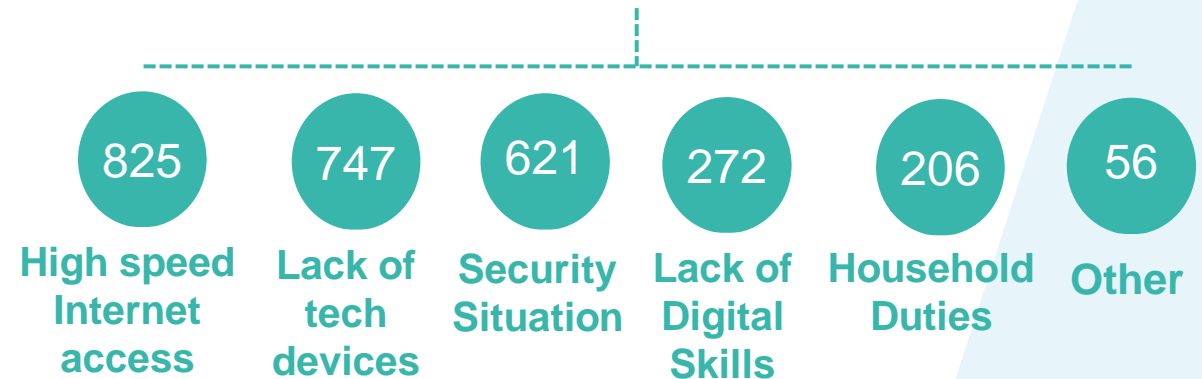
Human capital & education: challenges to education delivery

Needs & challenges for continuation of education services

202k
tablets
required

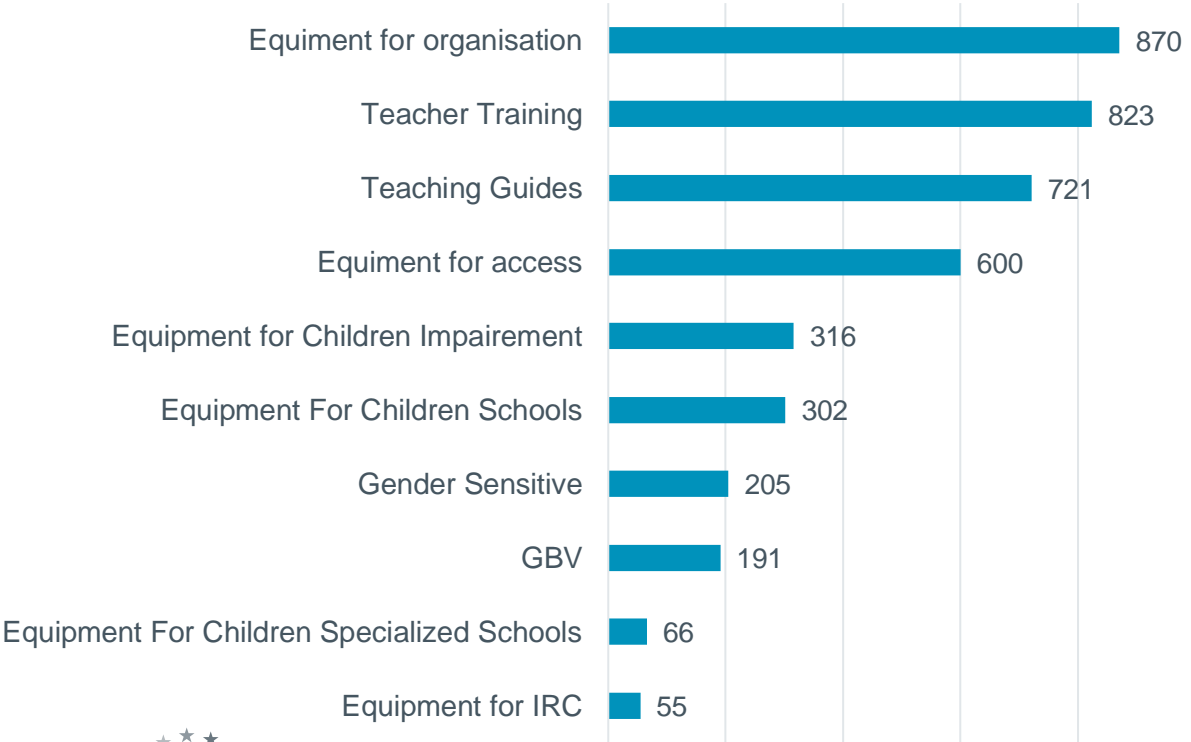
165k
laptops
required

Challenges for teachers to facilitate online learning (# of municipalities)

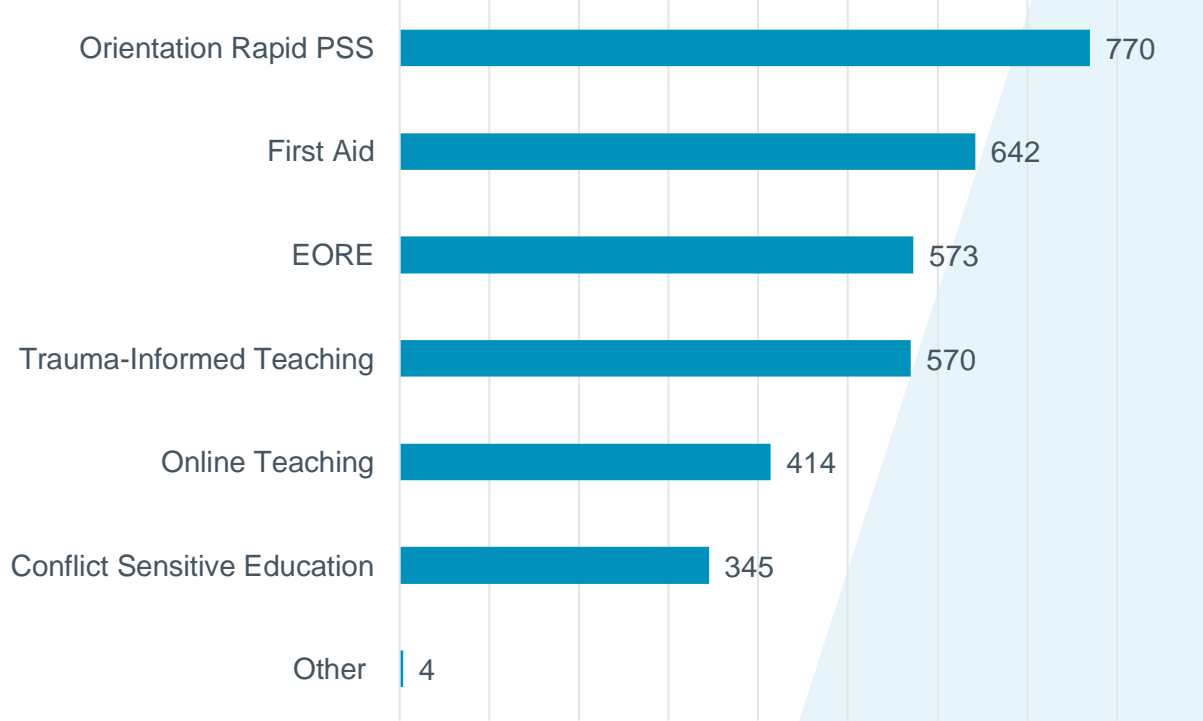


Human capital & education: understanding pupil and teacher needs

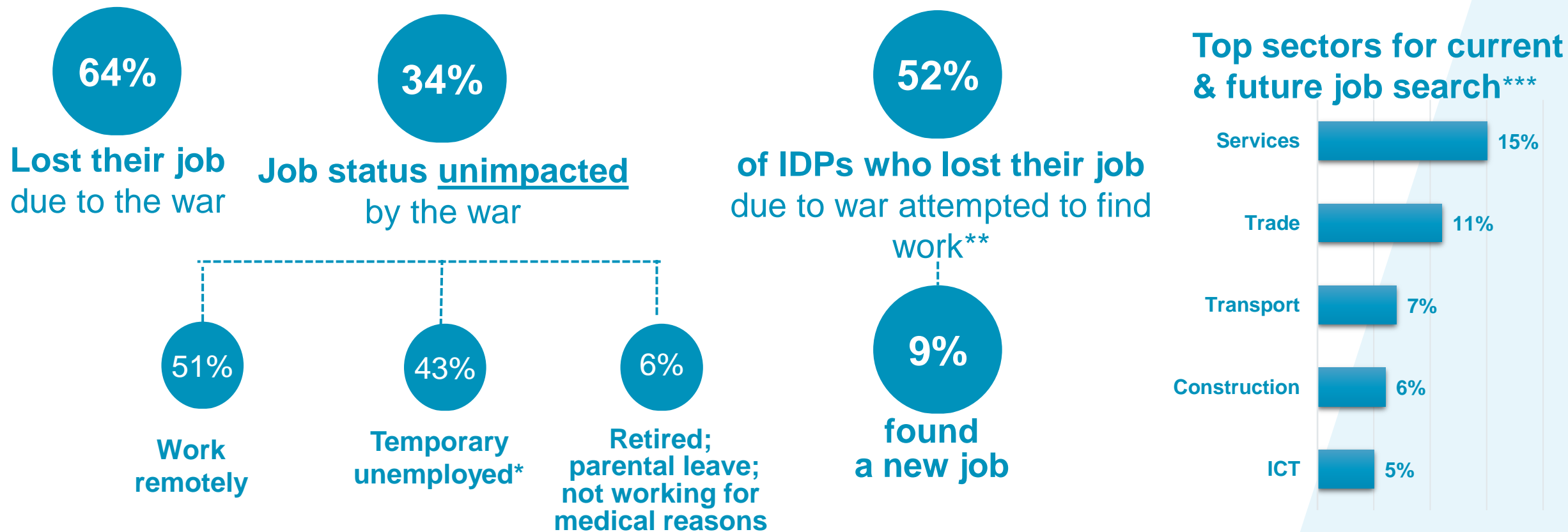
Needs for Inclusive Education



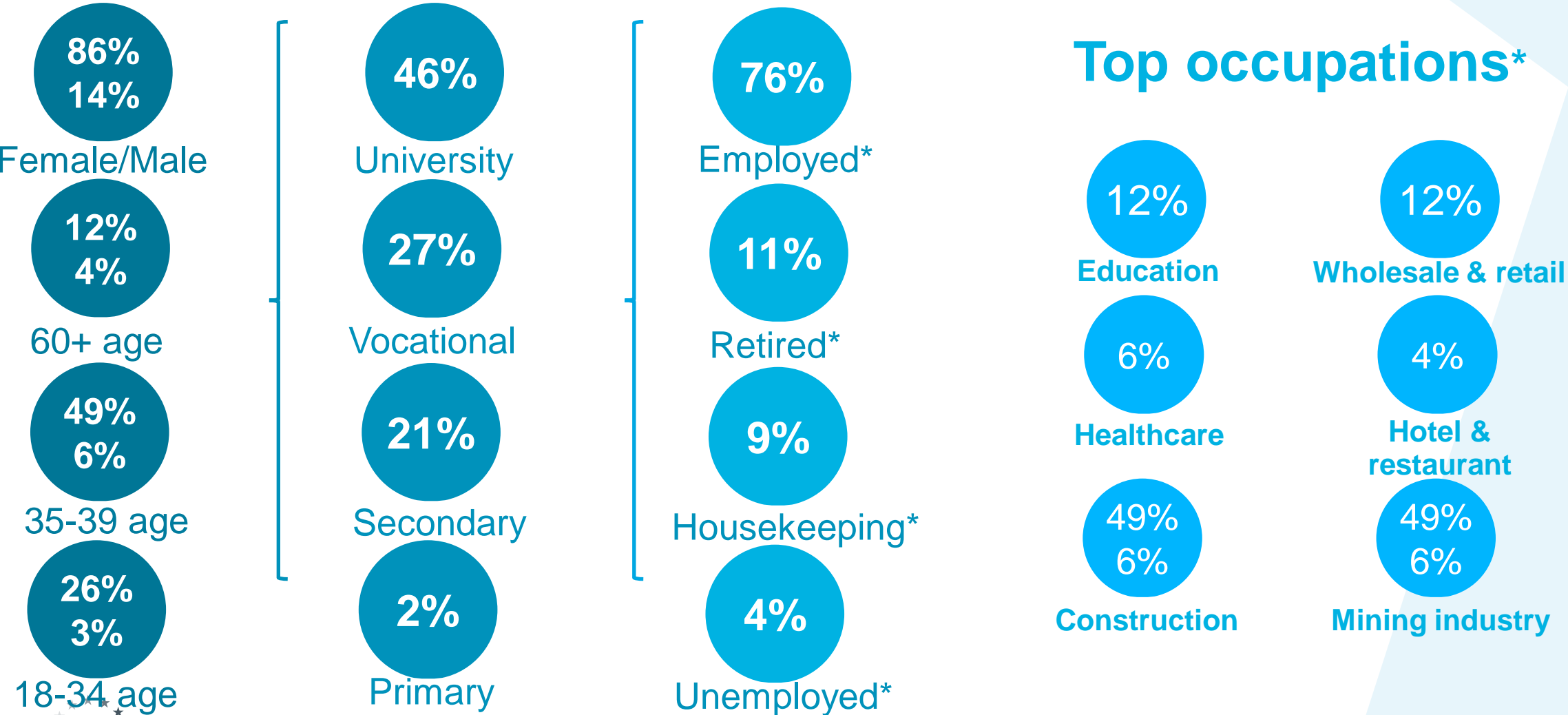
Desired Topics For Professional Development



Human capital & employment: characteristics of Internally Displaced Persons (IDPs)



Human capital & employment: profiles of refugee population



* Status before leaving Ukraine
Note: Based on 23,054 interviews contacted in Belarus, Bulgaria, Hungary, Republic of Moldova, Poland, Romania and Slovakia between May and mid-August 2022. While respondents are randomly selected to reduce bias, non-probability sampling is used and results cannot necessarily be extrapolated to the population of refugees from Ukraine as a whole.
Source: UNCHR (Aug 2022) [“Profiles, Needs & Intentions of Refugees from Ukraine”](#)

Human capital & employment: the potential contribution of Ukrainian refugees to the labour force in European host countries

Labour market integration challenges

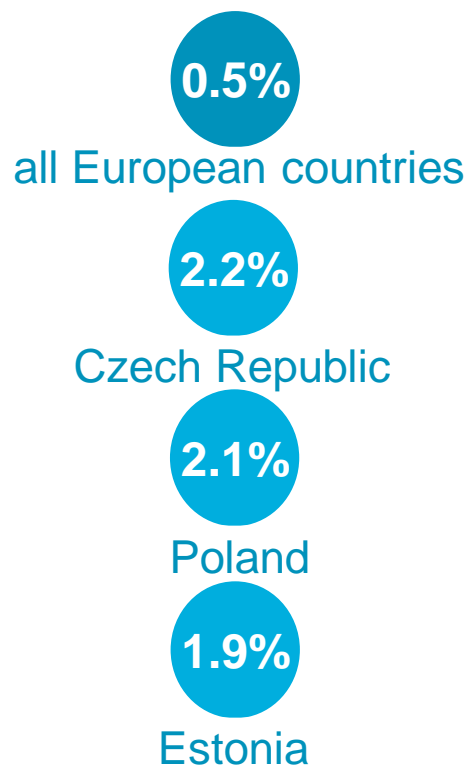
Facilitated by:

- Education profile
- Existing social networks
- Immediate access to employment

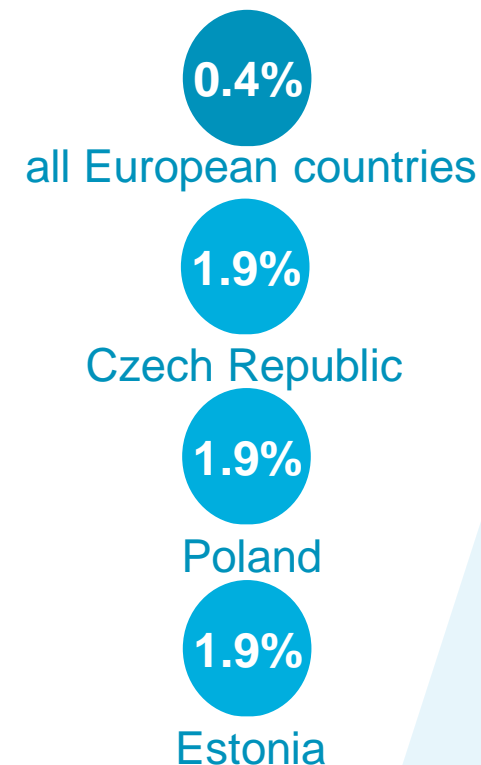
Hindered by:

- Single mothers with children and other dependents

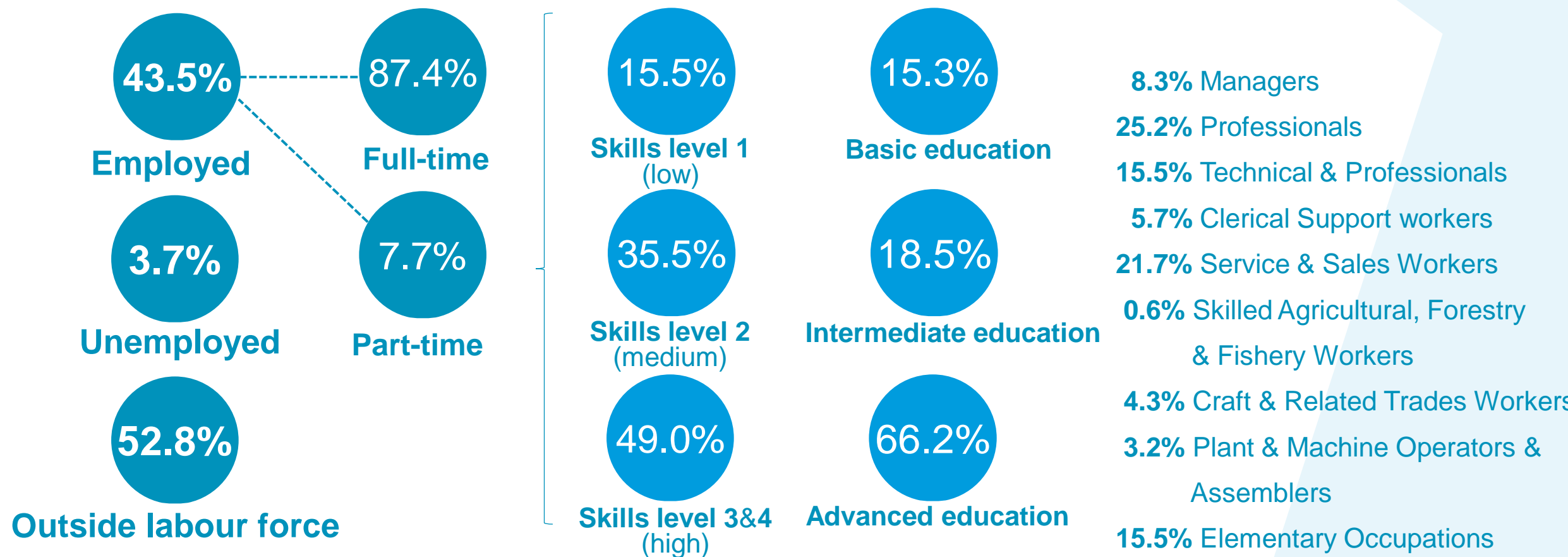
Labour force relative change projections*



Employment relative change projections**



Human capital & employment: characteristics of refugee population



Looking ahead: estimates of reconstruction costs & infrastructure losses

Estimates of reconstruction costs:

- **\$564b - \$600b**
(including direct and indirect losses; Ukrainian Government & [Kyiv School of Economics](#))
- **\$330b - \$550b**
(30% to 50% capital stock destroyed assumption, [CEPR](#))
- **\$200b - \$500b**
(based on previously EU funded countries for their accession, [CEPR](#))

Estimates of infrastructure losses* (08 September):

- **\$114.5b** overall direct loss
- **\$35.1m** transportation infrastructure
- **\$47.8m** on housing
- According to preliminary estimates, **the recovery needs for destroyed assets** is at least **\$197.8b**

Source: Ukrainian Government & [Kyiv School of Economics](#)

Productive capacity estimates:

- **7.5%** of Ukraine's productive capacity has been lost since the start of the invasion (incl. **2.5%** of the primary, **3.2%** of the secondary & **1.6%** of the tertiary sector).
- This includes among others: **20% of land** unavailable for agricultural production, **40%** of the productive capacity in the **steel sector** and, **43% of the energy sector** being occupied or damaged (mainly nuclear & thermal)

Source: [Blinov & Djankov](#), Sep 2022).

Looking ahead: SMEs, business surveys & reallocation program

SMEs in war time survey:

- **42%** do not operate at all
- **31%** suspended their operations
- **27%** continue to pay full wages vs **21%** not being able to pay

Source: [EBA Unlimit Ukraine survey](#), March 2022

The Ukrainian business survey:

- **86%** of companies slowed down, reduced or stopped their operations
- **37%** of companies are transforming their business due to war (completely/partially or in the process to)
- **16%** will transform their business in the near future
- Orders (**50%**), logistics (**29%**), supplies (**21%**) and payments (**20%**) are the main difficulties faced

Source: [Kyiv School of Economics](#), March 2022

MoE reallocation program

- **300** enterprises have reallocated, from impacted regions, following the Ministry of Economy initiative.
- **1,500** reallocation applications have been submitted.
- **121** business are already operating.

Source: [Ukrainian Ministry of Economics](#), April 2022

Looking ahead: institutional forecasts

		2021	2022	2023	2024
GDP (% change)	<u>World Bank</u>	3.4%	-45.1%	2.1%	5.8%
	<u>IMF</u>	3.4%	-35.0%	..	
	<u>EBRD</u>	3.4%	-20%	23%	
<u>Statistics Services of Ukraine</u>			-15.1% 2022 Q1 -37.2% 2022 Q2*		
Employment Losses**	<u>ILO</u>		-30.2% (based on current situation) -43.5% (based on military escalation) -8.9% (based on hostilities cessation & withdrawal)		
Poverty rate***	<u>World Bank</u>	1.8%	19.8%	18.5%	
	<u>UNDP</u>	2.5%	4.2% - 28%	..	
Vulnerable population ^	<u>UNDP</u>	46.4%	49.7% - 62.5%	..	

Notes: 2022 and 2023 refer to forecasts, except for Statistics Service Ukraine referring to 2022Q1.

* Real GDP change compared to Q1 & Q2 2021, respectively (seasonally adjusted).

** % changes compared to pre-conflict period; scenarios for next three months;

*** Upper middle-income poverty rate (\$5.5 in 2011 PPP); UNDP: range of four crisis scenarios projections based on initial partial equilibrium analysis and GDP shocks ranging from 7% to 60% decrease.

^ Vulnerable population to income poverty is defined if his/her income is above \$5.50 a day but below \$13 a day.

Looking ahead: proposals

Estimates:

- **Learning losses** due to a combination of extended pandemic-related closures and the war are estimated to **be more than 1 (schooling) year**. Also, the **loss of future earnings per student** is estimated to be **more than 10%** ([Angrist, Djankov, Goldberg & Patrinos, 2022](#)).

Demographic & labor market shock

- Ukraine's population has been **ageing fast**; the (median) age was 35 in 1990, reaching 41 at the start of the war. Proposed policies include: i) incentives for Ukrainians to **return from abroad**, incl. monetary rewards to rebuilding homes and businesses, ii) priority support in the form of welfare payments for refugees who have **lost their family**, iii) **child support policies** to increase fertility rates (lower cost childcare) ([Blinov & Djankov, 2022](#))
- Set up a plan for the reconstruction of post-war Ukraine; including support measures to **encourage the return of those migrants** currently flooding out of the country ([WiiW](#), April 2022).
- In the **reconstruction process**, foreign firms with functioning supply chains and organisational capital can be utilized to address shortages of **expertise and workforce**, while encouraging the **use of local labor force** ([CEPR](#), April 2022).

Looking ahead: proposals

Long-term cost of wars on wartime children

- There is little doubt that the trauma and fear Ukrainian children are experiencing will have a tremendous effect on their **physical and mental health**, an effect that may last for life.
- A number of studies provide mounting and alarming evidence on the potential impact that the Russian invasion may have on the **human capital and physical and mental health outcomes** of the Ukrainian children who are being exposed to war and large-scale destruction.
- Findings from historical episodes underscore **the importance of policies that prioritise the child**. Such policies are essential not only to improve the wellbeing of wartime children and their children, who are also impacted by warfare, but also to facilitate peacekeeping operations (for a review see [Akbulut-Yuksel](#), May 2022)
- According to historical lessons on displacement in Europe, **refugees, and by extension their children**, will be keen to make the most of a traumatic experience. **Access to education can be a silver lining of forced migration**, allowing refugee children to invest in a brighter future (see [Becker](#), March 2022)

Looking ahead: proposals

Technology & education:

- Build back better: **R&D reversing - brain drain actions**, including the use of EU educational and research programs (Erasmus, ERC), while attracting **modern technologies and skill-intensive capital investment** (CEPR, April 2022).
- Upholding **Ukraine's 'intellectual sovereignty'**: ensuring the on-going presence of the country's research and educational sector within the worldwide scientific community and, providing reach and profile to the country's intellectuals, teachers and researchers in the global community (Cooper, Brik, Shapoval, [LSE Policy Brief](#), 2022).