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**DIGITIZATION
OF DESTROYED
INFRASTRUCTURE**

Kyiv
region



REBUILD 

ABOUT THE PROJECT

Background

The military actions of Russia and Belarus cause numerous damages and destruction in almost all regions of Ukraine — housing and infrastructure are being destroyed, industrial facilities and local businesses shut down.

The speed and efficiency of the country's recovery processes directly depend on a competent assessment of the damage, correct budgeting and a step-by-step plan for reconstruction. A transparent assessment of losses will justify the need for funding as well as simplify the process of raising funds for recovery.

About the project

The RebuildUA project aims to digitize, analyze and demonstrate to the world the destruction of Ukraine's infrastructure. The geography of the project covers all regions of the country affected by military aggression.

The results will be made public, communicated to communities, public authorities and specialized recovery funds.

Project founders:

Drone survey and digitization of geospatial information:



Land analysis and interaction with communities:



Methodology

1. Drone photography and orthophoto creation

The use of drones allows the project team to collect detailed data on the destruction: to fly at low altitudes, and shoot buildings at different angles and from all sides. For localities where drone shooting is not possible, we use high-resolution satellite images.

2. Collection of photos and videos

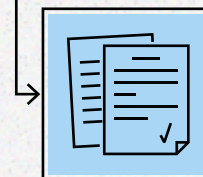
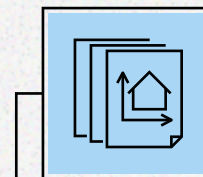
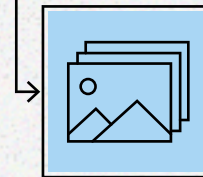
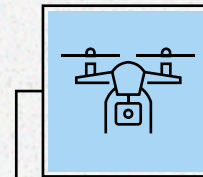
To ensure completeness of the input data, the project team captures photos and videos, as well as collects additional information from verified sources.

3. Destruction detection and data processing


Based on orthophotos, GIS specialists digitize all buildings, identify destroyed objects, classify building types, and determine levels of destruction.

4. Publication of analytical reports

Designers and content managers present the complete information in public infographic reports.



Find out more at the project website:

 rebuildua.net

ABOUT THE LOCALITY


Pushcha-Vodytsya has become one of the most devastated areas of Kyiv as a result of the proximity to Irpen and Gostomel, where the Russian army has committed horrific crimes.

On the territory of Pushcha-Vodytsya, residential buildings were destroyed, rails of the city tram line were damaged. The main problem here is mined forests that surround the area: despite all the demining efforts, it is still dangerous to stay there.

The RebuildUA team visited the locality and analyzed the destruction. Keep track of our next destinations on the map and in the project news.



 rebuildua.net

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City
District
Locality

Kyiv
Obolonskyi
Pushcha-Vodytsia

 Survey area
288 ra

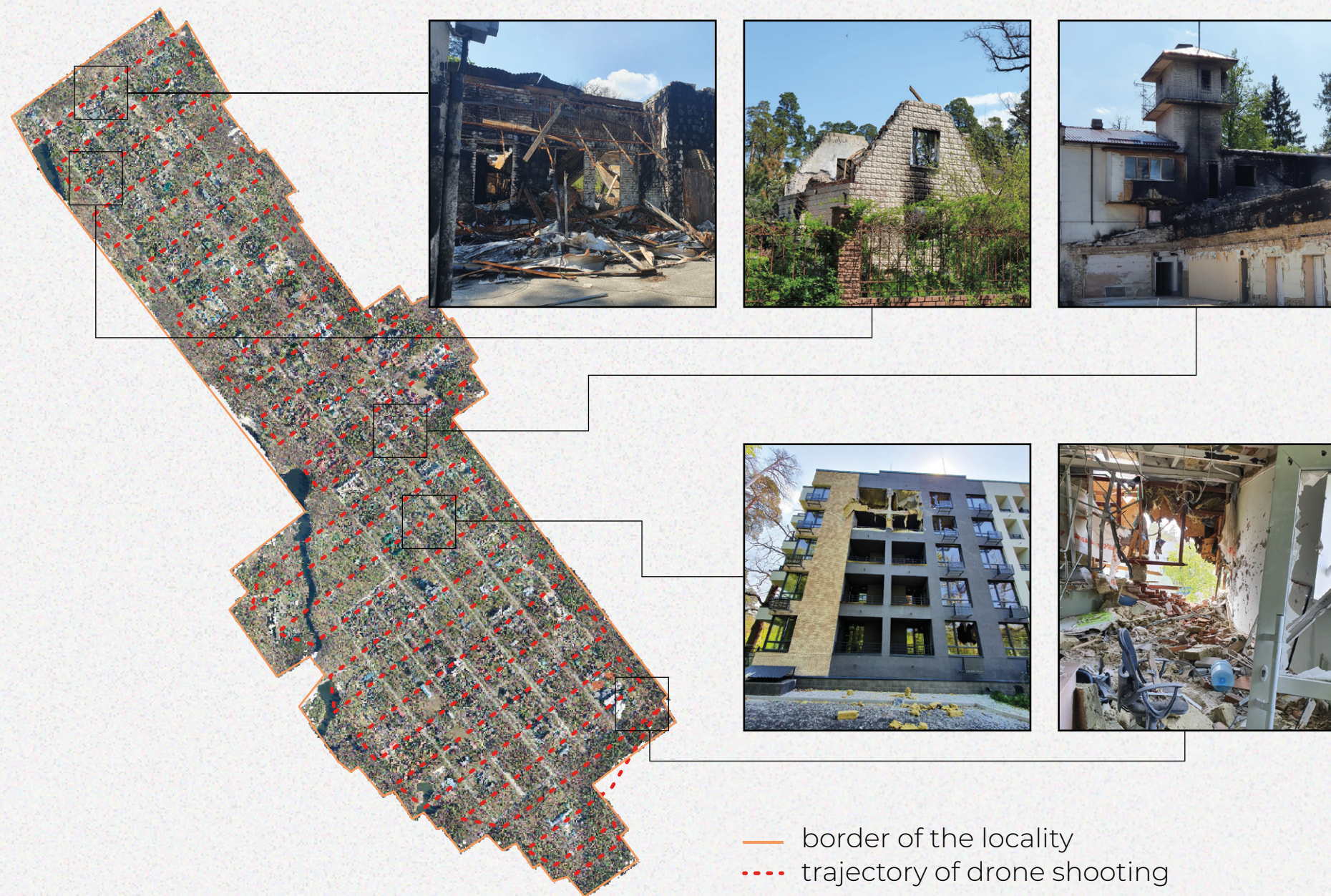
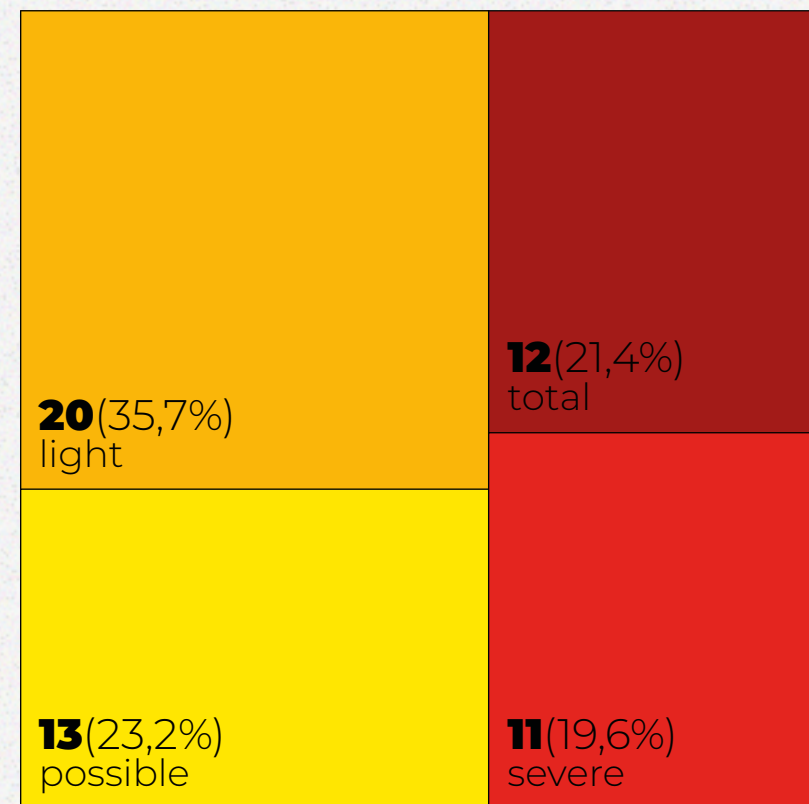
 Population
3 400 people

LEVELS OF DESTRUCTION

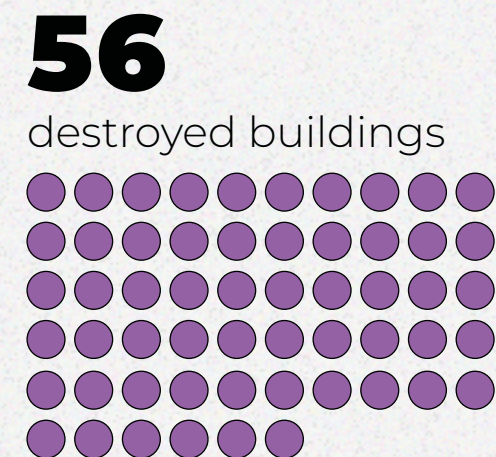
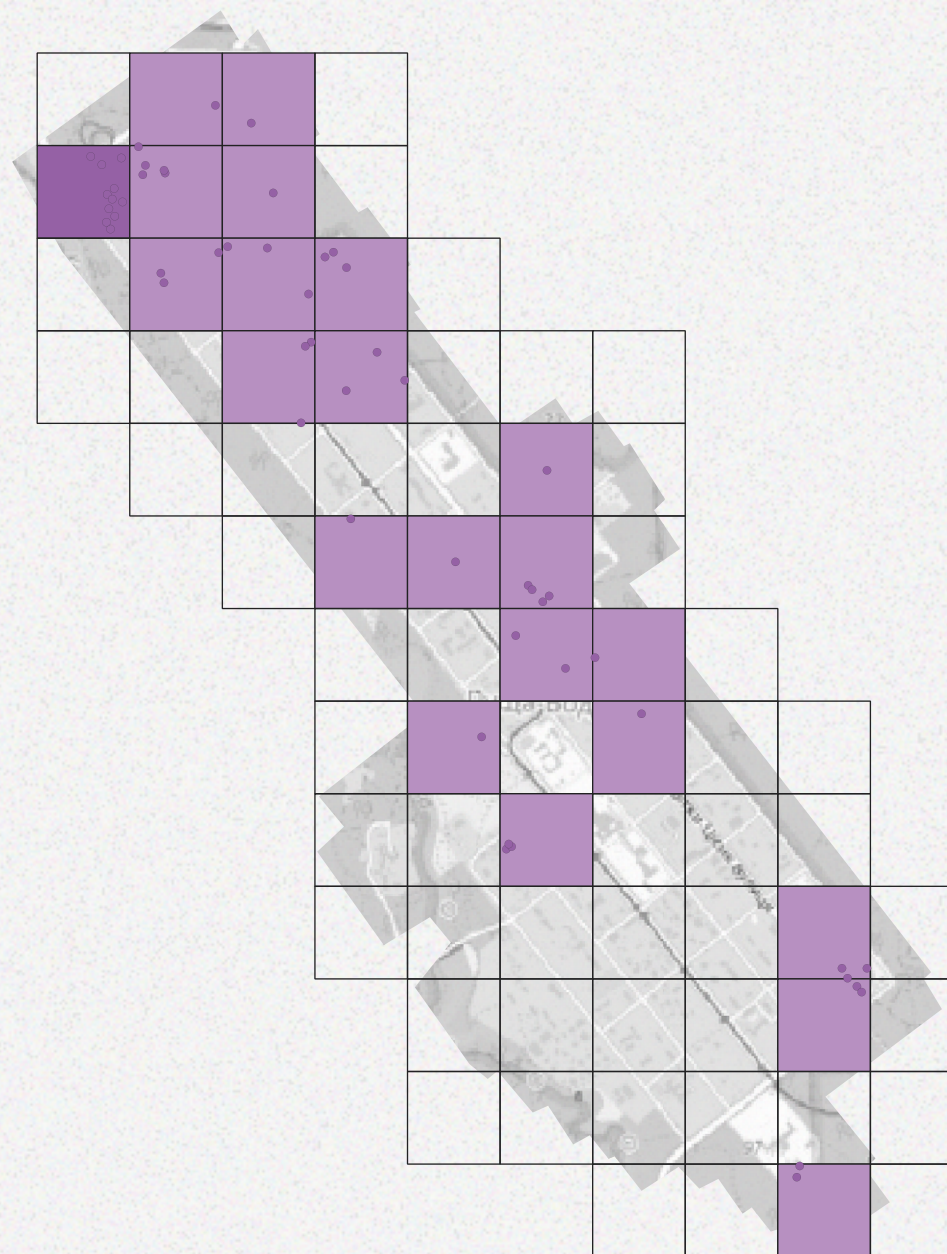
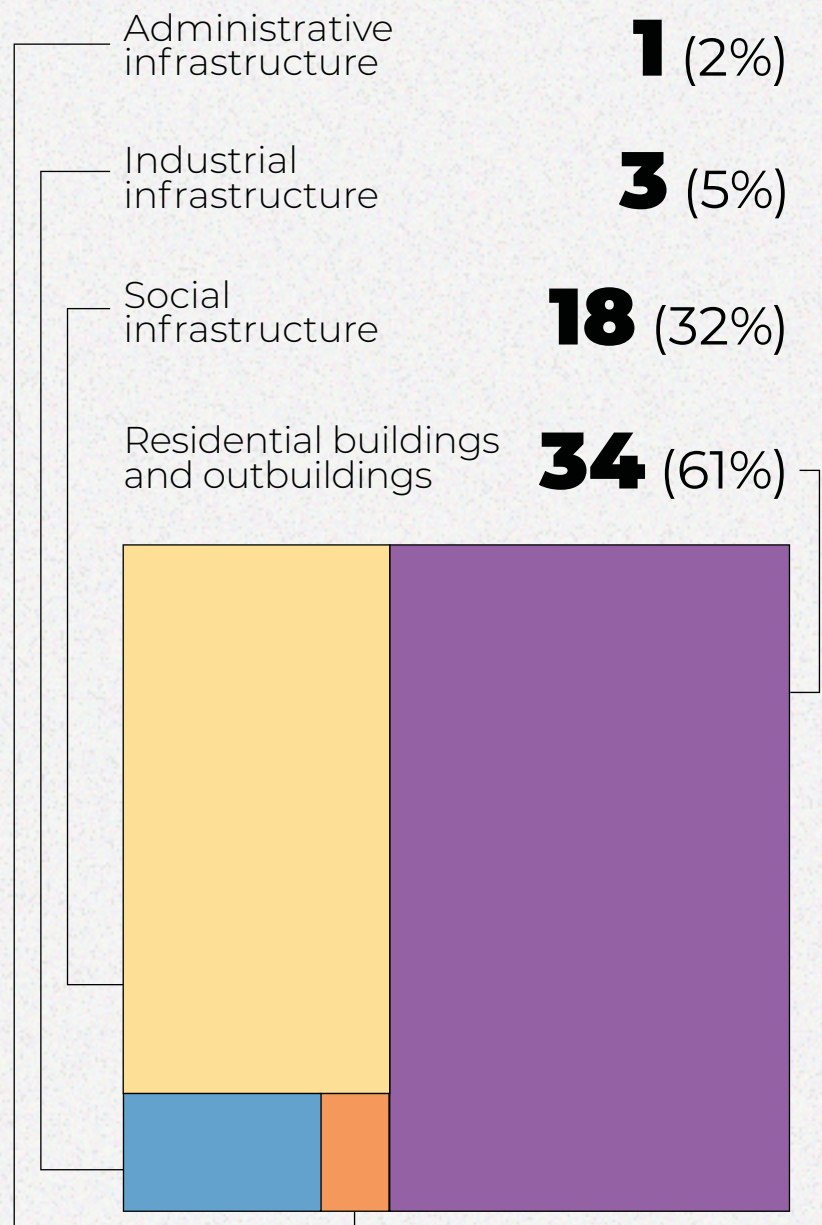
Buildings destroyed:

56 out of 1 920

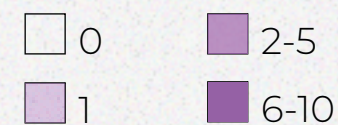
Level of destruction, number of buildings



THERMAL MAP OF DESTRUCTION

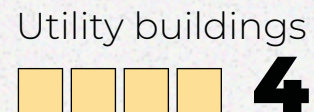


Number of destroyed buildings

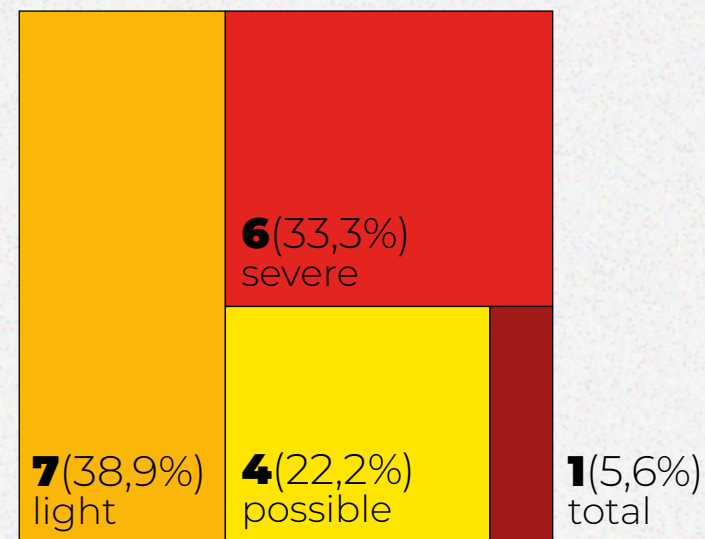


SCALE OF DESTRUCTION

Social infrastructure



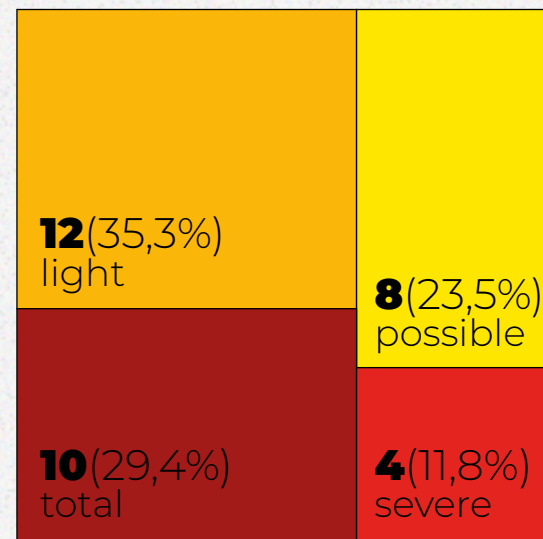
Level of destruction



Residential buildings and outbuildings



Level of destruction



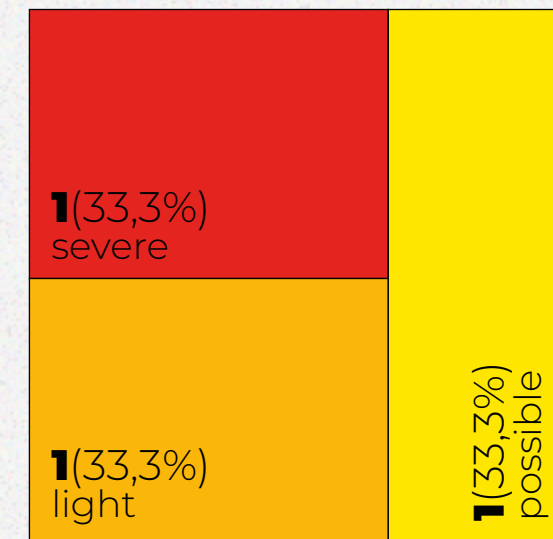
Administrative infrastructure



Industrial infrastructure

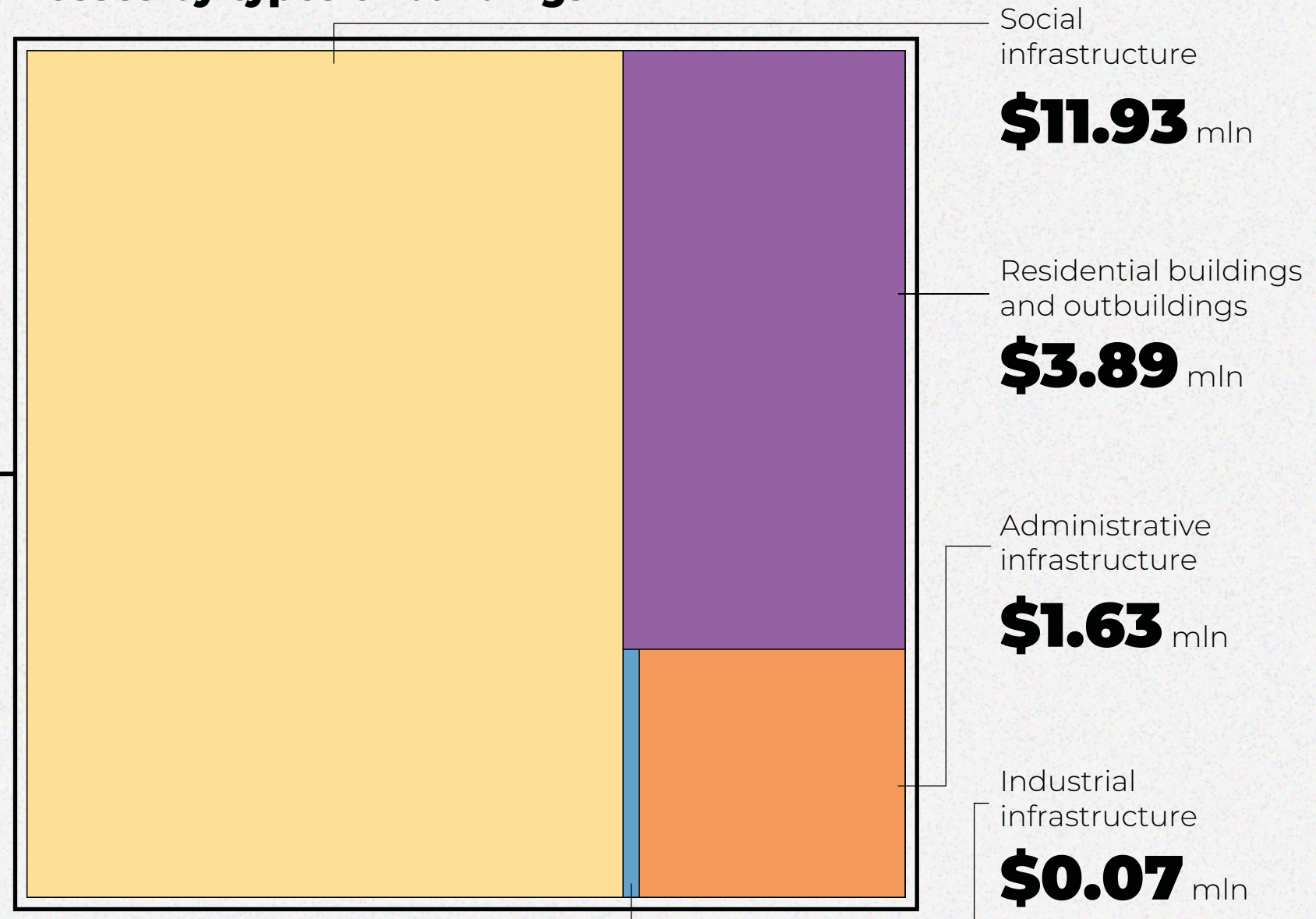


Level of destruction



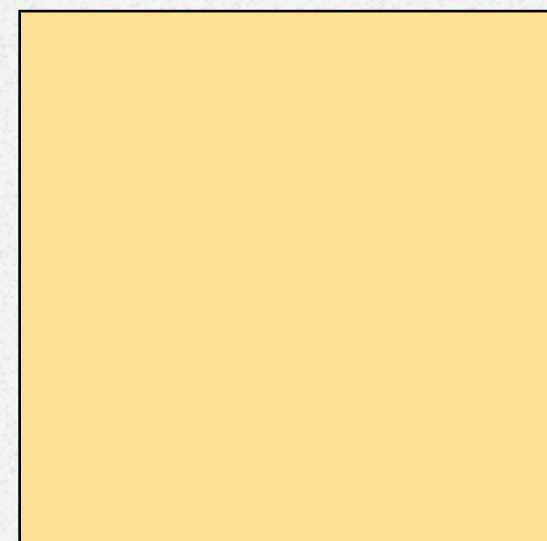
Losses by types of buildings

Total losses
\$17.51 mln
(512.25 mln UAH)

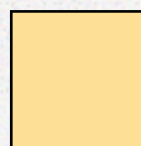


ASSESSMENT OF LOSSES

Social infrastructure



\$10.58 mln
Healthcare & recreation buildings



\$0.69 mln
Sports facilities



\$0.24 mln
Hotels



\$0.23 mln
Utility buildings

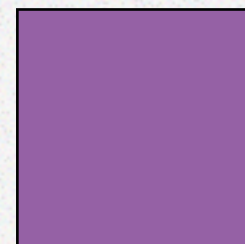


\$0.16 mln
Cafes & restaurants



\$0.03 mln
Shops

Residential buildings and outbuildings



\$2.16 mln
Apartment buildings

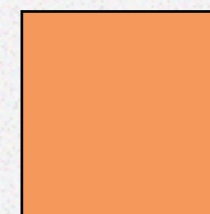


\$1.61 mln
Private houses



\$0.12 mln
Outbuildings

Administrative infrastructure



\$1.63 mln
Fire department

Industrial infrastructure



\$0.07 mln
Warehouses

1. Assumptions

The following fractions were used for calculations:

100%

of the replacement cost of total destruction

50%

of the replacement cost of severe destruction

10%

of the replacement cost of light destruction

0%

of the replacement cost of possible destruction

2. Value determination



Large objects

The assessment of large objects, in particular enterprises, is calculated individually on the basis of financial statements and other public sources regarding value information.



Medium objects

Medium facilities, in particular, social infrastructure, trade objects, and services (health, education and culture, shops, hotels, restaurants, etc.) are calculated on the basis of average cost data, taking into account the type of area (urban/rural).



Small objects

Small objects, which include residential buildings, outbuildings and garages, are calculated based on the average footage (taking into account the area and type of area) and the cost per square meter (nominal cost + cost of redecoration repairs + cost of dismantling).

REBUILD



The RebuildUA project aims to analyze and visualize the destroyed infrastructure of Ukraine, make this information public and share the results with communities, public authorities and specialized foundations



rebuildua.net

Partners:

Visual style and content:



Assessment of losses and damage, budgeting:



Digitization of geospatial information:



Support in cooperation with public authorities:



Cooperation & analysis of community economy, Vkursi Hromada:



Supported by:

