ALT/BAU
ALTERNATIVE BUILDING
ACTIVATION UNITS

ALT / BAU URBACT Transfer Network Alternative Building Activation Units

How to reactivate vacant residential buildings in need of refurbishment

Capacity Building webinar, 19 April 2021

Constanța: Using geographic information systems (GIS)

https://altbau-primariact.hub.arcgis.com/pages/proiectul-altbau

Diana Lepădatu, City of Constanța, Romania

Constanța, Romania
Using geographic information systems (GIS)

Constanța City Hall uses the GIS infrastructure based on the ESRI ArcGIS Enterprise software platform. It is managed by the Urban Database Compartment from the Urbanism Department.

ArcGIS Online is the external GIS web server portal application, used in different applications for citizens, such as:

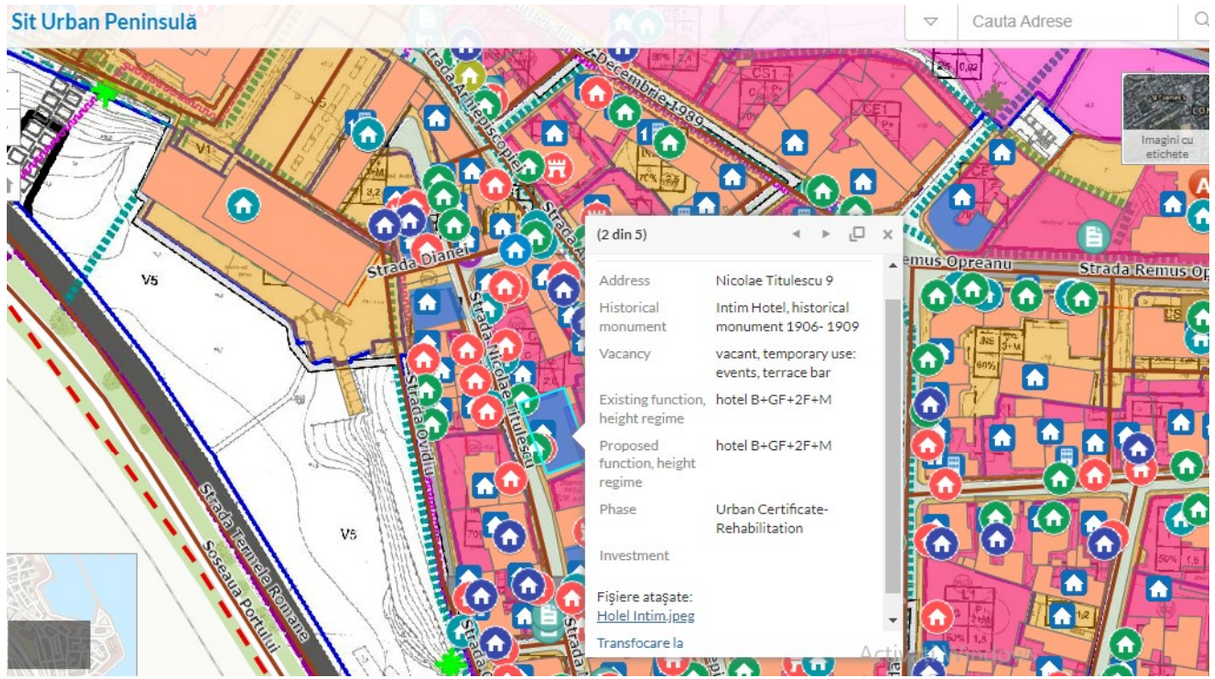
- ”Local Register of Green Spaces”
- the local ALT/BAU website, using ArcGIS Hub Application
- ”Peninsula Urban Site” Application, an urban planning database for buildings from the historical centre.

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 1: Collecting data- Excel tables made by city hall departments and institutions

- 80% of our time and resources were allocated to the process of data collection
- We established the categories of information needed in order to support the reactivation of buildings, the development of urban plans and other projects and based on that we selected what kind of data we took from different sources
- The first tipe of sources was city hall departments and institutions, who already had their own datasets in excel tables, such as:
  - Urban Department,
  - Patrimony Department,
  - Local Police,
  - Public Service of Taxes and Fees,
  - Autonomous Regime of Public and Private Domain Exploitation.



Data from the excel tables is viewed in pop-up windows

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 1: Collecting data- Questionnaires for the owners of the buildings

- The second source of data was from questionnaires that were given to the owners of the buildings located in the historical center, by using ArcGIS Survey123, a web and mobile application for data collection containing the operational layers published in the ArcGIS portal
- The owners have given us information about the current condition of the building, its history, recent works that were done and plans and proposals of the owners. They could also upload documents to support this information.
- The survey is available online on the local ALT/BAU website

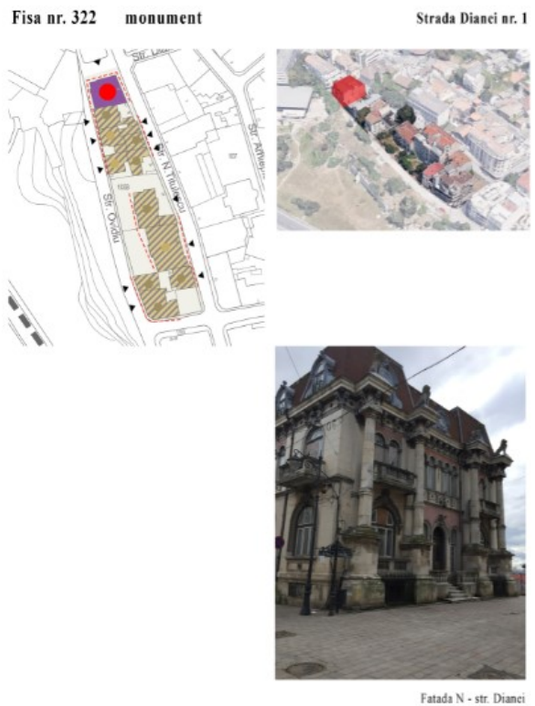
Data from the survey is viewed in pop-up windows in ”Peninsula Urban Site” Application

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 1: Collecting data- Datasheets for every building made by volunteer architects and experts from the County Department for Culture

- Our 3rd source of data was from **pdf datasheets for every building** and **dwg maps for blocks and plots**, that were made by volunteers architects and experts from the County Department for Culture. The County Department for Culture has helped because it is in charge by law to provide specialised consultancy in the field of historical monuments protection and to cooperate with public administration authorities for the elaboration of urban development programs.
- They then elaborated excel tables with the same information and organised it so that it can be better operated.
- They established an **ID for each building**, based on which the received data would be correlated and uploaded to the application.



FIȘA nr. 322
MONUMENT CT-II-m-A-02798

ADRESA POSTALA	Strada, nr. – Dianei nr. 1 colt cu str. – Nicolae Titulescu	
REGIM INALTIME	S-subsol, **D-demisol, P-Parter, 1 E-etaj**(e), ….etaj partial, **M-mansarda**	
REGIM CONSTRUIRE	□ - izolat, □ - cuplat, ■ – insiruit	
REGIM ALINIERE	■ - la aliniament, □ – retrasa in curte, □ - la limita laterala a lotului □ – la limita posterioara a lotului	
STIL	□ – Traditional, □ – Clasicist, eclectic, □ - Art-Nouveau, ■ – Alt stil – baroc venetian □ - Neoromanesc, □ - Modernist, □ - International 1960, □ – 1970-1980, Dupa 1990: □ - traditional, □ - contemporan, □ - fara stil	
AN CONSTRUIRE (facultativ)	□ - datare exacta – inscriptie: 1898-1902 □ - Ante 1900, □ - 1900-1930, □ - 1940-50, □ - 1960-70, □ - 1970-80, □ - dupa 1990	
TIP SI FUNCTIUNE CONSTRUCTII	PRINCIPALA	locuinta □ - functionala ■ - nefunctionala
	ANEXE **numar, functiune, materiale**	
STARE CONSTRUCTII	PRINCIPALA	□ - Foarte Buna, □ - Buna, ■ - Medie, □ - Rea, □ - Foarte rea (ruina)
	ANEXE	□ - Foarte Buna, □ - Buna, □ - Medie, □ - Rea, □ - Foarte rea (ruina)
MATERIALE FINISAJ cladire principala		
FATADE	■ - Tencuiala, □ - placaj caramida, □ - placaj piatra, □ - placaj lemn, □ - cortina sticla, □ – altele culoare: bej	
SOCLU	□ - Tencuiala, □ - simulipiatra, ■ - piatra, □ - piatra artificiala, □ – gresie, □ - altele	
ACOPERIS	□ – sarpanta, ■ – mansarda, □ - terasa	
INVELITOARE	□ - olana, □ - tigla trasa, □ - tigla solzi, □ - tigla din tabla, □ - tabla foi, □ - azbociment ondulat, □ – carton bitumat, □ – tip bardoline, ■ - altele – solzi din tabla	
TAMPLARIE	■ - lemn, □ - lemn stratificat, □ - metal, □ - p.v.c.	
IMPREJMUIRE (materiale)	□ - Zidarie, □ - Fier forjat, □ - grilaj metalic, □ - prefabricate beton, □ - lemn, □ - plasa metalica, □ - gard viu, ■ - neimprejmuit	
PROPUNERI (facultativ)	□ - de pastrat ca atare ■ - posibil de modificat cu pastrare elemente valoroase, necesita reabilitare □ - posibil de inlocuit	

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 1: Collecting data- Datasheets for blocks of parcels made by World Bank experts

- Our fourth source of data was from World Bank experts who have elaborated **datasheets for blocks of parcels** within the urban regeneration studies they made for the Peninsula area, based on the technical assistance agreement concluded with the Constanța City Hall
- These studies were made in order for us to take over principles, ideas and concepts in our future urban plans, regulations and projects

294 Analiza fondului construit

I.42.01

Adresă: Str. Dianei nr.1, colț cu Nicolae Titulescu

Identitate

Cod LMI:	CTH-m-A-02798, Casa cu lei, fostă casă "Emirzian"
Regim de înălțime:	D(Demisol)+ P(Parter)+ 1E(Etaj)+ M(Mansardă)
Regim de construire:	Înșiruit
Regim de aliniere:	La aliniament
An construcție:	Sfârșit de secol XIX
Stilul clădirii:	Baroc
Arhitect:	Ion Berindei

Descriere

Funcțiune:	Restaurant nefuncțional, fostă bancă și locuință
Starea clădirii:	Medie spre rea
Fațade:	Tencuială și placaj de cărămidă
Soclu:	Piatră
Acoperiș:	Mansardă
Învelitoare:	Tablă solzi și foi
Tâmplărie:	Lemn
Împrejmuire:	La intrare, din fier forjat
Anexe:	-
Starea anexelor:	-

Referințe

Documentație existentă:	Are documentație de restaurare, dar necesită actualizări
Propuneri:	De păstrat ca atare
Note:	Necesită consolidare, are POT-ul de 100%

I.42.02

Adresă: Str. Nicolae Titulescu nr. 18

Identitate

Cod LMI:	-
Regim de înălțime:	P(Parter)+1E(Etaje)
Regim de construire:	Înșiruit
Regim de aliniere:	Retrasă la limita posterioară a lotului
An construcție:	-
Stilul clădirii:	Fără stil
Arhitect:	-

Descriere

Funcțiune:	Locuință, funcțională
Starea clădirii:	Rea
Fațade:	Tencuială
Soclu:	-
Acoperiș:	Șarpantă
Învelitoare:	Tablă foi
Tâmplărie:	Lemn
Împrejmuire:	Zidărie și fier forjat
Anexe:	1 garaj
Starea anexelor:	Rea

Referințe

Documentație existentă:	-
Propuneri:	Posibil de modificat cu păstrarea elementelor valoroase
Note:	Necesită reabilitare

I.42.03

Adresă: Str. Ovidiu nr.3

Identitate

Cod LMI:	-
Regim de înălțime:	P(Parter)+2E(Etaje)
Regim de construire:	Înșiruit
Regim de aliniere:	La aliniament
An construcție:	-
Stilul clădirii:	Fără stil
Arhitect:	-

Descriere

Funcțiune:	Locuință, funcțională
Starea clădirii:	Bună
Fațade:	Tencuială
Soclu:	Tencuială
Acoperiș:	Șarpantă
Învelitoare:	-
Tâmplărie:	P.V.C.
Împrejmuire:	Grilaj metalic
Anexe:	-
Starea anexelor:	-

Referințe

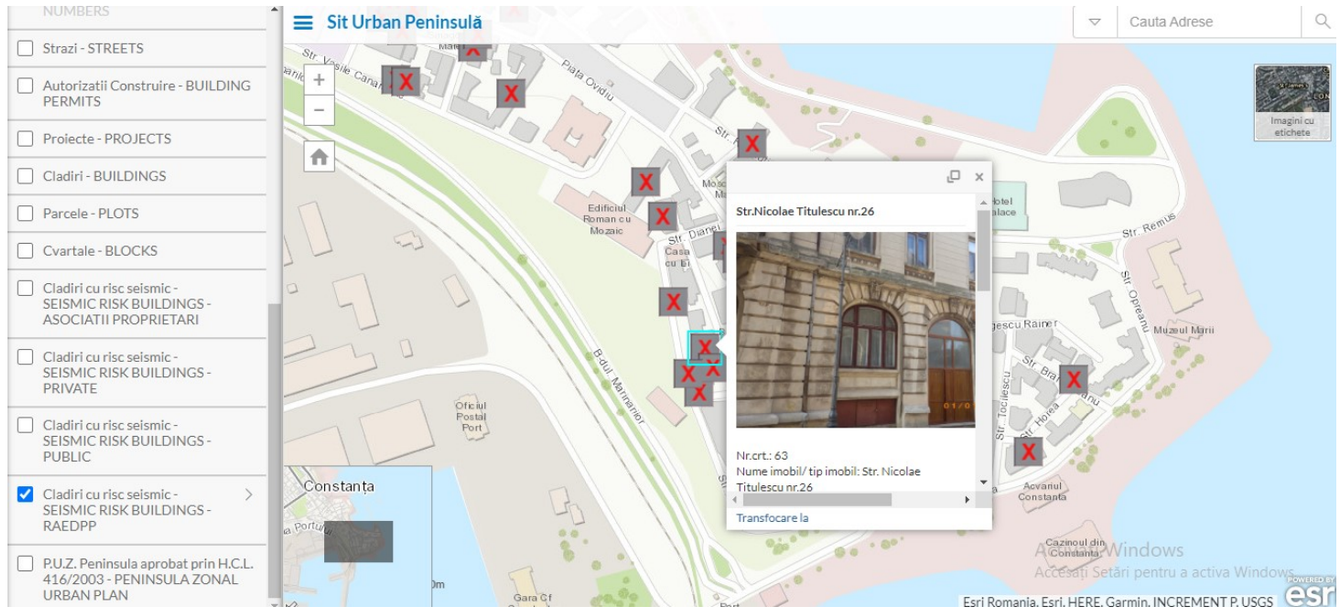
Documentație existentă:	-
Propuneri:	-
Note:	-

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 1: Collecting data- Excel tables made by city hall Commission for the reduction of seismic risk on existing buildings

- Our fifth source of data was from **”The Commission for the Reduction of Seismic Risk on Existing Buildings”** from within the city hall, which has inventoried the buildings with seismic risk in **excel tables** and these have then been uploaded to the application



Data from the excel tables is viewed in pop-up windows

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 1: Collecting data- ArcGIS Collector was used to collect field data

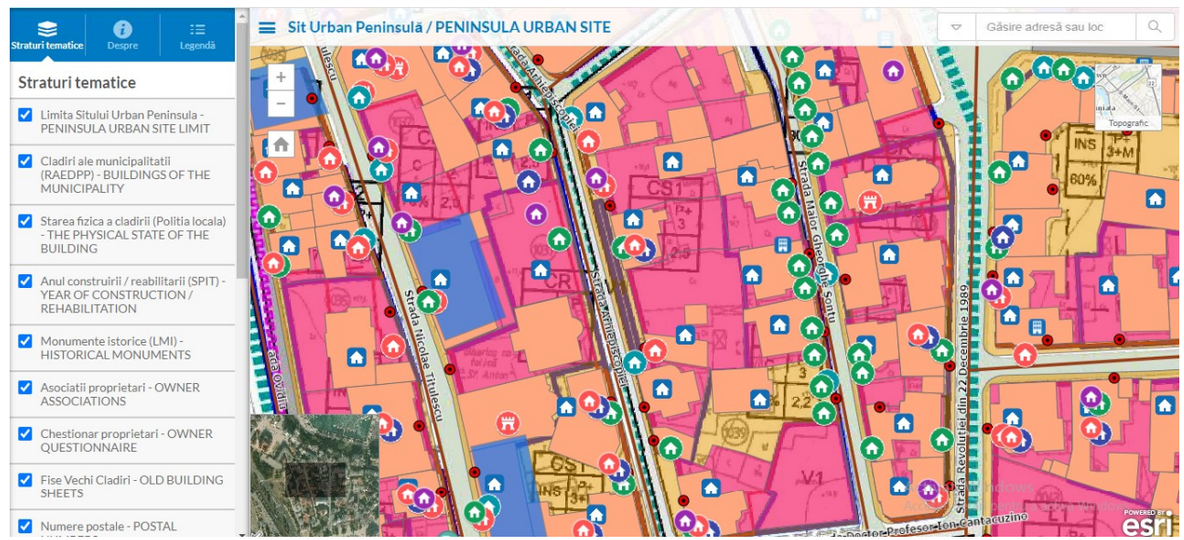
- Lastly, the **ArcGIS Collector** was used in order to collect field data, a mobile application for collecting and editing geospatial data through web maps that contain the operational layers published in the ArcGIS portal

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 2: Uploading data- based on the ID for the buidings

- The next stage after we have collected the data is to upload it based on the ID for each building. The excel tables we have created were then uploaded into the internal ArcGIS Pro desktop application and they were processed with its specific tools
- This process included correcting and validating data received from different sources, such as: checking the structure of the database, organising columns, avoiding alphanumerical inconsistencies of texts and numbers and taking care of data writing errors, for instance spacing and punctuation
- The data was then matched with the building ID, so that it can be organised for queries, analyses, statistics and graphs that would be displayed in the dashboard



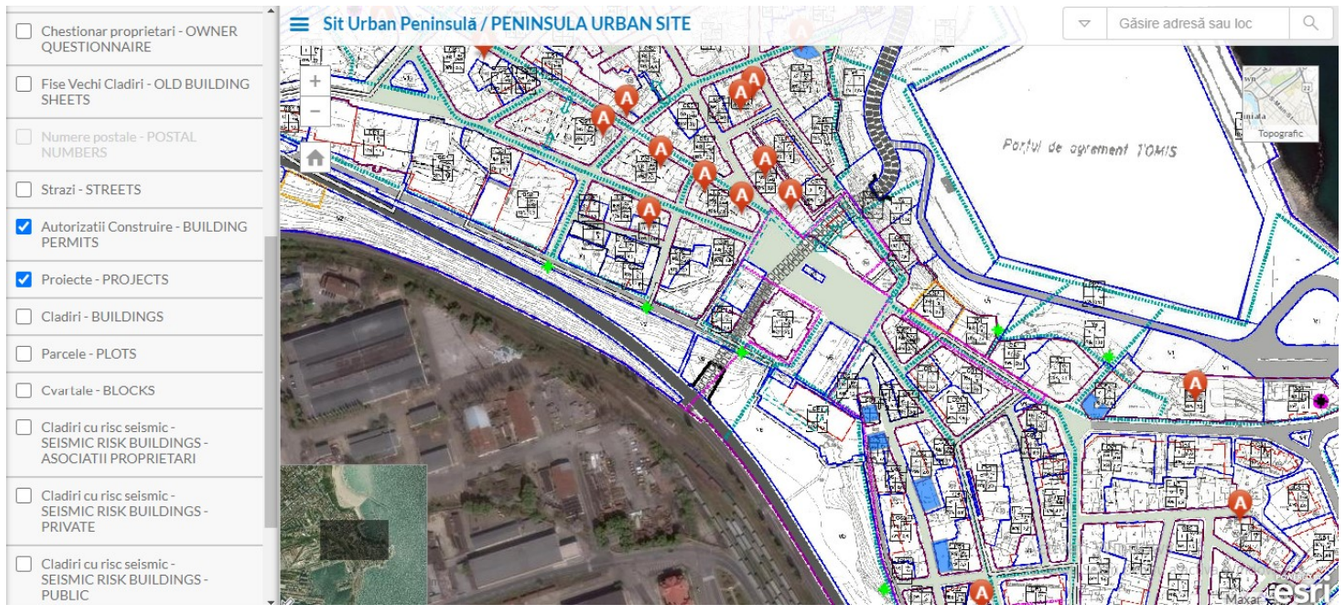
- The next step was publishing thematic web layers related to the map on the ArcGIS Online, the external GIS web server portal application
- This was followed by uploading the processed data correlated with the map into the “Urban Peninsula Site” Application

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 3: Updating and Monitoring data

- The third stage was that of updating and monitoring the data. This includes monitoring the dynamics of the physical condition of the buildings, its occupancy, the state of the construction works, as well as the options of the owners for the future of their buildings
- We are keeping track of the dates when new information is uploaded, therefore allowing us to make an evaluation of their evolution over time.



Constanța, Romania

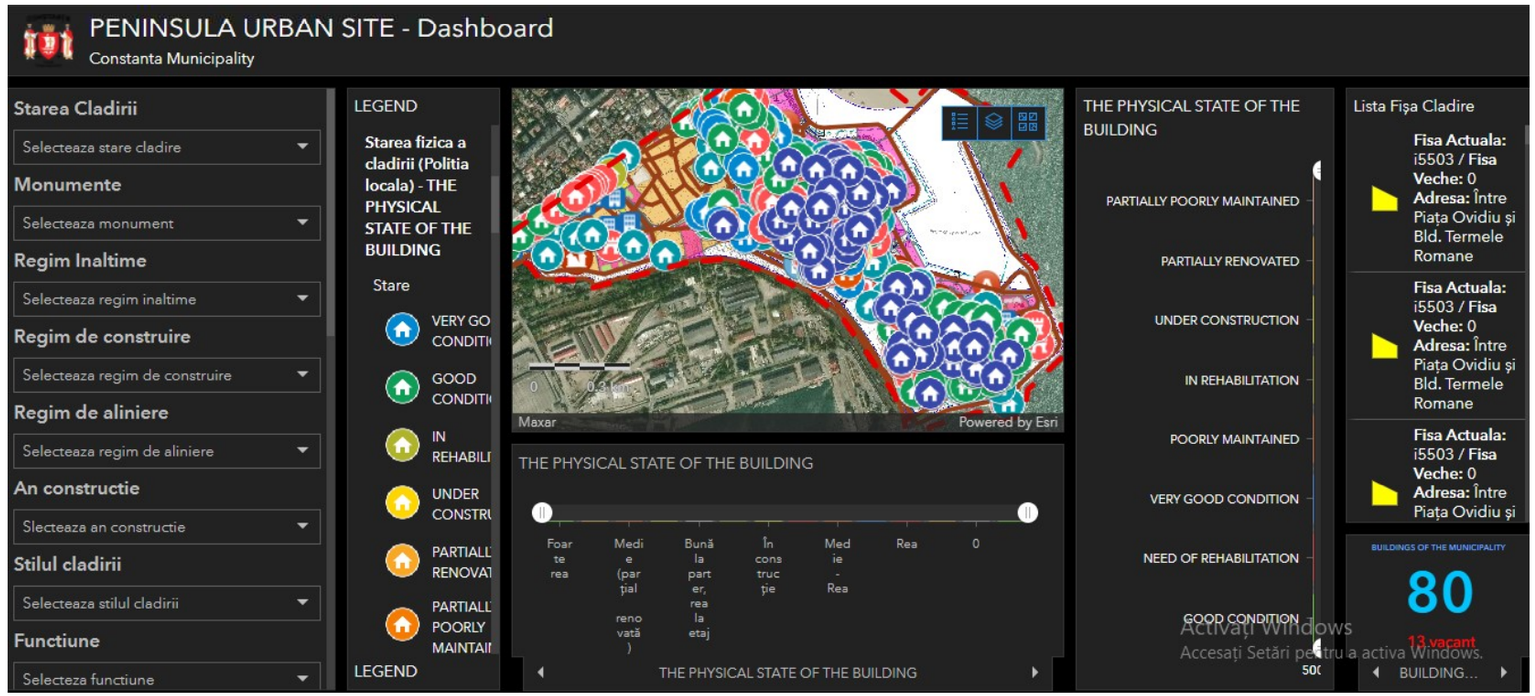
”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 4: Using data

The last stage is that of using the data.

”Peninsula Urban Site” Application is an interactive mapping tool that supports the reactivation of the buildings, through:

- supporting the owners, investors and buyers in decision-making, providing historical information, the current situation of the building and proposals of the owners for the future of their buildings
- It also supports the elaboration of other city hall plans and projects.



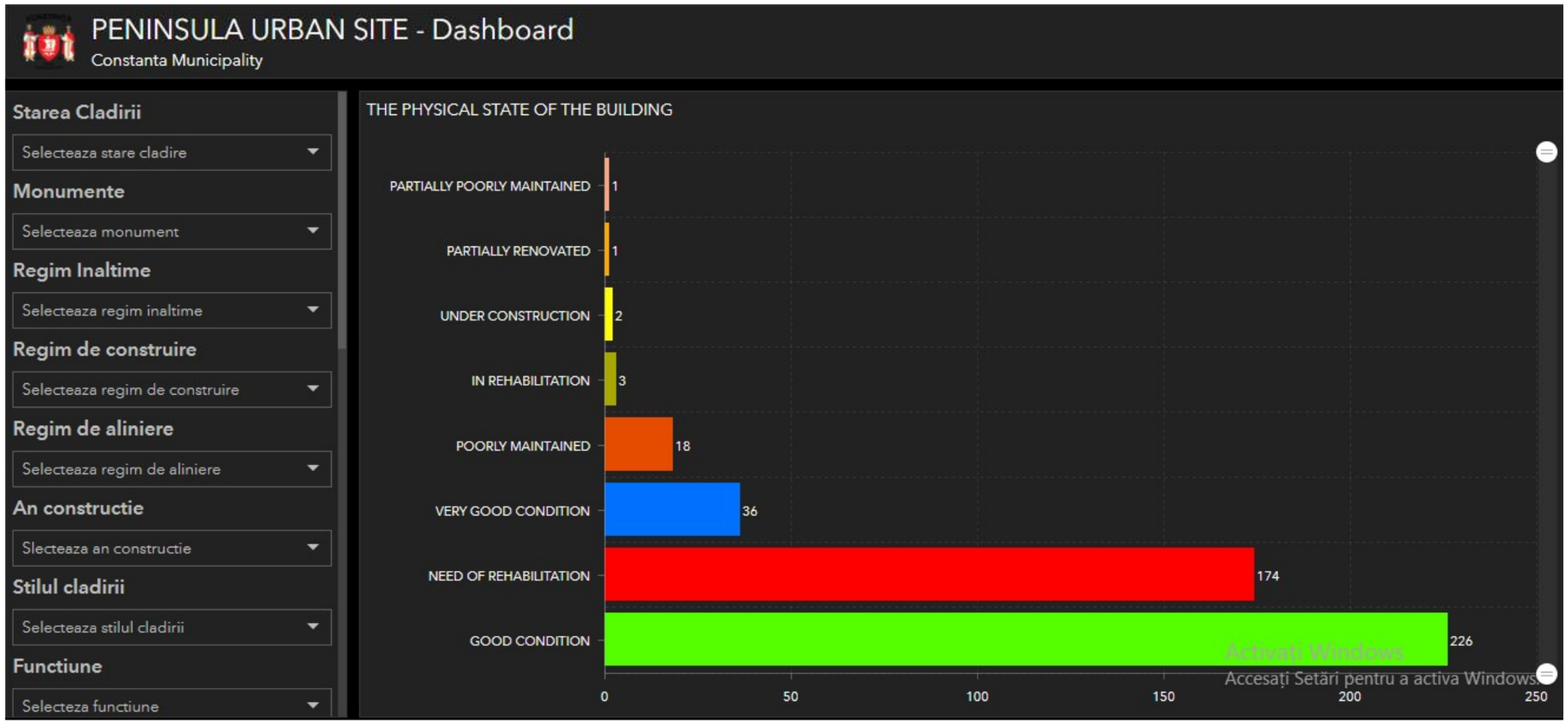
The dashboard allows you to display various graphs and statistics.

Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 4: Using data

The application allows us to view the data in graphs. In this picture, you can see the current condition of the buildings, the red graph showing the ones that need to be rehabilitated and the green one showing the ones that are in a good condition.

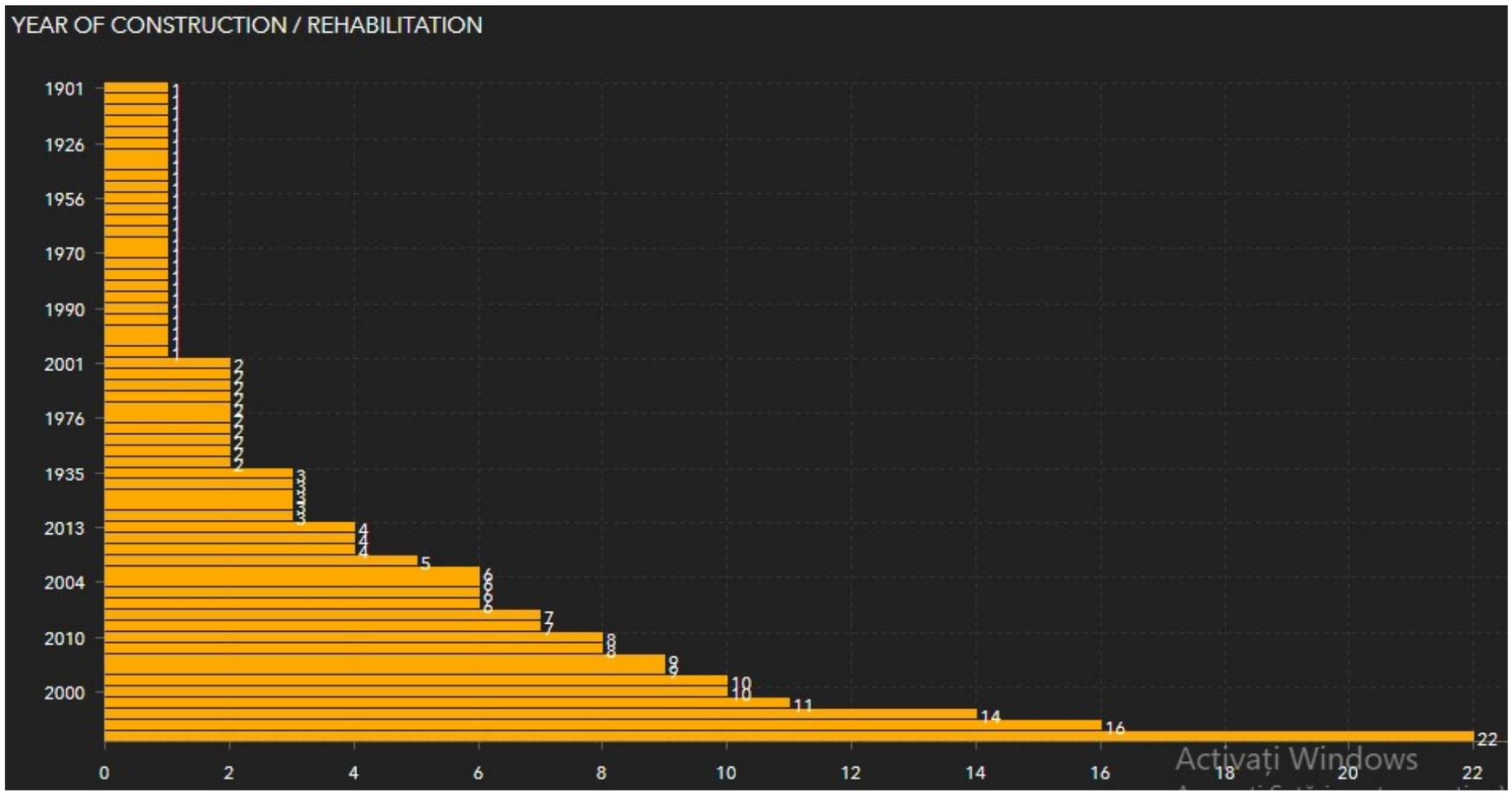


Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 4: Using data

In this picture you can see a graph with the year of construction or the year of the last rehabilitation of the buildings.

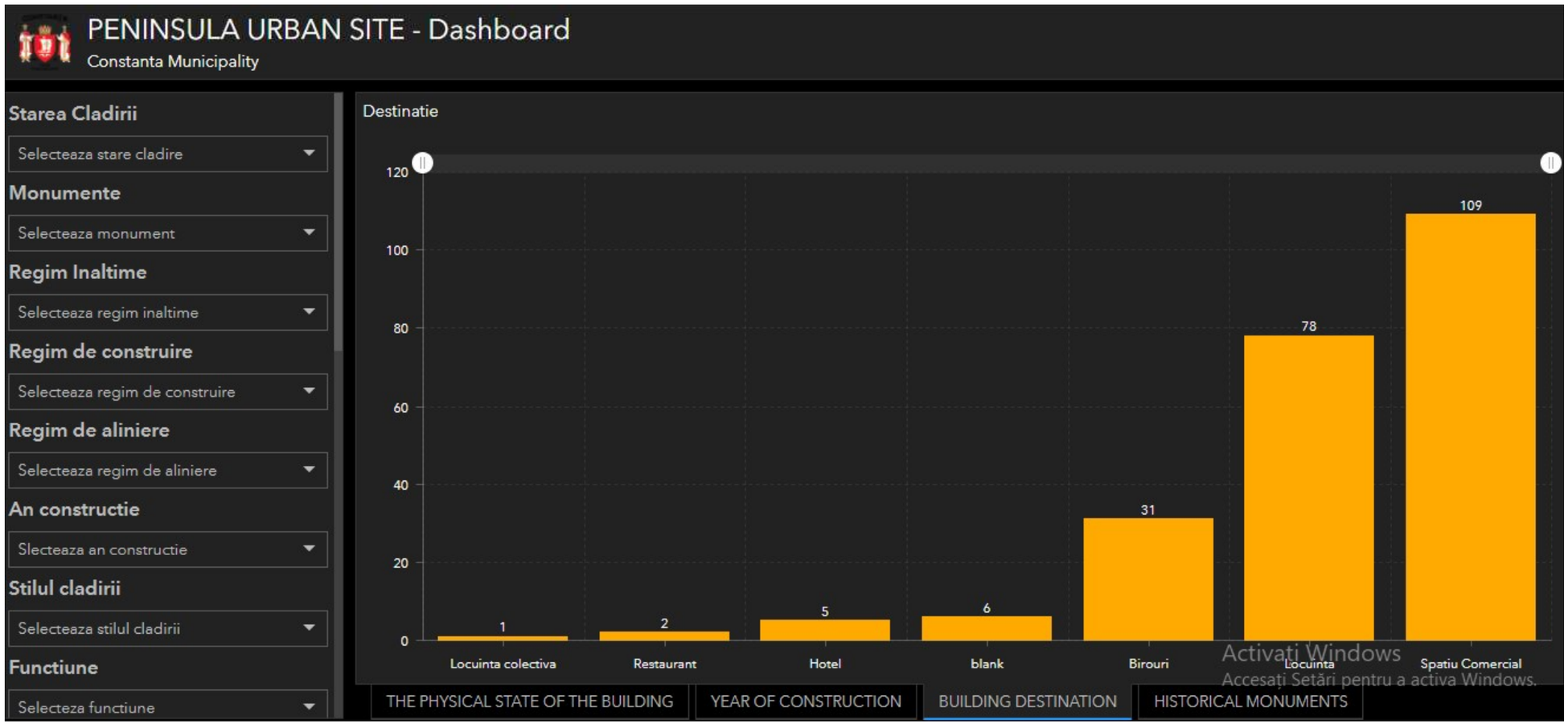


Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Step 4: Using data

In this graph you can see the functions of the buildings. The most common ones are for residence, trade and offices.



Constanța, Romania

”Peninsula Urban Site” Application, an urban planning database for historical centre

Steps further

The steps we are planning on taking further are to continually develop and update the "Peninsula Urban Site“ Application, by:

- A more simple organisation of datasets that are received from different entities in order to make optimal use of them and generate useful reports
- Uploading other kind of datasets, such as:
  - Approved urban planning regulations of each regulatory area,
  - Images from previous and future studies
- Datasets will be uploaded by city hall departments directly

Thank you very much for your attention!

We would be glad to hear your views.

If you would like to get in touch with us,

we can be contacted at this e-mail address:

Diana Lepădatu, Urban Department

Sorin Amzea, Urban Database Compartment

urbanism@primaria-constanta.ro

Constanta City Hall