



WEBGIS AND DOCUMENT MANAGEMENT SYSTEM FOR MANAGING THE ELEMENTS OF A MAP.

An object is thoroughly known when its history is known; *Knowledge* allows better management.

An object can be *identified* by its position on a map, which shows its context, and *described* by an associated sheet.

Associate events and documents; our system goes further: allows to store the documentation produced during the studies and/or interventions carried out on it; for example a redevelopment project, a restoration, a maintenance intervention, etc.

The system is the extension of a WebGIS and allows you to keep track of events that have occurred or are scheduled, allows the storage, cataloging and indexing of the documents produced.



Thanks to this, the team can manage the site and the “objects” present in it, can efficiently plan future interventions, and share information in real time. Any change to the system is immediately available to the entire team, improving its efficiency.

It is a dynamic system that allows you to keep updating the history of the individual elements within their environment, giving managers a complete and updated overview of the website.

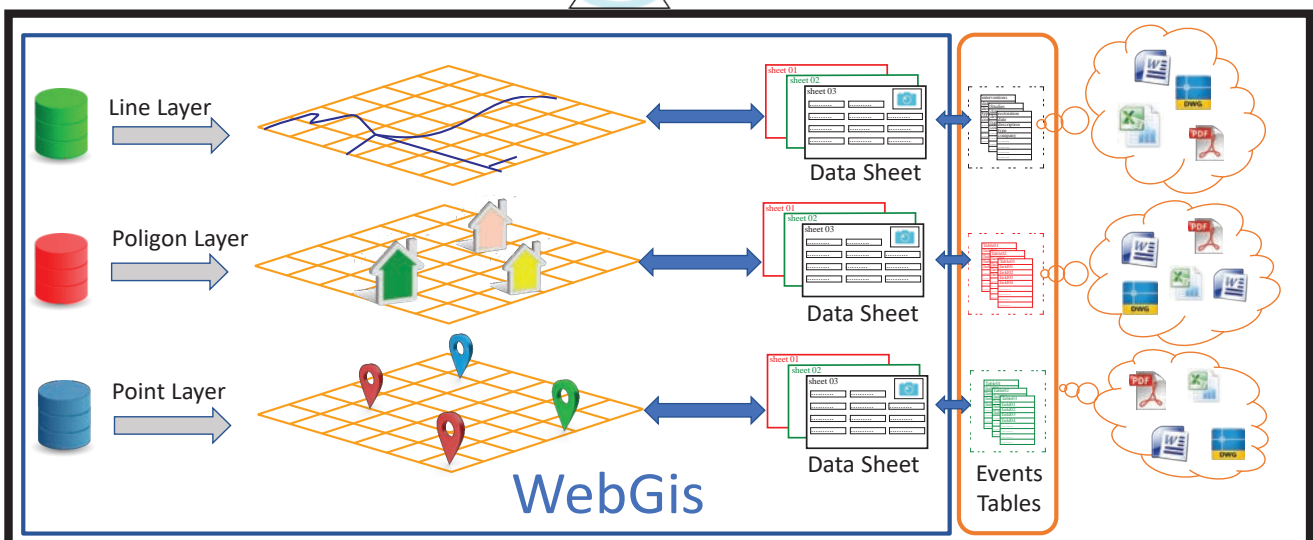
Users groups and permissions; a system of hierarchies of users, divided into groups, which allows depending on the permissions of the connected user, to see, add and / or modify the different elements of the system itself.

The entire framework was built using open source components of proven reliability leaders in their own field. The system is multilingual according to modern Web standards.

For each vectorial layer we can associate tables, for example tabs that characterize it; additional tables can describe “the story”, through actions or events that the object has been submitted to, such as an inspection, design, maintenance operations, a restoration. To each of these events we can associate a space (structured or not) within the document manager, where we can collect and catalog the files that document the event.

Configurable dashboard; a dashboards allows you to friendly manage everything, to have an overview of the site, the ability to navigate between the cartographic paer, tabular and document instantly and intuitively. The system does not require the installation of any software, it works through any browser *regardless of the hardware and operating system*; any system update or addition of new features is immediately available to users.

User friendly; you do not need to be an “expert” to use the system; through a userfriendly interface you can search, apply filters in order to select one or more elements that match certain criteria and the result is visible both in tabular and graphically way



ENHANCE, MANAGE, CONTROL...

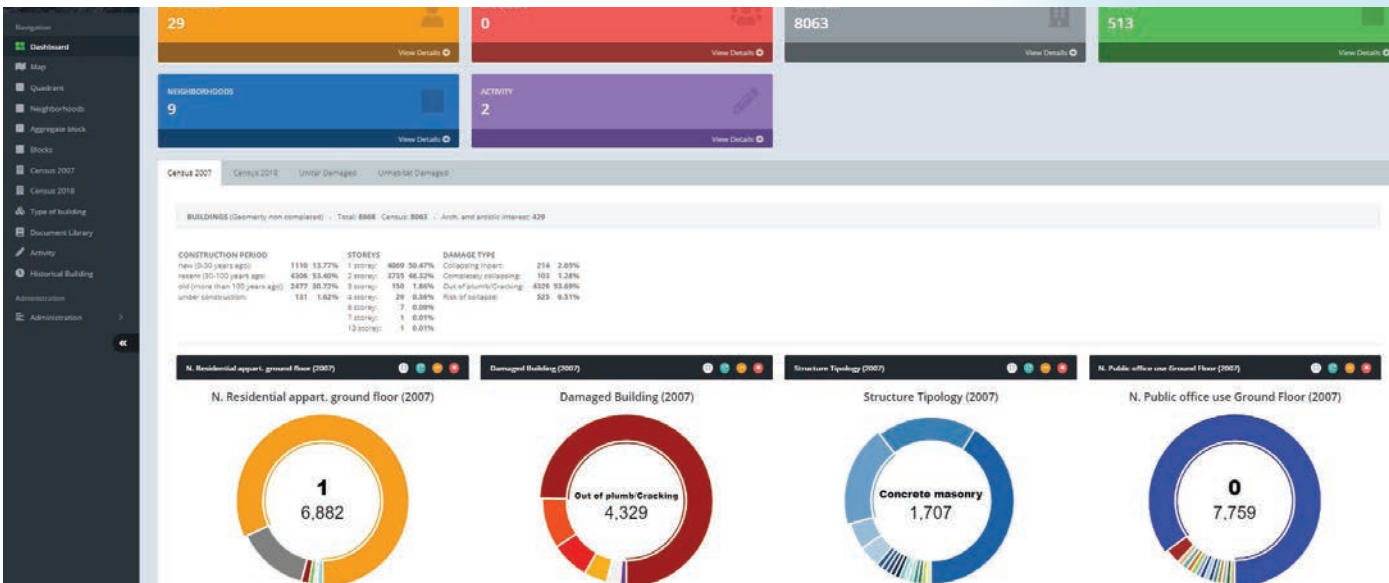
highlighted on the map; also, you have available all the tools that allow easy navigation: *zoom, pan, selection, search, measure*. With the appropriate permissions you can modify or insert additional graphics directly from the browser.

Layer manager allows us to turn on and off, change the order, transparency in order to have the map that most corresponds to our needs.

A powerful text search engine, associated with the indexer of the document manager (read and indexes all the contents of the document inserted inside it), allows us to quickly identify it.

The possibility to create *workflows* allows you to automatize processes or trig actions when an event occurs such as sending an email, moving documents from a folder to another, requesting approval from a particular user or group of people, etc.

The system is flexible and customizable in according to customer needs, can be used by all those who need to manage the elements located on the territory.



- A trunk of road, railroad, water supply or sewage system...
- A well, a trellis, a tower, a light pole, a tree, a manhole...
- The different elements of an archaeological site, museum's works, the buildings of an urban area...

They all are elements that have a "past" characterized by *events* to which *are usually connected documents* that describe the story, and give us information about the current characteristics of the object or of his past, about transformations that the object has been submitted over time, and why and who made the changes.

The user has the possibility to customize the system components.

The system allow to add or delete maps, graphs, and tables to adapt the system to the needs of the moment.

Security and data privacy; this is guaranteed by a robust access control system giving maximum freedom to share documents: you can share a document with everyone, even on social media, or do not share it at all.

The interface shows a table of entries under the heading "Documentation and Studies" > "Architectural Documentation".

Title	Date	Organization	Person	Alfresco Links
Architectural Documentation	2008-01-01	HCECR	Directorate of Antiquities	Folder
Survey and Architectural Documentation for All Buildings including Photographic Documentation for Each Building/Studies for the Conservation and Restoration of 8 Building Groups at Erbil Citadel	2012-01-01	HCECR-UNESCO	Ines ingenieros consultores	Folder
Architectural Documentation of the Existing Fabric of the Citadel, Buildings & Streets(Conservation and Rehabilitation Master Plan)	2011-01-01	HCECR-UNESCO	Consultancy for Conservation & Development	Folder
Architectural documentation of the existing fabric of the citadel, buildings&streets(Conservation and Rehabilitation Master Plan)	2011-01-01	HCECR-UNESCO	Constulancy for Conservation & Development	Folder

Showing 1 to 4 of 4 entries

case history

Mosul old city - Iraq

The historic center of Mosul was severely damaged by the war for liberation from ISIS.

UNESCO manages the project for its reconstruction.

In this case the platform in addition to documenting the progress of the work, will allow the cataloging of the documents that will be produced during the reconstruction project. An instrument that will allow the various teams involved to share information in real time.

Various layers document the transformation of places over time: historical maps from the beginning of the 20th century to the current state; maps and data of the 2006/2007 census; the UNITAR map "Damage assessment of Mosul", August 2017 (release date of the city from ISIS) the damage map from UNHABITAT etc..

A sheet has been associated with each building in the historic center, which describes its current status, the budget, the phase of the reconstruction project, scheduled actions etc.; the user has access to all the data available on the property such as the 2006 census, the census 2018 and other layer.

Additional tables, linked to the main one, describe the actions carried out; for each of these records, you can attach any documents



1930 Al-Hadba' minara



2018 Al-Hadba' minara

produced, which are cataloged and stored in the document management system.

The system allows you to add additional layers that become available during the project, such as roads, sub-services and whatever else the team will find useful.

The platform, with its different degrees of access to information, will allow all the parties involved (from lenders to operators) to follow the status of the project throughout its cycle.

For each housing unit it will be possible to view the history of the entire project and the documents produced, as well as the progress, the allocated budget, the expenses made; it is also possible to build general reports that aggregate data with homogeneous characteristics.

At the end of the reconstruction project, the system can become the starting point for the manage the territory by local administrators.



2013



2018

Datasheet of house: 6 - Block: MOS_350

Map References

Central Point:
Latitude: 4024046.8409 - Longitude: 332006.9731

Photo

Building		
Building ID:	MOS_350_06	Description:
Total area built:	0	N. storeys:
Use:	occupied	Damage:
Project phase:		Status phase:
Allocated Budget:	0	Estimate Budget:
Area:	238.57	Destination:
Owner:		Tribes:
Actual expenses:	0	

Census 2007

Building ID: MOS_350_06 Storeys: 2 N. Upper floor residential: 1 Period of construction: old (more than 100 years) Appearance: I Water service status: Sewerage status: Telephone status: Location artistic elements: entrance Date of survey:	from photo: 1 n. GF residential: 1 N. Upper floor productive: 0 Presence arch. elements: 1 Location post-entrance: Front Structure typology: Stone masonry Potable water served: I Electricity served: I Garbage served: I Heating served: I Cooling served: I	to photo: 5 n. GF productive: 0 N. Upper floor Prod. fac.: 0 Presence arch. elem.: I Vehicular entrance: I Damaged: I Water potable status: Electricity status: Garbage status: Heating status: Cooling status:
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Synopsis of building: Building in aggregated block

N. GF Prod. fac.: 0
 Degree of use: occupied
 Pedestrian entrance: I
 Civic vehicle entrance:
 Type of damage: Out of plumb/Cracking
 Water service served: I
 Sewerage served: I
 Telephone served: I
 Arch. and artistic interest: Other
 name of surveyor:

Metadata

Type of Building: Building (General / Default)	Sensor date: 2017-08-04	Sensor ID: GeoEye-1	Confidence: Medium
Validated field: Not yet field validated	Damage Type: Moderate Damage	Shot ID: DC	Event code: CE214061380
N. Building: MOS_350_06			

case history

The Citadel of Erbil - Iraq

The Citadel of Erbil is a characteristic urban settlement on top of an artificial hill (Tell).

With a diameter of about 300 meters, as result of the archaeological deposit of successive stratified of civilizations accumulated over more than 6,000 years, appears to be the city with the longest living continuity. In 2007, the Kurdistan Regional Government (KRG) established the High Commission for Erbil Citadel Revitalization (HCECR) for the preservation and revival of the citadel. In June 2014 it became part of the UNESCO heritage sites.

The purpose of the assignment was to create a georeferenced document archive for all data concerning the entire Citadel, starting from an updated map.

We created the basis of the system producing the classic mapping in scale 1: 200, using a drone for the acquisition of photo stereo pairs and then carried out all the steps that led to the completion of the cartography:

topographic framing network, aerial triangulation, fotogrammetric aerial restitution, reconnaissance, integration of aerophotogrammetric restitution on the ground, editing of the numerical cartography, structuring of the data.



The client's need was to manage both the activities of the archaeological areas and those of the housing units.

The citadel of Erbil is divided into 59 blocks, each one contains a certain number of "plots". Each "plot" is a housing unit so for each one was created a sheet, which in addition to identifying its position on the general map, contains all the information that characterizes it. There are also associated other tables that record the various activities carried out, divided into categories:

investigations, interventions, redevelopment projects, studies. Also for the archaeological areas has been created a table that lists the general characteristics such as: the name of the area, the depth of excavation, the sector and the description ... each area is associated with a sheet of activities carried out and / or programmed in the area.

In both cases, at each "event" a space is reserved for the conservation and management of the attached documentation. The WebGis map is enriched with additional completion layers, such as the design of the new electricity network, the sewage system and the water network in addition to the layers of the cartography produced.

All events held on the site with the related documentation are also managed.



Plot no.	Plot name	Type and Grading	Prob. Construction Period	Area	Project Status	Alfresco Links
B01-01	Hajj Waisi Agha	Heritage House Grade 1	pre 1900 AD	159,17	Project Proposal	Show Folders Show Map
B01-02	Hajj Waisi Agha	Heritage House Grade 2	pre 1900 AD	180,68	Project Proposal	Show Folders Show Map
B01-03	Noraldin Rashid Agha Waisi Agha	Heritage House Grade 2	pre 1900 AD	273,7	Project Proposal	Show Folders Show Map
B02-01	Ali Kuri Waisi Agha	Heritage House Grade 2	1900-1950 AD	359	Project Proposal	Show Folders Show Map
B02-02	Rashid Agha Diwakhana	Heritage House Grade 1	1900-1950 AD	493	Project Proposal	Show Folders Show Map
B02-03	Related to Sheikh Jamil Afandi	Heritage House Grade 2	pre 1900 AD	180,13	Project Proposal	Show Folders Show Map
B02-04	Related to Hajj Rashid Agha	Heritage House Grade 3	pre 1900 AD	56	N/A	Show Folders Show Map
B03-05	Salih Chalabi	Heritage House Grade 1	pre 1900 AD	397	N/A	Show Folders Show Map
B02-06	Heshim Dabbagh	Heritage House Grade 2	1900-1950 AD	372,75	Project Proposal	Show Folders Show Map
B03-01	Sheikh Jamil Afandi	Heritage House Grade 1	pre 1900 AD	542	Project Proposal	Show Folders Show Map