

UNIONE

EUROPEA



Ministero dello Sviluppo Economico





Regione Puglia Dipartimento Sviluppo Economico, Innovazione, Istruzione, Formazione e Lavoro

POR Puglia FESR FSE 2014-2020 - Sub-Azione 1.4.b

INNOLABS

SOSTEGNO ALLA CREAZIONE DI SOLUZIONI INNOVATIVE FINALIZZATE A SPECIFICI PROBLEMI DI RILEVANZA SOCIALE

IM.P.A.C.T. project

(IMmersive technologies to Promote Apulian Cultural heritage and Territory)

DELIVERABLE D6 Immersive multimedia content

Temporary Association of Purpose: HGV Italia Srl - Lead Partner Archeologica Srl - Partner Cassandro Srl - Partner Meeting Planner Srl - Partner Never Before Italia Srl - Partner Romano Exhibit Srl - Partner Solutiongroups Srl - Partner Solutions Plus Srl - Partner University of Foggia - Research Organization

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Sezione A2. Immersive multimedia contents

1. Content development and their implementation

Within activity C.6 "content development" following the participatory activity of sharing the design choices made and the co-design of the content aspects to be implemented, the following deliverables were produced, detailed in the following paragraphs:

- Screenplay for each of the two areas of interest
- Realization of VR 3D environments and 3D movies
- Realization of final films of the territories of the Dauni Mountains and the Ionian area.

Following the meetings with the final users and the sharing of ideas, also with the partnership, two scripts were defined for the different territories.

1.1. Area Ionica screenplay

THE FRONT MONITOR CAN BE SEEN LIVE IN THE VIEWER AT THE CONSOLE WITH A FLIGHT OVER PUGLIA. A NARRANT VOICE (Avatar in the figure of Magarella) WELCOMES THE VISITOR AND INVITES HIM TO UNDERTAKE THE JOURNEY

"Hi ... as you can see, we are flying over there Puglia, a region rich in history, traditions, and culture. Many areas are now known, others are a little less but certainly just as deserving of a visit. The journey that I propose to you aims precisely at the discovery of one of these, and to be precise the area of the Ionian area. "Hold on tight. The journey is about to begin !!"

Welcome to my fantasy world. I'm Magarella daughter of the magician Greguro. We are in the year 1000. My father enjoyed a reputation as a healer, a saint. He practised his art in some caves in the Gravina delle Rose of Massafra. He made lotions with the medicinal plants that grew in the ravine and administered them to the sick.

I had the task of collecting them. At night I went down from the cave and collected the herbs that grew luxuriant in the ravine. Many men in the country i they were courting and this must have sparked envy of their women who pointed me out as witch ... I would have, according to them, seduced men with filters and spells.

A VORTEX EFFECT, TAKES THE TRAVELER INTO REAL-WORLD, OUT OF THE FANTASTIC WORLD THE NARRANT VOICE IS BACK TO ACCOMPANY HIM ON THE TRIP

You just discovered an ancient story related to Massafra. But let's get to today ... What you are seeing is one of the many ravines that distinguish the territory of Massafra and Grottaglie. The ravines are a typical karst morphology of the Murgia: erosive engravings even more than 100 meters deep, very similar to canyons, carved by meteoric waters in the limestone rock.

FLIGHT WITH DRONE TO TRAVEL THE GRAVINA FINO AT THE GREGURO PHARMACY ENTRANCE

DRONE ON THE HISTORICAL CENTER UNTIL THE PART WITH GRAVINE

Here is the defined cave -Pharmacy of the Magician Greguro -, yes, the very one where Magarella is thought to have lived with his father. Let's go inside to discover it, Follow me !!

It is an extraordinary complex of twelve caves communicating, all dug into the rocky bank. Notice the dense network of niches dug into the walls, like one gigantic shelving, they were according to tradition, the spaces where my father, magician Greguro used to collect and collected medicinal herbs ... but this is one story that I have already told you.

DRONE ON THE HISTORICAL CENTER UNTIL THE PART WITH GRAVINE

The urban centre of Massafra also guards precious examples of cave living

with particular reference to age contexts medieval. Particularly illustrative are the cases of the rock churches of the city centre, such as the rock church of Candelora

and the rupestrian church of San Leonardo, distinguished both from well-preserved fresco cycles.

DRONE ON THE HISTORICAL CENTER UNTIL THE PART WITH GRAVINE

Let's move now to Grottaglie

FLIGHT ON THE GRAVINA OF THOUGHTS UNTIL REACH THE GRAND OPENING

Here too there are numerous ravines ... among them the Gravina of thoughts is worth a visit ...

Or the ravine of San Giorgio where in one cave, hidden perhaps for a thousand years, was discovered an ancient rock church excavated in the live rock, on the walls of which three were found splendid frescoes depicting San Nicola, Santa Barbara and the blessing of Christ

In addition to the many scenic beauties, there is a lot more to discover ... for example, look here ... it is of the potters' workshops, a flagship of the city. Grottaglie is the only Apulian ceramic centre protected by the DOC trademark and inserted in the short list of the 28 cities of Italian ceramics

But there is still a lot to discover. It is indeed possible visit numerous churches such as the mother church Collected Maria Santissima Annunziata

The Sanctuary of San Francesco De Geronimo

The church and convent of San Francesco Di Paola

Now I show you another peculiarity ... Between Grottaglie and Crispiano, there is a dense concentration of farms a short distance from each other that give origin of a real " massariale village ".

FLIGHTS IN COUNTRYSIDE AND MASSERIE

360 STATIC INTERNAL ON WHICH THEY APPEAR IMAGES OF TYPICAL PRODUCTS AND DISHES THAT GO AROUND

There are so many flavours and recipes that come from this you can appreciate by visiting these places.

VORTICE EFFECT THAT REPORTS THE VISITOR IN THE SPACESHIP WHILE THE VOICE OFF SCREENPLAYS

I hope this little taste of the territory is status to your liking. Have a good return trip ...

1.2. Screenplay Area Monti Dauni

THE FRONT MONITOR CAN BE SEEN LIVE IN THE VIEWER AT THE CONSOLE WITH A FLIGHT OVER PUGLIA. A VOICE NARRATOR OFF-SCREEN WELCOMES THE VISITOR

"Hi ... as you can see, we are flying over there Puglia, a region rich in history, traditions, and culture. Many areas are now known, others are a little less but certainly just as deserving of a visit. The journey that I propose to you aims precisely at the discovery of one of these, and to be precise the area of the Dauni Mountains "Hold on tight. The journey is about to begin!

THROUGH CHAIR MOVEMENT EFFECTS YES

IT WILL BE PROJECTED TOWARDS THE FRONT MONITOR

We are flying over the town of Bovino. Here is It is possible to visit numerous architectural heritage of great historical value ...

... like the castle, an architectural complex of medieval plant, built on a spur rocky in a dominant position, of which phase a circular tower is preserved. Its hanging gardens were built in the 1800s, yes develop on a three-level terrace connected by flights of stairs, inspired by the park of the Royal Palace of Caserta and the Recale Park, residence summer of the Duchess of Bovino Anna Maria Suardo in Guevara.

DRONE APPROACH TO THE FACADE

The medieval Cathedral is also worth a visit dedicated to Santa Maria Assunta, which represents one of the first examples of Apulian Romanesque. It is between the 12th and 13th centuries that the building of cult encompasses the adjacent and pre-existing chapel of San Marco of the eleventh century. Then there is the small church of San Pietro. The construction it should go back to the initiative of Bishop Giso (1100 ca.), mentioned in an epigraph reused as a step for the portal. The Civic Museum is very interesting "Carlo Gaetano Nicastro" tells the story of territory through various eras ... the Neolithic, ... the age of metals, ... the Roman age, ... the Middle Ages. ACCELERATION AND RELEASE ON BLACK TO ENTER INSIDE 360 STATIC OF ALL THE EXHIBITION ROOMS FLIGHT WITH DRONE TO TRAVEL THE TORRENT E PASSAGE UNDER THE BRIDGE

But let's move outside the town. Here too there are many things to discover like the Roman bridge in masonry, with three arches, useful for crossing the Cervaro river. had great importance strategic in the past, as it put in connection with the royal road that connected Naples to Puglia.

The monumental Bourbon fountain. This was it made in 1734, in travertine marble, for will of Charles III of Bourbon, useful to the neighbour post station. It is characterized by the presence of long tanks for watering horses, fed by several spouts decorated by gargoyles.

The Taverna del Ponte, of the modern age, was property of the Guevara Dukes. The complex is made up from several building nuclei, which are arranged around the quadrangular central courtyard. The building, in the current planimetric conformation, it was presumably built in the second half of the 16th century century, in the area formerly occupied by a post station of the Roman age.

Of great didactic importance, it turns out to be "Il water mill del Ponte ", dating back to 1600.

FLIGHT WITH DRONE TO TRAVEL THE TORRENT E PASSAGE UNDER THE BRIDGE

It is the only structure still functioning in Puglia where it is possible to witness the operation of a real water mill that uses the current of the waters of the Cervaro river for the grinding of grain.

By operating the lock system, the water invests in energetically the wheel with the blades, connected directly to the millstones. This is how you get the Senatore Cappelli quality flour. This then is sieved to obtain different types of flour.

360 STATIC TO SHOW PROCESSING PHASES FLOUR WITH A "VORTEX" EFFECT THAT TAKES US BACK IN FLIGHT OUTSIDE

Moving away about 2 km from Bovino, in locality Walls of arches are preserved imposing structures made of ashlars stone, referring to aerial sections of the aqueduct Roman of the ancient Vibinum ...

FLIGHT WITH DRONE TO TRAVEL THE REMAINS AND FINISH ON THE HIGHEST PART 3D AQUEDUCT RECONSTRUCTION

It is the only structure still functioning in Puglia where it is possible to witness the operation of a real water mill that uses the current of the waters of the Cervaro river for the grinding of grain.

FADE OUT ON ANOTHER FLIGHT

FLIGHT WITH DRONE OVER THE FOREST AND ARRIVAL ON

MASSERIA SALECCHIA

The wooded area incorporates the current Salecchia farm, which falls within an ancient hunting estate of the Dukes Guevara.

In addition to the archaeological and historical heritage, no less interesting turn out to be the naturalistic one with various woods including the Salecchia wood that we are flying over, characterized by the prevalent presence of Turkey oaks interspersed with pastures and arable land

360 STATIC INTERNAL ON WHICH THEY APPEAR IMAGES OF TYPICAL PRODUCTS AND DISHES THAT GO AROUND

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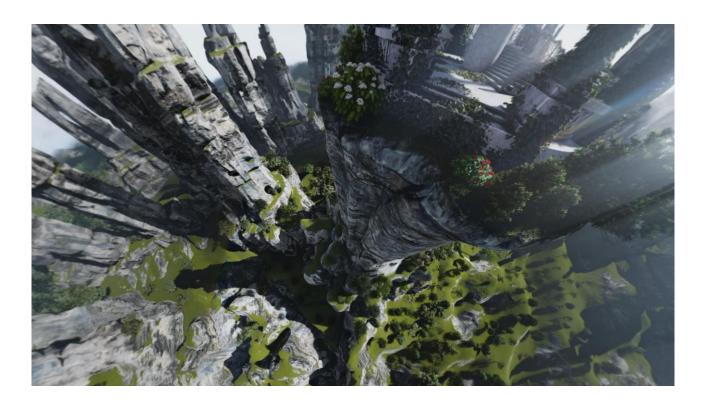
VORTICE EFFECT THAT REPORTS THE VISITORS IN THE SPACESHIP

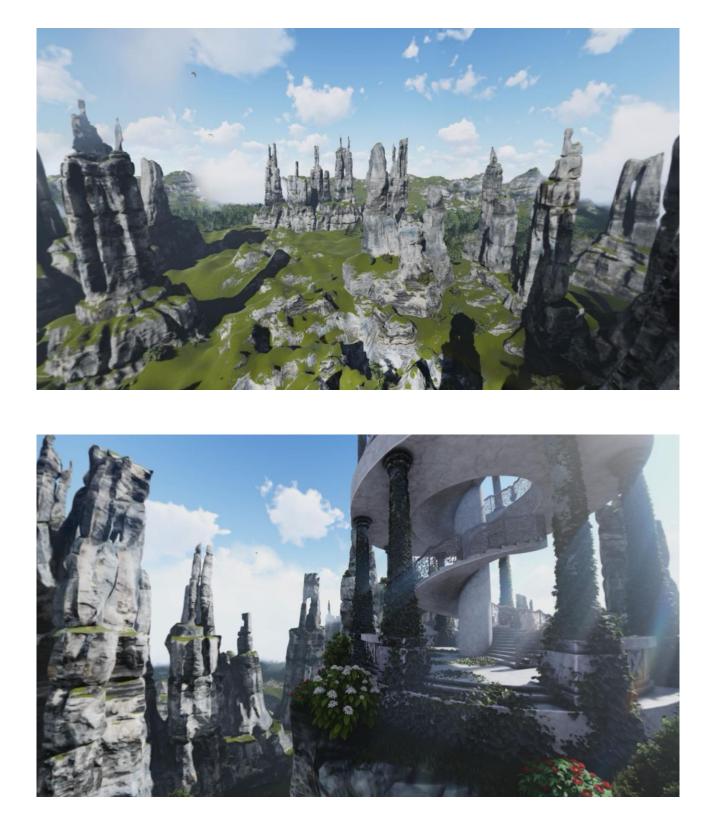
I hope this little taste of the territory is status to your liking. Have a nice return trip ...

2. VR – 3D environments and 3D movies

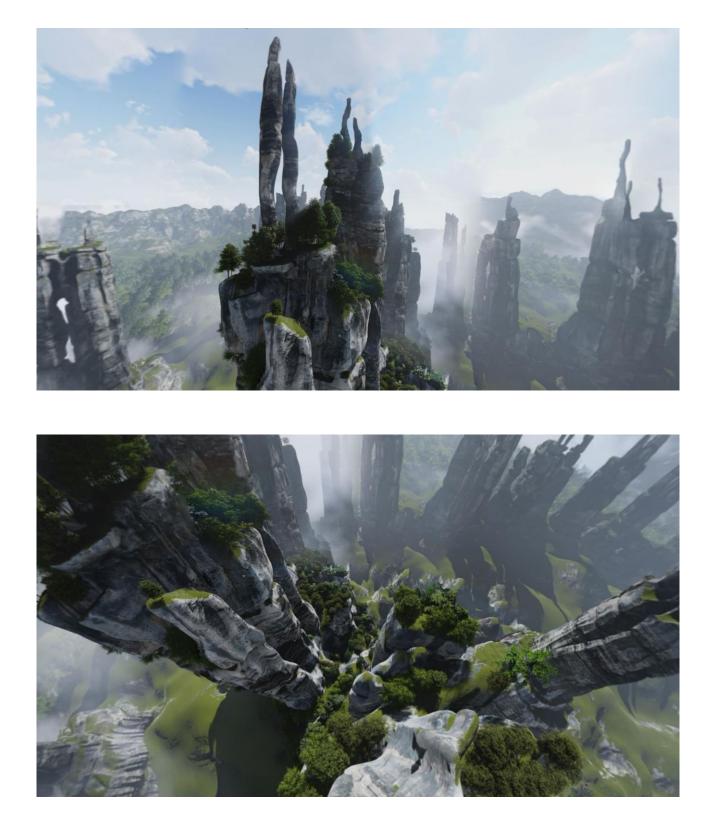
2.1. VR-3D environments

After studying the territories and places of interest and after a careful examination of the contents to be represented in the films, the staff of technicians developed and reconstructed VR-3D settings to be included in the videos. Here are some frames of scenes used in movies.











2.2. Final 3D movies

After an in-depth study of the project and the script, supported by the suggestions of the end users and accompanied by local operators, we carried out several inspections to identify the suitable places to be represented in the films and the useful processing times. In consideration of the sunlight useful for shooting and the glimpses to highlight in the films, a schedule of activities to be used for the shooting has been defined.

The following locations have been chosen in the Ionian Arch area:

- Gravina di Massafra
- Pharmacy Mago Gregorio
- Inhabited of Massafra
- Rock church of Candelora
- Rock Church of San Leonardo
- Town of Grottaglie
- Gravina of thoughts
- Gravina di San Giorgio Crypt
- Potters' workshops
- Cathedral
- Sanctuary of San Francesco de Geronimo

- Convent of San Francesco di Paola
- Various farms (Crispiano area)

The following locations have been chosen in the Bovino area:

- Bovino inhabited area
- Castle
- Gardens of the Castle
- Cathedral
- Church of San Pietro
- Civic Museum
- Roman bridge
- Bourbon fountain
- Taverna del Ponte
- Watermill
- Roman aqueduct
- Bosco Salecchia
- Masseria Salecchia.

2.2.1. The final film in the Ionian area

From the following link, it is possible to view the complete video, while below are the main passages with images of the filming and reconstructed settings: <u>https://youtu.be/CvMzqx4vwmc</u>





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A VORTEX EFFECT, TAKES THE TRAVELER INTO REAL-WORLD, OUT OF THE FANTASTIC WORLD THE NARRANT VOICE IS BACK TO ACCOMPANY HIM ON THE TRIP You just discovered an ancient story related to Massafra. But let's get to today ... What you are seeing is one of the many ravines that distinguish the territory of Massafra and Grottaglie. The ravines are a typical karst morphology of the Murgia: erosive engravings even more than 100 meters deep, very similar to canyons, carved by meteoric waters in the limestone rock;



FLIGHT WITH DRONE TO TRAVEL THE GRAVINA FINO AT THE GREGURO PHARMACY ENTRANCE DRONE ON THE HISTORICAL CENTER UNTIL THE PART WITH GRAVINE

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is an extraordinary complex of twelve caves communicating, all dug into the rocky bank. Notice the dense network of niches dug into the walls, like one gigantic shelving, they were according to tradition, the spaces where my father, magician Greguro used to collect and collected medicinal herbs but this is one story that I have already told you.



DRONE ON THE HISTORICAL CENTER UNTIL THE PART WITH GRAVINE The urban centre of Massafra also guards

precious examples of cave living



with particular reference to age contexts medieval. Particularly illustrative are the cases of the rock churches of the city centre, such as the rock church of Candelora



and the rupestrian church of San Leonardo, distinguished both from well-preserved fresco cycles.



DRONE ON THE HISTORICAL CENTER UNTIL THE PART WITH GRAVINE

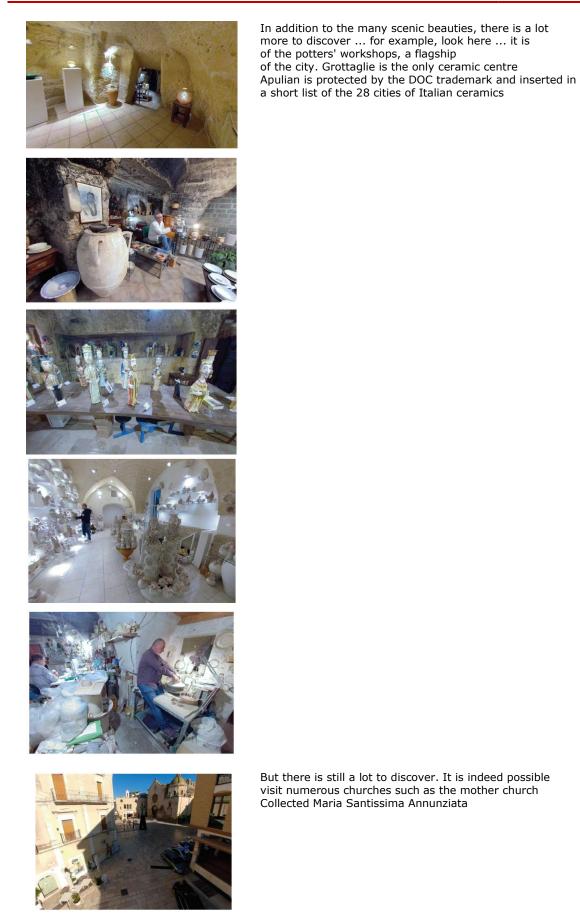
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the Sanctuary of San Francesco De Geronimo



the church and convent of San Francesco Di Paola



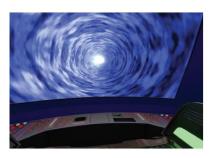
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VORTEX EFFECT THAT REPORTS THE VISITORS IN THE SPACESHIP

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Jonica Area backstage photo









2.2.2. The final film in the Monti Dauni area

From the link <u>https://youtu.be/gxl4-mdS1Ck</u> it is possible to view the complete video, while below are the main steps with images of the shooting and reconstructed settings:



NEL VISORE SI VEDE ANIMARE IL MONITOR FRONTALE ALLA CONSOLLE CON UN VOLO SULLA PUGLIA. UNA VOCE NARRANTE ACCOGLIE IL VISITATORE

"Salve,....come puoi vedere, stiamo sorvolando la Puglia, una regione ricca di storia, tradizioni, cultura. Molte zone sono ormai note, altre lo sono un po' meno ma sicuramente altrettanto meritevoli di visita. Il viaggio che ti propongo mira proprio alla scoperta di una queste, e per la precisione la zona dei Monti Dauni "Tieniti forte. Il viaggio sta per cominciare!!"

IM.PACT project - IMmersive technology to Promote Apulian Cultural heritage and Territory (code 4QDD935-1)



ATTRAVERSO EFFETTI DI MOVIMENTO SEDIA SI VERRA' PROIETTATI VERSO IL MONITOR FRONTALE

Stiamo sorvolando il comune di Bovino. Qui è possibile visitare numerosi beni architettonici di grande valenza storica...





...come il castello, un complesso architettonico di impianto medievale, edificato su uno sperone roccioso in posizione dominante, della cui fase originaria si conserva un torrione a pianta circolare.

I suoi giardini pensili realizzati nel 1800, si sviluppano su un terrazzamento a tre livelli raccordati da rampe di scale, ispirati al parco della Reggia di Caserta e al Parco di Recale, residenza estiva della duchessa di Bovino Anna Maria Suardo in Guevara.

AVVICINAMENTO CON DRONE ALLA FACCIATA

Merita una visita anche la Cattedrale medievale dedicata a Santa Maria Assunta, che rappresenta uno dei primi esempi di romanico pugliese.

ACCELERAZIONE E STACCO SU NERO PER ENTRARE ALL'INTERNO

E' tra XII e XIII secolo che l'impianto dell'edificio di culto ingloba l'adiacente e preesistente cappella di San Marco dell'XI secolo.







C'è poi la piccola chiesa di san Pietro. La costruzione dovrebbe risalire all'iniziativa del vescovo Giso (1100 ca.), ricordato in un'epigrafe riutilizzata come gradino per il portale.

360 STATICI DI TUTTE LE SALE ESPOSITIVE

Molto interessante risulta essere il Museo Civico "Carlo Gaetano Nicastro" che racconta la storia del territorio attraverso varie epoche...il neolitico,..... l'età dei metalli,.... l'età romana,il medioevo.

VOLO CON DRONE A PERCORRERE IL TORRENTE E PASSAGGIO SOTTO IL PONTE

Ma spostiamoci fuori dall'abitato. Anche qui ci sono molte cose da scoprire... ...come il ponte romano in muratura, a tre arcate, utile all'attraversamento del fiume Cervaro. ha avuto grande importanza strategica in passato, in quanto metteva in connessione con la strada regia che collegava Napoli alle Puglie.

La fontana monumentale borbonica. Questa, fu realizzata nel 1734, in marmo di travertino, per volontà di Carlo III di Borbone, utile alla vicina stazione di posta. E' caratterizzata dalla presenza di lunghe vasche per l'abbeveramento dei cavalli, alimentate da diverse cannelle decorate da mascheroni; 20



La Taverna del Ponte, di età moderna che fu proprietà dei Duchi Guevara. Il complesso è costituito da più nuclei edilizi, che si dispongono attorno alla corte centrale di forma quadrangolare. L'edificio, nell'attuale conformazione planimetrica, fu presumibilmente costruito nella seconda metà del XVI secolo, nell'area anticamente occupata da una stazione di posta di età romana.



Di grande importanza didattica, risulta essere "II mulino ad acqua del Ponte", risalente al 1600 .

VOLO CON DRONE A PERCORRERE IL TORRENTE E PASSAGGIO SOTTO IL PONTE

E' l'unica struttura ancora funzionante in Puglia dove è possibile assistere al funzionamento di un vero mulino ad acqua che sfrutta la corrente delle acque del fiume Cervaro per la macinazione del grano.

Azionando il sistema di chiuse, l'acqua investe in modo energico la ruota con le pale, collegata direttamente alle macine. E' così che si ottiene la farina di qualità senatore Cappelli. Questa poi, viene setacciata per ottenere diversi tipi di farina.











360 STATICO A MOSTRARE FASI LAVORAZIONE FARINA

EFFETTO "VORTICE" CHE CI RIPORTA IN VOLO ALL'ESTERNO

Allontanandoci a circa 2 km da Bovino, in località Mura d'archi, si conservano imponenti strutture realizzate in conci lapidei, riferite a tratti aerei dell'acquedotto romano dell'antica Vibinum...

VOLO CON DRONE A PERCORRERE I RESTI E TERMINARE SU PARTE PIU' ALTA

3D RICOSTRUZIONE ACQUEDOTTO

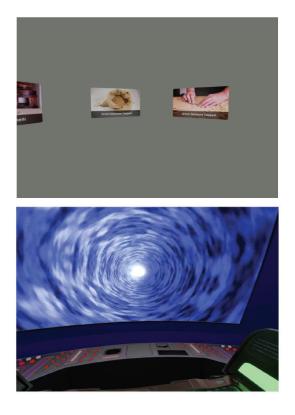
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DISSOLVENZA SU ALTRO VOLO

VOLO CON DRONE SUL BOSCO E ARRIVO SU MASSERIA SALECCHIA

Oltre al patrimonio archeologico e storico, non meno interessante risulta essere quello naturalistico con vari boschi tra cui il bosco di Salecchia che stiamo sorvolando, caratterizzato dalla prevalente presenza di cerri inframezzati da pascoli e seminativi

L'area boschiva, ingloba l'attuale masseria Salecchia, che ricade all'interno di un'antica proprietà di caccia dei Duchi Guevara.



360 STATICO INTERNO SU CUI APPAIONO IMMAGINI DI PRODOTTI E PIATTI TIPICI CHE GIRANO INTORNO

Tanti sono i sapori e le ricette che provengono da questa che potrai apprezzare visitando questi luoghi.

EFFETTO VORTICE CHE RIPORTA IL VISITATORE NELL'ASTRONAVE

spero che questo piccolo assaggio del territorio sia stato di tuo gradimento. Buon viaggio di ritornooo..

Monti Dauni backstage photos



