



# APPLICATION OF GEOINFORMATICS AND CROWDSOURCING INTO LANDSCAPE ARCHAEOLOGY

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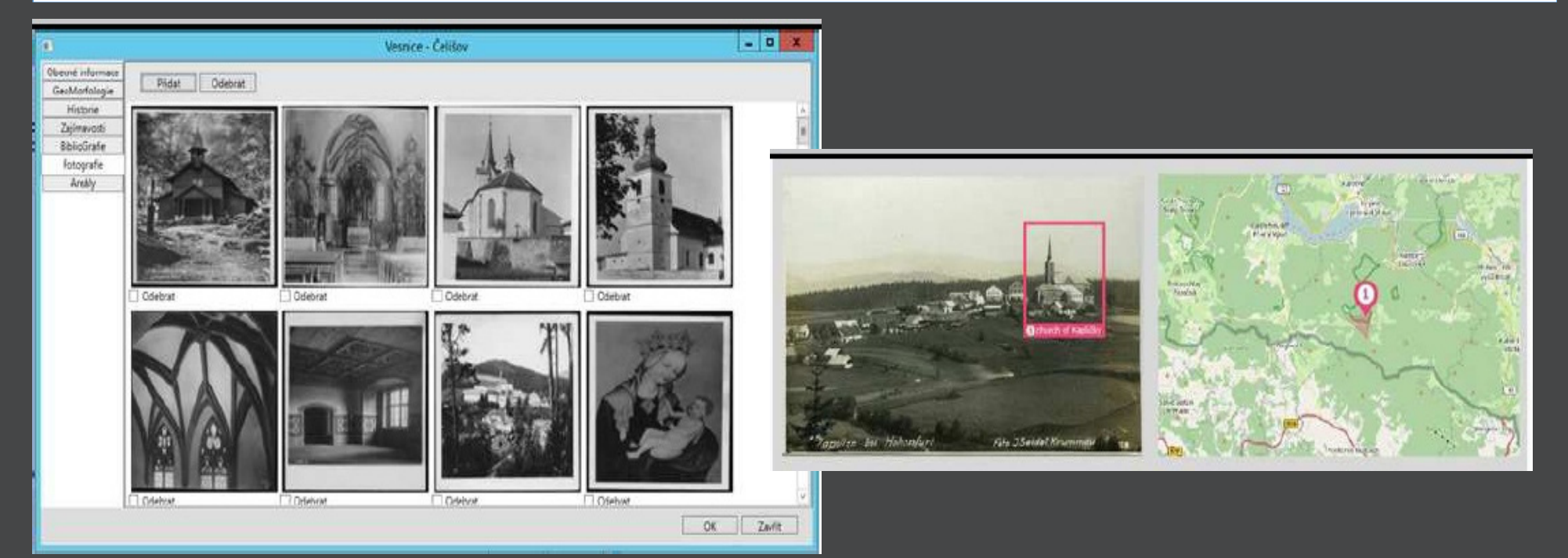
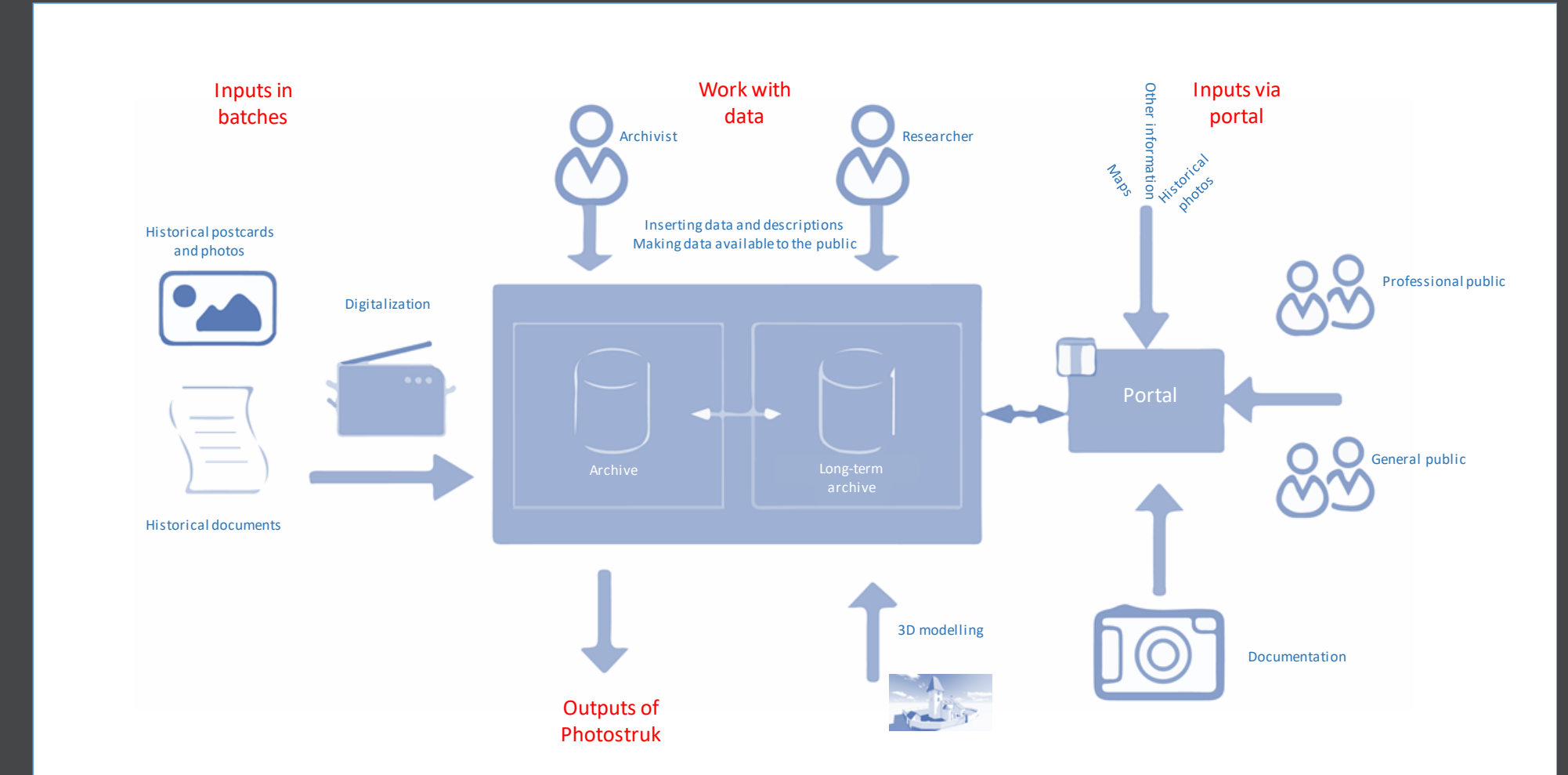
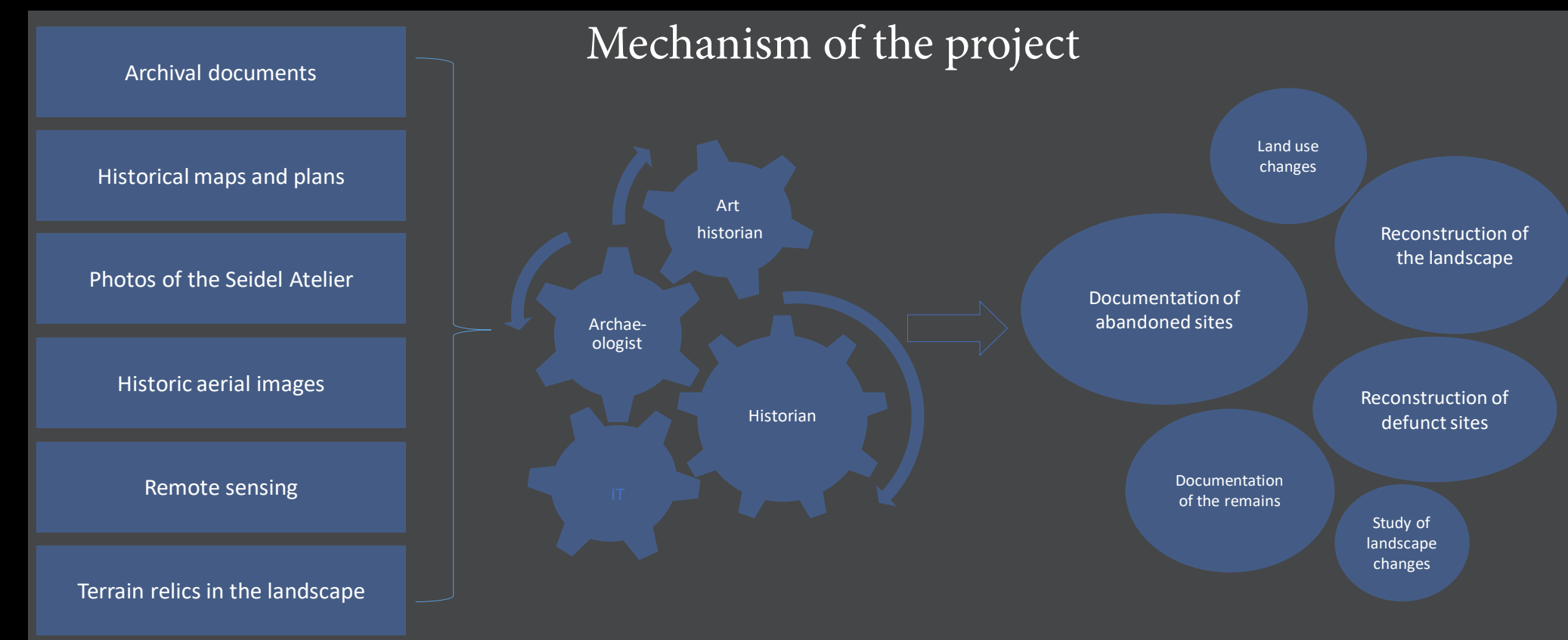
## ABSTRACT

Rural landscape in the Czech Republic and its way of use has changed significantly during last hundred years, in „contemporary“ or „recent past“. Mainly due to dramatic historical events and changes in the society and communities associated with them. To name the most significant: World Wars; the expulsion of Germans after The Second World War and abandonment of their villages and rural system; populating of this location with new people; collectivization of agricultural terrains caused by Communistic regime; or border closure because of construction of the Iron Curtain.

Important witnesses of these dynamic processes are historical photographs. They reflect cultural, social and economic developments, nature and climate changes. In the same time, they provide a basis for the interpretation of past events, activities and situations. Moreover, historical photographs are for the public emotional documents and visualisations of historical situations and a vehicle of memories of past cultures in general.

The following poster, presenting preliminary results and concepts of the interdisciplinary and trans border project PhotoStruk, focuses on geoinformatics and crowdsourcing based approaches to speed up the process of classification and meta documentation. Together with methods of non-destructive archaeology and history, they allow investigation and reconstruction of abandoned settlements, landscapes, land use and cultural assets. In addition, describes how important historical events affects the landscape. The developed method and tools are tested on a collection of photographs from the archive of the Museum Fotoatelier Seidel in Český Krumlov, Czech Republic. It contains 140 000 photographs taken from the late 19th century until the 1950s. Its digital collection composed by 20 000 photographs is holdings with many undocumented and wrong tagged images which contains important information of destroyed or abandoned villages, landscapes and cultural heritage.

**Keywords:** Transformation of landscape, abandoned settlements



## ABANDONMENT OF SETTLEMENTS AS A RESULT OF THE EVICTION OF THE GERMAN POPULATION

The industrialization in the 19th and the first half of the 20th century transformed the countryside of the Czech-Bavarian border. After the Second World War, German population was expelled from the Czechoslovak territory. Thousands of border settlements were devastated, some villages disappeared, others only partially. Both the residential buildings and their economic background were destroyed. After the war, workshops, factories, warehouses, water canals, railways, roads, mines, quarries ceased to exist. All this can be the subject of landscape, residential and industrial archaeology research.

*Destroyed paper mill in Františkov: During 2WW there were manufactured Messerschmitt combat aircraft. 3D reconstruction from J. Seidel's photographs*

*Village Kapličky Topography: Combination of aerial photographs, photos by J. Seidel, DTM Location of the photographer's position*



## LANDSCAPE CHANGES - THE FORMATION OF IRON CURTIN AND THE ESTABLISHMENT OF MILITARY AREAS

On July 1, 1950, the military area „Boletice“ was established in Bohemian Forest. It extended in the altitude range from 540 to 1232 meters above sea level and reached a total area of 219.49 km<sup>2</sup>. 35 settlements and the 38 villages destroyed. Among them where e.g. Vitěšovice. It belonged originally to the monastery in Zlatá Koruna. In the 15th century, it became to Rosenberg's possessions. In the 17th century, there was a strong German colonization. In 1795, the old wooden chapel was replaced by the stone church of St. John of Nepomuk. The village, including the church, graveyard, parish and school, was destroyed in 1955. Blasting the village served as a backdrop for filming the „Obediently Reporting“ film, which reflects the story of Good Soldier Švejk.



## WATER DAMS

The totalitarian regime was characterized by the construction of megalomaniac buildings, which, on the one hand, should have helped the post-war growth of the economy, but also became a symbol of a strong regime. Construction of the largest dam in Czechoslovakia was carried out on the Vltava river between 1952 and 1960. The Lipno 1 dam, built by political prisoners and opponents of the monetary reform, reached an area of 4870 hectares. A totally, 23 settlements were flooded.



## LOST INVENTORY OF DEMOLISHED OBJECTS

Through the photographs of the church interiors, the furniture of the defunct sacral buildings can be studied. At the same time, it allows interconnect interiors with the surviving artefacts to be interwoven. In the 1950 some equipment of the church in Kapličky was removed before demolition. For example, a slate roof served to cover a new cinema in Frymburk. Some of the interior equipment was taken to a monastery in Vyšší Brod. The sculptures that stood on the altar in Kapličky also wandered. Using photogrammetry, it was possible to create 3D models of these statues and link them to their place of origin.



## CROWDSOURCING

At the web site [www.photostruk.cz](http://www.photostruk.cz), people help to identify the subject of photography from the Atelier of J. Seidel. Mostly it is about the buildings that are completely defunct and people who are no longer living. Such a photograph help us to see how disappeared places looked like.