GIS TOOLS FOR CAMPUS MAP - CASE STUDY UNIVERSITY OF LIFE SCIENCE „KING MIHAI I" FROM TIMIȘOARA

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Abstract. *This project presents the development of an interactive model of the campus of the University of Life Sciences "King Mihai I" of Timișoara, created using the ArcGIS Story Maps platform. The aim of this model is to provide a comprehensive and accessible visual representation of the university's facilities and structures, integrating detailed geographic information and relevant imagery. Users can virtually explore the campus, view the locations of buildings, laboratories, green spaces, and other points of interest. Through interactive maps and multimedia stories, this project enhances the orientation and information experience for students, faculty, and visitors. The model also has the potential to facilitate the strategic planning and development of the university's infrastructure. StoryMaps is an application created by the company ESRI and has become a popular environment for virtual tours of universities and university campuses around the world. Some apps created with StoryMaps provide an overview of campus facilities, while others focus on themes including trees, sustainability, history and diversity. An interactive map created with StoryMaps can serve a wide variety of purposes such as providing an engaging and easy-to-create way to present your university campus in an interactive tour. Such maps and interactive applications can help students and professors to navigate in campus or serve as ways for prospective students and employees to tour the campus. These types of interactive maps can help students to think spatially and to use technology in meaningful ways. It can give them a sense of pride to be authors of their campus maps.*

Keywords*: GIS, StoryMaps, ArcGIS, Campus Maps, Interactive*

INTRODUCTION

University of Life Sciences "King Mihai I" Timisoara was founded in 1945, being one of the oldest and most respected higher education institutions in the agricultural and veterinary field in Romania. The university offers bachelor's, master's and doctoral programs in fields such as agronomy, horticulture, animal husbandry, veterinary medicine, food technology, etc. These programs are adapted to the current needs of the labor market and society in general, and are supported by qualified teaching staff and modern education and research infrastructure. USVT Timișoara is also known for its research activity, which covers a wide range of fields, from the improvement of agricultural crops and animal husbandry, to the diagnosis and treatment of animal diseases and food safety. Over time, USVT Timișoara trained numerous specialists in agriculture and veterinary medicine, who contributed significantly to the development of the agricultural sector and to the protection of animal health in Romania and in other countries.

Figure 1. USVT

MATERIAL AND METHODS

StoryMaps was used to represent the Faculties and Components of the USVT campus on the map, with an easy to use and friendly interface. The app offers a great experience both on PC and Mobile Phone resulting in a wider range of people being able to connect to the story.

For this project we used ArcGis Pro for a better experience and an easier transfer of data between ArcGis Software and SoryMaps. The Shape format of the buildings was imported from ArcGis Pro and displayed in a simple and interactive map for the users to better understand the facilities of the USVT Campus.

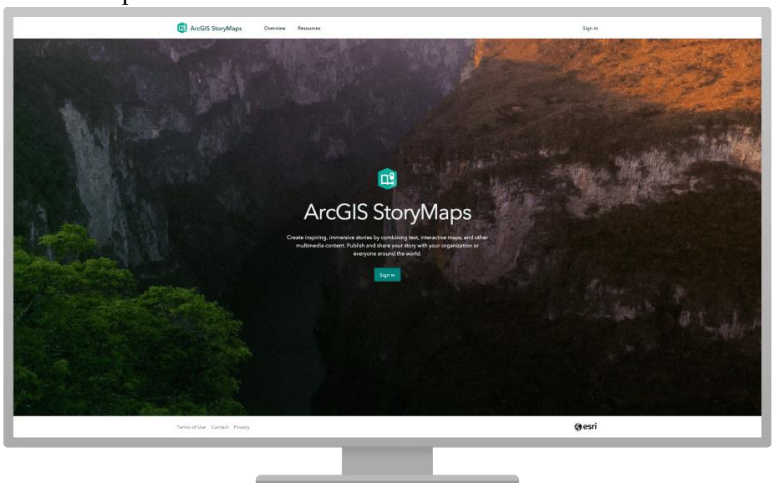

Figure 2. StoryMaps

ArcGIS Pro is the premier desktop geographic information system (GIS) application. Crafted with user-driven innovations, it offers unparalleled tools and capabilities that support your work. Users can maintain spatial data effectively; generate stunning 2D, 3D, and 4D visualizations; and conduct advanced mapping analytics. The seamless data sharing within the ArcGIS system fosters valuable GIS solutions and insights.

Figure 3. ArcGis Pro

RESULTS AND DISCUSSIONS

The project contains two interactive maps.

Figure 4. Faculties Map

The first map contains the geolocation of the faculties and some important informations, as well as the link to the faculty website.

Figure 5. Facilities Map

The second part contains a map with all the facilities of the campus ordered in a list with the geolocation.

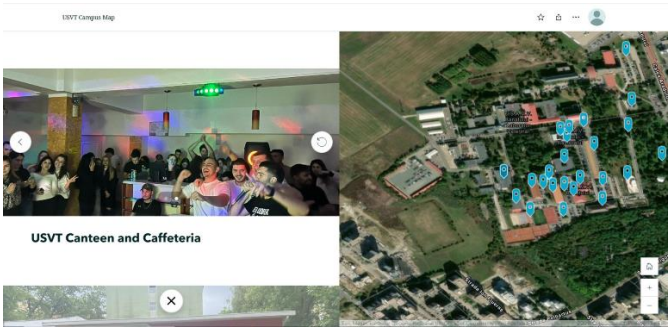

Figure 6. Example of facilities

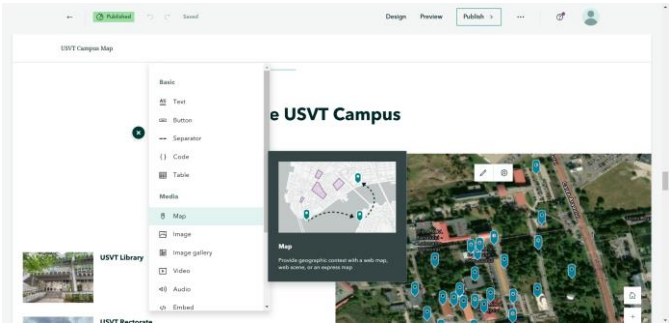

Figure 7. Editing

One of the advantages of StoryMap is editing feature. In the editing tab many things can be changed on the go, by the author. A new construction in the campus can be added or deleted in the case it is not existing anymore.

CONCLUSIONS

The successfully demonstrates the power of GIS technologies in enhancing the management and navigation of university campuses. By utilizing ArcGIS Pro and ArcGIS StoryMaps, we have created an interactive and informative digital map that not only provides detailed campus layouts but also offers a user-friendly experience for students, staff, and visitors. The integration of geographic information with narrative storytelling through ArcGIS StoryMaps adds value by presenting a comprehensive view of the campus in an accessible format. This project highlights the significant potential of GIS tools in educational environments, improving spatial awareness, supporting campus planning, and fostering greater engagement with the university's infrastructure. The resulting map serves as a practical tool for better campus navigation and decision-making, while also contributing to the ongoing development of smart campus initiatives.

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