

## Catching the Urban Chameleon - Building an Online Platform for Visualising and Analysing Contemporary Graffiti in Vienna

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### ABSTRACT:

This presentation will introduce the online platform UrbanChameleon, which we have been developing to facilitate the analysis and dissemination of contemporary graffiti in Vienna, Austria. The platform is designed to visualise and analyse data collected in the scope of project INDIGO, which is funded by the Heritage Science Austria programme of the Austrian Academy of Sciences (ÖAW) and focuses on circa 13 km of graffiti-covered surfaces along the Danube Canal.

Project INDIGO utilises OpenAtlas, an open-source, web-based database system that leverages the CIDOC CRM (Conceptual Reference Model) to manage and visualise historical, archaeological, and cultural heritage data. The CIDOC CRM is an international standard ontology for exchanging and integrating heterogeneous cultural heritage data and information, enabling the representation of complex relationships and events in a structured manner. The online platform seamlessly connects to OpenAtlas through an API (Application Programming Interface), a set of protocols and tools that enables different software applications to communicate and share data. This integration allows the platform to efficiently fetch and incorporate graffiti data, ensuring a comprehensive and user-friendly exploration experience.

A key feature of the online platform is a 4D viewer that allows users to visualise graffiti in its original location and context, as well as track its temporal changes. This is achieved via Cesium-based tools, open-source software libraries designed to create and visualise 3D geospatial data in web applications. Known for their powerful and flexible capabilities, these tools enable the rendering of high-quality, realistic 3D environments. By incorporating Cesium-based tools into UrbanChameleon, the platform provides immersive and detailed visualisations of graffiti, making it easier for users to understand their spatial context.

UrbanChameleon benefits from enhanced stability, performance, and scalability, providing a seamless and efficient user experience when exploring graffiti in Vienna. The platform features a user-friendly interface with an interactive map component, offering valuable insights into the distribution and context of contemporary graffiti. By focusing on the core functionalities and user experience, the platform allows researchers to study and understand the cultural heritage and significance of graffiti in an intuitive manner.

In conclusion, the UrbanChameleon platform provides researchers with a comprehensive tool to explore, search, and filter graffiti in Vienna, specifically at the Hall of Fames along the Danube Canal. It enables them to uncover layers of meaning and contextual significance. To truly engage with those graffiti records and unlock their analytical potential, smooth data streaming and proper treatment of the temporal dimension are key, which UrbanChameleon enables via various technical means. In the end, we hope that the platform can be used to digitally explore the colourful walls of the Danube Canal over time and space, but also facilitate the creation of valuable insights into the evolution of graffiti and its role in our contemporary society.