3D-Reconstruction of historical landscapes in the District of Göttingen

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Academic Aim

In the past two centuries, there has been a dramatic change of the landscape within the district of Göttingen following different stages of economic land use. The change was accompanied by several transformations of biodiversity, human usage potential, and perceivable forms of appearance (e.g. landscape design) accordingly. The aims of this project are:

(1) to visually reconstruct the historic transformation of landscapes since the end of the eighteenth century (*Visualization Stage*), and
(2) to evaluate its aesthetic perception (reception) and evaluation today (*Evaluation Stage*).

We draw our data from multiple monographic and cartographic sources, as well as photographic content. To achieve an accurate and holistic visualization of the Göttingen landscape we base our analyses on different time intervals following the analyses of Korus (2009) Preutenborbeck (2009) Anders (in process):

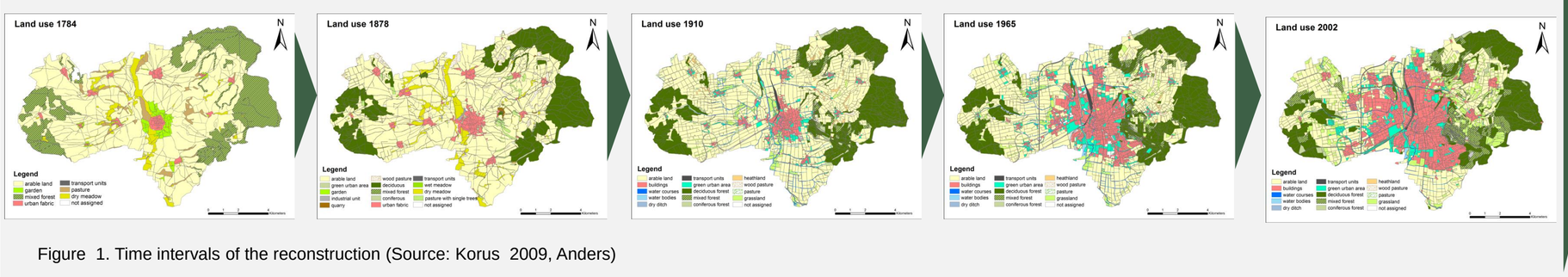

Figure 1. Time intervals of the reconstruction (Source: Korus 2009, Anders)

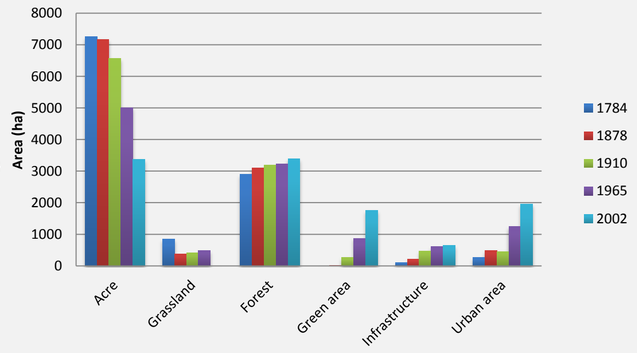

Figure 2. Land use changes (Source: Korus 2009, Anders)

Methodology

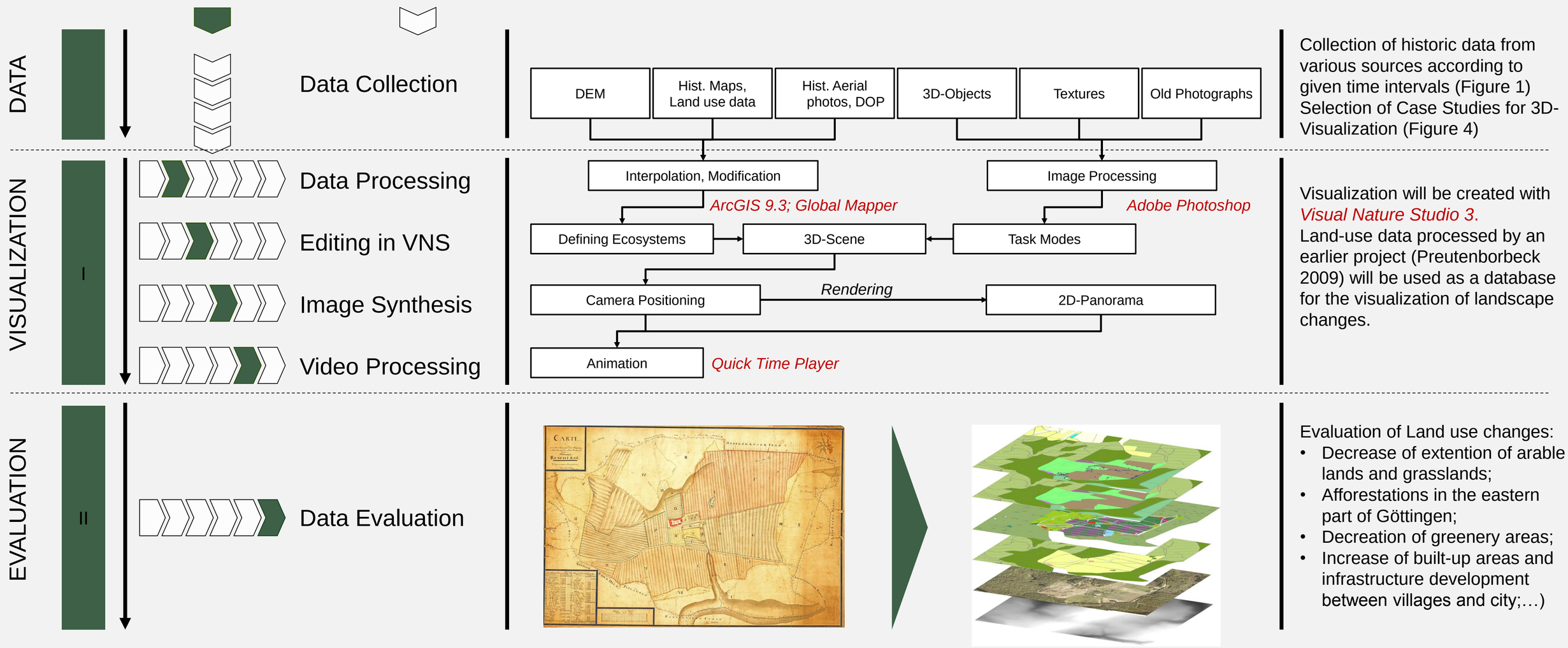

Figure 3. Historical Map from 1824 about Kerstlingeröder Feld

Preliminary Results

Selection of viable case studies based on historic data

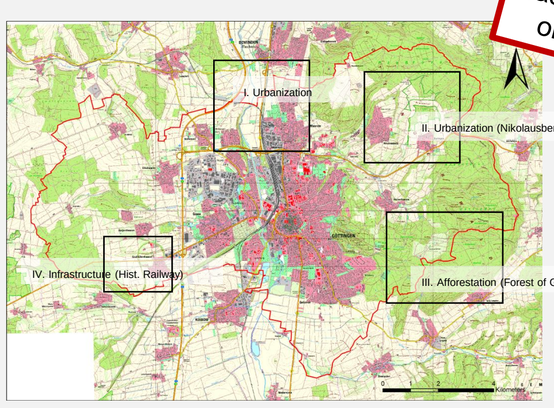

Figure 4. Case studies for 3D-Visualization

First 3D-Model Rendering

Figure 5. Visualized landscape about 1878

Expert Survey Construction and Evaluation

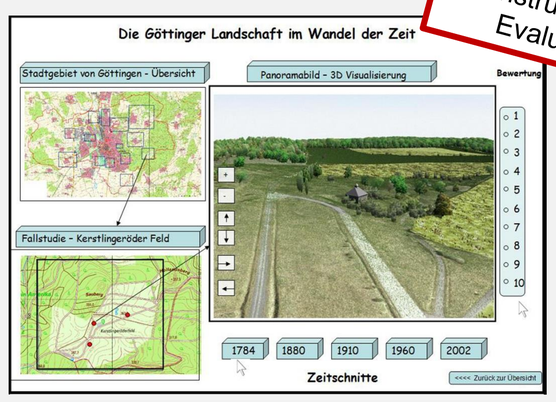

Figure 6. Internet Survey by Experts

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DFG Deutsche Forschungsgemeinschaft

Graduate School Interdisciplinary Environmental History

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

References:

KORUS 2009 Historical-ecological landscape-analysis about the City of Göttingen, Master Thesis, University of Göttingen

ANDERS (in process) Consequences of Land use changes in central Europe during the 19th and 20th centuries and the impact for forest ecosystems, Dissertation in process, University of Göttingen

PREUTENBORBECK, J.: Zur Wirkung historischer Landnutzungsmuster auf Artenvielfalt und Lebensgemeinschaften: Eine Exemplarische GIS-Gestützte Analyse von Landnutzungswandel und Biodiversität der Kulturlandschaft im Naturraum Göttinger Wald. Georg-August Universität Göttingen 2009

HISTORICAL MAP ABOUT KERSTLINGERÖDER FELD 1824 : Archive Von Wangenheim