

## Digital Mapping as a Tool for Finding Cities' DNA

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**Abstract :** Transformation of urban environments can be compared to evolutionary processes. Systematic digital mapping of historical data can enable capturing some of these processes and their outcomes. For example, it may help reveal the structure of a city's historical DNA. Gathering historical data for automatic processing may be giving a basis for cultural algorithms. Gothenburg City museum is trying to make city's heritage information accessible through GIS-platforms and is now partnering with academic institutions to find appropriate methods to make accessible the knowledge on the city's historical fabric. Hopefully, this will be carried out through a project called Digital Twin Cities. One part of this large project, concerning matters of Cultural Heritage, will be in collaboration with Chalmers University of Technology. The aim is to create a layered map showing historical developments of the city and extracting quantitative data about its built heritage, above and below the earth. It will allow interpreting the information from historic maps through, for example, names of the streets/places, geography, structural changes in urban fabric and information gathered by archaeologists' excavations. Through the study of these geographical, historical and local metamorphoses, urban environment will reveal its metaphorical DNA or its MEM (Dawkins).

**Keywords :** Gothenburg, mapping, cultural heritage, city history

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