

Historical Maps and Photographs in Geographic Information Systems : A case study of Hamra in Beirut

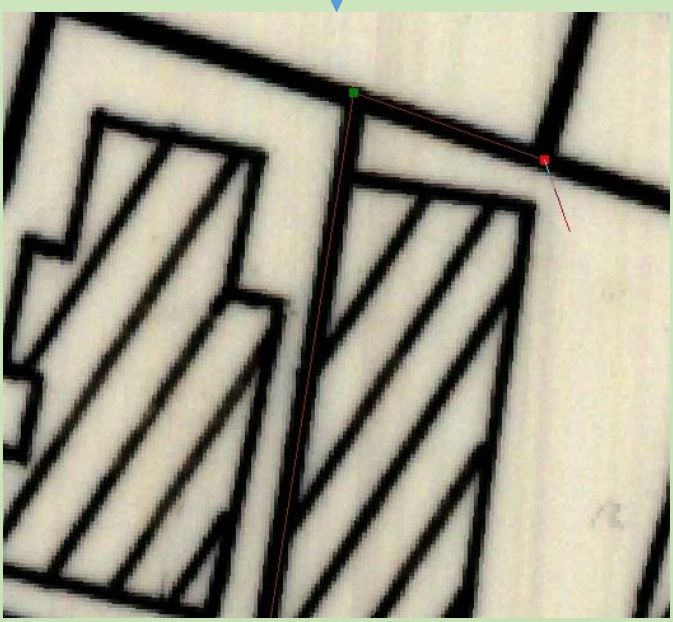
Hamra of Beirut:
In 1973 geographer Per Kongstad and sociologist Samir Khalaf published the book *Hamra of Beirut – A Case of Rapid Urbanization*. The book contains a series of cartographic elements and analysis from the Hamra area in Beirut, Lebanon. The material is mainly from the 1960's.
The material from the book was used in a master thesis at Aalborg University Copenhagen (Denmark) to explore the integration of the historic dataset in a modern context of urban development and memory. The project was carried out in cooperation with the *Neighborhood Initiative* from the American University of Beirut (AUB).

Urban Memory
Historical maps and photographs can be used for linking the past and the present. This is useful for technical studies of urban development as well as for sociological initiatives concerning culture, community and wellbeing of a neighbourhood. Drastic changes in the physical layout of a city, can have practical and social implications for the residents. Historic material can show changes in urban tissue and be used for commemorating the past and enlarge a sense of self for a community.

Geographic Information Systems (GIS):
A GIS can be used for visualising, questioning, analysing, and interpreting data to understand relationships, patterns, and trends in the world.
GIS is used in organisations of all sizes and in almost every industry. Most people use GIS every day in their private lives for navigation with GPS or online maps or for exploring interests with a geographic association (geo-locating). For instance on Google Earth or via mobile apps that add location to certain interests or people, such as *Foursquare*, *Tinder*, *Endomondo*, *Facebook*, *Songkick*, *Bands in Town* to name a few.



Historical data can be transformed from physical to digital format. Maps can be scanned and all their contents and information digitised with GIS. This can allow for new analysis and new ways of visualising.
Old Photographs can likewise be scanned and incorporated into a geographic context by geo-locating.



The entire process requires office work as well as field work.
Local residents are the ones who should benefit from such a project, but they are also a vital part of the process of locating historic photographs in a place that has gone through many stages of transformation.

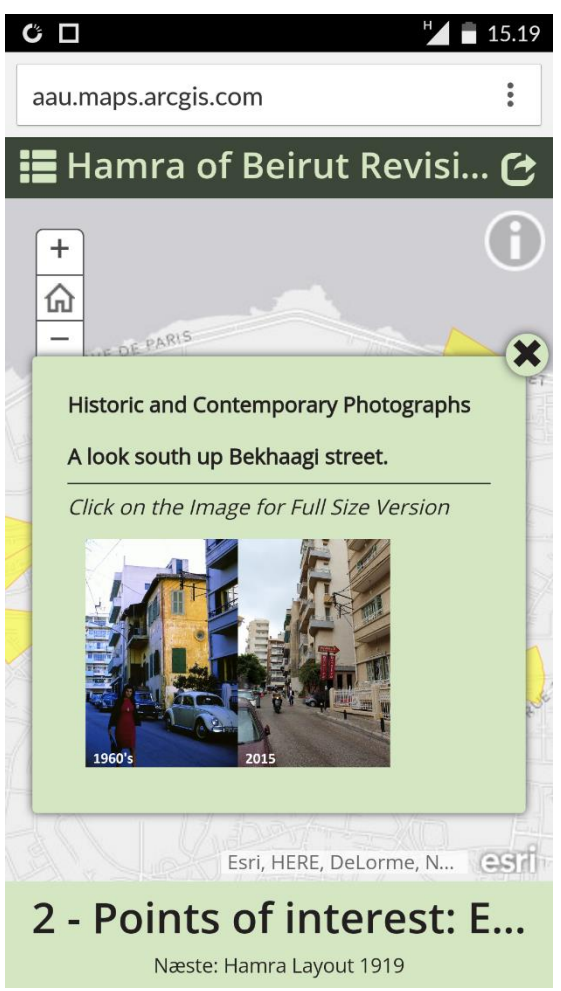
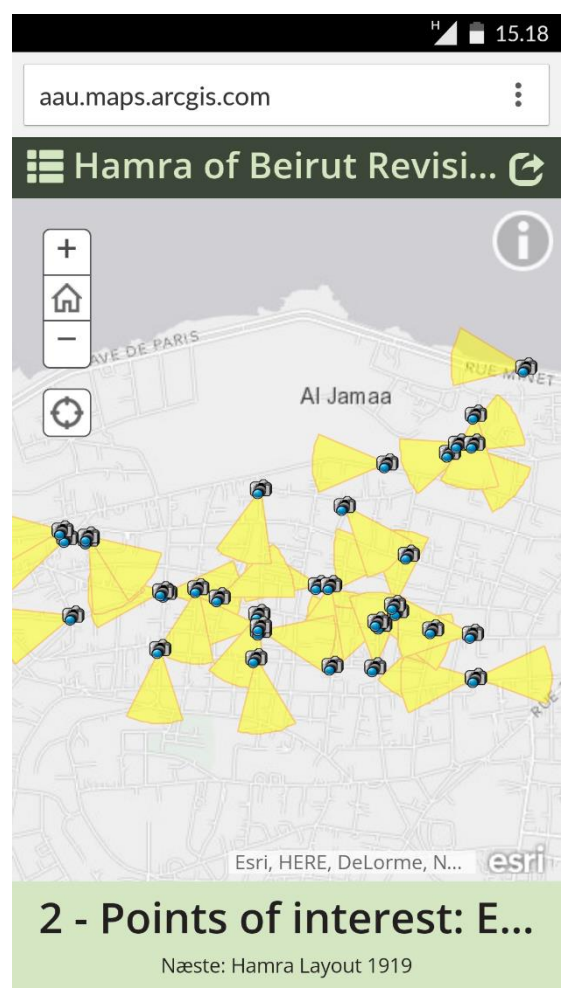
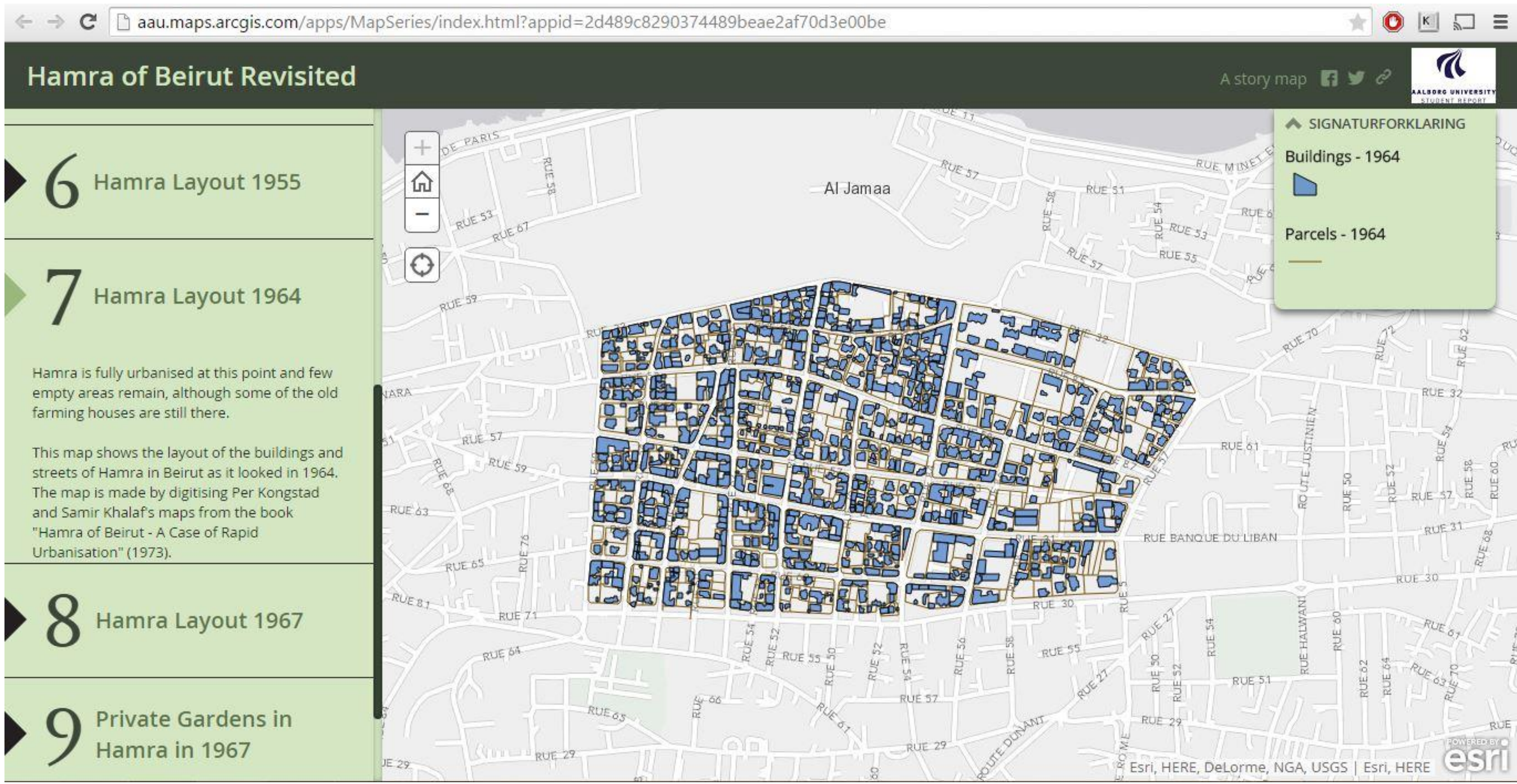
Geo-locating of photographs is necessary for integrating with the maps and for collecting comparative material that can aid in visualising how the transformations have affected the city.

Communicating the product to a wide variety of audiences is the final important aspect.

The outcome should be made available to professionals who are interested in the digital data for analysis. But it is just as important to tell the story of the urban neighbourhood to its residents and beyond.
In this regard interaction is engaging and Story Maps are an easy, effective and appealing way of narrating such stories.



Story Map of Hamra of Beirut



<http://arcg.is/1dWkhSI>

The Story Map of *Hamra of Beirut* allows users to actively explore the development of Hamra in a series of digitised maps and photographs in popups, showing the past and present in an engaging manner. The Story Map can be accessed from computers as well as smartphones.