



MELICA: Modeling Everyday Life In Cold-War Aarhus

Adela Sobotkova & Rosanna Farbøl

28 November 2023

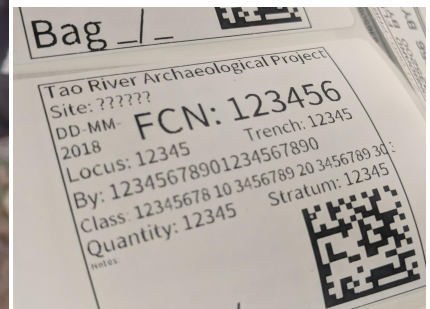
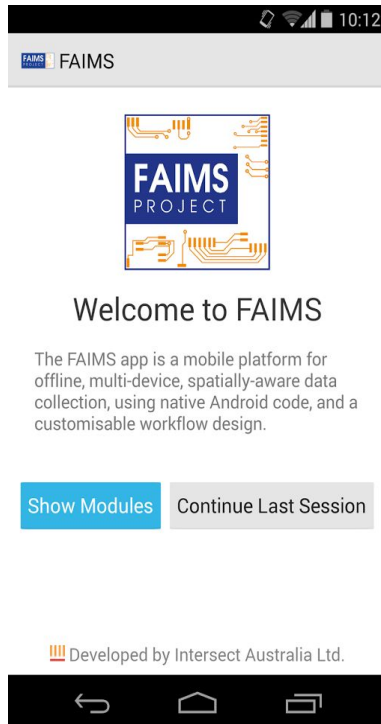
The Origins



Cold-War landscape archaeology in SE Bulgaria



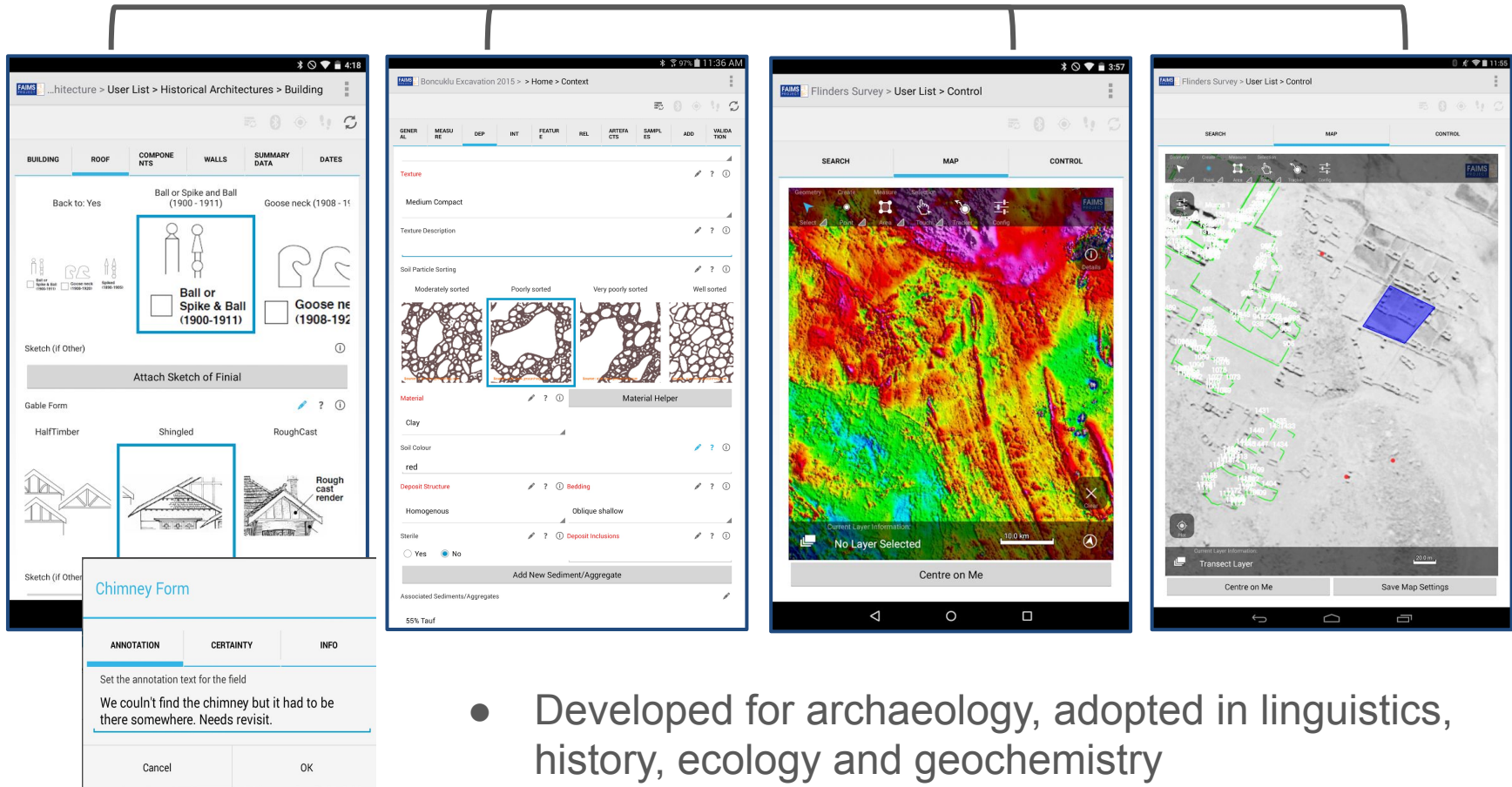
2012 - 2022: FAIMS Mobile 2.6



- Open-source, generalized system for offline field data collection
- github.com/FAIMS/faims-web
- github.com/FAIMS/faims-android

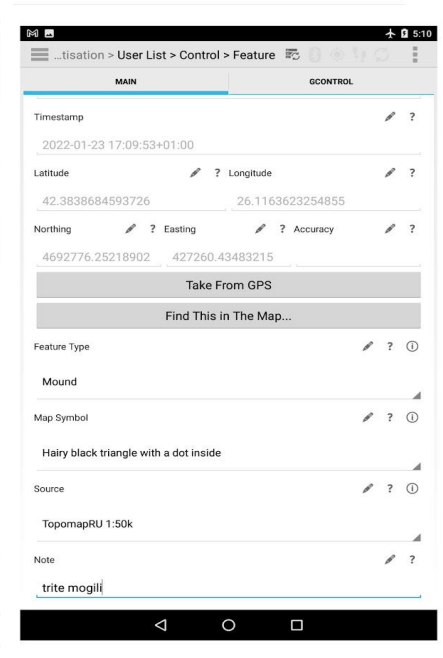
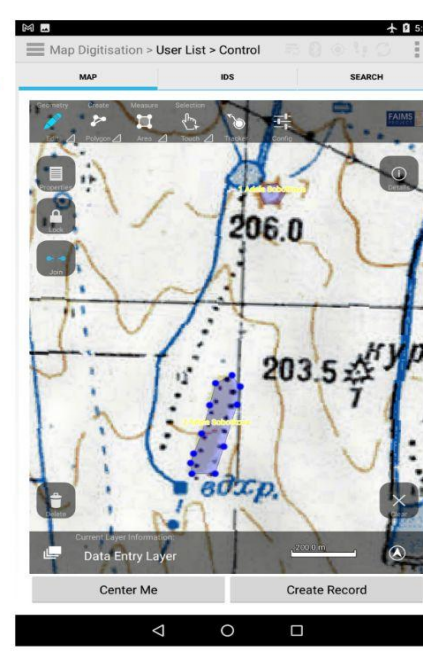
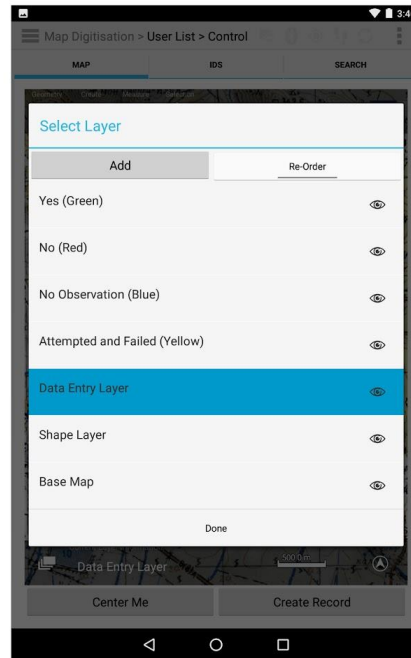
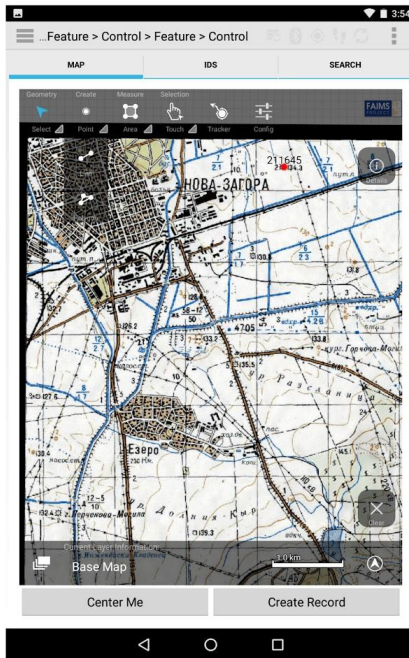
Generalized for Fieldwork Across Disciplines

FAIMS Codebase



- Developed for archaeology, adopted in linguistics, history, ecology and geochemistry
- Customizable == needs to be customized

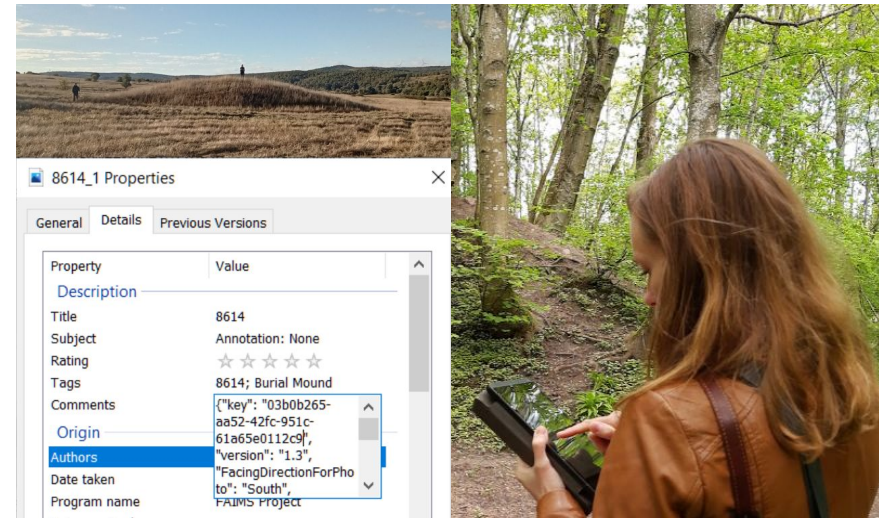
Full Mobile GIS offline



- Legacy raster and vector loading and rendering (spatialite+nutiteq)
- Creation and editing of spatial, structured, free data with multimedia
- E.g. <https://github.com/faims/burial>

FAIR spatial data in the Field

- F1: Unique identifiers & human alias
- F2: Project and record-level metadata
- A: mediated access
- I: Ontologies? Standards!
- R: Rich metadata and licensing



uuid	identifier	createdBy	createdAt0
1000021682767059876	200-{Shelter_Type_II}	Adela Sobotkova	2023-04-29T11:...
1000021682768373348	201-{Other}	Adela Sobotkova	2023-04-29T11:...
1000021682768548507	202-{Other}	Adela Sobotkova	2023-04-29T11:...
1000021682768679366	203-{Other}	Adela Sobotkova	2023-04-29T11:...
1000021682768821236	204-{Other}	Adela Sobotkova	2023-04-29T11:...
1000021682768903677	205-{Other}	Adela Sobotkova	2023-04-29T11:...
1000021682768988689	206-{Other}	Adela Sobotkova	2023-04-29T11:...
1000021682769863447	207-{Shelter_Type_III}	Adela Sobotkova	2023-04-29T12:...
1000021682770716813	208-{Shelter_Type_III}	Adela Sobotkova	2023-04-29T12:...

Will this Module contain sensitive data?

- Yes
 No



Dansk Koldkrigsforening
 Var Danmark virkelig klar til 3. Verdenskrig?



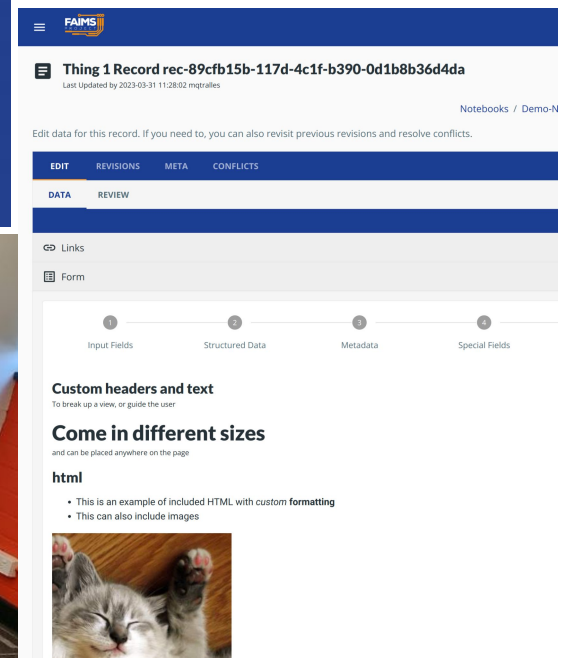
2023-2024 FAIMS3

- Now also with a Graphic User Interface

FAIMS 3.0 Electronic Field Notebooks

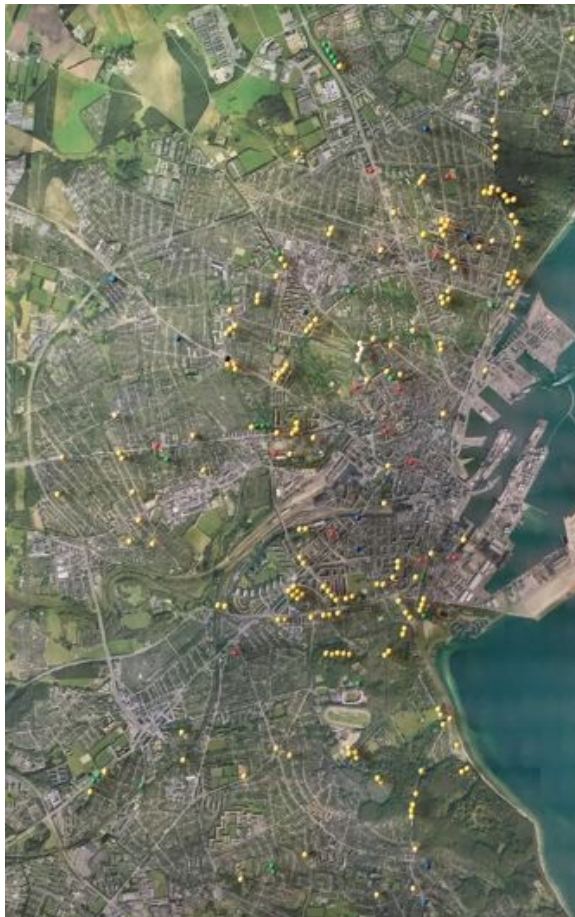
The FAIMS 3.0 Project is building the next generation of Electronic Field Notebooks. Join us on the journey.

SIGN IN



2022 - 2023 Pilot Project

Testing Democracy from the Bottom-Up: Plan and Reality of Civil Defense in Cold-War Aarhus



Developing and testing field-data capture systems

Sources:

- List of addresses
- Photo of a map with pins!

FAIMSV26

FAIMS

AVAILABLE

Aarhus
Server: da

Bird Ne
Server: da

CSIRO and pri
Server: da

ES Fish
Server: da

Lake M
Server: da

Map Di
Server: da

Perach
Server: 19

Perach
Server: 19

Perach
Server: 19

Tao Riv
-2018

Aarhus Cold War Bunkers 2021

Mapping of Cold War civil defense structures as part of Digital Methods in History, Brecht Emne - Cold War era, and Cultural Data Science - Spatial Analytics coursework

[Load Module](#)

MODULE SRID	32632
MODULE YEAR	2021
PERMIT NO.	N/A
PERMIT HOLDER	N/A
PERMIT ISSUED BY	N/A
PERMIT TYPE	N/A
CONTACT AND ADDRESS	Adela Sobotkova
PARTICIPANTS	Adela Sobotkova Petra Hermankova Rosanna Farbel
COPYRIGHT HOLDER	Adela Sobotkova
CLIENT/SPONSOR	Adela Sobotkova
LAND OWNER	Aarhus kommune
HAS SENSITIVE DATA	false

VERSION 1.0 SERVER DEMO.FEDARCH.ORG.80

FAIMS3

Shelter Record 04018-III

Edit data for this record. If you need to, you can also revisit previous revisions and resolve

EDIT REVISIONS META CONFLICTS


1 General 2 Element

Here you can describe the shelter or other feature that you encounter. Please beware th multiple shelters clustered together (each will have its own emergency exit), you need to individually. You may suggest the subtype (number of iterations) in the Subtype field of t that is part of the cluster. That way, an individual shelters of type I will have subtype A, w will results in two shelter records of type I and subtype B. Consult your supervisor if in di

[Draft last saved a minute ago Tue Dec 13 2022 12:39:06 GMT+0100 \(Central European Standard Time\)](#)

Civil Defence Features

A number of different civil defence features can be found around Aarhus, from emergency hospital, watch posts to civilian shelters of different design. This form is designed primarily for shelters. If a feature is a shelter, then please select an appropriate type as best as you can surmise from the remains visible on the surface. If the feature is something else (depo, or other), select Other and describe in the Annotation, please.





<https://github.com/FAIMS/Aarhus-shelters-faims-2.6>

Shelter monitoring April 2023

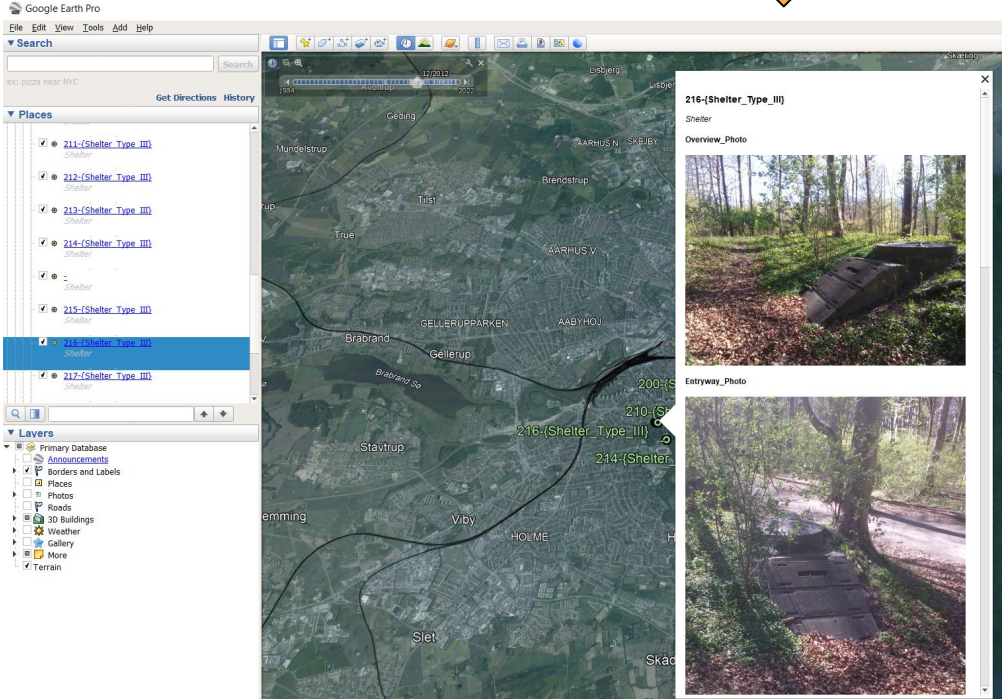
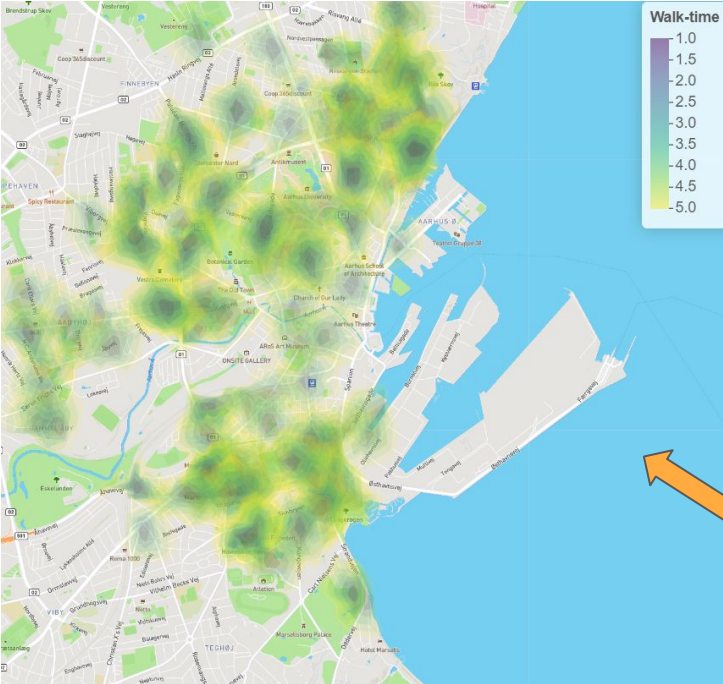


- Map and document visible shelters' condition, accessibility, and present use
- Offline app essential; people take lots of photos!



FAIMS: Rich and integrated spatial data

- Is analysis-ready!
- Spatial formats (csv, kml, shp, geojson)
- Multimedia, structured data and annotations written across these files



Walker K (2023). *mapboxapi: R Interface to 'Mapbox' Web Services*. R package version 0.5.3.

Moving to “Where’s the nearest shelter?” app

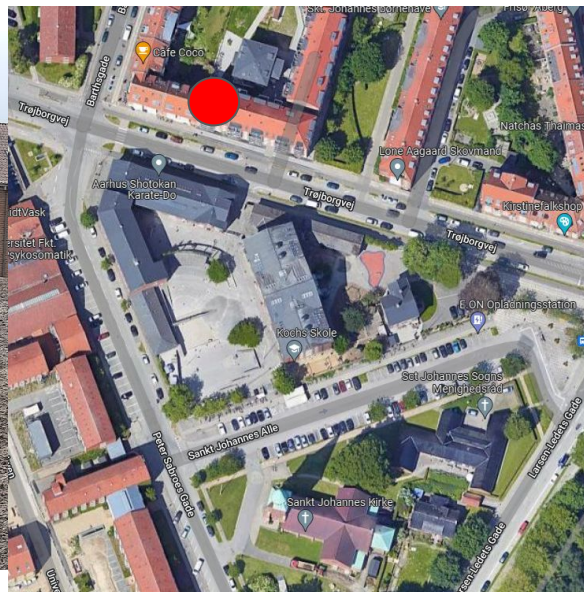
April 2021 developing "Bunker app" for data capture student activities in Spatial Analytics

March 2022: responding to a colleague's request

Meanwhile, I just cannot stop thinking your bunker app that you did last year as I have read this news:

<https://cphpost.dk/?p=131669>

Can you tell me the nearest bunker to my house ? I am on Trojborgvej 72.



MELICA: The Birth of Digital History Project

~/RStudio/1_Teaching/cds-spatial-2022/Week04 - Shiny

http://127.0.0.1:6631 | Open in Browser



Address

Trojborgvej 75, Aarhus

Find the nearest shelter

Instructions to the shelter /n (beware:location error ~100m)

- Walk west on Trojborgvej.
- Turn left onto Peter Sabroes Gade.
- Turn left.
- Turn right.
- Turn right onto Larsen-Ledets Gade.
- Your destination is on the right.



MELICA: The Plan

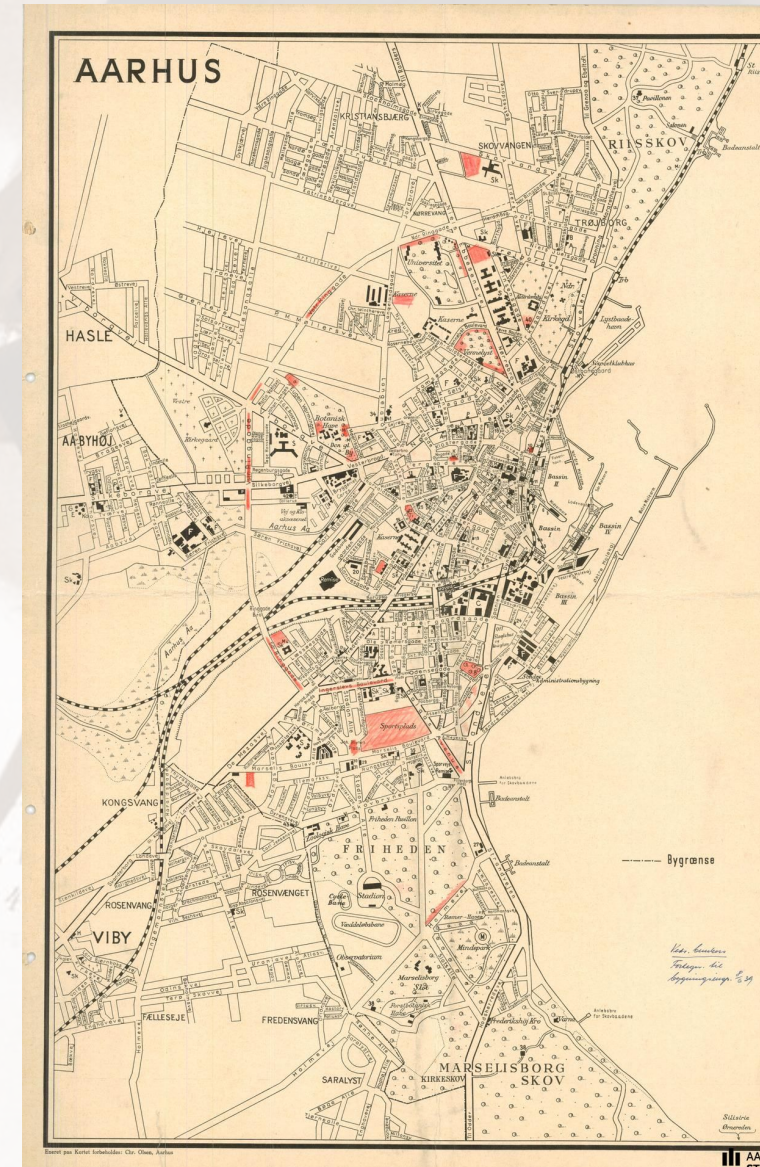
We start in 2024

Year 1: digital archive creation, field data capture, data streamlining and enrichment

Year 2: textual and spatial analysis

Year 3: simulation and dissemination

Time and Activity Plan	Year 1	Year 2	Year 3
WP1: Digital Archive Creation	■	■	
WP2: Field Data Collection		■	
WP3: Text and Spatial Analysis		■	■
WP4: Evacuation Simulation			■
WP5: Outreach and Dissemination	■		■



MELICA: Research Objectives

- 1: Reconstruct the everyday experience of individuals living in Cold-War Aarhus: a militarization of everyday life or 'normalization' of war?
- 2: Identify the gap between how Cold-War civil defense was conceptualized at the **national** level and delivered at the **local level** in Aarhus, Denmark.
- 3: Evaluate civil defense effectiveness by **simulating a shelter drill in silico**, identifying weak points and stakeholders in civil defense planning.



<https://www.aarhusarkivet.dk/records/000137027>

**FUNDED
AT 75%**

Then



<https://www.aarhusarkivet.dk/records/000303780>



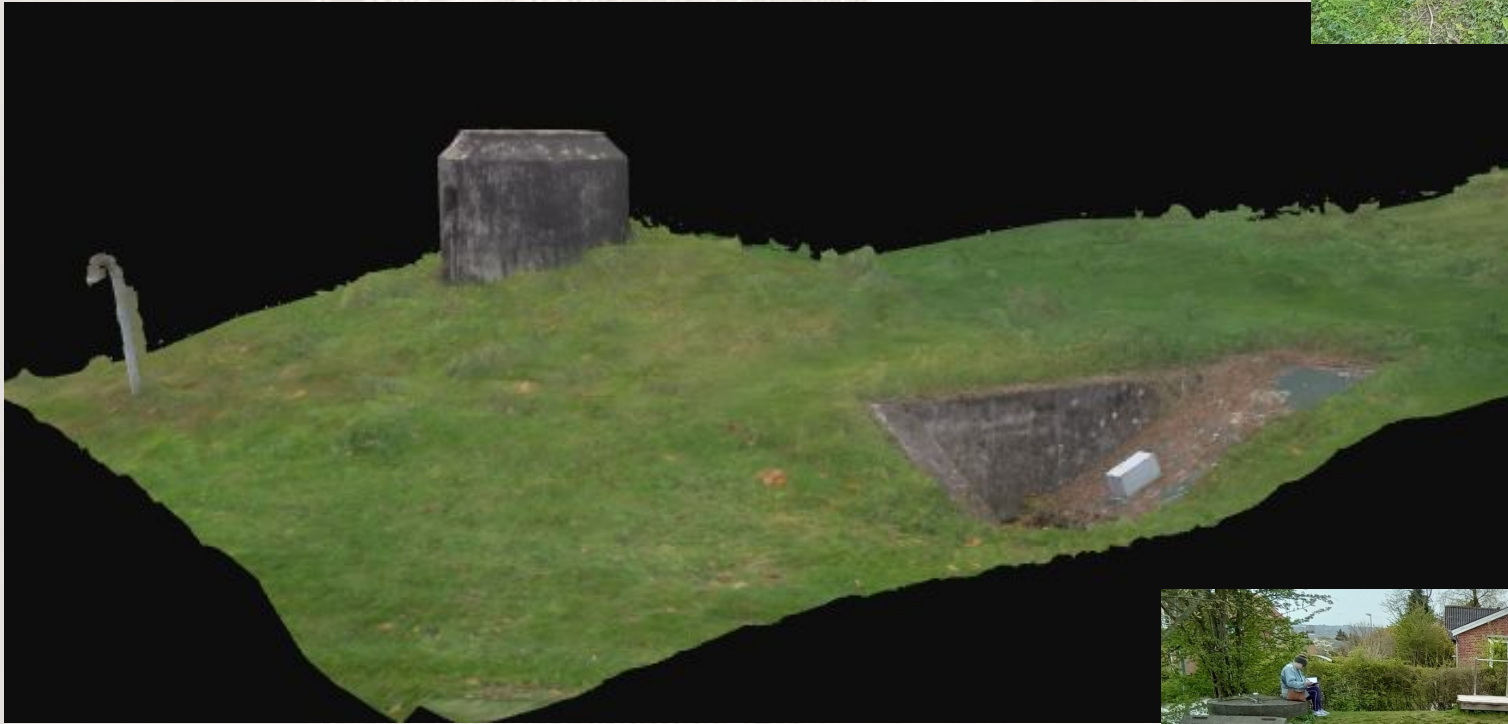
<https://www.aarhusarkivet.dk/records/000303778>



<https://www.aarhusarkivet.dk/records/000303853>

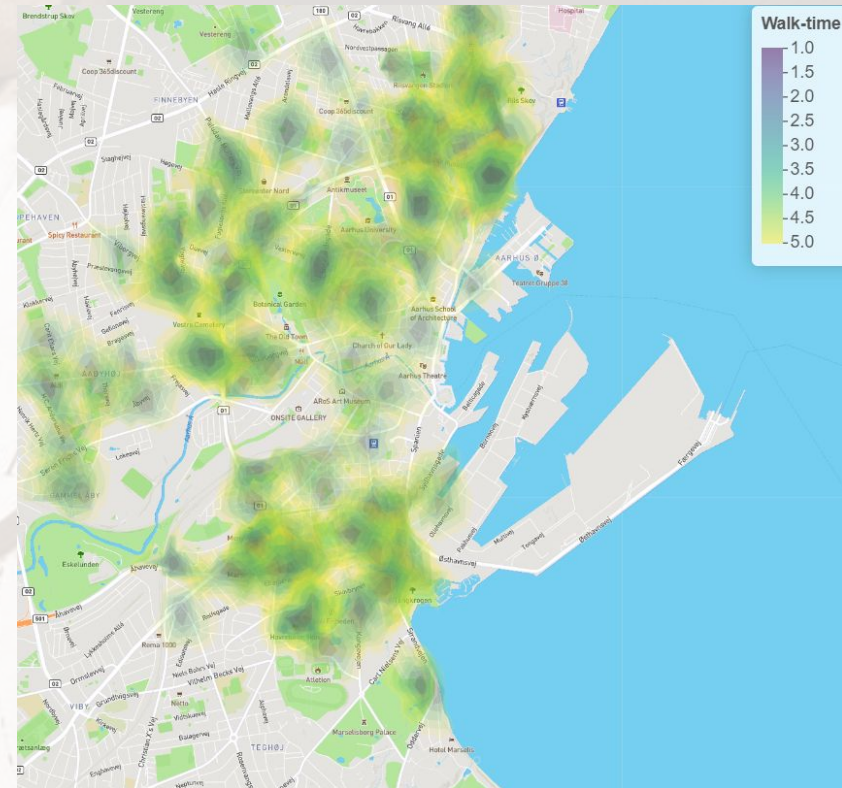
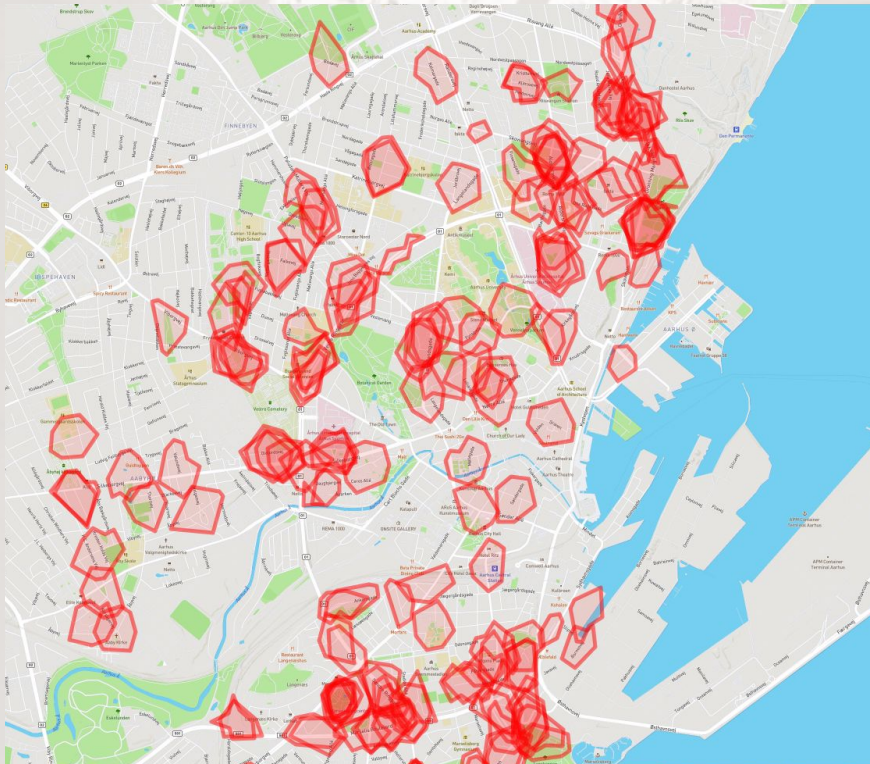
Now

<https://demo.pedestal3d.com/r/K1IPA7-wVN>



What is the efficacy of this civil-defense network, really?

- How was the local civil-defense conceptualized and implemented? Who is protected? Who is left out?
- The friction between local geography and the national guidelines



MELICA: Partners and participants

- Adela Sobotkova (AU)
- Rosanna Farbøl (AU/UiO)
- Iza Romanowska (CHCAA)
- Kristoffer Nielbo (CHCAA)
- Claus Juhl Knudsen (Aarhus Stadsarkiv)
- Thorbjørn Jørgensen (Østjyllands Brandvæsen)
- Tommy Cassøe (Dansk Koldkrigsforening)
- Magnus Nielsen (MA student)

Advisory board:

- Rosa Magnusdottir, U of Iceland
- Silvia Ziauddin, U of Zurich
- David C. Harvey, AU



Thank you :)

Comments? Questions? Write to:

adela@cas.au.dk

rosanna.farboel@cas.au.dk

Testing Democracy from the Bottom-Up: Plan and Reality of Civil Defense in Cold-War Aarhus

While in the past, city planners designing for civilian protection guesstimated the movement of people by looking at the distribution of places (churches, shops, schools, parks) in the maps, today we can use mobility statistics, 3D models and road networks to quantify the diurnal movement of people through the urban landscape and the accessibility of shelters. With the help of computer simulations and agent-based modeling (ABM) our project aims to assess the evacuation potential of the Aarhus shelters in order to evaluate how effective, even, and complete their coverage was with regard to 1970-80s population and building distribution. For example, we will design an agent-based model that will investigate the efficacy of the shelter system under different conditions, such as varied shelter readiness or the level of awareness among the general public about the shelter location. Agents will be asked to move to the nearest shelter they are aware of, enabling us to reconstruct what proportion of the population successfully reached protection and whether they were evenly distributed between locations. This way we can assess the utility of the shelter system and take into account the differences in population numbers and activity in the course of the day and different levels of awareness of evacuation procedures. Computer algorithms coupled with historical data will reveal how well the local implementation of civil defense matched the democratic and equitable ideal of the national strategy.

Rosanna Farboel

Assistant Professor
School of Culture and Society -
History, subject

✉ rosanna.farboel@cas.au.dk
📍 1463.528
☎ +4587162209
📠 +4526503612



Petra Hermankova

Assistant Professor
School of Culture and Society -
Classical Archaeology, subject

✉ petra.hermankova@cas.au.dk
📍 1463.430



Adéla Sobotková

Associate Professor
School of Culture and Society -
History, subject

✉ adela@cas.au.dk
📍 1463.522
☎ +4587162317

