

Participatory expert mapping: Accounting for the mapping process in STARTUP

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Introduction

The STARTUP project has its analytical focus on Local Cultural Praesidia (LCP), from hereafter “praesidia”, and their role in local communities (Galdini and De Nardis 2025; Galdini et al. 2025). However, there is no overall comprehensive list or map of this type of often independent actors in the studied cities meaning that the STARTUP project would first have to identify them in order to be able to select a sample to analyze further. STARTUP has therefore engaged in an extensive mapping process in order to identify and locate praesidia across the concerned cities. One basic idea with mapping praesidia has hence been to make the involved researchers better prepared to make an informed selection of cases based on the total number of praesidia in the city and based on an understanding of the spatial variation of this type of cultural activities. In relation to the New European Bauhaus-focus on “people and places that need it most” the latter is of central concern and mapping hence secures the needed basic knowledge of what exists where.

Basically the work we have done is a type of cultural mapping based on participation of, and collaboration with, experts in refining a dataset originating in 200+ openly available databases with geolocated data. “Cultural mapping” (Duxbury et al. 2015, Evans and Foord 2008, Evans 2024) or “participatory mapping” (Denwood et al. 2022) or “counter-mapping” (Duggan and Gutiérrez-Ujaque 2025) as it is also called, is a small but well-established field in the social sciences (cf. also Brown and Kyttä 2014 on participatory GIS and public participatory GIS). Although these namings connote somewhat different approaches and development lines, they are all basically engaged in order to go beyond established knowledge and power structures, often for local empowerment and emancipatory purposes. All would also involve the participation and input from – experts or not – actors not normally engaged in map making. In STARTUP the number of participating actors are focused but as Evans (2015) and Brown and Kyttä (2014) discuss: mapping in participatory ways look very different from project to project depending on the purpose with the mapping process.

In order to distinguish the mapping method employed in the project from participatory mapping in general, which often would have more community involvement, we have called the method “participatory expert mapping”, which aims to capture the character of the approach. The experts here being both researchers of urban studies in the respective cities but primarily aiming to capture the participation of artists who by their professional lives would have extensive knowledge on the cultural scene of their respective cities. Supported by the API-mapping tool and the process described in the following the knowledge of these experts was reflectively and collaboratively codified into the present maps.

The following text explains in detail how we went about to produce the maps. The aim of the present text is to be as transparent as possible with the mapping

method and mapping process underpinning the maps produced in the project. It is a compilation of the relevant parts, slightly revised, of three reports (project deliverables 2.1, 2.2 and 2.3) in work package 2 of the STARTUP-project where the mapping method and mapping process was developed for project needs whereas this text brings what was dispersed in three reports into one coherent text in order to make it transparent and available.

The basic idea with the mapping method is that every relevant cultural actor that exists in real life also has a digital presence, and that presence can be detected with the API-mapping tool developed in the project. The tool uses 200+ openly available databases in OvertureMaps as a proxy for “digital presence” and makes it possible to identify and locate the relevant cultural actors. The tech-driven results are however not good enough in themselves as they contain many hits (a hit is a geolocated cultural place) that are not relevant (e.g. not active anymore). By manually checking (by humans) how the geolocated cultural actors present themselves on the internet, irrelevant hits can be deleted.

The method thus *reduces* from a large number of hits in order to construct the map. In a sense this is the opposite to how many maps are constructed where pre-defined categories of objects are added in order to build up the content of the map. The STARTUP method on the other hand enabled, during the process of mapping, intense discussions of what should be included or not (is it a valid hit, or not?) and in those discussions the very concept of praesidia was further developed according to the understandings of the mapping teams. It should however be noted that mapping teams and their respective cities, languages and cultures differ so to what extent the different city maps are comparable in a detailed sense would require further research. It should also be noted that the experts (both the academic and creative partners) were able to add hits that the API-mapping tool did not detect. These would be places known in other ways to the researchers and creatives involved. Most often these places would have some kind of digital presence but had for some reason or another not been picked up in any of the 200+ databases used by the mapping tool.

In the following parts of this text, the work processes underpinning the final map are described. We start with an overview of the five basic steps involved and then proceed with detailed accounts of these five steps in five corresponding sections, the last of which also contain conclusions about the process and mapping method. The text ends with pointing to the mapping guide developed in the project for those who would like to use the mapping method in their own projects.

Five steps in the mapping process

In short, the mapping process started with integrating over 200 openly available databases into the API-mapping tool, based on Overture Maps. We downloaded the results we got with selected search terms into one (1) dataset, and then refined

the dataset by deleting bad hits and adding good hits. We did this in five interrelated steps.

The first step is largely technical in character and is concerned with how STARTUP employs API-mapping tools in order to construct a functional mapping device that is user friendly in a research context. This means that it should be possible to use by researchers who are not familiar with either the technical aspects of API-mapping or with mapping. The account below, however, is highly technical as it is aimed at reproducibility and explanation of the API-mapping tool, which require a high level of technical detail. API stands for Application Programming Interface and this and other technical terms, abbreviations and referred websites are listed and shortly explained in Appendix 1.

The second step was concerned with deciding the search terms to be used in the API-mapping tool constructed in the first step. The search terms decide what will end up in the rough and un-refined "ground map" consisting of results from the 200+ databases available in OvertureMaps.

The third step was concerned with refining the dataset underpinning the ground map and producing the cultural maps of each case study city. Based on the cultural maps, further refinement was made in the fourth step in order to produce the praesidia maps. In the final fifth step we evaluated and reflected on the process and the learnings we made from the mapping. This also enabled us to develop the mapping method further, the result of which is presented in the mapping guide.

For implementing steps 2 to 5 we made use of a system of templates to engage partners and ensure participatory involvement. Each template contained a sub-task to be carried out locally with results sent to the mapping lead partner (Stockholm University) for integration in the overall map. During the process, the lead partner was all idle to answer questions and provide support or clarifications if needed. The templates are central to the mapping process and described in detail below. All templates used and the meetings grounding the mapping method with the participants are listed in Appendix 2.

This five step process, involving in total 13 templates with sub-tasks, produced three maps of which the two first (ground map and culture map) were stepping stones in order to produce the last and final map (praesidia map) presented on the STARTUP website. Overall, summarizing the process of producing Praesidia maps a few notes on the underpinning maps are in place.

Ground map: The ground map is the first draft of the maps based on the selected search terms and over 200 data bases available through OvertureMaps. The ground map, apart from setting the borders of the areas to be studied, contained a large number of bad hits that in the process of producing the Culture map was deleted from the underpinning dataset. The ground map is very "raw" and its prime purpose was that it made us able to

produce a dataset that the project fully controlled, and that could be cleaned and added to according to the purposes of the project. The ground map is not used in the project for any other purpose than providing a ground for the culture and praesidia maps.

Culture map: The STARTUP culture map is a broad map of cultural infrastructure and culture in the concerned cities. This map includes a large number of places that would classify as culture and cultural infrastructure but not necessarily as praesidia. The culture map forms the basis for further refinement (deleting and adding hits) into the praesidia maps.

Praesidia map: Based on the Culture map, the Praesidia map was produced. The idea is that it should only include praesidia which in turn would make it possible to make the selection of a purposeful and spatially varied sample to study further. The Praesidia map may also be used for communicative purposes and perhaps especially for showing the relevance of this type of culture activities in relation to community involvement, local development and/or policy. The Praesidia map for each partner is available on the STARTUP website on this link: <https://horizon-STARTUP.eu/map-ver-6/>

Summing up, the work included to first construct the API-mapping tool to be used in mapping and then decide more exactly what should be searched for in the databases (deciding search terms). The resulting dataset produced a "ground map" that was then refined (deleting bad hits, adding new hits) in order to produce broad cultural maps. The cultural maps in turn was then refined into praesidia maps with deleting all hits that were not "praesidia" and hence not relevant for the project. The last and fifth step was reflecting on the process in order to learn from it and further ground the method for developing the mapping guide.

First step: Technical aspects

For STARTUP to be able to do API-mapping, we first had to construct an API-mapping tool that should be user friendly in a research context. This means that researchers in STARTUP across Europe should be able to use the tool based on fairly simple instructions without having deep knowledge on the technical aspects underpinning the tool or API-mapping. It could also be mentioned that the API-tool was tested with the researchers in a workshop in Stockholm in May before the mapping process formally started, to then be further refined based on that input. For testing the API-tool a particular workshop material was developed which involved testing different digital devices in order to find the best solutions. The testing of the tool also familiarized academic and creative partners with API-mapping and the type of results it can produce.

The following accounts for the technical processes involved. It is aimed at reproducibility and hence requires a high level of technical detail. For abbreviations, technical terms and referred websites, see Appendix 1.

Collection of official data on administrative boundaries in Europe

For the cartographic component of the project, open data provided by official public authorities were accessed through their respective APIs.

Eurostat, the statistical office of the European Union, is responsible for collecting and disseminating statistical and geographical information across all member states. Through its GISCO service and associated API, harmonized data at the municipal (LAU) level are made available for the entirety of Europe. These datasets constitute the source of the municipal boundaries used for most of the cities included in this study (Eurostat GISCO, 2024).

Etalab, the French governmental body in charge of open data policy, provides national datasets, accessible via open data APIs, including the delineation of inter-municipal structures (EPCI). From this source, the boundary of the Eurométropole de Strasbourg – an inter-municipal entity composed of several municipalities – has been retrieved (Etalab, 2024).

For the Ruhr area in Germany, three municipalities (Dortmund, Bochum, and Gelsenkirchen) have been aggregated into a single spatial unit. In this way, the project establishes a consistent and comparable set of boundaries across the selected case studies, enabling cross-national spatial analysis.

Processing and integration of cultural place data

For the analysis of cultural infrastructures, open geospatial data were combined and processed through reproducible workflows. City boundaries were first collected from official sources (Eurostat GISCO and Etalab, see above) and stored as individual GeoJSON files. These boundary files serve as the spatial framework for subsequent analysis.

Information on cultural places was then retrieved from the Overture Maps Foundation (OMF), which publishes global, openly licensed geospatial datasets. OMF is a member-governed Linux Foundation initiative by AWS, Meta, Microsoft, and TomTom. OMF collects and harmonizes open and corporate-contributed source (OpenStreetMap and 200+ public datasets) into a unified schema with open GERS IDs. Using Overture's API-accessible Parquet files for the "places" theme, a wide set of categories relevant to arts, culture, and creative production were selected.

The datasets were processed in DuckDB, where spatial extensions enabled filtering and joining. Each cultural place record was spatially matched with its corresponding city boundary using geometric operations. The resulting data were exported in GeoJSON format for cartographic visualization, alongside CSV summary tables reporting counts of places per city and per category.

Through this pipeline, disparate data sources are integrated into a consistent and comparable dataset. The combination of API-based data access, standardized formats (GeoJSON, Parquet, CSV), and transparent processing steps ensures both reproducibility and adaptability for further research use. All information needed (licences, attributions, requirements, workflow etc.) is available on the the GitHub-repository: <https://github.com/Liistamo/STARTUP-cultural-data>

Cartographic visualization in the project interface (website)

The cartographic interface is implemented as a full-screen web map using Leaflet. Basemap tiles are served by OpenStreetMap, while study geometries are loaded as local GeoJSON assets: (i) city or metropolitan boundaries (one file per city/region) rendered as outline layers, and (ii) a consolidated point-based dataset of cultural places exported from the processing pipeline ("cultural_places_*.geojson").

Interaction is client-side and lightweight. Users can: (a) filter points by category and/or city, (b) zoom to a selected city (boundary-aware fit), and (c) inspect individual features via pop-ups (name, category, website, city). A compact legend reflects the category color scheme used in the exported GeoJSON. For downstream use, the filtered selection can be exported directly from the browser to CSV or XLSX (via SheetJS), preserving name, category, website and coordinates. All logic – filtering, symbolization, and export – runs in the browser without server-side state, ensuring a reproducible, portable visualization layer that can be updated simply by replacing the input GeoJSON files.

Second step: Deciding and translating the search terms

The second step in the research process involved deciding and translating the search terms together with all partners in the STARTUP-project. To organize this work, a number of templates were developed that were sent to all partners to work with. Each template included clearly defined tasks on what to do and how to report it back. Out of a total of 13 templates, the templates numbered 1, 3 and 5 were concerned with deciding and translating the search terms. It should here be mentioned that all templates called for transdisciplinary collaboration between the academic and creative partners in the respective case study cities but also underlined when this collaboration would be especially useful (i.e. in Template 6, see below).

Template 1 with attachment was concerned with selecting relevant search terms. Out of the total number of over 2100 possible search terms in the database, the most relevant were to be selected. This involved pre-mapping and testing various search terms and how they played out spatially on the map and in the underpinning dataset. The pre-mapping served several purposes of which the first would be to refine the search terms in trying to find the most precise. A second purpose would be to familiarize the researchers in the project with the API-mapping tool in order to be able to use it efficiently once the final search terms had been decided.

In Template 1 there was also a technical instruction so partners, on their own and/or with support from Stockholm University, could test and pre-map various search terms, so they would be better positioned to suggest additions or deletions to the final list of search terms. Nevertheless, in order to help the different research teams in the project to select, Stockholm University had gone through the list and pre-selected over 120 search terms that were related to the cultural and creative sector. All partners could then either accept the pre-selection or suggest additions and deletions of search terms, based on the list of all possible search terms and the pre-mapping and testing they were encouraged to do. The process resulted, after a workshop in Dortmund, in that seven search terms were deleted and an additional 15 search terms being added.

In Template 3 and 5 the search terms were listed and sent to the partners to translate into their national languages. The translating of the search terms was made for several reasons but one of the the most important is that the translations would be used when reflecting on the results of the API-mapping tool we constructed in relation to possible other mapping devices (especially in relation to large commercial sites like Google Maps). Another reason for translation is that it highlights the "language-embeddedness" of culture. For some of the English search terms there are, for example, no local language equivalent. This also worked the other way around. In some language contexts there are certain cultural practices that cannot be translated easily to English. Translating hence highlights some features particular to cultural research that will be needed to understand further when comparing between cases and case study cities. Translating the search terms could hence also have an impact in the coming work packages.

The deciding of the search terms was also the result of a longer process that started in the Stockholm workshop called "Kickoff-meeting to start the mapping and case studies selection" (May 2025) where the consortium discussed relevant sectors to focus the research on. The result of the Stockholm workshop supported a broad mapping including all or most cultural and creative sectors. A following digital meeting (in June) raised the question if this should be narrowed down but there was no enthusiasm for this whereupon the more fine-tuned selection of search terms, once the work in WP2 formally started, set off from a broad approach. The final selection of the search terms was also in focus at the Dortmund workshop in September after which the process of deciding search

terms was closed. To the workshop in Dortmund all partners had prepared by finishing Template 1 (and Template 2).

There are some advantages of a broad approach. It relates to how the European Commission has defined the cultural and creative sector (European Commission 2018), and it would also make the resulting map include more possible praesidia that could be selected to be part of the sample for case study research. A drawback, on the other hand, is that the dataset underpinning the ground map would risk containing many irrelevant hits. In Rome, the broad approach gave rise to almost 10 000 hits that would need to be manually checked for their quality when cleaning the dataset (see below). A too broad approach also risks containing search terms that only in rare cases could be relevant as praesidia, for example most types of production companies. On the other hand, identifying praesidia not previously known might demand a broad approach, at least initially.

Third step: Refining the datasets

The third step of the mapping process is about refining the datasets. It also involves all partners in the consortium and the work was organized in the same way as described above with templates with concrete tasks being sent to partners. Concretely, the tasks were addressed in Templates 2, 4, 6 and 7.

Template 2: The first of these tasks was to spatially delineate the case study cities. In an online meeting it had been decided that administrative borders should be used and partners were asked in Template 2 to indicate these as well as how the city would normally be placed (on paper maps). The latter is not important in digital maps that have a zoom function but for paper maps there are cartographic conventions specific to each place to consider (e.g. how the city is normally positioned on the paper). The results of Template 2 were also discussed at a workshop (in Dortmund, September 2025) where all partners could see and discuss all cities' delineations and hereby also get a sense of comparative aspects between the cities. The workshop also led to some partners adjusting their delineations and, as cities are different, a certain flexibility was allowed. The partner in Dortmund decided to include three interlinked cities, as defined by their administrative borders, in the Ruhr metropolitan area. The administrative borders indicated by partners were then used to find the exact and official borders of the respective cities in the Eurostat database (see above regarding technical aspects).

In this process and at the Dortmund workshop, it was also decided that STARTUP should primarily not include hits that are located outside of these borders. This led to some new configurations of the API-mapping tool that after the workshop were updated. This decision also means that cleaning the dataset underpinning the map would only be concerned with hits inside the administrative borders. (Later in the process this was changed again as some partners wanted to include relevant

cultural actors situated outside the borders in their work with selecting cases for further study.)

Template 4: Cleaning the dataset from bad hits was the task of Template 4, which was introduced at the Dortmund workshop together with Template 6 and 7). The overall aim with Template 4 was to refine the dataset and clean it from bad hits. At the workshop and in the template partners got information on what to keep and what to delete while refining the dataset according to the following:

What is a bad hit? We strive to get a rather broad map but a map that is clean of hits that according to our local knowledge and pre-understanding of the field have no chance of being, in a broad sense, a culture-driven place (which might or might not have extended relations with the local and/or city-wide community). The focus is on expressive culture (art, music, dance etc) including their distribution (like book stores) rather than social activities and places in general.

Please thus note that at this stage we are not looking only for hits that are “true praesidia” or culture-driven places with community relations as that will be part of a selection that takes place later. The aim here is rather to get a view – for scientific and communicative reasons – of a layer of cultural activity throughout the city which to date is not well represented in maps, public consciousness, planning or politics/policy. (Emphasis in original)

The partners were asked to use their local knowledge and in hesitant cases check the web site of the hit. The instruction was thus fairly open and short and in practice leaving some flexibility about what to include in the map, which would make the maps more adapted to the local needs of the research teams, for example regarding communication (see below) based on the map.

It should be pointed out that cleaning datasets is an important task but also demanding if the dataset is large. As mentioned, Rome had almost 10 000 hits whereas smaller cities would have less hits. For comparison, Stockholm had ca 3800 hits, Ruhr (Dortmund–Bochum–Gelsenkirchen) ca 1800 hits, Gdańsk ca 800 hits, Seville ca 1500 hits, Madrid ca 6700 hits, Strasbourg ca 1200 hits and Trenčín ca 150 hits. It is unlikely that all partners do the cleaning of the dataset in the same way, which on the other hand was not the main point with the mapping. Rather the point is to be able, in coming tasks, to select a spatially varied sample of praesidia from an informed position and going through large quantities of data provides for that purpose.

Going through large quantities of data also relates to the New European Bauhaus axis of including people and places that need it the most since the map would cover districts and neighborhoods in which some are affluent, and some poorer, and some might not be that well known as for their cultural and creative sector. A cultural map including these districts and neighborhoods remedies this situation.

More important than exact similarity between the maps of the case study cities would be that the hits presented in the map represent places that are still active. The dataset included many non-active places, some of historical character (e.g. museums that closed in the 1950s) but mostly because the database from which the dataset was constructed is not systematically updated, which underlines the importance of manually cleaning the dataset.

In addition, it should also be mentioned that in most cases, the partners involved several researchers as well as colleagues from the creative partner to clean the dataset. It is unlikely that all persons after reading the instruction would understand it the same way. In any case, while cleaning the dataset from bad hits, the researchers would be learning and get familiarized with the empirical field, and would be able to note hits that would have the potential to be "true" praesidia which in turn could be part of the sample to be selected. For the selection purposes, if the mapping practices differ slightly between cities in this stage it would not significantly matter as long as a potential praesidia is not mistaken for a bad hit.

Template 6 and 7: The aim of the task in Template 6 was to refine the dataset by adding places of interest to the dataset based in our professional knowledge (researchers and creatives) as well as the additional places we could find when comparing (in Template 7) with other cultural maps of our respective cities. The task was highly collaborative and transdisciplinary between the academic and creative partner in the respective cities since we expected that the creative partner has better knowledge of the cultural scene and its physical infrastructure than the researchers. However, we as researchers and creatives do not possess full knowledge of all places of interest in the city as a whole. The dataset is likely to be "better" (more complete) in some districts and concerning some cultural directions. Nevertheless, the dataset and maps will be good enough at this stage for the purposes of the project. We also kept open the possibility to add further to the dataset during the next steps.

What was then to be added? In Template 6 every partner was asked to add "potential praesidia (broadly viewed)" and then a quote from the Grant Agreement was used for clarification, namely:

The focus of STARTUP is on the role of the often neglected but important "local cultural praesidia", meaning small cultural institutions, local organizations, cultural initiatives or creative spaces representing the finest grained contact points between cultural and creative professionals, and local communities.
(Quote from Excellence section in the GA)

The template further specified: "We are *especially interested* in finding praesidia that are artist initiated and artist driven since these according to earlier research have a very important role in successful creative placemaking, and may have a good chance of representing transformative change in relation to NEB-values." (Emphasis in original)

The template nevertheless also opened up to add other cultural places (not only praesidia) as the aim at this stage is to get a map of culture that can be used both for selecting praesidia for case study research as well as form the base for the communicative aspects of the project as a whole.

Concretely, the work resulted in a number of hits being added to the dataset in each of the case study cities. The number of additions ranged from ten up to 147 places that had not been part of the original dataset. In an attachment to Template 6, the name, geo-coordinates (latitude and longitude) and web address of the new cultural places were listed by the respective partner and then sent to STARTUP's computer expert at Stockholm University to be added to the digital dataset.

Lastly, the (mass) communication with partners in templates were replaced with direct communication between Stockholm University and the respective partner including a final check of data quality before producing the cultural maps of the respective city. In many cases this was a straightforward communication and in most cases there were no major problems with the data (although most partners had a few data points that needed double checking, e.g. regarding the geo-coordinates). In one case though, a larger problem with the data was detected, that could then be addressed and solved. The problem stemmed from a partner who by mistake did not use the correct link to the dataset. This last quality check was to make sure that all partners would be able to produce a map that would meet the quality standards of STARTUP and that would also function as a base for the coming work in WP2 with the praesidia map

All the cultural maps produced are available at <https://horizon-STARTUP.eu/map-ver-4/> and how these were refined into praesidia maps is accounted for below.

Fourth step: Producing praesidia maps

The overall work with the Praesidia maps follows the process of sub-tasks presented in templates. In the earlier steps we produced the Culture map based on work in seven templates (Template 1 to 7). Reducing the Culture map to the Praesidia map were done supported by three more templates (Template 8, 9 and 11). As before, we employed the API-mapping tool developed in the project to do the digital maps. (Template 10 and 12 does not refer to the mapping process in the process but to selecting cases based on the praesidia map and are hence not discussed further here.)

Starting in early October 2025 partners were asked in these templates to step by step further refine the dataset underpinning the maps to only include hits that would qualify as praesidia, broadly viewed. The broad view of the concept of praesidia was used as there otherwise might be a risk of deleting hits from the dataset that could qualify as a praesidia.

It should also be noted that the primary objective with producing praesidia maps is for selection purposes. This academic objective was consciously allowed to overshadow strict cartographic conventions in map making. As will be discussed further below this included adding hits outside the city boundary and also adding hits of praesidia that are either mobile or digital. The idea is thus to get a map that includes and shows as many relevant cases as possible, that potentially could be selected into the sample for further empirical study.

Overall, the process was highly adaptive to the wishes and desires of the partners. Whereas the production of the Culture map, albeit being participatory, followed cartographic mapping conventions more strictly, this last stage of the mapping process was more open to the input of the mapping participants (e.g. regarding digital or mobile praesidia). To be open to what the mapping participants (in this case the partners of the project) consider important is normal and good practice in participatory and cultural mapping (Duxbury et al. 2025). This openness also supported the aim of the project to make partners do their selection from a range of varied praesidia rather than based on a more confined and limited set of possible cases.

As in earlier steps, these templates were sent from Stockholm University (the mapping-lead partner) to all partners to be handled and solved locally and then returned to Stockholm University with the results of the sub-task. Concretely, the work for all partners involved stripping the dataset of the Culture map to *only* include praesidia (Template 8). Together with adding new hits (Template 9 and 11) this would in practice produce a new dataset based on which the Praesidia map could be produced. Temporally, the tasks were divided into two phases, the first regarding Template 8 and 9, to be ready till 20 October 2025 so draft praesidia maps could be made in time for the consortium meeting on 22 October. The second phase concerned Template 11 which made possible for partners to keep on adding new praesidia to the dataset all the way up to the deadline.

Stripping the dataset

Template 8: The aim of this sub-task was to strip the dataset underpinning the Culture map from every hit that is not a praesidia (broadly viewed). This would include taking away large cultural actors like opera houses, commercial galleries and all hits that would not classify as praesidia. What was to be regarded as praesidia was explained in the template:

Please thus note that at this stage we are looking only for hits that are "praesidia" (in a broad sense). Important to save are thus also potential praesidia. As in earlier templates, a praesidia is:

The focus of STARTUP is on the role of the often neglected but important "local cultural praesidia", meaning small cultural institutions, local

organizations, cultural initiatives or creative spaces representing the finest grained contact points between cultural and creative professionals, and local communities. (Quote from Excellence section in the GA)

We are *especially interested* in praesidia that are artist initiated and artist driven since these according to earlier research have a very important role in successful creative placemaking, and may have a good chance of representing transformative change in relation to NEB-values.

Obviously, the term praesidia is not strictly defined but rather represents an idea of a phenomenon that to date is not well represented as a category of its own in research or policy. This also gives rise to partners to interpret the term a little differently from case city to case city, which has also been done. Despite continuous discussions in the project about what the term praesidia is meant to capture to create a common understanding, when the term is employed in practice for the first time it is bound to show the differences in understanding, even if all partners were in agreement on what the term should include. It should also be pointed out that it is a conscious choice of the project to not predefine the term praesidia but rather inductively let it be empirically grounded first, and then conceptualize it, see STARTUP's conceptual research framework (Galdini 2025).

In practice, some partners used a broader view and kept many of the hits from their culture map, whereas other partners in practice used a narrower definition leading to fewer total hits on the praesidia map. The praesidia maps are thus not fit for direct comparison between the involved cities but becomes ideographic representations of praesidia as a phenomenon in relation to the researchers' conceptual delimitation in that particular city. Nevertheless, for the purpose of selecting cases from the map, this conceptual ambiguity would not matter much as the result (a sample of ca 20 cases) in any case would need to follow the criteria for selecting (De Nardis and Landolfo 2025). With a more refined Praesidia map, this process is likely to be smoother than for those that chose a broader view of praesidia for their Praesidia map.

Practically the work with Template 8 meant that partners again reviewed the dataset underpinning the culture map and marked all hits that should stay in the dataset. The marking was made in an attachment (an excel-sheet) that was sent to Stockholm University where the project's research engineer used this to produce a new version of the map, separated from the old.

One can note that in relation to reducing the ground map to the culture map, the process was smoother this time. Researchers were more used to the process and there were no bad hits in the dataset that might disturb the assessment of what should be kept, and what should be deleted. Only in one case were minor problems detected in the handling of the different datasets by a partner, but when detected this was easily corrected via mail contact. A similar problem arose when producing the culture map which made us as the mapping lead partner note the importance of double checking and early follow ups of partners' local processes.

We also note that a certain amount of support most likely is needed however the clarity of instructions. These aspects will be included for further reflection when refining the mapping process for the mapping guide.

Adding hits to the dataset

Template 9: The aim of this sub-task was to add places of interest (only praesidia, not any other type of cultural activity) to the dataset. In this task it was also possible to add praesidia without a set venue, like digital praesidia or mobile praesidia. The task was highly collaborative between the academic and creative partner since it was assumed that the creative partner would have deep knowledge of the cultural scene and the physical infrastructure in the concerned city. Regarding what would be a valid praesidia to add, the same formulations were used as in Template 8 (see above).

The idea was to use the combined professional knowledge of academic and creative partners, as well as other material that would be fairly easy at hand, e.g. other local culture maps, google maps/apple maps or similar tools, and membership lists of professional organisations that we could be part of to find more praesidia. For this sub-task, partners were also asked to revisit Template 7 which concerned other culture maps in the city and check and reflect upon if there would be places indicated in them that would be worth adding to the praesidia map.

Concretely the work was made by partners by filling in an excel-sheet with information on name, website, cultural sector and the geo-coordinates (latitude and longitude) of the praesidia. The excel-sheet was then sent to the project's research engineer in Stockholm who added the places into the digital dataset. The same concrete process was used regarding Template 11, see below.

It could also be mentioned that adding mobile or digital praesidia to the map first presented somewhat of a cartographic problem. Since these praesidia do not have a set location in the city we first tried to list them in a drop-down list in a corner of the map. This did not work well for reasons related to legibility when zooming in and out of the map. Instead we gave them an "imagined" location in the centre of the map and a special symbol to signal that this location is not related to an actual place.

Draft selection

Template 10: This template contained no new mapping data but listed praesidia especially interesting to discuss for case study research and is not discussed further here (it does not relate to the mapping per se).

Last chance to add hits

Template 11: The aim of this sub-task was the same as in Template 9 with only two differences. The first is reflected in the title of the template, i.e. to get a last chance to add relevant praesidia that could be part of the selection. Some partners used this possibility but not all.

The second difference is that the criteria decided in the project (De Nardis and Landolfo 2025) opened for "wild cards" and adding places that are located outside the borders indicated on the map. Some partners used this possibility, but not all. The rationality of this possibility is that the cities' delineations are made based on administrative borders but these borders in some cases do not represent the city as a built up or functional area. In short, the city is so to speak larger than the administrative borders of the city. For two cities – Stockholm and Gdańsk – this presents a problem since there are a number of relevant praesidia in the city or tri-city respectively but that are formally outside the borders we have used. For other cities, with a more "rational" administrative border, this would not be an issue. Opening the selection to places outside the borders nevertheless follow the idea of keeping the possibility to include, in relation to the research questions of STARTUP, the most relevant praesidia in the final selection (De Nardis and Landolfo 2025).

What should be noted however is that the mapping process differs between those praesidia that are inside the border, and those that are outside. Those inside the borders were subject to an extensive mapping process starting with template 1. Those outside the border are added based on the expertise of academic and creative partners. If the map is comprehensive regarding praesidia inside the border, the same cannot be said regarding praesidia that are outside the border. Outside the border there might thus be places that would qualify as praesidia but are not in the map. This does not matter much as long as the map is used for selecting relevant cases but could be a communicative problem if the map is used for other purposes.

Selection of cases

Template 12: This template contained no new mapping data but listed and described praesidia finally shortlisted for selecting case studies and is not discussed further here (it does not relate to the mapping per se).

Fifth step: Lessons learned

As mentioned in the introduction the project and mapping process should end with making a mapping guide for others who might want to use the mapping method in their own projects. In order to ground the mapping guide we therefore asked

partners in a separate template (Template 13) for their own reflections of using the method. This template was constructed together with prof. Mariusz Czepczyński, University of Gdańsk. The aim was to find out – from a user perspective – what worked well and what in the tool and mapping process that could be further developed. The reflections were made closely after finishing the last map (the praesidia map) and were made in relation to four themes with two to four questions in each, including the possibility to reflect freely. Partners were asked to write ca half a page per question and submit to Stockholm University. The results of these reflections are summarized in the following.

Engaging in participatory expert mapping has involved an intense learning experience for partners which include both learnings about the city and mapping as a research practice. Research-wise, it has involved both the conceptual progress of praesidia necessary for understanding the type of cultural activities and creative placemaking as well as a greater understanding and knowledge of the spatiality of these actors when identified and located. It thus made visible these actors as a category in its own right and showed its layering in the city. The purpose with the mapping was primarily to be able to make a spatially informed selection of cases where the sampling should be made from a larger number of possible cases than previously known to the researchers and in this process also familiarize with the field of study. As judged by the reflections reported this was fulfilled. It can also be noted that the learnings stemming from the mapping process to a large degree also reflect the insights put forward in the cultural and participatory mapping literature (e.g. Duxbury et al. 2015, Evans and Foord 2008, Evans 2024, Brown and Kyttä 2014, Denwood et al. 2022, Duggan and Gutiérrez-Ujaque 2025). This takes different expressions among different partners although the discussions between academic and creative partners proved formative for all. The expertise of the creative partners hereby came to form not only the concrete results but also the very category mapped. However, for the project as a whole this is only a stepping stone as the idea is that the concept of praesidia – as a particular layer of cultural activity and a category of actors in its own right – will continue to be developed as empirical studies progress with the selected case studies.

Reflections also concerned how well this mapping method matches other available maps and mapping tools (espec. Google Maps) and partners argue it in many respects it beats the alternatives but it is not as user friendly. Basically the curated results of the praesidia map in a better way than alternatives represent the actors of interest to STARTUP whereas the alternatives give non-correct, non-complete and/or even misleading results.

A further conclusion, based on the reflections, is that the particular mapping method employed in STARTUP has worked but that for future uses the implementation should be adapted. This especially concerns the fact that although human moderation of tech-generated results is needed, human labour capacity is restricted. It is thus important to find a balance between the results based on the

API-mapping tool and human review, deletions and additions to the map, in order to find out when the method would come to its best. In STARTUP we did the map in several steps. From the ground map produced by the API-mapping tool we deleted irrelevant hits into a cultural map. And from that in turn we kept on deleting hits that were not to be considered as praesidia. Throughout the process we could also add relevant hits that we knew about from other sources. However, although this in principle worked it was also a labour intense process since we used many search terms covering many cultural sectors. The many search terms provided a large amount of hits from the API-mapping tool, especially in the larger cities and to manually clean the dataset was demanding. In addition, the experts engaged would optimally need to be experts in all the selected sectors. The method thus would work better if working with one or a few sectors (i.e. employing fewer search terms) on which participants have expertise. If wanting to cover more sectors, then this could be added in a step by step manner to not overload the available (human) resources.

A final conclusion from the reflections is that the participatory aspect of the method could be extended. In STARTUP we employed the expertise at hand but in further securing the results, the maps could be available to add to and comment on by more actors on the mapped scene. No map is ever perfect, but adding in further expertise on the topic of the map, would further secure the results. As for now it is possible to add hits to the map through the STARTUP website but further anchoring in the cities with several actors contributing in a comprehensive way would also make possible continuous updating. Several partners point out that mapping is a living process that should not stop but rather be deepened as the project learn from the field (case studies, interviews etc). It would also further refine or at least secure the results of the map. To what extent this will happen will be a matter for how well the map is received in the concerned communities when communicated and potentially put in use for broader objectives than the research grounding and sampling objectives for which the map was primarily produced. In relation to the public cultural maps currently available in the cities, hopefully this will be the case as the praesidia maps tells another spatial narrative, potentially empowering the concerned scenes and related communities as well as related urban administrations.

Interactive post-mapping and doing your own map

After the maps were finished in 2025, they were made available (together with the underlying datasets) on the project website and made interactive. Any user may hence submit suggestions of places to add to the map. These suggestions are reviewed by the project if they fit the theme of the map and then added with a special symbol, indicating that the place has been added in a different process than the other places on the map.

Participatory mapping of various kinds often aims to strengthen and empower local communities and actors that are not well represented in available maps or otherwise. Participatory mapping as well as making the map interactive is a way to

include different types of knowledge than the one normally engaged in producing maps and hence give these actors a voice about the spaces they occupy and are part of.

Participatory mapping has by now a fairly long history but the digital mapping technology has developed tremendously in the last two decades. Nevertheless, tech-driven results need in most cases to be curated and formed by humans in order to be truly purposeful. Therefore, STARTUP makes the mapping tool we developed and the related processes of participatory engagement open for all who want to make maps on their own, see further “Mapping guide: Doing your own map” (available at <https://horizon-startup.eu/mapping-local-cultural-places/>)

To be able to map space according to your needs is a form of power and we therefore share not only the results (the praesidia maps, and the cultural maps) but also the mapping method and the mapping tool we used. Anyone wanting to use the method and the mapping tool can adapt these to their own needs.

Please do not hesitate to reach out to the project (contact below) if you are planning to use the guide. The mapping guide is available on the project’s website: www.horizon-STARTUP.eu

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Appendix 1: Technical references and abbreviations

Web sites (referred to in the technical account)

DuckDB Spatial: <https://duckdb.org>

Etalab (EPCI/contours administratifs):
<https://etalab-datasets.geo.data.gouv.fr/contours-administratifs/latest/geojson/>

Eurostat GISCO (LAU): <https://gisco-services.ec.europa.eu/distribution/v2/lau/>

GitHub (STARTUP Cultural Data):
<https://github.com/Liistamo/STARTUP-cultural-data>

Leaflet: <https://leafletjs.com/>

OpenStreetMap: <https://operations.osmfoundation.org/>

Overture Maps: <https://docs.overturemaps.org/>

SheetJS: <https://docs.sheetjs.com/docs/>

Abbreviations and technical terms with short explanation

API – Application Programming Interface: A standardized way for applications to communicate with each other. Used in this project to access open data from public sources.

CCS – Cultural and Creative Sector: This term includes both private, public and other forms of organizing cultural and creative activities.

CSV – Comma-Separated Values: A text-based format for storing tabular data used for exporting results.

DuckDB: A lightweight database system optimized for analytical processing of large datasets on local computers.

EPCI – Établissement Public de Coopération Intercommunale: A French administrative structure for inter-municipal cooperation, grouping several municipalities under a shared governance framework.

Etalab: A French governmental body responsible for open data policy and for maintaining the national open data platform (data.gouv.fr).

Eurostat: The statistical office of the European Union, responsible for collecting, harmonizing, and publishing statistical and geographical data across member states.

GERS ID – Global Entity Reference System ID: A unique identifier used by the Overture Maps Foundation to link and harmonize data on places from multiple sources.

GeoJSON – Geographic JavaScript Object Notation: A widely used text-based format for representing geographical data such as points, lines, and polygons, compatible with most web mapping tools.

GISCO – Geographical Information System of the Commission (Eurostat): Eurostat's service for the dissemination of standardized spatial data and geographic information across Europe.

LAU – Local Administrative Unit: A statistical level used by Eurostat corresponding to municipalities or equivalent local divisions within European countries.

LCP – Local Cultural Praesidia: The term refers to the cultural places that are the object of study in STARTUP.

Leaflet: An open-source JavaScript library for creating interactive web maps.

Overture Maps Foundation (OMF) : An open-data mapping initiative under the Linux Foundation, supported by AWS, Meta, Microsoft, and TomTom. Provides globally harmonized geospatial datasets.

OpenStreetMap (OSM): A collaborative, open-source platform that provides freely available map data created by contributors worldwide.

Parquet: A columnar data storage format optimized for efficient reading and writing of large analytical datasets.

SheetJS: A JavaScript library enabling reading, writing, and exporting of spreadsheet formats (e.g. CSV, XLSX) directly in the browser.

XLSX: A Microsoft Excel file format used for storing spreadsheet data.

Appendix 2: Meetings and templates

The work included the following meetings with the consortium. In addition to this list, a large number of internal meetings as well as contacts with individual partners have taken place. Here, however, only the larger planned meetings with the consortium are listed. It should be noted that in between these meetings the API-tool was developed as well as the detailed planning and organization of the work (e.g. in the templates and template attachments).

30–31 January 2025 – Introducing WP2 at the STARTUP Kick off meeting in Rome.

22–23 May 2025 – Testing the API-tool and discussions of sectors in several sessions at the STARTUP workshop “Kickoff-meeting to start the mapping and case studies selection” in Stockholm.

12 June 2025 – Online meeting to discuss relevant cultural and creative sectors.

2 September 2025 – Online meeting discussing Template 1 and 2 with attachments and starting the partners’ concrete work in WP2.

8–10 September 2025 – Introducing Templates 3, 4, 5, 6 and 7 with attachments at the STARTUP workshop in Dortmund.

22 October 2025 – Online meeting to discuss the draft selection of cases (Template 10).

19 November 2025 – Optional online meeting to discuss the work with Template 13 about learnings and reflections from the mapping process.

As mentioned above, the work was organized with templates sent to partners with clearly defined tasks and specified deadlines. Below follows a list of the templates used in the mapping process.

Template 1: Refining and deciding the digital search terms. The aim of this task was to create lists of search terms that will be used for the pre-mapping before and at the workshop in Dortmund.

Template 2: Delimit the search area. The aim of this task was to delimit the case study city.

Template 3: Translating the search terms. The aim of this task was to translate the search terms into our national languages.

Template 4: Cleaning the dataset from bad hits. The aim of this task was to refine the dataset by cleaning it from bad hits.

Template 5: Translating the added search terms. The aim of this task was to translate the search terms that had been added after the Dortmund meeting to the list of search terms.

Template 6: Adding hits to the dataset. The aim of this task was to refine the dataset by adding places of interest to the dataset.

Template 7: Identifying and comparing with local cultural maps. The aim of this task was to identify local cultural maps of potential relevance and compare them with our dataset.

Template 8: Stripping the dataset. The aim of this task is to strip the dataset underpinning the map from every hit that is not an LCP (broadly viewed).

Template 9: Adding hits to the dataset. The aim of this task is to add places of interest to the dataset that we have come to know of but that currently is not in the dataset. It will be used to produce the draft praesidia map for the meeting the 22 October.

Template 10: Draft selection. The aim of this task is to produce a basis for the discussion on the meeting 22 Oct (10.00-12.00). It will concern the implementation of the selection criteria and how to get a spatially varied sample to secure the NEB-axis "people and places that need it most".

Template 11: Last chance to add hits. The aim of this task is to add places of interest to the dataset that we have come to know of but that currently is not in the dataset.

Template 12: Selection of cases. The aim of the task was to present the final selection of cases.

Template 13: Lessons learned. The aim of this task was to collect partner reflections on the mapping process.

Please note that Template 10 and 12 in the list above was not part of the mapping process but refer to the selection of cases made based on the praesidia map.