



DEVELOP CALL

Financial Support for Third Parties

Mid-term progress Report Part A (Public)

Avoine Map



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Executive Summary

Avoim Map is a nine-month PoliRuralPlus Develop Call project that supports rural-urban development in the Mallusjoki pilot region in Finland through open-source digital tools. The project translates ideas identified in earlier local co-creation activities into three practical, interoperable services: Energy Map, Zoning Map, and Activity Map and Calendar. Together, these tools support sustainable planning, cultural heritage development, event visibility, and local participation.

During the reporting period, the consortium has focused on the first implementation phase and the early part of the second phase. Significant progress has been made in all three service tracks. For Energy Map, Feydec Oy has programmed the service database and Avoim Map Oy has finalised the user interface design for implementation. Saatsi Arkkitehdit Oy has supported the service by identifying relevant datasets and by beginning practical planning work with the Mallusjoki Youth Association for the community building. This work has included physical and remote stakeholder meetings, Mallusjoki Community Hall site visit, including laser scanning, drone imaging, and the preparation of initial condition plans and a photogrammetric 3D surface model.

For Zoning Map, Feydec Oy has developed and published a private online test version, and supporting methodology and feature documentation have been prepared. The service is currently being tested online by the Finnish Environment Institute and Fingrid during March 2026. The development includes new functions such as linear infrastructure planning, alternative basemaps, editable land-use coefficients, updated carbon sink and emissions logic, and geospatial file export.

For Activity Map and Calendar, Avoim Map Oy has created the first main landing page user interface and organised workshops with key local and regional stakeholders, including the Mallusjoki Youth Association, Päijät-Häme Regional Council, and the City of Orimattila. These workshops clarified user needs, service scope, and potential synergies with existing regional calendars and cultural mapping services.

The mid-term results show progress against the approved work plan. No deviations have occurred. Early signs of impact include sustained stakeholder interest, functioning prototypes and test environments for all three services, and growing evidence of scalability beyond the Mallusjoki pilot area via national stakeholder interest. The next phase will focus on implementation, refinement, interoperability with PoliRuralPlus tools, broader piloting, communication outputs, and finalisation of public-facing services and documentation.

1. Project Overview

Avoim Map was selected under the PoliRuralPlus Develop Call to deliver practical digital applications that address rural-urban challenges in the Mallusjoki pilot region. The project aligns closely with the objectives of the call by developing interoperable, place-based, and open-source digital services that support local participation, sustainable development, and stronger links between rural communities and surrounding towns and regions.

The project addresses three interconnected needs in the Mallusjoki area. First, there is a need for better digital support for energy-efficient and circular building development, local community building and cultural heritage assets are a solid pilot case for this. Second, there is a need for more accessible tools for climate-conscious and data-driven zoning and land-use planning. Third, there is a need for stronger visibility, discoverability, and coordination of local activities, attractions, and events in order to support the rural events ecosystem and attract visitors from urban areas.

These needs are highly relevant to the Finnish pilot objectives of PoliRuralPlus. The project contributes to the rural events industry ecosystem, supports territorial identity and cultural legacy, and promotes socially and environmentally sustainable solutions by using open geospatial data and digital decision-support tools. It also reflects New European Bauhaus values by combining sustainability, inclusion, and aesthetics in both process and outcome.

The main target users and stakeholders include the Mallusjoki Youth Association, local residents, event organisers, SMEs, municipal and regional authorities, planners, and cultural actors. In practice, the project serves both local users in Mallusjoki and wider users in Orimattila, Päijät-Häme, and other Finnish regions where the services can later be reused.

The project solution consists of three linked service components:

- Energy Map, an open geospatial tool for analysing building energy performance, renovation options, and related environmental and cost impacts
- Zoning Map, a climate-conscious planning service for assessing carbon storage, carbon sinks, and land-use effects in zoning and infrastructure planning
- Activity Map and Calendar, a user-friendly service for mapping attractions, activities, and events, with moderated submissions and local marketing support

The overall methodology combines open data integration, agile software development, stakeholder workshops, professional planning input, and open-source publication. This ensures both immediate local relevance and long-term replicability.

2. Progress Against Objectives and Work Plan

The main objective of the project is to develop, pilot, and document three interoperable digital services that support sustainable rural-urban development in the Mallusjoki pilot region. The approved work plan defined a first phase focused on design, baseline data, stakeholder engagement, and prototype development, followed by a second phase focused on implementation, testing, refinement, and dissemination.

Progress against the work plan has been strong.

Summary of activities carried out

Energy Map

Feydec Oy has programmed the Energy Map database and published its [codebase](#) in a [GitHub repository](#). The technical specifications of the database have been [documented](#). In parallel, Avoin Map Oy has completed the [user interface design in Figma](#) and prepared it for implementation. Saatsi Arkkitehdit Oy has provided continuous expert feedback on the datasets and data combinations most useful for evaluating buildings, planning renovation options, and supporting dialogue between users and service providers.

Saatsi Arkkitehdit Oy has also started practical design cooperation with the Mallusjoki Youth Association regarding the development of the community building. A remote meeting was organised in early January, followed by a site visit. During the visit, laser scanning and drone imaging were carried out, producing baseline material for the planning work. Based on this, initial condition plans and a photogrammetric 3D surface model were prepared.

Zoning Map

Feydec Oy has developed a working test version of the Zoning Map and made it available online in a restricted test environment. Supporting documentation has been prepared, including methodology material, a summary of the latest features, and an example of geospatial file export. The service is currently being tested online by stakeholders in the Mallusjoki region and national stakeholders, including the Finnish Environment Institute and Fingrid. Development work has focused on basemaps, transparency controls, line infrastructure planning, editable land-use shares, sink and emissions logic, and downloadable geospatial outputs.

Activity Map and Calendar

Avoin Map Oy has prepared the initial main landing page user interface for the Activity Map and Calendar. This visual and functional concept is scheduled to be implemented as an MVP web service by the end of May 2026. The service has been informed by several stakeholder interactions. A local scoping meeting took place in Mallusjoki when the project started, and informed the visual guideline and digital needs documents. A key online stakeholder follow-up meeting was held on 18 February 2026 with representatives of the Päijät-Häme Regional Council, the City of Orimattila, and the Mallusjoki Youth Association. This meeting clarified the need for a flexible, digitally advanced service that complements, rather than duplicates, existing calendars and mapping initiatives. A further online workshop with the Mallusjoki Youth Association has been scheduled for 23 March 2026.

Reference to planned phases and milestones

The project remains aligned with the approved work plan. Phase 1 activities have been completed. Phase 2 implementation has started as planned. No delays or deviations have occurred.

Milestones and deliverables status

- Initial Energy Map database architecture, achieved
- Energy Map UI design, achieved
- Initial building survey and 3D baseline documentation, achieved
- Zoning Map test version online, achieved
- Activity Map and Calendar landing page UI, ongoing, on schedule
- Stakeholder workshops and interviews, ongoing, on schedule
- Mid-term progress reporting, achieved

No deviations from the work plan and corrective actions

There have been no deviations from the approved work plan. Activities have progressed as expected, with no negative impact on objectives, timeline, or results.

3. Technical Results and Outputs

At mid-term, the project has produced concrete technical outputs in three service areas.

Energy Map

The Energy Map has progressed from concept and data planning into a technically defined and code-based service architecture. The backend database structure has been programmed by Feydec Oy and documented in a dedicated technical specification. The service is designed to combine building-level and surrounding context data in a way that supports energy evaluation, renovation discussion, and green building planning. Avoyn Map Oy has also produced a complete interface design in Figma, ready for implementation.

Zoning Map

The Zoning Map has reached the level of a functioning online test service. It includes features for calculating soil and vegetation carbon storage effects, working with alternative basemaps, editing land-use assumptions, planning linear infrastructure such as power lines, and exporting geospatial calculation results. The methodology and latest features have been documented, and a geospatial export example in GeoJSON format has been produced. The service is currently in structured testing with external expert users.

Activity Map and Calendar

The Activity Map and Calendar aims to support the rural events industry ecosystem. It has reached a clear concept and interface prototype stage. Its initial main landing page visual and structural design is complete, and implementation as an MVP is scheduled for completion by the end of May 2026. The concept includes event and attraction mapping, category-based browsing, and event submission with moderation.

Technical maturity

- Energy Map: prototype architecture and interface ready for implementation
- Zoning Map: functioning test deployment in active pilot use
- Activity Map and Calendar: interface prototype completed, MVP implementation in progress

Interoperability and standards

The services are built on open-source principles and geospatial interoperability. Avoyn Map's open-source codebase is maintained in the AvoynOrg GitHub environment. The database logic uses open and reusable structures suited to geospatial standards and interoperability. The project team has reviewed PoliRuralPlus material related to JackDaw and other relevant tools, and plans a dedicated technical meeting with the JackDaw team during the project to ensure that data outputs can be transferred in a technically suitable form.

Figures and annex references

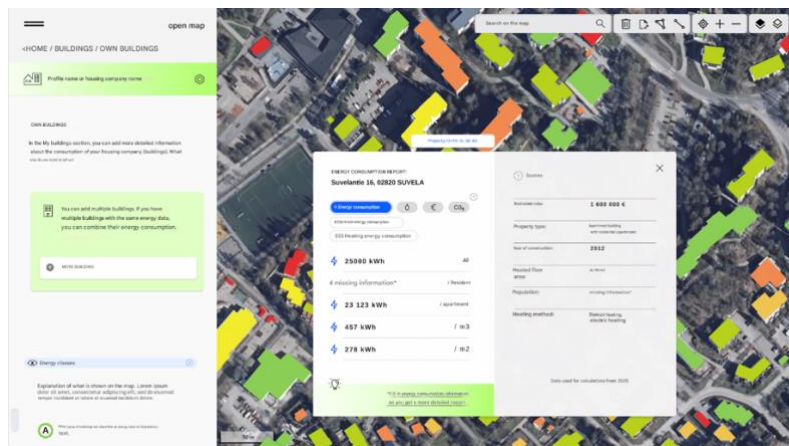


Figure 1. Screenshot of the Energy Map UI design (Feydec Oy)

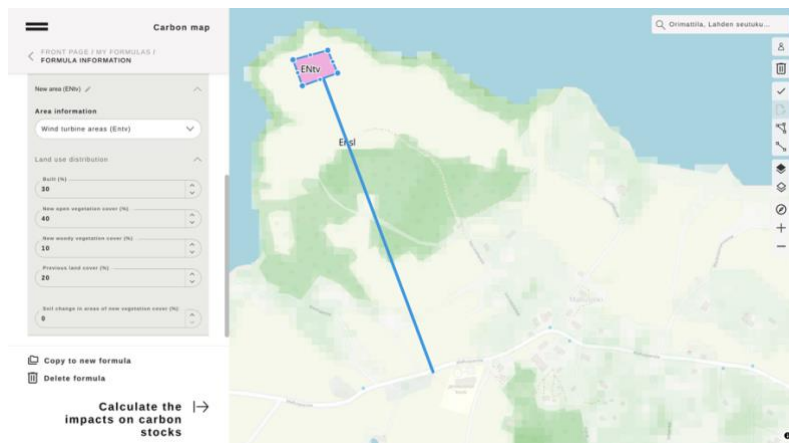


Figure 2. Screenshots of the Zoning Map test service (Feydec Oy)

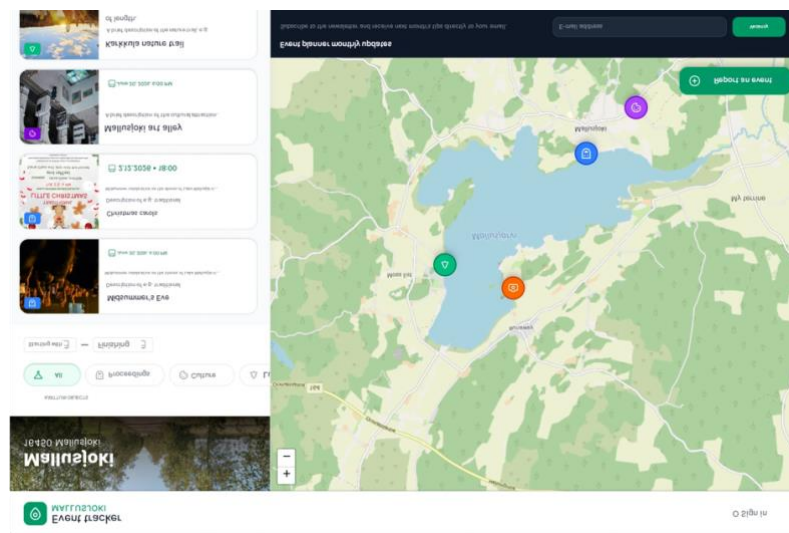


Figure 3. Screenshot of the Activity Map and Calendar landing page UI (Avoim Map Oy)

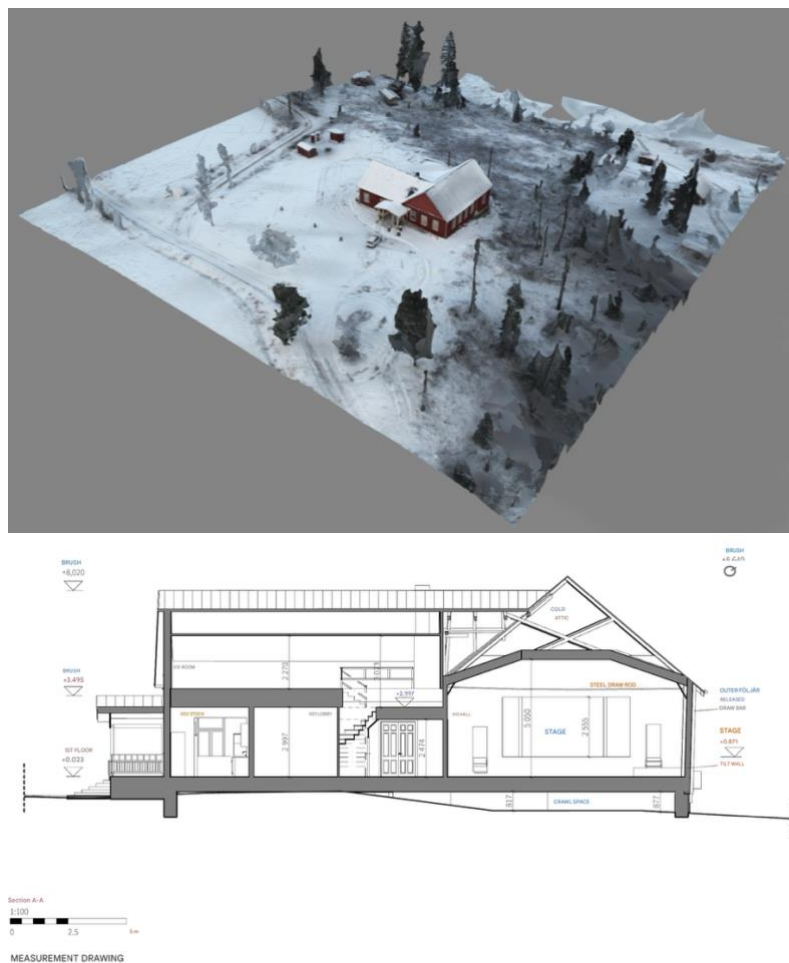


Figure 4. Drone photogrammetry and initial condition assessment materials of the Mallusjoki community hall (Saatsi Arkkitehdit Oy)

4. Integration and Contribution to PoliRuralPlus

The project contributes to the wider PoliRuralPlus ecosystem in several ways. First, the consortium has already used PoliRuralPlus tools during workshops and internal project meetings to support early ideation and data review. In particular, the **Advisor tool** has supported concept refinement, and **JackDaw** has been explored as a relevant route for future data integration and spatial question-answering.

Second, the project is producing structured open data, documentation, and geospatial outputs that are relevant for the PoliRuralPlus ecosystem. The Energy Map, Zoning Map and Activity Map all generate reusable data and technical outputs, as well as practical community-facing service models that can be linked to other digital services. The project's emphasis on open standards, documented structures, and exportable geospatial formats increases the chances that the outputs can be integrated with PoliRuralPlus tools and reused in later regional deployments.

Third, the project has strong synergies with other ongoing initiatives. The Zoning Map builds on earlier Carbon Map open-source development and links to climate-conscious planning needs that are relevant nationally. The Energy Map demonstrates how open data and digital tools can support SMEs, residents, planners, and building service providers. The Activity Map and Calendar connects directly to regional and local visibility challenges and complement initiatives such as Päijät-Häme's Treasure Map and the City of Orimattila's calendar environment.

In terms of reusability, the project is designed around open-source publication, exportable datasets, modular service architecture, and documented methodology. This benefits PoliRuralPlus by adding tested digital building blocks that are not restricted to one local use case.

5. Stakeholder Engagement and User Involvement

Stakeholder engagement has been central from the start of the project.

Stakeholder groups involved

The project has engaged the following stakeholders:

- Mallusjoki Youth Association, including board representation through Anni Kivinen
- Päijät-Häme Regional Council, represented by project manager Joonas Pokkinen
- City of Orimattila, represented by vitality director Sara Villander
- Smart & Lean Hub Oy, represented by CEO Tuula Löytty
- Finnish Environment Institute
- Fingrid
- SME companies including SkenarioLabs Oy, Glass Check Oy
- Large companies including Motiva, BearingPoint, Bank of Åland
- NGOs including National housing association
- Research institutes including Aalto university, Finnish Natural Resources Institute, National Land Survey of Finland
- Finnish Ministry of Environment

Engagement methods

The project has used several engagement methods:

- in-person and online workshops and interviews
- design review, test use and pilot feedback sessions
- building survey and planning dialogue
- technical presentations

Feedback received and its influence on the work

Feedback has helped refine scope, usability, and relevance. In the Activity Map and Calendar process, stakeholders emphasised the need for a service that is easy to submit to, includes all kinds of events and attractions, and complements existing municipal and regional solutions instead of duplicating them. There was a need for a more sophisticated, easy-to-use map solution compared to, e.g. ArcGIS. In the Energy Map process, stakeholders highlighted the importance of including datasets that support real renovation and planning discussions. In the Zoning Map process, expert testing has helped validate usability and relevance, especially in the renewable energy production site land use planning impact measurements (solar, wind, powerlines, etc.), including for public planning actors. It is required to estimate land use climate impacts, and being able to do this with a freely available science-based web service is expected to support the planning processes, increase transparency, find solutions that affect ecosystems less, and further help with compensations, as part of the scalable green transition.

Evidence of uptake or interest

While full uptake is not yet available at mid-term, interest is already clear across all three services. Energy Map has attracted substantial interview and workshop activity. Zoning Map is in live expert testing with national actors. The Activity Map and Calendar has received positive local and regional interest and has already supported useful coordination between Mallusjoki, Orimattila, and Päijät-Häme stakeholders.

6. Communication, Dissemination and Visibility

Communication activities have started and are compliant with EU visibility requirements.

Progress towards obligatory media outputs

- 1st(/2) news article titled “[Avoim Map project reaches mid-term milestone in Mallusjoki](#)” is published on PoliRuralPlus web page’s [news](#) section
- 1st(/3) blog post titled “[Digital services for the Rural Events and Activities ecosystem are under development for the Mallusjoki pilot region](#)” is published on PoliRuralPlus web page’s [blog](#) section
- Social media summaries:
 - launch posts have been published on [LinkedIn](#) and [Facebook](#)
 - mid-term posts have been published on [LinkedIn](#) and [Facebook](#)

All communication outputs acknowledge PoliRuralPlus funding and, where applicable, include GDPR-compliant visuals.

Events, demonstrations and presentations

- Energy Map has been presented in interviews and workshops
- Zoning Map is currently being tested privately online by the Finnish Environment Institute and Fingrid during March 2026
- Activity Map and Calendar has been presented and discussed in workshops

Links to public materials

At mid-term, public documentation is still limited, but project launch and mid-term social media posts, and the first news and blog posts are already online.

7. Impact Assessment

Expected impacts

The project is expected to improve local and regional capacity for sustainable planning, rural event visibility, and cultural heritage development. It supports climate-conscious decision-making, stronger discoverability of local attractions and activities, and better use of open geospatial data in practice.

Early signals of impact

Early signals are already visible:

- active engagement from local, municipal, and regional stakeholders
- expert testing of the Zoning Map by national actors
- practical use of the project in real building planning discussions
- evidence that the tools are relevant beyond Mallusjoki, especially for other municipalities and regions

Qualitative indicators

At this stage, the strongest indicators are:

- stakeholder willingness to participate repeatedly
- strong interest in reuse and further synergies

- positive response to open-source and interoperable technical design
- recognition that the services fill real gaps in existing digital support systems

8. Challenges, Risks and Lessons Learned

Key challenges encountered

No major challenges have occurred. The main issues have been typical for ICT development and multi-stakeholder projects, such as coordinating schedules, refining scope between related services, and ensuring that technical architecture supports future interoperability.

Risk mitigation actions

The consortium has mitigated risks through regular internal coordination, early stakeholder engagement, modular development, and phased testing. The use of open-source tools and documented technical structures also reduces long-term risk.

Lessons learned

A key lesson is that early stakeholder dialogue is essential to avoid overlap with existing services and to identify real functional gaps. Another lesson is that technical flexibility is especially important in rural development contexts, where a service may need to serve communities, municipalities, and expert users at the same time. Finally, the work has confirmed the value of combining digital development with concrete place-based planning processes, such as the community hall's sustainable planning work.

9. Sustainability, Replicability and Next Steps

Planned next steps

During the next phase, the project will:

- Implement the Energy Map user interface and continue dataset enrichment
- Continue Zoning Map testing and feature refinement
- Implement the Activity Map and Calendar MVP by the end of May 2026
- Organise the next stakeholder workshop for the Activity Map and Calendar
- Continue technical preparations for interoperability with PoliRuralPlus tools, especially in relation to JackDaw
- Prepare blog posts, news articles, and further communication materials
- Document methods, lessons learned, and reusable technical outputs

Adjustments to the work plan

There are no adjustments to the approved work plan.

10. Conclusions

The project is progressing according to plan, with no deviations, and has already produced significant partial results across all three service areas.

Key achievements so far include:

- completed Energy Map database architecture and UI design
- online test deployment of the Zoning Map
- completed initial UI for the Activity Map and Calendar
- stakeholder workshops and coordination across local, municipal, regional, and national actors
- practical building survey and initial design support for the Mallusjoki community hall

The strategic value of the project lies in its combination of open-source technology, practical stakeholder-driven service design, and strong alignment with PoliRuralPlus objectives. Avoin Map is demonstrating how digital tools can strengthen rural vitality, cultural heritage, and climate-conscious planning in an integrated and replicable way.

Optional Annexes

[Link](#) to annex documents. Documents include:

1. Technical specs of the Energy Map database
2. Energy Map user interface design
3. Methodological summary of Zoning Map for replication
4. Zoning Map report page example
5. Zoning Map example geospatial export
6. Activity Map and Calendar UI mockup
7. Mallusjoki Community Hall, Initial Condition Plans, 29 January 2026