



D5.2 Integrated report on the impact of the four pilots

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List of Acronyms

AT LAST	Name of the consortium in the EU LIFE project
CNCA	Carbon Neutral Cities Alliance
CoP	Community of Practice
ESRS	European Sustainability Reporting Standards for use by all companies subject to the Corporate Sustainability Reporting Directive (CSRD)
EPC	Energy performance certificate
GCom	Global Covenant of Mayors
Huddle	Online learning platform developed by Transition Stories for AT LAST: https://atlast.thehuddle.nl
PED	Positive Energy Districts
PESTLE	Political, Economic, Social, Technological, Legal, and Environmental factors
SECAP	Sustainable Energy and Climate Action Plan
SKR	Swedish Association of Local Authorities and Regions
SMART	Specific, Measurable, Achievable, Relevant, Timebound
WP	Work Package
SEI	Stockholm Environment Institute
AESS	Agenzia Per L'Energia e Lo Sviluppo Sostenibile
VVSG	Vereniging van vlaamse steden en gemeenten
KVN	Klimaatverbond Nederland

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1. Executive Summary

The AT LAST project supported municipalities in Belgium, Italy, the Netherlands, and Sweden in advancing the energy transition by improving implementation of Sustainable Energy and Climate Action Plans (SECAPs). The project focused on turning climate plans into concrete local action, generating momentum and insights for more sustainable neighborhoods. It was structured around pilot activities and Communities of Practice (CoPs), which enabled municipalities to exchange knowledge, test approaches, and strengthen implementation capacity.

Each country adapted methods to local needs: Belgium and the Netherlands emphasized structured peer learning through CoPs, helping municipalities improve governance, citizen engagement, and neighborhood-based renovation approaches. Italy combined inter-municipal cooperation with technical support for SECAP implementation, while Sweden took a targeted approach focused on financial tools, investment planning, and data systems to support decision-making.

The project achieved strong results in organizing CoPs, which became effective platforms for structured exchange, allowing municipalities to replicate successful approaches and accelerate actions. Through these structures supplemented by an [online community space](#) and direct support, municipalities strengthened governance, improved coordination across departments, and developed more practical, actionable plans. They also gained expertise tailored to local needs and regional contexts.

Citizen engagement was central to all pilots. Municipalities tested a range of approaches, including local workshops, neighborhood dialogues, and targeted communication campaigns to improve the involvement of residents. These efforts raised awareness, built trust, and provided input for locally grounded solutions. Sustaining participation requires continuous effort.

A key achievement was bridging the gap between strategy and implementation. In Italy, progress was evident in renewable energy communities and climate adaptation projects. Belgium developed structured neighborhood approaches and enhanced planning, monitoring, and communication. Dutch municipalities used learnings to speed up or improve neighborhood-level heat transition plans. In Sweden, financial transparency and investment planning strengthened the feasibility of climate action.

Shared challenges included limited administrative capacity, staff turnover, and complex regulations, which slowed implementation in all countries. Many municipalities had clear plans but lacked resources or tools to execute them fully, requiring flexible, step-by-step approaches. Enabling conditions—effective governance, reliable data, access to financing, and strong stakeholder engagement—proved as critical as technical solutions.

Building on project tools and lessons, partners plan to continue sharing best practices and organizing CoPs. By leveraging the networks developed, expertise gained, and peer-learning methods tested in AT LAST, future efforts will ensure that the project's insights continue to guide local climate action.

Overall, AT LAST demonstrated that practical support, peer learning, and tailored approaches significantly improved municipalities' ability to deliver climate action. The combination of local experimentation and structured exchange provided valuable, transferable lessons for scaling the energy transition across Europe.

2. Introduction

This report will provide the final report on the results of the pilots in work package 5 (WP5) of the project AT LAST, covering the full project period of 1/10/2023 to 31/3/2026. In the previous progress report we focussed specifically on the first project period (between 1/10/2023 and 28/2/2025).

The specific objective of WP5 was to set up and moderate 4 pilot networks (in the form of Communities of Practice (CoP's)) of local and regional authorities that receive training, engage in networking, gain knowledge and exchange experiences on the implementation of their local climate plans. The goals were to:

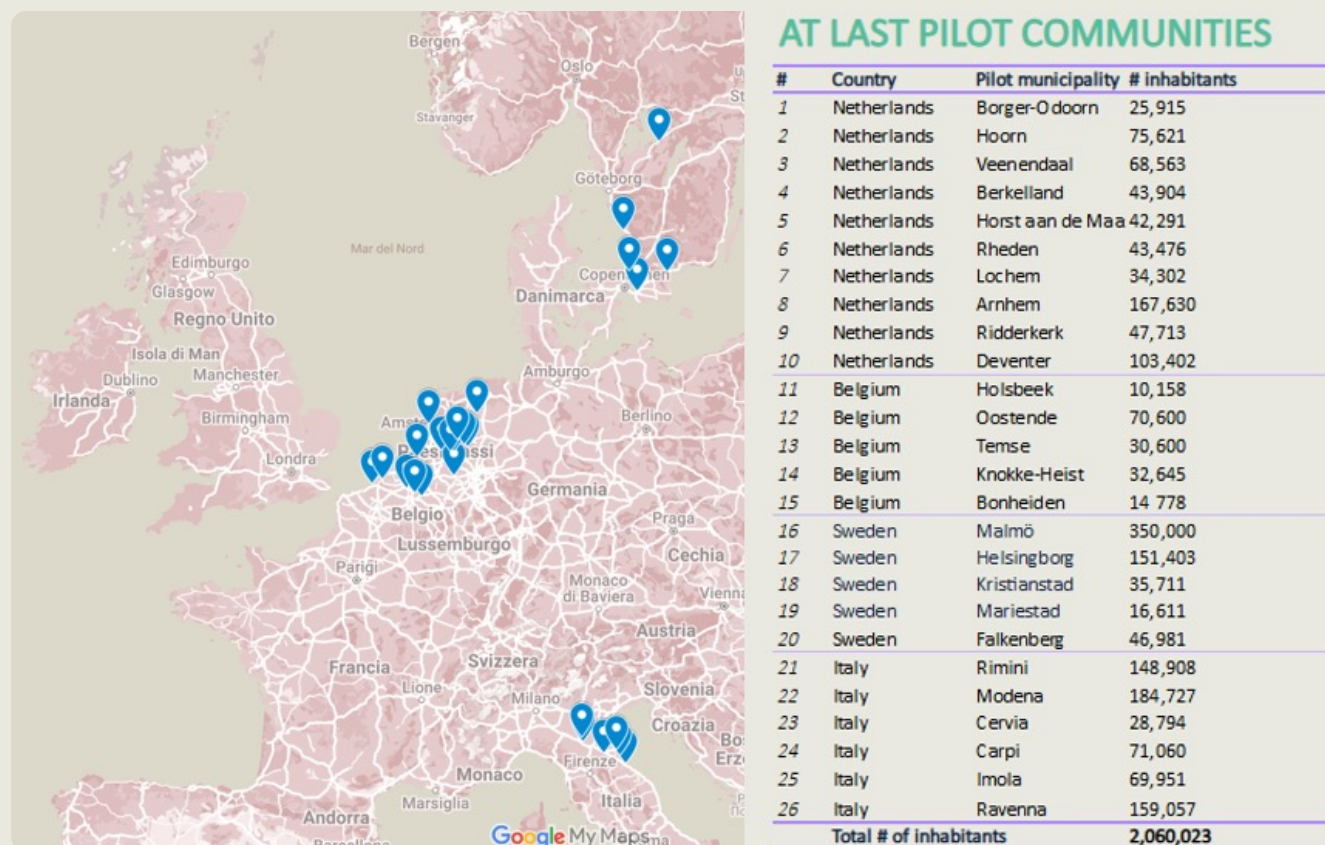
- *share in-dept practical experiences in developing and implementing SECAPs/climate plans,*
- *create a network of people that can provide hands-on knowledge and experiences to be disseminated towards a broader audience through amongst others a handbook, tool-inventory (WP3) and an online learning platform (WP4).*

During the reporting period, the partners Klimaatverbond Nederland (the Netherlands), VVSG (Belgium), AESS (Italy) and SEI (Sweden) have successfully initiated 4 pilot networks in 2024, involving 26 pilot municipalities in total. In Belgium and the Netherlands, the pilot network took the form of a COP to strengthen peer-learning among the pilot cities. In Italy and Sweden, the network was less formally focused on peer-learning but more based on expertise advisory and working sessions. Together the involved municipalities execute SECAP actions for over 2 million inhabitants.

The purpose of this report is to inform interested stakeholders on the results, learnings and recommendations gained during the project, through publication on our websites and the LIFE Project Results platforms. Specific content of the report of interest to the general public will be disseminated in subsequent communication, for instance

through newsletters, social media posts and on the [online learning platform of AT LAST](#). The results, learnings and recommendations can be used to improve future communities of practice in work package 6.

Figure 1. The 26 pilot cities involved in the project, with around 2 million inhabitants in total.



3. Local energy transition context for policy makers in the AT LAST project

The energy transition in Europe is shaped by diverse conditions, including political or socioeconomic conditions. This impacts how municipalities in the European member states implement policies and projects. This chapter outlines the key contextual factors in the four pilots in Belgium, Italy, the Netherlands, and Sweden. These contextual factors, and the obstacles they present, have played a defining role in both the local energy transition efforts and the structure and content of our CoPs in AT LAST. More on the CoP set-up can be read in the next chapter.

3.1. Belgium

Cross sectoral integration

In Belgium, the pilot focuses on the renovation challenge, which many municipalities see as a key factor to reduce emissions from private homes and meet European climate goals for 2050. This challenge remains substantial: in 2020, 2.9 million dwellings still required renovation to meet the 2050 targets, equivalent to renovating around 3% of the housing stock—or more than 95,000 homes—each year.

A lot of open data is available for municipalities to monitor their plans and track implementation, such as [‘Provinces-in-numbers \(platform\)’](#), the Flemish Energy and Climate Agency datasets, and the [Local Energy and Climate Pact](#) tool. As consortium partners, Transition Stories and VVSG support municipalities through knowledge exchange, scaling up good practices, and strengthening neighbourhood-based or collective approaches. This includes guidance on project

scoping, communication strategies, governance structures, and the use of data in decision-making.

However, local governments continue to face structural barriers. Legislation on collective ownership models is often unclear, staffing capacity is limited, and financial constraints slow down implementation. Several municipalities also experienced delays due to staff turnover or shifting priorities after the 2024 local elections. Once projects begin, additional challenges emerge from the highly diverse built environment, which makes standardised approaches difficult. Municipalities also report that residents can be hesitant to renovate due to perceived complexity, administrative burden, and a lack of clarity about long-term planning or expected benefits. Communication barriers—particularly resistance to the term “climate”—further complicate engagement efforts. As a response, phased and neighbourhood oriented implementation, combined with accessible communication and targeted support tools (such as thermo-scans, local ambassadors or iterative project pilots), have been proven to be a more realistic and effective strategy.

3.2. Italy

Cross sectoral integration

Governance

Financial innovation

In Italy, municipal energy transition efforts are closely tied to Sustainable Energy and Climate Action Plans (SECAPs), with over 3,200 municipalities having committed to CO₂ reduction

through the Covenant of Mayors. However, implementation varies significantly based on municipal size and financial resources. While national policies, such as the National Integrated Energy and Climate Plan (NCEPs), provide incentives for renewable energy adoption, complex administrative processes often hinder local innovation. Despite the geographical proximity of many Italian municipalities administrative fragmentation hampers mutual exchange and coordination of energy transition projects.

Emilia-Romagna, the region where the Italian pilot cities are located, has made notable progress in implementing energy transition projects, yet it still faces major environmental challenges, including poor air quality and excessive land consumption. This has contributed to recent climate-related disasters such as flooding, highlighting the urgency of adaptation measures.

Despite advancements in emission reduction and renewable energy, the territorial and administrative challenges of municipalities require further efforts to achieve sustainability goals. With this in mind, AESS has supported the six chosen municipalities in improving their energy strategies through the AT LAST project, providing technical assistance and facilitating coordination.

During the project period, the political context in the pilot cities remained generally stable, with no major shift in local leadership. This continuity enabled constructive collaboration, allowing the focus to remain on the implementation of the chosen activities.

The institutional environment was supportive and collaborative, although the administrative and procedural requirements influenced the pace of some of the activities. The project, nonetheless, worked within these frameworks, contributing to the implementation and realisation of local energy strategies.

3.3. Netherlands

Cross sectoral integration

Governance

Financial innovation

Similar to the Belgian situation, Dutch municipalities are faced by an ambitious renovation target per 2050. The national government requires all Dutch homes to be moved from gas heating to sustainable heating systems by 2050. Achieving this requires the sustainable renovation of over seven million houses, equating to 600-1,000 renovations per day—far above the current rate of 1,000 per year.

Municipalities play a pivotal role in the local planning and implementation of the energy transition, supported by national legislation, guidelines, subsidies, and planning tools. Local governments are required to develop heat transition plans, mapping out transition strategies. These plans are updated every five years and are supplemented by detailed neighbourhood-level implementation plans (wijkuitvoeringsplannen) that refine energy strategies, assess community support, and evaluate grid capacity constraints. The neighbourhood-based approach ensures public engagement but also presents challenges. The key barriers include mobilizing homeowners, securing sufficient investments, and addressing labour and material shortages. The CoP of Klimaatverbond addressed those by focusing on all three thematic areas of AT LAST; governance, financing, and integrated approaches.

During the implementation of the AT LAST project, new national legislation has been prepared and adopted which significantly affected and will affect municipal responsibilities: in particular the Municipal Instruments for the Heat Transition Act (Wet gemeentelijke instrumenten warmtetransitie) which is expected to enter into force in 2026; and the Collective Heat Act (Wet collectieve warmte) which has been adopted in December 2025. Both acts grant municipalities a large role and clearer authority to enforce the heat transition locally. Another positive development is the new Energy Act (Energiewet) of January 2026 which recognises energy communities as formal actors in the transition, enabling resident-led contributions to local energy saving and renewable generation. The preparation of these legislations already provided municipalities with clearer frameworks during the project and the expectation of formal authority to steer the local heat transition. They are expected to lead to a more enabling and predictable environment for neighbourhood-level planning and implementation beyond the project.

3.4. Sweden

Cross sectoral integration

Governance

Financial innovation

Sweden follows a unitary system where the 290 municipal governments have significant autonomy in climate and energy planning. Municipalities are responsible for designing energy plans, managing waste, education, and local transport, while regional governments oversee health care and regional transport. Taxes are levied at the local level, and most municipalities own extensive assets, including public buildings and schools. A system of equalisation supports financial redistribution between municipalities.

Swedish cities began developing formal climate and energy plans in the late 1980s and early 1990s. Momentum increased after the introduction of Sweden's first Climate

Action Plan in 1993, supported by national legislation and EU policy frameworks. Carbon taxation, introduced in the early 1990s, created long-term price signals to reduce emissions. Many municipalities participate in climate networks such as Klimatkommunerna, Viable Cities and Thriving North, which support collaboration and innovation in climate action.

Despite this strong policy foundation, municipalities increasingly face implementation challenges related to financing, investment prioritization and economic feasibility. Climate neutrality and resilience targets require large-scale investments in transport electrification, energy systems, industry, agriculture and climate adaptation. While climate plans are often well developed, translating these ambitions into structured investment strategies and financially grounded implementation pathways remains complex.

The Swedish pilot within AT LAST therefore focused on financial innovation and climate investment planning. It explored how municipalities can quantify investment needs, improve financial transparency, integrate sustainability reporting considerations, and strengthen the link between climate strategies and municipal budgeting systems. By addressing these financial and governance dimensions, the pilot supported municipalities in moving from climate ambition to economically viable implementation.

3.5. Commonalities in the energy transition

In sum, despite the variety in contexts, all countries share a strong commitment to the energy transition including recognition of the role of municipalities for the transition to succeed. While each country faces distinct challenges in the energy transition, there are commonalities to be found in the pilot approaches. Belgium and the Netherlands, for example, both explored a neighbourhood-based approach to engage communities in large-scale renovations, and all pilots invested in citizen engagement, to ensure that residents are involved in decision-making regarding the energy transition in their neighbourhoods. Italy and Sweden highlight the importance of structured climate action plans, demonstrating the role of long-term strategic planning. Additionally, both Sweden and the Netherlands explored funding mechanisms to support the goals and ambitions of the municipalities. Italy added a focus on climate adaptation.



4. Pilot design and activities

The four pilot networks in Belgium, Italy, the Netherlands, and Sweden were designed to address country and regional specific challenges in climate action and energy transition. While the goal of all our pilots was similar, each pilot took a tailored approach, reflecting local governance structures, priorities, and available resources. While Belgium and the Netherlands prioritized structured knowledge exchange and capacity building through CoPs, Italy focused on fostering municipal collaboration, whilst Sweden applied a one-on-one mentoring approach. A common factor in all the pilots was that they aimed to facilitate knowledge exchange between cities and learning through the showcasing of best practices. Together, these pilots provided valuable insights and methodologies that informed future efforts in sustainable urban development.

This chapter outlines the setup of the four pilots and an overview of the activities undertaken in each country. As could be read from the sections below, each consortium partner approached the CoP concept differently and has adapted it to local needs and governance structures.

4.1 Belgium



The Belgian pilot centred on a hybrid Community of Practice (CoP) combining online learning with regular in-person meetings. This format allowed municipalities to work efficiently while gaining hands-on experience with real cases linked to the municipality’s Local Energy and Climate Pacts and SECAPs. Although the activities focused on specific, urgent actions identified in the SECAP and not the entire project portfolio. Some of the SECAP projects were carried out by other colleagues or external partners (such as energy houses or non-profit organisations) and were therefore not directly the responsibility of the participants themselves. Each participant developed assignments directly linked to their day-to-day responsibilities, creating an immediate

connection between learning and local implementation. VVSG and Transition Stories jointly coordinated the CoP, with VVSG focusing on policy, municipal support and networking, while Transition Stories provided educational guidance and methodological expertise.

The CoP was designed to meet at least five times per year, complemented by individual tasks and interactive exchanges on the [e-learning platform](#). Session themes were not fixed long in advance but were chosen dynamically, based on the needs expressed by participants, insights from submitted project materials; such as project notes and presentations evaluated by Transition Stories and VVSG, and discussions during earlier sessions. Although the meeting calendar was set, final topics were confirmed roughly one month beforehand, ensuring that the CoP could respond to new challenges such as political developments, staff turnover or the preparation of new municipal planning cycles.

The objectives of the pilot projects of the participating municipalities can be summarized as follows:

Bonheiden	To encourage community participation in the renovation of the Kardinaal Cardijn neighbourhood. This includes improving insulation for both comfort and sustainability and promoting energy efficiency and renewable energy. They aim to integrate shared mobility solutions and green and blue infrastructure.
Knokke-Heist	To develop PEDs by implementing collective infrastructure projects focused on carbon neutrality, reducing energy consumption, and producing surplus green energy. The approach includes organizing collective energy-saving renovations, engaging residents through climate roundtables, and establishing participatory renewable energy projects, all within a neighbourhood-based framework
Oostende	The goal is to make the Oostende Centrum neighbourhood more liveable and better prepared for climate impacts. The project brings residents, local organisations and the city together to shape plans and solutions. Different city departments and external partners work closely throughout the process, supported by a simple structure that helps everyone make decisions and carry out the work efficiently.
Kontich	Focuses on improving the coordination of its energy coaching programme and on strengthening the effectiveness of local support measures. Together with Hove, the municipality also invests in climate communication, developing practical guidance and good practices. These examples were shared through VVSG's best practices database, supporting other municipalities in their communication work.
Hove	Focuses on improving its renovation and neighbourhoodengagement approach, particularly in a context of shifting staff capacity and reliance on external partners. The municipality reviewed its cooperation model after resident feedback showed that people place more trust in municipal staff than in external facilitators, leading Hove to adjust its governance and clarify expectations for the next phase.

Implementation of the Community of Practice

The pilot launched with a joint introductory meeting for the three participating municipalities—Bonheiden, KnokkeHeist and Oostende. This first session established a shared foundation: participants met each other, explored the scope of their local projects and received an introduction to the e-learning platform. Transition Stories explained expectations around participation and provided guidance on project scoping. Following this session, all participants drafted a project note, which was then reviewed by VVSG and Transition Stories. The feedback of Transition stories

and VVSG helped refine each project and supported the identification of knowledge gaps to be addressed in future sessions.

Building on lessons from the e-learning modules, the CoP continued to use these project notes as an anchor throughout the process. The notes guided municipalities in structuring their local work, while also informing the design of subsequent sessions on communication, governance, data use and neighbourhood-based approaches. By September of 2025, Transition Stories and VVSG had organised six CoP sessions.

The final session took place in person in Ostend. Staff from the city guided the AT LAST delegation — representatives of the pilot municipalities — on a city walk. They used a special map to show the main highlights of the Positive Energy District that is being developed in the city centre.

Deviations and solutions Belgium

The CoP in Belgium progressed steadily. All four pilot municipalities remained actively engaged, and the municipality of Hove acted as a sounding-board municipality. A sounding board pilot is a municipality who give early feedback on the proposed methodology and process of a community of practice. It reviews draft ideas, test whether the approach is practical, and point out what is missing or unclear. Its feedback helps improve the structure, tools and workflow of the community of practice. In this way, the sounding board pilot ensures that the final process is easier to use, better aligned with local needs and more likely to succeed.

Although Holsbeek eventually withdrew, and Temse also stepped back from active participation, both municipalities contributed meaningfully through the preparatory studies they had already completed. At the same time, the intermunicipal association Interleuven expressed interest in joining, and discussions about their involvement were ongoing. Changes in political priorities following the 2024 local elections and fluctuations in staff availability caused temporary delays in some municipalities. Even so, the CoP proved resilient: sessions remained well attended, and VVSG adjusted its support where needed, including through internal restructuring of staff resources within the pilot municipalities. As a result, the Belgian pilot remained on track for the duration of the project.

4.2 Italy



The six pilot cities in Emilia-Romagna involved in AT LAST were Modena, Carpi, Cervia, Ravenna, Rimini and Imola. Building on AESS's collaboration with these municipalities, they were selected due to their existing Sustainable Energy and Climate Action Plans (SECAPs) and their active engagement in key areas such as renewable energy communities, sustainable mobility and climate adaptation. The rationale behind the pilot design was not to introduce entirely new strategic directions, but rather to support municipalities in advancing concrete actions that were already under consideration or partially developed. In many cases, local administrations had identified priority measures aligned with their SECAP objectives; however, implementation was often constrained by limited technical capacity, financial resources or administrative complexity. AT LAST was therefore conceived as a targeted support mechanism, aiming to bridge the gap between planning and implementation. By providing technical assistance, governance support and structured stakeholder

engagement, the project enabled municipalities to move forward on specific initiatives that might otherwise have remained at the conceptual stage.

Three municipalities (Rimini, Cervia and Modena) concentrated primarily on energy-related actions, with particular attention to renewable energy communities and support mechanisms for local energy transition. The other three cities (Imola, Carpi and Ravenna) focused on climate adaptation measures, addressing urban resilience and the integration of adaptation strategies into local planning processes. This differentiation allowed the project to test different approaches within a coherent regional framework

The pilot projects supported by AT LAST technical assistance are as follows:

Modena	Establishment of a One-Stop-Shop to support the installation of renewable energy systems in the private sector, providing structured guidance to citizens and businesses in their energy transition.
Carpi	Development of a regeneration masterplan for an industrial area through a structured co-design process involving local workers and stakeholder, focusing on adaptation and sustainable mobility measures.
Rimini	Technical and administrative support for the establishment of the municipal Renewable Energy Community, including the preparation of communication materials to inform citizens.
Ravenna	Assessment of the impact of the microclimatic benefits of an urban area, regenerated through adaptation measures, combined with the organisation of a public event to disseminate insights on Nature-Based Solutions (NBS).
Cervia	Legal and administrative support for the creation of the municipal Renewable Energy Community, alongside the organisation of a public information event to foster community engagement
Imola	District regeneration strategy developed through a participatory co-design process involving local stakeholders and citizens, culminating in a meta-project outlining future implementation.

Implementation of the Community of Practice

While each municipality pursued locally tailored initiatives, the Italian Community of Practice (CoP) played a central role in ensuring cross-city learning and methodological coherence. The CoP was conceived as a space for exchange among municipal representatives and technical partners, aimed at sharing experiences, addressing common administrative challenges and reflecting collectively on implementation pathways. In particular, it supported municipalities in translating SECAP commitments into concrete, operational actions by discussing practical tools, governance models and procedural steps required for implementation.

Three sessions structured the exchange between the participating municipalities. An online kick-off meeting on 29 October 2024 introduced participants, presented their starting points, and clarified expectations regarding the use of AT LAST technical assistance. This was followed by an in-person progress meeting on 19 June 2025, which focused on reviewing the advancement of local pilot projects and facilitating peer exchange between municipalities. The final online thematic session on 29 September 2025 was organised in breakout groups on Energy and Adaptation, allowing municipalities to share project updates and discuss technical questions with AESS experts related to SECAP implementation.

These meetings facilitated peer learning for both energy-focused and adaptation-focused pilots. It provided a forum to compare governance approaches, discuss regulatory and procedural constraints, and identify solutions to common implementation barriers linked to SECAP measures. Furthermore, AESS created a Huddle platform subgroup and sharing relevant materials on the platform, enabling CoP members to continue exchanging ideas beyond the meetings.

Deviations and solutions Italy

The Italian pilots progressed in line with the initial objectives and overall project design. While no major deviations occurred, certain adjustments were necessary to accommodate administrative timelines and procedural requirements at the municipal level. The project adopted a flexible implementation approach, adapting internal timelines where needed while ensuring continuity of activities and maintaining overall operational effectiveness.



4.3 Netherlands



The pilot in the Netherlands focused on governance, financing, and integrated approaches to sustainable renovation and energy transition. The pilot is set-up as Community of Practice of 10 municipalities focusing on exchanging experiences and learning from best practices.

Based on participants' priorities, Klimaatverbond structured the CoP around key themes:

- **Strengthening the development, execution and monitoring of local energy transition plans**, including exchanges on neighbourhoods characteristics, monitoring of SECAPs, cooling in the energy transition plans, and capacity planning for growing sustainability teams.
- **Enhancing community participation and neighbourhood approaches**, covering social profiling, communication strategies, collaboration with energy cooperatives, the integrated neighbourhood approach, and the role of local initiatives in shaping renovation solutions.

- **Providing practical knowledge on enabling conditions**, such as legislation and policy developments, innovative financing mechanisms\ (including SPUK-LAI), and addressing grid congestion in relation to the local energy transition.

Implementation of the Community of Practice

The CoP was kicked-off in an in-person meeting to identify shared challenges and learning needs among participating municipalities. This was followed by regular online sessions on average each 6 weeks from May 2024 to March 2026. Klimaatverbond organized 11 online CoP meetings, 3 in person meetings, and (co-)organized 5 events in which the AT LAST content was shared and participants gained additional knowledge.

Most CoP sessions follow a structured format, featuring presentations by CoP members and external experts, followed by interactive discussions and knowledge sharing. In addition to these core meetings, the CoP provided a platform for participants to update each other on ongoing projects, seek peer advice, and receive updates on relevant activities of AT LAST. Content development and municipal support was provided by external partners, including BouwhulpGroep (a consultancy on sustainable home renovation) and Energie Samen (an umbrella body for energy cooperatives in the Netherlands).

Furthermore, the CoP informed several publications:

- A publication on cooperation between energy collectives and municipalities (de Opgroeiverkenner)
- A publication on the integrated neighbourhood approach to sustainable renovation;
- A 2026 report on responding to increasing cooling demand within municipal energy transition plans;
- A best practice publication on community participation and cooperation between municipalities and citizen

The pilot municipalities all focus on the development and implementation of plans for the energy transition and sustainable renovation at neighbourhood level.



The following learning needs were covered in the CoP:

Arnhem	Engaging a diverse group of residents and co-creation; the question of ownership of heating solutions (legislation); financial insight for residents; and communicating grid congestion consequences.
Berkelland	The need for a long term strategy versus the political reality of elections.
Borger-Odoorn	How to efficiently engage residents through a personal approach; legislative obligations; financing through subsidies; simple monitoring; and creatively dealing with grid congestion.
Deventer	How to efficiently engage residents through a personal approach; the need for legislative clarity; justification of financial demands on residents; and communicating grid congestion consequences.
Hoorn	Engaging a diverse group of residents; understanding new legislation; affordability through subsidies; identifying effective monitoring indicators, and dealing with grid congestion.
Horst aan de Maas	Legislation aimed at urban areas rather than rural areas; dealing with fake news reg. renewable energy projects; need for long term legislation.
Lochem	Engaging a diverse group of residents; financial affordability; creatively dealing with grid congestion.
Rheden	Keeping resident initiatives involved; how to ensure neighbourhood plans are legally anchored; attracting large investors as part of the financing strategy.
Ridderkerk	Engaging a diverse group of residents; understanding new legislation; financial clarity on costs and subsidies; continuous monitoring; resolving grid congestion.
Veenendaal	Engaging specific resident target groups; how to ensure neighbourhood plans are legally anchored; financial feasibility; meaningful monitoring; and realistic communication about all-electric.

Deviations and solutions Netherlands

All planned activities were implemented, with minor adjustments in timing. Of the ten municipalities originally committed, only one remained engaged at the start, partly due to the long interval between proposal and project launch. To address this, an open call brought nine new municipalities into the CoP, and bilateral meetings clarified expectations and aligned goals, resulting in the CoP launch moving from January to May 2024.

Another challenge faced was high turnover of municipal staff. This has also affected participation levels, with some replacements bringing less experience in the subject matter. One municipality, Horst aan de Maas, opted for a more passive role due to internal capacity constraints.

This also influenced the scope of implementation support. Klimaatverbond initially aimed to guide municipalities to make a start with the integrated neighbourhood approach

within the project timeframe. However, this proved challenging in practice, as many municipalities lacked the capacity to embed the approach within their plans—let alone implement it on the ground—within the project timeframe. We could only start the groundwork for the approach with the pilot municipality of Arnhem. The CoP therefore focused on creating an enabling environment, providing municipalities with relevant knowledge, tools, and insights that they could apply within their own timelines and capacity constraints.

A small deviation relates to the use of the e-learning platform. While initially planned as a key resource, the content proved to be less relevant for participants of the Dutch pilot. Alternative materials from partners and networks were therefore used to support learning and exchange. Klimaatverbond did contribute reports and lessons learned to the online platform to share knowledge beyond the Dutch context. Looking ahead, Klimaatverbond plans to make more targeted use of the platform. An internal evaluation showed that particularly junior climate officials expressed a need for structured peer exchange. In response, Klimaatverbond intends to establish a dedicated energy transition CoP for starting municipal officials, for whom the e-learning platform is expected to better match learning needs.

4.4 Sweden



The Swedish pilot was designed differently from the other three country pilots. While Belgium, Italy and the Netherlands focused on structured Communities of Practice (CoPs), Sweden adopted a data-driven, one-on-one mentoring and tool-development approach, with the objective of strengthening financial innovation in municipal climate governance.

This design reflects both the maturity of Swedish climate planning and the specific needs expressed by participating municipalities. Rather than requiring support in drafting climate plans, Swedish municipalities requested assistance in understanding the financial implications of climate neutrality, structuring climate investment plans, identifying financing gaps, improving transparency of environmental expenditure, and testing economic modelling tools. The Swedish pilot therefore focused on developing and refining financial tools and methodologies in close collaboration with individual municipalities, while enabling cross-municipal exchange where relevant.

Pilot structure

At proposal stage, Helsingborg, Mariestad and Kristianstad expressed interest in strengthening their financial and economic understanding of climate transition pathways. During implementation, additional municipalities became involved in thematic strands, resulting in differentiated pilot tracks. The Swedish pilot evolved into three interconnected strands:

Environmental Expenditure and ESRS Alignment

(Helsingborg, Falkenberg, Kristianstad)

This strand explored whether municipal expenditure could be classified according to ESRS environmental categories (E1–E5). Activities included introductory meetings on financial classification methodology, collection of accounts-level financial data, analysis of invoice-level datasets, and comparative discussions on procurement coding structures. The pilot also assessed UNSPSC tagging practices and conducted governance discussions on classification confidence and uncertainty.

Helsingborg served as the primary prototype development case, with detailed invoice-level testing. Falkenberg contributed additional data to assess methodological transferability under different tagging conditions. While Falkenberg uses the same decision-support system (Qlik Sense), its invoices are not tagged with UNSPSC codes, highlighting differences in data maturity. Kristianstad expressed early interest in applying the methodology and plans to continue active engagement following the release of the tool prototype in early March, ensuring that replication builds on a tested and refined version.

Climate Investment Planning and Financing Gap Analysis

(Malmö)

This strand addressed the financial feasibility of climate neutrality. Activities involved mapping total climate transition investment needs, identifying public, EU, and philanthropic funding sources, estimating financing gaps,

and discussing sequencing and risk-sharing mechanisms. Private capital mobilisation requirements were also explored. This work supported Malmö in aligning climate ambitions with structured financial planning and realistic investment sequencing.

Economic Modelling and Dashboard Testing

(Mariestad)

This strand focused on testing and refining the Viable Cities Finance Dashboard as a decision-support tool for climate action and investment planning. Activities included pilot kick-off meetings introducing the updated modelling framework, demonstrations of new dashboard versions, independent testing by municipal staff, and feedback sessions on usability and functionality. The pilot refined scenario stacking logic and integrated adaptation-related measures.

Testing highlighted the importance of scenario tracking and documentation, transparent assumptions, clear export functions, and usability for municipalities with limited modelling capacity. The feedback strengthened the robustness and replicability of the dashboard.

Methodological Approach

The Swedish pilot applied a structured five-step investment planning logic:

1. *Assess current emissions, assets and behavioural patterns*
2. *Forecast transition pathways*
3. *Design targeted measures across sectors*
4. *Evaluate economic and risk implications*
5. *Identify financing options and investment structuring mechanisms*

Unlike a traditional CoP, this approach prioritised deep technical engagement, real-data testing, iterative prototype refinement, and adaptability to different municipal data

maturity levels. Knowledge and tools developed in bilateral settings will be disseminated more broadly following the prototype release.

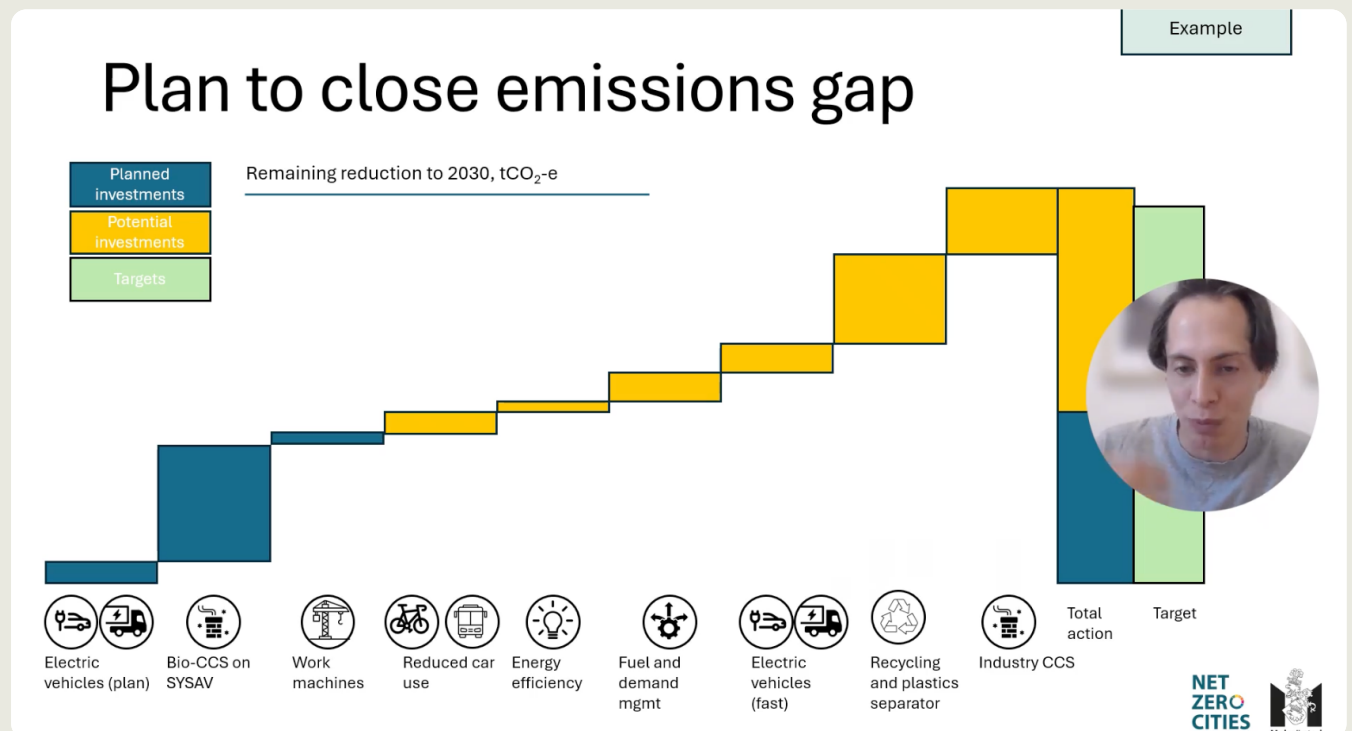
Deviations and adaptive solutions

The overall objectives of the Swedish pilot remained intact. However, the format evolved in response to municipal needs. Originally, a single integrated investment report covering multiple cities was envisioned. During implementation, it became clear that municipalities required differentiated support depending on their specific priorities (expenditure classification, financing gap analysis, modelling).

As a result:

1. *Group meetings were reduced in favour of targeted bilateral sessions.*
2. *Prototype development was prioritised before broader replication.*
3. *Engagement with Kristianstad was sequenced to follow the release of the prototype in early March.*
4. *Cross-municipal exchange emerged organically through data-sharing discussions (e.g., invoice-level comparison between Helsingborg and Falkenberg).*

This adaptive approach ensured methodological depth while preserving future scalability.



4.5 Joint activities

Consortium partners met each other during the monthly AT LAST meetings, in which they updated each other on activities and progress. Klimaatverbond, in collaboration with the other partners, organized the AT LAST European exchange meeting at September 18, 2024. In this online meeting, all pilot municipalities from the four countries came together and gained an understanding of the state of play of the energy transition and the different policy contexts in each country. They exchanged experiences and challenges related to finance, governance, and positive energy districts. In addition, the annual partner meetings (in Brussels, Malmö and Helsingborg and Rimini) also offered opportunities for exchange and learning on pilot progress.

Finally, pilot insights were at the core of the AT LAST Final Event, organized March 19 in Brussels. Rather than a closing chapter, it felt much more like the beginning of what comes next. The event “From Climate Plans to Local Impact” brought together local and regional leaders from across Europe. It showed one thing clearly: cities are not waiting; they are already delivering real change on the ground. When municipalities have the right tools, clear governance and predictable funding, they deliver real change for every street, every neighbourhood and every citizen.

#	Title of event	Date	Place and form	Number & type of participants	Short description
1	AT LAST European exchange meeting	September 18, 2024	Online - MS Teams	16 policy officers from CoP municipalities from BE, IT, NL & SE	Goal: insight in solutions and best practices in SECAP implementation through Europe, through exchange in break out rooms.
2	AT LAST Final event	March 19, 2026	Online – CEMR, Brussels	100 participants from local authorities including CoP municipalities BE, IT, NL & SE, MP’s, EU-related institutions, Covenant of Mayors, CEMR and Consultants	“From Climate Plans to Local Impact”. Goal: to bridge the gap between climate strategies and local implementation, focusing on practical tools and real-world examples.



5. Pilot results & impact

The following chapter presents the results achieved by the Communities of Practice (CoPs) and the pilot networks of AT LAST, highlighting the progress made at multiple levels. The structure of the chapter reflects the increasing scope of results. It begins in our sphere of control: with outputs and learnings within the pilot networks. In the following chapter, we present results within our sphere of influence, such as improved SECAP implementation and policy development amongst CoP municipalities. The chapter concludes with results beyond our sphere of influence, focusing on expected environmental impacts such as reduced energy use and CO₂ emissions. As the level of impact increases, the degree of direct influence naturally decreases.

All pilots addressed most levels of results, though their emphasis varied according to local contexts and opportunities. Belgium and the Netherlands invested strongly in the organisation of the CoP, generating valuable lessons on collaborative structures and peer learning and increased capacity in the participating organisations. In the Netherlands and Sweden, efforts have concentrated on developing CoP content and deepening understanding of tools, methods, and thematic expertise. Belgium, Italy and Sweden demonstrated particularly strong insights in municipal actions and policy implementation. This diversity of approaches and outcomes provides a rich and complementary mix of learnings and recommendations.

The results presented in this chapter demonstrate that the project successfully achieved its expected results: the establishment of four pilot networks in Belgium, the Netherlands, Italy, and Sweden, covering the main aspects of climate planning—financing, governance, and cross-sectoral integration. The pilots validated information and contributed practical insights for the integrated inventory handbook developed in WP3 and the e-learning platform developed in WP4. And third, case studies and lessons on financing, governance structures, and cross-sectoral integration were collected to support WP2 activities on sustainability, replication, and exploitation of project results.



5.1 Increased knowledge and understanding through Communities of Practice

5.1.1 Belgium

Results

For the Belgian Pilot, VVSG and Transition Stories teamed up to ensure a highly-qualitative and effective Community of Practice. Five participating cities were selected by VVSG to take part in the pilot, they were based on the criteria:

1. Small to medium sized
2. Location selected for a Positive Energy District Approach.

Regular meetings between the partners ensured that the CoP sessions helped alleviate the knowledge and skill gaps identified in the very first session of the COP. In total, 5 sessions were held with differing topics and formats (some live, others online). Each of the sessions was paired with useful knowledge on the [e-learning platform](#) to ensure a level playing field between participants and efficient time-management throughout the sessions.

The step-by-step methodology applied across the pilots is truly a highlight of the results. It identifies missing policy instruments that limit positive energy districts deployment in Flanders and highlights the reasons behind Ostend's relative success.

Step 1. Define the District and Assess Needs

Municipalities begin by identifying the boundaries of the district, examining the building stock, energy demand, renovation status, renewable potential, and possible grid constraints.

Step 2. Mobilise Local Stakeholders

Municipal teams engage residents, distribution system operators, local businesses, ESCOs, social services and community groups. Early engagement helps to build trust and create shared ownership.

Step 3. Develop an Integrated Energy Vision

A neighbourhoodscale plan is created that combines renovation trajectories, energy efficiency needs, renewable production, mobility considerations and climate adaptation. This vision must align with local climate plans and regional targets but aligned with the engagement of the Covenant of Mayors.

Step 4. Choose Governance and Policy Instruments

Municipalities review possible instruments such as neighbourhood renovation coaches, collective procurement, one stop shop models, local energy communities or long term public private partnerships.

Step 5. Organise Funding and Financing

Municipalities explore combinations of public funding, ESCO services, private financing, citizen investment and EU programmes. Affordability for vulnerable households remains a critical pillar.

Step 6. Implement, Monitor and Adjust

Implementation is phased, starting with quick wins such as insulation, rooftop solar and smart controls. Municipalities monitor progress and adjust actions based on data, feedback and evolving circumstances.

Overview of Pilot Projects

Ostend

Ostend progressed the furthest of all pilots. Its success is linked to:

- A structured neighbourhood improvement programme supported by an official public tender containing clear award criteria and technical requirements.
- Strong political backing and administrative coordination across departments.
- A stable governance model with a clear point of contact for stakeholders and residents.
- Previous experience with large scale energy transition projects.

Knokke Heist

The municipality showed strong ambition but faced challenges in aligning spatial planning, homeowner readiness and timing of investments.

Hove

Hove made progress in mapping energy consumption and exploring scenarios but was limited by budgetary and capacity constraints.

Kontich

Kontich succeeded in mobilising local actors but struggled to translate planning work into implementable actions within a diverse private housing stock.

Bonheiden

Bonheiden focused on citizen engagement and data gathering but did not reach an investment ready PED model.

Temse and Holsbeek (Withdrawn)

Both municipalities withdrew due to internal capacity issues and difficulties integrating PED actions into their existing planning and development cycles.

4. Missing Policy Instruments in Flanders

All pilots highlighted similar regulatory and structural gaps:

1. Lack of a legal framework enabling neighbourhood level coordination of renovation activities.
2. Insufficient financing instruments tailored to district scale energy solutions such as collective solar, storage or district heating.
3. Absence of standardised procurement templates for integrated neighbourhood renovation services.
4. Weak alignment between local renovation plans and grid planning, causing delays and uncertainty.

5. Why Ostend Succeeded

Ostend's progress can be attributed to:

- A well designed tender procedure embedded in a broader neighbourhood improvement programme, with clear award criteria and technical provisions.
- High administrative capacity and long term political commitment.
- A neighbourhood narrative that linked energy renovation to wider goals such as liveability and public space improvement.
- Strong cooperation with local stakeholders, enabling faster decision making.
- The annex will include:
- English translations and original versions of the project fiches;
- The relevant sections of the City of Ostend's procurement documents, including the award criteria and technical requirements.

These debates underline a key insight also seen in the PED pilots: large scale energy projects require strong public trust, careful spatial planning and open dialogue. PEDs offer a complementary approach that strengthens local ownership of the energy transition.

Conclusion

The pilot phase shows that Positive Energy Districts are feasible in Flanders, but municipalities need better policy frameworks, financial tools and internal governance models. Ostend demonstrates that structured procurement, political commitment and good stakeholder alignment can enable successful PED development. Strengthening these enabling conditions can help Flanders scale up neighbourhood level renovation while navigating broader energy transition debates.

Activity table

#	Title of event	Date	Place and form	Number & type of participants
1	Introduction, projectscooping (PESTLE & SWOT-analyses), e-learning platform walkthrough	1 October 2024	VVSG, Brussels	11 pilot cities, Transition Stories and VVSG
2	Project notes, governance, stakeholder roles, Vilvoorde case	5 December 2024	Teams	8
3	Communication strategy & climate conversations	7 February 2025	Antwerp	11
4	Data-driven working (AI-tools, surveys, data processing, GDPR, MS/Google tools)	15 May 2025	Teams	11
5	Project progress review & Ostend's district improvement contract + wrap up	11 September 2025	Ostend	11
6	Monitoring & reporting – KPI's, data needs, tendering	25 November 2025	Teams	11

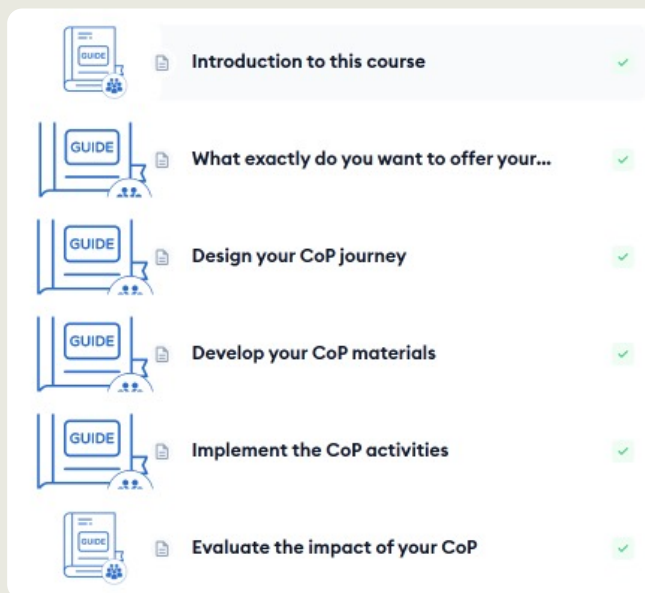
KPI table

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Belgium	4	4	7	7	Number of real life implementation sites
Belgium	20	100	100	500	Number of people trained
Belgium	300	600	300	600	Number of people reached through communication efforts

Learnings on CoP organisation & methodology

The Belgian CoP organisation and methodology was integrally put on [the e-learning platform](#) to share it with potentially interested partners in the wider EU network of the AT LAST consortium. The course offers theoretic background, a clear step-by-step guide that was followed for the Belgian CoP and includes the learned lessons along the way.

The approach taken for the CoP was cocreative which meant the participants were the ones deciding which topics or questions they wanted to focus on and the trajectory was adapted to fit this in. Some other guiding principles were a great degree of participation and learner-centered exercises which meant all work done was almost directly useable in the work environment of the participants. This increased the motivation to participate as most of the participants had little time available and did not want to spend time on theory or abstract examples.



Joint communication guideline of Hove and Kontich

Communicating clearly with residents ready to take steps in their homes and neighbourhood.

This cheatsheet provides local governments with clear, positive and inclusive communication guidelines for neighbourhood renovation projects.

Pilot cities can use it to engage residents more easily and motivate them to act through simple, accessible and tailored messaging.

Together, we take worries away, help citizens live and enjoy their home, and let them decide what we need to do.

Learnings on Content & knowledge development

The first session of the CoP was used to map the gaps in the participants knowledge and skills in their current work environment. The results of the GAP-analysis were then used to design the CoP journey and the next sessions. Before the start of each session, participants were briefed about the topic on hand. To ensure each participant had a good understanding of the topic and common terminology, some lessons of [the e-learning platform](#) were included in the invitation. This way, it was ensured everyone had the same theoretic background and the session could focus maximum on peer learning, sharing experiences and practising of new skills. This meant the sessions could be organised more efficiently as very little time was spend on the transfer of new knowledge. The approach was welcomed and applauded by all participants as they felt the sessions contributed to their capacity to fulfil their daily tasks at multiple times throughout the training sessions.

Regarding the topics covered, we noticed that there was a big variety in the amount of experience with some participants just entering the job of climate officers whereas others had already multiple years of experience on their hands. All participants also had different degrees so their theoretical expertise was also very versatile. This can be very beneficial for peer learning as they all offered different perspectives and insights on similar problems they were facing. It did make it quite a challenge to narrow down the topics for the sessions but in general most of the learnings came down to project management skills such as budgeting, capacity planning, goal setting and KPI-definition. A second important topic was more related with psychological wellbeing and was centered around burden-sharing and communicating about sustainability projects with a variety of partners with different needs and expectations.

On top of that, participants could freely browse [the e-learning platform](#) throughout their work time to solve urgent questions or needs. We noticed that most participants did not actively use the platform on a regular basis but instead were driven by the actual projects they were working on. They only consulted the platform if they had an urgent need for information and remembered from a CoP-session or email that content on this existed on the e-learning platform. This aligns with research that shows learning culture and habits take time to form and are very often driven by practical needs¹ (in the work environment). This insight was also confirmed in the impact survey where only 5% of the respondents indicated they used the platform more than 10 times (up to January 2025).

¹ Kittel AFD, Kunz RAC and Seufert T (2021) Self-Regulation in Informal Workplace Learning: Influence of Organizational Learning Culture and Job Characteristics. *Front. Psychol.* 12:643748. doi: 10.3389/fpsyg.2021.643748

5.1.2 Italy

Results

In Italy, AT LAST contributed both to the advancement of concrete local pilot actions and to the strengthening of inter-municipal collaboration through the Community of Practice (CoP). This combined approach proved effective in supporting municipalities in moving from SECAP planning towards more operational implementation pathways.

At municipal level, the six pilot cities made progress on concrete initiatives related to energy transition and climate adaptation. In the three energy-focused municipalities, the project supported the development of local pathways connected to renewable energy communities and support mechanisms for local energy transition. In Modena, the pilot advanced the preparatory work for a One-Stop-Shop aimed at supporting citizens and businesses in the installation of renewable energy systems. In Rimini and Cervia, AT LAST provided technical, administrative and legal support for the development of municipal Renewable Energy Communities, while also strengthening the communication and public engagement dimension of these processes.

In the three adaptation-focused municipalities, the project supported more place-based and participatory approaches to urban resilience. In Carpi and Imola, the pilots contributed to the development of regeneration strategies through structured co-design processes involving local stakeholders, workers and citizens. In Ravenna, the pilot generated a clearer understanding of the microclimatic benefits associated with adaptation measures implemented in a regenerated urban area, while also creating an opportunity to disseminate these insights through a public event focused on Nature-Based Solutions. Across these municipalities, the pilot activities helped translate SECAP priorities into more concrete implementation process by clarifying procedural steps, supporting structural internal processes, and creating stronger conditions for future implementation.

Alongside these local developments, the Italian Community of Practice proved to be an effective mechanism for strengthening inter-municipal collaboration and supporting the implementation of SECAP-related actions. By creating a structured space for peer exchange and technical support, the CoP enabled municipalities to address common implementation challenges while reflecting collectively on the progress of their local pilots.

The CoP was implemented through three structured sessions held between October 2024 and September 2025, combining online and in-person formats. All six pilot municipalities were consistently represented, with at least two technical or administrative officers participating from each city. This continuity of participation was an important factor in building a stable exchange process and ensuring the relevance of discussions over time. The CoP functioned as a coordination and peer-learning mechanism, fully aligned with the objectives of AT LAST. One of its main added values was the opportunity for municipalities to share concrete practices developed in their local pilots and to explore their potential transferability to other municipal contexts. This exchange also allowed municipalities to reflect on the practical methodologies tested within the pilots.

The kick-off meeting established a shared understanding of starting points and expectations, laying the foundation for structured collaboration. The in-person progress meeting further reinforced this dynamic, allowing municipalities to present ongoing pilot developments and engage in direct dialogue. Informal feedback collected during the session highlighted the importance of face-to-face exchange in building trust and fostering mutual learning. The final thematic online session, structured into Energy and Adaptation breakout groups, proved particularly valuable from an implementation perspective. Municipalities were able to present concrete challenges related to their pilot initiatives and directly discuss technical questions with AESS experts. This format supported problem-

solving and clarified procedural aspects often linked to SECAP implementation. Overall, the CoP strengthened professional networks among municipalities, facilitated the exchange of replicable practices, and contributed to enhancing municipalities' capacity to move from planning to implementation. Its main result lies in having created a stable framework for structured collaboration, through which local administrations could collectively reflect on common challenges and identify more operational pathways for their climate actions.

KPI table

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Italy	6	6	6	6	Number of real life implementation sites
Italy	35	100	479	2395	Number of people trained
Italy	300	600	780	3900	Number of people reached through communication

Activity table

#	Title of event	Date	Place & form	Number & type of participants	Short description
1	Italian Community of Practice – Kick-off Meeting	29 October 2024	Online meeting	15 participants, municipal technical officers & political parts from six pilot cities, AESS experts	Introductory session aimed at presenting pilot objectives, aligning expectations and enabling municipalities to share their starting points and intended use of AT LAST technical assistance.
2	Exploratory walk in the pilot area – Imola	3 June 2025	Imola, in-person	Approx. 30 participants, citizens and local stakeholders	Exploratory walk organised in the pilot area to collect inputs from citizens and local stakeholders.
3	Italian Community of Practice – Progress Review Meeting	19 June 2025	In-person (Emilia-Romagna)	12 participants, municipal representatives and political part, AESS experts	Meeting dedicated to reviewing the progress of local pilot projects, encouraging sharing. The goal was to receive support from AESS experts in-person.
4	Workshop on district regeneration strategy – Imola	24 June 2025	Imola, in-person	Approx. 30 participants, citizens and local stakeholders	Workshop organised to systematise the inputs collected during the exploratory walk and to support the co-design of the regenerated area.
5	Italian Community of Practice – Thematic Session (Energy & Adaptation)	29 September 2025	Online	12 participants, municipal technical officers & political parts from six pilot cities, AESS experts	Thematic working session structured in two breakout groups (Energy and Adaptation), addressing technical questions and implementation challenges related to SECAP measures.
6	Final presentation of pilot results and masterplan – Imola	7 October 2025	Imola, in-person	Approx. 30 participants, citizens and local stakeholders	Final event organised to present the results of the pilot and the regeneration masterplan developed by AESS.
7	Urban exploratory walk in the pilot area – Carpi	10 October 2025	Carpi, in-person	Approx. 15 participants, local stakeholders and citizens	First urban exploratory walk in the pilot area, organised to collect observations and inputs on the regeneration needs and potentials.
8	Urban exploratory walk in the pilot area – Carpi	17 October 2025	Carpi, in-person	Approx. 15 participants, local stakeholders and citizens	Second urban exploratory walk in the pilot area, organised to deepen the collection of local inputs and perspectives on the area's regeneration, incl adaptation and sustainable mobility.
9	Exploratory walk on Nature-Based Solutions – Ravenna	31 October 2025	Ravenna, in-person	Approx. 130 participants, citizens and local stakeholders	Exploratory walk organised in the surroundings of the regenerated area to raise awareness among citizens about Nature-Based Solutions to experience the area and its adaptation-related features.
10	Final event on Nature-Based Solutions & micro-climatic effects – Ravenna	31 October 2025	Ravenna, in-person	Approx. 130 participants, citizens and local stakeholders	Final public event organised to present the microclimatic effects observed in the regenerated area and to disseminate insights on Nature-Based Solutions.
11	Workshop on regeneration priorities – Carpi	21 November 2025	Carpi, in-person	Participants involved in the previous exploratory walks, local stakeholders and citizens	Workshop organised to synthesise the inputs collected during the urban exploratory walks and to gather participants' needs, priorities and expectations for the regeneration process.
12	Public event on municipal Renewable Energy Community – Rimini	1 December 2025	Rimini, in-person	Approx. 200 participants, citizens and local stakeholder	Final public event organised by the municipality to present the Renewable Energy Community initiative. AESS prepared the communication materials.
13	Public event on the Renewable Energy Community – Cervia	16 December 2025	Cervia, in-person	Approx. 32 participants, citizens and local stakeholders	Public information event organised to explain how the municipal Renewable Energy Community works and to present its potential benefits for the local community
14	Public event on the One-Stop-Shop and call for expressions of interest	27 March 2026	Modena, in-person	Approx. 20 participants, citizens and local stakeholders	Public event organised to present the functioning of the One-Stop-Shop and to launch the call for expressions of interest.
15	Public event on the One-Stop-Shop and call for expressions of interest	31 March 2026	Modena, in-person	Approx. 20 participants, citizens and local stakeholders	Second public event organised to present the functioning of the One-Stop-Shop and the call for expressions of interest.

Learnings on CoP organisation & methodology

The Italian Community of Practice demonstrated that a small-scale, regionally focused CoP can be an effective coordination mechanism when participation is stable. With consistent representation from all pilot municipalities and a combination of online and in-person formats, the CoP provided a place where to exchange and share knowledge. The experience highlighted several methodological lessons relevant for future inter-municipal cooperation initiatives.

1. Combining online and in-person formats enhances effectiveness. While online meetings are easier to be followed, the in-person session played a crucial role in strengthening interpersonal trust and informal exchange
2. Thematic working sessions are useful for municipalities. Structuring one session into thematic breakout groups (Energy and Adaptation) increased the practical relevance of discussions. Smaller groups enabled participants to address concrete technical questions and directly engage with AESS experts.
3. Flexibility is essential. Municipal administrations operate under significant time and capacity constraints. A flexible approach to scheduling, agenda-setting and thematic prioritization was essential to maintain engagement.

Learnings on content & knowledge development

The Italian CoP helped clarify implementation pathways by deepening municipalities' understanding of shared challenges and identifying practical approaches to advancing SECAP-related measures.

- Many implementation challenges are shared across municipalities. Municipalities generally have clear strategic objectives aligned with their SECAPs. The main obstacles lie in administrative procedures, regulatory interpretation and operational capacity.
- Practical examples are more valuable than theory. Participants responded most positively to concrete examples presented by other municipalities, particularly when these were directly connected to ongoing pilot actions. The opportunity to see the procedure of particular tools proved to be useful.

- Citizen engagement remains a priority topic. While municipalities recognise the importance of citizen involvement in climate and energy initiatives, they also highlighted the difficulty of dedicating sufficient time and resources to participatory processes. The CoP confirmed a shared interest in further developing practical and manageable engagement approaches, including participatory co-design processes and structured stakeholder engagement formats tested within the AT LAST pilots.
- Knowledge consolidation and peer learning emerged as key outcomes of the CoP. The exchange among municipalities strengthened professional networks and facilitated the circulation of practical experiences across the region. In addition, the lessons learned from the pilot activities were consolidated in a practical guidance and methodological insights from the AT LAST project and providing a resource that can support other municipalities interested in replicating similar approaches.

Regeneration of an industrial area – Carpi

The Municipality of Carpi identified the regeneration of a local industrial area as a strategic priority, in line with its climate and sustainability objectives. The area presented different climate challenges.

Through AT LAST, AESS supported the municipality in designing and facilitating a structured co-design process. Local workers and stakeholders were actively involved in workshops aimed at identifying critical issues, exploring future development scenarios and defining concrete regeneration priorities.

The process culminated in the development of a meta-project delivered to the municipality, outlining a strategy for the area. The initiative was very helpful in strengthening the dialogue between the municipality and local actors, creating a shared understanding of challenges and opportunities.

5.1.3 Netherlands

Results

In the Netherlands, Klimaatverbond convened and facilitated a Community of Practice (CoP) with 10 municipalities to strengthen the development and implementation of their SECAPs. KVN organised 14 dedicated CoP sessions, including 3 in-person meetings and 11 online sessions. In addition, KVN had presented their CoP insights in 5 additional events, to reach out to a wider audience with the best practices developed, for instance with energy communities, for KVN member municipalities, for parties involved in financing the transition and by collaborating with a CoP on climate adaptation.

KVN structured the CoP around three themes identified by participants, which can be groups as follows:

1. Learning and sharing to ensure efficient and quality development, execution and monitoring of local energy transition plans
2. Learning and sharing to strengthen community participation;
3. Practical knowledge on legislation and policy frameworks, financing mechanisms, and grid congestion.

Through these activities, KVN directly engaged 49 policymakers from the 10 participating municipalities.. Additionally 20 policymakers from other public authorities and 54 stakeholders from the public and private sector, joined selected sessions and events, further expanding the knowledge transfer on SECAP implementation.

KVN developed and published 4 practical publications:

- A publication on cooperation between energy collectives and municipalities (de Opgroeiverkenner)
- A publication on the integrated neighbourhood-based approach to sustainable renovation;
- A 2026 report on responding to increasing cooling demand within municipal energy transition plans;
- A best practice report on community participation and cooperation between municipalities and citizen initiatives.

KVN designed all publications to directly support municipal warmteprogramma's (the Dutch equivalent of SECAPs). KVN disseminated these reports not only to AT LAST municipalities but to all KVN member municipalities via newsletters and social media, thereby extending their reach and supporting replication. KVN will further use these outputs in WP2 activities on sustainability and exploitation.

Evaluation results demonstrate that the participating in the AT LAST CoP effectively increased participants' knowledge and understanding. Respondents to the AT LAST survey all report the value of tips and best practices shared by other municipalities. Most participants also appreciated the insights and analysis of the local energy transition. Overall, peer learning and practical guidance were the key elements participants plan to apply in their work. The municipality of Lochem for instance reported *“that the session on data-driven working has led them to implement a Power BI system and engage with the municipality of Rheden”*. Interestingly, the AT LAST survey shows all respondents have expanded their professional network through the CoP and intend to use it, for example by seeking help from colleagues or experts they met. We particularly value this outcome, as it enables ongoing knowledge sharing beyond the project's end.

“The CoP provides a good overview for someone like me who has just started in this position and is new to the role.”

Internal surveys among Dutch participants confirm that the CoP delivered in-depth and relevant content. 5 out of 8 municipalities reported they found the CoP content somewhat useful in their daily work, and 2 of municipalities found it very useful. Those new to their roles particularly benefited from the structured overview and practical insights. As one participant noted, *“The CoP provides a good overview for someone like me who has just started in this position and is new to the role.”* Another wrote *“We acquired significant knowledge in an area where our organization is still developing.”*

In sum we conclude that through learning and sharing in our Community of Practice sessions, AT LAST has strengthened the knowledge base and implementation capacity of local policymakers working on SECAPs.

Activity table

#	Title of event & description	Date	Place and form	Number & type of participants
1	Starting event: identifying key topics	30-5-2024	CoP in person	11 Policy makers
2	Neighbourhood characteristics that shape energy and renovation solutions.	1-7-2024	CoP online	10 Policy makers
3	Developing a narrative: community participation and social profiling	12-8-2024	CoP online	8 Policy makers
4	Presenting the integrated neighbourhood approach to energy cooperatives	10-9-2024	In person gathering	25 pax from energy cooperatives
5	Exchange on good practices & challenges within European municipalities	18-9-2024	EU Meeting online	6 Dutch Policy makers
6	Cooling in the heat transition	23-9-2024	Webinar heat adaptation	4 Policy makers
7	Innovative financing of the renovation wave	10-10-2024	Workshop at Triodos bank	5 Policy makers; 6 participants from private organisations
8	Developing a narrative: communication, customer journeys, and collaboration with energy cooperatives.	4-11-2024	CoP online	10 Policy makers
9	The integrated neighbourhood approach	9-12-2024	CoP online with local energy cooperatives	11 Policy makers; 6 participants from energy cooperatives
10	Financing renovation and the local energy transition	16-12-2024	CoP	10 Policy makers
11	Grid congestion and the local energy transition	27-1-2025	CoP online	9 Policy makers
12	Grid congestion and the local energy transition & the integrated neighbourhood approach	13-3-2025	Session during event	10 Policy makers; 7 participants from public or private orgs
13	Monitoring of the municipal SECAPs	28-4-2025	CoP online	7 Policy makers
14	Developments in policy and legislation	2-6-2025	CoP online	7 Policy makers; 2 participants from public or private orgs
15	Interim review and municipal developments	14-7-2025	CoP online	9 Policy makers
16	Strengths of local community participation	15-9-2025	CoP in person	7 Policy makers; 1 participant from public organisation
17	Financing renovation: SPUK-LAI	6-10-2025	CoP online	10 Policy makers; 2 participants from private organisations
18	Capacity planning in growing sustainability teams	19-11-2025	CoP online	7 Policy makers
19	Innovative solution for the energy transition & Final evaluation	11-3-2026	CoP in person	6 Policy makers; 5 participants from public or private orgs

Learnings on CoP organisation & methodology

Reflecting on the results of our Communities of Practice (CoPs), several key learnings emerge on how to organize them effectively. These insights are based on participant surveys, feedback, and our analysis of the CoP's evolution:

Content:

We learned that the CoP was particularly effective in facilitating learning in multiple ways. Participants gained access to the latest information on the energy transition. Equally important, the CoP enabled them to connect with colleagues facing similar challenges. Our exchanges not only enriched their understanding but also translated into practical insights that most participants could apply directly in their daily work.

Format

A CoP with many participants from diverse municipalities benefits from rich exchanges due to varying sizes, experiences, and implementation stages of sustainability plans. However, this diversity also made it harder to provide in-depth support and foster a strong community with high social cohesion, especially given the geographical spread. A major challenge was the different implementation stages among municipalities, limiting the quality of exchange in discussions. This situation, in addition to high staff turnover, shifted our focus toward expert-led knowledge sharing rather than peer-to-peer exchange. From these challenges, we learned:

- If the aim of your CoP is to build a community, setting up a more in-depth CoP with a smaller number of municipalities from a smaller region is most suitable; approaches recommended are field visits, creative exercises for information exchange and limited 'presentations'.
- If the aim of your CoP is in-depth knowledge sharing, an online CoP with more participants is more effective. Sessions of 1.5 to 2 hours, with a maximum of two

presentations and ample time for questions, work well. Active facilitation and discussion are essential, encouraging participants to share their municipal experiences and learning needs. Tools such as MIRO boards, Mentimeter, and prepared discussion prompts support engagement.

Learnings on content & knowledge development

Dutch municipalities face key challenges in engaging residents to support sustainability measures.

CoP sessions highlighted several lessons: align with local concerns and existing community groups, develop plans with residents rather than for them, communicate clearly, be personally visible in the neighbourhood, and ensure diverse participation beyond early adopters.

Municipalities learned from Arnhem that structured support for energy collectives can successfully stimulate local initiatives, especially when collaboration develops gradually through "opgroeiruite" (a tool to which Klimaatverbond contributed in AT LAST). Initiatives like DeBlauweWij(k) Economie show that neighbourhood-led projects efficiently harness local knowledge and expertise—citizens are experts on their own community, and enabling their participation can be more effective and cost-efficient than hiring external consultants.

The integrated neighbourhood approach, discussed across multiple sessions, combines residents' needs with sustainability goals and scalable engineering solutions, fostering long-term collaboration between municipalities,

Collaboration between residents & the municipality in Deventer, De Worp

An inspiring example of how the municipality successfully collaborates with its residents can be found in the Dutch city of Deventer, in the neighborhood called "De Worp".

An interview with both actors (active residents & the municipality) was published in this blog on the website of Klimaatverbond & the AT LAST Academy. Unlike other neighborhoods, this one was specifically selected to start with a neighborhood sustainability plan (WUP) because of the active residents group. Lessons include:

- The municipality should play a facilitating role, listen, take time to build a relationship with the group and be available on site in the neighborhood;
- Successful collaboration is possible when roles and expectations are clear. In De 'Worp' the WUP was written collaboratively.
- To reach a lot of residents a 'door hanger' with questions about sustainability measures was spread and handed out in home mailboxes. The active resident group picked them up a few days later when residents hanged them on their door. This proved to be a very successful method with a very high response and a great way to start the conversation.

residents, and industry partners. To help municipalities get a better understanding of the approach, Klimaatverbond wrote a [publication](#) on the methods in February 2025.

The social profiling method presented in the CoP proved valuable by analysing social cohesion and trust to identify entry points for engagement. It supports early involvement and tailored communication strategies, strengthening participatory SECAP implementation. Veenendaal is currently applying the method and sharing its experiences. The method has been published in a scientific [study](#).

The CoP explored practical approaches to address challenges in financing the energy transition. One municipality piloted an informed decision-making approach that treats residents as experts, engaging them in workshops on costs and subsidies, thereby combining financial clarity with local trust. Another municipality combined individual subsidy guidance with neighbourhood-wide funding strategies, creating a structured approach that attracted strong interest within the CoP.

Municipalities also learned that door-to-door engagement and local information points increase uptake of insulation measures under the SpUk LAI scheme. Using tools such as the Keuzewijzer, NPLW capacity tools, and the Utrecht Income Tool helps target support effectively and plan resources strategically.

Grid congestion is another pressing issue. Lessons included: improve data analysis to better predict electrification and demand growth, accelerate neighbourhood-level grid expansion, and make smarter use of existing capacity through demand-side management. A more decentralized system with local balancing can reduce peak loads and increase resilience. Klimaatverbond will explore this in the follow-up of AT LAST (see chapter on Way Forward). One municipality shared practical lessons, a.o. that strong municipal oversight is needed to avoid

poorly located transformer stations; coordination with other projects reduces duplication; and clear communication helps prevent resistance and misinformation among residents.

We learned that monitoring SECAPs is essential to understand the impact of actions and guide decision-making. Reliable implementation data is vital for policymakers, energy coaches, and practitioners, but it is often considered too technical. Frontrunner municipalities, such as Rheden, are willing to share their approaches and tools with interested municipalities. A key insight is to focus on three levels: area, building, and user. Together, these form the foundation for monitoring, policy analysis, and implementation. While much data is publicly available, user-level (building) data is often missing, and municipalities should prioritize collecting and using it.

Municipalities have learned that upcoming legislation will significantly strengthen their role and responsibilities in the heat transition. They will gain authority to designate areas for collective heating networks, set public ownership requirements, and regulate tariffs, while being responsible for feasibility and affordability. Additionally, they must develop and regularly update heat programs under the Omgevingswet, ensuring participation, monitoring, and

alignment with national energy and electricity laws. A key insight for this was to split the Beleidsnota Warmte and the Warmteprogramma to improve decision-making. In preparing the Warmteprogramma, they must balance investments, source allocation, underground space, cooling demand, and grid congestion, while ensuring affordable alternatives. Utrecht's use of the Klimaat Effect Atlas and a structured assessment framework offers a practical model for other municipalities.

Finally, municipalities learned that implementing the heat transition requires growing capacity and significant funding, which is not always fully available. Creating a dedicated municipal team—including a policy coordinator, neighbourhood project leader, and communication advisor—enables more effective planning, monitoring, and execution of insulation programs, warmtenet development, and local energy coaching. Working programmatically, integrally, and cross-sectorally, supported by tools like the NPLW Handreiking, helps municipalities allocate budgets, plan staffing, and decide which tasks to manage internally versus through regional collaboration or external expertise. CoP organisation for increased knowledge and understanding.

KPI table

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Netherlands	50	100	123	341	# people trained in total
Netherlands	300	600	7426	9511	# people reached through online communication (social media, LinkedIn, website), organization of- and participation in events and providing trainings
Netherlands	1	1	1	5	implementation sites

5.1.4 Sweden

Results

The Swedish pilot implemented a differentiated Community of Practice model centred on financial innovation, combining deep bilateral technical engagement with selective cross-municipal exchange. Rather than following a traditional multi-city CoP structure, Sweden adopted a thematic pilot cluster model organised into three complementary strands.

Environmental Expenditure Classification (Helsingborg, Falkenberg, Kristianstad)

This strand focused on developing a prototype methodology to classify municipal expenditure against ESRS environmental categories (E1–E5). Engagement progressed through structured phases, including an initial scoping meeting on 2 May 2024, governance scope clarification on 17 March 2025, receipt of financial datasets on 19 March 2025, technical deep-dive meetings on 7–8 May, 26 May, and 2 September 2025, and a conceptual validation meeting on 27 January 2026. The process resulted in agreement that invoice-level data should form the primary interpretation layer, General Ledger data should serve for aggregation and validation, confidence levels must be included, and some expenditure categories may remain unclassified. Falkenberg participated as a replication case, providing accounts and supplier ledger data in April and May 2025, while a peer-triggered exchange on 8 May 2025 highlighted differences in UNSPSC tagging practices and data maturity. Kristianstad expressed interest in further engagement following the prototype release in early March.

Climate Investment and Financing Gap Analysis (Malmö)

This strand focused on clarifying the financial feasibility of climate neutrality. Structured working sessions mapped total climate transition investment needs, identified public, EU, and philanthropic funding sources, estimated financing gaps, and explored private capital mobilisation requirements. The work shifted the conversation from ambition-driven planning to financially structured transition pathways, strengthening investment realism within climate planning.

Economic Modelling and Dashboard Testing (Mariestad)

Mariestad piloted the Viable Cities Finance Dashboard to assess its usability and relevance for municipal climate planning. Activities included dashboard demonstrations, a pilot testing phase, structured feedback on layout, export functions, and scenario tracking, and discussions on integrating agricultural and adaptation measures. Key outcomes included recognition of the importance of scenario documentation, confirmation that modelling tools must prioritise usability, and validation that financial dashboards complement energy modelling tools.

Cross-Strand Impact

Although Sweden did not implement a traditional CoP structure, meaningful knowledge exchange occurred through peer-triggered data requests, governance discussions bridging finance and sustainability departments, methodological validation meetings, and iterative tool refinement. The Swedish pilot functioned as a financial innovation laboratory, strengthening financial transparency, investment planning realism, data-driven climate governance, and pathways for scalability.

KPI table

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Sweden	5	5	5	5	Number of real life implementation sites
Sweden	20	100	20	115	Number of people trained
Sweden	300	600	19	160	Number of people reached through communication efforts

Activity table

#	Title of event	Date	Place & form	Participants	Short description
1	Initial scoping meeting – needs assessment	02 May 2024	Online	Helsingborg (Niklas, Milou) + SEI	Identification of municipal needs regarding financial innovation and sustainability spending analysis.
2	Governance scope clarification – municipal vs company data	17 March 2025	Online	Helsingborg finance + SEI	Decision on whether expenditure classification should include municipal companies.
3	Financial dataset received	19 March 2025	Data exchange	Helsingborg finance + SEI	Accounts-level financial data shared to initiate classification testing.
4	Financing discussion session	12 February 2025	Malmö	Malmö + SEI	Introduction to climate investment planning and financial structuring.
5	Investment needs & funding mapping session	25 March 2025	Malmö	Malmö + SEI	Mapping total transition investment needs and funding sources.
6	Financing gap & capital mobilisation session	29 April 2025	Malmö	Malmö + SEI	Estimation of financing gap and discussion of private capital mobilisation.
7	Pilot kick-off – Economic model for climate transition	20 March 2025	Online	Mariestad + SEI	Introduction of updated finance dashboard and modelling framework.
8	Dashboard demonstration & project plan approval	11 April 2025	Online	Mariestad + SEI	Demonstration of dashboard; agreement on testing phase.
9	Dashboard feedback & validation session	16 May 2025	Online	Mariestad + SEI	Structured feedback and refinement of modelling logic.
10	Introductory meeting – Financial classification methodology	16 April 2025	Online	Falkenberg + SEI	Introduction to ESRS-based expenditure classification approach.
11	Falkenberg accounts data received	17 April 2025	Data exchange	Falkenberg finance + SEI	Accounts-level data shared for preliminary assessment.
12	Invoice-level peer discussion (UNSPSC comparison)	08 May 2025	Online	Helsingborg, Falkenberg, SEI	Discussion on invoice-level classification feasibility and tagging differences.
13	Supplier ledger (leverantörsreskontra 2024) delivered	23 May 2025	Data transfer	Falkenberg + SEI	Supplier ledger shared for invoice-level testing.
14	Financial systems deep dive	7–8 May 2025	Helsingborg	Finance team + SEI	Review of financial codes and reporting dimensions.
15	Source reduction & workshop planning	26 May 2025	Online	Helsingborg finance + SEI	Reduction of source documents; HR involvement flagged.
16	Data refinement & HR alignment	02 September 2025	Online	Helsingborg finance + SEI	Supply chain, taxonomy and social dimension alignment discussion.
17	Conceptual & methodological validation	27 January 2026	Helsingborg City	Finance + sustainability staff + SEI	Agreement on prototype logic and confidence-level approach

Learnings on CoP organisation & methodology

The Swedish pilot adopted a differentiated format compared to other countries. Rather than establishing a new formal Community of Practice, activities were embedded within existing municipal collaboration structures and organised through targeted bilateral engagements. This approach generated several organisational and methodological insights.

Embedding activities within existing structures increases engagement.

Swedish municipalities already participate in national networks such as Viable Cities. Building on these structures reduced duplication and increased willingness to engage, as activities were perceived as complementary rather than additional reporting burdens.

A bilateral format enables deeper technical work.

Working municipality-by-municipality proved necessary for topics involving financial data, procurement systems, and governance structures. Sensitive financial datasets required trust, staged access, and iterative clarification. A large multi-city format would likely have limited this depth.

Prototype-first scaling strengthens credibility.

Developing and testing approaches initially with one municipality (Helsingborg) before replication (Falkenberg, Kristianstad) allowed methodological refinement prior to broader rollout. This sequencing reduced risk and increased confidence among participating cities.

Financial innovation requires cross-department alignment.

Discussions frequently involved finance, sustainability, procurement, and strategy departments. The process itself triggered valuable internal dialogue, even before tools were finalised. This highlights that organisational learning is as important as technical output.

Structured peer exchange can emerge organically.

Although Sweden did not organise a large formal CoP, knowledge exchange occurred through targeted moments, such as the discussion on invoice-level classification between Helsingborg and Falkenberg. This suggests that focused thematic exchange may sometimes be more effective than broad forums.

Iterative development is essential when working with municipal data.

Data availability, system limitations, and governance constraints required continuous adaptation. A rigid pre-defined methodology would not have worked. Flexibility allowed alignment with real municipal workflows.

Learnings on content & knowledge development

Across environmental spending classification, climate investment planning, and dashboard testing, the Swedish activities generated several content-related insights relevant for municipalities seeking to strengthen the link between climate ambition and financial decision-making.

Learnings on content & knowledge development

Environmental Spending & ESRS Logic

Municipal climate strategies are strong, but financial visibility is weak. Cities often have well-developed climate objectives but lack clear insight into how spending aligns with those objectives.

Existing accounting structures are not designed for environmental interpretation. Procurement categories, object codes, and cost centres reflect administrative logic rather than climate purpose. This limits their direct usefulness for sustainability analysis.

Invoice-level data significantly improves analytical quality.

More granular data increases classification confidence, especially for distinguishing mitigation and adaptation activities.

Confidence levels are necessary to avoid false precision.

Not all expenditure can be clearly classified. Introducing categories such as “high confidence,” “medium confidence,” or “requires review” improves transparency and credibility.

ESRS environmental themes (E1–E5) provide a useful structuring logic. Even without formal reporting requirements, ESRS themes help create a shared vocabulary between finance and sustainability teams.

Malmö – Climate Investment Planning

Translating climate targets into investment needs clarifies priorities. Quantifying required investment (SEK 8.7–11.9 billion) made the scale of transition tangible and actionable.

Emissions are concentrated in a limited number of sectors.

Road transport, district heating, and industry account for the majority of remaining emissions, enabling targeted intervention.

Financial barriers are unevenly distributed. While municipal balance sheets are relatively strong, households, SMEs, and industrial actors face higher investment constraints.

Administrative and regulatory barriers are often more limiting than capital availability. In several sectors, regulatory complexity or coordination challenges hindered investment more than financing capacity.

Mariestad – Dashboard & Adaptation Measures

Data availability determines operational feasibility. Some adaptation measures (e.g., rewetting) are locally relevant but cannot yet be operationalised due to limited data.

Smaller municipalities face analytical capacity constraints. Tools must therefore prioritise simplicity and usability.

Iterative testing improves relevance.

Direct municipal feedback during dashboard testing clarified which indicators were realistic and actionable.

Cross-cutting Insights

Linking emissions, investment, and budgeting improves governance coherence. When climate goals are connected to financial flows, decision-making becomes more structured and prioritised.

Technical tools alone are insufficient. Facilitated discussion and internal coordination are necessary to translate analytical outputs into governance change.

Scalability requires flexibility. Municipal size, data systems, and institutional capacity vary significantly. Tools must allow modular adoption.

From Climate Target to Investment Plan: Malmö's Climate Financing Analysis

Malmö used AT LAST support to move beyond climate target setting and assess the concrete financial implications of achieving climate neutrality by 2030. Rather than focusing solely on emissions pathways, the municipality examined what the transition would require in terms of real investment, sectoral prioritisation, and financing feasibility.

The analysis combined emissions data with sector-specific investment modelling and financial assessment. It identified that approximately 90% of Malmö's remaining emissions are concentrated in three sectors: road transport, district heating (including waste incineration), and industry. This concentration allows for targeted intervention rather than diffuse action.

To achieve the necessary reductions, additional climate investments of approximately SEK 8.7–11.9 billion will be required by 2030, corresponding to around 1% of local GDP. Priority investment areas include:

- *Electrification of transport*
- *Carbon capture and storage at major point sources*
- *Waste and plastics separation*
- *Cycling and public transport infrastructure*
- *Energy efficiency in buildings*
- *Emissions-free construction equipment*

A key insight was that financial barriers are unevenly distributed. While Malmö municipality itself has relatively strong financial capacity, households, SMEs, and certain industrial actors face greater challenges related to upfront investment costs and risk exposure. In several sectors, administrative and regulatory constraints were found to be as significant as capital availability.

The Malmö case demonstrates how linking emissions data with investment and financing analysis strengthens climate governance. By quantifying the financial scale of transition, the municipality was able to clarify priorities, identify bottlenecks, and support more structured dialogue on implementation.

This approach illustrates how climate neutrality strategies can evolve from ambition-driven planning toward financially grounded transition pathways.

5.2 SECAP implementation

5.2.1 Belgium

During the project, Belgian municipalities made steady progress in strengthening the foundations for SECAP implementation. The three original pilot municipalities — Bonheiden, Knokke-Heist and Oostende — advanced their project development, governance alignment and communication strategies. Kontich formally joined as an additional pilot municipality during the project, contributing both its ongoing neighbourhood-renovation trajectory and its communication practices. Hove remained engaged as a sounding-board municipality, providing a structured project note and practical insights that supported peer learning. Together, these municipalities demonstrated how CoP-driven collaboration can accelerate SECAP-aligned planning and implementation.

Results

Steps toward SECAP implementation

Strengthened project planning across pilot municipalities
Bonheiden developed several project fiches linked to neighbourhood renovation and submitted multiple proposals to the Technical Assistance Hubs (TEAH), showing a direct link between CoP participation and more structured SECAP aligned planning.

Knokke Heist progressed its neighbourhood based approach toward a local heat strategy, using thermoscans, targeted communication, and engagement tables to map renovation needs and plan collective actions.

Oostende identified 30 climate related projects in its updated climate plan, with the district improvement contract (“wijkverbeteringscontract”) forming a major SECAP aligned framework integrating energy, public space, mobility, water and urban regeneration.

Kontich, after becoming an official pilot municipality, contributed its ongoing neighbourhood trajectory, including a structured approach to energy coaching, resident surveys, communication tools, and preparation for both individual and collective renovation support. The project note clarifies clear SECAP aligned goals: 40% household CO₂ reduction by 2030, a 3% annual renovation rate, and collective renovation targets under the LEKP.

Hove, as a sounding board municipality, provided a nearly identical project structure and shared practical insights on governance, communication and engagement, which informed the work of all active pilot municipalities.

Improved governance and internal coordination

Staff turnover, elections and capacity shortages affected all Belgian municipalities, but the CoP supported them in developing more robust governance structures:

Oostende created a cross departmental governance structure with 16 staff members, streamlining coordination across climate, mobility, environment, water, social inclusion and urban planning.

Bonheiden and Knokke Heist used their project notes and CoP discussions to clarify responsibilities and prepare for their Multi Annual Plans.

Kontich addressed gaps caused by the absence of a sustainability officer, refining roles, communication tasks, and cooperation with energy coaches.

Hove documented that residents trusted municipal staff more than external facilitators, prompting a governance adjustment that was directly relevant to peer municipalities facing similar challenges.

These governance improvements create essential enabling conditions for SECAP implementation.

Better citizen engagement and tailored climate communication

AT LAST strongly influenced municipal communication strategies, an important SECAP lever:

Knokke Heist redesigned its communication by planning personal follow up after thermoscans, using renovation guides as trusted messengers.

Bonheiden applied iterative participatory sessions and visuals to develop neighbourhood visions, reinforced by a strong communication plan.

Oostende used interactive tools (e.g., maps summarising residents’ concerns) to ensure transparent communication and realistic expectation setting.

Quote Ostend

“By pooling and sharing knowledge, we work more efficiently and improve the quality of our plans.”

Kontich and Hove jointly created communication guidelines, tested them in their neighbourhood trajectories, and shared their good practices via the VVSG practice database — directly supporting SECAP’s behavioural and engagement components.

Advancing monitoring and datadriven SECAP implementation

The monitoring capacity of Belgian municipalities has improved significantly.

Oostende strengthened its internal data processes and now integrates participatory data into its planning work. All pilot municipalities tested practical data tools, such as Forms, Excel and Power BI, and they discussed workflows that comply with GDPR rules.

Kontich and Hove developed one of the most complete monitoring frameworks. Their framework includes EPC baselines, a clear segmentation of target groups, a link with EnergyID and a structured follow-up process for energy coaching.

These elements contributed to the national discussion on AT LAST KPI reporting, including energy savings, greenhouse gas reductions and investment levels.

Preparing for collective renovation and energy communities

Collective renovation has become a core component of SECAP implementation in Belgium.

Bonheiden explored new partnerships with social organisations to better reach vulnerable groups. Knokke-Heist analysed the potential for collective energy and heat solutions in selected neighbourhoods. Oostende worked on a long-term framework for collective investments through its district improvement contract.

Kontich and Hove committed to establishing energy communities by 2025. They assessed the potential for collective energy production and water use, and they linked collective renovation to mobility, green space and water management. Their approach offers a transferable blueprint that is fully aligned with SECAP principles.

Learnings

Across all municipalities, AT LAST contributed by:

- offering iterative feedback on project notes and neighbourhood plans
- providing tools for governance, communication and monitoring
- strengthening crossdepartment collaboration
- facilitating peer learning (e.g., insights from Hove’s trust based resident engagement, Kontich’s communication and energy coaching approach, Oostende’s transversal governance)
- and helping municipalities link SECAP objectives to practical, phased neighbourhood trajectories.

Municipalities indicated that several projects “entered a flow” thanks to AT LAST sessions and peer to peer guidance.

Conclusion

Despite capacity constraints and election related delays, Belgian municipalities made substantive progress toward operationalising their SECAPs. Bonheiden, Knokke Heist, Oostende and Kontich strengthened foundational elements of SECAP implementation — governance, planning, communication and monitoring — while Hove contributed critical transferable knowledge as a sounding board municipality. Through AT LAST, municipalities moved from broad climate intentions toward structured, actionable and neighbourhood centred plans, laying the groundwork for implementation in the 2026–2031 multi annual planning cycle.

KPIs	Target		Achieved	
	end value	beyond end value	end value	beyond end value
Investments in sustainable energy (in million euros)	1,25	9	0,94	10,8
Legislation & policy	6		7,6	

Trajectory of the Downtown District of Ostend

Ostend is reshaping its downtown district through an ambitious, long term neighbourhood trajectory towards a positive energy district. The city started in early 2025 with dozens of one on one interviews to capture what residents really need — from mobility and cooling to heritage, noise, water and liveability. That input was guiding the first studies, a deliberate choice after earlier projects showed that involving people too late can slow everything down.

A cross departmental team of 16 staff coordinates the work, linking climate, mobility, public space, social issues and spatial planning. The city also mapped resident feedback on an interactive “quote map,” used during workshops and meetings to make concerns visible at street level. Engagement remains a challenge, partly due to the many second home owners in the area, but tools like guided district walks, visualisations and climate dialogues are helping to bridge that gap.

This led to include technical studies on collective energy potential, green blue infrastructure, water buffering and mobility, as well as alignment with Ostend’s new spatial policy plan. The trajectory has evolved into a published tender with a model for complex inner city transitions, combining local voices to develop a positive energy district and a long term climate planning.

5.2.2 Italy

Results

In Italy, AT LAST contributed to advancing the implementation phase of existing SECAP commitments rather than introducing new strategic planning documents. While no new SECAPs were formally adopted during the project period, participating municipalities progressed on concrete actions aligned with their climate and energy objectives. Across the six pilot cities, AT LAST supported municipalities in moving from strategic intent to practical implementation. All the pilot initiatives (the establishment of Renewable Energy Communities, the creation of a One-Stop-Shop for renewable energy systems, and the development of regeneration strategies through co-design processes) were directly connected to actions outlined in local SECAP frameworks.

The contribution of AT LAST was primarily focused on reducing implementation barriers. Through technical assistance and the Community of Practice, municipalities were able to clarify procedural steps, address administrative and governance-related challenges, and better define how specific actions could be advanced in practice. In this sense, the project strengthened the capacity of local administrations to move forward with SECAP-related measures. Rather than replacing existing municipal processes, AT LAST complemented and reinforced them by helping structure initiatives that had already been politically endorsed but required further support to progress towards implementation.

The main added value of AT LAST in Italy lies in its contribution to bridging the gap between SECAP planning and practical execution. By supporting municipalities, the project helped translate climate commitments into more actionable steps. Although the project did not directly result in the adoption of new planning instruments, it contributed to making existing SECAP objectives more operational and implementable at local level.

Learnings

The Italian pilot experience highlighted the complexity of translating climate strategies into concrete local action. While participating municipalities demonstrated clear political commitment and alignment with SECAP objectives, implementation requires sustained technical support.

1. *Municipalities require operational support.* Limited technical staff and high administrative workloads often constrain implementation capacity. Even when strategic objectives are well defined, translating them into operational actions requires dedicated time and resources.
2. *Flexibility is essential.* The ability to adapt activities, adjust timelines and tailor support to the specific needs of each municipality proved essential for maintaining engagement and ensuring tangible results

KPIs	Target		Achieved	
	end value	beyond end value	end value	beyond end value
Investments in sustainable energy (in million euros)	0,63	5,25	3,96	18,48
Legislation & policy	12	12	12	12

From SECAP commitment to Renewable Energy Community: The Case of Rimini

Within its Sustainable Energy and Climate Action Plan (SECAP), the Municipality of Rimini had identified the promotion of renewable energy production and community-based energy models as a strategic priority. Translating this objective into a functioning Renewable Energy Community (REC) required navigating complex legal, administrative and governance frameworks.

Through AT LAST technical assistance, AESS supported the municipality in clarifying national regulatory requirements, defining an appropriate governance model and structuring the administrative procedures necessary for establishing the REC.

Parallel to the technical work, the project supported communication and engagement efforts, including the preparation of informative materials to inform potential members and stakeholders.

As a result, the municipality progressed from a strategic commitment in its SECAP to the formal establishment of a Renewable Energy Community, providing a concrete instrument to advance local renewable energy production and citizen involvement.

While the REC builds on broader national policy developments, AT LAST supported the Municipality in its journey. The case demonstrates how targeted technical support can accelerate the operationalization of SECAP measures at municipal level.

5.2.3 Netherlands

Results

Our CoP municipalities, like most Dutch municipalities, are in the process of updating their Heat Transition Visions into more detailed Heat Programmes (Warmteprogramma's). These programmes specify which neighbourhoods will phase out natural gas, which technologies will be used, and how residents and stakeholders are involved. To make these plans concrete, many pilot municipalities are or have been developing neighbourhood implementation plans (wijkuitvoeringsplannen) that turn strategic goals into practical, locally tailored actions.

After two years of participation in the AT LAST CoP, there are clear indications that municipalities have taken steps toward improving policy, municipal actions, and SECAP implementation. Between 2024 and 2025, the pilot municipalities adopted 13 policy or legislative documents. Six of these were preparatory steps toward Heat Programmes, which all municipalities expected to finalise within the next two years. At the time of writing, only Hoorn had completed its Heat Programme. In addition, only Rheden and Hoorn had finalised their neighbourhood implementation plans during the project period.

So how did the project contribute? In the AT LAST survey, 50% of respondents reported making changes to the management or implementation of SECAP-related projects as a result of CoP activities. Complemented by our internal evaluation, we can see that participation in the CoP has had a tangible impact on the planning practices of at least 5 local governments. One participant noted *“We apply the information from the CoP on a daily basis when developing our heat transition plans. When asked to what extent the CoP contributed to the development of plans, projects, or policies, 2 respondents indicated a strong contribution, 3 indicated some contribution, and 3 noted less contribution than expected. This was captured clearly by one participant*

who shared, *“It has given me practical tools and guidance to take forward. It has not yet led to concrete actions”*. None of the municipalities reported that the CoP had not contributed to policy development at all.

Whilst the above could give the impression limited progress was made, the opposite appears to be true. Municipalities actively prepared for implementation of SECAPs in the project lifespan. They informed residents about upcoming changes to build awareness and support for future SECAP measures, particularly at neighbourhood level. Many municipalities organised participatory processes to ensure plans reflected local needs—an approach consistently emphasised in the CoP. They also applied several methods and strategies discussed during the sessions. An overview:

Rheden

Rheden implemented a broad and integrated approach, including an energy shop, information events, community dialogues, insulation support programmes, and initiatives such as neighbourhood deals and local repair teams.

Lochem

In Lochem, cooperative LochemEnergie coordinated information sessions on insulation, subsidies, and green roofs, actively facilitated by community motivators and energy coaches.

Horst aan de Maas

Horst aan de Maas implemented a mix of communication and support measures, such as webinars, information sessions, and energy advice. A strong focus was placed on tackling energy poverty through insulation campaigns (NIP), alongside support for local energy communities like EnergieKronenberg.

Hoorn

Hoorn has been actively developing neighbourhood implementation plans, with a participatory process launched in 2025. This included surveys, community events, ongoing engagement with resident groups, home energy scans, and public information meetings.

Deventer

Deventer organized a range of practical activities, including collective insulation actions, thermal imaging campaigns, tailored advice, and outreach through local events and walk-in sessions.

Borger-Odoorn

In Borger-Odoorn, multiple villages benefited from information and group purchasing events, alongside the rollout of a broader municipal insulation programme.

Berkelland

Berkelland provided demand-driven support via the Energieloket Achterhoek and is exploring the potential for small-scale energy or heat communities through ongoing feasibility studies.

Arnhem

Arnhem has focused on participatory approaches, including resident panels, working groups, and targeted studies in several neighbourhoods. The municipality also supports local initiatives, offers funding instruments, and is moving toward more area-based communication and support. The municipality initiated the menu approach of the of the integrated neighbourhood approach in 1 neighbourhood.

Learnings

Municipal Capacity

A key learning from the project is that structural capacity constraints within municipalities significantly limit implementation. Municipalities in the Netherlands face a major challenge: they are responsible for transforming the built environment, often without sufficient organisational capacity. Policy officers frequently feel overwhelmed by the volume of work and the need to keep up with new policies, budgets, and regulations. Combined with limited staffing and high turnover, these constraints affect how much a project like AT LAST can directly influence policy change.

Although municipalities responded positively to CoP knowledge sharing, not all could immediately apply new methods or approaches. For example, the integrated neighbourhood approach was widely welcomed in principle. Klimaatverbond sought to support CoP members in applying this approach, but practical implementation proved difficult due to limited capacity and resources.

Several lessons emerge from this.

- Municipalities need to invest in efficient capacity planning—a topic we therefore addressed in a dedicated CoP session. Dedicated tools and methods are available to support municipalities in this, which Klimaatverbond promoted through social media.
- The team composition and a clear description of roles and responsibilities can give the team working on the energy transition in the municipality direction to work more integral, combining different sectors.
- Additionally, a more hands-on approach may be required to guide junior officers step-by-step in developing solutions. Klimaatverbond will explore a more practical, hands-on CoP format as a follow-up to AT LAST (see AT LAST legacy plan).

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Investments in sustainable energy (in million euros)	14,4	36	12,5	57,3	€ additional costs per house equivalent * number of houses targeted for transition measures (e.g., network upgrades, gas removal, district heating, installation costs and insulation of dwellings).
Legislation & policy	20	20	13	43	End value: includes policy briefs, planning notes, environmental effect reports, subsidy frameworks, and both draft and final versions of heat programmes. Beyond end value: includes a.o. heat programmes and related implementation frameworks, neighbourhood implementation plans (WUPs) & environmental and spatial plans.

Integrated neighbourhood approach

The Integrated Neighbourhood Approach was developed by Bouwhulpgroep (a Klimaatverbond partner in AT LAST) within the Horizon2020 project Save The Homes and tested in a successful pilot in Rotterdam through a One-Stop-Shop model that reduced complexity for residents, secured municipal funding and support, and built on the active involvement of residents.

Within AT LAST, KVN organised sessions to present the approach to pilot municipalities, generating strong interest. The city of Arnhem began exploring the approach with Bouwhulpgroep in 2025, together with the neighbourhood maintenance company. The aim is to develop a widely supported renovation menu for around 2300 households, including demonstration homes. This menu defines concrete renovation measures per housing typology, including costs, subsidies, and implementation pathways. A core element is the active engagement and guidance of residents throughout the process. By the end of AT LAST, the orientation phase is completed. Work continues on defining building components for the menu, and resident outreach will start soon.

CoP contribution to SECAP implementation

The CoP aimed to contribute to the development, improvement or implementation of SECAPs. Our survey showed that two municipalities reported applying AT LAST insights extensively in their policy planning, development, or implementation, three applied them to some extent, and three applied the insights less than expected. No municipality reported not using the information at all. While the picture is somewhat mixed, the results suggest that for at least half of the municipalities, the CoP provided relevant knowledge that helped them implement SECAPs more effectively. Our interpretation and key learnings from this are as follows:

- The CoP addressed relevant topics, but its influence depended on participants' experience and role within their organisation. Some members already had greater access to information, while others were less aware. A key learning is to better tap into existing knowledge, contribute to it, and ensure it reaches those less connected or active in sharing networks.
- Even partial application proved valuable: small adjustments, tailored tools, or practical tips from the CoP helped municipalities overcome challenges and improve the quality and feasibility of their plans.
- Structured knowledge sharing supports uptake, but additional support may be needed: while some officers benefited directly from the CoP, time constraints and specific challenges mean that others could benefit from hands-on guidance or technical assistance.

In terms of SECAP implementation, we learned that delays in wijkuitvoeringsplannen were often linked to trends that ultimately increase efficiency and project success:

- Successful implementation ultimately depends on residents, since it is in their homes that the changes must take place. When residents are not involved from the outset, municipalities often had to take a step back to ensure proper engagement before moving forward. This need to facilitate thorough participation has been a primary reason for the delayed neighbourhood implementation plans (wijkuitvoeringsplannen). Reflecting this, the main focus of the pilot municipalities' work during the project was on resident engagement and awareness-raising activities, ensuring that implementation could proceed effectively once buy-in was secured.
- Municipalities increasingly adopt an integrated approach, considering not only heat but also electricity, mobility, and other sectors (e.g., Arnhem). While this adds complexity and can slow timelines, it improves the feasibility and overall efficiency of solutions, making it a necessary approach for success.
- Strictly following administrative neighbourhood boundaries—a common practice in the Netherlands—is not always practical. Many municipalities instead focus on smaller units, such as parts of neighbourhoods (Hoorn), rural areas (Berkelland), or defined energy zones (Arnhem), enabling smarter grouping and more targeted interventions.

5.2.4 Sweden

Results

In Sweden, AT LAST activities contributed to SECAP implementation primarily by strengthening the financial, governance, and analytical foundations required to move from climate ambition to operational decision-making. Rather than directly implementing physical measures or revising SECAP documents, the Swedish pilot focused on improving the structures that enable implementation to occur more effectively and transparently.

Strengthening the Financial Basis of Climate Action

One of the main structural barriers identified across municipalities is the limited visibility of how financial flows align with climate objectives. While SECAPs articulate mitigation and adaptation measures clearly, municipal accounting systems are typically organised by administrative logic rather than environmental purpose. The environmental spending classification work with Helsingborg, Falkenberg, and Kristianstad addressed this gap by exploring an ESRS-aligned logic (E1–E5) for interpreting municipal expenditure. This pilot supported municipalities in increasing transparency of climate-relevant spending, improving internal dialogue between finance and sustainability departments, identifying areas where mitigation and adaptation expenditures are difficult to distinguish, and highlighting data limitations that constrain monitoring. Although still in prototype phase, this approach strengthens SECAP implementation by making climate ambition more financially traceable and measurable within existing municipal systems.

Enhancing Investment Planning and Feasibility

In Malmö, the focus was on translating climate neutrality objectives into concrete investment requirements and financing conditions. By quantifying the additional investment needed to reach climate neutrality (SEK 8.7–11.9 billion by 2030), the analysis shifted the discussion from

targets to feasibility. This work contributed to SECAP implementation by clarifying sectoral priorities, identifying financial and regulatory bottlenecks, supporting a more structured sequencing of measures, and highlighting the uneven distribution of financial barriers across households, SMEs, and industry. By linking emissions reduction pathways with investment logic, Malmö strengthened the operational realism of its climate strategy.

Improving Monitoring and Indicator Development

Through dashboard testing in Mariestad, the pilot examined the feasibility of tracking adaptation and agricultural measures within a structured analytical tool. Testing revealed significant data constraints for certain locally relevant measures, the need to prioritise indicators with reliable and comparable data, and the importance of usability for municipalities with limited analytical capacity. This iterative testing approach contributes to SECAP implementation by improving the quality and feasibility of monitoring frameworks, particularly for adaptation-related actions that are often less systematically tracked.

Governance and Cross-Department Coordination

Across all Swedish activities, a recurring outcome was improved dialogue between finance, sustainability, procurement, and strategy functions. Even before full tool deployment, discussions on classification, investment modelling, and data interpretation triggered internal coordination processes. These governance effects are critical for SECAP implementation, as climate measures often require cross-department collaboration, and improved shared understanding of financial and analytical structures reduces fragmentation.

Strategic Contribution

Taken together, the Swedish pilot demonstrates that strengthening implementation does not only depend on launching new measures, but also on improving financial transparency, investment realism, data-driven monitoring

capacity, and cross-department governance alignment. By focusing on these structural enablers, AT LAST supported Swedish municipalities in reinforcing the operational backbone of their SECAPs, highlighting that implementation is not solely about executing projects, but also about ensuring that planning, budgeting, investment, and monitoring systems are aligned with climate objectives.

KPIs	Target		Achieved	
	end value	beyond end value	end value	beyond end value
Investments in sustainable energy (in million euros)	28,8	72,0	1.175,0	3.620,0
Legislation & policy	12	12	15	75

Learnings

The Swedish pilot generated several insights into the structural conditions that shape the implementation of SECAPs at municipal level. Rather than focusing on the addition of new measures, the work revealed systemic enablers and constraints that influence whether climate plans translate into operational action.

Financial visibility is a prerequisite for implementation. Municipalities often have clear climate ambitions but lack transparency on how existing budgets align with these objectives. Without structured insight into spending and investment flows, it is difficult to prioritise actions or assess whether financial resources support stated goals.

Investment realism strengthens implementation credibility. Quantifying the scale of required investment, as demonstrated in Malmö, shifts climate neutrality from a strategic ambition to a financially grounded transition pathway. This increases clarity in prioritisation and strengthens political and administrative ownership.

Data constraints limit monitoring capacity. Adaptation and land-use measures are often harder to track due to fragmented or unavailable data. SECAP implementation therefore depends not only on policy ambition but also on the availability of reliable indicators and analytical capacity.

Cross-department coordination is essential. Climate action frequently requires collaboration between finance, sustainability, procurement, and technical departments. Fragmented governance structures slow implementation, while structured dialogue improves alignment and feasibility.

Administrative and regulatory barriers can be as limiting as financial ones. In several sectors, obstacles to implementation were linked to regulatory complexity, coordination challenges, or institutional fragmentation rather than insufficient capital alone.

Incremental and iterative approaches are more realistic than comprehensive redesigns. Municipal systems are complex and resource-constrained. Implementation is more effective when tools and methods are introduced gradually, tested, and refined over time.

Strengthening SECAP Implementation Through Financial Transparency: The Helsingborg Case

Helsingborg identified a structural challenge common to many municipalities: while climate objectives were clearly articulated in strategic documents, there was limited visibility on how municipal spending aligned with these objectives. Budget and procurement systems were organised according to administrative logic rather than environmental purpose, making it difficult to track mitigation and adaptation expenditure.

Through AT LAST, Helsingborg engaged in a structured process to explore whether its financial data could be interpreted using the logic of the European Sustainability Reporting Standards (ESRS), particularly environmental themes E1–E5. Rather than aiming for full ESRS reporting, the objective was to test whether this framework could improve internal understanding of climate-related spending.

The process involved:

- Reviewing object codes, project codes, and procurement categories
- Assessing the feasibility of invoice-level classification
- Discussing the distinction between mitigation and adaptation spending
- Identifying areas where expenditure could not be clearly classified

A key outcome of the discussions was the recognition that financial interpretation must include confidence levels (e.g., high, medium, requires review) to avoid false precision. The municipality also identified that General Ledger data is reliable for aggregation, but insufficient alone for environmental interpretation without invoice-level detail.

Although the prototype remains under refinement, the process itself strengthened cross-department dialogue between finance and sustainability teams. It improved awareness of structural data limitations and highlighted the importance of financial transparency as a prerequisite for effective SECAP implementation.

The Helsingborg case illustrates that implementation is not only about launching new measures, but also about aligning budgeting systems with climate objectives to enable more informed decision-making.

5.3 Environmental impact

5.3.1 Belgium

Results

The environmental impact of the Belgian pilot is expected to materialise over the coming years, as most measures developed during the AT LAST project are long term, neighbourhood based actions that require phased implementation. While concrete energy savings, emission reductions and renewable energy outputs will only be visible once renovation projects, district plans and collective actions are fully rolled out, the groundwork established during the CoP already enables these future impacts. Municipalities advanced their monitoring methods, identified potential impact pathways and defined the building blocks for calculating primary and final energy savings, renewable production and avoided emissions. These preparatory steps—such as EPC baselining, mapping collective potential, identifying resident groups and improving data collection—form the foundation for robust impact reporting in the next project phase.

Across Belgium, municipalities linked their SECAP priorities to concrete neighbourhood projects, heat planning, renovation trajectories and energy community development. By clarifying project scopes, estimating budgets and identifying the number of households per neighbourhood, local authorities now have the necessary information to translate their SECAP ambitions into measurable environmental outcomes. As such, this chapter outlines the expected environmental impacts of the Belgian pilot and explains how the work carried out in AT LAST prepares municipalities to deliver and track these impacts in a structured way.

Learnings

The Belgian pilot demonstrated that achieving meaningful environmental impact requires strong preparatory processes, clear data structures and realistic planning. Municipalities learned that early investment in monitoring—such as EPC baselines, household segmentation, and simple but reliable data tools—greatly improves their ability to estimate potential energy savings and emissions reductions later on. CoP discussions also highlighted that neighbourhood based approaches generate broader environmental co benefits: opportunities for nature based solutions, improved water management, cooling strategies and collective mobility options.

A key learning was that environmental impact cannot be isolated from governance and communication. Municipalities found that transparent communication and resident involvement are essential for achieving renovation depth and participation rates required to reach SECAP aligned impact. Likewise, strong internal coordination helps ensure that energy, water, mobility and spatial planning objectives reinforce each other rather than compete. The pilots also

showed that collective renovation models and energy communities have high potential environmental impact, but only if supported by phased implementation, crossdepartmental collaboration and accessible engagement tools. These insights will inform the way Belgian municipalities design and deliver climate related projects in the coming years.

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Primary Energy savings	8,69	20,28	4,35	10,15	GWh/year
Final Energy Savings	6,05	14,22	3,20	7,53	GWh/year
Renewable Energy generation	0,70	5,95	0,27	1,33	GWh/year
GHG emissions reduced	4.131	20.657	2.217	13.301	Tons of CO2eq/year

5.3.2 Italy

Results

The environmental impact of the Italian pilot is expected to materialise progressively over the coming years, as the initiatives supported through AT LAST mainly consist of structural measures requiring phased implementation. Their full effects in terms of energy savings, renewable energy generation and emission reductions will become visible as the supported actions move from preparation and activation to full operation.

The pilot has already generated a clear quantified environmental potential, as reflected in the KPI framework. Across the six pilot municipalities, AT LAST supported initiatives directly linked to renewable energy production, energy efficiency, sustainable mobility and climate adaptation objectives already embedded in local SECAPs. In this sense, the project contributed not only to advancing implementation processes, but also to strengthening the conditions for future environmental results.

The Italian pilot has laid the groundwork for measurable improvements in renewable energy generation, energy savings and emission reductions. By helping municipalities clarify procedural steps, strengthen governance arrangements and move forward with actions that were already identified as priorities, the project reduced implementation barriers and increased the likelihood that local climate measures will translate into tangible environmental outcomes over time.

Learnings

The Italian pilot highlighted several lessons regarding the environmental dimension of local climate action.

1. Environmental impact often depends on long implementation timelines. Many of the actions supported through the pilot have strong environmental potential, but their measurable effects are only likely to emerge once the relevant structures, investments or governance arrangements are fully in place.
2. Enabling conditions matter for environmental performance. Technical assistance, administrative clarification and local coordination are not environmental impacts in themselves, but they are often necessary preconditions for energy savings, renewable energy generation and emissions reductions to materialise.
3. Adaptation measures require broader ways of understanding impact. In adaptation-focused pilots, environmental value is not limited to immediately quantifiable indicators. Improved urban resilience, better public understanding of Nature-Based Solutions and stronger integration of adaptation into local planning are also important results that shape longer-term environmental outcomes.

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Primary Energy savings	0,99	2,31	14,43	76,16	GWh/year
Final Energy Savings	0,64	1,5	8,09	40,43	GWh/year
Renewable Energy generation	0,8	4,2	5,81	29,04	GWh/year
GHG emissions reduced	729	3647	3321	16607	Tons of CO2eq/year

5.3.3 Netherlands

Results

The environmental impact of the Dutch pilot is expected to materialise gradually over the coming years, as the AT LAST interventions primarily supported municipalities in developing and implementing energy transition strategies. Any energy savings or emission reductions will become visible only once concrete measures—particularly neighbourhood-level implementation plans (*wijkuitvoeringsplannen*)—are finalised and executed.

The environmental impacts of the project are captured in the EU LIFE KPIs. Given the indirect nature of the project's contribution, we need to explain our methodology. We focused calculations on pilot neighbourhoods, as the CoP sessions primarily targeted improving the SECAPs in these neighbourhoods. Eight out of ten municipalities selected one or more pilot neighbourhoods and defined targets (These varied per municipality—ranging from 250 new energy labels A/B, 20% CO₂ reduction by 2030, to fully gas-free neighbourhoods by 2050). For each neighbourhood, a preferred retrofitting approach was determined (e.g., gas-to-all-electric or district heating), with insulation measures assumed in all approaches.

We used data from the Netherlands Environmental Assessment Agency (PBL) comparing a business-as-usual scenario with different retrofitting strategies to estimate the potential environmental impact of the preferred approach. A key challenge was distinguishing impacts at the end of the project versus beyond five years. Following EU LIFE KPI guidance, and given municipal commitment to target specific neighbourhoods, one could assume all measures are triggered by project end; however, this would overstate short-term impact. Instead, the total expected impact was evenly allocated across periods within the target timeframe, starting from the project start (end of 2023).

We acknowledge that the reported KPIs are indirect results and cannot be solely attributed to our project, as other actors also contributed significantly. However, by focusing our KPIs on the impacts triggered in the identified neighbourhoods, the impacts reported have a concrete link with the AT LAST CoP activity. In the CoP, we supported municipalities in improving the development and implementation of these plans. As such, the project is assumed to have contributed to expected benefits, including reductions in natural gas consumption and CO₂ emissions, and progress toward the national goal of making millions of Dutch homes gas-free by 2050.

While we expect that learnings will gradually inform policies and plans in other neighbourhoods or municipalities, this potential underestimation of broader impact is balanced by the risk of overestimating local impact, given contributions from other actors and the assumption that all plans will be implemented as intended.

Detailed methodology, including data sources and calculations, will be provided in the KPI deliverable.

Learnings

We learned that it pays off to start small and simple before moving on to the more complex neighbourhoods. We noticed several municipalities took a smaller focus than the large administrative neighbourhoods. 2 other municipalities did not identify a pilot location by the end of the project, because they started with a neighbourhood that proved to ambitious – for instance due to the great disparity in insulation level or the complexity in applying district heating approaches. They are now considering to start in an easier neighbourhood to learn and test, before moving on to the more complicated neighbourhoods.

There is a clear shift in our pilot neighbourhoods towards all-electric solutions rather than district heating, reflecting a broader trend across the Netherlands. We learned that slow design and implementation of neighbourhood plans can have unintended consequences for the energy transition, particularly when combined with a rapid increase in subsidized individual heat pumps, which can undermine the feasibility of district heating if too many residents adopt them. Although the PBL found that district heating represents the lowest-cost solution for roughly one-third of neighbourhoods, we saw that several planned projects

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Primary Energy savings	4,35	10,15	7,6	26,2	GWh/year
Final Energy Savings	3,48	8,11	9,5	32,9	GWh/year
Renewable Energy generation	0,35	3	7,8	27,2	GWh/year
GHG emissions reduced	2774	13871	1466	6727	Tons of CO ₂ eq/year

* *warmth generation through renewable source such as district heating & heat pumps*

did not proceed—either because they were not financially viable, deemed to ‘complex’ or because residents were reluctant due to concerns about costs, limited choice, and general uncertainty. In contrast, heat pumps can be installed individually and much more quickly. A key learning is that municipalities must carefully balance thorough research and community participation with timely decision-making, as delays can affect the economic viability of long-term, collective heating solutions and risk discouraging residents and energy collectives eager to act but facing prolonged municipal uncertainty. The growing tendency of municipalities to adopt all-electric solutions as the default in neighbourhood plans may be a direct consequence of this dynamic.

A key lesson learned regarding the impact of SECAPs is the importance of clearly defining targets. Generic goals, such as becoming “gas-free,” do not provide sufficient guidance for decision-making. We learned that having insight into the total energy demand of a municipality, expressed in GWh or GJ, is crucial to understanding the scale of the task, both in terms of supply and demand.

From observing the diversity of strategies being explored, we also learned that achieving greater energy efficiency typically requires more complex and integrated systems that combine multiple demand- and supply-side solutions. Complex solution can offer the greatest efficiency. At the same time, municipalities must carefully consider how complex their chosen system can realistically be and when to take action, accepting certain inefficiencies as part of the transition process.



5.3.4 Sweden

Results

In Sweden, AT LAST did not directly implement physical climate measures. Instead, the activities strengthened the financial and governance foundations that enable long-term SECAP implementation.

The environmental spending classification work with Helsingborg and Falkenberg improved visibility of climate-relevant expenditure within municipal financial systems. This supports more transparent monitoring and prioritisation of mitigation and adaptation measures.

In Malmö, the climate investment analysis quantified the additional investment required to reach climate neutrality and identified priority sectors with the highest emissions impact. This strengthened the financial realism and sequencing of mitigation actions.

Dashboard testing in Mariestad clarified data constraints and improved understanding of feasible monitoring indicators for adaptation measures.

While no direct emission reductions can be attributed to the project period, the Swedish pilot enhanced financial transparency, investment planning, and monitoring capacity, thereby strengthening municipalities' ability to implement climate actions over time.

Learnings

The Swedish pilot highlights that environmental impact in advanced municipal contexts is increasingly constrained not by the availability of climate measures, but by the ability to integrate financial, analytical, and governance systems into decision-making processes.

Environmental impact is limited by decision-system alignment rather than ambition.

Municipalities already have well-developed climate strategies and identified measures. However, environmental outcomes depend on whether these measures are embedded in budgeting, procurement, and investment planning processes. Without this alignment, even technically sound measures risk remaining under-prioritized or delayed.

Financial structuring determines the pace of environmental impact.

The pilot demonstrated that the timing and scale of emission reductions are strongly influenced by how investments are structured and sequenced. In particular, the ability to coordinate public and private capital, manage risk distribution, and align financing timelines with implementation pathways is a key determinant of when environmental benefits materialise.

Granularity of data directly affects environmental decision quality.

Access to more detailed financial and operational data (e.g. invoice-level information) significantly improves the ability to identify, prioritise, and monitor climate-relevant actions. Conversely, aggregated data limits the precision of environmental analysis and can lead to misallocation of resources or overlooked opportunities.

Trade-offs between analytical complexity and usability influence impact.

While advanced modelling tools can provide deeper insights into environmental outcomes, their effectiveness depends on usability within municipal contexts. Tools that are too complex risk limited adoption, particularly in smaller municipalities, reducing their practical contribution to environmental impact.

Environmental impact pathways differ across mitigation and adaptation.

Mitigation-related actions (e.g. energy efficiency, transport electrification) can be more directly linked to quantifiable outcomes, whereas adaptation measures often require proxy indicators and longer time horizons. This difference necessitates differentiated approaches to monitoring and evaluation within municipal systems.

KPIs	Target		Achieved		
	end value	beyond end value	end value	beyond end value	
Primary Energy savings	8,7	20,3	2012,4	10.062,0	GWh/year
Final Energy Savings	6,96	16,22	2010,0	10.050,0	GWh/year
Renewable Energy generation	0,7	6	0,3	1,3	GWh/year
GHG emissions reduced	4024	20121	334.348	1.671.742	Tons of CO2eq/year

Institutional coordination is a prerequisite for scaling environmental impact.

The pilot showed that environmental outcomes depend on coordinated action across finance, sustainability, procurement, and planning functions. Fragmentation between these domains slows down implementation, while improved coordination enables more efficient translation of climate strategies into operational actions.

Reducing uncertainty is as important as increasing investment.

In several cases, delays in implementation were linked not to lack of funding, but to uncertainty around data, methodologies, or regulatory conditions. Strengthening clarity and confidence in decision-making frameworks can therefore unlock environmental impact more effectively than increasing resources alone.



6. Recommendations & concluding remarks

Based on the experience, lessons and insights we gained during the project, we defined different recommendations for the future. Not only focussing on how to set up and organize an effective Community of Practice, and which key factors should be considered when starting such a CoP (6.1), but also on what to do to make it as impactful as possible (6.2). Next to that, we defined some strategic recommendations specifically for municipal policy development and planning (6.3). Furthermore, we also defined some specific actionable recommendations for specifically for participating municipalities (6.4) on key factors for successful implementation of local climate policy, for example around community engagement. And finally, we conclude with some overall, concluding remarks (6.5).

Next to that, we also defined some specific actionable recommendations for participating municipalities (6.3) on key factors for successful implementation of local climate policy, for example around community engagement. We also defined some strategic recommendations specifically for municipal policy development and planning (6.4). And finally, we conclude with some overall, concluding remarks (6.5).

6.1 Key considerations when starting a CoP

It is important that the format and scale of a CoP always follow its primary objective. Different goals require different levels of interaction, group size and facilitation methods. Therefore, it is essential to answer key questions to help define the most appropriate approach to be effective. We have listed key considerations to help define the most appropriate approach and ensure that the CoP delivers concrete value for the participating municipalities:

1. Define the main aim of your CoP; is it mainly to exchange information and in-depth knowledge? Is it to build a strong, coherent community?
 2. If the main aim of your CoP is to build a community, setting up a more in-depth CoP with a smaller number of municipalities from a smaller region is most suitable; approaches recommended are field visits, in-person gatherings, creative exercises for information exchange and limited 'presentations'.
- If the main aim of your CoP is in-depth knowledge sharing, an online CoP with a larger number of participating municipalities who can share knowledge, and exchange will be more effective. Approached recommended are sessions of 1,5-2 hours (including a break). With maximum 2 presentations and ample time for questions. It is recommended to ensure active facilitation and discussion sessions in which participants are encouraged to share the experience from their municipalities or their learning needs. Useful tools are MIRO boards, Mentimeter and prepared discussion propositions.
 - Future Communities of Practice should explicitly respond to limited municipal capacity. Start with a thorough assessment of existing structures, networks, knowledge, and support mechanisms to determine where real added value can be created. Identify what already exists and which gaps remain. By focusing on these gaps, rather than duplicating what already exists, CoPs maximise impact while minimising participants' time investment, making the most of limited municipal capacity.

6.2 Preconditions for a successful CoP

When you have set up your CoP with a clear aim and target group, we found that it is important to maintain a strong focus on practical, peer-based work during the CoP-sessions. We have learned that practical exercises around project scoping, timing, and planning have supported participants in structuring their ideas and translating them into actionable steps. Peer feedback and discussion also played a central role in refining project concepts and creating a shared learning environment.

Based on these observations, we have formulated the following recommendations for future CoP editions that ensure a format that are grounded in real municipal practice, flexible in delivery and focused on supporting policy officers in turning plans into concrete action.

- Continue using hybrid formats to balance accessibility with in-person interaction, especially for practical exercises and site visits.
- Strengthen peer learning by allocating sufficient time for feedback, discussion, and exchange of experiences between municipalities.
- Keep communication guidance practical, focusing on clear language, realistic messaging, and concrete tools for handling resistance and engagement.
- Support data-driven working with simple, purpose-driven tools and clearer guidance on how to use data for decision-making and reporting.
- Address governance constraints by encouraging early planning, clear milestones, and internal coordination to manage time pressure and staff changes.

- Complement e-learning with live, practice-oriented sessions, as direct exchange proved more effective under time constraints.
- Use existing expertise, both from other organisations as from within the municipalities. Policy offers have more expertise than they sometimes realize themselves. Asking them to present their municipality's methods is not only an easy way to organise a quality presentation for a CoP, but it also ensures that information is relatable for other participants and it contributes to a recognition of their – or their municipalities' - efforts.

6.3 Strategic recommendations for policy development and planning

During the project we have learned – especially from the Swedish pilot – that strengthening implementation of local climate policies not only requires attention to measures and targets, but also to the financial, governance, and data systems that underpin municipal decision-making. There are structural enablers that can play a decisive role to determine whether climate ambitions are operationalised in practice such as financial transparency, investment planning, and monitoring frameworks. Therefore, we have formulated some specific, strategic recommendations for policy development and planning. They focus on making tools and methods accessible, actionable, and relevant for municipalities, while supporting meaningful collaboration across departments and stakeholders:

- Integrate climate, energy and social policies. Linking environmental goals with social inclusion and local development increases public acceptance and impact. This will support municipalities to pursue integrated SECAP implementation across sectors.
- Make sure to support and enable scalability. Provide clear guidelines and templates to help municipalities replicate successful approaches.
- Its important to start with simple measurements and learn from implementation. Set up learning systems, so you can improve understanding and refine methods over time.
- European methods, like the ESRS (European Sustainability Reporting Standards), can be used as a voluntary analytical framework. Only use it if it provides advantages to the implementation of your plans.
- Complement climate action plans with explicit investment and financing assessments. Prioritise measures based on both emissions impact and financial feasibility.
- Identify and address administrative and regulatory barriers as part of climate implementation strategies.
- Institutionalise monitoring to guide policy adjustments and measure impact. Build an accessible, low barrier monitoring system from the start of project implementation. For example, a dashboard with basic reliable and comparable data. Focus on high-priority and easy to gather data measurements and consider extending the system later in the process. Adopt a framework to enable indicators to evolve as the data improves. Make sure the tool is usable with little capacity. In the Netherlands it is recommended to collect and use data at area, building, and user level.
- Ensure that methods and tools can be developed and implemented relatively easy, and allow for iterative development, scalability, adaptability and learning-by-doing through the implementation process. It is important to start small, test with pilots, ensure feedback loops and scale up successful methods.

6.4 Actionable recommendations for municipalities

Not only the format and set up of the Community of Practice is important for successful implementation and impactful local climate and energy policy. Therefore, we have also formulated actionable recommendations specifically for municipalities. These can be implemented regardless of the active participation in a Community of Practice and are specifically suitable for small to medium sized municipality officials.

Firstly, an important topic we found was the engagement of local communities and citizens:

- Engage citizens early. Invest time and resources in early communication and participation to build trust and long-term involvement, using diverse communication channels. In CoP sessions in several AT LAST countries, communication-focused sessions have helped municipalities to reflect on how they engage citizens and stakeholders in a realistic and transparent way. There are existing and proven effective participatory tools. Use and replicate these tools that have already been developed. Formats such as guided walks and mapping workshops are effective, adaptable and transferable across municipalities and policy areas.
- Take into consideration non-municipal stakeholders (households, SMEs, industry) in your plans and develop targeted support mechanisms, for the actors that play an essential role in the implementation of your plans. This also means developing plans with residents, not for them. Anchor policies and participation strategies in local concerns and existing community networks.
- For this purpose, invest in visible, personal engagement. Door-to-door outreach and trusted local information points significantly increase participation and uptake.

- Support local initiatives structurally. actively support local initiatives because they not only deliver substantial contributions to renewable energy goals, but also create ownership and social inclusion. To unlock this potential, municipalities need to move beyond transactional project support and instead foster long-term partnerships by creating “opgroeirumte” (Dutch concept to; enable space to build a relationship between the municipality and local communities) to build long-term and equal collaboration. This way, municipalities strengthen both the effectiveness and legitimacy of their energy policies.
- Ensure long-term follow-up. Include monitoring mechanisms to assess participation, behavioural change and outcomes over time.

Secondly, there are some recommendations specifically linked to the policy topic, the local energy transition:

- Integrated approaches to the needs of residents. Align personal housing needs with scalable, integrated, collective implementation models and link to other concerns in the neighbourhood.
- Apply integrated approach to SECAPs, by not only focusing on heating, but also mobility, social issues, and emerging challenges like rising cooling demand. This can be more complex to implement, but it ensures that policies are relevant to residents’ everyday lives and increases public support for climate action. Integrated planning also improves policy coherence, aligning measures across sectors and connecting them to broader local priorities. Despite the added complexity, this approach is worthwhile because it produces more effective, inclusive, and implementable climate and energy strategies.
- Address grid congestion proactively. Improve demand forecasting, strengthen municipal oversight, and invest in local balancing and demand-side management.

And thirdly, we have found some important recommendations related to the internal affairs and organisation within local authorities:

- Combine technical and social skills. Technical expertise should be paired with facilitation and mediation, making complex topics accessible to non-expert audiences. These skills are not necessarily to be found in one person, but colleagues within the municipality can complement each other with these skills to make technical expertise accessible and communicated well.
- Prepare for expanded legal responsibilities. Municipalities should carefully weigh whether and how to use the “aanwijzbevoegdheid” (Dutch for; ‘power of designation). This is a new legal measure in the Netherlands, that allows municipalities to enforce which areas switch to sustainable heating and when, increasing efficiency in the energy transition. However, it is advised municipalities carefully consider how this authority affects people’s choices and costs, and whether clear safeguards are in place to protect affordability and individual freedom of choice. Its use should prioritize fairness and public trust, as successful implementation depends on community support.
- Build dedicated municipal capacity. Establish a structured energy transition team and work programmatically, integrally, and cross sectoral. Make use of best practices of other municipalities or tools of knowledge institutions.

6.5 Concluding remarks

These recommendations aim to guide municipalities and project teams toward approaches that are set up to succeed. They aim to ensure that both technical and governance challenges are addressed while fostering meaningful local engagement and continuous improvement. Based on the pilot experiences and the AT LAST thematic focus on cross-sectoral integration, governance, and financial innovation, we summarize the following key recommendations:



Governance: ensure early, continuous, and meaningful citizen involvement. Ensure plans are co-created with residents rather than designed for them. Build long-term, trust-based partnerships. Finally, align policies with local needs, and develop internal capacities to enable effective collaboration with citizens.



Cross-sectoral integration: Approach the energy transition as a multi-domain challenge, integrating climate and energy policies with other domains, such as mobility, social issues, and cooling demand. Align measures with residents’ broader needs and local development priorities to enhance relevance and impact. Effective integration relies on supportive structures such as coordinated teams, integrated monitoring systems, and alignment with financial planning.



Finance and financial innovation: Ground climate policies in solid financial planning and assessment. Prioritize measures based on CO2 impact and financial feasibility and focus on cost-effective measures and replicable approaches. Promote transparency and structured investment planning. Finally, foster innovation through iterative learning, monitoring, and piloting new approaches that can be scaled over time.

7. Way forward for improving SECAP implementation

The AT LAST project showed that effective local climate and energy action relies on practical tools and structured knowledge exchange within and between municipalities. Across partner countries, Communities of Practice and pilot activities demonstrated that combining peer learning with expert guidance helps turn strategic objectives into actionable, neighbourhood-level plans. Project results are now being embedded in municipal practices and professional networks, ensuring insights continue to guide local action. Building on this foundation, partners aim to continue supporting municipalities in refining and implementing their SECAPs, through support in (new) communities of practice and through scaling and replicating the tools and methodologies developed through the pilots and Communities of Practice.

7.1 Replication and upscaling

First, many of the practical outputs generated within the CoPs and pilots will continue to be used and upscaled by project partners and participating municipalities.

Belgium

VVSG and Transition stories developed a procedure and call for interest in positive energy district (PED) procurement, a data-driven methodology for climate policy, and communication guidelines for citizens combined with climate roundtable formats. These outputs provide practical tools such as [e-learning](#) for municipalities to structure procurement processes, strengthen evidence-based climate policy, and improve citizen engagement. The tools can be scaled within Flanders through training and support provided by VVSG and integrated into broader initiatives on data-driven climate governance. With adjustments to local contexts and alignment with EU legislation, the approaches can also be replicated by other European municipalities.

Italy

AESS developed several participatory, governance, and analytical tools during the project. These include a co-design methodology for urban regeneration, which has scaling potential through applications for EU and national funding to implement the measures identified through the co-design process. In addition, AESS developed a procedure and call for interest for banks and companies to establish a One-Stop-Shop (OSS), a Nature-Based Solutions (NBS) impact assessment framework, a call for citizen engagement in renewable energy communities, legal support for the establishment of energy communities, and a broader citizen engagement approach for energy and climate initiatives. These outputs can be further scaled by integrating them into regular municipal planning and governance processes and by strengthening collaboration with financial institutions, service providers, and citizens. At the same time, the methods, procedures, and engagement approaches developed in the project can be transferred to other municipalities seeking to establish similar participatory planning processes, One-Stop-Shops, or renewable energy communities.

The Netherlands

Klimaatverbond developed several methods to strengthen collaboration between municipalities and citizens in the energy transition, including the integrated neighbourhood approach, the Opgroeiverkenner collaboration tool, a social profiling method, a collection of examples and best practices for community involvement, and an advisory note on integrating cooling into heat transition strategies. These outputs help municipalities design more inclusive and context-specific local energy transition plans and engagement strategies. Klimaatverbond will further test these approaches and continue dissemination and

targeted support, enabling municipalities to adopt and adapt the methods in additional neighbourhoods and projects.

Sweden

SEI developed a climate governance and financial tracking methodology for SECAP implementation, including an ESRS-aligned tool to analyse and track climate-related municipal expenditures and support climate investment planning. The approach helps municipalities strengthen financial governance and improve transparency around climate spending. It can be applied by additional Swedish municipalities and adapted by other local authorities interested in linking sustainability reporting frameworks with local climate investment planning and governance processes.

7.2 Future communities of practice

Secondly, we plan to maintain or further develop the knowledge-sharing structures developed in the communities of practice, either by continuing the existing CoPs or by establishing new thematic groups building on the needs identified during the project.

Belgium

In Belgium, follow-up CoPs are directly informed by the needs and gaps identified during the first phase of the pilot. While municipalities made significant progress in project planning and governance, additional support is needed to move from planning to the implementation of their Sustainable Energy and Climate Action Plans (SECAPs). In particular, municipalities highlighted the need for stronger monitoring, data management, and KPI calculation, including support to gather baseline data, estimate impacts, and align local monitoring systems with regional and European reporting requirements. This was especially relevant as municipalities began implementing measures such as heating transition plans and collective energy projects within their 2026–2031 Multi-Annual Plans.

Secondly, municipalities expressed interest in continued exchange and coaching on internal coordination and multi-service planning to address capacity constraints due to staff turnover, limited resources, and the complexity of neighbourhood-based work, which has slowed progress in some municipalities.

A third area concerns effective climate communication and citizen engagement, particularly in neighbourhoods with lower participation or greater diversity. Municipalities requested additional sessions on linking communication to implementation steps, developing tailored outreach strategies, and managing expectations during long-term

transition processes, including through climate roundtables. Finally, the follow-up CoPs respond to the growing need for structured approaches to collective renovation, energy communities, e-learning and neighborhood improvement contracts. Municipalities are interested in exploring phased implementation models that can help translate climate plans into concrete actions. These needs coincide with the start of a new municipal policy cycle following the 2024 elections, making continued CoP exchange particularly valuable for turning climate strategies into budgeted and operational measures.

Italy

AESS intends to continue encouraging collaboration and knowledge exchange among municipalities beyond the project period. In its role as a technical energy agency supporting local authorities, AESS could facilitate connections and knowledge sharing among municipalities, helping to sustain dialogue and collaboration on initiatives such as Positive Energy District development and other local energy transition measures. It also plans to support the development of a learning community inspired by the AT LAST Community of Practice guidelines

The Netherlands

The AT LAST project stimulated the development of four new Communities of Practice through different pathways. Two are direct thematic continuations of the AT LAST CoP discussions. First, increasing attention to cooling demand—an issue often overlooked in heat transition strategies—led to the creation of a dedicated CoP focused on integrating cooling into heat transition planning, supported by a publication released in March 2026. Second, strong interest in the integrated neighbourhood approach has created momentum to potentially establish a smaller, implementation-focused CoP in 2026 involving around five municipalities. With hands-on support from Klimaatverbond Nederland and Bouwhulpgroep, participating municipalities would test the approach in selected neighbourhoods by

co-developing integrated solutions with residents, linking housing, sustainability, and wellbeing measures.

Two additional CoPs emerged from broader lessons learned during the project. One CoP on CO₂ pricing was already being developed but will benefit from the lessons learned from the structured peer-learning format tested in AT LAST. The second targets early-career municipal civil servants, providing a platform to exchange practical experiences and strengthen skills such as stakeholder engagement and navigating public sector organisations – using AT LAST publications and the AT LAST Academy. Beyond the CoPs, Klimaatverbond is also exploring, together with Stichting Oranje Advies, a concept for local energy sharing using neighbourhood batteries, with the potential support of the Bank Nederlandse Gemeenten to finance pilot neighbourhoods in the coming years.

Sweden

The follow-up CoP in Sweden will explore how sustainability reporting frameworks and financial governance tools can support climate plan implementation, building on the work in the pilots. During AT LAST, SEI developed and tested an ESRS-aligned tool to help municipalities analyse and track climate-related expenditures and investment needs. Interest from municipalities demonstrated a clear demand for continued exchange on linking sustainability reporting with climate investment planning and budgeting processes. SEI will therefore continue facilitating a thematic CoP that enables municipalities to share experiences, discuss practical challenges, and further develop approaches for climate investment governance.

7.3 Concluding remarks on the way forward

In summary, many of the tools and methods developed through the AT LAST CoPs and pilots are ready for continued use, scaling, and replication across partner countries. By supporting the integration of these best practices into municipal processes in the future, partners aim to strengthen municipal governance, support evidence-based decision-making, support planning and implementation, and enhance citizen engagement.

We also plan to build on our experience gained – and networks developed – in organizing Communities of Practice, either by continuing existing communities of practice or establishing new thematic collaborations. Follow-up activities will focus on practical needs such as monitoring and data management, governance and coordination, citizen engagement, and supporting neighbourhood-based approaches.

Furthermore, the partners will build on the project by addressing new – but related – topics that emerged during the project, including cooling in heat transitions, climate investment governance, and citizen-led energy initiatives. By building the peer-learning methods and facilitation structures tested in AT LAST, these efforts will ensure that the project's knowledge, methodologies, and networks continue to inform local climate and energy action.

Finally, the AT LAST project has shown that regional differences matter: each context requires its own “best fit” approach to the design and content of CoPs, as well as the tools and methodologies they use. At the same time, every country has generated valuable examples and insights that deserve to be shared more widely. Looking beyond borders – particularly through [online learning](#) – these practices can inspire others. Building on this, partners will continue to collaborate, exchange knowledge, and learn from one another, ensuring that both national upscaling and cross-border cooperation help drive the energy transition forward.



Annex 1: Overview of topics per pilot municipality

	Civic engagement	Citizen engagement	Energy saving	Positive Energy District	Renewable Energy	Grid congestion	Urban renovation	Nature-Based Solutions	Heat island	Agriculture	Financing	Net Present Value	One-stop-shop	Legislation	Monitoring	Reporting regulations
Knokke-Heist (BE)	X	X	X	X												
Bonheiden (BE)	X	X	X	X												
Oostende (BE)	X	X	X	X												
Carpi (IT)		X					X	X	X							
Cervia (IT)		X			X									X		
Imola (IT)		X					X	X	X							
Modena (IT)		X			X								X	X		
Ravenna (IT)		X					X		X							
Rimini (IT)		X			X									X		
Arnhem (NL)		X				X					X					
Berkelland (NL)		X				X					X			X	X	
Borger-Odoorn (NL)		X				X					X			X	X	
Deventer (NL)		X				X					X			X		
Hoorn (NL)		X				X					X			X	X	
Horst aan de Maas (NL)		X				X					X			X	X	
Lochem (NL)		X				X					X					
Rheden (NL)		X									X			X		
Ridderkerk (NL)		X				X					X			X	X	
Veenendaal (NL)		X				X					X			X	X	
Kristianstad (SE)										X	X					X
Helsingborg (SE)											X					X
Falkenberg (SE)											X					X
Malmö (SE)											X	X				
Mariestad (SE)										X						
TOTAL	3	19	3	3	3	9	3	2	3	2	14	1	1	11	6	3

Annex 2: Tender file City of Ostend

The Belgian Community of Practice has developed a practical, step-by-step approach to guide cities and stakeholders in creating a Positive Energy District, from initial visioning to implementation. In addition to this methodological framework, the City of Ostend has produced a legally vetted tender file that can serve as a concrete example for municipalities preparing similar procurement processes. Please visit <https://aessenergy.it/progetti/atlast/> for downloads.



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