NET ZERO CITIES SGA-NZC

City Mission Governance, Coordination and Integration

Governance innovation and implementation in the Cities Mission: Second Case Study Anthology Theme 3.

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Summary

This report examines how mission governance supports city-level climate neutrality transitions across four European Mission Cities: **Umeå**, **Oslo**, **Turku** and **Aachen**. It focuses on the internal governance arrangements, coordination mechanisms, roles, mandates and institutional practices through which municipalities organise themselves to deliver ambitious climate-neutrality commitments. Across the four cases, mission governance is understood not as a single organisational model, but as a set of structures, routines and ways of working that connect long-term political commitments with everyday administrative practice, departmental implementation and wider city partnerships.

All four cities have sought to embed climate neutrality within core municipal governance rather than treating it as a separate environmental programme. In Umeå, climate neutrality is positioned as one of four overarching municipal goals and operationalised through the Programme for a Climate Neutral Umeå 2040 and the Umeå Climate Roadmap partnership. In Oslo, the Climate Strategy and Climate Budget provide the central governance architecture, assigning responsibility for measures across departments and linking climate action directly to the city's financial budget. In Turku, the Climate Plan, climate budget and broader integration of climate, nature and circular economy provide a framework for aligning climate neutrality with the city's development agenda. In Aachen, the mission is grounded in a layered mandate comprising council resolutions, a citizen-led petition and a Climate City Contract co-signed by a broad coalition of local actors.

The cases highlight that effective mission governance requires a balance between strong central coordination and distributed ownership. Each city has developed a core coordination function, whether through Umeå's Strategic Development Unit, Oslo's Climate Agency, Turku's Climate, Nature and Circular Economy Team, or Aachen's Mission Management Team and Steering Circle. These structures provide strategic direction, facilitate cross-departmental alignment and maintain connections with external support programmes. However, they cannot deliver the transition alone. The cases show that climate neutrality must also be translated into the mandates, routines and responsibilities of line departments, municipal companies and implementation partners.

We identify several distinctive strengths across the cases. Umeå demonstrates how climate neutrality can be integrated into a municipality's overarching goal structure and linked to both internal steering and external partnership-building. Oslo shows the value of a mature climate budget model that connects targets, measures, indicators, departmental responsibility and financial planning. Turku illustrates the importance of participatory climate-plan development, internal capacity-building and the integration of climate, nature and circular economy into a broader sustainability mission. Aachen provides a strong example of iterative mission governance redesign, using external facilitation, political steering and partner engagement to clarify roles and strengthen coordination.

Even so, the cases point to shared challenges. All four cities continue to work on extending ownership of the mission beyond core climate units and politically engaged departments. Mandate ambiguities remain particularly visible in cross-cutting domains such as mobility, procurement, investment planning and engagement with external actors. Monitoring also remains a persistent challenge. While all cities combine emissions inventories with programme, measure or output indicators, none can fully attribute aggregate emissions reductions to specific municipal actions. This creates a need for credible intermediate indicators, clearer narratives of progress and more systematic learning routines.

Mission governance involves institutional and cultural change, not only formal coordination. Cities are adapting procurement rules, budgeting practices, investment appraisal processes, reporting routines and internal communication practices. External support from NetZeroCities, national programmes, consultants and peer-city networks has been important in creating protected spaces for experimentation, reflection and governance redesign. In several cases, pilot projects and externally supported processes have helped cities test new approaches before formalising them within ordinary administrative procedures.

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Looking ahead, the report identifies two priorities for strengthening mission governance:

- Cities need to deepen the integration of climate neutrality into everyday municipal operations by clarifying responsibilities, embedding indicators into management routines, securing stable capacity and widening ownership across the full municipal organisation.
- Mission governance will increasingly need to connect mitigation with adaptation, biodiversity, circular economy, just transition and wider socio-economic transformation. This will require governance arrangements that can manage trade-offs, support learning and maintain political and public legitimacy over time.

Overall, the four cases demonstrate that mission governance can act as an important accelerator of city-level climate transitions when it combines clear political mandates, adaptive coordination structures, robust but pragmatic monitoring, and a sustained commitment to institutional learning. The experiences of Umeå, Oslo, Turku and Aachen offer practical insights for other Mission Cities seeking to move from climate-neutrality planning to large-scale implementation.

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Abbreviations and acronyms

Acronym	Description
CCC	Climate City Contract, the main governance instrument of the EU's 100 Climate Neutral and Smart Cities Mission including a city's action plans, investment plans and stakeholder commitments
ESG	Environment, social and governance; a framework used by investors and companies to measure a business's long-term sustainability
EU	European Union
MoU	Memorandum of Understanding
NECP	National Energy and Climate Plan
RES	Renewable Energy Source
SECAP	Sustainable Energy and Climate Action Plan
SMEs	Small and medium enterprises
SUMP	It is a strategic planning framework used by cities and municipalities
WTE	Waste To Energy

Keywords

Mission Governance; Departmental Coordination; Monitoring, Evaluation, and Learning (MEL); Multi-Actor Collaboration.

Introduction

This report analyses how mission governance supports city-level climate neutrality transitions in four European Mission Cities: Umeå, Oslo, Turku and Aachen. It focuses on internal governance arrangements and cross-departmental coordination as key enablers of climate action, positioning mission governance as a mechanism that connects ambitious political commitments with everyday administrative practice and broader city governance.

Mission governance is understood here as the set of structures, roles, processes and ways of working through which a municipality organises itself to deliver a clearly defined, time-bound public goal - in this case climate neutrality - and turns that goal into coordinated action across departments, municipal companies and key external stakeholders towards the shared mission. This framing builds directly on the Cities Mission interview guide, which emphasises shared vision and objectives, coordination mechanisms, political and leadership support, clear roles and mandates, integration into everyday operations, changes to rules and norms, and the capacity to experiment and learn over time.

This chapter synthesises evidence from four in-depth mission governance case studies to provide an overview of how mission governance is currently designed and practised in different European urban contexts. It highlights convergences and divergences across the cases, and how different institutional choices respond to similar implementation challenges. It also distils practical lessons on institutional design options, enabling conditions and governance innovations that can inform other cities and policy-makers working within the EU Mission 100 Climate-Neutral and Smart Cities and related net-zero delivery frameworks.

The synthesis draws across the four city case studies on mission governance prepared for **Umeå**, **Oslo**, **Turku** and **Aachen**, complemented by a cross-city peer-learning workshop and the common Cities Mission interview guide on mission governance and cross-departmental coordination.

Across the four cities, data collection combined document analysis and semi-structured interviews. For each city, two in-depth interviews of approximately 90 minutes were conducted with senior officials directly involved in the design and implementation of climate-neutrality governance, typically including a Mission coordinator or climate director and a senior counterpart in a key implementing department. Interviews were conducted between December 2025 and March 2026 using the shared interview guide, which covers cross-administration coordination, roles and mandates, monitoring, rules and norms, and forward-looking challenges and opportunities.

Interview material was triangulated with municipal documents such as climate strategies, climate neutrality action plans, climate budgets and Climate City Contracts; with national and European programme documentation; and with analytical inputs from prior governance reviews and external support providers. In addition, a two-and-a-half-hour online city-to-city workshop on mission governance, held in April 2026, brought together representatives from all four cities to present their approaches and reflect jointly on internal governance, cross-departmental coordination, emerging breakthroughs and persistent obstacles. Observations and insights from this workshop form an additional comparative lens for the synthesis.

Table 1 includes the interview sample across the four cases. To protect anonymity, interviews are referenced in the text using only an interview number - without naming individual respondents or specifying their exact positions.

The interview guide was designed to focus less on individual attitudes and more on institutional arrangements, governance practices and organisational learning journeys. Insights from the interviews were integrated analytically into the cases rather than presented as extended narratives or quoted at length, in order to foreground governance mechanisms.

Table 1 - Interviews

City	Interviewee(s) approximate role(s)	Interview	Date
Umeå	Senior strategic development officer, climate neutrality programme	Interview 1	Feb 2026
	Sustainability manager / boundary-spanning change leader	Interview 2	Feb 2026
Oslo	Senior official, Climate Agency - climate strategy and budget	Interview 3	Dec 2025
		Interview 4	Jan 2026
Turku	Climate director, Climate, Nature and Circular Economy Team	Interview 5	Jan 2026
	Senior specialist, climate plan implementation	Interview 6	Feb 2026
Aachen	Mission manager / head of Climate Neutral Office	Interview 7	Feb 2026
		Interview 8	Mar 2026

The four cities were selected to highlight geographical diversity, institutional variety and differences in climate-governance approaches within the EU Cities Mission, while sharing substantive climate-neutrality commitments and participation in NetZeroCities support programmes.

Together, they span a Nordic mid-sized city in northern Sweden, the Norwegian national capital with a long-established climate budget and climate agency, a rapidly growing coastal city in south-west Finland, and a German university city embedded in a structurally transforming coal-mining region. All four have developed Climate City Contracts and related climate plans, and all participate in national or European climate-city initiatives beyond the Mission.

Table 2 summarises key contextual characteristics across the four cities, drawing on Section 1 of the individual case studies. It provides a basis for interpreting differences in mission governance design, particularly in relation to demographic structure, economic profile, regional setting and climate-policy trajectories.

Despite their differences, the four cities share several structurally important features: all are regional centres with significant higher-education and research sectors; all face transport and building emissions as major mitigation challenges; and all have chosen to anchor climate neutrality in formal council decisions and integrated climate plans rather than treating it as a purely project-based agenda. These commonalities create a shared foundation for experimenting with mission governance as a lever for systemic transformation.

Table 2 - Comparative information across the four city cases.

City	**Population and demographics**	**Regional and geographic setting**	**Economic profile**	**Climate targets and mission framing**
Umeå	≈135,000 residents in the municipality with sustained annual growth of around 1,400 people and a relatively young age profile.	Northern Sweden, coastal city on the Bothnian Bay, regional hub for Västerbotten County with a subarctic but coastal-moderated climate.	University and research city with strong knowledge-intensive services, public sector employment and green industrial linkages in the wider region.	Layered climate-neutrality targets: climate-neutral municipal organisation by 2025, urban area by 2030, municipality by 2040, and consumption-based emissions of 1 tCO_2e per capita by 2050, framed under the "Climate Neutral Umeå 2040" programme.
Oslo	≈710,000 residents in 2023, with strong population growth over the last decade and a relatively young demographic profile and high share of foreign-born residents compared to Norwegian average.	Capital of Norway, located at the head of the Oslo Fjord, combining dense urban districts with extensive protected forest areas and functioning as national political and economic and cultural centre.	Service-based metropolitan economy centred on public administration, knowledge-based services, finance, ICT, education and construction.	Ambition to reduce territorial greenhouse gas emissions by 95% by 2030 compared with 2009, combined with a 10% reduction in total energy use and substantial cuts in consumption-based emissions, framed through a Climate Strategy and Climate Budget.
Turku	Over 200,000 residents in the municipality and more than 300,000 in the wider urban region, with steady recent growth and an increasingly multicultural population.	Historic coastal city in south-western Finland at the mouth of the Aura River on the Baltic Sea, regional capital of Southwest Finland and key Baltic Sea hub.	Diverse economy with major sectors in maritime and shipbuilding, technology and life sciences, logistics and transport services.	Target of carbon neutrality by 2029 - equivalent to a 90% reduction in emissions from 1990 levels - with a subsequent shift toward climate positivity and "resource wisdom", framed through a SECAP-based Climate Plan and recognised by the EU Mission Label.
Aachen	≈262,000 residents in 2022 with moderate growth and a young demographic profile strongly shaped by four universities and a large student population.	Westernmost city in Germany, bordering Belgium and the Netherlands, regional centre for a nine-municipality city region and located on the fringe of the Rhenish mining district.	Heterogeneous urban economy combining services, trade and logistics with manufacturing - especially mechanical engineering - and a large higher-education and research sector.	Climate-neutrality target for 2030 grounded in a proportional share of the remaining global GHG budget, anchored in an Integrated Climate Protection Concept (IKSK 2.0) and a Climate City Contract co-signed by a broad coalition of local actors.

1 Key themes in mission governance

This section presents insights from the four cities across core themes of mission governance. For each theme, it synthesises how mission governance processes are practically organised in Umeå, Oslo, Turku and Aachen.

1.1 Mission, common vision and shared objectives

Across all four cities, climate neutrality is framed as a whole-of-city mission that must be embedded in core municipal strategies, rather than as an add-on environmental programme.

In Umeå, climate neutrality is one of four overarching municipal goals alongside sustainable growth and two dimensions of social sustainability, institutionalised through the Programme for a Climate Neutral Umeå 2040 in the municipal planning directive. Climate objectives are thus explicitly positioned as integral to the city's overall development trajectory rather than as a separate sustainability track (Interviews 1-2).

In Oslo, the mission framing is articulated primarily through the Climate Strategy and the Climate Budget. The city rarely uses the language of "mission" internally, but functionally treats climate neutrality as a central organising goal, with the Climate Budget serving as a yearly operationalisation of the overarching targets. The fact that the Climate Strategy enjoys broad support across almost all political parties has been crucial for establishing a shared direction, giving the climate agenda continuity across electoral cycles and providing a strong mandate for the Climate Agency's coordinating role (Interviews 3-4).

Turku presents climate neutrality in 2029, coinciding with the city's 800th anniversary, as a defining milestone for its future identity. The mission is framed in increasingly integrated terms that combine mitigation, circular economy and nature positivity, with climate, nature and circular economy now treated as equal pillars in the city's strategic framework. The Climate Plan, Circular Economy Roadmap and emerging Nature Roadmap together define a wider sustainability mission that extends beyond emissions reductions towards questions of "resource wisdom" and sustainable lifestyles (Interviews 5-6).

In Aachen, the mission narrative is grounded in a layered mandate that combines a 2020 council resolution linking the city's climate target to its proportional share of the remaining global GHG budget, a citizen-led petition adopted unanimously in 2022 that sets climate neutrality by 2030, and a Climate City Contract co-signed by over 150 organisations. This combination of political resolutions and civic mobilisation gives the mission a particularly strong normative and democratic underpinning, even as the challenge remains to translate this into everyday ownership across a 6,000-person administration (Interviews 7-8).

1.2 Mission governance context and transition teams

Each city has developed a core coordination structure, a transition team or equivalent mission governance nucleus/nodes, that sits at the intersection of political leadership, central administration and sectoral departments.

These structures differ in their formal status, composition and degree of centralisation, but they play analogous roles in steering the mission, maintaining cross-departmental alignment and interfacing with external partners and support programmes.

In Umeå, mission governance is deliberately distributed rather than concentrated in a single climate office. The Strategic Development Unit within the City Management Department houses the designated officers responsible for coordinating the climate neutrality programme, including the steering mechanism for the municipality and municipal companies and the secretariat for the Umeå Climate Roadmap partnership. This unit sits close to the city manager and oversees a portfolio of sectoral transition teams - for energy transition, mobility transition and construction emissions - that bring together relevant departments, municipal companies and external stakeholders around specific transition domains (Interviews 1-2).

Oslo's transition team is more centralised. The Climate Agency, established in 2016, functions as a dedicated climate office with a broad mandate not only to coordinate but also to initiate and propose new measures. Located close to the Governing Mayor within the Department of Environment and Transport, the agency concentrates climate expertise in one unit of around 50 staff and is responsible for drafting the Climate Budget, negotiating measures with departments and agencies, and coordinating Oslo's participation in EU and city-network initiatives. Its integrative leadership role is widely recognised as a core success factor (Interviews 3-4).

In Turku, the Climate, Nature and Circular Economy Team within Business and Economic Development Services serves as the strategic hub for mission governance. The team, led by the Climate Director and comprising around thirteen professionals, is responsible for developing and updating the Climate Plan and for coordinating implementation and stakeholders engagement. Its location - recently moved from a position akin to the Mayor's Office into an economic-development service division - reflects an intentional effort to embed climate work in the city's broader development and investment agenda, while maintaining strong links to central administration and political leadership (Interviews 5-6).

Aachen's mission governance context is shaped by a distributed Mission Management Team (MMT) and a Steering Circle that together form the core transition team. The MMT coordinates three strands - EU Mission coordination, IKSK implementation and Climate City Contract partner engagement - across different parts of the administration and the externally positioned Climate Neutral Office. The Steering Circle, comprising two Deputy Mayors and departmental heads, functions as the primary forum for strategic steering, reviewing progress and taking key mission-related decisions. This architecture emerged through an iterative redesign process supported by external facilitators, moving from loosely connected project structures towards a clearer, more formalised governance system (Interviews 7-8).

1.3 External support and influence on governance

External support from European and national programmes, consultancies and peer-city networks has played an important role in shaping how mission governance has evolved in all four cities, albeit in different ways.

In Umeå, NetZeroCities support has been particularly influential through a governance review of the Umeå Climate Roadmap partnership conducted by an external think-tank. Applying a "humble governance" framework, this review prompted a critical reflection on the partnership's structure and led to recommendations such as establishing smaller working groups with clearer mandates and clarifying the distribution of roles between the municipality and external partners (Interviews 1-2).

Oslo's climate governance model predates the Cities Mission and has not been fundamentally redesigned through external support. Instead, NetZeroCities and other international initiatives have functioned mainly as platforms for topic-specific peer learning and for influencing European and global agendas on issues such as fossil-free construction. Oslo has used networks like C40 and ICLEI to disseminate its climate budget model and to co-shape markets for zero-emission construction, rather than to reconfigure its internal governance (Interviews 3-4).

In Turku, external support has been closely tied to internal organisational development. Participation in NetZeroCities pilot project has enabled the city to dedicate work packages to internal communication and capacity building, including climate and nature dialogue trainings and climate leadership development. The EU taxonomy has provided a methodological frame for the climate budget, while collaboration with external consultants has supported the design of new cross-sectoral steering groups on wellbeing, business and environment that are intended to reinforce horizontal governance of strategic themes (Interviews 5-6).

Aachen offers one of the clearest examples of external governance support as a direct lever for mission governance redesign. Long-term facilitation by an external consultancy, supported through NetZeroCities, enabled off-site retreats with senior leadership and mission team members that surfaced tensions around roles, decision-making and reporting lines. The resulting redesign formalised the Mission Management Team and Steering Circle, clarified reporting cycles, and introduced coaching for preparing agenda items and decision proposals. External project frameworks have likewise provided protected space for experimenting with green procurement and new financial instruments that would have been difficult to introduce through standard administrative processes alone (Interviews 7-8).

1.4 Roles, mandates and organisational set-up

Clarifying how responsibility for the Mission is distributed across departments, municipal companies and external actors is a central task of mission governance. All four cities have taken steps to formalise roles and align mandates with mission objectives, but they continue to navigate gaps and overlaps, especially in cross-cutting domains such as sustainable mobility, public procurement and emissions from the municipality as an employer.

In Umeå, the City Council's decision to introduce a new steering mechanism for the four overarching municipal goals, including climate neutrality, has been a major structural shift. Specific political committees and municipal companies are formally designated as responsible for each goal, and the Strategic Development Unit holds the city-officer roles for climate. At the same time, a core-mandate framework in the planning directive emphasises that committees and companies must fulfil their core mandates before taking on strategic objectives, requiring climate objectives to be interpreted and implemented in ways that align with long-term organisational purposes rather than being added as external demands (Interviews 1-2).

Oslo's approach to roles and mandates centres on embedding climate responsibilities through the Climate Budget. The Climate Agency co-develops measures with relevant departments and agencies, but once the Climate Budget is approved by the City Council it becomes legally binding, assigning clear responsibility for implementation and reporting to specific entities. This structure ensures that climate measures are treated on a par with financial commitments, and it creates a strong incentive for departments to engage proactively in measure design rather than risk having externally designed measures imposed on them (Interviews 3-4).

In Turku, the Climate, Nature and Circular Economy Team plays a coordinating and enabling role, but implementation responsibilities remain distributed across service divisions and city-owned companies. The Climate Plan is gradually becoming more explicit in assigning responsibilities in thematic areas

such as nature and carbon sinks, while tools like EU taxonomy-based climate budgeting and climate investment planning are used to embed climate considerations in departmental investment decisions. However, some domains - for example climate engagement in schools and kindergartens - still rely heavily on individual motivation and lack fully formalised mandates (Interviews 5-6).

Aachen has pursued a mixed approach. Under the IKSK, 36 climate protection managers have been appointed across departments, each responsible for specific measures, representing a systematic attempt to embed Mission responsibilities into existing organisational units. Yet many mission-related tasks, including coordination of the EU Mission, continue to be carried as add-ons to pre-existing roles without formal job-description changes. This selective formalisation leads to variation in how fully the mission is integrated into departmental routines, with some managers well embedded and others struggling to reconcile climate tasks with competing priorities (Interviews 7-8).

1.5 Coordination mechanisms and cross-departmental work

Mission governance requires both formal and informal coordination mechanisms that enable departments and municipal companies to work together on cross-cutting transition challenges. All four cities combine structured interdepartmental forums with project-based collaboration and relational work, though the balance between these elements varies.

In Umeå, a significant evolution has been the dissolution of dedicated programme steering groups for the four overarching goals and the transfer of their functions to existing senior governance bodies: the city manager's group of departmental directors and the municipal companies' group of chief executives. This shift embeds climate governance discussions in forums with genuine decision-making authority and aligns climate considerations more closely with financial and strategic deliberations. Sectoral transition teams and the Climate Roadmap secretariat provide more specialised spaces for coordination at the operational level, particularly with external partners (Interviews 1-2).

Oslo's main coordination mechanism is the Climate Budget process itself, which requires all departments and agencies to engage in measure development, commit to output indicators and report progress three times a year. The Climate Agency also convenes cross-departmental working groups on specific issues - such as climate adaptation - and works bilaterally with departments to develop measures tailored to their mandates. A key cultural practice is investing time in building a shared vocabulary and mutual understanding, recognising that departments operate with different professional languages and priorities (Interviews 3-4).

Turku coordinates cross-departmental work through a combination of climate-plan update processes, thematic internal working groups and emerging cross-sectoral steering groups. The periodic evaluation and revision of the Climate Plan functions as a major participatory process, involving around 200 internal and external experts and giving departments a direct role in shaping sectoral goals and measures. This process, alongside regular internal working groups on sustainable construction, circular economy and climate communication, has been central to building shared ownership and clarifying how climate objectives relate to each department's everyday work (Interviews 5-6).

In Aachen, the formal coordination architecture consists of four tiers: the Steering Circle for strategic political and administrative steering; the Mission Management Team for operational coordination; a climate team that brings together project managers responsible for IKSK measures; and a Climate City Contract Curatorium that engages premium partners and political leaders. Beyond these formal structures, leadership has explicitly encouraged informal network-building through lunch meetings, "climate breakfasts" and bilateral check-ins, recognising that trust-based relationships are often essential to enabling cross-departmental collaboration in practice (Interviews 7-8).

1.6 KPIs, monitoring and everyday operations

Monitoring progress on the Mission and integrating indicators into everyday operations are persistent challenges across the four cities. All have developed multi-layered monitoring architectures that combine territorial emissions inventories with programme or measure-level indicators, but all also face methodological and organisational difficulties in linking specific actions to measurable emission reductions and in embedding indicators into management routines.

In Umeå, national regional emissions statistics provide the main source for territorial emissions monitoring, supplemented by sector-specific data such as bicycle counts, travel surveys and energy-usage figures. Annual programme reports compile this information into a narrative of progress on the four overarching goals. The city is moving toward prognosis-based reporting that models future trajectories, inspired by other Swedish cities. Even so, it continues to grapple with attribution challenges and with incomplete integration of climate indicators into departmental operational plans (Interviews 1-2).

Oslo's monitoring system is closely tied to the Climate Budget. Output indicators are defined for each measure - for example kilometres of new bike lanes or number of public charging stations - and responsible entities report progress three times a year. A "Climate Barometer" provides near-real-time indicators across key sectors, complementing the annual emissions inventory. Indicators are developed in collaboration between the Climate Agency and departments and are embedded into departmental activity plans, ensuring at least a baseline integration into everyday operations. Nonetheless, the city continues to refine methodologies and data sources, recognising that early versions of indicators were sometimes crude and that methodological improvement is an ongoing process (Interviews 3-4).

Turku uses annual climate reporting to the City Council to monitor implementation of the Climate Plan, alongside sectoral indicators and EU taxonomy-based assessment of investments above a certain threshold. The climate budget, while structured differently from Oslo's, functions as a lens to examine whether major investments align with climate and sustainability criteria. Internal and external communication tools - including a "climate situation room" online platform and climate webinars - help to feed monitoring insights back into organisational learning and public awareness, but integrating indicators systematically into all departmental routines remains a work in progress (Interviews 5-6).

Aachen utilises an annual CO_2 balance following national standards as the primary territorial indicator, complemented by measure-level tracking in tools such as PlanForge and sector-specific indicator sets - for example, a mobility strategy with 25 ratified indicators. However, the CO_2 balance aggregates sources that are both within and outside municipal influence - including highway transit traffic - which creates difficulties for attributing changes to municipal measures and can distort political perceptions of sectoral performance. The mission team therefore invests significant effort in interpreting and explaining indicators for decision-makers, highlighting where observed trends reflect factors outside the city's control (Interviews 7-8).

1.7 Rules, norms and internal institutional change

Mission governance extends beyond formal structures to encompass changes in rules, procedures, organisational culture and norms. All four cities report incremental but important shifts in areas such

as procurement, budgeting, risk culture and internal capacity-building, often emerging from specific projects and experiments rather than from comprehensive reform packages.

In Umeå, the municipal planning directive and the 0.5% budget allocation rule - requiring all political committees to allocate a share of their budgets to the overarching goals - represent notable rule changes that broaden financial responsibility for climate work beyond traditionally “green” departments. The revision of procurement policies, shifting responsibility for climate criteria from the procurement unit to ordering departments, is another example of institutional redesign intended to embed climate considerations more deeply in everyday decision-making (Interviews 1-2).

Oslo has used the Climate Budget as a vehicle for steady evolution of rules and norms. Procurement regulations now require environmental weighting in public tenders, and zero-emission standards have been introduced for municipal construction sites, supported by a proactive and experimental approach to piloting new criteria. Organisational culture has gradually shifted, with initial scepticism about measures such as fossil-free construction giving way to wider acceptance following successful pilots. This illustrates how experimentation can de-risk change and help internalise new norms (Interviews 3-4).

Turku has reoriented budgeting and investment planning through EU taxonomy evaluations and climate-budget work, encouraging departments to consider climate and sustainability criteria in project design and appraisal. Capacity-building initiatives under NetZeroCities projects - such as nature webinars, climate dialogue trainings and participation in city-wide HR webinars - have sought to normalise climate and nature themes as part of mainstream professional development, not only as specialised topics for climate staff (Interviews 5-6).

In Aachen, institutional change has been largely pragmatic and project-driven. A prominent example is the experimental introduction of lifecycle-based procurement criteria, including CO_2 shadow pricing, within an externally funded project on green procurement. Internal auditing, typically a guardian of compliance and cost-effectiveness, agreed to treat project procurements as experimental, allowing deviations from standard price-weighting rules. Once piloted successfully, these approaches are moving towards formal adoption, illustrating a pattern in which practice precedes and legitimises rule change rather than the other way around (Interviews 7-8).

1.8 Leadership, political support and multi-level context

Strong and relatively stable political support has been a precondition for ambitious mission governance in all four cities, though the nature of this support and its interaction with changing political landscapes differ. Leadership by mayors, deputy mayors and senior officials has been crucial in legitimising mission governance innovations and in sustaining momentum through periods of organisational strain.

In Umeå, climate neutrality is anchored in formal council decisions that elevate it to one of four overarching goals, providing a strong political mandate. The city manager and development director play visible roles in championing the mission internally, while participation in national programmes such as Viable Cities and regional networks underscores the city’s role in a broader green industrial transformation in northern Sweden. Leadership has also been important in navigating tensions between central coordination and departmental autonomy, particularly as the governance model has shifted from centralised steering groups to more distributed responsibility (Interviews 1-2).

Oslo benefits from unusually broad political consensus on climate policy, with the Climate Strategy supported by almost all parties in the City Council. This continuity has allowed the Climate Agency to operate with a clear and enduring mandate across changes in governing coalitions, focusing on implementation rather than re-justifying basic goals. At the same time, Oslo’s strong international

profile and engagement in networks such as C40 and NetZeroCities reinforce political ambition by situating local efforts within a wider global leadership narrative (Interviews 3-4).

In Turku, both the previous and current mayors have been active climate leaders, including through roles in networks such as ICLEI. Climate and nature are strongly reflected in the mayoral programme and city strategy, providing political backing for the climate team's work. Political leadership has been important in sustaining long-term processes such as the Climate Plan updates and the establishment of climate partner networks, even when departmental structures and leadership change (Interviews 5-6, 2026).

Aachen's political context is distinctive in that two successive changes of mayoral leadership - from a green-led to a centre-right administration - have not altered the formal commitment to the 2030 climate-neutrality target. Instead, what has shifted is the narrative frame: from a broader future vision to an emphasis on structural economic transition in the post-coal Rhenish mining district. Deputy mayors responsible for climate and urban development have played central roles in maintaining mission credibility and in anchoring the Climate City Contract politically, while the citizen-led petition provides an additional democratic mandate that mission governance actors can invoke when negotiating internally contested decisions (Interviews 7-8, 2026).

2 Comparative review of mission governance approaches

Building on the thematic overview, this section compares how the four cities operationalise mission governance across the main dimensions.

Table 3 provides a high-level comparison of mission governance arrangements in Umeå, Oslo, Turku and Aachen across the main themes of the analytical framework. It captures the most salient similarities and differences relevant for understanding how each city has organised itself to deliver on its climate-neutrality mission.

The table also shows that while all four cities use similar building blocks - climate plans, climate budgets, partnership frameworks - they combine them in different ways which reflect their institutional histories, administrative cultures and political contexts.

2.1 Distinctive strengths across the four cases

Each city exhibits distinctive strengths in its mission governance approach that are instructive for other Mission Cities.

In Umeå, a key strength lies in the intentional integration of climate neutrality into the municipality's core governance architecture. By framing climate neutrality as one of four overarching goals, anchored in the Programme for a Climate Neutral Umeå 2040 and operationalised through a steering mechanism that designates responsible committees and companies, the city has avoided the trap of treating climate as a parallel agenda. The Umeå Climate Roadmap partnership further extends this integration to external actors, with a structured cycle for commitment, action and learning.

Oslo's most notable strength is the maturity and coherence of its climate budget model, which tightly couples political targets, departmental responsibilities, indicators and financial planning. The Climate

Agency's strong mandate and integrative role, combined with the legal status of the Climate Budget as part of the city's financial budget, give Oslo a powerful governance instrument that is rare among cities. Over a decade of iterative refinement has produced a system that is both structured and adaptable, capable of incorporating new themes such as consumption-based emissions and climate adaptation as understanding and data evolve.

Turku stands out for its systematic and long-term approach to internal and external engagement. The participatory processes used to develop and update the Climate Plan, involving around 200 internal and external experts, have been central to building shared ownership across a wide range of departments and stakeholders. The integration of climate, nature and circular economy into a coherent sustainability framework, supported by dedicated strategic documents and the Climate Team network and Climate Partner network, gives Turku a relatively holistic mission governance architecture that extends beyond emissions to broader ecological and social questions.

Aachen's strength lies in its layered mandate and the way it has used external support to navigate a complex governance environment. The combination of council resolutions, a citizen-led petition and a broad coalition of Climate City Contract partners provides a strong democratic foundation for the Mission. The iterative redesign of mission governance, facilitated by external partners, demonstrates a willingness to critically examine and adjust internal structures - a form of institutional learning that is itself a hallmark of effective mission governance. Aachen's use of project frameworks to pilot changes in procurement, finance and communication also illustrates how cities with constrained capacity can nonetheless innovate institutionally.

Table 3 - Comparison of key dimensions of Mission Governance across cases

	Umeå	Oslo	Turku	Aachen
Transition team / core coordination	Strategic Development Unit in City Management Department, plus sectoral transition teams and Climate Roadmap secretariat; distributed governance model.	Dedicated Climate Agency with broad mandate to coordinate and initiate measures; centralised climate office close to Governing Mayor.	Climate, Nature and Circular Economy Team as strategic hub within Business and Economic Development; strong links to central administration.	Mission Management Team spanning administration and Climate Neutral Office, overseen by a Steering Circle of deputy mayors and department heads.
Primary governance tools	Programme for a Climate Neutral Umeå 2040, municipal steering mechanism for overarching goals, Umeå Climate Roadmap partnership framework.	Climate Strategy and integrated Climate Budget as Chapter 2 of the financial budget; Climate Barometer for indicators.	SECAP-based Climate Plan, climate budget linked to EU taxonomy for investments, Climate City Contract and climate partner networks.	Integrated Climate Protection Concept (IKSK 2.0), Climate City Contract with multi-tier partner commitments, annual CO_2 balance and PlanForge tracking.
Distribution of roles and mandates	Council designates responsible committees and companies for overarching goals; Strategic Development Unit supports departments; core-mandate framework shapes how climate objectives are interpreted.	Climate Budget assigns legally binding responsibility for measures to specific departments and agencies; Climate Agency leads design and assessment.	Implementation responsibilities distributed across service divisions; Climate Team provides strategic guidance; responsibilities gradually clarified in updated Climate Plan.	36 climate protection managers across departments; mission roles partly formalised and partly based on add-on tasks; Climate Neutral Office bridges administration and external partners.
Cross-departmental coordination	Senior coordination through city manager's group and municipal companies group; sectoral transition teams and Climate Roadmap secretariat; informal forums such as "growth breakfasts".	Climate Budget process as central coordination mechanism; cross-departmental working groups on specific themes; intensive bilateral engagement by Climate Agency.	Participatory Climate Plan updates involving around 200 experts; internal working groups on sustainable construction, circular economy and communication; emerging cross-sectoral steering groups.	Four-tier coordination architecture (Steering Circle, Mission Management Team, climate team, CCC Curatorium) plus informal lunches and climate breakfasts encouraged by leadership.
Monitoring and indicators	National regional emissions statistics, annual programme reports, and evolving prognosis-based reporting; integration of indicators into departmental plans still uneven.	Annual emissions inventory, Climate Budget output indicators with thrice-yearly reporting, and a Climate Barometer with near-real-time indicators embedded in departmental plans.	Annual climate report to council, sectoral indicators and taxonomy-based investment assessment; climate situation room and webinars used for feedback and learning.	Annual CO_2 balance, PlanForge for IKSK measures, sectoral indicator sets (e.g. mobility strategy), and scenario tools such as ClimateView; significant attribution challenges.
Rules, norms and institutional change	0.5% budget allocation for overarching goals, revised procurement responsibilities and core-mandate logic; ongoing efforts to embed climate into HR and organisational routines.	Environmental weighting in public procurements, zero-emission criteria for construction, and iterative refinement of Climate Budget methodologies; growing culture of experimentation.	EU taxonomy integrated into budgeting and investment planning; capacity-building projects (webinars, trainings) mainstream climate and nature topics.	Project-based experimentation with lifecycle procurement, financial architecture and capacity-building, often preceding formal rule changes; culture of pragmatic adaptation.

2.2 Shared challenges and governance trade-offs

Despite their differing strengths, the four cities face a set of shared challenges that highlight the governance trade-offs inherent in mission-oriented approaches.

- A first shared challenge concerns extending ownership of the mission beyond core climate departments and politically engaged units. Even where political support is strong and climate is embedded in high-level strategies, departments whose mandates appear less directly linked to climate - such as education, social services or business development - are often slower to integrate climate objectives into their routines. This creates an ongoing governance task of translating mission goals into meaningful roles for all parts of the organisation.
- A second challenge relates to mandate ambiguities in cross-cutting domains. In Umeå, responsibility for emissions from staff commuting - identified as the largest emission source for the municipality as an organisation - remains contested between the technical department, HR and the strategic development unit. In Turku and Aachen, responsibilities for mobility are split between planning and service provision, complicating coordinated action on transport. In Oslo, while mandates are relatively clear, some emerging domains such as circular economy have required explicit clarification of the Climate Agency's role. These examples underline that mission governance often exposes gaps and overlaps in existing institutional designs, requiring sustained negotiation rather than one-off organisational charts.
- A third shared challenge is the attribution problem in monitoring: politicians and the public increasingly expect clear evidence that climate investments translate into emission reductions, yet causal links between specific measures and aggregate emission trends are often difficult to demonstrate. All four cities rely on combinations of territorial inventories and measure-level indicators, but each acknowledges that their systems cannot fully trace the impact of individual actions. This creates pressure on mission governance actors to develop intermediate indicators, narrative explanations and evaluation practices that are credible enough to sustain political support while acknowledging uncertainty and complexity.
- Finally, sustaining organisational capacity over time is a common concern. Mission governance often depends on a relatively small set of highly committed individuals - climate directors, mission managers, senior strategists - who act as relational linchpins and knowledge carriers. Turnover in these roles, coupled with broader staff changes and shifting political priorities, can threaten continuity. Cities respond through formalisation (e.g. establishing permanent positions and embedding responsibilities in job descriptions) and through institutionalisation of processes (e.g. recurring climate-plan updates, routine reporting cycles). Even so, all four cases suggest that mission governance remains vulnerable to capacity constraints and that building resilient teams and knowledge systems is an ongoing governance priority.

2.3 Shared challenges and opportunities

Drawing together the comparative insights, several cross-cutting challenges and opportunities stand out as particularly salient for Mission Cities seeking to strengthen mission governance. These relate to anchoring the mission in core governance, deepening internal integration, navigating multi-level constraints and expanding the scope of mission governance beyond mitigation alone.

On the challenge side, all four cities grapple with how to move from climate as a strategic priority to climate as a routine consideration in everyday decisions across all departments and levels. This involves not only formal instruments - such as climate budgets, taxonomy-based investment screening and earmarked budget shares - but also cultural work to make climate objectives meaningful and actionable for staff whose daily tasks do not obviously relate to emissions. It also requires confronting the limits of municipal influence in domains such as consumption-based emissions, private building stock and regional mobility, and developing governance strategies that mobilise external actors without over-stretching municipal mandates.

On the opportunity side, mission governance frameworks create leverage points that cities can use to accelerate broader governance innovation. The Cities Mission label and Climate City Contracts provide external reference points that can justify internal reforms and new practices, as seen in Turku's climate budgeting and Aachen's procurement experiments. External governance reviews, such as Umeå's partnership assessment or Aachen's mission-governance facilitation, can surface tensions that are difficult to articulate internally and provide structured processes for working through them. City-to-city peer learning, as reflected in the joint workshop, offers a space for comparing governance choices and outcomes, giving practitioners both inspiration and cautionary tales.

Another opportunity lies in expanding mission governance beyond mitigation to encompass adaptation, just transition and broader ecological concerns. Turku's integration of climate, nature and circular economy as equal pillars, and Aachen's focus on post-coal structural transformation, point to emerging multi-dimensional missions that require even more integrated governance approaches. As climate impacts intensify and social equity concerns come to the fore, cities will need mission governance frameworks that can hold multiple, sometimes competing, objectives in view and that can support difficult trade-offs transparently.

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3 Conclusions and outlook

The four mission governance cases examined in this synthesis demonstrate that mission governance can function as a powerful accelerator of city-level climate transitions when it successfully combines clear political mandates, adaptive coordination structures, robust yet pragmatic monitoring and a deliberate focus on institutional learning and cultural change. While each city has followed a distinct governance trajectory, several common design principles emerge.

- First, anchoring climate neutrality in core municipal governance - through overarching goals, integrated climate strategies and budgets, and formal council decisions - appears crucial for giving mission governance sufficient authority and durability. Climate missions that remain at the level of projects or voluntary commitments risk being marginalised when fiscal or political pressures mount. By contrast, when missions are embedded in planning directives, budget rules and performance frameworks, they are more likely to shape day-to-day decisions and survive electoral cycles.

- Second, effective mission governance depends on a balance between central coordination and distributed ownership. Central units such as Oslo's Climate Agency, Turku's Climate Team, Umeå's Strategic Development Unit and Aachen's Mission Management Team provide essential integrative capacity, but they cannot deliver the mission alone. The most promising arrangements are those that combine strong central hubs with mechanisms that empower line departments, municipal companies and external partners to take responsibility for specific parts of the mission in ways that align with their mandates and capabilities.

- Third, experimentation and learning are core features rather than by-products of mission governance. All four cities have used pilots, projects and external support frameworks to test new rules, instruments and collaboration formats - from zero-emission construction criteria and green procurement to climate communication trainings and new steering groups. These experiments have generated both tangible emission reductions and less tangible but equally important institutional learning, gradually shifting norms and expectations about what constitutes "normal" governance practice in the context of climate emergency.

Looking ahead to 2030 and beyond, mission governance in these cities faces a dual task. First governance needs to evolve to deepen internal integration by extending climate ownership to all parts of the municipal family, refining monitoring and evaluation systems and securing stable capacity and resources. Second, it must align with, or integrate, emerging agendas such as climate adaptation, biodiversity and just transition, at the same time as engaging and creating shared ownership of the climate governance with private sector actors, civil society and residents as co-creators of transformative change. The experience of Umeå, Oslo, Turku and Aachen suggests that this is possible if mission governance remains adaptive, reflexive and open to critical self-examination.

For the broader Mission Cities community and policy-makers, the cases underscore the value of sustained governance support that goes beyond technical guidance and project funding to include facilitation, peer-learning and institutional experimentation. As Mission Cities move from planning to large-scale implementation, mission governance will increasingly be judged not only by its ability to design strategies but also by its capacity to navigate difficult trade-offs, maintain public legitimacy and institutionalise climate action as an ordinary part of governing the city. The four cases analysed here offer concrete examples of how this can be done, and of the work that still lies ahead.

4 City Cases: Mission Governance

4.1 Umeå

4.1.1 General City Information

Basic City Profile

Umeå is northern Sweden's most populous municipality, with a total population of approximately 135 273 residents as of the December 2025, of whom 91,916 reside in the urban area. Total population has increased by 2.3% from 132,235 in December 2022 and has displayed sustained growth by approximately 1,400 residents annually over the preceding five years. Accordingly, long term projections estimate 200,000 inhabitants by 2050. The average resident age of 39 years reflects a relatively young demographic profile, shaped in part by Umeå's substantial university and research sector, with Umeå University and related knowledge institutions constituting central pillars of the local economy.

The labour market is comparatively strong, with Umeå's unemployment rate of 4.4 per cent in 2022 substantially below the national average of 6.6 per cent, and employment in private services, research, and knowledge intensive sectors has remained robust despite national inflationary pressures. Västerbotten County has the lowest unemployment in Sweden, with Umeå around 4 per cent, and long-term unemployment at 1.2 per cent compared with 2.7 per cent nationally, which underscores both the strength and tightness of the local labour market (Umeå Municipality, 2025a).

The municipality is also the largest single employer in northern Sweden, with approximately 13,000 municipal employees, a structural fact of direct significance for climate governance, since staff commuter travel constitutes one of the organisation's largest controllable emission sources (Interview 2, 2026). The municipality anticipates recruiting approximately 1,000 full time employees annually through 2031 to meet demand arising from ongoing economic expansion, which may create both opportunities and challenges for embedding climate conscious working practices in an expanding workforce (Umeå Municipality, 2025a).

Geographic and Regional Context

Umeå is situated in Västerbotten County at approximately 63°N, on the western shore of the Bothnian Bay. The climate is subarctic and temperate, moderated by coastal proximity, with average daily temperatures above 10°C for only three months annually. This climatic context drives significant heating demands, making the district heating network, which supplies approximately 80 per cent of buildings within the city, a strategically important energy infrastructure asset (2030 Climate Neutrality Action Plan for the City of Umeå, 2024).

The city is vulnerable to localised climate impacts, including flooding and erosion along the Umeälven and Sävaån rivers, and faces increasing risks from heavy rainfall, forest fires, and drought under projected climate trajectories, which reinforces its commitment to accelerated

mitigation and adaptation. Regionally, Umeå functions as the economic and administrative hub of Västerbotten County and plays a strategic role in the wider context of northern Sweden's green industrial transformation, where large scale electrification and decarbonisation investments in sectors such as steel production, mining, and forestry are creating new labour demands and investment flows.

Governance and Institutional Setting

Umeå is governed through a City Council, which sets overall strategic goals and adopts annual budgets. Below the council, the Municipal Executive Board holds overarching responsibility for the municipality's four strategic goals, namely sustainable growth, two dimensions of social sustainability, and climate neutrality. Political committees govern individual departmental areas and are formally assigned climate related responsibilities through the annual budget process (Interview 2, 2026).

From 2021, the City Council decided that all committees and wholly owned municipal companies must have a written core mandate that clarifies the municipal purpose of the committee or company, as well as its role and responsibilities, and that these core mandates should apply for at least one term of office and be monitored annually (Umeå Municipality, 2025a). For companies, the core mandate is set out in the articles of association and specified in shareholder directives, while for committees, the core mandate is established in the Regulations for Municipal Committees and the Executive Board and incorporated into the planning directive (Umeå Municipality, 2025a). This core mandate system forms the basis for operational and corporate governance, with a clear order of priority whereby core mandates take precedence over strategic objectives, and both take precedence over any additional tasks when resources are constrained (Umeå Municipality, 2025a).

The administrative structure most relevant to climate governance includes the City Management Department, which houses the Strategic Development Unit (Strategisk Utvecklingsenhet) and to which the city manager is attached, the Technical and Municipal Buildings Department, responsible for sustainable mobility, cycle infrastructure, public transport management, and the energy performance of municipal buildings, the City Planning Department, which manages comprehensive and detailed planning and land use decisions, and the Environmental Department, responsible for regulatory and permitting functions. The city also owns a portfolio of municipal companies under the holding entity Umeå Kommunföretag, including the energy company Umeå Energi, the housing company AB Bostaden, and the waste and water utility Vakin, all of whom receive formal owner directives specifying climate responsibilities (Interview 2, 2026; 2030 Climate Neutrality Action Plan for the City of Umeå, 2024).

Climate and Sustainability Commitments

Umeå has adopted a layered and time differentiated set of climate neutrality targets. The city of Umeå, understood as the urban area, commits to climate neutrality by 2030, the full Umeå municipality is to be climate neutral by 2040, the municipal group as an organisation has committed to climate neutrality by 2025, and consumption based emissions are to reach 2 tonnes of CO_2e per person by 2040 and 1 tonne by 2050, bringing the city into alignment with the Paris Agreement's allocation framework (2030 Climate Neutrality Action Plan for the City of Umeå, 2024, Interview 2, 2026). These targets are formally adopted by the City Council and embedded in the municipality's strategic governance architecture.

The long-term climate neutrality ambition is organised through the Programme for a Climate Neutral Umeå 2040, one of the three strategic programmes established alongside the Growth Programme and the Social Sustainability Programme in the municipal planning directive, which collectively operationalise the four overarching goals across the organisation (Umeå Municipality, 2025a). The planning directive sets out financial guidelines and a two per cent surplus target to ensure sound financial management, which frames the room for manoeuvre for climate related investments in the 2026-2029 period (Umeå Municipality, 2025a).

Umeå participates in the European Commission's Mission for 100 Climate Neutral and Smart Cities through the NetZeroCities consortium, and in Sweden's national Viable Cities programme. A formal Climate City Contract has been developed in alignment with both initiatives. The city is also a signatory to the Covenant of Mayors and participates in the Thriving Northern Cities regional network (2030 Climate Neutrality Action Plan for the City of Umeå, 2024, Interview 2, 2026).

City Mission and Climate Neutrality Agenda

Umeå's climate mission is framed under the banner "Klimatneutralt Umeå" and is embedded as one of four overarching municipal goals rather than positioned as a standalone sustainability programme. This integration into the core municipal governance framework is an intentional design choice, intended to distribute ownership across the organisation rather than concentrating responsibility in a single department (Interview 2, 2026). The 2030 Climate Neutrality Action Plan for the City of Umeå frames the transition as a just transition that simultaneously advances social, economic, and ecological objectives, explicitly aligned with the city's growth and social sustainability commitments (2030 Climate Neutrality Action Plan for the City of Umeå, 2024).

The Umeå Climate Roadmap functions as the city's local green deal and has recently been revised for the period 2026-2028 as an official municipal partnership framework, under the title *Umeå Climate Roadmap: A partnership and framework for Umeå's climate transition 2026-2028* (Umeå Municipality, 2025b). By signing a letter of intent, organisations, businesses, and public sector bodies commit to work together in partnership to accelerate Umeå's climate transition and significantly reduce greenhouse gas emissions in accordance with the Paris Agreement, and they explicitly support the goals of a climate neutral Umeå by 2040 and the consumption-based emission targets (Umeå Municipality, 2025b). Within this framework, the mission is operationalised through five focus areas, mobility and transport, energy and the built environment, consumption and the circular economy, food and agriculture, and complementary climate challenges, and a set of specified climate challenges within each focus area that partners are encouraged to adopt (Umeå Municipality, 2025b).

Key Challenges and Opportunities

Umeå's primary structural mitigation challenge is its high dependency on fossil fuels in the transport sector, despite early and substantial investments in public transport electrification, with 100 per cent of local public transport trips conducted by electric bus from 2026 (previously 75%), and significant renewable energy capacity, including a municipal co owned hydroelectric plant producing over 2 TWh annually (2030 Climate Neutrality Action Plan for the City of Umeå, 2024). The gap analysis conducted as part of the Climate City Contract process confirmed that, even if all existing departmental programmes were fully implemented, significant emission reduction gaps would remain, requiring additional and more transformative interventions (2030 Climate Neutrality Action Plan for the City of Umeå, 2024).

Significant enabling assets include very high levels of civic engagement, with over 80 per cent of citizens engaged in civil society organisations, and Umeå citizens having been rated Europe's most environmentally aware in 2014, while the wider Övre Norrland region ranks first among 272 EU regions on the Social Progress Index, reflecting high levels of social trust that underpin collaborative governance (2030 Climate Neutrality Action Plan for the City of Umeå, 2024). At the same time, the municipal planning directive highlights structural challenges, such as a tightening labour market, demographic shifts with fewer children and more people aged 80 and over, a housing shortage expected to increase in 2025-2026, and an investment level significantly above historical norms, all of which place pressure on municipal capacity and finances during the climate transition (Umeå Municipality, 2025a). In addition, external factors have extensively reduced construction of new housing and increase the level of insecurity of green investments in the region making municipal planning and implementation difficult.

4.1.2 Mission Governance in Umeå

Mission Governance Context and Transition Team

Umeå does not operate a single, formally designated transition team or climate office in the conventional sense. Rather, mission governance is distributed across several interlocking structures whose composition, formal relationships, and relative authority have evolved considerably since the initial governance framework was established in 2022.

The primary coordinating function rests with the Strategic Development Unit within the City Management Department. This unit houses the designated city officers formally responsible for steering the climate neutrality programme, including the steering mechanism for the municipality and municipal companies adopted by the City Council, and the secretariat for the Umeå Climate Roadmap partnership (Interview 2, 2026). The unit sits within the same department as the city manager, which provides proximity to senior administrative leadership, although without formal hierarchical authority over line departments. The Development Director formally holds programme responsibility at director level.

Figure 1 - Key programs and governance structures in Umeå

Alongside the Strategic Development Unit, a Sustainability Manager role, introduced relatively recently and described by its holder as still being defined in terms of its precise mandate, serves a boundary spanning function, working to connect internal departments and external partners in the climate transition (Interview 2, 2026). The role is explicitly framed as that of change leader and boundary spanner, seeking to engage the municipality as a whole in a climate transition that extends beyond the departments most directly assigned to climate work.

An informal internal group referred to as "Team Climate" has at times drawn on personnel principally from the Strategic Development Unit alongside representatives from other departments to coordinate concrete activities and transition planning (Interview 2, 2026). Supplementing this, sector specific transition teams have been established in areas including energy transition, mobility transition, and construction emissions, each involving different constellations of municipal departments, companies, and external actors. These teams differ significantly in their degree of formalisation, time horizon, and membership composition, a feature of the governance architecture that both reflects adaptive flexibility and creates coordination complexity.

Figure 2 - Evolution of Mission Governance in Umeå

The origins of the current architecture trace to two inflection points. First, the Viable Cities national funding award in 2019 enabled the appointment of dedicated climate transition officers for the first time, providing the administrative foundation for sustained mission coordination (Interview 2, 2026). Second, and more decisively, the 2022 City Council decision introduced a new steering mechanism that formally designated specific political committees and municipal companies as responsible for the four overarching municipal goals, including climate neutrality, and appointed city officers to coordinate the programme (Interview 2, 2026). From 2023, this steering mechanism was operationalised, and the municipality entered a phase of sustained governance experimentation and learning.

External Support and Influence on Governance

External support has played a substantive role in shaping Umeå's approach to mission governance, providing both specific methodological inputs and important catalytic moments for internal reflection and restructuring.

The NetZeroCities programme has been the most significant source of structured external support. Through the Climate City Contract process, Umeå has received a City Advisor relationship and access to the NetZeroCities platform for peer exchange and methodology development. NetZeroCities and EIT Climate KIC commissioned Demos Helsinki to conduct a

governance review of the Umeå Climate Roadmap partnership in spring 2025, resulting in the application of a Humble Governance framework to the partnership's future development and recommendations for its structural evolution (Demos Helsinki, 2025a). This external review provided the municipality with a structured analytical lens for examining its own coordination challenges and prompted specific recommendations, such as the establishment of smaller working groups with clearer mandates and a more deliberate distribution of roles between the municipality and external partners (Demos Helsinki, 2025a). A portfolio mapping methodology developed within the NetZeroCities consortium is being piloted in Umeå as a bridge between the external Climate City Contract process, different important ext. actors in Umeå, especially partners in Umeå climate roadmap and municipal owned companies.

Beyond NetZeroCities, the Viable Cities national programme has provided both funding and a governance framework that has been progressively mainstreamed into Umeå's internal processes. Practitioners report that the national Climate City Contract process has matured to the point where it can function as a genuine governance lever, informing internal work rather than operating solely as an external reporting obligation (Interview 2, 2026). Peer learning from other Swedish and Nordic cities has also influenced governance design, including comparison with Uppsala Municipality on goal structure and governance simplification, and exchange with Karlstad, Malmö, and Stockholm on external funding, monitoring practices, and prognosis based reporting (Interview 2, 2026).

External engagement has introduced several tools that have been partially embedded in Umeå's practice, including the Humble Governance four principle model of consensus, delegation, learning, and responsiveness, normative scenario based planning developed in partnership with Material Economics and ClimateView, the Umeå-model on carbon calculation for construction co developed with sector partners within the Umeå Climate Roadmap partnership, and the Changemakers for Impact leadership development programme developed by innovation officers etc. in Umeå municipality and implemented in the Umeå climate roadmap partnership etc. (2030 Climate Neutrality Action Plan for the City of Umeå, 2024, Demos Helsinki, 2025a). System hosting methodology, inspired by the development of Karlstad University, represents a further avenue of methodological learning around managing complex multi stakeholder governance challenges.

The cumulative effect of external support has been most tangible in prompting honest self-assessment of governance design, identifying where coordination structures lacked decision mandate, where roles were ambiguous, and where internal communication and follow up had been insufficient. The Demos Helsinki review, in particular, functioned as a mirror that surfaced tensions and design flaws that internal actors found difficult to articulate within existing structures.

Mission, Common Vision, and Shared Objectives

The mission is articulated at multiple levels and through multiple frames, reflecting the layered nature of Umeå's climate commitments. At the broadest level, climate neutrality is positioned as one of four equal overarching municipal goals, alongside sustainable growth and two dimensions of social sustainability, an architectural choice that integrates climate into the municipality's core governance logic rather than treating it as a supplementary agenda (Interview 2, 2026). Operationally, the mission is broken down into distinct time bounded targets, city boundary neutrality by 2030, whole municipality neutrality by 2040, organisational neutrality by 2025, and a long-term consumption based reduction pathway extending to 2050 (2030 Climate Neutrality Action Plan for the City of Umeå, 2024). The Programme for a Climate Neutral Umeå 2040 in the

planning directive provides the overarching programme frame through which these ambitions are pursued (Umeå Municipality, 2025a).

The Umeå Climate Roadmap supplements this internal architecture with a partnership framework that structures the external collaboration and provides a common vocabulary for multi stakeholder engagement. The revised roadmap for 2026-2028 specifies that partners undertake to support the climate neutrality and consumption based targets, to take active part in common learning and dialogue, to yearly share information of implemented climate actions, to work actively to reduce their emissions, and to link their own climate work to at least five of the climate challenges defined in the roadmap, which are organised under the focus areas of mobility and transport, energy and the built environment, consumption and the circular economy, food and agriculture, and complementary climate challenges (Umeå Municipality, 2025b). It also outlines a structured six step cycle for partners, including assessment of current emissions, adoption of reduction targets, selection of roadmap challenges, alignment with sectoral roadmaps such as those of Fossil Free Sweden, development of action plans, and annual follow up and review (Umeå Municipality, 2025b).

The development process for the mission and its objectives was substantially political in character. The new climate goals were adopted through a formal City Council decision in 2020 and operationalised through a further council decision in 2022 that introduced the steering mechanism and designated responsible committees. The process involved extensive prior political deliberation, motivated in part by political frustration with an excessively complex preceding goal architecture, and followed benchmarking of other municipalities' governance designs (Interview 2, 2026). The initial version of the Climate Roadmap partnership was developed through a more explicitly co created process involving departments, municipal companies, and prospective external partners in 2021-2022, attracting 37 founding signatories at launch in December 2022 (Interview 2, 2026). The 2026-2028 revision is the outcome of an iterative process in which Umeå Municipality, acting as system host, has led dialogue with existing partners to refine focus areas, climate challenges, and collaboration formats in light of experience and external inspiration, particularly from the Uppsala Climate Protocol (Umeå Municipality, 2025b).

Shared understanding of the mission across the municipal organisation remains uneven and constitutes one of the most significant barriers to implementation. Municipal companies demonstrate the strongest ownership and have moved at the greatest speed toward implementation, attributed in part to the clarity and specificity of owner directives and in part to the organisational agility of company structures relative to public administration (Interview 2, 2026). Within the municipal departments, a clear gradient exists, the Technical and Municipal Buildings Department, the City Planning Department, and the Environmental Department demonstrate relatively strong engagement, whereas departments such as Education, Elder Care, and Business Development treat climate objectives as peripheral to their core mandates (Workshop Summary, 2025). The Business Development function is assigned an overall goal is sustainable growth. Consequently, they focus more on growth than on climate, and a more engaged business department in climate work could help mobilise more forward momentum (Workshop Summary, 2025).

Internal communication of the mission to departments has been an acknowledged weakness. The Climate Roadmap partnership, while well known among senior officers, has been poorly understood across many departmental units, and workshop participants in 2025 confirmed that outreach to departments had been insufficient during the partnership's first three-year period (Workshop Summary, 2025). Annual programme reports, partnership days, and Climate Summits constitute the primary communication channels, but these currently reach an engaged minority rather than generating broad institutional awareness (Demos Helsinki, 2025b). The revised roadmap for 2026-2028 explicitly emphasises joint learning and dialogue, including commitments

for partners to participate in the annual climate summit and partnership days, to contribute to thematic groups under the focus areas, and to engage in a strategic group for the development of the partnership, which creates a potential vehicle for strengthening internal and external communication over the next period (Umeå Municipality, 2025b).

Roles, Mandates, and Organisational Set up

The distribution of responsibility for the climate mission across Umeå's municipal departments is formally structured through the annual City Council budget decision, which designates specific political committees and municipal companies as responsible for contributing to the four overall goals. For climate neutrality, the most directly appointed committees are those overseeing the Technical and Municipal Buildings Department, the Environmental Department, and the City Planning Department, with the Municipal Executive Board and the Strategic Development Unit holding overarching coordination responsibility (Interview 2, 2026).

Within this formal architecture, responsibilities are broadly allocated as follows. The Technical and Municipal Buildings Department carries responsibility for sustainable mobility, including cycling infrastructure, public transport planning and management, and construction machinery electrification, as well as for the construction and energy and climate performance of municipal buildings. The City Planning Department is responsible for land use, zoning, and detailed planning decisions that shape the long term physical conditions for the transition. The Strategic Development Unit provides strategic coordination, supports implementing departments, and holds the formal city officer designations for the climate programme (Interview 2, 2026). Municipal companies operate under owner directives and have developed their own internal transition processes with considerable autonomy, often moving more quickly than the municipal departments.

The degree of formalisation in role definition has increased substantially since 2022 but remains incomplete in several critical areas. From 2026, the Strategic Development Unit's mandate to support implementing departments has been made more specific and explicit, a direct response to the recognition that informal coordination has been insufficient to drive departmental integration (Interview 2, 2026). Simultaneously, the 2026 budget decision mandates that all political committees allocate 0.5 per cent of their budgets to work on the overall goals, including climate neutrality, a flat percentage applied across all committees regardless of the scale or nature of their climate related portfolio, which represents the first systematic attempt to broaden financial commitment beyond the departments most directly assigned to the mission (Interview 2, 2026, Umeå Municipality, 2025a).

The core mandate framework set out in the planning directive introduces a further layer of mandate clarity. Committees and companies are expected to fulfil their core mandates first and only then to contribute to strategic objectives and additional tasks, which implies that climate related strategic objectives must be interpreted and implemented in ways that are compatible with, and embedded in, the long-term purpose of each committee and company (Umeå Municipality, 2025a). Annual follow up requires committees and companies to assess to what extent they have fulfilled their core mandates and to report to the Municipal Executive Board, which compiles this information for the City Council, providing an institutionalised mechanism for reflecting on mandate alignment (Umeå Municipality, 2025a).

Several structural and personnel changes reflect the growing institutionalisation of climate governance capability. The former head of the Strategic Development Unit has moved into a project management leadership role within the Technical and Municipal Buildings Department,

which institutionalises climate transition knowledge within the organisation responsible for the largest implementation portfolio (Interview 2, 2026). The Sustainability Manager role represents a new category of senior municipal function oriented explicitly toward boundary spanning and cross departmental facilitation (Interview 2, 2026). A strategist focusing on coordination with the municipal holding company has also been appointed, which contributes to aligning municipal company and departmental programmes (Interview 2, 2026).

Despite these advances, significant gaps and overlaps in responsibility allocation persist. The most analytically significant concerns the municipality's role as the region's largest employer and, by extension, its responsibility for addressing commuter travel emissions, identified as the largest emission source in the municipality as an organisation. Responsibility for this domain is contested and unresolved among the Technical Department, which holds sustainable mobility competence, the HR Department, which holds employee policy authority, and the Strategic Development Unit, which holds strategic coordination responsibility (Interview 2, 2026). No single owner had been designated for this area at the time of the interviews, and this accountability gap is particularly significant given the emission impact of the domain.

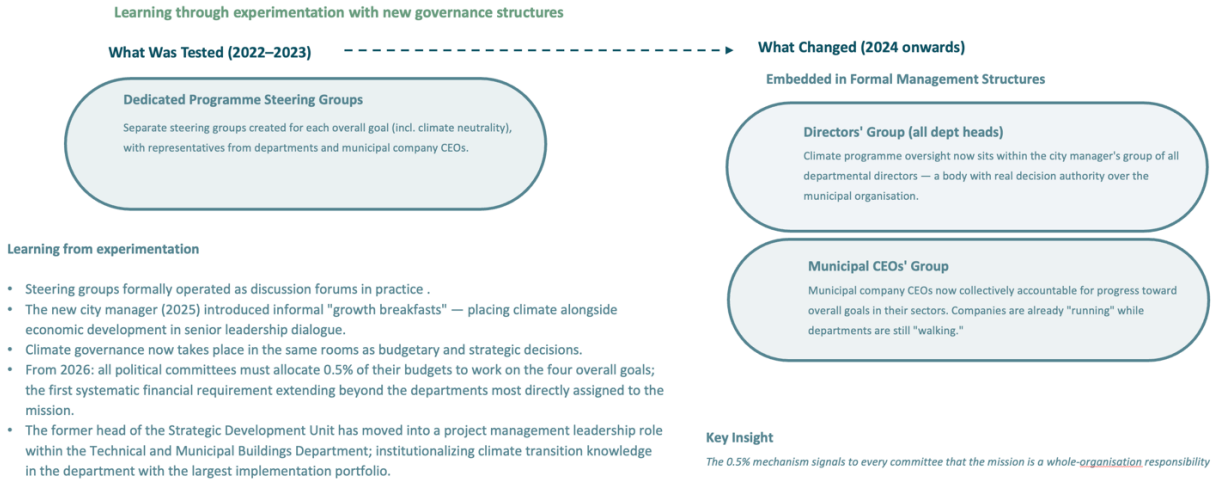

Figure 3 - Experimentation with governance structures in Umeå.

More broadly, the governance learning journey undertaken since 2022 has produced an important institutional insight, responsibility for climate objectives is most effectively held by the political committees and departments that possess both the mandate and the resources to act, rather than directed from the Strategic Development Unit. Early efforts to have the strategic coordination function specify departmental actions produced political resistance, since committees perceived such direction as an encroachment on their mandate and accountability (Interview 2, 2026). The current approach, which focuses on providing support and facilitation rather than direction, is described as a major learning, marking a transition from a centralised to a distributed ownership model.

Coordination Mechanisms and Cross Departmental Work

Cross departmental coordination in Umeå is characterised by an important structural evolution, a transition from purpose-built programme steering groups to embedding climate programme oversight within existing formal decision-making structures. Until 2024, the governance

architecture included dedicated programme steering groups for each of the four overall goals, composed of relevant departmental representatives and municipal company chief executives. These groups operated as discussion forums without decision making authority and were disconnected from the formal management processes through which resources are allocated and priorities confirmed, which limited their ability to drive accountability or resolve conflicting departmental priorities (Interview 2, 2026).

From 2024, the programme steering groups were dissolved and their functions were redistributed to two pre-existing senior governance bodies, the city manager's group of all departmental directors and the municipal companies' group of chief executives. These groups are now collectively responsible for overseeing progress toward the overall goals, including climate neutrality, within their respective sectors. This change is widely regarded by practitioners as a significant improvement, since it embeds climate governance within spaces that possess genuine decision authority and ensures that climate discussions take place in the same rooms as budgetary and strategic decisions (Interview 2, 2026, Interview 2, 2026).

In addition to this overarching governance structure, mission specific coordination processes exist at the sectoral level. Sector specific transition teams address energy transition, mobility transition, and construction emissions, each involving different configurations of municipal departments, companies, and external partners (Interview 2, 2026). The Climate Roadmap secretariat within the Strategic Development Unit functions as a permanent coordinating body for the external partnership, managing partner communications, facilitating partnership days and the annual climate summit, coordinating the annual monitoring survey, and supporting the strategic group that co develops the partnership model and joint learning and dialogue (Umeå Municipality, 2025b). Informal "growth breakfasts" convened by the new city manager have provided an additional venue for cross departmental dialogue that brings together climate and economic development agendas at senior level (Interview 2, 2026).

Concrete cross departmental collaboration has been most evident in specific project contexts. The fossil free working machines pilot, a joint initiative between the Strategic Development Unit and the Technical and Municipal Buildings Department, secured public investment funding for the remaking of a central city square using fossil free construction machinery and created opportunities to engage local supply chain partners in the transition (Interview 2, 2026). The development of Umeå's energy programme involved a co-created normative scenario process linking the municipality, Umeå Energi, regional stakeholders, and research institutions (Interview 2, 2026). The revised public procurement policy, developed in collaboration between the Strategic Development Unit and the Procurement Unit, formally shifted responsibility for setting climate criteria in procurements from the procurement function to the ordering department, an institutional redesign with significant implications for how climate objectives propagate through the spending decisions of the organisation (Interview 2, 2026).

Persistent coordination challenges remain. The siloed character of the municipal organisation, in which each directorate operates with substantial autonomy relative to the city manager's authority, limits lateral coordination capacity. The cultural distance between departments with strong climate mandates, such as Technical and Municipal Buildings, and those without, such as Education or Business Development, has yet to be closed, and the 2025 workshop confirmed that many departments have insufficient knowledge of the Climate Roadmap to identify their own role within it (Workshop Summary, 2025). Coordination with external partners under the Climate Roadmap, while structured, faces the challenge of uneven engagement levels, highly committed partners are well served by existing structures, while the partnership has yet to develop effective mechanisms for drawing in less engaged actors or those facing more significant transition barriers (Demos Helsinki, 2025a, Umeå Municipality, 2025b).

KPIs, Monitoring, and Everyday Operations

Umeå's monitoring architecture for the climate mission operates at multiple levels, combining national emissions databases, internal programme indicators, and the voluntary annual partner survey of the Climate Roadmap. The primary emissions data source is the national Regional Emission Statistics database, supplemented by the municipality's own tracking of sector specific activity data, including bicycle counts, travel surveys, and energy consumption figures from the district heating and electricity networks (2030 Climate Neutrality Action Plan for the City of Umeå, 2024). Annual programme reports compile this data into a formal account of progress against the four overall goals, including climate neutrality, which is reported to the City Council and made publicly available (Interview 2, 2026).

The integration of climate indicators into departmental operational plans has been developing progressively but remains incomplete. Each of the four programmes now includes formally specified indicators embedded in its programme document, providing a more structured framework for departmental reporting than existed in the programme's early years (Interview 2, 2026, Umeå Municipality, 2025a). The municipal planning directive contains a dedicated section on monitoring, analysis, and evaluation, which sets out expectations for follow up of strategic objectives and programmes, including the Programme for a Climate Neutral Umeå 2040, within the annual cycle of budget, accounts, and evaluation (Umeå Municipality, 2025a). Inspired by monitoring approaches in Malmö and Stockholm, the municipality is in the process of shifting toward prognosis-based reporting, a more analytically demanding approach that models future emission trajectories rather than simply recording historical data (Interview 2, 2026).

Notwithstanding these advances, significant challenges in monitoring and integration persist. A central difficulty is the inability to draw a clear causal line from specific municipal actions to measurable emission reductions, which is a challenge that politicians increasingly press the administration to address, seeking clearer evidence of the relationship between investment and impact (Interview 2, 2026). This attribution problem is particularly acute in sectors involving complex system dynamics, such as transport, where the emission impact of any single intervention depends on multiple co evolving factors.

At the partnership level, monitoring is structured through an annual voluntary review in which Climate Roadmap signatories undertake to share information on the activities and results of their climate work, including how they have worked on their selected climate challenges and the progress of their internal climate and sustainability processes (Umeå Municipality, 2025b). The annual review is explicitly framed as both a way of monitoring how climate work is progressing among partners and in Umeå as a whole and as a central part of shared learning and dialogue. Information gathered through the review is shared within the partnership and communicated externally (Umeå Municipality, 2025b). A portfolio mapping exercise, intended to provide a system level view of all planned and ongoing climate actions across the partnership and assess their aggregate emission impact, has been initiated but is not yet complete (Demos Helsinki, 2025a).

No evidence has been identified of climate or mission related KPIs being formally linked to individual staff performance reviews or appraisal processes within the municipal organisation. This gap between strategic objectives and human resource management systems represents a structural limitation on the extent to which the climate mission can be said to be embedded in everyday organisational operations. The 0.5 per cent budget allocation, effective from 2026, represents the most tangible mechanism linking the climate mission to operational resource decisions across all committees, although its flat application, regardless of the scale of climate exposure in each portfolio, limits its precision as an instrument for driving proportionate action (Interview 2, 2026, Umeå Municipality, 2025a).

Rules, Norms, and Internal Institutional Change

Several changes to formal rules and procedures have been introduced since 2022 as part of the governance transformation. The most significant is the revised public procurement policy, which reassigns responsibility for setting sustainability and climate criteria in public contracts from the central Procurement Unit to the relevant ordering departments. This structural change reflects a broader principle, namely that accountability for climate outcomes in a domain should lie with the actors that make the relevant decisions and hold the relevant budgets rather than with a support function (Interview 2, 2026). Implementing this principle in procurement requires ordering departments to develop or access technical knowledge about what climate criteria are legally permissible and practically effective, a capacity building challenge that the Strategic Development Unit is now mandated to support (Interview 2, 2026).

The Umeå-model, a carbon calculation tool for construction projects developed collaboratively with sector partners within the Umeå Climate Roadmap partnership, represents a further formalisation of climate considerations into operational practice. The model provides a project level framework for calculating climate impact in line with the Paris Agreement's emission budget logic and has been adopted by the Technical and Municipal Buildings Department as a tool for evaluating building projects. This co production of a technical standard, developed with industry partners rather than imposed from above, illustrates the practical application of a facilitative approach to institutional change.

The annual budget decision mechanism, through which the City Council designates 0.5 per cent of each committee's budget for work on the overall goals from 2026, constitutes a formal procedural change with significant institutional implications. It signals political intent that all departments, including those that have previously treated climate as external to their mandates, are expected to engage with the overall goals, and it is explicitly framed in the planning directive as part of the restructuring of resource allocation in a context of high investment levels and tightening labour market conditions (Interview 2, 2026, Umeå Municipality, 2025a).

Cultural change within the organisation is more difficult to assess, but available evidence suggests meaningful movement in certain parts of the administration alongside persistent resistance in others. Municipal companies represent the clearest site of cultural transformation, owner directives have provided a decisive mandate signal, and company structures, with their faster decision cycles and more direct accountability to outputs, appear to have enabled more rapid embedding of climate objectives in operational planning (Interview 2, 2026). Within the municipal departments, a notable cultural shift has occurred within the Strategic Development Unit, where the recognition that effective governance requires facilitating and supporting departmental ownership rather than directing action from the centre represents a significant change in the unit's self-conception and operational approach (Interview 2, 2026).

Persistent cultural barriers remain in departments with more distant relationships to the mission. The Business Development function's mandate alignment means their work is more focussed on growth, and more engagement in climate work could help move forward more effectively (Workshop Summary, 2025). More broadly, the risk that governance processes become ends in themselves, generating high quality discussions and documentation without translating into emission reductions, is identified in the Humble Governance review as a live concern, particularly in partnership settings where consensus building norms can suppress accountability expectations (Demos Helsinki, 2025a).

Capacity building efforts have included development of the concept Changemakers for Impact leadership and facilitation programme. Facilitation education for several municipal departments in

the city has been conducted annually since 2024, a 3 day education program with the purpose to be able to lead and facilitate transition. In addition, focus is placed on implementation through the development of concepts and methods linking local, regional and national levels, through exploration of the system hosting methodology by Karlstad University, and the capacity building dimensions of the Pilot City Collaboration under NetZeroCities (Demos Helsinki, 2025a). These activities have reached a core group of committed individuals within the Strategic Development Unit and the broader climate transition network, but evidence of systematic, organisation wide capacity development for climate governance remains limited.

A significant cross cutting feature of Umeå's governance is what the Humble Governance framework identifies as a defining characteristic of mature adaptive governance, namely a willingness to acknowledge uncertainty, defer to others' expertise, and operate through iteration rather than blueprint (Demos Helsinki, 2025a). This orientation is evident in practitioners' explicit admissions about unclear mandates and unresolved responsibilities, in the iterative redesign of governance structures, and in the co production of tools and models with partners rather than top-down specification (Interview 2, 2026, Interview 2, 2026). This epistemic humility is simultaneously a governance strength, enabling adaptive learning, and a risk factor if not counterbalanced by sufficient clarity of accountability and decision authority.

Leadership, Political Support, and Multi Level Context

Political support for Umeå's climate mission has been sustained since the initial goal adoption in 2020 and has intensified progressively through formal institutional commitments. The 2022 City Council decision introducing the steering mechanism represented the pivotal moment of political commitment, embedding climate neutrality in the core municipal governance architecture and creating the formal basis for departmental accountability (Interview 2, 2026). The planning directive for 2026-2029, adopted as the proposal of the Social Democrats and the Green Party, integrates the Programme for a Climate Neutral Umeå 2040 into the overall strategic objective framework and sets financial guidelines that must be reconciled with climate investment needs (Umeå Municipality, 2025a).

Political engagement with the mission has not been passive. Several assignments have been issued by political committees to restructure the governance processes within the municipality, and politicians are described as actively monitoring the pace of departmental integration and as being willing to use formal governance instruments to accelerate it when progress is deemed insufficient. The 0.5 per cent budget mandate from 2026 was explicitly motivated by political frustration that not all departments were engaging adequately with the overall goals, a political decision to use resource allocation as a tool for distributional governance reform (Interview 2, 2026). Similarly, the reduction in the number of overall goals from a previous larger set of objectives to four focused commitments reflected a political ambition to increase clarity and accountability at departmental level (Interview 2, 2026).

At the administrative leadership level, the arrival of a new city manager in 2025 is widely identified as a significant accelerator of cross departmental ownership. The new city manager's engagement, including the introduction of informal growth breakfasts that place climate alongside economic development in a senior leadership dialogue, has provided a visible signal that the mission is a whole organisation priority rather than the preserve of the Strategic Development Unit (Interview 2, 2026). The degree to which this change represents durable institutional embedding versus dependence on a single individual's personal commitment is an important forward looking question.

The multi level governance context provides both enabling resources and important constraints. The European Union's mission framework provides financial support, methodological toolkits, and structured peer learning opportunities through the NetZeroCities platform. The Viable Cities national programme provides a domestic accountability framework and network. The Thriving Northern Cities regional network offers a peer learning context relevant to the distinctive challenges of northern Sweden's transition, while national legislation requiring energy planning and strategic environmental assessment provides a minimum floor of climate related procedural obligations across all Swedish municipalities (2030 Climate Neutrality Action Plan for the City of Umeå, 2024, Interview 2, 2026). No material evidence has been identified of constraining national regulatory frameworks that directly impede Umeå's mission governance, although the relationship between municipal autonomy and national industrial transformation strategies in northern Sweden represents an area warranting continued attention.

4.1.3 Looking Ahead: Challenges, Opportunities, and Lessons

The most significant forward looking governance challenges identified through this analysis cluster around three dimensions, accountability depth, organisational sustainability, and data adequacy.

On accountability depth, the central challenge is extending genuine climate ownership beyond the small group of committed departments and individuals currently driving the mission to the broader municipal organisation and the full universe of Climate Roadmap partners. The flat 0.5 per cent budget mechanism is a necessary instrument for signalling that all committees must engage with the overall goals, but it is not sufficient on its own to ensure that the resulting activities are strategically purposeful or proportionate to departmental emission exposure (Umeå Municipality, 2025a). More differentiated approaches to mandate assignment and follow up, including targeted engagement strategies for currently less engaged departments such as Business Development, represent a priority for the next governance phase (Workshop Summary, 2026).

On organisational sustainability, the current governance architecture remains partially dependent on a small number of committed individuals, whose departure would create significant institutional knowledge and relationship losses. The structures of accountability within the directors' group and the chief executives' group are more durable, but the operational coordination capacity of the Strategic Development Unit depends on maintaining specific individual expertise. Developing more distributed and embedded climate competence across the organisation, including through systematic integration with human resources processes and skills supply plans, is a critical gap, particularly in light of the tightening labour market and projected labour shortages in key sectors identified in the planning directive (Umeå Municipality, 2025a).

On data adequacy, completing the portfolio mapping exercise, developing prognosis-based reporting, and improving the ability to attribute emission impacts to specific interventions are all pressing technical priorities. Politicians are increasingly pressing for clearer evidence of the relationship between governance inputs and climate outcomes, a demand that current monitoring systems are not yet fully equipped to meet (Interview 2, 2026, Demos Helsinki, 2025a). The requirement in the Climate Roadmap for partners to carry out annual reviews of their climate actions and to estimate emission reductions provides an important lever for strengthening the data base, but it will require further methodological support and capacity building if it is to generate high quality information at scale (Umeå Municipality, 2025b).

Several significant windows of opportunity can be identified for the near term. The new three-year period of the Umeå Climate Roadmap partnership from 2026 to 2028 provides a structured occasion to implement the structural recommendations from the Humble Governance review, including the establishment of smaller, more active working groups and clearer role definition for municipal departments and external partners within the partnership (Demos Helsinki, 2025a, Umeå Municipality, 2025b). The maturation of the national Climate City Contract process as a genuine governance lever provides a further opportunity to align European Union mission objectives with internal planning cycles more closely than has been possible in previous years (Interview 2, 2026). The broader Nordic green industrial transformation, generating new investment and institutional interest in the region, could create additional political salience for Umeå's climate leadership and attract co funding for transition investments, although it also heightens competition for scarce labour and capital (Umeå Municipality, 2025a).

Several lessons emerge from Umeå's governance experience that are likely to be of relevance to peer cities. First, purpose-built coordination structures that lack formal decision authority are a governance design risk, the experience of Umeå's former programme steering groups demonstrates that placing governance conversations outside the rooms where decisions are actually made generates discussion without accountability. Embedding climate governance within existing formal management structures

is more demanding in terms of agenda management but more likely to produce durable ownership (Interview 2, 2026).

Second, the distribution of mandate and responsibility must follow resource and decision authority, the insight that political committees must hold ownership of their own climate actions rather than receiving direction from a strategic coordination function reflects a broader principle about the conditions under which institutional actors develop genuine accountability (Interview 2, 2026). Third, the pace of governance learning required to manage complex multi actor transitions in real time demands tolerance for structural iteration, Umeå's willingness to acknowledge that its initial structures were not optimal and to redesign them, while institutionally challenging, has produced a more effective architecture than premature consolidation would have allowed (Demos Helsinki, 2025a).

Umeå's experience suggests that the principles of consensus, delegation, learning, and responsiveness, operationalised through structured but adaptive processes, can sustain meaningful collective action under conditions of significant uncertainty (Demos Helsinki, 2025a, Umeå Municipality, 2025b). Equally, the identification of risks, including diffuse accountability, process over results dynamics, and low demand setting in consensus-oriented environments, are areas where Umea’s climate transition can be more actively managed to produce the rapid emission reductions the mission demands.

4.2 Oslo

4.2.1 General City Information

Oslo is the capital of Norway, located in the south-eastern part of the country at the head of the Oslo Fjord, forming the core of the Oslo metropolitan region (City of Oslo, 2024). The city has a cold temperate climate with an average air temperature of 5.6°C, and its topography combines fjord coastline, river valleys, and forested hills, with green areas covering 78% of the municipal territory (Happy City Index, 2025; OECD, 2026). Oslo is a compact metropolitan city combining dense urban areas with large protected green zones, notably the Marka forest, and the municipality includes both highly urbanised districts and peri-urban natural areas, resulting in strong land-use and mobility pressures (City of Oslo, 2024). The city had a total population of 710,929 in 2023, of which 71.1% was of working age, with a comparatively young age profile and a low old-age dependency ratio of 18.4% (OECD, 2026). Population growth has been significant, at 14.3% between 2014 and 2024 compared to the Norwegian average of 8.7%, and 50.7% of the population is foreign-born (OECD, 2026). This continued urbanisation pressure intensifies demands on transport, housing, and energy systems, which are among the main sources of greenhouse gas emissions in the city (City of Oslo, 2024). Despite being the national capital, Oslo's median equivalised household disposable income (429,180.8 NOK) and employment rate (72.5%) are below national averages (OECD, 2026), and these socio-economic characteristics are relevant context for the fairness of the city's climate transition.

Oslo operates under a parliamentary system of governance in which the City Government, headed by the Governing Mayor, represents the executive branch and is responsible to the City Council, the legislative body that sets overall policy direction and approves the annual budget (City of Oslo, 2024). The City of Oslo holds both municipal and county functions, giving it extended responsibilities compared to other Norwegian municipalities and strengthening its capacity to coordinate policy across sectors relevant to climate and sustainability (City of Oslo, 2024). The city is Norway's political, economic, and cultural centre, serving as a major university and research city, innovation hub, and transport node (City of Oslo, 2024; Happy City Index, 2025). Its key sectors include public administration, knowledge-based services, finance, ICT, education, healthcare, construction, and transport (City of Oslo, 2024). Oslo is also Norway's second-largest public procurer after the national government, with annual purchases of approximately 36 billion NOK (3.2 billion EUR), a large proportion of which is connected to buildings and construction. This significant procurement power is a central lever in the city's climate governance approach, as explored in Sections 2 and 3.

Central to Oslo's climate governance is the Climate Agency, established in 2016 to follow up on the implementation of the city's Climate Strategy (City of Oslo, 2024). The Climate Strategy, adopted with the support of 8 out of 10 political parties in the city council, sets five targets towards 2030: reducing direct greenhouse gas emissions by 95% compared to 2009 levels, significantly lowering indirect emissions, preserving and enhancing natural carbon storage, reducing total energy consumption by 10% compared to 2009, and strengthening climate resilience (City of Oslo, 2024). In addition, the City Government has adopted a Thematic Plan for a Circular Economy towards 2030. Key strategic priorities include zero-emission transport and mobility, fossil-free construction and municipal operations, energy efficiency and renewable energy, climate adaptation and nature-based solutions, and reducing emissions embedded in consumption and procurement (City of Oslo, 2024). The main operational mechanism for implementing the Strategy is the annual Climate Budget, which is integrated as Chapter 2 of the city's fiscal budget, formally owned by the Department of Finance. The Climate Budget translates climate targets into concrete actions, assigns implementation responsibility to municipal entities, and requires regular reporting (City of Oslo, 2024). This structured approach has made Oslo an internationally recognised trailblazer in climate governance (Shank, 2024).

Oslo's climate ambitions are pursued within a multi-level governance context. At the national level, key climate authorities include the Ministry of Climate and Environment, the Ministry of Transport, and the Ministry of Petroleum and Energy (City of Oslo, 2024). The relationship between the city and the national government is of particular importance, as national legislation can both enable and constrain local climate action. Internationally, Oslo is an active member of C40, which opened an office in the city to accelerate climate budget work and clean construction collaboration (C40, 2020). The city is also a member of ICLEI and CNCA, a signatory of the Covenant of Mayors, an active initiator in the EU Big Buyers Initiative, and a participant in the Norwegian national city network on climate change and in the EU Cities Mission through NetZeroCities (City of Oslo, 2024). Oslo's path towards climate neutrality faces several challenges, including continued population growth, emissions from construction and consumption outside city boundaries, coordination challenges across agencies and sectors, and constraints posed by national legislation (City of Oslo, 2024). At the same time, the city benefits from strong political commitment, well-established governance tools, high administrative capacity, and an active innovation ecosystem with engaged research institutions and private sector actors (City of Oslo, 2024).

4.2.2 Mission governance in Oslo

Mission Governance Context & Transition Team

Oslo established a Climate Agency established in 2016 as the agency responsible for implementing the city's climate strategy, and it is located in the Department of Environment and Transport (City of Oslo, 2024). It was set up with the goal of strengthening the in-house coordination capacity and ensuring that climate goals and strategy are taken forward (Vedeld et al. 2021). In the organisational structure, the agency was allocated close to the Governing Mayor's office and with strong mandates and resources (Vedeld et al. 2021). The Climate Agency is also the body responsible for Oslo's participation in the EU Cities Mission.

The Climate Agency drafts recommendations for yearly budgeting conferences for the climate budget and it suggests and negotiates measures with all agencies and departments. It has an official mandate to give feedback on budgeting of other entities, comment on other entities' activity plans, and to give feedback and assess climate impacts of other agencies' budget propositions (City of Oslo, 2024). Based on obligatory climate reporting across the municipal organisation, the Climate Agency consolidates the information and gives feedback to the city government on where more climate action is needed or where climate impacts differ from pre-assessments (City of Oslo, 2024).

According to the case study interviews (2025, 2026), the role and mandate of the Oslo Climate Agency differs from many other cities' similar agencies, as it has a mandate to be visionary and not only act as a coordinating body. In practice, this means that the Agency has the possibility to instigate new initiatives and suggest them to other departments and agencies, and to come up with visionary ideas on how to reach the city's climate goals, which is found important for its success (Interview, 2025). According to Oslo's internal communication materials shared by the interviewees, it is also important that the Climate Agency clearly communicates its broad mandate and role both internally and externally, and it has identified principles for its communications such as using clear and understandable language, acting as positive motivators towards others, and showing respect for different competences and knowledge.

External Support & Influence on Governance

Oslo is active in various international networks and projects such as NetZeroCities, ICLEI and C40. According to the interviewees (2026), peer-learning on specific topics from the most advanced frontrunner cities (e.g., on clean construction or EU policy) has been the most useful element of the NetZeroCities platform for the city.

Oslo is also a very active member of the C40 network and initiated a clean construction initiative within the network. The interviewees note that they saw potential in joining forces with other cities because Oslo on its own is too small to change the market, and demand for clean construction machinery needs to come from other cities too. They also worked to raise the electronic construction agenda internationally in order to develop the market and indirectly help clean construction in Oslo (Interview, 2026).

They are also active in smaller and more specialised initiatives. The Procura+ network for procurement is mentioned as influential for procurement as a learning platform (Interview, 2026). On innovation and implementation, Oslo also works with various consultancies, universities and businesses, especially during piloting phases (Interview, 2026).

Contributions to breaking silos and rethinking governance

The interviews do not provide concrete examples of contributions from external support to rethinking the city's climate governance. It is noted that the city has had its climate governance model already since 2016, preceding the Missions work. The value of NetZeroCities and other external support has rather been to enable subject-specific peer-learning on specific topics from other advanced cities.

Rather than influencing the city's internal governance, the interviews point to the value of NetZeroCities from a multi-level governance perspective. According to the interviews (2026), EU-industry dialogues have been beneficial for Oslo, and Oslo appreciates the possibility to learn about EU policy and how to influence EU policy-making on issues that are relevant for Oslo's climate ambitions.

In general, external support and cooperation through networks such as NetZeroCities and C40 seem to be most valuable when they provide an opportunity to learn from advanced cities, and of influencing the international agenda. The clean construction work in C40 is an example of that, and so is the EU impact work through NetZeroCities. Oslo is also sharing experiences with other cities especially related to the climate budget tool, where Oslo's work has been broadly disseminated internationally through C40 and other channels (Interviews, 2025, 2026).

A learning highlighted in the interviews (2025, 2026) concerning the external support in NetZeroCities is that the project's early activities targeted cities who were just about to start their climate work. The value of the support appeared to be somewhat less evident for cities with more advanced climate policies and governance, such as Oslo. However, as noted, later the peer-learning and EU level interaction have been found useful for the city.

According to the interviews (2026), Oslo would need more support in the form of funding, since the funding for international work is especially difficult for the city to attain. There is also a need for funding support for implementation of concrete climate action. Some national funding is available, but the interviewees point that it is very limited.

Funded by
the European Union

Framing and understanding of the mission

In the interviews and in the city's written publications, Oslo does not commonly use the mission vocabulary, but instead talk about their climate strategy and the climate budget, and the governance around those. According to Vedeld & Hofstad (2022), as well as interviewees (2025, 2026), Oslo's climate goals provide guidance and direction, while the climate budget is the tool to select actions and implement action.

According to the interviewees (2025), it has been particularly central for reaching a shared direction that the climate strategy is supported by a broad majority of parties in the city council. The fact that all departments and agencies are included in the climate budget work is also mentioned as important factors that contribute to an understanding of a shared direction.

As the climate budget is included in the financial budget as section 2 and is owned by the finance department, it makes departments and agencies understand that they need to prioritise climate. According to an interviewee (2025), all this leads to a situation where "no-one in the municipality has an excuse not to do something".

It is emphasised that the EU Cities Mission has not directly influenced the local climate policy or governance, as the structures and policies were already in place when the EU Mission was launched, but that the Mission has functioned as a peer-learning opportunity (Interview, 2025).

Development process for mission and objectives

According to Oslo's Climate City Contract, Oslo's Climate Strategy was developed in a consultative process. First, the Climate Agency developed a white paper with analysis of the local conditions, gaps, barriers and opportunities. It also suggested target areas that were later decided in a participative process that invited different kinds of organisations and the general public to contribute. In practice, breakfast meetings, meetings with private sector actors and general feedback meetings were organised. The white paper was also distributed for public consultation, where 75 comments were received from the public and private and third sector organisations (City of Oslo, 2024).

8 out of 10 political parties in the city council were in favour of the Climate Strategy when it was adapted in 2020. In addition, Oslo has also started Business for Climate Network where participating businesses sign a contract and agree to contribute to the city's climate objectives (City of Oslo, 2024).

Internal communication of the mission

The interviewees (2025) especially highlight that the Climate Agency works directly and individually with all departments and agencies. They note that it is central to their work to learn about the different parts of the organisation that they work with, and to recognise that different approaches are needed in communication with different parts of the city organisation as they can have differing cultures and goals. Communication and interaction may need to be tailor-made to each department or agency.

Building trust and taking time to create a common vocabulary have been found important and useful in communicating and cooperating between the Climate Agency and other departments and agencies. It has also been found important to always clearly explain the mandate of the Climate Agency so that everyone understands that they have a mandate to actively engage other departments and even instigate climate action in other departments (Interview, 2025).

2.4. Roles, Mandates & Organisational Set-up

The responsibility for implementing the climate measures outlined in the Oslo Climate Budget 2025 is distributed among various municipal agencies and departments. This distribution of tasks is designed to make the Climate Budget a more effective governance tool for all municipal agencies and

departments, with reporting requirements similar to those for the overall budget. The allocation of responsibilities spans major infrastructure projects, day-to-day operations, and regulatory roles, ensuring a city-wide approach to achieving Oslo's five climate goals. Actors involved in the Climate Budget measures range from agencies responsible for waste and energy (KON, EBY, REG) and mobility & infrastructure (BYM, Ruter) to those with cross-cutting procurement and management roles (All, UKE) and policy & planning functions (KLI, PBE) (City of Oslo, 2025, pp. 5-7).

In this distributed responsibility setting, the Climate Agency operates as the leading agency. According to Vedeld & Hofstad (2022), the Climate Agency has integrative leadership characteristics, as shown by leading the co-design of climate policy, building institutional capacity for internal climate policy integration, and ensuring alignment across the municipal organisation.

As explained by the interviewees (2025), the Climate Agency works with all city departments and agencies to co-create various measures to reduce emissions to reach the climate targets set for 2030. To illustrate the logic of responsibility distribution in this collaboration, for example in the field of waste management, the Climate Agency would be interested in reducing all types of emissions while the Waste Management Agency would be primarily interested in household waste, due to their specific responsibility within the city organisation.

Interviewees (2025) describe a typical process of collaboration as starting with the Climate Agency working with the departments and agencies to develop an overall approach to the responsibilities of the department or agency in question, and to map different possible emission reductions. Once an agreement has been reached on the measures, then the Climate Agency puts it forward as a suggestion to be included in the Climate Budget. Following the City Government's approval, the relevant department or agency would be in charge of implementing the reduction measure and report back to the Climate Agency on the implementation status. In addition, the Climate Agency also reports to the City Council three times a year. If their report suggests that a measure has not resulted in the emission reduction as anticipated, they put forward additional suggestions to amend the measure.

Also as a part of this workflow, interviewees (2025) explained that during the budget process, every department in Oslo submits proposals for additional financial allocations for cost increases and new initiatives. These proposals are assessed by the Climate Agency for their climate impact, although some, such as hiring teachers, have little effect. The Climate Agency conducts an overall assessment of all proposals, ranking them based on efficiency for reducing emissions and adapting to climate change, providing the city government with a clear overview of the proposals' impact.

A strong incentive for all parts of the organisation to collaborate with the Climate Agency and actively participate in developing new climate policies and measures stems from the understanding that their involvement is beneficial. Interviewees (2026) note that all departments and agencies are aware of the city's climate ambitions. If they do not contribute to the design process, the Climate Agency will develop the policies anyway. These externally designed policies may then be more challenging for the department or agency to implement, as their specialized knowledge would not have been incorporated.

Alignment of mandates with mission objectives

The interviewees (2025) reported that in the City of Oslo, the departments have clear mandates within their own field, which naturally strengthens departments' ability to take action on climate matters. Nevertheless, there are also cases where a specific need for emissions reduction do not fall under the mandate of a specific department. In those cases, the Climate Agency makes a recommendation as to how to approach the responsibility and process. In some of these cases, changes in national legislation also removed the mandate gap, by enabling the City to take action as needed.

With another perspective into the question of mandate, the success of Oslo's Climate Budget stems primarily from its broad political mandate, which the interviewees (2025) see as its key advantage

when compared to other cities' approaches. Operationally, the Climate Budget's effectiveness is ensured by its integration as Chapter 2 of the city budget. This structure mandates the prioritisation of climate goals across the city hall. Crucially, once the Climate Budget is approved by the City Council, it becomes legally binding, dictating the actions that must be taken despite potential departmental disagreements (Interview, 2025).

Structural and role changes to support the mission

Interviewees (2026) point out that the establishment of the Climate Agency in 2016 was a major structural change that was put in place to actively work on climate goals. Centralizing climate expertise in one office allowed other departments to leverage that knowledge without needing their own dedicated staff, leading to significant city savings and improved efficiency through better coordination (Shank, 2023).

Interviewees (2026) further point out changes in the mandate of the agency responsible for the city's overall procurement strategy as another example of major revisions following Oslo's increased climate ambitions and the inclusion of environmental weighing in all procurement processes.

Gaps and overlaps in responsibilities

The city has identified the mandate related to zero emission construction as a potential gap in mandate. This is because zero emission construction is identified as a field where local action possibilities appear limited or where national-level action is needed to enable the local level action. Despite this, the city has proactively adapted its approach, particularly in the construction sector, by piloting and subsequently implementing zero-emission criteria in procurement weighting (Interview, 2025). This indicates a shift in mandate and operational prioritisation to support climate goals.

Similarly in circular economy, the Climate Agency's mandate regarding the subject has been clarified and expanded. Currently, the Agency is primarily responsible for coordinating internal efforts in circular economy. Previously, this responsibility was shared among four agencies, and consolidation to one lead agency has increased the impact (Interview, 2025).

2.5. Coordination Mechanisms & Cross-Departmental Work

The Climate Agency operates as a "horizontal convener", with the Climate Budget being the main "coordination and steering tool" (Hofstad, 2022), defining the various climate goals and clearly stating the responsibilities across departments. Against this background, climate governance work in the City of Oslo can be described as highly structured cross-departmental collaboration resulting from shared formal responsibilities across Finance, Environment, and Transport Departments (Brown & Hoti, 2025), as well as across all the other departments and agencies with specific mandates (Interview, 2025).

In order to avoid departmental disagreements from arising, interviewees (2025) emphasised that it is crucial to do the foundational work of finding a shared understanding and vocabulary with all relevant stakeholders across the city hall. What significantly helps agencies and departments to reach a shared conclusion is a clear mandate for the climate work required. When agencies and departments know *what* they are trying to achieve and *with what* (resources, timelines, regulatory limits, etc), the focus shifts to *how* best to implement. In this case, a joint proposal becomes a practical solution for coordinated implementation, as a joint proposal yields greater influence and streamlines the subsequent implementation stage. Typically, one agency (e.g., the Climate Agency) develops the measures, while another agency and department may be responsible for implementation, which shows the need for collaboration to ensure that proposed measures are practical and achievable.

Apart from the Climate Budget itself, interviewees (2025) provided examples of new forms of cross-departmental coordination approaches. A semi-permanent structure was mentioned: an action plan and a steering group involving relevant agencies to address climate adaptation issues such as heavy precipitation. As an example of a procedural change, interviewees noted a process where all city agencies are involved in an assessment of the climate impact of all new proposals, to ensure funds do not inadvertently increase emissions. Furthermore, climate considerations are now routinely mandatory for every measure put forward for political consideration. This has been supported by the Climate Agency's active engagement and involvement in other departments' strategies with hands-on efforts on the biggest emissions sources.

2.6. KPIs, Monitoring & Everyday Operations

According to the Climate City Contract (City of Oslo, 2024), the Climate Budget reporting is the main system of monitoring progress in city departments and agencies. The entities responsible for measures in the Climate Budget must report on their measures similarly to how they report on their finances. Progress on each measure is also reported three times a year based on measure-specific output indicators. Indicators can, for example, be focused on the amount of public charging stations installed, or kilometers of new bike lanes constructed.

The output indicators that are set in the Climate Budget for the responsible departments and agencies are also included in the department's or agency's own activity plan (City of Oslo, 2024) which may further contribute to their work being aligned with the objectives. The KPIs are developed in cooperation between the Climate Agency and the responsible entities (Interview, 2026).

In addition, the Climate Budget's annual updates include an evaluation of the latest GHG inventory. The process includes evaluating and adjusting measures based on the information on their impact, as well as evaluating the climate effects of potential new measures.

The Climate City Contract (City of Oslo, 2024) also notes that the Climate Agency has established a Climate Barometer that monitors the outcomes of different measures across the most important sectors. The Climate Barometer functions as a more real-time supplement to the GHG emission inventory that has a lag time of over a year. The indicators in the Climate Barometer are also evaluated three times a year to ensure that the Climate Budget measures are on track, and they are also used to complement the annual evaluation of the climate effects of the Climate Budget's measures. The set of indicators in the climate barometer is continuously being improved. According to the interviews (2026), Oslo also works together with the organisations responsible for national GHG emissions calculations to add detail to the system in order to refine the calculations made in Oslo.

2.7. Rules, Norms & Internal Institutional Change

Reflecting on the changes in how the Climate Agency works within the Climate Budget framework, interviewees (2025) noted that initially, the primary focus of assessment was solely on CO_2 emissions, specifically reduction potential or the cost per ton of emission reduction measures. This approach has evolved into a broader assessment that now incorporates climate adaptation and other consequences, such as energy supply.

The Climate Budget and calculation methodology undergo continuous refinement, becoming more sophisticated each year as emission cuts are achieved as intended. While many cities seek a perfect initial calculation and comprehensive monitoring, the City of Oslo has taken a more proactive and experimentative approach, focusing on the biggest emission factors and how to reduce them, recognizing that the perfect monitoring approach and process will be established through the ongoing process (Interview, 2025).

Another concrete example of changes in procedures when aiming to increased climate ambition is that Oslo has implemented new procurement practices, requiring environmental weighting of 30% in all processes. Interviewees (2026) note that the procurement processes were also revised to also consider Scope 3 emissions to align with the increased visibility of Scope 3 emissions in Oslo's Climate Budget.The city also updated tender criteria to mandate zero emissions for all municipal construction sites by 2025 (Shank, 2023).

Shifts in organisational culture and norms

Interviewees (2026) have noted a gradual change in organizational culture and attitudes toward climate action through several examples. Within zero-emission construction technology, the interviewees shared that the proposed changes were met with high skepticism, particularly by the procurement staff. However, successful piloting led to a significant positive change among the end-users as well as the procurement criteria developed in the city.

Interviewees (2026) acknowledged that the cultural barriers are diverse, depending on the specific measures or agencies involved. Crucially, the process of adopting the current climate goals have led to a gradual increase in knowledge across the city organisation, involving more people and resulting in the implementation of more new solutions. This suggests that the process of striving for ambitious climate goals in itself generates organisation learning and change. In addition, interviewees (2026) also suggested that introduction of new technologies also impact organisational culture and attitudes.

Capacity-building and staff support

According to Shank (2023), the requirement for Oslo's climate office to coordinate with all other city departments on every new proposal fosters new skills. Climate staff quickly gained competence in the diverse cultures, capacities, languages, and approaches of other city offices. This resulting professional development has been beneficial for the staff's career and an asset for the city.

Nevertheless, regarding skill gaps and development, interviewees (2026) pointed out the challenge of assessing competence needs across a massive organisation of 55000 employees many[1] of whom work on climate-related issues. Determination of needs for extra knowledge and competence is a case-by-case consideration, while also depending on available budget and political priorities. While training and staying current with new developments are recognised as important, secondments are also common practice.

2.8. Leadership, Political Support & Multi-Level Context

It is highlighted both by the interviews (2025, 2026) and by Vedeld & Hofstad (2022), that designing clear climate goals with a broad support across parties in the city council has been important, and also a "prerequisite for the adoption of the climate budget as a proactive policy instrument" (Vedeld & Hofstad, 2022, p.71).

According to the interviews (2026), the political support from the council level and the different parties has been constant, and the mandate to the city officials from the city council to prioritise climate is

[1] Interviewees (2026) note that although the climate work is streamlined across the city organisation, groups such as teachers, kindergartens, hospitals, elderly care and similar do not strictly work on climate related issues.

unchanged. Rather than changes in the commitment to climate ambition, there have been slight changes in different political parties' focus areas in implementing climate policies. For instance, the current majority party focuses more on business and innovation, in comparison to the earlier social-democratic local government.

There are no separate formal political commitments apart from the Climate Strategy and the Climate Budget in Oslo in the field of their climate policy. The interviewees (2026) do not consider it likely that the political climate would change in Oslo in the near future because, for instance, the climate budgets have been approved by the parties unanimously.

Engagement of senior officials and department heads

According to the interviews (2026), there are only minor differences in how much senior officials and department heads engage with Oslo's climate goal. All departments and agencies are involved in the climate budget and need to implement the measures that they are responsible for, but some department heads are more personally involved while others delegate to other seniors in their organisations. The interviewees also note that the engagement of departments also depend on how critical the sector or agency is for mitigation in Oslo. They also note some small disagreements arising when adapting new technology and ensuring that it is secure and resilient (e.g. when electrifying fire-fighting vehicles).

Overall the Climate Budget and the climate budgeting process include all departments and thereby all senior officials and department heads. Once a measure is included in the Climate Budget, the responsible departments and agencies commit to implementing it. The Climate Agency continuously follows up the implementation of the measures of the Climate Budget, and all the departments report on their actions three times a year. According to the interviews (2026), this means that all parts of the organisation know that if they do not implement the agreed actions, they will need to provide justifications.

Multi-level governance context

The interviews (2025, 2026) particularly highlight the importance of interaction and dialogue between the City of Oslo and the Norwegian national government. The national level legislation is considered a major barrier to Oslo's climate ambitions, and the city actively advocates for financial or legal changes. As an example, Oslo succeeded in getting the national government to give the local level the needed legal basis to regulate emissions from private construction sites, and they are currently in the process of the national government allowing the introduction of zero-emissions zones, thanks to the years of dialogue between the national government and the City of Oslo.

As noted in Chapter 3, despite Norway being a non-EU Member State, engaging and influencing EU policy is also highlighted as a relevant multi-level governance context for Oslo (Interviews, 2025, 2026).

4.2.3 Looking Ahead: Challenges, Opportunities & Lessons

Future challenges for mission governance in Oslo

According to the interviews (2026), the major global changes towards less ambitious climate policy are expected to be a major challenge for Oslo, which is framed to be “a small city in a big world” .

Global changes in, for example, technology and decreasing green investments are expected to also affect Oslo, as relevant technology might become less available and more expensive. Also the reduced ambition at the EU level, for example related to the EU Green Deal implementation, is expected to indirectly influence Oslo (Interview, 2026).

In developing its internal working methods, the next challenge that Oslo is facing is related to the integration of climate adaptation to its climate budget, requiring new ways of thinking and managing. Developing good indicators and measures on adaptation is found especially challenging, but the city is cooperating with other cities with experience on this, such as New York (Interview, 2026).

Opportunities for mission governance in Oslo

The interviews (2026) point to private businesses’ continuous engagement and climate work as an opportunity. In a situation where political support is decreasing globally in many places, companies are still showing ambition despite the unclear political situation, which is an opportunity for cooperation and joining forces with cities as well.

According to the interviews (2026), continued cooperation with the national government is a further opportunity for Oslo. As noted, dialogue between the city and the national level has already led to legal changes that enable more ambitious climate action at local level (e.g., on clean construction and low emission zones). However, it is still a challenge that national level processes are long, and Oslo still has several topics where national level changes would be required to enable the city to cut its emissions according to its goals. For instance, when it comes to consumption-based emissions and circular economy, national policies on taxation, VAT, and goals for re-use could be considered a barrier. Property transfer tax is another example, as it does not exist for new buildings, but exists when transforming an existing building into new homes which risks dis-incentivising more climate-friendly re-use instead of new construction.

Advice and lessons for other cities

The interviewees (2026) state that it is important for a city to set ambitious goals from the start, give the city organisation a clear mandate to work towards those goals, and have strong support from the political system. Also the system of working across the city organisation and making all departments and agencies responsible for action (especially through the system and process established in the Climate Budget) have been essential.

The interviewees (2025, 2026) also advise other cities not to wait until they have all the possible knowledge about measures, or perfect calculation methods, before taking action. They note that Oslo has focused on taking concrete action and, for instance, testing new technologies as early as possible. They also advise identifying and prioritising the biggest sources of emissions at first, as well as starting with addressing the largest emissions in areas where the city organisation has agency and possibility to act, i.e., has the legal basis or other means to reduce emissions in those areas.

4.3 Turku

4.3.1 General City Information

Basic city profile

Turku is a historic coastal city in southwestern Finland and the regional capital of Southwest Finland, situated at the mouth of the Aura River on the Baltic Sea. Founded in 1229, it is Finland's oldest city and one of the country's most significant urban centres, with a population over 200 000 inhabitants in the municipality and over 300 000 in the broader urban region, making it the third largest urban area in Finland after the Helsinki and Tampere regions.

The city's age profile is typical for a European urban area: approximately 25 % are children and youth (0-17 years), 60-62 % are working age adults (18-64 years), and around 20 % are over 65, with a median age of about 40 years. In recent years, Turku's population has been growing steadily, driven by internal migration and international immigration, and forecasts suggest continued growth in the coming decades. The city is also becoming increasingly multicultural, with a rising share of residents from foreign language backgrounds, reflecting broader demographic trends in Finland.

Geographically, Turku serves as a dynamic hub in the Baltic Sea region, combining urban services with rich natural surroundings and a vibrant cultural and academic life anchored by multiple universities and research institutions.

Turku's economy is driven by several key sectors. The city is a major centre for maritime and shipbuilding. Technology and life sciences also play an important role, with firms specializing in biotech, medical technology, and ICT. Additionally, Turku's logistics and transport sector benefits from its strategic coastal location, supporting ports, freight, and shipping services. The largest sources of CO_2 emissions in Turku come from energy, heating (particularly district heating for buildings), transport (including road traffic and shipping), and industry, with shipbuilding and manufacturing contributing significantly to the city's overall emissions.

Municipal structure and political leadership

The governance of Turku is based on a democratic municipal structure headed by a City Council elected by residents every four years. The Council exercises the highest decision-making authority in the municipality, determining the city's strategic objectives, budget, and key policies, including climate and sustainability objectives, and appointing members to various committees that oversee sectors such as urban environment, culture, and social services. The current council term (2025-2029) comprises 67 councillors from a range of political groups representing both majority and minority positions in local politics. The executive leadership is centred on the Mayor's Office, supported by a Chief of Staff and central administration responsible for coordinating city operations, implementing council decisions, and steering strategic priorities across service divisions and city-owned companies.

City Mission and Climate Neutrality Agenda

Turku has positioned itself on the international stage for climate action through participation in and the EU Mission for 100 Climate Neutral and Smart Cities and the NetZeroCities pilot programme. In March 2024 the city received the prestigious EU Mission Label, which recognizes successful development of its **Climate City Contract (CCC).** With the ambitious goal of achieving **carbon neutrality by 2029** (meaning a 90% reduction in emissions compared to 1990 levels), **and transitioning towards climate positivity thereafter**, the city has developed comprehensive climate plans and partnerships that engage companies, residents, and civil society in emissions reduction, circular economy, and nature-based solutions. Other key goals include the sustainable use of natural resources and

maintaining a rich urban and local natural environment. The shift to climate-positivity increasingly emphasizes consumption-based emissions and is complemented by a target for resource wisdom by 2040. More broadly, the climate work in Turku is beginning to move from a sole focus on emission reductions toward a wider sustainability framework, reflecting on what constitutes a sustainable and good life in times of ecological crisis and within planetary boundaries.

Key regional bodies relevant to climate and mission governance include the Urban Environment Committee and regional committees such as the Southwest Finland Waste Management Committee and the Turku Region Public Transport Committee, which play important roles in implementing infrastructure and environmental policy. Within the administration, dedicated departments and programmes focus on climate, nature, and sustainability work guided by Turku's **Climate Plan 2029**.

The city has focused on climate and sustainable development goals since at least 2009, when the first climate program was launched. Turku joined the Covenant of Mayors in 2010, and the first SECAP-based Climate Plan was approved by the city council in 2018. That plan has been updated once and is currently being revised again. In 2025, the City Board set the goal of nature positivity by 2030, aiming to give biodiversity and nature the same strategic focus as climate. Circular economy has also been a priority, with a roadmap published in 2021 after a multi-year development process. Today, climate, nature, and circular economy are treated equally on the agenda, each supported by dedicated strategic documents and programs that are regularly updated.

4.3.2 Mission Governance Context & Transition Team

Transition team / coordinating unit

The climate work is coordinated by the **Climate, Nature and Circular Economy Team** within Business and Economic Development. The team, led by Risto Veivo, Climate Director, has currently 13 professionals with backgrounds in natural and social sciences and operates close to central administration. Its main tasks are advancing the Climate Plan and the CCC strategically, aligned with the city strategy and mayoral program, and collaborating with stakeholders. Recently the department has been moved from a position comparable to the Mayor's Office to Business and Economic Development Services as part of a broader city reorganization. A separate Environmental Protection Department handles more direct biodiversity and nature work, while this team focuses on strategic, long-term planning for climate, nature, and circular economy.

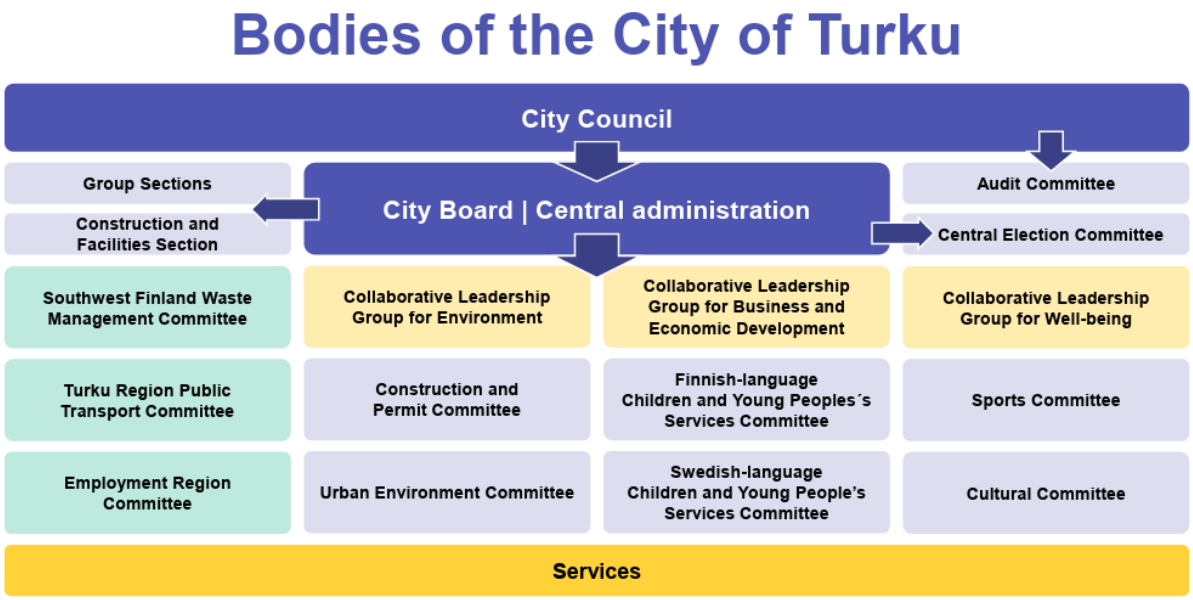

Figure 4 - Organisational chart of Turku.

Figure 5 - Organisational chart of Turku Service division of Business and Economic Development.

The implementation of the Climate Plan has been embedded into Turku's regular management processes and is overseen by both the City Council and the City Board. The City Board receives a report on the implementation and progress of the Climate Plan at least once a year, in addition to the climate report submitted to the City Council. The achievement of the objectives set for 2021, 2025, and 2029 is reviewed during each Council term as part of the Climate Plan's periodic updates.

Recognising the vital role of the private sector in achieving climate neutrality, Turku actively encourages companies and organisations to join the city's **Climate Team network** by making a climate pledge. The Climate Team network currently includes around 140 organisations. Members join the network with already implemented climate, biodiversity or circular economy actions - both small

and large scale - which are documented on the Carbon Neutral Turku website and highlighted in the annual climate report.

Another important body in the city's climate work is the **Climate Coordination Group**. Serving as a key hub for information exchange and expertise, it provides ongoing support for the city's climate initiatives. The group consists of approximately 200 internal and external experts and plays a central role in the Climate Plan process.

Additionally, to co-develop the CCC, Turku has established a **Climate Partner network** comprising nearly 50 organisations. This group brings together key companies and local institutions such as universities, welfare organisations, the church, and cultural actors including theatres, which have formally committed to supporting the city's climate objectives while implementing their own concrete actions. Climate Partners are invited by the city, and their commitment document is negotiated individually with each organisation, ensuring a clear contribution to the climate neutrality goal. Collectively, these organisations send a strong signal of shared commitment to climate goals and contribute to building a broader understanding of progress as well as forthcoming developments. The network has continued to expand and strengthen over time, while some Climate Partners are also part of the Climate Team network.

External Support & Influence on Governance

Overview of external support

As part of the NetZeroCities Pilot Cities Programme, Turku implemented the 1.5-Degree City project. Within this pilot, the city created opportunities for residents to actively participate in climate action, supported companies in developing low-carbon business practices through the ongoing work of the Climate Team network, and established an online platform "Climate Situation Room" for knowledge-based governance. In collaboration with the University of Turku's Department of Psychology, insights from behavioural science and "nudging" methods were applied to encourage climate-positive behaviour. The project promoted a 1.5-degree climate-friendly lifestyle among residents through dialogues, an empowering climate communications campaign, and a network of climate ambassadors composed of relatable role models from Turku. In addition, the initiative included piloting sustainable leisure-time mobility solutions in partnership with citizens.

In addition to NetZeroCities support, city networks play a central role in learning and collaboration. The city is actively involved in several long-standing networks, including Finnish Sustainable Communities (FISU), The Towards Carbon Neutral Municipalities (Hinku), Local Governments for Sustainability (ICLEI), The European Regions Research and Innovation Network (ERRIN), and others, alongside its participation as a Mission City. These networks provide important opportunities to exchange experiences with other cities, replicate successful practices, and foster collaboration across internal departments. Political leaders are also involved in these networks, which sends a strong internal signal about the importance of climate action and the city's active role in national and international cooperation.

Finally, the city has worked with an external consultancy, which supported a broader leadership and organizational development process. Part of this work focused on climate leadership, examining how it is currently organized within the city and how it could be further developed. Through this collaboration, the agency contributed to governance-related improvements.

Contributions to breaking silos and rethinking governance

As part of this recent city-wide leadership design process supported by an external consultancy, a new governance structure was introduced in the form of three **cross-sectoral "co-influential steering groups."** These groups focus on well-being, business and economic development, and the

environment, and are intended to ensure that key strategic themes cut across all departments and city activities. The Climate Team is directly involved in the **Environmental Steering Group**, with a senior representative participating and parts of the team holding preparatory responsibilities. Each steering group includes five elected politicians alongside senior officials from the city administration, such as service area leaders and department heads. The groups are designed to keep their respective themes consistently on the political and administrative agenda.

This structure is very new, having been introduced in autumn 2025, and meeting practices are still evolving. While related strategic processes - such as the Climate Plan and the Nature Roadmap - already exist, discussions are ongoing about the exact role and authority of the steering groups, including whether they will function primarily as decision-making bodies or advisory forums.

Mission, Common Vision & Shared Objectives

Framing and understanding of the mission

Accessing the EU Mission for Climate-Neutral and Smart Cities and developing the CCC has clearly acted as an accelerator of climate work and stakeholder engagement, as it required bringing together the most central actors in the Turku region. Through this process, the city has also been able to secure funding. The CCC Action Plan was developed based on the existing Climate Plan, while the CCC Investment Plan was more newly constructed during the process, building on and linking to the Climate Budget that the city had already started to develop. The CCC has been particularly relevant in strengthening the investment framework, helping to better link city investments with climate budgeting and align these more closely with the EU level. It has also played a role in establishing the Climate Partner network, including the creation of CCC commitments, with new partners continuing to be invited to join. More broadly, the Mission has provided not only resources, but also a clear framework and a strong network to support and further develop Turku's climate work.

The city's climate work is guided also by several high-level strategic documents. The Climate Plan is one of the key overarching frameworks and is regularly updated each council term. At the beginning of 2026 the plan has been undergoing evaluation and revision, with an updated version expected to be presented to the city council in June. In parallel, the city is developing its first Nature Roadmap. Together with the Climate Plan and the Circular Economy Roadmap, which is expected to be updated next year, these documents form the core strategic framework guiding climate, biodiversity, and circular economy work. Other thematic strategies - such as those related to forests or the Baltic Sea - also exist, but these three documents are considered the primary pillars of the city's sustainability agenda.

Development process for mission and objectives

Internal engagement in Turku has evolved gradually over more than a decade, as the importance of climate and nature has become more visible across the city organisation. Today, the topic is clearly on the city's agenda, but this did not happen automatically. Progress required persistence, relationship-building, and continuous dialogue to build mutual understanding. Political leadership has also supported this development. Both previous and current Mayors have been very active, including internationally through ICLEI, which has helped strengthen these topics. **Despite political changes, climate and nature remain strongly reflected in the current mayoral programme and the ongoing city strategy renewal.**

External frameworks also accelerated progress. The EU taxonomy provided structure and a clear narrative for sustainability work, while participation in initiatives led by the European Commission strengthened networks and cooperation with actors such as the European Investment Bank. Mission funding also enabled the climate team to expand to four dedicated staff members, allowing broader cooperation with regional partners.

Getting departments on board - especially the planning and construction service area - has been a process spanning several years. The Climate Team worked through repeated workshops, discussions, and integration of climate considerations into existing processes. For example, the city introduced EU taxonomy evaluations into investment planning, assessing the sustainability of major projects such as infrastructure and buildings. Initially, this approach was not well understood, but through continuous engagement departments gradually recognized its value and practical relevance.

Persistence was key. The climate team regularly requested time in department meetings, presented agenda points, and sought input and support. Having a bridge-builder within the team, such as a colleague who came from a construction background, helped connect people, make climate topics more relevant, and navigate resistance.

Collaboration across departments varies. The planning and construction service area is particularly important because of its strong influence on climate and nature outcomes, and cooperation with them has improved significantly. The procurement department is another strong partner, actively developing sustainable procurement criteria and initiatives. Cooperation with the mobility function is also important, as they lead many sustainable transport projects, although coordination can sometimes be challenging due to structural separation within the organisation.

Engagement with some sectors, such as children and youth services (schools and daycare), has been more limited because their daily priorities differ. In contrast, cooperation with cultural services has worked relatively well. Overall, collaboration across the large city organisation has strengthened over time, with particular focus on departments that have the greatest impact on climate and nature outcomes.

Internal communication of the mission

To strengthen internal engagement, several tools have been developed. A new webpage under the 1.5 Degree City project serves as a shared resource base and is used in internal discussions. In the ongoing INTACT project (funded under NetZeroCities “Enabling City Transformation” Programme), one full work package is dedicated specifically to internal communication and engagement, recognizing that this requires more systematic effort. Initiatives include nature webinars, climate and nature dialogue trainings, new intranet pages, participation in the selected city-wide HR webinars led by the Mayor, and long-running climate webinars that, although originally aimed at external stakeholders, also attract internal staff. Campaigns, info screens in buildings, and broader communication efforts have further supported outreach. In addition, regular meetings and internal working groups - such as those on sustainable construction, circular economy, climate engagement and communication - support ongoing collaboration across departments.

A smaller project funded by the Finnish Ministry of the Environment highlighted differing internal attitudes: some staff are highly motivated, some are willing but unsure how to act, and some are resistant. Through targeted one-to-one discussions with department representatives, the climate team explored perceived roles, opportunities, and barriers related to climate, nature, and circular economy topics. This marked a shift toward deeper internal activation work, which now continues under larger projects.

A key lesson has been that engagement often starts with information-sharing but needs to move toward more participatory approaches. **Not all departments can directly influence emission reductions, but they can contribute in other ways, such as citizen engagement, communication, or process development. Making climate and nature issues understandable and relevant to each department’s daily work, and ensuring that ownership extends beyond the climate team, remains central to long-term integration.**

Roles, Mandates & Organisational Set-up

Distribution of responsibility for the mission

The Climate Director is responsible for the city's climate strategy and governance and plays a key connecting role. He ensures that climate issues remain visible in the right forums, particularly in political contexts. His ability to identify where to engage, whom to involve, and how to frame issues has been important for maintaining continuity and keeping the climate agenda on track. The core team consists of the Climate Director and four senior specialists in permanent positions, while the rest of the team works mainly on project-based or temporary contracts as project managers or specialists. The Climate Director, senior specialists, and project managers meet regularly to discuss strategic issues and the overall direction of the work. The team is also organized thematically: some members focus on climate mitigation and adaptation, others on biodiversity or the circular economy, and two colleagues works specifically on climate finance and investments. This structure combines strategic oversight with thematic expertise.

Implementation of climate actions takes place at multiple levels but is not fully formalised by department. Guidance comes from political leadership, strategic documents such as the Climate Plan, and ongoing project-based initiatives. The new version of the Climate Plan is beginning to specify responsibilities more clearly in some thematic areas, such as nature and carbon sinks, although assigning all actions to specific departments would require significant coordination and resources.

Some challenges remain. For example, work on carbon sinks and compensation is complicated by unclear legislation, while climate engagement in schools and kindergartens often depends on individual motivation and resources. Coordination can also be difficult in areas such as mobility, where services and planning are located in different parts of the organisation. Overall, responsibilities are shared, and cross-departmental cooperation continues to evolve to address these challenges.

Alignment of mandates with mission objectives

Perceptions of climate work across departments vary. Mobility teams are generally very supportive of climate action and actively seek solutions, although political decisions can sometimes limit progress. The construction and planning departments employ many staff members, and the flow of understanding and information can be slow, requiring repeated discussions and structural support such as climate budgeting and taxonomy workshops. Over time, attitudes have improved, and department heads now recognize the relevance and importance of climate work.

Engagement also depends on personal attitudes. Some staff feel their work has a real impact, while others question its significance in the context of global emissions. This creates a wide range of perspectives among both leaders and staff. **Consistent dialogue, workshops, and structured processes over several years have been key to building understanding and commitment.**

Coordination Mechanisms & Cross-Departmental Work

Formal coordination mechanisms

The evaluation and **update of the Climate Plan is a highly participatory process** involving Climate Coordination Group consisting of **staff from multiple city departments as well as external stakeholders** such as universities, higher education institutions, companies, and other key partners. The Group brings together a plenary body alongside smaller thematic groups aligned with the SECAP model (including energy, mobility, city structure and construction, nature and carbon sinks, adaptation, strategy and vision, and communication and participation). It is closely involved in both the evaluation and updating of the Climate Plan, while also supporting its implementation. The group convenes more frequently during key planning phases, in addition to its regular biannual meetings.

The Climate Plan itself is less detailed than in some other cities. Rather than assigning specific responsibilities, it sets overarching targets for each thematic area. After approval by the city council, the thematic groups continue to meet to review progress, assess developments, and identify

necessary actions. This creates a continuous follow-up cycle rather than limiting engagement to the planning phase. For example, in the energy group, city-owned energy companies play a central role. Progress is monitored through indicators such as the share of renewable energy in district heating, and discussions focus on performance, barriers, and next steps. This ongoing engagement helps keep climate objectives visible, although progress varies across sectors.

Implementation and follow-up are also supported through regular meetings with department heads, presentations to service-area executive boards, and interaction with political leadership. Annual climate reports are presented to the city council, providing opportunities for discussion and accountability. Together, these formal and informal processes help ensure that the Climate Plan remains a living framework rather than a static document.

Examples of cross-departmental collaboration

Climate action across the organisation is coordinated through projects, strategic engagement, and regular interaction at multiple levels. Projects are central: some are developed within individual departments, such as mobility or procurement, while others are co-created across departments. Often the climate team initiates projects but later transfers ownership to relevant departments, enabling them to secure funding and take long-term responsibility.

Strategic influence is also exercised through involvement in major steering documents, such as the city strategy and the mayoral programme, ensuring that climate and nature objectives are embedded in these frameworks. Coordination is supported by regular meetings: Senior expert group and the full team meet biweekly, while project work is typically organised through more frequent meetings. Together, these mechanisms help align departments, sustain momentum, and integrate climate action across the organisation.

Enablers and opportunities for coordination

In Turku, momentum has not come from single quick wins but from persistence and strong leadership. Climate Director has played a key role in knowing when to push, how to adapt to changing circumstances, and how to keep climate issues on the agenda even when progress is difficult. **As the climate target year approaches and many cities doubt they will reach their goals, Turku has chosen to maintain its ambition and is updating its Climate Plan rather than lowering expectations.** This continued commitment has helped sustain motivation. At the same time, actively highlighting successful examples within different departments has been important. Communicating what works builds trust, strengthens engagement, and ensures achievements are recognized.

KPIs, Monitoring & Everyday Operations

Monitoring systems and indicators

Annual climate monitoring covers multiple sectors to track progress toward carbon neutrality. The main focus areas are energy, transport/mobility, industry, agriculture, waste management, machinery, and heating. CO_2 calculations are the core indicators, complemented by qualitative reporting on projects, pilots, citizen participation, and nature-related actions. Reporting follows the structure of the Climate Plan and aligns with Covenant of Mayors standards.

The monitoring informs priorities indirectly. Energy has been a major success area, so transport and mobility are now relatively more significant as emissions there remain higher. Indicators are included in the city strategy, so decision-makers can track them, though specific departmental actions are not yet formally tied to KPIs. In some sectors, like mobility, the team starts to identify more precise indicators to guide internal efforts, but annual data availability can be a limitation.

Data for climate monitoring in Finland is supported by reliable annual CO_2 emissions data for each municipality, provided by the state-owned research organisation SYKE (Finnish Environment Institute).

This ensures consistent tracking of overall emissions and progress toward climate targets. Mid-targets for emissions (e.g., 75% reduction by 2025) are tracked annually, and so far, the city has met or exceeded them. Internal departments provide underlying data, but availability varies by sector. For example, mobility data is collected only every 4-5 years, making annual tracking difficult. While broad indicators are stable and outsourced, more detailed, sector-specific indicators (like mobility) would need additional annual data and resources to be useful. Consumption-based emissions are a newer indicator being piloted across Finnish cities, but it's not yet part of routine reporting. Overall, the process is structured but depends heavily on both external calculation services and periodic internal data collection.

Rules, Norms & Internal Institutional Change

Team culture and trust are equally important. Because the work involves experimentation and uncertainty, a supportive environment where people can share doubts and test new ideas is highly valued. Optimism also plays a key role: the team believes that ambitious goals such as carbon neutrality and nature positivity are achievable, which encourages proactive thinking and enthusiasm for new initiatives.

A broad mix of expertise is essential within the team. Members come from diverse backgrounds in natural and social sciences, which helps address the wide-ranging challenges related to climate, nature, and the circular economy. Much of the work involves continuous problem-solving in complex and uncertain situations, making strong communication and collaboration crucial both within the team and with other departments and external partners.

At the same time, some capacity gaps remain. The loss of a colleague with construction expertise has been noticeable, and financial and calculation skills are limited. The team also feels it could ideally be larger to fully cover all thematic areas. Despite these constraints, the combination of diverse expertise and a collaborative culture have enabled steady progress. The team participates in training offered by the city and through professional networks, including courses in service design and leadership that are applied directly in their work. Learning also takes place through exchanges with other Finnish cities and European initiatives, although time can be a limiting factor. Experimentation is a normal part of the team's approach, with small pilots used to test ideas and develop solutions. This experimental mindset is less common across the wider city organisation.

Leadership, Political Support & Multi-Level Context

The decision to join the EU Mission came from the city's EU office, which raised the idea several times. Early momentum came from city officials, including Climate Director and colleagues, who pushed the agenda forward. Political support has grown over time, especially under Mayor Minna Arve, who was very active internationally and pro-climate. Prior to her, earlier Mayors and city leadership were gradually becoming involved, building support step by step.

Ambitious targets, such as early climate goals set in 2009 and tightened in 2018 and 2022, were initially seen as impossible, but meeting them faster than expected helped create confidence that climate action is achievable. Wider societal movements, like Fridays for Future in 2017-18, also increased public visibility of climate issues and strengthened political backing.

Political support for climate action in Turku has remained strong despite changes in leadership. The Social Democratic Party currently leads the city, following over 20 years of more centre-right leadership. The new Mayor, Piia Elo, naturally supports climate and nature goals, and the team actively worked to ensure these issues were included in the mayoral program and the upcoming city strategy. Dialogue with political leaders is ongoing, and climate and nature priorities continue to be

maintained and adapted, for example by connecting them with children, youth, and just transition focus areas.

National politics in Finland have shifted more to the right, but in Turku local elections have favoured climate-supportive parties, showing a degree of separation between national and city-level trends. While some Finnish cities have reduced their climate teams, Turku has strengthened its capacity by adding senior specialists and permanent positions, supporting continuity and long-term planning.

At the national level, priorities have changed: requirements such as mandatory municipal climate plans have been removed and related funding has been reduced, making climate work more challenging. One consequence is that Turku's climate team was moved into the economic services department, reflecting the growing emphasis on city growth and economic development. As a result, the team increasingly frames climate action in terms of economic benefits alongside environmental goals - an approach also reflected in the current update of the Climate Plan and its internal communication.

4.3.3 Looking Ahead: Challenges, Opportunities & Lessons

Looking forward, the main challenge is making climate work more integrated across departments. It's not just about the climate team doing things, but about helping all staff see their role and feel empowered to take action. This involves two levels: motivating individual employees to find climate solutions in their work and ensuring leadership supports and implements climate priorities in their teams.

Opportunities include using the Climate Plan update and the new Nature Roadmap as tools to engage staff and departments. There's also potential in working more closely with companies, making collaboration more effective, relevant, and even enjoyable. Leadership engagement is another area to leverage, especially with the new Mayor focusing on children and youth, which could open new ways to connect climate work to longer-term goals and everyday benefits, like health and sustainable living.

For cities seeking to create a strong internal environment for climate work, three key points stand out:

- First, **dialogue and communication** are crucial. Regular conversations across departments, building trust, and repeating messages help make climate work visible and understood. It's not enough to just give instructions - people need to see why it matters and feel involved.
- Second, **ambitious, clear targets** motivate action. Setting concrete goals with visible deadlines helps people understand what they are working towards and gives a sense of urgency. Targets that are too far in the future risk losing momentum, so shorter-term, actionable milestones are important.
- Third, **linking climate work to the city's broader image and identity** creates momentum. Framing climate and nature efforts as central to the city's reputation, both locally and internationally, encourages internal ownership. It shows that climate action isn't just a task - it's part of what defines the city and how it is seen externally.

These three elements together - open dialogue, ambitious targets, and connecting to the city's identity - create an environment where climate work is supported, understood, and actively pursued.

Overall, successful climate governance in Turku has been built on a few key elements. Decision-makers have shown strong and consistent support, with broad agreement on the city's climate policy. The climate team has worked under the guidance of the Mayor, and although it now sits within business and economic development services, this link has remained while the team itself has continued to grow and strengthen. Just as importantly, work is carried out in close collaboration across departments, in a co-creative and mutually supportive way.

4.4 Aachen

4.4.1 General City Information

Basic City Profile

Aachen is an independent city in North Rhine-Westphalia (NRW), Germany, with a total area of 160.9 km² and a population of approximately 262,000 inhabitants as of 2022 (CCC: Action Plan). Its population density of 1,548.5 inhabitants per km² is well above the NRW state average of 525.5 inhabitants per km².

Aachen's demographic profile is relatively young, shaped significantly by its status as a university city. The population grew by 2.4% between 2018 and 2023, slightly above the German average of 1.9%, and the foreign-born population stands at 28.5%. The 18-25 age group is the only cohort with positive net migration. In the 2019/20 winter semester, enrolled students were equivalent to almost a quarter of the city's total population, reflected in a household structure where 56.7% of households are single-person (CCC: Action Plan; OECD Local Data Portal, 2021-2022).

The economic structure is heterogeneous: approximately 67% of employees work in services, 17% in trade and logistics, and 15% in manufacturing, particularly mechanical engineering. The largest employer is RWTH Aachen University. Mean equivalised household disposable income stands at €23,309, below the German average of €30,853 (OECD Local Data Portal, 2020), partly attributable to the student population.

Geographic and Regional Context

Aachen is located in the westernmost part of Germany, bordering Belgium and the Netherlands, and serves as the regional centre for the Aachen city region, which includes nine surrounding municipalities. The city is part of the Rhenish mining district, characterised by lignite mining across the Hambach, Garzweiler, and Inden open-cast mines, and is classified as a structurally weak region under the EU's regional aid framework, making it eligible for ERDF funding (CCC: Action Plan).

Approximately 60% of the building stock is residential, with the majority built between 1949 and 1978, a period associated with low energy efficiency standards. The city's strong transport connectivity, including cross-border commuter flows from Belgium and the Netherlands and links to three federal motorways, means that a significant share of mobility-related emissions falls outside Aachen's direct governance reach. Highway transit traffic in particular distorts the city's mobility sector emissions figures, complicating progress measurement (Interviews, 2026; CCC: Action Plan).

Governance and Institutional Setting

Aachen's city administration is organised into seven directorates, 23 specialist areas, six district offices, and six municipal enterprises, employing over 6,000 staff. The municipal family, comprising core administration, enterprises, and holdings, has a maximum direct and indirect influence of approximately 50% on the reduction of energy-related GHG emissions in the city as a whole. This makes external stakeholder engagement a governance necessity rather than a choice (CCC: Action Plan).

Two directorates carry primary responsibility for the mission: Directorate III for Urban Development, Construction and Mobility, and Directorate VII for Climate and Environment, Municipal Operations and Buildings, the latter newly created in 2021. A Climate Neutral Office, operating with its own identity

and staffing outside the core administration, serves as an additional coordination and convening unit. Municipal enterprises are also significant actors, particularly in energy supply, public transport, and district heating. Stadtwerke Aachen is the majority shareholder in grid operator Regionetz GmbH, bundling electricity, gas, heating, and water grid management across the city and surrounding region (CCC: Action Plan).

Since the city's inclusion in the EU Mission, two successive mayoral elections have taken place, resulting in a shift from a green-led to a centre-right administration. Political commitment to the mission and the 2030 target has been maintained through both transitions (Interviews, 2026).

Climate and Sustainability Commitments

Aachen has a documented climate commitment stretching back to 1991, when it established an office for energy and climate protection and joined the European Climate Alliance. The city has been a member of the EU Covenant of Mayors since 2009 and has received European Energy Award gold certification in 2011, 2015, 2019, and 2023 (CCC: Action Plan).

In 2019, the City Council declared a climate emergency. In January 2020, Aachen became the first German city to formally adopt a climate target based on its proportional share of the remaining global GHG budget (16.3M tCO_2eq), linking its policy directly to the Paris Agreement. In May 2022, a citizen-led petition signed by over 11,000 residents was adopted unanimously by the City Council, setting the goal of climate neutrality by 2030 across all territorial emissions and sectors (CCC: Action Plan).

City Mission and Climate Neutrality Agenda

Aachen's mission is operationalised through two complementary instruments: the Integrated Climate Protection Concept (IKSK), which establishes municipal measures and a staged reduction pathway, and the Climate City Contract (CCC), which extends commitments to the city's broader ecosystem of partners and stakeholders. The IKSK 2.0 targets climate neutrality, or at least an 80% reduction in emissions compared to 1990, by 2030, incorporating both the core administration and municipal holdings. The CCC Action Plan covers seven fields of action: governance, energy, buildings, mobility, economy, societal transformation, and offsetting, with key priorities including heat supply decarbonisation, renewable electricity expansion, mobility transition, and building renovation at a target rate of 4% annually (CCC: Action Plan).

The CCC is backed by 73 (160 (as of April 2026 (31 premium, 72 framework, 39 basic, 18 LOI) signatories across four tiers of commitment. Premium partners, including RWTH Aachen University, municipal utility STAWAG, public transport operator ASEAG, and civil society organisation Klimaentscheid Aachen, are each voluntarily committed to achieving climate neutrality by 2030. The broader coalition spans universities, companies, hospitals, business associations, schools, churches and civic groups (CCC: Commitments).

Key Challenges and Opportunities

The structural governance challenge for Aachen is that roughly half of the city's GHG emissions lie outside the direct influence of the municipal family, distributing responsibility across actors the city can engage but not direct. Within the emissions that are more directly addressable, two sectoral challenges are particularly acute. The decommissioning of the Weisweiler lignite-fired power plant in 2029, which currently feeds the district heating network, requires coordinated action across utilities, regional actors, and the administration within a fixed timeline. The mobility transition faces structural lock-in: car density has grown 30% over 30 years despite only 3.1% population growth, and the

transition requires alignment across planning, infrastructure, procurement, and public transport (CCC: Action Plan). Below-average household income relative to the German mean adds an equity dimension to these governance decisions.

Against these challenges, Aachen holds several structural assets. The university ecosystem is directly embedded in the mission coalition as a premium partner and provides a foundation for innovation partnerships. The city's position at the centre of the Rhenish mining district's post-coal transformation gives it access to structural funds and a regional political mandate for change. Municipal ownership of key energy infrastructure, including STAWAG and the existing district heating network, provides direct leverage over energy transition decisions that extends beyond what regulatory instruments alone could achieve.

4.4.2 Mission Governance in Aachen

Mission Governance Context and Transition Team

Aachen's transition team is a distributed coordination structure spanning EU, municipal, and ecosystem logics. The team is not a conventional organisational unit. It is distributed across the city administration and the Climate Neutral Office, with a closer core group, the Mission Management Team (MMT), and a wider tier of colleagues who coordinate on specific tasks such as CO_2 monitoring and network engagement (Interviews, 2026).

The MMT coordinates three distinct strands with differentiated responsibilities and reporting lines to the Steering Circle (STK). The first is *Coordination of the EU Mission*, sitting within the Department for Procurement, Contracts and Grant Management. The second is *Coordination of the IKSK*, sitting within the Department of Climate and Environment and responsible for overseeing 30 core municipal measures. The third is *Coordination of the Climate City Contract*, led by the head of the Climate Neutral Office, responsible for managing external partners and commitment-signer actions. The STK brings together the two Deputy Mayors and heads of key departments, and functions as the primary forum for strategic decision-making and political steering.

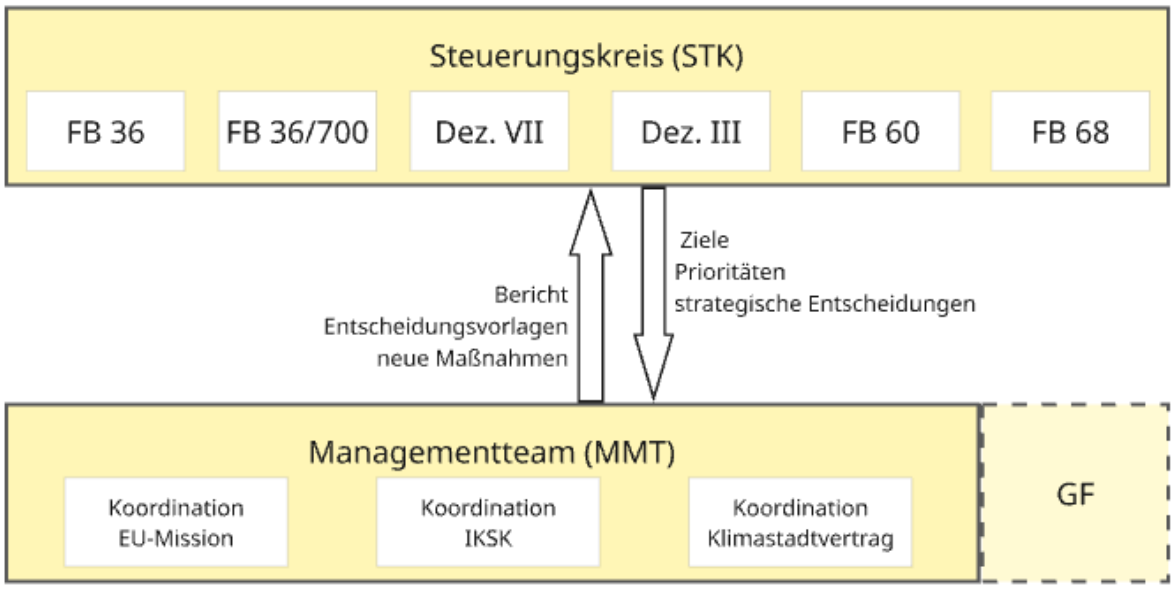

Figure 6 - Governance structure for "Climate-Neutral Aachen 2030": Steering Circle (STK) and Mission Management Team (MMT). *Source: City of Aachen.*

The MMT meets bi-weekly and functions as the primary space for operational coordination: aligning positions across the three strands, surfacing emerging issues, and preparing decisions and reporting for the STK. The STK meets every six to eight weeks, opening with political updates from the Deputy Mayors, moving through a prepared focus topic, receiving structured progress reports from each MMT strand, and closing with an EU Mission highlight. Interviewees described one of the governance challenges the redesign process had to resolve as unclear roles, responsibilities, and reporting structures: decisions requiring political input were not always sufficiently prepared, while questions of who should take responsibility for which issues, and how they should move through the system, were still being worked out.

The team was not the result of a single formal design decision, but developed over time through a series of decisions linked to the mission process. Following Aachen's selection as an EU Mission City in April 2022, an initial transition team was established under the two Deputy Mayors. The coordination function expanded during the CCC development phase, following a board-level decision to fund a second full-time role focused on building the local ecosystem. Through this period, the team operated as a loose network without clearly defined roles or boundaries, with responsibilities absorbed by whoever was most available and decisions taken informally. Following submission of the CCC in 2024, a period of reduced momentum and uncertainty about how to work together in the implementation phase made those gaps more visible. This triggered a governance redesign, supported by Rupprecht Consult and Dark Matter Labs through a NetZeroCities City Expert Support Facility request, producing defined roles, agreed meeting rhythms, and formalised reporting lines, formally constituting the MMT and STK as the governance architecture for implementation (Interviews, 2026).

External Support and Influence on Governance

External support has been a consistent enabling condition throughout the mission, most effective where sustained over time and where it provided functions that were difficult to organise internally: independent facilitation, governance structuring, and additional capacity the administration did not have readily available.

Rupprecht Consult has been the primary source of governance support, commissioned in 2023 and extended through the CEFS mechanism into the implementation phase. Drawing on the OSTO systems analysis model, their work spanned organisational design, facilitation of off-site retreats, and moderation of Steering Circle meetings during the first months. The retreats, in particular, created protected time in which senior leadership and the team could work through governance design questions, on roles, decision-making structures, and reporting, that internal hierarchies made difficult to address from within. The city assessed that none of the team could have moderated such a process internally, and that external facilitation was key to enabling questions about authority, coordination gaps, and working arrangements to be surfaced and worked through in a way that would have been difficult to achieve internally (Interviews, 2026).

Coaching sessions with the MMT ahead of Steering Circle meetings were identified as a specific and effective intervention. The focus was on structuring proposals clearly: leading with the decision required, presenting the relevant options, and making the implications of each explicit. The coaching process helped establish this as a discipline, and shifted the quality of what the STK could do in its meetings, improving the way decisions were prepared and brought forward.

Technical support for the IKSK update was provided separately by GERTEC GmbH and the Wuppertal Institute, developed jointly with the CCC process to ensure alignment between municipal measures and the wider action plan. The NetZeroCities City Advisor relationship provided longitudinal contextual knowledge, trust built over time, and an outside perspective that helped the city identify opportunities and frame its work. NZC Capital Hub engagement explored blended funding mechanisms. A NZC-supported climate communication workshop brought colleagues from across

departments together to work on narrative framing and difficult conversations with climate sceptics. A recurring lesson from the city's experience was the value of continuity: where external relationships were sustained over time, partners developed a stronger understanding of the city's context and constraints, which made their support more effective at key moments (Interviews, 2026).

Mission, Common Vision, and Shared Objectives

The 2030 climate neutrality target rests on an unusually strong and layered mandate, combining political decisions and civic mobilisation, but translating that mandate into consistent ownership in day to day implementation across a 6,000-person administration remains the central implementation challenge.

The target is grounded in two City Council resolutions and reinforced by a citizen-led petition signed by over 11,000 residents, adopted unanimously by the council in May 2022. The CCC, ratified by council in 2024 and co-signed by 160 (134 by the time of CCC submission) organisations, extends this commitment across the city's ecosystem. The layered character of this foundation was not accidental. Three processes ran in parallel during the period following Aachen's inclusion in the Mission. The IKSK was revised to extend its target horizon to 2030, with the update led by GERTEC GmbH through a participatory process involving structured workshops with staff across the administration, and presented through multiple political committees before council approval in March 2024. The CCC was developed to consolidate commitments from the wider city ecosystem and incorporate the IKSK as administration-owned measures within a broader action plan. And a communication campaign was developed jointly and launched at the same day at the CCC submission event with the slogan "Us.Now," targeting the urban community.. Each process involved different actors and operated through different accountability mechanisms, together creating a broader and more layered foundation for the mission, which has helped maintain continuity as political priorities and framing have evolved (Interviews, 2026; CCC: Commitments).

Within the administration, the target is understood as a collective obligation rather than a departmental project. Alignment is strongest where mandates already correspond to mission objectives, primarily in Environment, Buildings, Mobility, Utilities, and Procurement. It is harder to establish in non-technical departments, where the connection to existing mandates is less direct and structural friction is more common. Interviewees noted that even in departments where engagement was strong, the mission had not yet consistently reached the level of individual staff members: political decisions and overarching targets could remain loosely connected to what they meant in practice for day-to-day responsibilities, particularly for those not directly involved in strategic or leadership discussions. Progress toward mainstreaming climate action across the administration remains a work in progress, particularly beyond the departments most directly engaged.

Internal communication has been an important part of the effort to build shared ownership. After selection as a Mission City, the team engaged colleagues across the administration through presentations on the mission's objectives, with the aim of building early awareness of what it required from different parts of the organisation. A standing climate team, meeting approximately every six weeks and bringing together project managers responsible for IKSK measures, provides a regular cross-departmental forum at working level. A climate protection conference for department heads also continues, meeting quarterly. Alongside these formal forums, informal communication has been actively cultivated: regular lunch check ins between mission coordination team members and colleagues in areas such as mobility and circularity, and climate breakfasts open to a wider group, have helped maintain connections that formal meeting structures alone do not provide. Leadership explicitly encouraged this layer of exchange, recognising the importance of informal contact alongside more formal coordination arrangements (Interviews, 2026).

The limits of formal internal communication were visible in the extent to which the mission had reached everyday work across the administration. The challenge was not primarily one of willingness.

Interviewees suggested that once colleagues had been onboarded, they were often willing, and in many cases enthusiastic, to contribute. A harder task was translating political commitments and shared objectives into forms of involvement that connected to day to day responsibilities across a large and differentiated organisation. This became more pronounced as the mission moved from planning into implementation, with broad awareness and alignment needed to be complemented by other forms of ownership and action.

Roles, Mandates, and Organisational Set-up

Responsibility for the mission is broadly distributed but only partially formalised, with some areas strongly institutionalised and others relying on informal arrangements, creating tensions in departments whose operating logic does not fully align with climate action.

A substantial part of Aachen's climate implementation capacity predates the Mission. Under IKSK 2020, €120 million was allocated for climate protection measures, including the appointment of 36 climate protection managers across all departments, with these positions later extended through to 2030 (CCC: Commitments). These managers, each assigned to specific measures, represent the most systematic layer of formal role assignment in the mission. Beyond this, mission-specific roles are limited. The only positions created specifically for the mission are the head of the Climate Neutral Office and two project managers coordinator for the NZC pilot CoLab. One of these positions was made permanent.For most staff, including the Mission Coordinater, mission-related responsibilities are carried as informal additions to existing roles, without formal mandate change or job description revision. The pattern this creates is one of selective formalisation: where the IKSK assigns a measure to a department and that measure maps clearly onto existing competencies, there is a degree of formal grounding; where responsibilities are less clearly embedded in existing roles, implementation depends more on informal coordination and individual initiative (Interviews, 2026).

The 36 climate protection managers represent the most tangible attempt to embed mission responsibilities formally across the organisation. In departments where assigned measures align closely with existing work, the manager role tends to be well integrated into normal working practice. In departments where the assignment is more peripheral, the role can sit awkwardly alongside core responsibilities, with climate protection tasks treated as an add-on rather than a central function. Where measures are progressing more slowly, the challenge appears to relate not only to technical capacity, but also to whether the responsible manager has the organisational backing, the time, and the cross-departmental access needed to drive implementation effectively.

Mandate tensions are most visible in three areas. The treasury's obligation to manage the annual municipal budget in compliance with NRW state regulations creates tension with the multi-year planning logic that climate action requires, reflected at times in gaps between climate budgets allocated and amounts spent. Internal auditing's compliance mandate prioritises cost-effectiveness, creating friction with the mission's objective of embedding lifecycle and sustainability criteria in procurement decisions. The communications department is in a phase of adjustment following the change in mayoral leadership, with the alignment of its mandate with climate communication goals evolving under changed political conditions. These are not attitudinal resistances; they reflect the boundaries of institutional mandates and the time it takes for those to adjust (Interviews, 2026).

Economic development presents a different kind of challenge, not structural friction but distance. Climate and economic objectives have been broadly compatible in practice, but the department's primary focus on digitalisation and job creation means it operates on a somewhat different set of priorities, and the mission is less consistently felt as a shared priority.

Two structural additions addressed gaps the core administration did not have the capacity to fill from within. The Climate Neutral Office, positioned outside the administration with its own corporate identity and web presence, enables engagement with the CCC partner ecosystem in ways the administrative

structure would make more difficult, and has functioned as a connector between external partners and internal departments. The financial architect, an external specialist contracted on a limited basis of approximately five days per month, addressed a recognised gap in financial expertise; conversations with bodies such as the European Investment Bank had previously lacked a clear internal lead. The role was placed through the Climate Neutral Office rather than directly within the city administration, a choice shaped in part by the political and cultural context and the collaborator's public profile as a known climate advocate. It is currently contributing to the development of a climate compensation fund mechanism and to building the financing pipeline required to support the mission's investment ambitions (Interviews, 2026).

Coordination Mechanisms and Cross-Departmental Work

A four-tier formal structure provides the coordination structure for the mission: the Steering Circle for strategic decision-making and political steering, meeting every six to eight weeks; the MMT for operational coordination, meeting bi-weekly; the climate team for working-level measure tracking, meeting approximately every six weeks; and the CCC Curatorium for ecosystem engagement with approximately thirty premium partners, all political parties, the Deputy Mayors, and the executive mayor, meeting twice yearly. This formal architecture is necessary, but on its own insufficient. Informal network-building, actively encouraged by leadership, has been essential to enabling cross-departmental collaboration in practice, operating through a different logic than formal coordination: less about managing defined responsibilities, and more about building the trust and mutual awareness that allows people to reach across departmental boundaries without always requiring a formal mandate to do so (Interviews, 2026).

The CCC Curatorium functions as the primary interface between the city administration and the broader partner ecosystem. Its composition, approximately thirty premium partners alongside all political parties, the Deputy Mayors, and the executive mayor, gives it a distinct character: it is neither a purely administrative forum nor a purely political one, but a space where institutional partners engage directly with senior political leadership around the shared commitments of the Climate City Contract. Interviewees described the Curatorium as a forum for surfacing shared challenges and testing ideas across organisational boundaries. It has given rise to thematic working groups on specific topics, including a climate compensation fund and the heat transition, which allow deeper engagement between the city and specific partner groups on issues where the standard Curatorium format does not provide sufficient time or depth. The twice-yearly rhythm means it cannot function as an operational coordination mechanism, but it has proven valuable as a space for legitimacy and accountability: a regular occasion on which the city's senior political leadership reports on mission progress to the partners who have co-signed the contract (Interviews, 2026).

Project frameworks have been important in enabling collaboration where formal mandates do not naturally converge. Within externally funded projects, departments can work beyond their usual constraints with fewer internal barriers: funding reduces the relevance of financial risk as a constraint, and the project framework provides legitimacy for working in different ways. Interviewees noted that this dynamic also creates space for colleagues who are intrinsically motivated but rarely find the organisational room to act on that motivation within standard administrative structures. The EU-project context gives them both the permission and the practical tools to contribute in ways that normal working conditions do not. The green procurement project, run under the Enabling City Transitions programme, illustrates this clearly. It brought together procurement, road construction, facility management, and internal auditing around the shared task of testing sustainability criteria in public purchasing. External funding mitigated financial risk, while a specialised lawyer provided technical grounding, and a connection to Oslo offered a best-practice reference that gave departments the confidence to attempt procurements they would not have tried alone. In this case, internal auditing endorsed the procurements as experimental, permitting price weighting to shift from the standard 50% to 30% in favour of quality and sustainability criteria. That endorsement would have been more difficult

outside the project structure, not because internal auditing was unwilling, but because the project framework gave the deviation from standard practice a legitimate basis that normal administrative channels did not readily provide (Interviews, 2026).

A different type of cross-sectoral collaboration has emerged through the mission's network-building work. The mission team introduced the managing director of a recently professionalised citizen energy cooperative (through funding of the ALTHEA EU-project) to the municipal colleague responsible for charging infrastructure. The connection led to a project combining photovoltaic energy, storage, and publicly accessible charging infrastructure, financially viable under existing funding schemes and linking climate, energy, and mobility objectives in a way that neither actor had been able to pursue alone. This kind of facilitated emergence, where the team's role is to build relationships rather than coordinate activities, has become more frequent from late 2025 onwards, suggesting the cumulative effect of sustained network-building over time that formal coordination structures alone would not have generated (Interviews, 2026).

Coordination challenges persist alongside this momentum. Departmental capacity constraints limit the time available for horizontal work. Procurement rules and administrative approval cycles create delays between decision and implementation. The shift in mayoral leadership has required ongoing adaptation in how the mission is framed and communicated internally and externally, adding a layer of narrative management to an already demanding coordination effort (Interviews, 2026).

KPIs, Monitoring, and Everyday Operations

The central challenge in Aachen's monitoring is attribution: the city's instruments operate at a level of aggregation that makes it difficult to connect specific municipal actions to measurable outcomes. This creates direct tension with political expectations for clear evidence of impact. That tension is not only a technical inconvenience; it shapes what the mission team can propose, defend, and resource in conversations with political leadership.

The foundational instrument is the annual CO_2 balance, calculated using the ECORegion tool in accordance with the BISKO standard since 2010. It provides the territorial overview used for political reporting, but cannot distinguish between emissions within and outside municipal influence, or attribute progress to specific measures. Highway transit traffic passing through Aachen further distorts figures, making the mobility sector appear to underperform despite meaningful progress in areas under municipal control. This is not only a measurement problem. When political leadership reads the CO_2 balance and sees a sector performing poorly, it can generate pressure on the departments responsible for that sector, regardless of whether the underperformance reflects anything those departments could have influenced. The monitoring instrument therefore shapes political judgement in ways that can misalign incentives and obscure where progress is and is not being made. The mission team has limited means to correct that reading without more granular data (Interviews, 2026).

In practice, the mission team works to manage the gap between what the monitoring system produces and what political decision-making requires. Progress updates to the Steering Circle bring together different layers of reporting, including measure-level updates and the CO_2 balance. Interviewees also emphasised the importance of distinguishing between territorial emissions trends and those areas where the city's own measures can reasonably be expected to have influence, for example by separating out factors such as transit traffic in the mobility sector. The team works across these different layers of information, combining aggregate indicators such as the CO_2 balance with measure-level updates from tools such as PlanForge, even where the causal link between specific measures and emission reductions cannot be precisely quantified. Interviewees indicated that this requires interpretation and explanation to make the data meaningful for decision-making, as the monitoring instruments themselves do not directly provide this level of clarity. As the mission moves further into implementation, and expectations for clearer evidence of impact are present, these practices are likely

to come under greater pressure in the absence of a more robust attribution framework (Interviews, 2026).

Two additional instruments address the need for more granular tracking. PlanForge enables systematic progress reporting on individual IKSK measures across departments. Interviewees noted that its use varies considerably in practice: in some departments it functions as a genuine planning and management aid, consulted regularly and updated as part of ongoing project work; in others it is treated primarily as a reporting obligation, completed when updates are requested and rarely consulted in between. The extent to which PlanForge supports active measure management, rather than simply documenting status, depends significantly on the culture and capacity of individual departments rather than on the tool itself. ClimateView provides sector-disaggregated analysis with scenario modelling capability, integrating data from the economic model developed as part of the CCC to link strategic targets with operational monitoring. It was formally adopted in early 2026, with public publication planned for April. Neither instrument fully resolves the attribution challenge.

Many IKSK measures are framed at a level of ambition, such as transitioning the heat system or enabling citizen behaviour change, that makes connecting them to trackable milestones difficult. The city has also ratified 25 mobility-related indicators as part of the Mobilitätsstrategie 2030, providing a more structured monitoring framework in that sector. Across other domains, the gap between what can be measured and what political leadership expects to see remains. This gap is consequential: in the absence of credible intermediate indicators, it becomes more difficult for the mission team to demonstrate that investments are producing progress, which can complicate efforts to protect those investments in budget negotiations and to sustain political commitment to measures whose effects materialise over longer timeframes (Interviews, 2026).

Rules, Norms, and Internal Institutional Change

Institutional change in Aachen has been predominantly pragmatic and project-driven, emerging through specific initiatives rather than comprehensive structural reform. Project frameworks have created space for motivated staff to act in ways that standard procedures would otherwise limit.

The clearest example concerns procurement. New criteria incorporating CO_2 shadow pricing and lifecycle considerations have been developed and tested experimentally within the NZC ECT programme, with explicit endorsement from internal auditing. Formal adoption is moving through political processes, with a council vote expected after the summer break. The case illustrates a pattern that runs across Aachen's institutional change: formal adoption follows demonstrated practice rather than preceding it (Interviews, 2026).

Where resistance exists, most consistently in the treasury and internal auditing, it reflects the boundaries of formal mandates rather than opposition to climate action. These departments operate within formal remits and procedural logics that constrain their ability to adapt without changes to rules, approvals, or authorising frameworks. The procurement case makes this distinction concrete: once a project framework provided legitimacy, internal auditing was able to endorse approaches it would not typically support through normal channels (Interviews, 2026).

Capacity building has followed a similar logic: targeted and opportunity-driven, integrated into normal professional development rather than delivered as a separate mission programme. A training session on an ecological construction planning tool, organised for colleagues working on mission-relevant projects, attracted significantly more participants than anticipated. Interviewees described the response as surprising, pointing to a broader latent appetite for this kind of skills development across the administration that had not previously found an outlet. A climate communication workshop, organised with NZC support, brought together colleagues from across departments to work on how to frame the climate narrative and how to lead difficult conversations with climate sceptics, an area

where the team had identified a practical gap between the importance of communication and the confidence of many colleagues to engage in it effectively.

EU-funded project frameworks have also functioned as capacity-building vehicles in a more embedded sense: the ECT green procurement project provided colleagues in procurement, road construction, and facility management with technical grounding through a specialised lawyer, a concrete best-practice reference through the connection to Oslo, and a protected context within which to apply new approaches with reduced perceived risk. The team's choice not to establish a dedicated training budget for the mission reflects an implicit position: mission-relevant skills are more likely to be sustained when developed through existing professional development structures within departments, rather than through a separate mission-branded programme that may not be embedded in everyday practice (Interviews, 2026).

Leadership, Political Support, and Multi-Level Context

Political support for the mission is grounded in a combination of formal commitments that have provided continuity across political cycles. Two City Council resolutions, a citizen-led mandate with over 11,000 signatures, and a CCC ratified by council and co-signed by 160 organisations provide overlapping anchors that the mission team can draw on when alignment needs reinforcing. Through two successive changes of mayoral leadership, formal commitment to the 2030 target has been maintained. What has shifted is framing. Under the previous administration, climate neutrality was one of seven pillars of a broader vision of the city's future. Under the current mayor, the primary frame is structural economic transition, with climate action positioned within the post-coal transformation of the Rhenish mining district. Each shift has required adaptation in narrative and in how internal alignment and the external coalition are maintained (Interviews, 2026).

The Deputy Mayors responsible for the mission have played a central role in establishing credibility, both internally and with external partners. Their involvement extended beyond formal governance participation: during the development of the CCC, the Deputy Mayors accompanied initial outreach meetings with the leadership of major universities, companies, and associations, signalling at senior level that the city was taking the coalition-building process seriously. That direct engagement was identified as an important factor in building early trust and momentum, particularly in the first phase of securing commitment from major institutional partners (Interviews, 2026).

The multi-level governance context is broadly enabling. The 2021 NRW climate protection law, committing the state to greenhouse gas neutrality by 2045, provides policy alignment with Aachen's municipal target. The three NRW Mission Cities, Aachen, Münster, and Dortmund, have formed an alliance to address the state government jointly on mission-related needs. At federal level, the eightGerman Mission Cities have constituted the stronGER Cities network, which holds permanent representation in the federal steering forum on the Mission and has submitted joint advocacy statements calling for Mission Cities to be able to test innovations at pilot scale without undue procedural constraint (CCC: Action Plan; CCC: Commitments).

4.4.3 Looking Ahead: Challenges, Opportunities, and Lessons

Three structural challenges are expected to shape the governance of the mission through to 2030. The most persistent is the mismatch between the multi-year investment horizon required for heat transition, building renovation, and mobility transformation, and the annual budgeting cycle that governs municipal planning. This constraint is rooted in municipal budget law, which requires annual planning, and it creates an ongoing tension between the mission's strategic horizon and the administration's financial planning logic. Without a medium-term fiscal framework aligned to the 2030 target, funding gaps are difficult to anticipate systematically, and the investment case continues to be assembled year by year rather than as part of a coherent multi-year strategy.

Adapting the mission's framing under a changed political direction is a second ongoing challenge. The shift in mayoral leadership has required adjustment not only in external communication but also in how climate objectives are positioned internally and within the broader economic transition narrative. Managing that adaptation without losing momentum or internal coherence remains an active task for the coordination team.

A third challenge is capacity. As the mission moves from development to implementation, the portfolio of work has expanded, and the CCC has significantly broadened the scope of ecosystem engagement. Interviewees noted that this increases pressure on coordination capacity, with priorities competing for limited time and attention (Interviews, 2026).

Concrete opportunities exist in the near term. The ELENA facility offers support for developing investable projects and blended financing structures, providing potential momentum for the pipeline that the financial architect role has begun to build. The anticipated council vote on revised green procurement criteria represents a procedural window for embedding mission objectives into a core administrative function with implications across departments. Interviewees also pointed to increased cross-sectoral collaboration from late 2025 onwards, suggesting that earlier network-building efforts are beginning to enable more forms of coordination that no longer need the same level of direct initiation from the mission team (Interviews, 2026).

Three observations from Aachen's experience may be relevant for other cities building mission governance. First, senior political commitment appears most effective where it is made visible through concrete actions, such as participating in partner outreach, taking early resource decisions, or engaging directly in governance forums, rather than through formal declarations alone. In Aachen, interviewees associated this visible engagement with increased credibility in the early stages of coalition-building.

Second, informal networks built alongside formal structures appear to play an important role in enabling cross-departmental collaboration. Interviewees linked recent examples of more organic collaboration to relationships developed over time, suggesting that these networks complement formal coordination mechanisms rather than replace them.

Third, the continuity of the mission through changes in political leadership is associated with the layering of formal commitments, including council resolutions, a citizen mandate, and the CCC coalition. Together, these provide multiple points of reference that can be drawn on to maintain alignment over time. For cities beginning similar processes, this points to the potential value of building multiple forms of commitment early (Interviews, 2026).

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