NET ZERO CITIES

EU MISSION PLATFORM | CLIMATE NEUTRAL AND SMART CITIES

Climate City Contract

2030 Climate Neutrality Investment Plan

2030 Climate Neutrality Investment Plan of the Cities Eindhoven & Helmond

Gemeente Helmond

EINDHOVEN

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Table of contents

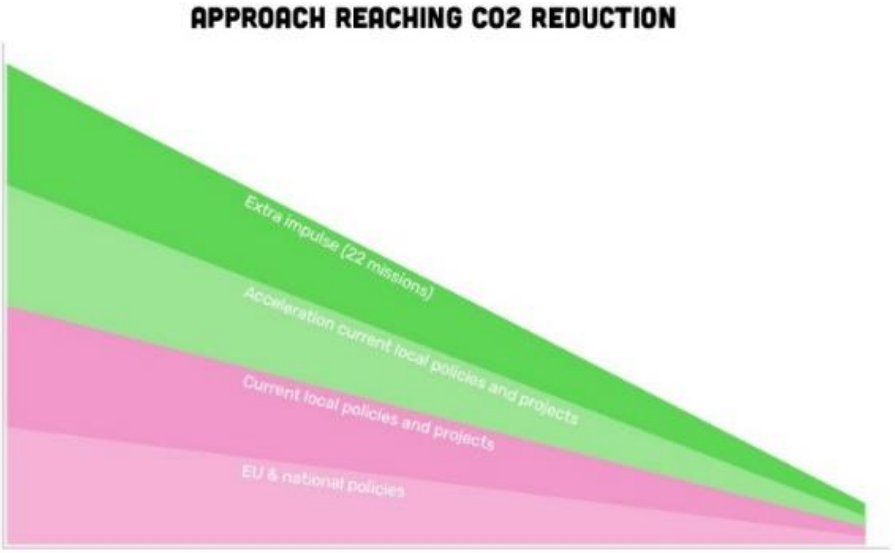
List of tables

Glossary of Terms

Acronym		Description
AP		Action Plan
EV		Electric Vehicle
IP		Investment Plan
KPI		Key Performance Indicator
MEL		Monitoring Evaluation & Learning
MRV		Monitoring Reporting Verification
VVE		Dutch: Vereniging van Eigenaren English: Owners' Association
WP		Work Package

Definitions

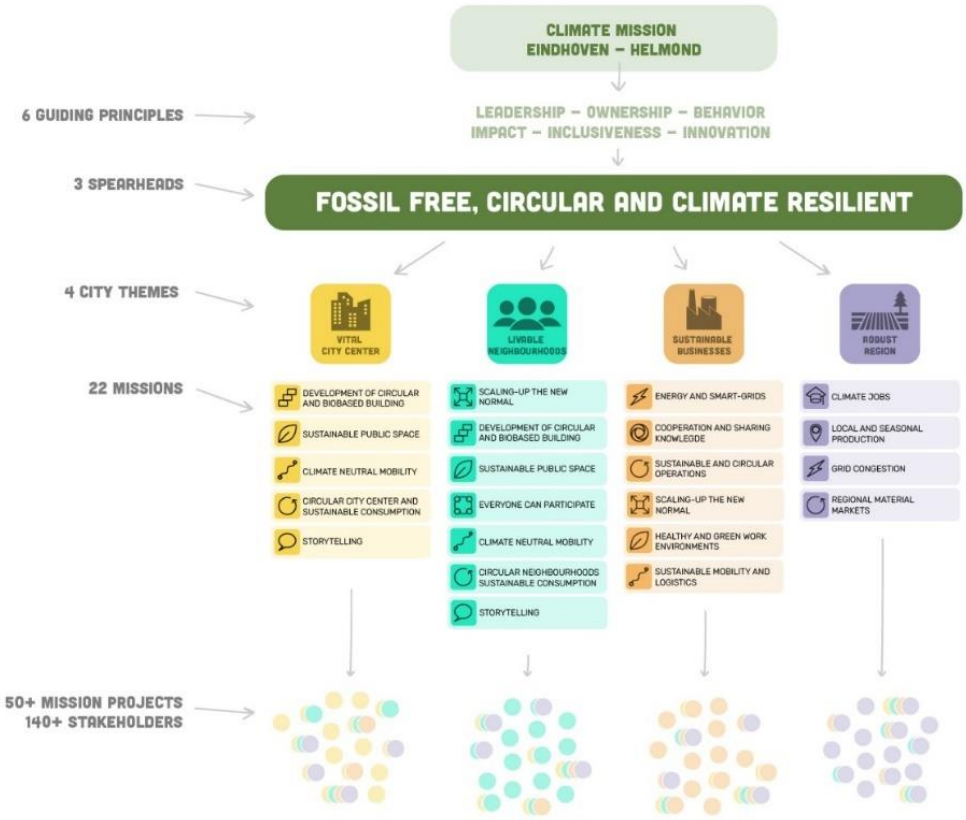
Definitions regarding the approach in CO_2 reduction



EU / National policies	Current policies and projects at National and EU level which are already being implemented.	Based on a sectoral approach: - Built environment - Mobility - Industry divided into 12 investment actions.
Current local policies and projects	Current policies and projects at regional and local level which are already being implemented (GAP analysis)	
Acceleration current local policies and projects*	"acceleration" pertains to both the "regular" acceleration of current policies and projects as well as the scope of further policies and projects which are necessary to at least achieve the "threshold" 55% emission reduction target.	
Extra impulse through 22 missions*	New projects emerging from the missions are in support of three categories defined above. Based on the 22 Missions and its projects.	Based on City themes as explained in the table below

** The acceleration and additional impulse are to be achieved through the realization of projects ahead of time and through increased engagement of the involved stakeholders in the Climate Action Plan of both cities.*

Definitions – regarding the Climate Delta Plan Eindhoven-Helmond



Climate Delta Plan Eindhoven-Helmond	The broader approach by Eindhoven and Helmond to realize the necessary transition on the long term, which goes beyond the reduction of CO_2 only. An important milestone on the road to this ambition is of course to work towards climate neutrality by 2030.
Spearheads	The three spearheads of the Climate Deltaplan consist of cities which are: 1. fossil-free 2. circular 3. climate-resilient
Guiding Principles	Six guiding principles apply to all three spearheads and are essential for reaching the goal of climate neutrality. These principles include: 1. leadership 2. ownership 3. behaviour 4. Impact 5. Inclusiveness 6. Innovation
City themes	The Climate Delta Plan is focused on 4 city themes, which are based on the geographical boundaries of coherent parts and groups of stakeholders in the cities. 1. Vital City Centre 2. Liveable Neighbourhoods 3. Sustainable Businesses 4. Robust region
Missions	The Delta Plan consists of 22 missions – or impact pathways – which have been formulated for each city theme. Stakeholders have committed to one or more missions each.
Mission projects	The 22 missions consist of various projects, which were set up by the stakeholders. The overview of which is available on the website www.knaphe.nl

Reader's Guide

Ambition

This Climate Investment Plan maintains the 80% ambition outlined in our Expression of Interest (EoI) with an interim target of a 55% CO_2 reduction by 2030. Originally, the 80% target was coupled to a timeline until 2030. However, since the EoI and the development of the Climate City Contract (CCC), a number of challenges have arisen in the preparation of several of the planned actions that lie outside of the municipalities' control, but which may nonetheless hinder the planned implementation of our earlier defined impact pathways and action portfolios to reach our 80% reduction ambition. Among these unexpected challenges are delayed investments in the national energy infrastructure, (resulting and continued) grid congestion, a shortage of qualified personnel and lack of viable business cases, especially in relation to district heating projects.

As a result, our updated estimates forecast that the 80% reduction on our way to climate neutrality will be achieved later than previously anticipated. More specifically, we expect that the impact pathways and action portfolios identified prior to the surfacing of these new challenges, i.e. acceleration of current local policies and projects, will result in a total emission reduction of 55% or 1.067 kt in 2030. With a continuation of these pathways, an emission reduction of 80% is aimed for by 2035 instead. According to the new estimates, the emissions gap in 2030, the amount necessary to achieve net-zero, is estimated to be an absolute value of 485 kt CO_2e.

As such, choosing to adopt a realistic approach, the CIP and CAP take as their point of departure a 55% emission reduction target in 2030 while providing sporadic insight into the additional efforts necessary to achieve the aforementioned 80% ambition. Nonetheless, as the pathways and action portfolios listed in the CAP and CIP are the result of an extensive stakeholder engagement and co-creation process, we have not had the opportunity to come up with additional pathways and actions to make sure we reach 80% by 2030 according to the new estimates. In the future iterations of the CCC, Eindhoven and Helmond are committed towards working to reduce this gap as much as possible through further actions, thus aiming to bring the 80% emission reduction forward from 2035.

In that regard, both municipalities consider the Climate City Contract (CCC) as a crucial tool to achieve their ambition of becoming a climate-neutral cities. Firstly, the CCC outlines current and planned actions, placing them in a broader EU context. Secondly, and perhaps most importantly, using the networks and tools associated with the Mission label as well as the support from the National Support Structure, will allow both municipalities monitor the implementation of the CCC and use data from ClimateOS and other support mechanisms to explore further opportunities and approaches to close the emission reduction gap and bring the 80% goal closer to 2030 in future CCC iterations. We will publish updated versions, and each updated version will offer more detailed answers and solutions.

While these new estimates are a setback, having this insight now, allows the municipalities to already take action to minimise delays or to accelerate projects, if applicable. Both municipalities remain committed to collaborating with their local stakeholders, local and national governments as well as with European networks and institutional bodies to overcome these barriers, The National Support Structure will be leveraged as a vehicle to address implementation barriers and target policy breakthroughs. Furthermore, the cities recognise that the climate neutrality transition is shared responsibility and will adopt a methodology to reflect this shared ownership of the climate investments they foresee.

Methodology & Approach to CO_2 Reduction

The municipalities of Eindhoven and Helmond understand that the transition towards climate neutrality is a joint effort. On the one hand, this is true when it comes to the different (political) levels at which climate action is pursued. Climate neutrality policies are put in place both at the European and national level as well as on the level of local governments, such as municipalities. As such, reaching climate neutrality targets will depend on the joint effects of policies and initiatives at each of these levels. Figure 2 represents the multi-level governance nature of climate action. Moreover, it also highlights that in order to reach climate neutrality targets, additional efforts, in particular at the local level, are required.

Figure 1: Multi-level governance nature of climate action

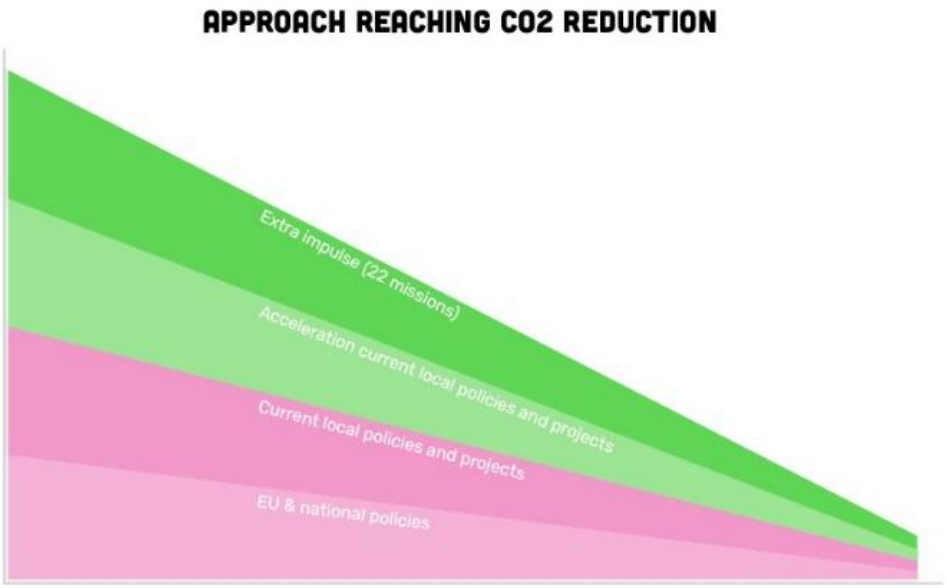
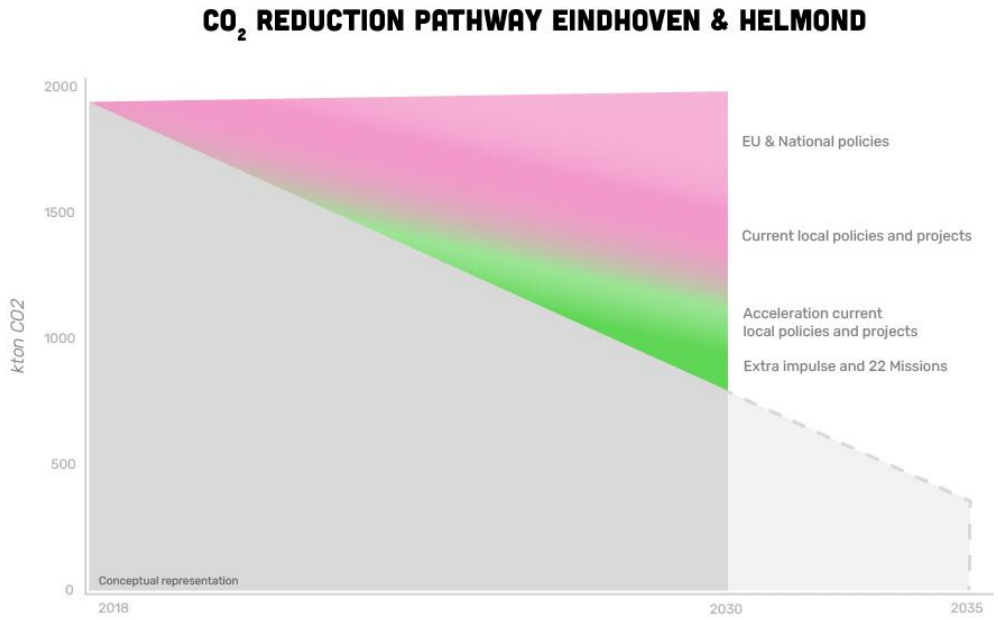


Figure 2 is a conceptual representation of the contribution of the policies and the missions that have so far been identified towards the 80% target, which according to our updated estimates is foreseen to be achieved in 2035. Through CCC implementation and iterations, further opportunities to increase the impact of these policies and, thus, to further reduce CO_2 emissions will continue to be explored.

Figure 2: conceptual representation of CO_2 reduction pathway showing the interaction between policies and missions



Correspondingly, this Climate Investment Plan is concerned with the policies and projects that the municipalities of Eindhoven and Helmond implement at the local level in support of their emission reduction and climate neutrality targets. These pertain chiefly to the implementation of existing projects (dark pink) and policies and the accelerated implementation of further projects and policies (light green) that require (additional) investments. Supplementing these projects and policies are thematic missions (dark green) aimed at engaging stakeholders and encouraging them to adopt climate-friendly behaviours.

The existing and accelerated policies highlighted in in dark pink and light green have been categorised according to a total of three broader (economic) sectors and twelve constituent investment actions. Tables 10A and 10B define these sectors and investment actions and provides some project descriptions to give a better idea of what kinds of investment these will entail. The remainder of the Readers Guide will describe in greater detail the structure and nature of the three sectors and twelve investment actions, on the one hand, and the supporting 22 missions on the other as well as their interrelationships.

Existing and acceleration of local policies and - Investment sectors and actions

These pertain to policies and projects that will require substantial (additional) investments. Crucially, whereas some of these projects and policies were already foreseen for implementation prior to 2030 (dark pink), the implementation of other projects and policies will be accelerated to achieve at least 55% emissions reductions by 2030 (light green). Tables 6A and 6B indicate where accelerated policies and projects will be put in place to reach at least the 55% “threshold” reduction target in 2030. In that regard, it is important to note that the “acceleration” represented in tables 6, 6A and 6B pertains to both the “regular” acceleration of existing policies and projects as well as the scope of further policies and projects which are necessary to at least achieve the “threshold” 55% emission reduction target. As can be discerned from tables 6A and 6B, both cities have decided to direct “additional” investments necessary to achieve the “threshold” 55% emission reduction in 2030 along those investment lines in which stakeholders other than the municipality are expected to be “in the lead”. Overall, in this CIP, existing and accelerated policies and projects have been classified according to three sectors:

- Built Environment
- Mobility
- Industry

Subsequently these sectors have been further subdivided into twelve investment actions. Please consult tables 6A and 6B for a detailed overview of the sectors and investment actions, including project descriptions which give some more specific indications of the type of projects and actions foreseen. The three sectors and twelve investment actions represent the structural “umbrella” of this Climate Investment Action and are the frame according to which the various tables and narratives, in particular in parts B and C, have been drafted.

Extra Impulse: 22 Missions

The three sectors and twelve investment actions outline focus on triggering investment for specific projects on the ground. However, to achieve these goals, it is necessary for all involved parties to be informed and engaged. To do so, the municipalities of Eindhoven and Helmond have defined the following 4 themes:

These themes are:

1. Vital City Center
2. Liveable Neighbourhoods
3. Sustainable Businesses
4. Robust Region

The 4 missions consist of 22 missions that aim to engage stakeholders, encouraging them to adopt climate-friendly behaviours and partake in climate neutrality investments. Thus, the underlying 22 missions primarily serve as supportive actions to realise investments and actions (i.e. acceleration) by the municipalities, homeowners, companies, citizens. Investments within each of the investment actions defined should not be financed solely by the municipalities. In fact, the largest investments need to be made by other stakeholders. The missions support this by providing information, networks and platforms to increase engagement and willingness to invest. This joint effort (public and private) aims to achieve the intended goals, ensuring that the cities are vital, liveable, economically future-proof, and strong. Eindhoven and Helmond will be attractive to both residents and businesses if the intended actions are conducted within the set timeframes.

This requires a structured approach that will take several years. Steps need to be taken in multiple areas, including policy development, financing, developing bankable business cases, training people, solving grid congestion, building networks and platforms, etc. The city themes create impacts on the 3 spearheads identified as broader goals for the cities (fossil-free, circular, climate resilient), In this way, the CCC approach goes beyond CO_2 emission reduction and also focuses on unlocking the co-benefits of the climate transition. The city themes and missions can be viewed here:

KNAPHE (https://www.knaphe.nl/en) This website will also be used to inform and engage stakeholders from the private sector and will be leveraged to attract contributions.

Crucially, while these supporting missions require no additional funding as part of the Climate Investment Plan, they nonetheless represent an additional “impulse” and building block to the overall climate-transition effort of Eindhoven and Helmond. The themes and missions are the result of an extensive stakeholder engagement and co-creation process and are therefore anticipated to best represent the interest of the various stakeholders in Eindhoven and Helmond.

Relationship between themes and investment actions

This Investment Plan is structured around those actions that require (additional) investment, i.e. the implementation of specific policies and projects. As such, the CIP will focus predominantly on the three sectors and twelve investments actions targeted for investment while making only sporadic references to the 22 missions defined in the Climate Action Plan. The following overview maps the relationship between these investments and the previously mentioned themes. As the table shows, sectors in the Climate Investment Plan may relate to one or more of themes.

Scope of Investments

The total **estimated investments until 2030 equal € 2.67 billion** (divided amongst all stakeholders. € 2.09 billion thereof is related to current policies and projects and € 583 million to acceleration of current policies and projects to achieve the 55% emissions reduction target in 2030.

Looking further ahead, the total **estimated investments until 2035 equal €6.9 billion** of which € 2.08 billion is related to current policies and projects, € 583 million to acceleration of current policies and projects to achieve the 55% emissions reduction target in 2030 and € 4.23 billion to the implementation of additional policies and projects to achieve the 80% reduction ambition in 2035.

1 Part A – Current State of Climate Investment

1.1 Module IP-A1: Existing Climate Action Funding and Financing

A-1.1: Textual element

This Climate Investment Plan upholds the goal of reducing CO_2 emissions by 80%, with an interim target of a 55% reduction by 2030. However, during the drafting of the Climate City Contract (CCC) and the initial steps towards implementing several planned actions, it has become evident that new circumstances, beyond the control of the municipalities, have emerged. These factors hinder the implementation of climate neutrality measures and projects, resulting in a revised timeline. Consequently, the target of an 80% CO_2 reduction is now set for 2035.

This section will expand on the existing actions and funding that are part of the cities' current policy, and the contributions this policy will make towards achieving the interim 2030 climate neutrality goal set at 55%.

Eindhoven dedicates approximately 3-4% of its annual budget to climate-related initiatives, with recent allocations reaching up to €47 million in 2023. Correspondingly, Helmond directs around 2-3% of its annual budget towards climate actions, with the latest budget showing an allocation of €14.1 million in 2024. The climate-related investments of both cities are shown in Table 1 to increase annually. The climate-related budget allocations for Eindhoven and Helmond follow from the Duurzaamheid (sustainability) and Afval (waste) sections of the municipal budgets. The Duurzaamheid budget is used for various initiatives such as providing assistance to low-income households in the energy transition or forming regional collaborations on energy strategies, while the Afval budgets support efficiency improvements in waste collection and reduction. Additional funds are also allocated towards goals such as sustainable transport and climate adaptation. However, due to the nature of municipal bookkeeping, these financial streams are often integrated across other budget programs. Moreover, the cities make additional investments, in public transport for example, that have no allocated funding because they are carried out by a third party. This makes it challenging to isolate climate-specific expenditures.

Despite these budget allocations, the financial resources required for the climate action plan of Eindhoven and Helmond exceed the current significant investments. The Climate Investment Plan outlines twelve investment actions that require operational funding. These include large-scale retrofitting projects to improve energy efficiency in residential buildings, development of sustainable transport systems and green urban spaces, and transitioning to renewable energy sources for heating, such as district heating networks.

Both cities raise capital through various means. Significant funding comes from national government allocations through the municipality fund, covering approximately half of their total budgets. This general allotment can be spent freely according to city council priorities. Another revenue stream from the national government consists of specific allotments reserved for particular tasks and which cannot be freely allocated. Other revenue sources include local taxes, fees, and charges, typically adding up to less than 10% of the total budget. A small portion of the revenues comes from municipally owned companies or participation in public limited companies. For instance, Eindhoven is engaged in several public-private partnerships; namely the agreements on sustainable and affordable housing with housing corporations in Eindhoven, the development of futureproof business park De Hurk and the Park Strijp Beheer collaboration for urban development. Helmond engages in many public-private partnerships like their board position in Brainport and shared ownership of the Automotive Campus.

To secure and utilise mission-level capital linked to their action plan, the cities require enhanced capacity and capabilities in financial management, project implementation, and stakeholder coordination. This includes developing skills for complex budgeting and financial oversight, building expertise in executing large-scale projects, and enhancing collaboration between public and private sectors.

The Climate Action Plan of Eindhoven and Helmond provides estimations that indicate substantial investments are needed. For example, Eindhoven's plan includes €200 million for housing retrofits and €150 million for sustainable transport infrastructure. Both cities avoid budget deficits through careful financial planning to ensure they comply with legal borrowing restrictions and prevent provincial or national government intervention. The most significant legal frameworks dictating borrowing restrictions include the Municipalities Act (Gemeentewet), Financial Relationships Act (Wet Financiële Verhoudingen) and Decentral Governments Funding Act (Wet Financiering Decentrale Overheden or FIDO). Budgetary constraints may necessitate prioritising projects based on their potential CO_2 reduction impact. There is need for additional public and private funding to realise the ambitious climate goals.

According to OECD data, own tax revenues represent only a small share of local budgets in the Netherlands, accounting for less than 10% of local revenues. This is significantly lower than the OECD European Countries average of 32.1%. Consequently, municipalities like Eindhoven and Helmond are heavily dependent on national government contributions for their operations and initiatives, including climate action projects. This financial structure underscores the importance of efficient resource allocation and the need for innovative funding strategies to support ambitious climate goals.

Both cities possess some capacity to deploy capital from various sources but need to enhance their procurement, budgeting, and incentive scheme capabilities. They utilise public finance instruments such as national and European subsidies for home insulation and renewable energy installations, as well as low-interest loans for energy-efficient upgrades in households and businesses.

Eindhoven and Helmond maintain a comprehensive overview of public and private funding sources for climate action and can explore innovative financing mechanisms and partnerships. They have financial policies in place, including sustainable purchasing regulations and frameworks for energy-efficient building standards, to guide capital allocation towards projects supporting climate neutrality goals.

Current funding sources and financial instruments are aligned with the Climate Action Plan goals. Eindhoven and Helmond utilise annual climate budgets to track CO_2 reduction progress. Critical areas of policy impacting the municipalities' financial goals for climate action include the European Green Deal, EU Climate Law, and the National Climate Agreement.

Table 1: Historical and Current Municipal Budget for Climate Actions

Budget Data Eindhoven	**2020**	**2021**	**2022**	**2023**	**2024**
Municipal Budget Eindhoven (€)	€ 1.117 M	€ 1.118 M	€ 1.237 M	€ 1.237 M	€ 1.165 M
Eindhoven Budget for Climate Actions & Projects (€)	€ 37 M	€ 41 M	€ 40 M	€ 52 M	€ 47 M
Eindhoven Municipal Budget for Climate Actions & Projects (%)	3,3%	3,7%	3,2%	4,2%	4,0%
Budget Data Helmond	**2020**	**2021**	**2022**	**2023**	**2024**
Municipal Budget Helmond (€)	€ 392 M	€ 499 M	€ 452 M	€ 493 M	€ 447 M
Helmond Budget for Climate Actions & Projects (€)	€ 11 M	€ 11 M	€ 11 M	€ 14 M	€ 14 M
Helmond Municipal Budget for Climate Actions & Projects (%)	2,9%	2,1%	2,5%	2,8%	3,2%
Cumulative Budget Data	**2020**	**2021**	**2022**	**2023**	**2024**
Total Municipal Budget (€)	€ 1.509 M	€ 1.617 M	€ 1.689 M	€ 1.729 M	€ 1.612 M
Total Municipal Budget for Climate Actions & Projects (€)	€ 49 M	€ 52 M	€ 51 M	€ 65 M	€ 61 M
Cumulative Municipal Budget for Climate Actions & Projects (%)	3,2%	3,2%	3,0%	3,8%	3,8%

The cost of municipal employees working on the execution of projects and activities are excluded in table 2.

Table 2: Finance Sources By Budget Programs, for Years 2021 to 2023

Budget programs	**Budget Allocation for Climate Actions and Projects – City of Eindhoven**		
	2023	**2022**	**2021**
Waste	€ 27 M (53%)	€ 27 M (69%)	€ 26 M (64%)
Sustainability	€ 25 M (47%)	€ 12 M (31%)	€ 15 M (36%)
Total in €	**€ 51.899.000 (100%)**	**€ 39.523.000 (100%)**	**€ 41.010.000 (100%)**

Budget programs	**Budget Allocation for Climate Actions and Projects – City of Helmond**		
	2023	**2022**	**2021**
Waste	€ 9 M (64%)	€ 9 M (76%)	€ 8 M (73%)
Sustainability	€ 5 M (36%)	€ 3 (24%)	€ 3 (27%)
Total in €	**€ 13.550.000 (100%)**	**€ 11.343.000 (100%)**	**€ 10.653.000 (100%)**

Table 2A: Finance Sources By Field of Actions and Stakeholders

Sector	Investment Actions	Description	Amounts and figures per unit for Helmond	Amounts and figures per unit for Eindhoven	Stakeholders
Built Environment	Modifications to Residential Buildings	Insulation of Homes Alternative Heating & Cooling in Homes	13557 houses, average €10K	*TBD*	Homeowners (70%) / VVE; Housing corporations (30%)
	Modifications to Non-Residential Buildings	Insulation of Utilities & Other Buildings Alternative Heating & Cooling in Utilities & Other Buildings	*TBD*	*TBD*	Companies (80%); Utility providers (20%)
	Alternative Energy Systems & Infrastructure	Removal of Gas Infrastructure Deployment of Alternative Heating and Electricity Infrastructure	*TBD*	*TBD*	Municipality (90%); Utility providers (10%)
Mobility	Sustainable Vehicle Fleet	Sustainable Civilian & Corporate Car-Fleet	*TBD*	*TBD*	Municipality (5%); Motorists (80%); Companies (15%)
	Charging Infrastructure	Charging infrastructure for car fleetfrom Existing Growth	23354 EVs; 25% policy related	*TBD*	Municipality (45%); Motorists (20%); Companies (35%)
	Zero Emission Zones/Low Traffic City Centres	Creating Low Traffic Zones	8646 loading stations in diverse categories added; 75% of their costs	*TBD*	Municipality (100%) Development companies
	Modal Shift	Alternative Transport (Transferia, Bicycle stations)	*TBD*	*TBD*	Municipality (95%); Transport Operators (5%)
	Incentive programmes	Setting up Incentive Programs	*TBD*	*TBD*	Municipality (100%)

Industry	Heat infrastructure	Adjustment Heating Infrastructure Adjustment Electricity Infrastructure	*TBD*	*TBD*	Municipality (70%); Utility Providers (30%)
	Modifications in Companies and Processes	Adjustments to Companies and Processes: MJA, EML, EED	*TBD*	*TBD*	Companies (100%) Utility Providers
	Energy Transition Projects	Sustainable Energy Projects (smart-grids etc.)	*TBD*	*TBD*	Municipality (50%); Utility Providers (20%); Companies (30%)
	Electrification	Electrification Industry (Phasing Out Natural Gas in Company Processes)	€300k per company	*TBD*	Companies (100%)

1.2 Module IP-A2: Strategic Funding and Financing Evaluation

A-2.1: Textual element

Despite the budget allocations that Eindhoven and Helmond make towards climate-related initiatives, the financial resources required for the climate action plans exceed the current operational funding.. The sectors and investments actions identified in this CIP, and supported by the 22 missions referred to in annex 1 of the CAP, require significant investments and capital to be raised and include large-scale retrofitting projects to improve energy efficiency in residential buildings, development of sustainable transport systems and green urban spaces, and transitioning to renewable energy sources for heating like district heating networks.

Eindhoven and Helmond have similar sources of income, primarily funded through national government allocations via the municipality fund, which covers the majority of their budgets—69% for Eindhoven and 66% for Helmond in 2024. In addition to this, tax revenues contribute 16% of Eindhoven's income and 14% of Helmond's income, with the tax revenue comprising property tax, sewage charges, waste charges, parking fees, permit fees, and the precario tax.

The Climate Action Plan indicates substantial investments are needed. For example, it includes €200 million for housing retrofits and €150 million for sustainable transport infrastructure. Both cities aim to avoid budget deficits through careful financial planning, but budgetary constraints may necessitate prioritising projects based on their potential CO_2 reduction impact.

Current funding sources and financial instruments are aligned with the Climate Action Plan goals. Eindhoven utilises annual climate budgets to track CO_2 reduction progress, while Helmond implements performance agreements with housing associations to promote energy-neutral construction. Critical areas of policy impacting the administration's financial goals for climate action include the European Green Deal, EU Climate Law, and the National Climate Agreement. At various levels, policies provide a framework for climate action funding, including the National Climate Agreement, Regional Energy Strategy, and local Climate Neutral Plans. These frameworks help attract private investment by ensuring projects meet international sustainability criteria

Both cities possess some capacity to deploy capital from various sources but need to enhance their procurement, budgeting, and incentive scheme capabilities. They utilise public finance instruments such as subsidies like ISDE or HER+ for home insulation and renewable energy installations, as well as low-interest loans for energy-efficient upgrades in households and businesses.

Eindhoven and Helmond maintain a comprehensive overview of public and private funding sources for climate action and can explore innovative financing mechanisms and partnerships. They have financial policies in place, including sustainable purchasing regulations and frameworks for energy-efficient building standards, to guide capital allocation towards projects supporting climate neutrality goals.

Both cities also engage in partnerships with private investors and utilise EU funds for various projects. Eindhoven, for example, collaborates with housing corporations and leverages Special Purpose Vehicles (SPVs) like Park Strijp Beheer to attract private investment in sustainable urban development. Helmond participates in public-private partnerships, holding a board position in Brainport and sharing ownership of the Automotive Campus. It should be noted, however, that these PPPs are unlikely to result in profits for either city, as this is not the purpose of the municipalities' participation. In that regard, the local context in the Netherlands differs significantly from other European regions where municipalities are more likely to have significant ownership shares of companies and may use funds generated by these companies as sources of income.

Additionally, both cities can apply for EU funds such as the European Regional Development Fund (ERDF/EFRO) for renewable energy projects and Horizon Europe for innovations in energy efficiency.

Strategies to facilitate the transition towards climate neutrality include accelerating renewable energy adoption, enhancing public transportation infrastructure, and promoting circular economy practices. The cities have access to various forms of capital specific to achieving climate neutrality targets, including EU grants, national subsidies, municipal bonds, and private investments.

The beforementioned capital and strategies along with policy implementations can be used to stimulate the private sector involvement necessary for the net zero process. The cities expect businesses to adopt green technologies, innovate sustainable products and services, and significantly invest in climate actions such as renewable energy, energy efficiency and green infrastructure. The 22 missions that Eindhoven and Helmond have formulated in their Action Plan help guide private organisations as well as individuals in contributing to the net zero ambition. This is accomplished by setting clear targets, providing relevant information for achieving these targets, and in some cases, providing municipal assistance, such as energy coaches to promote sustainable home renovations.

The current debt levels of both cities are managed within the legal frameworks of the Municipalities Act, FIDO, Treasury Banking Act and BBV (Budgeting and Accountability Decree). Loans are primarily provided by the Bank Nederlandse Gemeenten (bank of Dutch municipalities). Identifying and leveraging existing income and capital sources are crucial for funding climate actions, involving exploring new funding mechanisms and reallocating resources towards high-impact projects.

The city of Eindhoven's net debt position decreased to €209.2 million in 2023, with long-term debt at €307 million. Eindhoven's projected financing needs grow to €122 million by 2026. Legislative requirements include adhering to the cash limit, which limits short-term financing to 8.5% of the total budget, and the interest risk norm, ensuring annual repayments and interest adjustments do not exceed 20% of the budget. Compliance with these norms was achieved in 2023. New debt issuance requires careful consideration and council approval for significant amounts, guided by the Wet Financiering Decentrale Overheden (FIDO) to manage treasury risks effectively.

The city of Helmond's net debt position has decreased to €66.9 million by the end of 2023, down from €79.7 million at the beginning of the year, with no new long-term loans taken and regular repayments of €12.8 million. Helmond's long-term loans are decreasing from €80 million in 2023 to €32 million by 2026. Legislative requirements for issuing new debt include adhering to the cash limit, which limits short-term financing to 8.5% of the total budget (€35.6 million in 2023), and the renterisiconorm (interest risk norm), which caps annual repayments and interest revisions at 20% of the total budget (€83.8 million in 2023). Compliance with these norms was maintained in 2023.

Potential future capital sources that the cities could explore to support their climate neutrality goals include climate funds from international climate finance mechanisms and investments from international financial institutions focused on sustainability, such as the European Investment Bank (EIB). By leveraging these insights and examples, Eindhoven and Helmond can strategically manage their fiscal resources to support their ambitious climate action plans, addressing both current challenges and future goals.

Table 3: List of Income Sources for the City

Income Category	City income (2024)	% of city budget
Source of City Income	*Eindhoven: 1.165,3 mln* *Helmond: 459,4 mln*	*100%*
1. Municipality Fund a. General allotment from the National Government	E: 657,1 H: 251,4	E: 56% H: 55%
2. Municipality Fund a. Additional allotments from the national government for specific goals or tasks	E: 150,3 H: 51,6	E: 13% H: 11%
3. Local taxes and Charges a. Immovable property tax b. Sewage charge, this can only be spent on costs related to sewage-management c. Waste charge, this can only be spent on costs related to waste-management d. Parking Charge e. Permit-charge f. Precario	E: 187,1 H: 63,3	E: 16% H: 14%
4. Subsidies and special funds a. Municipalities can apply for specific governmental subsidies and funds for some projects. These are usually investments		
5. Fees and retributions a. Parking Charge b. Permit Fees c. Land development fees d. Market dues e. Other service-fees	E: 170,8 H: 93,1	E: 15% H: 20%
6. Profits a. Municipality-owned companies b. Participations in third party companies.		

Table 4: List of Capital Sources for Eindhoven and Helmond

Type	Size Range	Level	Description
Source of Capital	*Quantum of Capital Accessible to the city through this source*	*Private or Public*	*(Description of capital source e.g. cost & provider)*
Bank Dutch Municipalities (Bank Nederlandse Gemeenten)	€89.2 billion loan portfolio	Public	Provides loans and financial services to municipalities and public sector institutions, focusing on social impact and sustainability.
Housing Fund (Volkshuisvestingsfonds)	€1 billion annually	Public	National fund supporting public housing projects, including energy-efficient upgrades.
Central Government Service for the Enterprising Netherlands (RVOnl)	Varies by project	Public	Provides subsidies and grants for sustainable energy projects.
Central Government Growth Fund (Nationaal Groeifonds)	€20 billion over 5 years	Public	Supports large-scale projects that promote economic growth, including sustainable infrastructure.
ESI-funds (EFRO and Interreg)	€5 billion for the Netherlands (2021-2027)	Public	European structural funds supporting regional development and cross-border cooperation in sustainability projects.
Pensionfunds	Varies	Private	Investments from pension funds in sustainable projects.
Private equity, venture capital	Varies	Private	Investments in innovative and high-impact climate projects.
Housing Fund (Volkshuisvestingsfonds)	€1 billion annually	Public	National fund supporting public housing projects, including energy-efficient upgrades.
Central Government Service for the Enterprising Netherlands (RVOnl)	Varies by project	Public	Provides subsidies and grants for sustainable energy projects.

Central Government Growth Fund (Nationaal Groeifonds)	€20 billion over 5 years	Public	Supports large-scale projects that promote economic growth, including sustainable infrastructure.
ESI-funds (EFRO and Interreg)	€5 billion for the Netherlands (2021-2027)	Public	European structural funds supporting regional development and cross-border cooperation in sustainability projects.
Pensionfunds	Varies	Private	Investments from pension funds in sustainable projects.
Private equity, venture capital	Varies	Private	Investments in innovative and high-impact climate projects.
Total in €	**Approximately € 130 billion**		

Table 4A: List of Types of Sources per Stakeholder

Stakeholder	Role	Type	Financing sources [for subsidies, see part B]
Homeowners/VVE	Houses and residents	Private	Equity, loans
Companies	Company buildings	Private	Equity, loans, (revolving funds)
Housing Corporations	Houses and residents	Semi-public	Equity, loans, treasury based on policy commitments
Municipality	Infrastructure, city planning, citizens	Public	Treasury, budget (see part A)
Government	National policy implementation, EU policy alignment, municipality and province support	Public	National support, subsidiaries, revolving funds
Construction companies	Buildings and charging	Private	Equity, loans
Development (architects)	Developer Experience (DEVEX), design	Private	Equity, loans, (revolving funds)

1.3 Module IP-A3: Barriers to Climate Investment

A-3.1: Textual element
Structural Barriers

- *Dependency on contributions from the national government*

  In the Netherlands tax revenues represent only a small share of the local budgets, accounting for less than 10% of local revenues. Consequently, the municipal budget depends for a large amount on financial contributions from the national government. Relying on a single source for funding increases the vulnerability to financial instability. It is important to diversify funding by seeking additional investors, subsidies, funds or partners to reduce dependency. Essential is also to build up and maintain a multiple network with financiers and continuously explore grants, subsidies and other funding opportunities.

- *No structural financial cooperation*

  Structural financial cooperation between governments on all levels is necessary to realise the physical preconditions required for the ecological transition. Consider, for example, financial space to realise heating networks, speeding up zero-emission mobility, or cooperation to mobilize private capital for the sustainability transition. Current national financial support is mainly project-oriented. All municipalities can apply and it is thus uncertain if the subsidies will be granted, preventing long-term planning and reliance on these funds.

- *Climate justice*
  There is a need for more opportunities to fairly distribute the benefits and burdens of the ecological transition. For instance, creating financing constructs that help tenants and citizens with less financial capacity or self-reliance to become more sustainable.

- *Grid congestion*
  Inefficient renewable energy infrastructure can hinder investments. Absence of a reliable grid system and energy storage facilities may deter investors or companies to invest in climate-neutral alternatives for their energy needs.

- *Divestments and passing on the consequences of climate change*
  In order to realise the ecological transition, it is necessary that the governments have a better picture of the financial and economic-social consequences of ecological degradation and climate change. With this image, we can jointly use the resources that society makes available to us more effectively to achieve the ecological transition and prevent damage.

- *Technological innovation*
  Investors may be hesitant, particularly in long-term projects, due to the rapid evolution of technology and uncertainties surrounding the performance of emerging green technologies.

- *Skills and capacity*
  A structural shortage of skilled professionals in sustainable technologies and green finance can impede the effective execution of climate projects.

Policy Barriers

- *Regulatory uncertainty*
  Hesitancy among investors can arise from inconsistent or changing government policies. Establishing stable, long-term policies is crucial for attracting capital. Without good legislation and structural financial resources, our cities cannot, for instance, program and implement the heat transition. Cooperation between decentralised authorities, the national government and the EU helps to embed the lessons learned at a local level in national and European policy and to achieve sufficient market demand and supply through sustainable purchasing.

- *Subsidies for fossil fuels*
  Existing subsidies for fossil fuel industries can distort the market, diminishing the competitiveness and attractiveness of renewable energy projects to investors.

- *Transition to a circular economy*
  For an (accelerated) transition to a circular economy, a structural partnership/consultation structure is needed between the government, local authorities and the business community in which agreements are made about the design of the circular economy and what is needed to create this economy, including financing.

Economic Barriers

- *Short-term economic policy*
  Investors may prioritise short-term gains over long-term sustainability due to economic uncertainties or pressure to deliver immediate returns.

- *Indirect (environmental) costs are not included in the decision process*
  Many environmental costs, such as pollution or resource depletion, are not reflected in market prices, making traditional, less sustainable investments appear more profitable. The result of cost-benefit analysis should be more valuable compared to the financial-only analysis.

Financial Barriers

- *High initial costs*
  The upfront costs of renewable energy projects can be higher compared to traditional alternatives, deterring investors despite the long-term benefits.

- *Limited access to finance and risk perception*
  Small and medium-sized enterprises may struggle to access financing for climate initiatives due to perceived risks. Investors may perceive climate projects as riskier, especially if they are unfamiliar with sustainable technologies or if they fear policy changes. We advocate a fair energy tax, which closes the gap between large consumers and SMEs at a national level, for example.

- *Lack of financial instruments*
  Insufficient availability of green financial instruments, such as green bonds or climate risk insurance, can limit the options for investors seeking sustainable opportunities.

- *Lack of investment capacity*
  Improving the investment capacity of housing associations, as they have insufficient financial scope to contribute to sustainable new construction and sustainability of their existing stock. Especially now it is extra important that they invest in advance.

- *Tax system*
  Greening the tax system, including shifting taxes from labour to raw materials. Reward the use of secondary raw materials over primary raw materials. Policy high on the R ladder at European level is essential to stimulate and enforce different design choices and adjustments in consumption patterns.

Social Barriers

- *Public awareness*
  Limited awareness about the benefits of climate investments among the public can impact political will and, consequently, policy support.

- *Resistance to change*
  Industries heavily invested in traditional, high-emission practices may resist the transition to sustainable alternatives, slowing down progress.

Addressing the above barriers requires a combination of government interventions, international collaboration, financial innovation, and efforts to raise awareness about the benefits of climate investments. It's crucial to create an enabling environment that rewards sustainable practices and aligns financial incentives with long-term environmental goals.

Table 5: Barriers to Climate Investment

Financial Barriers to achieving Climate Neutrality	Typology of Barrier	Description	Sector and stakeholders involved	Mitigating factors
Structural barriers				
Dependency on contributions from the national government	Absence of financial instruments	It is important to diversify funding by seeking additional investors, subsidies, funds or partners to reduce dependency.	Multiple network with financiers and continuously explore grants, subsidies and other funding opportunities.	Diversify funding sources by building relationships with multiple financiers, continuously exploring grants, subsidies, and other funding opportunities to decrease reliance on national government contributions.
No structural financial cooperation	Government policies, absence of financial instruments	Financial cooperation is necessary to realise the physical preconditions required for the transition.	EU, national government, regional and local government, financial institutions.	Develop structured financial cooperation agreements, create cross-sector alliances, and establish clear funding mechanisms to support the transition.

Climate justice	Socio-economic	Need for more opportunities to fairly distribute the benefits and burdens of the transition.	Government, house-owners, tenants.	Implement policies that promote inclusive growth, ensure equitable access to climate financing, and protect vulnerable communities through targeted interventions.
Grid congestion	Technological	Realise the physical preconditions required for the transition. Room for experiments and innovation.	Government, grid-operators, businesses.	Invest in grid infrastructure, promote decentralised energy systems, and encourage innovation through pilot projects.
Divestments and passing on the consequences of climate change	Government policies, socio-economic, knowledge	Financial and economic-social consequences of ecological degradation and climate change.	Government, businesses, citizens, knowledge institutions.	Encourage responsible investment strategies, promote corporate social responsibility, and raise awareness of the long-term economic benefits of sustainable practices.
Technological innovation	Technological, government policies, innovation	Policy freedom to experiment and innovate, financial instruments.	Government, businesses, knowledge institutions, intermediary organisations, financial institutions	Enhance regulatory frameworks to support innovation, provide incentives for R&D, and create platforms for knowledge exchange between stakeholders.
Skills and capacity	Government policies, knowledge, socio-economic	Sufficient trained and skilled professionals.	Educational institutions, labour market regions, governments, businesses, knowledge institutions.	Strengthen vocational training programs, promote STEM education, and establish public-private partnerships to develop the necessary workforce skills.
Policy barriers				
Policies and regulations	Government policies	Establishing stable, long-term policies is crucial for attracting capital.	Governments, financial institutions, investors.	Create clear and consistent policy frameworks, offer long-term contracts for renewable energy, and reduce regulatory uncertainty to attract investment.
Subsidies for fossil fuels	Government policies	Stimulate competitiveness and attractiveness of renewable energy projects.	Energy sector, governments, financial institutions, investors.	Phase out fossil fuel subsidies, redirect funds to renewable energy initiatives, and provide financial incentives for clean energy adoption.

Economic barriers				
Short-term economic policy	Government policies, socio-economic	Prioritise long-term sustainability over short-term gains.	Businesses, governments, financial institutions, investors.	Promote long-term sustainability goals, align financial incentives with climate targets, and engage in multi-stakeholder dialogues to balance short-term interests.
Indirect (environmental) costs	Government policies, socio-economic	Include environmental costs in market prices, apply cost-benefit analysis.	Businesses, financial institutions, knowledge institutions.	Implement carbon pricing, encourage the internalisation of externalities, and develop tools for environmental cost accounting.
Financial barriers				
High initial costs	Government, absence of financial instruments	Making renewable energy projects more competitive compared to traditional alternatives.	Businesses, energy sector, developers/builders, governments, financial institutions, investors.	Provide low-interest loans, tax incentives, and grants for renewable energy projects, and establish risk-sharing mechanisms to lower investment barriers.
Limited access to finance and risk perception	Government, absence of financial instruments	Better access for small and medium-sized enterprises for financing climate initiatives.	Businesses, insurance companies, governments, financial institutions, investors.	Develop tailored financial products for SMEs, improve credit risk assessments, and enhance public-private partnerships to mobilise capital for climate projects.
Lack of financial instruments	Absence of financial instruments	Availability of green financial instruments	Financial institutions, investors, governments.	Expand green bond markets, create green banks, and encourage the development of innovative financial products that support sustainable investments.
Lack of investment capacity	Government policies	Investment capacity of housing associations.	Housing corporations, governments, financial institutions, investors.	Provide targeted financial support to housing associations, implement policies that incentivize energy-efficient retrofitting, and promote public-private partnerships.
Tax system	Government policies	Policies high on the R ladder.	Governments, businesses, financial institutions.	Reform tax systems to promote resource efficiency, introduce incentives for circular economy practices, and align tax policies with climate goals.
Social barriers				
Public awareness	Behavioural change	Awareness about the benefits of	Citizens, governments, businesses, financial	Launch public awareness campaigns, integrate climate education into curricula, and

		climate investments among the public.	institutions, knowledge institutions.	encourage community participation in climate projects.
Resistance to change	Socio-economic, financial, behavioural change	High investments resist the transition to sustainable alternatives.	Businesses, governments, financial institutions, knowledge institutions.	Address concerns through stakeholder engagement, provide financial incentives for change, and create transition plans that consider social and economic impacts.

2 Part B – Investment Pathways towards Climate Neutrality by 2030

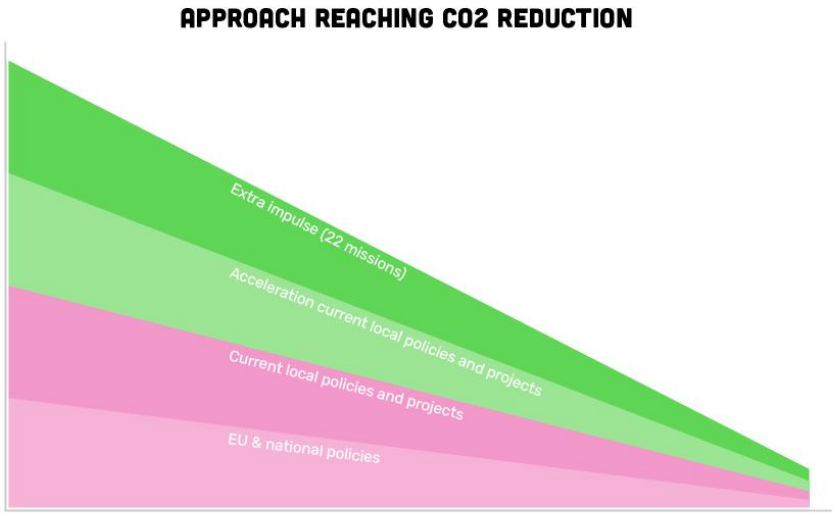
2.1 Module IP-B2: Capital Planning for Climate Neutrality

B-1.1: Textual element

1.1.1 Approach to CO_2 Reduction

As outlined in the Climate Action Plan, the net-zero ambitions of the municipalities of Eindhoven and Helmond are based on the model below.

- **Existing Policies & Projects at European, National and Local Level:** Beyond the immediate local context, policies at the European and national level are and will remain in place and contribute to emissions reductions until 2030 and beyond. Additionally, both cities have already put in place policies and projects in support of their net-zero ambitions. Taken together, the existing policies and projects at European, national and local level represent the point of departure of the CAP and CIP.
- **Acceleration of Policies & Projects at Local Level:** However, in order to achieve the targets that they have set, both cities will have to make additional efforts. These efforts thus lie accelerating policies and projects that were previously scheduled beyond 2030 andare highlighted in light green.
- **Extra Impulse:** Furthermore, Eindhoven and Helmond will also rely on the 22 missions identified in annex 1 of the CAP to support existing and accelerated policies to be deployed until 2030. These missions aim chiefly at achieving behavioural change and encouraging residents and other stakeholders to adopt climate-friendly behaviours. Although their precise impact is difficult to quantify and therefore not accounted for in the CAP or CIP, these missions are nonetheless expected achieve an extra “impulse” in CO_2 reductions. In doing so, these missions will help to steer Eindhoven and Helmond beyond the “threshold” 55% 2030 emission reduction expected to be achieved through the implementation and acceleration of existing policies and projects.



1.1.2 Scope of Climate Investment Plan: Measures until 2030

It is important to note that while the structure used in this Climate Investment Plan is aligned with the structure employed in the Climate Action Plan, the Climate Investment Plan is chiefly concerned with the projects and measures that Eindhoven and Helmond plan to undertake, and which require additional funding until 2030.

More specifically, therefore, (Part B of) the Climate Investment Plan pertains predominantly to the "Acceleration" of current local policies and projects. The CIP estimates the expected investment volume of these policies and projects until 2030 as well as determining, broadly, how this investment is expected to be covered by the various stakeholders involved. In addition to this detailed analysis for the investments foreseen until 2030, estimates will also be presented in passing on the expected financial scope of the investments necessary to achieve the 80% emissions reduction target by 2035 to which both cities remain committed.

1.1.3 Structure of CIP: Three Sectors, Twelve Investment Actions

Although the Climate Investment Plan is closely aligned with the Climate Action Plan it is only concerned with those measures in the CAP that relate to direct investments. As such, it takes as its point of departure a total of three sectors (Built Environment, Mobility and Industry) that are together subdivided into twelve investment actions. Within each of these investment actions a number of specific investments (labelled as project descriptions) can be distinguished which are necessary in order to achieve the (additional) objectives outlined in the CAP and against which the success of the CIP will be measured. These specific investments are considered as individual actions/projects.

Tables 6A and 6B provide an overview of the specific (types of) projects foreseen as part of each of the twelve investment actions defined under the three sectors. The volume of the investment actions constitutes existing policies and accelerated policies. Areas in which the municipalities have decided to allocate proportionally more funds (compared to the average for their sector) have been marked with an asterisk. These pertain chiefly to those investment lines in which stakeholders other than the municipality are expected to be "in the lead" and whose involvement is a precondition to achieving the "threshold" 55% emission reduction in 2030.

1.1.4 Gauging Investment Volume & Financial Coverage

Both the municipalities of Eindhoven and Helmond have begun to assess the expected costs for the climate measures identified in their Climate Action Plans that require (additional) investments. Apart from the absolute costs it is important to determine the costs relative to the cities' existing climate budgets. Indeed, the net and relative spend of the municipalities of Eindhoven and Helmond for climate actions is given in table 1 (Section A1). While it is clear that both cities dedicate significant financial means and a growing percentage of their overall budgets to climate actions, these are insufficient to achieve the expected necessary spending to achieve the reduction targets to which the cities have committed themselves.

To illustrate, in 2024, the municipality of Eindhoven allocated €61.15 million to climate action, representing 3.8% of its total municipal budget. Yet, until 2030, the climate measures identified in this CIP for Eindhoven are expected to amount to at least €1.61 billion comprising both existing measures and an acceleration of future measures. The latter alone is associated with an expected investment volume of more than €354 million. Of course, not all costs are to be borne by the municipality. Even still, it is evident that to achieve the ambitions to which Eindhoven has committed itself, additional funding will be required to accelerate policies and projects and encourage stakeholders to adopt more climate-friendly behaviours and that such funding should originate from sources other than the municipal budget alone.

As such, in the preparation of their joint Action Plan, the cities have conducted a thorough assessment of the estimated costs for the proposed measures and have developed plans on how

these costs are to be covered by various stakeholders and different funding instruments. For some measures, costs may be determined with a relatively high degree of reliability as these have already been budgeted previously. For others, figures should be considered as informed estimations based on the assessments of external experts or drawing on the past experiences of both cities in the execution of similar projects. These measures will therefore require budget adjustments and specifications prior to and during their implementation. Additionally, budget constraints and shifting priorities may dictate that certain investments are scaled down while new investments may also be introduced to answer to emerging challenges or opportunities. Therefore, while both cities will aim to avoid budget deficits through careful financial planning and leveraging various stakeholders and funding instruments, budgetary constraints may nonetheless dictate that projects are to be prioritized based on their CO_2 reduction impact.

Accounting, therefore, for a certain degree of budgetary flexibility, the figures presented in this CIP may be considered as “realistic” estimates based on the best available data and foresight. In doing so, they provide informed budget expectations for the implementation of the climate strategies of Helmond and Eindhoven and, as a second step, a basis to consider how this budget is to be covered by various stakeholders and leverage opportunities for external funding such as subsidies or loans. The diversification of investment coverage should also be considered desirable given the municipalities reliance on funds allocated by the national government. By leveraging other capital sources such as debt financing in the form of loans or (green) bonds, subsidies from climate finance mechanisms and investments by international financial institutions, Eindhoven and Helmond can support their climate actions more strategically. Equally, there is clear recognition that involving various stakeholders can help to leverage their combined expertise and allow action to be taken more effectively in areas where the municipality lacks the authority to act alone, such as in the improvement of buildings other than homes and public facilities.

Table 6: Sectors and Investment Actions Targeted for Investment

EINDHOVEN							
Investment Action	**Implementation Costs/Capex**	**Operational Costs**	**Direct impacts (Emission reductions) ***			**Cost Effect. (EUR/tCO_2e))**	**Indirect impacts (co-benefits) ***
			Exist.	**Accel.**	**Impul.**		
SECTOR: BUILT ENVIRONMENT							
1. Modifications to residential buildings	*€ 582.23 M*	*€ 9.50 M*	***Total: -64***			*€ 9.034*	*- Lower Costs* *- Increased Wellbeing* - Reduced Social Inequality - Reduced Usage of Existing Infrastructure
			-39	*-25*			
2. Modifications to non-residential buildings	*€ 204.70 M*	*€ 4.09 M*	***Total: -28***			*€ 7.311*	- Lower Costs - Reduced Usage of Existing Infrastructure
			-27	*-1*			
3. Alternative Energy Systems & Infrastructure	*€ 525.27 M*	*€ 10.51 M*	***Total: NA***			*NA*	- Reduced Usage of Existing Infrastructure
			NA	*NA*			

SECTOR: MOBILITY							
4. *Sustainable Vehicle-fleet*	*€ 118.18 M*	*€ 1.18 M*	***Total: -26***			*€ 4.545*	- Reduced Noise and Air Pollution
			-13	*-13*			
5. *Charging Infrastructure*	*€ 45.36 M*	*€ 1.81 M*	***Total: -4***			*€ 11.339*	
			-2	*-2*			
6. *Zero Emission Zones/Low traffic City Centre*	*€ 7.00 M*	*€ 0.49 M*	***Total: -37***			*€ 189*	- Reduced Spatial Congestion - Space for Urban Greenery
			-19	*-18*			
7. *Modal Shift*	*€ 1.00 M*	*€ 0.30 M*	***Total: -21***			*€ 48*	- Increased Access to Mobility - Reduced Spatial Congestion
			-11	*-10*			
8. *Incentive programmes*	*€ 1.00 M*	*€ 0.30 M*	***Total: -7***			*€ 143*	
			-4	*- 3*			

SECTOR: INDUSTRY					
9. *Heat infrastructure*	*€56.40 M*	*€6.80 M*	***Total: -91***	*€620*	- Increased Energy Efficiency and Circularity
			-80 *-11*		
10. *Modifications in Companies and Processes*	*€ 180.00 M*	*€12.6 M*	***Total: -34***	*€ 5.294*	- Increased Energy Efficiency and Circularity
			-30 *-4*		
11. *Energy Transition Projects*			***Total: NA***		- Increased Energy Efficiency and Circularity
12. *Electrification*			***Total: NA***		- Increased Energy Efficiency and Circularity
Total	***€ 1,721 M***	***€ 49.2 M***	***-312***	***€ 5.108***	
Cross Cutting Costs		These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.			

HELMOND							
Investment Action	**Implementation Costs/Capex**	**Operational Costs**	**Direct impacts (Emission reductions) ***			**Cost Effect (EUR/tCO_2e)**	**Indirect impacts (co-benefits) ***
			Exist.	**Accel.**	**Impul.**		
SECTOR: BUILT ENVIRONMENT							
1. Modifications to residential buildings	*€ 252.48 M*	*€ 5.05 M*	***Total: -54***			*€ 4.676*	*- Lower Costs* *- Increased Wellbeing* - Reduced Social Inequality - Reduced Usage of Existing Infrastructure
			-46	*-8*			
2. Modifications to non-residential buildings	*€ 246.8 M*	*€ 4.94 M*	***Total: -35***			*€ 7.102*	- Lower Costs - Reduced Usage of Existing Infrastructure
			-28	*-7*			
3. Alternative Energy Systems & Infrastructure	*€ 159.10 M*	*€ 3.18 M*	***Total: NA***				- Reduced Usage of Existing Infrastructure
			N/A	*N/A*			

SECTOR:MOBILITY								
4. *Sustainable vehicle fleet*	*€ 100.18 M*	*€ 1.00 M*	***Total: -19***			*€ 5.142*	- Reduced Noise and Air Pollution
			-11	*-8*			
5 *Charging Infrastructure*	*€ 30.25 M*	*€ 1.21 M*	***Total: -2***			*€ 19.289*	
			-1	*-1*			
6. *Zero Emission Zones/Low traffic City Centre*	*€ 5.00 M*	*€ 0.35 M*	***Total: -10***			*€ 510*	- Reduced Spatial Congestion - Space for Urban Greenery
			-4	*-6*			
7. *Modal Shift*	*€ 0.50 M*	*€ 0.02 M*	***Total: -10***			*€ 51*	- Increased Access to Mobility - Reduced Spatial Congestion
			-4	*-6*			
8. *Incentive programmes*	*€ 0.50 M*	*€ 0.02 M*	***Total: -11***			*€ 45*	
			-4	*-7*			

SECTOR:INDUSTRY						
9. *Heat infrastructure*	*€ 4.00 M*	*€ 0.48 M*	***Total: -39***			*€ 101*	- Increased Energy Efficiency and Circularity
			-34	*-5*			
10. *Modifications in Companies and Processes*	*€ 34.10 M*	*€ 2.39 M*	***Total: -8***			*€ 4.323*	
			-7	*-1*			
11. *Energy Transition Projects*	*€ 16.88 M*	*€ 1.18 M*	***Total: -6***			*€ 2.812*	- Increased Energy Efficiency and Circularity
			-5	*-1*			
12. *Electrification*	*€ 102.14 M*	*€ 5.11 M*	***Total: -24***			*€ 4.255*	- Increased Energy Efficiency and Circularity
			-21	*-3*			
Total	***€ 952 M***	***€ 25 M***	***-218***			*€ 4.375*	
Cross Cutting Costs	These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.						

**Referring to the Action Plan*
***Indicative indicators*

B-1.1: Textual element

1.1.5 Breakdown of Investment Effort

This section represents an overview of the actions foreseen as part of the Climate Action Plan that necessitate further investments and are therefore included in this Climate Investment Plan. This overview is provided in tables 6A and 6B below. Crucially, the tables show both the expected size of the total investment concerned as well as a breakdown of these investments into existing efforts and the acceleration of policies and projects. Furthermore, the tables give a first impression of what stakeholders are expected to be involved in each of the subsectors. Together these provide the structure necessary to reliably and informedly determine the minimum required costs associated with the actions defined in the Climate Action Plan and how these costs are to be borne. Each of the action portfolios defined in the CAP that can be clearly tied to costs and funding is listed below.

1.1.6 Additional Acceleration

As alluded to previously, and in line with table 6 above, for the investments and reductions targeted until 2030, only the implementation of existing and accelerated policies and projects have been accounted for and differentiated from the 22 missions geared towards incentivising other stakeholders, as the latter's impact is difficult to determine with a sufficient degree of accuracy.

At the same time, both cities recognise that it is crucial to get stakeholders other than municipality on board. In that regard, it is important to note that the "acceleration" represented in tables 6, 6A and 6B pertains to both the "regular" acceleration of existing policies and projects as well as the scope of further policies and projects which are necessary to at least achieve the "threshold" 55% emission reduction target. As can be discerned from tables 6A and 6B, both cities have decided to direct "additional" investments necessary to achieve the "threshold" 55% emission reduction in 2030 along those investment actions in which stakeholders other than the municipality are expected to be "in the lead". More specifically, Eindhoven has allocated its additional funding (€ 59.43 million) to the modifications to residential buildings. This follows logically from the substantial share of "built environment" interventions in the city's overall budget and the crucial role that households are expected to play in ensuring that climate neutrality measures are executed. For the same reason, Helmond has also allocated additional funds to incentivize utility providers and owners of other non-residential buildings to adopt insulation and alternative heating measures (€ 23.69 million). Additionally, Helmond has also allocated additional funding to incentivise motorists to adopt EV-vehicles (€ 36.22 million) and EV-charging infrastructure (€ 3.92 million) as well as incentivise companies to electrify (€ 27.13 million) and make adjustments to their industrial processes (€ 8.08 million).

1.1.7 Capital Intensive Projects

Tables 7A and 7B provide an indication of the projects that are expected to represent the greatest capital/investment volumes. It is important to note that the CAPEX figures included for Built Environment in these tables represent the total planned efforts along the different investment actions both before and beyond 2030 (and therefore the scope of the Climate City Contract). More generally, specific projects within the investment actions will be more narrowly defined going forward. It is only then that more precise estimations on the total investment volume, the division of CAPEX costs among stakeholders and the possible use of additional funding instruments can be determined.

Table 6A: Budget Breakdown for Sectors and Investment Actions Targeted for Investment

EINDHOVEN						
Investment Action	**Description**	**Total Investment Volume**	**Existing**	**Acceleration**	**Total Invest. 2035**	**Stakeholders**
SECTOR: BUILT ENVIRONMENT						
1. *Modifications to Residential Buildings*	**- Insulation of Homes** **- Alternative Heating & Cooling in Homes**	**€ 582.23 M**	€ 355.90 M	€ 226.33 M*	*€ 1 573.32 M*	Homeowners, VVEs, Housing Corporations
2. *Modifications to Non-Residential Buildings*	**- Insulation of Utilities & Other Buildings** **- Alternative Heating & Cooling in Utilities & Other Buildings**	**€ 204.68 M**	€ 199.78M	€ 4.90 M	*€ 667.19 M*	Companies, Utility Providers
3. *Alternative Energy Systems & Infrastructure*	**- Removal of Gas Infrastructure** **- Deployment of Alternative Heating and Electricity Infrastructure**	**€ 525.27 M**	€ 512.66 M	€ 12.61M	*€ 1 996.16 M*	Construction Companies, Heating/Utility Providers, **Municipality**
TOTAL :		**€ 1 312.18 M**	**€ 1 068.34 M**	**€ 243.84 M**	**€ 4 236.67 M**	
SECTOR : MOBILITY						
4. *Sustainable vehicle fleet*	**-Sustainable Civilian & Corporate Car-Fleet**	**€ 118.18 M**	€ 60.22 M	€ 57.95 M	*€ 189.08 M*	Motorists, Companies, **Municipality**
5. *Charging Infrastructure*	**-Charging infrastructure for car fleet**	**€ 45.36 M**	€ 23.11 M	€ 22.24 M	*€ 60.48 M*	Companies, Network Operators, Construction Companies, **Municipality**
6. *Zero Emission Zones /Low-Traffic City Centre*	**- Creating Low Traffic Zones**	**€ 7.00 M**	€ 3.57 M	€ 3.43 M	*€ 7.00 M*	**Municipality**

7. *Modal Shift*	**- Alternative Transport (Transferia, Bicycle Stations)**	**€ 1.00 M**	€ 0.51 M	€ 0.49 M	*€ 2.00 M*	Transport Operators, **Municipality**
8. *Incentive Programmes*	**- Setting up Incentive Programmes (smart grids etc.)**	**€ 1.00 M**	€ 0.51 M	€ 0.49 M	*€ 1.00 M*	**Municipality**
TOTAL :		**€ 172.53 M**	**€ 87.92 M**	**€ 84.61 M**	**€ 259.56 M**	
SECTOR : INDUSTRY						
9. *Heat Infrastructure*	**- Adjustment Heating infrastructure** **- Adjustment Electricity infrastructure**	**€56.40 M**	€ 49.92 M	€ 6.49 M	*€ 100.00 M*	Heating/Utility Providers, **Municipality**
10. *Modifications in Companies and Processes*	**- Adjustments to Companies and Processes: MJA, EML, EED**	**€ 180.00 M**	€ 159.30 M	€ 20.70 M	*€ 540.00 M*	Companies
11. *Energy Transition Projects*	**Sustainable Energy Projects (smart-grids etc.)**				*Accounted for in line 10*	Companies, Utility Providers
12. *Electrification*	**- Electrification Industry (Phasing Out Natural Gas in Company Processes)**				*Accounted for in line 10*	Companies
TOTAL :		**€ 236.40 M**	**€ 209.22 M**	**€ 27.19 M**	**€ 640.00 M**	
TOTAL:		***€ 1 714 M***	***€ 1 365 M***	***€ 356 M***	***€ 5 135 M***	
TOTAL: Cross Cutting Costs			These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.			

Table 6B: Budget Breakdown for Sectors and Investment Actions Targeted for Investment

HELMOND						
Subsector	**Description**	**Total Investment Volume**	**Existing**	**Acceleration**	**Total Invest. 2035**	**Stake-holders**
SECTOR: BUILT ENVIRONMENT						
1. *Modifications to Residential Buildings*	**- Insulation of Homes** **- Alternative Heating & Cooling in Homes**	**€ 252.48 M**	€ 216.24 M	€ 36.25 M	*€ 581.83 M*	Homeowners, VVEs, Housing Corporations
2. *Modifications to Non-Residential Buildings*	**- Insulation of Utilities & Other Buildings** **- Alternative Heating & Cooling in Utilities & Other Buildings**	**€ 205.98 M**	€ 201.03 M	€ 4.94 M*	*€ 296.07 M*	Companies, Utility Providers
3. *Alternative Energy Systems & Infrastructure*	**- Removal of Gas Infrastructure** **- Deployment of Alternative Heating and Electricity Infrastructure**	**€ 159.10 M**	€ 155.28 M	€ 3.82 M	*€ 354.58 M*	Construction Companies, Heating/Utility Providers, **Municipality**
TOTAL :		**€ 617.56 M**	**€ 572.55 M**	**€ 45.01 M**	**€ 1 232.48 M**	
SECTOR: MOBILITY						
4. *Sustainable vehicle fleet*	**- Sustainable Civilian & Corporate Car-Fleet (23K Vehicles)**	**€ 58.39 M**	€ 29.75 M	€ 28.63 M*	*€ 93.41 M***	Motorists, Companies, **Municipality**
5. *Charging Infrastructure*	**- Charging Infrastructure (8600 Stations)**	**€ 25.73 M**	€ 13.11 M	€ 12.62 M*	*€ 34.03 M*	Companies, Network Operators, Construction Companies, **Municipality**

6. *Zero Emission Zones /* *Low-Traffic City Centre*	**- Creating Low Traffic Zones**	**€ 5.00 M**	€ 2.55 M	€ 2.45 M	*€ 5.00 M*	**Municipality**
7. *Modal Shift*	**- Alternative Transport (Transferia, Bicycle Stations)**	**€ 0.50 M**	€ 0.25 M	€ 0.25 M	*€ 1.50 M*	Transport Operators, **Municipality**
8. Incentive programmes	**- Setting up incentives programmes**	**€ 0.50 M**	€ 0.25 M	€ 0.25 M	*€ 0,50 M*	**Municipality**
TOTAL :		**€ 90.11 M**	**€ 45.92 M**	**€ 44.19 M**	**€ 134.72 M**	
SECTOR: INDUSTRY						
9. *Heat Infrastructure*	**- Adjustment Heating infrastructure** **- Upscaling heating-infrastructure City centre** **- Upscaling Heating infrastructure Houtsdonk** **- Heat Network from sewage treatment plant** **- Heating Infrastructure Industrial site Hoogeind/BZOB/GS** **- Adjustment Electricity infrastructure**	**€ 4.00 M**	€ 3.54 M	€ 0.46 M	*€ 137.00 M*	Heating/Utility Providers, **Municipality**
10. *Interventions in Companies & Processes*	**- Adjustments to Companies and Processes: MJA, EML, EED**	**€ 23.00 M**	€ 20.35 M	€ 2.65 M*	*€ 93.00 M*	Companies

11. *Energy Transition Projects*	**- Solarfields on industrial sites** **- Smart Hub Hoogeind** **- Smart Grids**	**€ 16.88 M**	€ 14.93 M	€ 1.94 M	*€ 16.88 M*	Companies, Utility Providers
12. *Electrification*	**- Electrification Industry (Phasing Out Natural Gas in Company Processes)**	**€ 75.00 M**	€ 66.37 M	€ 8.63 M*	*€ 150.00 M*	Companies
TOTAL :		**€ 118.88 M**	**€ 105.20 M**	**€ 13.67 M**	**€ 396.88 M**	
TOTAL:		***€ 827 M***	***€ 724 M***	***€ 103 M***	***€ 1 764 M***	
TOTAL: Cross Cutting Costs			These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.			

*Includes “additional” policies and projects to be accelerated in order to achieve “threshold” 55% emission reduction in 2030.

** The cost included under the revised 55% scenario for 2030 is lower than the initial budget drafted for the 80% reduction target. As such, this figure may change according to insight during the implementation of the action portfolio.

Disclaimer: The CAPEX and OPEX amounts in this table are indicative and may vary depending on several variables, including related risks, maturity, conditions of applicable grants, duration, market circumstances, and interest rates. These amounts can be determined at the time of finalizing the business case of the projects.

Table 7A: Capital Intensive Projects Eindhoven

Sector	Action / Indicator				
Built Environment	Binnenstad	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		258.86 €m	*5.18 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Het Ven	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		62.12 €m	*1.24 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Generalenbuurt	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		57.92 €m	*1.16 €m*	*…EUR/tCO₂e*	***Renovations Houses:*** *Homeowners (70%) / VVE; Housing corporations (30%)* ***Energy Infrastructure:*** *Municipality (90%); Utility providers (10%)*
		Project Description : *…*			
Built Environment	Fellenoord	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		54.65 €m	*1.09 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			

Built Environment	Vlokhoven	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO_2e)**	**Investment (Split by Stakeholders)**
		50.11 €m	*1.00 €m*	*…EUR/tCO_2e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Gildenbuurt	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO_2e)**	**Investment (Split by Stakeholders)**
		48.62 €m	*0.97 m*	*…EUR/tCO_2e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			

Table 7B: Capital Intensive Projects Helmond

Sector	Action / Indicator				
Built Environment	Centrum	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		197.39 €m	*3,95 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Hoogeind	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		124.27 €m	*2.49 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Eeuwsels	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		73.71 €m	*1.47 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Akkers	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		60.11 €m	*1,20 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			

Built Environment	Heipoort	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		53.80 €m	*1.07 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Built Environment	Brouwhuis Dorp	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		50.04 €m	*1.00 €m*	*…EUR/tCO₂e*	**Renovations Houses:** Homeowners (70%) / VVE; Housing corporations (30%) **Energy Infrastructure:** Municipality (90%); Utility providers (10%)
		Project Description : *…*			
Industry	ZON Systeem Hoogeind	**Capex (€m)**	**Opex (€m)**	**Cost Effectiveness (EUR/tCO₂e)**	**Investment (Split by Stakeholders)**
		15.00 €m	*…€m*	*…EUR/tCO₂e*	***Energy Transition Projects:*** *Municipality (50%); Utility Providers (20%); Companies (30%)*
		Project Description : *…*			

2.2 Module IP-B2: Capital Planning for Climate Neutrality

B-1.2: Textual element

1.2.1 Determining Financial Coverage of Additional Investment Efforts & Involvement of Stakeholders

Of course, contributions to support the foreseen projects and investments may concern not only different stakeholders but may equally consist of different funding sources including, among others, municipal budgets, contributions from private parties such as citizens and companies as well as additional support from available funds, subsidies and other funding instruments that are available at both the national and European level. After all, despite the significant resources that the municipalities of Eindhoven and Helmond have already dedicated to climate-related actions, these provide insufficient (financial) means necessary to support their ambitions towards climate neutrality as outlined in their joint Climate Action Plan. As a result, the cities of Eindhoven and Helmond have identified and budgeted a number of additional investments necessary to achieve climate neutrality and sustainability targets. Until 2030 these pertain, chiefly, to the acceleration of policies and projects originally planned beyond 2030 as well as the implementation of additional policies and projects to accelerate emission reductions and achieve at least the “threshold” 55% reduction in 2030.

Of course, the municipalities of Eindhoven and Helmond have already begun to gauge the expected costs for implementing these measures. In that regard it is important to note that while existing policies and projects that had been planned until 2030 are at an advanced stage of financial planning, the acceleration of measures originally foreseen for the 2030-2050 period require additional financial support and are surrounded by a greater degree of financial uncertainty.

This implies that for the accelerated measures the cities of Eindhoven and Helmond have formulated as part of their Climate Action Plan and, by extension, this Climate Investment plan, an adequate and informed financial strategy is required to determine how each investment is to be covered. This strategy ought to consider, on the one hand, the necessary collaboration with a wide variety of stakeholders which may vary for each type of investment. On the other hand, the strategy should make informed plans on which stakeholders may be expected to contribute financially to the measures aimed at climate neutrality or instead be relied upon to provide expert knowledge on certain topics. Finally, in some instances the municipalities may conclude that other stakeholders should be encouraged to take the lead as the appropriate authority to exert and stimulate action where this responsibility does not lie primarily with the municipalities themselves. For example, as cities have limited control over utilities, they require active involvement of regional and national authorities to support their efforts.[1] Ultimately, the financial coverage for each of the identified actions will leverage all possible sources of financing and, therefore, aim to include the relevant stakeholders. The envisioned coverage of the total investment volume for each investment line is outlined in table 8A. It should be noted that in order for these stakeholders to contribute financially, it is key to overcome the barriers that have so far prevented other parties from financing climate investments

[1] Net Zero Cities, “Impact of City Climate Neutrality Action Plans”. February 2024.

1.2.2 Strategy to Leverage Public & Private Funding

Eindhoven and Helmond will aim for a capital deployment of the anticipated investments that optimally leverages both public funding, private investments and additional funding opportunities such as subsidies and loans. To do so, it is a paramount to establish and maintain public-private partnerships so as to develop projects that are attractive to private investors and public funding bodies alike.

The municipalities of Eindhoven and Helmond are well-positioned in this regard. Already, both municipalities maintain a comprehensive overview of public and private funding sources for climate actions. Furthermore, the municipalities can leverage various financial policies to guide both public and private capital in support for climate action. Indeed, the Special Purpose Vehicles that facilitate private investments in projects that support public objectives may be considered to exemplify the various tools that Eindhoven and Helmond have at their disposal to create a pipeline of projects that is supported by both public and private investments. Over the past year, the municipality of Eindhoven alone has gained experience in deploying public-private partnerships through agreements on sustainable and affordable housing with housing corporations, the development of the futureproof business park De Hurk and collaboration for urban development as part of Park Strijp Beheer.

To attract investments from companies and stimulate investments by citizens, Eindhoven and Helmond will rely heavily on the 22 missions identified in the CAP. As a first step, these missions will consist of making information on sustainable and climate-friendly behaviours and investments accessible through “storytelling”. After all, both cities recognise that climate change and climate-neutrality efforts can oftentimes remain abstract to these stakeholders. Thus, efforts include targeted information campaigns, making information accessible and sharing the stories of front-runners to inspire others to follow. Of course, while raising awareness is an important first step, merely informing citizens and companies of opportunities for climate-investments is likely not sufficient to trigger investments on the ground. Instead, the municipalities will also seek to use existing networks such as Brainport Eindhoven, Innovatiehuis de Peel and others to engage with specific stakeholders and build strong public-private partnerships. Finally, the municipalities will also seek cooperation and coordination with other layers of governments and neighbouring regions to remove barriers in legislation and learn from initiatives elsewhere.

Table 8: Capital Planning by Stakeholder

Sector	Investment total (€M)	Municipality (€M)	Housing Associations (€M)	Transport Operators (€M)	Utility Providers (€M)	Citizens (€M)	Companies (€M)
Built Environment	*1.971*	*77*	*242*		*706*	*584*	*361*
Mobility	*309*	*51*		*0.08*		*168*	*90*
Industry	*394*	*39*			*21*		*333*
Total	**2.674**	**167**	**242**	**0.08**	**727**	**752**	**784**

Table 8A: Summary of Capital Planning by Stakeholder

EINDHOVEN						
	PUBLIC	SEMI-PUBLIC			PRIVATE	
Investment Action	**Municipality**	**Housing Associations**	**Transport Operators**	**Utility providers**	**Citizens (Houseowners & Motorists)**	**Companies**
SECTOR: BUILT ENVIRONMENT						
1. Modifications to Residential Buildings	**1%** **Total** € 6M **Acc.** € 2M	**29%** **Total** € 169M **Acc.** € 65M			**70%** **Total** € 407M **Acc.** € 158M	
2. Modifications to Non-Residential Buildings				**20%** **Total** € 41M **Acc.** € 1M		**80%** **Total** € 163M **Acc.** € 4M
3. Alternative Energy Systems & Infrastructure	**10%** **Total** € 52M **Acc.** € 1M			**90%** **Total** €473M **Acc.** € 11M		
TOTAL : €	**€ 58M** (€ 4M)	**€ 169M** (€ 65M)	**€ 0M** (€ 0M)	**€ 514M** (€ 12M)	**€ 407M** (€ 158M)	**€ 163M** (€ 4M)
SECTOR: MOBILITY						
4. Sustainable vehicle fleet	**1%** **Total** € 1M **Acc.** € 0.60M				**70%** **Total** € 82M **Acc.** € 40M	**29%** **Total** € 34M **Acc.** € 17M

5. *Charging Infrastructure*	**45%** **Total** € 20M **Acc.** € 10M				**20%** **Total** € 9M **Acc.** € 4M	**35%** **Total** €16 M **Acc.** € 8 M
6. *Zero Emission Zones/Low traffic City Centre*	**100%** **Total** € 7M **Acc.** € 3M					
7. *Modal Shift*	**95%** **Total** € 0.95M **Acc.** € 0.47M		**5%** **Total** € 0,05M **Acc.** € 0.02M			
8. Incentive programmes	**100%** **Total** € 1M **Acc.** € 0,49M					
TOTAL : €	**€ 30M** (€ 15M)	**€ 0M** (€ 0M)	**€ 0,05M** (€ 0,02M)	**€ 0M** (€ 0M)	**€ 91M** (€ 44M)	**€ 50 M** (€ 25M)
SECTOR: INDUSTRY						
9. *Heat Infrastructure*	**50%** **Total** € 0M **Acc.** € 0M			**30%** **Total** € 0M **Acc.** € 0M		**20%** **Total** € 0M **Acc.** € 0M
10. *Interventions Modifications in Companies and Processes*						**100%** **Total** € 30M **Acc.** € 3M

11. *Energy Transition Projects*	**50%** **Total** € 25M **Acc.** € 3M			**20%** **Total** € 10M **Acc.** € 1M		**30%** **Total** € 15M **Acc.** € 2M
12. *Electrification*						**100%** **Total** € 150M **Acc.** € 17M
TOTAL : €	**€ 25M** (€ 3M)	**€0M** (€ 0M)	**€ 0M** (€ 0M)	**€ 10M** (€ 1M)	**€ 0M** (€ 0M)	**€ 195M** (€ 22M)
TOTAL:	*€ 117M* *(€ 22M)*	***€ 169M*** *(€ 65M)*	***€ 0,05M*** *(€ 0,02M)*	***€ 530M*** *(€ 13M)*	***€ 499M*** *(€ 202M)*	***€ 405M*** *(€ 51M)*
TOTAL: Cross Cutting Costs			These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.			

HELMOND						
	PUBLIC	SEMI-PUBLIC			PRIVATE	
Investment Action	**Municipality**	**Housing Associations**	**Transport Operators**	**Utility providers**	**Citizens (Houseowners & Motorists)**	**Companies**
SECTOR: BUILT ENVIRONMENT						
1. *Modifications to Residential Buildings*	**1%** **Total** € 3 M **Acc.** € 1M	**29%** **Total** € 73 M **Acc.** € 10M			**70%** **Total** € 176M **Acc.** € 25M	
2. *Modifications to Non-Residential Buildings*				**20%** **Total** €49M **Acc.** € 9M		**80%** **Total** € 197M **Acc.** € 37M
3. *Alternative Energy Systems & Infrastructure*	**10%** **Total** € 16M **Acc.** € 0.38M			**90%** **Total** € 143M **Acc.** € 3M		
TOTAL : €	**€19M** (€ 1M)	**€73M** (€10M)	**€0M** (€ 0M)	**€192 M** (€ 12 M)	**€176M** (€ 25M)	**€197M** (€ 37M)
SECTOR: MOBILITY						
4. *Sustainable vehicle fleet*	**1%** **Total** € 1M **Acc.** € 0,70M				**70%** **Total** € 70M **Acc.** € 49M	**29%** **Total** € 29M **Acc.** € 20M

5. *Charging Infrastructure*	**45%** **Total** € 14M **Acc.** € 8M				**20%** **Total** € 6M **Acc.** € 3M	**35%** **Total** € 10M **Acc.** € 6M
6. *Zero Emission Zones/Low traffic City Centre*	**100%** **Total** € 5M **Acc.** € 2M					
7. *Modal Shift*	**95%** **Total** € 0,47M **Acc.** € 0,23M		**5%** **Total** € 0,03M **Acc.** € 0,01M			
8. Incentive programmes	**100%** **Total** € 0,50M **Acc.** € 0,25M					
TOTAL : €	**€21M** (€ 11M)	**€0M** (€ 0M)	**€0,03M** (€ 0,01M)	**€0M** (€ 0M)	**€76M** (€ 52M)	**€39M** (€ 26M)
SECTOR: INDUSTRY						
9. *Heat Infrastructure*	**50%** **Total** € 2M **Acc.** € 0.23M			**30%** **Total** € 1M **Acc.** € 0,14M		**20%** **Total** € 0.80M **Acc.** 0.09M
10. *Modifications in Companies and Processes*						**100%** **Total** € 34M **Acc.** € 14M

11. *Energy Transition Projects*	**50%** **Total** € 8M **Acc.** € 0,97M			**20%** **Total** € 3M **Acc.** € 0,39M		**30%** **Total** € 5M **Acc.** € 0,58M
12. *Electrification*						**100%** **Total** € 102M **Acc.** € 36M
TOTAL : €	**€10M** (€ 1M)	**€0M** (€ 0M)	**€0M** (€ 0M)	**€4M** (€ 0,53M)	**€0M** (€ 0M)	**€141M** (€ 0M)
TOTAL:	***€ 50M*** *(€ 13M)*	***€ 73M*** *(€ 10M)*	***€ 0,03M*** *(€ 0,01M)*	***€ 197M*** *(€ 12M)*	***€ 253M*** *(€ 77M)*	***€ 379M*** *(€ 63M)*
TOTAL: Cross Cutting Costs			These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.			

Disclaimer: The percentages may vary depending on several variables, including related risks, maturity, conditions of applicable grants, duration, market circumstances, and interest rates, and based on estimations of similar projects. These percentages can be determined at the time of financial close and may also differ within a sector. The percentages presented reflect an estimate of the proposed financing structure of the underlying projects.

B-1.2: Textual element

1.2.5 Capital Planning

While it is possible to provide accurate estimations of the total investment volume of the respective sectors and investment actions, it is, at this stage, not possible to determine definitively how these investments costs are to be borne by the respective stakeholders involved. Indeed, the financing structure for investments depends heavily on the particular business case of any particular project and its risk profile, maturity, interest rates and market circumstances. This is true both for the financial contributions of private and semi-public stakeholders such as citizens, companies, utility providers, transport operators and housing cooperations as well as for the possibilities of leveraging additional financial instruments such as loans or subsidies. As such, the percentages and figures included in tables 8 and 8A should be considered as informed estimates at this earlier stage of planning and will be further refined during the execution of the CAP.

This evidently represents some challenges when determining capital planning and the size of the funding gap. However, the municipalities of Eindhoven and Helmond recognise that, even at this comparatively early stage of planning, it is important to gauge both what investments the municipality is expected to contribute to so as to arrange for these funds to be covered through municipal budgets or other funding sources. Likewise, it is crucial to ascertain where investments efforts will land with other stakeholders so as to be able to develop strategies to engage with these stakeholders effectively. The methodology employed to determine the funding gap follows this two-pronged approach.

- As a first step, the coverage of municipal budgets is estimated by determining the share of investments that pertain to the acceleration of existing or the introduction of new policies, as these are associated with the additional costs that are not reflected in the municipalities existing financial planning. The coverage of the municipal budgets is therefore calculated by dividing the acceleration-related investments taken up by the municipality by the total sum of all investments taken up by the municipality.

  Municipal funding coverage: C / (C+D) = G

- Of course, as emphasised repeatedly in this CIP, climate-neutrality geared investments should not be performed only by the municipality or governments in a broader sense. Rather, stakeholders involved in each of the sectors (and investment actions) are expected to contribute. Therefore, the total funding gap should be interpreted as all the investments not yet covered by municipal budgets. Therefore, the overall coverage of investments is calculated by dividing the sum of all investments taken up by the municipality by the sum of all climate-neutrality geared investments taken up by the different stakeholders. When interpreting these numbers, it should be noted that at this stage of financial planning all costs to be borne by stakeholders other than the municipality itself have been represented as not yet covered, as a result of which the percentual coverage appears to be very low. However, in the financial planning process for individual projects arrangements will and will have been made with partners that will result in a higher overall funding coverage.

  Overall funding coverage: C / (C+D+E) = F

Following this methodology the funding gap for Eindhoven is estimated at € 1.623 billion (column D+E) which is equal to 89% of the overall investment effort (100%-Column F). € 23 million of additional funding is required by the municipality itself (column D), equal to 20% of the overall investment effort for the municipality (100%-column G). Correspondingly, the funding gap for Helmond is estimated at € 914 million (column D+E) which is equal to 96% of the overall investment effort (100%-column F), € 12 million of additional funding is required by the municipality itself (Column D) which is equal to 24% of the total investment volume for the municipality (100%-column F). It is important to note that these figures are determined on a portfolio basis and that funding coverage is both expected to vary from project to project and that contributions from individual stakeholders must also be secured on project level.

1.2.5 Determining Additional Funding Mechanisms to be Leveraged for Climate Investments

Having defined the scope of the projects and investments which require further financial coverage, table 9C below provides an overview of the most relevant funding instruments on the local, national and European level on which the cities of Eindhoven and Helmond may, in part, rely to support their sustainability efforts. The relevant subsidies, funds and other financial instruments are specified for each of the twelve investments actions and three subsectors that have been defined. It is important to note funding opportunities for these actions have been defined in general terms and that the appropriateness of each grant of fund will depend on the precise nature of specific projects foreseen and the specific terms and conditions defined for any given call under the grant or fund concerned A more informed estimation of the alignment between investment actions and financial instruments can thus only be made at a more advanced stage of planning when a project's maturity, business case and risk profile can be clearly defined.

A general observation that must be made in this regard is that public subsidies and funds often target the development or deployment of innovative technologies or concepts as these are generally associated with costly processes and a lack of a commercially viable business case. In that regard, subsidies and other contributions represent a welcome alleviation of these costs. Simultaneously, whereas subsidies and funds should be seen as opportune instruments to enable developments that could otherwise be associated with a high degree of risk, applications for funding opportunities are themselves associated with an element of risk due their complexity and competition. This implies that is when determining whether or not to make use of such instruments to support the objectives and investments defined by the cities of Eindhoven and Helmond, it is key to make strategic choices both in the short and long term.

Finally, table 9A provides an overview of the most relevant opportunities within the financial landscape of today. In future, new financial instruments may arise to answer to emerging pressing challenges while conditions may also be subject to change over time. It will therefore be important to continuously monitor the funding landscape going forward in order to make informed decision on the suitability of any given instrument.

Table 9A: Capital Planning Eindhoven

Sector	Investment Action	Cost to Municipality		Cost to Other	% of Costs Covered	Municipality % of Costs Covered
		Exist.	Accel.			
A	B	C	D	E	F	G
BUILT ENVIRONMENT		*€ 55M*	*€ 3M*	*€ 1 252 M*	*4%*	*84%*
1. Modifications to Residential Buildings		*€ 4M*	*€ 2M*	*€ 576M*	*1%*	*61%*
2. Modifications to Non-Residential Buildings		*€ 0M*	*€ 0M*	€ 204M	*0%*	*N/A*
3. Alternative Energy Systems & Infrastructure		*€ 51M*	*€ 1M*	*€ 472M*	*10%*	*98%*
MOBILITY		*€ 16M*	*€ 15M*	*€ 142M*	*11%*	*51%*
4. Sustainable Vehicle-fleet		*€ 0.58M*	*€ 0.60M*	*€ 117M*	*1%*	*51%*
5. Charging Infrastructure		*€ 10M*	*€ 10M*	*€ 25M*	*23%*	*51%*
6. Zero Emission Zones/ Low-Traffic City Centre		*€ 4M*	*€ 3M*	*€ 0M*	*51%*	*51%*
7. Modal Shift		*€ 0.48M*	*€ 0.47M*	*€ 0.05M*	*48%*	*51%*
8. Incentive Programmes		*€ 0.51M*	*€ 0.49M*	*€ 0M*	*51%*	*51%*
INDUSTRY		*€ 25M*	*€ 3M*	€ 208M	*10%*	*88%*
9. Heat Infrastructure		*€ 25M*	*€ 3M*	*€ 28M*	*44%*	*88%*
10. Modifications in Companies and Processes		*€ 0M*	*€ 0M*	*€ 180M*	*0%*	*N/A*
11. Energy Transition Projects		*€ 0M*	*€ 0M*	*€ 0M*	*0%*	*NA*
12. Electrification		*€ 0M*	*€ 0M*	*€ 0M*	*0%*	*NA*
TOTAL:		***€ 95M***	***€ 21 M***	***€ 1 602M***	***6%***	***81%***

Table 9B: Capital Planning Helmond

Sector	Investment Action	Cost to Municipality		Cost to Other	% of Costs Covered	Municipality % of Costs Covered
		Exist.	Accel.			
A	B	C	D	E	F	G
BUILT ENVIRONMENT		*€ 18M*	*€ 0.70M*	*€ 640M*	*3%*	*95%*
1. Modifications to Residential Buildings		*€ 2M*	*€ 0.30M*	*€ 250M*	*1%*	*86%*
2. Modifications to Non-Residential Buildings		*€ 0M*	*€ 0M*	€ 247M	*0%*	*N/A*
3. Alternative Energy Systems & Infrastructure		*€ 16M*	*€ 0.40M*	*€ 143M*	*10%*	*98%*
MOBILITY		*€ 10M*	*€ 11M*	*€ 115M*	*7%*	*48%*
4. Sustainable Vehicle-fleet		*€ 0.30M*	*€ 0.70M*	*€ 99M*	*0%*	*30%*
5. Charging Infrastructure		*€ 6M*	*€ 8M*	*€ 16M*	*20%*	*43%*
6. Zero Emission Zones/ Low-Traffic City Centre		*€ 3M*	*€ 2M*	*€ 0M*	*51%*	*51%*
7. Modal Shift		*€ 0.24M*	*€ 0.23M*	*€ 0.03M*	*48%*	*48%*
8. Incentive Programmes		*€ 0.25M*	*€ 0.25M*	*€ 0M*	*51%*	*51%*
INDUSTRY		*€ 9M*	*€ 1M*	*€ 146M*	*6%*	*91%*
9. Heat Infrastructure		*€ 1.77M*	*€ 0.23M*	*€ 2M*	*44%*	*88%*
10. Modifications in Companies and Processes		*€ 0M*	*€ 0M*	*€ 34M*	*0%*	*N/A*
11. Energy Transition Projects		*€ 7M*	*€ 1M*	*€ 8M*	*44%*	*88%*
12. Electrification		*€ 0M*	*€ 0M*	*€ 102M*	*0%*	*N/A*
TOTAL:		***€ 37 M***	***€ 12 M***	***€ 902M***	***4%***	***73%***

Table 9 C: Additional Funding Sources for Capital Planning

Investment Action	Grant or Fund	Description	Type	Level	Target	Field of Action
	SECTOR: BUILT ENVIRONMENT					
1. Modifications to Residential Buildings	**EIB (European Investment Bank)**	Uses public capital to invest and attract private capital	*Loans & Advice*	**European**	EU Companies /Governments	Energy/ Circular
	Invest EU	Mobilise private financing for strategic investments	*Fund*	**European**	EU Companies /Governments	Energy/ Circular/ Mobility
	LIFE	Environment, climate and energy	*Grant*	**European**	EU Companies /Governments	Energy/ Circular
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	ISDE (Investerings-subsidie Energie-besparende en Duurzame Energie)	Sustainable Housing	*Grant*	**National**	Homeowners	Energy
	SVVE (Subsidieregeling Verduurzaming voor VvE's	Sustainable Housing	*Grant*	**National**	Housing Corporations	Energy
	VVE Energiebesparing	Sustainable Housing	*Grant*	**National**	Housing Corporations	Energy
	Coöperatieve Energieopwekking	Renewable Energy	*Grant*	**National**	Housing or Energy Corporations	Energy
	Subsidieregeling Verduurzaming en Onderhoud	Sustainable Housing	*Grant*	**National**	Housing Corporations	Energy
	DUMAVA Duurzaam maatschappelijk vastgoed	Sustainable Public Housing	*Grant*	**National**	Public Sector	Energy

2. Modifications to non-residential buildings	**Invest EU**	Mobilise private financing for strategic investments	Fund	**European**	EU Companies /Governments	Energy/ Circular/ Mobility
	European Urban Initiative	Support Urban Areas with Innovation	*Grant*	**European**	EU cities	Energy
	New European Bauhaus	Architectural Climate-Investments tied to Culture	*Grant*	**European**	EU Companies, Researchers, Cultural Institutions	Energy
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	WIS (Warmtenetten Investerings-Subsidie)	District Heating	*Grant*	**National**	Dutch Companies	Energy
	Verduurzaming bedrijventerreinen	Sustainable Commercial Properties	*Grant*	**National**	Dutch Commercial Property Owners	Energy
3. Alternative Energy Systems & Infrastructure	**Invest EU**	Mobilise private financing for strategic investments	Fund	**European**	EU Companies /Governments	Energy/ Circular/ Mobility
	EEEF (European Energy Efficiency Fund)	Stimulate Investments in Energy Efficiency, Renewable Energy and Sustainable Transport	*Loan*	**European**	EU Companies/ Governments	Energy
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	SAH (Aardgasvrije Huurwoningen)	Gasfree Housing	*Grant*	**National**	Housing Corporations	Energy

	SECTOR: MOBILITY					
4. **Sustainable vehicle fleet**	**Invest EU**	Mobilise private financing for strategic investments	Fund	**European**	EU Companies /Governments	Energy/ Circular/ Mobility
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	Bijdrageregeling Regionale mobiliteits-programma's 2024	Support project included in regional mobility programmes	*Grant*	**Regional**	Regions in the Province of Brabant	Mobility
5. *Charging Infrastructure*	**CEF Transport / Energy (Connecting Europe Facility**	Sustainable Transport	*Grant*	**European**	EU Companies	Mobility
	AFIF (Alternative Fuel Infrastructure Facility)	Sustainable Transport	*Grant*	**European**	EU Companies	Mobility
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	Bijdrageregeling Regionale mobiliteits-programma's 2024	Support project included in regional mobility programmes	*Grant*	**Regional**	Regions in the Province of Brabant	Mobility
6. *Zero Emission Zones/Low traffic City Centre*	**ELENA (European Local ENergy Assistance)**	Renewable energy and energy efficiency and innovative urban transport	*Grant*	**European**	EU Companies/ Governments	Energy/ Mobility
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	Bijdrageregeling Regionale mobiliteits-programma's 2024	Support project included in regional mobility programmes	*Grant*	**Regional**	Regions in the Province of Brabant	Mobility

7. Modal Shift	**ELENA (European Local ENergy Assistance)**	Renewable energy and energy efficiency and innovative urban transport	*Grant*	**European**	EU Companies/ Governments	Energy/Mobility
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	Bijdrageregeling Regionale mobiliteits-programma's 2024	Support project included in regional mobility programmes	*Grant*	**Regional**	Regions in the Province of Brabant	Mobility
8. Incentive Programmes	**European City Facility**	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	SECTOR: INDUSTRY					
9. Heat infrastructure	**Innovation Fund**	Stimulate private investment in sustainable energy and climate	*Fund*	***European***	EU Companies/ Governments	Energy/Mobility
	EEEF (European Energy Efficiency Fund)	Stimulate Investments in Energy Efficiency, Renewable Energy and Sustainable Transport	*Loan*	**European**	EU Companies/ Governments	Energy
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	Innovation Fund	Stimulate private investment in sustainable energy and climate	*Grant*	***European***	EU Companies/ Governments	Energy/Mobility
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	MIA/Vamil (Milieu Investerings Aftrek)	Financial Advantage on Sustainable Investments	*Tax Measure*	**National**	Dutch Investors	Energy
	EIA (Energie-Investeringsaftrek)	Financial Advantage on Sustainable Investments	*Tax Measure*	**National**	Dutch Investors	Energy

10. *Modifications in Companies and Processes*	**DEI+CE (Demonstratie Energieën Klimaatinnovatie)**	Demonstration and pilot projects of innovative sustainable technologies	*Grant*	**National**	EU Companies	Energy
	MIA/Vamil (Milieu Investerings Aftrek)	Financial Advantage on Sustainable Investments	*Tax Measure*	**National**	Dutch Investors	Energy
	EIA (Energie-Investeringsaftrek)	Financial Advantage on Sustainable Investments	*Tax Measure*	**National**	Dutch Investors	Energy
11 *Energy Transition Projects*	**Innovation Fund**	Stimulate private investment in sustainable energy and climate	*Fund*	***European***	EU Companies/ Governments	Energy/Mobility
	EEEF (European Energy Efficiency Fund)	Stimulate Investments in Energy Efficiency, Renewable Energy and Sustainable Transport	*Loan*	**European**	EU Companies/ Governments	Energy
	Interreg Deutschland - Nederland	Interregional (innovation) projects	*Grant*	**European**	EU Companies, Governments & Knowledge Institutions	Energy/ Circular
	Interreg Vlaanderen - Nederland	Interregional (innovation) projects	*Grant*	**European**	EU Companies, Governments & Knowledge Institutions	Energy/ Circular
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	EFRO (Europees Fonds voor Regionale Ontwikkeling) OPZuid	Support Regional Economy, Innovation and Sustainability	*Grant*	**European/ National**	Noord-Brabant, Zeeland & Limburg	Energy/ Circular
	MOOI (Missiegedreven Onderzoek, Ontwikkeling en Innovatie)	Pilots for Innovative Solutions by Consortia	*Grant*	**National**	Dutch Companies	Energy/ Circular

12. Electrification	**Innovation Fund**	Stimulate private investment in sustainable energy and climate	*Fund*	***European***	EU Companies/ Governments	Energy/ Mobility
	European City Facility	Climate and energy investment concepts	*Grant*	**European**	EU Cities	Energy
	MIA/Vamil (Milieu Investerings Aftrek)	Financial Advantage on Sustainable Investments	*Grant*	**National**	Dutch Investors	Energy
	EIA (Energie-Investeringsaftrek)	Financial Advantage on Sustainable Investments	*Grant*	**National**	Dutch Investors	Energy
	MOOI (Missiegedreven Onderzoek, Ontwikkeling en Innovatie)	Pilots for Innovative Solutions by Consortia	*Grant*	**National**	Dutch Companies	Energy/ Circular
TOTAL:						
TOTAL: Cross Cutting Costs			These can include any supporting activity needed across different sectors, such as citizen engagement, communication with relevant stakeholders, governance and planning exercises, capacity building, the setting-up of SPVs for project management, etc.			

2.3 Module IP-B3: Economic and Financial Indicators for Monitoring, Evaluation and Learning

B-3.1: Textual element

Current situation

Currently, the municipalities use The National Energy Outlook Calculation System (Nationale Energieverkenning-Rekensysteem NEV-RS), the emission registration of the RIVM and the Regional Climate Monitor (Klimaatmonitor) of the Central Bureau of Statistics (CBS) to monitor their CO_2 emissions. In addition, they use data from their own databases. Most of these databases report annual data with a two-year delay.

Action and investment planning through ClimateOS

To refine the monitoring system, the cities will implement a new instrument (ClimateOS). This will not only improve the monitoring system and make more up-to-date figures available but will also allow for analysis and backcasting as well as scenario and investment planning. The action plan portfolio will be set up in ClimateOS, it breaks the transition into manageable shifts, with transition elements. Each element enables the cities to shift to a low carbon operation while sustaining the underlying activity, like commuting to work. As transition elements are interconnected, the platform can be used to simulate and design the right pathway and gain the insights needed to design actions and align stakeholders. It will also show whether the action plan is on track or additional actions are needed.

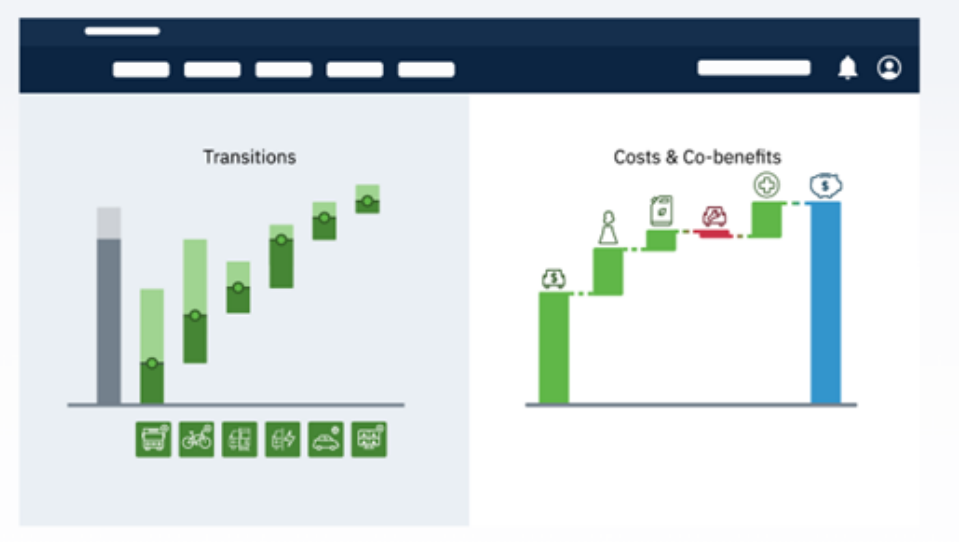


Figure 3: in ClimateOS, the different transition elements add up to a cost and co-benefit overview.

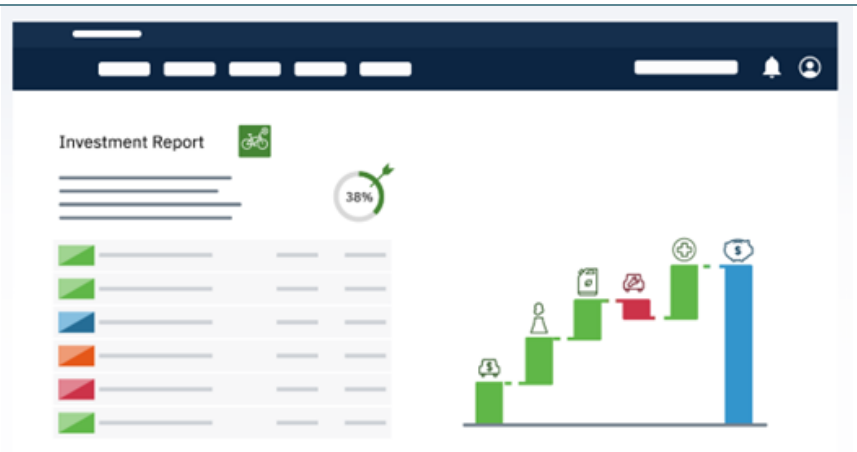


Figure 4: each action has its own targets regarding CO_2 emissions and costs, an investment report is created by aligning all the actions.

Table 10: Economic Indicators by Sector

Sector	Indicator	Indicator Unit	Indicator Baseline*	Indicator Target 2030*
Built environment	Modifications to Residential Buildings	#, %	*Helmond 27609* *Eindhoven 112.63*	*PM*
	Modifications to Non-Residential Buildings		*Helmond €296M* *Eindhoven €667M*	*PM*
	Alternative Energy Systems & Infrastructure		*Helmond €335M* *Eindhoven €1.996M*	*PM*
Mobility	Sustainable vehicle fleet	#	*Helmond 23.350 vehicles* *Eindhoven 47240 vehicles*	*PM*
	Charging infrastructure	#	*H: 8.600 stations* E: 9.000 stations	*PM*
	Zero Emission Zones/Low traffic City Centre	#	*H: €5M* E:: € 7M	*PM*
	Modal Shift	#	*H : €500K costs* *E : €1M*	*PM*
	Incentive programmes	#	*H: TBD* E: TBD	*PM*

Industry	Heat infrastucture	*PM*	*PM*	*PM*
	Modifications in Companies and Processes	*PM*	*PM*	*PM*
	Projects	*PM*	*PM*	*PM*
	Electrification	*PM*	*PM*	*PM*
Green Infrastructure and Nature Based Solutions	*Included in Climate Delta Plan (see Climate Action Plan)*	*NA*	*NA*	*NA*
Waste and Circular Economy	*Included in Climate Delta Plan (see Climate Action Plan)*	*NA*	*NA*	*NA*

**Indicative indicators*

Table 11: Financial Indicators by Sector

Sector	Indicator	Indicator Unit
Mobility		
Reduction of emissions	CO_2 emissions mobility	kton CO_2
Smart mobility	Modal split (bike, walking, public transport, electric car, fossil fuel car)	%
	Shared mobility service	Number of available vehicles
	Zero-emission vehicles	Number of vehicles
Sustainable and clean mobility	Car traffic in city centre	Indicator related to 2019 = 100
	Friendliness of walking, bicycle and public transport facilities	1-10 indicator
	30km/h zones in city centre	Number of streets
Mobility safety	Traffic safety - car accidents	Number of serious accidents per year

Smooth mobility	Cyclists using cycling lanes	Number of cyclists
	Traffic flow on ring road	Floating car data
	Additional slow lanes (fast lane exclusively for bicycles)	km
	HOV-lane (fast lane exclusively for high speed bus)	km
	Renewal of traffic lights	Number renewed
Airport	Estimated LTO (Landing – take off) emissions of Eindhoven airport	kton CO_2-equiv
Built Environment		
Housing	CO^2 emissions housing	kton CO_2
	CO^2 emissions cultural, sports and leisure activities	kton CO_2
	CO^2 emissions public buildings, schools and public services	kton CO_2
	Energy consumption industry and commercial services	TJ
	Average energy consumption per household (gas, electric, district heating, other)	TJ
	Energy labels of dwellings (sub divided into privately owned and rental)	Number of dwellings per label category (A-F)
	Exiting dwellings converted to (hybrid) all-electric or district heating	Number of dwellings converted
	Collective purchase energy saving measures	Number of participating households
	Energy saving boxes	Number of boxes handed out
	Online helpdesk energy saving measures	Number of unique website visitors
	Vouchers to purchase anergy saving measures	Number of vouchers handed out
Municipal buildings	Smart renovation of municipal buildings (above regular standards) (performance indicators on: energy, comfort, materials, mobility, water, biodiversity, visibility, social, maintenance, futureproof)	Multiple indicators related to each theme (32 in total)
Office buildings	Energy labels	Number of offices per label category (A-F)
Industry		
	CO_2 emissions industry, commercial services and offices	kton CO_2
	Monitoring of action plan Industry is currently being developed. Indicators will cover emissions, energy sources, PV, green and water, circular economy, mobility of employees and logistics. These will be added in an update.	

Energy Systems		
	Type of energy installation in housing (gas, electric, district heating, other)	%
Green Infrastructure and Nature Based Solutions		
	Satisfaction with the design of the green infrastructure in the residential area	% of inhabitants
	Satisfaction with the maintenance of green infrastructure in the residential area	% of inhabitants
	Biodiversity species groups	Degree of improvement
	Visits to one of the major urban parks every year	Number of inhabitants
	Accessibility of the public green space	Number of dwellings within 5 minutes walking or bicycling distance from green public space
	Climate proof built environment (Rekentool Klimaatopgave)	Climate proof indicator with building permit
	Reducing the paved area by 10% when renewing public space	Number of areas
	Areas with less than 75m2 of public green space per dwelling	Number of areas
	Reducing the paved area in private space	Number of participants / m2 turned into green space
	Green roofs on existing buildings	m2
	School playgrounds changed into green space	Number of schools / m2
Waste and Circular Economy		
	Residual waste	% of total waste
	Amount of waste per inhabitant	kg/inhabitant
	Industrial waste and circular economy will be addressed in the theme Field Industry	

Regarding financial indicators, these will be developed as we implement the ClimateOS platform. This will also depend on the indicators which are available at a national or local level.

Other potential options

- Total Public Capital Invested in Climate Actions (EUR m)
- Budget Assigned to Climate Action Projects (%) Annual Budget for Climate Actions / Total Annual Budget
- Capital Invested in Climate Action Projects per Capita (EUR k) Annual Capital invested in Climate Projects / Estimated Number of Residents in the City
- Total Private Capital Invested in Climate Actions (EUR m)
- Coverage of Climate Finance Gap (%) Annual External Finance of Climate Actions / Finance Gap between Required Investment and Municipal Spend
- Public to Private Capital Ratio (0.00x) Annual External Finance of Climate Actions / Annual Public Spending on Climate Actions
- Emission Return on Invested Capital (EURm) Total Capital Invested in million / Kt CO_2 reduced
- Sector-Level Emission Return on Invested Capital (EURm) Total Capital Invested in Sector million / Kt CO_2 reduced
- Cost Coverage (Annual Municipal Revenue from Projects / Annual Financing Costs) * 100
- Debt to Budget Ratio Total Outstanding Debt / Annual Municipal Budget

3 Part C – Enabling Financial Conditions for Climate Neutrality by 2030

3.1 Module IP-C1: Climate Policies for Capital Formation and Deployment

C-1.1: Textual element
Achieving climate neutrality by 2030 in Eindhoven and Helmond necessitates comprehensive and strategic policies that stimulate economic growth and innovation while addressing environmental challenges. These policies are essential for creating the financial conditions needed to encourage significant investment in CO_2 reduction technologies, sustainable infrastructure, and energy-efficient solutions. By fostering collaboration between public and private sectors and promoting sustainable practices across housing, commercial buildings, and urban development, these initiatives drive the adoption of renewable energy, enhance building performance, and improve climate resilience. Efforts such as upgrading municipal and private buildings, accelerating solar and wind energy generation, and investing in climate resilience projects ensure that both cities reduce their carbon footprints and build robust, future-proof urban environments. Collectively, these policies position Eindhoven and Helmond as leaders in sustainable urban development, ensuring economic vitality, environmental sustainability, and a high quality of life for their residents.

Table 12: List of Climate Policies to Enable Capital Deployment

Climate Policy	Policy Status (Enacted, In Process, Development, etc.)	Description of the policy (sector, targeted audience, etc.)	Intended Outcome for Capital Formation
UN Paris Agreement	Enacted	Treaty to limit global temperature rise below 2°C above pre-industrial levels and to limit the temperature increase to 1.5°C above pre-industrial levels.	Encourages global investment in climate solutions.
EU Emissions Trading System (ETS)	Enacted	System based on the 'cap and trade' principle: a limit on total greenhouse gas emissions is set for covered sectors, reducing annually to meet the EU's climate target.	Creates market for emissions trading, spurring green investment.
European Green Deal	Enacted	Package of policy proposals for reducing net greenhouse gas emissions by at least 55% by 2030.	Drives investment in sustainable technologies and practices.

EU Climate Law	Enacted	European Union commitment for the target to be climate neutral by 2050 with identified 2030 target and pathway proposals to reach both targets. Coherent, efficient, multimodal, and high-quality transport infrastructure across the EU.	Sets long-term investment trajectory in green sectors.
Trans-European Transport Network (TEN-T) policy (CEF)	Enacted	Coherent, efficient, multimodal, and high-quality transport infrastructure across the EU.	Fosters investment in sustainable transport infrastructure.
Alternative fuels infrastructure regulation (AFIR)	Enacted	2025-2030 deployment targets for recharging and refuelling stations for alternative fuels (to fossil fuels)	Boosts investment in alternative fuel infrastructure.
EU Regulation 2023/851 Actualised CO_2 emission standards performance standards for cars and vans	Enacted	Introducing stricter CO_2 emissions targets for cars and vans in line with the EU reduction targets for cars and vans of 100% by 2035.	Accelerates investment in low emission vehicles.
EU Regulation CO_2 Emission Standards for Heavy-Duty Vehicles	Enacted	Introducing stricter CO_2 emissions targets for heavy-duty vehicles in line with the EU reduction targets for cars and vans of 100% by 2035.	Promotes investment in sustainable heavy-duty transport.
EU Circular Economy Action Plan	Enacted	Action plan with measures to produce more sustainable products, decrease waste and promote circularity in the EU. Part of European Green Deal.	Invites capital in circular economy initiatives.
EU Biodiversity Strategy 2050	Enacted	EU Strategy to halt the decline of biodiversity and help biodiversity increase by 2030. Part of European Green Deal.	Encourages investment in biodiversity conservation.
EU Nature Restoration Law	Enacted	Set of rules to restore biodiversity and ecosystems within the EU aiming to have at least 20% of EU's land and sea covered by recovery measures by 2030 and all ecosystems by 2050.	Draws funding for ecosystem restoration projects.
EU Zero Pollution Action Plan	Enacted	Action plan to drastically decrease pollution within the EU. Target of zero pollution in 2050 and 25-55% percent decreases in different types of pollution by 2030.	Attracts investment in pollution reduction technologies.
National Climate Agreement	Enacted	Agreement between large group of national stakeholders in the Netherlands committing to bringing national CO_2-emissions down by at least 49% by 2030 and 95% by 2050 compared to 1990	Drives national investments in emission reduction.

Mobility Vision 2050	Enacted	National vision paper about the future of mobility	Influences investment in sustainable mobility solution
Wetsvoorstel Collectieve Warmte	In Process	Proposed bill to facilitate the development of district heating by designating public parties to develop said networks, thus giving the public sector more control.	Promotes public investment in district heating.
National Insulation Program	Enacted	National program to insulate 2.5 million households by 2030, reducing energy consumption and preparing for non-fossil fuel heating.	Boosts investment in energy-efficient housing.
Provincial multiple year plan on infrastructure, energy and climate (pMIEK)	Enacted	Integrated provincial analysis on the most important decisions to make to ensure a functioning energy system beyond 2030.	Guides provincial investments in energy infrastructure.
Regional Energy Strategy (Brainport region)	Enacted	Regional strategy for increased production of renewable energy on land, for saving energy and sustainable heat generation	Encourages regional investments in renewable energy.
National Performance Agreements (NPA) Housing Associations	Enacted	Agreements require housing associations to phase out EFG labels in social housing by 2028. Accelerated efforts are needed to meet NPA objectives.	Stimulates investment in energy-efficient social housing.
National Energy Agenda	Enacted	The main lines of future energy policy for the period up to 2050.	Boosts investments in energy saving, insulation and renewables.
Provincial Energy Agenda 2019-2023	Enacted	Guideline for action of the province. This with the aim of being in place by 2050, 100% sustainable energy and a reduction of 90% of CO_2 emissions compared to 1990.	Influences investments in energy saving, insulation and renewables.
Delta Rhine Corridor	Enacted	Initiatives to construct multiple underground pipelines, including a hydrogen transport pipeline, from Rotterdam to the German border via Moerdijk and Geleen.	Attracts investments in renewables and circular and sustainable industry.
National Approach Mobility Transition	Enacted	Accelerating the mobility transition through a joint approach by all governments.	Drives investments in structural mobility improvements.
Building Balance programme	Enacted	Initiating, encouraging and supporting independent regional and national chains for biobased building.	Attracts investments in biobased building.

National Delta Plan on Spatial Adaptation	Enacted	Limit flooding, heat stress, drought and the consequences of flooding.	Invites investments in agriculture, water and green.
De Grote Oogst	Enacted	Structural collaborations in 12 industrial areas with concrete action plans to make the industrial estates more sustainable and green together with partners.	Drives investments in sustainable industry actions.
Operatie Steenbreek	Enacted	Action Plan of national knowledge and network organization that provides support in sustainably greening our living environment.	Attracts investments in greent, water and climate actions.
Implementation program Future-proof Brainport Electricity Network (UTEB, Brainport Region)	Enacted	21 municipalities in the Brainport area, the province of North Brabant and Brainport Development collaborate to limit the consequences of net congestion.	Promotes investments in actions preventing or managing net congestion in the Brainport region.
Brainport Sustainability Plan (Brainport region)	Enacted	Projects and activities in the field of circularity and sustainability with a focus on circular chains.	Boosts investments in circularity and sustainability in the Brainport region.
Peel Positief (Helmond and Peel region)	Enacted	Projects and activities in the field of circularity and sustainability.	Stimulates investments in circularity and sustainability in the Helmond and Peel region.
Green and smart mobility (Brainport region)	Enacted	Innovative technological breakthroughs in electrification, hydrogen applications and future-oriented digital infrastructure in mobility.	Influences investments in electrification and hydrogen applications.
Brainport Bereikbaar (Brainport region)	Enacted	Optimal flow and accessibility of the Brainport region. Facilitate and encourage mobility solutions that are faster, cleaner and healthier.	Draws funds for innovative mobility solutions
Towards a climate neutral Eindhoven	Enacted	Eindhoven wants to reduce the city's CO_2 emissions by 55% in 2030 and 95% in 2050 compared to 1990 emissions.	Fosters investments in CO_2 reductions in Eindhoven.
Implementation Agenda 2021-2025 (Eindhoven)	Enacted	An adaptive implementation agenda in which the CO_2 impact of projects is made transparent.	Influences investment decisions related to CO_2 reductions in Eindhoven.
Climate Regulation 2016 (Eindhoven) Climate Regulation Helmond by 2035	Enacted	Step-by-step reduction of greenhouse gas emissions (GHGs) compared to emissions in 1990	Draws funds for reduction GHGs.

Sustainable Strategic Program and Healthy City (Helmond)	Enacted	Strategy focused on sustainability and climate adaptation.	Encourages investments in sustainable actions and climate adaptation.
Climate Neutral Plan in 2035 (Helmond)	Enacted	Helmond want to be climate neutral as a city in the period 2035-2045.	Stimulates capital to support actions for the city's climate neutrality.
Annual climate budget (CO_2, energy-use) Eindhoven	Enacted	Report on progress towards CO_2 reduction goals.	Encourages investment in CO_2 reduction technologies and initiatives.
Annual climate budget (CO_2, energy-use) Helmond	Enacted	Report on progress towards CO_2 reduction goals.	Encourages investment in CO_2 reduction technologies and initiatives.
Decarbonizing Strategy 2050 (Eindhoven, Helmond)	Enacted	Heating and cooling homes, businesses and other buildings within the built environment in a different way than with natural gas.	Stimulates investment in alternative heating and cooling technologies.
Mobility Vision and Implementation Program (Eindhoven, Helmond)	Enacted	Vison on the future mobility system and what is needed to achieve this.	Promotes investment in innovative and sustainable mobility solutions.
Circular City Eindhoven	Enacted	To be a circular city in 2050 that uses (raw) materials in a sustainable way.	Drives investment in sustainable and circular economy practices.
Sustainability Pact (Eindhoven) and Performance Agreements (Helmond)	Enacted	Agreements with housing associations about making homes more sustainable.	Encourages investment in sustainable housing improvements.
Energieloket, Energiehuis (Eindhoven, Helmond)	Enacted	Helping homeowners making homes more sustainable.	Facilitates investment in home sustainability upgrades.
De Groene Zone (Eindhoven, Helmond)	Enacted	Initiative with the aim of providing as many homes as possible with insulation and solar panels.	Boosts investment in residential energy efficiency and solar technologies.

Green Deal Healthcare (Eindhoven, Helmond)	Enacted	Improve the performance of healthcare institutions by saving energy, using waste and water more efficiently, combating food waste and limiting transport movements.	Promotes investment in sustainable practices in healthcare facilities.
Green Deal Offices (Eindhoven, Helmond)	Enacted	In 2023, every office with an area of more than 100 m2 must have at least energy label C. Office owners are challenged to go a step further by opting for energy label A. In return, they receive a postponement of the legal obligation, and they will be helped to achieve this result.	Encourages investment in energy-efficient office buildings.
Green Deal Utility (Eindhoven)	Enacted	Improves the performance of utility construction companies by saving energy, preventing waste, limiting transport movements.	Stimulates investment in sustainable construction practices.
Green Deal Events (Eindhoven)	Enacted	The Green Deal Events focuses on the themes of energy, materials and plastic, food and drinks, mobility, and diversity and inclusion.	Drives investment in sustainable event practices across multiple sectors.
Business Investment Zone De Hurk (Eindhoven)	Enacted	Real estate owners and businesses work together on activities in the areas of quality of life, safety, sustainability, greenery, mobility and accessibility.	Encourages collaborative investment in urban sustainability and quality of life improvements.
Stichting Bedrijventerreinen Helmond (Helmond)	Enacted	Real estate owners, businesses and the city of Helmond work together on activities in the areas of quality of life, safety, sustainability, greenery, mobility and accessibility.	Promotes collaborative investment in urban development and sustainability in Helmond.
Smart Synergy Helmond	Enacted	Program in which businesses work with each other and with the municipality. The projects individually contribute to the energy transition, but collectively they ensure accelerated sustainability of the Helmond industrial estates.	Stimulates joint investments in industrial sustainability projects.
Making Municipal Buildings Sustainable (Eindhoven, Helmond)	Enacted	Approach for making municipal buildings (including schools and sport facilities) more sustainable and at the same time work smartly with real estate owners to make all buildings in the city more sustainable.	Encourages investment in sustainable upgrades for municipal and private buildings.
Policy memo on solar parks and wind turbines (Eindhoven)	Enacted	Approach to accelerate solar and wind generation in urban areas.	Promotes investment in urban renewable energy projects.

Vision and policy Solar fields and solar roofs (Helmond)	Enacted	Framework and conditions for solar fields and solar roofs.	Facilitates investment in solar energy infrastructure.
Socially Responsible Ordering and Purchasing (Eindhoven, Helmond)	Enacted	The policy of the cities of Eindhoven and Helmond is to purchase as sustainably and socially as possible.	Drives investment in sustainable and socially responsible procurement.
Water and Climate Adaptation Approach (Eindhoven)	Enacted	Program for making the city of Eindhoven (more) climate resilient.	Encourages investment in climate resilience projects in Eindhoven.
Climate-resilient Implementation Agenda 2021-2025 (Helmond)	Enacted	Program for making the city of Helmond (more) climate resilient.	Promotes investment in climate resilience projects in Helmond.
Urban Lighting Program (Eindhoven, Helmond)	Enacted	Program for making public lighting more sustainable.	Stimulates investment in energy-efficient public lighting systems.

3.2 Module IP-C2: Identification and Mitigation of Risks

C-2.1: Textual element
In Eindhoven and Helmond, we prioritise risk analysis in our decision-making investment processes to achieve climate neutrality. We systematically identify and measure risks related to financing actions, considering financial, technological, and regulatory factors. Our understanding of risk mitigation and quantification methods, such as sensitivity analysis and scenario planning, allows us to proactively manage uncertainties. We have developed a comprehensive risk management framework that includes processes for risk identification, assessment, mitigation strategies, and ongoing monitoring. This framework is regularly reviewed through structured processes involving stakeholders and experts to ensure its effectiveness and alignment with our sustainability goals. By integrating rigorous risk analysis and robust risk management practices, we aim to optimize resource allocation and maximize the impact of our investments in building resilient, sustainable urban environments for our communities.

Table 13: Climate Investment Plan Risk Framework

Sector	Sectoral Project	Risks Identified	Description of Risk	Risk Priority	Mitigation of Risk
Built Environment	Modifications to houses	Cost Overruns	Unexpected expenses increase project costs	High	Establish strict budget controls
		Delays in Approval	Regulatory delays hinder progress	Medium	Engage with regulators early
		Resident Disruption	Construction disrupts daily life	Low	Plan and communicate construction schedule
	Modifications to other buildings	Structural Issues	Discovering unforeseen structural problems	High	Conduct thorough pre-assessment
		Supply Chain Disruptions	Delays in receiving materials	High	Diversify suppliers
		Budget Shortfalls	Insufficient funds for completion	High	Secure additional funding sources
	Renewable energy	Technology Failures	Renewable systems fail to perform as expected	Medium	Choose proven technologies
		Community Opposition	Local resistance to installations	Medium	Conduct community engagement sessions
		Grid Integration Issues	Difficulty integrating with existing grid	High	Coordinate with utility companies
Mobility	Vehicle Fleet (Electric Vehicles)	High up-front capital costs	Large investments with uncertain returns are necessary	High	Explore financing options, subsidies and partnerships
		Limited Charging Infrastructure	Insufficient chargers for EV fleet	High	Expand charging network planning
		Range Anxiety	Drivers fear running out of battery	Medium	Invest in education and outreach
		Dependency on electricity	Reliance on stable electricity supply	High	Develop alternative charging solutions
	Charging infrastructure	Market risks	Dependence on the widespread adoption of electric vehicles	Medium	Market analysis, customer education, and incentives
		Cybersecurity risks	Vulnerability to cyberattacks	High	Implement robust cybersecurity protocols

		Urban planning risk	Need for well-designed biking and walking infrastructure	Medium	Collaboration with urban planners
		Adoption risks	Possible installation delays, slow setup of charging stations	High	Streamline permitting processes
		Technological risks	Rapidly evolving technology	High	Plan for regular upgrades
Industry	Heat modifications	Compatibility Issues	New systems incompatible with old ones		Conduct compatibility assessments
		High Conversion Costs	Expensive to convert existing systems		Seek financial aid and grants
		Operational Downtime	Production halts during modifications		Schedule modifications during low demand
	Modifications to companies	Resistance to Change	Companies hesitant to adopt new systems		Offer incentives and support
		Skilled Labor Shortage	Lack of trained personnel		Invest in training programs
		Compliance Challenges	Difficulty meeting new regulations		Provide regulatory guidance
	Projects	Project Overlaps	Conflicting schedules and resources		Coordinate project timelines
		Inadequate Funding	Insufficient budget for completion		Diversify funding sources
		Stakeholder Misalignment	Different priorities among stakeholders		Regular stakeholder meetings
	Electrification	High Energy Costs	Increased electricity consumption costs		Negotiate bulk energy rates
		Grid Capacity Limits	Existing grid cannot support demand		Collaborate with utility providers
		Technological Integration	Difficulty integrating new tech		Choose adaptable technologies

3.3 Module IP-C3: Capacity Building and Stakeholder Engagement for Capital and Investment Planning

C-3.1: Textual element

Helmond and Eindhoven will ensure that their plans and associated investments are effectively implemented through a comprehensive approach as outlined in the Climate Mission project plan. This approach includes leveraging the robust network of stakeholders and fostering strong collaboration between the two cities, which will be crucial for driving the necessary activities and ensuring efficient execution. The cities will focus on continuing to program, drive, and facilitate activities across the four city themes and 22 mission trajectories, emphasizing the importance of co-creation, tailored support, and strategic communication. This involves aligning internal organisations, promoting awareness, and engaging residents to build a resilient structure for ongoing development and adaptation. To monitor progress and facilitate decision-making, tools like ClimateOS will be utilised, providing essential data and insights. The establishment of a clear project governance framework, which includes defined roles and responsibilities, will ensure that the project remains on track and meets its objectives. Additionally, the pursuit of innovative financing solutions, including blending EU grants with other financing mechanisms, will be critical for supporting the financial sustainability of the projects. Both cities are committed to embedding climate actions within their core operations and leveraging existing resources, such as personnel and materials, to maximize efficiency and impact. Furthermore, they will ensure that the necessary resources, including funding, staff, and expertise, are allocated effectively to support the implementation of the Climate Mission. By creating a conducive environment for innovation and continuous improvement, Helmond and Eindhoven aim to achieve their climate goals and serve as a model for other cities seeking to implement similar initiatives.

To make the above concrete, in the municipalities of Eindhoven and Helmond, the Climate Mission is strategically positioned within the respective organisational structures to ensure comprehensive climate action. In Eindhoven, the Strategy and Tasks sector, through the Climate Program Office, oversees the Climate Mission and collaborates with Helmond. In Helmond, the Climate Mission operates under the Sustainable and Healthy City Program within the Strategy & Tasks department, involving multiple project leaders and program team members to address climate issues across policy areas. A structured growth model ensures central coordination and stakeholder engagement, integrating mission trajectories into societal tasks. The governance structure includes a monthly Steering Committee with climate portfolio holders, administrative clients, an overall project leader, and key stakeholders. The weekly Client Consultation ("opdrachtgeversoverleg") involves administrative clients and the overall project leader. The Core Team, including project leaders and a communication advisor, meets weekly, with the extended Core Team+ meeting every six weeks to discuss progress and challenges. The Project Group, meeting biweekly to triweekly, consists of the Core Team, city theme project leaders, communication advisors, and subject matter experts. Ad hoc working groups focus on specific themes like monitoring, communication, and finance.

Figure 5; the joint Eindhoven-Helmond transition team

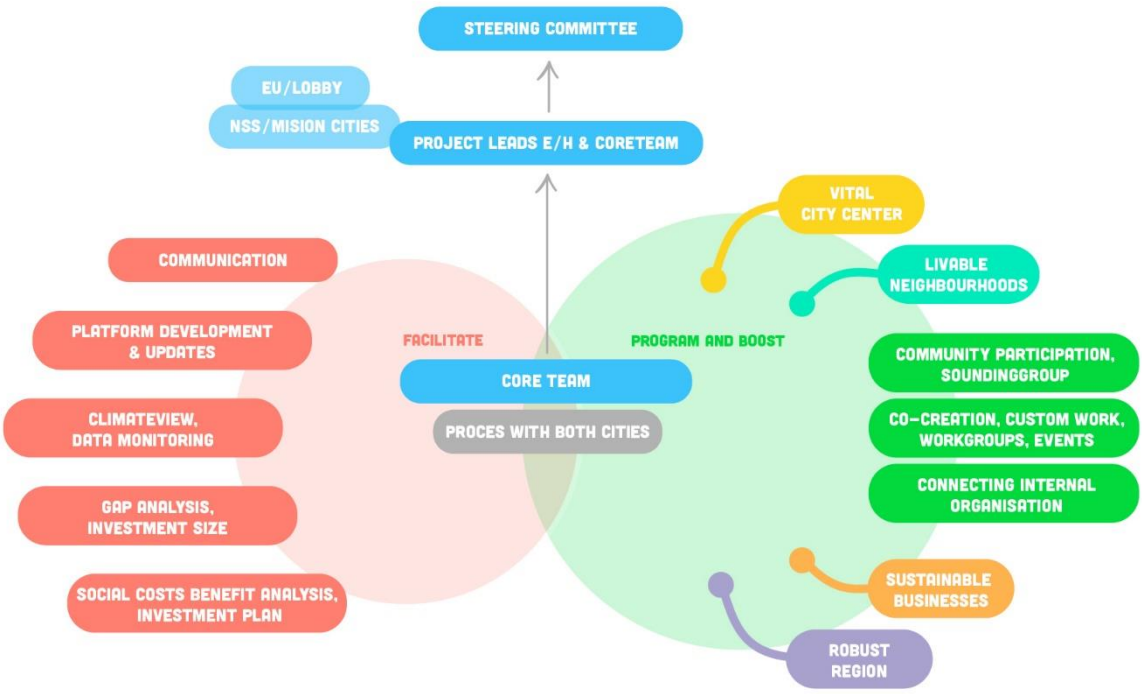


Table 14: Stakeholder Engagement Mapping

Stakeholders involved	Required Investment (€)	Network	Influence	Interest	Level and Type of Engagement
Companies	…	Several business organisations	On city council	Attractive business environment	Support of (circular) business
Energy companies		Energy	Shareholding	Business cases	Support for energy projects
Investors and financiers		Financial and banking	Guarantees	Business cases	Financing development and realisation
Banks		Financial and banking	Guarantees	Business cases	Financing development and realisation
(Semi) governmental organisations		Political	Large on policies and financial support	Accelerating the (energy) transition	Policy making (slow processes)
Housing corporations		Real estate	Loans	Making the housing sector more sustainable	Financing development and realisation
Nursing/care homes		Welfare	Loans	Making the welfare sector more sustainable	Financing development and realisation
Institutions active in the fields of healthcare		Healthcare	Making the health sector more sustainable	Financing development and realisation	Financing development and realisation
Other institutions active in the fields of welfare		Welfare	Guarantees	Making the welfare sector more sustainable	Financing development and realisation
Institutions active in the fields of sports		Sports	Guarantees	Making the sports sector more sustainable	Financing development and realisation
Institutions active in the fields of culture		Culture	Guarantees	Making the culture sector more sustainable	Financing development and realisation

Table 15: Stakeholder Activity Cost

Stakeholders involved	Activity	Cost to Municipality (€)
European Commission	Close monitoring of relevant policy and budgetary processes of the EU to be informed about the latest developments on different types of actions, i.e. grants, technology, products, policies, other European cities etc.	*PM*
National government (Netherlands)	Supporting the Climate Neutrality of Dutch cities financially with grants, adapting policies, supporting investment climate	*PM*
(Semi) governmental organisations and agencies	Supporting the Climate Neutrality of Dutch cities administratively with research projects, adapting policies, supporting investment climate	*PM*
City council of Eindhoven	Supporting their citizens and companies financially with grants, adapting policies, supporting investment climate	*PM*
City council of Helmond	Supporting their citizens and companies financially with grants, adapting policies, supporting investment climate	*PM*
Financing companies and banks	Consulting, informing and creating an attractive sustainable investment climate.	*PM*
Investors	Consulting, informing and stimulating sustainable investments	*PM*
Homeowners and real estate owners	Campaigns for stimulating renewable energy, mainly in the form of installing solar panels and switching from gas to renewable energy	*PM*
Companies	Campaigns for the circular use of various resources such as investments and networks.	*PM*
Employers' organisation	Campaigns for stimulating employees for alternative and public transport	*PM*
Public transport passengers	Campaigns for sustainable and efficient public transportation network including the use of different types of transportation (i.e. bus, tram, train, bike etc).	*PM*
Pedestrians	Safety on sidewalks	*PM*
Cyclists	Safety on bike lanes	*PM*
Commuters by car	Campaigns for the use of public transport, P+R	*PM*