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MÜNSTER
TRANSFERABILITY PACKAGE

UP2030 UPSCALING PHASE

UP2030

EXECUTIVE SUMMARY

The purpose of this document is to transfer the knowledge and results acquired by the city of Münster during the UP2030 project, so that the prototype developed can be replicated or scaled up both in other parts of the city and in other cities seeking innovative solutions for sustainable urban development. This 'transferability package' contains information about the scaling methodology designed in UP2030, defining the key concepts to be taken into account for its effective implementation in cities. The following sections of this document also provide a detailed account of how Münster has implemented the methodology in its local context, along with the results obtained from the process:

- Definition of the objectives for the upscaling phase for the city, specifying which are the dimensions that will be addressed and the impact generated with the actions.
- List of barriers when it comes to upscaling and measures proposed to overcome these. Some of these measures could be recommendations obtained from the finance and governance tools.
- Definition of a plan for upscaling the prototype, collecting the next steps for design and implementation and assigning roles and responsibilities among the actors involved.
- Provide a list of guidance materials and resources to inform key stakeholders about the upscaling phase and the activities that need to be conducted.

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GLOSSARY

Replication: transfer of a tested or proven interventions or initiatives to a different location at the same scale, in order to repeat success elsewhere and achieve similar results.

Upscaling: ability to take a tested concept, pilot project or initiative, and expand it while maintaining efficiency, in terms of people served, revenues generated, or other similar targets.

Prototype: initiatives, plans, programs or solutions developed by cities during the UP2030 project.

Learning Action Alliance (LAA): knowledge exchange and co-creation platforms intended to support the communication, coordination, innovation, and dialogue between city stakeholders at multiple levels.

THE IMPORTANCE OF UPSCALING – UP2030 UPSCALING METHODOLOGY

In projects such as UP2030, it is essential to devise a strategy for sustaining the work carried out during the project and maximising its impact. Due to this reason, the UP2030 project built an **upscaling methodology** to provide cities with instrument and resources developed during the project, so that the prototypes developed during the project can be grown and adapted to other sectors, regions and countries, in order to accomplish the goals defined by each city. This process ensures that best practices are transferable and adaptable across different urban contexts.

The success of the replication or upscaling efforts is completely reliant on the institutional environment in which the actions will be implemented. Therefore, it is essential to create an "enabling environment", which is constituted primarily by:

Finance

Mechanisms for accessing financial, technical and political support.

Governance

Supportive policy, legal and regulatory frameworks and better policy coordination.

Capacity

Enhanced capacity across all levels of government.

The upscale methodology was structured in three phases:

1. PREPARATORY WORK

Setting the basis for upscaling

- Understand the local context, challenges and priorities of cities.
- Define the objectives for upscaling.
- Explore the available tools on governance and finance that support upscaling.

2. LAA WORKSHOP

Bringing local stakeholders to the process

- Set the scene, presenting the objective and defining the resources and capacities to move forward.
- Create readiness among the stakeholders at the local level.
- Design an initial implementation plan for upscaling actions.

3. FOLLOW-UP WORKSHOP

Refining the next steps

- Analyse the main insights and results obtained in the LAA workshop.
- Define next steps for the implementation of upscaling activities.
- Develop a transferability package, collecting information about objectives, opportunities, barriers, actions and resources needed for upscaling.

One of the key outcomes of this process is the **transferability package**, which is designed to serve as a guidance document for cities to assist them in transitioning from the planning phase to the implementation phase of upscaling activities. The transferability package is also designed to facilitate the communication of results with relevant stakeholders within the municipality, as well as with other local and regional governments seeking to learn from best practices.

INTRODUCTION OF THE CITY

Münster urges to address urban sprawl, which is a main driver of increased emissions, by supporting more compact and climate-friendly neighbourhoods. Nevertheless, this can lead to the densification of the urban area, decreasing the adaptation capacity of the city against floodings and Urban Heat Island effect, among others. Therefore, in the UP2030 project the city wants to design a strategy for retrofitting the building stock, public spaces and infrastructure, while balancing climate change mitigation and adaptation, to create liveable dense neighbourhoods.

From vision to action

CITY'S VISION

- Strengthen community involvement by actively engaging with them since the early stages of the project and readapting the previously implemented Climate Training concept to the neighbourhood level.
- Design measures for carbon reduction in buildings at the neighbourhood scale, in alignment with the Climate City Contract and city's climate neutrality objectives.
- Protect existing districts against climate hazards.

PROTOTYPE

Creation of a roadmap for climate friendly neighbourhoods to guide the city administration

Münster's adaptive pathway

One of the main priorities of Münster is to update the governance and urban planning procedures to respond to the urban sprawl and retrofit challenges. To respond to that, in the UP2030 project the city has developed a **roadmap for a climate-friendly neighbourhood** development in existing buildings. The term climate-friendly in this context reflects that climate mitigation and adaptation should be considered as integrated and synergistic approaches when transforming existing urban areas. This roadmap enhances municipal cooperation by providing clear steps for achieving climate neutral and adapted neighbourhoods. It will benefit the municipal staff by providing planning instruments, measures, databases, funding opportunities and participatory approaches.

The guide is divided into five phases: identification of needs for action, assessment of risks and levers, development of strategies, implementation of measures, and monitoring and controlling of the implementation. In this way, the City of Münster will extend its previous approach of looking at individual buildings and other main CO_2 emitter to the neighbourhood levels. The platform ensures open access to guides, methodologies, case studies, participatory tools, and training materials, all in Hungarian (with a few exceptions), tailored for local implementation.

The people and tools needed for developing the adaptive pathway:

- **BuroHappold**: tailoring the **Climate Proofing Method** to a holistic Guideline for integrated mitigation and adaptation actions in Münster by using existing concepts, strategies, and data already in place in Münster.
- **Imap**: developing a concept for the **"KlimaTraining"**, a learning program where volunteer citizens provide tips to other citizens on how to design their neighbourhood in a climate-just manner.
- **Vrije Universiteit Brussel and Centre for Research & Technology Hellas**: Supporting visual storytelling through **Neutrality Story Maps**.

UPSCALING FOR MÜNSTER

The roadmap that the city of Münster has designed will guide municipal staff through the different available resources and steps that need to be taken for a climate neutral and adapted neighbourhood development. The main objective defined by Münster for the upscaling phase is to foster the acceptance of this roadmap and integrate it into the existing planning procedures of the city. The guidelines aim to prepare the city against climate change impacts and enhance stakeholder participation.

These are the specific objectives defined by Münster:

- Creation of working structures for the ongoing updating of the guideline.
- Integration of the guideline into the "Climate City Process".
- Utilization of synergies with the "Guideline for climate-friendly development of New Development Areas".
- Prospective expansion of the guideline so that it can also be used by planners, architects (and possibly the public).

For accomplishing these objectives, it is essential to bring all relevant stakeholders together and discuss different integration opportunities for the guidelines.

The LAA workshop in Münster gathered around 30 people from different municipal departments, were participants had a knowledge exchange across different departments and get to know what others are working on. The meeting aimed to build a network of people and municipal departments working on climate issues, in order to embed the climate-friendly neighbourhood approach in the climate protection processes and meet city's objectives of climate change mitigation and adaptation.

Furthermore, the workshop served as an opportunity to bring to the discussion existing instruments and concepts developed within the municipality and see how they can complement each other. A total of six instruments were analysed: Guideline to climate-friendly neighbourhoods (developed in UP2030), Digital Guide to Climate-Friendly Urban Development, Urban Climate Analysis, Municipal heat planning, Münster Mobility Master Plan 2035 +, and Digital Participation. The connections between these instruments highlighted the need to work together and create working groups to meet the city's climate goals.

The following sections provide an overview of the main results achieved by Münster in the upscaling phase, including the barriers and opportunities encountered together with local stakeholders, key decisions made, and a plan for next steps.

What are the barriers that need to be overcome with upscaling?

- **Lack of resolution on the guidelines** by the City Council.
- **Lack of clarity of the responsibilities and technical methods** for the ongoing updating of the guidelines.
- **Lack of an institutionalised exchange** in the administration and **uncertainty about the activities of other departments**, as political parties are often not enough informed about administrative activities.
- **Contradictory and conflict-generating administrative structures.**
- **Lack of formal decision-making authority of the Climate Office.**

What are the opportunities that have been found in the upscale phase?

Face-to-face conversations and regular exchange:

- Create a **"Jour Fixe"**, to exchange knowledge and ideas in a regular manner.
- Organise **smaller discussion groups** for direct exchange, mutual updates and coordination as an alternative to large workshop formats.
- Implement the **"just do it" principle** at the operational level.

Communication and organisational structures:

- Create and communicate the **binding nature of the guideline**, defining commitments and priorities.
- Clarify **how exchange results are passed** on to supervisors and colleagues within the regular meeting format.
- Develop a **shared understanding of integrated climate adaptation** through top-down communication.
- Create **universally applicable standards** that are also recognizable to new employees.

Interface with politics:

- Improve the **communication between administration and politics**.
- Reduce the **number of applications** through better information.

Structural improvements:

- Establish a **task force** (Climate Office) for urban planning processes to reduce informal planning.
- Strengthen the **role of the Climate Office Staff**.
- **Redesign the contradictory and conflict-generating administrative structures**.

Technical solutions:

- **Link the guideline with the municipal "Data Wiki" and "KomMonitor"**, in order to identify relevant indicators.
- Further develop the **PDF-based guideline into an online tool**.
- Examine the **synergies with the other instruments and concepts** developed within the municipality.

Enabling the environment: governance and finance

Governance and finance are essential components of an upscaling plan. During the first phase of the upscaling methodology (preparatory work), the city of Münster went through the finance and governance aspects, taking as a reference the **tools** developed by the the Global Green Growth Institute (GGGI) and adelphi, respectively, and explored how these resources could help them shape an enabling environment for their upscaling plan. The key findings obtained from this initial phase were then discussed with the stakeholders of the Learning Action Alliance. The main results of the discussion are detailed below.

Governance

Governance has been the key priority aspect that needs to be improved to ensure a successful implementation of the upscaling actions in Münster. One of the main objectives will be to redefine the internal structures within the municipality, so that the guidelines have a real impact in the planning processes of the city. On the one hand, communication and information exchange with different municipal departments and decision makers need to be enhanced, making sure that all administrative departments that are connected to the climate-just transformation of urban districts are on the same page and that political parties are informed of the decisions and strategies developed by these departments. On the other hand, the guidelines need to be aligned with the other existing instruments within the municipality, to ensure a successful integration of it into the Climate City Process.

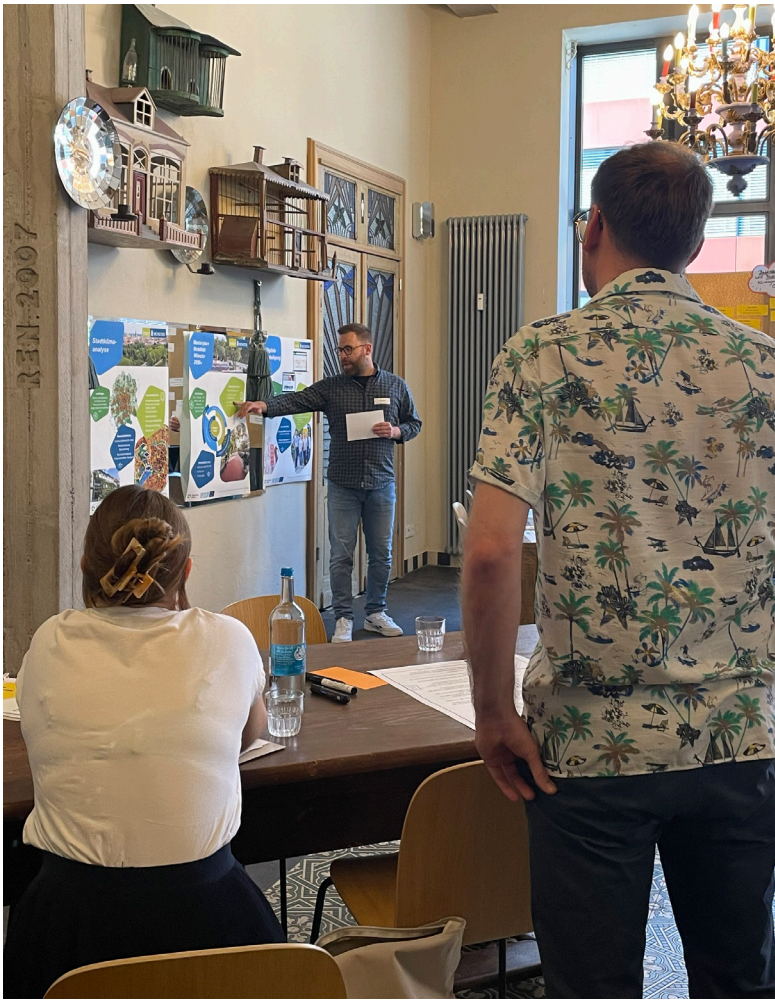
As the guidelines are not binding, they cannot be implemented in the short term. For this reason, Münster proposed the creation of a Task Force to work in an orderly manner, bringing together representatives from different departments and neighbourhoods to discuss challenges, opportunities and next steps. The objective is to present a solid plan to politicians and decision-makers and gain their approval for the implementation of the guidelines.

Finance

The search for funding opportunities and existing financial resources was a point included in the discussion with local stakeholders, in order to ensure that the upscaling plan can be implemented in the future. However, funding has not been defined as a priority issue for the city at this time, as the success of the upscaling plan depends first and foremost on strengthening governance structures within the city. In addition, the city of Münster has already established a climate protection and adaptation control system, including a financial climate budget. This budget is used to monitor key measures for achieving the city's climate targets.

Once governance aspects have been strengthened, Münster will work to seek funding opportunities to enable the implementation of the guidelines, exploring local or European funds, as well as resources provided by tools such as the Green Finance Guide developed by GGGI, for example.

Once the project is completed, Münster will continue with an ongoing process based on the monthly Jour-Fixe, where the next steps will be defined in more detail. Some monthly meetings have already been held in 2025, and more are planned for 2026. Therefore, the upscaling process will be a continued action for Münster.



Greening the city - Action plan for the next steps

From October 2025

Data query pm available/necessary data within the different departments on climate-friendly departments.

From October 2025 onwards

Jour-Fixe on climate friendly neighbourhoods (monthly meetings).

October 2025

Collegial exchange with other cities.

End of 2025

Partners involved

- Climate Office
- Citeq (IT Department)
- Smart City Münster
- Department of City Planning
- Department of Mobility and Civil Engineering
- Münster Marketing
- Ministry of Home Affairs, Local Government, Building and Digitalization of the State of North Rhine-Westphalia
- Department of Culture
- Department of Social Affairs
- Department of Human & Animal Health
- Department of Property Management
- Department of green spaces, environment and sustainability
- Other Cities

TOOL'S CONTRIBUTION TO THE PROTOTYPE AND POST-PROJECT USE

As mentioned in previous sections, Münster aims to integrate its prototype, the guideline for climate friendly neighbourhoods, into their urban development processes. For this purpose, it will be essential to create a working structure that ensures the ongoing use and updating of the guideline. The development of the prototype was a collaborative effort, and it is foreseen that its success after the end of the project will rely on the effective collaboration with the tool providers that Münster has worked with.

Climate Proofing Method (Buro Happold)

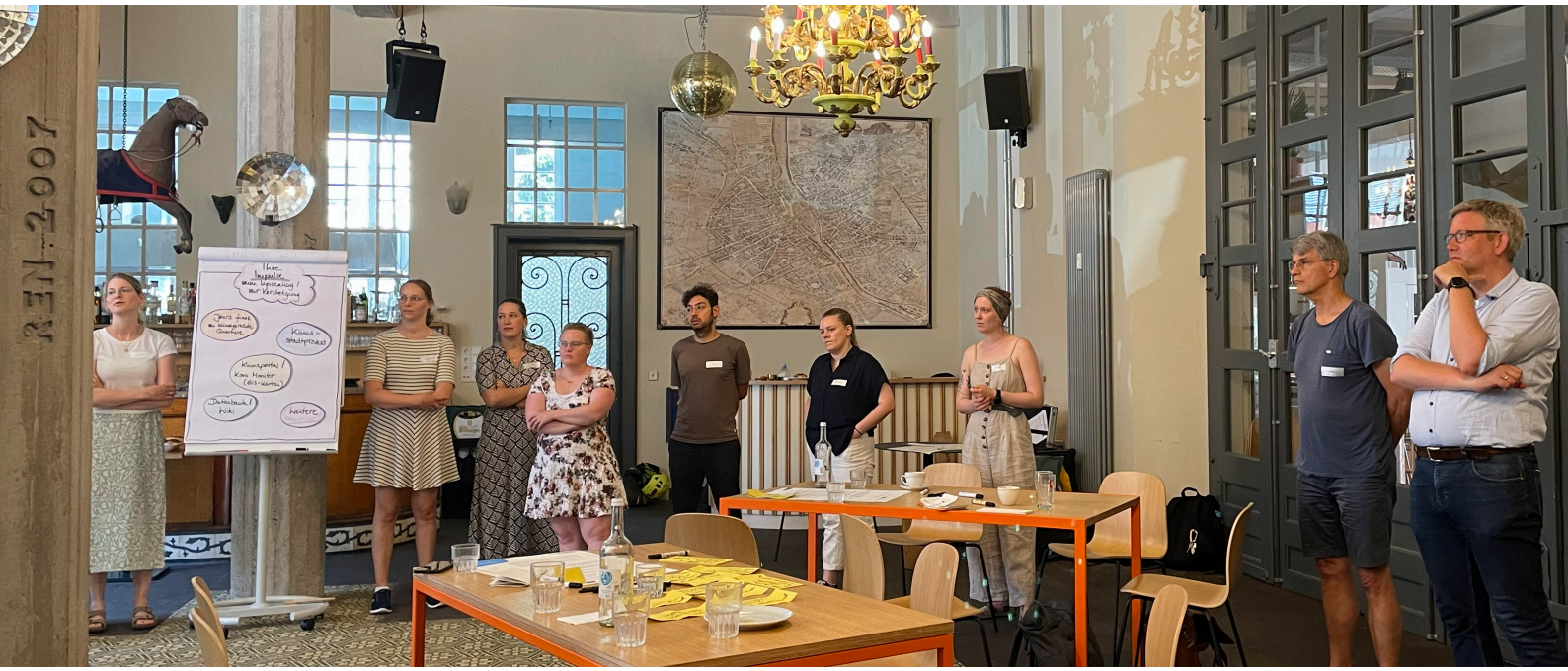
The **Climate Proofing Method** supports municipalities and decision-makers in evaluating the climate impacts of planned developments, helping them identify low-carbon, climate-adapted and just strategies from the outset. The tool has been integrated into the strategic guidelines of Münster for the development of existing districts and it will continue to be used after the project concludes, as the guideline was set up for the ownership of the tool to be transferred to the city's climate unit.

To this end, during the UP2030 project Buro Happold organised three workshops with the municipality to collaboratively develop the tool. As a result, municipal staff received sufficient training and supporting materials to ensure effective implementation of the tool, for which it is recommended to pilot test in additional neighbourhoods or project areas, including existing urban zones, to assess the adaptability and effectiveness of the tools and the guidelines beyond the initial scope. Since the tool is designed to operate without cost, the municipality will be able to use it at any time, with Buro Happold's role being shifted to providing support when requested by the city.

Neutrality Story Maps (VUB and CERTH)

By showcasing the work of the pilots and their prototypes in an accessible format with success stories, lessons learned and future strategies, Neutrality Story Maps allows other neighbourhoods in the city to learn and adopt similar climate neutrality strategies and approaches.

The tool has been embedded in the communication strategy for the project by Münster, who is using the tool to communicate the possible use of it in a neighbourhood to the general public in an accessible multimedia narrative format. The city expressed interest in using the platform for at least the next five years that will be freely accessible.



TRANSFERABILITY OF THE PROTOTYPE

Münster is a good example for cities looking to develop projects or interventions linked to master planning and informed decision making. These projects can guide current municipal planning processes and transform the way local governments think and act. In UP2030, one of the objectives that has been defined in the upscale phase is to maximise the impact of the prototypes developed during the project, expanding them to other sectors, regions and countries.

To this end, it is extremely important to understand the characteristics of the context of the place where the prototypes are to be scaled up or replicated. To facilitate this process of transferring processes and results, the UP2030 project has developed four **Urban Typologies** with over 1000 provinces each in order to identify provinces, covering almost all of Europe, that have similarities based on different indicators that have been analysed. By grouping European regions with similar attributes, the Urban Typologies aims to foster targeted collaboration and encourage knowledge-sharing and communication for more effective solutions, especially between regions and cities sharing similar opportunities and challenges.

Four distinct typologies have been created:

- **Capacity for action**: Considers socio-economic factors and governance indicators.
- **Contributions to mitigation**: Focuses on sectoral emissions, carbon sequestration capacity and renewable energy potential.
- **Climate hazards**: Focuses on prevalent climate hazards and exposure.
- **Urban morphology**: Focuses on urban landscape and infrastructure characteristics such as urban density, land use types, etc.

For each typology, respectively, these are the clusters that correspond to the province in which Münster is located (Münster, Kreisfreie Stadt), and hence which most closely resemble the province Münster, Kreisfreie Stadt:

CAPACITY FOR ACTION

Strong Economic Centers

Concentrated primarily in Germany, Austria and the Benelux countries, regions in this cluster are typically small, highly urbanized economic powerhouses. This cluster demonstrates exceptional economic performance with the highest GDP per capita and employment rates in the study area, supported by very strong governance with below-average shares of vulnerable age groups, and healthcare infrastructure is abundant. Their compact, densely populated nature and intensive urban delevopment result in minimal share of protected areas, reflecting the trade-offs inherent in concentrated economic activity.

CONTRIBUTIONS TO MITIGATION

Highest wind potential in contiguous European lowlands

This cluster is characterized by the **highest wind energy potential** in the study area combined with **high photovoltaic potential**, while **CSP potential is very low**, distinguishing it from related clusters. It is a largely contiguous area, spanning and covering most of the Benelux, Nothern Germany, Western Poland, and all of Ireland, and has a **highly urbanized character**. CO_2 emissions from buildings, vehicles, and industry are moderate and virtually identical to study area averages. **The share of forests and wetlands is relatively low**, providing space for renewable infrastrucutre.

CLIMATE HAZARDS

Complex hazard combination in low-lying lowlands

This cluster, dominant in **Western, Eastern and Central Europe** near the **Baltic and North Seas**, is characterized by **low-lying topography** and **moderate climate hazards**. Key risks include **heat stress, air pollution** (moderate to low risk according to the WHO Air Quality Guideline 2021), **pluvial and fluvial flooding, drought, and wildfire.** No single hazard is extreme, but their **combined occurrence poses complex challenges**. The cluster hosts the **largest population** (92 million) and **extensive urban areas**, which increase vulnerability to **urban heat islands** and flooding due to surface sealing. Exposure to **sea-level rise is moderate** and fluvial flooding is higher near rivers, but overall flood risk is relatively low.

URBAN MORPHOLOGY

Flat urban-industrial hubs with low green coverage

Regions in this cluster are found all throughout the study area but concentrated in Western and Northern Europe. Urban areas in this cluster are characterised by a **high proportion of industrial and commercial spaces**, the highest amongst all clusters. The urban landscape is f**lat and highly sealed**, and **dense built-up structures are common**, with **very limited space dedicated to green areas. Population density is slightly above the average** of the study area.

For each of these four typologies, and for all clusters constituting the typologies, the following useful information is highlighted and can be explored: a short characterization, common challenges and opportunities in each cluster, as well as key areas for action and example measures and instruments therein. In doing so, clusters can support urban planners and decision-makers in identifying strategic priorities, in addressing climate challenges more effectively, and with knowledge transfer between similar provinces, across Europe.

Münster can serve as an example for other cities in these clusters, i.e. with these similar characteristics that are seeking to develop sustainable, climate-resilient and inclusive strategies for their local contexts. However, it should be noted that these typologies do not restrict the scope for replication and scaling up (i.e., the Münster prototype is not only applicable in places classified within these four typologies), but rather help to identify places where the transfer of this package of Münster is most likely to be successful. In addition, it goes without saying that these clusters can not replace province or city case studies, and not be used as such. The clusters are on a province level.

*To explore the typologies, use the **interactive map**.*

*The full list of indicators is also found in the **methodology section**.*

KEY MESSAGE FROM THE CITY

"The upscale workshop was an opportunity to have a knowledge exchange across different municipal departments. We had the chance to learn more about what each person is working on and we saw that we could do many things together. We had the feeling that we are part of a network working on climate issues and we have already scheduled some meetings among the different stakeholders for the next months, together with the establishment of working groups / task forces."

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The local actions have been led by the municipality of Münster and its liaison, Fraunhofer IAO.

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