Interreg
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MONA

3x ACTION PLAN FOR

FACILITATING AND STIMULATING A MODAL SHIFT TOWARDS SUSTAINABLE MOBILITY

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MONA Activity (Interreg)	A2.4 Pilot A: Action plan for facilitating and stimulating a modal shift towards sustainable mobility
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1. Glossary

There are many definitions around (sustainable) mobility. These terminologies, depending on country and context, can be used differently with dissimilar meanings. The list below is a glossary collection of terms that are used throughout this plan, for reader clarity.

Sustainable tourism	Project MONA stimulates sustainable tourism in and around nature areas in NWE which benefits nature, the environment, visitors, and the local economy. With a focus on modal shift and sustainable mobility, MONA aims to ensure a positive visitor experience while preserving the natural environment. MONA develops and promotes a mindset around sustainable tourism which is balanced, inclusive, and socially and environmentally sustainable.
Sustainable mobility	Sustainable mobility refers to transport that emits low or no emissions and has a minimal environmental impact. 'Sustainable mobility refers to transportation systems that meet society's economic, social, and environmental needs without compromising the ability of future generations to meet their own needs. It emphasizes minimizing the negative impacts of transportation on the environment while ensuring accessibility, safety, and affordability. The approach integrates technology, infrastructure, behavioral changes, and policies aimed at reducing emissions, promoting public transit, and encouraging active modes of transport such as cycling and walking.[1] The sustainable mobility definition from project MONA also considers the concept of inclusive access and mobility access for all visitors, including disadvantaged target groups, contributing to societal goals.
Recreational mobility	Recreational mobility can be defined as the movement and activities undertaken primarily for leisure, enjoyment, or relaxation rather than for functional purposes such as commuting or errands. It includes activities like walking, cycling, hiking, or engaging in outdoor sports within recreational spaces such as parks and trails. These activities contribute to physical, mental, and social well-being while also fostering community cohesion and appreciation for natural environments.

[1] Sustainable Mobility: A review of Possible Actions and Policies, Italy (2020) - University of Sannio

	The concept emphasizes accessibility and inclusivity, ensuring people of all ages and abilities can participate. Barriers such as time, cost, and lack of suitable spaces are recognized as challenges that need addressing to maximize its benefits. This aligns with goals in public health and urban planning to integrate recreational spaces into sustainable urban development.[2] [3]
Modal shift	Essentially, Modal Shift is the shifting of travel modes that humans go through based on a range of variables; both external and internal influences that impact the way we move.[4] Modal Shift can be deemed as a new way of thinking about the way we travel. It encourages innovation, sparking alternative means of transit that combat the problems incited by previous travel models. At its core, Modal Shift pushes people towards more sustainable transport to benefit society. Modal shift initiatives require a combination of incentives, infrastructure changes, and behavioral interventions. Success depends on offering attractive alternatives and addressing barriers such as cost, accessibility, and perceptions of convenience.[5] In the context of project MONA the goal is to achieve a modal shift to and within our natural areas, from car use to more sustainable mobility options, such as walking, cycling, and public transport. Achieving a modal shift towards sustainable transportation options is essential for preserving the ecological integrity of the nature area, reducing carbon emissions, and ensuring its long-term resilience.[6]
Modal split	Modal split (also referred to as modal share) refers to the distribution of travel demand across different modes of mobility, such as walking, cycling, public transport, or driving. Modal split analysis can reveal a shift towards more sustainable mobility patterns, by indicating a changing landscape in mobility choices. The term modal split refers to the distribution of travel across different transportation modes, such as walking, cycling, driving, or public transit. In the context of nature areas, modal split analysis

[2] Promoting walking, cycling and other forms of active mobility, World Health Organization
[3] Physical Recreation: Characteristics, Significance, Types, Benefits and Barriers, Bangladesh (2023)
[4] What is modal shift and how can it change the way we travel?, Cassie Holland (2021)
[5] Understanding the requirements and barriers for modal shift, Climate Change Committee (2023)
[6] Train stations as green entrances to National Park Utrechtse Heuvelrug, the Netherlands (2023) – Wageningen University & Research

	often focuses on understanding the modes of transportation used by visitors to access or move within these areas. It provides insights into travel behaviors and supports decisions aimed at minimizing environmental impacts by promoting sustainable transport options, such as public transit or cycling, over private car use. Modal split models can also highlight the need for infrastructure adjustments to balance ecological preservation with accessibility. This concept is essential for planning in nature reserves, where promoting sustainable access aligns with conservation goals. For instance, introducing shuttle buses or cycling paths can shift the modal split towards less environmentally intrusive modes. Key insights about modal split are typically derived through surveys and modeling tools, helping manage traffic flow, reduce congestion, and support sustainable mobility.[7]
Soft mobility	Soft mobility in nature areas refers to non-motorized and environmentally friendly modes of transportation, such as walking and cycling, designed to reduce ecological impact and enhance sustainable interaction with the environment. This approach promotes active mobility to minimize disruptions to natural ecosystems while encouraging recreation and exploration. Soft mobility is often integrated into green infrastructure, which connects natural areas with accessible pathways, facilitating sustainable tourism and recreation while protecting biodiversity. These initiatives are particularly effective in preserving the tranquility and ecological integrity of nature reserves, as they limit motorized traffic and promote low-speed travel through carefully designed networks of trails and paths. This supports cultural and ecosystem services, such as improved mental well-being, reduced environmental degradation, and enhanced engagement with natural landscapes.[8]
Active mobility	Active mobility refers to modes of transport powered by human activity, such as walking, cycling, and other non-motorized forms of travel. It is considered a low-cost, zero-emission transportation option that also promotes health through increased physical activity. Active mobility is central to sustainable urban mobility strategies and is enhanced by supportive infrastructure, policies, and urban designs that prioritize safety and accessibility for all users. [9] [10]

[7] Modal share, Wikipedia
[8] Soft Mobility Network for the Enhancement and Discovery of the Rural Landscape, Italy (2023) - University of Milan & University of Bologna.
[9] Active mobility: walking and cycling, European Commission (2023)
[10] Active mobility: Institute for Transportation & Development Policy, New York

Shared mobility	Shared mobility in nature areas refers to services that enable individuals to share transportation options (without the need of ownership), such as bicycles, or e-bicycles, designed to facilitate sustainable travel in environmentally sensitive regions. These systems aim to reduce the environmental impact of travel by minimizing vehicle emissions and traffic congestion, while promoting accessibility and the efficient use of resources. Shared mobility in these settings is often integrated with eco-tourism initiatives and conservation goals, ensuring that mobility solutions align with the preservation of natural landscapes and biodiversity.[11]
Micro Mobility	Micromobility in natural areas refers to the use of small, lightweight, low-speed vehicles (sometimes electric), that facilitate short-distance travel. These vehicles include bikes, electric bikes (e-bikes) and other similar devices that are designed for personal transport in urban or rural areas. When applied to nature areas, micromobility allows individuals to access scenic or protected natural spaces with minimal environmental impact (compared to traditional motorized vehicles.) This concept aligns with sustainable mobility by offering low-emission alternatives for travel while preserving the natural environment.[12]
Green Entrances	This concept highlights the significance of levering existing infrastructure of railway stations and transforming these stations to “green entrances” for a modal shift stimulation from car use to sustainable mobility in the nature areas of Parc naturel régional Montagne de Reims, Grenspark Kalmthoutse Heide and National Park Utrechtse Heuvelrug. The concept of a green entrance (or green gateways) refers to the presence of natural elements in mostly urban settings, to connect people with nature, such as parks, reserves, or other greenery nearby They serve as an entrance or transition area between urban and natural spaces, fostering the connection to and attractiveness of nature to people passing this gateway. Specifically, in terms of the MONA project, the term ‘green entrance’ is used to describe ‘green’ mobility hubs from where people can enter natural areas in an immersive way. Green entrances emphasize natural elements in urban settings to connect people with nature, fostering accessible mobility and the attractiveness of train stations and public transportation. This strategic move aims to combat environmental concerns, enhance energy efficiency, and elevate the visitor experience. The initiative aligns with promoting a modal shift, encouraging travelers to favor sustainable alternatives like taking the train. These regional or local

[11] An Overview of Shared Mobility, Brazil (2018) - University of São Paulo
[12] Micromobility is clean and quiet, how can it be widely used?, World Economic Forum (2022)

	hubs can serve as essential centers for connecting people with nature while promoting public transportation options.[13]
Mobility hubs	A mobility hub in natural areas refers to a strategically designed space that integrates various modes of mobility to improve access to natural destinations. It serves as a point where people can transition between different forms of sustainable mobility options, such as cycling, walking, or public transport. These hubs are typically focused on enhancing connectivity, reducing car dependency, and promoting eco-friendly travel, all while supporting the conservation and enjoyment of natural landscapes. In nature-based contexts, these hubs can facilitate easier access to remote or protected areas without causing significant environmental impact, ensuring that visitors can travel sustainably while maintaining the area's ecological integrity. Mobility hubs in these areas often include services like bike rentals, sharing stations or drop-off points, enabling a seamless and low-carbon experience for tourists and locals alike.
Last-mile mobility	Last-mile mobility refers to a transportation service that connects passengers to their final destinations, such as homes, workplaces, or national parks, after they disembark from a centralized *mass transit* hub. It is the weakest link in the transportation network and often involves the use of shared vehicles, such as bikes, or e-bikes, to bridge the gap between public transit and individual destinations. The main goal of improving last mile mobility is to provide accessible and attractive mobility options that meet the specific needs and preferences of individuals, while also reducing traffic congestion and promoting environmental sustainability.[14]
Pull measures	Promoting alternatives: pull measures, or also known as a “carrot” describes actions or interventions that improve attractiveness of mobility modes other than the car. Most common pull measures are improvements in public transport availability and promotion of alternatives. They are often implemented as part of mobility management, which is a set of soft measures aimed at encouraging modal shift. Use of public transport can be marketed as a part of overall leisure experience. Sustainable alternatives, such as public transport, can be offered as an integral part of experiencing nature as opposed to just an accessibility feature.

[13] Train stations as green entrances to National Park Utrechtse Heuvelrug, the Netherlands (2023) - Wageningen University & Research
[14] Encouraging soft & shared mobility options at National Park Utrechtse Heuvelrug, the Netherlands (2023) – Wageningen University & Research

	Case studies emphasize the need for a balanced approach in which pull measures increasing accessibility are accompanied with push measures restricting undesired behaviour. [15]
Push measures	Restricting car use: push measures, or a "stick", are actions or measures which penalise car use. Push measures that are aimed at changing mobility behaviour include interventions that limit accessibility of specific modes, in the context of project MONA, it is the car, for example the introduction of paid car parking and road closures inside parks. Objectives of push measures are usually to make car use less convenient and to provide more space to nature and users of other modes.[16]

[15] How to push nature visitors towards sustainable mobility, The Netherlands (2023) - Breda University of Applies Sciences
[16] How to push nature visitors towards sustainable mobility, The Netherlands (2023) - Breda University of Applies Sciences

2. Introduction

2.1 About recreational mobility

The car is the preferred mode of transportation for leisure, sports and cultural activities. Research done by Karel de Grote Hogeschool shows that for instance in the region of Flanders 71% of leisure seekers choose the car to reach these types of destinations.[17] This preference not only leads to mobility issues, such as congestion and limited parking availability, but also impacts the natural environments visitors aim to enjoy. High volumes of visitors entering nature parks at specific entrances put significant strain on these areas, while other parts of the parks remain underused and see far fewer visitors.

In terms of more "functional mobility," such as commuting to work and school, significant progress has already been made in several European countries in recent years to work towards a 'modal shift', where there is a transition to more sustainable transportation options. For this type of mobility, a lot of data & research is available. However, when looking at 'recreational mobility', it is often more speculative, and not much data is known, but a common agreement is made that visitors tend to prefer using their car to visit leisure activities due to convenience and the decentralized location of a lot of leisure activities.[18]

2.2 About project MONA

Nature areas in North-West Europe (NWE) face an increasing number of visitors (intensified by COVID-19) resulting in an increased pressure on nature, negative environmental impacts, higher management costs, and nuisance for local residents and visitors. The high share of car use exaggerates these impacts. Therefore, effective traffic management in national parks has become crucial to enable sustainable tourism.

Project MONA is a European partnership between eight nature areas and three knowledge and disseminations partners across The Netherlands, Germany, France and Belgium. MONA stands for 'MOdal shift, routing and nudging solutions in NAture areas for sustainable tourism'. The goal of the project is to stimulate sustainable tourism in and around nature areas in North-West Europe. The project promotes sustainable tourism by advocating for eco-friendly mobility in natural areas, inclusive route planning, and sustainable practices among park visitors.

[17] Wegwijs in evenementen mobiliteit - Hoe stimuleer je duurzame mobiliteit naar jouw evenement - KdG Research (2021-2023)
[18] Wegwijs in evenementen mobiliteit - Hoe stimuleer je duurzame mobiliteit naar jouw evenement - KdG Research (2021-202)

Launched in 2023, MONA's mission supports nature, visitors, and local economies in north-western Europe. Its approach focuses on encouraging a shift to sustainable mobility, inclusive planning, and environmentally friendly practices for all involved. The duration of the project is 4,5 years, running up until the end of 2027. MONA's three pilot projects across eight nature reserves aim to manage visitor flows, reduce environmental impacts, and improve sustainable access. More information on project MONA can be found on the Interreg North-West Europe website for project MONA: https://mona.nweurope.eu

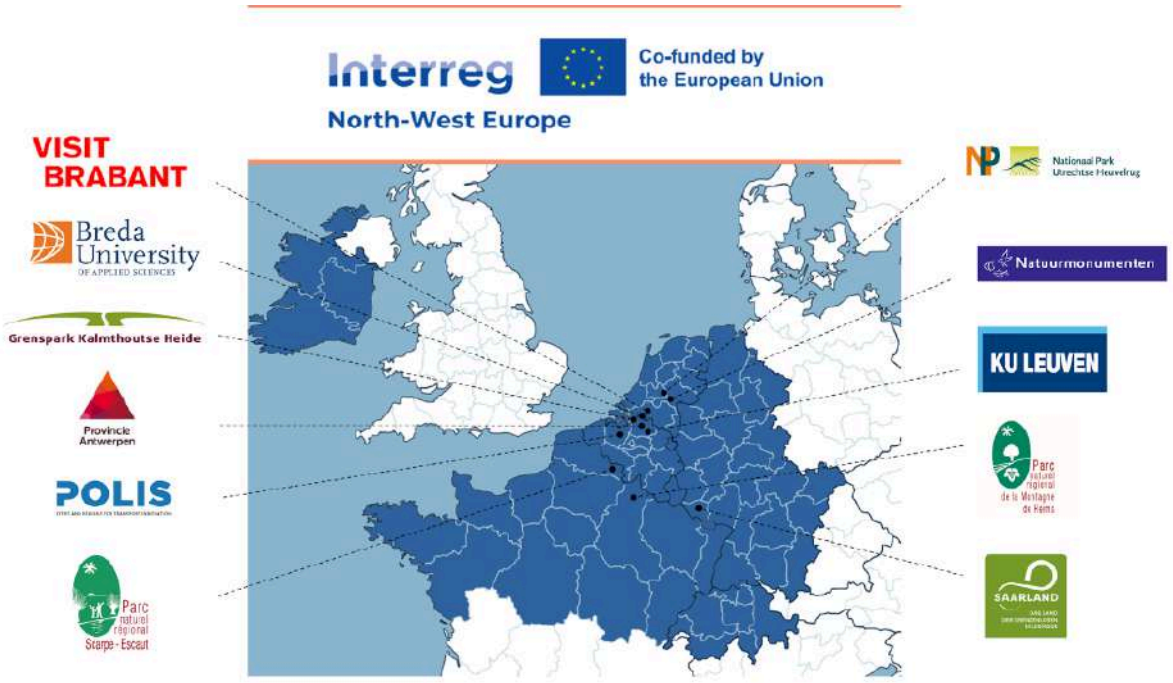


Figure: project MONA consortium

2.3 About modal shift

The growing interest in nature-based tourism has led to a significant increase in the number of visitors to nature reserves, especially since the corona pandemic. However, nature and recreation do not always go together, and the way in which visitors travel to the area is often always sustainable. Due to the many visitors, with the majority arriving by car, there are numerous challenges including negative impact on nature, traffic congestion, parking problems and air and noise pollution.

At the same time, the urbanised character of NWE, its dense public transport network, well-developed tourism & recreation sector, and presence of shared mobility providers offers ample opportunities for more sustainable tourism and modal shift.

To work on the topic of modal shift, within the MONA project, Pilot project group A was created. This pilot, led by National Park Utrechtse Heuvelrug, Grenspark Kalmthoutse Heide and Montagne de Reims Regional Park, has the primary aim of facilitating and stimulating a modal shift from car-centred travel to sustainable mobility alternatives such as walking, cycling and public transit.

Objectives include but are not limited to:

- **Enhanced Facilities:** Action plans will optimize parking, establish hubs, and improve road safety, making nature areas more accessible from nearby stations.
- **Visitor Information Format:** A standardized, accessible format—incorporating large fonts and Braille—will be developed, with annual assessments.
- **Regional Vision for Mobility:** National Park Utrechtse Heuvelrug leads stakeholder collaboration to create a model for sustainable mobility across North West Europe, with lessons shared at project meetings.

2.4 About this document

Activity 2.4 Pilot A: Action plan for facilitating and stimulating a modal shift towards sustainable mobility - led by National Park Utrechtse Heuvelrug, Grenspark Kalmthoutse Heide, and Montagne de Reims Regional Park, focuses on promoting walking, cycling, and public transit as alternatives to car travel.

In this activity, an action plan is set up for each of the nature areas. Each nature area requires different actions, but by developing a joint format, lessons can be learned from each other and knowledge and experiences can be shared. Every year the action plans will be reviewed based on lessons learned and best practices. Based on a joint format, the pilot partners develop an action plan for every park and describe what actions are necessary for a modal shift.

This document intends to create an overview of the current situation in the nature areas, and measures that have been taken and/or plans that are being made for the future to stimulate a modal shift from car use to more sustainable options. The plan contains joint format blocks to structure thinking about modal shift and sustainable tourism in and around nature areas, broader than MONA.

This action plan modal shift serves as a source of knowledge and inspiration for other national parks in densely populated regions in NWEurope. It also serves as input for the "Guidebook to Sustainable Tourism in Nature Areas" which is developed at a later stage in the project by POLIS. The "Guidebook to Sustainable Tourism in Nature Areas" helps nature areas and regions to enable sustainable access to nature areas.

3. Theoretical framework

Achieving a modal shift from car use to sustainable mobility, is a critical step in reducing environmental impact, alleviating traffic congestion, and fostering healthier, more livable communities. The importance of this shift cannot be overstated, as transportation remains one of the largest contributors to greenhouse gas emissions and urban challenges.

However, creating a modal shift is not a simple or quick process. The transition to sustainable mobility is a complex puzzle that can only be solved through an integrated approach and collaboration with regional and local authorities. It requires a strategic, multifaceted approach that addresses the diverse needs and behaviors of individuals. This can include improving infrastructure, providing better public transport options, providing clear information for seamless travel planning, and introducing experiences that prioritize sustainable mobility. Each of these strategies plays a role in making sustainable transportation the default and preferred choice for people. In the sections that follow, we have outlined the key actions required to drive this transformation and ensure its success over time. A distinction is made between actions that create a shift in how visitors can travel sustainably to the nature area, and actions that influence the mobility behavior and spreading of visitors within the nature area.

3.1 Creating a modal shift to the park

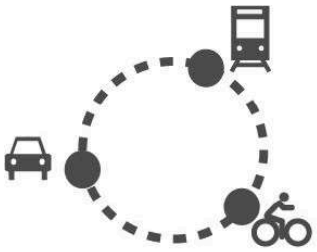
Creating a modal shift to the park relates to actions with the goal to stimulate and facilitate sustainable modes of transportation used by visitors to access the natural areas. It involves encouraging a change in the modes of transportation used to access natural spaces, prioritizing environmentally friendly and sustainable options while reducing the reliance on private cars. It is important that the flanks of the park are considered, to sustainably connect urban areas with the park. The goal is to reduce the carbon footprint and protect natural environments from overuse and pollution caused by car-dependent access.

This shift can be achieved by influencing the integration of sustainable recreational mobility into regional and local mobility plans/policy measures, infrastructure improvements, providing visitor information on each step of the visitor journey, and public awareness campaigns.

By making the shift from car dependency to more sustainable transportation methods, nature areas can reduce their carbon footprint, ease traffic congestion, and maintain their ecological balance, all while enhancing the visitor experience.

3.1.1 The introduction & implementation of a sustainable recreational mobility strategy

The transition to sustainable mobility is a complex puzzle that can only be solved through an integrated approach and collaboration with local authorities. Regional planning is often very commute-driven, a lot is organized around commute, though recreational mobility is often overlooked. This is one of the reasons why the MONA project was initiated. MONA is a European project, but locally the stakeholders also unite through the project. This improves cooperation with and between regional and local stakeholders, and works as an accelerator for the transition to sustainable mobility.



Through the MONA project we are working to create more awareness in policy making on recreational mobility, placing this topic on the political agenda. Sustainable recreational mobility should be integrated into regional and local mobility plans to achieve modal shift to our nature areas.

When developing a sustainable recreational mobility strategy, consideration should be given to the different types of transportation visitors can use to reach parks. What alternatives to private cars are currently available to visitors? How is the current mobility network surrounding the park? Are there mobility hubs where visitors find different forms of mobility to use?

Additionally, a distinction should be made in the target audience strategy for short-distance visitors (mostly residents from surrounding municipalities) and long-distance visitors coming from neighboring cities, regions, or even countries.

For short-distance travelers, research should be conducted to investigate why they choose to drive instead of walking or cycling to the park. Are the routes to the park unsafe, or are there other reasons why visitors are not choosing these more sustainable modes of transport?

For long-distance travelers, the main question is whether there are alternatives to the private car. Is the park accessible by train or bus? Within the scope of MONA, the challenge is significant in influencing this level of the mobility network. However, by focusing on this issue and involving relevant stakeholders, a first step has been made in having an impact here.

3.1.2 Creating a ‘Green Experience’

Creating a ‘Green experience’ where the transfer between sustainable modes of transport and the natural environments of the park are seamless encourages visitors to opt for sustainable transport options over private vehicles. ‘When a station is promoted as being an entrance, visitors by train would feel that the infrastructure is thoughtfully adapted to them and that they are not the forgotten group, stimulating their mobility behavior.’[19] It helps to inspire a commitment to sustainable choices.

‘The focus of this advice is to create one singular, seamless experience that will make the visitor feel immersed in the national park, even before officially stepping

[19] Train stations as green entrances to National Park Utrechtse Heuvelrug, the Netherlands (2023) – Wageningen University & Research

into it. The approach can include but is not limited to, including elements of nature into the station environment, establishing soft mobility hubs, and creating immersive audio tours. This entails fostering a sense of connection and belonging to the natural environment from the moment of arrival.'[20]

3.1.3 Visitor information on each step of the visitor journey

When visitors are encouraged to explore the park in a more sustainable way, it is essential to provide ample information to make the transition from car use to public transport or biking as seamless as possible. Both online and offline information should work together to create a cohesive and accessible narrative. Visitors need easily accessible information that they can look up in advance, for example, via the park's website or transport authority websites. However, not all visitors will research beforehand. To accommodate these visitors, clear and practical guidance should be available at every step of their journey—from leaving their home and reaching the nearest train or bus station to arriving at the park.

"The objective is to reassure the public that public transport is just as convenient as using a car." Research conducted by Wageningen University[21] emphasizes that it is crucial to "take people by the hand" and demonstrate how simple it is to use alternative modes of transportation. For example, digital platforms should prioritize public transport information. Websites should greet visitors with detailed yet straightforward details, such as travel durations, directions, and major destinations within the park. This ensures that visitors feel confident and well-prepared to make sustainable travel choices.

In addition to this other types of communication tools, like social media could potentially boost the awareness of sustainable travel, by linking the alternatives to events or branding opportunities. An example of this is the European Week of mobility[22]. Parks could use this opportunity to highlight the need for sustainable travel.

3.2 Creating a modal shift in the park

Managing visitor flows in natural areas is essential to balance conservation efforts, visitor experience, and sustainable tourism. Creating a modal shift in the park relates to strategies and actions to manage visitor flows effectively while protecting our natural areas and ensuring an optimal nature experience for visitors.

To manage visitor flow in nature parks, managers can use key tools like strategically placed points of interest, zoning, and optimized routing. By establishing attractions in specific areas, parks can naturally draw visitors toward less sensitive zones. Zoning divides the park into areas with varying levels of access, helping protect fragile ecosystems while guiding visitors to more resilient zones.

[20] Train stations as green entrances to National Park Utrechtse Heuvelrug, the Netherlands (2023) – Wageningen University & Research
[21] Train stations as green entrances to National Park Utrechtse Heuvelrug, the Netherlands (2023) – Wageningen University & Research
[22] mobilityweek.eu

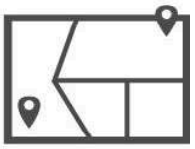
Thoughtful routing, including clear trails and loop paths, further disperses visitors, reducing congestion and minimizing environmental impact.

3.2.1 Providing experiences & points of attraction

This block is about curating and promoting experiences that not only draw visitors to the nature areas but also guide them towards activities and zones that match their interests and the park's conservation goals.

By offering targeted experiences, such as guided tours, thematic trails, and educational programs, visitors can be evenly distributed across the park, mitigating overuse of certain areas and enhancing the overall visitor experience. The suitable experience at the suitable location helps the spread of visitors, and creates a better connection to sustainable transport.

3.2.2 Zoning of nature areas



Implementing a zoning strategy aims to delineate areas based on allowable activities and conservation status. This structured approach not only helps in preserving sensitive ecosystems but also in managing visitor flow, ensuring that recreational activities are compatible with the conservation objectives of each zone.

3.2.3 Routing structure

A well-defined routing structure within nature areas is essential for directing visitor movement in a manner that prevents congestion and minimises environmental impact. This includes the creation of clearly marked trails for different activities (walking, biking, horse riding) and the strategic placement of signage to guide visitors efficiently, enhancing their experience while protecting natural habitats. This includes thinking about facilities on site, such as charging points, picnic benches, ... throughout the nature area, but also at train stations/transportation hubs/....

4. Modal shift action plans (park-individual)

This chapter outlines the three modal shift action plans, individually for each pilot A nature area: National Park Utrechtse Heuvelrug (NL), Grenspark Kalmthoutse Heide (BE) and Parc Naturel Régional de la Montagne de Reims (FR).

The modal shift action plan gives an introduction of each nature area describing the current situation in terms of mobility in the park, its challenges and the need for a modal shift from car use to more sustainable mobility options, such as walking, biking, public transport, shared mobility.

All pilot partners are a network organisation and do not own land. The pilot partners are not in charge of mobility directly. To achieve modal shift, there is a dependency on decision-making of various stakeholders. Stakeholder management and engagement is crucial to work on modal shift to and in nature areas. Therefore, each modal shift action plan gives an overview and description of involved stakeholders.

The modal shift action plans describe planned activities to facilitate and stimulate a modal shift to sustainable mobility to the park, and activities to stimulate a modal shift within the scope of the park to manage visitor flows. Modal shift is a long term transition, therefore each planned activity has a specification whether it is planned to be executed within the MONA project scope (2023-2027) or on the longer term.

Chapter 5 focuses on cross-learnings, emphasizing the importance of transnational knowledge sharing across pilot A through the MONA partnership. The cross-learnings highlight how collaboration across borders fosters innovation. By exchanging best practices, experiences, and resources, our nature areas can address mobility challenges more effectively and build sustainable recreational mobility solutions together.

4.1 Modal shift action plan: National Park Utrechtse Heuvelrug

4.1.1 Introduction

Nationaal Park Utrechtse Heuvelrug (NPUH) is a diverse nature reserve in the heart of the Netherlands, covering about 21,000 hectares. Located in the province of Utrecht, the park features rolling hills, dense forests, heathlands, sand dunes, and historic estates, shaped largely by glacial activity during the Ice Age. This unique landscape is home to a wide range of flora and fauna, including deer, badgers, and various bird species. The park also offers numerous recreational opportunities, with well-maintained trails for hiking, cycling, and horse riding. It's a popular destination for those seeking both natural beauty and cultural heritage, as the park is dotted with historic castles and estates that reflect the region's rich past. It has had the status of National Park since 2003.

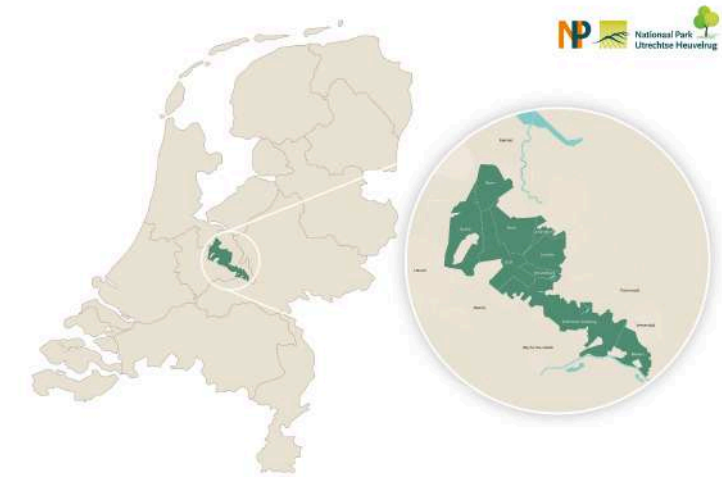


Figure: map and imagery Utrechtse Heuvelrug National Park (NL)

NPUH is a foundation that has been established since 2018. NPUH does not own any land, but it is a network organization that brings together all stakeholders that jointly form the National Park Utrechtse Heuvelrug. Ownership fragmentation has led to a large stakeholder ecosystem including (private) land owners, regional and local governments and nature conservation organizations. NPUH combines different stakeholder's expertise to ensure the preservation of nature, landscape, and cultural heritage.

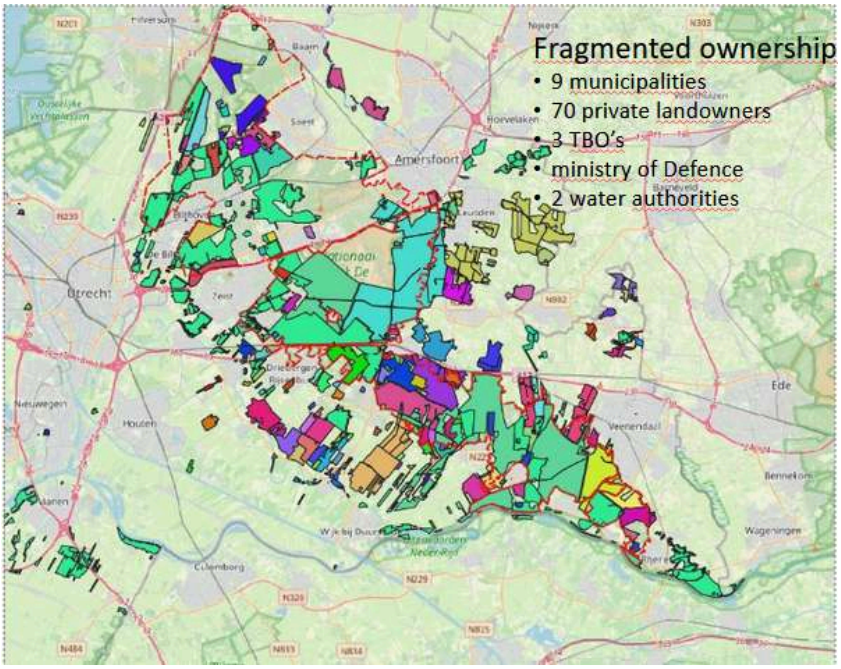


Figure: map of Utrechtse Heuvelrug National Park (NL) showcasing fragmented ownership

In the last decade, pressure on these themes rose, partly because the number of visitors grew strongly during COVID-19 (these visitor numbers are expected to continue growing). Due to the many visitors, with the majority traveling by car, this caused numerous challenges, including negative impact on the nature area, traffic congestion, improper parking, noise and air pollution and conflicts between different recreation groups. One of the most well visited places of NPUH is the village of Lage Vuursche and its surrounding nature area. During COVID-19, the municipality of Baarn even had to close the access roads and parking places to the Lage Vuursche nature area, as it was too crowded and emergency services couldn't get through.

Through the MONA project, NPUH is working on making recreational mobility to and within our park more sustainable. Through collaboration efforts between NPUH and higher education and knowledge institutions, the topic of sustainable mobility and recreation is one of the key topics investigated for a sustainable future of the national park.

Figure: news item on the closing of Lage Vuursche village

The Research & Education Hub Utrechtse Heuvelrug has been set up by NPUH and Utrecht University, to provide a transdisciplinary landscape where researchers, students and societal stakeholders from the area can learn together how to achieve sustainability transitions in a way that protects the natural heritage and the intrinsic, relational and instrumental value of the national park. The Research & Education Hub aims to provide a scientific knowledge base needed to study the effects of mobility and recreation in the park.

The MONA activities build on this research and focuses on physical improvements in the park and enhanced visitor experiences to promote a transition towards sustainable mobility. As this requires an integrated approach and involves many different stakeholders, NPUH will contribute its expertise in stakeholder management.

NPUH is located in a very busy urbanized area, surrounded by cities like Utrecht, Amersfoort, Veenendaal and Amsterdam. The risk of urbanisation and population growth in the surroundings of the nature area has been posed as a threat. At the same time, due to its urbanised character, NPUH has an extensive mobility and public transport network, well-developed recreation sector and shared mobility providers in proximity. This offers opportunities for sustainable mobility and recreation.

Access by car is currently too facilitated in NPUH. There are many official parking spots throughout the nature area, with the majority offering free parking. Therefore, NPUH is looking at a balanced approach in which pull measures are accompanied with introduction of certain push measures to achieve modal shift.

Potential pilot locations in National Park Utrechtse Heuvelrug are the nature area in the municipalities of Baarn, Zeist, and Utrechtse Heuvelrug. These parts of the Utrechtse Heuvelrug are among the most busiest places in terms of recreational visitors. In both municipalities there are train stations (Baarn, Driebergen-Zeist, Den Dolder, Maarn stations) that allow direct access to the nature areas.

4.1.2 Stakeholders involved

NPUH needs partners to effectively contribute to a modal shift. As an organization without its own land or decision-making authority, stakeholder collaboration is essential to develop and implement effective measures. The following table illustrates the complexity of the stakeholder landscape, with each stakeholder also working on different themes.

Public authorities and organisations in charge of mobilities (regional and local)	Destination Management Organisations	Other
Province of Utrecht (regional)	Netherlands Board of Tourism & Conventions (NBTC) (national)	Site management organizations: Natuurmonumenten, Staatsbosbeheer, Utrechts Landschap, Utrechts Particulier Grondbezit
Municipalities of Baarn, De Bilt, Soest, Zeist, Amersfoort, Leusden, Woudenberg, Utrechtse Heuvelrug, Rhenen (municipalities within the park) Municipalities on the flank of the park: municipalities of Utrecht, Veenendaal (local)	RBT: The Regional Tourist Board (RBT) Heuvelrug & Vallei is the central marketing and promotion organization for this beautiful region. (regional)	Higher education and research organizations: KU Leaven, Breda University of Applied Sciences (BUAS), Wageningen University & Research (WUR), Utrecht University (UU), Hogeschool Utrecht (Utrecht University of Applied Sciences (HU)) Higher education and research organizations help to enhance both theoretical and practical knowledge of the complex relationships between visitors, residents, nature, environment, and mobility.
VNG (Association of Dutch municipalities) (national)	VVV Nederland (VVV Nederland supports 80 destination marketing organizations with products and services.)	Recreationists/Nature visitors seeking sustainable recreation in natural areas.
Infrastructure & public service providers: NS (Dutch Railways) (national) ProRail (Rail infrastructure manager of the Dutch railways) (national) ANWB (national road users service organisation) (national) Routebureau Utrecht (recreational routing agency province of Utrecht) (regional)		Local residents near protected areas, benefiting from reduced traffic congestion, and nuisance from overparking.

Goedopweg (a collaborative organization focused on mobility of the municipalities of Utrecht and Amersfoort, the province of Utrecht, Rijkswaterstaat and the Ministry of Infrastructure & Water Management.) (regional)		Nationaal Park Utrechtse Heuvelrug (NPUH) (network organisation: In the Utrechtse Heuvelrug National Park, the owners of nature reserves, the province of Utrecht and municipalities in and around the Utrechtse Heuvelrug, work together with other organizations and area parties to protect and develop nature, landscape and heritage.)
		National Parks Bureau (Netherlands)

4.1.3 Inventory session (BUAS)

The inventory session for the Utrechtse Heuvelrug focused on the wider scale of the Utrechtse Heuvelrug nature area. This activity aimed to provide an overview of the current challenges and opportunities around visitors flow and mobility and the current carrying capacity in Utrechtse Heuvelrug. NPUH brought together 25 stakeholders (regional and local mobility and tourism stakeholders and local DMOs) to the inventory session led by BUaS in February 2024, which allowed tourism and mobility stakeholders to discuss the challenges and opportunities for this topic together.

The workshop was organized to create an in-depth overview of the (perceived) challenges regarding visitor flows in and towards the nature area. Furthermore, it identified opportunities and potential solutions to solve these challenges. This information provides a backbone for the subsequent research activities in the MONA project.

The main outcomes of the session were:

• **Accessibility by car is too much and too easily facilitated at the moment**. A potential solution could be found in **paid parking** and more focus on **attractive alternatives for the car**, such as facilities for non-car visitors in the availability of shared bikes, bike parking, coherent connectivity to stations, more facilities for visitors without a car, and more frequent connectivity for public transport. Decreasing parking is a fragile balance between seducing and prohibiting. **Other modalities need to become more attractive**.
• **Awareness campaigns to seduce people to (travel to) recreate in another way**, but still connected to a 'carrot-stick' story. Soft measures like awareness, information, and facilities are combined with restrictions in price measures for car use and certain ways of using the area. In line with awareness, **nature visits should be associated with sustainable modes of transport** and awareness of the impact people can have on the nature they visit. Equally important is finding mechanisms to **encourage people to recreate closer to home**.
• **Policy** to get to concrete action in line with vision and the interconnection between different stakeholders (align domains, such as mobility and recreation, including those of municipalities and provinces).

• **Stations as entrances** are not a main solution and **should be connected to a well-defined routing network**. Routing can be connected to urban areas, creating a recreational experience from the front door to nature.
• **Steering and spreading visitors** through routes and attractive entry points with several facilities (toilets, restaurants, etc.). The choice of these points, amongst others, depends on their robustness (relating to zoning).
• The **digitalisation of information needs to be handled carefully**, as routes can remain online after they receive alterations, which can also create additional demand.
• **Anticipation of trends** like further population growth and an ageing population is needed.
• **Monitoring** concerning the needs of nearby residents, motivations of different user groups (for identifying ways of nudging), and locations of bottlenecks.

Figure: workshop inventory session NPUH

4.1.4 Creating a modal shift to the park

Two major highways (A12 and A28) and a number of provincial roads run through the park. This erodes the structure of the Utrechtse Heuvelrug and thus its function as a core area. Because of these highways, the Heuvelrug nature area is split into three sub-areas. With two railway lines running through the park, there are more than 13 railway stations in or in close proximity to the park, offering sustainable connections to cities like Utrecht, Amersfoort and Hilversum.

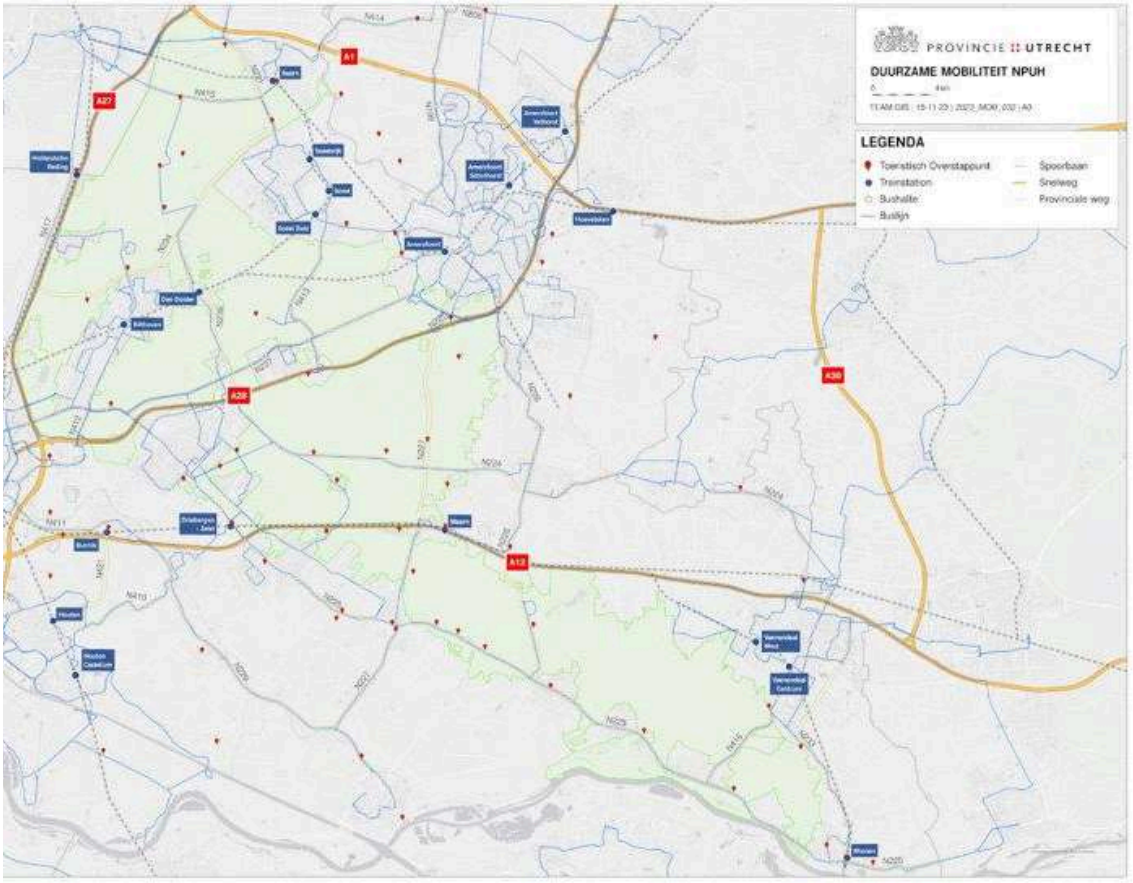


Figure: map of NPUH showcasing its extensive infrastructure/mobility network

Introduction & implementation of a sustainable recreational mobility strategy

NPUH does not have a mandate to work on a regional mobility strategy, however we collaborate with regional and local mobility authorities on the introduction, integration and implementation of (sustainable) recreational mobility in mobility strategies and plans. These actions outline what we do to influence modal shift.

Integration of sustainable recreational mobility

We noticed that regional planning was very commute-driven, a lot was organized around commute, though recreational mobility was often overlooked. The scope is not only the direct NPUH nature reserve but also its flanks, to sustainably connect urban areas and nature reserves. Through the MONA project cooperation with and between regional and local stakeholders is improved. and recreational mobility has now been more integrated locally and is on the agenda of local authorities, in our case for example the Province of Utrecht. This is a result of the MONA project.

NPUH would like to continue to leverage the MONA project to create more awareness in policy making on recreational mobility, while strengthening and anchoring the 'Unique National Park' and sustainable recreational mobility in programs and policies of regional and local authorities.

Regional vision on sustainable mobility (MONA subproject for NPUH)
There are many different stakeholders involved when implementing sustainable mobility options. The transition to sustainable mobility is a complex puzzle that can only be solved through an integrated approach and collaboration with local authorities. It is important to take collective steps that will ultimately benefit the nature area. This requires a regional vision on sustainable recreational mobility for NPUH. As part of the MONA project, NPUH with guidance from an external mobility vision expert, will develop a regional vision on sustainable recreational mobility that is supported by all relevant stakeholders and could serve as a leading example for other nature areas in NorthWest Europe. In October 2024, NPUH organised a kick-off meeting to bring together councillors to initiate the joint development of this vision, and collect stakeholders' thoughts on potential challenges and opportunities for this upcoming vision trajectory and collaboration. The outcomes of the kick-off serve as input to the vision trajectory. A follow-up meeting has been scheduled in April 2025.

Regional Accessibility program 2024-2029, province of Utrecht (regional)
NPUH is working with the province of Utrecht and contributed to include recreational shared mobility in addition to the public transport and cycling network/connections to recreational sub-areas in the new regional Accessibility program of the province of Utrecht 2024-2029. Shared mobility hubs are an important MONA subproject for NPUH.

New recreation & tourism program, province of Utrecht (regional)
The Province of Utrecht is working on a new recreation & tourism program. Evaluation will be finalised at the end of 2024. NPUH will provide detailed text to ensure sustainable recreational mobility is included in the mobility strategy / segment.

New mobility policy & plan - municipality Utrechtse Heuvelrug (local)
NPUH is collaborating with the municipality of Utrechtse Heuvelrug (potential pilot location) on their new mobility policy/plan, to ensure sustainable recreational mobility is included. This is an important topic for the municipality.

Pilot Shared Mobility Hubs (Soft Mobility) (MONA subproject for NPUH)
NPUH aims to improve both internal (within the park) and external (last-mile) sustainable mobility options. Through the MONA project we are working on a shared mobility hubs pilot. These shared bicycles, or e-bycicles will help visitors to cover the last-mile of their (train) journey. Hubs at yet-to-be determined locations for e.g. train stations or TOP's, could facilitate sustainable recreational movements to and within the park. The hubs should be part of a *back-to-many* network, which allows visitors to rent a bike in one location and give in the bike at another location. As such, it can serve as an extension to the existing OV-bike rental network (owned by NS, Dutch railways), which is connected to train stations only, with users having to return the bike at the same location as where they rented it. NPUH is collaborating with Goedopweg (Regional mobility governmental collaboration, province of Utrecht) and municipalities on the development of this pilot.

Figure: shared mobility hubs, province of Utrecht

Develop Parking spaces on flanks [Flank policy]

Future hubs could also be developed on potential larger P&R (park and travel) parking spaces at the edges/flanks of the park (in line with flank policy). This is one of the topics that will be discussed in the regional vision trajectory on sustainable mobility.

Pilot car regulation Lage Vuursche

In 2024, NPUH facilitated a preliminary research for the potential introduction of paid parking in Lage Vuursche (one of the busiest areas of NPUH). Currently, parking in most parking places in NPUH is free. However, to achieve modal shift we are looking at both push and pull measures. NPUH is facilitating cooperation between stakeholders on this topic. In 2025 there will be follow-up actions on car regulation in the area of Lage Vursche. This could include facilitating an in-depth research on the introduction of paid parking.

<u>Creating a green experience</u>

Green Stations (MONA subproject for NPUH) NPUH is collaborating with NS (Dutch Railways), ProRail and local municipalities on making train stations in or in close proximity to NPUH, recognizable as 'sustainable entrance' to the nature areas. This could include more greenery at the station, improving recreational facilities and visitor information and signage. Potential pilot stations include station Baarn and station Amersfoort.

Station Amersfoort: green station One of the municipalities which has a train station (Amersfoort) is currently working on planning and landscaping around the train station, inside of a bigger urban planning project. They have expressed their interest in transforming the station to become a 'green entrance/station' to NPUH. NPUH is in conversation with NS (Dutch railways) and the municipality of Amersfoort to discuss what this could entail.

Station Baarn: green station / shared mobility hub One of the municipalities which has a train station (Baarn) is currently working on a pilot with shared mobility. They also have expressed their interest in transforming the station to become a 'green entrance/station' to NPUH.

NPUH is collaborating with the province of Utrecht, Goedopweg, NS (Dutch railways) and the municipality of Baarn.

In June 2024 the first MONA information panels on Baarn railway station were launched to highlight the stations' function as a sustainable starting point and green entrance for visits to the NPUH Nature area. Baarn railway station is framed as a sustainable starting point to NPUH, while nudging visitors to travel sustainably.

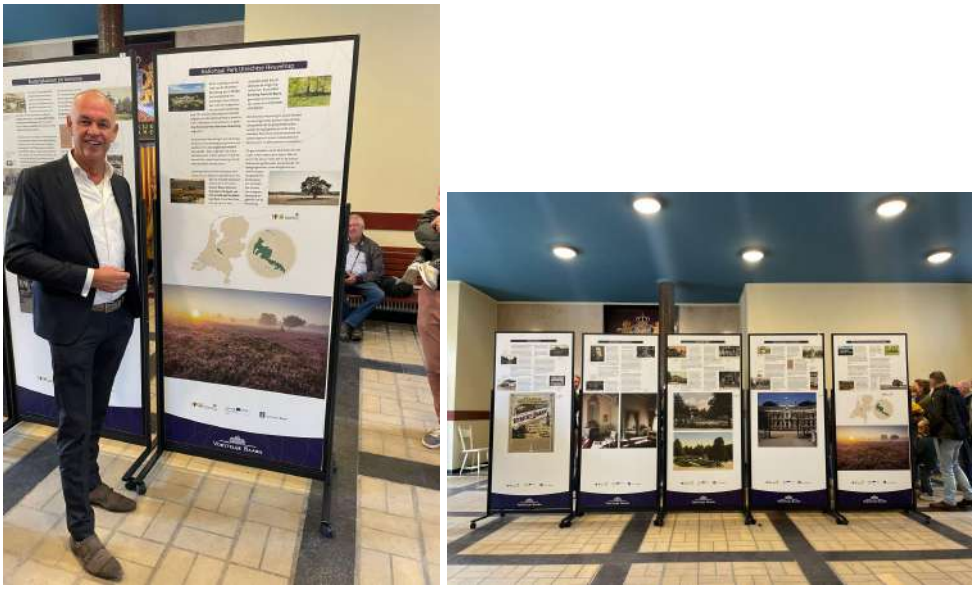


Figure: launch MONA information panels on Baarn railway station ;green entrance

Visitor information on each step of the visitor journey

The "inventory session" organized by BUas and NPUH (Feb 2024) showed that among the main topics for modal shift are communication and visitor information relating to mobility and route planning.

NPUH provides visitor information through various channels:

Online

NPUH website: .np-utrechtseheuvelrug.nl

NPUH newsletter (quarterly)

Social media

Instagram: https://www.instagram.com/nputrechtseheuvelrug

Facebook: https://www.facebook.com/NPutrechtseheuvelrug

Digital on partner/stakeholder sites

RBT (Regional Tourism Board): https://www.rbtheuvelrug-vallei.nl/

Routebureau Utrecht: https://routebureau-utrecht.nl

NS (Dutch railways): https://www.ns.nl/

Physical

VVV points (DMO), visitor centres and hospitality services

Information panels at entrance gates/TOP's/starting points

Stakeholder workshop on Visitor Information & Recreational gates

October 2024: NPUH in collaboration with the National Parks Bureau organised a stakeholder

workshop focusing on visitor information and recreational gates. Two expert consultants executed a visitor information and recreational gates analysis from a visitor's perspective. The outcomes indicated some challenges around visitor information, including fragmented digital visitor information. Additional guidance is needed for visitors arriving by train to help them locate park entrances more easily. NPUH is working on a report of this workshop as a base to improve these challenges in collaboration with local stakeholders.

Digital Starting Point Map (MONA subproject for NPUH)
NPUH wants to provide accurate information for visitors. We plan to develop an online integrative starting point map, which will allow visitors to plan their sustainable journey more efficiently. The map will show locations of train stations, mobility hubs/shared mobility, TOPs (touristic transfer points), walking/cycling routes, bus routes, parking areas, dog walking areas and facilities like restaurants and toilets. The goal is to enhance travel options and improve visitor experience while spreading visitors by choosing to show or not show certain park entrances or parking spaces that are usually most visited.

Website revision & improving accessibility page
For the transition to sustainable mobility, it is crucial to position climate-friendly transport options as standard. We have implemented updates to improve the accessibility page on our NPUH website, and incorporate more sustainability-focused messaging. Previously, directions to arrive by car were mentioned first and visitors were not well informed/encouraged to travel sustainably. Now, we better inform visitors of the many options to travel to NPUH by train or bus and "nudge" visitors to help protect nature by traveling sustainably. However, there is still room for improvement. We will develop an integrative starting point map as part of the MONA project. Our website will showcase this map to enhance visitor information.

Visitor communication to increase awareness and nudge towards sustainable mobility
NPUH is collaborating with RBT (Regional Tourism Bureau) on visitor communication to entice visitors to travel sustainably. Visitors generally do not yet see public transport as a possible travel option to the nature reserve. Nature visits should be associated with sustainable modes of transport. Sustainable mobility should be framed as part of the nature experience, and railways stations should be framed as ‘green entrance’ to the nature area. Sustainable mobility has not yet been a topic in previous campaigns. Campaigns to promote modal shift, seduce visitors to recreate and travel in a more eco-friendly way, increase environmental awareness/consciousness. Awareness campaigns should also focus on behaviour change and desired behaviour in nature (sustainable recreation).

TOP's revision & information panels
The information panels at current TOP's (touristic transfer points) were implemented in 2012. They are not up-to-date anymore and in some cases show outdated information or routes. The TOP's network (the locations of the TOP's and the information panels) will be revised/renewed in 2024/2025, with the province of Utrecht in the lead. NPUH is collaborating with the province of Utrecht and Routebureau Utrecht to revise locations of existing and new TOP's and information panels, in line with MONA modal shift efforts.

Action	Timing	MONA?
Introduction & implementation of a sustainable recreational mobility strategy		

Create more awareness in policy making on recreational mobility, while strengthening and anchoring the 'Unique National Park' and sustainable recreational mobility in programs and policies of regional and local authorities.	2023-2027 within MONA and long term continuation outside of MONA	within & outside of MONA scope
Together with our stakeholders, develop a joint regional vision on sustainable recreational mobility Utrechtse Heuvelrug and flanks (MONA subproject for NPUH)	2024 - 2025 (1.5 year)	within MONA scope
Develop shared mobility hubs pilot with bicycles or e-bicycles (MONA Subproject for NPUH)	2024 - 2026 (2 years)	within MONA scope
Include recreational shared mobility to the new regional Accessibility program 2024-2029 of the province of Utrecht	2024	within MONA scope
Provide input for the integration of sustainable recreational mobility in the mobility strategy of the New Recreation & Tourism programme of the province of Utrecht	2024	within MONA scope
New mobility policy & plan municipality of Utrechtse Heuvelrug	2024-2025	within MONA scope
Pilot car regulation in Lage Vuursche	2023-2026 (2 years)	within MONA scope
Develop Parking spaces on flanks of the park	long term	outside MONA scope
Creating a green experience		
Pilot: Transforming railway stations as green entrance to the park	2024 - 2026 (2 years)	within MONA scope
Visitor information on each step of the visitor journey		
Facilitate and organise a Stakeholder workshop on the topic Visitor Information & Recreational gates in NPUH, create a report as a base for collaboration on this topic with local stakeholders	2024 - 2026 (2 years)	within MONA scope
Develop an online integrative starting point map, which will allow visitors to plan their sustainable journey more efficiently	2024-2026 (2 years)	within MONA scope
Website revision & improving accessibility page on NPUH website	2024-2026 (3 years)	within MONA scope

Visitor communication to increase awareness and nudge towards sustainable mobility	2025-2027 (3 years)	within MONA scope
Collaborate with province of Utrecht and municipalities on the revision on TOP's (touristic transfer points) locations and renewing its information panels	2024-2025 (2 yearS)	within MONA scope

4.1.5 Creating a modal shift in the park

Zoning of nature area

There is an outdated zoning plan from 2014 in which the entire Heuvelrug is divided into zones (quiet, peaceful, pleasant and lively). In the quiet zone the main goal is nature, in the lively zone the main goal is recreation.

There must be a good balance between human activities and natural values. Good zoning helps with this, starting with determining where visitors are received.. The province of Utrecht, in collaboration with site owners and municipalities, is working on a new NPUH Recreational Zoning Policy and Plan in which a balance is sought between nature and recreation (recreational zoning in relation to natural values). The zoning is the base for the design of the recreational network. With the constructive input of numerous residents, users and local entrepreneurs on the Utrechtse Heuvelrug, a plan is being drawn up in which protection and experience go hand in hand. The new zoning plan is important to give direction to the recreational use of the Heuvelrug in the coming years. At this stage it is not clear when this new zoning plan will be finalised. NPUH is closely monitoring this trajectory.

Routing structure

During the "inventory session" organized by BUas and NPUH in (Feb 2024) it was noted that stations as 'green entrances' are not a main solution by itself and they need to be connected to a well-defined route network.

During the stakeholder workshop it was also discussed that a better connection should be made between train stations, TOP's and future mobility hubs and the nature area, in terms of signage. Additional guidance is needed for visitors arriving by train to help them locate park entrances more easily. An example, there is a TOP (Touristic transfer point) with various walking and biking routes starting, just two minutes walk from Baarn railway station, however there are no clear directions from the railway station to the actual TOP/park entrance. Through the MONA project we plan on improved signage at stations and mobility hubs to guide visitors efficiently to the entrance points and routes.

Action	Timing	MONA?
Zoning of nature area		
Monitor new NPUH Zoning trajectory	long term (3+ years)	outside scope MONA
Routing structure		

Improve signage around railway stations to guide visitors efficiently from stations/hub to the park entrance and routes	2025-2026 (2 years)	inside scope MONA

4.2 Modal shift action plan: Grenspark Kalmthoutse Heide

4.2.1 Introduction

BENEGO Grenspark Kalmthoutse Heide (GKH) is a nature park located in a densely populated area in Belgium on the Belgian-Dutch border. Covering approximately 6,000 hectares, it's one of the oldest and largest nature reserves in the region, renowned for its distinctive heathland, forests, wetlands, and sand dunes. This unique landscape is home to a rich biodiversity, including rare plant species, migratory birds, and a variety of wildlife. The park offers visitors extensive walking and cycling trails, making it a popular destination for nature enthusiasts. Its cross-border collaboration also highlights the importance of joint conservation efforts in preserving this fragile ecosystem.

Similar to NPUH and PNRMR, GKH does not own any land, but it is a network organization that brings together all stakeholders that jointly form the park. Ownership fragmentation has led to a large stakeholder ecosystem including (private) land owners, regional and local governments and nature conservation organizations.

The park offers a calming, healthy natural environment for urban residents and is therefore of great value to the region, but struggles with transportation issues that threaten vulnerable nature sites in the park. The private car as the main transport mode leads to congestion and disturbance for residents. In the MONA-project, GKH will implement strategies for realizing a modal shift towards alternatives. GKH has participated in various EU supported projects (Interreg and Life) contributing specifically to nature and biodiversity in the area. MONA will be the first to tackle the issues visitors pose, such as pressure on parking spaces and on protected habitats and species, a growing problem for nature areas.

4.2.2 Stakeholders involved

GKH needs partners to effectively contribute to a modal shift. As an organization without its own land or decision-making authority, collaborations are essential to develop and implement effective measures. The following table illustrates the complexity of the stakeholder landscape, with each stakeholder also working on different themes.

Public authorities and organisations in charge of mobilities	Destination Management Organisations	Other
Municipalities of Stabroek, Kalmthout, Essen and Woensdrecht	Visit Brabant	Agentschap Natuur & Bos (ANB)
Transport region of Antwerp	Visit Kalmthout	Natuurmonumenten
Province of Antwerp	TPA (Tourism Province Antwerp)	Staatsbosbeheer
Agentschap Wegen & Verkeer (AWV)	Visit Flanders	Instituut voor natuur & beschermindseducatie (IVN)
Public transport operators: De Lijn, Arriva and SNCB		Knowledge institutions (KU Leuven, BUas,...)

4.2.3 Inventory sessions

Grenspark Kalmthoutse Heide partners with the MONA project to encourage a shift from car to train and bicycle use. During the Inventory session, a diverse range of challenges was collected in the first brainstorm phase, concerning the view on a sustainable nature park, the issues that are faced in the park and the desired future outcome for this nature area. The collected issues can be grouped into four themes:

Entry Points: Visitor flow varies significantly, with some points, especially Poort De Vroente, experiencing overcrowding. A capacity assessment is needed to determine how many visitors each point can handle, alongside communication to encourage varied arrival modes and entry points.

Zoning: The heather landscape, a fragile ecosystem, is heavily visited due to its proximity to main entries. Clearer data is needed to manage visitation by creating "rest zones" (A zones) for preservation and redirecting visitors to more resilient areas.

Park Connections: The cross-border location leads to varying standards in management, visitor information, and route organization between Belgian and Dutch sides. Belgian entry points are better connected and more accessible, while Dutch routes often lack cross-border pathways and cohesive infrastructure.

Modal Shift: Despite public transport access, most visitors arrive by car due to limited and irregular public transport services. There's little clarity on train connections and routes to park entrances, often deterring visitors from sustainable transport options. Signage and facilities for last-mile connections are also insufficient, especially around Kalmthout and Heide stations.

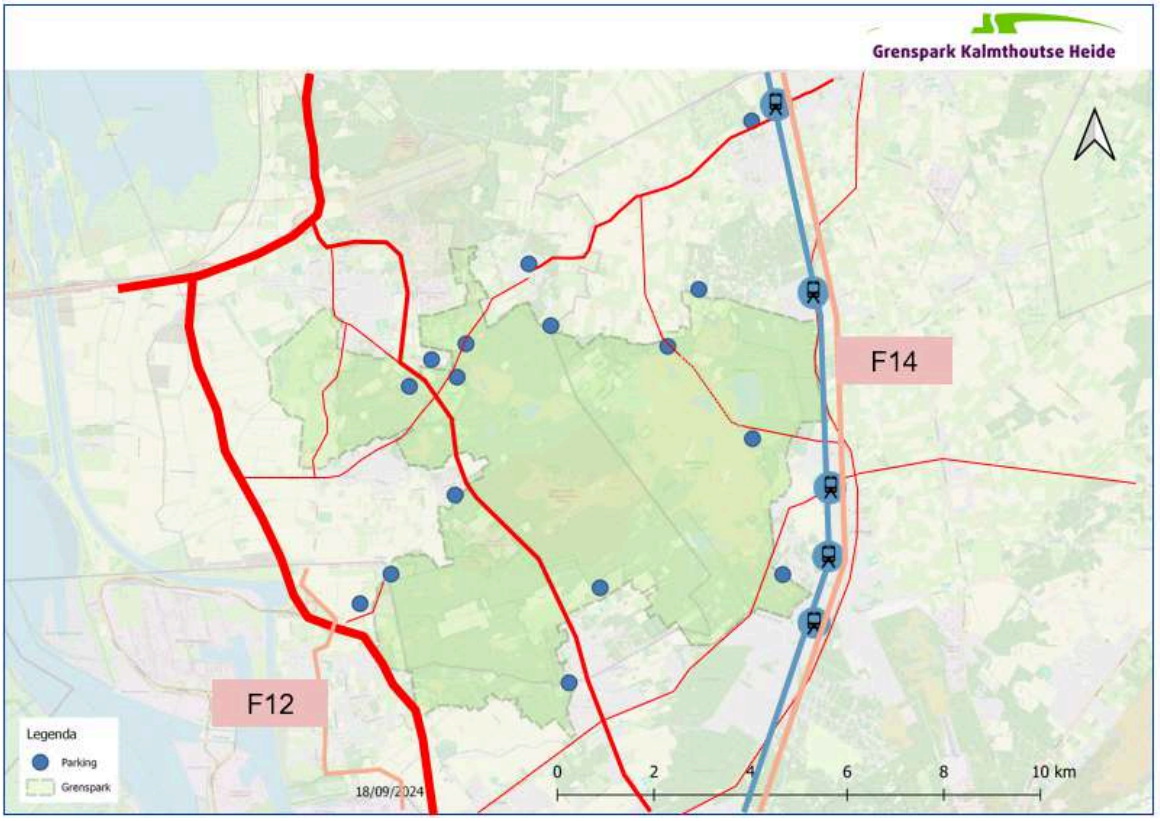
Concerning a vision for the future of the park, solutions have been suggested that can be connected to 5 main topics:

1. Facilitation of sustainable modes; Stakeholders suggest improving train access, shuttle services, bus connections, and bike infrastructure to reduce car dependency. For example, renaming the 'Heide' train station to 'Kalmthoutse Heide' and improving connections to long-distance walking networks could promote public transport. Enhancing bike routes and creating marked cycling entry points are also recommended.
2. Zoning of the park connected to vulnerability; The most visited, vulnerable areas should be divided into A, B, and C zones based on their sensitivity. A-zones would be quiet areas, while B and C-zones could accommodate more visitors. Data on the park's carrying capacity and clear zone markers are essential.
3. Branding of nature protective visits; Promoting nature visits with a focus on protecting the environment, connecting with other local attractions, and providing clearer information on park visitation.
4. New design of entry points; Encourage entry by bike or foot, especially at overcrowded points like Vroente. Alternative entrances and facilities for younger visitors should be created.
5. Monitoring of visitors. Utilize phone data to track visitor flow and manage park capacity.

These suggestions were evaluated in terms of feasibility and if possible applied on the creation of the action plan for GKH.

4.2.4 Creating a modal shift to the park

One major highway (A12) and several regional roads run along and through the park, causing fragmentation of the natural environment. Railway line 12 runs along the eastern side of the park, providing a connection between the cities of Antwerp and Roosendaal. Five train stations are located near the park, within walking or cycling distance. Additionally, the park is surrounded by cycling highways F12 and F14. Alternative modes of transportation are present, so there are opportunities to work on a modal shift. In this part key topics are highlighted to change modal behavior towards the park.



The map shows an overview of the most important roads in the area (red), the trainline (blue) and the cycling highways (pink).

The introduction & Implementation of a sustainable recreational mobility strategy

GKH does not have a mandate to work on a regional mobility strategy. Although collaboration is organised with local municipalities. This remains at a local level and lacks key mobility authorities such as transport operators and the transport region of Antwerp.

Putting the topic of recreational mobility on the political agenda

Within the Flemish/Belgian context, the topic of recreational sustainable mobility has not received much attention in recent years. While efforts have been made to promote a modal shift toward more sustainable forms of transportation, these have mostly focused on home-to-work and home-to-school commutes. Through the MONA project, cooperation with local stakeholders has improved, but there is still significant room for progress. GKH aims to gain momentum on this issue by using the project to raise awareness in policymaking about recreational mobility at various levels. The goal should be to create a regional vision on recreational mobility, just like Utrechtse Heuvelrug.

Last-mile mobility research

KH will engage in discussions with neighboring municipalities to coordinate potential mobility-related projects and explore opportunities for collaboration. GKH aims to support this by conducting mobility research on the last-mile connections to the park. Two potential approaches can be pursued:

On one hand, GKH intends to collaborate with academic institutions involved in the MONA project, allowing master's students to conduct thesis work focused on the areas surrounding the park.

Proposals could be made to improve traffic safety around the park, establish new mobility hubs, or explore other potential solutions.

On the other hand, GKH will work with a design team on a large-scale project, further detailed in this document. A component of this design project involves a mobility analysis of the surrounding area, from which suggestions for mobility solutions across various aspects can be developed. The resulting solutions will be discussed with stakeholders, considering possible funding streams.

Smarter Parking policies

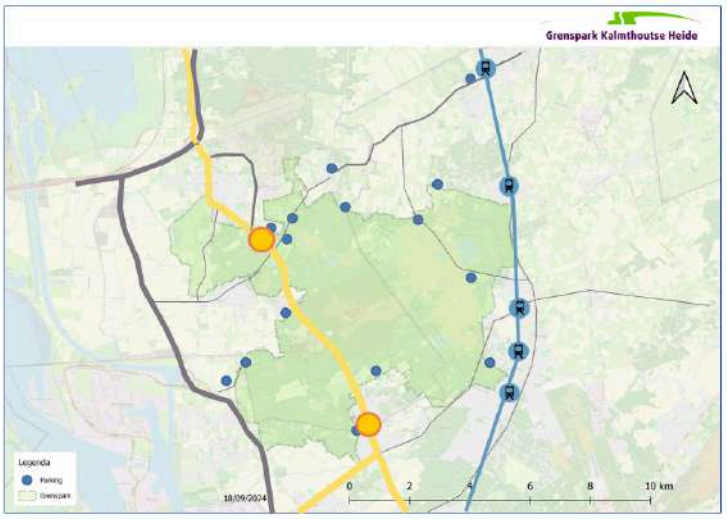
Currently, there are approximately 17 areas providing parking spaces for visitors, all of which are free. On peak days, several of these locations face undercapacity and cannot meet demand. Instead of adding more parking spaces, questions should be raised about whether push and pull measures should be considered to support the modal shift. The goal is not to increase the number of visitors reaching the park by car, but to encourage visitors to use alternative modes of transport. Concrete actions have not been defined within the scope of the MONA project, and the current political climate does not allow much questioning of the status quo. However, the MONA project will serve as a platform to keep the conversation going and to explore alternatives that can be discussed with municipalities.

<u>Creating a green experience</u>

Green Stations (MONA subproject for GKH)

GKH will collaborate with a design agency and local municipalities to make stations and other mobility hubs recognizable as sustainable entrances to the surrounding nature areas. This could include adding more greenery at the stations, enhancing recreational facilities, and improving visitor information and signage.

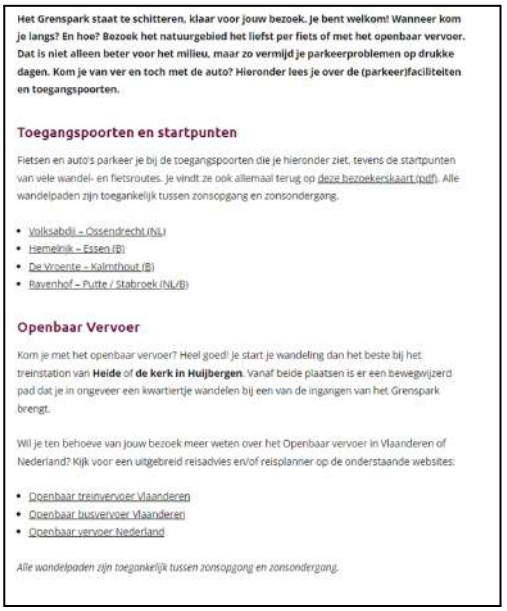
Since there are multiple stations and several bus stops near the park, the design process will also explore solutions to make these bus stops more inviting and functional as gateways to the park. The design teams will not only focus on the hubs themselves but will also propose ideas for enhancing visual connectivity to the park. This will help 'guide' visitors through visual elements, creating a seamless experience that begins the moment they step off the bus or train.Within the scope of MONA it is likely that one mobility hub will be transformed to a green station as a pilot case. A guidebook will be provided to allow local municipalities to invest the next couple of years in the transformation of these hubs into green stations.



(picture right)The yellow dots indicate the location of bus stops, the blue line and dots shows the trainline.

Visitor information on each step of the visitor journey

Grenspark offers visitor information through various channels. Digital information is provided via a website and social media channels. Analogue information is provided by a visitor map sold at tourist information offices and hospitality services. Information panels at entrance gates and starting points provide information for visitors arriving at the park. Considerable effort has been made to enhance the user-friendliness of the routing structure, starting points, and entrance gates in the last couple of years.



Het Grenspark staat te schitteren, klaar voor jouw bezoek. Je bent welkom! Wanneer kom je langs? En hoe? Bezoek het natuurgebied het liefst per fiets of met het openbaar vervoer. Dat is niet alleen beter voor het milieu, maar zo vermijd je parkeerproblemen op drukke dagen. Kom je van ver en toch met de auto? Hieronder lees je over de (parkeer)faciliteiten en toegangspoorten.

Toegangspoorten en startpunten

Fietsen en auto's parkeer je bij de toegangspoorten die je hieronder ziet, tevens de startpunten van vele wandel- en fietsroutes. Je vindt ze ook allemaal terug op deze bezoekerskaart (pdf). Alle wandelpaden zijn toegankelijk tussen zonsopgang en zonsondergang.

- Volksabdij – Ossendrecht (NL)
- Hemelrijk – Essen (B)
- De Vroente – Kalmthout (B)
- Ravenhof – Putte / Stabroek (NL/B)

Openbaar Vervoer

Kom je met het openbaar vervoer? Heel goed! Je start je wandeling dan het beste bij het treinstation van **Heide** of **de kerk in Huijbergen**. Vanaf beide plaatsen is er een bewegwijzerd pad dat je in ongeveer een kwartiertje wandelen bij een van de ingangen van het Grenspark brengt.

Wil je ten behoeve van jouw bezoek meer weten over het Openbaar vervoer in Vlaanderen of Nederland? Kijk voor een uitgebreid reisadvies en/of reisplanner op de onderstaande websites:

- Openbaar treinvervoer Vlaanderen
- Openbaar busvervoer Vlaanderen
- Openbaar vervoer Nederland

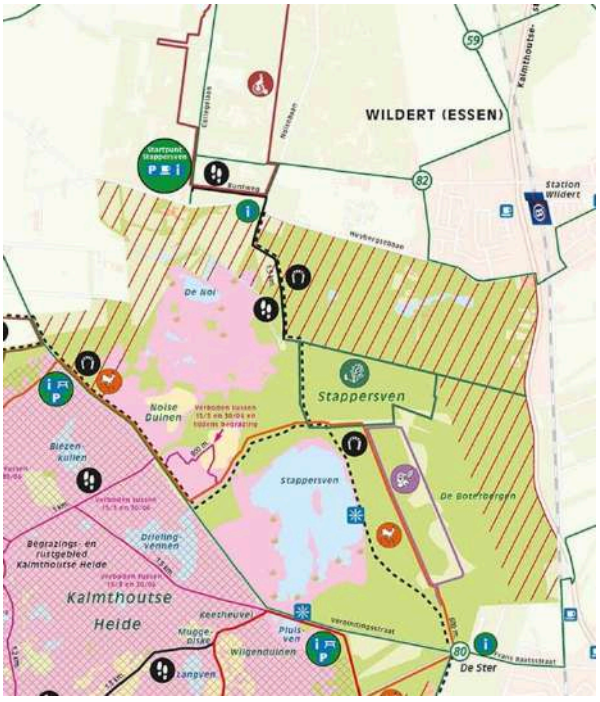
Alle wandelpaden zijn toegankelijk tussen zonsopgang en zonsondergang.

Despite these efforts, there is still room for improvement in terms of user experience and accessibility. Many of these decisions were made with the assumption that visitors would primarily arrive by car, which can limit accessibility and clarity.

Website revision & improving accessibility page

The current website only provides limited information regarding sustainable modes of transport. In order to inform visitors properly, additional information needs to be put on the website with info regarding ticket info, pricing, timetables, shared mobility options, etc…. The image below shows a screenshot of the accessibility page without this added information (august 2024). It is currently not user-friendly.

Grenspark Kalmthoutse Heide is committed to sustainability and has a green mobility vision. The park's accessibility page will be based on the (dutch) STOP principle: pedestrians first, then cyclists, followed by public transport, and lastly, private cars. Visitors should be encouraged to use sustainable modes of transport to better protect the fragile natural environment and to prevent parking issues and disturbances.



Analogue visitor map

The current visitor map is car-oriented and lacks info regarding bus lines and bike facilities. A screenshot on the left shows a part of the visitor map (Link).

When looking at the lay out of the current visitor map, one can say it lacks clarity and is quite challenging to comprehend. The amount of info shown on the map makes it quite hard for first time users to really comprehend the park structure. The current website also aims to inform visitors about available hiking trails and transportation options for reaching the park but

lacks in clarity and additional information like for instance which hikes are easily accessible with sustainable modes of transport. One of the key actions here is to rethink the visitor map into an 'experience' map that also emphases sustainability. Grenspark will work together with a design studio to redesign this map into something that is easily understandable, makes a better connection with mobility hubs, and provides additional information such as bike repair facilities and bike parking spots.

Digital Starting Point Map (MONA subproject for GKH)
Grenspark Kalmthoutse Heide aims to provide visitors with accurate and user-friendly information to support sustainable travel. We plan to develop an online interactive map that will serve as a central starting point for planning visits. This map will highlight key locations such as train stations, bus stops, walking and cycling routes, bus lines, parking areas and facilities like restaurants and restrooms.

The goal is to offer visitors a seamless travel experience while encouraging sustainable transport options. Additionally, the map will help distribute visitor flow by selectively displaying or omitting certain park entrances and parking areas that tend to be overcrowded, thereby protecting the park's delicate natural environment and enhancing the overall visitor experience. In a future phase, Grenspark aims to innovate by utilizing data from counting poles to provide real-time information on visitor density, allowing visitors to make informed decisions about which areas to explore based on current crowd levels.

Visitor communication to increase awareness and nudge towards sustainable mobility
Visitors often do not yet consider public transport as a viable option for reaching the nature reserve. However, nature visits should be closely associated with sustainable modes of transport, making eco-friendly travel an integral part of the overall nature experience. Railway stations, in particular, should be positioned as green entrances to the park, reinforcing their role in sustainable access to the area. Sustainable mobility has not been a focus in previous campaigns. Moving forward, Grenspark aims to promote a modal shift by encouraging visitors to travel and recreate in more eco-friendly ways, thereby increasing environmental awareness. These campaigns will not only highlight sustainable travel options but also emphasize behavior change, encouraging responsible and eco-conscious recreation within the park. Grenspark will adopt a more proactive communication strategy on social media, using opportunities such as the European Week of Mobility to spotlight alternative transport options and inspire visitors to choose greener ways to reach the park.

Information panels
Visitors arriving by public transport need to be provided with information when they get to the train or bus station. Only at the train station Heide is an information panel provided for visitors arriving by train, even though there are multiple stations and bus stops connecting to the park. The connection between these 'mobility hubs' and the park is currently insufficient. The customer journey needs to be easy and avoid hurdles that would prevent visitors from using a sustainable mode of transport. The network feels incomplete and needs to be filled further with additional paneling.

Action	Timing	MONA?
Introduction & implementation of a sustainable recreational mobility strategy		
mobility research by university students and/or design agency	2025-2027	within scope MONA
Creating smarter parking policies framework	-	outside scope
Creating a green experience		
Creating Green stations and connections to the park to create a green experience	2025 (design work) Starting 2025 (implementation)	within and without scope MONA and
Visitor information		
Improving accessibility info on website by adding more, concrete info about sustainable mobility	2024 (short term action)	within scope MONA
Improving the analogue visitor map (folders & signs) by focussing more on sustainable mobility and less on car facilities - design made by a design studio	2024-2025 (1 year)	within scope MONA
Providing a digital, interactive map on the website with a focus on sustainable mobility	2025 (6 months)	within scope MONA
Guiding visitors more visually between mobility hubs and park entrances. Adding information panels at mobility hubs where this is currently lacking	2024-2025 (1 year)	within scope MONA

4.2.5 Creating a modal shift in the park

Providing experiences & points of attraction

Grenspark offers a variety of attractions designed to enhance the visitor experience, including two towers that offer breathtaking panoramic views of the surrounding areas. However, the current challenge is that most of these points of interest are concentrated in the eastern part of the park, which is also home to the famous heathland landscapes that attract many visitors. This concentration of attractions leads to congestion, with certain areas becoming overcrowded. As a result, the visitor experience is diminished, and the fragile ecosystem is put at risk due to increased foot traffic.

In contrast, the western part of the park remains much less visited, primarily due to its more remote location and a lack of attractions and experiences to draw visitors. This imbalance creates an opportunity to better distribute visitor flow and reduce pressure on the over-visited eastern section.

Horseback rider network
GKH currently has a fragmented offering for horseback riders in the park. To provide a comprehensive offering for this target group, the park will work towards creating an equestrian network through a co-creative process. This will take into account the needs of this group, as well as existing experiences in the park, ensuring that the network is spread throughout the park to contribute to the visitor distribution objectives.

Train walk experience
Treintrambus is a Belgian organization dedicated to representing the interests of travelers. One of their projects is the 'Groene halte wandeling'. The aim of this project is to offer hikes that start and end at a train station, allowing recreational walkers to enjoy nature in a sustainable way. Grenspark will partner with this organization to facilitate a Green Stop hike that will also pass through the Grenspark area. To achieve this, a hiking route will be designed in collaboration with Traintrambus and the partner municipalities. Subsequently, a promotional campaign will be developed, signage will be added at the stations, and the hike will be integrated into the Grenspark's hiking network.

New experiences that make people 'shift'
GKH aims to offer new experiences that begin outside the park and guide visitors to one of the various entry points that are currently underutilized. This can help distribute visitor traffic more evenly while also encouraging the use of sustainable modes of transportation.

Inspired by 'Treinreis Nieuw Land,' Grenspark wants to create an audio story for train travelers. In this audio story, travelers on the train to Grenspark can listen to tales about the history of the railway line between Antwerp and Roosendaal, a route rich in historical significance for Grenspark. This could encourage visitors to take the train by creating a unique experience centered around it. This side project could be managed in cooperation with local stakeholders and volunteers, who often possess a wealth of interesting stories to share.

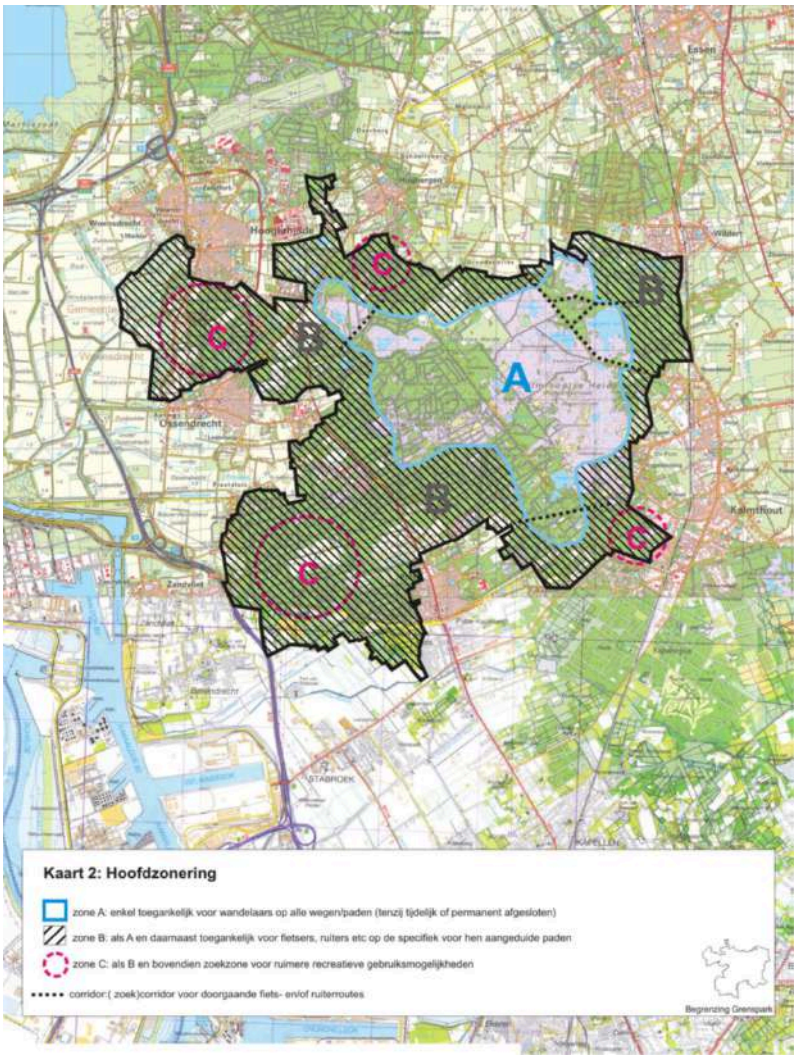
Offering hikes that guide visitors to different starting points can help both to distribute visitors within the park and to provide new, tailored experiences for currently underserved target groups, such as families with children. Grenspark hopes to collaborate with students on this initiative as part of a thesis project linked to one of the partner institutions.

<u>Zoning of nature area</u>

Grenspark Kalmthoutse Heide has divided its natural areas into three recreational zones:
Zone A: This zone encompasses the most valuable nature areas and features very limited recreational infrastructure, such as only a few hiking trails. Cycling and horse riding are not permitted here.
Zone B: This zone includes valuable natural areas and offers more recreational infrastructure, including additional hiking trails, benches, and picnic areas.
Zone C: This zone is designated for more intensive recreational activities, such as mountain biking (MTB), while still maintaining a focus on nature.

Creation of a spreading plan

Although the design process will focus on creating new hiking experiences as mentioned earlier, the existing zoning will remain unchanged and will serve as the foundation for all design work. The design process will aim to add more recreational facilities in the so called B and C zones As part of the design exercise mentioned earlier, the design team will review the existing offerings, including hiking trails, bike routes, and mountain biking paths, and explore strategies to encourage visitors to explore the western side of the park. The team will have the freedom to create new, compelling experiences that will attract visitors to this less-explored area. The team will consider reimagining existing activities, refreshing current trails, or developing entirely new points of interest and attractions to create a balanced and engaging visitor experience throughout the park. The team will be asked to provide experiences that connect to all major starting points.



Design work on entrance gates

As a part of this design exercise, the design teams will look at the current entrance gates, evaluate them and potentially make suggestions into changing locations, size, adding more, less..etc. The design team needs to think which kind of visitor we want to attract to each gate and what facilities need to be provided to really enhance these gates. Within the timeframe of MONA it is possible that one or more pilot projects will be designed and potentially developed. It is to be expected that full realisation of these entrance gates 2.0 will be outside of MONA.

<u>Routing structure</u>

Grenspark offers around 28 marked hiking routes and 4 mountain biking (MTB) single tracks. The park also features node networks managed by either the Province of Antwerp or the Province of Noord Brabant. While there are a few horse riding trails, they are not well connected. Hiking routes provided by Grenspark are clearly marked with wooden posts throughout the park. Information signs are

available for all 28 hikes, though there is room for improvement in terms of creating a stronger visual connection with mobility hubs.

Monitoring of visitor flows

GKH is committed to purchasing several counting devices to gain better insights into how the hiking and mountain biking network is being used by visitors. The results will be used, on the one hand, to conduct analyses and identify opportunities for improving the network. On the other hand, this information can be integrated into the digital map to provide visitors with real-time information about visitor density on different trails. This could encourage visitors to explore less crowded areas of the park.

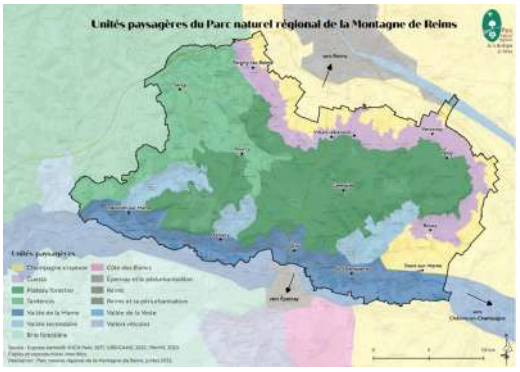
Creation of a 'Signage family'

As mentioned earlier, the design team will rethink several entrance gates. Part of this exercise will involve reimagining the current routing and signage architecture. The objective is to make the signage clearer, more easily understandable, and to enhance its architectural quality. The outcome will be a guidebook that provides a cohesive framework for all entrance points and information hubs, ensuring a consistent and unified visual identity.

Action	Timing	MONA?
Providing experiences & points of attraction		
Creating of a 'spreading plan'	Q1-Q2 2025	Within scope
Creating of a cohesive horseback riding network	Q1-Q2 2025	Outside of scope MONA
Creation of a new 'train walk' experience	2025	Within scope MONA
Creation of an audio story to the park	2025-2026	Within scope MONA
Creation of a 'multi-day' hike	2025-2026	Outside scope MONA
Zoning of nature area		
Creation of a 'spreading plan'	Q1-Q2 2025	Within scope MONA
Design work on the entrance gates	Q1-Q2 2025 (design work) starting 2025 implementation	partially within scope MOna, partially outside

Routing structure		
Creating a visitor flow monitoring network by using counting poles for recreational activities	starting 2025	Within scope MONA, but will continue after MONA
Monitoring mountainbike usage on mountainbike loops	starting 2025	Outside scope MONA
Creation of a 'signage' family	Q1-Q2 2025 (design work) starting 2025 implementation	partially within scope MOna, partially outside

4.3 Modal shift action plan: Montagne de Reims Regional Park



Montagne de Reims regional nature Park, located in the culturally rich Champagne region, attracts visitors for nature and leisure tourism, especially with its expanding wine tourism. With the renewal of the Park's Charter ("Objective 2039"), mobility has become a priority to improve pedestrian, cycling, and connections towards sustainable transportation modes. Although the park is accessible by train and near Reims, Épernay, and Châlons-en-Champagne, it lacks transportation links between train stations and key tourist sites.

The park's landscape includes forests, vineyards, and farmlands, with three state forests certified as "Forests of Exception" (Faux de Verzy, Chêne à la Vierge, and Hautvillers), two Natura 2000 sites, and other conservation areas. The Faux de Verzy forest alone draws 250.000–300.000 visitors annually, yet information on access is limited, and car travel remains the primary option. Existing data on visitor patterns is underused but could offer insights into visitor mobility and needs if analyzed more fully.

During and after Covid, counting poles showed that more visitors are going to the same busy and "accessible only by car" nature sites in the park, leading to congestion and decreasing nature values. PNRMR wants to encourage visitors to use train and bike to visit other and less fragile nature area in the Park. Another challenge is to balance the increasing number of outdoor activities, such as mountainbiking, while limiting their impact on nature. The park explores "nudging" as a solution to encourage responsible and sustainable visitor behaviours in nature.

Experience in the collection of visitor data is relevant for the project. PNRMR uses counting poles since many years and is currently improving its visitor flows strategy.

PNRMR sees sustainable mobility as a way to reduce the impact of tourism and leisure on the environment. Four train stations are located in the Park and are relevant to improve modal shift. These four train stations are directly connected to Reims and Epernay, biggest cities of the area located outside of the Park but very close. Therefore, the 4 train stations located in PNRMR could become “green entrances” of the Park, improving modal shift towards and within the Park.

An “on-site study” around train stations in the Park

In order to study the potential of railway stations as gateways to the Park, and to identify the actions which need to be implemented, the Park has decided to carry out a study as part of its main projects inside of MONA.

This study will involve every stakeholders described in the next part of this document, in order to ensure that we develop a regional vision and project around this train line and these 4 train stations. It will be conducted by students from 2 different schools and expertise fields, through an “on-site study”.

The stages of this study will be the following:

- From September 2024 to January 2025, Masters degree students from “Institut de Recherche et d'Etudes Supérieures de Tourisme de la Sorbonne - Paris 1” (recreational and tourism planning), will carry out a diagnosis of the visitor experience by train in the Park, and around the 4 stations. They will formulate propositions for projects to be developed in terms of communication, visitor information, routing, and zoning, in order to improve the “attractiveness” of the train as a way to reach the Park and as a mobility solution within the Park.

As part of this stage, recreational and tourism planning students will spend a whole week “on site” in order to better understand and explore the area. Different opportunities for dialogue with local stakeholders will be an important part of this work.

"On-site workshop" for recreational and tourism planning students in PNRMR - Nov 4th to 8th

- From January to June 2025, students from "Institut d'Aménagement des Territoires, d'Environnement et d'Urbanisme de Reims" (urban planning school) will take over to continue the study. They will work on identifying and describing development projects that can be carried out around stations to implement better services, information signage. One very important aspect is that these projects must be sustainable in order to be in line with the park's values.

Again, this part of the study will be carried out both on site, in collaboration with stakeholders, and with "office work" carried out by students and their supervisors.

The impact of this "on-site study" on our action plan for a modal shift through "La Ligne des Bulles" (regional train)

In the end, thanks to collaboration around MONA Project and the "on-site study", PNRMR and local stakeholders will have a clear vision on whats needs to be done and implemented to improve the role of train stations as "green entrances" of the Park, and to improve the attractiveness of the train to reach the Park and get around.

Since at this stage, the "on-site study" is not finished yet, it is difficult to describe all the actions and projects that will be designed and implemented during MONA Project and on a more long-term basis. Also, some projects designed by this study will be possible to implement through MONA Project (e.g : visitor information at train stations in the Park), while others will be more long-term projects (e.g : urban planning around train stations).

4.3.1 Stakeholders involved

PNRMR needs partners to effectively contribute to a modal shift. As an organization without its own land or decision-making authority on mobility issues, collaboration is essential to implement effective measures. The following table illustrates the complexity of the stakeholder landscape, with each stakeholder also working on different themes.

Public authorities and organisations in charge of mobilities	Destination Management Organisations	Other
Région Grand-Est (regional authority ; in charge of planning train mobilities inside of the region)	⇔ Agence régionale du tourisme du Grand Est (Grand Est regional tourism agency)	Municipality of Rilly-la-Montagne (train station located in the village)
SNCF (national railway company, currently in charge of running regional trains)		Municipality of Germaine (train station located in the village)
Grand Reims (Reims greater area, in charge of bike, mobility and transport)	⇔ Reims Tourisme et Congrès (Reims greater area tourism office)	Municipality of Avenay-Val-d'Or (train station located in the village)
Communauté de Communes de la Grande Vallée de la Marne (Grande Vallée de la Marne greater area, in charge of bike, mobility and transport)	⇔ Office de tourisme intercommunal d'Hautvillers (Grande Vallée de la Marne area tourism office)	Municipality of Aÿ-Champagne (train station located in the village)
Epernay Agglo (Epernay greater area, in charge of bike, mobility and transport)	⇔ Epernay tourism office	Montagne de Reims regional nature park (PNRMR)
Département de la Marne ("Marne" public authority, in charge of roads, and bike development)	⇔ ADT Marne (Marne agency for tourism development)	"Champagne Hillsides, Houses and Cellars" World Heritage management oranisation
		ONF (National Forestry Office)
		Tourism stakeholders (ex: museums, main sites of interest of the area, accommodations,...)
		Representatives for outdoor sports (e.g: hiking committee, Mountain Bikers Foundation, cycling events,...)

4.3.2 Inventory sessions

An inventory session was held at the beginning of the project, which gathered 25 participants to discuss the main challenges and opportunities for sustainable mobilities towards and within the Park. During this session, some key challenges have been underlined by participants.

Communication "before and during" visitors stay, is a key issue :

As important as it is to improve information towards visitors who are in the Park, communication before reaching the destination is a major aspect. Tourism stakeholders sometimes work with B to B travel agencies, or other target groups who could be interested in using the train to reach the Park, however to do so, they need to be aware of this possibility before their visit in the region.

More coherence needed between developments made by different public authorities in charge of mobilities:

For example in PNRMR, at least 4 different public authorities are in charge of the creation of biking routes. Administrative boundaries between territories sometimes lead to different ways of planning these projects, which does not make sense for visitors. With the same idea, the 4 train stations located in the Park should have the same level of facilities, and information found at train stations should be linked to each other. While today, several public authorities and one transport company are involved around train stations, which sometimes leads to different projects.

The visitor experience when using the train to reach the Park or to get around, would not be qualified as a "nice experience" today.

A "last mile" issue exists at each train station (lack of signage between train stations and tourist/leisure attractions nearby, for example), as well as poor information, services and facilities around train stations in most cases. Connection between train stations and biking routes is also a field where improvements need to be made.

Coordination between stakeholders involved is a challenge.

As we described in the table above, many stakeholders are involved here. This project brings together public authorities in charge of mobilities, destination management organisation (tourism field), as well as other organizations (for example, the National Forestry Office is involved because improving access to nature thanks to the train could mean easier access to forests located in the Park). The project needs to consider the competencies and strategic planning of different stakeholders, who are not always used to work together on such a topic.


4.3.3 Creating a modal shift to the park

The Park is located between 3 main cities of the Champagne area: Reims, Epernay, and Châlons-en-Champagne. These 3 cities are connected to Paris with direct trains.

It allows an easy access to PNRMR from Epernay and Reims which are linked to each other through a regional train called “La Ligne des Bulles” (which got its name from the world heritage listing of “Hillsides, houses and cellars” of Champagne in 2015). This railway line crosses the Park from north to south, and stops at 4 train stations in the Park.

The actions planned to improve access to the Park through the train, are described in the table bellow.

Action	Timing	MONA?
Visitor information		
Information about trains on Park’s website. A webpage on PNRMR’s website presents “how to reach the Park or how to get around the Park with the train”. When clicking on “How to reach the Park”, it leads to this same webpage. A widget is included in the page, to find train timetables in real time. https://www.parc-montagnedereims.fr/decouvrir/venir-et-se-deplacer-dans-le-parc/	2023	Outside of MONA scope
Event organization of “La Grande Traversée”, an event which		2022-2023 :

promotes the accessibility of the Park with the train. This event attracts +/- 2000 participants. It has been organized by the Park in collaboration with many local stakeholders and municipalities in 2022 and 2023, and will be back in 2025.		Outside of MONA scope 2025 : within scope MONA
Routing structure		
Printed map of PNRMR. The printed map (french/english) presents the routing structure of the Park (hiking, biking and mountain biking routes), and its main points of interest. It also includes an insert about train accessibility of the Park, and shows connections between paths and train stations. https://www.parc-montagnedereims.fr/brochure/carte-des-sentiers-plein-air/	2023 Will be updated and reprinted in 2025	
Improvement of online / digital information about walking routes in the Park. PNRMR and other DMOs are working on the improvement of digital information of routes / paths. Improving this aspect will enhance the experience of visitors using the train, thanks to better access to digital information of the routing structure of the Park.		2023-2027 Within scope MONA

4.3.4 Creating a modal shift in the park

As a coordinator of MONA Project implementations in Montagne de Reims Regional nature park, PNRMR will focus on creating a modal shift in the area thanks to 4 train stations located in the park. There is a specific focus on sustainable urban and landscape planning needed around these train stations, as it is underlined in PNRMR “landscape plan” published in 2021. Therefore, many actions will be focusing on what can be done in the Park, around train stations, to improve visitor experience for people using the train and other sustainable ways to get around and travel inside of the Park.

Action	Timing	MONA?
Visitor information		
Developing and implementing a format for visitor information at train stations		2025-2026 Within scope MONA
Improvement of online / digital information about walking routes in the Park. PNRMR and other DMOs are working on the improvement of digital information of routes / paths. Improving this aspect will		2023-2027 Within scope MONA

enhance the experience of visitors using the train, thanks to better access to digital information of the routing structure of the Park.		
Urban planning		
Designing urban and landscape planning around train station (as part as the “on-site study”)		2025 Within scope MONA
Zoning of nature areas		
It has been decided to focus on 4 train stations located in the Park, all linked to Reims and Epernay with the train, and all located close to different nature areas and forests		2023-2024 Within scope MONA
Routing structure / Experiences / Points of attraction		
Improvement of signage around train stations towards the main point of interests and the main hiking paths and biking routes. Use of signage to better allow visitors experiences combining the use of trains, walking and biking.		2026-2027 Within scope MONA And after, through other opportunities

5. Crosslearnings

Below table outlines cross learnings across the pilot A natural areas, working on the topic of a modal shift to sustainable recreational mobility. The MONA partnerships and transnational cooperation, allows us to learn from one another’s strategies, successes and challenges, accelerating progress in addressing mobility challenges.

The crosslearnings below describe common challenges, best practices and lessons learned across pilot A since the start of the project, March 2023, until the end of 2024. Every year the action plans can be reviewed based on lessons learned and best practices.

Common challenges	Overall • How do we know what is working? **Complex stakeholder landscape** • Recreational mobility lacking in mobility domain, plans and research • No domain specific stakeholder on this topic • Many different types of stakeholders involved

	– Municipalities, policy advisors (recreation or mobility, local & regional authorities, infrastructure & mobility providers,... – Fragmented land ownership – Different or conflicting interests • Many new stakeholders being introduced in the network of nature parks • The need for better communication and collaboration between different "worlds" (mobility stakeholders / tourism stakeholders / nature preservation…) • Stakeholder involvement and engagement is time-consuming. • Changing stakeholder landscape makes stakeholder management challenging **Authority** • Working on this topic without being in charge of mobility • Dependent on decision-making of various stakeholders – Different plans & agenda (MONA vs. municipalities) – Not only municipalities (transport regions, transport companies,...) – Long term mobility plans already decided for next couple of years (even outside scope of project MONA) **Designwork** • Challenge to improve without putting random objects in the public space! • Different rules in different station areas - not one size fits all – differences between station function/sizes and regulations, platform, stationbuilding, parking, street… **Priorities & decision making** • Car use (parking) is too facilitated and unregulated – Need for push measures next to pull measures • Local political context make some decisions quite hard • Recreational mobility, different approach from 'normal' commuter mobility – How do we play into this? • Some parts of the park are not accessible by sustainable modes of transport • Visitors are not aware of alternatives
Lessons learned	**Stakeholder management** • The transition to sustainable mobility is a complex puzzle that can only be solved through an integrated approach and

	collaboration with local authorities. ● Importance of involving the local municipalities, but also other partners like the transport region **Process** ● No one-size-fits all plan/approach for "green stations". It is custom work ● The goals are quite clear, the road towards is not. Not a fixed path to get there ● Some results will only be noticeable after the end of the MONA project. High ambitions are key, but will also take years to implement. ● The importance of working on Push & pull measures to achieve modal shift. **Visitor management** ● Sustainable mobility options will not cater to all visitors/recreation groups - it is about developing green alternatives => Igniting / starting a transition. **Modal shift is a transition that will take a long time.** ● Visitor participation is hard, behavioral change is harder. **'The MONA influence'** ● Regional planning is very commute-driven: a lot is organized around commute, though recreational mobility is often overlooked. Thanks to the MONA project, recreational mobility is more integrated locally. ● MONA is a EU project, but locally stakeholders unite through the project => improving cooperation on this topic + works as an accelerator for the transition to sustainable mobility. ● MONA as accelerator for mobility related projects

6. Conclusions

The *Action Plan for Facilitating and Stimulating a Modal Shift Towards Sustainable Mobility* serves as a foundational step in promoting environmentally friendly transportation alternatives in nature areas. By focusing on walking, cycling, and public transit, this initiative highlights the commitment in the context of project MONA, from National Park Utrechtse Heuvelrug, Grenspark Kalmthoutse Heide, and Montagne de Reims Regional Park to reduce car dependency while preserving the unique characteristics of their landscapes.

By addressing the pressing need for a modal shift in mobility, this initiative exemplifies the synergy between environmental stewardship, community engagement, and sustainable tourism, creating a roadmap for a more sustainable future in natural spaces in North-West Europe.

Through adoption of a joint format for collaboration and the development of tailored modal shift action plans for each park, this pilot encourages the sharing of insights, lessons, and best practices across various regions across North-West Europe. Annual reviews ensure the plans remain adaptive, informed by experience by development of modal shift pilot actions, and responsive to evolving challenges and opportunities.

Beyond its immediate goals, this document contributes to broader sustainability objectives by offering a source of knowledge and inspiration on the topic of sustainable recreational mobility for other parks in densely populated regions of North-West Europe. It also serves as groundwork and input for the upcoming *"Guidebook to Sustainable Tourism in Nature Areas",* further amplifying its impact by supporting nature areas in fostering sustainable tourism.

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