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NEMU – Nordic Ecosystem Mobility Unlimited

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Summary

Seamless multimodal mobility across borders in the Nordics and beyond is essential to the EU commuting and leisure travel market. It is also one of the action points in the EU Green Deal and the Nordic Vision 2030: The Nordic Region will become the world's most sustainable and integrated region by 2030.

While using a private car or air travel to cross borders in the Nordic region is easy, digital planning and navigation of other land or sea-based mobility modes are fragmented and confined to national boundaries.

NEMU is a transformative project aiming to elevate connectivity and mobility across the Nordic region. The initiative seeks to leverage the power of open mobility data to enable seamless, sustainable, and borderless travel across Nordic countries using one app and pay once.

By integrating planning, booking, payment, and navigation into a user-friendly service, NEMU addresses the pressing need for more efficient and environmentally friendly transportation options.

The project benefits from Nordic+, which serves as a rig for long-term collaboration to boost data sharing and scaling of smart connectivity solutions.

Nordic+ collaborate closely with the Nordic transportation authorities and initiatives like ODIN, a network for the standardisation of mobility data and sharing. The collaborative attitude underscores NEMU's commitment to a data-driven and cooperative approach that positions it at the forefront of smart connectivity solutions in Europe.

The NEMU project will use and develop existing services in combination with the results of the NOMAD project. The project partners Entur, Matkahuolto and SFMCON will enable multimodal planning between addresses in the Nordics using existing standards.

Using EU regulations and standards, the project shall formulate a strategy for facilitating third-party booking, payment, and validation of multimodal trips in one go.

On a practical level, NEMU address cross-border travel services in two corridors:

- The North-South: Oslo-Gothenburg, Malmö, Copenhagen (train & bus as a minimum) enabled by Entur's MaaS-app
- East-West: Helsinki – Stockholm – Oslo (train, bus and ferry) enabled by Matkahuolto 's MaaS-app

NEMU demonstrates how single MaaS apps can Nordic journeys more accessible. At the same time, NEMU opens the market for other mobility actors and software developers.

The NEMU project

Today we can navigate the world by air travel using one travel agency app including booking, ticketing, and payment in the currency we prefer. We can also navigate from anywhere to anywhere, even across borders using the built-in GPS in a car or on an app.

But, if we want to use more sustainable and shared mobility on land or sea, there isn't any easy end-to-end digital planning, purchase and navigation services available that can compete with the borderless navigation using the car's GPS.

We must rely on our own skills, abilities, and plenty of time to figure out how to get a ticket, book a ride or even more difficult make and navigate a multimodal travel plan.

No wonder that the use of the car and air travel is increasingly popular.

The EU is addressing the lack of Europe wide multimodal planning and navigation through the Multimodal Travel Information Services (MMTIS) regulation which calls for access to open mobility data from all modalities through National Access Points (NAP) Shortly, the booking and payment of mobility services through MaaS agents will be governed by the EU regulation known as Multimodal Digital Mobility Services (MMDS).

The NAP's are beginning to get populated with open mobility data, but the true value of the MMTIS and MDMS regulation will first be recognized when Mobility-as-a-service (MaaS) agents materialize utilizing the open mobility data. While regional and national MaaS implementations may be facilitated both by public and private actors, it is unclear how cross-border MaaS schemes will evolve.

The Nordic Ecosystem Mobility Unlimited (NEMU) project is settled to address the challenges for more sustainable, shared seamless borderless mobility in the Nordics through a Living Lab with real travelers.

Seamless mobility across borders in the Nordics and beyond is an important part of the EU single market both for commuting and for business travel and leisure/tourism.

While it is easy to use a private car or air travel to cross borders in the Nordic region, the use of digital planning and navigation of other land or sea-based mobility modes is very fragmented and within national borders.

Open Trip Planner for the Nordics

Find optimal multimodal travel plans – even cross national border in one travel planner service.

Travel plan suggestions including pricing between any two addresses in the Nordics

Consolidates NeTEx and SIRI open mobility data from National access points in Norway, Sweden, Denmark and Finland

An open service for Mobility as a service actors



The NEMU project will focus on how to seamlessly bridge national borders through a single digital service using shared and more sustainable mobility choices.

The project is by nature transnational. It aims at validating the use of open mobility data from several NAPs in the Nordic countries to deliver multimodal multinational travel information services of real value to citizens in the region.

To support cross border multimodal travel planning a travel planning service supporting the whole Nordics will be made available to the project by Entur. The Nordic travel planner can be used to plan multimodal trips between any addresses in the Nordics including pricing using NeTEx data from NAPs.

The project shall formulate a strategy for how to facilitate third party booking, seat reservations, payment, ticketing, and validation of multimodal trips from one MaaS agent in one go. The strategy shall look towards the preparatory work for the MDMS regulation for how to standardize third party booking, validation and payment of multimodal cross border travel plans.

The strategies formulated, will allow cross border multimodal discovery, planning, booking, payment, and navigation in one go for:

1. The Oslo-Gothenburg, Malmö, Copenhagen corridor. (train & bus as minimum)
2. The Helsinki – Stockholm – Oslo corridor (train, bus, and ferry)

Benefits for travellers:

Long distance: Easier to discover and plan multimodal cross border journeys.

Cross border commute: Single commuter ticket for multimodal travel making commute seamless.

Nordic Ecosystem Mobility Unlimited

Delivering true seamless multimodal travels.

Cross border trip planner for all Nordic countries.

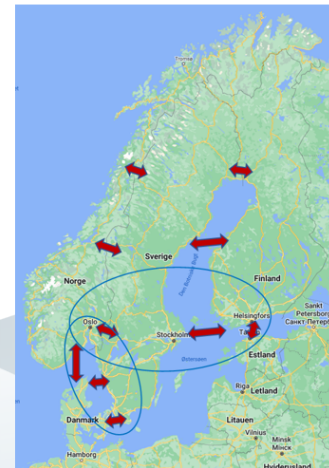
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It is the ambition for the project that the established MaaS services will expand into viable commercial operation and create first benchmarks on how open mobility data can be used to make use of sustainable multimodal travel accessible to all without prior knowledge of regional or other countries public transport systems and ticketing methods.

During the project travel patterns in the two cross border corridors will be analysed before and during the intervention.

The program is navigating uncharted territory and is likely to find problem areas, that needs further exploration and innovation. The Nordic+ Open mobility rig will closely monitor progress on the project and prepare further proposals to fulfil the ambitions of enabling use of sustainable ground and sea mobility options between any two addresses throughout all Nordic countries using open mobility data.

While the Nordics is the home of good rail and road infrastructure and a wide variety of shared mobility options, there are no digital services that will support travel planning across national borders in the Nordics. The NEMU project will be pioneering the value of use and combination of open mobility data through national access points to make it possible to roam around in the whole Nordic region just as easy as we are used to in our home regions.

The background for the Nordic Ecosystem Mobility Unlimited project

The NEMU project was initiated by ITS Nordic+ as a follow-up action after the predecessor NOMAD project. ITS Nordic+ was established during the lifespan of NOMAD and constitutes the same stakeholders: all the ITS associations in the Nordics including Estonia.

The NEMU project is a direct and natural follow-up activity after NOMAD – using the findings and results of the NOMAD project as a platform:

The NOMAD findings were listed as a minimum number of criteria that need to be in place to make cross-border multimodal MaaS and roaming work:

- A shared understanding of the MaaS concept and societal goals (including the joint Nordic vision 2030)
- Sharing of data in a free, standardized, and unbiased way
- Clearinghouse functions for both private and public transport providers
- Fair models for cost and revenue sharing for all transport providers - this might include the sharing of public subsidies with private transport providers
- Standards for the exchange of data, organizational aspects, and mobility operations (including the ODIN projects work on NAP and mobility operations)
- Adoption of local currencies and language
- Borders, concession areas and other boundaries should not limit transport operations
- A responsible unit/authority for cross-border and cross-boundary mobility in the Nordics

The first six bullets will be addressed directly in NEMU and will certainly help solve the last two also. In addition to the NOMAD results and findings, ITS Nordic+ has been established and will serve as a network with access to a community of mobility entities and experts – and with the capacity to run projects, demonstration and pilots.

As such, ITS Nordic+ is in fact a purpose-driven innovation ecosystem also known as a rig. The NEMU project is seen as the first step as a part of a larger picture/evolution towards seamless sustainable multimodal mobility throughout the Nordics. This is also known as MaaS roaming.

How will this project create something unique and innovative?

The NEMU project will create the first full fledged multimodal cross border mobility service in the Nordics – and Europe. The service will use open mobility data distributed through the National Access Points from several Nordic countries and following up on the emerging EU mobility directives.

The most significant innovation is the ability to plan, book and pay for mobility in and between Nordic countries in a single service using native language and paid in one go in the home country currency. In fact, planning of cross border multimodal journeys will go from hours of hard labor to a few minutes of easy planning - and fully compete with the booking of air travel or using a car and GPS navigation.