

Development Plan for the Seinäjoki Airport Environment – *Seinäjoki as a Logistic Hub for eCommerce*

Seinäjoki Airport as a test environment and model airport for an ecological cargo airport and as a logistic center for e-commerce, using unmanned logistic chain for the first mile and last mile deliveries

Into Seinäjoki Ltd

Into Seinäjoki Oy is a development company owned by the City of Seinäjoki, having nearly 20 years' experience in developing the business environment of the area. We have services for start-ups, growth companies and companies in different stages of their development and internationalization processes. We offer services that support growth and development: versatile business premises, industrial plots, as well as services for brainstorming a business idea and reforming a business.

Into Seinäjoki Oy has the experience and ability to identify and introduce new, innovative operating methods and tools related to the promotion of entrepreneurship. During its history, Into Seinäjoki Ltd has developed the innovation environment of the Seinäjoki region together with universities, university centers, the city and companies, processed and evaluated more than 1,000 business ideas, supported the creation of numerous growth-oriented companies and developed several business development innovation tools.

We are also responsible for developing Seinäjoki into an even better operating environment for companies, developers and citizens alike. We are involved in e.g. in the development of the city center, station area, logistics area, industrial areas and the airport environment.

Operation of the Seinäjoki Airport

Seinäjoki Airport has been in operation since the 1970s for recreational aviation and since the 1980s also for commercial air traffic. The airport has been strongly developed over the past 15-20 years, also utilizing various EU funding. In terms of infrastructure, the airport is at the top level in the country in comparison between provincial airports. More than EUR 15 million has been invested in airport infrastructure over the last 20 years.

In 2013, with the latest development project, it was stated that business tourism alone does not maintain operations and profitability, and the Helsinki route is not profitable. Therefore, specialization is important and a broader approach than the traditional concept must be found. A new and innovative source of income and the airport concept are vital for profitable operations and possible additional investments. Seinäjoki Airport Ltd was founded in 2015. The company has a broad-based ownership structure and carries out the responsibility for the maintenance of the airport at the same time being responsible for the cost level of operations. Currently, the airport is run by *On demand* concept. The *On demand* type service model has proven to be a viable concept at a small airport that does not have regular scheduled traffic.

A vision for new business

The development of Seinäjoki Airport and the implementation of new innovative solutions will promote the growth and development of the Seinäjoki area. The aim is to enable international accessibility of the Seinäjoki economic area (eg Chinese and European tourists) and generate internationalization of business leading to increased vitality of the region. The development of the airport operations will also promote foreign direct investments into the Seinäjoki area. By creating an ecological model airport for cargo and passenger traffic that utilizes future technological solutions, new business opportunities will also arise in the region. One interesting possibility is to explore environmentally friendly alternative methods for keeping runways thawed, as winter conditions pose challenges to the maintenance and operation of airports. This has also aroused interest in the EU Commission.

The good logistical location of Seinäjoki, the city's strong growth and development, as well as a strong network of business operators, support the idea of an e-commerce concentration to be formed in Seinäjoki. Seinäjoki is Finland's sixth largest concentration in the trade sector, and the goal for the future is to be an even more attractive place for trade and service companies. In a changing world, we need to keep pace with developments. The development of e-commerce in its various forms is based on global megatrends, which are affected not only by changes in consumer trends, e.g. digitalisation, climate change, internationalization and population growth. With the Covid-19 crisis, the need for faster development in drone technology and logistics is expected. When building the e-commerce center planned for Seinäjoki, the aim is to find the above solutions. Therefore, the strong focus of the plan is on the unmanned logistics chain and the related product development, testing and future solutions of the companies.

The long-term vision is to have a direct cargo flight from China to Seinäjoki, which could serve as a new gateway for China's major e-commerce operators, especially to the Nordic countries and also to the rest of Europe. In the shorter term, various possibilities will be explored for directing e-commerce cargo from, for example, a European cargo airport via Seinäjoki for further distribution to Sweden, Norway and various parts of Finland. Negotiations have taken place with an international company developing unmanned cargo drone. The transport capacity and operating range of the new type of cargo aircraft are significantly larger and longer than those of other freight drone developers known before. The company would be willing to establish a base in Seinäjoki. If implemented, the establishment of a base in Seinäjoki will require investments in infrastructure in the airport environment. Discussions will also take place with other potential actors who may enable the planned development in Seinäjoki. The party that is best able to meet the development needs of the Seinäjoki airport environment is selected as a partner.

Through development activities, the goal is to bring together companies operating in Seinäjoki that focus on e-commerce, for which new solutions aim to provide a more efficient and ecological logistics channel to reach their customers. Close cooperation with Seinäjoki Airport Ltd is essential at all stages of the development work. The logistics focus on e-commerce opens up new business opportunities for companies in the region. The e-commerce concentration offers an opportunity to enhance e.g. the operation of traditional shops and provide new opportunities for growth in the intensified competition in the trade sector.

Justification for the needed development measures

Seinäjoki Airport Ltd runs its operations with a minimal cost structure, which is why the airport does not have the opportunity to invest in new types of development measures. Small resources without external support are only sufficient to maintain *On demand* operations. For this reason, Into Seinäjoki Oy has approached Seinäjoki Airport Ltd and proposed closer co-operation to work on a broader development plan.

In the current situation, the municipalities of the Seinäjoki area will also not be able to provide additional support for airport operations from their tight budgets. The elaboration of a development plan is of paramount importance, as it will make it possible in the future, for example, to apply for larger EU-funded projects to implement the actual new business models. In the future, new development prospects could also inspire municipalities to join forces in reactivating the airport's development efforts, if the effects of the new business created at the airport were also reflected in the growth of business in the surrounding municipalities. Specialization in new types of ecological and innovative cargo airport operations could also bring opportunities for wider business growth regionally. External support in the form of development projects or other financial grants during the development phase of new activities is crucial to ensure that measures are implemented in the future.

The development plan may provide a new kind of concept for activating airport operations. This is also in the interests of the City of Seinäjoki, the surrounding municipalities and the companies of the Seinäjoki area. From the perspective of the City of Seinäjoki, all measures that can be used to find a new kind of activity to activate Seinäjoki Airport are worthwhile and desirable. Without the current private operator, the costs of maintaining Seinäjoki Airport would be borne by the City of Seinäjoki and the Municipality of Ilmajoki. The City of Seinäjoki appreciates the investment of the Seinäjoki Airport Ltd in maintaining the airport infrastructure. This valuable work is also one of the reasons why a medical helicopter base is being established at Seinäjoki Airport in the near future. 24/7 medical helicopter operations are scheduled to start in early 2022. A prerequisite for operation is an operating airport with air navigation equipment.

Actions supporting the Development Plan

- **Air Traffic Development Between the EU Rural Areas and China –project
1.1.2020-31.12.2021**

Into Seinäjoki Ltd is involved as a private sector partner and expert organization in the international cooperation project “Air Traffic Development Between the EU Rural Areas and China” managed by Into Seinäjoki Ltd, a subsidiary of the City of Seinäjoki. The project aims to develop passenger and freight traffic between EU rural areas and China. From China, both passenger and cargo traffic will increase significantly (according to forecasts even double) by 2037, posing a challenge to the current airport network. The need to develop rural

airports outside major cities is tremendous due to growing air traffic. During the project a roadmap for the ecological future of rural airports will be developed. This includes assessments on how the operation of rural airports could be developed in a more ecological and efficient way for both freight and passenger transport. In addition to Finland, Estonia, Slovenia, Italy and Greece are partnering in the international cooperation project.

Seinäjoki Airport has been selected as Finland's only rural airport to join the European network due to Seinäjoki's central logistical location and dynamic growth in the area. In addition, the operation of the airport by a private company facilitates various development measures and increases opportunities in new types of experiments. With regard to Seinäjoki Airport, the goal is to activate and create a new kind of business for Seinäjoki Airport and its surroundings.

Specific Measures for the Development of Seinäjoki Airport

Seinäjoki Airport is very well suited as a Living lab test environment for finding alternative and ecological solutions. Existing air traffic operations can be easily adapted to the requirements of test environment operations. At Seinäjoki Airport, it would make sense to test e.g. future technological solutions for an ecological model airport for cargo and passenger traffic, taking into account the continuity of the unmanned logistics chain with drone technology, as well as various tests. For example, utilizing excess heat to keep the runway ecologically thawed in winter conditions is of great global interest, significantly increasing flight safety.

Objective: Seinäjoki Airport as a Living Lab test environment for an ecological model airport for cargo and passenger traffic utilizing future technological solutions.

- 1) Integration of the test environment into Seinäjoki airport operations:
 - Exploring the testing possibilities of future technological solutions to create an ecological and efficient cargo airport model
 - Identifying companies that could be suitable for the test environment and bring together companies suitable for the test environment in a consortium of companies
 - Organize joint events among the business network to form an overall vision and model operations

- 2) Testing the utilization of excess heat for the ecological thawing and maintenance of runways
 - Preparatory measures to expand Seinäjoki Airport operations as a test environment for the ecological thawing and maintenance of the runway
 - Development of an action plan
 - Networking with key actors and companies
 - Assembling a consortium of companies
 - Mapping of financing options for the actual piloting

- 3) The continuum of an unmanned logistics chain
 - Preparatory activities and studies for the introduction of drone technology as part of an ecological freight transport model
 - Construction of a business network
 - Finding new partners.

Results: A model suitable for piloting an ecologically operating cargo airport and the readiness to establish a test environment as part of and in connection with the operations of Seinäjoki Airport Ltd.

- **eAviation -project (1.6.2020-31.5.2022)**

The city of Seinäjoki and the airport have also been involved in the preparation of the “eAviation - Electrified Airport and its Territorial Impact” project planned for the Kvarken region. This is a two-year project that has applied for funding from the EU's Botnia-Atlantica program, involving small airports in Norway, Sweden and Finland. The aim of the project is to create a network for the development of regional air transport with electric aircraft and to carry out a study on the regional impact of electrified air transport and its utilization, as well as on the development needs of airport infrastructure and electrical infrastructure. The Botnia-Atlantica Secretariat has submitted the project for funding. Through the project, Seinäjoki Airport will be one of the airports in the Kvarken region to which a route for electric air traffic is planned in the future. This provides excellent support for the development activities already planned and for the future vision of Seinäjoki Airport becoming a specialized cargo airport model airport and a Living lab test environment.

Representatives of the City of Seinäjoki and the airport will be able to participate in meetings and development measures, and all information produced during the project will be available to those responsible for the development work. The biggest impact of being involved in the project will be the fact that Seinäjoki Airport will be spotted on the map of electric traffic in the Kvarken area as one of the partners and actors in the future aviation development network.

- Study on the potential of Seinäjoki Airport and the possibility to act as a model airport for an ecological cargo airport

The study is part of the "Air Traffic and Logistics Development between the EU Rural Areas and China" international cooperation project. The study covers the following dimensions from the perspective that Seinäjoki Airport would become a test environment and model airport for an ecological cargo airport, as well as the logistical concentration of e-commerce, taking into account the unmanned logistics chain:

- Location of UAV logistics routes
- Suitability of UAV logistics for the needs of the backbone network (electricity)
- aviation safety aspects
- third parties
- use of the backbone for UAV traffic
- unsupervised aerodromes
- deep waterways and their significance
- AFIS airports and their locations
- taking into account professional aviation
- Suitability of Seinäjoki Airport for UAV logistics
- Seinäjoki Airport operating environment development plan

eAviation -hankkeen kautta Seinäjoen lentoasemalle eikä Into Seinäjoelle ole tulossa mitään rahallista osuutta. Seinäjoen kaupungin sekä lentoaseman edustajat pääsevät osallistumaan kokouksiin ja kehittämistoimenpiteisiin sekä kaikki hankkeen aikana tuotettu tieto on kehittämistyöstä vastaavien käytettävissä. Suurin vaikutus hankkeessa mukana olosta tulee olemaan Seinäjoen lentoaseman nouseminen Merenkurkun alueen sähköliikenteen kartalle yhtenä tulevaisuuden ilmailun kehittäjäverkoston kumppanina ja toimijana.

Through the eAviation project, no financial contribution is coming to Seinäjoki Airport and Into Seinäjoki. Representatives of the City of Seinäjoki and the airport will be able to participate in meetings and development measures, and all information produced during the project will be available to those responsible for the development work. The biggest impact of participating in the project will be that the Seinäjoki Airport will become one of the partners and actors in the future aviation development network.

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- **Cooperation discussions with an international company providing unmanned cargo services**

Seinäjoki Airport Ltd and Into Seinäjoki Ltd have held negotiations with an international company that develops unmanned cargo drone. The transport capacity and operating range of the new type of cargo aircraft are significantly larger and longer than those of other known freight drone developers. The company would be willing to establish a base in Seinäjoki. If implemented, the establishment of a base in Seinäjoki will require investments in infrastructure in the airport environment.

Based on its own studies, the company has decided to propose cooperation with Seinäjoki Airport due to the central location, the size of the city, the lack of regular scheduled traffic and the good surrounding infrastructure, where Seinäjoki Airport meets the criteria. The cooperation agreement would possibly start during 2021, which would enable the formation of a logistical hub of e-commerce in Seinäjoki in a short time. Determining the conditions for cooperation is of paramount importance. Promoting and attracting foreign companies to Seinäjoki is part of Into Seinäjoki's basic work through Invest in activities.

Into Seinäjoki is willing to continue co-operation discussions and negotiations with the international player in close co-operation with Seinäjoki Airport. In the big picture, it is in the interest of the City of Seinäjoki to get foreign stakeholders to the area to accelerate the development and growth of business in the area.