REGIONAL SUSTAINABLE AVIATION IN THE KVARKEN REGION

Interreg

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FAIR2 PROMOTING SUSTAINABLE AVIATION

VISION

Regional sustainable aviation in the Kvarken region

A unique opportunity for investors and operators to enter a developing industry in a market with proven demand.

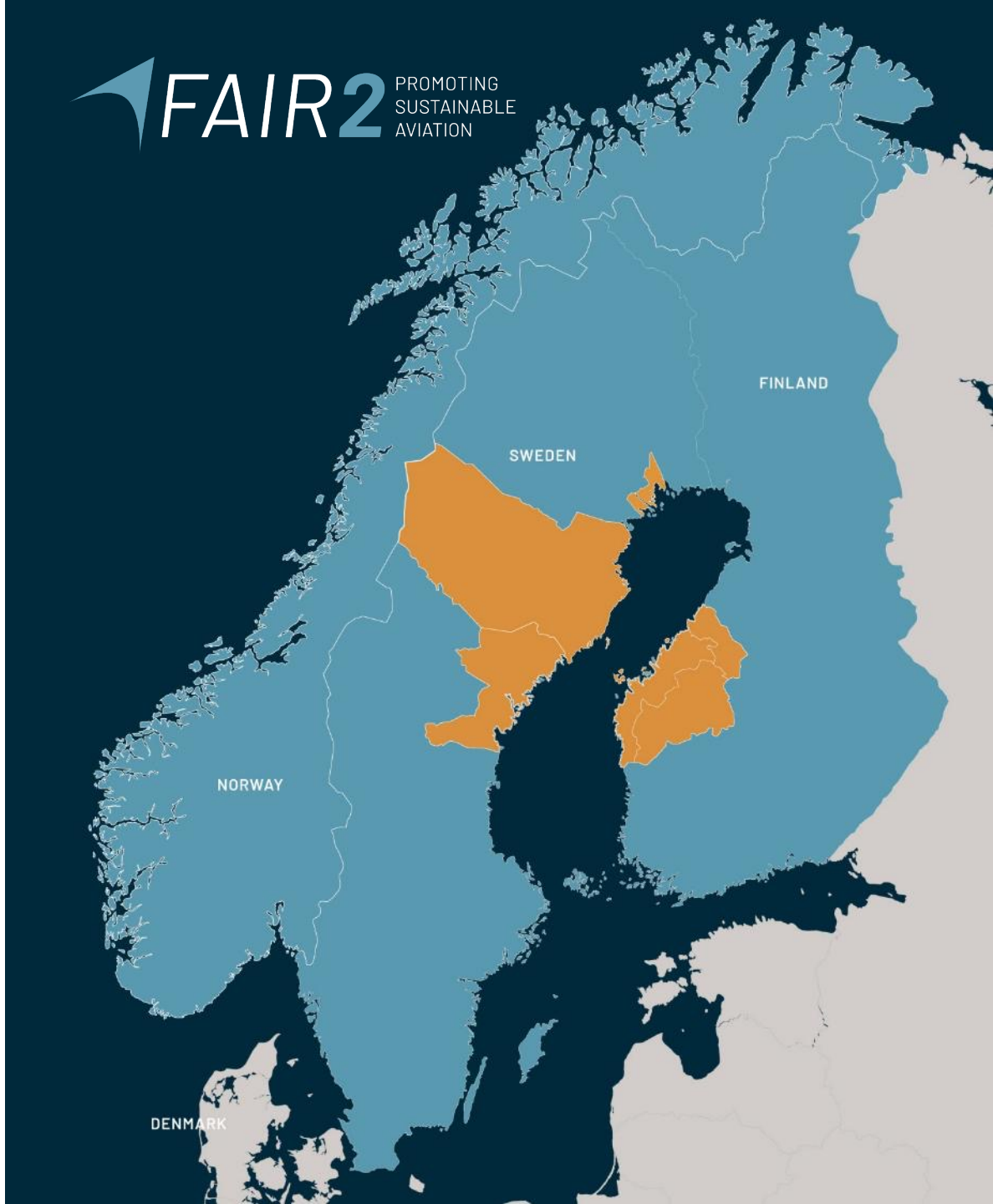
WHAT IS THE KVARKEN REGION?

The Kvarken region around the Kvarken Strait encompasses three Ostrobothnian counties in Finland and the Västerbotten and Västernorrland regions in Sweden. Together with Luleå municipality in northern Sweden, the region is a dynamic hub with thriving businesses, growing employment opportunities, strong educational offerings, and a high quality of life for its residents.

Coast to coast: approx. 80 kilometers

Population approx. 1 million

Sweden, largest cities:		**Finland, largest cities:**	
Sundsvall	100 000	Seinäjoki	65 000
Örnsköldsvik	55 000	Vaasa	70 000
Umeå	135 000	Jakobstad	20 000
Skellefteå	80 000	Kokkola	50 000
+ Luleå	80 000	+ Oulu	250 000



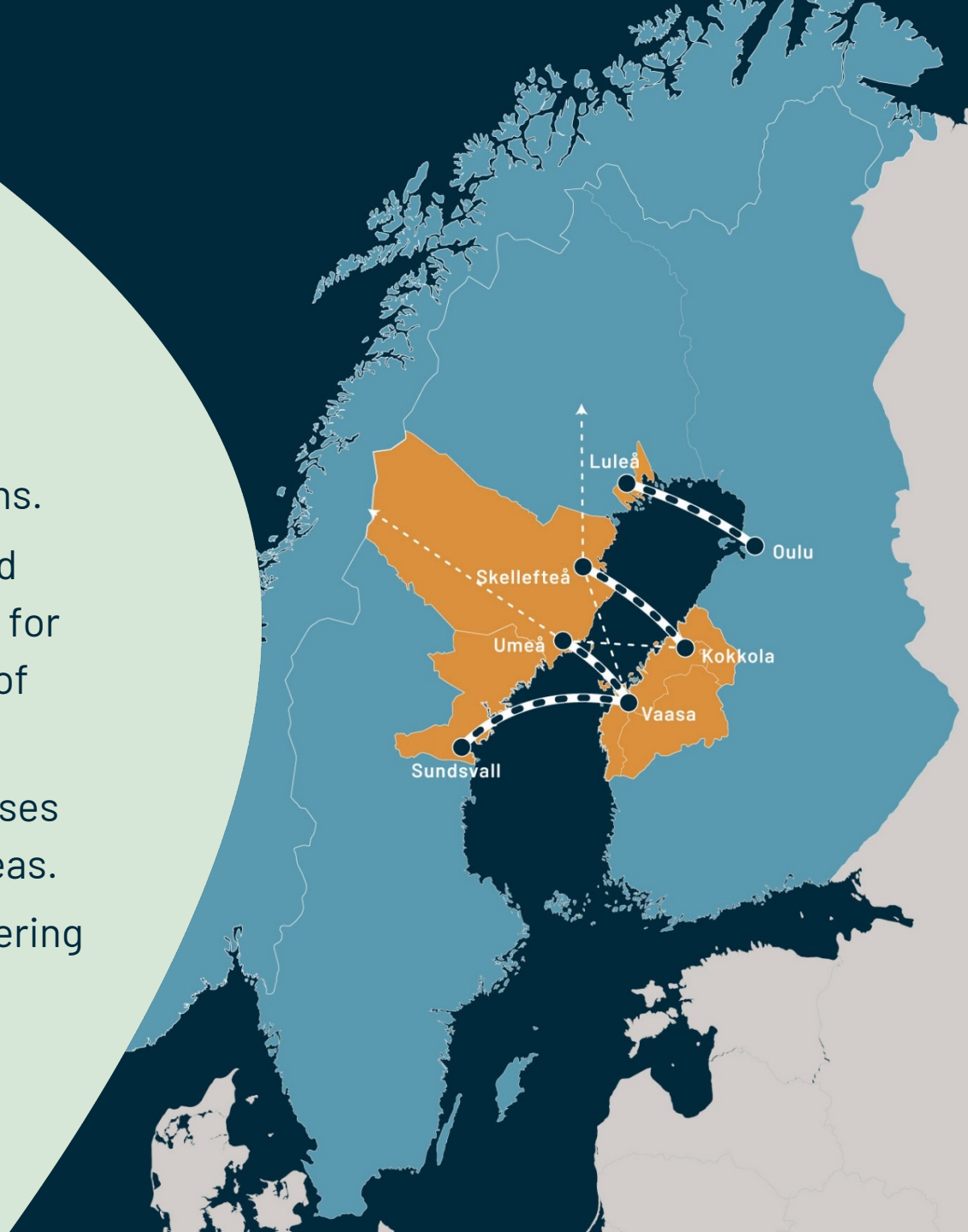
GAPS IN REGIONAL CONNECTIVITY

Obstacles of the Kvarken region:

- The region is vast and divided by the sea, largely lacking transport infrastructure. This makes movement inefficient and time-consuming for business travellers, locals, and tourists alike.
- Growing sustainability concerns fuel resistance to traditional aviation.
- These combined challenges hinder otherwise promising pathways to economic growth for the region.

OPPORTUNITIES FOR NEW MOVEMENT

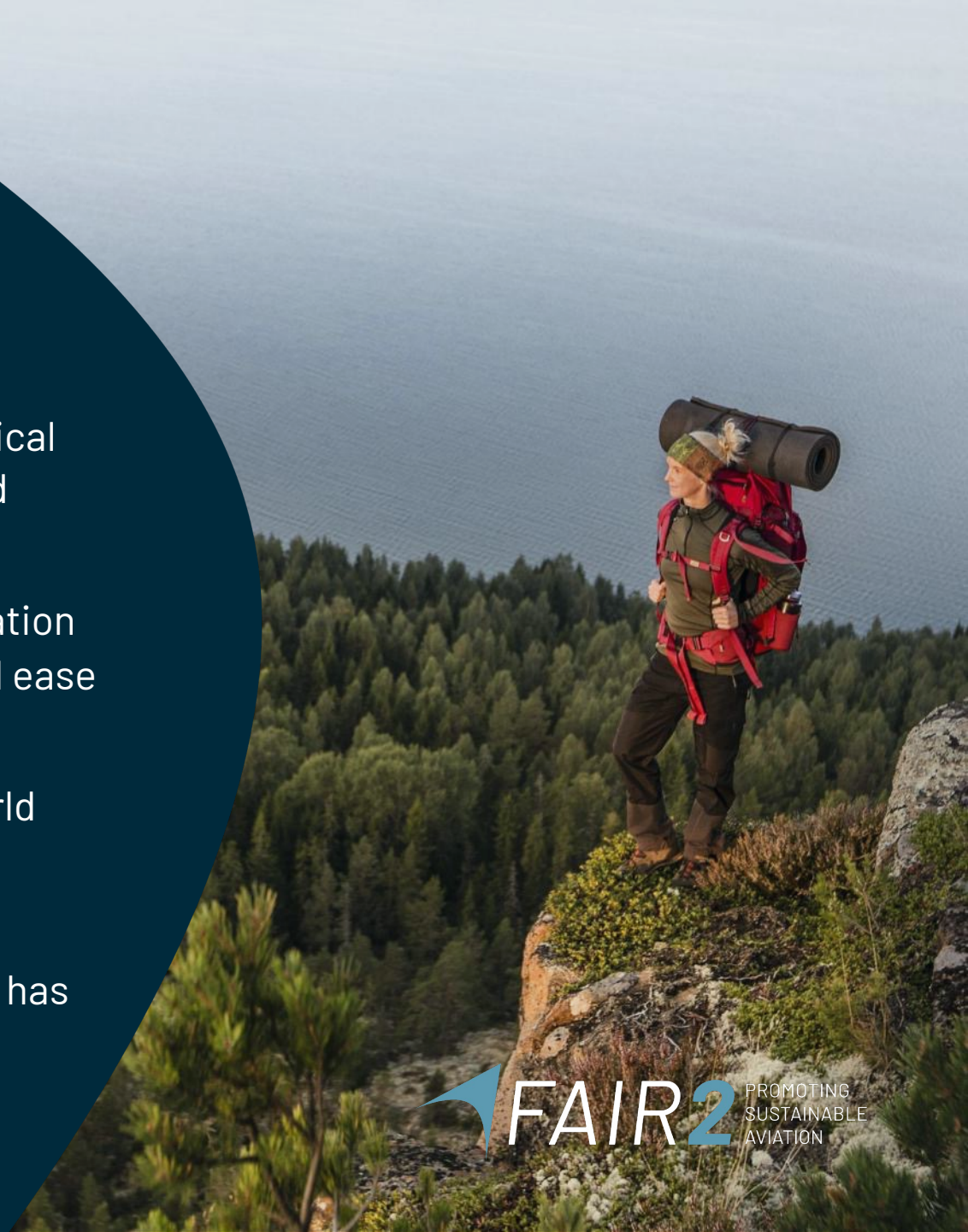
- Demand for efficient regional routes is rising, and new technologies align with travellers' sustainability expectations.
- The region is pioneering sustainable aviation. Skellefteå and Kokkola-Pietarsaari airports are investing in charging ports for electric aircraft, infrastructure, education, and the testing of new technologies.
- Strategic partnerships between municipalities and businesses create a promising environment for investment in these areas.
- The two coasts of the Kvarken Strait create synergies, fostering business and collaboration opportunities.



WHY NOW?

A great time for new investment

- **Strengthened Nordic cooperation:** The changing geopolitical situation has energized cross-border business interest and connectivity.
- **Population growth & workforce mobility:** Sustainable aviation can connect Nordic hubs, enhance workforce mobility, and ease labour shortages.
- **New tourism potential:** The establishment of UNESCO world heritage sites and the draw of Nordic nature provides the opportunity to unlock new recreational travel corridors.
- **The region's industries are booming:** The green transition has created a flourishing of businesses with evident synergies.



The future of green development

- On the Finnish side, green transition investments will amount to 40 billion euro and 6,000 new jobs in Western Finland by 2030.
- In Västerbotten and Norrbotten: 1.1 trillion SEK and 20,000 jobs in the next 20 years.
- In Västernorrland: 100-120 billion SEK and 7,500 jobs expected by 2030.


Kokkola Industrial Park

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PROVEN MARKET POTENTIAL

There is high mobility within the region:

- Currently, people are mainly relying on private cars. The most popular travel routes are to/from Umeå, Vaasa and Sundsvall.
- Flight routes and railways towards capital regions are an important lifeline.
- Demand is also high on the Swedish coast, but the Norrbotniabanan railway will meet these needs in the future.

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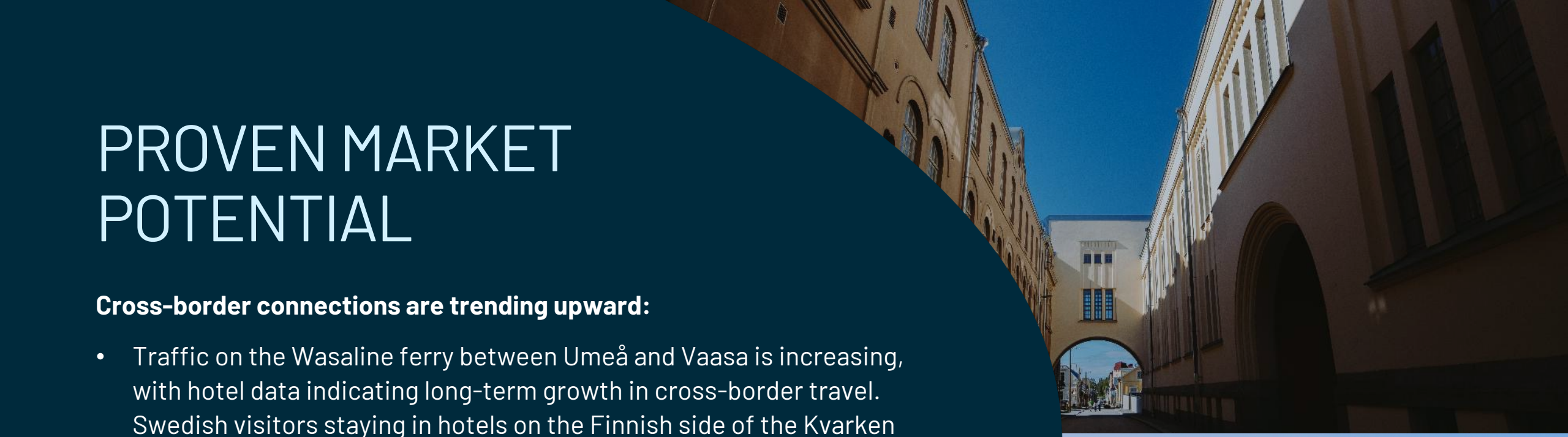
PROVEN MARKET POTENTIAL



Cross-border connections are trending upward:

- Traffic on the Wasaline ferry between Umeå and Vaasa is increasing, with hotel data indicating long-term growth in cross-border travel. Swedish visitors staying in hotels on the Finnish side of the Kvarken region have rapidly returned to pre-COVID levels, while Finnish travellers on the Swedish side have already exceeded them.
- Swedish travel is directed to Vaasa, and potentially other regions such as Kalajoki and Jakobstad in the future.
- Finnish travel is directed to Umeå, ski destinations, and the High Coast. Örnsköldsvik and Skellefteå have strong business ties with Finland.
- Likewise, Luleå has key connections to Oulu and a growing segment of leisure travellers between Luleå and Finnish Lapland.

PROVEN MARKET POTENTIAL

The target groups have positive views towards sustainable aviation:

- Being already familiar with electric vehicles, people are ready to embrace new forms of aviation.
- 91 % of Swedish and 67 % of Finnish companies in the region have a positive view of new technologies in sustainable regional aviation.
- People question the sustainability and convenience of available aviation services and wish for a reform. New sustainable business policies are limiting the use of conventional air travel.

TARGET GROUP'S WILLINGNESS TO PAY

- Depending on travel time, companies are willing to pay approximately 120 – 240 € (1,400 – 2,600 kr) per flight. Almost half of the surveyed Swedish companies stated they could imagine travelling via sustainable flight once a month or more.

Price scenario 1

Based on the current transport options: 4-hour journey and costs 65 € / 750 kr.

Travel with sustainable regional flight option: 2.5—hours door to door (of which the flight time is 1 hour).

What is the maximum you are willing to pay for such a trip?

Sweden:	Avg. 1434 SEK	**Finland:**	Avg. 121 €
	Median 1375 SEK		Median 100 €

In Sweden 77 % and in Finland 78 % were willing to pay more than what the trip currently costs.

Price scenario 2

Based on the current transport options: 8-hour journey and costs 130 € / 1500 kr.

Travel with sustainable regional flight option: 2—hours door to door (of which the flight time is 30 minutes).

What is the maximum you are willing to pay for such a trip?

Sweden:	Avg. 2623 SEK	**Finland:**	Avg. 244 €
	Median 2500 SEK		Median 225 €

In Sweden 71 % and in Finland 78 % were willing to pay more than what the trip currently costs.

BUSINESS CASE: FLIGHTS ACROSS KVARKEN

Estimate of profitability considering load factor for flights between Skellefteå-Kokkola or Umeå-Vaasa.

Flight time: 20 min

Frequency: 11 roundtrips per week (2 roundtrips Monday-Friday, 1 roundtrip Sunday)

Airplane size: 19 seats

Seats/year: 21 736

Cost: ~ 2 000 000 EUR / year*

Example of flight schedule (local times)

From	Time	To	Time
SE	07:00	FI	08:20
FI	08:40	SE	08:00
SE	16:00	FI	17:20
FI	17:40	SE	17:00

Number of passengers per flight and per year.

For reference, the Umeå-Vaasa ferry had 280 000 passengers in 2023.

Load factor	Passengers per flight	Passengers per year
25 %	5	5 434
50 %	10	10 868
75 %	14	16 302
100 %	19	21 736

	Ticket price: 100 €		Ticket price: 150 €		Ticket price: 200 €	
Load factor	**Revenue**	**Net profit**	**Revenue**	**Net profit**	**Revenue**	**Net profit**
25 %	543 400 €	-1 456 600 €	815 100 €	-1 184 900 €	1 086 800 €	-913 200 €
50 %	1 086 800 €	-913 200 €	1 630 200 €	-369 800 €	2 172 600 €	173 600 €
75 %	1 630 200 €	-369 800 €	2 445 300 €	445 300 €	3 260 400 €	1 260 400 €
100 %	2 173 600 €	173 600 €	3 260 400 €	1 260 400 €	4 347 200 €	2 347 200 €

*These costs are based on estimations. The real costs may vary from these numbers.

SENSITIVITY ANALYSIS: KEY RISKS & MITIGATION

- **Awareness and behaviour change:** Campaigns highlighting efficiency and sustainability can help spread the word about new routes and travel opportunities. Pre-marketing must be effective, and all stakeholders must commit to the project long-term.
- **Price sensitivity:** The focus must be on business travellers who are willing to pay more than tourists. Incentives and pricing models to attract early adopters are needed.
- **Sustainability expectations:** Meeting green aviation standards is critical for public and policy support. The connections to and from airports must also be well designed.
- **Lack of interaction:** Strengthening cross-border cooperation and matchmaking between businesses is crucial for growing long-term demand in the region.

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ESTIMATED TIMELINE

H1 2025

- Initial meetings with investors /operators.

H2 2025

- Developing a business case with municipalities and operators.
- Match-making events between businesses and municipalities.
- Regional destination and route marketing.

2026 / 2027

- Full-scale launch of prioritized routes. Starting with sustainable aviation fuel and switching to hydrogen/electric when possible.
- 2-4 routes (Luleå-Oulu, Skellefteå-Kokkola, Umeå-Vaasa, Sundsvall-Vaasa)

COMPETITIVE ADVANTAGE

The Kvarken region aims to be a global leader in sustainable aviation, preparing to adopt electric air travel once certified in the late 2020s. This pioneering initiative opens opportunities for investment.

The ideal location for electric aviation pilots

- **Optimal route conditions:** Short but challenging distances make it an ideal airspace for electric flights.
- **Strong green transition industries and investment:** Regional industries are committed to sustainability and have a great need for functioning transport infrastructure.
- **Economic growth & workforce demand:** Thriving businesses and increasing employment opportunities are driving regional expansion.
- **The region is already pioneering sustainable aviation:** Airports are investing in education, infrastructure and testing.

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THANK YOU

Join us in shaping the future of regional aviation.

We are happy to discuss investment and operational partnerships.

Contact us at [Your Contact Information].

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www.kvarken.org

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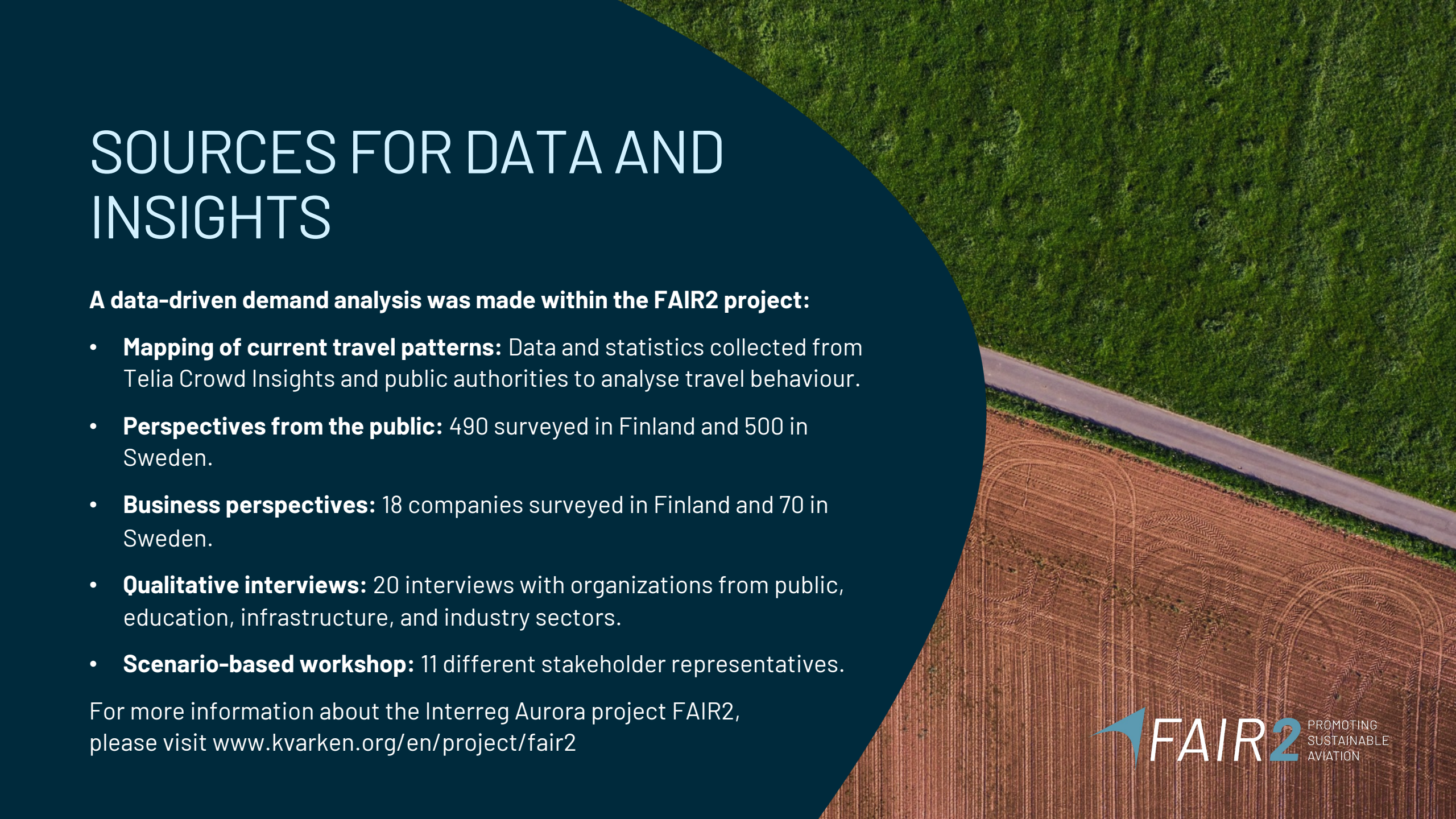
SOURCES FOR DATA AND INSIGHTS

A data-driven demand analysis was made within the FAIR2 project:

- **Mapping of current travel patterns:** Data and statistics collected from Telia Crowd Insights and public authorities to analyse travel behaviour.
- **Perspectives from the public:** 490 surveyed in Finland and 500 in Sweden.
- **Business perspectives:** 18 companies surveyed in Finland and 70 in Sweden.
- **Qualitative interviews:** 20 interviews with organizations from public, education, infrastructure, and industry sectors.
- **Scenario-based workshop:** 11 different stakeholder representatives.

For more information about the Interreg Aurora project FAIR2, please visit www.kvarken.org/en/project/fair2



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