



INFUTURE - Future potential of Inland Waterways

INTERNATIONAL CONFERENCE

«Waterways – A Step Towards Green Transition»

Transshipment hub models for IWW – best practices

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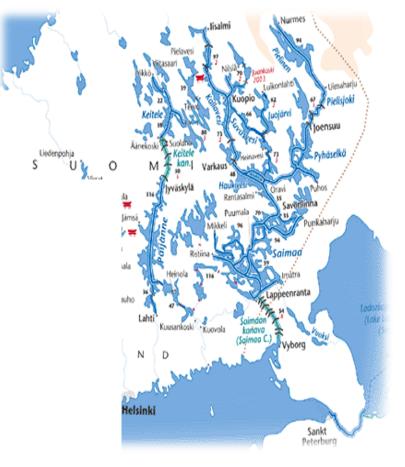






Inland waterways in Finland









Swedish port reconstruction experience

- Stockholm Norvik 2016-2020
 - 32 hectares
 - 800 metre quay length
 - 16.5 metre depth alongside
 - 8 straddle carriers
 - o 22 units, wide crane out-reach
 - o 65 tonnes twin-lift 20' under spreader

(81 tonnes under heavy lift cargo beam)

- o 500,000 TEU capacity per year
- Rail connection
- to realise that there is a strong competition
- the strong political will
- Eco-bonus





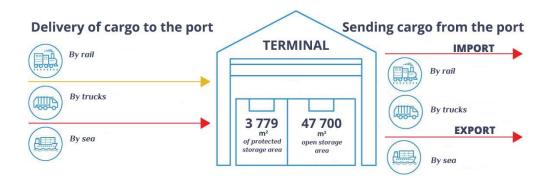


Port of Vyborg: Hub Potential

Transshipment route	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Export, tons	843 141	982 970	1 401 080	1 431 598	1 600 633	1 460 844	1 258 966	1 449 873	1 844 362	1 137 135
Import, tons	209 630	120 597	61 398	81 232	61 596	44 212	94 331	81 680	86 811	78 505
TOTAL, tons	1 128 149	1 127 657	1 495 351	1 548 551	1 701 204	1 527 656	1 375 905	1 550 796	1 945 200	1 234 359
Number of shipcalls	388	317	357	347	345	313	286	308	366	242
Freight cars Turnover	16 333	13 375	15 775	16 906	19 618	18 413	16 783	17 910	25 768	15 625

Port Logistics

Max size vessel in limited 135.0m length
6.5m draft
1500m total length of 13 berths
164cars/day
More than 6000m of railway tracks
9 cranes
51 479m2 total storage space





HUB criteria and HUB demand

- Location:
 main shipping routes
 surrounded by many large industrial zones
 deep water level
- 2. Free-trade area
- 3. Port charges: attractive, transparent and specific.
- 4. Additional utility services

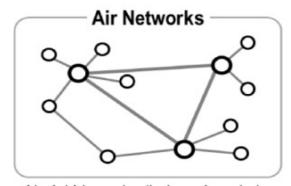
Container transport

Custom clearance or border control

Environmental friendly

Freight integrator service/cargo integrator/logistic integrator and freight forwarders:

- Making transport routes and schedules
- Searching for suitable vessels
- Booking of port services
- Marketing and stakeholder communication
- Other services.



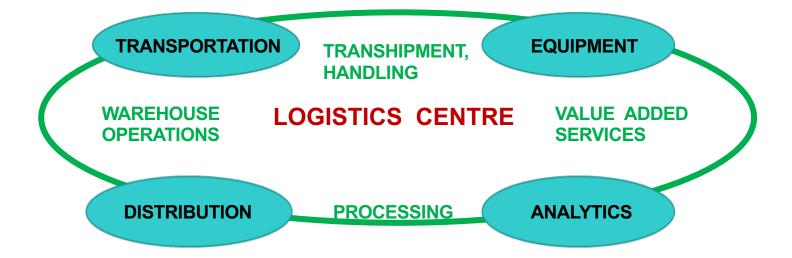
Nodal hierarchy (hub-and-spoke)





Logistics centre concept



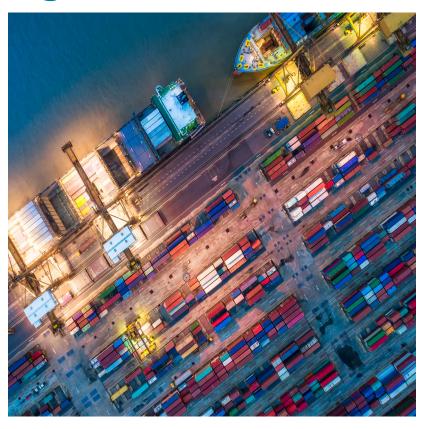


Source: Jorma Harkonen,

LIMOVA



Logistics centre services



Warehousing

- premise's rent;
- intermodal terminal;
- distribution

Transportation by

- trucks, lorries;
- railway;
- inland water vessels

General

- customs;
- IT;
- analytical;







Innovative Technologies for Logistics Centres

3D-printing



Driverless Vehicles





TE THE

Drones

Augmented Reality



RFID



Pick-by-voice, -light





Transshiment hub logistic centre potential

- Attracting more cargo flows to the greener solutions
- Providing more jobs for specialists
- New opportunities to transport cargo to the Russian Federation and Finland
- Saimaa Canal 's investment profitability is rising, competitiveness is growing
- More efficient connection of seaports to inland waterway networks

Transshipment Hub provides service package that makes inland waterway transport more profitable, safer, faster and more customer-oriented.





Tunne huominen - All for the future.