BUSINESS PLAN

NEW INLAND NAVIGATION SERVICE IN LITHUANIA

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CONTENT

Potential IWT Market in Lithuania / New Service idea

New IWW services in Lithuania based on existing and potential IWW customers and IWW ships operators. Lithuania IWW for the freight transportation is between Klaipeda port and Kaunas that means partly E70 and E41.

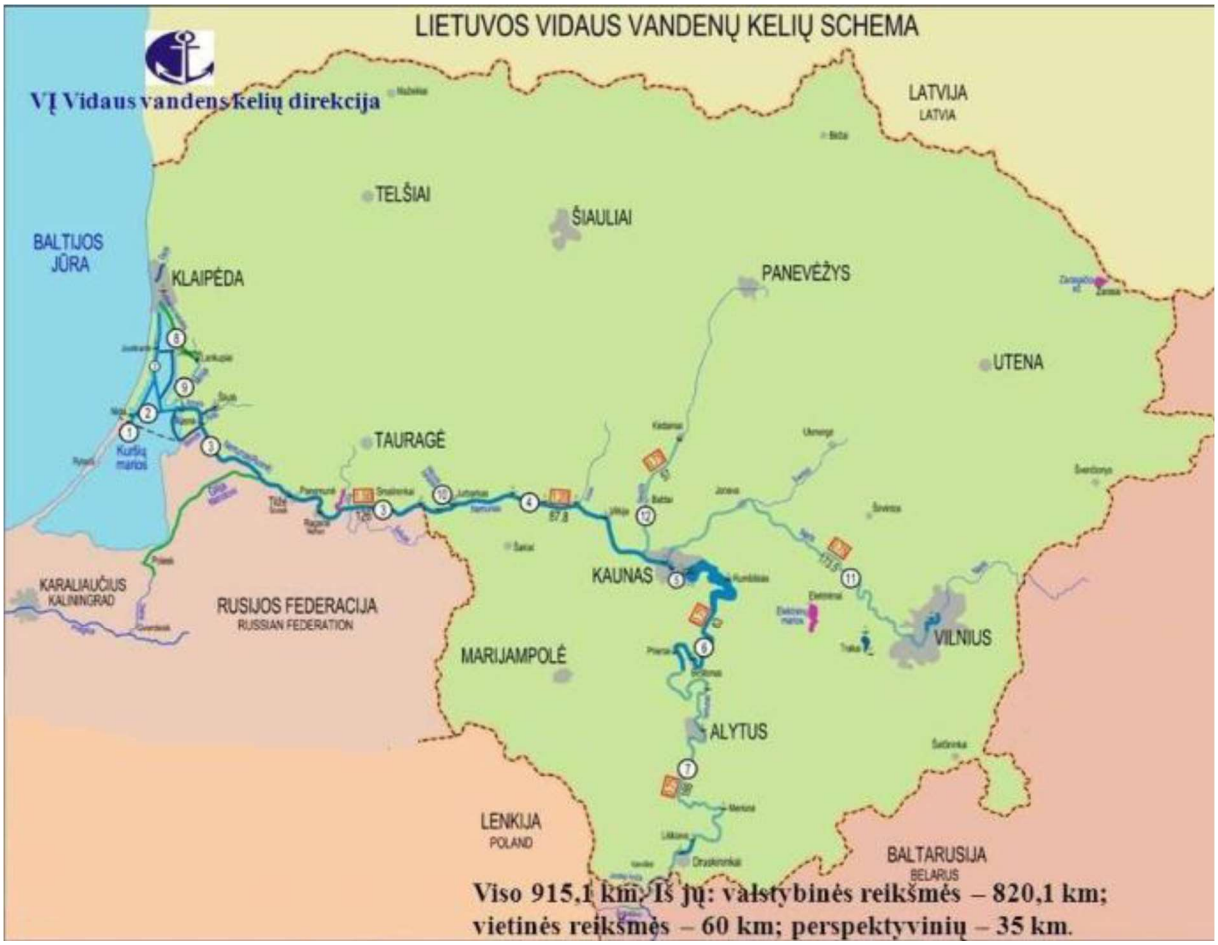

Fig. 1. Lithuania IWW for the freight transportation.

Today by Lithuania IWW mainly transported construction materials, wood production and small amount of other cargo. Potential cargoes, which can be transported by Lithuania IWW are:

- Oversize cargo (wind meals spare parts, heavy machinery for the energy and chemical industry as well construction big and heavy spear parts;
- Grain, wood and wood production;
- Chemistry production (fertilizers and raw materials for fertilizers producing;
- LNG as fuel for small cities hitting stations and other users.

Potential cargo owners are companies, which produsedmentioned googs or used its and transport companies, like chemical fertilizers producing company ACHEMA, Heavy machinery reparing and renovating company GARANT, Lithuania wood producing companies, grain storage company KAUNO GRUDAI, LNG import terminal operating company KLAIPEDOS NAFTA and other compamies.

New potential users of the IWW find that IWW are more useful from economical and environmental point od wiev, as well existing IWW did not used properly and are good potential possibilities increase competivenes in comparison with other similar Lithuania and neighboring Countries companies, which can not use IWW.

1 INLAND WATERWAY TRANSPORT MARKT POTENTIAL

1.1 Geographical area

In Lithuania for the freight transportation it is possible use very limit length of the IWW, just about 265 km that means between Klaipeda and Kaunas. Other sections of the IWW used for the water tourism and other proposals (mainly recreation}.

IWW section between Klaipeda and Kaunas has next main navigational parameters:

- Guaranty depths between Klaipeda and Jurbarkas – 1,5 m, between Jurbarkas and Kaunas – 1,2 m;
- Minimum width of the IWW between Klaipeda and Kaunas is 30 m;
- Minimum turning radius on the IWW bends is 250 m.

1.2 Potential cargo volume per month/year

Potential cargo flows, which could be transporting by Lithuania IWW between Klaipeda and Kaunas are:

- Construction materials (sand, gravel) - up to 1 million tons per year;
- Grain – up to 500000 tons per year;
- Wood and wood production – up to 300000 tons per year;
- Oversize cargo - up to 1000 units per year.

Estimated grown cargo flows could be oriented as follows:

- Construction materials (sand, gravel) – up to 5 – 7 % per year;
- Grain – up to 3-10 % per year (depends of the market demand;
- Wood and wood production – up to 3 – 5 % per year;
- Oversize cargo – up to 10 -15 % per year.

2 POTENTIAL NEW INLAND NAVIGATION SERVICE

2.1 The customers (cargo owners)

Main cargo owners and customers of the IWW transportation are:

- Construction companies, which buy construction materials (sand, gravel) for the planning Klaipeda port extention (alternatives 1, 2, 3 and 4), as well for the Klaipeda and Kaunas cities infrastructure development;
- Agriculture companies and grain elevators (storage) owners, mainly Kaunas grain elevators company transporting to Klaipeda port terminals (BEGA, Malku ilankos terminalas) for the future loading and export on sea ships;
- Wood and wood production companies located clause to the IWW (Nemunas river) transporting wood and wood production to Klaipeda port terminals (Malku ilankos terminalas, Vakaru krova) for the future export to other countries by sea ships;
- Oversize cargo mainly oriented for the construction and renovation Energy, Chemical and other industries in Lithuania from Klaipeda port terminals (Klaipedos Smelte, Vakaru krova, Malku ilankos terminalas, CKT and others to the Lithuania as well North-east part of the Poland and Belarus.

2.2 New service line (Origin-Destination)

Main cargo services line will be as exist today, that means between Klaipeda and Kaunas, potentially could be used E70 IWW between Klaipeda and West European Countries including Poland, but today political and organizational problems with Russia Federation (Konigsberg IWW section) looks problematic in nearest future.

2.3 Loading and discharging port

For the transportation goods by Lithuania IWW are use now and will be used in future IWW vessels with deadweight up to 1000 tons on section Jurbarkas – Klaipeda (mainly for the construction materials transportation as well oversize cargo transportation and on IWW section Jurbarkas – Kaunas IWW vessels with capacity up to 500 tons. In Klaipeda port cargo can be load on sea ships with capacity up to 100000 tons. In IWW loading places (in Kaunas and Jurbarkas) are special loading/unloading equipment and unlimited cargo storage capacity depends of the possible IWW vessels capacities, in Klaipeda port no limits in all.

In Kaunas IWW port are railway links with Lithuania public railway network, as well in Klaipeda port are railway network (about 80 km of the technological railway, which is link with Lithuania public railway network. All other possible places on IWW for the loading are link with Lithuania public road network and can used mobile loading/unloading equipment.

Special operation procedures in Klaipeda port as well in Lithuania IWW ports and loading and unloading places specific requirements are just for the oversize cargo.

2.4 Organisation of last mile transport

n/a

2.5 Competition to potential new market

Today oversize and other cargo are transporting by rail ways (mass cargo) and roads (oversize and other cargo).

For the mass cargo (mainly fertilizers) high competition are rail ways and partly road transport (grain, wood production, oversize cargo) and main competitors are Lithuania railways (LG Lietuvos geležinkeliai) and road transport companies (in Lithuania are big number road transport companies). Transportation costs for the typical cargo by roads is up to 1,2 – 1,4 EUR per km per transport unit (average weight 18 tons). Railway tariffs are very clause to road transport tariffs for the typical cargo. Transportation prices for the oversize cargo are negotiation business and not possible provide, because it is case by case system.

Table 1. Competition between Lithuania IWW and other transport modes

Competitor	Established date	Size	Market share (%)	Value to customers	Strengths	Weaknesses
Lithuania Railways (LG)	In 19 century, in general change in last three decades	In LG works about 10000 people, turnover is about 50 million tons per year	Keep clause to 100 % of the railway transportation and more than 50 % of the total freight transportation in Lithuania	In Lithuania LG is as monopolist in railway transportation and just have some competition with road transport	Good experience, have develop network of the railways, managers are relatively young with good knowledge and very motivate	As any monopolist structure some time delay take decisions, dictate conditions for the clients and it could be reason transfer some mass cargo from railways to IWW

Competitor	Established date	Size	Market share (%)	Value to customers	Strengths	Weaknesses
Road transport companies (in Lithuania are more than 100 road transport companies	Mainly are created after Lithuania Independence (after 1990)	In road transport companies works more than 30000 people	Keep clause to 100 % of the road transportation and about 50 % of the total freight transportation in Lithuania	Mainly compete between similar companies as well with companies from EU and other Countries	Main strengths of the road transport companies is flexibility as well big range of the transport means and possibilities provide good service for the clients	Main weaknesses of the road ransport companies – big difference between companies, some companies are very conservative (in areas where no big competition)

2.6 Conclusion: Potential for the new IWT service

Oversize cargo demand for the IWW today is from 500 units ap to 700 units, forecast demand for 2026 is about 1000 units of oversize cargo. Traditional cargo demant in case of good organisation and provide good services for the clients could be up to 2 million tons per year.
Sales targets could be oriented on new services based on low prices, flexible and high profesional work with potential IWW clients.

3 INLAND NAVIGATION BUSINESS SET-UP

3.1 Service characteristics

Frequency of services for the oversize cargo transportation during navigational period should be according orders with minimum delay time (not more than 1 day), for the typical cargo should be able provide daily services. Travel time from Klaipeda to Kaunas must be less as 1 day for the oversize and typical cargo.

3.2 Market and customer requirements

Market oriented on good logistics and services conditions and mainly oriented on oversize cargo and mass cargo transportation. Costs of the transportation oversize and mass cargo by Lithuania IWW should compete with other transport modes on all logistics chain original transportation point up to destination point.

3.3 Vessel characteristics

For the oversize cargo transportation need special push pontoons or barges with capacity up to 800 – 1000 tons, for the typical cargo need self propeller of push barges with capacity up to 500 – 600 tons. In ports no special restrictions or limitations, just for the oversize cargo it is necessary adopted loading/unloading facilities depends of the concrete parameters of the oversize cargo. On market are possibilities find request vessels, pontoons or barges.

3.4 Plant, equipment, vessels purchases

n/a

3.5 Organisational set-up

Organisation system for the using Lithuania IWW for the freight transportation should be distribute between State institutions for the infrastructure development and maintenance as well legal basis preparation and PPP or private IWW transport operators (terminals and IWW shipping companies.

3.6 Legal considerations

Existing legal considerations regarding transportation by IWW in general is good enough, like Lithuania IWW Code, but some laws, such as Lithuania Environmental Law should be improve depend of the possibilities regulate water level (depths) on Lithuania IWW by damps and locks construction.

3.7 Market Regulations and quality control

There are basic legal regulations regarding Lithuania IWW and inland shipping organisation, based on laws and regulations, presented in table. Main principle is free market conditions. Request certifications and other documents for the IWW shipping activities is descripted in laws and regulation, presented in table.

Table 2. Lithuania IWW legal basis

Planning levels	Type of document				
Lithuania	Strategic documents (name)	Planning documents (name)	Concepts (name)	Projects, programmes, agreements (name)	Other
European	COM(2013) 623 final);	n/a	European Agreement on main inland waterways of international importance (AGN)	06.09.2006 EP and EC regalement (EB) Nr. 1365/2006	
National	2016 – 2019 years Strategic activity plan		Lithuania IWW maintenance and keep guaranty depths	LR Environmental Minister 10.01.2007 decree No. D1-23	
National	LR Parliament. LR IWW Code1996.09.24. Nr. I-1534 (2017.12.01)		Main IWW regulation document		
National	LR Government Decree. CONCERNING THE APPROVAL OF THE INLAND WATERWAY LIST OF THE REPUBLIC OF LITHUANIA ON THE VALIDITY OF THE REPUBLIC OF LITHUANIA 1995.08.14. Nr. 1119 (2016.06.24)		Regulate main IWW exploitation and development		
National	LR Government Decree. TERMS AND CONDITIONS FOR THE ISSUE OF THE TERRITORY AND		Main legal regulator for the IWW ports and appals development and		

	REGISTRATION OF INLAND WATERWAY PORTS AND APPEALS OF THE REPUBLIC OF LITHUANIA 2005.10.03. Nr. 1057 (2017.02.25)		registration		
National	LR Transport Minister decree. APPROVAL OF LOCAL AND PERSPECTIVE INLAND WATERWAY LIST OF THE REPUBLIC OF LITHUANIA. 2017.04.19. Nr. 3-177		Strategical oriented for the IWW development		
National	LR Transport Minister decree. CONCERNING THE APPROVAL OF INLAND WATERWAYS OPERATION RULES. 2009.11.25. Nr. 3-600 (2017.06.07)		Regulate operational rules and procedures of the IWW and IWW ports		
National	LR Environmental Minister decree. CONCERNING THE ENVIRONMENTAL CONDITIONS FOR THE APPROVAL OF CAPITAL AND MAINTENANCE DREDGING. 2007.01.10. Nr. D1-23 (2014.08.09)		Regulate IWW capital and maintenance dredging		
Local*	List of inland waterways of state importance in 2017 (2017.04.24 No. 4S-72)		Regulate concrete works on IWW		
Local	"On the State Enterprise Directorate of Inland Waterways, 2016. February 19		Planning and executed concrete works for the exploitation		

	Order No.4S-26 "On Approval of the Procedure for the Use and Maintenance of Ports and Marinas of the State Enterprise of the Inland Waterways Authority“ (2017.02.03. No. 4S-24)		and development IWW		

3.8 Conclusion: schedule

Lithuania IWW have good potential possibilities for the oversize and some mass cargo (grain, wood, fertilizers etc.) cargo transportation and need business initiatives and State support.

4 FINANCIAL REVIEW: THE ECONOMIC FEASIBILITY OF THE NEW POTENTIAL IWT SERVICE

4.1 Start-up cost

In Lithuania IWW vessels for the freight transportation mainly are old and mainly request big expenditures for the maintenance. Vessels registration tariffs are relatively low.

4.2 Service operation cost

In Lithuania fuel, taxes, dues are similar as on other transport modes. Crewing salaries is equal to road transport drivers salaries including social charges.

Fuel for the IWW costs has not preferences in comparison with other transport modes. In future could be implemented LNG as fuel for the IWW ships, which could decrease fuel costs for the IWW ships in comparison with roads and railway transport.

Potential operations costs for the oversize cargo transportation should be relatively low in comparison with road and railway costs for the same type of the cargo.

4.3 Comparison of start-up and operation cost with alternative transport modes

Comparison transportation costs by roads, railways and IWW presented on fig.

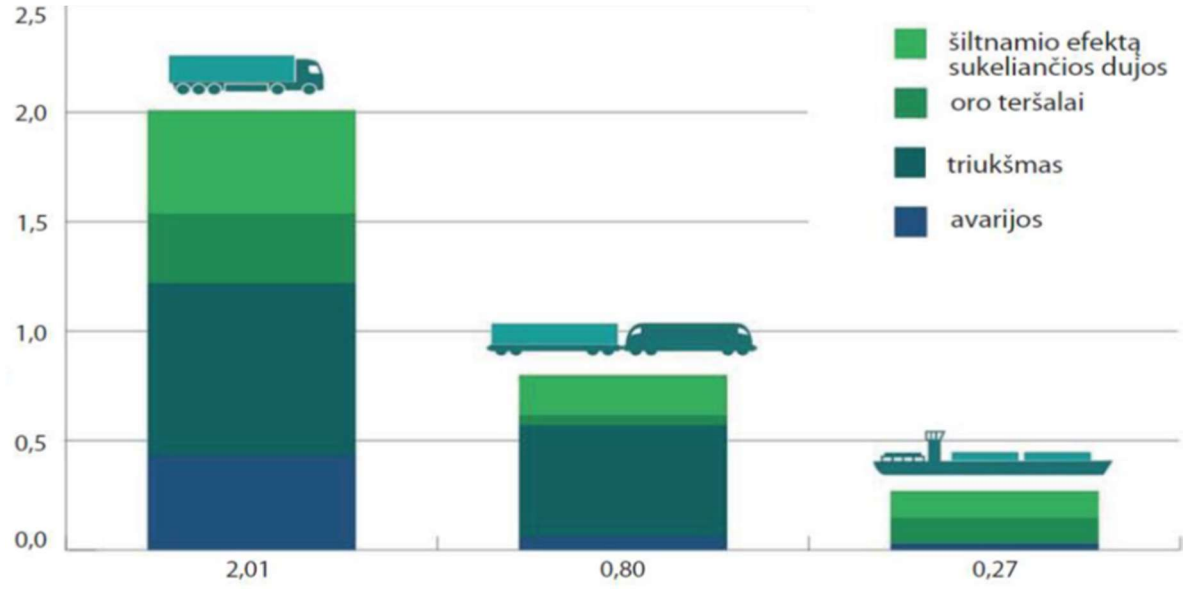

Fig. 2. Comparison costs, environmental impact and accidents risks between transport modes

Comparison transportation costs by roads, railways and IWW shown, that transportation costs by IWW is about 2 times less as by railway transport and about 6 times less as by road transport.

4.4 Break-even analysis

n/a

4.5 Conclusion of the economic feasibility

New services could be economically feasible for the oversize cargo transportation, because oversize cargo transportation by roads request very expensive infrastructure preparation, make big disturbance on other road transport activity and people, who live clause to the roads, by which transporting oversize cargo, disturbance (for some time need limit electricity (cutting wires), connectivity (limit use cars) and so on.

Potential turnover should be up to 1000 oversize cargo units per year and when will be rich more then 700 units per year it feasible some profit, but social advantages will be rich immediately after start regularly transporting oversize cargo by IWW.

In general are there possibilities to acquire public and European funds to start business on basis improvement life quality and environmental of the road network by which today are transporting oversize cargo.

5 MARKETING AND DISTRIBUTION ACTIVITIES

As no real experience of the IWW transportation different goods, it is necessary start from very clear cargo flows (oversize cargo), which have not, for example rail way, or have very limit, for example roads transportation, alternatives. Marketing should based on very clear logistics chain preparation and direct promotion to the real clients on conferences, workshops (wide spectrum marketing) and direct contacts, discussions with cargo owners and operators and transport companies (direct spectrum marketing).

6 RISK MANAGEMENT

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In general main risk – now traditions and constant cargo flows, that means necessary spend long time and provide good marketing on basis relatively low prices and high quality services

Risk	Likelihood	Impact	Strategy
Risk 1 *Now constant cargo flow and it is necessary create on basis high quality of the services and relatively low prices*	*Highly Unlikely*	*Medium*	*Government support and strong direct marketing*
Risk 2 *Lack of experience and good knowledge how organize all logistics chain*	*Highly Likely*	*Medium*	*Advance analysis and planning, people education and training*

7 SWOT-ANALYSIS OF POTENTIAL NEW IWT SERVICE

Strengths	**Weaknesses**
Possibilities used Lithuania IWW for the oversize cargo transportation as well some types of the mass cargo. *Existing depts. of the IWW is enough for the oversize and mass cargo transportation with barges capacities up to 600 – 800 tons.* *Transportation oversize cargo by Lithuania IWW can decrease transportation costs, delivery time and should be more environmental friendly in comparison with other transport modes*	*High infrastructure and superstructure preparation costs, lack of experience and tradition. During dry summers it is complicate keep guaranties depts. on the all length of the Lithuania IWW for the freight transportation* *Limit of the cargo quantities which could be reoriented from roads and railway transport on IWW.*

Opportunities	**Threats**
Increase depts. on the IWW by building patches of equipment and attract more cargo on IWW. *Mass cargo owners, located clause to the Lithuania IWW, such as agriculture and wood industry positively look on IWW opportunities in future.*	*Good public road and railway network in Lithuania and low density of population (in comparison with The Nederland density of population in Lithuania is about 8 times less), cannot stimulate create big volumes of the cargo and rich critical mass.*