

Mikko Matveinen & Timo Pakarinen (Eds.)



Promoting Cross-Border Wood Construction Business

Final Report



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1 Overview of the project

1.1 BACKGROUND

Wood construction is one of the potential growers' in the construction business sector and one of the big promises of bioeconomy which should be fulfilled. If succeeding, it might be a strong boost for local economies providing more profits and expanded labor markets in wide value added chain for both experts and young graduates. That would remarkably support the employability and wellbeing in the cross-border regions. Furthermore, in Finland promoting bioeconomy and wood construction is one of the key goals set by the national government. In Russian Federation, this possibility is also recognized and it is under consideration and promotion.

However, the potential of the wood construction business is still partly hidden and the resources are underutilized. Furthermore, there are bottlenecks slowing down or even hindering the development of the business. The bottlenecks seem to relate to the politics, attitudes, questions of land use and zoning, difference in methods of structural design according to Russian codes and Eurocodes and absence of mutual understanding. There is a severe need for the key players in the partnering cross-border regions to boost the wood industry. We should find new ways to overcome the obstacles expand the wood construction businesses, build an innovation hub bridging and growing the varied expertise bringing addition value for all parties.

The universities in the regions play a key role in developing the expertise and networks supporting the businesses. In its best, innovation, research and education form an iterative development process where higher education organization, businesses and business developers together find new ways to benefit all the actors. Yet, there is still work to do to

identify the bottlenecks of the development in details and to find ways to fill in the gap between the higher education and businesses.

1.2 THE PROJECT OBJECTIVE

The overall objective for the PROWO is to strengthen the business opportunities, markets and expertise in wood construction businesses across the border. Project aims at three goals: (1) identifying and analyzing in details the bottle-necks hindering the growth and full use of the potential of the wood construction business, (2) building the network of key players to boost the business, and (3) building common understanding on how to solve the problems. PROWO results will form the base for the for-coming development projects and activities. It also preliminarily starts to explore the possibilities for new business models, incubators and innovations yet these will be the key questions to solve in the future.

The target groups and beneficiaries of the project are the regional wood construction businesses, universities, business developers, administrative organizations, communities and the authorities dealing with wood construction issues.

1.3 IMPLEMENTATION OF THE PROJECT

Karelia University of Applied Sciences worked as a lead partner of the PROWO project. Other partner organization involved were Saint Petersburg State Forest Technical University and Federal State Budgetary Educational Institution of Higher Education, Petrozavodsk State University (PetrSU). Project was implemented during the one-year period 1.10.2018 - 30.9.2019.

The kickoff meeting of the project was held in September 2017. During the meeting the detailed implementation plan and schedule was created. Because of the delay in Karelia CBC financing program ratification there were one-year shutdown after the kickoff. So officially the project started in November 2018.

During the project implementation period there were three joint workshops: first in Joensuu, second in Saint Petersburg, and third in Petrozavodsk. The purpose of the joint-workshops were steering and planning of project activities and working with the content related issues. The methodology used in the project implementation to achieve the desired outputs is described in the following chapter.

2 Methodology used in the study

PROWO project conducted a thorough survey in the three cross-border regions including North Karelia, Petrozavodsk (Russian Karelia) and Saint Petersburg area. Each of the surveys was led by the university from the region involving local businesses. The method for the survey was structured interview (annex 1.). Questions used in the interview was decided together with all the project partners and tested beforehand.

The total amount of the interviews done in all three regions was 35 pcs. Interviewed persons worked in the leading or expert positions within their organizations. Following sectors within the field of wood construction and wood working industry was covered:

- » raw material supplier and logistics
- » sawing and planning
- » fabrication of round logs
- » fabrication of glued logs
- » fabrication of windows
- » fabrication of timber frame elements
- » fabrication log frames
- » contracting
- » engineering (structural design)
- » construction
- » research and development
- » consulting

See the detailed company profiles: annex 2.

Results of the interviews were analysed by each partner using SWOT-analysis tool. Internal strengths and weaknesses were recognised as well as external opportunities and threads. The results are described in the chapters: *Analyses of the bottlenecks hindering the development* and *Potential businesses related to wood construction*.

On the next stage three separate SWOT analyses were but together and further analyzed in joint-workshop in Petrozavodsk (7.5.2019). The aim was to point out the most crucial bottlenecks hindering the development related to cross-border cooperation. After finding the bottlenecks the project group try to figure out the potential solutions to tackle those problems especially from the university point of view. The concrete tool used in this work was applied from the future wheel tool. Results from analysis are described in the chapter *5 A plan for future development*.



3 Analyses of the bottlenecks hindering the development

3.1 NORTH KARELIA

The survey was conducted in North Karelia region among the organizations with different fields of wood working industry. Interviewed companies represents following fields: house construction, log house manufacturer, window manufacturer, log house retailer, logging and sawmill company, hardware shop and consulting companies.

Among the companies, there were actors who sell final products to Russia, companies who buy the final products from Russia and sell those to Finland. There were also few companies, who worked as a consult for Russian market and those were involved in construction and wooden member production. Between Finland and Russian, there are long tradition for business in round wood and timber trade. Also in these interviews, there were few companies, which works in these fields.

Finnish companies were active in Karelia region and in the area of St. Petersburg. The location of North Karelia was seen as a strength for local companies. Due to geographical location, the cultural differences was seen quite small between Finland and Russian markets. Basic communication with business partners was described as a normal and ordinary communication. Also those activities related to transportation and payment in transactions was seen among interviewed companies take place very fluently.

During interviews, it was emphasized that business potential between Russian and Finland is great and in many ways interesting. The business can occur in many ways so that you sell something to Russia, you buy from Russia and sell it to Finland or other countries or you have joint venture activity in Russia and you are active in global market.

Unstable business environment

Almost all interviewed companies stated the importance of the stable business environment. The business environment in Russian side was seen, to be developed during last years in very good direction but still there are some level of risks about uncertainty of business environment. This cause in some cases barrier related to market entrance or other activities in markets. For future development, stable business environment would be important for long term market activities and customer communication.

Language skills

In many cases during interviews the people says that most of the communication can be take place in English. But when the discussion of this matter goes more deep, it was clear that the importance of skills in Russian language is still important. Almost in every cases there could be found Russian speaking people who participate to business activities especially in final stage. So the importance and knowledge in Russian language is obvious.

Building codes

The construction work (both design and construction) is regulated very detailed in all countries. To be possible to make business in this sector it is needed to know the building code and other regulations related to construction activities. When these regulations are published in the original language it is often almost impossible for company people to understand those requirements. This is obviously the area, which easily create easily barrier for business development.

Product certification

There was no company in those interviewed, which would have been got product certification for Russian markets. It was seen as a difficult and expensive process. Even for this purpose, the practices and process has been simplified and has become cheaper. More information and consultation is needed in this matter to make business more reliable and fluent.

Market competition and channels

Russian markets especially in Karelia and in St.Petersburg regions was seen as growing and interesting for Finnish wood products. But at the same time it was stated that information for market channels, communication and customer preferences are limited. In this area a lot of information is needed to encourage companies to investigate and possibly establish new market activities in some parts of Russia.

Agents

Among interviewed companies, almost each of them used some private agents to help in providing business in Russia. It was also stated that these contacts could be found in some cases only with good luck. If there could be good database for these kind of experts it could help a lot for companies who are planning activities in these markets.

3.2 ST. PETERSBURG

The survey was conducted with organizations, which are mainly located in the Saint-Petersburg area. In addition, there were some organizations participating to the survey from Leningrad, Vologda and Kirov region as well. The survey was conducted among the organizations with different fields of activities: forest harvesting, sawing, planning, production of technological chips, production of windows, doors, wooden structures, houses and cottages, design, research and development, certification, woodworking equipment supplier. Outcomes of the survey are described in following:

The absence of a common regulations and technical documentation for factory-made wooden house-buildings

Russian manufacturers of sawn timber and wooden houses of factory housing construction note a number of difficulties in their work, which reduce, among other things, the efficiency of export of manufactured products. These difficulties include the following:

» Non-compliance of standards of the Russian Federation and the European Union for sawn timber. In the Russian Federation, in accordance with the applicable standards, sawn timber is sorted according to visual signs, mainly according to visible wood natural defects, primarily by size, quantity and quality of knots, their location on the surface of the board. The standards of the European Union provide for the sorting of sawn timber for structural purposes by strength indicators.

» The absence in the Russian Federation of a common Code of Rules governing the requirements for wooden materials for construction, including factory wood housing, including requirements for strength, fire resistance, bio-resistance, thermal insulation, strength of adhesive and other compounds, dimensions and others.

Low market knowledge

The active development of wooden housing construction began in the 2000s after a significant decline in production volumes during the 1990s. In the 90s of the last centuries, as a result of a decrease in production volumes, qualified specialists working at the enterprises of wooden housing construction were lost, including specialists in product distribution channels.

Training of specialists in the field of marketing in forestry educational institutions, training specialists in the production of wood members, loose necessary attention from education Institutions. This confirms the need to strengthen cooperation in the field of student exchange in marketing and marketing management programs between educational institutions in Russia and Finland.

Lack of know-how related to marketing channels

Practically all of the companies that participated in the interviews stressed that one of the main problems in development of wood-based house construction is lack of knowledge in marketing and especially knowledge about marketing channels. The main reason for such

situation can be explained as follows: The companies participated in the interviews are not so big, that's why as a rule they do not have a specialist with the basic education in the marketing. The sales are done by the specialists in wood processing technologies (with the same basic education). But they do not have marketing in their educational program as a basic education and are receiving information about methods of marketing on working place. That's why it is essential to offer training for adults in marketing for the representatives of the wood-processing companies.

Low level of staff skills

In educational institutions of the North-West of Russia there are no special training programs for specialists in the field of wooden housing. All specialists at the enterprises were trained in the educational program "Wood technology", in which they study the disciplines necessary for work in enterprises for the production of wooden houses. The creation of educational programs on wooden housing will solve this problem in the future. At present, it is advisable to conduct adult training for employees of enterprises in Russian Universities with the involvement of Finnish specialists.

Risks associated with currency instability

The instability of the currency (ruble weakening) significantly affects the costs for the production for those enterprises that purchase materials and components abroad for wooden houses. Wooden house-building enterprises import tools, glues, paints, antiseptics, window and door components, floor coverings and other products. For newly built and modernized enterprises, currency instability (the weakening of the ruble) leads to increasing in capital expenditures.

Unstable business environment

Practically all of the companies that participated in the interviews noted the importance of the stable business environment. Stable business environment allows you to make plans for the future, gives confidence in the future.

Risks associated with legislation

Practically all of the companies that participated in the interviews noted the importance of the stable legislation. These risks are similar to the risks of unstable business environment. Stable legislation allows you to make plans for the future, gives confidence in the future.

3.3. PETROZAVODSK AND RUSSIAN KARELIA

The survey was conducted in Petrozavodsk region among the organizations with different fields of activity: house construction, building of saunas, creation of log cages for various purposes, other industrial activities related to the manufacture of square section logs, OSB-panels, rounding logs or cylindrated logs, the production of technological pallets, technological chips, fuel bark and firewood.

The main customers in the field of construction are individuals and private companies; however, there are some organizations in other fields of activity, purchasing building materials, pallets and technological chips.

Market of some small companies is limited by Karelian districts, adjacent areas and capital cities such as St. Petersburg and Moscow. However, there are some organizations whose market includes Belarus, Finland, Estonia, Sweden, Denmark, France, USA, Egypt, Israel and UK.

Raw materials used in production are as follows: coniferous saw wood, wood boards, cants, OSB-panels (including the panels without phenolic components), profile and glued square members. Small organizations purchase building materials (boards, beams, rounded logs) from sawmills. OSB-panels are widely used in the wood construction; profiled and rectangular sections are also in demand. Most organizations do their work without help of subcontractors; some organizations use the help of subcontractors to perform special type of work: concrete casting for foundations, roofing works, installing of window sets and door sets.

Besides this, it was emphasized, that international cooperation requires higher quality of the product worked out, and among the factors that can be the main challenges in cooperation between Russia and Finland the following shortcomings were noted:

Lack of short-term financial resources

It takes a long time from the delivery of the product up to the receipt of money for this work, which is problematical for a small company; that is the reason why some of the small companies returned to the domestic market.

Poor transportation systems

One company noted that their organization uses only 33% of its possibilities and the company could possibly have produced a larger number of prefabricated structures made from shaped glued logs for the local market and for the foreign market too. However, the company works in the domestic market because of some problems with the transportation of finished products, due to large sizes.

Customs practices

Some companies noted customs problems. They suggest the solution to these problems: to issue a declaration for the customer of the house or building as for an Individual Entrepreneur, i.e. to sell the products to the customer before crossing the border so that the customer could solve these problems on his own.

Poor currency rate

All organizations noted the high euro exchange rate, which makes it impossible (or very expensive) to purchase any components in Finland for the houses they build.

Low market demand

Some companies noted the falling demand for rounded logs in Finland, low demand for houses intended for permanent residence. The most sought-after orders are summer houses, saunas, garages, sheds and gazebos.

Building permission process

It takes a long time from the approval of the design up to the order of a log cage (log frame), which is required for the obtaining a permission to start the construction process.

Lack of business skills

The organizations that do not have an experience in cooperating with Finnish companies do not understand how to organize such business, starting from paperwork and ending with specific cases.

Some companies pointed out difficulties in obtaining a work permission. They also believe that investment and economic risks are existing.



4 Potential businesses related to wood construction

4.1 FINNISH PERSPECTIVE

In Finland, we have long tradition to use of wood in house construction. About 85% of all detached houses are made out of wood based material. In addition, a large portion of agriculture buildings (about 65%) are made in wood based materials. However, when looking the statistics related high raised apartment buildings there the share of wooden buildings is about 5%. The growing potential in Finland is obviously in high raised apartment buildings, office buildings and other public buildings (schools and kinder gardens).

Building materials

Between Finland and Russia has long-term tradition in trade wood raw material. Round wood, wooden chips and sawn timber trade has create a big business for several companies. This business should be developed to the direction on more value added products like CLT. This could be natural step in direction more knowledge based products and in the same time can be used the best knowledge from each country.

Industrial manufacturing of wooden houses

The development related to reduce carbon dioxide has led to the situation that wood and wood products has become more and more interesting building material. The material

potential is good in both country and basic technology could be found. Combine to this customer-oriented design, industrial manufacturing and market communication this combination could create significant market potential in both countries.

Log houses

Traditional houses in Finland and in Russia are made out of logs. In these regions, North-Karelia in Finland and Karelia Region in Russia has also the best quality pinewood to be used as raw material for log houses. This good basis combined to high tech knowledge can create expanding business opportunities in Finland and in Russia. At the same time, it make it possible to expand market effort also to other markets example in Europe.

Knowledge based business, consulting

From Finnish point of view, the Russian markets are interesting and growing at the same time. In Finland there are several companies who are interested to be active in Russia but there are a lot need for detailed information from market channels, customer behavior, prize level etc. to help companies start market activity in Russia these is obviously need for different kind of consulting or business agents.

4.2 RUSSIAN PERSPECTIVE

Based on the surveys conducted in the Petrozavodsk, Saint-Petersburg, Leningrad, Vologda and Kirov region possibilities for the cross-border cooperation between Russia and Finland were recognised.

Key findings are described in the following chapters.

The use of low energy local building materials

In the Russian Federation, wood in comparison with metal, brick and concrete is an inexpensive building material, the resources of which in North-West Russia are 9907.6 million m³. Historically, in the North-West of Russia in rural areas, preference was given to wooden houses, since wood as a building material is easy to extract and process (Table 1), wood is a renewable resource.

Table 1. Energy intensity of building materials production / Chubinsky A.N. Wood in construction: advantages and disadvantages. Forests of Russia: politics, industry, science, education. SPb.: SPbGLTU. 2018, pp. 244-246.

Name	Material specific energy consumption for the production of 1 ton of material, kW * h	Energy consumption GJ for the production of 1 ton of material
Sawn timber	30	0,1-0,5
Wood products for building	450	0,1-0,5
Cement	2240	0,8-1,5
Brick	990	0,8-1,2
Concrete	2730	0,8-1,5
Steel		100
Aluminum	722	200

The trade of wood-based materials, manufactured in the Leningrad region and Saint-Petersburg

The North-West of the Russian Federation is the most developed federal region of Russia in the field of wood processing. 26% of the wood harvested in the country is processed at the enterprises of the North-West Federal District. Large enterprises are export-oriented, equipped with modern equipment, use innovative technologies and materials. Budget revenues from wood processing enterprises amount to more than 8 billion rubles. The main ones are: LLC Lesprom SPb. (production of plywood and joinery and construction products), LesPlitInvest OJSC (production of wood-based panels), Mayer-Melnhof Holz Efimovskiy OJSC (sawnwood production), Priozersky timber processing plant (production of sawn timber, production of wooden houses), Roschinsky Dom OJSC (production of wooden houses) , Svir Timber LLC (included in the Metsäliitto Group, lumber production), Ust-Izhora Plywood Mill OJSC (included in the Sveza group, plywood production, including laminated), House Concept Sodruzhestvo LLC (production of wooden houses). Also some large companies are placed at the area of Petrozavodsk and Russian Karelia: Concerns Segezha, Kondopoga, Pitkyaranta, Factory Kalevala (OSB panel production) and some others.

Customer focus

Wood as a building material has the following advantages over metal, brick and concrete: regulates the humidity in the home

- » does not contain allergens
- » characterized by low thermal conductivity and high relative strength (strength to density ratio)
- » in the process of burning wood is not deformed as metal (does not jam the doors and windows) and does not emit toxic substances like plastic

There are a lot of wooden house manufacturers on the territory of the Leningrad Region, St. Petersburg and Russian Karelia which creates a favorable competitive environment for the consumer. The distribution of producers on the territory of these regions minimizes the cost of delivering sets of elements of wooden houses to the consumer. It is also important that the consumer can independently assemble the house.

Experience of cooperation with Finnish companies

Manufacturers of wood products operating in St. Petersburg, Leningrad Region and Russian Karelia have a long experience of working with Finnish companies, primarily woodworking equipment manufacturers: Hew Saw (has a representative office in St. Petersburg), Raute Wood (has a representative office in St. Petersburg), Kallion Konepaja (has a representative office in St. Petersburg) and others. Finnish companies Tikkurila, Fortum, YIT, UPM, Metsäliitto Group work effectively in St. Petersburg and the Leningrad region. Many woodworking enterprises in the North-West region of the Russian Federation sell wood products to Finnish consumers. The staff of these companies has experience in working with Finnish companies.

Experience of cooperation between neighbors, Russia and Finland

Neighborhood of Russia and Finland, being in the same climatic zone North-West of Russia and Finland, the same species and dimensional characteristics of trees, historical roots will predetermine active cooperation in the field of growing, harvesting and processing of wood. Short distance between Russia and Finland predetermines low transportation costs for the transportation of raw materials and products, the possibility of face-to-face communication, which strengthens trust in the partner.

Cooperation between Russia and Finland takes place in all spheres of human activity: political, economic, humanitarian. In the economic sphere in the forest sector, examples of such cooperation in North-West Russia are Finnish companies UPM, Metsäliitto Group, Hew Saw, Raute Wood, Kallion Konepaja and others. This cooperation is expressed not only in trade in products, but also in joint business. Cooperation in the field of education and science, which is carried out by the St. Petersburg State Forest Technical University (SPbFTU) and Petrozavodsk State University (PetrSU), with the higher educational institutions in Finland, is also successful. This cooperation is aimed at joint training of students (CBU), exchange of students, lectures by Finnish teachers in SPbFTU and PetrSU teachers of SPbFTU and PetrSU at universities in Finland, organization of business trips of Russian specialists to Finnish enterprises and Finnish specialists to St. Petersburg, Petrozavodsk, Leningrad region and Russian Karelia enterprises.

Business communication between the Russian and Finnish business, scientists and specialists in the field of reproduction and processing of forest resources takes place annually at the St. Petersburg International Forest Forum, the conference "Forests of Russia" in SPbFTU.

In Petrozavodsk State University about 20 years is going on the course “Special features of Russian building stock” which attends by students from Joensuu, Kuopio and Kajaani. Course is organized and conducted by Russian and Finnish teachers. Also at PetrSU special course for Russian students “Structural Design according to Eurocodes” organized and some books devoted to these problems were published.

Interpersonal relationships related to business

Practically all companies that participated in the interviews noted the importance of interpersonal relationships in business. Good interpersonal relationships strengthen business relationships, contribute to their further development. That is why, it is advisable to exchange students, conduct advanced training of specialists from Russian and Finnish enterprises with the participation of teachers from Russian and Finnish Universities, organize business trips to Russian and Finnish enterprises, promote the participation of Russian and Finnish scientists and specialists in international conferences and exhibitions.



5 A plan for future development

For business

According to interview results it is obvious that there is a lack of knowledge in many fields on both sides of the border. The knowledge of markets in Finland or Russia, the building regulations, the design codes, the market channels, the market information, customer preferences and key players in markets are good examples of areas where more information is needed. To help companies or other operators in markets it would be important to establish a broad training program for all interested partners. This kind of program should be run in Finland and in Russia at the same time and also there should be a possibility to combine these visits with visits to interested targets.

There are also great possibilities to organize cooperation in the production of wooden products. We have good knowledge in production technology and also good quality raw material to be used in these products. This kind of products could be: particle boards, OSB, CLT, glulam rectangular sections, cylindrical logs, prefabricated houses and so on. With this kind of cooperation we could get more value added to our raw material and also create a competitive wood product cluster which would be able to compete in wide international markets.

In both countries the building process is controlled and guided with a lot of regulations and legislation, building acts. For design guidance in Finland is used Eurocode and Russia has its own national regulations. There are a lot of differences and it is possible to harmonize the process.

would be beneficial for all parties. To harmonize this regulation is not easy and quick process so training and different joint workshops are needed to rise the understanding in both side of border. To target in this process should be so that developers, contractors, designers and manufacturers knows well the basic process and so the business potential in both side of border could be utilized as good as possible.

During the building process, many different building products are needed. Such end products as windows, stairs, flooring material, paneling etc. are most of the cases made out of wood based materials. This create also great potential for value adding for raw material and also great opportunity for cooperation starting from design to retailing. Due to the good experience of cooperation between Finnish and Russian companies, it is possible to organize the training process for designers, workers and other experts from Russian and Finnish companies to boost the final product business. The market for this kind of products are global and the production of these products are reasonable establish in near raw material recourses in area like North-Karelia or Russian Karelia region.

For Universities

For future development point of view it would be important that cooperation between universities should be deepen. Development of new cross-border training programs for Civil Engineering employees should be in target in near future. The common education program would be able to create stable platform for students to get good basic education in this sector and what is important in both countries point of view. These young talents can create new group of professionals, which are key players in wood based business between Finland and Russia.

The key universities in this program are Petrozavodsk State University, Saint Petersburg State Forest Technical University and North Karelia University of Applied Sciences. These universities has already long tradition for cooperation in fields of forestry, wood technology and civil engineering. In first stage advanced program for education should be developed together with stakeholders and other important organizations in both countries. When curriculum is created at the same time also should be create and equipped of innovative platform for education, training and capacity building. The modern teaching technology should be used and the tight connection during studies to business should be confirmed. When first pilot training group is ready feedback should be collected to be sure that necessary action are made and better satisfaction of student's needs are achieved.

This kind of program should be run yearly basis and limited number of students from each country accepted according common rules. This means that we are able to starting of a permanent stable functioning of the educational network. At the same time, the business life could get a number of well-educated student which are able to work in Finnish-Russian business in different sectors.

6 Conclusions

1. All aims set by this Micro Project were achieved completely with the required quality.
2. Using the actual possibilities of the Karelia University of Applied Sciences, University of Petrozavodsk and St-Petersburg Forest Technical University it is necessary, to go on with active use of exchange programs for student and teachers in the field of wooden processing and wooden construction.
3. This Micro Project create good background for the next project realized for instance at platform of CBC or Erasmus+. Erasmus+ project could aimed to educate our students in the field of wood and wooden structures by creation the education net devoted to the same problems. This may be recommended to Leading Partner to start such a Project with the help of 1-st and 2-nd Partners.
4. Some problems and obstacles in the field of wood construction business were found listed. Recommendations to solve these obstacles were not prepared yet (see paragraph 5). To start with the full investigation and prepare the necessary recommendations needs for next project which may be organized by Leading Partner with the help of 1-st and 2-nd Partners.

QUESTIONNAIRE

- Bottlenecks related Finnish/Russian cooperation in the field of wood construction and woodworking industry

Basic information

Personal information:

- Title
- Gender
- Age
- Education

Company:

- Name
- Home location
- Fields
- Age
- Turnover
- Ownership
- Number of employees
- Products and services
- Main market areas

Production and markets:

- Use of raw materials
- Use of subcontractors
- Main customers
- Main distribute channels
- Main markets (export/domestic)

Cooperation between Russia/Finland

- Current cooperation with Russian/Finnish companies/stakeholders?
- How long experience you have in this cooperation?
- Which kind of experiences you have in this cooperation?
 - Good experiences
 - Problematic issues
 - Needs to developed

Which of these factors are main challenges in cooperation between Russian and Finland?

Personnel

- Number of skilled personnel
- Knowhow related to Finnish/Russia cooperation
- Language skills
- Lack of market knowledge
- Cultural knowhow
- Lack of Finnish/Russia networks

Infrastructure and financing

- Geographic location
- Transportation and logistics
- Product protection (risk of copying)
- Capital and capital cost
- Economical risks
- Risks in investments

Legislation

- Risks related to legislation
- Product liability
- Custom
- Currency rate
- Domestic content requirement
- Certifications
- Work permits
- Building legislations (i.e. Eurocodes)

Other risks

- Changes in political environment
- Terrorism
- Labour strikes

Annex 2. List of companies interviewed

№	Name of the company	Home location	Industry/Sector/Field	Contact information
2.	ООО " Хаус-Концепт"Содружество" Haus-Concept" Commonwealth"Ltd	Saint-Petersburg, Kolpino	Design of panel-frame houses, factory production of sets of panel-frame houses, construction.	Saint-Petersburg, Kolpino, Pr.Lenina 1/5 Tel.+7 812-309-03-96 Санкт-Петербург, Колпино, пр. Ленина, 1/5, телефон: 8 (812) 309-03-96.
3.	ООО "ДРЕВПИТЕРСТРОЙ" "Drevpiterstroy" Ltd	Saint-Petersburg	Cottage construction, installation of wooden structures	Санкт-Петербург, бульвар Сиреневый, дом 16, к. 1 Saint-Petersburg Bul.Sirenevyi 16 k/1
4.	ООО «СПбГАСУ - Иннодрев». "SPbGASU-Innodrev"	Saint-Petersburg	Examination of wooden buildings and structures, diagnostics of wooden structures, mycology and wood protection, design of wooden buildings, study of the connections of wooden structures with screws and screws, research of jointed connections using LVL, laboratory studies of the strength properties of wood and board materials, study of panels of wooden houses for rigidity.	Санкт-Петербург, 2-я Красноармейская ул. д.5, каб. 308 Saint-Petersburg 2-nd Krasnoarmeiskaya d.5, office 308 Tel. Тел./факс: -7 (812) 575-05-38 e-mail: kovalpavel.innodrev@gmail.com
5.	"ДОК"Ltd	Kirov region, town Belaya Holunizta	Production and construction of houses from glued timber and rounded logs	Кировская область , Белая Холуница, ул. Набережная 44 (900) 525-44-44 Kirov region, town Belaya Holunizta Ul.Naberezhnaya 44 Tel. +7900 525 -44-44
6.	ООО СДМ и К «Сертификация домов, материалов и комплектующих» SDM&K"Certification of houses, materials and accessories" Ltd	Saint-Petersburg	Certification of houses, materials and accessories	Санкт-Петербург, ул. Стародеревенская, д.6, к.1, телефон: (981)7086715. Saint-Petersburg Ul.Staroderevenskaya 6,building 1 Tel.+7981708-67-15

7.	"Faeton" Ltd	Saint-Petersburg	Supplier of equipment for woodworking and wooden housing.	Санкт-Петербург, ул. Матроса Железняка, д.1, телефон: (812) 320-48-98, info@faeton-spb.ru. Saint-Petersburg Ul.Matrosa Zheleznyaka 1 Tel. +7812320-48-98 e-mail: info@faeton-spb.ru
8.	АО "78 ДОК Н.М." Joint stock company "78 DOK N.M."	Saint-Petersburg	Design and construction of houses from laminated veneer lumber, production and installation of building structures from laminated wood, production and installation of wooden windows and doors	Адрес: г. Нижний Новгород, ул. Вторчермета, д.7 Tel. +7 (831) 224-04-36
9.	"STOD" Ltd	Saint-Petersburg	Production of laminated veneer lumber from timber, wooden building structures.	Санкт-Петербург, ул. Большая Морская, д.14, литер А, помещение 120-н офис 314, тел. 8 (812) 322-93-35 Saint-Petersburg Ul. Bolshaya Morskaya 14, liter A, Premises120-n office 314, Tel. +7812322-93-35
10.	"KARAMTD" Ltd	Saint-Petersburg	Development, supply and installation of equipment for the production of lumber company Kallion Konepaia.	Санкт-Петербург, ул. Новороссийская, д.1/107 Saint-Petersburg Ul.Novorossiiskaya d.1/107
11.	Joint stock company "Trade house TAT"	Vologda Region, town Cherepovezt	Construction of residential and non-residential buildings	Вологодская обл., г. Череповец, Советский пр-т., д. 99А Vologda Region, town Cherepovezt, Sovetskii pr.99-A
12.	"LPK after Zhelyabova" Ltd	Vologda Region	Wood processing, forest harvesting, saw milling	Vologda Region Ustuzhna district Settlement after Zhelyabova Ul.Sovetskaya 3 Вологодская обл., Устюженский р-н, пос. им. Желябова, ул. Советская, д.3
13.	"Roshchinskii Dom" Ltd	Leningrad Region	Wood houses production from glued and profiled timber	Leningrad Region Vyborg District Settlement Roshchino Ul.Krugovaya 10 Tel.+79052027755
14.	"Uyutnyy dom" Ltd	Petrozavodsk City	structural design, construction, anufacturing of building glued rectangular elements, all elements for skeleton system houses, OSB elements, etc.	address: 43, Pervomaysky Avenue, Petrozavodsk email: info-karelia@mail.ru phone number: +7 (8142) 59-33-37

15.	"Avgust" Ltd	Petrozavodsk City	cylindrical log houses design, construction and design of wooden houses	address: 31, Lenin Avenue, Petrozavodsk email: avgust.dkm@onego.ru phone number: +7 (8142) 56-20-79
16.	"Astor" Ltd	Petrozavodsk City	construction of wooden houses	address: 51 Monchegorskaya Street, Petrozavodsk email: monolit-invest.rk@mail.ru phone number: +7 (921) 459-99-12
17.	"SSO-Karelia"	Petrozavodsk City	low-rise building construction	address: 29, Kolcevaya Street, Petrozavodsk email: info@sso-karelia.ru phone number: +7 (8142) 26-01-37
18.	"Domnedorogo"	Petrozavodsk City	construction of buildings made of profiled wooden sections	address: 10a, Promyshlennaya Street, Petrozavodsk email: domnedorogo10@yandex.ru phone number: +7 (8142) 67-16-66
19.	"DOMOS"	Petrozavodsk City	construction of skeleton type wooden buildings and buildings made of glued profiled sections	address: 10a, Zavodskaya Street, Petrozavodsk email: sk.domos@yandex.ru phone number: +7 (911) 400-00-87
20.	"Sukhanov ST"	Petrozavodsk City	construction of log cages and houses.	address: 4, Zavodskaya Street, Petrozavodsk email: mailto:terem-karelia@yandex.ru phone number: +7 (953) 533-70-83
21.	"Melnitsa"	Petrozavodsk City	Production of sets all elements for houses (log cages and other elements)	address: Petrozavodsk, 2, Eight Luchevoi Proezd. email: info@millhome.ru phone number: +7 (921) 459-18-15
22.	"Teplo karelii" Ltd	Prionezhsky district, Vilga village	production of wooden building materials, rounded logs, profiled rectangular sections, wooden boards, profiled elements, wood for fire places, pallets, wooden furniture, construction, logistic services etc.	address: 7, Prionezhskoe highway, Vilga village email: info-teplopro@yandex.ru phone number: +7 (8142) 63-05-51
23.	"NORDHILL"	Petrozavodsk City	construction of building according to Scandinavian technologies	address: 25, Krasnoarmeyskaya Street, Petrozavodsk email: nordhill@mail.ru phone number: +7 (8142) 26-86-00
24.	"Sruby iz Karelii"	Petrozavodsk City	construction of wooden houses (handmade log cages)	address: 23, Novosulazhgorskaya Street, Petrozavodsk email: sруб-doma-karelia@yandex.ru phone number: +7 (960) 213-15-11

25.	"Semiastroi-ptz" Inc.	Petrozavodsk City	construction of wooden houses	address: 6, Sovetskaya Street, Petrozavodsk email: iinfo-semiastroi-ptz@yandex.ru phone number: +7 (921) 466-61-10
26.	Business Joensuu Ltd	Joensuu	Business developer	address: Länsikatu 15, 80110 Joensuu email: info@businessjoensuu.fi phone number: 358 10 419 8000
27.	Aurinko Hirsi Oy	Kontiolahti	Log houses	address: siprintie 4 B, 80910 Kontiolahti email: myynti@aurinkohirsi.fi phone number: +358 40 0444 956
28.	Ykköspuu Oy	Kontiolahti	Log Houses	address: Jaamankankaantie 4, 80710 Lehmo email: ykkospuu@ykkospuu.fi phone number: +358 50 32 77 666
29.	Stark Finland Oy	Helsinki	Hardware shop	address: Kaltimontie 9, 80100 Joensuu email: myyntipalvelu@stark-suomi.fi phone number: +358 400 394 381
30.	Consulting Isto Arvelainen	Joensuu	Private consultant	phone number: +358 400 210 464
31.	Karjalan Valaistuspalvelu Oy	Joensuu	Log houses, fire wood, led lights	address: Ahontie 8, 82220 Niittylahti email: info@karjalanvalaistuspalvelu.fi phone number: +358 40 900 6950
32.	Karjalan palvelu Oy	Tohmajärvi	Private consultant	address: Savitie 24, 82600 Tohmajärvi phone number: +358 44 344 7436
33.	Finnish-Russian Chamber of Commerce	Helsinki	Consulting	address: Eteläranta 10, 00130 Helsinki email: info@svkk.fi phone: +358 10 439 1150
34.	Idän Metsäkone Oy	Ilomantsi	Logging, sawmilling and biofuel trade	address: Mäntyojantie 10, 82900 Ilomantsi email: tapio.lauronen@idanmetsakone.fi phone: +358 50 036 2388
35.	Penttilän Puu Oy	Joensuu	Sawntimber trade	address: Pamilonkatu 22, Joensuu email: ilpo.asikainen@penttilanpuu.fi phone: +358 40 550 6525
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