

Company: AVRAME LLC

Country: Estonia

Case focus: Creating a business model

Course: Entrepreneurship

Date: July 2022

BACKGROUND INFORMATION

Production of wooden houses – market situation in Estonia

A wide variety of timber houses are produced in Estonia, e.g. prefabricated houses, modular houses and log houses. A modular house is a factory-built complete spatial building (up to 90% can be completed) and a prefabricated house is made up of factory-made elements that are assembled on site.



(Modular house <https://finnlog.ee/blogi/moodulmajad/> and prefabricated house <https://avrame.com/gallery>)

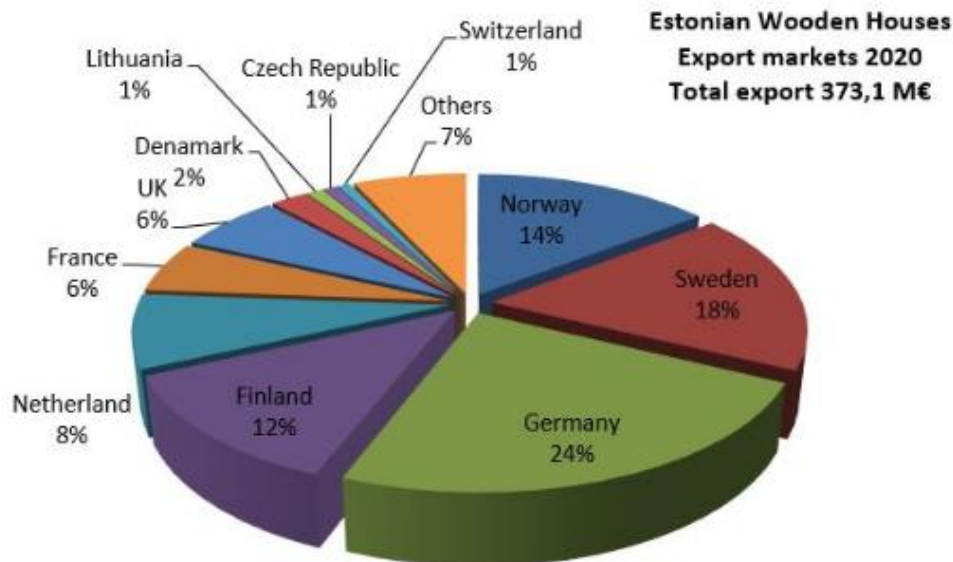


A log house is a building made of logs (photo: <https://pixabay.com/>). The log house industry is further divided into craft producers and machine producers. Hand-hewn log houses have a centuries-old tradition in Estonia. Estonian farmhouses have been built from local pine and spruce logs for centuries. Over 300 years old log buildings have been preserved in Estonia. Elsewhere in the Nordic countries, however, there are also wooden buildings dating back for 800 and even 1000 years.

The industrial production of wooden houses in Estonia began to develop in the 1950s. Today, the industrial production of timber houses has developed into a separate industry, with around 140 companies. According to Eurostat (<https://ec.europa.eu/eurostat>), the total turnover of the Estonian wood factory buildings sector was €415 million in 2020. Estonian manufacturers have long experience in the production of wooden houses and their products are competitive

in the global market. This is demonstrated by the fact that around 85-90% of the companies' total production is sold outside Estonia. Scandinavia, Germany and the United Kingdom are the main target markets, while Japan, South Africa and South Korea are also export partners. (<https://ehitusest.ee/uudis/2021/09/30/putmajatootjad-jatkuvalt-tublid-eksportijad/>)

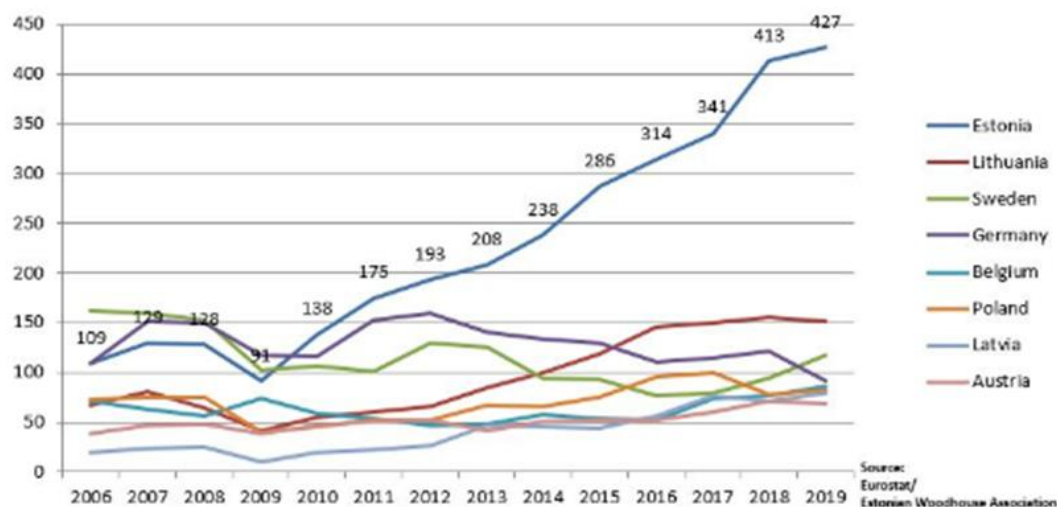
Estonian Wooden Houses export markets:



Source: Statistics Estonia

In absolute terms, the next largest exporter of wooden houses in the EU ranking after Estonia is Lithuania, with around 166 million euros worth of wooden houses going to foreign markets. After Lithuania there are Poland, Belgium and Sweden. Despite of a slight decrease in production turnover compared to 2019 (€462 million), Estonia is among the top six largest European producers of wooden houses. (<https://www.putmajaliit.ee/en>)

Export of Prefab Wooden Houses in EU 2006-2019



Why a wooden house?

- ✓ **Nature-friendliness:**
 - Wood is a clean building material created by nature itself.
 - Wood is a naturally self-sustaining building material.
- ✓ **Healthiness:**
 - Thanks to the antistatic properties of wood, log houses have less dust, a feature appreciated by allergy sufferers.
 - The moisture contained in wood is released indoors in winter, ensuring a constant and optimal humidity.
 - Through the log walls, there is a moderate and constant freshening of the indoor air.
- ✓ **Warmth:**
 - Wood is an inherently warm material, the temperature of interior surfaces is pleasant as it is always close to the ambient temperature.
 - Wood is a natural heat conductor, which is a constant indoor temperature. In summer, a log house is pleasantly cool.
- ✓ **Tradition:**
 - The construction of wooden houses is one of the oldest building methods.
 - A properly erected wooden house will last for centuries.

(<https://www.puitemajaliit.ee/miks-eesti-puitemaja>)

History of A-frame building

An A-frame house or other A-frame building is an architectural house or building style featuring steeply-angled sides (roofline) that usually begin at or near the foundation line, and meet at the top in the shape of the letter A. A-frame buildings are an ancient form known in Europe, China, and the South Pacific islands and were simple structures used for utilitarian purposes until the 1950s. In 1934, R.M. Schindler built the first modern A-frame house, for the owner Gisela Bennati, in Lake Arrowhead, California. Several different architects helped to popularize Schindler's idea in the early 1950s, designing A-frame vacation homes. Before long, thousands of A-frame homes were being built around the world.

The post–World War II popularity of the A-frame has been attributed to a combination of factors including Americans' extra disposable income, the inexpensiveness of building an A-frame structure, and a new interest in acquiring a second home for vacationing. Another factor contributing to the rise of the A-frame included the adaptability of the structure itself, which enabled architects to experiment with more modern designs. Additionally, many people preferred the idea of a "modern-style" vacation home to that of a "modern-style" primary home. A-frames became available as prefabricated kits, lowering the cost even more, and were sold by Macy's department stores. (https://en.wikipedia.org/wiki/A-frame_building)

In the 60s and 70s, the building technology was not that sophisticated. A-frame houses were difficult to insulate and therefore they could not be used all year round. That meant that eventually A-frame house lost its popularity and such a unique-looking house pretty much went into the history books. However, thanks to a new technology and ways of building, by the 2020s A-frame houses are back! With modern building materials, it is very easy to make A-frame houses as an all year round living space. A-frame kit houses are still very affordable to build and are perfect for everyone who wants to think out of the box.

(<https://avrame.com/about-us>)

PREVIOUS STORY

In 2012, Indrek Kuldkepp left the timber house manufacturer RPM, where he had worked for 15 years. By 2014, he had given up on a failed attempt to produce small Glog Home wooden houses and he started a software development company instead. At one of the training sessions on internet marketing, the local well-known trainer Peep Laja presented a web-tip he had created to help people find their life calling. After filling in the questionnaire, Indrek was told that he should work with wooden houses, that this was his "thing". Indrek thought then, "Ooh, that vocation or, I'm not doing very well with this vocation!" and concentrated on developing his own software company.



THE STORY and BRAND

Avrame LLC was established in the end of 2016. Indrek Kuldkepp, Avrame's founder and CEO, has a mason-carpenter-concreter specialty on special secondary education level and twenty years of experience in the production and sales of wooden house constructions. In order to expand and improve his marketing knowledge, he has independently taken a number of marketing courses, mainly online.

Indrek divorced his wife in 2012 and a year later he sold his "normal" house and started thinking about what kind of an affordable and rational (off-grid) house he could build without taking out a loan. "I paid off all my bank loans and decided that I didn't want to be a bank slave in this life anymore," he recalls.

After a long and thorough research on the Internet, Indrek "stumbled" upon the A-frame design. "I thought, oh, I think the A-frame concept is really cool!" At the time, two companies were offering prefabricated houses, one metal-frame from Alaska and the other a family-owned timber-frame from the USA. Since it did not seem reasonable to order a ready-made kit from either of them, Indrek decided to build it himself. He started by making a small model, calculating and figuring out the most optimal way. All this time, two and a half years, Indrek and his son lived in a tiny 13m² house.

Today, Indrek Kuldkepp lives in a three-store house and does not pay a cent to the bank. What is more, he does not pay for water or electricity, even though he has both. He gets his water from a well and his electricity from solar panels on the roof. In the rest of the world, these are called off-grid houses, meaning these are not connected to central heating, water or electricity. While building the house, Indrek thought that if it turned out well, he would offer it to others. It turned out great!

The biggest advantage of an A-shaped house is that the construction is simple and construction costs are low. "Whereas in a conventional house, you first put up the wall structures and then start building the roof, we do these two stages at the same time. Rather, the walls are not built," Indrek Kuldkepp explains. "In construction, the most expensive and complicated parts are the joints of different structures, for example, to put concrete and wood together. The A-frame, however, is 360° one and the same structure and is self-supporting, plus it has only five faces, whereas a normal house has seven. Therefore, the A-frame is the

structure with the least number of surfaces that can be increased. Theoretically, one could make this house a kilometer long, without having to change the engineering, with the same perpendicular triangle calculated and optimized. So there's enough flexibility in that construction method."



(Indrek Kuldkepp and the house he built. <https://www.facebook.com/DiyBuilders>)

More information on the Avrame concept can be found in this video: <https://www.youtube.com/watch?v=JI7m47HQrk> and on the website <https://avrame.com/en>. Be sure to check out the other videos on the Avrame YouTube channel <https://www.youtube.com/c/AVRAME/featured> and check out the Facebook page <https://www.facebook.com/DiyBuilders>.

The start of the company was bumpy and difficult. One lawyer, who knew Indrek, got excited about the idea and told him to write a business plan and he would arrange the financing. To start looking for people and premises, he gave Indrek €60 000. Indrek wrote a business plan that did not foresee any sales in the first nine months, but needed to complete the initial engineering solutions (including strength calculations, deflection calculations, wind load calculations, etc.), put together sets of drawings and write step-by-step instructions with 3D drawings, prepare certificates of compliance, and produce high-quality images and marketing materials and launch marketing activities.

Half a year later, it turned out that the lawyer had no intention of arranging the funding from the start, and was trying to trick the company and the idea. New backers had to be found, the debt to the lawyer paid off, and Indrek had to start from scratch. "But you see, that's how we worked our way up, bit by bit. Now it's like this: in 2019 we had a turnover of around €300,000, in 2020 it was €600,000 and in 2021 it was €1.8 million. At the beginning of this year (2022), we forecast that we would have €3 million, but at the current rate, it looks like we will have around €4 million," Indrek Kuldkepp said.

Avrame started with three people and now employs six people: Indrek as CEO, the Head of Sales, the Sales Manager, the Head of Engineering, the Purchasing Manager and the Office Manager. Avrame is a product development company by nature, and they outsource all the production of the house kits, the necessary materials and services.

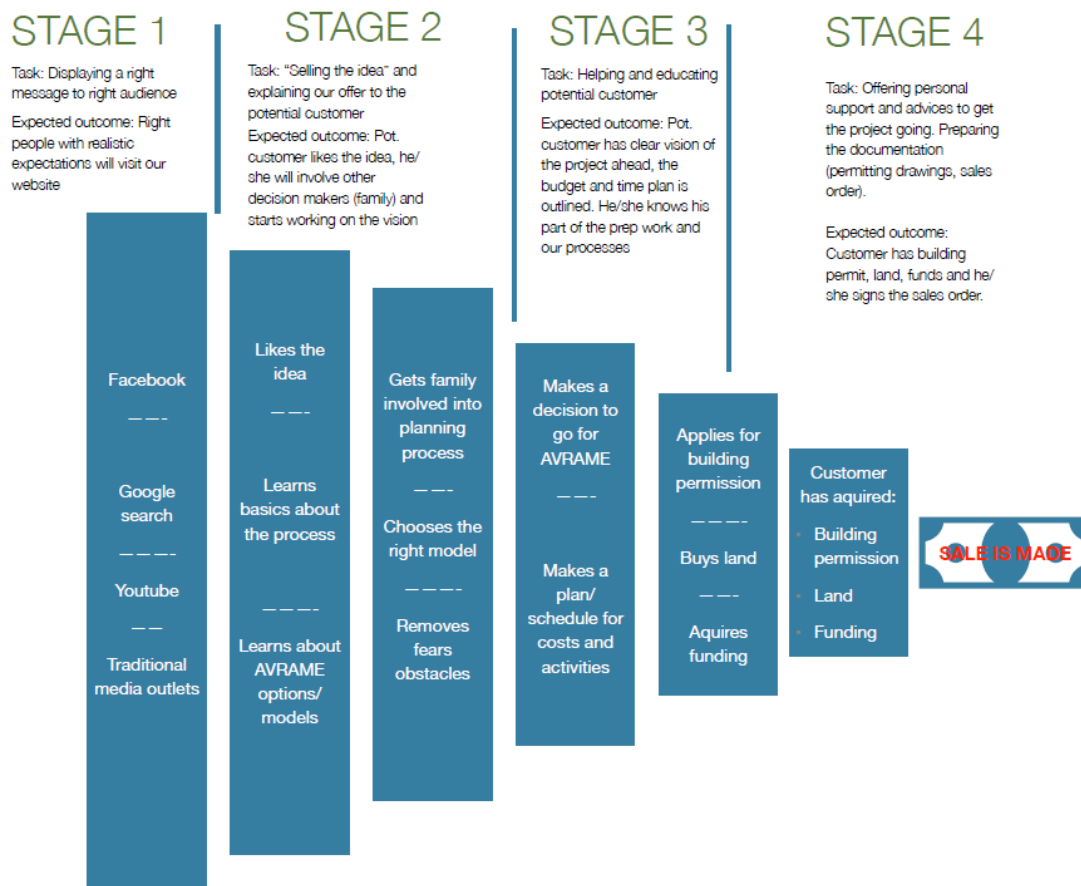
Marketing and customer relations

Avrame's activities have been export-oriented from the start and all their guidance and marketing materials are in English. Today, the website is available in fifteen languages, including Greek and Hebrew, so that the company can be found all over the world via Google. To produce the materials, Indrek worked internationally and found partners both in Estonia and around the world. From the very beginning, Indrek Kuldkepp decided to invest heavily in both the content and the visual quality of the marketing materials and guides, because he wanted to make sure that installers in Korea, Japan or Canada would not get it wrong and that Avrame would not be in the media with a headline like "Family of four killed under Avrame rubble". For example, a twenty-page step-by-step guide with 3D drawings took a couple of months to produce and cost around €5,000, a single computer rendered image took 3 weeks to produce and cost €3,000.



(Computer generated images, Trio and Duo; <https://avrame.com/gallery>)

Avrame has invested most in the ActiveCampaign, a customer experience automation or sales program. Currently in its fifth version, each version has cost several thousand euros and a lot of work. "We have about 1,200 to 1,700 new enquiries a month, but I only have two sales people! When a potential customer makes an enquiry on the website, the computer, the same software, speaks to him at first. A lot of people don't realize that it's not a real salesman talking to them. And then, when the computer thinks that the customer is already 'warm' enough, the matter goes to the salesperson's 'desk'," explains Indrek Kuldkepp. All the communication is automated with dozens of rules that have been created through painstaking work.



(Stages of the customer relationship from the business plan of Avrame)

Avrame product range and markets

Avrame's range of house kits (first and foremost Avrame's revenue stream) includes three product series - SOLO, DUO and TRIO - a total of 13 models. There are houses for the whole family as well as small sheds for the lawnmower. As Avrame itself is a product development company, all the necessary parts are ordered from Estonian local partners. These include Aknakoda (<https://aknakoda.ee/en/>), Ruukki (<https://www.ruukki.com/>), Aru Group (<https://www.arugrupp.ee/en/>), Essve (<https://www.essve.com/en/>), Velux (<https://www.velux.ee/>) etc. "Once the contract is signed, we send the production drawings to a factory in Kambja, Tabivere or Kuusalu (partner production units in small Estonian settlements), which orders the material, cuts out the parts and packs them. At the same time, we order windows and doors from another place and roofing material from a third," Indrek Kuldkepp described. If the customer is from outside Europe, everything is packed into a sea container and the goods are shipped. The biggest problem with shipping by a sea container at the beginning was how to get six-meter packages weighing 3.5 tons in and out of the container. The first container was loaded with a bucket of water and a packet of washing powder to make the floor slippery, but today special forklifts are used for loading and capstans are placed around the packs to push them out of the container.

The very first customers for the house set were from Estonia, but the first export sale was to South Korea and purely because of the super high quality of the imagery, it just appealed so much. Those first sales were difficult and the negotiations took a while, but once you

announced on the website that the first house was going to South Korea, it was easier to gain trust. The main market today is Canada. The places where customers build Avrame's houses can be seen on the following site: <https://avrame.com/avrame-locations>.

Exceptionally, all sales are made on a prepayment basis. In the company's history the only output worth of €2,500 that was done on credit, supervising an installation in Spain, ended in non-payment of the invoice. The amount did not have a major impact on the company's business, but it was a good lesson. 80% of sales of house sets are made directly and 20% through resellers (see <https://avrame.com/contact>). The average price of a single kit of three models is €45,000.

A market with very high potential is the US market, where the same volume is sold as elsewhere, but where Avrame sells product licenses (second Avrame's revenue stream) and the house kits are produced locally by a partner. Avrame does the marketing and the first contact with the customer. If the customer is interested, it is handed over to the Americans, who sign the contract and collect the money. Once this has been done, Avrame sends an invoice for €1,500 to the US partner and a bronze medal with the logo and serial number, for example "Avrame A-frame No 122", for delivery to the customer. The revenue from the US market is many times less than from Canada, but there are no risks or concerns. Each US state has different and very stringent building requirements (earthquake requirements, hurricane requirements, fire safety requirements, etc.) that Avrame would not be able to monitor and solve from its Tartu office.



(Trio 150, Minnesota USA; <https://avrame.com/gallery>)

The third revenue stream is Avrame's digital products in the web shop - sets of house designs for budgeting and negotiating with builders, and e-books. Together with his Italian partner Andrea, who lives in Tallinn, Indrek has written three e-books: the first is on house budgeting, the second is on 100 questions to ask before building, and the third one is on off-grid living. The turnover of these digital products is currently around €7,000-8,000 per month. Income from licensing and web shop is about 5% of total turnover.

The web shop also sells promotional products with Avrame logos and designs, a small range of home and garden products and off-grid living supplies. Revenues from these products are currently very low and the company does not see the need to boost this part of the business at the moment.

Avrame A-frame houses are not suitable for most urban environments, but they are an excellent choice for suburban and rural areas. Away from settlements, in the forest or in the mountains where there are no main connections (off-grid), they are the best choice of all. Avrame's customers are families looking for maximum quality at a reasonable cost; people looking for reducing their environmental footprint; people dreaming of a compact summer home; self-builders; camping site owners, etc.

The competitive situation

When Avrame first started, there were only a few competitors, but in the five years it has been in business, many A-frame providers have emerged around the world. In Estonia, there are no other A-frame house manufacturers, but the competitors are builders who carry out their clients' wishes according to pre-designed plans. "If we talk about competitors, there are two companies, one in Bulgaria and one in the Rostov region in Russia, who offer our houses. And they offer them in such a way that the pictures are also taken from our website. When I saw that, my blood pressure went up, but then I thought, well, I have created something worth stealing! 😊 I don't think they'll sell anything much, maybe two units a year. But on the website they offer everything from marble Italian villas to my houses, in a word, everything they've managed to scrounge together. I wondered how it would affect my life, whether I'd get older or sicker or poorer - it won't, so let it be" said Indrek.

CASE TO SOLVE: create a business model for Avrame

Tasks for the students:

1. Please read the case through individually. Be sure to check out the material available on the company's website and YouTube channel. Discuss it in teams of 3-4. Was all the information understandable? If not, raise questions and try to find the answers together.
2. After clear understanding of the case make a list of possible fundamental aspects of the nine modules based on A. Osterwalder and Y. Pigneur's "Generation of business models". Find the theory about business modelling and get familiar with the BUSINESS MODEL CANVAS
 - <https://www.strategyzer.com/canvas/business-model-canvas>
 - <https://canvanizer.com/new/business-model-canvas>
3. Discuss in teams and fill in the business model canvas. In the module on Revenue streams, please also provide numerical indicators.
4. Prepare a short presentation and explain your choices. In addition, give your opinion why Avrame business model works well all over the world.