

LIFE IN Estonia

FALL | 2013

SPECIAL!

Estonia,
Official Partner
Country of
the Hamburg
International
Boat Show

Sailing
and Surfing
Holidays
in Estonia

Estonian Maritime
Heritage in a New
and Exciting Package

Shipbuilding
in Estonia:
Where Traditions
Meet Innovation

Smart Solutions for Navigation

land & people | state & society | economy & business | technology & innovation | culture & entertainment | tourism

ISSN 1406-7331



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Estonia.eu
Positively surprising



The sea connects

Tourism plays an important role in restructuring and developing an economy. Estonia aims to be an attractive travel destination which makes people want to visit us, stay here longer and return here in the future because of the northern nature, unique cultural heritage and high-quality tourism products.

Nautical tourism is an increasingly popular way to combine the love of sailing and boating with vacation and holiday activities. Not only is nautical tourism an enjoyable way to see unique parts of the world, it is also a very profitable industry. The development of yachting tourism depends, above all, on the number and locations of appropriate guest harbours, the services provided and the availability of relevant information to tourists. There are currently only 24 harbours in Estonia which provide services according to the requirements of a guest harbour.

The objectives of the Ministry of Economic Affairs and Communications are to create a classification of Estonian small harbours, map the existing harbours and prepare a development plan for Estonia's small harbours network which provides services to international sea tourists and is also suitable for local mariners.

All of our ports are recorded in an electronic port register, www.sadamaregister.ee. It provides information about port locations, technical data on the ports, offered services, and the names of the port managers and the harbour masters. This is a database which can be used for the tourism sector, to provide necessary products online and for smartphones. Small harbours should be seen as part of a local infrastructure which is not profit-oriented itself but which provides opportunities to local businesses.

Estonia has a rich maritime heritage and, therefore, it is important to preserve and support harbour areas and communities traditionally engaged in fishing and traditional skills, from the perspective of strengthening the identity of Estonians. Supporting the preservation and

restoration of historical vessels, traditional ship-work and the display and use of vessels are important for encouraging education on maritime heritage, and will contribute to the positive image of maritime activities. This, in turn, will serve as a basis for the creation of an attractive environment, which will contribute to the development of maritime tourism.

The development of small craft building also depends on the infrastructure of harbours. Therefore, this network should also take into account shipbuilding areas which need specific infrastructure for building, repair and maintenance in small harbours. Saaremaa is a good example of systematic activities in building small craft. There are currently 19 ship- and boat-building companies. Moreover, young people can study the professions of small craft builder and ship designer in Kuressaare. This cluster-based approach is effective.

In recent years, the links between tourism and major yachting competitions have become considerably stronger. Lately, some international regattas have been held in Tallinn, such as the Laser Radial and Laser Standard European Championships, and the Melges24 Yacht Class World Championship Regatta of 2010. In August of this year, Tallinn hosted the World Championship of the Olympic Finn Class. In 2014 the ORC European Championship will be organised in Pärnu.

The sea does not know any borders. The sea connects. So relax, set sail and come to Estonia.



Juhan Parts
Minister of Economic Affairs and Communications

LIFE IN Estonia



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12 Lighthouse chain on the Estonian coastline

Lighthouses are witnesses of days past, and they are life-savers. But they are also architectural places of interest, each with its own appearance, character and origin. Estonia boasts one of the oldest working lighthouses in the world and the highest lighthouse on the Baltic Sea.

16 Around the world, powered by a kiss

Uku Randmaa became the first Estonian to sail alone around the world when he pursued his lifelong dream. During his 13-month ordeal he witnessed sunshine and hurricanes. According to Randmaa, it was a voyage to the limits of his capabilities.



20 Shipbuilding in Estonia: Where traditions meet innovation

World War II and the subsequent Soviet occupation totally cut off the local traditions of shipbuilding. When Estonia regained independence 22 years ago, it had to start from scratch. Today, there are over 60 companies specialising in boat and small craft building. For years, Estonian companies have shown their creations in Hanseboot. Get acquainted with the participants in this year's boat show.



32 Moments and snapshots of Estonia

In August 2013, a group of maritime journalists from Germany visited Estonia in order to learn about the opportunities available in Estonia as a seaside country and to visit small craft building companies. Read the impressions of one of the journalists, Andreas Kling.

34 Saaremaa Laevakompanii – Estonia's leader in domestic ferry traffic

The story of Saaremaa Laevakompanii is in many ways the story of Estonia's local ferry traffic: the company is as old as the re-independent Estonia. In 2010, both passengers and employers started to think differently about travelling to the islands of Estonia. With the arrival of new ferries, the ports were reconstructed and a modern e-port solution for checking-in and boarding was applied.



33 Estonian scientists have taught robotic fish to swim like trout

It makes no sense to swim against the current; it's better to figure out the most effective way to manoeuvre like fish. The scientists at the Biorobotics Centre of the TUT took the rainbow trout as a model and built robotic fish which are able to find the best way to their targets by using signals from water flow. *Life in Estonia* talked to Maarja Kruusmaa, Head of the Centre.

39 Shaka – mobile weather station measures wind and shares data with other users

Shaka, a start-up which originated in Estonia, has developed a device and software which help turn your iPhone into a mobile weather station.

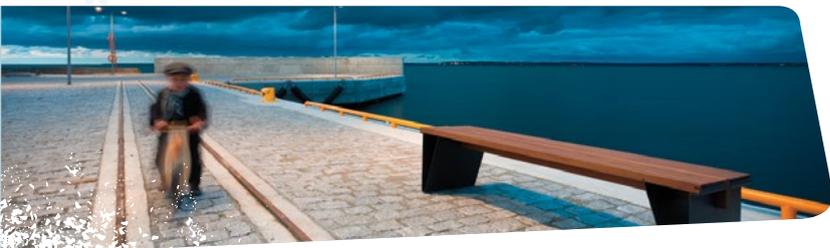
38 World famous chart producer Navionics moves to Estonia

One of the world's leading producers of electronic charts for GPS chart-plotters and navigation apps for water bodies will begin to develop its software in Estonia. "In Estonia you can feel technology in the air; it is like Silicon Valley," says Giuseppe Carnevali, the president and founder of Navionics.



43 Marine infrastructure developments in Estonia

Cybernetica AS has been a pioneer in developing marine infrastructure in Estonia. They have developed a new navigation, LED-based lightings system, a new radio communication system and a system that meets the GOFREP requirements. At present, Cybernetica is developing a system for small harbours, offering radio communication with vessels sailing into harbours and a central monitoring system if the harbour staff is temporarily unavailable to respond the calls.



45 Estonian design thrives on creativity and practicality

Estonian design has been described as “ the best kept Nordic secret”. Estonian designers know how to combine the know-how of their ancestors, long-forgotten skills and valuable visual heritage, with innovative technology and 21st century solutions. Outdoor furniture designed by Estonian firms is well-suited for small harbours and other similar public areas.



48 Architect's eye behind the camera eye

Arne Maasik is an architect who is captivated by photography. When looking at his photos, it becomes evident that it does indeed matter who is behind the camera. The portfolio in this issue presents Arne Maasik's light-filled imagery, which he captured during a recent visit to the island of Ruhnu.

59 Historic boats – memories on display or a living maritime tradition?

Historic boats always create a bit of a buzz in harbours and Estonian harbours have their own historic boats. A multiple-masted wooden boat is a beautiful sight, but for boat owners it is like owning a fighter aircraft: expensive to purchase and even more expensive to maintain. The Estonian Historic Boats Society has set itself the goal of keeping old boats in working condition and our maritime heritage alive.



64 Estonia: A special, secluded and safe destination for seafarers

Estonia has more than 3,800 km of coastline, and Estonian coastal waters have over 1,500 islands and islets. Estonia's geographical location and numerous waterways make Estonia a great place to travel by boat. *Life in Estonia* gives some practical information and useful tips, as well as one possible route for those who decide to discover Estonia by boat.



70 Surfing holiday in Estonia: Fun all year round

Estonia has numerous bays suitable for surfing, each with its own secrets and surprises. If you want to spend three or four days in beautiful nature with almost all of the Estonian surfers and surf lovers, check out the annual surf summer camps: the annual Surf Camp for windsurfers and Kitecamp for kite-surfers. All you need to do is come and discover them yourself!

76 Exciting places for recreational water sports

Find out about the most exciting places to go for canoeing, kayaking, boating and diving in Estonia!



78 Two faces of the Estonian Maritime Museum

The Estonian Maritime Museum, founded in 1935, has two very different buildings, in terms of both interior and exterior, the Seaplane Harbour and the Fat Margaret cannon tower. Both are worth a visit.

81 Estonia in brief



FAUST / Opera in two acts by Charles Gounod

/ 18 AND 30 OCTOBER, 20 AND 22 NOVEMBER
AT THE ESTONIAN NATIONAL OPERA /

Libretto by Jules Barbier' and Michel Carré after Carré's play "Faust and Marguerite" and Johann Wolfgang von Goethe's tragedy "Faust"
World premiere on 19 March 1859 (Théâtre Lyrique)
Premiere at the Estonian National Opera on 20 September 2012

Conductors: **Vello Pähn, Jüri Alperden** and **Risto Joost**
Stage Director: **Dmitri Bertman** (Helikon-Opera, Moscow)
Designer: **Ene-Liis Semper** (NO99)
Choreographer: **Edvald Smirnov** (Russia)

The classic story of the Faust legend is brought to life by Dmitri Bertman's and Ene-Liis Semper's fantastic vision of one of the most famous operas of all times.

Faust sells his soul to the devil Méphistophélès in exchange for youth, and is tempted by the innocent but fateful beauty of Marguerite. But there are no winners, when making a pact with the Devil – within a moment Faust humiliates the man who adores Marguerite, kills her brother and drives her insane. Gounod's music is enticing throughout with memorable hits, such as Marguerite's "Jewel Song" in the 3rd act and soldiers' chorus in the 2nd act.

Barbier and Carré based their libretto on the first part of Goethe's play, later adding scenes from the 2nd act. By the death of Gounod in 1893, "Faust" had been performed in Paris over a thousand times. The opera was so popular in the USA that for decades in the 19th century, the New York opera season was opened with "Faust".

www.opera.ee

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Tel +372 602 6000, kumu.info@ekm.ee
www.kumu.ee

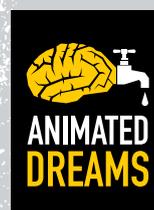
Open: Oct–March Wed 11am–8pm,
Thu–Sun 11am–6pm
April–Sept Tue, Thu–Sun 11am–6pm;
Wed 11am–8pm

**The Tallinn
Black Nights
Film Festival**



The Tallinn Black Nights Film Festival (PÖFF) is a unique event combining a feature film festival with sub-festivals of animated films, student films and children's/ youth films. The festival aims to present Estonian audiences a comprehensive selection of world cinema in all its diversity, with the emphasis on European films, providing a friendly atmosphere for interaction between the audience, Estonian film-makers and their colleagues from abroad.

The 17th Tallinn Black Nights Film Festival consists of the main programme, three sub-festivals, and film and co-production markets: **Black Nights Film Festival main programme** (15 Nov-1 Dec 2013): International competition programmes, EurAsia and Tridents Baltic, feature film competition.



Animated Dreams

/ 27 NOV - 1 DEC /

Competition of short animations
from the past two years.

Tallinn Christmas Market

/ OPEN 24 NOVEMBER 2013 - 8 JANUARY 2014
EVERY DAY 10:00 - 19:00 /

Hot Christmas drinks until 23:00
Christmas programme: on Fridays 17:00 - 19:00 and
on Saturdays and Sundays 12:00 - 14:00

**At the Town Hall Square of Tallinn, next to the majestic
Town Hall, a Christmas market will be held with a touch
of fairy tale where anything is possible!**

The heart of action will be the most important Christmas tree in
Estonia, surrounded by Christmas cabins/stands.

A living Christmas land is decorated with trees, Christmas decorations and Christmas lights. Merchants will be offering a broad range of handicrafts not found in regular shops. Guests can chat directly to masters and buy Christmas decorations and other handicrafts as original gifts for filling the sack of Santa Claus. Local caterers are offering Estonian Christmas cuisine starting from black blood pudding and sour cabbage to ginger breads and body- and soul-warming Christmas drinks. There will be live music on the market stage and the chance to meet Santa Claus. Activities for children include a mini zoo with rabbits, goats, lambs, ponies and geese, a slide, and Santa's House with a post office.

**A day at the Christmas market will be like
a magic Christmas fairy tale!**



Just Film

/ 15 - 24 NOV /

Competition of children's
films and youth films

Sleepwalkers

/ 19 - 23 NOV /

Four competitions of selected student and short films from
the past two years, a retrospective of a noted film school,
and special programmes.

SLEEPWALKERS

Baltic Event / 27 - 29 NOV /

Film and co-production market, which screens the newest
feature films from the Baltic countries; the co-production
market is open to projects from the Baltics, Central and
Eastern Europe, Russia and Scandinavia.

The festival includes **Industry@Tallinn**, a set of Industry-oriented events, and the **Black Nights Industry programme**, which focuses on Asian-European-US networking, inspiring and real-life-based sessions and an international producer-matching programme.

Further information at 2013.poff.ee

Eesti Kontsert

3 Dec Tartu Vanemuine Concert Hall
4 Dec Tallinn Nokia Concert Hall

TCHAIKOVSKY SYMPHONY ORCHESTRA

(Moscow)

Conductor
**VLADIMIR
FEDOSSEJEV**

Beethoven. Symphony No 4
Tchaikovsky. Symphony No 4

*"Outstanding ensemble of outstanding musicians."
Dmitri Shostakovich.*

concert.ee

Estonian Air to open seasonal Tallinn-Munich route in December

Estonian Air will operate the route once a week on Saturdays, departing from Tallinn at 8:00 am and from Munich at 10:20 local time. The route will be operated until 29 March 2014. According to Estonian Air, the air link between Tallinn and Munich is especially good starting point for a skiing holiday in Alps.

Starting from 21 December 2013, Estonian Air will launch a seasonal air link between Tallinn and Munich.

Munich's Franz Josef Strauss International Airport serves more than 30 million passengers per year and is Germany's second largest airport after Frankfurt.

One-way fares from Tallinn, if purchased on-line start from 99.90 EUR and from Munich from 124.74 EUR including all fees and taxes.



Mandatum Life Helsinki-Tallinn Race 2013



in 2013, as in the two previous years, was around 10 000 euros. Every competing boat participates in the donation.

Altogether, 178 boats signed up for the race and 172 boats finished with valid results. The first boat, which had started at 18:00, finished the race just after midnight and the last boat arrived at Pirita at approx. 10:30 on Saturday morning. The majority of the boats were from Finland. Typically one-tenth of the boats are from Estonia, with seven Estonian boats competing this year. There were several nationalities among the crews, and almost 1000 people sailed from Finland to Estonia during the night.



This year, the Tallinn Children's Hospital was donated 9800 euros.

A gentle August night. Stars fill the sky above. A nice wind takes sailing boats towards their goal in the Pirita harbour in Tallinn. These have been the conditions for the competitors of the Mandatum Life Helsinki-Tallinn Race in many years, as they were during the 21st race, held in 2013.

The boats race across the Gulf of Finland from Helsinki, Finland to the Pirita harbour in Tallinn from a Friday night and into Saturday. The race is organised by the Finnish yacht club Koivusaaren Pursiseura from Helsinki, and its concept has been practically the same since it was first held in 1993.

In 1996 the theme of helping others through sailing was introduced as an essential part of the race. A share of the profits was donated to the Tallinn Children's Hospital, and that tradition has continued ever since. The donation

In 2013, for the first time in the history of the race, it was possible to follow the sailing over the Internet. Over 20 boats had devices which sent information on location, direction, speed, boat's name etc. by radio, and the locations of the boats could be seen in real time on a map on the Internet.

On Saturday night, the grand finale of the race is held: the prize-award ceremony. The ceremony gathers most of the participating crews together to celebrate the winners and to witness the biggest winner: the Tallinn Children's Hospital. After the ceremony, there is time to celebrate the results, chat with fellow sailors and sail the race over and over again in discussions.

The 22nd race will be held in August, 2014. Entry forms for the race will be available in late spring next year on the website of the race:

www.helsinki-tallinnrace.fi



Tallinn hosted the Finn Gold Cup 2013

In the last week of August, Tallinn Bay witnessed the Finn-class cream of the crop, as Tallinn had the honour of organising the Finn-class World Championships.

It had been 19 years since the Finn Gold Cup was last held in Estonia. In 1994 it was sailed at Pärnu, but the 58th Finn Gold Cup was raced from the Tallinn Olympic Yachting Centre at Pirita, which was originally built for the 1980 Olympics. Estonia has only hosted four Olympic-discipline world championships, and two of those have been in the Finn.

Race Director Mr Ants Väinsalu admitted that it was a huge responsibility. "Sailors know that the end of August in Tallinn is well-suited for racing: the possibility of extreme storms or lulls is almost non-existent. But nobody expected that in reality we would have almost no wind and a glassy sea. Still, spirits were high and the sailors wore

smiles," said Väinsalu. Despite the lack of wind, the competition was still successful: the PRO, Madis Ausman, managed to find enough wind for seven races. On the last day, the weather conditions changed and it was possible to hold a quick and successful medal race.

Surprisingly, the still junior-class Jorge Zarif (BRA) was the winner of the 2013 Finn Gold Cup, having already secured the world championship before the medal race, and he returned home with one of the most valuable sports trophies in the world: the perpetual cup, made entirely of 18-carat gold, and according to different estimates worth 10 to 15 thousand euros. The prizes and the Finn Gold Cup were presented by Esko Rechartd (FIN), who won the Olympic gold medal during the 1980 Olympics in Tallinn. In winning the 2013 Finn Gold Cup, Jorge Zarif, who turned 21 in September, is one the youngest Finn world champions ever and he is definitely the only



The oldest participant was 78-year-old Gus Miller (USA). For his years-long contribution to Estonian yacht racing, he was awarded the Medal of Honour from the Estonian Yachting Union.

sailor to hold the Silver and Gold Cups at the same time. Ed Wright (GBR) placed second, while Pieter-Jan Postma (NED) took the bronze. In taking the bronze, a clearly elated Postma broke a run of fourth-place finishes, and added to his two silvers from 2007 and 2011. Estonia's number one Finn sailor, Deniss Karpak, finished 14th among the 86 participants.

The Finn Gold Cup 2013 was organised by the Estonian Finn Association, in cooperation with the Estonian Yachting Union and the ESS Kallev Yacht Club. The regatta was co-financed by the European Regional Development Fund, and supported by the City of Tallinn, Ministry of Culture and Cultural Endowment.



Photos: Piret Salmistu



Estonia - taking tradition to a new horizon

TEXT: **MARTIN HIRVOJA**

/ Member of the Management Board of Enterprise Estonia

Official partner country of the Hamburg International Boat Show 2013

Estonia is the official partner country of Hanseboot: the Hamburg International Boat Show 2013. The close economic and cultural ties between Estonia and Germany date back to the high period of the Hanseatic League, a medieval political and trading alliance. Tallinn – then known as Reval – was the league’s easternmost port and trading post, handling goods such as honey and linen from Novgorod, and furs and wax from Russia on their journeys to the ports of northern and western Europe.

Today, taken together, the ports of Tallinn and Muuga remain the largest in the Baltics, both for cargo and passenger transport. The Estonian shipping line Tallink is also the largest shipping company in the Baltic region and is active in both the passenger and cargo sectors. As well as countless transit ports, Estonia also has well over 100 small ports and mooring facilities, of which around 25 are able to accommodate large sailing yachts.

From wooden boats to luxury cutters

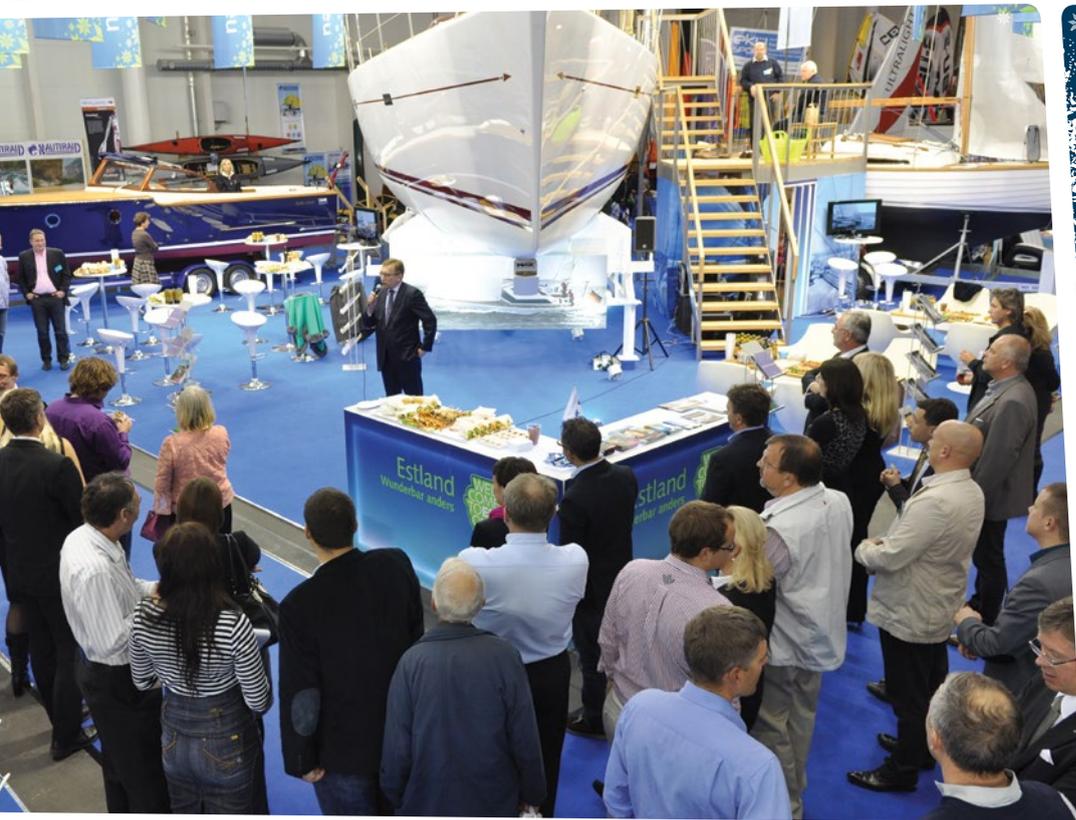
Estonia has a long maritime tradition, and shipbuilding has been an important pillar of the nation’s economy from time immemorial. Over 50 small companies operate successfully in the sector and have a strong reputation around the world. Many of them work with internationally renowned companies. There are still companies building classic wooden

boats in the national style, using time-honoured techniques. From traditional master builders to modern cruise ship designers, all are masters of their crafts.

Estonian boat and small ship builders also enjoy an excellent reputation in Germany; an example of this is the German-Estonian joint enterprise Polar Shipyard, based in the coastal town of Pärnu. The popular yachts Saare 38 and 41, made by Saare Paat, are now classics.

Estonian products are found in many Scandinavian, German and western European brands. As well as sailing yachts, manufacturers of small motorboats are also worthy of mention. Estonian companies not only make luxury cutters but also functional working ships and aluminium boats for the open sea. So it is not surprising that products from Estonia are found in Canadian waters and that Estonian master boat builders frequently receive highly regarded international awards, including the Motor Boat of the Year Award in the category Sports Cruiser.

An immense wealth of experience, combined with a pioneering, forward-looking spirit, has created fertile ground for such achievements. Traditions are not continued by looking back and dwelling on past memories but by passing on knowledge and using it as a foundation to develop new ideas and techniques.



Juhan Parts, Minister of Economic Affairs and Communications, at the opening of the Estonian stand at Hanseboot 2012.

With about 4,000 km of coastline, Estonia offers boundless opportunities for sailing, surfing, jet skiing, kayaking, canoe tours and scuba diving. Living by, with and on the sea has become an integral part of the daily life of tens of thousands of Estonians and is the economic cornerstone of the many companies operating in the tourist industry.

Old virtues, new goals

However, Estonia and Germany are connected by more than the historical union of the Hanseatic League. Centuries of shared history and cultural exchange have left their mark: Estonians are renowned for their exemplary work culture and "German punctuality". These Prussian virtues are not considered old-fashioned in northern Europe. Indeed, they have transformed the country in the brief period since the collapse of the Soviet Union and made it what it is today: a small but strong and reliable partner, as well as a trusted member of NATO, the EU and the Eurozone.

The Estonian business culture is thoroughly Hanseatic: calmness, reliability and trust are the highest virtues, and its strong work ethic commands great respect. Estonians do not see this as fusty: it has simply always been the right and proper way of doing things. Keeping promises is a matter of honour: a handshake is considered at least as binding as a contract and if in doubt the content is more important than the form, except in the context of Estonian design, which is becoming increasingly well-known in other fields besides shipbuilding.

Since 2003 Hamburg has been the homeport for the German branch of the Estonian business development organisation Enterprise Estonia, whose goal is to promote, develop and support tourism and business

cooperation. This is the most important state institution for advancing the economy and entrepreneurship in the country. Moreover, Enterprise Estonia plays an important role in boosting international trade relationships.

Cooperation with a long view

The establishment of free trade zones in Estonian ports is without doubt one of the most important maritime cooperation projects between the Hanseatic city of Hamburg and Estonia.

Estonia also participates in renowned trade fairs in the city, e.g. in the ship and boat fairs SMM and in the Hamburg International Boat Show, as well as in the tourism fair "Reisen Hamburg", which is aimed at the consumer market. Naturally, the port of Tallinn also takes part in "Seatrade Europe", the biennial cruise ship industry convention.

Additional projects are being planned, and the next of these will take place during the Hamburg International Boat Show in the late summer of 2013, including press trips for German journalists to Estonia, press conferences, business seminars for boat builders and events on the Estonian coast, with a varied programme of entertainment.

For Estonia, becoming the partner country of the Hamburg International Boat Show 2013 is much more than an isolated project; it is the logical continuation of a historical maritime friendship between the two countries. In 2006 Estonia was also a partner country for the 817th anniversary of the Port of Hamburg. The most important goal is to further develop the partnerships between these two regions and strengthen relationships in business, tourism and culture, as well as between ports.

For extra information please visit:

Estonian Investment and Trade Agency / Enterprise Estonia

www.investinestonia.com

www.tradewithestonia.com

Estonian Tourist Board

/ Enterprise Estonia

www.visitestonia.com

Association of Estonian Boatyards

smallcraft.ee

Marina Development Center

www.evak.ee

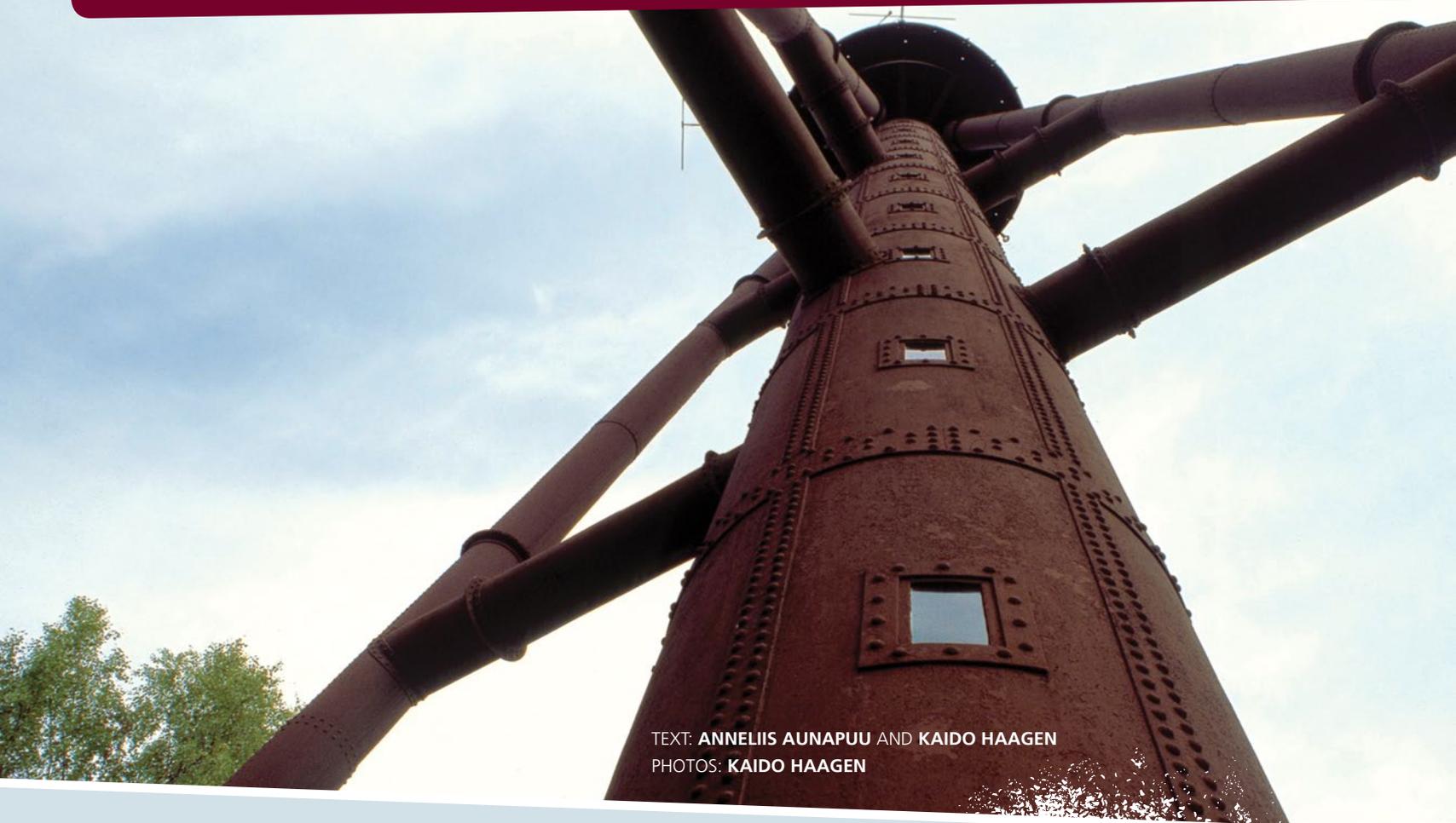
Estonian Yachting Union

www.puri.ee

Yacht charter and sailing vacations in Estonia

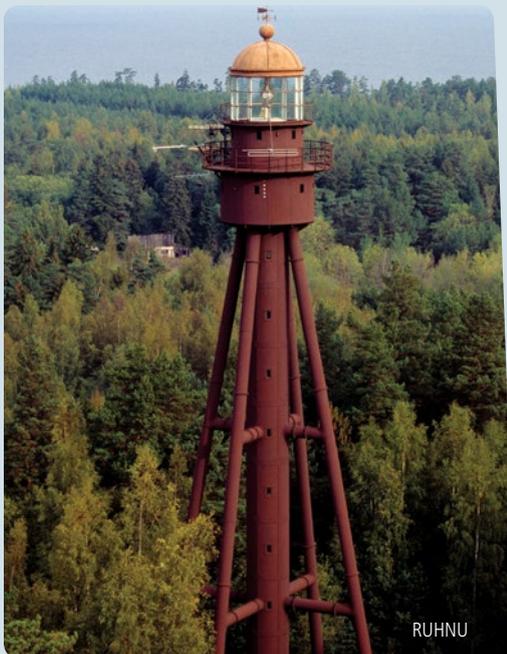
www.merisail.ee

www.sailing.ee



TEXT: ANNELIIS AUNAPUU AND KAIDO HAAGEN
PHOTOS: KAIDO HAAGEN

Lighthouse chain on the Estonian coastline



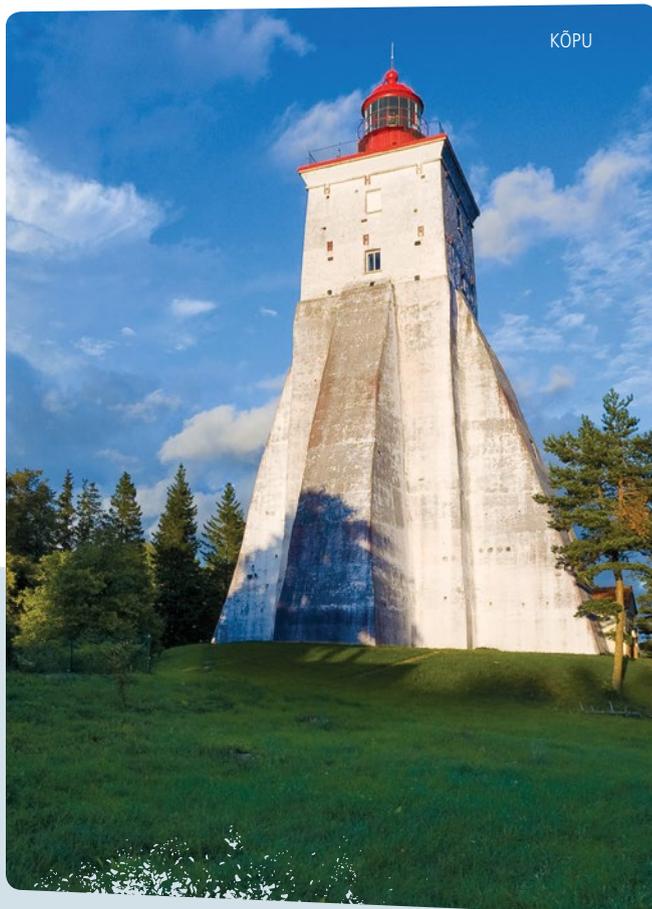
Lighthouses are witnesses of days past, and they are life-savers. But they are also architectural places of interest, each with its own face, character and origin. Therefore, many of them have been placed under heritage protection.

The lighthouses dotting the coastline of the main route on the Baltic Sea are proud signifiers of humanity, crossing national borders and creating solidarity between seafarers around the world. They have been built in order to help our boys find their way home, but they are also markers for foreigners, helping them to avoid rocks and find their way to harbour safe and sound with their valuable cargo.

The sea in this region is not safely navigable for those who are strangers to it and, throughout time, seafarers have needed guidance when entering the Gulf of Finland. Arriving in Tallinn, an important trading port during Hanseatic times, was (and still is) unthinkable without a guide. This is illustrated by the cemetery of ships in the coastal sea around Naissaar and elsewhere in the gulf. In addition to lighthouses and maps, sailors have always needed the assistance of maritime pilots.

← It is not a hundred per cent certain, but the father of the Ruhnu lighthouse could be Gustave Eiffel, who was working in the company Forges et Chantiers de la Méditerranée in Le Havre, France, at the time this unique tower was ordered. If this is true, the world famous Eiffel Tower in Paris is the younger sister of the Ruhnu lighthouse.

If one lacks either the courage or vigour to climb to the top, one has to find the strength somehow to go on. On Haubjerre Hill, there are two towers standing side by side. Those who make it to the top will be amply rewarded. The breath-taking view will make you forget the difficulty of the climb.



As the nearby Muuga Bay has very deep water and is much safer, it has recently taken over the role of Estonia's main cargo port. But, as for centuries sailors have become familiar with the Gulf of Tallinn, a busy passenger port is still located near the Toompea hill. In the old days, it was the Oleviste church tower which reached like an arrow to the sky and guided travellers. In addition to this church and the other spires of the city centre, there are two lighthouses which still guide magnificent ships today. The lower, tiny lighthouse with a red tower sits on the slope of Lasnamäe, next to the Estonian Art Museum KUMU, and the upper, black-and-white striped lighthouse is situated slightly further. Because of the high location, the lighthouses themselves do not need to be very high in order to fulfil their task. But even when you know the way and follow the signs, the sea can play tricks on you, as happened with our oldest sailing boat, the "Sirius Blue", during a pleasure cruise near Aegna recently. This reminds us again of the importance of lighthouses, as the sea tends to take its toll.



← Besides the fact that the Kõpu lighthouse is one of the three oldest continually operating lighthouses in the world, its beacon light is the highest coastal light on the Baltic Sea. While nowadays the erection of a new sea-mark takes days or hours, in the old days the construction of the Kõpu lighthouse and its different stages took twenty to thirty years. In summer, people hold concerts by the lighthouse, as if to show gratitude for its centuries-long service.

It may sound a bit strange but, originally, the base of the tower was a massive stone pillar and the 69-step stairway was cut into the tower later. To reach the very top, one has to climb 117 steps.

Therefore, many lighthouses have been standing in their present locations for centuries. Estonia is incredibly rich in diverse lighthouses. We have one of the oldest working lighthouses in the world, at Kõpu on the island of Hiiumaa. We have the highest lighthouse on the Baltic Sea, at Sõrve on the island of Saaremaa. Thanks to its location, the Kõpu light is actually situated the highest above sea level in the whole Baltic sea area. We have one of the few working wooden lighthouses in the world: the lower lighthouse of Suurupi, near Tallinn. In the middle of the sea, on a tiny piece of land, stands perhaps the loneliest lighthouse in the world: Keri. A lighthouse was brought to us straight from the World Exhibition in Paris: Tahkuna. Also the Ristna tower on Hiiumaa was ordered from Paris. The optics and other equipment were also selected from the best available in the world. Even today, the lighthouses are kept in top condition; there are solar batteries, automated equipment and LED lighting everywhere, helping to save on labour and energy.

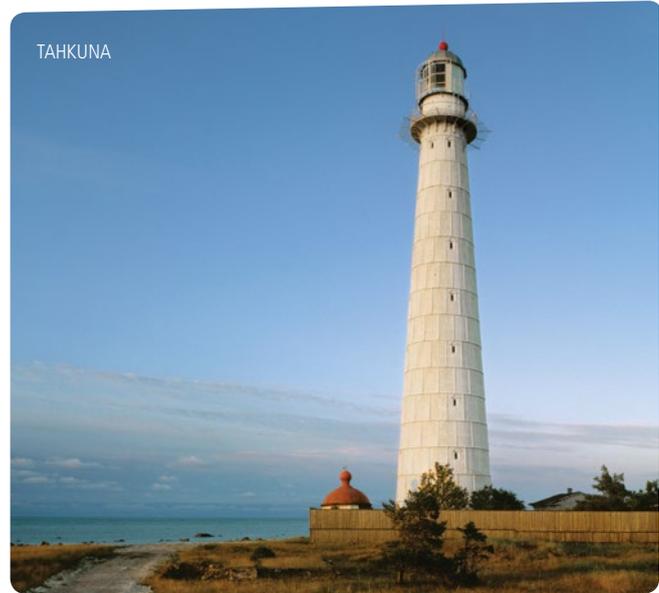
Although satellite navigation offers serious competition to lighthouses today, sailors admit that a guide they can see is irreplaceable. Hence, keeping the towers in good condition is not a wasted investment.

Kaido Haagen, a photographer and a "lighthouse collector", has gathered the Estonian lighthouses into a beautiful photography book, published by GO Travel, which is also a thorough guide and source of information. With the author's permission we have included some salty splashes from his book.

I LAND AND PEOPLE

The number of lighthouses in Estonia open to visitors can be counted on two hands. The Tahkuna lighthouse is one of the few that has not lost direct connection with people.

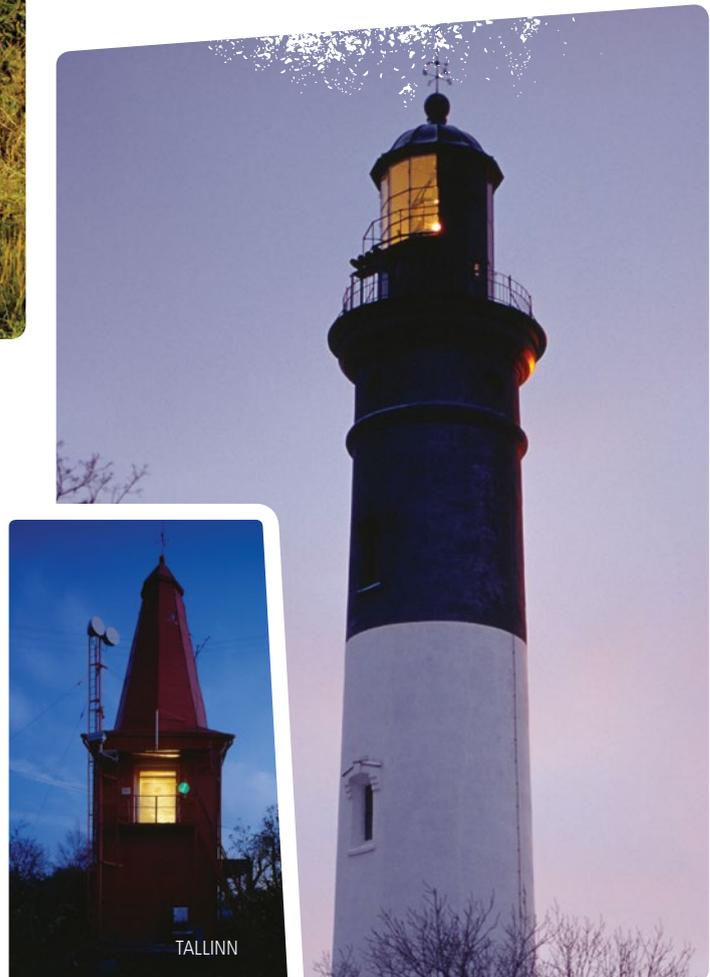
There are theories and legends that the components of the Ristna and Tahkuna lighthouses got mixed up. But it is a fact that they both originated in France, just like the Ruhnu lighthouse.



In order to draw attention to architecturally or culturally important lighthouses located in different parts of the world, for their preservation and protection, the international organisation IALA started the project 100+. In 1998, they published a book about the 125 most remarkable lighthouses in the world. Although each country was to nominate no more than five lighthouses, Estonia is represented by six: the Kõpu, Pakri, Tahkuna, Keri, Ruhnu, and lower Suurupi lighthouses.



Streets have been named after lighthouses. There is Punane (Red) Street in Tallinn, which used to have a lighthouse painted red. A white lighthouse stood on Valge (White) Street. One day it was decided to repaint the lighthouses, but the street names remained the same. Now a red lighthouse stands on Valge Street and a black-and-white lighthouse on Punane Street.





Lighthouses as tourist magnets

Whereas the three greatest lighthouses on Hiiumaa – Kõpu, Ristna and Tahkuna – are all open to visitors, the proudest lighthouse on Saaremaa, which is also the highest on the Baltic Sea – the Sõrve lighthouse – is still planning to open itself to visitors. Recently the guest-house next to the lighthouse was completed. There are also other renovated buildings in the vicinity with exhibitions on the theme, which include the biggest Estonian collection of lighthouse scale models: 20 models with measurements of 1:50. In other words, they are about human height and visitors can walk around them.



Who is someone who can never turn off the light when going to bed? A lighthouse keeper, naturally. Twenty years ago there were about fifty lighthouse keepers in Estonia. Five years ago the number was five and in 2010 there were only two left.



Lighthouses built in recent years look very dull. In earlier times, the architects-constructors-builders cared about the appearance of lighthouses as well. Those beacons had character even if the final decision was made by a third party. This is true, for example, of the Keri lighthouse. At that time there were no architectural contests, but they organized a meeting instead. As the participants could not decide on the appearance of the new lighthouse, the Russian Czar Peter the Great pointed at the decanter on the table, and the issue was settled.



Around the world, powered by a kiss

TEXT: MIHKEL KÄRMAS / PHOTOS: UKU RANDMAA



In Rodrigues: healthy body, healthy mind!

Uku Randmaa, the first Estonian to sail alone around the world, had a very special lucky charm with him, something which was able to withstand moisture and other extreme conditions: a kiss from his children.



Another sightseeing:
the Fortress of Queen
Victoria on Mauritius



In Coco Keeling, enjoying life in paradise

In summer 2010, Uku Randmaa, a father of four, hoisted the sails of his yacht Temptation III at the Pirita harbour and set sail towards the Canary Islands. Randmaa, who began sailing as a seven-year old, had decided to pursue his lifelong dream: to sail alone around the world. He compares the experience with conquering Mount Everest. "Each person chooses his or her own summit," he says, continuing "and when you prepare for it, you will conquer it, but the real challenge is conquering yourself."

As he left the Baltic Sea behind, he began to experience some doubts. "I was unsure whether my wings would carry me. There was the question of whether the material foundation was sufficient, but in addition I did not know how I personally was going to rise to the challenge," explains the solo sailor. "Until the last moment, I had doubts about how I would cope mentally, because when you are totally alone managing yourself becomes a complicated task."

The final decision to go through with the great adventure was reached after the first stage of the trip, at the Canary Islands on the African coast. "There I felt that I had the courage to go on this voyage," Randmaa recalls. Thus the official start to his trip around the world was December 2010 when he set sail from the

Canaries for Cape Verde and from there across the Atlantic Ocean.

A year and a month later, in February 2012, Uku Randmaa's yacht returned to Cape Verde. His dream had come true and he had circled the world. The then 48-year-old Estonian also wrote his name in the history books, becoming the first known Estonian to have sailed alone around the world.

Driven by the death of his wife

What prompted the successful real estate developer and sailing enthusiast to leave his work and children and take a voyage of discovery on remote and sometimes dangerous world seas? One impetus came after his wife, who had struggled with a long-term illness, died.

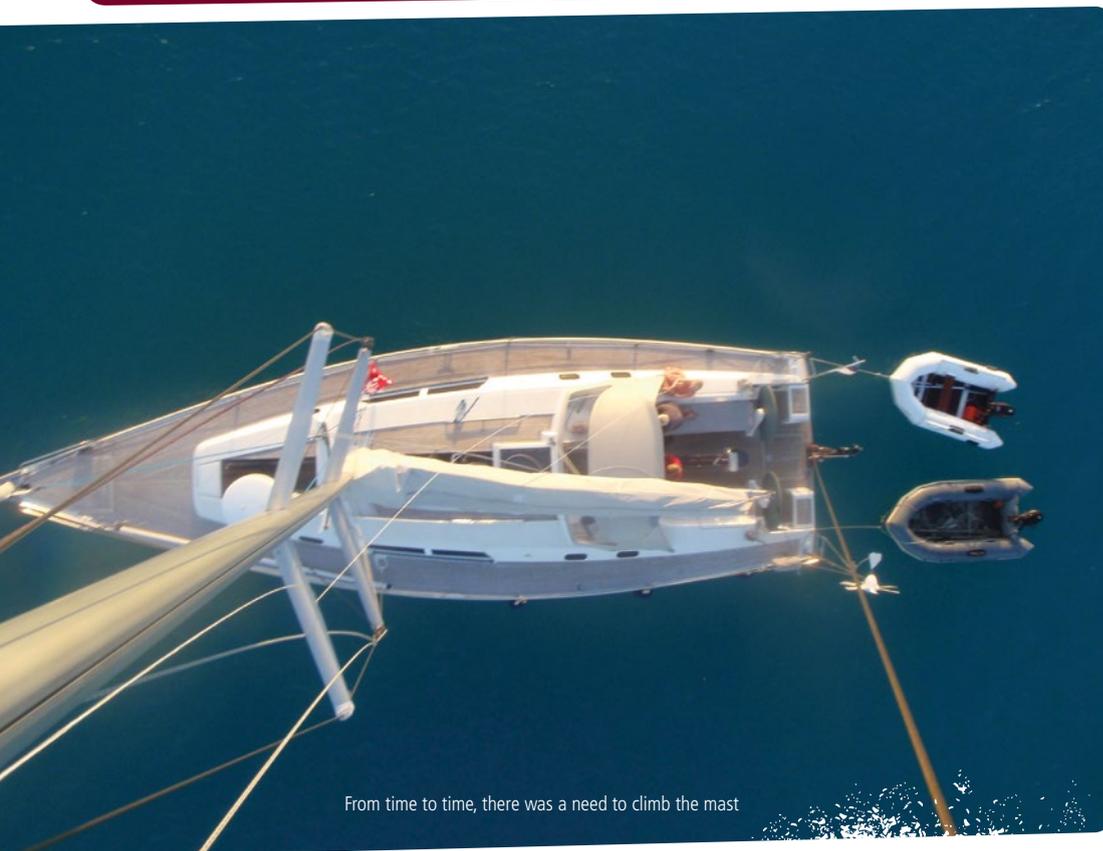
"If not everyone, then at least many people at some point in their lives ask themselves why we are here. What makes life valuable? We sit in front of the fireplace in the evening and ask ourselves whether the whole point is to just work and raise children. Or are we here to use what we earn to become more knowledgeable and better? I came to the conclusion that I would rather use my money for an investment in myself on a voyage, rather than just accumulate more and more."

When asked what prompted him to go alone, the sailor laughs. "I have hundreds of friends, and if I had taken one along, ninety-nine people would have been offended." Indeed, on an adventure of this sort the ability to cope under stress, a good relationship with oneself and a great sense of humour (demonstrated by Uku's contagious laughter) are perhaps even more important than navigation skills.

"Sailing alone is magical. First, it is difficult to fall out with oneself. And there are so many thoughts, so many things accumulated during life which you just want to mull over. And the sea is the best place for it," says Randmaa, growing more serious.

The worst-prepared around the world trip ever

"In hindsight, I can see that the desire to travel and see the world has been in me from the very beginning," says Randmaa. He calls his voyage the worst prepared around-the-world trip in the history of mankind. While most sailors planning a trip around the world prepare for years and start by, for example, designing their yachts and seeking the right kinds of wood, Randmaa's preparations included going to the store and buying 65 euros worth of canned food and a six-pack of beer.



From time to time, there was a need to climb the mast



During the trip, Uku also kept track of the route on a globe

Although he holds a Diploma of Naval Captain from the Tallinn Marine College (acquired during the Soviet era) and he has sailed as a crew-member on many stormy seas of the world, he didn't have much experience as a sailor before he set out on his voyage. "Typically for Estonian yachtsmen, I had never sailed anywhere else than the Baltic Sea, near Finland, the Åland Islands and Gotland. I had no experience sailing on an ocean. I couldn't even imagine how I would hold up in that environment or what kind of yacht I should have."

Randmaa's yacht was a standard 13.5-metre Hanse 430 yacht made in Germany. He didn't buy the required sea maps, but got them along the way. He gathered information about harbours from bits he heard from other sailors here and there. "When you're going on a voyage of discovery, you cannot plan everything to the smallest detail. If it's really your dream, nothing will hold you back!"

In fact, Randmaa decided whether to complete the voyage during the trip itself, and therefore he never announced his plans. "Among the many reasons for why I didn't go to the media, was the fact that I didn't know the limits of my skills and my yacht. The other reason was that that made me free. I had no contracts, promises or sponsorships

breathing down my neck. It was a voyage to the limits of my capabilities."

Worst enemies: sleeplessness and home sickness

Randmaa crossed the Atlantic in seventeen days. "That is when I knew I would not turn around and go back. It was full-speed ahead! Then I knew that I would make the trip around the world. At least I would try. The only question was whether to do it through the Panama Canal or around Cape Horn. I was not sure about my decision. I had been travelling for a long time and thought I would visit home," recalls the captain.

In January 2011, before the hurricane season, he brought the yacht on land, ordered sun protection covers, arranged maintenance work for the boat, and flew back home to Estonia during the coldest season. It was -30C. He lasted in Estonia for less than a month, before he bought flight tickets and enjoyed the stunned faces at the Caribbean port when he asked nicely to have the boat launched. "At that moment, the emotional decision to sail through the Panama Canal was born."

Randmaa says he was incredibly lucky. God

and experience saved him from real trouble. The only real problem during his long voyage was missing his loved ones at home. "I missed my kids incredibly. Incredibly! When you ask me what the most difficult thing at sea was, it was definitely being away from my family." He kept contact with his nearest and dearest via a satellite phone and the Internet when he happened to be near a coast. He also used it to keep an online diary of his travels.

There were periods when Uku Randmaa had no contact with land for weeks. "The longest stage in miles and time was sailing from the Galapagos Islands to the Marquesas Islands in French Polynesia. It was 22 days and 3,000 miles of pure pleasure," says Randmaa, with a smile. In order to make sure that his resources would last, he switched off the electricity and sailed almost the entire way from Galapagos to French Polynesia without using any power. "It brought me even closer to nature. I did not use the fridge, I caught fresh fish and I navigated according to the stars, planets and sun."

One of the most difficult stages was from Fiji to the northern tip of Australia. "I was totally exhausted in the Torres Strait: there were strong winds and currents and it was complicated to navigate. There were no good places to anchor.

I had to stay alert during the whole stage from Thursday Island to Darwin, which took over three days. At the end of this stage, I collapsed: there are limits to what one can endure.”

But during the whole voyage Randmaa was never ill. “I did my best to take care of myself, because when you are alone one of the risks is that you will become ill, and there is nobody to nurse you. You have to be conscious of taking care of yourself! For example, I met a solo sailor on Tonga, who had been bitten by a mosquito, came down with malaria and spent a month anchored and totally bedridden. He was able to sail onwards two months later. The risk of running aground is smaller than picking up some bacteria.”

Global village

His journey continued across the Indian Ocean to the Cape of Good Hope, on the southern tip of Africa, and from there back to the crossroads of the world’s oceans, Cape Verde, which marked the end of the full circle. “I believed it was the right time to take this voyage alone, because in ten years I could not handle the pace. In a sense this is a sport; it requires physical strength and toughness. During the voyage, I managed to get rid of my flabby stomach.”

People he met in the world’s harbours helped to satisfy the desire to communicate with others. They left a lasting impression. “I think it is a negative thing that the world is changing so fast. And the pace of change is increasing. Because of globalisation, the availability of the Internet and mobile phones, the world is becoming increasingly similar. All these beautiful exotic locations with their special cultures, traditions and habits are becoming more boring. When I read the book about the Estonian yacht Lennuk, which sailed around the world, I could see that, even within the ten years since their trip, there had been incredible changes in those exotic places, where mobile masts should not even exist. These days you are popular if you have a mobile phone and you are able to surf in chat rooms in the evening.”

Randmaa did manage to lose weight, but did he find what he was looking for? “Let’s say that I did not find the meaning of life. Perhaps I need to go again. But I did manage to look at the hustle and bustle from a distance. And I saw how many “engines are running on empty tanks.” I realised that you have to do what you want, whatever gives you joy, and where you can earn something else than just money.”



In anchorage at Prison Island preparing for coconut heist



Uku Randmaa, on a mission to make the world a better place, at the highest point in Mauritius

Estonian around-the-world sailors

So far, four Estonian yachts with crews have sailed around the world: during the first Republic of Estonia, the 18-year old Ahto Valter (Walter) started sailing around the world with his brother. In 1938-1940, he captained an extraordinary around-the-world journey on a 70-foot ketch named Ahto. Nobody believed that Walter had finished that journey until a colour film was discovered in Canada which proved that Walter had earned the honour. After the restoration of the Republic of Estonia, his triumph was followed in 1999-2001 by the yacht “Lennuk”, captained by Mart Saarsoo, the “Martha”, captained by Hillar Kukk in 2007-2009 and the “Nordea”, captained by Toonart Rääsk in 2010-2012.

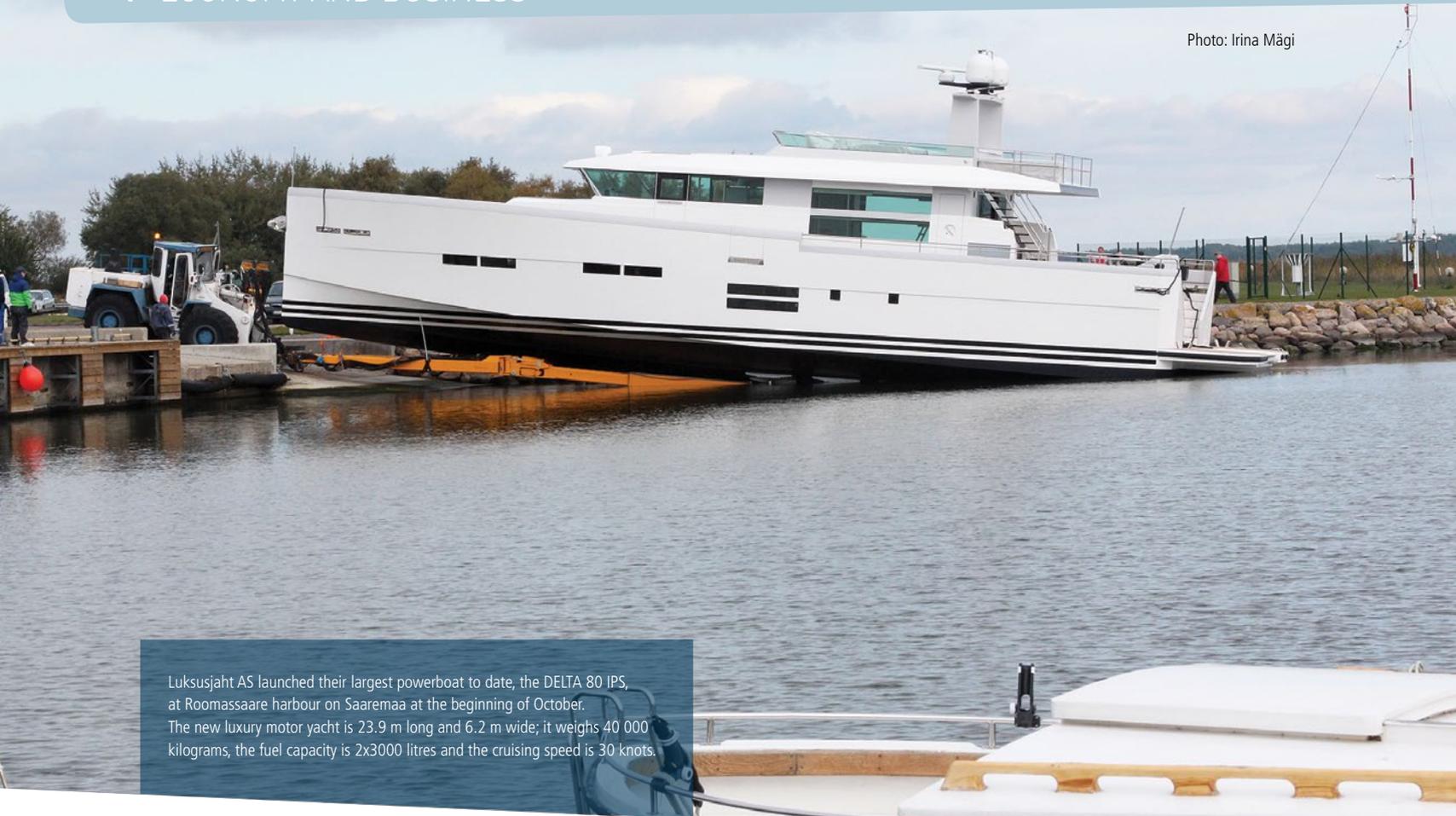
Amphibious craft built in Estonia to tour around the world

On 2 November the amphibious craft Amphibear – a land and water vehicle with two pontoons, built from a regular ATV – will start a nine-month trip around the world.

The latest and definitely the most peculiar project of sailing around the world is the one planned by the Tallinn-based engineer Mait Nilson. His vehicle is a Toyota ATV, rebuilt by himself, which he plans to drive on land and sail on the sea. The planned route is approximately 60,000 kilometres long and it will take nine months, during which the Estonian plans to cross the Atlantic and Pacific Oceans on his amphibious craft. Starting from Estonia, the journey will go through Europe, along the western coast of Africa, through South America, North America and Eurasia, and back to Estonia. The longest distance at sea will be 2,400 kilometres, from Cape Verde to Brazil.

The first and so far only amphibious craft to have made the trip around the world is Ben Carlin’s Half-Safe. Ben Carlin made his around-the-world tour in 1950-1957 and his amphibian crossed the Atlantic and Pacific Oceans. The Amphibear will be the second amphibian to tour the world, and the first to do so from the west. It will also be the first self-built amphibious craft to make this trip. Beginning in November you can follow the journey of the Amphibear on the webpage

www.amphibear.com.



Luksusjaht AS launched their largest powerboat to date, the DELTA 80 IPS, at Roomassaare harbour on Saaremaa at the beginning of October. The new luxury motor yacht is 23.9 m long and 6.2 m wide; it weighs 40 000 kilograms, the fuel capacity is 2x3000 litres and the cruising speed is 30 knots.

TEXT: JAANO MARTIN OTS / magazine Paat

Shipbuilding in Estonia: Where traditions meet innovation

Estonia is situated at the crossroads of major Russian and northern European trade routes and military strategic interests: on the eastern coast of the Baltic sea, on the border of ice-free waters. Throughout history, Estonia's favourable location, long coastline and many good harbours have meant that seafaring and shipbuilding have been the main branches of activity in Estonian coastal areas. Starting during the Viking era, through the Hanseatic League, Swedish Empire and Czarist Russia to the independent republic before the Second World War, Estonian boat- and shipbuilders have been famous and highly valued in Europe, and Estonian seafarers have been honoured as explorers, trade ship captains and naval commanders.

The historical background and context

When speaking of Estonian shipbuilding, one always has to remember the context. First, Estonia is indeed rich in terms of its long coastline, fishing stock and number of islands and islets, but it has a small population and all raw materials needed for shipbuilding are lacking, with the exception of wood. In a country with a population of 1.3 million, most indicators have to be viewed per capita. And this calculation shows that boat- and shipbuilding is an important branch of the economy for the Estonian state. Estonia has its Maritime Academy and shipbuilding specialists are trained at the Tallinn University of Technology, which is a very important indicator for a small country. The flagships of Estonian boating companies today are the **Tallink Grupp** – the biggest passenger traffic group on the Baltic Sea – and the shipbuilding group **BLRT Grupp**.

Secondly, the Second World War and the subsequent Soviet occupation totally cut off the local traditions of seafaring and shipbuilding. During the fifty years of occupation, a generation grew up who had no access to the sea, unless it was in the ranks of the Soviet navy or on fishing boats. Ship- and boat-building were also strictly controlled by the state, and private individuals were not allowed to own sea vessels or go boating. Hence, Estonian maritime education and small craft building started from scratch 22 years ago, when Estonia regained independence. A totally new generation of seafarers has been trained, including famous sailors, power-boaters, ship captains and ship builders.

Estonian Small Craft Competence Centre and Cluster

The Association of Estonian Boatyards, the organisation bringing Estonian small craft builders under one umbrella, was founded on the island of Saaremaa, where there are more boats and ships built per capita than anywhere else in Estonia. The association was founded in 1997 in order to preserve and promote the tradition of Estonian wooden boats. However, in 2009 it was decided to widen the organisation's mission and include other types and producers of small crafts. Thus other boat and small craft manufacturers from all around Estonia joined the organisation, with its centre on Saaremaa.

There are two further educational institutions in Kuressaare, the capital of Saaremaa, which teach small craft building as one of the subjects: the Kuressaare Vocational School and the College of Tallinn University of Technology. It was natural that businesses and educational centres reached the common understanding that it made sense to collaborate closely in order to better prepare specialists for small craft building. Today this cooperation takes place on a daily basis and, in addition to boat-building companies offering students of both schools small craft building apprenticeships at their companies, they also send their own staff to in-service training. Mark Muru, Executive Director of the boat manufacturer Alunaut, confirms that their company cooperates very closely with the Saaremaa Vocational School and College of the University of Technology. The Alunaut production facility even has a separate study room where the theoretical lectures of in-service training take place.

Local government authorities have also been included in organising the collaboration between small craft building companies and organisations. This has resulted in setting up a cooperation network, a cluster of individuals and organisations involved in small craft building. The main goals of the cluster are promoting education and increasing qualifications in the field, training new specialists, administering the activities of and communication within the network, small craft related product development and innovation, and the joint marketing and PR of small craft building companies in Estonia and abroad.

In order to enable this cooperation to have a concrete output, the Small Craft Competence Centre was set up in Kuressaare, and this is one of the most important centres of the cluster. The Competence Centre brings together the educational side, databases, laboratories, test pools and technology.

The Small Craft Competence Centre is a part of the Kuressaare College of the Tallinn University of Technology, and the new building of the centre, together with a test-pool for small boat models, financed by the EU, should be completed by early 2014. The centre will offer development and consultancy services to companies. In 2013-2014, the Estonian Maritime Academy will be united with the Tallinn University of Technology, which will hopefully bring additional maritime affairs subjects and teachers to Saaremaa, thereby increasing the level of services offered by the Competence Centre.

Mark Muru has high regard for the activities of the Competence Centre: "Although the centre will offer full services to its member companies and organisations from the beginning of 2014, when its new building is ready, the benefits of collecting and sharing competence in the field of recreational craft building is already tangible today. Many necessary tests can be carried out quickly here without having to wait for results

from distant laboratories. Quick feedback and the opportunity to experiment provide the opportunity to develop and test new solutions on site and this, in turn, offers broader support in creating and developing innovative products. We can say that, in this way, the Small Craft Competence Centre is a real incubator, opening up new opportunities for companies and educational and research centres, creating collaboration and synergy, and promoting national small craft building technology."

Estonian shipbuilding in figures

As there was no shipbuilding heritage left from the Soviet era, all companies active on the market today have been forced to build up their technology from scratch. This has enabled them to use the most up-to-date equipment, the best know-how and the most innovative solutions. In tandem with boat- and shipbuilding, other related fields, such as 3D design, hull design and building and casting moulds for the lamination of plastic details, have developed. Innovative solutions make it possible to build more comfortable, lighter, more sustainable and modern vessels. For example, up to 45-metre-long aluminium work-boats are being built on Saaremaa in the factory of **Baltic Workboats**.



The Estonian recreational craft industry is also very flexible: good work quality and highly skilled specialists make it possible to produce complex and work-intensive custom-made solutions and build boats and ships for the most extreme conditions and demanding clients, for example the 60-foot aluminium polar expedition yacht Journeyman 60 produced at **Alunaut**, and the 55-foot luxury sailing boat Polar 55 produced by **Polar Shipyard**.

There are over 60 companies specialising in boat- and small shipbuilding in Estonia, in addition to such large ship companies as the **BLRT Grupp**, **Reval Shipbuilding** and **Loksa Shipyard**. It is difficult to estimate the total number of ships built in Estonia as it is impossible to produce precise statistics. It is estimated that at least 2,000 boats and recreational ships are produced in Estonia annually, but the exact number remains a mystery due to statistical nuances. Many Estonian companies act as subcontractors and produce boats, spare parts and ship details, including complex boat hulls, for other countries. Therefore many recreational vessels produced in Estonia have hull numbers of other countries and are accounted for in the statistics of that country.

In the Estonian Register of Recreational Vessels, in recent years 1,200-1,300 vessels have been accounted for each year, but it is noteworthy that a only tiny number of those boats are produced in Estonia. Most local consumers are still buying used boats, which are cheaper, from Finland, Sweden, Norway, Poland and Germany.



Photos: Raul Vinni



Alunaut robust aluminium fishing and powerboats and complex special projects

In five years Alunaut, a Saaremaa-based boat manufacturer, has grown from a subcontractor for Swedish companies to an independent boat manufacturer whose brand includes a series of aluminium boats ranging from a 4.25-metre fishing boat to a 10-meter offshore powerboat. The Alunaut 750 series has been built for boating at high speeds and in any weather conditions. In cooperation with the Norwegian boat designer Oystein Jaer, a totally new hull shape has been created which can handle bigger waves and speeds of up to 50 knots. The **Alunaut 750** is produced in two versions: the **750 CC** (centre console) and the **750 AC**, with a cabin (pilot house).

According to the Executive Director of Alunaut, **Mark Muru**, the goal of the company is to produce high quality boats which do not leave boaters in trouble in any situation. "The primary task of our boats is to be trustworthy, functional and safe vessels for demanding users in any kind of weather conditions. At the same time, we offer basic comforts, speed, joy of the ride and top quality additional equipment. Of course, this increases the price of the boat, but boats meant for active use must be of good quality."

Before Alunaut came onto the market with its own boat models in winter 2012-2013, the company had gained valuable experience in boat building and renovation for a long time. The first major contracts of the company were for aluminium boats built for the Swedish companies Vector ProBoat, Hanterbarabatar I Gräddö AB and Aevotec AB. The fast and seaworthy **Vector** models are intended for use as commuter and patrol boats, while the Aevotec is a stable and practical fishing boat. A totally unique product group is the Fred 25 models. Developed in cooperation with Alunaut by the Swedish company Hanterbarabatar, the Fred 25 is a special boat for boaters with special needs. Even wheelchair users can comfortably use the craft, which is equipped with a broad bow ramp; the varied and plentiful special equipment makes riding in the boat a simple and comfortable experience for all people with special needs and limited movement.

The biggest and most complex project of Alunaut was the 60-foot aluminium expedition yacht **Journeyman 60**, an ice-capable vessel, built in 2009-2010. In addition to the construction of new boats and small



ships, Alunaut deals with boat renovation and reconstruction. Besides its own models, the company still does subcontracting work for Swedish companies.

In 2012, supported by Enterprise Estonia, Alunaut's new 1,300 sq metre production facility, equipped with modern technology, was completed on the island of Saaremaa. In cooperation with the Small Craft Competence Centre, Alunaut is also participating in the training of new boat-building specialists, offering internships in its factory and sending its staff to regular in-service training sessions. Although until now Alunaut has used Scandinavian-origin naval architects in designing its boat models, the first new generation of local ship engineers and designers is growing up in the company. In collaboration between young specialists and Norwegian consultants, the next sailing boat project is ready on paper: the 50-foot aluminium luxury sailing boat **Alunaut 1500 Sail**, the prototype of which is waiting for its chance to move from paper to production.

See more at: www.alunaut.ee



Nordtenwest

Founded by the classmates Aleksander Kāo and Margus Rebane, Nordtenwest is a boat manufacturer with the philosophy that a boat should be secure and weather-resilient, functional and economical. The main role models for the company are Norwegian boat manufacturers, but also the best work-boat models and technical solutions from the rest of the world have been influential. Built on the example of Norwegian fishing boats, the first model, the **Nordtenwest PCIE21**, is a fishing boat with an inboard diesel engine and a bow cabin, and it is made of fibreglass-composite material. A newcomer in 2013 is the boat model ACOE: an aluminium boat with an outboard motor and a 21.7-metre hull. This sea-secure work-boat with a walk-around cabin has been built on the basis of designs from New Zealand. The capacity of the outboard motor is between 120-150 hp, which makes the boat quite fast. During the company's preparations for the Hanseboot show, **Aleksander Kāo**, the Executive Director of the company said: "We expect that our newest model will be received well because it is a functional and economical vessel. Naturally, we will continue to produce the series of plastic boats, but we are mainly working with the aim of specialising in custom-made orders. We want to work well with both plastic and aluminium. Our future is not in mass-series production but as the manufacturer of special vessels."

www.nordtenwest.eu



The Nordtenwest PCIE21 a month before the boat show



Ridas Yacht & Composites

Ridas Yacht is a multifaceted boat manufacturer with a long history and extensive experience in subcontracting work for foreign ship producers, as well as developing its own line of boat models. Throughout the years, the main products of Ridas have been fast and high-quality sailing yachts, including ones carrying the company's own label. But, seven years ago, the company also started to produce rigid boats with inflatable pontoons: RIB boats. The company's flagship is the 36-foot **RIB Explorer**; in addition, there is a 32-foot hull in production which can be ordered with a cabin or as an open hull, and an open boat with a central console, the **RIB 700**.

The speciality of the 36-foot RIB Explorer is its asymmetrical hull. As the boat cabin is located starboard, the left side is larger in order to balance the weight. This boat is built for fast speeds in any weather conditions and, depending on the choice of engine, it can achieve up to 65-70 knots. With its two 315hp Yanmar diesel engines, which come as standard equipment, the RIB 36 can achieve a maximum speed of 50 knots. The boat is equally suited for hobby sailors or as a work-boat and transport boat for islands situated in stormy seas. Thanks to its sharp bottom angle, the RIB 36 can ride fast in big waves. Like the products of many other Estonian boat manufacturers, Ridas boats have become the property of many Scandinavian seafarers. This trust by Scandinavians demonstrates that the boats are of good quality.

www.ridasyacht.com

Kasse Paadid

Kasse Paadid, based on Saaremaa, is probably the largest serial boat manufacturer in Estonia. The company specialises in the production of two main boat models: the **Freed 430** and **Freed 430R**. Both are built on the same design and are meant for use on protected waters or coastal areas. Popular with coastal fishermen and boat rentals, the boats work well with oars and a smaller engine. The long keel and strong hull make the boat quite sea-secure and its light weight enables two men to

easily launch and retrieve the boat. The hull, which is equipped with air boxes, is unsinkable even when filled with water. Kasse boats have been successfully sold in Finland, Sweden, Norway and Germany, and Kasse is one of the few Estonian boat producers with a significant number of loyal clients in Estonia, probably due to the affordable prices and simple but high-quality designs.

www.kasse.ee



Saare Paat

Saare Paat, a small craft manufacturer based on the island of Saaremaa, has been through good times and bad times. Initially established to build traditional wooden boats, the company found rapid international success as a subcontractor for the Finnish boat producer Finnulf. Their yachts were built of reinforced plastic, and the interior design and finishing were done at Saare Paat. Finnulf yachts made on Saaremaa were selected as being among the best at many boat fairs in Finland and elsewhere. The orders kept coming in and business was booming. But the success story came to an abrupt end when Finnulf went bankrupt in 2011 and almost pulled Saare Paat down with it. According to **Peeter Säask**, the Executive Manager of Saare Paat, the company managed to avoid catastrophe only because it had slowly but surely started developing its own trademarks, in addition to subcontracting work for Finnulf. When Finnulf suddenly found itself in trouble, the orders stopped and the payments due never arrived, Saare Paat made the risky decision to focus on its own boat models, the **Saare 38** and **Saare 41**. Those trademarks became successful and Saare Paat made it through the crisis as a sailing boat manufacturer producing its own cruisers.

Today there are two different models of the **Saare 41**: the **41CC** is a centre-cockpit cruiser suitable as a family yacht, and the **41AC** is a more

classic model, with an aft cockpit. The company also continues to produce the Saare 38. Saare cruisers are sporty and fast, yet comfortable and fitted with top-notch equipment. Although the main models include standard equipment, customers' wishes are accommodated during the manufacturing process as far as the location of the cabins and the installation of equipment is concerned. The interior fittings of Saare Yachts are also made on Saaremaa and the biggest advantage of Saare Paat is the quality work carried out in its own factory. The quality of the work done on Saaremaa has been tested in the Scandinavian market, and the company's cruisers have been sold in Scandinavia, in other parts of Europe and in Russia.

In addition to cruisers, Saare Paat also manufactures **Stormer** motorboats, with classic hull shapes and inboard motors, also made of fibreglass-composite material. These days wooden boats can only be seen in the historical photographs hanging in the office of Saare Paat, next to pictures of Finnulf yachts, which remind the company of a great lesson learned.

Further information at: www.saareyachts.com



As its name indicates, the FlowBoat is meant for slow movement; therefore, it is a vessel for rivers and inland bodies of water. It has an economical engine, one does not need a boat license, and extra equipment includes a grill and a picnic table: what else do you need to fish and chill out on rivers and lakes? The creators of this leisure boat from the capital of Estonian inland waters built the first prototype for their own use, but when there was great interest from other hobby boaters, the decision was taken to make the boat fit for serial production.



FlowBoat a sustainable river catamaran for peaceful floating

Although the FlowBoat is just seven metres long, it appears to be much more massive – perhaps the high cabin creates an optical illusion. The first impression upon going onboard **FlowBoat 700** is as if one has stepped onto a raft. The rectangular deck surrounded by a sturdy railing, the cone-shaped cabin, or steering house if you like, towers in the middle of the boat, and there is a wide stern bench in the back. The deck is located high above the water surface and that creates the illusion of standing by the railing of a much larger ship. The vessel is stable on water, does not shake as you walk and, as is typical of catamarans, the board carries well.

Katri Tammekand, the Executive Director of the company, explains: “The idea of building this type of boat really started out as a hobby. For Tartu inhabitants, water means rivers and lakes. We like travelling on water; in the old days, we made many trips on rafts with pontoons and other similar vessels, went fishing and took leisure journeys on the Emajõgi River and Lake Peipus. These vessels developed over time, and more modern engines and comfortable board systems were introduced. This is how the idea of making a more proper vessel was born. We brought in the boat architects Enn Metsar and Margus Liigsoo and, after slightly more than a year of work, the first model was completed and the first vessels were on water. We would also like to thank Niina and Rein Nigul for their support in building the first prototype!”

Raivo Pääsuke is the head of the catamaran project. “With FlowBoat we tried to incorporate all the good characteristics and experiences of rafting. The concept is that we have developed a functioning and spacious bottom which makes it possible to install differently shaped cabins, steering consoles or awnings on its rectangular deck. The specific model is a walk-around-type of boat with a central cabin, but as all technology and appliances are in the pontoons of the catamaran, you

can in principle build anything on this surface. We have also tried a sail, in order to save on fuel and enjoy the peace on a lake, for example. The whole project was put together to enable us to produce the catamarans as a series. Moulds were made for details, and everything has been calculated, documented and tested. In this process, we have been greatly assisted by the producer of the Kiili Paat, Efekt AS,” explains Pääsuke.

The engine of the catamaran (20hp Honda outboard motor on the specific boat) is installed between the hulls of the catamaran with the help of a clever console, and in the front it is protected by a special splash cover. “This is something we have learned from rafts on pontoons; otherwise, it starts to throw up water. We have learned it from our own experience,” describes Pääsuke. The rudder blades and outboard motor are connected so that all three work synchronously.

Of course, the FlowBoat is no open sea cruiser and not intended as such. Its maximum speed, with a tail wind, is just over 10knots, and Pääsuke confirms that this is more or less the maximum speed they desired. The vessel has not been tested with a larger engine, although with design approval the engine could be up to 50hp. Raivo did not want to predict how much that could add to the speed, but it is obvious that this hull type is not meant for fast speeds. Therefore, a smaller engine and lower fuel consumption are preferable.

The FlowBoat successfully passed its sea test in the Pirita area of Tallinn. Different courses in relation to wind and waves were tested and everything went smoothly. The FlowBoat steered easily, and on open water drift was hardly noticeable. If you tried, you could cover the deck with splashes of water when riding strongly into waves, and the vessel noticeably shook when riding the sides of waves. But inside in the cabin splashing is of no concern; the strong windscreen cleaner leaves the skipper’s view clear.



TECHNICAL DATA:

Length: 7,000 mm
 Width: 2,500 mm
 Height of free-board: 500 mm
 Departure draft: 350 mm
 Maximum capacity (people + load): 590 kg
 Mass at full capacity: 1 590 kg
 Maximum engine capacity: 40 kW
 Passengers: 6
 Sea category: CE/C
 Material: fibreglass-composite



Polar Shipyard

User comfort needs to be tested on a journey

The catamaran has plenty of storage space. As the battery, fuel tank and other technical equipment are hidden in the hulls of the catamaran, the spacious stern bench and seats in the cabin are free for other equipment. There are separate holders for fishing rods on the railing. The sleeping berths are on the floor in the front of the cabin, and the boat builders confirm that four people can sleep there. The cabin itself feels quite spacious. The skipper has a great view and if necessary can also stand up and stick his head out of the hatch in the roof. The cabin walls are upholstered but not insulated, as the vessel is not meant for use in winter. If desired, a Wallas (or other) heating system can be installed, but there is no specific area designed for this. The FlowBoats produced so far have a small electrically heated ventilator on the front glass in order to keep the glass free of fog.

One can hang a grill behind the railing of the vessel and set up a nice picnic table in front of the stern bench. The base of the picnic table also has another function: it holds the mast. So far the details of FlowBoat's sail and rigging are undecided, but it is clear that without additional keels there could be no serious sailing. A sail could help when moving downwind. However, Raivo Pääsuke affirms that consultations with different specialists are under way and nothing has been ruled out. "If we find appropriate rigging, we will solve the issue of keels," he states.

..... www.floaboat.ee

The Nordic **Folkboat** is probably the best-known sailing ship model in Europe. Developed in 1942, the Folkboat continues to be a popular and highly valued vessel, known by everyone who has had anything to do with sailing. But only a few people are aware that these days the Folkboat is produced in Estonia, at the ship manufacturer Polar Shipyard, based in Pärnu. Although the model itself is over seventy years old and, on the basis of monotype class regulations, new Folkboats really resemble older ones, the Folkboat today is produced using the latest technology and materials: glass-reinforced plastic or GRP. The same factory also produces the classic **Nordic Cruiser** motorboat. The most ambitious project of Polar Shipyard has been the 55-foot luxury yacht **Polar 55**, which was presented at the boat show Hanseboot 2012.

..... www.polar-shipyard.com





Cumulus 164

Cumulus 164



BoatArt is a young boat-building company that produces a single boat model, the **Cumulus 164**, which already exists in several versions. The company was born out of the ambitious idea of creating a hobby boat which equally capable with oars, sails or motor. The flat-bottomed centre-boarder, which can glide with the help of the motor, has won many fans among fisherman and hobby boaters. The Cumulus project was also recognised at the Estonian competition of business ideas "Ajujaht" (Brain hunt).

What makes the Cumulus 164 special is the fact that you can very quickly and without much fuss change the way you propel the boat: the fully fitted boat is equipped with a motor, sail and oars. Using the outboard motor and steering wheel simultaneously is possible due to the use of two rudder blades, which means that the switch from sailing to using the motor is very fast and easy. Although the boat is not very large, it accommodates up to eight passengers comfortably due to benches fitted along the sides. To be introduced this autumn, the **Adventure** will be the most common universal boat of the Cumulus series, and it is equipped with a tent-cabin and railing. The other Cumulus models are the **Cumulus Fisherman** and **Cumulus Standard**. By the end of this season, a version with new rigging, meant for sailing, will be completed. The rigging will be developed together with Mati Sepp, a top Estonian sailor and Match Race skipper.

www.boatart.eu

Lindvart

The most famous product of the Saaremaa-based manufacturer Lindvart is the boat family Linda 520. Imitating classic Estonian and Scandinavian wooden boats meant for coastal waters, the 5.25-metre hull made of fibreglass-composite materials has a teak floor, teak seats and a teak deck finish. The boat is mainly meant to be propelled by an engine and it is equipped with a 9-14hp diesel central engine. The **Linda 520** is meant to be used in shallow coastal waters, between islands and on protected waters. Although its hull shape makes it a traditional fishing boat, the Linda 520 has a luxury finish and careful design, which

are more typical of a recreational boat. The boat is primarily meant for enjoying great weather, but it can of course also be used for fishing or transport to small islands and islets.

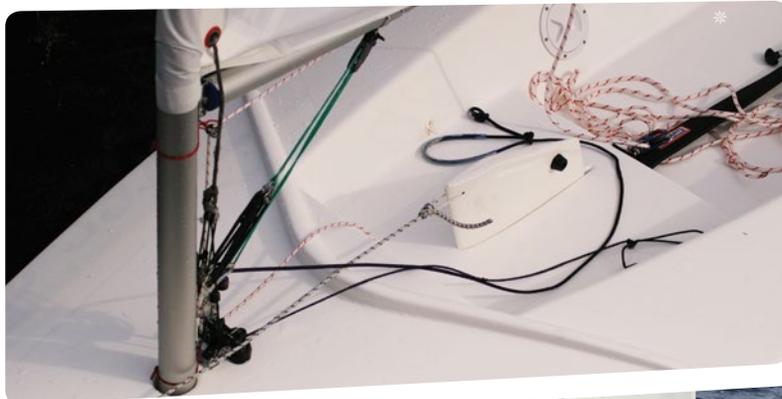
The **Linda 520E** is the electric model based on the same boat, and is propelled by the Vetus EP2200K electric engine. The electric model is equipped with a 24 V 400 Ah battery and, depending on speed, one charge can last for up to half a day.

Lindvart's product selection also includes the 12-metre yacht **Contrast 400**, a small keel-boat **Troll** and various **canoes**. An additional activity of the company is rebuilding and renovating fibreglass-composite material boats and ships.

www.lindvart.ee



Lingalaid 14



Lingalaid 402

Lingalaid

The best-known products of the company are still its boats and canoes, and there has been continuous product development in this area. Executive Director **Vahur Poolak** confirmed that Lingalaid will introduce two new boat models in autumn 2013: the **Lingalaid 402**, a gliding motorboat with a 20 hp outboard motor and the 14ft sailing boat **Lingalaid 14**. The company continues to produce its most successful boat model, the **Lingalaid 530**. With its classic wooden look, this is a sea-secure work-boat and fishing boat which was initially designed for the diesel engine to be installed in the middle of the boat. However to meet customer requirements, the Lingalaid 530 can also be ordered with an outboard engine and even in two versions: remote steering with a steering console and as an open work-boat with stern steering.

..... www.lingalaid.ee

Lingalaid, a company specialising in fibreglass products, has a much wider portfolio than boat manufacturing, including body detailing for cars and aeroplanes, motorcycle fairing, pools, lights, machinery parts and plastic products. Lingalaid also offers additional services linked to plastic processing, such as CNC and laser work, making models for plastic work, 3D design and printing.



Lingalaid 350



Nord 460 Comfort

MarineWorld / Nord boats



Nord 480

Nord is a trademark which the Estonian company Marineworld brought onto the market following the example of Norwegian sea-secure boats. The first prototype of the Nord 460 series was produced in 2011. The goal in designing the boat was to make it comfortable, sea-secure and easy to launch and retrieve from its trailer. The selection of Nord boat hull types and modifications is also simple. There are three types of Nord boat hulls: the 460, 470 and 480. From each type, one can choose between the following models: the Classic (outboard motor and tiller steering), the Comfort (one side console with windscreen) and the Commander (central console and walk-around).

Although the selection of Nord boat models has remained the same in 2013, Marineworld has made various improvements on all of its boats. The main changes include a better layout of storage areas and a stiffer hull. Customers can select their own sets of accessories and additional equipment: upholstery, boat covers, railings etc. The most attention has been paid to the models exhibited at the Hanseboot boat show: the **Nord 460 Classic**, **Nord 460 Comfort**, and **Nord 480 Commander**.

In Marineworld's product selection, you will also find the small boat **Hunter**, a catamaran type craft of 249 cm. As its name suggests, the boat has been specifically designed for assisting hunters and fishermen in their activities in low water areas, lakes and rivers. The Hunter weighs around 50kg, so it can be launched and retrieved by a single person. The boat is constructed so that it can also be used as a sledge in winters, for example to pull fishing gear behind a snowmobile.

www.marineworld.ee



The simplest way to enjoy sailing – kayak or canoe

After wooden rafts, canoes and kayaks are the oldest vessels in maritime history, having been the traditional sailing boats of various native peoples throughout history. Mostly these ultra-light vessels were used for fishing and hunting and for transport on rivers and lakes. But these boats with their low drafts have also been used for sailing in coastal waters and they were irreplaceable tools in harsh conditions: for example, on bog or marsh lakes or on frozen bays where at times one had to pull the boat along. The material of archaic light boats varied depending on what was available, ranging from animal skin stretched on a frame made of whale bone to skiffs carved out of a single tree trunk. Of course, such boat construction was labour-intensive and complex and it required builders with great skills and experience. The vessels made using this method were relatively fragile and boating was not something available to everyone: only a few people were able to own an expensive boat or use it to hunt, fish or earn a living in some other way.

Modern materials make it possible to build strong, light and easily steerable small vessels, which are unsinkable, and thus kayaking and canoeing have become popular forms of entertainment for modern city folk. These days, kayaks and canoes are mostly used for sports or short leisure trips. People no longer use these very light boats for fishing and the transport of passengers and goods takes place on other kinds of boats. For those who wish to try out a boat whilst spending time in a healthy and environmentally friendly way, ultra-light canoes and kayaks are the best choice. The light boat can be attached to the roof of a car

and taken anywhere; there is no need for a harbour or pier to launch the boat into the water. The minimal draft and strong build allow sailing in very shallow waters, which are inaccessible to motorboats, let alone yachts. Although it is possible to install sails and small engines on canoes and kayaks, these boats are normally propelled by muscle power, so it is also an efficient form of exercise that keeps you in good shape.

Canoes and kayaks have become very popular in Estonia. As no special permit or previous seafaring experience is necessary, these vessels are also perfectly suitable for first-time sailors. Estonia has many inland water bodies, which makes it possible to take long and interesting voyages on water. During the spring floods, kayaks or canoes can be used to travel inside forests and over fields, and this is the season when the highest number of people try out canoeing.

Tahe Outdoors is an Estonian company which has been active for 25 years. It manages six different trademarks linked to light vessels: **Tahe Kayaks, Trapper Canoes & Kayaks, Zegul Kayaks, Riot Kayaks, Beluga** and **Borealdesign**. Everyone from price-conscious beginners to demanding sportsmen will find a suitable vessel in the extremely large product and boat model selection. You can choose from a large variety of hull shapes, measurements and colours. In the autumn of 2013, the company will introduce four new models: the **Zegul Seaskater, Reval HV, Fit 132PE** and **Fit 158PE**.

www.tahemarine.com

In August 2013, a group of maritime journalists from Germany visited Estonia in order to learn about the opportunities available in Estonia as a seaside country and to visit small craft building companies. Below are the impressions of one of the journalists, **Andreas Kling**.

Moments and snapshots of Estonia

Three days in Estonia at the end of August: can this quick tour make up for my postponed three-week summer holiday in the north of the Baltics? Hardly, and that is not the aim, but it does provide a lot of inspiration, that's for sure. The daily agenda is packed with locations and information; sometimes it's all a bit too tight, but always warm-hearted, typical of this small country on the Baltic Sea, which has influenced the history of the country much more than the Soviet past, which ended two decades ago.

It will be the moments and snapshots which remain with me. Typical, impressive and unforgettable. They prove that the slogan "Visit Estonia" is an invitation worth accepting. The typical visit begins at the Tallinn Town Hall Square. A half litre of "Saku" beer while enjoying the sunset – we've arrived! The price of € 5.30 corresponds to the prices in Central European capitals, but nobody here seems to want to see the return of the Estonian kroon, which was abolished in 2011. And in the pub around the corner from the primeval Merchant's House Hotel, it is possible to buy a local beer for € 3.50.

In the evening it's time for Estonian for beginners. "Neh" means something like "what did you think then" and can be either positive or negative depending on the context. It is also the name of a gourmet

restaurant offering sophisticated fish and meat dishes. "Tere, tere" (hello, hello) is also mastered by most people quickly. This pleases Kalle Kuus, Harbour Master of the Old City Marina, which has become a showcase marina with many comforts, including three public sauna facilities. The crews of the 1,500 guest boats with up to 4.50 metre draughts will appreciate it until the end of the season.





This is also the mooring place of Hanse 47, which has been hired out since February 2013 by the bare-boat rental company Meri Sail, the first supplier to do so. They have ten private boats available as bare boats, partly from their second base in Haapsalu, which is 65 sea miles away on the western coast, across the sea from the beloved islands, explains Merike Reede, the co-founder of the rental company. This is the reason why the programme includes a one-way trip and a shuttle service by small plane. The typically Estonian fair-haired lady speaks almost perfect German and she is actually no exception. Fluent English is also common in this up-and-coming country. "In July, when the Finns are on holiday, it gets really full all over the place," she explains, "but the wind is better in May-June and in August-September."

We don't need the wind to get to the Pirita marina, where the Yachting Regatta of the 1980 Olympic Games took place. Thirty-three years later, the five rusty Olympic rings on the pier bear witness to the Moscow Olympics, which were boycotted by the Western states due to the Soviet Union's invasion of Afghanistan. There are already letters missing from the honorary plaque of Olympic champions, where the Olympic flame once burned; the Olympic Centre seems to have gone into decay.

"The private investor does not have enough funds," Commodore Kalev Vapper apologises for the disgrace. He and his Kalev Yacht Club would like to see the Olympic Centre renovated. There is a lot going on in modern Estonia, but not everything works out immediately. He prefers to show the fine-looking clubhouse, with original furniture from 1947, where currently the preparations for the Finn-class Gold Cup are in process. A thoughtful atmosphere prevails as the boats sail out past the top of the pier, where "we Opti sailors used to be stopped by armed border guards, if we wanted to pass the windward mark."

The Port Noblessner is not in snazzy condition either, but there are plans to renovate it on the basis of demand, more precisely according to the wishes of visitors. For this interesting approach, an Estonian design centre was contracted to carry out a long-term study, which has already been interviewing customers for three years and "is still in the phase of discovery," said Jane Oblikas, Manager of the Estonian Design Centre. From the industrial ruin where submarines were built and launched in 1912, a maritime meeting point is gradually developing, just 20 minutes away from the town centre. There is already a sailing school, a winter storage facility and the first jetty, which is currently free of charge. There is still a long way to go before reaching the goal of becoming the best marina in the country, but this will be an exciting journey.

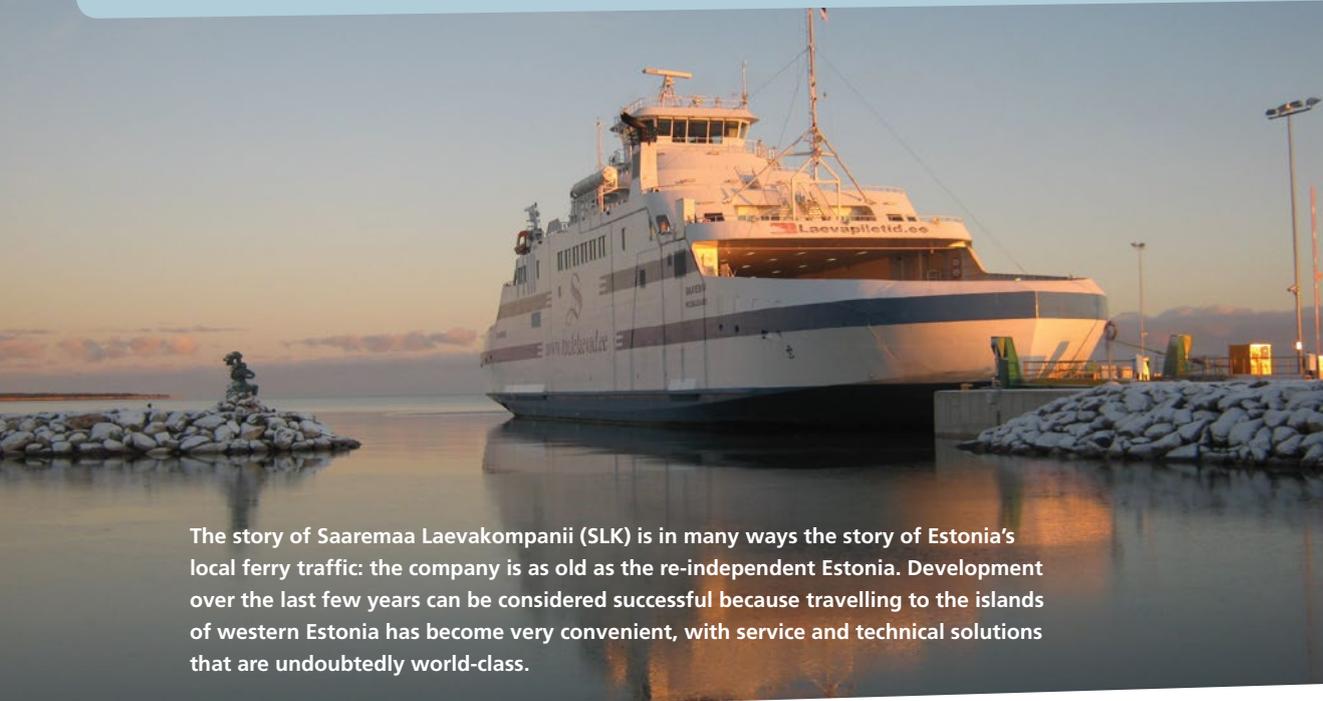
Not far away lies the large and inviting island of Saaremaa, which can be visited on a regular flight by a propeller aeroplane. All except two of the 34 types of orchids found in Estonia grow on this island. Enn Meri, the proud, first local owner of a Saare 38 sailing boat, which is built on the island, invites us for an evening sail from Roomassaare to the island capital of Kuressaare, where the yachting harbour is almost empty. He knows this area and the narrow waters like the back of his hand, and he immediately offers some tips on going to the southward island of Abruka or the island of Ruhnu in the Gulf of Riga, which is home to only sixty people. "Twenty-five to thirty of the total hundred harbours in Estonia are suitable for large yachts," explains Martin Hirvoja, Management Board Member of Enterprise Estonia, passionately. "We are still not as well developed as Sweden or Finland, but we are catching up."

That Estonia as a whole, and especially Saaremaa, are much more than just tourist attractions is proven by a look at the maritime economy. The pilot boats manufactured by Baltic Workboats are in demand internationally. Also, the small aluminium boats built by Alunaut are state of the art; in his 750CC, the shipyard boss Mark Muru makes it in seven minutes to the mainland. Prime Minister Andrus Ansip can be proud of his countrymen, who want to get started, to grow and be successful. And when, together with his counterparts from neighbouring Latvia and Lithuania, he attends a folklore performance dressed casually, he is also part of the people. The three prime ministers are dining in the lavishly and well-renovated Pädaste Manor, where Martin Breuer, with German and Dutch roots, has made a dream come true with the only five-star restaurant in the Baltic states outside the capital cities. There he offers fine organic cuisine from the region.



The small coach drives over bumpy countryside roads back to Tallinn. Although the surroundings seem totally deserted, the travellers have access to uninterrupted wireless Internet. This should soon be available all over the country as a basic right. This is not the only example of how Estonians have understood what is important for a bright future. A simple tax system, the average wage level (still) just below that of Thailand, as well as tangible lively creativity and unique nature, create the ideal mixture that is Estonia. From the Estonian ICT Demo Centre to the canoeing tour on the Valkna River – this speedy tour through the country just whet my appetite for more!





The story of Saaremaa Laevakompanii (SLK) is in many ways the story of Estonia's local ferry traffic: the company is as old as the re-independent Estonia. Development over the last few years can be considered successful because travelling to the islands of western Estonia has become very convenient, with service and technical solutions that are undoubtedly world-class.



Saaremaa Laevakompanii Estonia's leader in domestic ferry traffic



The historic dance of MS Muhumaa, MS Saaremaa and MS Hiiumaa on the Väinameri Sea in May 2011

The festive inauguration ceremony of MS Hiiumaa at Rohuküla harbour



Photo: M. Mumm

The people of Saaremaa are proud of their ambitious ferry company. The island has honoured them with every award available for developing the ferry traffic. But it is most heart-warming when the islanders praise and are grateful for the work which has made their life noticeably simpler and better. The ferry service, which runs smoothly and without delays, has also attracted tourists to the islands of Saaremaa, Hiiumaa and Muhumaa, evident in the growing number of hotel bookings.

Saaremaa Laevakompanii operates five local ferry lines, with a total of nine ferries. Three new ferries, built with the help of private investments, honourably bear the names of the islands. Constructing the MS Muhumaa, MS Saaremaa and MS Hiiumaa between 2007 and 2011 has provided the company with

invaluable experience. The experience and know-how gained will be applied to their new business: developing the technical supervision of ferry construction. As its first project, the new pollution control vessel Kindral Kurvits, for the Estonian border control, was finished in 2012 in Finland, with SLK performing the technical supervision.

The development of ferry transportation has also been noticed abroad. The Royal Institute of Naval Architects in the United Kingdom has selected the prototype for the new MS Saaremaa and MS Muhumaa as one of the 50 most remarkable ferries constructed in 2010. People from Croatia have also come to Estonia to learn about SLK's experience developing the ferry boarding and port access control systems in Estonia.

The christening of MS Hiiumaa in Norway, at the Fiskerstrand BLRT, on 7 April 2011



New era in Estonian ferries

In 2010, both passengers and employers started to think differently about travelling to the islands of Estonia. With the arrival of new ferries, the ports were reconstructed and a modern e-port solution for checking-in and boarding was applied.

The brand new ferries MS Muhumaa, MS Saaremaa and MS Hiiumaa are identical and can hold 160 vehicles and up to 600 passengers each. The ferries have two car decks, are 97 metres long, 18 metres wide and have a draught of four metres.

A unique system of barriers and traffic lights at the ports automatically directs the vehicles to the correct queues according to vehicle height and ticket status.

E-port is a technically integrated software solution for boarding and access control, completed in co-operation with Tuule Piletikeskus (ed. - ticket centre). E-port deals with ticket control, directing vehicles to the correct queues in the waiting area and boarding the ferries. This ensures fast and smooth boarding, which is the key to decreasing queues at peak times.

Strong winds and ice no longer affect ferry traffic

The new ferries have taken the quality of ferry traffic to another level despite the extreme weather conditions on the Väinameri Strait. When the old ferries were still in use, cancellations were common when winds rose above

20 m/s and tough ice conditions could prolong journeys from the usual hour and a half to seven or eight hours. There are almost no cancellations due to weather with the new ferries, which are safer and always on time.

It is a unique and historic moment when considerable development in several areas can take place simultaneously: new ferries, reconstructed ports and an automatic ticket control and boarding system. The result is a smooth and praiseworthy ferry service, which serves the interests of the entire region.

E-tickets make travelling to the islands a joy

Anyone can buy an e-ticket online, which ensures priority boarding on the desired trip, but can also be used at another time in the general queue if travel plans should change. Passengers can also change the dates and times of their trips online if necessary. The e-ticket system was launched in 2008 and was quickly adopted by passengers. The online site www.tuulelaevad.ee provides a good overview of the capacity of the ferries for each trip and helps in planning a trip so that passengers do not have long waits at the port.

E-ticket mobile check-in and vehicle directions

There are two ways to pass through the port entry: either by showing the printed ticket to the self-service ticketing machine scanner or by using mobile check-in. The latter is especially convenient because the passenger does not even have to open a car window in poor weather conditions. By calling the number on the counter terminal or barrier using a mobile phone, the ticket will be checked and the barrier will open. The system directs vehicles to different queues, high vehicles have their own queue, and there are also separate priority queues and general queues for high and low vehicles. To board the ferry from the priority queue, one has to buy the ticket online and arrive at the port on time.

Disembarking and boarding the ferry takes place simultaneously

In the waiting area, the passengers have to wait for the green light at the end of their queue. This is the signal for the entire queue to board the ferry. The first driver has to pay extra attention because he/she is the first to

drive onto the ferry. Disembarking and boarding the new ferries take place simultaneously: while the last vehicles are disembarking the green light is given to the first vehicles in the waiting area. Manual signals are no longer necessary because the system is controlled remotely with traffic lights managed by the ferry crew through PDA devices. The first time the passengers see the crew is on the ferry, where they are directed to the right deck.

Fixed link with ferries, bridge tickets and 24h schedules

The operator is not resting on its laurels, however, as there is always plenty more to do. The new development, which began in 2010 and which took care of the long waiting times in the ports at peak times, is only the first step. In the same way that the self-service e-ticketing, launched in 2008, was a prerequisite for the new e-port boarding and access control system, the arrival of the new ferries helped the system to work at its full potential by creating an extremely tight schedule and ensuring the boarding of the larger ferries in as little time as five to seven minutes.

Saaremaa Laevakompanii's new goal is to make crossing the strait as simple as if it were a fixed link while providing an enjoyable ferry experience.

The locals travel out of necessity, while visitors travel to the islands for enjoyment. Ferry rides are a gateway to the islands and usually also the first impression. A good feeling, which is the result of simple pleasant service, is important for both the locals going about their daily business and for visitors. It is this good feeling created by the experience of an enjoyable ferry ride that we want to develop with our partners and passengers.



Estonian scientists have taught **robotic fish** to swim like trout



Text: Holger Roonemaa

TEXT: HOLGER ROONEMAA / PHOTOS: ATKO JANUSON

Do you know that fish use the same technique in moving forward as sailors on the Gulf of Tallinn? They just go with the flow. This means that in turbulent water and with a strong current it makes no sense to swim against the current, but to figure out the most effective way to manoeuvre. The scientists at the Biorobotics Centre of the Tallinn University of Technology took the rainbow trout as their role model and built robotic fish which are able to find the best way to their targets by using signals from water flow. Life in Estonia talked to Maarja Kruusmaa, Head of the Centre.

There have been many robotic fish developed in the world. What makes the ones built here at the Biorobotics Centre of the Tallinn University of Technology unique?

There are indeed many robotic fish, but mostly they just swim like real fish. We use our robots in order to interpret information from water flow. Our robots are equipped with sensors which measure water flow signals; we record those signals and process the information and, thanks to this, our robots are able to

make their own decisions, taking into account the fluid flow. The sensors imitate the lateral line of the fish, which is a sense organ that receives a lot of information from water flow. To give you an example of what we did, first there was a robot fish which always turned its head towards the flow. It understood where the flow was coming from, and this has a clear analogy in biology. All fish do that – they turn themselves in the direction of the flow. It is a very primitive reflex of fish, just like when human beings pull their hands away when they burn themselves. The reason why fish do this

is probably the fact that the current includes all sorts of smells and food. Fish receive a lot of information from the current, which is why it is beneficial for them to turn their heads in that direction.

This sounds like useful information for fishermen

I think they are aware of this. After all, they have observed fish so much. Also, people who have aquariums at home have probably noticed this phenomenon.



When did it all start?

The first robot was completed a couple of years ago. In principle it could always swim upstream as it understood where the current was coming from. When you want to move upstream in a river, you know what 'up' means. So does our robot: it understands where the flow is coming from.

This first prototype of a robotic fish which senses the direction of current was just a start. What else have you been working on?

In fluid dynamics, we talk about two types of flow. Firstly, there is laminar flow, or uniform flow. Secondly, there is turbulent flow, or flow with eddies. We started to research how to swim within eddies. Eddies actually carry a lot of information. Laminar flow is like a sound with a constant height and strength, only two different components. Laminar flow always provides the same information: the strength of flow and the direction of flow. But turbulent flow is like listening to music. There are very many different things to extract: frequency, rhythm and repetitions. There is always a pattern. There is no difference between a fluid signal and, for example, the sounds of a cello. Just as you receive signals when listening to cello music, fish can receive all kinds of information from water. I believe there are very many things which we cannot even conceive of. It is known that the sensors of the lateral line are extremely sensitive. We think the sensors on our robotic fish are sensitive. If we were to put a one-millimetre water column on the tip of a finger, the sensor would feel it. But the receptors of the lateral line of fish are four times more sensitive than that. You cannot even begin to imagine it!

What does that figure mean?

That is 10,000 times, ten to the power of four. Human beings probably don't have anything as sensitive. For example, touch receptors: if you want your touch to be felt, you basically have to give quite a smack. After all, you cannot feel one millimetre of water on your hand. Only God knows what fish read from it. We could research endlessly what fish read and how they react to this information. Fish have many lateral line sensors but until now we have only simulated the most simple ones, with two or four receptors. For example, to direct the head in the direction of the flow we

use two sensors. This raises the question of why fish need thousands of sensors. This demonstrates clearly that fish are able to gather a great deal of different information in water. Biologists cannot ask the fish about their feelings. This is where we can use our robotic fish: release it into the water, record the signals and say, "okay, this information can be perceived in water."

How does this information benefit us?

This is the next step: once the signal reaches the fish, it makes a decision. So does our robotic fish. We have experimented with how to use eddies in order to save energy whilst swimming. If I know when an eddy is about to come, I am able to adjust accordingly to the flow. There are pressure differences within eddies, and always when there is a pressure difference there is force, and force always has a direction. If I adjust my position so that the force is in the same direction as where I want to go, then I gain some, as I don't have to work as hard.

Is it the same as searching for wind whilst sailing?

Yes, it has been shown that fish use the same strategy.

How far ahead do the fish see and plan their trajectory?

That is a good question and I don't know the answer. Biologists always look at it as part of a system: in addition to the lateral line, fish also have vision and a sense of smell. Fish do not just want to go in the direction of the current; they always have their own goals and they just make use of the current. The problem with underwater robots is that they cost a lot of money. They require a lot of maintenance, they have to be released into the water from a special research ship, which is expensive, and then there are the labour costs and so on. The trend in underwater robotics is to have the robots move autonomously. You release the robot into the water, it goes on its mission and then it returns. But, the shorter the mission, the less information you will receive. Robots mostly return because their batteries run out. The actual working time may be just a couple of hours. One option is to install better batteries, and another is to make movement as efficient as possible. The direction of our research

is to receive energy from the environment and not from batteries. We are already able to save up to 50% of the energy.

At the moment, our robots only have sensors on their heads. When a fish moves, it also creates pressure differences. At the moment, we are unable to tell which signals come from its own movement and which ones come from the environment. But we are working on it.

Why did you model your robot on the rainbow trout?

A rainbow trout is a fish with general skills. There are fish which manoeuvre very well, such as the eel, which can turn around in one spot. At the same time, the eel is very slow. Then there are fish which are very fast, such as sharks, tuna and swordfish. But they have very bad manoeuvring skills. A shark will swim in a straight line, then slow down, and then it takes a long time for it to turn around, with a large radius. The rainbow trout is somewhere in between. It is able to manoeuvre and also swim fast. Of course, in both capacities it loses out to other species, but it offers very many good characteristics for study.

So basically it is like a good decathlete?

Yes, that is a good way to illustrate it, because the rainbow trout has to live in many different environments. The trout starts out its life in a small puddle, then goes on to the waves and strong currents of the sea, and when it is ready to spawn it goes into a river with eddies and rapids. So it needs a variety of skills to survive.

How far will your robotic fish project develop?

Actually, we are already working on a European-wide project, in addition to the robotic fish one. The project is about developing robots for underwater archaeology. At first, we offered our robotic fish for this project, as it has a good ability to manoeuvre in comparison with ordinary robots. In underwater archaeology, one problem is entering shipwrecks. It is too dangerous for divers. We thought of making small fish robots but somehow in the process of design our fish turned into turtles! Instead of two fins they have four flippers. They are able to turn around on the spot. Their task is to take photographs or record video and to bring it back to the surface.



So this project takes your robotic fish project a step further?

Definitely. The reason why we are involved in this new project is that we acquired a lot of competence in underwater robotics during our first project. On the other hand, we are proceeding with the scientific side and researching what kind of signals there are in water and how to reflect them. Next year, we will undertake research with Germans and Finns on how to build fish-passes in rivers. The fact that most fish-passes don't work is unknown to the general public. Hydroelectric plants built on rivers invest huge sums of money in building fish-passes and then it turns out that they don't work. Then plants have to pay fines, and it is also bad for the environment, as fish are simply unable to access spawning areas. Nobody understands clearly why some fish-passes work and others don't. We will model the dynamics of the fish-passes on a computer and try to understand whether there are differences between a working fish-pass and

a non-working one. How will we find out? We will release our robotic fish with its lateral line sensor and record the signals, and then we will be able to say how a fish feels in one fish-pass or another. We will input the data into models and see whether we can develop a classification system.

How much have you thought about turning these projects into a business?

We do involve industrial partners in our projects, but we have never been in the position to spin-off something ourselves.

But that situation may arise?

Yes.

When?

I don't know, I am simply waiting for a great idea to come. I have started companies before! (laughs)

Well, it seems that this technology has great business potential?

That is true but, on the other hand, the underwater robotics market is very conservative and there are very few strong players. This field requires enormous investments, and investors turn to companies that have the capacity and have been in the market for some time. We have to find our niche, and the right way to enter the value chain. It doesn't work to just show up and kick the door open.

But when do you think your robotic fish could come onto the market?

We are planning to have our first field test in spring, when we will run tests in the sea. Development work continues, but in order to enter the market you have to work on product development and think of a business model. The question is whether we will be able to sell our product at a reasonable price. The other option is to license the technology.

Shaka, a start-up which originated in Estonia, has developed a device and software which help turn your iPhone into a mobile weather station. All you have to do is to download the software, plug the Shaka Wind Meter into a headphone jack and, voilá, your own personal weather station will measure the wind speed, wind direction and air temperature. In addition to learning about the current conditions in your own location, your personal weather station sends the measurements via the Internet to other users, resulting in a weather map which is constantly updated by users themselves and which can be viewed on your smartphone or on the webpage.

SHAKA

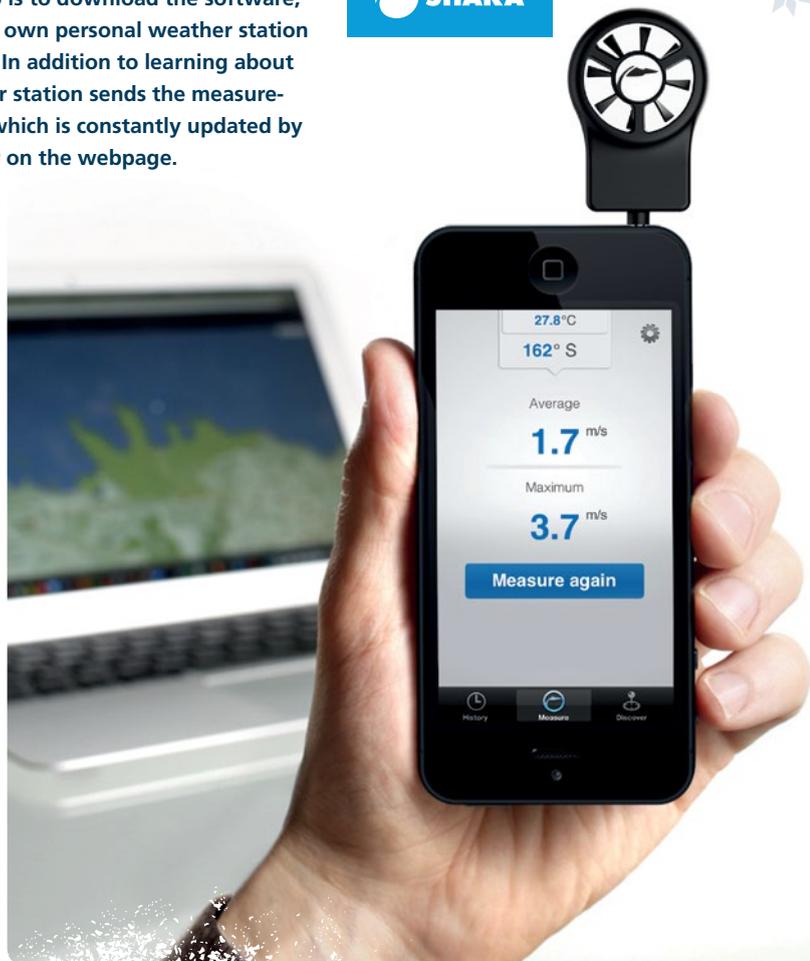
mobile weather station measures wind and shares data with other users

Jens Kasemets, the leading force behind Shaka, explains:

“Shaka Wind Meter is a comfortable and user-friendly gadget meant for sailors, surfers, boat passengers and other travellers in nature to evaluate weather conditions. But the main advantage of Shaka is that you can simultaneously view the measurement results of other users and, on that basis, assess weather conditions more generally and not just at your own location.”

A special feature of the Shaka Wind Meter is that it can be connected to a smartphone via a headphone jack that can be used with all phones, unlike data communication jacks. Currently, software exists only for iPhone, but an app for Android phones is currently in development. Shaka appliances have been pre-ordered from all over the world and the company aims to create a global weather data system operating in real time. Even official weather information experts and forecasters have expressed interest in the product.

As Jens Kasemets has been an active sailor for years, he is tuned into the expectations and needs of people for whom sailing is a serious hobby. There is never too much weather information and even with the most up-to-date weather forecast there is always the question: when were the measurements for the forecast actually sent and has the situation



changed since then? However, wind measurements sent by users in real time enable each captain to check what time the measurements were recorded. Thus seafarers can compare Shaka data with official forecasts, assess conditions themselves, and thus make appropriate decisions. The Shaka Wind Meter functions even when your phone is out of range. But the Shaka network needs dual data communication in order to function and this is currently mainly available in mobile networks. Thus, currently, the system is mainly meant for coastal waters and inland water bodies. Jens however believes that it is only a matter of time until data communication will be available on open seas and the system will start to receive data from ships further away at sea.

IT applications supplemented by data from users themselves are called crowd-sourced applications, and their main value is that the content of an application is produced simultaneously by very many different users for free and on a voluntary basis. This helps to create more reliable information than a small number of paid staff can offer and it also makes it possible to collect data from a much larger network than can be developed by one single company or service provider. Problems may arise if faulty measurements are entered into the system, but to tackle that developers are creating very complex algorithms which carry out checks and remove likely measurement flaws. On roads, a similar system is the GPS navigation system Waze, and Google Maps develops its maps with feedback from users.

See more at <http://shakaon.net>



TEXT: TOIVO TÄNAVSUU / PHOTOS: NAVIONICS

One of the world's leading producers of electronic charts for GPS chartplotters and navigation apps for water bodies will begin to develop its software in Estonia. "In Estonia you can feel technology in the air; it is like Silicon Valley," says Giuseppe Carnevali, the president and founder of Navionics and an adventurous, outdoor kind of guy.

World famous chart producer Navionics moves to Estonia

His long career includes being an Italian sailing champion, naval architect, marine officer, shipyard manager, fixed-wing aeroplane pilot and skier. Just recently, Carnevali made his first solo flight in a helicopter. "No, I am not a typical Italian," he says. "People as active as me end up not living in Italy."

James Bond fictional devices became reality

The history of Navionics goes back almost thirty years, when in 1984 Carnevali and his business partner Fosco Bianchetti introduced the world's first electronic chart device suitable for navigation: Geonav. The two men turned out to be pioneers in that field. Back in the 1980s this was a revolutionary device. Nowadays almost no car comes without GPS in it.

"I remember watching James Bond's Goldfinger, where 007 chased a bad guy and had a little screen in his car showing the car's position. That inspired me. I thought maybe we

could do a navigation system, something that shows you where you are instead of giving you numbers. That's how the business started. We turned the science fiction of 007 into a device you can buy," Carnevali recalls.

Things just fell in place brilliantly for Carnevali and Bianchetti in many ways. Carnevali, a mechanical shipping engineer back then, was an expert in sea, air and land navigation. Bianchetti had strong electronic engineering skills. Timing was crucial. Around the same time, Apple II and the first PC's came onto the market, with very early computer graphics, not nearly as good as iPads today, but they cost over 100,000 US dollars.

Before that, Carnevali had started another company in Italy, producing computer-based designs for ships. He says, "That was the infancy of computer graphics and I immediately got into it."

There were some other triggers that started

Navionics. First, Carnevali says, the economy was even worse than it is today. He'd lost his job at a shipyard and the ship owner consulting business he'd got into to support his family suffered when his ship-owning clients had severe problems.

Secondly, "One of my clients was a very rich man, wanted a super yacht built for himself and hired me to work out the specifications for it. He wanted it to be not only the biggest, but something spectacular, truly innovative. Having flown his private jet and seen a large display in it showing the ground speed, estimated time of arrival and some other things, I thought – 'what if we could put a map into the yacht that also shows where you are'," Carnevali says.

The yacht was never built, but that's how Navionics started. "I guess this is the story of many start-ups. They go through some serious setbacks that end up being the best things that could have ever happened," Carnevali explains.



Giuseppe Carnevali, a two-time Italian national champion in the Fireball-class as the skipper, a member of the national sailing team at various continental and world championships, and the navigator for the team that won the world championship in the Baltic-class and other long range races, says: "The national team and championship titles were in the '70s, when I was a young athlete, and those were experiences that I later used in founding Navionics. The long-range races as the navigator/tactician on larger boats came in the last 20 years or so, and they have offered great opportunities to improve our products."



NAVIONICS

- Founded in Italy in 1984 by Giuseppe Carnevali and Fosco Bianchetti.
- The firm has 500 employees.
- The expected turnover in 2013 is over 22 million euros, half from the US market.
- Navionics has branches in the USA (sales, marketing and making the charts), in Italy (headquarters) in India (software development) and in Estonia.
- Smaller offices are in France, Holland, Norway, Great Britain and Australia.
- The company is also engaged in social activities.

From maps to location-based service

At first, Navionics considered maps to be its core business: the company was one of the first to start digitising the charts of national hydrographic offices. As there were no devices to support electronic maps, the company then went into both software and hardware development.

Now Navionics has realised that the future of the mapping business is not maps, but location-based services. The revenue now comes from selling navigation apps on iTunes and Google Play.

Carnevali: "It is not the map itself, but what you build on top of it. That can be everything related to a location: a restaurant next to your ski trail, a nearby dock you can go to with your boat or along your hiking trail, etc. You may want to be able to play back your outdoor experience to share it with your friends. Those are exactly the kinds of things we build on top of maps."

The company has its own map database, in which nowadays the base data from national hydrographic offices represents a relatively small percentage of the total. In addition, Navionics uses data from hundreds of other

sources, ranging from surveillance by sonar to airborne surveys the company has conducted. "We have, for example, entirely remapped the Bahamas, where the best available official hydrographic charts date to 1843. Yet, there are still hazardous waters with lots of rocks," Carnevali says.

With their cutting edge technology, airborne lasers can do the same work in three days that used to take a year and a half using traditional methods. Similarly, Navionics has mapped around a thousand lakes in the US and Canada, as well as a lot of inland bodies of water in Europe.

"Columbus went to America without any chart at all. However, by law you must now carry official hydrographic charts. But we believe there's a better solution and we have a lot of testimonials from people saying that we saved their lives with our maps," Carnevali says.

The typical client of Navionics is an outdoor hobbyist, usually a boater, skier, biker or hiker, who enjoys fishing, sailing, diving, racing or simply having a good time.

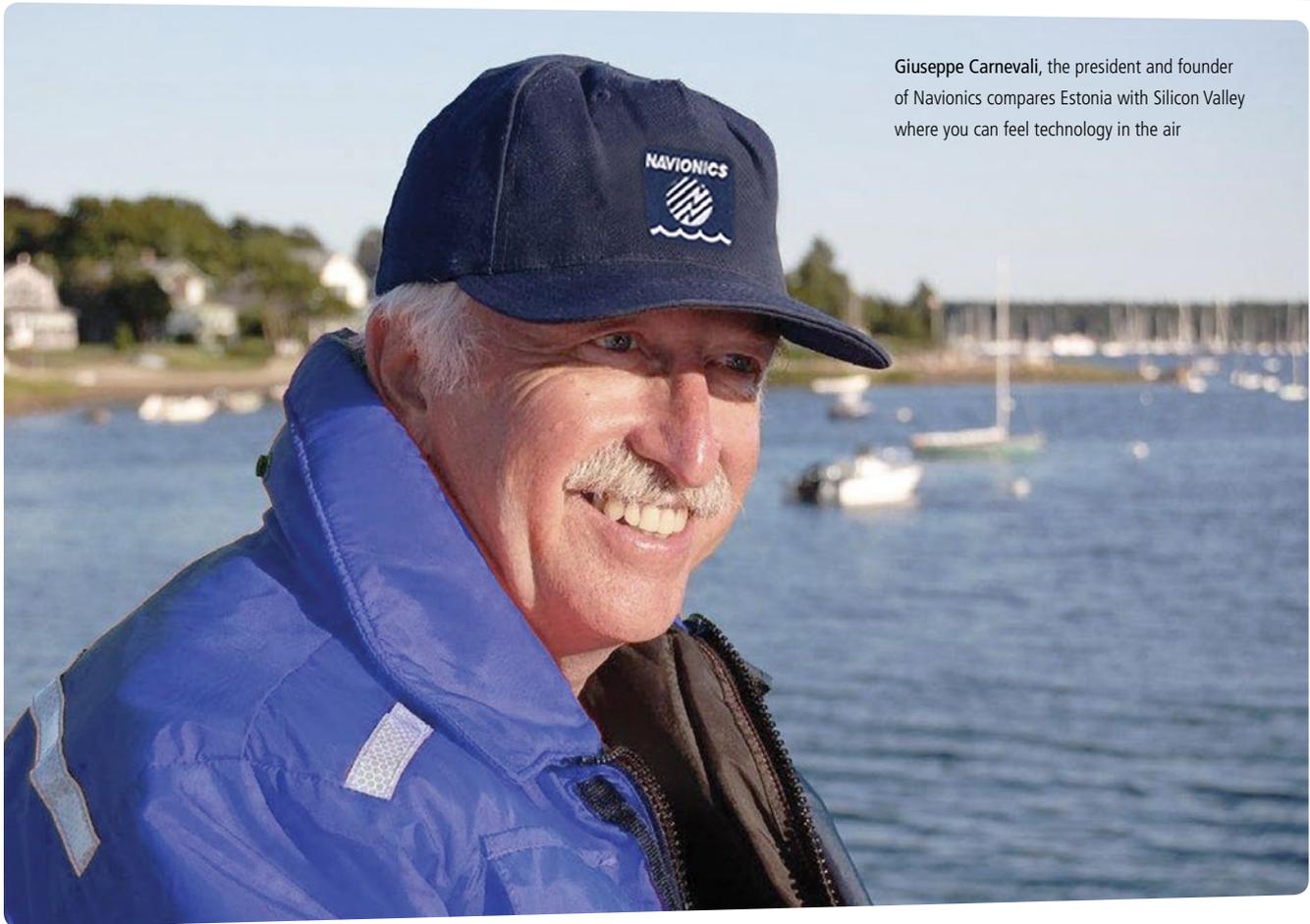
The company is most experienced in marine navigation. All of the information on depth, tidal waves, winds, weather, sights, temperatures, currents etc. is presented on an iOS

or Android. It is in fact possible to navigate a small vessel just with the help of your iPhone and Navionics apps, although Carnevali doesn't recommend it. The apps also involve an interactive element: one can share one's routes and adventures with friends.

There are also atypical user experiences: a pilot once asked to increase the speed of Navionics' boating app, currently limited to 99 knots, because his aeroplane was faster than that!

Another captain delivered a luxurious boat from a Finnish shipyard to the Mediterranean. The boat owner was tight with money and hadn't bought all of the necessary charts. So the captain had to use the Navionics app in his iPhone to navigate from Finland to the Mediterranean.





Giuseppe Carnevali, the president and founder of Navionics compares Estonia with Silicon Valley where you can feel technology in the air

These popular apps often rank high in the sales charts in their field. The best-selling Navionics app has almost a quarter of a million user sessions a day. Its nautical charts cover the whole world, including Antarctica.

According to Carnevali, Navionics has several competitors, including Garmin, but Google is not among them. "We are below their radar screen. Google's approach to maps is too general, and they don't speak the language of boaters and skiers," Carnevali claims.

Why Estonia?

Last spring Navionics opened a branch in Estonia, where according to Carnevali they plan to hire a large team: probably a hundred software developers eventually. Carnevali: "When we started to research where to expand, the only thing we knew about Estonia was that Skype was created in Tallinn. I had also seen a documentary on Estonia, about how its first prime minister after regaining independence was very young, full of youthful, vain and exciting spirit and had done a great job. It sounded like a good place to be for Navionics. Our core business is innovation. It is in our DNA. We apply it to location-based services. We are

looking for people who like innovation, from environments which favour innovation."

Navionics also considered Estonia to be business friendly, with great transparency, relatively low corruption and bureaucracy, a competitive tax policy, flexible labour laws and great openness to the world. So, as Carnevali explains, Navionics wanted to add a new business culture to its global mix: the Estonian culture.

When asked what innovations will come next in the area of navigation and location-based services, Carnevali is not too keen on disclosing his ideas. He likes the arrogance of Steve Jobs, who has said: "customers do not know what they want until we provide them with what they want."

The cost of labour is definitely not the lowest in Estonia, and good people are hard to find. However, in Estonia, technology is in the air: you can feel it and breathe it. There's a lot of excitement around innovation, technology start-ups and e-government, according to Carnevali.

He goes on: "Estonia is sort of like Silicon Valley, where people like to go to meet their

enthusiastic peers. Estonia is in almost the same time zone as Italy, while Silicon Valley is nine hours away."

At the same time, according to Carnevali, Estonia is relatively little known, and thus has good potential for growing smart technology companies.

"We hope to find in Estonia a place that allows us to be more competitive in the global market."



Marine infrastructure developments in Estonia

TEXT: REIN HAAVEL / Head of the Surveillance Systems Department, Cybernetica AS

An ice buoy with LED lights

Estonia has always been closely connected to the sea. The length of our coast line is over 3794 km, and there are more than 1500 islands. The main food for Estonians has been fish (Baltic herring, in particular) for centuries. There may have been a Viking settlement on Saaremaa, and for centuries there have been a number of marine schools in Estonia.

Everything changed for Estonia in relation to marine activities when the Soviet occupation began in 1940. To be on the coast without special permission was forbidden, most fishing boats were destroyed by Soviet officials, only a few Estonians were allowed to sail on ships that visited international waters, and the control of the sea and the marine infrastructure came under the control of the Soviet military.

The situation changed when Estonia regained its independence, although there were still problems for mariners. When the Soviet troops left Estonia they took with them important elements of the marine infrastructure and what was left behind was in a state of disrepair. Most of the navigational lighting system was nuclear-powered, which was unacceptable to Western countries.

Thanks to the initiative of the Estonian government, and especially the Maritime Administration, work began on the development of a navigation lights system in the Computer R&D Division, EKTA, of the Institute of Cybernetics.

The development targets included not only navigation lights but also all internal control equipment, remote control and permanent monitoring systems. New lights were designed with minimum energy consumption, using light emitting diodes (LED). Each light-buoy was equipped with a GPS receiver to inform the control centre if the buoy was drifting away from its position or had other problems.

Today this system covers nearly all the eastern coast of the Baltic and the southern coast of the Gulf of Finland. Further development and production of this system continues. Cybernetica has produced and delivered visual light signalling equipment not only for the Baltic region but for many other countries. Today production for the domestic market represents only a fraction of the total sales.



Transceiver's installation to an antenna for GOFREP system

Another important marine infrastructure element is radio communication with vessels at sea. This is strongly connected with search and rescue services.

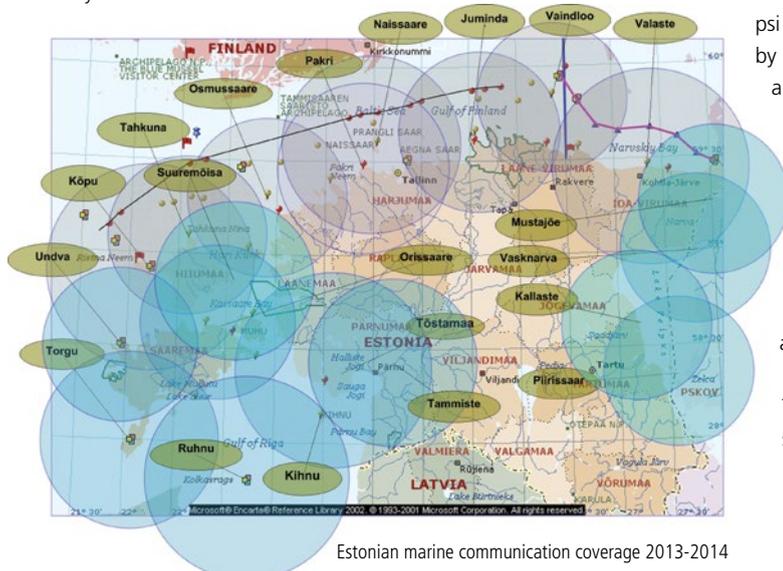
After the Soviet troops left Estonia, search and rescue became the responsibility of the Estonian Border Guards, and it is now shared by the Estonian Police and Border Guards. An important element in fulfilling this duty is the Estonian Maritime Communication System, operated by the State Infocommunication Foundation. The first technical system for marine communication, based on the Norwegian Gaxex system, was installed at the beginning of 2000. Today, Cybernetica is replacing this system with a modern up-to-date system, which it has developed. The system will cover all Estonian territorial waters, including Lake Peipsi. The same system is currently installed in ten different countries, including Indonesia, Azerbaijan, Poland and countries around the Black Sea.



Estonian Marine Communication system installation in Indonesia

To improve safety and security on the sea is important for every country, in fact every harbour, to have real-time information on vessel traffic. The service is called VTS (Vessel Traffic Service). The Tallinn VTS was started by the Maritime Administration in 2002. Cybernetica was their technical consultant in the procurement and building of the system.

At about the same time, it was decided at the IMO (International Maritime Organisation) that the Finnish Gulf was a very sensitive area in terms of pollution. One source of the pollution was shipping accidents due to the heavy traffic of vessels carrying dangerous goods (mostly oil products), and the area was declared a mandatory reporting area. This means that every ship must report its voyage information when entering the Gulf of Finland and the vessel's movements must be continually tracked by countries in the area.



Estonian marine communication coverage 2013-2014



Tallinn upper with LED lights

In 2003 when the partners of GOFREP (the Gulf of Finland Reporting system) decided to install the system, Estonia had no radar, marine communication, or other surveillance coverage of the Finnish Gulf available for GOFREP. As Cybernetica had been involved in the preparation process of GOFREP, it made a proposal to the Maritime Administration to develop and implement a system which would meet all of the GOFREP needs, including voice communication with vessels, AIS (Automatic Identification System) to follow the traffic in the gulf, various databases, a communication system to connect with the other GOFREP partners (Finland and Russia), and digital data communication DSC (Digital Selective Call) to handle automatic emergency and other important digital messages. The Maritime Administration accepted the proposal and on 1 July 2004 the system was successfully implemented. The system has been in continuous operation since then.

For an independent country, sea border security is vital. Our Border Guard service has taken major steps to develop border surveillance, including the sea border. Cybernetica has been active in the implementation of the surveillance systems. The eastern border, including Lake Peipsi and the Narva River, is equipped with surveillance systems designed by Cybernetica, including radar, night- and day-vision camera coverage and their control systems. Similar systems have been exported to Romania and Montenegro.

Cybernetica is looking forward to continuing to develop up-to-date marine infrastructure and support systems for mariners. In the nearest future, a system for small harbours will be developed, offering radio communication with vessels sailing into harbours and a central monitoring system if the harbour staff is temporarily unavailable to respond the calls.

To support security, protect the environment and provide comfort for sailors is the challenge for Cybernetica and its marine team.





Metod extendable work places by Iseasi for Thulema

Estonian design thrives on creativity and practicality

TEXT: **MARIS TAKK** /
Estonian Design Centre



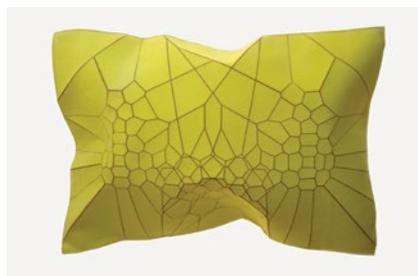
Moe vodka bottle by Jan Tomson

Stereotypes are dull and simplistic, but in defining Estonian design it is possible to highlight some features which seem to apply generally: individuality, creativity and practicality, as well as breathing new life into tradition and heritage. It is a unique characteristic of Estonian designers to combine the know-how of their ancestors, long-forgotten skills and valuable visual heritage, with innovative technology and 21st century solutions. This playful and skilful knack of uniting archaic patterns and contemporary forms in smart and high-tech products is visible in the works of older and younger Estonian designers. Innovative textile design has helped put Estonia on the global design map. The textile designer Kärt Ojavee recently completed her doctorate on smart textiles. The trump cards of Estonian design are unique and luxurious handicrafts, a personal approach and small output.



Bike racks by Extery

The characteristics which typify Estonian furniture, especially wooden furniture, production are ecological approach, endurance and sustainability. This is how furniture has been made in Estonia for centuries, and in recent years this concept has once again become a central part of the ideology of small furniture producers. They value traditional wood-processing methods, local raw materials and minimalist designs. Of course, Estonian designers cannot get around sustainable and ecological thinking, and this has been successfully applied in furniture production and fashion design.



Smart textiles by Kärt Ojavee

At the same time, due to Estonia's history of different ruling nations and its geographical location between eastern, western and northern Europe, Estonian design has become an exciting melting pot of Nordic functionalism, ascetic simplicity, clarity and the more playful western perfected solutions. In addition, Estonian design is strong and vivacious because it orientates itself in various fields: besides such "old" design fields as product and textile design, Estonia is good at relatively new and growing fields, such as service design and strategic design.

The ability to successfully combine service design, communication design and product design is illustrated by the joint project of Enterprise Estonia and the Estonian Design Centre, which will be exhibited at the Hanseboot boat show.

The service design company Brand Manual mapped out a complete service concept of a small harbour, based on the example of Port Noblessner in Tallinn.

Requirements for yachting harbours have increased over the years. Today's seafarers who spend their holidays sailing expect something more than just docks, electricity and canalisation from ports. Good service, orientation to the target group and a pleasant atmosphere form the essential basis for harbour visitors to feel welcome, and this applies to all age groups. The way in which leisure activities have changed and the range of age groups offer a real challenge for harbour owners in keeping their harbours well-equipped and functioning well in future.



Waste bins by Extery

The tools of service design make it possible to create a whole service concept, placing the service-user in focus. Brand Manual carried out extensive research in order to determine the needs and expectations of harbour users, from the planning of their journeys to the question of storing their yachts over winter. They will introduce their universal small harbour concept at the Hanseboot boat show, which will provide a model for other small harbours all over the world to adapt according to their own needs and capabilities.



EXTERY

products built to last

EXTERY creates urban furniture for public areas. People living in the tough Nordic climate value inviting warmth in urban scenery. EXTERY creates design elements for public spaces based on the belief that green technologies, culture-sensitive design and city furniture customised for locations form a foundation for a better and more comfortable urban environment. Where urban furniture is concerned, durability is often considered to be more important than design and comfort. However, the harmony between designs and the space in which they exist are just as important as the durability of the materials used to create them.



In addition to urban furniture collections, which include our famous park benches, bike racks, traffic barriers, bollards and waste bins, EXTERY also takes custom orders and produces urban furniture to meet special requirements. The uniqueness of EXTERY's collections lies in their obvious simplicity and comfort, and the harmony between our products and the space in which they exist, whether under the burning sun of the south or in the harsh climate of the north. EXTERY products are built to last. EXTERY products are recognised and purchased all over Europe because of their clever design and durability. Affordable prices and excellent service are added bonuses.

Having partnered with Iseasi Designers, the crème de la crème of Estonian industrial design, Martin Pärn, Edina Dufala-Pärn, Sven Sõrmus and Pent Talvet create solutions that are based on understanding the user, mastery of design techniques and long-term experience.

www.extery.com



minimal, modular, outdoor

ULAELU LINE

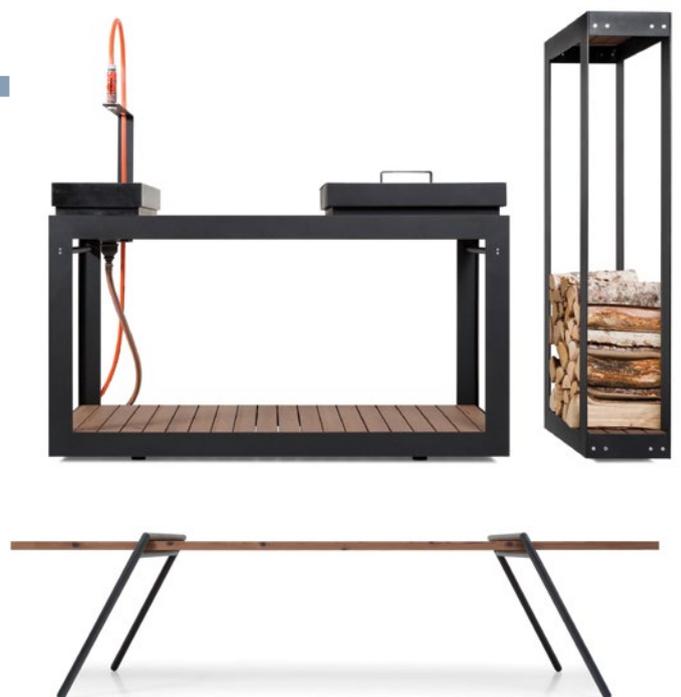
Ulaelu invites everyone to come outside and spend time in the garden or on the terrace. Our motto is: SUMMER IS SHORT, LET'S ENJOY IT!

Ulaelu is a minimal, modular, outdoor kitchen line. These high quality products are unique and incredibly durable in harsh weather conditions.

The main structure of the outdoor kitchen is the base frame, which accommodates one small and two large work-top modules. The modules are interchangeable and can be selected based on one's needs. The range consists of wooden, stone or plastic work-tops, together with a sink and a charcoal grill. To complete the ensemble, there is also a firewood rack and a table with accompanying benches.

The frame, the different modules of the outdoor kitchen, the table and the benches are weatherproof. Made of aluminium, the outdoor furniture is easy to move and will never rust.

www.ulaelu.com





Aldo Rossi, San Cataldo cemetery, Modena

ARCHITECT'S EYE BEHIND THE CAMERA EYE

When you look at Arne Maasik's (born 1971) photographs, it becomes evident that it does indeed matter who is behind the camera. A photograph which embodies an incredible stillness, which allures with its motif and hues of light, convinces the viewer without words that the term "art of photography" is not just hype, even though we tend to forget it in our world flooded with random images.

TEXT: ANNELIIS AUNAPUU
PHOTOS: ARNE MAASIK



Tangle

The portfolio in this issue presents Arne Maasik's light-filled imagery, which he captured during a recent visit to the island of Ruhnu. "I never saw the sea like this before," says the artist, who doesn't usually say much in praise of this unique location and moment.

As many know Arne Maasik for his vigorously dramatic and graphic architectural photographs, capturing the silent sea surface seems like a real change of direction. I ask what kind of motifs give him the impulse to take out his camera: man-made or natural? His reply comes quickly: it makes no difference. His object is the environment, both man-made and created by natural forces.

Yet not all embodiments of reality make one pick up a camera or want to create art. He does not allow the motif to rule over him; instead, he finds motifs when he looks for them. Sometimes he goes searching for them either on his travels or on a simple walk, but mostly he needs to do so in connection with a task. At the moment, Arne Maasik is involved in taking photos for a publication on Estonian islets. The book is intended as both a photography book and as a book one can read, and this assignment took the photographer to Ruhnu Island looking for motifs. His "catch", as the author says, was unexpectedly rich.



Impressive steel railroad structures in Germany

FROM THE RULER TO THE COMPUTER, FROM FILM TO DIGITAL CAMERA

Arne Maasik has an MA in Architecture (Estonian Academy of Arts, 1997). At the moment, he is not actively involved in architectural design, but he worked at the legendary offices of Künnapu & Padrik at a time when enormous and important contracts for the city were in process: the Viru shopping centre, Radisson Hotel, etc. He claims that this experience was incredibly exciting and significant. Indeed, not all architects get to be at the birth of so many important buildings and experience the tensions and metamorphoses of applications, projects and dreams coming true.

Even today he keeps in touch by using architectural and other design programmes on his computer. Yet he is still involved in architecture through his photography, as the two fields seem to be tied by an umbilical cord. After all, what would we know about the world's architecture if we did not see the best achievements or biggest failures in photographs?

Photography, its techniques, activities and results have captivated Arne Maasik for a long time, even back when people did not even dream of digital photos. All fields of life are becoming more and more technological and also the working tools of the photographer are in rapid development,

bringing about new opportunities and the temptation to acquire ever newer camera models. However, Maasik claims that he is not addicted to technology. Rather, he resists letting technique dominate art: the camera is just a tool. He has his favourite tools, which he repairs himself. Yet looking around his decoratively black-and-white workshop, it is difficult to believe that there is anything happening in technology which escapes Maasik's attention.

Sensing this, I ask if he has forgotten "real photography". As expected, he says that all of his old photo-lab gear is ready and waiting for the time when he once again feels the need to work with film, paper, projectors and the chemical wizard's lab.

WITH THE ARCHITECT'S EYE

Arne Maasik's architectural education is evident in his photos. They have a sharp sense of structure. His eye grasps a construction, and the eye of the camera captures this with a sense of clear divinity. The photos let viewers spend moments in silent meditation. Even when the motif is a street in New York, with its feverish pulsing life, the zigzag of steel constructions, or nature – a living organism, time seems to stand still in his photographs. The motif has always seemed to reveal symbols and therefore infinity.

This bond with infinity is perhaps best illustrated by Maasik's photos of the architecture of Aldo Rossi's San Cataldo cemetery in Modena. The clarity, structure and timelessness of architecture reach us via the silence caught in the photographs, a silence which creates a nearly unbearable hum in your ears. Maasik admits that Rossi's work has left a very deep impression on him. In addition to the above-mentioned cemetery, he also mentions the Gallarates residential area in Milan, which during the decades of modernist progress (from 1967 onwards) was built in a field. Photos captured in this artificial environment formed an unforgettable photography exhibition at the Tallinn City Gallery (2004). Maasik's largest exhibition took place in the Tallinn Art Hall in 2008, and it was the first time that photos were shown as art in this venue.

The epic grasp of Maasik's photos provides a trap for art critics to fall into rhetoric while analysing his work. It is difficult to avoid it here... Yet Maasik's model, the environment, is diverse, changing and full of possibilities.

The illuminated peace of Aldo Rossi's architectural objects also risks getting trapped in deadly seriousness and graphic manifestos of perfection. But this danger has been sensed by an entire generation; they greedily grabbed for the new – meaning - and dived deep into post-modern games with form.



Aldo Rossi, Gallarates residential area in Milan



Train

Rossi also became playful. For example, for the Venice Biennale in 1979, he created his World Theatre – Il teatro del Mondo – a floating building which, despite its temporary nature, went straight into architectural history books. It made sense to test new shapes in a less weighty (but more widespread) genre: design. Hence, Rossi created a series of coffee pots for Alessi, and they have become design classics. Maasik is attracted to perfection. Now he has become interested in giving meaning to the heritage of Louis Kahn. He is participating in preparations for a book which should make local audiences remember the input of this Estonian-born genius of an architect to the world's architectural heritage. Kahn's conceptual buildings and their games with light, shadow, shape and material offer the photographer wonderful motifs to capture. Those buildings too embody the yearning for infinity.

Yet there is no lack of air in Maasik's photos, where time seems to stand still. There is autumn-like clarity and balance instead of unsolved tensions.

ARCHITECTURE, TANGLES AND STEEL

In this environment, which is a tangle of potential themes, there are some topics which tend to captivate Arne Maasik's attention for longer periods of time and more thoroughly.

The variations on motifs that he finds and finds again often end up in art exhibitions or books.

In the book created by the artist where he has collected his photos from 1994-2007, there is a different kind of language and wealth of shapes, in addition to his main love: architecture. He has carefully looked at all kinds of "tangles", photographing with passion the articulation and rhythm of Estonian bushes. The biological and graphic arpeggios and quavers of these thickets successfully compete with the majestic architecture of New York in this book. Next to them, in strange compositions, stand forgotten or incomplete objects and artfully dilapidated witnesses of lost lifestyles and, once again, steel constructions, which have been one of Maasik's favourite themes over the years. Steel skeletons in different styles stand next to each other, from the vulgar minimalism of Soviet border guard posts to German railway architecture, with its massive size, rivets and girders.

If the drama of form caught by Maasik's camera seems to entrap you with materials such as wood and stone, you can just imagine what happens with steel, a material born out of fire, the shape of which refers roughly to engineering geometry, strength of materials and weight, and to a resilience which challenges time itself...

CITIES AND ISLANDS

Aerial photos are another subject which Maasik has engaged in over the years. Those photos show the living environment from a bird's-eye view, which in addition to unusual positions of the sun are filled with the kind of tranquillity we do not expect to see in our daily environment. As the town looks like a model town from above to an architect, it is an understandable perspective for him. But what about the viewer? As a lifelong resident of Tallinn, I cannot believe my eyes. Do we really live in this heart-shaped model? Just imagine: we could have been walking around in this area just when that photo was taken. How unimportant our daily business seems at this moment! The mystery of measurements.

Photographed from above, the loneliness of little islands forgotten in the sea becomes especially evident, and the allure of those photos is hard to forget.

Maasik's camera keeps finding tangles of tension in the environment. And we are able to enjoy those silent images where time has come to a standstill in the environment where Maasik clicked the camera button.



Aldo Rossi, San Cataldo cemetery, Modena

PORTFOLIO_ARNE MAASIK



Ruhnu I | 20 x 20 | B&W photography, 2013



Ruhnu II | 20 x 20 | B&W photography, 2013



Ruhnu III | 20 x 20 | B&W photography, 2013



Ruhnu IV | 20 x 20 | B&W photography, 2013



Ruhnu V | 20 x 20 | B&W photography, 2013



Ruhnu VI | 20 x 20 | B&W photography, 2013



Ruhnu VII | 20 x 20 | B&W photography, 2013



Ruhnu VIII | 20 x 20 | B&W photography, 2013



KAJAMOOR

Historic boats – memories on display or a living maritime tradition?

TEXT: JAANO MARTIN OTS / magazine *Paat*
PHOTOS: ESTONIAN HISTORIC BOATS SOCIETY

In summer 2013, Estonian harbours were visited by an internationally renowned regatta: The Tall Ships Race. The race took place on the route Arhus-Helsinki-Riga-Szczecin and, during the cruise, in the stage from Helsinki to Riga, participating boats stopped in the harbours of Tallinn, Saaremaa and Pärnu. The majestic multi-sail yachts were admired by many people, especially those who are themselves into sailing or motor-boating.



JÖMMU

The barge “**Jömmu**” was completed in 2006.

BOAT DATA:

Length 12 m, width 7.5 m, weight 25 tons, and can be sailed in a min. depth of 80 cm of water. The mast rises 14m from the surface, and the sail area is 100 m². The home harbour is Tartu, and the main sailing area is the internal water bodies of Estonia. The barge holds 36 passengers. Emajõgi-Peipus barges were unique wooden cargo boats, which were used on Lake Peipus and on larger rivers to transport goods for over 600 years, from the middle of the Hanseatic era in the 14th century to the middle of the 20th century. At their peak, there were more than 500 barges on Lake Peipus. Most of the barges were destroyed in World War II. The last barges could be seen on Lake Peipus in the middle of the 20th century.

Historic ships always create a bit of a buzz in harbour cities and, therefore, The Tall Ships Race has become something of a travelling tourist magnet which cities and ports do their best to attract. So many magnificent sailing ships together is a sight which cannot be seen at any other time. But Estonian harbours have their own historic boats and in season several of them can be seen setting sail. Keeping the local tradition of historic boats alive is the job of the Estonian Historic Boats Society, an organisation which brings together enthusiasts who have set themselves the goal of keeping old boats in working condition and thereby keeping our maritime heritage alive.

There are old boat enthusiasts all around Estonia. In Tartu there is **Lodjakoda**, which built a copy of a historic River Emajõgi and Lake Peipus river barge and launched it in 2006. What makes the 12-metre long and 7.5-metre wide barge “**Jömmu**” special is the fact that it can operate in very shallow water. The “**Jömmu**” is used for study trips and excursions; enthusiasts teach historical handicraft skills and the use of traditional materials on board.

The construction of a new and larger two-mast barge began in February 2013. It is planned to launch the boat in spring 2015, and it will be used mainly for organising natural science study trips on the River Emajõgi and Lake Peipus. The length of the two-mast barge is 18m, the width 8.5 m, the draft 90cm, the sail area 240m², and the allowed maximum capacity on board is 60 people.



TURM

Other replicas of historic wooden boats have been built in Lodjakoda, for example the Viking boat “**Turm**” and various river and lake barges.

The Viking boat “**Turm**” was built based on the example of a boat found in Lapuri, Finland as a beautiful example of the shipbuilding art of 1000 years ago. The **Turm** was launched in 2009.

BOAT DATA:

Length 12 m, width 3 m and draft 0.5 m. The boat operates with a 28-m² square sail or 10 oars. It sails in Estonian internal water bodies and coastal areas. Its home harbour is Tartu and the ship holds 12 passengers.

The two-masted schooner **"Hoppet"** is the only sailing boat built in Estonia before the Soviet occupation which is still in seafaring condition. Depending on the length of the sailing trip, "Hoppet" holds from 24 to 55 passengers.

The Hoppet was built in 1925-1926 and it was recorded in the Estonian Ship Registry in 1927.

Transporting goods and active in military service near the Åland Islands, the ship survived holm became its home harbour, where it operated as a cruise ship. In the first decade of the new century, the ship went from one organisation to another as the renovation work, started in the 1990s, continued. In 2011, the ship was sold to the Wooden Ship Society Vikan. In full sail, the boat arrived back in its home waters in the early summer of 2012 after being away for nearly 84 years.

HOPPET



Vikan is a society of wooden boat enthusiasts which has been active in Haapsalu for a decade. The society brings together enthusiasts of old boats who focus on the heritage of coastal seafaring in western Estonia and on boats which were used in this region. In an area which was strongly influenced by Sweden for centuries, it is natural that the maritime tradition has many parallels with Swedish historic

JAALA VIKAN



sea transport. Vikan has built copies of many historic wooden boats and organised several longer voyages on them. The most famous Vikan boats are the 14.5-metre long replica yacht **"Runbjarn"**, and a real historic ship, the two-mast fore-and-aft schooner **"Hoppet"**. The latter is the only known preserved wooden ship built in Estonia before World War II.

Replicas of historic boats are also built on the islands of Hiiumaa, Muhu and Kihnu. The **"Moonsund"**, a traditional trade boat of Muhu, was launched this season and it is currently waiting for a mast and rigging. The Society of Historic Boats also has two motor boats, the steamer **"Admiral"** and the steam-engine icebreaker **"Suur Tõll"**. The latter was docked last autumn and it will be a museum boat of the Estonian Maritime Museum.

SUUR TÕLL





Photo: Küllike Rooväli

The sailing ship **"Kajsamoor"** is a two-masted galleass-rigged square-topsail wooden schooner. It was built as a North Sea cargo ship in Norway in 1939. The boat's name is derived from ancient Norwegian mythology and means something like "the mother of the wind troll". Today she is a rare living example of a typical sailing trader (LOA 108ft – 33m, beam 6m and displacement 148 tons) in Estonia, offering cozy tar-scented leisure cruises, day-trips and charters certified up to 70 passengers. The routes include picturesque and unspoiled Estonian Islands, the Åland Archipelago (Finland), Gotland (Sweden) and an exciting array of well-known maritime festivals: Kieler Woche, Rostocker Hansesail, Ålands Sjödagar, the Tallinn Maritime Days and other events.

KAJSAMOOR

At the end of the season, the friends of historic boats got some bad news: the oldest Estonian sailing ship, the fore-and-aft schooner **"Blue Sirius"**, ran aground in difficult weather conditions. It was possible to free the boat and to transport it to a harbour, but the ship-owner and the insurance company are still in discussions over whether it is possible to restore the boat.

The daily joys and worries of historic boats

A multiple-masted wooden boat is a beautiful sight, but for ship-owners it is like owning a fighter aircraft: expensive to purchase and even more expensive to use. Wood as a boat construction material is extremely delicate and, in contrast to plastic, aluminium and iron boats, it requires constant maintenance. In addition, historic sailing boats require big crews, large berths, a lot of fuel and there are all sorts of other costs. There are not that many advantages: historic boats are no competition for modern trading ships, work-boats or passenger boats. Therefore the boats in the collection of the Estonian Historic Boats Society are mostly used for excursions, pleasure cruises, training and so on, and applications for additional funds are made to various projects meant for preserving cultural heritage and maritime traditions.

The yacht **"Runbjarn"** was completed in 2008 in Haapsalu

BOAT DATA:

Length 14.5 m, width 4.5 m, draft 1.5 m and sail area 117 m². It sails mostly on the Baltic Sea, but has made expeditions to the North Sea and the White Sea. Home harbour: Haapsalu. The boat holds 24 passengers.





Photo: Toomas Tuul



AIMAR

One should distinguish between actual old ships and replicas of those ships. As a rule, replicas are constructed on the basis of old designs and follow many traditional work methods, but they are still new boats. This means that in terms of the engine, navigation technology, appliances and security equipment those boats correspond to all modern requirements and they also use less energy and fuel. They often have additional automated and technical equipment which makes it easier to handle the sails and other mechanisms. Authentic historic boats require special care and attention, as in ships which have been in use for decades or even for a century everything starts to wear out: not just the wood, but all other materials, technology, sails and so on. Old engines are much more capricious and use more fuel than modern ones; their repair and maintenance is more complicated and costly. Nonetheless, there are enthusiasts in Estonia who promote both approaches: at the moment two replicas are in construction and two boat renovation projects are ongoing. These projects lack complete funding, but this is not seen as a setback for those in charge: they continue to submit applications and gather funds gradually; once the necessary sum for the next phase of the project accumulates, they continue with the construction. There is no rush with an old ship as the process is just as important as the end result, according to the owners and crew members of historic boats.



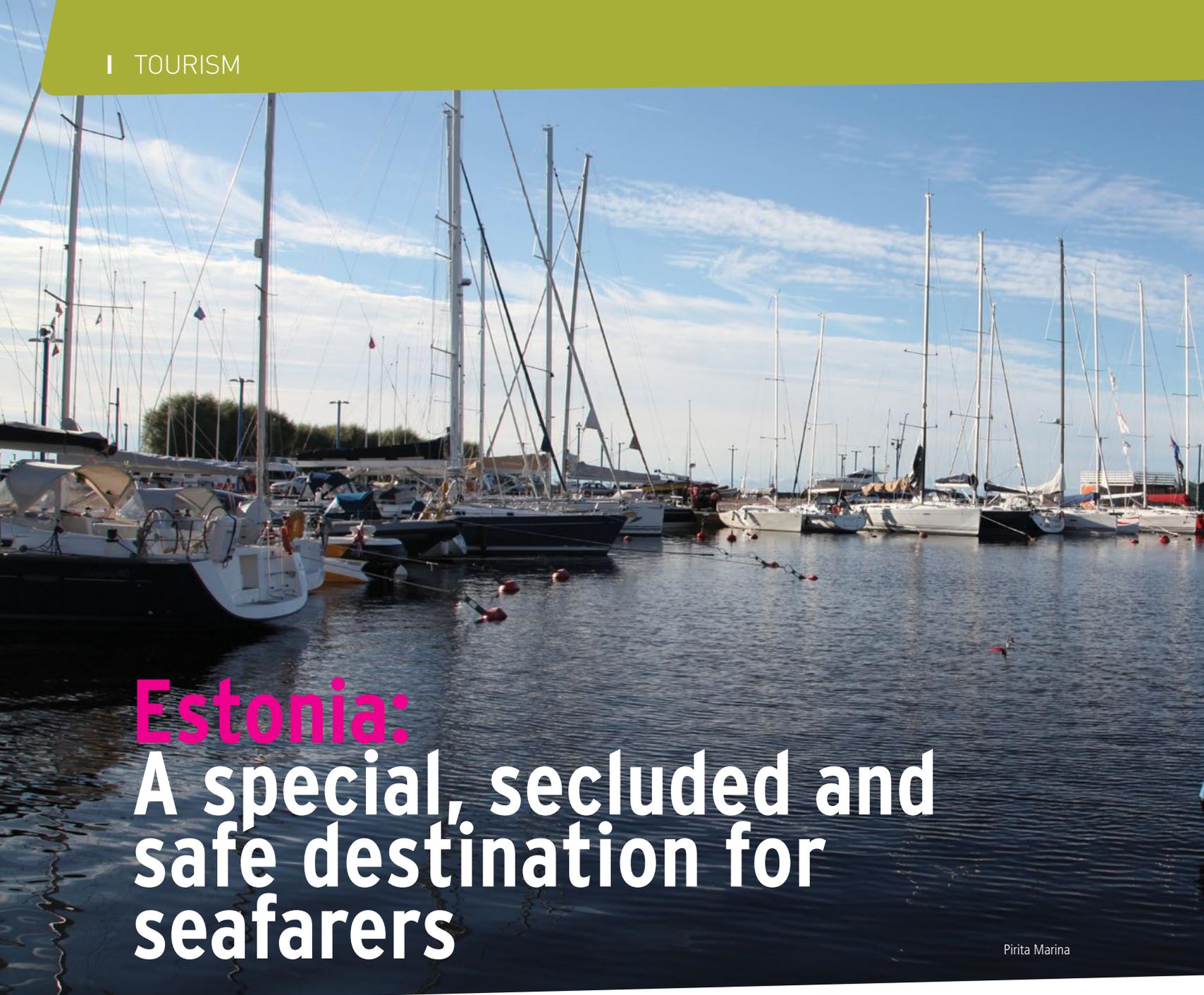
Photo: Herkki Häldre

This is not something a tourist stepping on board a historic schooner or a brig thinks about or should think about. They are just happy to take on the imaginary role of traditional seafarers and feel how the wind makes the ship move and rock. If you see a historic ship under an Estonian flag in an Estonian harbour, go have a look and find out if the next voyage has already been planned. Perhaps you will be lucky and get a place; then you'll feel what sailing on a historic boat is like.

The launch of the "Moonsund"



KALEBOAT PAULA
Kaleboat Paula, built in 2003, is unique among its kind and offers sailing trips on Lake Võrtsjärv for ancient vessel and fishing enthusiasts



Estonia: A special, secluded and safe destination for seafarers

Pirita Marina

TEXT: JAANO MARTIN OTS / magazine *Paat*

A long sea border, numerous waterways and islands

Most of Estonia has a sea border or an internal water body for a border: the Gulf of Finland in the north, the Baltic Sea in the west, and Lake Peipus and the Narva River in the east. Estonia has only 645 km of land border, but more than 3,800 km of coastline. Estonian coastal waters have over 1,500 islands and islets, although only 19 larger islands are inhabited throughout the year. If we add the rivers and lakes suitable for boating, it can be said that the country's geographical location and numerous waterways make Estonia a great place to travel by boat.

In twenty-two years of independence, Estonian society has become safe and European, and this also characterises Estonian waterways and harbours. EU citizens do not need visas or permits to travel on land

or sea in Estonia, the same methods of payment are valid on sea as on land, the infrastructure is well-developed and the state communications, emergency and rescue services operate efficiently. The services offered in harbours are of good quality and Estonians generally speak foreign languages: in most harbours you can get by in English, Russian or Finnish, and in some harbours you can also be served in Swedish, German or French.

In Estonia, a skipper permit is required when the sail area of a boat is larger than 25 square metres or its engine power exceeds 25 kW. But this requirement is mandatory only for boats sailing under the Estonian flag (incl. rental boats); vessels sailing under foreign flags are subject to the laws of the flag states. A radio operator's ROC or SRC certificate is required for the use of a marine VHF radio. The permitted alcohol concentration for a skipper is 0.8 per mil. This also applies in the case of boats sailing under foreign flags.



Shallow water and small harbours

Typically Estonian coastal waters are relatively shallow. Although at certain points in the Baltic Sea and the Gulf of Finland the depth reaches hundreds of metres, the coastal waters of Estonia are shallow and there are only a few natural harbours, mostly in larger riverbeds. It makes sense to set your echo-sounder depth alarm at 5-6 metres, because many bays and coastal areas are only ten metres deep. The shallow water may prevent sailing in some areas, depending on the vessel. Therefore, vessels with larger drafts must follow maps carefully and plan their journeys along waterways with appropriate depth.

Throughout history, more than 900 ports, docking or landing places along the Estonian coastline have been mentioned, but currently most of them are out of use or can be approached only in light boats with small drafts. Most of the small islands and islets lack proper harbours and one can arrive there only on a dinghy or rubber boat. Also many boat and fishing harbours on the map are just one to two metres deep and are not suited for yachts and larger motorboats. However, there are proper yachting harbours in all bigger towns and on islands which have regular ferry connections. The official port register contains 130 ports, about 30 of them fit for safe mooring for offshore yachts with drafts of 2 to 2.5 metres. If a journey is planned carefully and the winds are favourable, it is possible to sail around the Estonian coastline with the next harbour reachable within a day. The situation is set to improve in the next few years as many ports will undergo reconstruction work and there are plans to establish new harbours in areas without them at the moment. Many harbours on the Estonian coastline have fuel available and certainly the larger yacht clubs and guest marinas offer fuelling.



In the forefront, the Port Noblessner complex and a bit further the Seaplane Harbour

Climate

Estonia has a temperate climate and, with proper clothing and equipment, the sailing season can last up to five months. Between June and August, the sea temperature in shallower bays rises to 24-25 degrees and the long sandy beaches offer many opportunities to surf, sail a catamaran, water ski, wake-board and so on. Estonian rivers, lakes and coastal waters are normally under ice between January and March, and in normal winters the ice border is somewhere in the area of the western Estonian islands. For a couple of months, fisherman can enjoy the charms of ice-fishing. (leiad sikutaja pildi ehk?)

A totally unique phenomenon in Estonian water travel is the "fifth season", or floods. Mostly in spring, but sometimes in autumn, the flooding from rivers offers the opportunity to travel by canoes and boats in the middle of forests, fields and elsewhere where the land is usually dry. In several areas where these floods are a yearly phenomenon, there are special service providers offering flood journeys on canoes, rubber boats and rafts. During the flood in spring 2013 at the Soomaa National Park, the young sailors of the Pärnu Yacht Club held a competition on Optimist-class boats.

Waterways and maps

The majority of Estonian waters have been measured with the latest hydrographical technology and are charted precisely. Accurate and user-friendly sea maps for Estonian coastal waters are also available digitally for traditional navigation appliances, as well as for iPads and smart phones. Navigational marking in Estonian waters is correct but scarce: there are not too many buoys or spar buoys, but the most important ship routes are sufficiently and clearly marked. More accurate information about Estonian waterways and harbours is available under Sailing Directions of the Estonian Waterways Board; the digital version is available in English here: www.vta.ee/atp/index.php?id=18625

Where to go and what to see

Estonia's neighbours across the sea to the north and west are Finland and Sweden, in the south the country has a sea and land border with Latvia, and in the east the Gulf of Finland ends at St Petersburg. From the nearest Swedish harbour, Sandhamn, it is 125 miles to the Estonian islands; from Hanko and Helsinki in Finland it is just 45 miles. As crossing 125 miles seems too long for many seafarers, most visitors by sea to Estonia circle the Baltic Sea, sailing along both of Estonia's coastlines. Therefore, the sea routes when visiting Estonia are mostly on the north-south axis.

Mostly people arrive in Estonia from Finland and leave Estonia via Latvia, or the other way around. Those not put off by Russian bureaucracy, may also take the opportunity to visit St Petersburg. In order to sail in Estonian waters, no visas or special permits are necessary for EU citizens, but this does not apply for Russia.

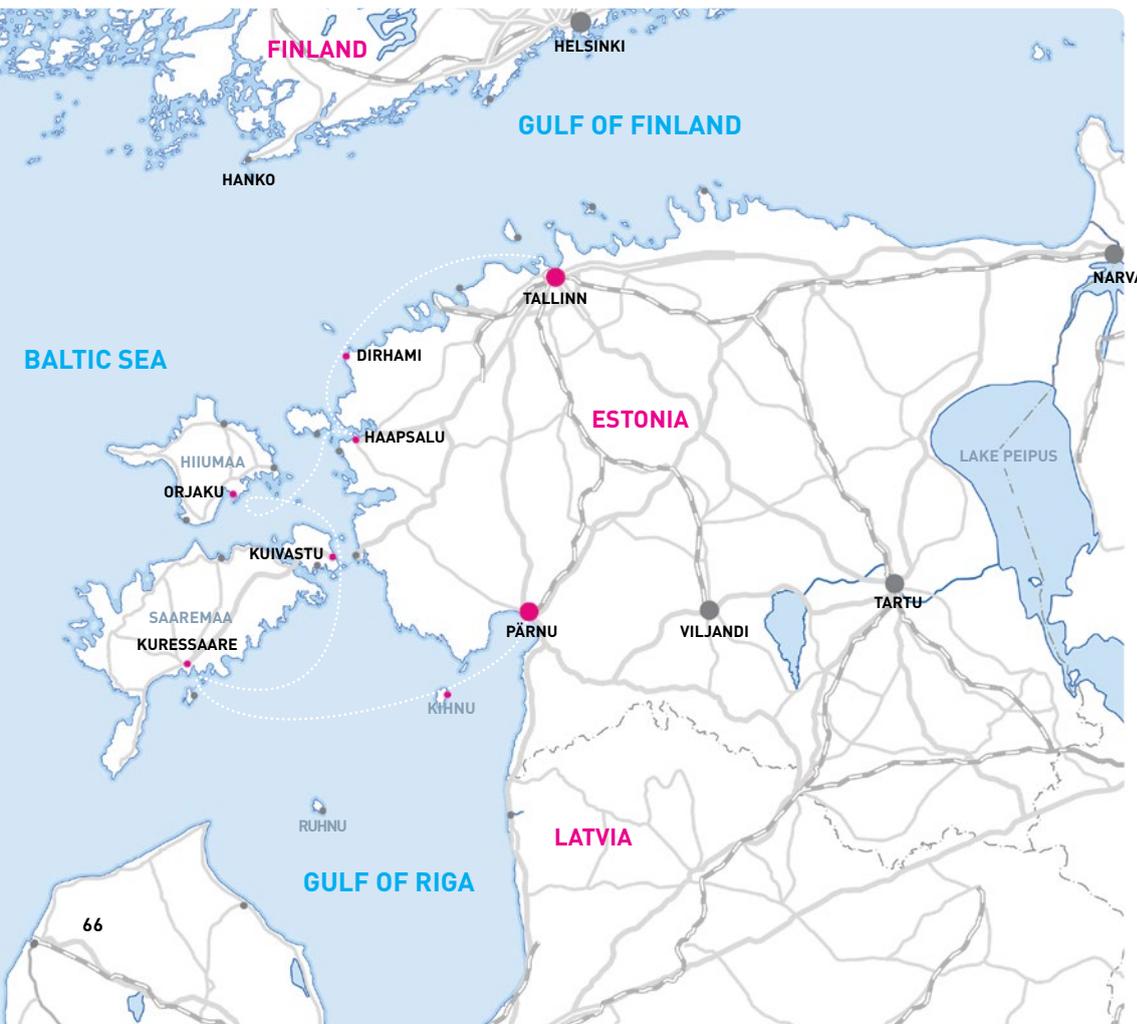
Generally speaking, we can divide the Estonian coastline into four large areas: those sailing here from the south will first reach **Ruhnu-Kihnu** and **Pärnu**, sailing northwards one will cross the **Muhu Strait** and the **western Estonian islands**, from there onwards to **northern Estonia** and **Tallinn** and then the **north-eastern coastline up to the Narva River**. Although competitive sailors travel the distance between Pärnu and Tallinn non-stop in about 24hrs, it is usually a week's trip to see all four areas. In more or less one-day journeys, it is possible to travel the route **Pärnu-Kihnu-Kuressaare-Kuivastu-Orjaku-Haapsalu-Dirhami-Tallinn**.



Pärnu

Pärnu, Haapsalu and Kuressaare are seaside towns with health spas, sandy beaches, cafes, festivals and night-life.

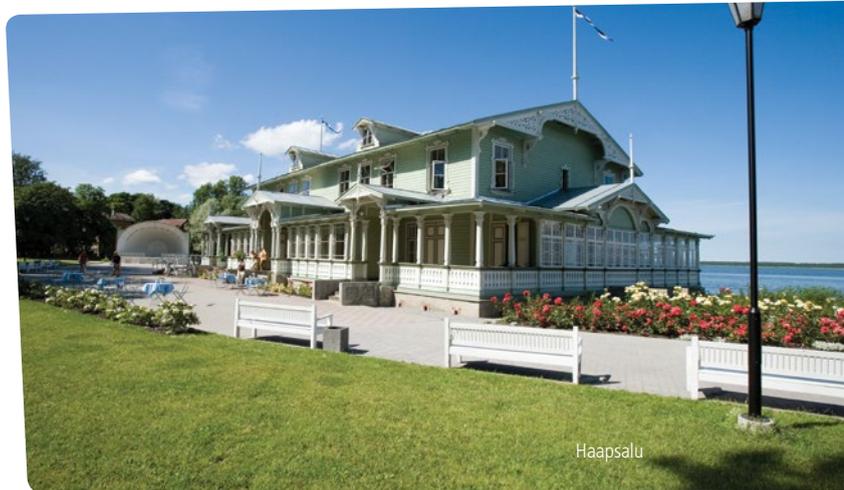
Although located a bit off the route of the Baltic Sea eastern coast, in Pärnu Bay, **Pärnu** is a great destination. It is an old Hanseatic town, the third largest town in Estonia and, without a doubt, the country's most popular summer resort. Pärnu is known as the Estonian summer capital. A good **yachting harbour** with 90 berths will greet you if you arrive on a pleasure boat. The harbour is administered by the Pärnu Yachting Club, which has a tradition dating back to 1906. In Pärnu you can get professional help with yacht repairs, sail repairs, engine maintenance or just a proper wash of the bottom of the vessel: a crane for lifting out your yacht will arrive with just a couple of hours notice, and the administrator of the Yacht Club will assist with all necessary activities.



In cooperation with the Tallinn ESS Yacht Club, the Pärnu Yachting Club organises a traditional regatta on the Muhu strait. The Moonsund Regatta is the largest and oldest yachting regatta in Estonia and has taken place on fifty-six occasions. In recent years, over 110 vessels have taken part in this 210 nm race.

The Pärnu Yacht Club is located almost in the centre of Pärnu. In addition to the modern yachting harbour, Pärnu has everything to live up to its reputation as the summer capital: a long sandy beach, countless restaurants, several health spas, water sports and fishing opportunities, a theatre and concert building, and various festivals. The popularity of Pärnu is proven by the fact that on hot summer days there may be over 30,000 people on the beach. The population of the town itself is 43,000.

Haapsalu is a resort with a calmer feel. With beautiful historical architecture and a large Episcopal castle, Haapsalu is also a “capital”: the “mud capital” of Estonia. Haapsalu was the first place in Estonia where healing mud was used and one can still get healthily muddy here. In summer there are numerous concerts, festivals and events in Haapsalu. Seafarers can choose between three guest marinas: the **Westmeri Yachting Harbour**, **Grand Holm Marina** and **Veskiviigi Yachting Harbour**. The latter is also home to the Haapsalu Yachting Club and sailing school. All harbours in Haapsalu are just a short walk away from the town centre. Vessels with larger drafts have to decide between entering the relatively shallow city harbours or docking 12km away at the **Rohuküla Harbour**, which is deep enough for multi-sail ocean yachts.



Haapsalu

On **Kihnu Island** and **Orjaku** on **Hiiumaa**, you can enjoy the peaceful environment of a small island and witness traditional village life, just like on **Ruhnu Island**, which is situated in the Gulf of Riga but belongs to Estonia. Kihnu, with its 560 permanent inhabitants, is part of the UNESCO World Cultural Heritage, as the island has retained the traditional coastal people’s culture, which can still be experienced at local celebrations. There is no point in looking for large shopping centres or nightclubs on Kihnu; if you’re lucky, the village shop and harbour pub will be open. Orjaku is more or less similar, but Hiiumaa is the second largest island in Estonia, with approximately 8,000 inhabitants, and in summer there is more to do and see there. There is a new contemporary yachting harbour in the capital, Kärkla, on the northern side of the island, which is the nearest harbour if you are sailing from Hanko in Finland.

Near **Dirhami**, one can enjoy pristine nature, calm and peace. The **Dirhami Port** has a fuel station and a cafe open in summer, but these are the only service and entertainment options around. Nearby is the beautiful Nõva landscape reserve, with rich berry and mushroom forests, and gorgeous sandy beaches, but you will be on your own unless you have pre-arranged for a guide to take you around.



Kuressaare Episcopal Castle

Saaremaa is the largest Estonian island, with over 30,000 inhabitants and many harbours. **Kuressaare**, the capital of Saaremaa, is better known by the German name Arensburg. Positioned on the southern coast of the island, Kuressaare has two harbours: the **Kuressaare Yachting Harbour**, next to the city centre, and the **Roomassaare Harbour**, five kilometres south of the centre. Roomassaare is mostly a cargo port, but there is also a yacht harbour here and passenger ferries to Abruca and Ruhnu Islands.

The Kuressaare Yachting Harbour can be accessed by the one-mile long dredged channel, but boats with the largest allowed draft (2.5m) may risk brushing the muddy sea bottom when the water is low. In summer Kuressaare has many concerts and festivals and the annual Kuressaare Opera Days are especially popular. There are also several health spas, bars, restaurants and nightclubs in the town. As Saaremaa is the unofficial recreational boat-building centre of Estonia, the best and newest boat models can often be seen in the harbours and people come here to test-sail new boats.

When sailing on the Muhu strait, you can make a stop by a smaller uninhabited island and, if there is a dinghy or rubber boat on board, also dock there. In addition to well-preserved nature, unique flora and migrating birds, the small islands have plenty of berries and mushrooms. One needs to take into account that some small islands are under nature protection and there may be movement restrictions, which should be researched beforehand.



Kuressaare Marina

Estonia's capital **Tallinn** offers activities and entertainment for all tastes. In Tallinn it is recommended that you visit the Maritime Museum – Seaplane Harbour, which is one of the most unique maritime museums in Europe. You can literally visit it on your boat: just sail to the Seaplane Harbour and you will have free docking there whilst you visit the museum.

If you arrive in Tallinn on a yacht or motor boat, you can choose between many guest marinas. The first one greeting visitors is the **Port Noblessner**, which used to be called the Peetri Harbour, on the western coast of the Gulf of Tallinn. The former boat construction harbour has been turned into a unique guest marina, just a few kilometres away from the city centre. The harbour has berthing places for several hundred vessels, and there are catering, sauna and boat repair services available.



Port Noblessner



Pirita Marina

Another newer marina is the **Old City Marina** in the middle of the city by the Admiralty Pool, which is just a couple of hundred metres away from the historical Old Town of Tallinn. As Old City Harbour is also the berthing place for the cruise boats sailing between Tallinn and Finland and Sweden, there are plenty of entertainment and shopping opportunities in the vicinity. The marina building also has a sauna, shower rooms and a club room. Old City Harbour is just a pleasant stroll away from all the most popular shopping centres, cultural facilities and nightclubs in the capital. Therefore, the seafarer does not have to think about renting a car or booking a taxi.

There are also many berthing places at the **Pirita Marina**, east of the Tallinn city centre. Pirita Marina is the largest marina in Estonia. The harbour itself boasts a long history: there has been a harbour at the Pirita River confluence since pre-historic times. The historical highlight, however, was probably in 1980, when the Yachting Regatta of the Moscow Olympic Games took place here. Thanks to Pirita, Tallinn can claim to be an Olympic town. Today guest marina services are offered here by the Kalev Yachting Club and Pirita TOP. Pirita is a bit further from the city centre but there are comfortable and fast transport connections to the city centre. Pirita is a more peaceful location, and just across the river you will find the most popular sandy beach in the Tallinn area, with a surf club and various beach bars. In the evenings, Pirita is very peaceful, especially in bad weather.



Eisma Yachting Harbour



It is possible to find other interesting routes in Estonia but describing them all would take too long. Those who want to sail onwards to St Petersburg can also sail through the north-eastern harbours in Estonia, including the newest harbour in the country: the **Eisma Yachting Harbour**, completed in 2013. It is also possible to find alternative routes along the Muhu strait, to visit the historical Koguva village on Muhu Island or the five-star gourmet restaurant at the Pädaste Manor nearby. Also, the islets of Aegna and Naissaar in the Gulf of Tallinn offer interesting entertainment in summer, including camping and picnics, as well as concerts and high culture, such as the Nargen Festival on Naissaar.



Your own boat or a rented boat?

As the distance between Germany and Estonia is 400-500 miles, the journey for regular seafarers may seem too long for one vacation, especially if one wants to travel short distances during the day and avoid sailing at night. In this case, two alternatives are worth considering.

The first option would be to come on your own yacht, but plan the Baltic tour for several seasons. During one vacation you could travel through Poland, Latvia and the Estonian west coast. Then you can leave your boat over the winter in Estonia and continue the next season in the direction of St Petersburg or Finland and Sweden. In Estonia, there are several trustworthy and reasonably priced places where you can store your boat over the winter. They offer the necessary maintenance work on your boat in autumn and in spring and the prices are normally lower than in Central Europe. The flight, passenger boat and road connections between Estonia and other European countries are good, so that you can travel to check on your boat or to do a shorter weekend journey on your boat.

The other option is to arrive in Estonia by plane, car or bus and rent the appropriate vessel here. Today there are also **bareboat rental companies** in Estonia (www.merisail.com, www.sailing.ee). If you find renting more comfortable and cost effective, you can think about sailing from Tallinn through the Muhu Strait and leave your yacht in Pärnu at the end of your journey, or go in the opposite direction.

When sailing in Estonia, one has to take into account that there may be days when you see no other vessel on the sea and also the harbours can be unusually quiet, especially on weekdays or in less than perfect weather. The main charms of Estonia are its well-preserved nature, empty beaches and peaceful berthing places and, for those seeking calm and privacy, it is a perfect destination.

Estonian waters and small harbours are well worth a visit by hobby seafarers.



Sõru Marina

Internal waterways

In addition to the new waterways which appear during floods, there are several other internal bodies of water worth mentioning. It is possible to take a motorboat from Võrtsjärv in central Estonia via the River Emajõgi through the city of Tartu, on to Lake Peipus and from there onwards via the Narva River to the town of Narva. This involves several hundred kilometres of travelling and seeing such sights as the city of Tartu, Emajõe Suursoo and Piirissaar. We know from history that waterways on Estonian rivers and lakes were formerly much deeper and longer. During the Viking era, the route starting in Estonia went as far as Constantinople, but geological processes have had their way. The Estonian land surface is rising slowly but surely and, with every passing century, the country's waterways become about 10cm lower. Currently there is no connection between Estonian coastal waters and internal waterways which can be sailed, so that in order to sail on internal waterways one has to rent a boat or bring one's own vessel via land transport.

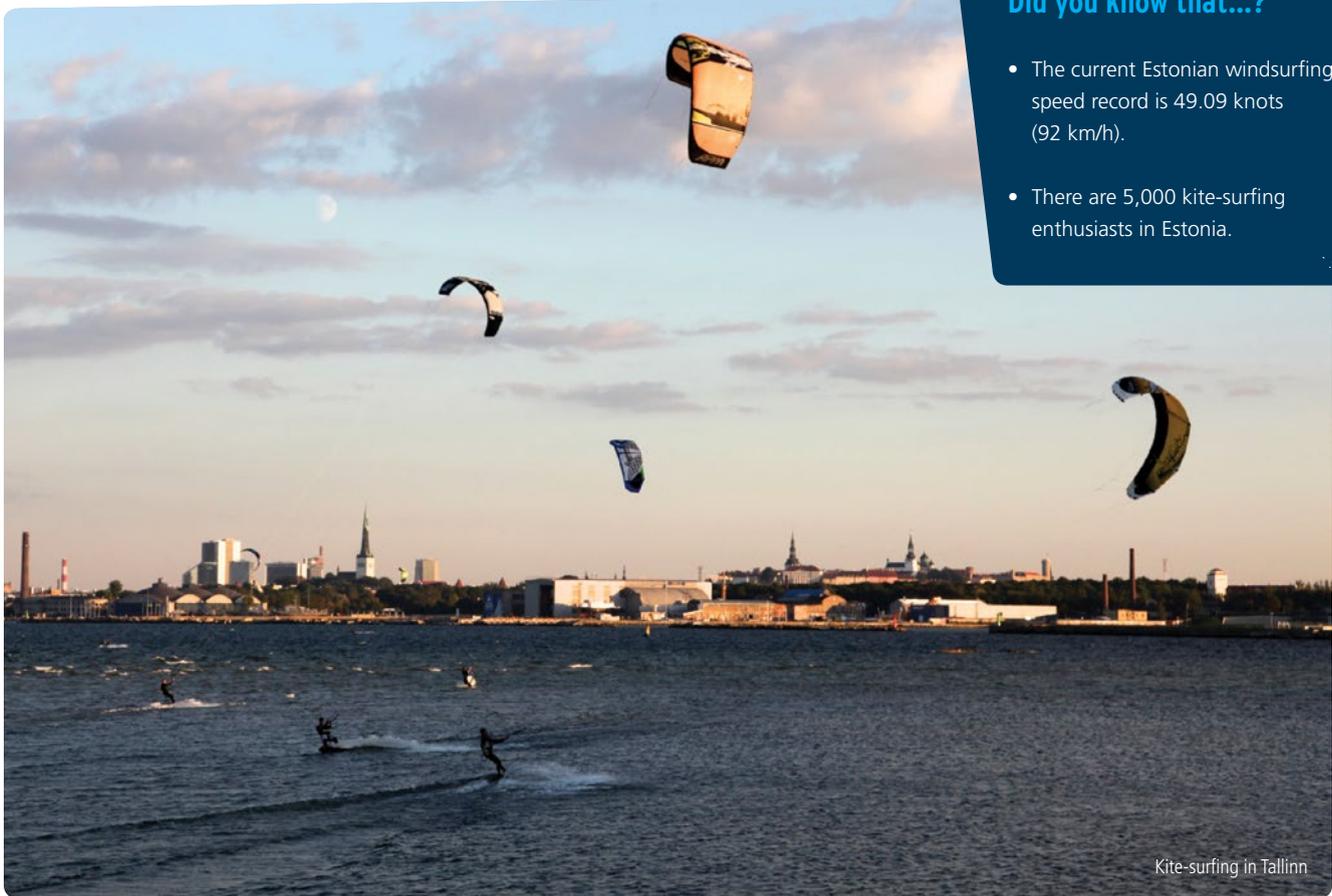


TEXT: TIINA JÕGEDA

Surfing holiday in Estonia: **Fun all year round**

Did you know that...?

- The current Estonian windsurfing speed record is 49.09 knots (92 km/h).
- There are 5,000 kite-surfing enthusiasts in Estonia.



Estonia has 3,794 kilometres of indented coastline. When the weather forecast promises strong winds or a storm, most people shiver and look for shelter, but those who have been infected with the surf bug are able to reach the windy Estonian coastline within one hour from any corner of the country. From offices in the Tallinn city centre, it takes just fifteen minutes to reach the surf club in Pirita: can you think of a more surf-friendly capital in Europe? A suitable surfing beach can be found no matter where the wind is blowing from and surfing is also possible on lakes: Lakes Peipsi, Võrtsjärv and Saadjärv, and Lake Harku, situated on the outskirts of Tallinn.

Most of Estonia's coastline is suitable for surfing, as there are just a few stony areas and not many high cliffs. A beach with suitable conditions is always within a few kilometres. In summer you can come upon an unexpected surfer in the most isolated places. In contrast to the coastlines of Finland and Sweden, Estonian shores are mostly sandy. The advantage of the Estonian seashore over the Latvian and Lithuanian shores is that the numerous peninsulas and inlets make surfing exciting and safe.

The Gulf Stream confronts Arctic masses of air in the North Sea, resulting in "bad-weather-spirals",

which weather forecasters lovingly call cyclones. Those cyclones follow each other up the Baltic Sea, creating the low grey mass which Estonians have learned to tolerate. Co-products of this are stormy winds, which because of the character of the cyclones mostly blow from the south-west.



Sea conditions during five months of the year make many surfing enthusiasts migrate south with the birds. The surfers who stay put "re-qualify" in winter to become snowboarders and cross-country skiers and, when the sea is finally covered with ice, it is time for ice surfing. The history of ice yachting in Estonia goes back half a century. The

bravest of the brave surf until Christmas: as they say, there is no bad weather, just inappropriate clothing. Thick calypsos sell well in Estonian surfing shops.

There are four places which have proven to be the most popular with surfers. Pirita beach in Tallinn is attractive to surfers because of its proximity; the next nearest wave spots to Tallinn are in Kakumäe and Vääna. The third highly rated location is the summer capital Pärnu, on the western coast of Estonia, where the sea is warmer than in Tallinn. The fourth well-known surfing spot is in Ristna, on the island of Hiiumaa.



Photos: Jaanus Ree



Surf Camp

The highlight of the summer season for thousands of surf enthusiasts – the Surf Camp - takes place every year in the middle of July.

Fifteen years ago, a group of surf-buddies got the idea of getting together in the summer in a beautiful natural location where they could talk about surfing, compete a bit and enjoy the bright Estonian summer nights by a bonfire while listening to some guitar music. The surfers then noticed that their modest idea of meeting up for a few summer days with tents and surfing equipment was also attractive to people who didn't surf. Adventurous souls soon discovered that the camp offered the opportunity to try out surfing, to have a look at the equipment and listen to advice from experienced surfers. Every year many holiday-makers caught the surf bug in the camp. The author of this article was among those infected and has not recovered since.



This gathering with over four thousand participants has grown into the largest surfing festival on the Baltic Sea, and Surf Camp has become a trademark symbolising a sporting lifestyle, ecological thinking and, of course, vigorous partying. The event has the potential to become an international one, especially since the income earned in the camp goes to support surfers who compete through the Estonian Surfing Union in competitions. The Bacardi Fun competition series, which offers beginners their first competitive experiences, takes place every year. The aim of the participants is not necessarily to reach PWA levels (organisation of professional surfers which organises events in more than 40 countries), but they may find surfing on their own a bit too boring and wish to set some sport goals. Testing one's capabilities at competitions makes surfing more fun, as competing speeds up development.

The Surf Camp also offers a range of activities on land for those who don't want to risk kite-boarding or windsurfing: art workshops, aerobics and yoga classes, table game competitions and training events, massage tents and childcare groups. These days one does not have to remain on the shore when there is no wind: SUPs, kayaks and skim-boarding make it possible to have fun in the sea. In the "surf cinema", people sprawl on giant cushions and watch such surf classics as Bruce Brown's "Endless Summer", Kathryn Bigelow's "Point Break" and Macario de Souza's "Fighting Fear". And of course there are bonfires on the beach, water-pipes, drums and bossanova rhythms until the early hours, when sweet dreams can be enjoyed in hammocks between the pine trees or on the colourful surf bus.

Varbla

Different kinds of exotic experiences can be found in Varbla, situated in Pärnu County in south-western Estonia. It is a well-hidden location, five kilometres of a winding path through a forest and a sheep range to the **Surfhunt** house, which is managed by **Epp Hunt**, who has a coaching qualification from the Royal Yachting Association in the UK. After spending years training beginners and intermediate surfers in Egypt, Venezuela and Greece, she returned to Estonia and now offers accommodation and active vacation packages to tourists. The sea near her home is an ideal practice site for beginners.



Pärnu

For over a hundred years the seaside resort of Pärnu has attracted holiday-makers with its amazing atmosphere. Naturally, in addition to the areas meant for sunbathing on the white sandy beach, there are several surf clubs. Every Estonian surfer comes to Pärnu at least once during the season, either to compete or to see friends.

The **Aloha Surf Club** offers equipment rental and advice from surfing instructors, and in the evenings there is candlelight and music on the club terrace. The club season starts in April and ends in October.

From above, the Bay of Pärnu looks like a giant funnel, which means that the air movement of the Gulf of Riga is forced into an increasingly narrow pipe in Pärnu, resulting in a stormy Pärnu beach.

"When weather forecasters predict winds blowing anywhere from the south-east to the west, we know that all these directions will reach the Pärnu beach as southern winds because of this funnel shape. In April and May, there is the additional thermo-effect: temperature differences created by wind," says the founder of the club, **Toomas Jürjo**.

Epp Hunt: "The good winds for surfing in Varbla are southern winds and north-western winds. Northern, north-eastern and eastern winds are all land winds and, therefore, totally unsuitable here. I am especially happy to welcome surfing tourists who have always dreamt of surfing but have never really given it a go. Therefore people of all ages are welcome, including people who have not even thought about surfing before..."

Depending on the strength of the wind, you can see carefully gliding beginners or racing old-timers in Varbla. "This summer has offered many different types of days, but whenever there is some direction to the wind, you can practice. Not many of us are confident in doing the carve tack, but the hand and foot position of this manoeuvre can also be done with a weaker wind, just like low wind gybe."



There is rental equipment suitable for beginners and intermediate surfers, meaning the surfboards are 150-litre ones. In addition, the club offers kite training, skim-board training, SUPs and kayaks. Toomas Jürjo invites everyone to participate in the Aloha Kite Challenge 2014, which will take place for the sixth time and include competitions for different levels.

Like everywhere else in the world, the number of kite-boarders in Estonia has grown explosively in the last few years. Although kite-boarding will not become an Olympic event until 2020, the sport has developed very quickly. Estonian kite-boarders participate in European and world championships and the first kite-boarding cup event has been held in

Estonia. One of the best Estonian female kite-boarders, Kristiin Oja (who won Kite Tour Asia in 2013), trains kite-boarders at the Aloha Surf Club in summer.

Jaano Martin Ots, who coaches tourists at Aloha in summer, says that average surf tourists should visit Estonia during the beautiful summer weeks, and more extreme surfers in the autumn, when there are big waves at Ristna and Vääna. "For Europeans this is a great location, with many sandy beaches, safe waters and a familiar culture on shore. For example, Finns come here in hordes and most training sessions in Pärnu this summer were in Finnish or in English, and there were Finns in every group."

Ristna

Estonia's coastal seas are mostly shallow and the waves are not that big. Ristna, situated at the tip of the Kõpu peninsula on Hiiumaa, is an exception. It is a world-class surfing location, by Nordic and European standards. It is called the "Hawaii of the Nordics", with ten-metre waves having been measured in Ristna, although the regular waves at the top of the peninsula measure five metres just before breaking. The sportsmen training here call the rare ten-metre waves "clean".

"Ristna is a special place because it is possible to surf here regardless of the weather and the direction of the wind," explains **Paap Kõlar**, the owner of the local **Surf Paradise**, a surfer and adventure sport fanatic, who is always present. "Ristna is located at the tip of the peninsula, in the middle of the Baltic Sea and therefore it is a very windy place. When the winds are really strong, the conditions become extreme and there are not many people who can surf there in such weather. That is the main magnet pulling real fans to test their abilities. But it is also possible to choose friendlier locations in stormy weather. The variety of choices makes it especially exciting."



Bird's-eye view of Ristna

Ristna is the rough diamond of the surfing world. It is situated at the end of the world: an almost unnoticeable forest trail winds through the woods to the extreme sports paradise, situated at the western tip of Hiiumaa Island in the middle of the Baltic Sea. In addition

to surfing gear, various other water sports equipment, from water skis to jets, can be rented here. Nature's magnificence is apparent here: the waves of your dreams and air temperatures which let every surfer feel like a true hero. One does not go into the water without a calypso here. Equipment can be rented on location and a rescue service is operational. Until the beginning of October sea temperatures in Ristna are between 18-20 degrees.

Surfers also take stands on public issues; for example, they have developed a position regarding the wind park set to open on Hiiumaa, as they rightly fear that the windmills planned in the sea near Ristna will change the quality of the wind and waves in the surfing paradise.

"In order to have such waves, you need a regular strong wind, openness to the sea, a cape on the sea, a suitably shaped seabed and no obstacles. These conditions are very sensitive and the tiniest disturbing factor will change the quality of the waves and winds. The wind park may seem like a small change, but it would be significant for us," explains Kõlar.

Pirita

The nearest popular surf beach to the capital is **Pirita beach** in Tallinn. Pirita rose to fame during the 1980 Moscow Olympic Games, which held their yachting regatta in Tallinn. Paap Kõlar founded the **Surf Centre** here in 1987, directly on a border beach with its strict border regime. Even the most demanding surf tourists can rent equipment in Pirita, coaches are available for lessons and the club terrace offers breath-taking views of yachts arriving back in their home harbour at sunset.

Although the surfing legend Robby Naish claims that surfing is not a lifestyle but a culture, it still remains a competitive sport for many people. Estonian surf-boarders compete with the best in the world: in the season about to end, Estonia has been represented in five board classes at international competitions.

Almost all current Estonian top surfers started out on a beach or surf club terrace watching their parents do tricks in the waves. Surfers are ideal parents: every teenager's dream! **Annika Valkna** first stood on a board as a 12-year-old (the best age to start), on her father's surfboard. Today Annika is a second-year architecture student and the first Estonian female athlete to have been accepted into the ranks of the Professional Windsurfers Association

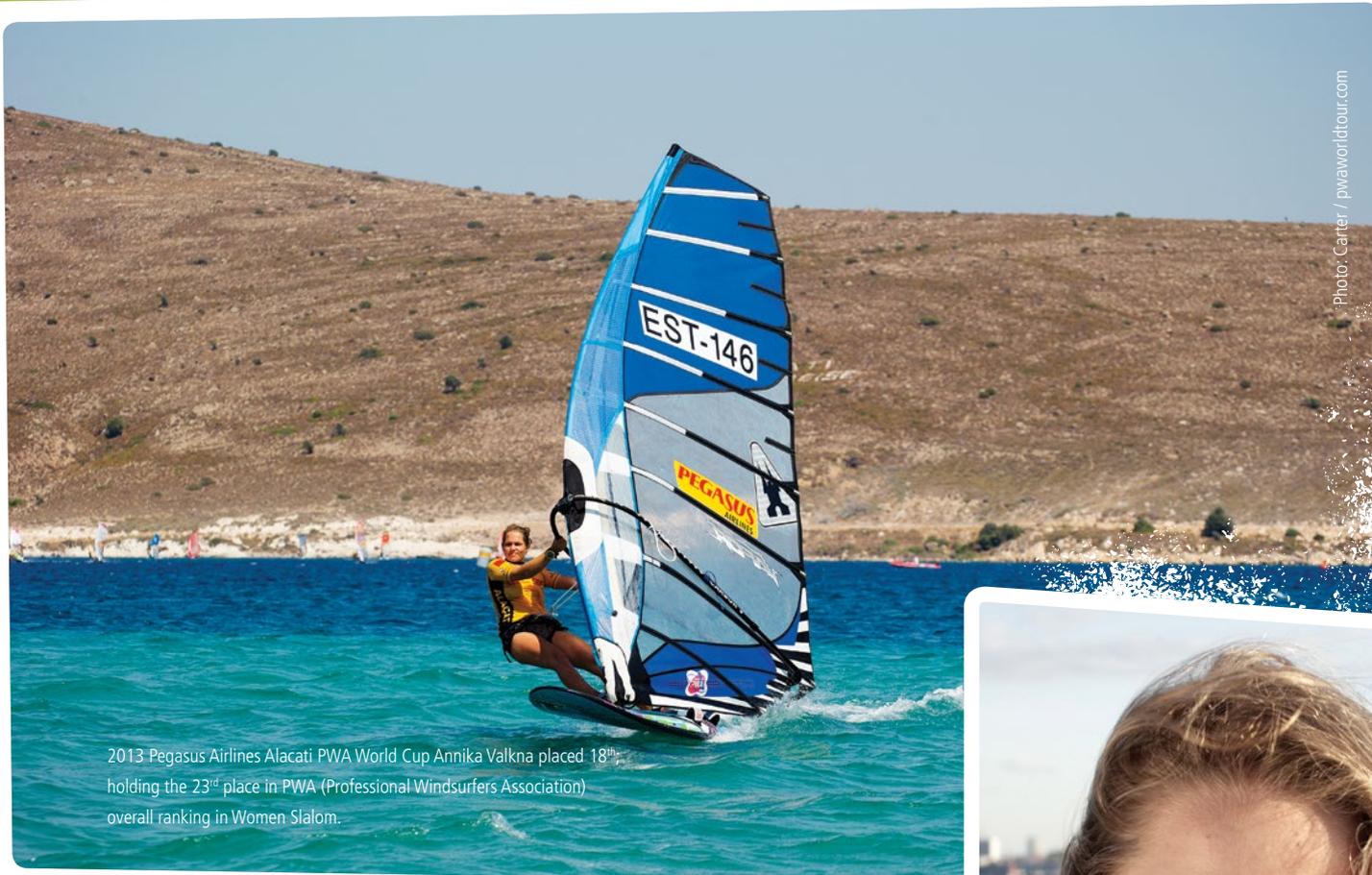


Photo: Carter / pwa-worldtour.com

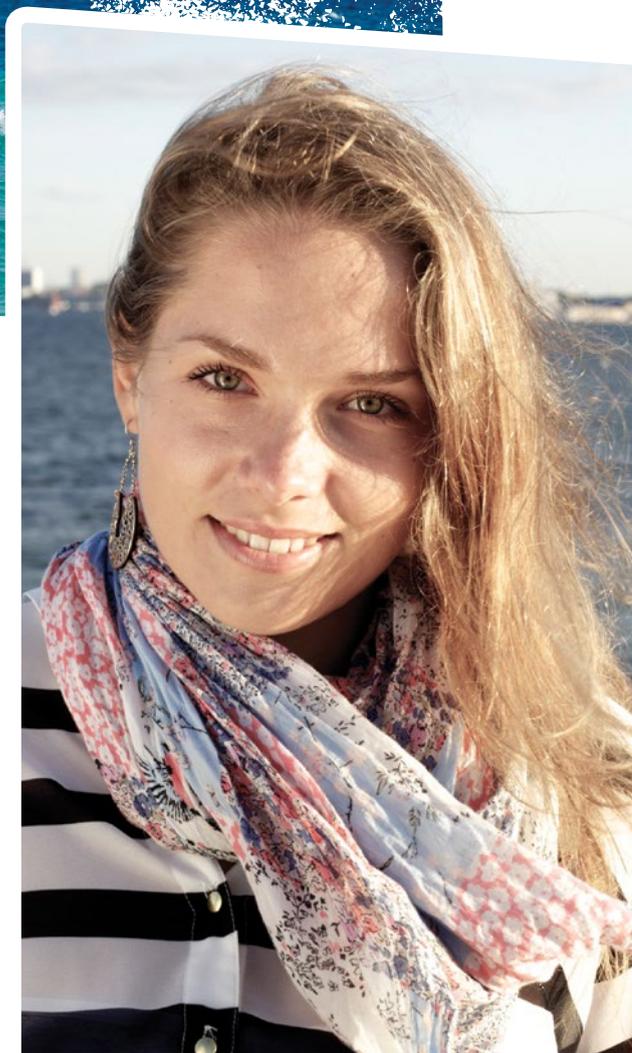
2013 Pegasus Airlines Alacati PWA World Cup Annika Valkna placed 18th, holding the 23rd place in PWA (Professional Windsurfers Association) overall ranking in Women Slalom.

(PWA). Of Estonian boys, Christofer Kalk and Tony Mõttus have reached the PWA freestyle series and both of them caught the surf bug in their homes. The double Formula-class world champion Martin Ervin (who trains in Pirita every day) says about himself and other Estonian surfers: "Coming from between banks of ice and supporting yourself financially, it means a great deal to get your foot in the door of the professional league."

If you're a fan of big waves but have no time to head to Ristna, **Vääna-Jõesuu** (25km from Tallinn) is your next best choice. **Ka-kumäe** beach in a Tallinn suburb is ideal for kite-boarders and the club there also has

rental services. The **Roosta resort** on the Noarootsi peninsula, near Haapsalu, is good for longer vacations for beginners. It organises surfing instruction courses and camps. There are exciting surfing areas on the largest Estonian island, **Saaremaa**, where you can choose your location depending on the direction of the wind. The Mändjala camping site near the capital of Saaremaa – Kussaare – offers kite-surfing instruction and equipment rental.

Estonia has numerous bays suitable for surfing, each with its own secrets and surprises. All you need to do is come and discover them yourself!



Annika Valkna: "I've been windsurfing for 7 years, starting off with raceboard and RS:X and for second year moved on with formula and slalom. For years I've been participating in Estonian national competitions and have also enjoyed the windsurfing experience abroad, where I think the greatest achievement was the 3rd place in Formula Europeans last year. My first international slalom competition was this year in Roses, where IFCA worlds were held, I was positioned 8th."





5th season in Soomaa

Exciting places for recreational water sports

Best places to go canoeing and boating in Estonia

- ★ **Soomaa National Park** (www.soomaa.ee) is where you'll experience the "fifth season": the period in spring after the snow has melted (and sometimes at other times of year as well, as a result of heavy rain) and when the whole area floods. You can canoe through the forest and along the roads, and occasionally even right up to and through the front doors of water-logged houses! You can also experience what it's like to go boating on high water on the majority of Estonia's larger rivers.
- ★ In addition to modern plastic canoes, you can try an ancient log-boat, made out of the trunk of a single aspen tree. The best place for this is Soomaa, where log-boat building camps are held in summer.
- ★ Estonia's rivers are normally slow-flowing but, when spring arrives and the snow melts, quite a few in the north and south of the country become white-water hot-spots perfect for rafting.
- ★ Boating or canoeing on the Vöhandu, Ahja and Piusa Rivers in southern Estonia, you will find yourself dwarfed in places by the more than 300-million-year-old Devonian-era sandstone outcrops.
- ★ Estonia's longest river marathon lasts 24 hours, during which competitors cover more than 150 km on the Vöhandu River: www.vohandumaraton.ee



The Estonian coast: made for kayaking

Kayaking is one of the most unique and environmentally friendly ways of exploring Estonia's winding coastline and 1,500 islands.

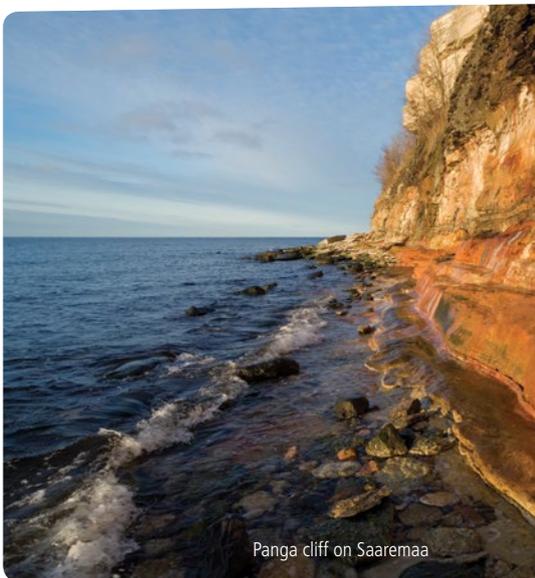
When visiting the capital of Estonia, do not forget that kayaking trips lasting a couple of hours take place throughout the summer on Tallinn Bay. The silhouette of the Old Town, the architectural heritage of the Soviet era and the local harbours lend these trips a very special feel. Shorter trips to islands off the north coast are also organised, for example to Aegna, Parkri and Pedassaare.

In the western part of Estonia's biggest island, Saaremaa, you'll find Vilsandi National Park, which is very popular among kayak enthusiasts. There are more than **150 islands and uninhabited islets** in the park, apart from the many and **varied birds** that call them home. The beaches here are worthwhile in their own right, covered in small stones that have been worn down over time by the sea. You're likely to find **a lot of fossils** here.

Kayaking trips lasting one or more days can be organised in the **protected zone of Hiiumaa's islets**, which are located a good rowing distance from one another. They are renowned for their beautiful nature and unique cultural heritage.

Trips are also arranged from the summer capital Pärnu to Kihnu Island, where you can experience the traditional lifestyle, recognised by UNESCO as a cultural treasure.

- * **The best time of year to go kayaking** is in the summer: between June and August the days are long and the water temperature of the sea is pleasantly warm, averaging 18°C.
- * **You should plan any kayaking trip well in advance**, especially if you also want to explore the islets. During the nesting season (15 April-15 July), you can only visit protected islets with a special permit, which must be applied for by the organiser of your trip.
- * **Anyone can go kayaking:** all of the equipment and the instructions you'll need are provided by the organisers.



Panga cliff on Saaremaa



Diving in Estonia

The recreational diving season usually lasts from May to September. The best visibility in Estonian waters is in spring and autumn (up to 10 metres). Passionate divers can also be found taking to the water in winter.

- * **Wrecks and military sites.** Its unique location and eventful history have left the Baltic Sea littered with the wrecks of thousands of ships, many of which are at **suitable depths for recreational divers** to explore. A large number of wrecks can be found in Tallinn Bay and around Toila. You'll also come across them when diving in the shallows between the islands of Hiiumaa and Vormsi. Close to Kuressaare on the island of Saaremaa, you will find **a Russian fighter plane** resting on the seabed. Apart from shipwrecks, divers will encounter other memorable sights beneath the waves: for example, there is the former **Soviet submarine demagnetisation station** in Hara and **the prison buildings** that have been submerged in the Rummu strip mine.
- * **Diving with seals.** In Vilsandi National Park on Saaremaa, you can go seal-watching both on and in the water. Young, inquisitive seals often come up for a closer look at divers and will sometimes even play with them – an unforgettable experience for amateur and more seasoned divers alike.
- * **Fascinating underwater landscapes.** Divers never fail to be impressed by Estonia's cliff-lined coast: underwater terraces often sink to astonishing depths off both the north and west coasts of the country.

The best place to see them is in the waters around the Panga cliffs on Saaremaa. Not far from the island of Osmussaar, off the west coast, is the more than 500-million-year-old Neugrund meteorite crater, which is the best preserved maritime crater of its kind in the world. The terraces the crater forms start at a depth of 15-18 metres, and the diameter of the crater itself is up to 20 km in places. A number of shipwrecks can be found close to the centre of the crater.

- * **Diving in lakes.** Estonia's lakes boast more fish and plant life than its coastal waters. The best place to explore this aquatic wonderland is in the clear waters of natural-spring lakes. Those with the best visibility in central Estonia are the Äntu lakes, where the springs alone are worth the dive. Diving courses are regularly held on Lake Saadjärv, in the south of the country, where you can visit an underwater theme park of concrete sculptures. And on Saaremaa you can explore the hidden world of crabs in both Lake Karujärv and the Jaagarahu strip mine.

www.visitestonia.com



The submerged Rummu prison buildings are suitable for recreational divers



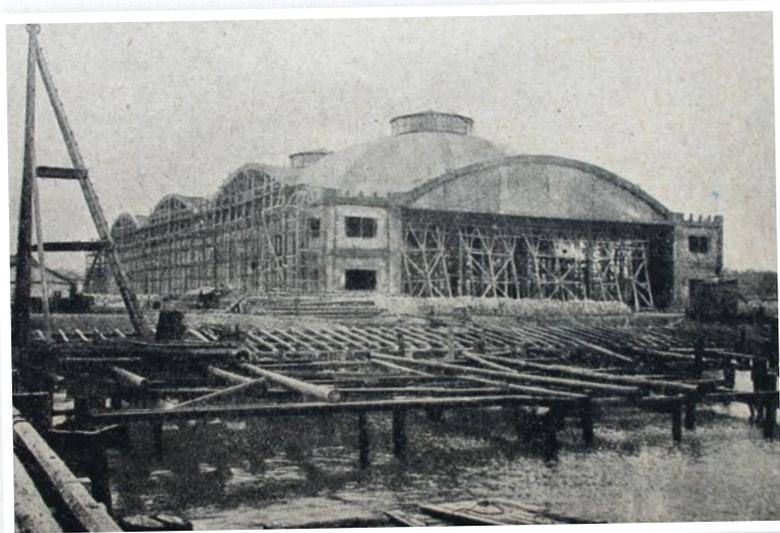
TEXT: KAIDI-KERLI KÄRNER / PHOTOS: ESTONIAN MARITIME MUSEUM

Two faces of the Estonian Maritime Museum

Seaplane Harbour the jewel of Estonian museums

In just over a year, the Seaplane Harbour has become the absolute favourite museum of foreign visitors and Estonians. So far, the museum has welcomed almost half a million visitors, which is a record for Estonian museums. In seventeen months, the Seaplane Harbour has become the second most popular tourist attraction in Estonia, second only to the Old Town of Tallinn, which is listed as part of UNESCO World Heritage. It all boils down to innovative thinking and the unwillingness to sacrifice where quality is concerned.

The Seaplane Harbour today stands out for its busy programme, the superbly restored main building and its exceptional museum collection. The size of the museum and seasonal exhibits provide good reason for visitors to keep coming back. The Seaplane Harbour has become especially popular with young families, as it provides something to do for all ages.





The museum building offers a challenge

It is obvious even from the outside that the Seaplane Harbour is something special. If, in addition to museums, you also happen to be into architecture, this place indulges both passions. The Seaplane Harbour hangars, which today are under heritage protection, were built in 1917. Their task was to house the seaplanes which were meant to protect St Petersburg from possible attacks. The hangars are architecturally unique. The hangars were constructed on the basis of designs by the world-renowned Danish engineering firm Christian & Nielsen, and they were the first structures in the world which made use of reinforced concrete shell domes. This made it possible to create an enormous interior space, where in an area of 35 x 116 metres there is not a single column. Almost a hundred years later the architecture still takes one's breath away and the large space is truly impressive. But just a decade ago the building was on the verge of collapse.

Founded in 1935, the Estonian Maritime Museum had collected a large number of valuable items through the decades, but the lack of appropriate museum space made it impossible to exhibit them. For years the Maritime Museum searched for an appropriate location for its valuable collection, which includes the British submarine *Lembit*, built for the Estonian Navy in 1937. Finally, they discovered the hangars of the Seaplane Harbour, which due to their seaside location in the vicinity of the Old Town seemed like a perfect location. In addition, the hangars had played an important role in Estonian maritime history.

But this is where the perfection ended. The hangars, which had been out of use for years, were about to collapse. Just before restoration work began, 3,600 metres of cracks in the cupolas were discovered.

The reinforced steel supporting the cupolas was totally corroded. It was obvious that only the best in the field could be hired for this challenge. The KOKO architects put together the restoration plans, and Professor Karl Õiger and Dr Heiki Onton from the Tallinn University of Technology helped with the restoration plans for the structure of the building.

"Restoring this building was an enormous challenge for us. This kind of building had never been restored in Estonia before. The situation of the building was even worse than it seemed and therefore we had to think of solutions fast, and find ways to bring ideas to life," says Ott Sarapuu, Executive Director of the Seaplane Harbour. As all the architectural, structural and exhibit work has been led by Estonians, it is correct to claim that the Seaplane Harbour is "Made in Estonia."

Creating a popular tourist attraction at the Seaplane Harbour injected new life into the seaside area, which has been a hidden jewel waiting to be polished. During the Soviet era, this seaside area was sealed off from the general public and since then it has been a deserted region. Thanks to the Seaplane Harbour, local people have also found this seaside area and different development projects have been initiated.

Life below the sea surface, on the surface and in the sky

Bringing the submarine *Lembit* into the building proved to be just as challenging as restoring the building itself. The *Lembit* had been in the sea for 75 years, which is the longest period for any submarine in the world. Astonishingly, the ship was in its original form, without major renovations. Bringing the submarine of over 600 tons onto land was a task which lasted for almost 24 hours, as it basically was moved centimetre by centimetre.



Photo: A. Teiss

Kids at the torpedo simulator

Today the submarine Lembit plays the lead role inside the Seaplane Harbour hangars, where it helps to divide the enormous space into three different levels: the world below the sea surface, on the sea surface and in the sky. The museum exhibits have been placed in their logical locations: the wreck of the Maasilinna and sea mines are below water, boats, yachts and the bridge are on the surface, and the seaplane has been lifted up under the ceiling. Visitors to the museum start their tour walking on the "surface of the water", on the impressive steel bridge, and learning about technological developments in maritime affairs which have taken place in Estonia or are linked to Estonia.

Innovation and courage have brought success

Since the Seaplane Harbour was just an idea on paper, it has followed the principle that the museum attractions and the way information is provided should involve all of the senses. For example, the mystical light glimmering below the surface is created with water, the floor of the museum is like a giant naval map based on ancient maps and special sound effects are used to make the museum visit more memorable. A giant aquarium (29m x 1.5m), introducing the typical fish of Estonian waters, attracts the eye immediately upon entry to the museum.

For visitors who enjoy a hands-on experience, the museum is perfect. You can even put your nose against the sea mines, ships and other exhibits if you want to. In addition, you can take a journey in a simulator, a yellow submarine, steer boats through the Gulf of Tallinn and try on Estonian military and naval uniforms.

The everyday management of the building also guarantees an innovative approach. Heat from seawater is used for the general heating and cooling systems, thanks to which the heating costs are lower. "This building was initially designed as a cold shed, and nobody ever thought that it would be heated. The size of the hangars is 100,000 cubic metres; in other words, it could hold 40 two-storey apartment buildings! Using seawater in a naval museum makes sense. In addition, it is an environmentally friendly way to heat," explains Ott Sarapuu.

The large-scale restoration work, saving a building under heritage protection, and the successful running of the museum, which has made the whole area popular, earned the Seaplane Hangars the prestigious Europa Nostra Grand Prix this year. It is the highest European award for heritage preservation, and this is the first time that this award has been given to Estonia. A total of 197 projects applied for the award, including the Kings Cross railway station in London, the Propylaea building on the Acropolis in Athens, and the Medellini Roman Theatre in Spain.

The Seaplane Harbour also holds the titles of Best Estonian Museum, Best Tourism Promoter 2012 and Best Family Friendly Attraction.

A museum which opens into the outdoors

Sometimes one wants to get a breath of fresh air during a museum visit. The Seaplane Harbour is not limited to the interior space, and with such large exhibits as ships it would be impossible anyway. Therefore many attractions of the museum are actually outside and some of them even in water. In addition, there is a working harbour here. Visitors can see many museum ships and even climb on one: the centrepiece of the museum – Suur Tõll, built in 1914 - which is the biggest steamer-icebreaker preserved in its original state in the world.



Photo: A. Teiss

Inside the submarine Lembit

Family favourite

The Seaplane Harbour is very popular with tourists, but within one year it has also become a beloved attraction for local visitors: it offers a new kind of museum experience and is especially fun for kids, who can also discover the museum as participants in camp trips and on family weekends, where the programme is especially varied. The museum is especially popular during the Tallinn Maritime Days in July; this year, in three days over 50,000 visitors came to the museum.

The Seaplane Harbour is a museum where ideas have no limits. As a driving force behind the community, it plays an important role in not just recording history, but in forging the future. The seaside area of the Tallinn city centre is still largely underdeveloped and a visitor magnet like the Seaplane Harbour adds enormous potential and added value to the whole area.

The cannon tower was built in 1529, and the thickness of its walls is over 5 metres. One of its more valuable characteristics is the 360-degree view from the roof. It is a unique view in Tallinn, as one can simultaneously see the red roofs of the Old Town and the sea, whilst enjoying a delicious Italian *gelato*.

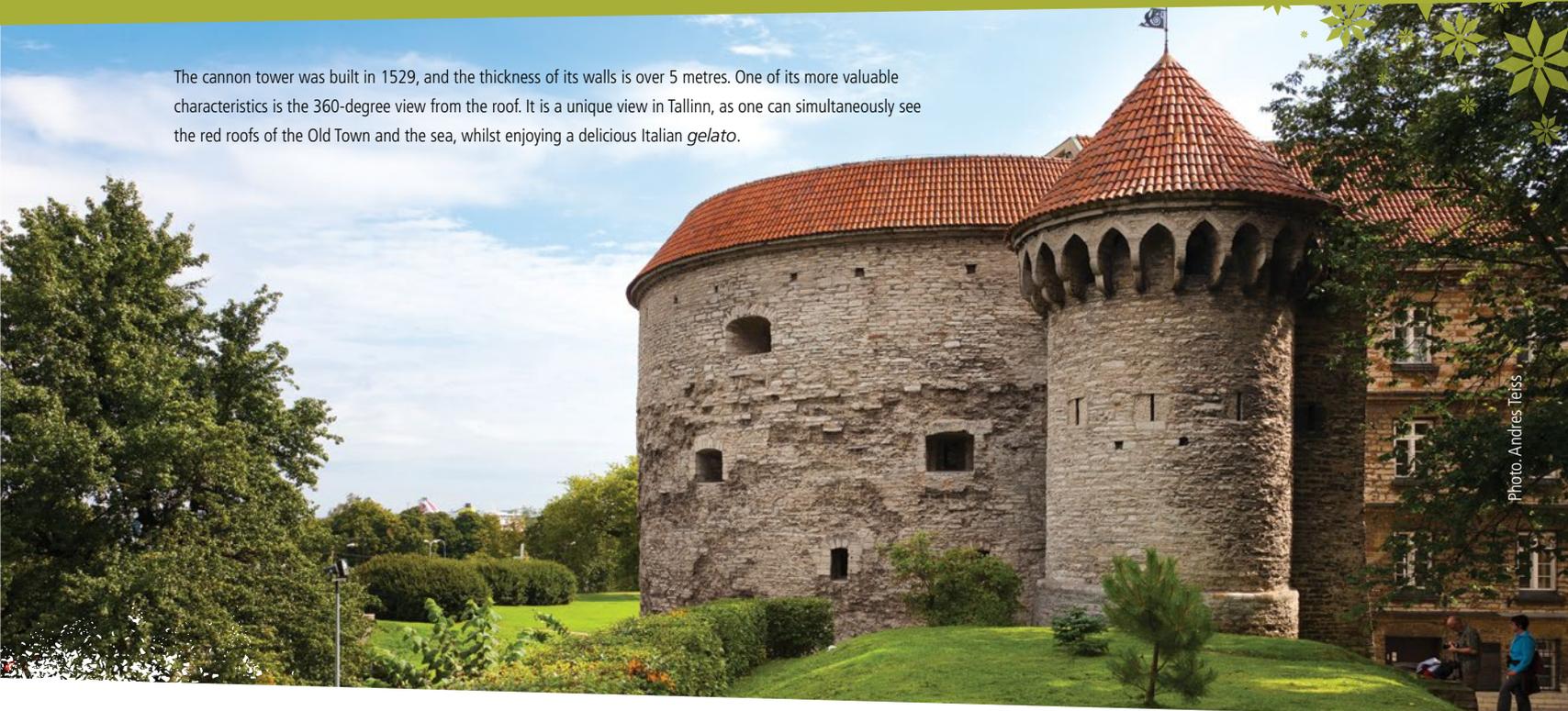


Photo: Andres Teiss

Fat Margaret is a building which forces people to stop and take photos. With its peculiar looks and centuries of history, it attracts tourists. But in addition to its exterior, it is just as interesting inside, as this is the place to discover the secrets of Estonian seamen and take a glimpse into their souls.

Fat Margaret's secrets of seamen

The secret life of seamen

The sister museum of the Seaplane Harbour, Fat Margaret is smaller and different in content. The focus of the exhibits and attractions is older Estonian maritime history, before the 20th century. In July, a new exhibition was opened entitled "Letters of Salty Life", which enables visitors to take a glimpse into the private correspondence of Estonian seafarers. The letters come from the Maritime Museum archives and relatives of sailors who have donated them to the museum collection. The letters are very touching.

"When putting the exhibition together, we read hundreds of letters from sailors to their families, for example from Singapore and Boston. They write of very private matters, such as the death of a close friend and the great love they left behind in their homeland, but also of daily concerns," explains the curator of the exhibit, Teele Saar. The exhibition takes visitors on a world trip, with five stops that sailors sent letters from: West Hartlepool, Brooklyn, Nikolajevsk, Singapore and Tallinn. At each stop, visitors can read interesting facts about the town at the turn of the 19th and the 20th centuries. In order to get a better feel for the era, each stop also has an interactive solution; for example, you can guess at different smells linked to the life of seafarers and listen to the sounds of animals that sailors liked to bring back home from their exotic destinations. It was important to the creators of the exhibition that each visitor could not only look at, but also touch, smell, listen and contribute to the exhibit. "My favourite place at the exhibition is the mysterious hole where visitors can stick their hands in without knowing what's

there and then guess what it is that they are touching. It takes some courage to stick your hand in without knowing what to expect," says Teele Saar, with a smile. At each stop, visitors can also read more about a specific topic linked to the correspondence. For example, how much did it cost to send a postcard a hundred years ago or what were the main implements people used to write with?



At the last stop, visitors can read copies of the personal letters sent by sailors to their families, and send paper postcards or e-postcards to their own loved ones. Children have their own postcard table. One aim of the exhibition is to make visitors think about when they last sent a letter or postcard to someone close to them and to urge everyone to keep in touch with the people they hold dear.

The exhibition is a part of the autumn programme of Fat Margaret and it will remain open until the middle of November.

Fat Margaret is an extremely interesting building, worth a look from the outside and inside. It offers special excitement for romantic souls who would like a glimpse into centuries-old secrets and the private lives of sailors.



Estonia in brief

Official name:	Republic of Estonia
State order:	Parliamentary republic
Area:	45,227 sq kilometres (17,500 sq miles)
Population:	1,294,236 inhabitants: 67.9% Estonians, 25.6% Russians and 6.5% others
Population density:	28.6 people per square kilometre. Over 70% reside in urban centres
Capital:	Tallinn with 427,894 inhabitants (as of 1 Sep 2013)
Other major towns:	Tartu (98,522), Narva (64,041), Pärnu (42,433), Kohtla-Järve (40,032)
Administrative divisions:	15 counties (<i>maakond</i>), divided further into 226 local municipalities, incl 33 towns and 193 rural municipalities (<i>vald</i>)
Islands:	1521, the biggest being Saaremaa 2,671 sq km, Hiiumaa 989 sq km, and Muhu 198 sq km
Biggest lakes:	Lake Peipsi 3,555 sq km (1,529 belong to Estonia), Lake Võrtsjärv 271 sq km
Longest rivers:	the Võhandu River 162 km, the Pärnu River 144 km, and the Põltsamaa River 135 km
Highest point:	Suur Munamägi (Great Egg Hill) 318 m
Air temperature:	annual average +7°C; March +6.3°C; July +17.7°C (2013)
Official language:	Estonian, a member of the Finno-Ugric group. Russian is widely spoken. Many Estonians speak English, German, and Finnish
Alphabet:	Latin
Religion:	Predominantly Protestant (Lutheran)
Currency:	euro (EUR) since 2011
Average salary:	887 EUR (as of 2012)
Driving:	Right hand side of the road. Speed limits in town 50 km/h, out of town 90 km/h. International driving licence required
Weights and measures:	Metric system
Electricity:	220 volts, 50 Hz
Country calling code:	372
Emergency number:	112 (free of charge)
National flag:	Blue-black-and-white
National holiday:	24 February (Independence Day)
National anthem:	<i>Mu isamaa, mu õnn ja rõõm</i> (My fatherland, my joy and happiness)
National flower:	Cornflower (<i>Centaurea cyanus</i>)
National bird:	Chimney swallow (<i>Hirundo rustica</i>)

Member of EU, NATO, OECD, WTO, and Schengen area

For travel details, please consult the following sources:

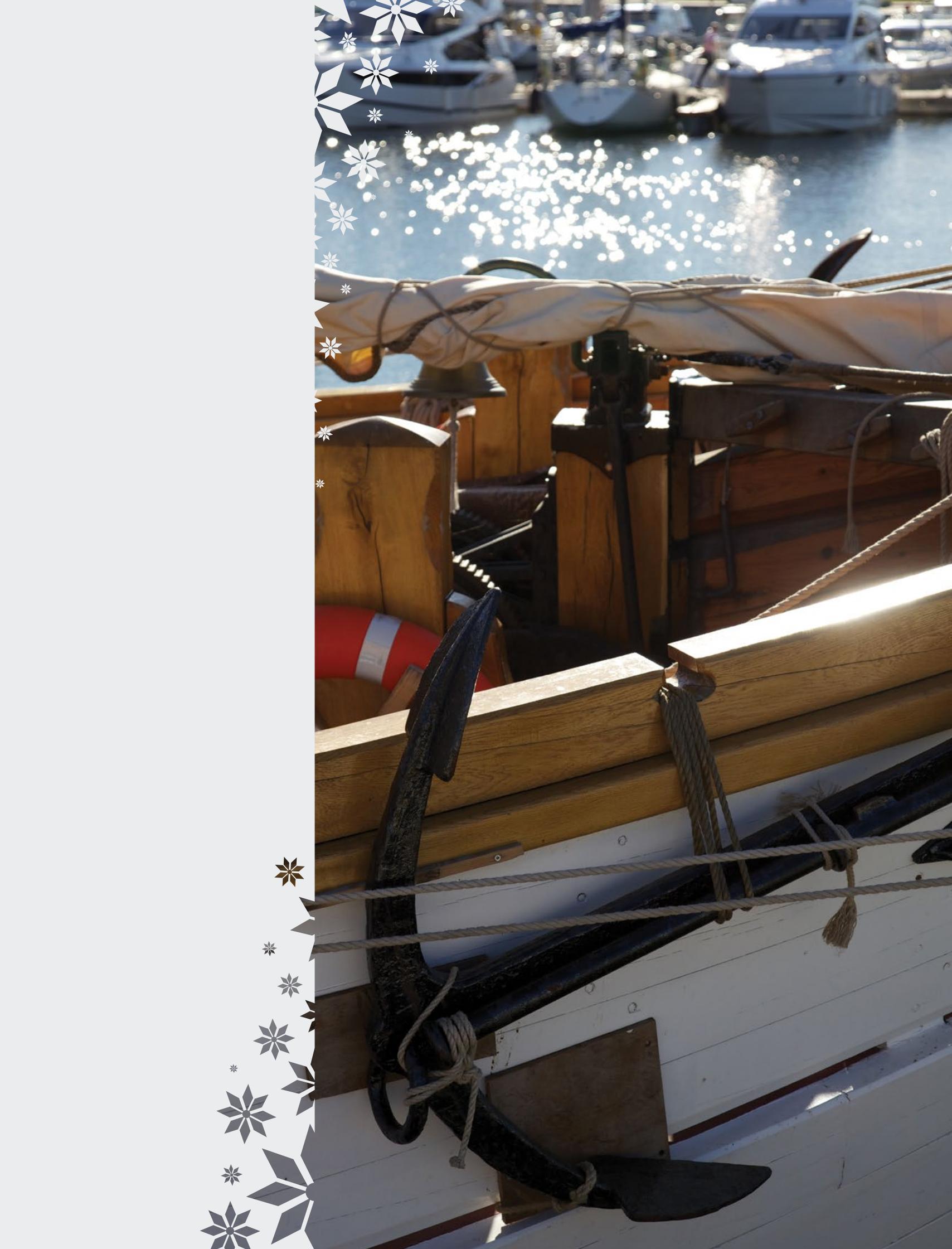
www.visitestonia.com (Estonian Tourist Board), www.riik.ee/en/

for customs information, please see www.customs.ee

The list of the top 50 restaurants can be found at www.flavoursofestonia.com

An English-Estonian dictionary is available on-line at www.ibs.ee/dict







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