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March-April

The Best from Slovenia

IN FOCUS
Slovenia Green

**I FEEL
SLOVENIA**



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SLOVENIA GREEN

Pristine nature, healthy and locally-produced food, exceptional abundance of water and particularly clean drinking water – these are Slovenia’s key advantages. Nature has endowed Slovenia handsomely with these strategic resources, which have been carefully managed by previous generations. In times of climate change, the importance of forest and wood is greater than ever, as nothing can replace the process of CO2 sequestration in wood. Wood is also the noblest of all materials. It complies with sustainable development principles, according to which mankind should be able to maintain its current standard of living with minimal environmental impact. As a resource, wood is essential for transition to a low-carbon society.

Ski jumper Peter Prevc was the star of daily media headlines, having beaten all records this season and united Slovenians in sports euphoria at the Planica giant hill. The performance of Prevc, who won the Crystal Globe for the overall World Cup victory, topped the separate ski flying standings, became ski flying champion and won the Four Hills Tournament this season, is labelled “historic, magnificent, epic”. He definitely wrote a new chapter in the history of ski jumping. After seven years of aspiration, the Crystal Globe finally ended up in his hands.

With great pride, we also write about Slovenian researchers from the Medical Faculty at the University of Ljubljana and the Ljubljana University Medical Centre, who were the first in the world to prove that the Zika virus infection during pregnancy causes brain damage in the foetus. It is one of the most important discoveries that has been pursued by prominent institutes worldwide in recent months.

In times of open issues, a pervasive crisis, dissatisfaction and doubts, the message in the seventh stanza of Prešeren’s Toast – celebrating a better world in various languages and interpretations – is particularly resounding. It was delivered on the eve of the Slovenian Cultural Holiday at the Prešeren Awards Ceremony, where they celebrate individuals who stand out from the average and bring the artistic field in which they work into the forefront. In times of uniformity of thought, this is rare, although essential for the freedom of thought and extraordinary achievements.

Vesna Žarkovič, Executive Editor

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GREEN COUNTRY IN DIGITAL EUROPE

Since green environmental technologies are key to sustainable development, Slovenia aims to position itself as a European leader in digital transformation. Its main objective is to become a reference green country in digital Europe, and to connect the state and public sphere with the economy and the needs of its citizens.

LONG-TERM STRATEGIES FOR EFFICIENT USE OF ENERGY

Slovenia: green reference country in digital Europe

VESNA ŽARKOVIČ

The energy sector is changing, not only in Slovenia but also throughout Europe at large. It is faced with a decline in the price of electricity and the abandonment of thermal energy, and at the same time it is focusing on renewable energy sources and efficient use of energy. Electricity producers thus encounter great challenges.



Slovenia is currently preparing a long-term development strategy for the electrical energy system, with which it would reduce Greenhouse Gas (GHG) emissions from electricity generation by at least 40 per cent by 2035 and by 80 per cent by 2055 relative to 2005. Currently, the greatest challenge is traffic, which will have to be tackled not only by the use of different resources, but with the change of everyday habits.

The aim is to reduce GHG emissions in traffic by at least 35 per cent by 2035 and by at least 70 per cent by 2055 relative to 2005.

GREATER SHARE OF RENEWABLE SOURCES

Slovenia wishes to increase the share of renewable energy sources, which currently represents a mere 19 per cent of the energy mix, which primarily consists of wood and other solid biomass, followed by water energy. Slovenia's energy concept strives to attain at least a 30-per cent share of renewable energy sources by 2035 in the end use of energy.

Renewable energy sources are the key to a safe energy future for Slovenia. Their advantages include the lack of GHG emissions, unlimited stock, independence from import and decentralised development of supply systems, while its weaknesses include unreliability, greater investments and frequently greater difficulty in accommodating into space, which is clearly demonstrated in Slovenia with the attempts of wind farm construction.

The greatest potential for the exploitation of renewable energy sources at the level of current commercially established technologies in Slovenia lies in heating.

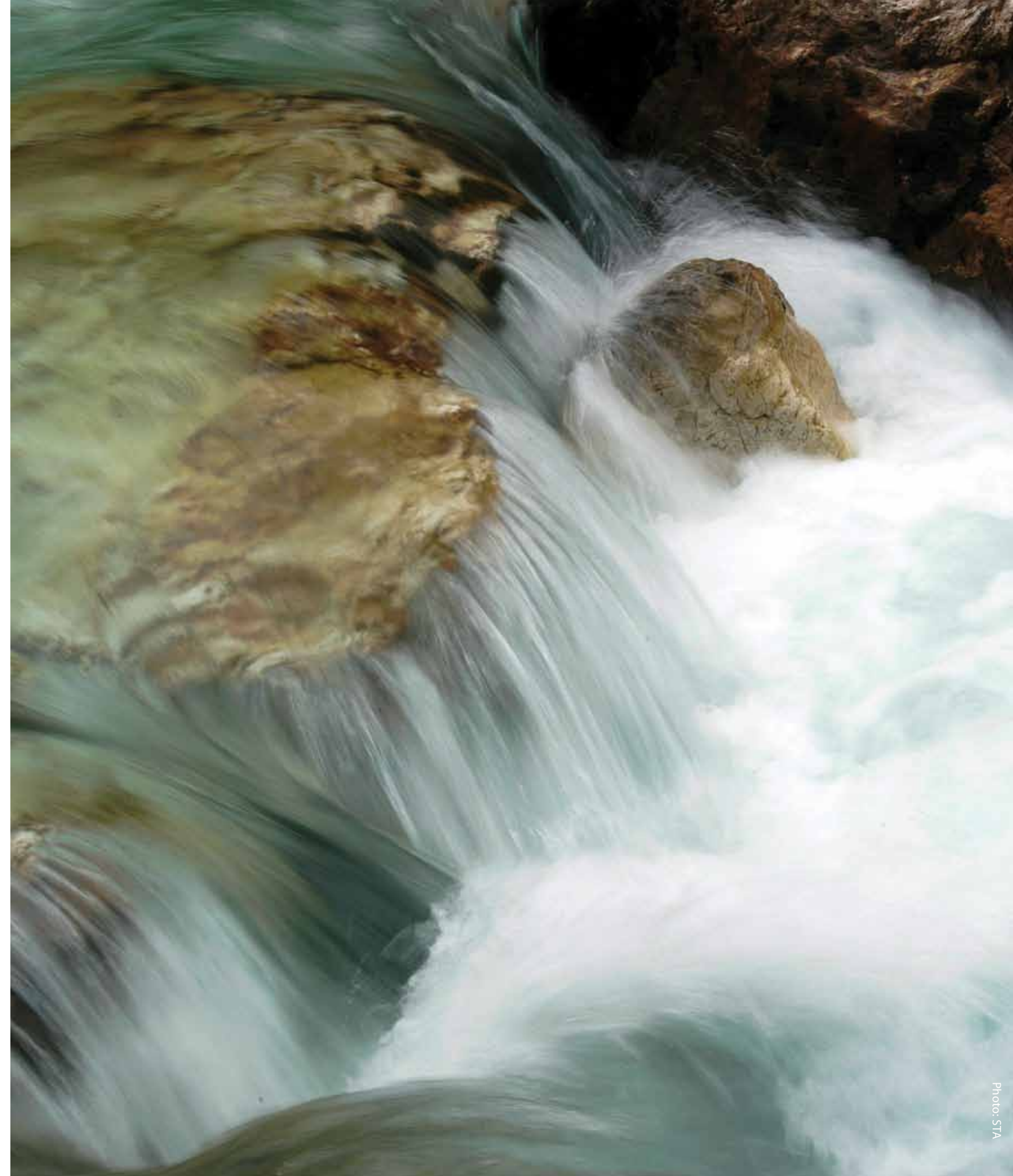
In this case, wood biomass has the greatest potential by far. In theory, Slovenia has also great potential for the production of electricity by means of photovoltaic power stations; however, there are no suitable locations for such large power stations. Nevertheless, renewable energy sources are of key importance also in the combat against climate change.

TRANSITION TO CIRCULAR ECONOMY

The linear model of economy has reached its limit and can no longer ensure sustainable development and long-term welfare. A broad social consensus and the establishment of a suitable support environment are necessary for a transition to a circular economy, which also requires cooperation and integration. The model demands a leap in thinking and functioning of every individual since it also involves a deviation from the consumers' philosophy towards responsible management of resources. The government is prepared for this and has made the first step by approving the framework programme for transition to a green economy.

In accordance with action plans for 2016 and 2017, certain activities are already under way that will promote the transition to a circular economy, something which is a long-term process.

While observing ecological limitations, production and consumption systems will have to change in order to provide a good life in the future. There is great consensus in Slovenia supporting the transition to a green economy. A new and more ambitious package on circular economy is supposed to maintain high goals regarding waste and combine these with the smarter use of raw materials and smarter design, which will enable renewal, reuse and recycling.



How is the development of green technology, as the key technology for sustainable development, being addressed at Technology Park Ljubljana, and what are the plans for the future?

Iztok Lesjak, Director of Technology Park: At Technology Park Ljubljana, we have always been thinking and working green and we strive towards sustainable development. After all, the location of the technology park at Brdo is part of the green, pleasant and friendly work environment. Harmony with nature also contributes to better well-being at work and improves efficiency.

By setting up three solar power plants on the roof of one of our buildings in 2011, we indicated our focus towards the environment and the tendency to use alternative sources of energy, and to contribute to the reduction of CO2 emissions into the environment. We also manage water carefully; we collect rainwater and use it for sanitary purposes and the heating of our buildings is based on the trigeneration. The implementation of every project is demanding and requires its time and financial means. For this year, we are planning the greening of several roofs on our nine buildings at the location at Brdo. Our vision by 2020 is linked with green technologies and we are thus directed towards cooperation with the companies involved with green technologies, which focus on sustainability, deal with computer supervision and optimisation of fireboxes, develop products for optimisation of electricity etc. Our desire is to open a charging station for electric vehicles at Brdo as soon as possible, and one of our main objectives is the integration of environmental companies in the Municipality of Ljubljana with the technologies from public research institutions and the products of start-up communities.

The care for the environment and sustainable development starts with an individual, and we, the staff at Technology Park Ljubljana, are aware of that. Each person individually, and together in the company. In the past, we thus organised two activities of forestation of our surrounding area and we wish to continue with such activities in the future as well, and integrate in them also the wider community.



WOOD — MAKING THE MOST OF
SLOVENIA'S GREATEST NATURAL RESOURCE

**University of Yale: Slovenia is the fifth
greenest country in the world**

VESNA ŽARKOVIČ, ALENKA DOLINAR

Nature gave Slovenians thousands of hectares of first-class forest, which many generations of our ancestors maintained carefully as the only strategic raw material we have. Forests and wood have influenced our economic and social development over the centuries, and now Slovenians strive to enhance their value even more. In times when climate change is becoming a pressing issue, the importance of forests and wood is greater than ever before since the process of absorbing CO₂ into wood cannot be supplemented in any other way.

Wood is also the noblest of materials because it meets the principles of sustainable development.

It enables humankind to preserve a given standard with the lowest possible impact on the environment. As a raw material, it is thus of key importance for the shift to a low-carbon society.

Since forests cover about 60 per cent of the country, Slovenia is the third most forested country in Europe after Finland and Sweden. Among 180 countries, Slovenia ranked fifth according to the Environmental Performance Index calculated at the American University of Yale. It was preceded only by Finland, Iceland, Sweden and Denmark. The EPI is calculated according to the country's activity in its care for human health and ecosystems.

FORESTS: AN ESSENTIAL COMPONENT AND CO-CREATOR OF THE SLOVENIAN LANDSCAPE

As a form of ecosystem, forests stand out the most in Slovenia and are our greatest natural wealth.

Photo: Daniel Novakovič/STA

Forests and wood are considered the Slovenian oil.

According to public surveys, almost 95 per cent of Slovenians agree that forests are an essential component and a co-creator of the Slovenian landscape. Slovenians want a clean natural environment and consider various effects of forests as very important. Forests are undoubtedly important also from the aspect of the tourist sector. At least indirectly, their impact on tourism is great. The success of many tourist destinations is conditioned by the presence of a greater area of forest and the fact that access to forests is available to anyone, whereas this is not the case in some other countries (e.g. Italy). A growing number of new recreational activities is taking place in forests.

Due to the exceptional coverage of forests, the process of substituting wood as a raw material has become more visible only in recent years. The use of wood as a local and environment-friendly material and a source of energy has many positive social, economic and environmental results. The most important ones are new jobs, particularly on farms and in rural areas, increased public revenue, reduction of unemployment, reduction of GHG emissions, improved self-sufficiency in energy, increased intensity of forest management and organisation of forest owners.

ARRAY OF BENEFICIAL AND MEASURABLE CHARACTERISTICS

As a material obtained from forests, wood has an array of beneficial and measurable characteristics: use of wood and wood products contributes significantly to the reduction of CO₂ emissions since it is produced in a clean process of photosynthesis. Trees and wood products can store CO₂ for decades and centuries, and the wood industry is the producer of minimum GHG emissions in the industrial production of end products. Wood is a renewable energy source; wood products are sustainable, they may be recycled or

used several times. Wood is also a very useful building material of low weight and great load capacity with excellent solidity and insulating characteristics and is also a pleasant material for our lifestyles and living spaces. It enables cost-efficient construction and a high culture of living with low maintenance costs. Furthermore, numerous possibilities of shaping wood should also not be neglected.

Throughout history, wood was one of the most frequently used materials for construction.

DIVERSE CRAFT AND CONSTRUCTION WOOD ACTIVITY

Because Slovenia is one of the most forested countries in Europe, diverse craft and construction wood activity has developed over the centuries. We wish to preserve these rich traditional knowledge and skills and upgrade them with modern knowledge on the processing of wood and implementation of wood constructions. If this is further combined with top engineering experience and architectural solutions, a story of success can develop, one already instigated by the Slovenian manufacturers of prefabricated wooden buildings. Wood is certainly a strategic Slovenian asset. We have begun to realise that we must manage it wisely and thus provide new jobs and general well-being. Action plans adopted by the government strive to promote a positive image of wood, including the enhancement of the awareness of wood and the promotion of the use of wood for construction and everyday application. Their aim is to promote sustainable, economic and qualitative use of wood and thus enhance its application.

To this end, the Wood and Furniture Industry Directorate was established at the Ministry of Economic Development and Technology in 2015.



Photo: Mostphotos



Photo: Daniel Novakovič/STA

WOOD INDUSTRY – GREEN INDUSTRY

As part of action plans and plans of the Wood and Furniture Industry Directorate, its special task is the establishment of links between educational institutions, such as universities and development institutes, and particularly between small and medium-sized companies for implementation of the latest achievements in the field of wood processing, design and construction.

One of the tasks is internationalisation, where joint presentations of Slovenian companies in the field of furniture industry, joinery

and prefabricated wood constructions on foreign markets under a joint brand are in preparation, including expert support for individual presentations at fairs. At this point, 100% Design, the UK's largest design trade event in London, must be mentioned. The companies will be able to take part in business delegations abroad.

Slovenia's strategic objective is for the European Union to discuss wood industry as a green industry and wood as a primary raw material for the shift to a low-carbon society and the realisation of globally adopted environmental commitments on the reduction of GHG emissions.

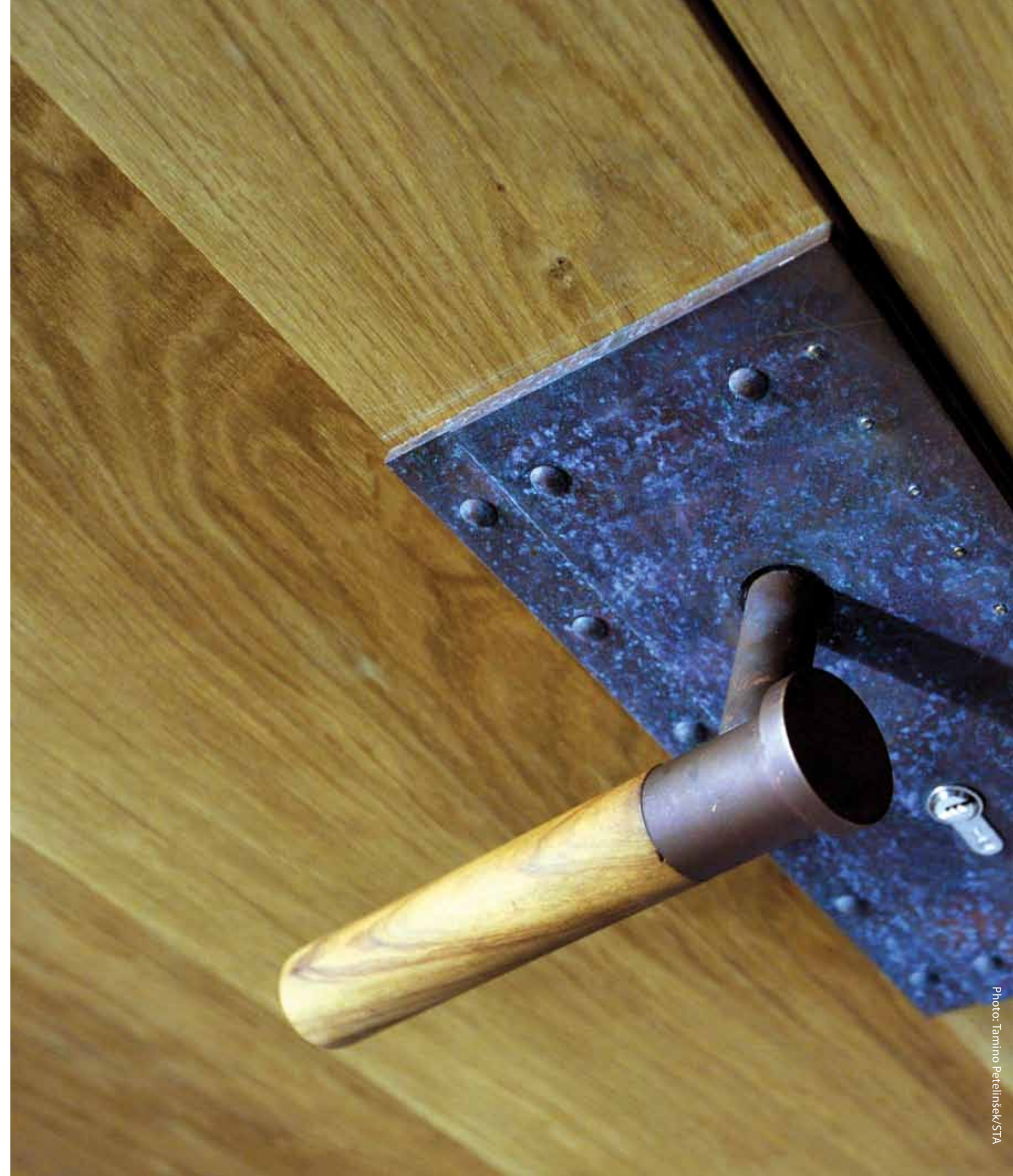


Photo: Tamino Petelinšek/STA

SLOVENIA GREEN

A new 'Green scheme of Slovenian tourism' - Clean, Sustainable, Natural

NATAŠA HOČEVAR



Slovenia's clean and pristine nature is the country's main advantage and the greatest attraction for tourists. Healthy and locally produced food, an extraordinary wealth of water, some of the cleanest drinking water in the world, immaculate nature, and almost unrivalled biodiversity. All of this represents Slovenia's sustainability, which results from natural conditions, as well as commitments undertaken by our state and its inhabitants to maintain the richness for future generations.

Slovenia has undertaken to pursue sustainable development by way of a national strategic policy and has thus made important steps in terms of the entire country and the tourist services that it offers. Tourist providers are increasingly changing their offer in order to follow the sustainable, that is, green development.

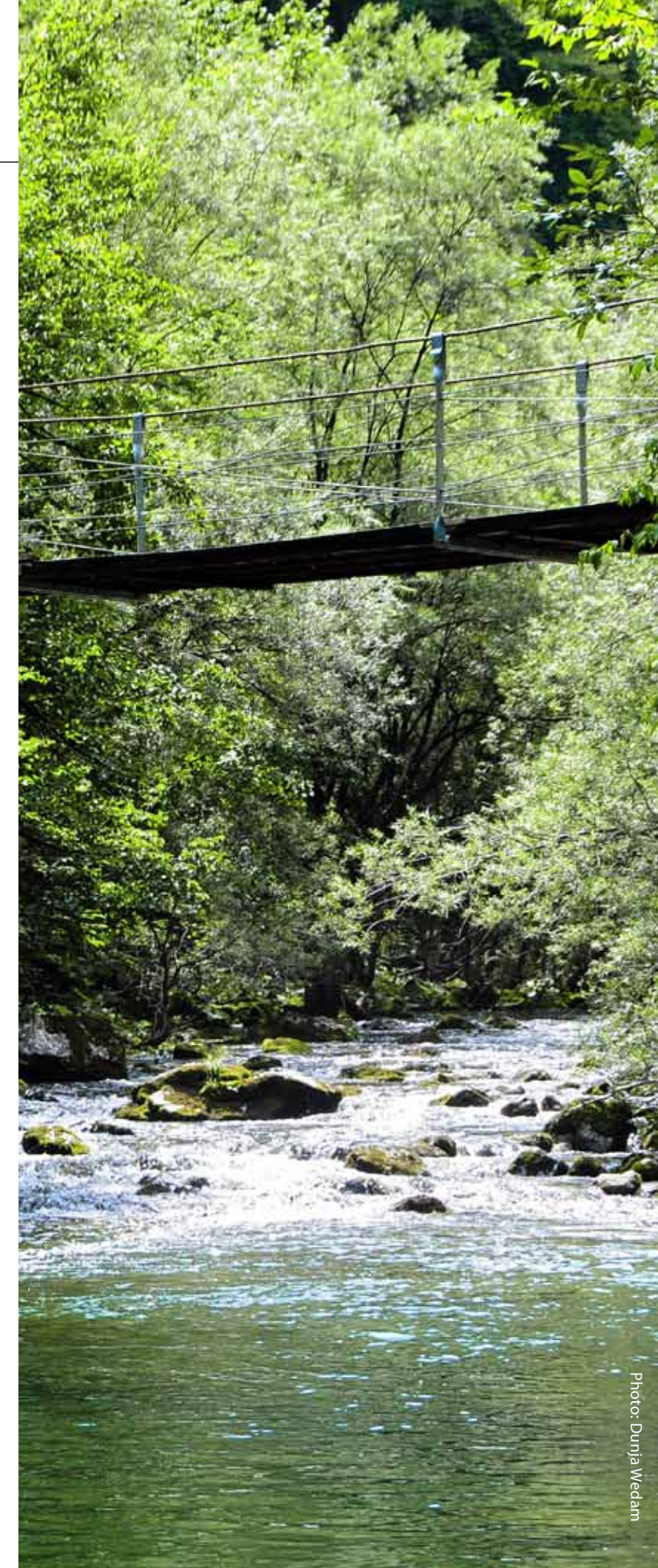
The Slovenian Tourist Board has defined this green policy as a very real opportunity for our country and its tourist services on offer.

GREEN TOURISM

The Green Scheme of Slovenian Tourism, the national programme for the accelerated introduction of sustainable business models in tourism, was set up last year, and presented by the Slovenian Tourist Board in cooperation with The Association for Sustainable Tourism GoodPlace (Green Destinations accredited partner). Communication activities related to the programme were supported by the Slovenia Green logo.

This is a system which functions on two levels - at the level of destinations and municipalities and at the level of individual tourism providers.

The activities are well under way. While one destination (Ljubljana, the Green Capital of Europe 2016, the first recipient of the Slovenia Green Destination label) and six providers have already obtained the Slovenia Green certificate, eight new destinations, which had successfully completed the evaluation process, were awarded the Slovenia Green Destination certificate at the beginning of March. One of the providers was awarded with the Slovenia Green Accommodation label, and there are eight other hoteliers currently undergoing the process of obtaining green certificates. A new invitation for destinations and providers regarding their participation in the Green Scheme is being prepared, together with the formation of the Green Partnership - Slovenia Green. The decision to initiate the assessment of the sustainability of the whole of Slovenia as a destination is also important.



SLOVENIA GREEN DESTINATION

Slovenia invites with the following phrases: feel the green landscape, take a walk or hike in the mountains and forests, feel our green destinations - Laško, Idrija, Kamnik, Žalec, Rogla - Zreče, Radlje ob Dravi, Cerklje ob Krki, Celje and many others. All of them have recently been awarded the Slovenia Green Destination certificate, by way of their numerous opportunities for experiences, green products and sustainable development offering everything for a real green experience.

You certainly must not forget to visit the first destination awarded with the Slovenia Green Destination label, this is Ljubljana, the Green Capital of Europe 2016.

SLOVENIA GREEN ACCOMMODATION

Slovenian hoteliers, providers of tourist apartments and other providers of accommodation may obtain the Slovenia Green Accommodation certificate on the basis of internationally recognised and established environmental labels for accommodation providers (BioHotels, EU marjetica, Green Globe, Green Key and Travelife). There are currently seven providers holding one of the above mentioned labels in Slovenia, and the Slovenia Green Accommodation certificate: Ortenia-Apartments in nature, Koren Camp Kobarid, Trnulja Country Estate, Snovik Spa, Thermana Park Laško - Hotel, Urška Tourist Farm and Park Hotel Ljubljana. It is expected that this year the number will increase significantly as there are as many as seven hotels undergoing the Travelife certification process in Ljubljana alone, together with a hotel from Podkoren.

YOU ARE INVITED TO TAKE PART IN GREEN EXPERIENCES

Slovenia has unique natural conditions which are a prerequisite for the country's sustainable policy. The story about "the green" is also incorporated in the national brand "I FEEL SLOVENIA". The colour which expresses the balance between the calmness of nature and the diligence of Slovenian people is the main part of the brand recognition. It is about our pristine nature and Slovenian determination to preserve it as such and to plan our development in a sustainable manner. The Slovenia Green unites and connects all of the above mentioned while making sure that we constantly strive to improve sustainable operation at all levels and to promote such operation. You are also invited to take part in green experiences by visiting one of our green destinations or providers.



Photo: B. Kadnik





LJUBLJANA – EUROPEAN GREEN CAPITAL 2016

**The first European green capital
in central and southeast Europe**

EGC2016 Team

Ljubljana is a city that will surprise you and exceed your expectations. It is unique – small by surface area, but huge in its hospitality and quality of life. Its 275 km² make it a metropolis, and at the same time it fascinates by its greenery, cleanness and safety. In the past decade, many sustainable changes have been introduced, and the European Commission has recognised this by awarding Ljubljana the title of European Green Capital 2016. According to the jury, Ljubljana is the city that made the biggest change in sustainability in the shortest period of time.

VISION LJUBLJANA 2025

In 2007, our team introduced Vision Ljubljana 2025, with the aim of making our city a sustainable and ideal city by that date.

We visualise a city that takes care of history, ensures a high quality of life, safety and tolerance, is environmentally friendly and is connected to its landscape.

In the Vision, the concepts of sustainable development and urban planning are closely intertwined. Since 2006 we have successfully implemented more than 1,700 projects enacting the Vision.

The representatives of the various world cities we meet often see Ljubljana as an example of good practice, pointing out the city's determination and courage to implement sustainable mobility projects in the city centre, where we established a green zone by closing it to motorized vehicles and opening it to pedestrians and cyclists. We completely transformed the main artery in the centre with an altered traffic regime and with the creation of shared space dedicated only to pedestrians, cyclists, and public transport. Now, on the main artery there are no private motorized vehicles, and the refurbished city walkway is lined with young ash trees attracting butterflies and bees.

BIG LIVING ROOM

The city has become revitalised with new energy; it has become not only a ecological zone but it is a big living room for diverse social, cultural, sporting, and other events where people meet and enjoy themselves. Besides, the renovated banks of the Ljubljanica River in the city centre now boast new bridges to shorten the distances pedestrians must cover. In 2012 we were awarded the "European Prize for Urban Public Space" for the project Refurbishment of the Banks and Bridges of the River Ljubljanica. Ljubljana was chosen among 347 projects from 36 countries as an example of linking green spaces with urban rehabilitation.

However, one of the major challenges was to change the established habits of residents, and to make a shift in their mindsets in order to allow for a better quality of life and a sustainable future.

For this reason, we cooperate and communicate with numerous stakeholders, especially with those who are most affected by the change. Sustainable strategies are carefully formulated, and projects are thoughtfully carried out in the cooperation with numerous local, regional, and national stakeholders. Participation in the process is not limited only to experts or certain stakeholder groups but is wide and open to all.

GREEN IDENTITY OF THE CITY

According to the jury, Ljubljana successfully combines two things: the recognizable green identity of the city and actively transforming areas that not too long ago were not green or environmentally sustainable. There is a large share of green surfaces. Almost 3/4 of the city's surface is covered with green areas. There are four nature parks in Ljubljana, among them the Ljubljana Marsh Nature Park -

Natura 2000 areas constitute more than 16% of the city's surface. The park is also listed in the UNESCO World Heritage List. We declared more than 1200 acres of special-purpose forest.

Forests cover 46% of the entire area of Ljubljana and reach right into the city centre.

20% of Ljubljana's area has natural protection status and the longest tree-lined city avenue the Path of Remembrance and Comradeship has more than 7,000 trees along 34 kilometres. We have also revitalised a large number of degraded areas and brownfields and created 80 acres of new parks. All residents access public green areas within 300 m of their homes.

Furthermore, we are continuing to offer sustainable mobility options to our residents and visitors, such as building Park & Ride facilities, greening our public transport bus fleet, prolonging the travel routes into neighbouring municipalities, expanding the network of the BicikeLJ bike-sharing system, and encouraging electrical mobility.

Ljubljana is a capital that has already exceeded the EU's recycling targets for 2020 by 10%. We rank first in separately collected waste in Europe and we are also the first European capital to be part of the Zero Waste Europe network. Our regional centre for waste management has the most advanced system of processing mixed and organic waste in Europe. It will manage waste for one-third of the country while creating new green jobs.

OUTSTANDING QUALITY OF WATER

The main water source for Ljubljana and its outskirts is groundwater from two different ecosystems: the Ljubljana Marsh and Ljubljana Field. The water is of outstanding quality, and there is no need for technical treatment. This proves that the city's development has been closely tied up to sustainable measures for the protection of water sources.



The city engages in many activities, campaigns and events to encourage its residents towards greener lifestyles. It has become a yearly tradition to conduct a month-long spring cleaning campaign called For a More Beautiful Ljubljana, as well as Sustainable Energy Week, and the twice-awarded European Mobility Week.

We decided that every member of our so-called 'large city family', which comprises more than 12,000 colleagues in city administration, along with public companies and institutions, should plant their own tree.

The tree-planting campaign was launched last year and it will be completed this year. Even though we have not only met, but even exceed some important goals, one can always find room for improvement and further development. At the moment, we are implementing over 90 projects and each one of them is "green". We will continue to restore degraded areas and nurture the established green ones. To fight climate change, we will, through various measures, reduce CO2 emissions by 30% by 2020 in addition to balancing the distribution of mobility; so by the end of the decade, one-third of all journeys will be made by public transport, one-third by foot and bicycle, and one-third by car. Additionally, we will reduce water loss and preserve clean drinking water, which must remain a public good, accessible to all.

We are very proud and honoured to be the seventh European city that won the prestigious title of European Green Capital. In 2016, every month is dedicated to different sustainable topic and we are carrying out numerous daily activities with different stakeholders to raise awareness among citizens on green issues and encourage them to make Ljubljana even more green, clean, hospitable and friendly. We would like to invite readers to visit Ljubljana and experience our city first hand.



QUALITY WOOD PRODUCTS FROM SLOVENIAN FAMILY BUSINESSES

Bar stools for Scandinavia and wooden guitars for America

VESNA ŽARKOVIČ

Uroš Kenda made the double bass for his master craftsman exam. At least 150 hours are invested in the curving of the wood and manual labour on the bass. He played many traditional songs on his instrument with the Dotik folk ensemble from Kanomlja.

Several Slovenian family companies have built successful business out of wood. There are more than fifteen enterprisers in the Cerklje hills which make products from this national treasure. One family company, Kendales of Dolenji Novaki, is renowned in particular for its exquisite furniture. Three generations of the Kenda family have dedicated their lives to wood.

"My father started the business, by making carts, wheels and joinery in 1955," says Jože Kenda, who continued his father's business and passed it on to his son Uroš a few years ago. Jože managed to establish a successful and solid company, which exports its entire production. In 2010, they carried out a major business deal for the American market. Their tables, bar stools from solid wood and wardrobes furnish 450 rooms in a prestigious hotel in Los Angeles and a global jewellery chain. They do not have to look for new clients at the moment since they cooperate with buyers from different countries. At the request of a particular client, they also successfully passed the international SMETA audit this year. In the 1970s, Uroš's grandfather added a first combination machine to the home-made wooden tool. "At the time, the machine was as expensive as if you were to buy a yacht today," remembers Uroš's father Jože, who spent most of his childhood in his father's workshop. To gain respect towards his craft, his father sent him to Cerklje to work as an apprentice. He later found employment in Lesna industrija Idrija and then he worked in Celes for many years. When the company faced its first crisis, Jože had already started his own business. In cooperation with other Slovenian companies, he started making tables for Ikea. "There were so many orders that we barely managed to keep up," he remembers.

THEY DO NOT LOOK FOR CLIENTS; INSTEAD, THE CLIENTS LOOK FOR THEM

Three years ago, Uroš Kenda took over the company. He is proud of the production of top bar stools for the Scandinavian market. The client from Denmark first ordered stools in Slovakia and Malaysia. Because they failed to attain the prescribed quality, the production was entrusted to Kendales. The client is now pleased with the quality and occasionally visits their production facility. He highly appreciates their products, says Uroš.

They have made 5,500 prestigious stools from solid wood, which reach extravagant prices on the market.

The quality of their work speaks volumes. They do not look for clients but buyers from the USA, England and Scandinavia look for them.



Kendales bar stool, the leading product of the company made from solid oak wood. It is featured in hotels, bars and jeweller's shops around the world.

TWO GREAT LOVES: WOOD AND MUSIC

Uroš combined wood and music, two of his greatest loves, into one. He visited a world-renowned producer of musical instruments in Milan to find the best wood for the manufacture of a double bass. A new business developed from his love of music. He invested at least 150 hours in the curving of the wood and manual labour on the bass. However, he did not stick to bass only. He has already shipped 35 wooden electric guitars to the USA.

“High-quality products sell well in the USA since they have plenty of low-budget ones.

Such guitars cost several thousand euros and are purchased only by serious musicians. Many order custom-made guitars. They tell us what kind of sound they want, and the master craftsman has to know how to attain that sound. He must be talented and possess great knowledge on how to correctly combine different types of wood. One guitar may be composed of three to four types of wood: spruce, linden, poplar, cherry, plum, beech, walnut, maple, mahogany, teak ... depending on what sound we want. Each guitar is thus unique.”

Uroš, who looks more like a pop star than a businessman, is full of ideas and plans, but he nevertheless never forgets to mention the importance of the foundations which his father and grandfather laid for him. He says that the great advantages of their family business are a small size and fast adaptability to the requirements of the market.

In the future, they will continue to focus on designer products with higher added value.

“The design of the current Kendales products is mainly determined by the clients, but one day, the products of our brand will come to the fore as well. I have many ideas, which I will realise after production at the new location starts, plans which will simplify work for nine permanently employed workers,” he stresses. He is proud of his hard-working and well-qualified workers. The production for the next year has already been planned and the products sold. But the quality always comes first. “Contracts with clients are not so important any more. We know that if our products lack quality, we won’t get a new order. The price has to be just right too. It must cover the costs of our work accordingly, and beyond that, we mustn’t care at what price our products will be further sold by the client.”



The salami cutter is their unique small product.

DAIRY KREPKO

Strong demand for organic milk processing

DANILO GOLOB
PHOTO: MLEKARNA KREPKO ARCHIVES



For the past twenty years, the Krepko family dairy has dedicated itself to producing fresh, traditionally-made dairy products. In 2007, the family decided to go over to organic milk processing since it corresponded to their lifelong conviction and vision for the future.

The people at Dairy Krepko in Laze pri Logatcu consider that healthy food should include all foodstuff groups in balanced quantities, among them milk and dairy products. "Due to its frequent consumption, particularly in the diet of children, we should bear in mind that everything that a cow eats ends up in the milk. So, if we eat organic dairy products, we don't consume the residue of potent conventional animal feed, fertilisers, hormones for increased lactation, pesticides and traces of antibiotics," explains Director Sandra Turnšek. Dairy Krepko buys milk exclusively from Slovenian organic farmers. The decision on the purchase of organic milk and their own production of BIO/organic dairy products set high requirements in milk processing, which comply with the Rules on organic production and processing of agricultural products and food. The dairy holds the strict certificate for the processing of organic milk into BIO/organic dairy products (controlled by KONCERT, SI-EKO-001). They offer an array of organic dairy products (milk, cheese, yoghurt, soured milk, kefir, cottage cheese, butter etc.) and also innovative dairy products such as fruit-flavoured milk kefir drink.

BREEDING EXCLUSIVE OF CHEMICAL ADDITIVES

No chemical additives are used on organic pastures. Cows are reared outdoors and feed freely on certified pastures and grassland, which means that the cattle breeding is completely natural. In the case of insufficient outdoor feed, only controlled and certified organic feed may be given to organic cows.

Artificial fertilisers, pesticides, medications or vitamins for preventive reasons are strictly prohibited ingredients in organic breeding.

All additives (fruit bases, herbs etc.) in processing must also be controlled and compliant with organic certificates. "With regular consumption of organic dairy products, we get more beneficial natural vitamins and minerals and reduce the intake of harmful substances

in our bodies, which will be grateful for and likely to get healthy sooner," states the Director of Dairy Krepko with conviction.

KING AMONG KEFIRS

Dairy Krepko is the only dairy in Europe specialised in the production of milk kefir in the traditional manner from kefir grains.

Kefir Krepko is considered an authentic traditional kefir with all beneficial effects for the human organism and particularly intestinal microflora. "We chose the more difficult path; however, this is the only way to obtain the known and acclaimed effects of kefir. The traditional methods of processing are a guarantee for excellent flavour. With minimum processing, we want to preserve as many minerals and vitamins as possible," explains Director Turnšek.

In 2009, iTQi, the leading International Taste & Quality Institute in Brussels, conferred to Dairy Krepko its highest recognition, three golden stars, and the title of the Superior Taste Award 2009 for their traditional Kefir Krepko. "We are particularly proud of the Superior Taste Award 2009 for our Kefir Krepko. We believed in this product from the idea on the production of this delicious drink to the end product with exceptional flavour, and that was later recognised also by the esteemed iTQi jury, which crowned it with the Superior Taste Award 2009.

The award represented an acknowledgement to our family company that we are on the right path and that the objectives set – traditional, natural, healthy and organic – mean a lot also in the today's fast pace of life.



Sandra Turnšek, Director of Dairy Krepko.

In fact, their significance is even growing. This was a reward for several years of constant efforts and persistence on the part of the excellent team of colleagues in the specialised production of traditional kefir whose ideas and work have been focused on constant development and education."

Dairy Krepko also received the title of the Better Food Herald 2015 by Zavod Viva and the Ministry of Agriculture, Forestry and Food of the Republic of Slovenia.

SUPPORT FOR THE COMPANY DEVELOPMENT

Dairy Krepko uses financial support mechanisms if they have clearly set objectives and anticipate long-term involvement in the activity for which investments are intended. In 2010, the company received a positive decision on the granting of non-refundable funds from the Agency of the Republic of Slovenia for Agricultural Markets and Rural Development under measure 123, Adding of Value to Agricultural and Forestry Products. The funds were allocated for the project of establishing production of organic products, which Dairy Krepko completed successfully.

The company is also eyeing foreign markets. They are currently in negotiations for entry into COOP Italia. "In general, I think that foreign markets are closing because they choose to support their own producers. This should be done in Slovenia as well," thinks Director Turnšek. The company sees its small size as an advantage rather than a weakness, which is why they wish to continue with niche production and plan the construction of a new facility, where new special dairy products will be made. They are also increasing doorstep selling because they noted that traders cannot provide sufficient space on their shelves for all of their products, which are in high demand among Slovenians.

Story of Dairy Krepko

The story of Dairy Krepko began in 1992 when Dunja and Brane Kelečević brought live milk kefir grains from the former USSR and started producing traditional kefir in a small dairy facility in Laze pri Logatcu. They were led by the passion to familiarise Slovenians with this natural probiotic drink of the Caucasian centenarians, about which many wonder if it is a miracle or a gift from the gods. Today Dairy Krepko is the only dairy in Europe specialised in the production of dairy kefir in the traditional manner from kefir grains.



Photo: Mospphotos

GREENLIGHT WORLDFLIGHT MISSION

The future is ultralight

PETRA DRAŠKOVIČ PELC

Photo: Matevž Lenarčič

Extreme pilot, biologist, photographer, nature conservationist, mountain climber and director of the Aerovizija company, Matevž Lenarčič is on another mission to fly around the world. The goals of this mission are set very high, since they combine scientific research and environmental activities. The main participants in the project are Matevž Lenarčič and Dr Griša Močnik. Lenarčič is the most experienced long distance solo flyer in ultralight aircraft in the world and is also a holder of the World Aviator of the Year 2013 Award, while Dr Močnik is a researcher, scientist, physicist, director and head of research at the Aerosol company. The project is a continuation of the hitherto successful aviation and research projects of the GreenLight WorldFlight mission from 2012 and 2013.

This time, Lenarčič will be flying in an ultralight aircraft, Dynamic WT9, manufactured at the Aerospool company in Slovakia. In total, he will spend almost 200 hours in the sky. On his 42,000-kilometre long journey, Lenarčič will make thirteen stops. The longest distance travelled without stopping in some nineteen hours is 4,200 kilometres. Special equipment for measuring black carbon concentrations (Aethalometer) was manufactured and adjusted for this project by the Aerosol company. Along the entire route, the device will be collecting and forwarding data on the quantity, concentration and sources of black carbon. Without such data, it is not possible to determine the significance and the extent of this pollutant, including its contribution to the global worsening of the condition of our planet.

INNOVATION IN BLACK CARBON RESEARCH

Research on such an extensive global and empirical basis is something completely new, not only in Slovenia but also in the world.

The data collected will be processed and the findings will be disseminated to the expert and broader public in the form of a study. Between 2016 and 2020, the participants in the mission will implement black carbon research in areas for which no data currently exist and where the pollution impact could have long-term consequences; these areas include the Central Atlantic Ocean, the North Pacific

Ocean, Asia, the Bay of Bengal, the Middle East, the Mediterranean and the Alps, Russia, China, the Himalayas and Antarctica.

With a refreshed team, new challenges and while advocating the philosophy of balance and care for the environment, space and natural resources, the project further approaches the basic narrative of GREEN SLOVENIA.

The GreenLight WorldFlight mission focuses on key solutions for humankind with consideration for the environment and people.

In a different, environment-friendly and energy-efficient manner, the project aims at presenting the world as it is seen from the sky. With the aid of top new technologies in the field of aviation and pollutant detection in the air, and particularly due to its innovative approach, the team wishes to make a contribution to the awareness that the quality of the natural environment and the quality of living are in close co-dependence. Research of black carbon, which is one of the key causes of the overheating of the planet, is the central topic of the GreenLight WorldFlight mission. The results of measurements will be used in a scientific study, by means of which the GLWF team wishes to highlight and initiate a debate at the international level about the neglected role of black carbon in global pollution, which causes climate change.

USE OF FUEL IN THE MOST RATIONAL MANNER

The anticipated departure date from Brnik Airport is 21 March 2016. The plane is currently at the Aerospool factory of ultralight aircraft where the equipment for measuring black carbon and additional fuel tanks are being installed. The aircraft was finally registered at the beginning of February; unfortunately not in Slovenia, but in France. Due to the delayed registration, the weather is causing most problems at the moment since it is preventing test flying. In addition to the aforementioned collection of data on the concentration, spread and source of pollution with black carbon in the atmosphere, the team also wishes to demonstrate how energy (fuel) can be utilised in the most rational way (use of the new economical Rotax 912iS engine) and raise the awareness of the widest circle of national and international public.

GreenLight WorldFlight 2016 presents numerous challenges for the ultralight aircraft, the pilot, team members and partners. The aircraft must function safely when flying at very high or low temperatures and at different altitudes. The new computer-operated Rotax 912iS engine ensures low fuel consumption, which is of the utmost importance. The quantity of fuel aboard such a small aircraft is very limited. Only the ideal combination of weight, thrust and optimum lift ratio will enable the attainment of the goal and the anticipated results. The logistics of obtaining permits for flying and landing in individual countries, the provision of fuel and maintenance service at the anticipated stops is a complex and challenging task.

The team also includes Vojko Strahovnik, Domen Grauf, Dr Lidija Honzak, Boris Mikuž, Dr Petra Draškovič Pelc, Andreja Vrečer, Nataša Krhen, Andrej Velkavrh and Rado Likon. Most of the mission's costs will be covered through the companies of team members and their voluntary work. The rest of the funds will be provided by partners and technical sponsors. The lead sponsor of the mission is the Akrapovič company, which decided to join the project particularly due to strong and clear synergies, which the project offers its partners from different fields..

“Care for the environment is the priority of all who, through our participation in the project, convey a clear message to the public that extremely difficult goals can be achieved with ultralight technology;” stressed Dr Uroš Rosa, CEO of the Akrapovič company.

The mission is also supported by the Slovenian state, which provided important organisational support through its network of embassies and the Government's Office for Slovenians Abroad, and contributed to raising awareness of the significance of the mission.



ORGANIC FARMING SPREADS IN SLOVENIA

In harmony with nature

DANILA GOLOB
PHOTO: FREŠER ARCHIVES

Twelve hectares of Matjaž Frešer's vineyards at the sunny wine-growing areas of Ritoznoj on the foot of the Pohorje mountain range, located 400 metres above sea level.



Different types of landscapes, a large number of mountain farms and many fertile areas provide excellent opportunities for the development of organic farming in Slovenia. As a consequence, the number of organic farms and growers and processors of organic food in Slovenia increases from year to year.

Given growing consumer demand for organic products and foods, and the increasing volume of trade in these foods, organic farming has a safe future. It renders a public service, preserves cultural and agricultural landscapes, enhances biodiversity, and protects drinking water resources and the entire environment. Farming that emphasises harmony with nature and preservation of soil fertility through use of organic fertilizers conforms with sustainable principles since it provides a balance among all elements found in the soil, plants, animals and humans. Within the system of organic farming, the production and processing of foods "from farm to plate" is subject to continuous and transparent control, which of, guarantee authenticity to consumers who opt for such products.

Organic farming allows the production of high-quality and safe food that is rich in nutritional value and high in vitamins, minerals, and antioxidants.

According to the latest official data, 3,298 farms (i. e. 4.6 % of all farms in Slovenia) with 41,237.19 hectares of agricultural land are undergoing controls for ecological certification. Out of these, 2,537 farms have already completed the conversion period (obtained organic certification).
Source: Situation Analysis of Organic Farming, Ministry of Agriculture, Forestry and Food

MATJAŽ FREŠER – AN INNOVATIVE YOUNG FARMER

In Slovenia, the proportion of organically farmed vineyard areas is growing. The use of agents of natural origin, the nature protection and conservation, the diversity of plants and animals, higher quality of the produce, the protection of human health, more health-beneficial substances in grapes, as well as a good market opportunity are some of the main reasons that winegrowers decide on organic wine production.

Matjaž Frešer, who was proclaimed the innovative young farmer of 2015 by the Chamber of Agriculture and Forestry of Slovenia and the Slovenian Rural Youth Association, also switched to organic wine production four years ago. The wine-growing tradition in the Frešer family from Ritoznoj dates back to 1832. Should he decide to continue the family tradition, Matjaž, who took over the wine-growing business from his father, had a vision to make something more of it than just sell wine as it had been done before.

"I wanted a different approach with a different story that would carry over the message of a man who produces wine with the signature of the area where it is grown."

He was lucky that his parents, who are otherwise involved in the milk production, supported his decision and recognised potential for further development. As Matjaž saw abroad, one could make a living by taking a different approach. In 2011, he therefore opted for the entirely organic production on all 12 hectares of vineyards located at the altitude of 400 meters, on the sunny wine-growing areas of Ritoznoj at the foot of the Pohorje mountain range. "I'm not interested in doing things halfway. When I decide on something, I make sure

I do it. The beginnings were not at all easy as there is very little information about organic wine production in Slovenia. So, we tried out things by ourselves to see what is suitable for our area and what is not. You start to observe the nature as you have never seen it before. And that is what I like about ecology.

You listen to yourself, which is what makes those wines special.

Because they are alive and because every bottle tells a story to the person who drinks it or gives it away as a gift. This makes me proud of every single bottle we fill. Because it carries a story."

They have increased the quality of the wine with the organic production of grapes while at the same time lowering the input costs and adapting to the modern customer who respects the local production with high quality. Matjaž offers fresh and ripe wines and special release wines, which include the prudentia ice wine as well as the pantheon wine available in 1.5-litre bottles. As the vice president of the Ritoznojčan Consortium, which connects 13 winemakers from the municipality of Slovenska Bistrica, Matjaž Frešer is reviving the dry wine type called ritoznojčan with the PTP recognised traditional denomination. The young farmer wants to create a recognisable style of making wine even for the most demanding wine drinkers around the world. It is his desire to raise the culture of drinking wines from the Štajerska region to the highest level and become one of the three largest private wine producers in Slovenia within 10 years.

A CLEAR VISION OF THE YOUNG FARMER

At barely 29, Matjaž Frešer has a clear vision of wine production. His desire is to increase it. Last year, they restored three hectares of vineyards and planted them with the existing varieties, and this year they will continue with the restoration. They made the best of the nice weather last November and restored two additional hectares of terraces, which will be planted in March this year with the well-known varieties. The increased production of wine also means they will need to enter new markets. This is why they would like to export more wine and raise the recognisability of wines.

More than 60 per cent of the Frešer wines, which are of course grown fully organically, are sold to restaurants, caterers and end customers.

More than a quarter are exported to Austria, the Czech Republic, and Slovakia.

Matjaž Frešer is proud to having been recognised as an innovative young farmer of 2015 by the Chamber of Agriculture and Forestry of Slovenia and the Slovenian Rural Youth Association as the two institutions thereby confirmed that his decision to get involved in organic wine production was not only the right decision but also the opportunity of a lifetime. "With such recognition, there should be no shortage of best wines in which you can taste the love towards the land, vine and wines. The Frešer wines," says the young man with confidence.



Matjaž Frešer – the innovative young farmer of 2015 opted for organic wine production four years ago. In organic wine production, the wine is protected with agents found in nature, such as copper, sulphur, acid clay and horsetail extracts. This is how the vine develops its defence system in order to draw nutrients deep from the earth.

Three Slovenian green projects receive European LIFE awards

SOURCE: STA



Three Slovenian projects have been listed among the best projects of the EU's LIFE programme that provides financial support for environmental, nature conservation and climate action projects throughout the bloc. Awards will be conferred at a ceremony in Brussels on 31 May as part of the Green Week.

The Wetman project furthering conservation and management of freshwater wetlands in Slovenia is among 23 projects selected from 63 applicants competing in the segment of nature and biodiversity.

The project looks to improve hydrological conditions, remove overgrowth and invasive alien fish species, and prevent the destruction of endangered habitats and the disturbance of endangered species.

Aquaviva and Rebirth have made it to the top five of the 14 projects that pursue specific environmental goals by means of information and communication tools.

Aquaviva looks to raise awareness of the Slovenian public about the importance of biodiversity of aquatic ecosystems for life on the planet, while Rebirth promotes the re-use of industrial and construction waste.

A stork in Ljubljana Marshes

BREAKTHROUGH DISCOVERY BY SLOVENIAN SCIENTISTS

The first to prove a link between the Zika virus and brain damage to the foetus

VESNA ŽARKOVIČ



Researchers of the Faculty of Medicine of the University of Ljubljana and Ljubljana University Clinical Centre have for the first time proved that infection with the Zika virus during pregnancy can cause brain damage to the foetus. Many esteemed institutes around the world have been trying to establish this link in recent months.

The successful and promptly completed research is the result of excellent cooperation between the scientists of different institutions, i.e. the Division of Gynaecology and Obstetrics of Ljubljana University Clinical Centre and institutes for pathology and microbiology of the Faculty of Medicine in Ljubljana. Miroslav Petrovec, Head of the Institute of Microbiology and Immunology, stressed that such research usually took some six months. However, the Slovenian team managed to complete the research in three months with great dedication, work during holidays and even pro bono cooperation of biotechnological companies.

The research was based on the case of a healthy European woman, who experienced febrile illness with rashes at the end of the first trimester of her pregnancy while living and working in Brazil. As explained by Nataša Tul Mandič, Head of the Division of Gynaecology and Obstetrics at the Ljubljana University Clinical Centre, the pregnant woman came for an ultrasound scan at their clinic in the last trimester of her pregnancy in October 2015. The ultrasound scan confirmed several abnormalities in the development of the foetus and placenta and they began research to determine the cause. They confirmed that in this case the Zika virus was present exclusively in the brain tissue of the foetus and nowhere else, not in the amniotic fluid or placenta or in any other tissue. "At that time, we realised that was probably something unique," they emphasise.

The research was led by Tatjana Avšič Županc. Other researchers included Nataša Tul Mandič, Mara Popović, Jernej Mlakar, Miša Korva, Mateja Poljšak Prijatelj, Jerica Mraz, Marko Kolenc, Katarina Resman Rus, Tina Vesnaver Vipotnik, Vesna Fabjan Vodušek Alenka Vizjak, Miroslav Petrovec and Jože Pižem, Head of the Institute of Pathology. Milojka Kolar Celarc, Minister of Health, congratulated the researchers for their exceptional scientific success. The Zika virus, which is carried by the Asian tiger mosquito (*Aedes albopictus*) and is usually found in Africa, spread to South America and the Caribbean last year. Simultaneously, an increase of newborns with microcephaly was recorded.

So far, there was no scientifically proven evidence that the Zika virus was causing microcephaly; however, the World Health Organisation (WHO) expressed high suspicion of such a link.

Recently, the WHO declared the Zika virus a public health emergency of international concern. In response to the achievement of Slovenian researchers, Marijan Ivanuša, the WHO Head of Country Office in Slovenia, said that "the Slovenian research denotes an extremely important piece in the mosaic of proving that the Zika virus may actually cause microcephaly."

Following their findings on the Zika virus, Slovenian researchers are already receiving invitations for cooperation from abroad.

Many other research teams were formed as a result of the work done by Slovenian researchers. Researchers from abroad have been sending their colleagues messages of congratulations and are also asking them to participate in further research. These findings are a good basis for other research teams, said Tatjana Avšič Županc from the Institute of Microbiology and Immunology from the Faculty of Medicine in Ljubljana. She explained that in the messages of congratulations she was receiving, certain researchers already indicated how it would be sensible to continue the research and were inviting them to cooperate.

"With regard to our findings, it would have to be examined how and in what manner the virus enters through placenta and into the foetus' brain, and exactly in which cells does it then reproduce," said the researcher. Such results are necessary in order to discover how to prevent such infections, transmission and anomalies. Knowledge of the entire virus genome is very important, particularly for researchers who are already involved in making a vaccine against the virus. By analysing the genome, the bioinformatic researchers can discover if an anomaly or a mutation occurred in the virus genome and what is necessary for the preparation of a high-quality and suitable vaccine, or for the research of possible new specific medications, explained Avšič Županc. She also added that the European Commission would soon publish a call for proposals for financing research in the field of the Zika virus. She is certain that they will be invited to participate in a major consortium. Avšič Županc is looking forward to this since any additional funding of the research is welcome. She also noted that the achievement of their research team is a great acknowledgement also for the Slovenian research sphere, which is reflected in the global media attention they are currently enjoying.

REAL LIFE LEARNING LAB

Knowledge transfer from university to the business sector

DANILO GOLOB
PHOTO: IRI UL ARCHIVES



The University of Ljubljana is the largest and the oldest institution of higher education, science and research in Slovenia. One of its important missions is the transfer of knowledge to the business sector, which is the main recruiter of expert human resources. Responsibility for ensuring effective cooperation between the University and business lies with the Institute for Innovation and Development.

The Institute connects entrepreneurs, researchers and experts, and works through project groups composed of experts in research and development.

KNOWLEDGE ALLIANCE FOR COMPREHENSIVE ENERGY-SAVING BUILDING RENOVATION

In mid-2014, the Institute completed the project, Knowledge alliance for comprehensive energy-saving building renovation, which established a real life learning lab. The project joined 25 companies and seven faculties of the University of Ljubljana, and formed an interdisciplinary partnership between the faculties of technical and social study courses of the University of Ljubljana and companies involved in the production of building elements, materials, system planning and implementation of services in the field of energy-saving building renovation. Some 40 per cent of the total energy consumption is used for heating, cooling and lighting in buildings.

An increase in energy efficiency is an opportunity to reduce the environmental burden and costs.

The students solving concrete problems put forward by the business sector had two mentors, one from the University and the other from the real environment or a company, who presented the students with different goals and requirements and encouraged them to tackle problems in a somewhat different manner. The cooperation did not function only in one direction since the companies participated actively in the teaching process and verified in practice the feasibility and applicability of the proposed academic solutions. The companies gave the University clear information about what the real sector expected, while on the other hand, they obtained qualitative interdisciplinary solutions and new ideas much quicker with the knowledge provided by the faculties.

Energy-saving building renovation has already been realised at the Faculty of Arts and the Faculty of Economics. An energy information system was implemented, which represents an overall solution for energy management in buildings.

OBJECTIVES OF ENERGY POLICY OF LJUBLJANA UNIVERSITY

Within the project, the students were working also on a pilot case of energy renovation of protected buildings (building of the Rectorate

of the University of Ljubljana), while one of the central activities of the Institute was energy-saving renovation of buildings of the University of Ljubljana. A complete survey of buildings of the University of Ljubljana was done in 2014.

With its vision in the field of sustainable energy management, the University of Ljubljana wishes to become a reference example for public sector buildings.

The strategic mechanisms being used include the formation of an energy concept for the University of Ljubljana, appointment of an energy manager as a custodian for implementation of the strategy, monitoring of the use of energy through a suitable information system and the introduction of a standard for supporting active energy management.

In accordance with the energy strategy, the University of Ljubljana aims to restore at least six per cent of their buildings per year and to renovate all of its buildings into energy-efficient facilities within twenty years. The renovation will improve interior living conditions and reduce the costs of energy supply. Furthermore, energy renovation will also serve as a good incentive for the Slovenian business sector.

ENERGY INFORMATION SYSTEM OF LJUBLJANA UNIVERSITY

In 2015, the Institute for Innovation and Development established energy accounting for buildings of the University of Ljubljana (EIS), which is the result of a joint development project between the Institute and a partner from the business sector. The system enables the preparation of different reports according to the type of buildings or the use of energy, energy products, costs and GHG emissions, including the preparation of various comparative analyses, which serve as the basis for verification of data and support energy management. The EIS enables the user (expert services, manager) to monitor the use of energy relating to the data from invoices, preparation of a cost structure analysis and determination of priorities for taking measures on the basis of financial indicators. This is currently the only energy accounting system operating in Slovenia (a large number of consumption points with direct e-invoice entries). All participants agree that integration of knowledge of producers and operators is the key to success and greener future of Slovenia.

FRANCE RODE

Slovene inventor of the first pocket calculator

DANILO GOLOB



In the early days of computer technology, he came to Hewlett-Packard already as an established inventor and engineer. He participated in all the company's important development achievements and through his work contributed to the rise of Silicon Valley. He developed the renowned HP-35 pocket calculator and is the holder of some 25 patents in the fields of computing, satellite navigation and radio frequency identification.

Eighty-one-year-old France Rode studied electrical engineering at the University of Ljubljana and after completing his studies gained experience in Germany. In 1960, he moved to the USA and made San Francisco his home. He successfully completed his Master's Degree in Biomedicine at Northwestern University in Illinois in 1962 and, in the same year, started working at Hewlett-Packard in California, where his exceptional scientific path began. He was one of the leading engineers for more than twenty years.

HP-35 POCKET CALCULATOR

Bill Hewlett and Dave Packard included Rode in the team of engineers focusing on the development of computing devices of the smallest dimensions. One day, Hewlett pointed to a clumsy desk calculator weighing almost 20 kilograms and said to the group of development engineers, including Rode, that he wanted to see that in a size which would fit into his shirt pocket. The engineers began developing a new device by first measuring the size of their boss's pocket. The innovative HP-35 pocket calculator was then created. The greatest credits for producing the first integrated circuit and the design of a miniature processor were ascribed to Rode. HP-35 became a huge hit. To justify the investment, 10,000 calculators would have to be sold at a price of 395 dollars in the first year.

However, more than 100,000 were sold in the first year alone, which was a turning point also for the Hewlett-Packard company because they did not have any mass products up to that time.

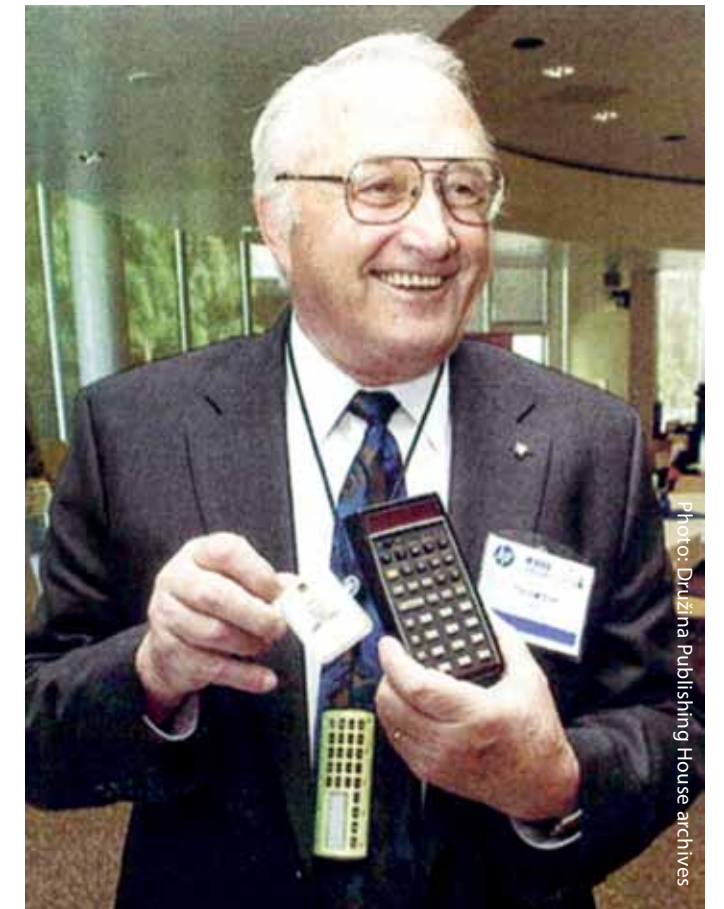


Photo: Družina Publishing House archives



They were barely able to keep up with the orders and had to enter clients on waiting lists. HP-35 was selling successfully between 1972 and 1975, and was followed by upgraded versions.

LONG LIST OF PATENTS

France Rode constantly developed new challenging products. After leaving the Hewlett-Packard company, he started his own business and was involved in the development of contactless radio frequency identification chips (RFID) and satellite signal receivers (GPS), which are used today in the majority of mobile phones and navigational devices for vehicles. One of his ingenious inventions was also the workplace entry card. Rode also participated in the development of the first laptop. He worked on the electronic lock and key system and some other security devices.

Although the successful engineer with a fantastic career retired in 2009, he is not short of new ideas. He believes that 3D printing will have a great impact on the future of technological development. He is certain of the success of 3D printers, which will be able to transform virtual objects into real ones.

Women select colour

The first test calculators were made from a beige-coloured plastic. Such models would probably be sent for production had Bill Hewlett not taken one sample home where his wife suggested that black would look more elegant. Of course, the colour had to be changed immediately.

Rode rejects an offer from Apple

Steve Jobs and Steve Wozniak did their traineeship at the Hewlett-Packard company, where they later presented their first prototype of the Apple computer, but were rejected at the meeting on the grounds that it was too simple for HP and that no one would want to use such a device. Jobs and Wozniak left the company and started their own business. When Rode was leaving the Hewlett-Packard company, they invited him to the Apple company. He rejected their offer because he decided to venture on his own and concentrate on his own inventions.

One dollar per invention

It is interesting that Rode with his exceptional knowledge and acknowledged inventions never became a millionaire. A special approach was applied in the Hewlett-Packard company regarding innovations and inventions and the emphasis was on the collective spirit of developing. An individual was awarded for each new idea or invention the sum of one dollar. Rode said that even after he had left the company, he was never able to capitalise on his achievements accordingly. He nevertheless felt fulfilled and very rich.

The book *Slovenian-American Inventors and Innovators*

Many inventions that we may take for granted were made by Slovenians who left their homeland, and their descendants who left their mark in the new world. The book *Slovenian-American Inventors and Innovators*, written by Edi Gobec, presents more than a hundred Slovenians who succeeded in the USA with their innovations and inventions. Many of their accomplishments have literally changed the world – not only in technology, where, for example, Joe Sutter, the constructor of Boeing 747, and France Rode, the inventor of the first pocket calculator, accomplished remarkable achievements. Slovenians also made a number of important innovations and inventions in medicine, among whom Gordon Vehar should be mentioned, who made significant contributions to a more successful treatment of haemophilia, heart attacks and cancer. The numerous life stories included in the book show how Slovenian innovativeness, commitment, perseverance and courage contribute to the overall human progress. This year, *Slovenian-American Inventors and Innovators* will also be published in English.

Engineer and inventor France Rode developed the legendary HP-35 pocket calculator and is the holder of some 25 patents in the fields of computing, satellite navigation and radio frequency identification.



START-UPS & CO-WORKING

New trends in entrepreneurship and conducting business

DANIJA MAŠIČ

Photo: "INITIATIVE START:UP SLOVENIJA / HYPERLINK "HTTP://WWW.STARTUP.SI"

Unemployment, population growth and rapid technological change prompt the development of new products, new jobs and new business ideas. In entrepreneurship we see many start-ups, and now there is also a new way of conducting business – co-working.

Co-working entails sole-proprietors and other professionals sharing working premises. The production hall of the Mladinska knjiga publishing house measuring 1,600 square metres, which was once one of the largest printing facilities in south-east Europe, is an exciting example of this trend.

The City of Design was created in it, providing areas for co-working where 66 people can hire work desks at, as well as 20 studios.

The co-working joint premises, operated by the Big Institute directed by Zmago Novak, are only part of the City of Design, which offers possibilities for co-creating and serves as an urban camp for socialising, creating, and exchanging skills, knowledge and services. The shared office concept, a type of co-working, was introduced in 2011 by the Young Entrepreneur Institute, which in its office at its current location combines several entrepreneurs and a few occasional clients.

To join products of Kickstarter companies under one roof, Nejc Leskovar and Klomen Smrtnik from the Desnahemisfera design studio and the Woodstock team, hired business premises on the promenade Čop Street in Ljubljana, where the brands and projects of promising start-ups are combined under the title, Brands of Friends.

NUMEROUS START-UP PROGRAMMES

The Initiative Start:up Slovenia was established to enhance and form national programmes for promotion of entrepreneurship and to provide a network of comprehensive support for launching and establishing start-up companies in Slovenia.

The holders of the initiative, Venture Factory and Technology Park Ljubljana, and their strategic partners, the Chamber of Commerce and Industry of Slovenia and Coinvest, manage its development. To support business ideas of students, the Ljubljana University Incubator was developed within the framework of which a start-up camp programme or an accelerator was organised, where young entrepreneurs develop their skills in the start-up centre. The accelerator depends greatly on state resources whose funds are compensated for in the form of created jobs and new products.

Urška Sršen, co-founder of the Bellabeat start-up, is according to Forbes one of the thirty young Europeans under the age of 30 who are transforming the world. Her start-up, which she co-founded with Sandro Mur, was selected as the best young company in health care. The famous product of Bellabeat is BabyWatch, a product which with the help of a transportable ultrasound headphone attached to a smart phone enables pregnant women to listen to the heartbeat of babies in their bellies. The Bellabeat company, which develops systems in perinatal and neonatal care, employs 60 people, and with different teams in Zagreb, San Francisco and Shenzhen develops smart jewellery, the LEAF, which tracks women's activities, sleep and menstrual cycle. In addition to her business ventures, Urška also finds time for sculpturing and kiting.



Zoic Bar is the renamed start-up of the original Buzzmade. The research in the field of insects and development of products for human consumption is the idea of Domen Krč, which came about while listening to lectures at the faculty. Together with Krištof Horvat and Matjaž Vidmar, Krč started a start-up. Their first investment was the purchase of 20 kilograms of mealworms. They now breed, pasteurise and dry mealworms and then grind the dry mass. The flavour is good, similar to nuts. The product contains 50 per cent of protein, 25 per cent of fat, 10 per cent of fibre and is rich in Omega-6 and Omega-3 fatty acids. The bar does not contain gluten or lactose. The exoskeleton of mealworms is supposed to contain the important building block of joints and their composite parts, i.e. glucosamine.

The insects intended for human consumption are said to be an excellent potential source of protein in future since little feed is needed for their rearing and less drinking water is used.

This enables the setting up of undemanding breeding with minor emissions. Insect diseases are not transmitted to people and CO2 and methane emissions are negligible due to simple breeding. There are some two thousand insects in the world suitable for human consumption.

Musguard is a removable mudguard for the rear wheel of a bicycle designed by industrial designer Jurij Lozić for his own needs. The mudguard is made of polypropylene and comes in various colours. It is light, removable, simple, durable and cost-efficient. Its greatest advantage is that it can be removed easily when not needed. Since no comparable product was available on the market, Lozić registered his brand.

The 4th Office platform is a brand of the MARG Inženiring company. The 4th Office is a cloud workspace solution enabling simple business transactions and allowing the staff to do their work at any time irrespective of where they are situated. In 2015, the 4th Office platform, which employs 50 people, was among the most successful Slovenian start-ups when it comes to acquiring investors.

The Safe-Cover is also a product invented for personal needs – while on vacation by sea – by entrepreneur Miha Merlak. An open can left outdoor is unprotected against insects, while Safe-Cover enables safe and hygienic drinking from a can.



Start-up companies are temporary organisational units organised in uncertain circumstances where the development of target-oriented products is taking place. These companies develop new and innovative products, which will solve problems of their future clients. With the metrics model, they recognise the needs of individuals and can implement an appropriate analysis for the suitability of their activities and draft the correct strategy for the realisation of their objectives.

Co-working is a modern form of conducting business, which enables temporary or permanent sharing of the business environment. The advantages of such an environment include socialising, which stimulates creative cooperation and thus enhances the efficiency and productivity of individuals and offers more possibilities for open communication and networking. The shared office reduces the costs of companies which are still in the phase of forming ideas and have not yet fully developed their products.

QUADROFOIL

A revolutionary vessel

POLONA PREŠEREN
PHOTO: QUADROFOIL ARCHIVES



Quadrofoil is a completely new type of watercraft, revolutionary in its design and purpose. Developed by a high-tech Slovenian company, Quadrofoil is quiet, ecological and aesthetic, and reaches a top speed of 40 km/h without creating any waves.

It was designed to respond to the nautical market's need for a vessel with driving characteristics resembling the manoeuvring of a car. Moreover it is energy-efficient and does not pollute the environment. We are already familiar with energy-efficient and ecological vehicles and aircraft (Tesla and Pipistrel), but this is the first product with those qualities designed for the nautical industry.

"Throughout the entire project, we were led by the idea of constructing a watercraft, which would not merely be an advance in design and high technology. We wanted it to contribute to cleaner salt and fresh water and to a cleaner planet, which we have borrowed and received to manage and upkeep for our children and their descendants. It is our responsibility to leave them their inheritance in the form of a preserved environment and enable them to live and create in a healthy environment," says Marjan Rožman, CEO of the Quadrofoil company.

The trends in reducing emissions in road and air traffic have been present for some time, while the nautical industry lagged behind in the field of producing vessels, which would meet the strictest regulations in limiting emissions into the environment. "We want to change that. We also seek support and understanding from international decision-makers. In this regard, we particularly refer to ecological initiatives for the buyers and owners of electric vessels."

SLOVENIAN KNOWLEDGE

The Quadrofoil project is the result of a Slovenian team of experts led by Simon Pivec, R & D Director, who is the mastermind behind the idea and the co-designer of the vessel.

At the end of 2011, he got an idea about a vessel with underwater wings and the first prototype was made six months later.

A year later, it was presented at the Internautica boat show in Portorož. The response from the public and visitors was exceptional. The company also received the Project of the Year Award.

"At the end of 2014, one of the most important decisions was made, when we assessed that the vessel was ready for testing on the market, i.e. the collection of pre-orders. We organised a market-

ing campaign, into which we invested substantial funds, particularly in the making of a film, which has had almost one million views on YouTube. It has also exceeded several million views on web-based networks in Eastern Asia," says Mr. Rožman.

Their success escalated. They sold all vessels from that series and received more orders than they could meet with their current production resources. Their order book is full until July 2016.



GREAT DEMAND

The vessels are displayed all over the world. At the end of 2015, Quadrofoil was featured at the international fair in Qatar from where it went to Dubai. This February, the vessel was put on display at the Eurasia Boat Show in Istanbul and in April it is going to Singapore Yacht Show.

Visitors' responses are incredible. The design of Quadrofoil is what first attracts the eye. There were many attempts in the past of designing attractive vessels with hydrofoils; however, many manufacturers merely tried to upgrade the "classic" form of the vessel. "We completely changed the concept and made a vessel which exceeded the nautical design. This is also one of the reasons for the constant inflow of queries for setting up Quadrofoil on mega yachts worth several millions. When planning, we knew that an attractive design would not be enough and that driving characteristics and energy efficiency would also play an equally important role," explains Marjan Rožman.

We thus made and patented a steering system, which enables exceptional agility and driving characteristics, which so far were only possible when driving a car. Their engineers also combined a high-performance electrical engine with hydrofoils, which drastically reduces the costs (less than EUR 1 per one hour of driving) and may be lower by fifty-fold if compared with petrol-fuelled vessels.

BUYERS FROM AROUND THE WORLD

"Our market is global because we believe that every sea, river and lake needs Quadrofoil. Our clients come from every corner of the world: the United Arab Emirates, Singapore, Croatia, Russia, China, the USA, Spain, Switzerland, Hungary, Australia, the Netherlands, Monaco, Mauritius, Turkey etc."

They are particularly happy to receive queries from areas which are saturated with exhaust gases or overburdened with road traffic. Quadrofoil's contribution in such areas is so much greater. Image driving to work or an afternoon errand along city river canals: no rush hour, on less than EUR 1 per one hour of driving and no consequences on the environment.

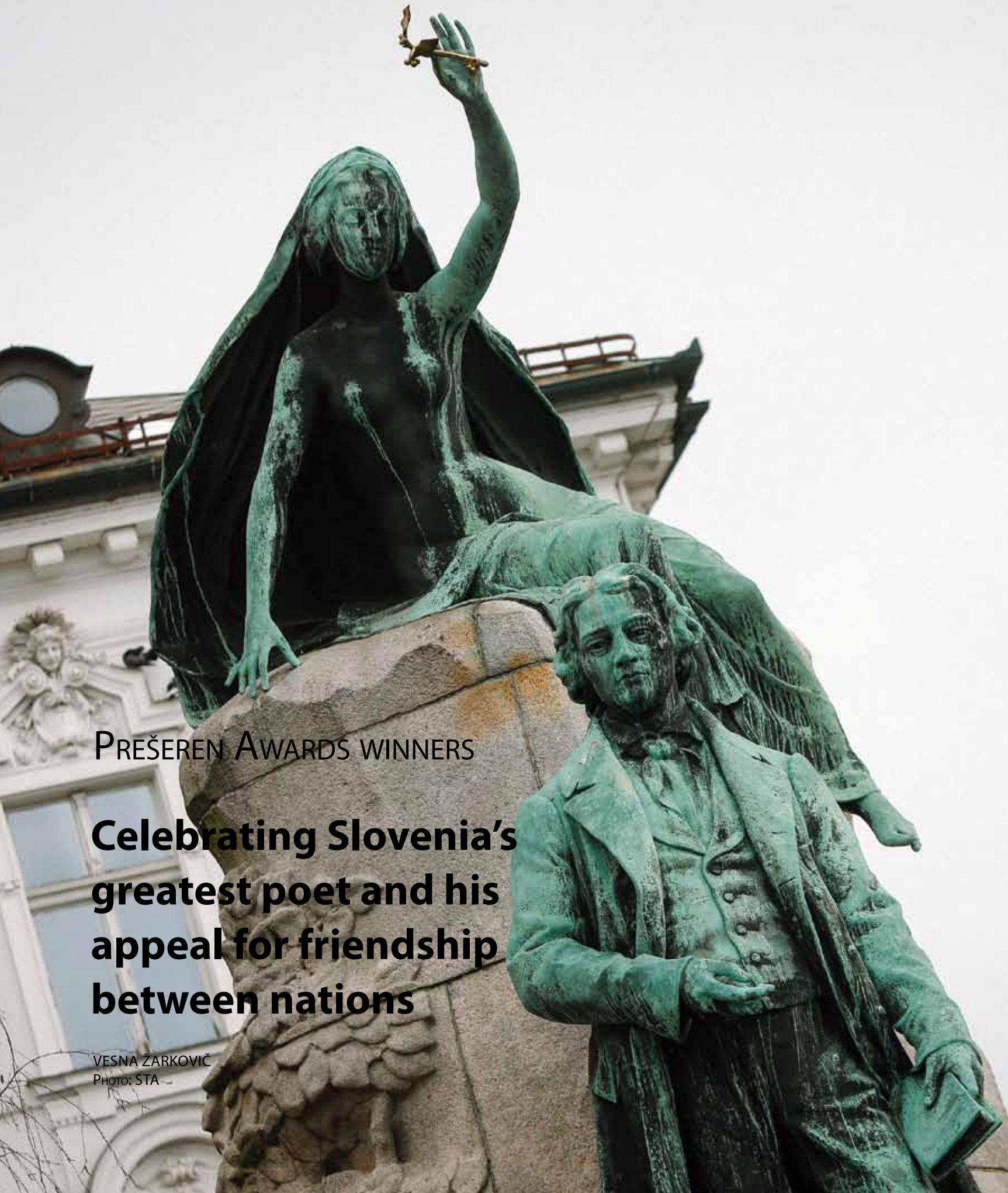
The versatile and successful future of the ecological approach in connection with supreme design is also denoted in the many requests for representation which the Quadrofoil company receives from all over the world. So far, they received over 850 requests for representation from 120 countries.

About Quadrofoil

Quadrofoil is a high-tech development company with a team of skilled engineers, nautical enthusiasts and visionaries, who designed and manufactured the world's first fully electric powered and completely environmentally friendly personal hydrofoiling watercraft.

Using C foil technology, Quadrofoil's underwater wings and a patented steering system enable the watercraft to lift above the surface at just 12 km/h and offer the driver a unique feeling of floating above the water and exceptional driving characteristics. The Quadrofoil is also very energy-efficient as its operating costs are below EUR 1 for one hour's drive. Electrically powered engine produces zero emissions, which means that this electric personal hydrofoiling vessel can be driven on lakes, rivers, seas and ecozones, where most motor boats and PWCs are not allowed.





PREŠEREN AWARDS WINNERS

Celebrating Slovenia's greatest poet and his appeal for friendship between nations

VESNA ŽARKOVIČ
Photo: STA

On 7 February, the eve of Slovenia's national Culture Day, a ceremony took place at Ljubljana's Cankarjev dom to present Prešeren Awards and the Prešeren Fund Awards. The artistic programme was created by director Mare Bulc, who showed how the last verses of Franc Prešeren's poem, A Toast, envisioning a better world and peace between nations, sound in different languages and in various interpretations. Janez Bogataj, President of the Prešeren Fund Management Board, stressed that Prešeren Day, which is also a national holiday, is particularly requisite at a time of unresolved questions, general crisis, dissatisfaction and doubt. According to Bogataj, the Prešeren Awards celebrate individuals who have risen above the average and dared to question the artistic field in which they create. This is also rare at a time of uniform thinking, although necessary for the freedom of thought.

This year's Prešeren Laureates were the writer, Tone Partljič, and composer, Ivo Petrič. Six Prešeren Fund Awards were conferred to composer and choirmaster Ambrož Čopi, director Janusz Kica, painter Aleksij Kobal, poet Cvetka Lipuš, sculptor Mojca Smerdu and actress, dancer and performer Katarina Stegnar.

GREAT PREŠEREN LAUREATES: TONE PARTLJIČ AND IVO PETRIČ

Partljič is a writer who has had a great impact on the Slovenian literary and theatrical fields in the last fifty years, and Petrič's works are considered some of the most recognised and influential in modern Slovenian music.

Partljič is a contemporary Slovenian dramatist who has dedicated most of his writing talent to comedies, which reflect social and political developments. His comic effects are also based on the elements of universal, timeless comedy, which makes many of his older comedies still relevant today. Partljič is best known to the broader public for his comedy, My Dad, the Socialist Kulak, which is considered the most successful Slovenian comedy after the Second World War and has been performed numerous times on different stages and was masterfully adapted for the big screen and television by Matjaž Klopčič.

In the citation, Mateja Pezdirc Bartol wrote that Partljič was a classic of Slovenian comedy since he was distinguished by exceptional knowledge of comedy traits, whereby he continues the tradition of Linhart and Cankar and further develops it in his own manner and style. As a man of theatre, he has great command of character, situation and linguistic comedy elements, which makes him unique, and the audiences always reward him for his understanding of the underprivileged man.



He is also a master of prose and has published over twenty works for adults and children. We must not neglect his contribution to the development of Slovenian film, television series and films, important and high-profile works, for which he wrote scripts that were frequently based on his own plays, says the citation.

The scope of Petrič's work is extensive and diverse, and includes orchestral, chamber and solo pieces. Matjaž Barbo wrote in the citation that the composer was characterised by his uncompromising dedication to his own poetic principles, contrasting as they may be to mainstream trends and the principles of average taste. At the beginning of his career in conditions of unnatural optimism of the predominant Socialist realism of the 1950s, this starting point ignited Petrič's youthful resistance and led him towards strict modernism.

Later on, Petrič's non-conformity led him away from the mainstream and generally established patterns of modernist desire for the new and dictated that his creative expression remain loyal to his own poetic principles. Today, he is one of the most frequently performed modern Slovenian composers. His works were performed on some of the most renowned concert stages in Slovenia and abroad, and were published on many records interpreted by some of the top musical performers.

CULTURE OF DIALOGUE AND MUTUAL UNDERSTANDING

The annual central celebration of Prešeren Day took place at the poet's birthplace, Vrba na Gorenjskem. The official speaker at the event was the President of the Republic of Slovenia, Borut Pahor.

President Pahor called upon Slovenians to observe the culture of dialogue and mutual understanding.

."Today may be a holiday on which we do not celebrate culture only in the narrow sense of the word; when not only language, poetry or art are in question, but also we, as people and relations between us – cultural relations in the broadest sense of the word," stated the President. Despite the rain, several hundred people listened to the

President's address and even more visited Prešeren's birthplace throughout the day.

Many events were organised all over the country in the light of the Culture Day. The annual reading of Prešeren's poetry in front of his statue in Ljubljana started at noon, and simultaneously took place also in Maribor and Nova Gorica for the first time. The event organised by the Slovenian Association of Dramatic Artists attracted many lovers of Prešeren's poetry in spite of the bad weather.

KRANJ RETURNS TO THE PERIOD OF PREŠEREN

On the Culture Day, the town of Kranj returned to the 19th century, the time when France Prešeren lived and created there. For the 14th consecutive year, Prešeren Fair is reviving the memory of Slovenia's greatest poet. The event has developed from its modest beginnings into one of the most recognised events organised on the occasion of the Culture Day. The old town centre of Kranj attracts annually some 20,000 visitors from Slovenia and abroad.

Prešeren Fair is an event where the present meets the past.

On 8 February, the old centre of Kranj at least partly transforms into the town, which it once was at the time of Prešeren, who arrived in Kranj 170 years ago and spent the last two and a half years of his life there. The nostalgia for the Prešeren's era is recreated by over 800 people from 150 organisations. These include organ grinders, actors dressed in the 19th century costumes, innkeepers offering famous dishes from that period, craftsmen and sellers of home-made products, handicrafts and antiques. Visitors listened to the traditional recitations of Prešeren's poems. This year, a special treat was also the performance by mezzo-soprano, Manca Izmajlova.

The event is the result of joint efforts by numerous folklore groups and cultural societies from all over Slovenia, and particularly the Museum of Gorenjska, Kranj City Library, Prešeren Theatre Kranj and other holders of ethnological heritage in Kranj. Prešeren lived and worked in Kranj from 1846 until his death on 8 February 1849.





MLADINSKO THEATRE

An innovative Slovenian youth theatre

POLONA PREŠEREN
PHOTO: STA

Of all Slovenian theatres, the Mladinsko Theatre it is the one that most frequently tours around the world. Since starting touring in 1975, the theatre has visited a host of cities and international theatre festivals. It was established in 1955 as the first professional theatre for children and young people in Slovenia. In the 1980s, it re-focused on interdisciplinary integration of different theatrical approaches.

Today it is renowned for its broad array of innovative poetic productions by various young directors and for its phenomenal ensemble energy. This is the Peter Brook approach towards acting, which is not based on a hierarchy of stars, but on an acting laboratory integrating individual virtuoso parts into the strong whole of the acting ensemble. Their performances address universal paradoxes of civilisation and on the problematic issues of new times and spaces.

The theatre will continue to develop the code of new theatrical practice, new visual paradigms, new views on the classics, modernism and postmodernism.

At the Mladinsko Theatre, the actor, director, choreographer, set designer, musician... research and develop, risk and create in order to develop a new spectator through their gestures.

THEATRE STORIES

Over the decades of creating and staging performances many interesting stories happened in the theatre. Several juicy anecdotes circulate about certain performances and their beginnings. One of the interesting anecdotes is the one about the première of *Leviatan* from 1985 about which the ensemble found out from newspapers since no one took seriously the impulsive director Ljubiša Ristić who announced the première only a few days before on the basis of a sudden inspiration.

The performance that had the most repetitions (at least according to the memory and the archives since the data from the first decades of the theatre were unfortunately lost) is *Pippi* directed by Vito Taufer. But before *Pippi*, the most popular little girl was *Alice in Wonderland*. Currently, the most popular performances among the audiences are *Pavla Above the Precipice*, which was inspired by the life of the moun-

tain climber Pavla Jesih, and *Rok's Depth*, a story of the immortal Slovenian ski legend, Rok Petrovič.

The location of performances was not always confined to the premises of the theatre located in the centre of Ljubljana. The large Concert Hall in Postojna Cave and the great reading room in the National and University Library also served as stages for their performances. Some of the more unusual sites used for the setting up of their theatrical performances also include the lawn in front of the Piran church, a railway wagon (named the rocket and used on tours), a field next to a farm in Switzerland, a shipyard in Izola, the riding ground at Secondary Agricultural School Grm Novo Mesto, Ljubljana Castle and the citadel in Budva, Montenegro.

In many performances, the actors have had to put on animal costumes, while on many occasions live animals were also incorporated in the plays. One of these was *You Never See Me Where I See You*, which was premiered at the riding ground in Novo Mesto, where the audience was able to see four horses, a tortoise and a camel (the latter two were borrowed from Ljubljana Zoo). Goats, chicken, doves, white crested Polish hen, canary, python, two Russian wolfhounds, a Labrador Retriever and a group of lively rats were also featured in certain performances.

SLOVENIA'S AMBASSADOR

Mladinsko is the theatre which consistently integrates Slovenian theatre into foreign theatrical currents.

Cultural ambassadorial work has always been one of the prominent objectives of the theatre. Their performance which is most frequently presented abroad is *Silence, Silence, Silence*. On one of their tours, they received a 24-minute ovation of applause in Ciudad de México. The most important aspect of touring is that in this way the art surpasses cultural, linguistic and geographical barriers.

SEASON AS NEVER SEEN BEFORE

This year's season will be diversified with a special season ticket, Bay of Piran, in cooperation with the Croatian National Theatre Ivan pl. Zajc from Rijeka. Mladinsko is certain that where the politics cannot reconcile, the arts may intervene. The aim of the programme, which significantly enriches the cultural offer of both cities, Ljubljana and Rijeka, is to offer the theatre-goers an opportunity to broaden their cultural horizons. "We believe that integrating plays of two programme-related theatres into a joint seasonal programme is a step in the right direction," they are convinced.

All performances will be subtitled. In addition to an entrance fee, the season ticket also includes transport from Ljubljana to Rijeka, a guided tour of the city and dinner. "The audience will have the opportunity to not only see the performance but to take a walk along the streets of both towns, visit galleries and museums, have a meal in any of the Ljubljana or Rijeka restaurants, and finally to determine whether seabass tastes the same on either side of the border, and that the Adriatic flora and fauna are politically and nationally neutral," explains Goran Injac, Artistic Director of the Mladinsko.

"The cooperation involves two programme-related theatres from two countries, which are divided by the issue of the border in the Bay of Piran," says Injac. "The Bay of Piran is a common point of conflict which touches upon politics and the needs and desires of the neighbouring countries. We decided on the name of the season ticket together with the responsible people of the Rijeka theatre because we are certain that the issue of political relations must be placed in a problematic context now when we are initiating such regional cooperation – a joint seasonal programme. We wish to introduce the creativity of the theatre in Rijeka to the audiences in Ljubljana and vice versa: present the theatre-goers in Rijeka the performances of the theatre in Ljubljana. Considering the fact that both theatres have a similar political and socially-critical programme, it is our duty to discuss sensitive topics in both countries."

Mladinsko ON TOUR in 2016

- Theater im Theater im Pfalzbau, Ludwigshafen, Germany (March)
- Festival Iberoamericano de Teatro de Bogotá, Colombia (March)
- Slovenian Repertory Theatre, Trieste, Italy (April)
- FIT-BH – Festival Internacional de Teatro Palco & Rua de Belo Horizonte, Brazil (May)
- Wiener Festwochen, Vienna, Austria (May)
- Kunstfest Weimar, Germany (August)
- MOT, Skopje, Macedonia (September)
- Zürcher Theater Spektakel, Zurich, Switzerland (August)
- HAU Hebbel am Ufer, Berlin, Germany (September, October)
- MESS, Sarajevo, Bosnia and Herzegovina (October)
- and regularly in Rijeka, Croatia.





PETRA KOVAČIČ

First violin in the Vienna Philharmonic

POLONA PREŠEREN
PHOTO: ANDREJ GRILC

A life's dream recently came true for a young talented violinist, Petra Kovačič: she became a first violin in the Vienna Philharmonic. After a successful audition, she is taking her place in one of the world's most famous orchestras.

Kovačič first encountered the violin at a very tender age. She was immediately taken by the instrument and started playing it when she was five. "I practised regularly, attended competitions and held my own recitals. I continued my education at Ljubljana Music and Ballet Conservatory, and in 2009, at the University of Music and Performing Arts in Vienna. I've wanted to play in the Vienna Philharmonic Orchestra ever since I was a little girl, when I found a CD at home with Beethoven's *Missa solemnis*."

Every new year, her family would gather and watch the New Year's Concert of the Vienna Philharmonic on TV.

One of her goals was to play in this orchestra and her great wish has now come true.

She started her new job this February. We spoke just after she had signed the contract and the excitement was still at its peak. In a good sense.

Kovačič has been living in Vienna for seven years. In addition to her studies, she also attended various master courses, among these were also the courses organised by the Vienna Philharmonic every August in the Trenta Valley.

AUDITION

As one of the most renowned orchestras, auditioning for the Vienna Philharmonic demands a serious approach. "For every musician, the preparations for the audition start with the first contact with the instrument. This means tackling technical challenges and performance anxiety from public performing at an early age. Direct preparations for the audition started for me in October, and weren't any different to everyday practice of the instrument. The only difference was that I took more time for the prescribed programme and I studied it in greater detail."

The auditions for each orchestral instrument are different. They differ depending upon the prescribed programme and the course of

events on the day of the audition, which starts in the morning when the candidates first draw the numbers, which determine their order. The jury composed of colleagues from the orchestra selects the programme for the first round, which is played by all candidates in the determined order. After the end of the first round, the jury sums up points and informs the candidates which of them will perform in the second round and which programme they want to hear. The number of rounds depends on the jury and how long it takes them to arrive at the decision on which of the candidates is the most suitable for the vacant position. This is an exceptionally stressful situation, which is surmountable if the musician is well prepared and confident in their abilities.

The waiting was the most tiring. The candidates performed the first two rounds behind a curtain. When only three candidates remained on the short list, they performed the required pieces of music directly in front of the jury. When the jury told her that she had been selected, she was ecstatic. Nevertheless, Kovačič is not the only Slovenian playing in the Vienna Philharmonic.

Since 2011, the double bass player, Iztok Hrastnik, has also been a member of the Philharmonic. He was the first Slovenian in the orchestra after one hundred years.

INSPIRATION

Only Petra knows best how much hard work was invested in her achievement and how many sacrifices. How little time she had to relax during holidays and vacations if she wanted to make progress in her career. She absolutely enjoys music, but playing is hard work and it is always necessary to set high goals. "My goal has always been to do something which I enjoy most effectively and to find time every day for myself, friends and family, it is from there that I get my energy for work," she says.

Yes, Petra is truly an inspiration for all who venture on the musical path and for those of us who derive great joy and pleasure in music.



SKI JUMPING FINALS IN PLANICA

Slovenian double win wraps up World Cup season

VESNA ŽARKOVIČ
PHOTO: STA

Peter Prevc and Robert Kranjec wrapped up a dream season for Slovenian ski jumping on March 20, taking first and second place in the second double Slovenian win of the World Cup finale on the giant hill in Planica. Prevc, who had secured the overall World Cup win prior to Planica, cemented his place in the history books with the record 15th individual victory of the season and 22nd podium finish. The 23-year-old jumped 238 and 241.5 metres, beating Kranjec, who flew 234 and 233 metres, by 15 points. Johann Andre Forfang of Norway came in third. In the World Cup standings Prevc beat runner-up Severin Freund of Germany by over 800 points with 2,303 points won in the season, another all-time record.

His win wraps up a season that sports commentators are already describing as one-of-a-kind. The star jumper was quick to point out that such an extraordinary season is unlikely to become the norm.

“A lot happened this year, I was strong, performed well throughout. I have warn that it will be difficult to repeat such a season,” he said.

Prevc not only won the overall rankings and broke the individual records, he also won the prestigious Four Hills Tournament and the separate ski-flying rankings, where Kranjec finished second.

The 2015/2016 season also established Slovenia as a ski jumping superpower, as Prevc pulled the entire team ahead. In the Cup of Nations Slovenia came in second for the first time in history, ceding only to Norway, the birthplace of ski jumping. “We took everything we could,” head coach Goran Janus told reporters. The team is also very cohesive, with key members close friends. This was evident throughout the four days of competition in Planica, as the team members cheered each other on.

Prevc’s dream season was also reflected in attendance, as about 100,000 people came to Planica for the four days of competition. Planica, the symbolic centre of Slovenian ski jumping, was a curse for Prevc last year, with a weak final jump costing him the overall World Cup win.

PLANICA: GLOBAL GEM WITHOUT RIVAL

Between 17 and 20 March, Planica demonstrated its unrivalled capability to host and organise major competitions and sporting events. Boasting over 13,000 ski jumps and other activities in 2015, Planica has become the most utilised ski jumping centre in the world. Every year, the ski jumping finals in Planica represent a full-scale dress rehearsal for organising the world championship. The coveted prize of hosting such a prestigious event has now become a thoroughly realistic goal thanks to the completion of the Nordic Centre. Over the years Planica has developed into a sporting icon and a cherished tradition whose popularity and status have grown over the decades – a tradition passed down from generation to generation. Abroad, too, this finale of the ski jumping season in Planica is remarkably popular and viewed most favourably – after all, this is one of the few things that we Slovenians are known for and excel at.

It is said that a trip to Planica is a must for anyone visiting Slovenia since it has grown into one of our nation's most important tourist attractions. The Nordic Centre, combined with the great successes of Slovenian ski jumpers and the 80-year tradition of ski jumping in Planica, have become almost synonymous with the anthem, language or culture of Slovenia itself, and indeed they have come to represent a significant part of the nation's identity.

Planica is certainly one of the most recognised, iconic symbols of Slovenia – one in which Slovenia takes great pride.

It undoubtedly enhances the tourist offering and image of the country in the world, which has positioned itself as a green, active and healthy destination, and for this it is rightly renowned throughout the world.

Between 130 and 150 million TV viewers across the globe watched this year's competitions in Planica. Some 100,000 spectators came to Planica for the event and watched the competitions in person. And why is ski jumping so popular in Slovenia? Because of its tradition. Slovenians have been involved in ski jumping since the 1930s and 1940s. This association is much longer than with other sports, which is a major advantage in comparison with other sporting activities.

SLOVENIA IN BID TO HOST WORLD CHAMPIONSHIP

The Ski Association of Slovenia is mounting a bid to organise the Ski Flying World Championship in 2020 and the Nordic World Championship in 2021. The decision on the organiser will be made in June at the International Ski Federation (FIS) Congress in Cancun, Mexico. The FIS Council will hold a secret ballot on the three candidates: Planica (Slovenia), Oberstdorf (Germany) and Trondheim (Norway). In order to win, Slovenia needs nine votes from a total of seventeen Council members. Currently the largest event for which Slovenia is bidding on the international arena requires political support of all stakeholders in Slovenia.

This is an exceptional opportunity for Slovenians to present themselves globally since the history of Planica is rich in sports achievements and holds a significant place in the hearts of Slovenians.

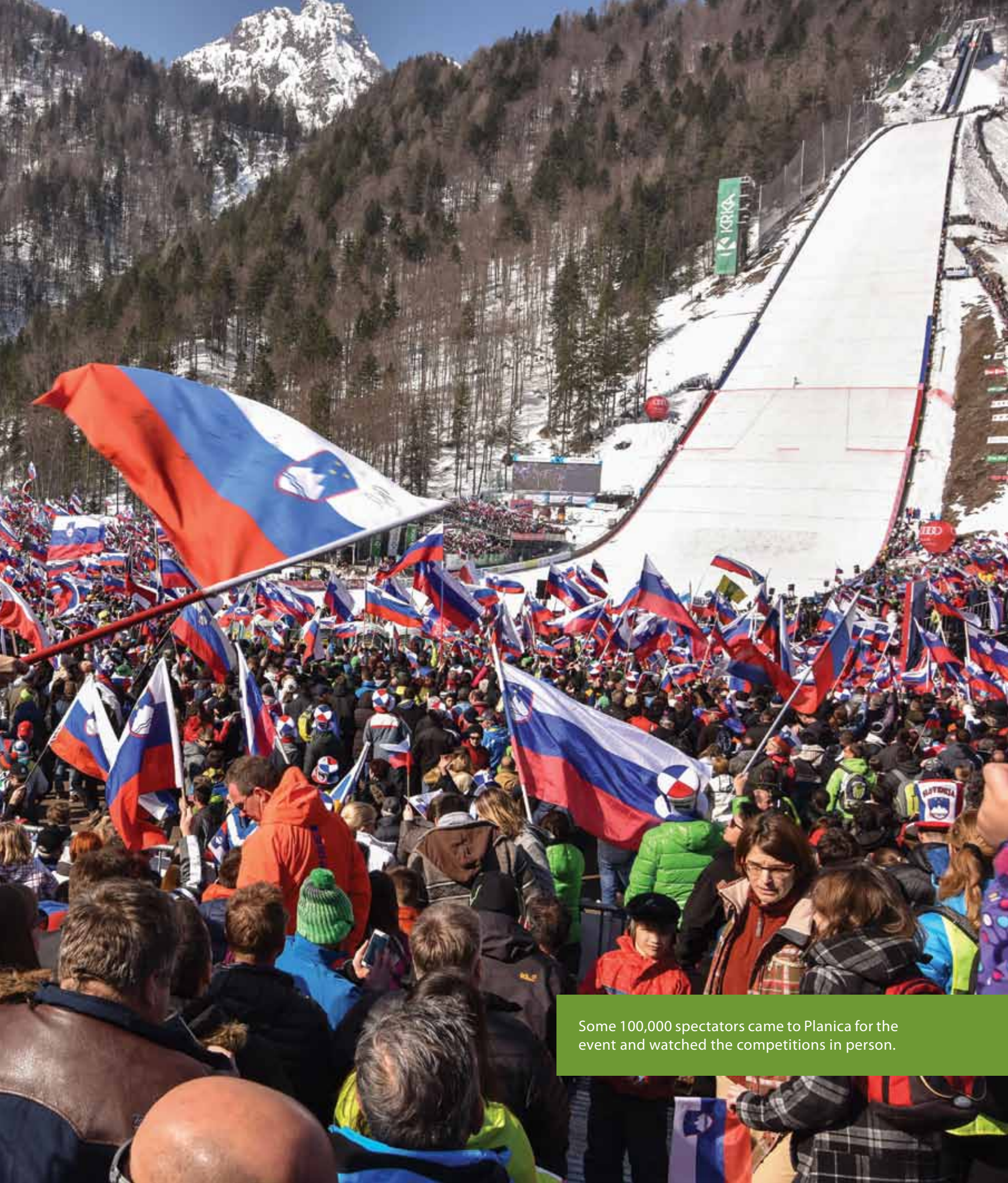
Planica is the only candidate for the ski flying world championship, whereas in the Nordic category, it is competing against two strong candidates and for the third consecutive occasion.

The ambassadors of the candidacy are Petra Majdič, former cross-country skier and an Olympic medallist and Franci Petek, former ski jumping world champion. Slovenia cooperates closely with the neighbouring municipalities Tarvisio in Italy and Villach in Austria. Villach would even provide funding for Slovenia's candidacy since it is aware of the importance of such an event in its vicinity, which would attract over 1,500 competitors and accompanying personnel. Furthermore, the visitors would occupy all available accommodation facilities in the Gorenjska region and in the surrounding areas of Tarvisio and Villach.

With the help of EU funds, a new Nordic centre was constructed in Planica worth EUR 42 million, which is the most modern centre for cross-country skiing in the world. The centre includes eight ski jumping hills from a 20-metre jumping hill to a 225-metre flying hill. It is distinguished by modern cross-country trails with support technology for the production of artificial snow and appertaining infrastructural facilities. The centre is sited on the edge of the Triglav National Park and complies with all environmental requirements. Since the Nordic Centre was constructed almost entirely with EU funds, it is only right that it displays its applicability and character in hosting great sporting events.



Robert Kranjec (left) and Peter Prevc (right) wrapped up a dream season for Slovenian ski jumping, taking first and second place in the second double Slovenian win of the World Cup finale.



Some 100,000 spectators came to Planica for the event and watched the competitions in person.

55 YEARS OF BROADCASTING FROM PLANICA

In 1960, TV Slovenia organised the first ever international broadcast of a sports event from Planica. Even cattle were used to transport the equipment. Some 24 million viewers all over Europe were drawn to their TV sets. In 2015, the signal from Planica was broadcast by three times as many TV stations to more than 100 million viewers worldwide. In Slovenia alone, the event was viewed by every fourth citizen.

In the first years of broadcasting, television crews slept in tents in the snow. They were the pioneers of perfect shots and camera turns, which were the result of local knowledge while presenting the great extent of the ski flying hill. In 1969, broadcasts featured graphics for the first time, and the viewers were also able to see ski jumps in slow motion. Three years later, the broadcasting was in colour, and in 1994, another novelty was introduced – super-slow motion. With the help of miners from Velenje, a 70-metre tunnel was dug under the giant ski flying hill ten years ago. The distance from one end of the flying hill to the other is now shorter by half an hour. Nowadays, less camera wiring and cables are used as well; some 500 to 600 metres of cables less.

In the past, three cameras were used for broadcasting and now there are 23, and the cameramen play the key role in broadcasting. The position next to the take-off table is of the utmost importance. When jumping off the table, the competitors are only three metres away from the camera, and the cameraman must turn the camera even up to a speed of 100 km/h in order to follow the jump. During the 4-day competition in Planica, over 500 such turns are made. The cameraman's work is also dangerous. Prior to broadcasting, the safety rail on the TV tower is removed. The cameraman is positioned on the edge of the platform and equipped with a safety belt. He is attached to two anchors preventing him from slipping. The suitable positioning of over 40 microphones adds extra appeal and excitement to broadcasts. Microphones at the in-run and the take-off table, where five sound technicians catch sound, are also a Slovenian invention. When Austrians heard these sounds for the first time, they were certain that they were added effects.

The knowledge of the experts of TV Slovenia is appreciated also abroad. The broadcasting of ski jumping was thus entrusted to them at the Olympic Games in Turin, Vancouver and Sochi.



LILA LAPANJA

A young hopeful of the US ski team who speaks Slovene

POLONA PREŠEREN
PHOTO: US SKI TEAM ARCHIVES



Lila Lapanja is a World Cup skier who is a young hopeful of the US ski team, but has Slovenian roots; her father Vojko used to ski for the Slovenian national team and was Lila's coach until 2011. The love for skiing thus remained in the family.

Lila has dual Slovenian and American citizenship but competes for the US team, and she had her first experience of skiing in Sierra Nevada. Her father not only taught her to ski, but also taught her Slovene. Thanks to him her Slovene is excellent. Vojko skied together with Jure Košir and Mitja Kunc in a golden era of Slovenian skiing. In 1991, he went to study in the USA, where he met Lila's mother, Margaret Beiser, journalist and writer.

We spoke briefly with Lila during the European leg of the Alpine Skiing World Cup.

How was it growing up to a Slovenian father and an American mother in the USA? Did you keep regular contacts with Slovenia?

We were mostly an American family growing up, especially since I went to school in the USA. I remember before Skype was invented I would call my grandparents in Slovenia to say hello on the telephone. As soon as we got Skype, I would talk to my family in Slovenia almost every week and then visit during my summer vacation.

Your father was also your first coach. How does he influence your skiing performances now?

Yes, he was my coach when I was younger and he is still involved in my skiing career. We talk often about my training, racing and equipment. He gives me a great perspective outside of my team training. When I'm home we ski and train together and during the off-season I make him do fitness training with me. To see if he can keep up.

We perceive skiing as a national sport here in Slovenia; it's a huge part of our national identity. Are you aware that you are actually a typical Slovenian?

I love my Slovenian identity.

I feel lucky to be a ski racer who has a Slovenian/European connection. I feel at home in Europe where ski racing is a recognised sport. I am excited that I'm able to connect with my Slovenian fans by speaking the language as well.

What is your motivation?

My motivation is simple: master my skiing and racing experience, succeed at the top level in Alpine skiing and inspire people on my journey. I also envisage Olympic success on my odyssey.

Do you perhaps see yourself also a part of the Slovenian national skiing team one day?

I am proud to be a member of the US ski team and represent my country in sports. However, I will always be a part of the Slovenian ski team in spirit. Slovenia can claim me too since I have Slovenian citizenship.



CELJE, A CITY ON THE WATER

Restoring the pleasures of the Savinja River

BORUT BATAGELJ
PHOTO: HISTORICAL ARCHIVES CELJE,
KKK NIVO CELJE COLLECTION



The history of the third largest city in Slovenia is inextricably linked with water. Celje, first mentioned as the Celtic Keleia, was actually built on water. Settlers were attracted by the area's fertile fields, but it was swampy and subject to continual flooding due to the wide river basin of the Savinja, which eventually flows into a narrow valley towards Laško.

Around the year 270, the Roman Celeia was struck by a severe flood, which led to the relocation of the riverbed of the Savinja almost one kilometre towards the Miklavž Hill, where it still flows today. Floods are one of the most persistent nightmares for the people of Celje. It is a problem and irritation they hope to resolve once and for all with the recently implemented flood measures and regulation of the Savinja and its tributaries.

The Savinja once had a great impact on the everyday life in Celje, particularly through timber rafting, the laundering and drying of washing on its banks. In the second half of the 19th century, the river provided a great impetus to tourism. At that time, Celje was building its attractive image particularly thanks to the crystal clear Savinja.

Printed tourist guides gave Celje a new name: the jewel on the Savinja.

In addition to the famous history of the Roman period and the counts and princes of Celje, it was the water that attracted foreigners to the city. Many new bathing areas were organised on the edge of the city park after 1870, which obtained a common name, the Savinja baths. In the summer months, the city next to the crystal clear Savinja attracted to the water locals and foreigners, who were seeking refreshment in the river.

BATHING TOURISM

As one of the most renowned orchestras, auditioning for the Vienna Philharmonic demands a serious approach. "For every musician, the preparations for the audition start with the first contact with the instrument. This means tackling technical challenges and performance anxiety from public performing at an early age. Direct preparations for the audition started for me in October, and weren't any different to everyday practice of the instrument. The only difference was that I took more time for the prescribed programme and I studied it in greater detail."

Due to the then prevailing code of morality, the bathing areas were separated for women and men and glances over wooden fences were considered vices. In the period when a tense national situation prevailed, which separated Celje and its people in two, the bathing areas were also divided into German and Slovenian ones. The social life in Celje in the 1880s was also divided into male and female bathing sections along the Savinja. In 1899, Andrej Fekonja wrote: "These baths are a famous distinctive feature of Celje because they are the cheapest, very enjoyable and also healing ... both locals and foreigners come to cool down from the summer heat all day long; in the evening, you can see head next to a head bobbing in the water, and one can even say: Half of Celje is floating in the water."

According to the experts, the river with its warm springs and current even had healing powers: "Experienced doctors claim that the Savinja baths have the same effect on people's health as the baths in the nearby Dobrna and Laško health resorts. They have proved successful against gout, general weakness and are particularly beneficial for skin and nerves and accelerate general recuperation," wrote Fekonja.

The Savinja baths were once what many health resorts with their warm healing springs in the surrounding area are today, i.e. Laško, Dobrna, Rimske Toplice and Rogaška Slatina.

But they were even more than that since they had their urban, once strongly developed township hinterland, which created a successful story with the river and recognised in it great potential.

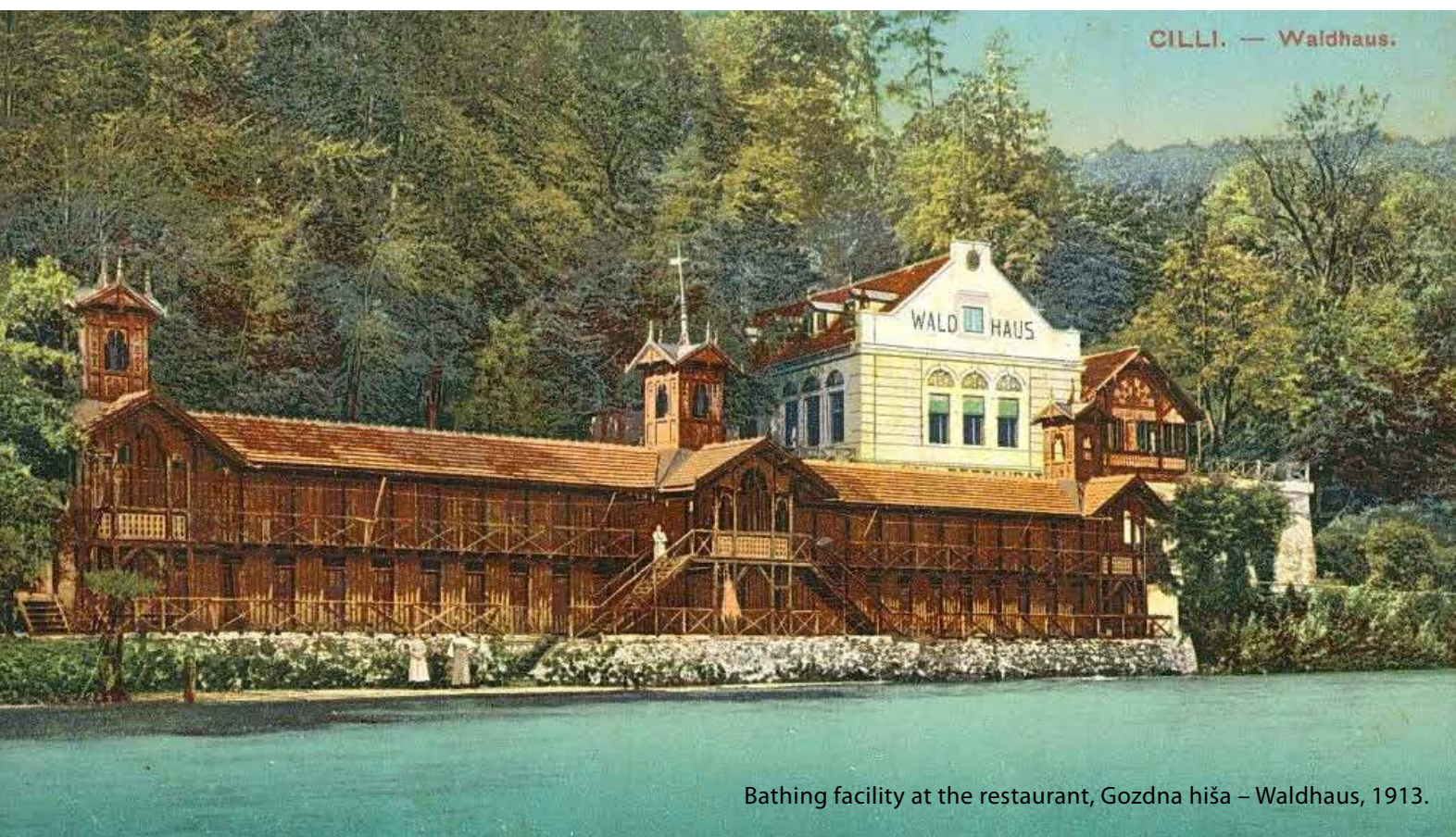
INDUSTRIALISATION OF THE CITY

The industrialisation of Celje located next to the Savinja, which ran parallel with the development of bathing tourism, severely interrupted this romantic image as the 19th century faded into the dawn

of the 20th century. If the arrival of the Southern Railway to the city in 1846 (Celje will be celebrating the 170th anniversary this June) enabled the development of tourism, it even further accelerated the start of industrialisation, while also contributing to the direct and long-term degradation of the environment. With the development of industrialisation along the upper river basin, the Savinja flowed through Celje ever more brown and foamy and utterly unsuitable for bathing. The coal mines on the edge of the Savinja Valley contributed significantly to the pollution by coal washing, including the tannery in Šoštanj, from which parts of skin and hair would drift all the way downstream to Celje. The tributaries which flowed through the eastern highly industrialised part of Celje also became very affected by pollution, particularly the Hudinja and the Voglajna rivers.

The latter river was renamed the "Black Nile" by the Celje newspaper, *Nova doba*, in the 1930s.

The situation has changed only in the recent decades and life in Celje, which previously deviated away, has now moved closer to the water again. A long and beautifully-kept promenade gives a buzz to that part of Celje where city and river converge, and a new bridge for pedestrians and cyclists was constructed last year between the newly renovated library and sports surfaces in the city park. In the summer, a special vibe is created at the city beach, where the partnership of the Historical Archives Celje, the Celje Museum of Recent History and the Celeia Institute of Cultural Events and Tourism last year prepared an outdoor panel exhibition, "The Savinja Baths". This reminded us of the golden era of Celje bathing tourism and opened



Bathing facility at the restaurant, Gozdna hiša – Waldhaus, 1913.

a new view of co-existence of the city with the river in the new era. The exhibition will be on display again in summer 2017.

ŠPICA BOATHOUSE

The promenade is further supplemented by a modern building of the boathouse at Špica.

The Špica boathouse is becoming a recognised event centre, where a growing number of keen swimmers take a swim in the ice-cold Savinja every 1 January.

A new modern kayak and canoe centre was established with the boathouse, which has obtained numerous successes with local clubs, organisers of competitions and top young sportspeople. The soul of the club and the boathouse is Dušan Konda, who has many ideas for further development of life by the Savinja. His desire is to construct a movable iron hydraulic dam with several chambers upstream from Špica, which would enable the construction of an open Celje beach by the Savinja with an arranged large swimming area and all the necessary infrastructure, whereas a modern kayak course would be constructed downstream from the dam enabling the organisation of competitions at the highest level. With such ideas and projects, Celje may once again obtain the name it once proudly carried: the jewel on the Savinja River.



Špica boathouse: a modern facility which serves as the centre for development of water sports and a modern event venue on the embankment of the Savinja. KKK Nivo Celje collection



SLOVENIA IN HAPPY EXPECTATION

The rare *Proteus anguinus* lays eggs

DANILO MAŠIČ

Photo: Postojna Cave archives

Excitement spread in the subterranean Postojna Cave at the end of January. A guide noted that an egg of *Proteus anguinus* was attached on the glass of the aquarium located in the underground Concert Hall. Next to it a female was on guard. When another *Proteus anguinus* approached the egg, the mother-to-be violently attacked and bit it on the side and chased it away.

In order to enable the development of larvae, biologists immediately provided a less stressful environment. All protei with the exception of the mother-to-be were relocated into another aquarium, and lighting inside was turned off because protei are sensitive to light.

The *Proteus anguinus* of the Postojna Cave is the only cave chordate, a representative of salamanders, to be found in Europe. So now we are holding our breaths, since it takes 120 days for the larvae to hatch.

Proteus (direct translation from Slovenian is "human fish") received its name due to the colour of its skin, which resembles the skin of Caucasian people. *Proteus* breaths with external gills, simple lungs and through skin. Its inner ear serves as a balancing and hearing organ. It has two pairs of legs and uses its fin-shaped tail for swimming. As an example for the reduction of structures through disuse, the creature was quoted by Charles Darwin in his work, *On the Origin of Species*. Other contemporaries of the time also discussed it, e.g. Žiga Zois, Carl Franz Anton Ritter von Schreibers, Josephus Nicolaus Laurenti etc.

The lifespan of *Proteus anguinus* stretches over 100 years. Its development is slower since it depends on water temperature. *Proteus* becomes sexually mature at 14 years. It is resistant to long-term starvation and can live up to 10 years without food. Sexually inactive specimens usually aggregate under stones or in fissures, while sexually active males establish their territories and attract females. The animals are supposed to find each other on the basis of a chemical trace.

Proteus anguinus was first mentioned by Slovenian nobleman and polymath Janez Vajkard Valvasor in his work, *The Glory of the Duchy of Carniola* (1689), where he referred to it as a cave dragon's offspring. Healthy unpolluted habitat is very important for the existence of proteus. Groundwater polluted with pesticides, artificial fertilisers and heavy metals poses a threat to cave animals.

The first recorded laying of eggs of a proteus in Postojna Cave occurred in 1875.



In 2013, a female proteus laid 30 eggs but none of them hatched. A barrier was installed in the aquarium and the female left the spawning ground after she had laid all the eggs. One of the males managed to get through the barrier and ate several eggs, while others were damaged by amphipods, small crustaceans, which protei feed on. In 1963, biologist Marko Aljančič started breeding protei in an underground laboratory for the first time in Slovenia. He managed to breed larvae into adult animals, but it was only in 1991 that he saw the laying of eggs.

After the first two weeks of isolation, the infrared camera in the aquarium revealed that the number of eggs amounted to 45 and some were already showing the signs of division, which increases the possibilities that larvae will develop from them. The infrared camera does not bother the light sensitive proteus when laying eggs.

The music group, Čompe, in their song, Človeška ribica, sing about an interesting legend about a proteus: "A girl went to fetch water and she scooped a goldfish with her bucket. The goldfish had four little legs and teeth sharp as a vampire's. When it got dark, the goldfish changed into a beast and bit the little girl. As a punishment, the devil took the goldfish underground with him. He said that it would be a poor wretch, confined to a cave blind and ugly until the judgement day. The gates of heaven were closed for it forever and it would no longer be gold but human."



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