

TECHNOLOGY
Health technology is
growing rapidly in Finland

CULTURE
Find Finland on
the TV screen

CLIMATE CHANGE
Ambitious target of carbon
neutrality by 2035

HAPPINESS
The quality of everyday
life makes us happy

THIS IS FINLAND

Kide Science

Teaching vital future skills
to children

2021–2022

ISSN 2343-2624



**SUOMI
FINLAND**

2 | FEELING FINLAND


By Maria Öfverström
Photo Juha Kauppinen

THE NORTHERN LIGHTS COLOUR THE SKIES

Finland's natural scenery includes by any measure some of the most beautiful views in the world: blue lakes, emerald forests and snowy winter landscapes. After the bright nights of summer, the dark of autumn and winter descends, but the sombre season has its own rewards. Only in the dark can we admire the celestial pyrotechnics. The aurora borealis is no stranger to the starlit skies of Lapland, far from the equator.

The northern lights can be seen from the end of August and continue right up to the beginning of April. The best time to see them is around midnight when the sky is clear and the land is dark. Street lamps, yard lights and other light pollution from human habitation obscure their glory.

The aurora can be elusive, but various services are available to help visitors find and enjoy it. There are several phone apps that can tell when the aurora is active; just search for "northern lights" in your app store. The Finnish Meteorological Institute maintains its own space weather service at aurorasnow.fmi.fi. Auroras result from disturbances in the magnetosphere caused by solar wind. Many holiday centre hotels in Lapland have their own Northern Lights alarm, which can be set to wake you as soon as the phenomenon starts to spread across the sky. ●

 aurorasnow.fmi.fi



DIGITALISATION DEMANDS JOINT EFFORT

The Covid-19 pandemic forced schools all over the world to close their doors. In Finland, schools closed in March 2020, and our school in Rauma, on the west coast, basically had two days to make the enormous digital leap to remote education. I became a designated "digital teacher," tasked with helping colleagues to make the transition. I remember the teachers looked strained: How on Earth are we going to pull this off?

For two days, I helped colleagues build a viable digital survival package, showing them how to hold classes and assign homework online, while making sure that no learners were left behind. The teachers, young and old, grabbed hold of these new tools with great determination: Somehow, we will make this work.

In addition to my duties as digital tutor, I had a class of my own: bright-eyed first-graders who had – fortunately – just learned how to read. Over the coming weeks, I watched this class of seven- and eight-year-olds blossom into digital wizards. What's more, I saw how committed the parents were to supporting their kids. As for me, I turned into a teacher version of a YouTuber, beginning my working week on Sunday by shooting videos for the class.

Talking about that spring with the faculty in hindsight, everybody agrees that we didn't have a clue about what was to come. If we had, we would have just collapsed on the spot.

Looking back, I feel that the biggest transition wasn't digital at all. There was a significant change in the mind-set of the teachers. Previously they had run their classrooms more like a captain runs a ship: keeping their own council in many things. During the pandemic, we couldn't do that anymore: we had to get together and pool our resources just to make it through the week. I found myself turning to every contact in my network and every education resource available to keep the class afloat.

And it worked. We all learned perhaps the most important lesson of all: when we make a united effort, we are just about unstoppable. ●

Mariel Eerola-Leino is a teacher and digital tutor at an elementary school in Rauma, Finland.

Photo: Savi Elio

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FINLAND**



this is
FINLAND.fi

Stories illuminated

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FACTS ABOUT FINLAND

POPULATION: 5.52 million

TOTAL AREA: 338,435 km²,

of which 10% is fresh water

BIGGEST CITIES: Helsinki (capital), Espoo, Tampere, Vantaa, Oulu and Turku

OFFICIAL LANGUAGES: Finnish and Swedish

GOVERNMENT: Independent republic since 1917

CURRENCY: Euro

JOINED THE EU: 1995

GDP PER CAPITA: €43,455 (2019)

TOP SECTORS FOR FOREIGN INVESTMENT:

Business services, ICT, healthcare and wellbeing, retail, cleantech

TOP AREAS OF EMPLOYMENT: Services, financial and business

services, trade and hotel, manufacturing, transport and communications

By Minna Takkunen
Photos Samuli Skantsi

SCIENTIFIC THINKING THE FUN WAY

Kide Science creates science education for children that is literally child's play. The fun, hands-on pedagogical model is based on substantial research into how kids learn best.



ome with me. Hoseli the robot needs help. He's thirsty. We can help him find the stuff that quenches his thirst. I've heard it's something that isn't soluble in water.

Children aged three to ten in kindergartens and schools in Europe, Asia, Australia, Africa and Latin America have joined the adventures of Hoseli in a digital fantasy world called Supraland where the small robot lives. They get to try and test things for themselves, like making fake snow or building rockets with vinegar and bicarbonate of soda.

The fun world created by Kide Science combines the main elements that studies have found to enhance scientific thinking: stories, imagination, empathy, visual and tactile learning, cooperation, everyday observations and creative problem-solving. These are also components of vital future skills.

The company's founders are **Jenni Vartiainen**, **Aino Kuronen** and **Sari Hurme-Mehtälä** and we spoke with all of them. Kide Science was born from research Vartiainen did at the University of Helsinki. "International research had shown that children as young as three years benefit from learning scientific thinking, but this finding hadn't really been put into practice," says Vartiainen. She took her research to an empirical level by establishing science clubs for young children.

"Some of the parents were surprised at how excited their children got about it all," Vartiainen says. There was clearly a demand that had not been satisfied. "I was asked to continue running the science clubs." So began the story of Kide Science.

Children and parents are excited, and so are investors. Between the launch in 2017 and the fourth quarter of 2020, Kide Science raised a combined 2.4 million euros for developing its business. Its education materials are currently available in English, Chinese and Finnish.

EVERYONE CAN BE A SCIENTIST

Boosting the curiosity and sense of wonder that children already have is the key. "Kids observe and interpret the world around them from the moment they are born," the second developer of Kide Science, Aino Kuronen says. "They practice everything in life through play."

"It's important not to limit what is there already," Vartiainen adds. Giving children the space and tools to play the role of a scientist in their own individual ways motivates learning. And when positive emotions pop up, the hunger for learning increases even more.

Digital devices and applications provide the framework for unlimited thinking and playing, but the gist of Kide Science education is in tactile activities.

"It all takes place in the real world," Kuronen says. "Kids aren't just staring at screens." Everyday household items such as salt, bicarbonate, sweets, empty toilet rolls, spoons and peas are among the things that the experiments use.

It's also about dismantling the misunderstandings around science. "There are a bunch of myths," says Kuronen. "These include the ideas that you need to be highly intelligent or have a calm temperament to be a scientist."



EDUCATION
MATERIALS ARE
CURRENTLY
AVAILABLE IN
ENGLISH, CHINESE
AND FINNISH.

Kide Science was founded in 2017, and now they have 500 certified Kide teachers and 15,000 children in live sessions.

SPACE FOR FLEXIBILITY AND CREATIVE COLLABORATION

A digital environment provides flexibility. “Materials are accessible anytime, anywhere,” says the third of the Kide Science developers, Sari Hurme-Mehtälä. “The platform also makes it easy for teachers to learn the pedagogical model. And we are able to scale the contents.”

And here comes an important point: you don’t have to be a science teacher to begin with. The most important role for adults is facilitating and supporting the children’s own thinking. Vartiainen says the most inspiring moment comes when children start helping each other and suggesting ideas for solving the problems.

With growing demand for distance learning, Kide Science are now researching the best ways to build a pedagogical model for families.

How do the developers of Kide Science see the possibilities of digital tools? “Simulating reality with virtual reality glasses is on the increase, and so is visualising things,” says Kuronen. “For instance you could shrink yourself to fit into a water molecule,” suggests Vartiainen. Now that would be cool, wouldn’t it? ●



ACCLAIMED EDUCATION GOES DIGITAL

Finland’s high scores in international education rankings are a continuous source of global fascination. How do we do it? Is it something that other countries can adopt?

“To learn how to learn from an early age is at the heart of the matter,” says **Katia Al-Kaisi**, CEO of Education House Finland. She lives in Dubai, where she runs a business that brings the best of Finnish education to the Middle East, including solutions created by Kide Science.

“Children’s well-being in a broader sense is something that goes beyond the curriculum in Finland. It is based on appreciating and listening to children.” This is reflected in research, like the OECD’s Programme for International Student Assessment. In the latest PISA results, from 2018, Finland stood out among the 79 countries in its connection between life satisfaction and performance.

More and more, Finland’s style of student-centred learning and solid pedagogical knowledge are worked

into digital tools to create compelling educational solutions.

One example of this was a joint pilot project, in August 2020, to test how cross-border remote learning for young children works in practice. It was led by Education House Finland together with eight other Finnish educational companies. Fifteen children between the ages 5 to 8 took part.

The topics of this two-week summer camp included science through imagination and play; creative use of technology to make music; meaningful movement; positivity and social and emotional skills; coding; and fun Arabic learning. There was also a gamified online math challenge.

“We received overwhelmingly positive feedback, which strengthened what we already know about the excellence of Finnish education solutions

and the level of learner engagement and motivation they embed,” says Al-Kaisi.

Apart from digital expertise, what else do we need in the future to succeed? “Soft skills such as communication and people skills are important. So are resilience and adaptability.” These have all become familiar in the rapidly changing world of 2020. We all have learnt new digital skills in response. Some trends, such as distance learning, have greatly accelerated.

Life-long learning is another necessary mindset. “Think about programming languages. They get renewed all the time. A language you learn now could be obsolete in five years.” ●

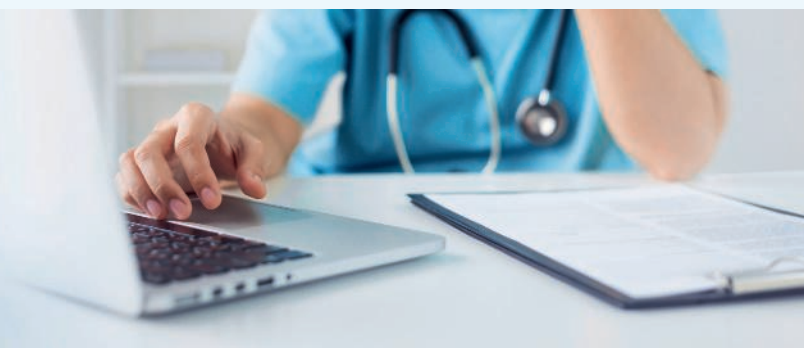
Healthcare technology is a growing field in Finland.
We looked at three healthtech services.

By Tiina Suomalainen
Photo iStock

CASE

VIDEO ENABLES GENUINE CONNECTION BETWEEN NURSES AND HOME CARE CLIENTS

A patient's well-being and medications can be checked by a virtual house call. The same video visit can provide psychological and social support. Arnevi Niemelä, 70, looks forward to her virtual morning meeting with the nurse.



Nurse **Pia Nuora** sits down in front of her screen and puts her headphones on. She starts the video call and the tablet rings at **Arnevi Niemelä's** house.

"Good morning Arnevi, how are you?" she asks. Niemelä answers that she's fine, "although I didn't sleep very well last night."

Nuora checks that Niemelä has measured her morning blood sugar and that the reading is good. Next she asks her patient to hold up the medicine kit so she can see if Mrs Niemelä has remembered to take the day's medication.

This is one way to make home care visits – by video. In the Social and Health Care District of South Karelia, about eight percent of such visits are handled remotely.

TIME FOR RELAXED CONVERSATION

Niemelä was keen on the idea of virtual visits as soon as they were suggested. Previously a home care

worker visited her daily. Now a nurse comes once a week and the other visits are by video.

It's a good arrangement, she says. Video calls are more relaxed than home visits. There's nothing complicated about them. You just come to the tablet computer when it rings.

"The nurses are absolutely wonderful, and we've become real friends," says Niemelä. "The morning call is a nice way to start the day."

This time Niemelä and Nuora talk about the covid situation and the weather. The forecast is for rain. "We'll have to find sun in our hearts," says the nurse.

Nuora is a practical nurse who has worked in home care for a long time. She thinks that virtual visits can create a genuine presence. During an actual visit, there's too much work to allow time for conversation. A remote visit is one-on-one, between equals.

"Of course, it's no substitute for

physical contact. During the call, you need to stay alert for signs of changes in the patient's condition."

A SECURE SERVICE

Patients suitable for virtual visits are selected according to their needs and after an assessment by home care workers. For some, video calls will be enough. Others will need physical visits too.

"It's a way of lightening the home care workload while allocating physical visits to those who need them," says development manager **Katja Rääpysjärvi** of South Karelia Social and Health Care.

The VideoVisit service covers 200 municipalities in Finland. Every month, about 100,000 video visits happen.

Because it is a social and health care service, data security is important. It runs from computer servers located in Finland, so all data remains within national borders. All connections are end-to-end encrypted. ●

By Sami Anteroinen
Photo Riikka Kantinkoski



Coordinating nurse Aili Sihvo

CASE

DIGITAL PLATFORM BOOSTS QUALITY OF LIFE FOR CANCER PATIENTS

How can digital tools help to deal with serious illness? In 2012, a Finnish start-up by the name of Kaiku Health set out to provide personalised digital health interventions for cancer patients. The result: the Kaiku digital health platform.

Kaiku's algorithms screen symptoms, alert the care team and provide support for cancer patients. This, along with the capture and analysis of real-world data, paves the way for more personalised and value-based healthcare.

Coordinating nurse **Aili Sihvo** from Docrates cancer hospital in Helsinki has been using the platform from the very beginning. "Back in autumn 2012, Docrates was the first trial hospital for the Kaiku platform and I was one of the first users," Sihvo recalls.

"The platform helps the patient communicate with the care team more easily and effectively."

STAND BY ME

The platform is a personal companion throughout the different phases of therapy, reducing uncertainty about symptoms by educating patients about their self-management strategies. According to studies, digital symptom monitoring can help cancer patients live longer, reduce the number of ER visits and improve their quality of life.

What's more, the Kaiku algorithms sort patients' symptom reports according to their urgency, which helps clinical staff prioritise their daily work. Multidisciplinary care teams have access to a comprehensive decision-support dashboard, which allows early intervention. Clinics using Kaiku Health report a decreased phone call burden and more efficient patient visits and contacts.

GET MORE DONE!

For Sihvo, the platform has meant better control over her workday. Since the first version, the platform has also developed a great deal.

"During this time it has become more versatile and efficient," she says.

Today, the Kaiku platform is in routine use in over 40 cancer clinics and hospitals around Europe. It is currently used by thousands of patients diagnosed with some 25 types of cancer. ●

"THE PLATFORM HELPS THE PATIENT COMMUNICATE WITH THE CARE TEAM MORE EASILY AND EFFECTIVELY."

By Riitta Alakoski
Photo Suvi Elo, Oura

CASE

A SMART RING CAN EVEN SPOT AN UPCOMING ILLNESS

The latest wearable smart devices are much more than just fitness gadgets. A Finnish healthtech invention, the Oura ring, measures a person's heart rate, activity, sleep and body temperature to guide them towards a healthier lifestyle. An Oura ring might even have been able to save lives in the early stages of the coronavirus pandemic.

Petri Hollmén, a busy Finnish CEO, got a hint about an upcoming illness from his smart ring in March last year.

"I had no symptoms whatsoever, but one morning my Oura ring alerted me that my energy levels were below par. Also that my temperature had risen during the night, although by the morning, it was already back to normal," Hollmén says.

He had just returned from Tyrol, Austria, one of the early hot spots of the pandemic, so Covid-19 came to mind.

"I wondered if the readings could be a sign I was getting sick," he says. "There were fewer than a hundred cases in Finland at that time, so even the nursing staff were unsure whether I should be tested."

But it turned out that the ring was right, as Hollmén did test positive. He never developed any symptoms, and his energy levels were back to normal in a couple of days. Symptom-free, he could have exposed and infected many people.

"I probably would never have known I'd had covid if it weren't for the ring," Hollmén says.

LISTEN TO YOUR RING AND FEEL BETTER

The advantages of tracking body functions from a finger instead of the wrist are more accurate pulse rates and temperature readings. In fact, Oura is the only wearable smart device that measures body temperature from the skin and not the external environment. The data can be monitored with an app.

Oura's capabilities are very close to advanced medical technologies. The ring can give vital information of the user's health with its three advanced sensors that score readiness, sleep, and activity.

One of the most valuable things Hollmén has learned from his ring is to emphasise recovery and rest as part of being physically fit.

"I use to work out after work no matter how exhausted I felt," he says. "Now, if the ring tells me that my energy levels are low, I rest instead. It has had a major effect on my well-being." ●

Petri Hollmén



THE OURA RING:

- A sleek, ultralight, unobtrusive wearable.
- No screens, sounds or flashing lights.
- Water resistant and durable, with a one-week battery life.
- Tracks all stages of sleep, body temperature and body movement.
- Through an app, it provides daily feedback and guidance for a more balanced, healthier lifestyle.

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By Ida Ijäs and Maria Öfverström

Photos Amos Rex, Topi Leikas, Matti Porre, Norman Ojanen / Lehtikuva, Eeva Riihelä / Lehtikuva, Mirka Kleemola / Imaginary Oy, Seilo Ristimäki

EXPLORE FINLAND ONLINE

SIT BACK AND ENJOY THE RIDE



National Museums: Open Museum

No matter where you are or what time it is, you can experience the National Museum of Finland digitally on a site that invites you to enjoy and learn. Finland's shared cultural heritage, from prehistory and medieval times up to the turning points of independent Finland, is available for everyone to experience. The castles, museums, collections and research of the National Museum of Finland offer educational content for teachers and anyone interested in history and cultural heritage.

kansallismuseo.fi/en/avoim-museo-1



Presidential Palace

Explore the glory of the Republic of Finland.

presidenti.fi/en/presidentialpalace360/



The Fortress of Lappeenranta

A mobile walking tour of an old fortress in what is now eastern Finland and used to be on the border between the Kingdom of Sweden and the Russian Empire.

tarinasoitin.fi/lappeenrantafortress



Virtual Amos Rex

Amos Rex, a privately funded art museum with unique architecture, opened in central Helsinki in August 2018. Virtual Amos Rex is just like real one, but online. It presents art from the exhibitions as well as works created specifically for the virtual museum.

amosrex.zoanweb.io/





Air Guitar World Championships

Rock, peace and air guitar: One of the best events in Finland, held in the northern city of Oulu. Turn up your laptop and tune in to a recording of the 2020 world championships.

airguitarworldchampionships.com/en/stream/



Turku Philharmonic Orchestra's Online Concerts

Turku Philharmonic Orchestra publishes livestream HD-quality web concerts for online listeners to enjoy.

tfo.fi/en/live



Alvar Aalto

Renowned Finnish architect Alvar Aalto (1898–1976) was a major figure in modern architecture and a pioneer of design. Get to know his sophisticated work and plan a future physical tour of his buildings around the country.

alvaraalto.fi/en/works/architecture/
or visit alvaraalto.fi/en/



Stage24

If you aren't into air guitar, try something more refined: the virtual stage of the Finnish National Opera and Ballet. Set the stage in your living room and you can watch and listen to performances whenever you like.

oopperabaletti.fi/en/stage24/



Finland on Instagram

The following accounts are good places to start.

[@kpunkka](https://www.instagram.com/kpunkka)

Konsta Punkka is a wildlife and landscape photographer with pictures mostly from Finland, sometimes farther afield.

[@helsinkiacademy](https://www.instagram.com/helsinkiacademy)

Kristo Vedenoja specialises in photographs of buildings in his hometown of Helsinki.

[@kaffeagram](https://www.instagram.com/kaffeagram)

Trips around Finland in the company of Kaffe, a curly-coated retriever.

[@thisisfinlandofficial](https://www.instagram.com/thisisfinlandofficial)

This Is Finland: Things you should and shouldn't know. Published by the Finland Promotion Board.



By Tim Bird

Photo Arto Takala, City of Lahti, Miikka Pirinen/Sitra, Lassi Häkkinen

SETTING ACHIEVABLE TARGETS FOR CARBON NEUTRALITY

Climate change knows no national boundaries, and measures to curb the rise in global temperature are only effective if everyone contributes to the effort. Finland has ambitious aims, although plenty of work remains to be done if it is to achieve carbon neutrality by 2035.



The

current Finnish government's means to achieve the ambitious target of carbon neutrality by 2035 include new decisions on climate policy and nearly emissions-free electricity and heat production by the end of 2030s, as well as reducing the carbon

footprint of building, promoting a circular economy, and a climate-friendly food policy. Environmentally harmful activities will be taxed more than before, and the nature conservation legislation will be reformed.

Oras Tynkkynen is senior advisor on the carbon-neutral circular economy at the Finnish Innovation Fund Sitra. Formerly a climate policy specialist in the Prime Minister's office, he is one of Finland's leading authorities on climate solutions. He is uniquely qualified to comment on the country's progress towards carbon neutrality.

"Reaching the targets is not an easy task," he says. "It requires a lot of effort and Finland is working on it. We don't have in place all the policies to get us there, but we have 15 years to introduce new measures. Although there isn't a full roadmap to carbon neutrality yet, the government has recognised the areas where we need to work. These include changes in energy taxation and measures to reduce fossil fuels in transportation. If you want the whole country to be carbon neutral, you need to act in every sector of society."

Finland's targets are the most ambitious in the industrialised world, says Tynkkynen, although they need to be seen in the context of how different countries take different approaches.

Comparisons between countries are not straightforward because of their different circumstances.

OPTIONS FOR INNOVATION

What makes the Finnish targets different and more robust, he says, is the aim to achieve them through entirely domestic measures. Some of these are highly innovative. Tynkkynen name-checks Sitra's list of 100 potential climate actions available to Finnish policymakers. They range from a stronger Climate Change Act and a public transport ticket accepted nationwide to taxation reform that will increase VAT on goods and reduce it on services.

He names a number of technological developments where Finland is already especially active. "One field where there is a lot of interesting activity is geothermal heat. It's long-established in countries like Iceland and Indonesia, but Finnish researchers are trying to make it viable in countries where high land-surface temperatures don't exist. That's important, because while the world is making good progress in the field of electricity production, heat is a big issue. If we can find a good way to solve issues of heating it would contribute hugely to solving the problem of carbon emissions."

Another exciting and promising area is the creation of single-cell protein using carbon dioxide and electricity, which has been studied by Lappeenranta University of Technology LUT and the VTT Technical Research Centre of Finland. The resulting protein products could be used for animal feed, for example, avoiding environmental impacts such as greenhouse gas emissions or nutrient run-offs from soil.



TALES OF TWO CITIES

Municipalities in Finland are taking their own pioneering initiatives to work towards carbon neutrality. Turku and Lahti are two examples of cities implementing progressive climate policies that are already having an impact.

TURKU: HISTORIC CITY LOOKS TO THE FUTURE

Finland's oldest city and former capital, located in the southwest corner of the country, was named Europe's best-performing mid-sized climate city 2020 by the EU's Covenant of Mayors. The city has made the transformation from fossil fuels to renewables as part of an ambitious climate plan. It is on course to reach a 2021 target of halving greenhouse gas emissions compared with 1990, implementing circular economy solutions and becoming climate positive by 2029.



LAHTI: GREEN CAPITAL OF EUROPE 2021

Located an hour's train ride north of Helsinki, Lahti is leading the pack in Finland in terms of smart, sustainable solutions. It was the winner of the European Green Capital competition for 2021. It has eliminated coal; it recovers as much as 97% of household waste; and it incentivises the circular economy. It has set the target of carbon neutrality by 2025 and encourages sustainable transport, such as cycling and public transport. The city sits on the shore of Lake Vesijärvi and has cleaned up this and other local waterways as part of wider measures to protect valuable surface water and groundwater sources.



WE MAKE IT WORK



“FINLAND IS ALSO A LEADER IN THE CIRCULAR ECONOMY AND WE HAVE SOME QUITE EXCITING STARTUPS AND BIGGER COMPANIES WITH A RANGE OF PRODUCTS COMING FROM THAT.”

Oras Tynkkynen

“Finland is also a leader in the circular economy and we have some quite exciting startups and bigger companies with a range of products coming from that,” says Tynkkynen. “Circular economy means getting rid of waste by reusing resources time and time again. It covers resource efficiency, designing products so that they use less resources, and replacing fossil resources with renewable ones.” In this scenario the lifetime of products is extended or products are replaced with services.”

He laments the fact that global temperature targets, set in 2015 by the Paris Agreement to define ceilings for long-term temperature rises, are extremely unlikely to be met as things stand. The

goal was to restrict the global temperature increase to well below two degrees Celsius above preindustrial levels and to try to limit it even further to 1.5 degrees.

“People are working every day to change it, but this is the current situation,” says Tynkkynen. “In fact, the rise is more likely to be three degrees. But national emission targets are encouraging, the most exciting of which is the recent Chinese aim to be carbon neutral by 2060. When countries put forward carbon neutrality targets, they are usually fairly credible and serious.”

RIPPLE EFFECT

Finland intends to forge ahead towards carbon neutrality regardless of what other countries are doing, on the understanding

that its efforts will have a wider effect in the longer term. “The share of carbon fossil-fuelled cars in Norway, for example, is already down to about 10% of new cars sold. All the rest are either hybrid or zero emission cars. Imagine if this was the case across the EU, which is the biggest internal market globally. Even countries outside this sphere of action would be affected. I think if you have a large chunk of the global economy moving towards carbon neutrality, it is going to have a ripple effect globally.”

Individual action and changes in social behaviour will also bear fruit, says Tynkkynen, who would normally take the 36-hour train-and-ferry route from Tampere for EU meetings in Brussels rather than fly. “Swedish climate activist **Greta Thunberg** famously took a sailing boat across the Atlantic to the United Nations in New York to demonstrate how difficult it is to lead a sustainable life in current systems. It highlighted the challenges we have to face to arrive at carbon neutrality.”

Tynkkynen would like to see a higher profile for Finland's climate efforts internationally. Fortunately, the Nordic countries combined get some attention in international comparisons of carbon neutrality targets. ●



The city of Lahti encourages people to use sustainable modes of transport: walking, cycling and public transport.

By Maarit Seeling
Photo Kreetta Järvenpää



"Obviously we haven't solved all the problems, but at least we're looking for solutions," says Carlos Henriques (on the right). Albert Sunyer is sitting on the left and Luca Balac in the middle.

AIMING FOR NIL WASTE

Helsinki restaurant Nolla was established to pursue sustainable values. In particular, the restaurant seeks to produce zero refuse or waste.

N

olla wants the entire restaurant sector to work together in a circular economy to promote sustainable development.

While the average eatery produces about 70,000 kg of waste a year, Nolla aims to live up to its name, which means "zero".

The three chefs behind the idea are united in their desire to do good and save the world. **Albert Franch Sunyer** is a native of Catalonia in Spain, **Carlos Henriques** moved to Finland from Portugal and **Luca Balac** was born in Serbia.

While winning their spurs in prestigious Finnish restaurants, they noticed how many fine ingredients were wasted and how little waste would be produced if only operations were organised more sensibly.

"Restaurants waste a brutal amount of food," says Franch Sunyer. "I think it's just part of natural evolution to look for a solution."

ORGANIC WITHOUT THE MIDDLEMAN

Nolla buys its ingredients direct from local organic producers, and it won't accept anything in disposable plastic packaging.

The restaurant has optimised its energy efficiency and water use. It even has its own in-house composter for bio-waste.

"Sustainable development and ecological values are now in vogue in business, but it's time to move beyond words to action," says Carlos Henriques.

NO COMPROMISE ON QUALITY

Despite their unusual operation, the main point of the menu is still fine food, combining the traditional cuisines of the Portuguese, Spanish and Serbian proprietors. Their commitment to sustainable development does not overshadow quality.

Henriques hopes that the whole sector will come to recognise that there is no need for food waste, and that disposable packaging is not an inevitable by-product for a restaurant. Answers to problems can be found case-by-case.

"For example, we buy oil in large containers and decant it into smaller vessels in the restaurant," Henriques says. "The container is returned to the producer to be refilled. It's a new way of thinking. Old practices have to be challenged."

The owners admit that one restaurant may not be able to save the whole world from climate change, but at least it can lead the way and create new practices.

"Hopefully at some stage all restaurants will be run on the same principles," Franch Sunyer says. "Nolla will not be the exception but the rule," Henriques agrees. ●

ZERO-WASTE PILOTS AROUND HELSINKI:

WeFood combats food waste by selling food that would otherwise become food waste, such as food in slightly damaged packaging or fruit and vegetables with superficial imperfections.

wefood.fi

Jädelino makes Italian style ice-cream of bananas and other fruit rescued from grocery shops.

jadelino.fi

Bread often gets wasted in shops, since it should be eaten fresh. **Wasted** makes beer from rescued bread.

getwasted.fi

By Riitta Alakoski
Photo Samuli Skantsi



KAYLEIGH KARINEN

- 24-year-old American from Michigan, USA
- Has also lived in Spain, Chile and Finland
- Competed with several cheerleading teams, including ICE All Stars, Oklahoma State University, UPAC All Stars Chile and HAC Elite (Helsinki). On the Finnish national women's team since 2018
- Speaks English, Spanish and Finnish
- Travels the world as much as she can, sometimes cheerleading, sometimes with just a backpack and hiking boots

LEADING IN CHEERLEADING

World champion cheerleader Kayleigh Karinen had already lived in the US, Chile and Spain when she decided to settle down in Finland, the country of her ancestors.



Kayleigh Karinen has won the world championship not once but twice. Considering she's American and cheerleading originated there, you would expect her to have won her gold medals under the US flag. But no. She competed in the US for most of her career, but won the ultimate title as a member of the Finnish national team.

"I am very proud of my Finnish roots," says Karinen, 24. "And very fortunate to be able to compete and win as a Finn."

Her great-great-grandparents migrated from Finland to America in 1902 in search of a better, more prosperous life. Others in the family had already moved there in the 1880s and 1890s. About 400,000 Finns moved to America in the turn of the 20th century to escape poverty and political unrest around the time of Finnish independence.

The amount of direct contact between Karinen's family and Finland had slowly dwindled. She decided to renew the connection by living here for a while.

"I had spent time at a grandparent's summer cottage in Michigan, so wooden houses, lakes and nature were not entirely unfamiliar."

Now she has met relatives in Vaasa, on Finland's west coast, and visited her great-great-grandparents' former house in nearby Jalasjärvi.

"My father and brother had never been to Finland either. They came to visit me here and we went to Jalasjärvi and Vaasa together," she says. "It was a very meaningful experience."

SISU IN HER HEART

Kayleigh came to Finland for a five-month exchange programme in January 2017. She had already lived, studied and cheered in Chile and Spain.

"I had never been to Finland, but I'd dreamt about it," she says. "Roots and relatives are a big thing in my family."

At first, almost the only word she knew in Finnish was sisu, meaning guts and perseverance. Now she speaks almost fluent Finnish, and sisu is her spirit word – it is even tattooed on her finger.

"Sisu is how things are done here – being feisty and determined and pushing through difficulties. I feel that I have gotten this far with the help of it," she says. "Now the knowledge of the word has spread to other countries."

She extended her exchange programme to a full year and then applied for a master's programme at Helsinki University. She has been studying for a degree in Linguistic Diversity and Digital Humanities, with graduation slated for November 2021.

PLANNING TO STAY IN FINLAND

"I want to stay in Finland for good," says Karinen. "I admire that everything here is open and progressive. It gives me the opportunity to flourish, not in just cheerleading, but in everything I want to do."

She is head coach and coordinator for Funky Team, one of the biggest cheerleading clubs in Finland. She also teaches tumbling at a gym in

At first, almost the only word Kayleigh Karinen knew in Finnish was sisu, meaning guts and perseverance. Now she speaks almost fluent Finnish.

Helsinki. A tumbler does standing and running floor acrobatics, such as back tucks and flips with twists. The national team is still a big part of her life.

"The team, the cheerleading environment and the families I have met have been a huge help," she says. "And without cheerleading I wouldn't have been able to stay here or travel the world the way I have."

PRACTICE THE FINNISH WAY: SMARTER

Finland is well known in the world of cheerleading. The US held the top title until 2018, when Finland won the World Championship. Finland won again in 2019. In 2020 the championship was cancelled because of Covid-19.

Karinen knows one main reason why Finland took over at the top.

"The motto for the national team is to train smarter, not harder," she says. "That means that we have enough rest days and get enough sleep and of course eat wisely. Here they understand the importance of rest days at every level of cheerleading. In some other countries, sports can easily become overwhelming, with too many practices and competitions."

"Practicing smarter and safer means that athletes can have a longer career. You warm up and cool down well at every practice, and maintain overall balance in your life. You don't get as many injuries and you don't burn out."

The national team practices together just seven weekends a year. In addition, stunt groups – smaller parts of the team – practice individually in their hometowns two or three times a week.

Winning the World Championship had been a dream for Finnish cheerleading for a very long time. Karinen feels fortunate to have helped make it come true.

"I have dreamt about winning since I was very young, but I never thought that it would happen with Suomi - Finland written on my chest," she says. "It is an indescribable feeling to hear the national anthem on the podium." ●



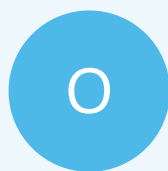
"SISU – BEING FEISTY AND DETERMINED AND PUSHING THROUGH DIFFICULTIES – IS THE WAY THINGS ARE DONE HERE."

MARK HEIDT

is an American artist and entrepreneur. He and his wife, Kirsi, who comes from Finland, have four children. Together they have created a coffeehouse chain in Finland called Valkoinen Puu (White Tree).



THE AMERICAN DREAM IN FINLAND



Our family life began in Niagara Falls, New York. Opportunity presented itself when we were shipping our ceramic lamps and products to Finland. Desiring a peaceful community for our family, we decided to move to Kirsi's hometown in the South Ostrobothnia region, in western Finland, in 2007 to start our dream coffeehouse. Today we have three coffeehouses, in Kauhajoki, Seinäjoki and Tampere.

Living in Kauhajoki was the best thing we could have done. Our family had the support of Kirsi's parents, who lived on the other side of the field. Living in the countryside is peaceful and inspirational.

Being an entrepreneur in Finland is absolutely amazing. You can receive planning and financial support to start and grow your business. Everyone has equal opportunity, in society as well as in business. It only takes hard work and a great business vision to make your life rich and fulfilling.

Our business here in Finland is part of our lifestyle. The scenery is beautiful wherever you go, and this is what inspires us. It is reflected in one of our ceramic lines, Home, which incorporates local flowers and birds and which we sell at our cafés.

Combining family life and business, we had a busy time when we first moved to Finland. Now, years later, our children

are much older and independent, and I can say we all enjoy living here. Besides running our business, we enjoy family, friends, travel, the outdoors and the freedom of the countryside.

The special part of our business, Valkoinen Puu (White Tree), is that it enriches our life by presenting opportunities and experiences. We have travelled to coffee festivals throughout the world and appeared on a TV show called Finland's Best Bakery. Sometimes a city contacts us about opening a new coffeehouse. We never know what the future will bring.

Kirsi and I take great enjoyment from working together, designing new coffeehouses and creating new products. We also have the best crew of employees. It is wonderful to watch our business grow with them.

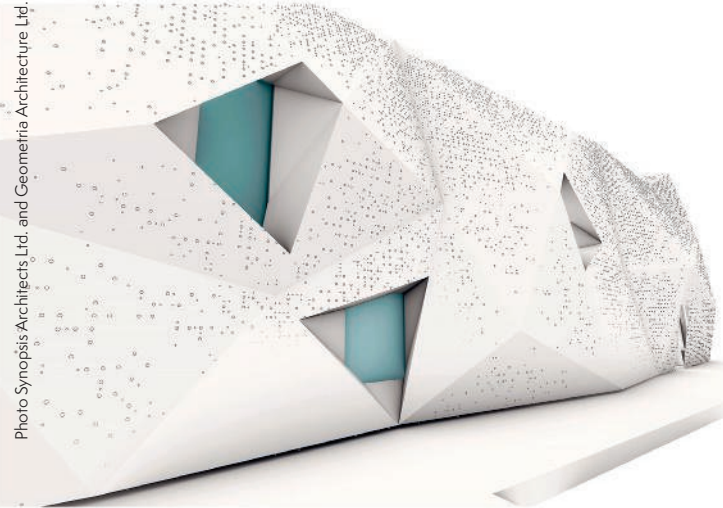
The American dream is alive and well in Finland, and we love it! ●

"LIVING IN THE COUNTRYSIDE IS PEACEFUL AND INSPIRATIONAL."

KEEP IT SHORT

By Päivi Brink

Photo Synopsis Architects Ltd. and Geometria Architecture Ltd.



The LUMI data centre has a unique form (artist's conception).



LUMI SUPERCOMPUTER: THE LEADING COMPUTING FACILITY IN EUROPE

One of the most powerful supercomputers in the world, LUMI, will start its operations in CSC's data centre in Kajaani, Finland, in 2021. CSC is a Finnish centre of expertise in information technology.

LUMI will be one of the world's fastest supercomputers. It enables high-performance computing and data-analytics, and it's also one of the world's most advanced platforms for artificial intelligence. The supercomputer uses 100% renewable carbon neutral energy and the heat it generates will be utilised in the area.

LUMI is a unique European endeavour, with ten European countries and the EuroHPC Joint Undertaking investing in it. The EuroHPC JU is a joint initiative between the EU and European countries to develop a World Class Supercomputing Ecosystem in Europe. LUMI is set to boost research, employment, and competitiveness throughout Europe. ●

 lumi-supercomputer.eu

FUN FACT:
LUMI MEANS "SNOW"
IN FINNISH.

NOKIA ENABLES THE NEXT GIANT STEP FOR HUMANKIND

Nokia was selected by NASA to build first ever cellular network on the Moon. LTE/4G technology will revolutionise lunar surface communications already in late 2022. Nokia's LTE network is ideally suited for providing wireless connectivity for any activity that astronauts need to carry out, enabling voice and video communications capabilities, telemetry and biometric data exchange, and deployment and control of robotic and sensor payloads. LTE is a type of 4G network that is slower than normal 4G, but faster than 3G. Communications will be a crucial component for NASA's Artemis program. ●

 nokia.com



Photo Nasa



FREE COURSE ELEMENTS OF AI AVAILABLE IN ALL OFFICIAL EU LANGUAGES

The Elements of AI is a ground-breaking online course made by the Finnish IT company Reaktor and the University of Helsinki. Artificial intelligence refers to simulation of human intelligence like learning and problem solving in machines. By the end of 2021, Elements of AI will be available for free in all official EU languages. By the end of 2020, more than 550,000 people all over Europe have already taken the course. The aim is to reinforce the digital leadership of the EU. ●

 elementsofai.com

Photo Antti Aimo-Koivisto / Lehtikuva



MAN'S BEST FRIEND CAN SMELL THE CORONAVIRUS

Covid-19 has hit air travelling hard, but in Finland, dogs have come to the rescue. At Helsinki Airport, sniffer dogs specially trained to find Covid-19 are helping to find passengers carrying the coronavirus.

Trained dogs can detect the coronavirus in humans five days before they develop symptoms. This pilot programme is part of research conducted by the University of Helsinki. A team of 15 dogs and 10 instructors are working in the programme. The arriving passenger is asked to wipe his or her neck with a cloth and the dog sniffs the cloth. The dog barks the test result in a few minutes. ●

 helsinki.fi/dogrisk

ÅLAND – AUTONOMOUS REGION SINCE 1921

Åland is a cluster of islands between Finland and Sweden that has been an autonomous, demilitarised and neutralised part of Finland since 1921. The Åland Islands solution was made at the League of Nations. This peaceful solution of the dispute between Finland and Sweden is known as the Åland Example.

The Åland Islands Peace Institute focuses on forms of autonomy, minority issues, demilitarisation and conflict management. Many conflict experts have visited Åland in the course these 100 years in order to study this inspirational example. ●

 peace.ax/en/



Photo Ront Rekoma / Lehtikuva



FAIRY TALE FOREST: POETIC FOREST CONSERVATION

The Finnish Natural Heritage Foundation has just founded a conservation area called Tiitiäisen metsä to honour the beloved Finnish poet **Kirsi Kunnas**. The initiative came from Kunnas' publisher WSOY and the poet herself. The forest was named after her children's poetry book character *Tiitiäinen* (Tumpkin in English), a little forest goblin who first appeared in the book *Tiitiäisen satupuu* (*The Tumpkin's Wonder Tree*) in 1956. The Tumpkin poems form a quirky and original declaration of love for the Finnish forest. The twenty-seven-hectare conservation area is located at Ylöjärvi, near Tampere. It is easily accessible and free for anyone to visit. The protected forest is left untouched which helps to preserve biodiversity of the old forest and offers an ideal home for many endangered species. Part of the funding for the area comes from WSOY and funds are also raised through donations. ●

 luonnonperintosaatio.fi/en/news/forest-named-tiitiais-en-metsa-founded-ylojarvi

Photo Ari-Pekka Auvinen



By Sami Anteroinen
Photo Vilja Harala

FRANK MARTELA

- Frank Martela, PhD, is a philosopher, author and researcher in psychology specialising in the question of meaning in life.
- His articles have appeared in *Scientific American Mind*, *Harvard Business Review* and *Salon*, and his work has been featured on Quartz and the BBC.
- Martela is currently based at Aalto University in Helsinki.



HAPPIEST PLACE ON EARTH

Make it a hat-trick! In March 2020, Finland received the ranking of Happiest Country in World for the third year in a row. We talked with happiness researcher Frank Martela to find out why and how.



ince the first World Happiness Report came out in 2012, four countries have held the top position: Denmark in 2012, 2013 and 2016, Switzerland in 2015,

Norway in 2017, and now Finland in 2018, 2019 and 2020. With its continuing upward trend in average scores, Finland consolidated its hold on first place, pulling significantly ahead of runner-up Denmark and the rest of the pack.

In addition to the country rankings, 2020 was the first year that the World Happiness Report ranked cities around the world by their subjective well-being. As it turns out, the happiest city in the world is Helsinki, the capital of Finland. You'd probably expect to have seen spontaneous parades in the streets of Helsinki to celebrate these accomplishments.

Aalto University researcher **Frank Martela** smiles at the notion of dancing in the streets.

"The Finnish brand of happiness is a bit more reserved," he says. "It's got a lot more to do with simply being content with how

things are than manifesting joy in bursts of raw emotion."

SHINY HAPPY PEOPLE

Martela explains that because the report asks people to assess (on a scale of 0 to 10) how content they generally feel in life, Finns may be hesitant to throw in a top grade, but they don't feel very low about their lives, either.

"There may not be that many tens, but if you're looking for ones, twos or threes, you won't find many of those, either," he says.

Martela believes the happiest people in the world lead lives of "silent satisfaction," which places a lot of emphasis on the quality of everyday life. Granted, the climate is a cool one – to put it mildly – but Finnish society really works. Finns are proud of their "soft infrastructure," the safety net that will catch you should you take a tumble.

"Our social welfare services are in pretty fine form, whether you're talking about healthcare, education or unemployment benefits," he points out.

Meeting colleagues in international seminars, Martela used to get a lot of questions about Finland's PISA success.

"Lately, that has changed. Now people want to ask me about why Finland is the happiest country in the world," he laughs.

HAPPY TOGETHER

Martela admits that the World Happiness Report makes the Finnish way of life look mighty good by focusing so strongly on society. Indeed, four of the six factors the report uses to explain a country's happiness are, in fact, different aspects of the social environment. They include having someone to count on; having a sense of freedom to make key life decisions; generosity; and trust.

Martela co-authored a chapter of the report with three colleagues – **Bent Greve**, **Bo Rothstein** and **Juho Saari**. In it, they dive deep into what they call “Nordic exceptionalism,” and they have a lot to say about trust as the kingmaker of social cohesion. Since trust in other people has been linked to citizens' happiness, trust may well be the “secret weapon” of not just Finland, but all the Nordics. The three Nordic countries included in the analysis – Denmark, Finland and Sweden – occupy the top three positions in their index of social cohesion, making trust and social cohesion one key explanation for happiness in the Nordic region.

Furthermore, several studies have demonstrated that various measures of social or horizontal trust are robustly correlated with life satisfaction – and this relationship holds true even when controlling for factors such as gross national income per capita.

THE TOP 10 HAPPIEST COUNTRIES:

1. Finland
2. Denmark
3. Switzerland
4. Iceland
5. Norway
6. The Netherlands
7. Sweden
8. New Zealand
9. Luxembourg
10. Austria

The World Happiness Report (2020)



TRUST MAY WELL BE THE “SECRET WEAPON” OF NOT JUST FINLAND, BUT ALL THE NORDICS.

In March 2020, Martela and his colleagues got to talking about Covid-19 and what it might do to societal cohesion.

“It was interesting that we all held the same view that countries that are big on trust will be better able to have a coordinated and effective response against the pandemic,” says Martela.

HAPPY TRAILS

So, is everything just picture-perfect in the winter wonderland? Well, some Finns are critical of happiness reports and point out the severity of the northern climate.

Martela is familiar with this criticism and is not entirely unsympathetic towards his sceptical countrymen. Nevertheless, he has a working theory about the impact of “sun and fun” coveted by so many.

“If a Finn goes to a holiday destination in the south somewhere, he will marvel at the sun and the warmth for a week and think everything is so much better over there,” he starts off.

“After the first week, however, he will start to see things that make him wonder about this: suddenly aspects of society that are highly functional in Finland may not work at all there.”

“Realising that, it's good to go back home again.” ●

Subheadings for this story taken from song titles by, in order of appearance, R.E.M., The Turtles and Van Halen.



By Sami Anteroine
Photo Markku Ulander / Lehtikuva

MUJI

- Japanese retail giant Muji specialises in minimalistic interior decoration items and clothes.
- They have 900 stores around the world and in November 2019, they launched a 3,600m² flagship store in Kamppi, Helsinki.
- Muji wanted to invest in Finland, because it is a highly developed country, an advanced market and part of the EU and the Eurozone with emphasis on the free trade.

MUJI'S PHILOSOPHY OF SIMPLICITY SUITS THE FINNISH LIFESTYLE

M

ihoko Takagi, managing director of Muji Finland, says that opening its biggest store in Europe in a country with a relatively

small population definitely felt like a challenge for the company. She admits to being a bit worried about whether it would all work out.

No need to worry: Finns took to Muji in an instant, flooding social media with images of purchases from the trendy store. Analysing the first year, Takagi says that it is "most fortunate" that the Finnish people have a very good impression of Japan.

"And the Finnish lifestyle is close to Muji's philosophy," she says. "This is a big help in realising the pleasant life we aim for."

Takagi says that working in Finland she has learned a lot about what makes

a truly sustainable society. "We believe that the experience of operating in a cutting-edge country that is aiming for a sustainable society will be a great help for the future development of Muji Finland."

POP-UPS CAME FIRST

But how did it all start – why did Muji choose to come to Finland? Takagi explains that the company had launched pop-up stores (four in total) in Helsinki and they were well received.

"We finally wanted to get the whole Muji world here to be experienced by Finns," she says. The official decision to launch a store in Finland was made in 2017.

Previously, while serving as the managing director of Muji Italy, Takagi had the opportunity to visit Finland for the first time. "That time I came to see the northern lights. Unfortunately, they did not appear," she laughs.

Talking about the most interesting things about Finland for her personally, Takagi has a clear favourite:

"It's the climate. The midnight sun in summer, the cold autumn, and the pitch-black winter are very different from the climate in Japan. Every day is a challenge for me to find out how to get used to it."

COMMON GROUND

Still, there are cultural similarities between the two countries, if you look at the mind-set of the people. Takagi feels that the Finns and the Japanese have several characteristics in common.

"We're both polite and a little shy. We're hardworking and we both appreciate simplicity."

Takagi says sauna is very popular in Japan, too – and Muji chose sauna for a key visual at the store, since the company fully understands that it's an important part of people's lives in Finland. ●

Text and photos by Marina Ahlberg, Anna-Kaisa Asuja, Helena Forsgård, Ida Ijäs, Päivi Leinonen, Mikko Nikkinen, Tiina Suomalainen and Kati Valjus

MY HAPPY DAY

Family, friends and the outdoors are what happiness in Finland is made of. We asked people what brings enjoyment to their everyday lives. It's the little things, say the inhabitants of the world's happiest* country.



MARKKU RÄMÖ, BLACKSMITH ARTIST, RETIRED, LOIMAA
TAPIO LAURILA, CANTOR, RETIRED, LOIMAA

Friends are really important, and health, of course. We have a good group for hobbies like tennis and petanque. And what would life be without music! We like to sing karaoke, and we may enjoy some wine at the same time, too.



VEIKKA IJÄS, STUDENT, AND HERTTA, CORGI, OULU

It's the simplest things that make me happy. For example, friends, family, my dog and cycling all fill me with happiness on a daily basis.



MARIANNE ROVIO, FREELANCE JOURNALIST, LOIMAA

What makes me happy is the people close to me, and the motivation to do the work I like. I enjoy reading books a lot, because books can take you to different stories and different worlds. Nature also makes me happy, and I can find it nearby. I exercise in the countryside every day in various ways; cycling, jogging or walking my dog.



KARIN ERLANDSSON, AUTHOR, MARIEHAMN, ÅLAND

Because Finland is so well ordered and safe, I know that I will get good care if I get sick and that my children will get a good education. I don't have to worry about everyday life. Instead, I have the time and the opportunity to do fun things that make me happy. I like swimming, both outdoors and indoors, and spending time in the countryside – and grilling sausages.

** For three years in a row, the Happiness Report of the UN Sustainable Development Solutions Network has named Finland the world's happiest country. The report uses data from a question in the Gallup World Poll: "On a scale of zero to ten, where do you place your own life?"*



**ELIISA HEIKKINEN,
MUNICIPAL OFFICE MANAGER,
KUHMO**

It feels good when life runs smoothly. There is joy in having family, friends and relatives nearby. Interesting, pleasant work gives your life a rhythm. Training provided at the workplace encourages you to accept change and job development.

I play football in a women's amateur team. My teammates, the sport itself and the will to win all contribute to my motivation for training. You are also more likely to go out for a run when the running tracks are near your home. The countryside and my hobbies give me strength and energy and recharge my batteries.



**LASSE KAKKO, CIVIL ENGINEER,
TAIPALSAARI**

What makes you happy is good mental and physical health. Basically, that means being able to stay active and do what you want to do. You need to have the right underpinnings to be able to enjoy something more material, such as a new sailboat.



**HANNU LILJAMO,
65, HAUKIPUDAS**

I enjoy doing voluntary work. I retired a couple of years ago and one of the things I do now is to chair a residents' association. Together we can have an influence on decision-makers. The job has given me a grassroots view of how the sense of community is an important resource in people's everyday lives.



**VIRPI USKI, PENSIONER,
TAIPALSAARI**

Grandchildren and work make me happy. I see my 7-year-old and 14-year-old grandchildren all the time, and it's wonderful. I take the younger boy to school and back every day. The boys often sleep over at our place, too. Although I am retired, I can't resist helping out at my husband's business. Little everyday things like this make me happy.

By Päivi Brink

Photos Jari Romppainen /Film Lapland, Tommi Hynynen, Dionysos films, Tarmo Lehtosalo/Lehtikuva

PHOTOGENIC FINLAND

Finland offers various landscapes from cities to archipelago, wilderness and lakes. Here we have a stunning stage for movies, documentaries and TV series, no matter what kind of setting is needed. In recent movies Finnish cities have even played the roles of Paris and Seattle.



Finnish landscapes offer plenty of snowy forests in the winter and endless midnight sun by all the 188,000 lakes in the summer. Since about 70% of Finland is forest, there is plenty of wild

natural scenery. Surprisingly often even the most remote places in Finland can be accessed with heavy vehicles, since roads are already in place for forest maintenance.

Also, the internet and telephone networks operate in most places and even cyber safety is good. The country is very safe and the infrastructure works well even during the winter. No wonder that various movie and TV series productions have taken place in Finland in recent years.

In some movies Finnish cities have even acted the roles of other cities. During the last months of 2020, an American movie called *Dual* was filmed in the versatile city of Tampere, pretending to be Seattle. In *Tove* – a movie distributed in 2020, describing the decisive period in the life of the

Finnish author **Tove Jansson** – Turku with its beautiful 19th-century buildings, stood in for Paris in the early 1950s. In previous movies, Turku has also acted the roles of Stockholm and Venice.

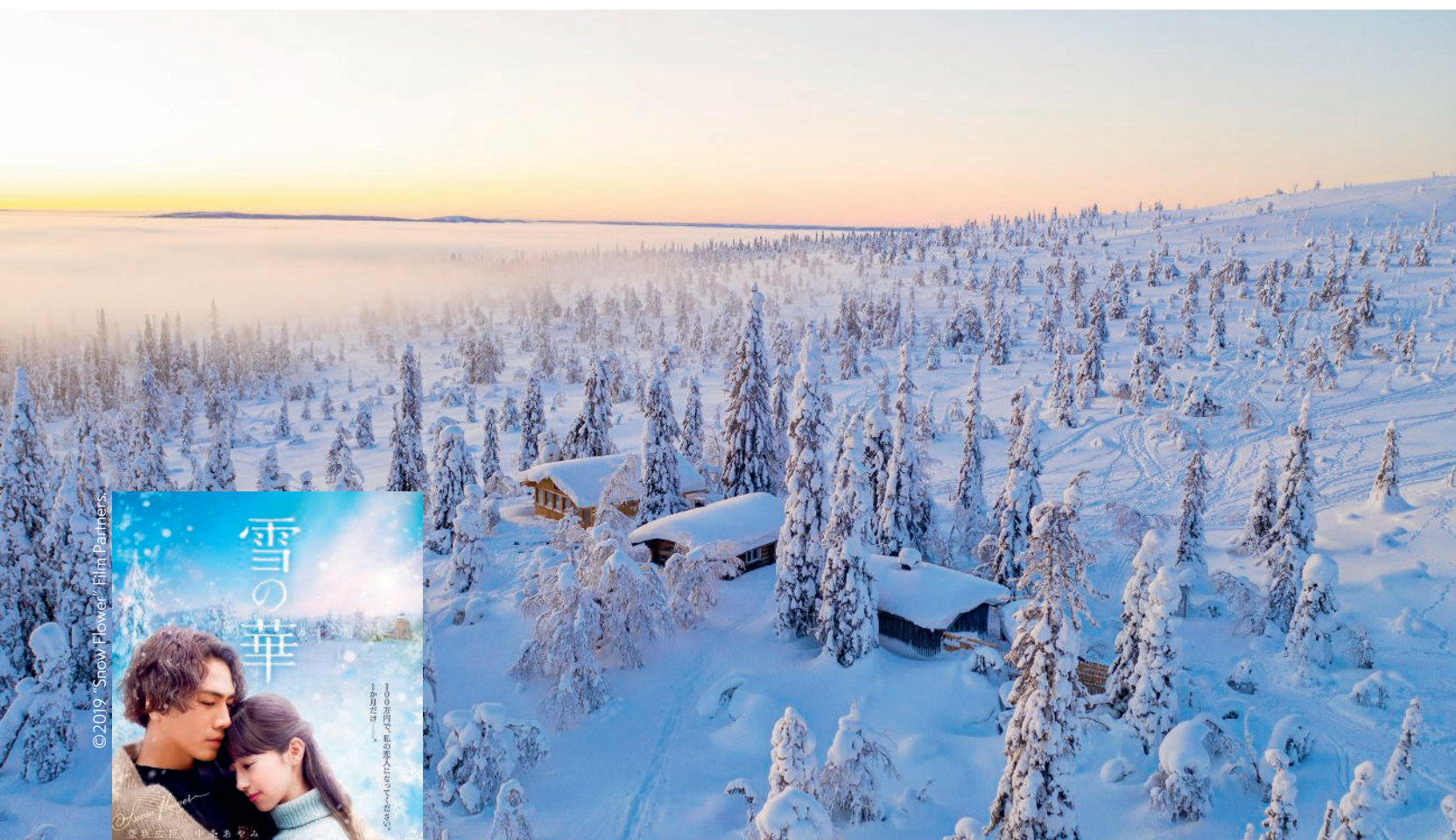
SETTING THE FILM *AÏLO* IN FINNISH LAPLAND

Sometimes the Finnish landscape takes a leading role in a movie or a TV series. French movie *Aïlo*, or in English *A Reindeer's Journey*, (2018) is a movie about a newborn reindeer overcoming many challenges during the first year of his life in the stunning landscapes of Finnish Lapland.

“Obviously, the nature and Finnish landscapes were a definite reason to choose Finland as the location for *Aïlo*. Also, I chose Rovaniemi as I wanted *Aïlo* to be a Christmas tale,” director **Guillaume Maidatchevsky** says.

A key point for him was meeting with **Marko Röhr**, the producer of MRP Matila Röhr Productions.

“Marko Röhr is an amazing producer of fiction and documentaries and also a nature lover,” says Maidatchevsky. “Together with his director of



In the Japanese movie *Snow Flower* (2019), a trip to Helsinki and Finnish Lapland is a dream come true for a dying young woman. Arctic nature is a main feature of the movie.

FINLAND HAS VERSATILE LANDSCAPES FROM ARCHIPELAGO TO ARCTIC FORESTS AND VIVID CITIES WITH HISTORICAL LAYERS.



From the movie *Tove*: Writer and artist Tove Jansson paints a canvas in her Helsinki apartment.

photography **Teemu Liakka**, they know many wild places and are in contact with the local Sámi [the indigenous people of northern Europe]. So, it was great to have Marko and Teemu with us. Filming wildlife with the use of documentary material in a fiction style is not an easy task. Marko also knew exactly how I wanted to direct Ailo. Adaptability was a key word for me and Marko understood it really well.”

POSITIVE FEEDBACK FOR FINNISH PROFESSIONALS

Finnish people working for the audio-visual industry get mainly positive feedback after working in international productions.

“Finnish professionals in all stages of production are often considered very trustworthy, amazingly cost-effective and good at staying on schedule,” says product

manager **Merja Salonen** from Business Finland. She is in charge of production incentives for the audio-visual industry. “Finns tend to get straight to the point. They also know how to work in winter conditions.”

The movie or TV series does not need to be filmed in Finland in order to employ these cost-effective and punctual Finnish professionals. It’s possible to do just post-production with them – including editing, sound engineering, colour correcting, and more.

DEADWIND IS MAKING WAVES INTERNATIONALLY

Deadwind, or Karppi in Finnish, is a crime series starring **Pihla Viitala** as detective Karppi and **Lauri Tilkanen** as her new partner **Sakari Nurmi**. Sofia Karppi is a strong, independent young widow, a

caring mother and a capable detective appreciated by her colleagues, but she is also reserved and feisty. Deadwind is directed by **Rike Jokela** and it’s mainly set in Helsinki. The first season was released in 2018 and the third season was filmed last fall.

Deadwind, and another crime series called Border Town set in the southwestern Finnish city of Lappeenranta, were the first Finnish TV series distributed internationally by Netflix. They have opened doors for other Finnish productions on various international streaming platforms.

“The company in charge of our international sales got Netflix interested when we only had the script and some video clips ready,” says Deadwind producer **Pauliina Ståhlberg** from Dionysos Films. “Deadwind is a good example of Nordic

GAME-CHANGING INCENTIVE FOR AUDIO-VISUAL INDUSTRY

The aim of Business Finland’s Production incentive for the audio-visual industry is to increase international interest in Finland as a production location and to promote the development, growth, and internationalisation of Finnish audio-visual companies. Finnish and foreign production companies can apply for a cash rebate.

Business Finland’s Production incentive for the audio-visual industry includes a cash rebate for production costs in Finland, up to 25%. It’s aimed at both Finnish and foreign production companies using services of people and companies who pay their tax in Finland. The funding is aimed at feature films, documentary films, serial fiction and animation productions.

“Production companies can apply for a cash rebate for the costs involved in all the production phases conducted in Finland, for example, writing the script, searching for locations, filming, composing the music, and post-production,” product manager **Merja Salonen** from Business Finland says.

Business Finland makes funding decisions quickly.

“The request for the rebate can be sent as soon as the work in Finland is done. Our

average processing time is 10 days. The whole movie or TV series does not need to be finished before the money is paid,” Salonen says.

Many other countries have similar incentives and they have become an important tool for competing for audio-visual productions.

“Various Finnish professionals will improve their skills and widen their networks when involved in an international production. The incentive also encourages Finnish productions to aim at international distribution from the outset. This incentive makes it easier for our skilled professionals to enter international production negotiations because they can bring something substantial to the negotiation table.”

One TV series that has received a production incentive for all three seasons made so far, is Deadwind.

“The production incentive has been very important for the success of Deadwind. With this incentive we got the quality of the series to the same level as international productions. All the professionals working with this production got more time to do their work better and you can see it in the end result,” says Deadwind producer **Pauliina Ståhlberg**. ●

Business Finland is the Finnish government organisation for innovation funding and trade, travel and investment promotion.

 businessfinland.fi
Search for: Production incentive for the audiovisual industry



Deadwind's Helsinki is quiet, grey, cold and wet, as if it were November all the time.

Noir, which has been very popular internationally for some time. After the success of the first season of Deadwind, it was easier to get the next seasons distributed internationally. The series has been popular all over the world, including France, the UK, Japan, South Korea and Brazil. The script is very good, which also attracts interest for remakes in other languages."

The series is set in Helsinki, but it does not look like a travel ad.

"Deadwind's Helsinki is quite rough and melancholic: quiet, grey, cold and wet", says Ståhlberg. "Often the scenes are set on the edge of the town, not in the centre. But it is very recognisably Finland and Helsinki." ●



The TV series Ivalo is being filmed on top of Kaunispää fell, a mountain that is part of the Saariselkä fell range in Inari.

Do you have the popcorn ready?

These are some of the productions that have received production incentive from Business Finland and are available internationally on various streaming platforms.

- | | |
|---|---|
| 1. The Guardian Angel – Suojelusenkeli (feature film) | 7. Aïlo – A Reindeer's Journey (feature film) |
| 2. Deadwind – Karppi (TV series) | 8. Aalto (documentary film) |
| 3. Border Town – Sorjonen (TV series) | 9. Heavy Trip – Hevi Reissu (feature film) |
| 4. Cold Courage (TV series) | 10. Arctic Circle – Ivalo (TV series) |
| 5. Moomins – Muumit (animation series) | 11. Invisible Heroes (TV series) |
| 6. Peacemaker – Rauhantekijä (TV series) | 12. Bullets (TV series) |

By Päivi Leinonen

NATURAL AND CULTURAL HERITAGE IN ABUNDANCE

Whether in town or out in the country, Finnish people live side by side with nature. Even the largest cities have natural areas accessible by public transport, and the countryside is never far away. There is a great diversity of national parks as well as World Heritage Sites.

World Heritage Sites in Finland:

whc.unesco.org/en/statesparties/fi

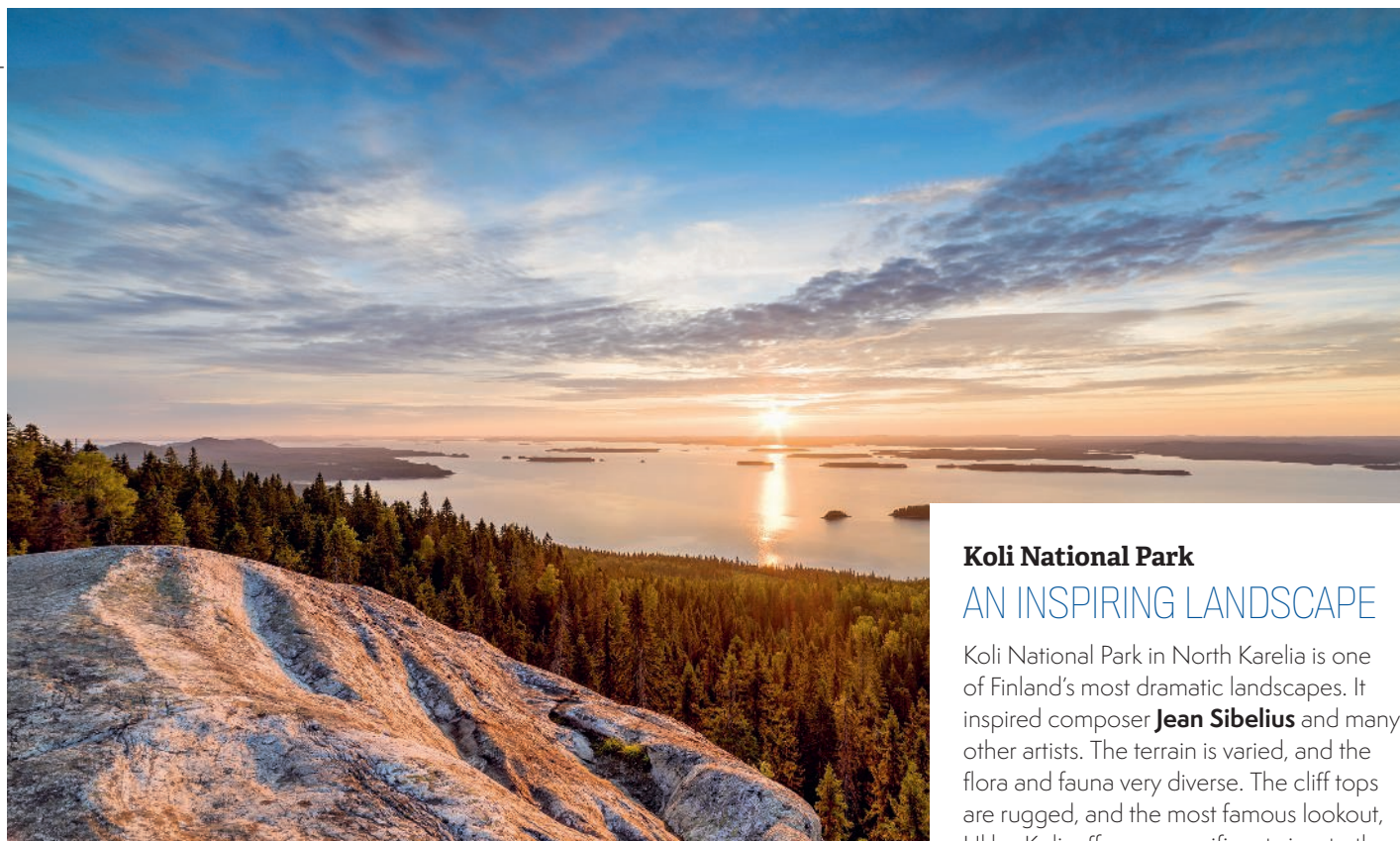
- The Fortress of Suomenlinna
- Old Rauma
- Petäjävesi Old Church
- Verla Groundwood and Board Mill
- Sammallahdenmäki Bronze Age burial site
- The Struve Geodetic Arc
- The Kvarken Archipelago

National Parks in Finland:

nationalparks.fi/nationalparks

Visitor Centres offer guided tours, demonstrations, exhibitions and information on hiking and area services.

Photo Marko Haapalehto



Koli National Park

AN INSPIRING LANDSCAPE

Koli National Park in North Karelia is one of Finland's most dramatic landscapes. It inspired composer **Jean Sibelius** and many other artists. The terrain is varied, and the flora and fauna very diverse. The cliff tops are rugged, and the most famous lookout, Ukko-Koli, offers a magnificent view to the east towards Lake Pielinen. Camping is permitted in marked areas and various other types of accommodation are available in the area.

Suitable for all ages all year round. Some parts are accessible to people with disabilities.

SUSTAINABLE TRAVEL FINLAND

Sustainable Travel Finland is a label that helps the travel trade and travellers recognise tourism companies and destinations that take sustainability seriously. Read more on Visit Finland:

visitfinland.com/sustainable-finland

Nuoksio National Park

NATURAL WONDERS NEAR THE CITY

It is rare in Europe for a national park to be so close to a capital city. The area has remained uninhabited because its difficult bogs and cliffs are unsuitable for agriculture. Nuoksio's lakes, forests, valleys, swamps and cliffs provide the perfect hiking environment. Visit the Finnish Nature Centre in Haltia to discover all of Finland's natural habitats in one place.

Suitable for all ages. Part of the area is wheelchair-accessible.

Photo Katri Lehtola / Metsähallitus



Photo Eva Ramstedt



The Kvarken Archipelago

SEE THE EFFECTS OF THE ICE AGE

Kvarken is the narrow middle section of the Gulf of Bothnia. Its Finnish name, Merenkurkku, means "throat of the sea". The archipelago exemplifies the phenomenon of land uplift since the last Ice Age. Today, the land is rising by about eight millimetres annually, expanding the area by about 100 hectares every year.

The Kvarken Archipelago is Finland's only Natural World Heritage Site on the Unesco List. It forms a geological entity with Sweden's World Heritage Site Höga Kusten.

Most of the sights can be reached by car or boat. Certain routes are wheelchair accessible.



Photo Minna Koramo

Oulanka National Park

ENJOY THE EXOTIC WILDERNESS

Oulanka National Park is bordered on the east by Russia's own Paanajärvi National Park. The northern landscape is dominated by pine forests and river valleys with sandy banks. You can walk over suspension bridges and listen to roaring rapids. The routes for hiking vary from short day trails to the 82-kilometer (about 51-mile) Bear Tour, one of Finland's most popular hiking trails. You can also travel by kayak, cycle, ski or snowshoe. Most of the sights are located within a few kilometres by foot or canoe. One of the routes is accessible.



Photo Ismo Pekkarinen / Lehtikuva

Petäjävesi Old Church

THE BEAUTY OF WOOD

The Old Church of Petäjävesi, in central Finland, represents the long tradition of log construction and Lutheran church architecture. The church was built from 1763 to 1765, and its appearance has remained almost unchanged since then. The old church is still used during the summer.

Verla Groundwood and Board Mill**INDUSTRIAL HISTORY FROM THE 19TH CENTURY**

The Verla wood pulping mill and cardboard factory is a unique World Heritage Site. The factory milieu in south-eastern Finland has been preserved in its original form, surrounded by a residential area for workers. Exhibitions, an ironworks, village shops, a café and a wine shop complete the atmosphere. Guests can stay overnight in former millworkers' houses in a late 19th-century setting, in a traditional lumberjack's hut or in newer wooden cottages. You can also see prehistoric rock paintings by the river.

People with reduced mobility can participate in part of the standard tour.

Photo Pekka Sakki / Lehtikuva



Photo Otto Ponto / Lehtikuva

Pallas-Yllästunturi National Park**THE MOST POPULAR NATIONAL PARK IN FINLAND**

The northernmost part of this national park is located in the far-northern municipality of Enontekiö, part of the homeland of the indigenous Sámi people. The landscape of Pallas-Yllästunturi is dominated by a chain of fells about a hundred kilometres long. There are 25 open wilderness huts in the park and nearby.

In wintertime, the highland of the national park is perfect for cross-country skiing, along trails with a total length of 500 kilometres (about 310 miles). The legendary 55-kilometer (about 34-mile) Hetta-Pallas trail runs through the landscape and is the oldest marked hiking trail in Finland. There are also a number of marked mountain bike routes in the area.

The Archipelago Trail**ISLAND HOPPING**

The Archipelago Trail is a popular way to explore the archipelago of south-western Finland by car or bicycle. Island hopping is one of the things that makes this route special – there are nine ferries and many bridges. Only one of the ferries charges for tickets; all the others are free of charge. Along the way, you experience the stunning archipelago scenery, restaurants and farm shops and enjoy the sea breeze. The length of the trip is 250 kilometres (155 miles).

Photo Juho Kuva



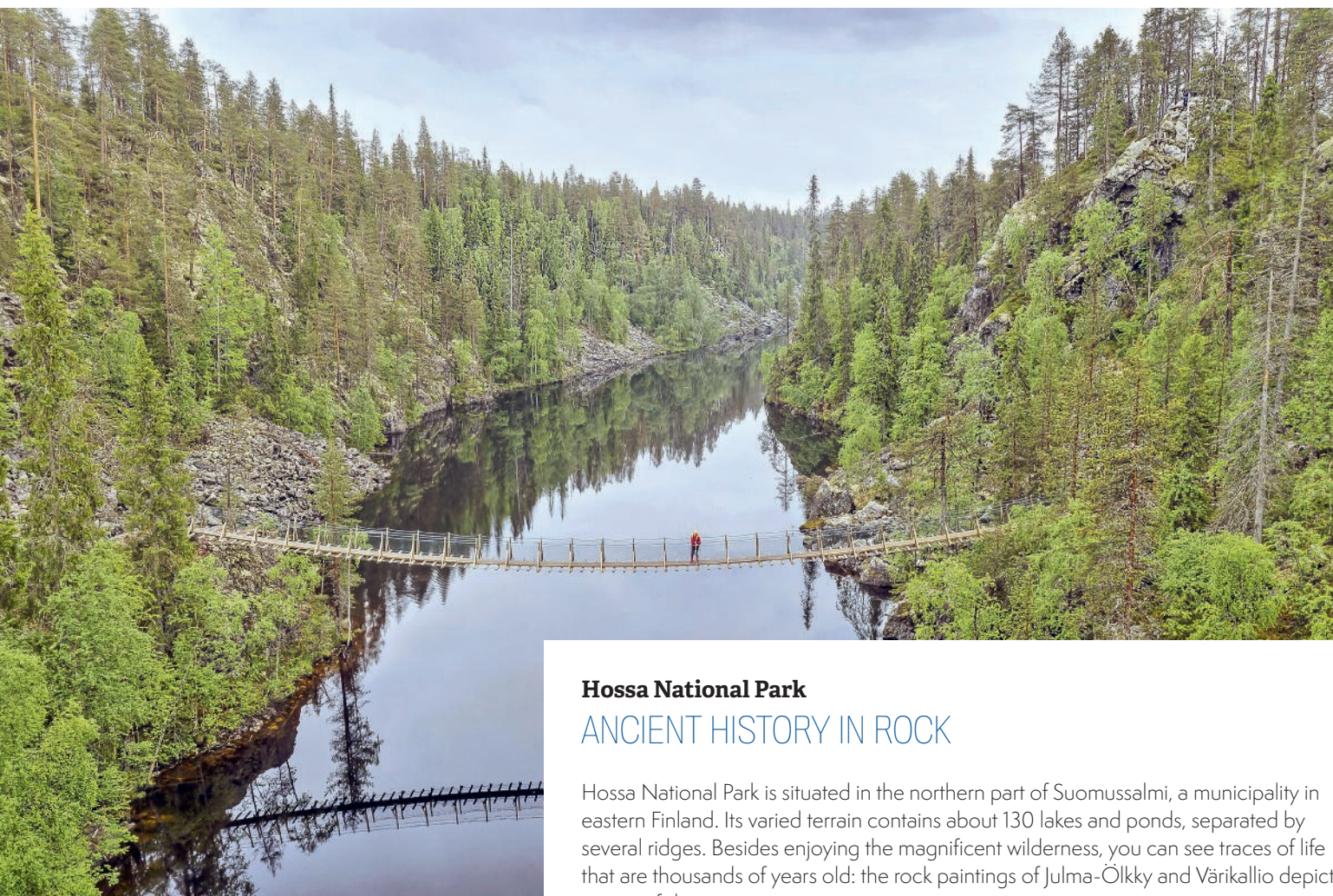


Photo Ismo Pekkarinen / Lehtikuva

Hossa National Park

ANCIENT HISTORY IN ROCK

Hossa National Park is situated in the northern part of Suomussalmi, a municipality in eastern Finland. Its varied terrain contains about 130 lakes and ponds, separated by several ridges. Besides enjoying the magnificent wilderness, you can see traces of life that are thousands of years old: the rock paintings of Julma-Ölkky and Väräkallio depict stories of shamanism.

Hossa National Park is excellent for families with children. It provides versatile services for people with disabilities.

Suomenlinna Fortress

EVERYDAY LIFE AT A WORLD HERITAGE SITE

Suomenlinna is a sea fortress located approximately one kilometre (about 0.6 miles) off the coast of Helsinki. It is one of Finland's most popular tourist destinations, and received a million visitors in 2019. There are many cafés and restaurants, and various cultural events throughout the year. Today Suomenlinna is a district of Helsinki where about 800 people live.

Some parts of area are accessible for wheelchairs, but the terrain can be challenging.

Photo iStock



By Maria Öfverström
Illustration Päivi Rücker

HOOKED ON FINNISH

Snake, Angry Birds, Clash of Clans – have you been spending your leisure time with the creations of Finnish video game companies without realizing it?

We trawled through the history of the gaming industry in Finland and put together a page of the top games based on diverse criteria. This is just a fraction of the total.

1. **CHESMAC** (1979) computer chess: The first commercial game from Finland.

2. **UUNO TURHAPURO MUUTTA MAALLE** (UT moves to the countryside, 1986): The first and only video game based on a Finnish movie.

3. **UNREAL WORLD** (1992): Freeware, still being updated. Based on local mythology and folklore, it has been called “a homage to national culture”.

4. **DEATH RALLY** (1996), Max Payne (2001), Alan Wake (2010), Quantum Break (2016): All developed by Remedy Entertainment and all international blockbusters, these are the backbone of the industry.

5. **SNAKE** (1997): A new variant of the 1970s game Snake was preloaded on Nokia mobile phones in the 1990s, and the game found a vast audience.

6. **SUPREME SNOWBOARDING** (1999): The first Finnish game to sell more than a million units.

7. **HABBO** (2000): Not a game as such, but an extremely popular online community where young users from around

GAMES

12. **CLASH OF CLANS** (2012), **HEYDAY** (2012), **CLASH ROYALE** (2016): These Supercell games established Finland as a giant of the world gaming industry.

13. **CITIES: SKYLINES** (2015): A city-building game, unusual for Finland, with sales of more than six million to date.

11. **LEGEND OF GRIMROCK** (2012): An exceptional and widely praised dungeon crawl game that has sold more than a million units, a remarkable feat for its genre.

14. **MY SUMMER CAR** (2016): Users assemble a car and even have a sauna in this strange, parochial game that has hundreds of thousands of cult followers.

10. **HILL CLIMB RACING** (2012): A small and unexpected hit, downloaded some 140 million times to date.

9. **ANGRY BIRDS** (2009): Game created by Rovio has about 67 million monthly active users.

8. **TRIALS HD** (2009): A motorcycle game in several versions, with sales in the millions.

The next hit is, of course, unknowable. Judging from today's gaming culture, it could be in the genres of eSports, augmented reality (AR), virtual reality (VR) or even exergaming (players need to exercise in order to play the game).

Ranking by sales is also ambiguous. A million units of a console game can generate the same revenue as a mobile game downloaded 100 million times. ●

Veli-Matti Karhulahti, senior researcher at the University of Jyväskylä, in central Finland, served as consultant for this article.

15. **CRITICAL OPS** (2016): Part of the new wave of e-sports games, with downloads in the tens of millions.

16. **CONTROL** (2019) is an action-adventure video game developed by Remedy Entertainment and **BRAWL STARS** (2017) is the newest game from the makers of Clash of Clans and Clash Royale.

the world chat. Developed by a gaming company, it contains many game elements, including avatars.



More things
you should and
shouldn't know:
 finland.fi

HARBOUR AREA BECOMES URBAN OASIS

Helsinki is still creating new residential districts. The old port and industrial area of Jätkäsaari will be completely rebuilt by 2030. The plan is for an ecological housing district and includes the Wood City complex. This consists of multistorey apartment blocks built of wood, the traditional Finnish housebuilding material.

 uuttahelsinki.fi/en/jatkasaari