







A

TALLINN – EUROPEAN GREEN CAPITAL 2023

Tallinn is the European Green Capital 2023 focusing on how innovation and green governance can offer opportunities to mitigate and adapt to climate change. Tallinn works actively with universities, companies and citizens to integrate a sustainability mindset into all actions, policies, and day -to -day city management to implement the UN Sustainable Development Goals and the local green deal objectives while making the city a better living environment for the citizens.

According to Krista Kampus, Executive Director of the European Green Capital 2023 the idea of an European Green Capital was born in Tallinn, which makes Tallinn very proud to hold the title in 2023: "For us, the Green Capital means that Tallinn is a sustainable, resilient, and inclusive city – the European Green Capital title gives us a good opportunity to accelerate this transition. We want every citizen of Tallinn to benefit from the European Green Capital year and the accompanying developments."

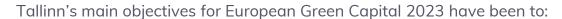
The capital of Estonia has become a beacon of innovation and technological progress, attracting entrepreneurs, innovators, and tech providers from all over the world. Tallinn has achieved the 10th place in the Innovation Cities: Small 200 Index, which evaluates the innovativeness of cities with fewer than one million residents. Tallinn uses many digital tools to mitigate and adapt to climate change, for example EU project "Green Twins" develops and visualizes through user-friendly interfaces the layer of dynamic digital vegetation for the Urban Digital Twins of Helsinki and Tallinn. The project aims to bring greenery into the discussion about Urban Digital Twins.

"The title of green capital has given us an ideal opportunity to formulate goals, create a network and choose better means to make Tallinn a greener and more sustainable city. The green capital year provided a good opportunity to involve people and organizations to growing Tallinn's green and innovative development. We have built a strong foundation so that the benefits and impact of the title year stay with us and do not fade when the year is over," Mr. Mihhail Kõlvart, Mayor of Tallinn said.

TALLINN'S MAIN OBJECTIVES FOR EUROPEAN GREEN CAPITAL 2023

In the Green Capital year, Tallinn's main themes are **biodiversity**, **green innovation**, **climate** and **sustainable governance**.

According to Ms. Krista Kampus, Executive Director of Tallinn European Green Capital 2023 Tallinn has re-organized the whole city structure and organization to better coordinate sustainable changes and work better with the UN Sustainable Development Goals: "We also wish to further involve local communities in city development, find opportunities to support green innovation, develop environmentally friendly modes of travel, such as cycle lanes and public transport, and improve circular economy. In addition, we also wish to help citizens better understand the importance of environmental protection."



- initiate change and new sustainable activities
- accelerate the sustainable processes, eco-innovation and green growth
- engage citizens and organisations in becoming more sustainable and bring the city closer to the citizens
- develop city space which considers the needs of all citizens

Tallinn's goals for 2035

- Sustainable mobility The goal is to reduce C02 emissions by 40% by 2035 (starting point is 2007), by 2035 70% of Tallinners use public transportation compared to other mobility. This also entails achieving CO2-neutral public transport by 2035. All public transport is free of charge for people registered as living in Tallinn.
- Circular economy The goal is that more than 65% of waste will be recycled by 2035 New reuse and repair centres are being opened in different locations all over the city (starting 2022)



GREEN INNOVATION AND TECHNOLOGY

Tallinn is the capital of Estonia, which is well known as E-estonia, the world's most advanced digital society.

For example:

- Estonian government had their first e-cabinet meeting in 1996.
- Estonians have been able to declare their taxes online since 2000 (98% do it only and it takes on average 3 minutes to do).
- From 2001 Estonia has the X-road system for e-services. X-Road has become the backbone of e-Estonia, allowing the nation's public and private sector information systems to link up and operate in harmony. 99% of public services are accessible online 24/7.
- From 2002 all Estonians have a secure digital signature allowing to use online services and sign contracts digitally.
- From 2005 Estonia has electronic voting system for elections. One third of votes in elections are cast online with votes cast from over 110 countries.

As the European Green Capital one of the main focus areas for Tallinn is green innovation and green technology. Estonia has a vibrant technology and innovation sector and is #1 in Europe in unicorns per capita. There are also many interesting green technologies being developed that we want to showcase on our green capital year.





TEST IN TALLINN PROGRAM

On its European Green Capital year, Tallinn has launched the Test in Tallinn program. The Test in Tallinn program is unique because it offers businesses the chance to test their technologies in a live environment. The program provides access to various testing sites, from roads, streets to buildings, and connects businesses with the right people to help them navigate the testing process. Businesses can use this to accelerate the process of developing new solutions and valuable references for scaling up their businesses. The program is especially suitable for businesses looking to test smart mobility, green energy and energy efficiency solutions and other innovative technologies that require a live environment to test.



Currently, 13 innovation projects are underway, 7 of them from abroad.

Tallinn supports the testing of innovation projects in the urban environment on a case-by-case basis with a duration of up to 12 months.



TALLINN GREENTECH WEEK

The culminating event of Tallinn's Green Capital year is Tallinn Greentech Week on 13-17 November. This event will showcase Tallinn's efforts towards sustainability and green technology innovation, attracting global attention. Greentech Week will feature several events including Cleantech Forum Europe, Tallinn NEXPO, Smart Cities Convention, Green Governance Conference and Balanced Economy Forum. The goal is to encourage cooperation among green technology specialists and establish a dialogue between European cities and companies, with around 500 investors, innovators, and entrepreneurs expected to attend.

GreenTech Week is more than just an event; it's a stepping stone for Tallinn towards becoming a global hub for green technology. It invites green tech enthusiasts from around the world to come together, share ideas, and help build a sustainable urban future. The week signifies the blend of Tallinn's historical essence with its modern green ambitions, promoting global collaboration for a sustainable, tech-driven future.

NEXPO Tallinn (13–17 Nov) is part of the Tallinn GreenTech Week. NEXPO is an event dedicated to showcasing the latest green technology innovations from around the world and bringing together people from other GreenTech Week events to create a more sustainable future. Program includes showcases, discussions, workshops and networking events. **More info with dates and times.**

TALLINN GREENTECH WEEK IS A SERIES OF INTERNATIONAL BUSINESS EVENTS THAT INCLUDES:

<u>GreenEST Summit (13 Nov)</u>. Regional green technology conference, connecting and facilitating networking among the Estonian greentech industry through coordinated matchmaking.

<u>Smart Cities Convention (14–15 Nov).</u> Uniting influential clean technology leaders, including executives, CEOs, investors, and government agencies worldwide. Includes a one-of-a kind event Fuck Up Night that shines a light on the power of failure by hearing stories from people who have failed. It's a place for sharing and celebrating, rather than shaming. Participants come together to tell real stories about their own missteps and discuss the lessons learned.



<u>Cleantech Forum Europe (14–16 Nov)</u>. Addressing strategic public innovation, human-centric implementation of smart city tools, and public-private sector connectivity.

<u>Green Governance Conference (16 Nov)</u>. The conference will bring together cities from the Baltic Sea Region to share best practices and discuss challenges for a city in transitioning to green governance.

<u>Balanced Economy Forum (17 Nov)</u>. Estonia's first balanced economy conference "Elephant in the room" encourages decision-makers to find and implement new environmentally friendly economic models.

GREEN TECHNOLOGY EXAMPLES

<u>Ülemiste city</u>, which is using smart city technologies to create an international, attractive, knowledge-based working, development and living environment that would increase the competitive ability of people and companies, bring talents home to implement their potential, and inspire the birth of new business models. Their goal is to having up to two times fewer cars per person by 2025 and by 2030 to have a car-free campus centre.

<u>Clevon</u> autonomous delivery. Self-driving unmanned delivery vehicles, which can be adapted to transport anything and navigate through urban environments with ease.

<u>Bikeep</u>. Micromobility platform provider, which allows people to park and charge bikes, e-bikes and scooters securely and smartly.

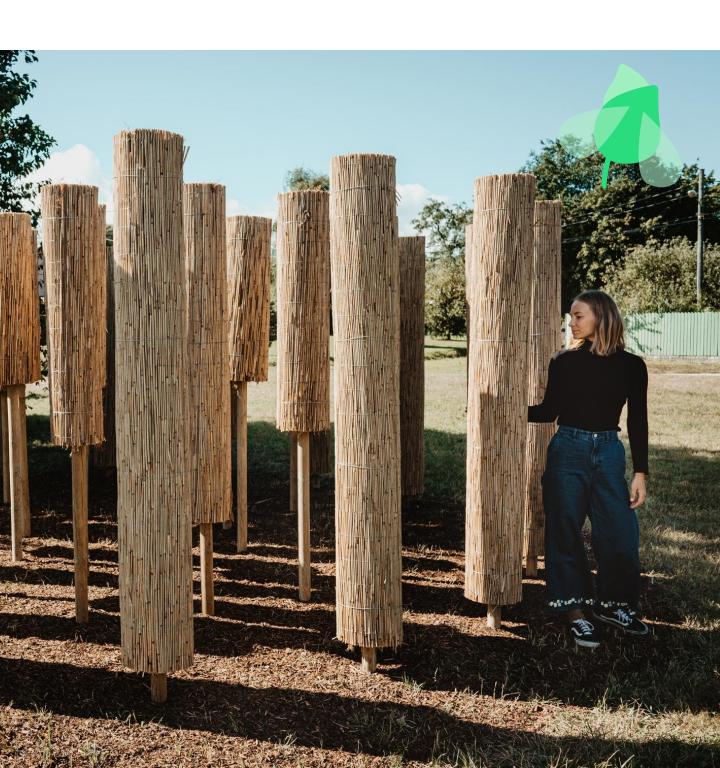
<u>AuveTech</u> Electric and hydrogen self-driving vehicles and autonomous transportation systems that have been tested in different Tallinn locations as last-mile solutions.



BIODIVERSITY

"The development of green areas has always been a priority for Tallinn as the Green Capital. In the new year, we will make a big contribution to ensure that urban nature is diverse and offers exciting activities for Tallinners of all ages."

Mr. Vladimir Svet, Deputy Mayor of Tallinn.



BIODIVERSITY

As one of the best-preserved medieval cities in Europe and a UNESCO World Heritage Site, Tallinn is characterized by a diverse and mosaic nature of its landscapes and communities, which also serve as habitats for rare species. The city has parks, forests, alvers, meadows, heaths, sand dunes, rivers, lakes, cliffs, sandy beaches, valleys, reeds, bogs and even its own island.

13.8% of Tallinn's area is protected. The plan is to create two new nature reserves: Astangu-Mäeküla and Kakumäe. There are 60 parks, 11 protected areas and over 100 individual objects under protection in Tallinn.

NATURA 2000 areas cover 7.2% of Tallinn's land area.

138 protected animal species (including 92 bird species) and 41 protected plant species are found in Tallinn.

We also have an island (Aegna) and a bog (Pääsküla).

Tallinn is a good example that an urban space and environment do not have to contradict each other. Tallinn is in the process of developing a green corridor, a Pollinator Highway, crossing through six city districts. This Pollinator Highway will be equally a green transport corridor for butterflies, bumblebees, bees, other groups of animals as for humans.

Human health and well-being will be at the core of the urban planning in Tallinn. Biodiverse green scaping and cherishing the nature will support the mental and physical health of Tallinn residents.

"Tallinn has more than 2100 hectares of protected areas – nature reserves, protected parks and even and island. Tallinn is also one of the few capital cities that has its own bog. And probably the only one where Scottish Highland cattle are employees of the city. This is just one of our many projects for restoring and protecting the biodiversity of coastal meadows," Vladimir Svet.



Pollinator Highway – a vibrant linear park which is sustainable co-excistance of biodiversity and urbanisation). Connects 6 of 8 Tallinn's districts. Will become a species-rich natural environment with meadows, a green corridor between the districts and a space for walking or bicycling.

Another green corridor **Klint park** connects 3 of 8 Tallinn's districts. It's a nine-kilometre-long unique park area on a limestone cliff and will be transformed into a coherent and integrated recreational area for all. the cliff has many different habitats and several protected plants and birds. The aim is to create an environment where people have rest areas, but at the same time there is very little interference with nature.

Community gardens Also: the number of community gardens and educational gardens (in schools and kindergartens) grows every year – new parks and neighbourhoods already come with embedded communal food growing possibilities. In 2022 Tallinn will have 28 community gardens and 71 educational gardens (that the city supports).



SUSTAINABILITY GOVERNANCE

A

"We have re-organized the whole City structure and organization to better coordinate sustainability work and work better with the UN Sustainable Development Goals."

Ms. Krista Kampus, Executive Director of Tallinn - European Green Capital 2023











SUSTAINABILITY GOVERNANCE



When talking about the future of cities, there is one thing that is agreed upon by most – to achieve the transformation of our cities, we also need a transformative management system. Tallinn calls this "Sustainability governance". It takes the SDGs as the framework for our ambitions and proposes a system of processes and relationships that would help us build consensus, develop policies, and facilitate skills and enthusiasm to achieve our goals. Rethinking governance is not something that one city can do alone. This is why we are calling out to any interested parties – cities, academia, think tanks, experts etc. – to join forces and work together in elaborating the framework for how we govern the cities of the 21st century.

Sustainability governance is an holistic way of managing sustainable development in the city organisation (incl. ecological, social, economical and cultural sustainability).

It involves:

- integrated planning, decision making, budgeting, procurement, service design etc
- full integration of sustainability targets and indicators in the city strategic planning and monitoring process
- internal and external cooperation, sharing of best practices and peer-learning

As Tallinn is the European Green Capital 2023, we are committed to promoting discussions about new forms of governance. We are looking to co-create the framework together with partner cities and other networks, like for example Eurocities, ICLEI, Energy Cities, UCLG and CEMR, and others. During that time, we work to elaborate longer-term forms of cooperation, including possible financing, but also already tackle actual topics presented by partner cities. In 2023, we already started collaborating with nine other cities through an URBACT network fully dedicated to advancing sustainability governance. This is one example of how we promote peer learning around the topic.



HIGHLIGHTS OF THE EUROPEAN GREEN CAPITAL YEAR

Tallinn-Helsinki Dynamic Green Information Model

Connecting built environment, vegetation and people by using urban digital twins.

The aim of the GreenTwins project was twofold:

- to create and visualize through user-friendly interfaces the layer of dynamic digital vegetation for the Urban Digital Twins of Helsinki and Tallinn;
- to create user-friendly physical and virtual spaces for digitally aided public participation and collaboration.

Thus, GreenTwins aimed to bring forward the importance of urban vegetation for the well-being of citizens, to forecast and visualize the temporal and seasonal changes in urban vegetation, as well as to involve citizens into designing urban green areas.

THE OUTCOMES OF THE GREENTWINS PROJECT ARE:

Digital tools: Virtual Green Planner (VGP) and Urban Tempo (UT) VGP is a Unity game-engine based 3D application for co-designing built and green areas. It is primarily meant as a tool for active citizens to create alternative urban visions and discuss them. UT is a COVISE based 3D augmented reality application for realistic visualisations of built and green areas. It is meant as a tool for professionals and active citizens to view the temporal and seasonal changes in the urban vegetation.

Layer of vegetation for Urban Digital Twin (UDT)

The digital plant library extends the UDT by creating a layer of dynamic digital urban vegetation. The dynamic aspect is a major novelty of the GreenTwins project. The layer of vegetation includes 3D models of plants and the information about their growth patterns and seasonal changes in the local climatic conditions. Thus, the layer of vegetation allows professionals and active citizens to view how the visual appearance and the ecosystem services of the urban green areas will likely change over time and depending of the season. The layer of vegetation is used in the digital tools VGP and UT.





Physical space: AvaLinn (Open City, est.)

Smart City Planning Hub in the city center of Tallinn at Kaarli pst 1 is a physical space equipped with state-of-the-art visualization technology for facilitating digitally aided participation and collaboration in urban planning. This physical space makes it possible to bring together various stakeholders—without concern for their level of digital literacy—into planning discussions and decision-making. Digital tools, in turn, are seen merely as means for building common understanding of future change in the built environment.





SMART CITY PLANNING HUB AVALINN



Smart City Planning Hub is a hub that was opened in the spring of 2023. The CityHub is an exhibition and co-creation space equipped with state-of-the-art visualisation technology, with the aim of facilitating citizens' participation in the urban design processes and fostering meaningful discussion between the city, developers, professionals and citizens.

Innovative digital tools were set up in the centre, enabling complex urban planning processes to be addressed in a more accessible way. This has created a better basis for quality debate and decision-making in spatial planning and zoning.

To ensure that the new participation hub has both a high quality form and content, the interior architecture, technical needs and event programme were developed in international cooperation. The project partners are the Municipalities of Tallinn and Helsinki, Tallinn University of Technology and Aalto University. The project team consisted of researchers and experts in the field.

The participation hub is one of the key outcomes of the joint Tallinn-Helsinki GreenTwins pilot programme and part of the large FinEst Twins project, supported by the European Regional Development Fund and the Estonian Ministry of Education and Research.





GREEN TRACKS PROJECT



Aims to bring more greenery into the urban space and support the development of green networks, increase the quality of green areas, create better urban space in high-use areas, create some projects in every district



This year we have completed:

- Summer park on Town Hall Square
- Jõesuu 5 beach park
- Coastal area installation and city space
- Interventions by Linnahall
- 8 parklets around the city
- 14 flower meadows
- 9 food forests



More interventions are planned to be completed in 2024.



SUSTAINABLE SONG AND DANCE FESTIVAL

As a result of the cooperation between Tallinn, the European Green Capital 2023, and Estonian Song-and Dance Festival Foundation the 13th Youth Song and Dance Festival was held in a significantly more environmentally friendly manner than before.

100,000 PEOPLE WERE FED WITH REUSABLE DISHES

3.5 TONS LESS GARBAGE

70 SEPARATE WASTE COLLECTION CONTAINERS

More efficient public transport:

- · special buses and trams
- · bicycle parking lots



"SAVE OUR SEA" CAMPAIGN

More than 156,000 people from 45 municipalities along the Baltic Sea took part in the activities of the European Green Capital Tallinn, the city of Helsinki and the Save Our Sea campaign of the environmental organization Let's Do It World.

91 EVENTS

10 COUNTRIES

45 MUNICIPALITIES

IN TALLINN:

- Seminar on Baltic Sea biodiversity
- · Baltic Sea family day
- "Going to Zero" exhibition
- "Life in the Baltic Sea" program for schools
- Several clean-up days on beaches
- August 23 September 16 advertising campaign









"LET'S CREATE TOGETHER" FUNDING

48 projects received non-profit support from the green capital, in total of more than 1 million euros.

WE SUPPORTED:

- additional environmental education programs of events such as Tallinn Music Week, PÖFF and Robotex
- urban space projects such as a community sauna, the mind garden of the Chanber of People with Disabilities, bucket gardens and insect hotel installations
- various environmental education projects for youth, children, community and people with special needs

GREEN COMPASS

With the <u>Green Compass</u>, everyone can map their green behaviour in four different areas: energy, mobility, home garden and consumption.

It's a questionnare of green activities. Every green behaviour has a specific value. The longer years you have practised this green activity, the bigger the "reward tree" will be in the picture of your green behaviour.

After mapping your green behaviour, you can choose green behaviours that suit you, i.e. make green promises to make your lifestyle even more environmentally friendly.

You can also read what Tallinn is doing in these areas in the European Green Capital title year and in the near future.



WHAT IS EUROPEAN GREEN CAPITAL?

History and background

The idea of a European green capital was born in Tallinn, when in 2006, 15 cities signed a memorandum for the title of European Green Capital here. In 2008, the European Commission took it under their wing.

Since 2010, one green capital has been selected each year. Last year, the title was held by Grenoble France.

The green capital is expected to meet high environmental standards and ambitious future goals of becoming more sustainable and environmentally friendly.

- The Award is open to cities with over 100,000 inhabitants in the EU Member States and EEA countries
- Applicant cities are assessed on the basis of 12 environmental indicators: air quality, noise, water, sustainable land use, waste and circular economy, green growth and green innovation, nature and biodiversity, climate change mitigation, energy efficiency, adaptation to climate change, sustainable management.



HEIDI SOLBA

Heidi is an inspiring citizen of Tallinn and is strongly dedicated to sustainability in both her professional and private life. Five years ago, with 21 dedicated international environmental leaders, Heidi created the organisation Let's Do It World. Heidi is now the President and Head of the Global Network. The NGO aims at tackling environmental and social issues due to mismanaged solid waste. Let's Do It World also manages the World Cleanup Day, the biggest global campaign, which is presented today in 197 countries, all over the world. Heidi is strongly passionate about the project.

"Cleaning up our city and our planet must be something fun, it must be a way to create dialogue, bring more ideas so that we can be greener and cleaner all together"



KRISTJAN LIND

Kristjan Lind is an Estonian entrepreneur, co-founder and CEO of Bikeep. He is also one of the European Green Capital ambassadors for his city. His story is inspirational as he created his company by combining all his passions. He is really committed towards citizens' well-being in urban areas.

Bikeep is a small infrastructure for micro mobility which provides safe bike parking all over the world thanks to smart innovation. You can now park your bike with ease and in total safety.

Kristjan usually introduces this idea by saying: "Please, show me a negative side of cycling".



ALJONA ZUEVA

Armed with bags, trash grabbers and a goal to pick up litter on the streets, Aljona Zueva had an idea to take a different approach of how she can clean up the waste in her city's streets. With a passion for this idea, Aljona founded Rohelinn in 2018, an NGO with the goal of making Tallinn a cleaner and greener city by removing garbage from the streets. Rohelinn takes a different approach to this common way of keeping cities clean, as it combines picking up trash with fun experiences.

One of the many events that Rohelinn holds is Trash Dance.

"We have a Zumba trainer who comes to the park and does open training to everyone who's there, music is all over the place, people are so cheerful, and everyone dances together. Then we give them sticks and pick up trash in the park," as Aljona explains.

One of Rohelinn's missions is environmental education and protecting the planet for future generations. "Only when you start doing it, you cannot unsee the garbage around you", she recalls. You also bring people all along with you, it's a way to involve new generations.



RALF-MARTIN SOE

Smart City researcher and expert in Digital Governance for more than ten years, Ralf-Martin Soe is also the founder of the Finest Centre for Smart Cities, based in Tallinn. He is a former Assistant Professor at the University of Technology in Tallinn and he is currently a Global Digital Governance fellow at Stanford University.

The core principles of the FinEst Centre for Smart Cities are to improve the citizens' quality of life in urban areas bringing strong and effective cooperation at various levels in the process. City leaders, researchers, scientists, citizens, business managers, and engineers are brought together to create the better version of smart cities.

According to Ralf-Martin, Tallinn as European Green Capital 2023 is another occasion to pursue the research on smart cities and green initiatives, it also gives a greater reach to the various propositions.



LAURI KLEIN

Passionate about wildlife and proud citizen of Tallinn, Lauri is involved in many projects concerning the protection of green areas in Tallinn and its region. One of the things he is most proud of is the fact that Tallinn kept many natural areas under protection and continues to take good care of it.

Lauri insists on the fact that cities should be a better living environment. According to him, it's a pity that people want to escape the cities during weekends. Everybody should be happy to live in cities, even during their free time. In a way, it shows that the conditions of living inside the cities are not as good as they should be, and they need to be changed.

"The key for it are healthy ecosystems inside the cities" - although Lauri, recognises that Tallinn is already very green, he insists on the fact that we should start seeing cities as an ecosystem itself and to think about nature and the city as one entity.



INES-ISSA VILLIDO

Ines is an Estonian entrepreneur with a background in sculpture (BA) and plastic technology (MSc). Making environmental artworks for a music festival represented the starting point of the whole adventure with cigarette butts. By creating sculptures related to sustainability and especially to ocean pollution, lnes started to dive into sustainable topics and its main challenges, which led her to work with upcycling...cigarette butts.

Her sculptures mostly focus on the conflict between the natural world and human actions. In recent years she has experimented with using fishing nets, cigarette butts and other waste materials to create her artworks. While concentrating more on environmental art, lnes got interested in the materials she was using and started looking into ways how to learn more about plastics.

From her own experience, connecting science, art and design, sustainable projects could take us further that we can imagine, always opening new possibilities. "In my opinion, there is a lot of unapplied potential that could happen when joining science with art & design. (..) In some cases, joining art or design with science may help to build the bridge in introducing new materials or solutions to a wider public."





See you in Tallinn!

greentallinn.eu

LinkedIn: greentallinn23

