

LJUBLJANA



European Green Capital 2016

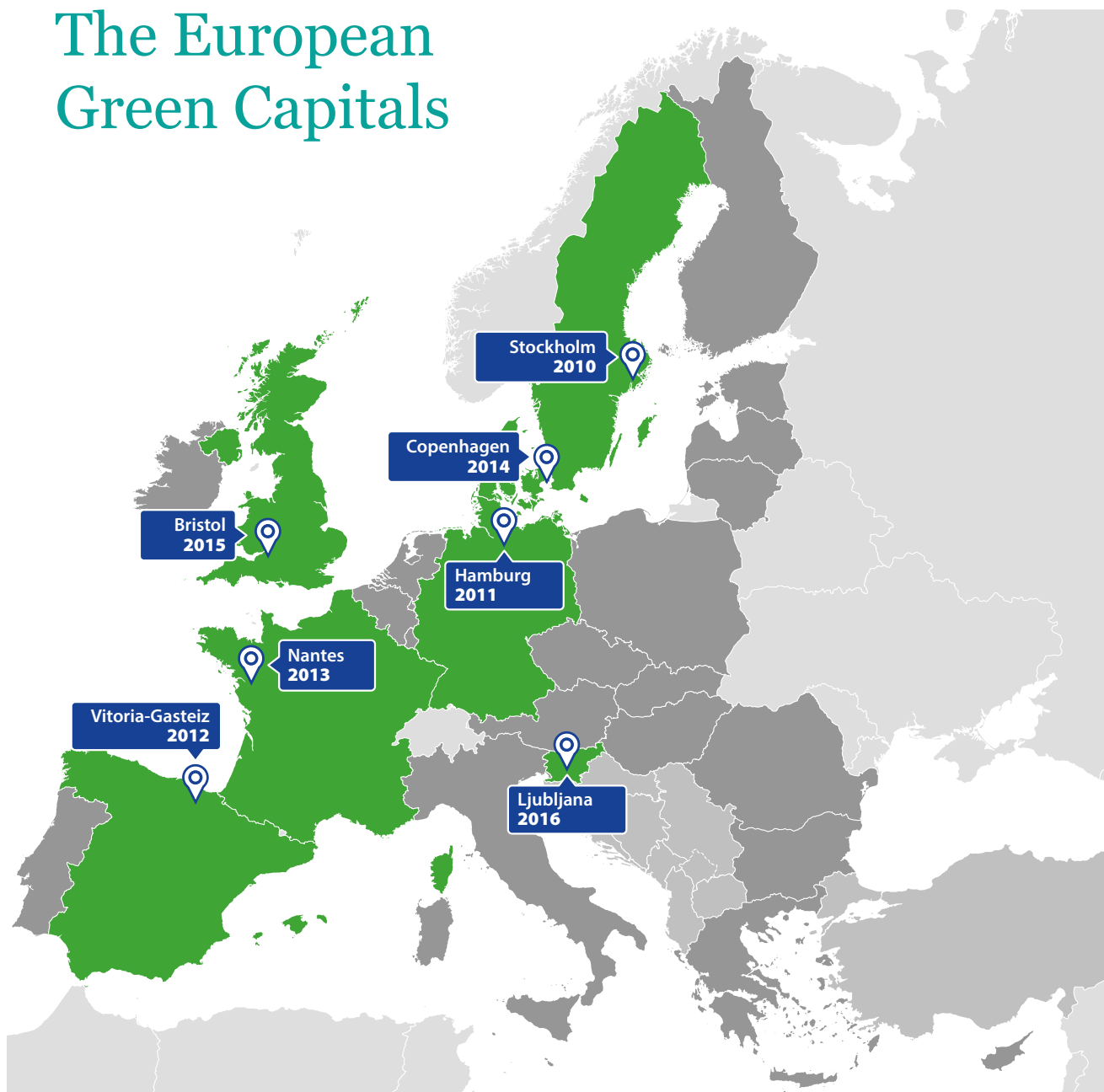
LJUBLJANA.
For you.

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The European Green Capitals



Beautiful Ljubljana

Since its launch in 2010, over 100 cities have applied for the European Green Capital Award, 30 have been shortlisted, and eight have won the title. It is very encouraging to see so many cities combining progress and commitment in social, economic and environmental domains, in an effort to provide a high quality of life for their inhabitants. The winning cities differ enormously, but they all have good practices and concrete examples to share of what a European Green Capital can look like.

From the outset, the European Green Capital Award has been rewarding efforts made at local level. More than two thirds of Europeans live in an urban setting, and this number is steadily increasing. As urban areas expand, so too does the demand for housing, energy, water, and transport. With every passing year, the need for a move towards sustainable urban living becomes more apparent – we need Green Cities, Fit for Life!

Each of the winners to date – Stockholm, Hamburg, Vitoria-Gasteiz, Nantes, Copenhagen, Bristol, Ljubljana and Essen – is an inspiring example of how cities can drive environmental change. Ljubljana for example, once dominated by car transport, has become a city focused on public transport, pedestrian access and cycling networks. Excellent water management, nature conservation and integrated urban planning bring people, organisations and businesses together in a way that benefits both citizens and the environment.

Progress is its own reward, but the satisfaction and pride involved in winning the European Green Capital Award boosts awareness of the need for environmental change not only in the winning city but across Europe and beyond. I encourage everyone to see for themselves what our European Green Capital 2016, Ljubljana, is doing to make Europe's cities better places to live, work, play and grow old.



Karmenu Vella

Commissioner for Environment, Maritime Affairs and Fisheries



To me, Ljubljana is the most beautiful city in the world!

Ljubljana is proud to be European Green Capital 2016! This prestigious title from the European Commission is a great honour and the highest recognition of our efforts to reach the primary goal of ensuring a high quality of life for our citizens in a beautiful and healthy environment.

In its explanatory statement, the Commission highlights that we have made the greatest improvements in quality of life in the shortest period of time. Indeed, the memory is still fresh of the period nine years ago when our team took over the management of the city. Although I can still remember heavy traffic in the city centre and a number of brownfields, today these are a very distant memory and it seems as though Ljubljana has always been this beautiful and tidy. The city centre, now open only to pedestrians and cyclists, is like a big living room and a cultural and social setting, while former brownfield areas have been transformed into numerous parks, green spaces and playgrounds, where citizens relax and socialise.

Our team designed the sustainable future of Ljubljana many years before receiving this title. It was in 2007 when we created and started to live our Vision Ljubljana 2025. I already knew then that we were on the right track and that nobody could take away our



dreams! With professional, committed, persistent teamwork and the inclusion of the widest public we have achieved extraordinary results that place Ljubljana on the European map of the most sustainable cities. I am proud of our achievements, I am proud that Ljubljana for now is the only European Green Capital in central and south-east Europe. However, I am also aware that despite everything that has been accomplished so far we still have many challenges to face in the future. We shall face them with the same vigour and energy, and we will follow the way forward that we have set for ourselves.

This brochure outlines some of the projects that have brought Ljubljana the title of European Green Capital 2016. I am convinced that when you read our success story you will share our enthusiasm.

I invite you to see the beauty of Ljubljana with your own eyes. We will welcome you with arms wide open and show you how proud we are of our beautiful, clean, safe and green city, where we live together and respect our differences. You will discover that this is a city of friendly people who take care of Ljubljana to remain a hospitable, green and healthy place for future generations. Ljubljana is simply the most beautiful city!



Zoran Janković
Mayor of the City of Ljubljana



Ljubljana – green for the people

Ljubljana is a city that will surprise you and exceed your expectations. It is indeed a unique place: small in size but big in hospitality and quality of life. According to one of the many etymological explanations, its name is derived from the word 'ljubljen', meaning 'loved'. It is therefore not surprising that Ljubljana is beloved by its citizens and visitors alike.

However, many changes have been made to reach this point. And these numerous changes, which happened in a very short time, are one of the reasons that made Ljubljana European Green Capital 2016. It has become the first and only green lighthouse in central and south-east Europe.

Do you remember how it used to be?

This is a question that almost everyone who lives in Ljubljana or who has returned here after a long time asks at one point or another. People quickly get used to changes for the better and they also quickly forget how they had to avoid cars in the city centre, how hard it was to cross the river, how long they had to wait for their bus at bus stops, and how the banks of the Ljubljanica river were full of car parks, which have now been replaced with delightful coffee shops.

It is hard to believe that the green capital of today was so different only less than ten years ago.

Timeline ...

AD 14 — *The first mention of Emona, a Roman garrison, on the territory of present-day Ljubljana.*

1112 - 1125 — *The first mention of Ljubljana Castle.*

1144 — *The first mention of Ljubljana by its German name Laibach.*

1146 — *The first mention of Ljubljana by the medieval name Luwigana.*

1200 — *City rights are granted to Ljubljana.*

Changes for the better

The city centre used to be packed with cars and buses. Today it is reserved for cyclists and pedestrians. The banks of the Ljubljanica River have been transformed into quality public areas for citizens and visitors, the distance between them has been shortened with the construction and/or renovation of nine bridges across the river, and new footbridges have been set up on the Path of Remembrance and Comradeship which make the walks even more enjoyable.

Ljubljana has as much as 542 m² of public green areas per inhabitant. Around 80 ha of these areas are newly landscaped while work to restore brownfield sites and transform them into green spaces is ongoing. This is how the city maintains its distinctive green identity while actively transforming the areas, which were neither green nor sustainable not that long ago. More than 46 % of the city area is covered by native forests, almost 75 % by green areas of which over 20 % are protected.

The Slovenian capital is one of the very few European capitals that can boast drinking water with no prior technological treatment. With its water source protection programme and advanced waste water management, water in Ljubljana will remain potable and of impeccable quality for a long time without any additional technological treatment.

Ljubljana is the European capital with the largest share of separately collected waste (63 % in 2014) and the first European capital to be part of the Zero Waste Europe network with a Zero Waste Strategy. With even more accessible infrastructure and innovative solutions, the programme will prevent waste generation and encourage re-use and recycling.

More than 46 % of the city area is covered by native forests, almost 75 % by green areas of which over 20 % are protected.

In 2015, 74% of homes in Ljubljana have already been connected to a district heating system and a natural gas network. Public transport is becoming increasingly accessible and user-friendly.

All these facts and figures are proof that Ljubljana deserves the title of European Green Capital 2016 and that the quality of life in the city is increasing significantly.

Proud achievements of the European Green Capital

Ljubljana received the award because it has made the most changes in the right direction over the shortest period of time. A large 'city family' of more than 12 000 colleagues in the city administration, public companies and institutions takes care of the fast and sustainable progress in the city alongside Ljubljana's citizens, many NGOs, other organisations and companies. Together, they make the Vision Ljubljana 2025, created in 2007, a reality.

Koseze Pond is part of the Rožnik, Tivoli and Šišenski Hill Landscape Park. A natural environment inhabited by rare and endangered animal and plant species.



*Built on a former brownfield plot, Northern Park and children's playground features a statue *Girl with the growing book* which literally expands every year with new verses showcasing Slovenian language, culture and national heritage.*



They are also proud of the Tourism for Tomorrow Award 2015, won by Ljubljana in the Destination category. This award from the World Travel and Tourism Council (WTTC) recognises the most sustainable destinations. Ljubljana was also included on the Sustainable Destinations Global Top 100 list for 2014.

Since 2006, more than 1600 projects have given the city its cosmopolitan character and brought it many flattering national and international awards and titles. The aim of these projects was to improve the quality of life of each and every citizen.

Ljubljana not only shows that changes can be quickly implemented, but also that they can be made in harmony with the environment and in cooperation with many stakeholders. Ljubljana should, therefore, be an example and an inspiration to other European cities as well.

Receiving the Award

The idea of a European Green Capital Award was conceived in 2006 in Tallinn as a result of the initiative taken by the Association of Estonian Cities and 15 European cities, including Ljubljana.

The award is given to a city that:

- achieves high environmental standards;
- sets ambitious goals for further environmental improvement and sustainable development;
- serves as a role model to other cities.

The European Green Capital Award is a European Commission initiative aimed at recognising and rewarding local efforts to improve the environment, the economy and the quality of urban life. The winning cities to date include Stockholm (Sweden), Hamburg (Germany), Vitoria-Gasteiz (Spain), Nantes (France), Copenhagen (Denmark), Bristol (United Kingdom), Ljubljana (Slovenia) and Essen (Germany).

Cities which are shortlisted then make a final presentation to a jury comprising representatives from the European Commission, European Parliament, Committee of the Regions, European Environment Agency, Local Governments for Sustainability (ICLEI), Covenant of Mayors Office and the European Environmental Bureau.

In 2014, when the prestigious title was awarded to Ljubljana, the finalists also included Essen (Germany), Nijmegen (Netherlands), Oslo (Norway) and Umeå (Sweden).

Each year, a group of 12 independent environmental professionals examines cities' entries on the basis of 12 indicators:

- *climate change: mitigation and adaptation*
- *local transport*
- *green urban areas incorporating sustainable land use*
- *nature and biodiversity*
- *ambient air quality*
- *quality of the acoustic environment*
- *waste production and management*
- *water management*
- *waste water treatment*
- *eco-innovation and sustainable employment*
- *energy performance*
- *integrated environmental management*



Green, green, green

If you take a look over Ljubljana from Ljubljana Castle's viewing tower, you soon realise that you are surrounded by nature. Ljubljana echoes the surrounding nature, learns from it, but most of all respects it. Welcome to the city where green is at home.


Although almost half of the municipality is covered with forests, which together with other green areas account for as much as three-quarters of the city territory, Ljubljana is still expanding its little green corners.

There are four landscape parks in the city area. The first one is Rožnik, Tivoli and Šišenski Hill Landscape Park, which lies very close to the city centre. Within its boundaries, many species of natural importance that are included on the Red List of threatened species have been preserved. The park is also very popular among citizens because it provides a perfect spot for recreation and a place to relax and get back to nature.

In the vicinity is the Botanical Garden, one of the oldest in Europe which was established as early as 1810, and is Ljubljana's oldest continuously operating cultural, scientific and educational institution.

The second is the Ljubljana Marsh Landscape Park, which covers as much as 135 km². Its main characteristics are the endless mosaic of meadows, open woodlands, fields, ditches and hedges. The cultivation practices in the meadows have contributed to the conservation of its rich biodiversity. The Ljubljana Marsh has a special place in history – in 2002 archaeologists found there the remains of a 5200 year-old wooden wheel with an axle that is considered the oldest wooden wheel in the world. The prehistoric pile-dwellings on the Ljubljana Marsh were listed as a UNESCO Heritage Site in 2011.

The third park, Zajčja Dobrava, is the oldest among landscape parks with its natural lowland forest, (established in 1972) while the fourth one, Polhov Gradec Dolomites Landscape Park, is proud of its rich biodiversity and endemic species.

 The Rožnik, Tivoli and Šišenski Hill Landscape Park, a home to many flora and fauna on the Red List of threatened species. It is a place for recreation and relaxation in nature's embrace, located right in the city centre.



Nature as one with history

The Path of Remembrance and Comradeship is the longest tree-lined city avenue, with more than 7 000 trees along 34 kilometres. It is a popular running and walking route but also a memorial to the suffering of Ljubljana's citizens during World War II. The row of trees takes you along the route where Italian occupation forces erected a barbed wire fence all around the city in 1942. Every year to celebrate 9 May, Ljubljana's Liberation Day, almost 40 000 people join the march along the path to pay tribute to the indomitable spirit of Ljubljana's citizens between 1942 and 1945.

Lively atmosphere along the river banks

With its sweeping turns and slow rhythm, the Ljubljanica River has always been a distinctive feature of the city from which it got its name. With the comprehensive renovation of the banks and construction of bridges for pedestrians and cyclists, as well as new riverboat piers, the whole area along the Ljubljanica river bank in the city centre has become a central point for social events.

The Path of Remembrance and Comradeship, a popular tree-lined route around the city where people walk, run and cycle every day.

“The reconfiguration of the banks of the Ljubljanica River is clearly identifiable as the fruit of a collective effort of different developers and authors...”

David Bravo Bordas, Secretary of the European Prize for Urban Public Space during the awards ceremony in 2012.

The renovation has created a quality public space for citizens and visitors, where it is possible to find reading corners, see a presentation of the archaeological site at the Špica embankment, take a boat tour along the Ljubljanica or simply enjoy the lively atmosphere along the river banks. On the banks of the Ljubljanica, you can also enjoy the rich culinary offerings, get together with friends in coffee shops or simply sit in the shade of a tree and listen to the river.

From 347 projects submitted by 36 European countries, the City of Ljubljana's project for the Refurbishment of the Banks and Bridges of the River Ljubljanica won the European Prize for Urban Public Space 2012.

Brownfield sites transformed into green areas...

Between 2009 and 2015, Ljubljana built new parks and other green areas, resulting in an increase of 80 ha in green public areas in the city. In addition to the Northern Park, the park along the Gradaščica River and Stožice Sports Park, Ljubljana also created the new Šmartinski Park and Zelena Jama Park. These are directly connected to the central Žale Cemetery, an important cultural heritage site for the city.

Instead of brownfield sites along the Sava River, Ljubljana's citizens have a new place for relaxation and recreation. The Sava Recreational and Educational Centre includes managed sections of cycle paths and horse-riding trails, footpaths, a small animal farm, a children's playground and horse enclosures. The newly established 8km route of cycling paths and footpaths marks the first step towards connecting the Sava River from its source all the way up to the state border.



The Jakopič Promenade in Tivoli Park hosts photo exhibitions throughout the year, some of which are world renowned.

...including the stadium

In 2010, the Stožice Centre was built on the site of an abandoned gravel pit. As part of the Centre, a stadium with seating capacity for 16 000 spectators, together with a 12 500-seat hall, were built and outdoor sports facilities were set up. Ljubljana residents' dreams of a facility for bigger sports, cultural and entertainment events have thus finally come true.

...and urban gardens

Vegetable gardening in Ljubljana is an increasingly popular leisure activity. Although its main purpose is growing vegetables for personal use, with the degree of self-sufficiency increasing, it is also a way of socialising and spending free time while improving people's attitudes towards the soil and the environment.

However, the increase in vegetable gardening in the 1990s also had a negative side. Many gardens appeared in unsuitable locations, so the city administration decided to establish detailed conditions for land use in their new municipal spatial planning. In the plan, 46 ha of land are earmarked for gardening in 23 areas. In this way, the city administration intends to gradually increase the level of self-sufficiency and improve the quality of life in the city.

Citizens can rent a garden plot on municipal land, while the city takes the initiative in connecting the owners of private land and interested gardeners.

Bee-keeping is at home in Ljubljana

Bees are essential for the survival of mankind. Ljubljana is firmly linked to bee-keeping: its beginnings date back to the times of the first settlements in the area. Even more importantly, bee-keeping is still alive among Ljubljana's citizens. Around 300 beekeepers maintain more than 4 500 beehives housing as many as 180 million bees.

In the summer months, 450 000 bees live on the roof of the 'Cankarjev dom' building, the main cultural institution in the city centre. The bees forage in nearby parks and even fly to Ljubljana Castle. Analyses of honey have shown that it is of very high quality because city greenery is not treated against pests. There are no pesticides, free acids or residues of heavy metals and genetically modified organisms. The honey is cleaner than honey from intensively cultivated agricultural areas. Bees are attracted to the city through the gradual planting of bee-friendly perennials in green public spaces.

... timeline ...

1243 — Ljubljana is first mentioned as a city.

1278 — Ljubljana comes under Hapsburg rule and is called Laibach.

1693 — Foundation of Academia Operosorum, which brought together all the important scholars from the region of Carniola, and was modelled on the contemporary Italian academies.

1701 — Foundation of Academia Philharmonicorum. Its members included Haydn, Beethoven, Brahms and Paganini.

Around 300 beekeepers maintain more than 4 500 beehives housing as many as 180 million bees.

- *Successful removal of Ambrosia as part of the 'Put on the gloves' initiative.*
- *Most citizens have access to green public areas within 300 m of their home.*
- *A traditional one-month clean-up campaign 'For a More Beautiful Ljubljana' brings together citizens and more than 12 000 colleagues from the big city family (city administration, public companies and institutes) every year. In 2015 and 2016 each city family member will plant their tree.*
- *16.5 % of the City of Ljubljana is located within the protected Natura 2000 site.*

The result of cooperation between bee-keepers and the city administration is a tourist bee-keeping education trail that connects the main locations of Ljubljana's bee-keepers.

Help the frogs cross the street

The citizens of Ljubljana are given the playful nickname of 'Žabarji' — 'frog people' — by some people from other parts of Slovenia, probably because frogs croak merrily in the Ljubljana Marsh, Tivoli and Rožnik parks and near watercourses. This is good news since amphibians are a bio-indicator of a clean and healthy environment.

It is, therefore, not surprising that right here in Ljubljana volunteers, environmentalists and the city administration undertook an initiative to help the amphibians cross the road during their migrations. Every year they carry about 10 000 frogs, great-crested newts and salamanders across the road. Along the dangerous sections, they build protective fences.

As well as toads, common frogs, agile frogs, marsh frogs, European tree frogs and yellow-bellied toads, there is also a large population of a threatened and rare type of moor frog that turns bright blue during the mating season. Since the presence of humans prevents frogs from reproducing, the city administration supports an action called 'Frog Watch', during which volunteers prevent people from disturbing the frogs in the mating season.



Protecting wildlife takes many forms in Ljubljana.

Left: *Parus major* (Great Tit) and *Rana arvalis* (frog)

Right: *Buteo Buteo* (buzzard)

■ *Morning mists over the Ljubljana Marsh Landscape Park.*





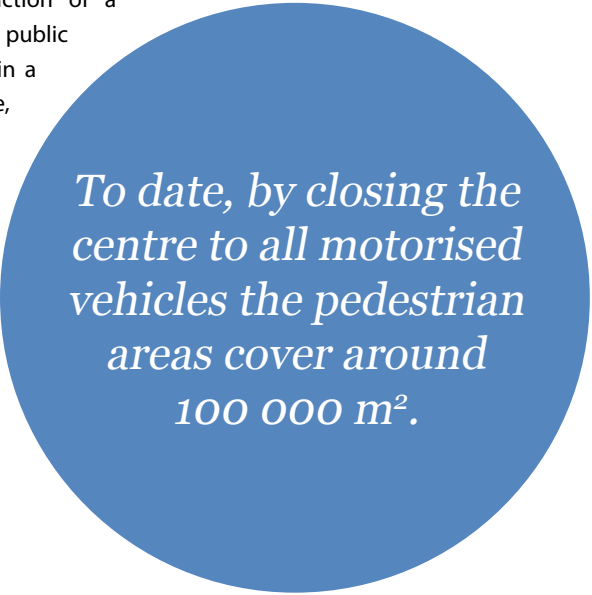


More space for pedestrians and cyclists

Ljubljana is following a new Sustainable Mobility Plan that meets the requirements of modern times in terms of mobility and sustainable development. Priority is given to pedestrians, cyclists and public transport.

Closing the city centre to motorised vehicles, the introduction of a multipurpose 'Urbana' smart city card and the modernisation of public transport are just some of the measures which have resulted in a complete transformation of the city's image in such a short time, as well as making the city friendlier and more accessible for its citizens and visitors.

One of the most important changes in the last decade is certainly the ecological zone, which was created in 2007 when the old city centre was closed to all motorised traffic, although deliveries can be made between 6 am and 10 am. The city centre that was once overcrowded with cars has become a pleasant public space and an attractive setting for a variety of social, cultural and sports events. To date, by closing the centre to all motorised vehicles the pedestrian areas cover around 100 000 m².



To date, by closing the centre to all motorised vehicles the pedestrian areas cover around 100 000 m².



'Slovenska Street'
before and now

Green areas getting closer to the city centre every day

One of the most visible measures aimed at establishing a good-quality public area in the city centre is the transformation of part of the main traffic artery of 'Slovenska Street' into a more attractive area for pedestrians, cyclists and users of city buses.

Following the introduction of a new traffic regime in this area, black carbon concentrations have decreased by 58%. The refurbished city walkway is now lined with 63 young ash trees, which form a 400-metre long avenue and attracts butterflies and bees.

With further refurbishment of public space, the city centre will be connected to the Rožnik, Tivoli and Šišenski Hill Landscape Park. And path will be created from it over the green castle hill in the centre of Ljubljana and ultimately towards the forested hillside of Golovec Hill, part of the eastern Prealps or Posavsko hills. Leading across Golovec Hill, there is also the Path of Remembrance and Comradeship, which encircles Ljubljana. Urban green spaces will also be connected with the Ljubljana Marsh Landscape Park.

Following the introduction of a new traffic regime in this area, black carbon concentrations have decreased by 58%.

The multipurpose 'Urbana' smart city card

The introduction of a multipurpose 'Urbana' smart city card has facilitated payments for many services, including rides on city buses (users are able to switch buses free of charge within 90 minutes of the first validation), parking in public car parks, the funicular to Ljubljana Castle and even the services of the Ljubljana City Library. Card holders can also hire a city bike from the self-service bike sharing system Bicike(LJ) and pay for services within the Park and Ride (P+R) system.

There are currently five P+R parking facilities on arterial roads into the city. Together with the 'Urbana' card, public transport modernisation, the Bicike(LJ) system and many other measures, they encourage citizens to combine different means of transport, avoid using private vehicles and thus contribute to lower pollution levels.

... timeline ...

1809 - 1813 — Ljubljana becomes the capital of Illyrian Provinces. The first tree avenue is planted along the Ljubljanica river bank.

1810 — The Ljubljana Botanic Garden is established. The first governor-general of the Illyrian Provinces, Marshal Auguste de Marmont, attended the opening ceremony and planted a linden tree.

1821 — Ljubljana hosts the Congress of Holy Alliance, a coalition of countries that defeated Napoleon, which was attended by the most prominent European rulers.

Once an unsightly car park, Congress Square is now ideal for socialising and hosting major events, with 720 parking spaces created in 2011 in a new underground facility.



More people using public transport

Regular updating of Ljubljana's bus fleet, the introduction of new and optimizes bus lines and the instalment at bus stops of modern real-time displays showing scheduled bus arrivals are just some of the many reasons for the satisfaction with the quality of city public transport expressed by as many as 78% of citizens in the Eurobarometer survey at the end of 2012.

The number of city transport users rises every year. Between 2010 and 2014, it increased by 18.5%. A 34% rise in journeys was also recorded on intercity and integrated lines between 2013 and 2014.

The optimisation of public company LPP (Ljubljana Passenger Transport) lines shows that the city responds successfully to citizens' wishes. Thus, with the latest change that was introduced to one of the city lines in 2014, journeys increased by as much as 467% in just six months.

The number of city transport users increases every year.



LPP is dedicated to greening its fleet with environmentally friendly buses.

96 % of Bicike(LJ) bike-sharing users rated the service favourably in a survey.



Almost half of Ljubljana Passenger Transport's 221 vehicles meet high environmental standards. Methane (CNG) buses already represent 17 % of all Ljubljana Passenger Transport vehicles.

220 km of managed cycling routes

Ljubljana has become a city of cycling. Situated on a plain, it is ideal for everyday cycling. A mild climate makes it possible for cyclists to enjoy their rides even in the colder months, and because of the city's small size, other parts of town are never too far away.

Ljubljana not only offers cyclists more than 220 km of managed cycling routes, it also encourages sustainable mobility through concrete measures and projects. Since 2011, Ljubljana's citizens and visitors can hire bicycles through the very popular self-service bike-sharing system Bicike(LJ). The system comprises 36 stations and 360 bicycles and has seen close to 3 million journeys in its first four years of operation.

The following figures are evidence of the project Bicike(LJ)'s success:

- a single bicycle is used 7.5 times a day;
- more than 98 % of users return the bicycle after the first hour, which means that the vast majority of users ride for free;
- 96 % of users surveyed believe Bicike(LJ) is a very positive project.

General information

*Surface area of the City of Ljubljana:
275 km²*

Population: 287 218 (2015)

*GDP per capita – Osrednjeslovenska
statistical region: EUR 24 845 (2013)*

Population density: 1 044/km² (2015)

City holiday: 9 May – Liberation Day

*The area of the City of Ljubljana comprises
17 internal territorial units – districts*

*Tourist arrivals (total domestic and
foreign): 562 213 (2014)*



Encouraging sustainable mobility

Ljubljana is the only city to receive a European Mobility Week Award twice: in 2003 and 2013. The purpose of European Mobility Week, the largest campaign for sustainable mobility in Europe, is to encourage European city administrations to introduce sustainable measures in the field of transport while actively including citizens and numerous stakeholders. Every year, further permanent measures are taken in Ljubljana, including new access restrictions for motorised vehicles on particular streets, rearrangement of public spaces, the introduction of new bus lines and more environmentally-friendly vehicles, as well as activities focused on improving conditions for cyclists and pedestrians.

Ljubljana, accessible to all

The City of Ljubljana received the bronze Access City Award in 2015. This recognition places Ljubljana among the most successful European cities in the field of public space accessibility, public transportation, information and a variety of services and programmes for people with disabilities.

One of the special programmes available for people with disabilities is Demand Responsive Transport. Users can call a special phone number and request transport with an adapted vehicle, which means that Ljubljana Passenger Transport provides a vehicle with a ramp and space for persons with disabilities or a low-floor vehicle on its regular line. The share of buses with a ramp and a low-floor is almost 70%.

Drivers are trained to provide assistance to people with disabilities who can carry special identification cards.

*Summer concert on
Congress Square.*

Ljubljana still has its gentlemen

"A smile is our compulsory uniform," Igor Kvržić and Zoran Stojinović are happy to point out.

They are in charge of 12 drivers of electric-powered Kavalir¹ vehicles, which provide transport for elderly visitors and anyone having difficulty walking in pedestrian areas inside the ecological zone and on streets with traffic restrictions.

The drivers are true gentlemen, just as the Slovenian name of the vehicles suggests: *"We help our clients get into the vehicle and try to satisfy all their wishes. Over the years, we have got to know each other very well. They trust us so much that they even ask us to help them carry their shopping bags into their homes,"* says Igor. Zoran adds: *"We are not here just to drive people around the city, but also to chat with them and brighten their day – this is the best job in the world."*

"Hi Zoran, how are you doing today? Igor, can you take me across the renovated Slovenska street?" the client asks while being helped into the vehicle. *"What can I say? These drivers are great, they are punctual and friendly,"* confirms the customer.

¹ Slovenian word Kavalir means gentleman in English.

*Kavalir drivers brighten
the day for locals and
tourists.*



Since 2007, the three Kavalir vehicles have covered more than 80 000 km and carried more than 900 000 passengers.

Besides people having difficulties walking and accessing the city centre, Kavalir vehicles are also popular among tourists and passers-by. And while drivers of Kavalir vehicles would not be gentlemen if they turned anybody down, elderly and mobility-impaired people always come first. *"That's why they can reach us on a special number. We ask them to call us,"* Zoran explains.

Kavalirs move at a speed of 5 km/hour and can cover 60 km around the city centre during a 12-hour day.

The Kavalir vehicles were introduced in Ljubljana alongside the ecological zone in 2007 and are available to use free of charge. Since then, the three Kavalir vehicles have covered more than 80 000 km and carried more than 900 000 passengers. The numbers are expected to increase in the future.

In 2016, the electric Kavalir vehicles will be joined by an electric-powered tourist train.

Interview with a female bus driver

In 1998, Irenka Štefančič became the first female bus driver. Ljubljana was very different back then. *"Being a bus driver is not an easy job, because every day people trust you with their lives, but I still love and enjoy doing it,"* says Irenka, who has been joined by seven more women drivers in the last 18 years.

In what way has transport around Ljubljana changed since 1998 when you started?

'Perhaps drivers don't notice these changes as much as other road users. We do our job the same way in traffic jams or free-flowing traffic. However, we can see that lately traffic is moving much faster.'

Irenka Štefančič is convinced that due to the traffic regulation system in Ljubljana public transport is faster and more accessible.



What do you think has contributed to these changes?

"The traffic regulation system has contributed the most to these improvements. There are more yellow lanes for buses, so public transport moves much faster. The traffic has become even smoother with the reconstruction of a few arterial roads. I notice that more people use buses since the introduction of the P+R system car parks."

In what way has modern technology changed your work and reduced bus delays?

"It's true that there used to be more delays, and it also often happened that two or even three buses on the same line arrived at a particular bus stop at the same time. Today, we have displays on our buses that allow us to monitor our distance from other buses on the same line so that can't happen anymore. Besides that, we are also regularly informed about traffic jams and diversions, as we are connected to a Traffic Control Centre, which monitors all buses using satellite technology. In case of congestion we follow intervals instead of timetables or add extra buses to lines."


How have Ljubljana Passenger Transport buses changed?

"The newer buses are not only environmentally-friendly, but passenger-friendly as well. They are specially adapted for people with disabilities because they are equipped with special ramps and a body-tilting system. They have space for people with disabilities, voice announcements and bigger LED screens that ensure better visibility of information. Users can check estimated bus arrivals with the Route Planner in Google Maps on the website that was set up exclusively for Ljubljana Passenger Transport, and there is also a phone line that can be used by passengers who wish to check the arrival time of their bus. There are also real-time displays on bus stops that show all the arrivals."



High ambitions for less waste and a better quality of life

Ljubljana is distinguished by a sophisticated waste management system which produces excellent results: 63% material recovery in 2014. Such a high share of separately collected waste puts Ljubljana in a leading position among European Union capitals. In the last ten years, the quantity of separately collected waste has increased almost ten-fold, while common European commitments — prevention of waste generation, re-use and maximum material recovery — are also being effectively fulfilled with the implementation of a Zero Waste Strategy. Ljubljana, European Green Capital 2016, is also the first European capital on its way towards a zero-waste society.



Ljubljana is distinguished by a sophisticated waste management system which produces excellent results.

Infrastructure and working with citizens are key factors

In the last ten years, the quantity of separately collected waste has increased from 16 to 145 kg per citizen. This significant improvement is the result of upgrading infrastructure, intensive communication and cooperation with citizens.

Ljubljana implements a door-to-door collection of four types of waste, while in the city centre efficient and much neater waste collection is provided through underground collection units. These collection units for paper, glass and packaging are accessible to all, while bins for biological and residual waste are reserved for the households in the vicinity. These can only be opened with special cards that record the number of garbage bags which determines the monthly household bill.

... timeline ...

1849 — The rail connection between Ljubljana and Vienna is established.

1895 — The city is hit by a devastating earthquake.

1896 - 1910 — The 'revival of Ljubljana': after the earthquake the city is renewed on the basis of a new regulating plan by Slovenian architect Maks Fabiani.

1919 — The University of Ljubljana is established.

1921 - 1956 — World renowned Slovenian architect Jože Plečnik fundamentally changes the image of the city. Plečnik's Ljubljana is one of the most comprehensive works of art of the 20th century.

1942 — The occupying forces erect a barbed wire fence around Ljubljana. Today, the Path of Remembrance and Comradeship follows its trail.

Waste management in Ljubljana is simple and efficient due to a comprehensive and accessible information network. A combination of digital communication tools and personal contacts with citizens has proven to be a successful formula.

Not only a recycling society, but also a society of responsible consumers

The people of Ljubljana asked themselves: how can we become a society of responsible consumers who produce less waste and recycle as much as possible?

That is why they decided on an alternative solution that replaces disposal and energy recovery in the framework of a comprehensive waste management plan, namely the move towards a Zero Waste Strategy. With the adoption of this strategy, Ljubljana made a commitment to collect at least three-quarters of separately collected waste by 2025, to produce less than 60 kg of residual waste per citizen and to dispose of less than 30 kg of waste per citizen.

The citizens of Ljubljana have already stopped viewing waste as something redundant and unwanted. The credit for this goes to Ljubljana's public company Snaga. Snaga is aware of its responsibility and power in making changes for a better society. Together with the city, NGOs, companies and other stakeholders they are changing attitudes towards food waste and used items and create a sustainable and socially responsible future.

Since 2008, ordinary containers have been replaced with underground collection points, thereby rationalising waste management and improving the appearance of the city. Recycling and reuse are part of everyday life.



Get used to reuse


How can we encourage a sustainable attitude towards things, make rational shopping decisions and give value to all those things that money cannot buy?

With the implementation of a Zero Waste Strategy, Ljubljana is the first European capital on its way towards becoming a Zero Waste Strategy.

In Ljubljana, this is done through the 'Get Used to Reuse' initiative which, with the help of music, a video manifesto, workshops and urban interventions, dispels the myth that new is better than old or pre-used. The initiative shows ways of everyday living according to the principle of reuse and also how we can change our attitude towards things in the long term. Resale and exchange have already become new forms of recycling, while sharing things has also been expanding. There are more and more examples of residents in one or more buildings sharing bicycles and even cars.

Waste containers also play an active role in the city – with a little help from Snaga, which puts them at the centre of its 'Raise your voice against food waste' campaign. The campaign highlights the problem of wasted food and addresses our attitudes towards food in a society of wealth and excessive consumption. The waste containers are the main elements of the campaign. At various events organised in city districts, they warn against inappropriate attitudes towards food. With banners, such as 'Even though we stand in the street, it does not mean we are hungry!', 'We are fed up with food waste!', and 'Raise your voice against throwaway food!', they call on us to change things.

Visitors to the events receive a food storage container with a small encouragement to take what they cannot eat at a restaurant with them, to save leftovers from lunch for the next time and to learn how to store food properly.



A Regional Waste Management Centre will solve the waste problems of one-third of Slovenia.

A modern waste management plant creates green jobs

While Ljubljana is the proud holder of the European Green Capital title, a Regional Waste Management Centre is also opening its doors in the city. This is the largest cohesion and environmental project in Slovenia and will solve the waste problems of one-third of the country.

The key part of the regional centre is three facilities intended for mechanical-biological processing of waste, for separately collected biological waste from which compost can be produced, and for residual municipal waste. The centre will use the most advanced and sustainable technology for waste management in Europe and ensure green jobs. With a special learning trail, it will also bring the waste management perspective closer to people in a creative way.

Visiting the Reuse Centre

The city encourages creative and responsible consumption, which is why even in Ljubljana there is an increasing trend towards popular clothing swaps, vegetable and plant swaps (Zelemenjava) and sharing programmes, such as the Library of Things, toy swaps etc.

People also frequently visit the small store and workshop that are part of the Reuse Centre (CPU). A visit to the centre resembles a walk through a sophisticatedly furnished old urban apartment, except that carefully-chosen, well-preserved and still very usable objects have price tags attached with symbolic prices.

The centre provides jobs for people who find it hard to get one, while at the same time helping objects, which are no longer wanted, find a new life and make a new owner happy for a small amount of money. Also for sale are objects which have been repurposed by skilled craftsmen and artists: for example, a shoe closet that used to be a gaming machine.

Every day at the Ljubljana centre almost 100 objects get a new owner, from cups and kick scooters to ties and sofas.

A visit to the Reuse Centre is also part of Ljubljana's educational programme, which finds fun, practical ways to present priority aspects of waste management to schools and kindergartens. Here, young people can see the importance of creativity, innovation, social entrepreneurship, creation of green jobs and inclusion of vulnerable groups.



The Ljubljana Reuse Centre gives objects a second life while promoting creativity, social entrepreneurship, green jobs and inclusion.



Drinking water in Ljubljana

Ljubljana is a city in which water is not hard to find. Upon entering the city, visitors are welcomed by two important rivers – the Sava and the Ljubljanica – and their tributaries. Natural drinking water in Ljubljana is an irreplaceable and priceless resource.

Ljubljana is one of the very few European capitals that can boast potable tap water that is not treated with technological processes.

During the spring and summer months, citizens and visitors can drink water from the closest public water fountain. Water from these fountains is controlled and thus completely safe. Ljubljana already has more than 30 fountains, and by using the mobile app Tap Water Ljubljana, everyone can find the nearest fountain.

... timeline ...

1945 — Liberation: Ljubljana becomes the capital of the People's Republic of Slovenia, part of the Federal People's Republic of Yugoslavia, later Socialistic Republic of Slovenia within the Socialist Federal Republic of Yugoslavia.

1991 — Upon the dissolution of Yugoslavia, Ljubljana becomes the capital of the independent Republic of Slovenia.

2002 — The world's oldest wooden wheel, 500 years old, is found at the Ljubljana Marshes.

Robba Fountain – also known as the Fountain of Three Carniolan Rivers (Sava, Ljubljanica and Krka) – is located in front of the town hall.

Drinking water straight from the source!



The first water supply system in Ljubljana as early as 1890

In 1890, Ljubljana got its first modern public water supply system. Today, the water supply and sewage systems that spread under Ljubljana are already so extensive that the pipes would stretch all the way to Berlin and back, with the network being 2 000 km in length. The sources of Ljubljana's water supply system became water protection zones as early as 1955.

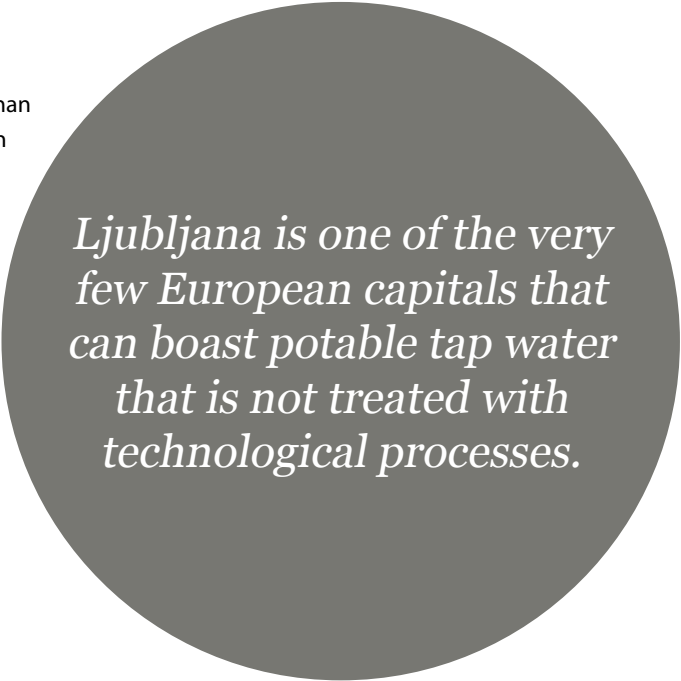
The main water source for Ljubljana and its outskirts is groundwater from two different ecosystems: Ljubljana Marsh (a Natura 2000 site), and Ljubljansko Field. Both aquifers hold great quantities of groundwater and are filled with water from rivers and precipitation. Water travelling through pipes is extracted by five water plants. Surplus extracted water is collected in reservoirs. Households in Ljubljana measure and check the amounts of water used with 40 000 water meters.

Users can find up-to-date information about local water quality on the website, where public company JP VO-KA (Water and Sewerage) publishes daily information about the amount of water extracted, the level and temperature of groundwater and the quantity of treated waste water.

Surveys show that Ljubljana citizens are satisfied with the water supply system.

Concerns about drinking water

The groundwater supply is three times greater than consumption, so water is never lacking in Ljubljana even during the dry summer months. However, the city administration and VO-KA take numerous measures to encourage the efficient use of water. Various communication and educational campaigns aimed at reducing water use are also addressed to different stakeholders who are thus called upon to act.



Ljubljana is one of the very few European capitals that can boast potable tap water that is not treated with technological processes.

On average, a citizen of Ljubljana uses 120 litres of drinking water a day and around 44 m³ a year. Household consumption accounts for 67.5% of the total consumption of water in Ljubljana.

Since 2009, larger buildings must have a system for collecting, storing and using storm water. The country's largest stadium, Stožice, has tanks for collecting storm water that is used for watering the green areas.

80 000 m³ of waste water treated daily

Water then travels to the sewerage network. Ljubljana has 830 km of pipes for waste water discharge and 330 km of pipes for storm water. Between 2008 and 2013, three surplus storm water collectors were built in Ljubljana with a capacity of 30 500 m³.

Waste water travels through the sewerage system to the Central Treatment Plant in Ljubljana, where suspended solids, such as larger particles and fats, are first removed. Mechanical treatment is then followed by biological treatment in aerated basins with activated sludge full of micro-organisms. Activated sludge in the treatment plant then separates from the treated water, which flows back to the Ljubljanica. This is the end of the journey water makes through the urban environment.

The Central Treatment Plant in Ljubljana is the biggest in Slovenia and on average treats 80 000 m³ of waste water a day.

*Ljubljana Marsh
Landscape Park
(Natura 2000 site)
is a major source of
water and a natural
ecosystem.*





Every year, more people are connected to the sewerage system

More than 93 % of the citizens are connected to the sewerage system in urban agglomerations and this number will reach 95 % by 2020. One of the main tasks in the field of waste water management is to extend the sewerage system to those areas that still have none.

In 2008, Ljubljana launched the installation of the sewerage system in the area of Rakova jelša. The main feature of this neighbourhood was the number of buildings constructed without a permit. It was, therefore, necessary to first regularise illegal buildings, before constructing municipal infrastructure. The next phase will also include sewerage pipelines along side streets and the construction of a municipal treatment plant, which will enable proper treatment of waste water for 8 500 people.

A vacuum sewer system is planned because the specific soil structure and the high groundwater table prevent the construction of a traditional sewerage system with gravitational drainage of waste water.

■ *The water supply and sewage systems under Ljubljana are so extensive that the pipes would stretch to Berlin and back.*

You've got a friend in Ljubljana

Due to the flooding that has hit the area in recent years, Ljubljana is well aware of the importance of urgent assistance. Consequently, when waters flooded parts of Bosnia and Herzegovina, Serbia and Croatia in May 2014, the citizens of Ljubljana took immediate action.

Just two days after the floods, the City of Ljubljana sent two firefighting units to the flooded regions. A group of professional firefighters formed a water rescue unit that was sent to Bosnia and Herzegovina, where it provided assistance to affected people for eight days. On the same day, the second firefighting unit travelled to the Republic of Serbia together with an emergency medical team. Ljubljana's firefighters helped with the transport of food, water and other supplies as well as with evacuations, medical transports and clean-up operations.

In the following days, even more members of the civil protection, rescue services and colleagues from the public company JP VO-KA (Water and Sewerage) travelled to the areas affected by flooding.



More than six tonnes of material resources collected

In Ljubljana, a free concert entitled 'Flooding the Square' was organised. The event brought together more than 40 musicians from Slovenia, Croatia and Bosnia and Herzegovina, all of whom waived their performance fees. Money collected from tickets and SMS donations was transferred to a special account for flood victims. During the concert, trailers were parked on the main road where the Slovenian Red Cross collected donated materials. With six tons of material resources collected, Ljubljana and its surroundings proved to have big-hearted people who were there to help when it is needed.

The City of Ljubljana also provided financial help to its twin cities of Belgrade, Skopje and Sarajevo. The funds were also donated by colleagues from the city administration, public companies and institutions.

In 2014, many of Ljubljana's professional firefighters shared their expertise and helped battle floods in the Balkan Region.



You reap what you sow

Today, they are toddlers and schoolchildren. Tomorrow they will make decisions and build the future not only for Ljubljana, but for Slovenia as a whole, and perhaps also for other cities and nations. Therefore, the key to a sustainable future is in the hands of young people.

The people of Ljubljana are aware that education and raising awareness should start early. Kindergartens in Ljubljana pay special attention to ecology and thus enhance environmental awareness among children and their parents as well.

Kindergartens and schools participate in a number of international ecological projects and receive awards for their sustainable contributions. The sorting of waste is an everyday job to them: they even compete at it. They make new things from used articles, they read and tell green stories within the Eco-Reading Badge project, they plant trees, learn about the importance of self-sufficiency, as well as arrange green areas around kindergartens and schools. They actively take part in growing herbal, floral and vegetable gardens, contribute to saving electricity and water, and organise collection campaigns of old paper, used cartridges and batteries. Schools and their pupils also participate in clean-up events. The annual campaign 'For a More Beautiful Ljubljana', which runs from 22 March (World Water Day) to 22 April (Earth Day), is just one of the opportunities for schools to contribute to a more beautiful, cleaner and greener Ljubljana.

In 2016, the whole city will celebrate the moment when Ljubljana proudly becomes European Green Capital. For this reason, a number of stakeholders, including kindergartens and schools, have actively participated in the preparation of a year-long programme. Many activities will take place each month in addition to the ongoing ones and will involve parents as well.

The children of Slovenia's capital city are the youngest green ambassadors and the true pride of Ljubljana.



Ljubljana has transformed itself into a modern, clean, green and safe city in a decade. One of many projects is the country's biggest sports and recreation facility, Stožice Centre, which boasts the largest district cooling system in Slovenia.

Good work to continue in the future

In less than nine years, Ljubljana has implemented more than 1 600 projects, and also brought to life those it spent many decades – or even a whole century – waiting for. The quality of life has improved greatly and many prizes and commendations have followed, including the highest possible European award given to cities, the prestigious title of European Green Capital.

The implemented projects and the city's efforts are also reflected in citizens' satisfaction with their life in Ljubljana and the growing numbers of tourists that visit the city every year. Green, safe, clean, always attractive and friendly, Ljubljana has become a magnet for visitors from near and far. The result is a record number of overnight stays every year and the significantly enhanced international reputation of the city.

Sustainable, innovative and productive actions, commitment to the efficient implementation of development tasks, cooperation and the sharing of experiences and knowledge among stakeholders are constantly kept in mind by all the colleagues of the city administration, public companies and institutes.

Plans for the future

Ljubljana will continue its efforts to ensure excellence and constant improvement of the quality of life in a clean, safe and friendly environment, as well as active protection of water sources and nature.

The city administration is committed to the conservation of green areas and the recovery of brownfield sites, as well as protection of Ljubljana's unique biodiversity. They will promote sustainable actions, business activities and lifestyles, and continue to enhance self-sufficiency (efforts to make the distance from farm to fork as short as possible to ensure the highest quality food for children and young people).

Regular renovation works on roads and other public areas will continue, taking into account the most vulnerable groups and people with disabilities (ramps, tactile paths). Public spaces, river banks, parks and city greenery will be systematically and regularly maintained. Repair and repaving works on damaged roads, cycle lanes and pavements will also continue. Further work will be carried out to expand the underground waste collection system, expand the network of P+R parking facilities and continue to promote electromobility. With the purchase of new methane (CNG) buses, the public transport fleet will be further modernised.

New cycle lanes will be built and current ones repaired. And with the help of EU funds, the city administration will complete the construction of the connecting channel C0, the Central Wastewater Treatment Plant Ljubljana upgrade and the construction of the missing sewerage network in agglomerations of up to 2000 p.e. Thus, the majority of facilities

... timeline.

2004 — Ljubljana holds a ceremony marking Slovenia's accession to the European Union.

2010 — Ljubljana is World Book Capital – a title awarded by UNESCO in 2008.

2010 — Ljubljana adopts a new Urban Master Plan for future urban development.

2011 — The remnants of pile-dwellings at the Ljubljana Marshes are entered on the UNESCO World Heritage list.

2014 — Ljubljana celebrates the 2000th anniversary of Emona.

2016 — Ljubljana is named European Green Capital 2016.

According to the Vision Ljubljana 2025, the city will become the ideal, sustainable place, with a cosmopolitan character and a modern image.

in agglomerations will be connected to a sewerage system. They will intensively reduce water waste and vehemently oppose the privatisation of the water supply.

Ljubljana is the first European capital in the Zero Waste Europe network. The activities are and will be mainly focused on waste prevention, reuse and recycling, and they will also continue activities in the field of separated waste collection, where Ljubljana has already reached the European peak in the percentage of separately collected waste. With the Regional Waste Management Centre upgrade, the biggest cohesion and environmental project in Slovenia, they will solve the waste problem for 700 000 inhabitants (one-third of the entire population of Slovenia). It will be the most advanced system of mixed and bio-waste management in Europe.

The old sugar factory will house the gallery for visual arts.





In the Šmartinska District Partnership, 12 private partners have created an ambitious long-term urban project that will involve the commercial, urban, social and environmental regeneration of an industrially degraded area of 2 278 300 m² (the largest regeneration in Ljubljana).

Concentrated residential areas and neighbourhoods will be built in line with the principles of sustainable urban construction, taking into account modern environmental standards.

In the future, new buildings will be connected to a more environmentally-friendly system of district heating by heat or gas, and the district heating network will continue to be rolled out. Cleaner technologies will be introduced, including a partial shift from coal to gas and the construction of a TE-TOL combined cycle power plant.

Activities and projects will be carried out in the future as well. With such extremely encouraging foundations, Ljubljana will be even more firmly placed on the map as a conference, cultural events and sports tourism destination, and will attract visitors from all parts of the world.

According to the Vision Ljubljana 2025, the city will become the ideal, sustainable place, with a cosmopolitan character and a modern image. A city for the people, tailored to the individual needs of its citizens, open to investors and professionals from all over the world. As such, Ljubljana will continue to ensure safety and respect for diversity, as well as offer and continue to improve an already high quality of life.



Further information

European Commission DG Environment European Green
Capital Award:

<http://ec.europa.eu/environment/europeangreencapital/>

[http://ec.europa.eu/environment/europeangreencapital/
winning-cities/2016-ljubljana/index.html](http://ec.europa.eu/environment/europeangreencapital/winning-cities/2016-ljubljana/index.html)

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