

8. LJUBLJANA FORUM



WWW.LJUBLJANAFORUM.ORG

FUTURE OF **CITIES**

SUSTAINABLE – SMART – INCLUSIVE

EUROPEAN CITY & BLOCKCHAIN
ASIA-EUROPE COOPERATION



Synthesis Report

Conference

October 4th - 5th 2018 • Ljubljana Castle, Slovenia



Ljubljana, the city of sustainable tourism 2019

The European Commission (EC) launched a new initiative, the European Capital of Smart Tourism, with the aim to promote smart tourism, enable network, strengthen destinations, as well as to facilitate the exchange of good tourism practices among European cities. The initiative seeks to recognise achievements in four categories: sustainability, accessibility, digitalisation, and cultural heritage and creativity.

Independent experts and representatives of the EC and the European Parliament (EP) awarded Helsinki and Lyon with the European Capital of Smart Tourism 2019, while awarding the city of Ljubljana with European Smart Tourism Award for 2019.

Four cities received 2019 European Smart Tourism Award for their achievements in four categories: Málaga for Accessibility, Copenhagen for Digitalisation, Linz for Cultural heritage, and creativity, and Ljubljana as the best in the field of sustainable tourism development.

Ms Petra Stušek, the managing director of Ljubljana Tourism, has noted: *'The award positions Ljubljana at the very top of good practices in the field of sustainable tourism development due to its results so far and its plans for the future, which will enable further economic and social development as well as preserve the natural environment and resources in the process.'*

When it comes to the sustainable tourism development of the City of Ljubljana, Stušek presented 'Green Supply Chains, Taste Ljubljana' project, which connects primary schools to the local food producers, the city's zero waste management measures, increase of public green spaces, pedestrian zones, cycling trails and public transport networks, the introduction of electric tourist train, measures taken in order to achieve deseasonalization and dispersion of tourism flows and the development of cultural districts.

To learn more about European Capital of Smart Tourism, visit: <https://smart-tourismcapital.eu>

To learn more about Ljubljana winning sustainable tourism award, visit: <https://www.visitljubljana.com/en/b2b-press/press-releases/ljubljana-received-the-sustainable-tourism-award-in-the-european-capital-of-smart-tourism-competition/>





Synthesis report on
FUTURE OF **CITIES**
SUSTAINABLE – SMART – INCLUSIVE
EUROPEAN CITY & BLOCKCHAIN
ASIA-EUROPE COOPERATION

Content

5	Introduction
6	About Ljubljana Forum 2018
8	City Leaders and Representatives
9	Speakers
10	Moderators
11	About the Agenda
12	Official Opening of Ljubljana Forum 2018
14	Session I: European City & Europe – Asia Cooperation
17	Session II: Round Table of City Leaders – City Good Practice Cases
18	Session III A: Industry Solutions for Cities
20	Session III B: Industry Solutions for Cities & Reference Projects
22	Ljubljana Forum Reception & Award Ceremony – Ljubljana Castle
25	European Blockchain Hub Openning
28	Conclusions
30	About the People

Introduction

The eight forum on future of cities focused on sustainable, smart, and inclusive cities. Nevertheless, a special attention has been given to cooperation between Europe and Asia for digital transformation of cities towards successful smart cities.

For the first time, new emerging technologies such as blockchain and distributed ledger technologies (DLT) supporting different pillars of smart city development were show-cased. We have organised a dedicated workshop on smart tourism and customer-friendly payment services.

Today, we live in a time of extraordinary opportunities and fundamental changes in our society, business, and personal environments. New technologies are solving those challenges for people, while cities and regions are gaining special type of importance.

Slovenia is successfully keeping the pace with global developments in the dynamic digital environment. Moreover, this country is often positioned as one of the leading countries in Europe when it comes to the development and application of blockchain technology, now with a particular focus on achieving the United Nations' recognised sustainable development goals (SDGs).

For this reason, one of the main topics at this year's Forum was 'blockchain city'.

I am particularly pleased that Slovenia, along with other European Union (EU) countries, is leading in successful cooperation with many countries in Asia, especially in the field of blockchain development technologies.

Ljubljana Forum is providing a unique space and European Blockchain Hub (EUBC HUB) is providing knowledge and resources. The EUBC HUB is reaching full potential in becoming global leading organisation which connects all relevant stakeholders (private sector, governments, academia, civil society, and others) in the field of advocating and supporting capacity building for blockchain development.

Only together, with joint effort, we can see the use of new emerging technologies, including blockchain, work for sustainable and resilient cities and societies for the greatest benefit to its citizens.

Thank you for being part of the eight Ljubljana Forum. We are looking forward to deepening our partnerships in 2019 and in the years to come.



Blaž Golob

Chairman of Ljubljana Forum

About Ljubljana Forum 2018



The eight edition of the Ljubljana Forum took place 4-5 October 2018, at Ljubljana Castle, in Ljubljana, Slovenia. It welcomed 160 participants, speakers, and moderators from all over the world. More specifically, geographic diversity of participants was as follows: 50% from South East/Central Eastern Europe, 15% from Slovenia, and 35% from the rest of the world. When it comes to stakeholder diversity, the Forum welcomed participation of high level representatives, city leaders, futurists, urban planners, architects, academics and researchers, city industry solution providers, consultants, government, European Union (EU) institution representatives, banks, civil society, and media.

The overall objective of Ljubljana Forum 2018 was to connect, enable, and encourage good practice cases and concrete cooperation among different stakeholders, with the special attention to **Europe and Asia cooperation** for digital transformation of cities towards successful smart cities.

Objectives of Ljubljana Forum 2018

- Objective 1:** To present and promote the European green capital.
- Objective 2:** To present Governance Challenges and Smart Infrastructure.
- Objective 3:** To present the opportunities of industry solutions for cities and smart infrastructure.
- Objective 4:** To present the best project practices and entrepreneurship.
- Objective 5:** To connect, learn, bring about new projects and move forward.

Ahead of the 2019 EU elections, new financial perspective 2021-2027, and reinforcement of the EU Urban agenda, the event's focus was on EUROPEAN CITY as sustainable, smart, and inclusive. For the first time, new emerging technologies such as blockchain and distributed ledger technologies (DTL) supporting different pillars of smart city development, were showcased.

Organizers and partners of Ljubljana Forum 2018

- BTC City
- City of Ljubljana
- Development Agency Zagreb
- ELSA
- Energetika Ljubljana
- European Blockchain Hub
- European Investment Bank
- GoForeSight Institute
- ifeelsLOVEria
- Petrol
- SunContract
- The Events
- Vodovod Kanalizacija
- World of Sharing, WOS

Participating cities

- City of Ljubljana
- City of Budapest
- City of Cetinje
- City of Novi Sad
- City of Podgorica
- City of Rijeka
- City of Tirana
- City of Vienna

Ljubljana Forum is an annual gathering that combines knowledge and experience of city governance and defines key areas, visions, and strategies of the future development of cities.

The aim of Ljubljana Forum is to promote opportunities for future development of cities and metropolitan areas of the Southeast European region.

The objective of Ljubljana Forum is to offer a framework for cooperation, networking, and learning among various stakeholders: political decision-makers, city leaders and city administration, investors, businesses, civil society, researchers, academics, and students.

The objective of Ljubljana Forum is to empower this network of stakeholders to create prosperous future of cities through researching, developing, and implementing the best practices of urban development.

Miran Gajšek, head of department for urban planning, City of Ljubljana and co-chairman of Ljubljana Forum, **Blaž Golob**, chair of Ljubljana Forum and president and CEO, European Blockchain Hub, **Tjaša Ficko**, vice mayor of the City of Ljubljana, **Zoran Janković**, mayor of the City of Ljubljana



Mr Dato Rey Gun, EUBC HUB Co-founder and member of the management board, European Blockchain Hub, **Mr Rex Yeap**, WOS Co-founder and member of the advisory board, European Blockchain Hub



City Leaders and Representatives at Ljubljana Forum 2018



Mr Marko Filipović, deputy mayor of the City of Rijeka, Croatia

Mr Aleksandar Kaščelan, mayor of the City of Cetinje, Montenegro



Mr Miran Gajšek, head of department for urban planning, City of Ljubljana, Slovenia

Mr Genci Kojdheli, director general of strategic projects and economic development, City of Tirana, Albania



Mr Zoran Janković, mayor of the City of Ljubljana, Slovenia

Mr Balázs Szeneczey, deputy mayor of the City of Budapest, Hungary



Mr Zdravko Jelušić, head of Mayor's office, City of Novi Sad, Serbia

Mr Ivan Vuković, mayor of the City of Podgorica, Montenegro



Mr Bernd Wünschek, head of IT Architect for the City of Vienna, Austria



Speakers of Ljubljana Forum 2018



Mr Zoran Janković,
mayor of the City of Ljubljana

Mr Primož Škerl,
deputy technical director at
Energetika Ljubljana



Mr Damjan Kralj,
member of the management
board, director of sales and
marketing, BTC d.d.

Ms Anja Blaj, head of
advocacy, EUBC HUB



Mr Blaž Golob, chairman
of Ljubljana Forum, president
and CEO, EUBC HUB

Mr Jose Jacob Kalayil,
CEO Integro Ltd, chairman of
India Advantage Summit



Mr Rex Yeap, WOS
Co-founder, member of the
advisory board, EUBC HUB

Mr Jože Mermal,
chairman of the management
board, BTC d.d.



Mr Lorenzo Madrid, GFS
Institute consultant

Mr Dato Rey Gan, EUBC
HUB Co-founder, member of
the management board, EUBC
HUB



**Ms Stephanie E.
Trpkov**, World Bank
consultant

**Ms Emilija Stojmenova
Duh**, director of the Digital
Innovation Hub Slovenia,
president of the management
board, EUBC HUB



Mr Mark Kalin, director of
digital innovation, BTC d.d.,
member of the management
board, EUBC HUB

Mr Tadej Slapnik,
director, Tolar HashNET
Slovenia, president of the
advisory board, EUBC HUB



Mr Gregor Novak,
SunContract CEO and founder,
member of the management
board, EUBC HUB

Mr Klemen Rupnik,
founder and director
Blockchain Association,
member of the advisory
board, EUBC HUB



Moderators of Ljubljana Forum 2018



Mr Holm Keller, chairman
kENUP Foundation, member
of the management board,
EUBC HUB



Mr Jan Künne, consultant
& network partner EDG / ABC
Enterprise accelerator Palo
Alto, Ljubljana



Ms Aida Mahmutović,
community manager, EUBC
HUB

About the agenda

Thursday, 4th October 2018

Place of venue: **Ljubljana Castle**

Time	Session	Speaker
9.00 – 9.30	Official Opening of Ljubljana Forum 2018 Introduction & Welcome address	Mr Zoran Janković, mayor of the City of Ljubljana Mr Damjan Kralj, member of the management board, director of sales & marketing - BTC d.d. Mr Blaž Golob, chairman of Ljubljana Forum, president & CEO of the European Blockchain HUB
9.30 – 9.50	Signing ceremony Ljubljana Forum Cities of the Future project – PETROL & City of Ljubljana	

Session I: **European City & Europe – Asia Cooperation**

Moderator: Mr Holm Keller, Chairman KENUP Foundation & management board member – European Blockchain HUB

9.50 – 10.50	European City	Mr Miran Gajšek, head of department for urban planning – City of Ljubljana / co-chairman of Ljubljana Forum
	EUROPE – ASIA Cooperation	Mr Rex Yeap, WOS Co-founder, Member of the Advisory Board of the European Blockchain HUB
	Smart & Inclusive Cities	Mr Lorenzo Madrid, GFS Institute consultant
	Digital transformation of Cities – from vision to concrete projects	Ms Stephanie E. Trpkov, consultant World Bank
	Asian perspective of Smart City development – Hong Kong bay area	Mr George So, chairman United Regent Group Ltd., chairman Hong Kong Node, European Blockchain HUB

Session II: **Round Table of City Leaders – City Good Practice Cases**

Moderator: Ms Aida Mahmutović, social media & community manager, European Blockchain HUB

11.00 – 12.15	Mr Zoran Janković, mayor of Ljubljana; Mr Ivan Vuković, mayor of Podgorica; Mr Aleksandar Kaščelan, mayor of Cetinje; Mr Balázs Szeneczey, deputy mayor of Budapest; Mr Marko Filipović, deputy mayor of Rijeka; Mr Genci Kojdheli, director general of strategic projects and economic development, Tirana; Mr Bernd Wünschek, head of IT Architect for the City of Vienna; Mr Zdravko Jelušić, head of Mayor's office, Novi Sad	
---------------	---	--

Session III A: **Industry Solutions for Cities**

Moderator: Mr Jan Künne, consultant & network partner EDG / ABC Enterprise accelerator Palo Alto / Ljubljana

14.00 – 15.00	BTC CITY	Mr Mark Kalin, member of the management board of the European Blockchain HUB
	World of Sharing	Mr Rex Yeap, WOS Co-founder, Member of the Advisory Board of the European Blockchain HUB
	SUNCONTRACT	Mr Gregor Novak, CEO & founder Suncontract
	ENERGETIKA JP/LJ	Mr Primož Škerl, head of sector JP Energetika Ljubljana

Session III B: **Industry Solutions for Cities & Reference Projects**

15.00 – 16.00	Legal Framework for Blockchain City Development	Ms Anja Blaj, head of advocacy, European Blockchain HUB
	Smart Cities Development in India	Mr Jose Jacob Kalayil, CEO Integro Ltd, chairman of India Advantage Summit
16.00 – 16.15	Conclusions of the first day & introduction to the second day	
16.30 – 18.00	Study tour visit to one of the selected city object that was energy retrofit (European Investment Bank – EIB financed / initiated in Ljubljana Forum in 2012)	
20:00	Ljubljana Forum Reception & Award Ceremony	

Friday, 5th October 2018

Place of venue: **BTC City of Ljubljana / Visit to the Bitcoin City / Pyramid building, Šmartinska 140, Ljubljana, 6th floor**

9:00 – 10:00	Official opening of the European Blockchain HUB – BTC City	Mr Blaž Golob, president & CEO of the European Blockchain HUB; Mr Zoran Janković, mayor of the City of Ljubljana; Mr Jože Mermal, president of the board BTC d.d.; Mr Dato Rey Gan, EUBC HUB Co-founder, Member of the Management Board of the European Blockchain HUB
11.15 – 12.00	Introduction to the Work of the European Blockchain HUB	Ms Emilija Stojmenova Duh, president of the management board of the European Blockchain HUB; Mr Tadej Slapnik, president of the advisory board of the European Blockchain HUB; Mr Mark Kalin, blockchain lead BTC & management board member of the European Blockchain HUB; Mr Rex Yeap, WOS Co-founder, Member of the Advisory Board of the European Blockchain HUB; Mr Blaž Golob, president & CEO of European Blockchain HUB

Official Opening of Ljubljana Forum 2018



Zoran Janković, mayor of the City of Ljubljana

Mr Zoran Janković, mayor of the City of Ljubljana, Mr Damjan Kralj, member of the management board, director of sales and marketing - BTC d.d., and Mr Blaž Golob, chairman of Ljubljana Forum, president and CEO of the European Blockchain HUB (EUBC HUB) welcomed participants to the eight Ljubljana Forum inviting to actively engage in discussions concerning European cities as sustainable, smart, and inclusive cities with the focus on emerging technologies, such as blockchain supporting different pillars of smart city development.



Damjan Kralj, member of the management board, director of sales and marketing - BTC d.d.



Marko Dimkovski, CFO, board member, Javna razsvetljava d.d., **Luka Komazec**, Resalta d.o.o., **Jože Torkar**, Energy and environmental solutions, Petrol d.d., **Alenka Loose**, City of Ljubljana, **Zoran Janković**, mayor of the City of Ljubljana, **Tomaž Berločnik**, president of the Board, Petrol, d.d.

Signing ceremony Ljubljana Forum Cities of the Future project – PETROL & City of Ljubljana

Energy Efficiency project initiated at Ljubljana Forum in 2013. In 2018 first phase was realised and second phase contract signed. **Forum objective No 5 realised!!!**

About the highlights

Session I.

European City and Europe-Asia Cooperation



Holm Keller, Chairman of kENUP Foundation, **Miran Gajšek**, co-chairman, Ljubljana Forum, City of Ljubljana, **Stephanie E. Trpkov**, strategic competitiveness consultant, World Bank Group, **Rex Yeap**, WOS Co-founder, **Lorenzo Madrid**, GFS Institute consultant

According to Savills World Research, Worldwide Trends 2018 report, the 'non-core markets, in economies which will outperform the European average, such as the CEE region¹, could attract investors that are prepared to move up the yield curve. Alternative sectors, such as residential (housing, student housing, and senior housing), hospitality, healthcare, and data centres are characterised by strong fundamentals influenced by structural rather than cyclical factors, for long term, strategic investment plans.

1 Central and Eastern European (CEE) Countries is an OECD term for the group of countries comprising Albania, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Slovenia, and the three Baltic States: Estonia, Latvia and Lithuania. (<https://stats.oecd.org/glossary/detail.asp?ID=303>)

Technological disruption and social change means occupiers need new and different types of space. We are witnessing the emergence, and fast evolution, of new property types. These are often hybrids of traditional uses, but with a focus on services, exhibitory, and sharing. Examples include co-working and serviced offices, co-living, micro-living, new leisure uses, and student housing/hotels. These are segments which do not have the depth and liquidity of the established sectors, but we expect them to lead investment into new property types, some of which have yet to emerge.



Stephanie E. Trpkov, World Bank Consultant

Mr Miran Gajšek, head of department for urban planning, City of Ljubljana and co-chairman of Ljubljana Forum, noted the following objectives for urban regeneration:

Urban renewal: transformation into a recognisable, programmatically rich and active part of the city, with intertwining activities enabling dwelling, working, and leisure.

Economic renewal: creation of conditions for an economically prosperous city district where the former employment in processing industry will be offset by new activities.

Social renewal: creation of conditions for a socially alive city district, with homes in the private market and social rented housing, local service businesses, and global production companies.

Ecological renewal: ecology-promoting city district, cleared off old environmental burdens; enabling energy-efficient construction that utilise energy- efficient technological solutions.

Mr Rex Yeap, co-founder World of Sharing (WOS) dedicated his speech to the cooperation between Europe and Asia.

He pointed out that as cities are evolving in Europe and Asia, the more advance they get there is a greater worry about environmental issues. Building smart cities plays an important role when it comes to global warming, as well as for the people who live in the cities for their healthy lifestyles. Yeap notes that in his opinion, smart cities are 'not matured yet in many countries'. He concluded by noting that **Asia** will need more input by profession and experts from **Europe** to build smart cities. Europe did a fantastic job in building smart cities, while retaining the cultural and historical value of the cities. This certainly will enable future generation to be able to see these historical monuments, cities' development throughout history still in-vivo and not in the books.



»I strongly support events, such as the Ljubljana Forum, because it enables to continue to organize and keep the pace on yearly basis, to share the latest technologies' developments, and it adds value in strategy on smart cities. I always believe we shall share more about how we build our city to a better place, since we have a common goal - for citizens and those who stay at our cities to be safe.«

Mr Rex Yeap, WOS Co-founder, member of the advisory board, EUBC HUB

Ms Stephanie E. Trpkov, consultant, World Bank, presented on the subject of connecting cities in the Silk Road, more specifically on the PPP model for successful development.

When it comes to digital transformation of cities, Trpkov offered food for thought with interesting examples which went from a vision to concrete projects.

Mr Lorenzo Madrid, GFS Institute consultant, spoke about what Smart City 3.0 is. He noted that the next 'buzz words' are: **Next, IoT, Sensors, Connected, Future, Smart.**

City managers might face the urban planning challenges such are: shrinking revenues, budget cuts, limited natural resources, aging of citizens, outdated infrastructure, growing energy demands, and rigorous regulatory requirements; as well as importance to understand and provide improved cybersecurity and privacy when moving to digital technology.



»There is no absolute definition of a smart city, but it is a process by which cities become more 'livable' and resilient, therefore able to respond more quickly to new challenges.«

Mr Lorenzo Madrid, GFS Institute consultant

Session II:

Round Table of City Leaders - City Good Practice Cases



Genci Kojdheli, director general of strategic projects and economic development, Tirana, **Ivan Vuković**, mayor of Podgorica, **Bernd Wünschek**, head of IT Architect for the City of Vienna, **Zdravko Jelušić**, head of Mayor's office, Novi Sad, **Aida Mahmutović**, social media & community manager, European Blockchain Hub, **Marko Filipović**, deputy mayor of Rijeka, **Balázs Szeneczey**, deputy mayor of Budapest, **Aleksandar Kaščelan**, mayor of Cetinje, **Miran Gajšek**, head of department for urban planning, City of Ljubljana



"The most important part for the city of Rijeka is to be a smart city at 2020."
Mr Marko Filipović, deputy mayor of Rijeka

"Some things we have heard today could be the future for us. In the end, we want to see improvement."
Mr Ivan Vuković, mayor of Podgorica



"As politicians, we are watching public and making decisions in the right way, for our people and our city. Often, the problem is law. Laws about, for example digitisation of documents, are needed. We have to lot to do in the future if we want to reach discussion also about new technology, such is blockchain."

Mr Zdravko Jelušić, head of mayor's office, Novi Sad



"The City of Vienna cooperates with a lot of universities. Our projects are not big but we want to learn new technologies. Recycling is a big topic, but if it is not done right nobody cares. Important points are also privacy and security. And there are completely different ways in which people look on these topics."

Mr Bernd Wünschek, head of IT Architect for the City of Vienna



Session III A:

Industry Solutions for Cities



Gregor Novak, CEO & founder, Suncontract, **Rex Yeap**, WOS Co-founder, member of the advisory board of the European Blockchain Hub, **Mark Kalin**, head of innovation office and new technology, BTC City, member of the management board of the European Blockchain Hub, **Primož Škerl**, deputy technical director at Energetika Ljubljana, **Jan Künne**, consultant & network partner EDG / ABC Enterprise accelerator Palo Alto / Ljubljana

Mr Mark Kalin, head of innovation office and new technology, BTC Company, and member of the management board of the EUBC HUB, presented the BTC City as one of the largest business, shopping, entertainment, recreational, and cultural centers in Europe. Data shows more than 21 mio visitors per year, 3,000 companies, more than 450 shops, 70 food restaurants, 8,500 free parking spaces, and 12,5 mio cars per year.

Indicative data from BTC City as Innovative City: ABC Accelerator

- In last 3 years accelerated 90 startups from 24 different countries.
- ABC Accelerator became the best accelerator in Central Europe on 25 November 2017.
- Currently running 6th program for startups – DEEP TECH.
- Has all-inclusive package with apartments, developers, legal etc..
- Collected more than 30 mil of investments into its startups.
- Created more than 1,000 new jobs.

Looking into the new era of BTC Company, it aims to include: blockchain, virtual reality (VR), augmented reality (AR), and machine learning (ML) technologies, for the following:

- The future of shopping by implementing new technologies.
- Implementation of different blockchain projects in the BTC City.
- Being the center of the European Blockchain Hub (EUBC HUB).
- Being recognized as the Bitcoin city.
- Accepting cryptocurrency in every shop - Elipay.
- And stay tuned for: crypto ATMs.

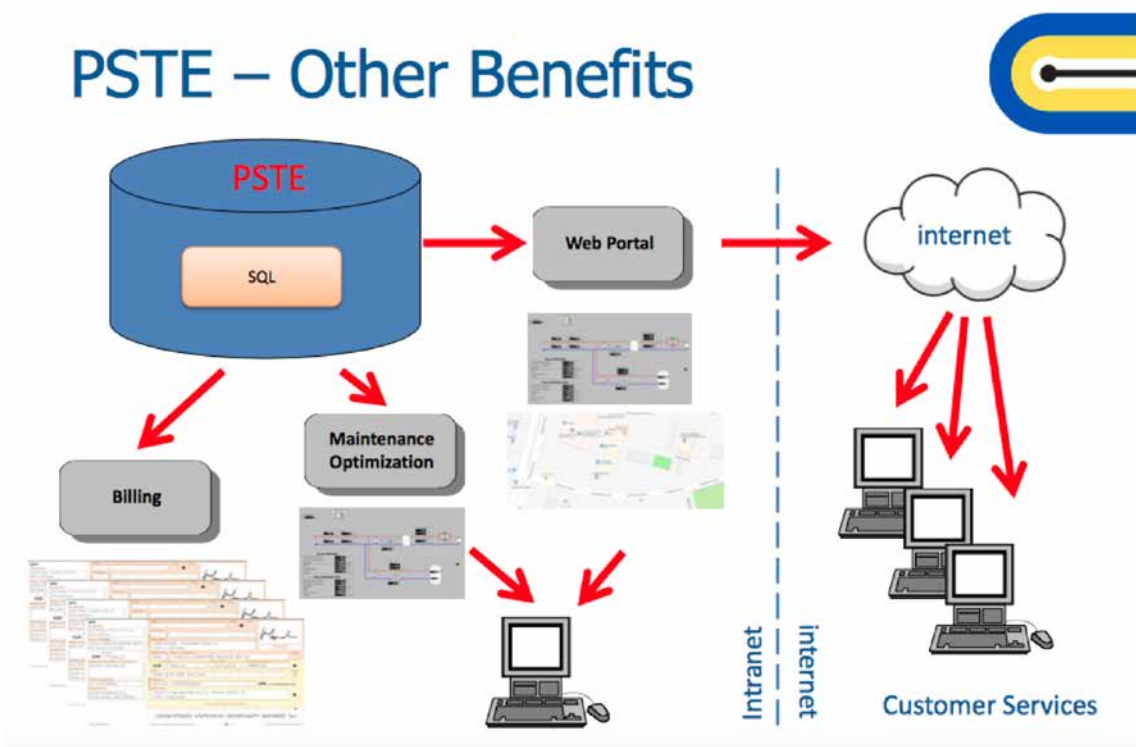
Mr Gregor Novak, CEO and co-founder, SunContract, presented their vision which includes trust, transparency, traceability, time stamp, transaction, digitalisation, decarbonization, deregulation, decentralization, and democratization. SunContract works on solving on daily basis expensive electricity costs, pollution-based environment overheating, absence of retail peer-to-peer energy market, and inability to manage prosumption. Their work supports the growth of self-sufficient energy communities with batteries, supports EU directive and OZN in the area of achievable sustainable goals. Their platform has been launched in April 2018, in Bled, Slovenia.

Why to spread the word on implementing the 'SunContract'?

- It promotes self-sufficiency
- Producers break even initial investment faster
- Consumers save money
- It promotes the use of renewables
- Contributes towards a cleaner environment

Mr Primož Škerl, deputy technical director at Energetika Ljubljana was one of the speakers at the Industry solutions for cities session. Škerl presented the PSTE (Pametni Sistem Toplotne Energije) project, about smart energy smart systems, its challenges and smart heating solutions.

PSTE – Other Benefits



Session III B:

Industry Solutions for Cities & Reference Projects



Jose Jacob Kalayil, CEO Integro Ltd, chairman of India Advantage Summit, **Anja Blaj**, head of advocacy, European Blockchain HUB, **Jan Künn**e, consultant & network partner EDG / ABC Enterprise accelerator Palo Alto / Ljubljana

Mrs Anja Blaj, head of advocacy at the EUBC HUB, addressed the issue of technology's lack of neutrality. As it always reflects creators attitude, moral values and intentions, one needs to seek legal standards and common denominators in order to assure the development follows social needs. Blaj compared legal rules and decisions to a consensus protocols ingrained in a code and explained why an interdisciplinary approach might be needed today more than ever. She emphasised that legal framework creators will have to take into account the smart city infrastructure, including traffic surveillance, infrastructure funding, mobility, big data and its connection to smart incentives.

There are two important agility mechanisms to achieve stability of the system:

1. **Minimum viable regulation (MVR) with rapid updates as new technology is adopted;**
2. **Sandboxes - experimental environment in which solution providers cooperate with government to better understand how to regulate the new technology.**

Blaj named numerous pilot projects adopting blockchain technology for smart city infrastructure, such are Tidepool, Phosphorus, Fitbit, Johnson&Johnson, to name a few, and concluded with FDA Commissioner, Scott Gottlieb's statement: *"We need to modernize our **regulatory framework** so that it matches the kind of innovation we're being asked to evaluate."*



Jose Jacob Kalayil, CEO Integro Ltd, chairman of India Advantage Summit

Mr Jose Jacob Kalayil, CEO Integro Ltd, chairman of India Advantage Summit, presented about smart city solutions and development in India. Kalayil emphasized the current Prime Minister of India, Mr Narendra Modi has been awarded, along with the French president Emmanuel Macron, with United Nations honor, in policy leadership category, for 'pioneering work in championing the International Solar Alliance and promoting new areas of levels of cooperation on **environmental action**.' Indian sustainable policy implementation on green grassroots initiatives 'have flourished'. A major push forward towards renewable energy in recent years has propelled India to become the fifth largest producer of solar energy and the sixth larger producer of renewable energy worldwide.

When it comes to education, they take special pride in their Smart classrooms in the following cities in India: Vishakhapatnam, Kakinada, in two schools, and Jabalpur in 22 schools.



Ljubljana Forum Reception & Award Ceremony



Simon Trnovšek, secretary general, Kazakh-Slovenian Business Club, **Miran Gajšek**, head of department for urban planning, City of Ljubljana, **Rex Yeap**, WOS Co-founder, member of the advisory board, EUBC HUB, **Marija Mardonović**, TheEvents, **Janez Koželj**, vice-mayor of the City of Ljubljana, **Blaž Golob**, chairman of Ljubljana Forum

During the eight Ljubljana Forum, the 2018 'Future of Cities Award', for the best innovation in the field of developing future of the cities, has been given to

the City of Almaty, for their Urban mobility reform 'From a car-oriented to people-oriented city', project.

To the Award ceremony, Mr Simon Trnovšek, secretary general of the Kazakh-Slovenian Business Club, has been invited and to whom the Award has been presented.

Ljubljana Forum's 'Future of the Cities Award' is an annual tradition and it is presented to the most innovative smart city development project.

This year's competition was extremely strong, and the job for the Selection committee was not easy. Apart from the winning project 'From a car-oriented to people-oriented city' from the City of Almaty, the following two projects also made it to the finals:

- the City of Ankara, Ankapark, 'Sustainable tourism potential of the city' project, and
- the City of Zagreb, River Save, 'Returning citizens to the river Sava'.

Janez Koželj, vice-mayor of the City of Ljubljana



The overall objectives of the Forum are to connect, enable, and encourage good practice cases and concrete cooperation among various stakeholders. Ljubljana Forum is, for the eight year now, a proud host of cities and regions in Europe, Asia, and beyond, offering a space and opportunities for strengthening cooperation for better performance of our cities.

We congratulate the winner, the finalists, and extend our appreciation to all other applicants for participating in this year's competition.

For the closing of the eight Ljubljana Forum, at the reception and award ceremony, the vice mayor of the city of Ljubljana, Mr Janez Koželj, gave a speech.



Welcome to Ljubljana and to Ljubljana Forum for the eight time

'Dear visitors and participants of the Forum, dear colleagues,

Ljubljana Forum on the Future of the Cities is opening discussions about the underuse of ICTs which could foster the process of achieving the set of sustainable transformational goals. In this regard, we are concurrently striving to keep the pace.

The fundamental objective of our eight Forum is to bring closer the examples of good practice and effectively encourage significant collaborations between various stakeholders and partners to implement innovative technologies for safe mining of big data, which is being offered in the network of all the data used in the city management.

As we all know, the smart cities infrastructure is based on the Internet of Things (IoT), linked through a network of smart phones, tablets, and other devices, surveillance cameras, and sensors - with the purpose of monitoring traffic flows, consumer behaviour, criminal conducts, etc.

Mobile devices and IoT tools can be spread across the city and easily incorporated, registered within distributed ledger technology (such as blockchain). Since each device can be registered with its very own password and title caption, a unique identification guarantees much safer use and prevents the obtained data to be maliciously abused. This all being said, there's countless opportunities for blockchain technologies in the sector of smart cities, where huge amount of data is constantly being provided, collected and processed, yet spared for our future measures and practical operations.

Participants of the eight Ljubljana Forum at the Evening Reception & Award Ceremony



Data incorporated in a safe blockchain environment could ease the access, management of statistics, and facts by city administration and public service providers. Blockchain technologies enable various stakeholders to collect, revise, manage databases without the possible biased or vulnerable intermediaries, autonomously and in a decentralised manner. With this in mind, it offers effective infrastructure for the improvements of public safety, validation of public transportation, improvements of public procurement, and much more.

This are just some manners in which new, innovative blockchain technology or distributed ledger technology contributes to the removal of barriers and faster development of smart cities as a interconnected smart system of networks.

With strong belief everyone on the forum obtained more knowledge, made strong connections and perhaps even concluded some agreements about future cooperation, while enjoying each others company, I congratulate you all at the conclusion of our Forum.'



Zdravko Jelušič, head of mayor's office, Novi Sad, **Aleksandar Belić**, Novi Sad, **Denis Mladenčić**, Viškovo, **Marko Filipović**, deputy mayor of Rijeka, **Maja Zupančič Pintar**, EUBC HUB



European Blockchain Hub Opening



Zoran Janković, mayor of the City of Ljubljana, **Miran Gajšek**, City of Ljubljana, **Helena Petrin**, secretary general at BTC d.d., **Jože Mermal**, president of the Board, BTC d.d., **Blaž Golob**, president and CEO of the EUBC HUB, **Dato Rey Gun**, member of the management board, EUBC HUB, **Rex Yeap**, member of the advisory board, EUBC HUB

The second day, 5 October 2018, marked the official opening of the European Blockchain Hub (EUBC HUB), in the BTC City Center premisses, in Ljubljana, Slovenia. Over a hundred guests from all around the world, including partners, supporting organizations' representatives, experts in the field, stakeholders, as well as curious visitors, attended the opening.

Guests were welcomed by **Mr Blaž Golob**, president and CEO of the EUBC HUB, who stated that *the Hub marks a new era for the blockchain industry, with ambition to position its members, Ljubljana, Slovenia and Europe worldwide.*



Guest from all around the world attended the opening.



Rex Yeap, WOS Co-founder, member of the advisory board, EUBC HUB, **Klemen Rupnik**, Slovenian Blockchain Association, member of the advisory board, EUBC HUB, **Dato Rey Gun**, EUBC HUB Co-founder, member of the management board, EUBC HUB, **Mark Kalin**, director of digital innovation, BTC City, member of management board, EUBC HUB, **Blaž Golob**, president and CEO of the EUBC HUB, **Emilija Stojmenova Duh**, director of the Digital Innovation Hub Slovenia, president of the management board, EUBC HUB, **Tadej Slapnik**, director at Tolar Hashnet Slovenia, president of the advisory board, EUBC HUB, **Stephanie E. Trpkov**, World Bank consultant, member of the supervisory board, EUBC HUB, **Gregor Novak**, SunContract, member of management board, EUBC HUB.

Blaž Golob, president and CEO of the EUBC HUB, **Damjan Kralj**, member of the management board, director of sales and marketing, BTC d.d., **Dato Rey Gun**, EUBC HUB Co-founder, member of the management board, EUBC HUB, **Rex Yeap**, WOS Co-founder, member of the advisory board, EUBC HUB, **Mark Kalin**, director of digital innovation, BTC City, member of management board, EUBC HUB



The opening of the Hub has been welcomed by **Mr Zoran Janković**, the mayor of the City of Ljubljana himself. Janković expressed his excitement and pleasure for putting Ljubljana, *the most beautiful city in the world*, in the center of conversation and action around emerging technologies, such as the blockchain.

Mr Rex Yeap, EUBC HUB advisory board member, noted that he sees the EUBC HUB as a platform not only to connect Europe and Asia, but countries within Asia as well, in *using blockchain to reach out to the rest of the world*. He invited to join forces on *exchanging information, knowledge, as well as experience, in order to make Europe and Asia a better place*.



Guests enjoyed networking over brunch reception and special art exhibition by **Mr Miha Murn** at the premises of the EUBC HUB.

The EUBC HUB is a cooperative that is currently gathering government, academia, business sector, and individuals, but is nonetheless welcoming interest and cooperation with other stakeholder representatives, as well, in the development of blockchain and distributed ledger technology (DLT) for achieving sustainable development goals (SDGs). It is open for everyone who shares the values of openness, social responsibility, and general care for others. It is an independent organization established with the purpose to increase the advantages of stakeholders in blockchain technology and the distributed economy, while increasing the advantages of Europe, through regional and global partnerships.

The second part of the opening was dedicated to the stakeholders and board members introducing the work of the EUBC HUB for guests and broader audience.

All information and activities of the European Blockchain Hub (EUBC HUB) can be found at: www.eubchub.eu.

Guests enjoyed networking over brunch reception and special art exhibition by Mr Miha Murn at the premises of the EUBC HUB.



Conclusions of Ljubljana Forum 2018



Miran Gajšek, co-chairman of Ljubljana Forum and **Blaž Golob**, chairman of Ljubljana forum

City leaders, speakers, emerging technologies and blockchain experts, and participants of the VIII Ljubljana Forum gathered at Ljubljana Castle to discuss the concept of a sustainable, smart, and inclusive future of cities, with the emphasis of cooperation between Asia and Europe and blockchain technology.

It is not easy to keep the pace with the world evolving in economic, social, technological, as well as political ways. All of these are reshaping the world as we know it, bringing in new challenges for people and therefore for cities.

For urbanization, demographic changes, technological progress, and environmental challenges, having smarter cities is not an easy task for governments.

However, a 'smart city' is becoming a trending concept on global basis, and lately more than ever is more and more connected with emerging technologies such as artificial intelligence (AI) and blockchain. In order to become smarter, more collaborative, inclusive, connected, and more sustainable, they need to provide better services and offer higher living quality for its citizens. And for this, carefully planned smart city strategies are crucial.

At the eight Ljubljana Forum on future of cities, we focused on European city as sustainable, smart, and inclusive city, especially as we approach the 2019 European Union elections, new financial perspective 2030, and reinforcement of the EU Urban Agenda.

We put special focus on cooperation between two continents, Europe and Asia, as strong and global partners, both strong in developing and using new technologies, such is blockchain.

For the first time, blockchain supporting different pillars of smart city development have been showcased.

Blockchain is somewhat a new technology, therefore most of governments have not yet seen its potential in building smart cities. Therefore, with Ljubljana Forum, and connecting solutions from Europe, Asia, and beyond we are working in emphasizing its great potential.

Only some of the areas where blockchain can play big role are voting systems, education, traceability of medicines, food and agriculture, energy, employment, insurance, among others. In addition, blockchain can decrease the risk of challenges related to data security, privacy, inefficiency, lack of transparency, as well as corruption. For that, we have included blockchain in looking into smart cities of the future.

Ljubljana Forum, within eight years, has become a platform for multistakeholder community, where knowledge is shared with new good practices and arising challenges.

We believe that cities need to learn one from another.

With open collaboration, careful vision and development strategy, and potential of new technologies, we can help our cities become smart cities of well-being for everyone.



Extraordinary relaxed people at Ljubljana Forum. Right **Mr Marko Filipović**, deputy mayor of the City of Rijeka, **Digital Cities Challenge** (www.digitallytransformyourregion.eu), selected city by European Commission.

Miha Murn, president and CEO of AAMI International Corporation





About the People

City Leaders

Mr Marko Filipović, deputy mayor of the City of Rijeka, Croatia
 Mr Miran Gajšek, head of department for urban planning, City of Ljubljana, Slovenia
 Mr Zoran Janković, mayor of the City of Ljubljana, Slovenia
 Mr Zdravko Jelušić, head of Mayor's office, City of Novi Sad, Serbia
 Mr Aleksandar Kaščelan, mayor of the City of Cetinje, Montenegro
 Mr Genci Kojdheli, director general of strategic projects and economic development, City of Tirana, Albania
 Mr Balázs Szeneczey, deputy mayor of the City of Budapest, Hungary
 Mr Ivan Vuković, mayor of the City of Podgorica, Montenegro
 Mr Bernd Wünschek, head of IT Architect for the City of Vienna, Austria

Speakers & Moderators

Mr Zoran Janković, mayor of the City of Ljubljana
 Mr Damjan Kralj, member of the management board, director of sales and marketing, BTC d.d.
 Mr Blaž Golob, chairman of Ljubljana Forum, president and CEO, EUBC HUB
 Mr Rex Yeap, WOS Co-founder and director director Blockchain for SDGs tour, EUBC HUB
 Mr Lorenzo Madrid, GFS Institute consultant
 Ms Stephanie E. Trpkov, World Bank consultant
 Mr Mark Kalin, director of digital innovation, BTC d.d., member of the management board, EUBC HUB
 Mr Gregor Novak, SunContract CEO and founder, member of the management board, EUBC HUB
 Mr Primož Škerl, deputy technical director at Energetika Ljubljana
 Ms Anja Blaj, head of advocacy, EUBC HUB

Mr Jose Jacob Kalayil, CEO Integro Ltd, chairman of India Advantage Summit
 Mr Jože Mermal, chairman of the management board, BTC d.d.
 Mr Dato Rey Gan, president Titanwave Pte Ltd, Singapore, member of the management board, EUBC HUB
 Ms Emilija Stojmenova Duh, director of the Digital Innovation Hub Slovenia, president of the management board, EUBC HUB
 Mr Tadej Slapnik, director, Tolar HashNET Slovenia, president of the advisory board, EUBC HUB
 Mr Holm Keller, chairman KENUP Foundation, member of the management board, EUBC HUB
 Mr Jan Künne, consultant & network partner EDG / ABC Enterprise accelerator Palo Alto, Ljubljana
 Ms Aida Mahmutović, community manager, EUBC HUB

Participants

Mr Nejc Avguštin, Ljubljana
 Mr Mladen Babić
 Mr Mojca Bajec, IPOWERO d.o.o.
 Ms Željana Barišić, Zagrebački inovacijski centar d.o.o.
 Mr Matic Baškovič, Resalta d.o.o.
 Mr Tomaž Berločnik, Petrol d.d.
 Ms Tanja Bivic, Blockchain Alliance Europe
 Ms Anja Blaj, EUBCHUB
 Ms Nataša Bogme Kirn, KingS d.o.o.
 Mr Julij Božič, BTC
 Ms Brigita Bračko, THE EVENTS
 Ms Saša Buničič, Arhitektura in oblikovanje
 Ms Nadine Castillo
 Mr Ian Chai, Creative Hive
 Mr Kristopher Colja
 Ms Norma De Saint Picman, Noravision Gallery Zavod za promocijo umetnosti, kulture in izobraževanja

Mr Marko Dimkovski, Javna razsvetljava d.d.
 Mr Tihomir Divjak, GFS Institut
 Ms Nena Dokuzov, Ministry of Economic Development and Technology
 Mr Lajos Dániel Fehér, Embassy of Hungary
 Mr Boštjan Ferk, Ljubljana
 Mr Hrvoje Filipović, Graml Ltd. / Bigbelly General distributor
 Mr Sergij Foski, Core Matrix Limited
 Ms Martina Gabor, iPOWER d.o.o.
 Mr Dato Rey Gan, EUBCHUB
 Mr Robert Gazvoda
 Ms Gábor Gellért
 Mr Jurij Gerbec, Petrol d.d.
 Ms Katja Geršak
 Mr Bojan Golic, Civil Service Agency of Bosnia and Herzegovina
 Mr Rok Gornik, iPOWER d.o.o.
 Mr Guenther Graml, Graml Ltd. / Bigbelly General distributor
 Mr Marjan Gumzej, Ljubljana
 Mr Gregor Hlupič, MAOP
 Mr Marko Hočevár, Ljubljana
 Mr Milan Horvat, Firma Plus
 Mr Vladimir Hutinec, Ljubljana
 Mr Klemen Ivančič
 Mr Jose Jacobs, GFS Institute
 Mr Srečo Jadek, Odvetniška pisarna Jadek and Pensa
 Mr Jože Kastelec, Ljubljana
 Mr Luka Komazec, Resalta d.o.o.
 Mr Gregor Kos, E-PR
 Mr Mitja Košak, Solos
 Ms Mia Kovačič, Resalta d.o.o.
 Ms Katja Kralj
 Ms Sanela Krese
 Mr Tomaž Kričej, iPOWER d.o.o.
 Mr Peter Kunštič, Optomotive GmbH
 Mr Damjan Kuzmič, KD projekti
 Ms Katja Lesjak, Eunex-E
 Mr Marko Lukič, Lumar IG d.o.o.
 Mr Nemanja Malbašič, SRC d.o.o.
 Mr Miha Mermal, BTC d.d.
 Mr Miklós Mártonffy, Chief Architect of Budapest
 Mr Jure Maučec
 Ms Nina Mayerhof, One humanity institute
 Ms Klavdija Merc Godler, Petrol d.d.
 Mr Matic Merčun, Limitlex holding Ltd.
 Mr Martin Mikeln, CEO
 Mr Marko Miklavčič, Eunex-E
 Mr Enio Minxhozi, Director of Foreign Affairs
 Mr Denis Mladović, Viškovo
 Ms Staša Mlekuž, Blockchain Think Tank Slovenia
 Mr Marko Mugrle, MAOP
 Mr Oliver Muldoon
 Mr Miha Murn, AAMI
 Mr Gregor Murn, AAMI
 Mr Gregor Musa, Director
 Ms Andreja Nagode, Javna razsvetljava d.d.
 Mr Domen Neffat, Neffat Law
 Mr Gregor Novak, iPOWER d.o.o.
 Mr Primož Osmanović
 Ms Stela Papič, AAMI
 Ms Lea Paternoster Bojič, European blockchain hub
 Mr Martin Pečar, OmniOpti
 Ms Sylvia Pencheva, Institute for Philosophical Research
 Mr Blaž Petermel, SMARTIS d.o.o.
 Ms Helena Petrin, BTC d.d.
 Mr Leo Petrov, Infodom d.o.o.
 Mr Mario Pichler, Software Competence Center Hagenberg GmbH
 Mr Mitja Pirc
 Mr Dejan Podhraški, Ljubljana



Ms Daša Podržaj, AAMI
 Mr Miroslav Polzer, International Association for the Advancement of Innovative Approaches to Global Challenges IAAI
 Ms Blaženka Pospíš Perpar, Petrol d.d.
 Ms Milica Projić, Zagreb Innovation Centre Ltd.
 Ms Manca Pugelj, EUBCHUB
 Mr Kristian Ravič, Development agency Zagreb - TPZ Ltd.
 Mr Roman Rener, Geodetic institute Slovenia
 Mr Blaž Repe, Petrol d.d.
 Mr Martin Retelj, British Slovenian Chamber of Commerce
 Mr Klemen Rupnik, Blockchain Association
 Mr Pavle Sicherl, SICENTER
 Mr Slavko Slavk, Javna razsvetljava d.d.
 Ms Nuša Smolič, AAMI
 Ms Nina Smolič, NKBM
 Mr Kiril Spirovski, Ernest and young svetovanje d.o.o.
 Mr Edvard Sternad, Institute for Superior Digital Tehnology
 Mr Frane Šesnić, Zagrebački inovacijski centar d.o.o.
 Mr Marko Šmid, SRC d.o.o.
 Ms Simona Špilak, Boc Institut
 Mr Klemen Štibilj, Video Chef
 Mr Milan Šturm, Petrol d.d.
 Mr Peter Trček, Blockchain Think Tank Slovenia
 Mr Gregor Treska, BC association
 Mr Srdjan Trifunovic
 Mr Marko Umberger, Ljubljana
 Ms Barbara Uranjek, British Slovenian Chamber of Commerce
 Mr Žiga Urankar, Odvetniška pisarna Jadek and Pensa
 Ms Tanja Vesel, Vesela doživetja
 Ms Gabriela Vial Pereira, Donau-uni.ac.at
 Mr Slavko Vidović, InfoDom d.o.o.
 Ms Zdravka Zalar, Smartis d.o.o.
 Mr Marjan Zaletelj, Javna razsvetljava d.d.
 Ms Maja Zupančič Pintar, European Blockchain Hub

Team

Ms Brigita Bračko
 Mr Miha Sever
 Ms Nina Zalar
 Ms Nataša Tanasić
 Ms Nika Glavnik
 Ms Marija Mardonović



Complete solutions



PETROL

Energy for life

Petrol as the largest energy company in South East Europe has a clear vision of future low carbon society. With more than 70 years' experience and long-term BBB investment grade, we are transforming to a **Multi-Utility Mobility and Energy service Company (MUMESCO) Company** that can help execute investments in smart city solutions or help investing through public private partnerships.

As a recognised partner of smart cities in the region, we manage five of the aspects that are important to cities, namely **energy, buildings, infrastructure, the environment and mobility**, in an optimum manner in order to achieve their goals, using minimum of energy and producing minimum environmental footprint.



Partnering for efficient production, supply and distribution of **energy** in cities, we optimise and manage district heating systems of cities, supply cities with cleaner, eco-friendlier energy sources, and construct the necessary infrastructure. We invest in power production coming from renewable energy sources, such as geothermal energy, wind power, solar power and hydropower.



Executing comprehensive solutions in the field of the supply and use of high-quality drinking water, supported by expert management tools, we provide cities with the control of their **infrastructure**, optimisation of their water supply and development planning. We significantly contribute to reducing the costs of water distribution, diminish energy consumption, reduce water losses and take care of wastewater operations.



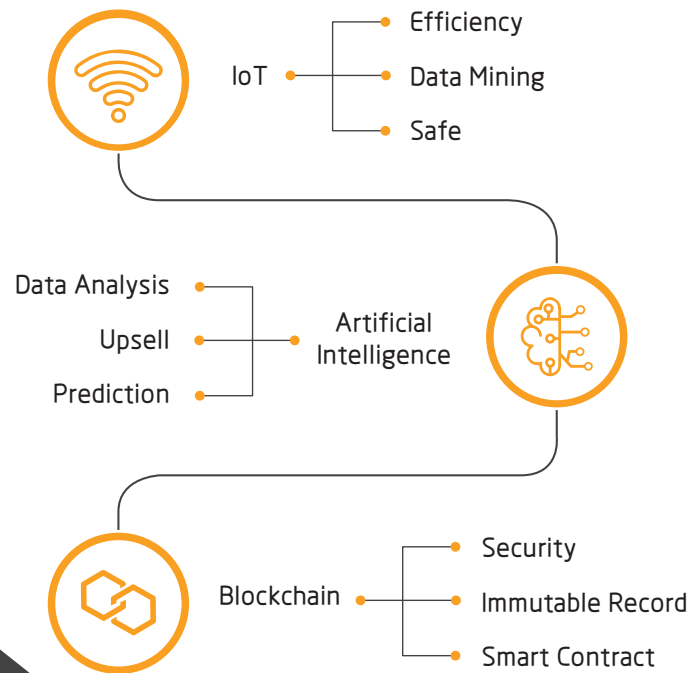
With state of the art technology, we are digitalising the pathway for all smart city users, through solutions that connect data flow from IoT devices, public utilities to end users and through our digital outlets and smart home solutions. Let's invest in smart decisions together.



WOS TECHNOLOGY
Cutting Edge. Precise. Integrated.

WOS is creating a community of sharing economy around the globe to understand their lifestyle and behavior by using THREE CUTTING-EDGE TECHNOLOGIES. When resources are mobilized, every single consumer pays less for what they desire.

In WOS, we are obliged to recalibrate the unfit behavior with every single data collected throughout the events. The future is now, together we build a smarter community by leveraging on the BIG DATA.



WOS FOCUS & DEVELOPMENT

Pay Less, Share More.



Food & Beverage - Odanow
• Online Ordering & Booking



Community - Hive
• Smart Community and Cities



Distribution - Odamart
• Smart Shelf Sharing



Fashion *COMING SOON*
• Digital Shopping System



Space *COMING SOON*
• Smart Space Sharing



Transport *COMING SOON*
• Intelligent Vehicle Function

OFFICIAL SITE PAGE

Keep abreast of update on WOS.



WOS Website



WOS Facebook



One Belt One Road initiative

About GoForeSight Institute www.goforesight.eu

Mission

GoForeSight

Vision

Supporting stakeholders in achieving prosperity and promoting development towards just world.

Foresight

A systematic, participatory, and multi-disciplinary approach to explore mid-to long-term futures and drivers of change.
(Forward Thinking Platform)





GoForeSight Institute
www.goforesight.eu

Prepared by: Blaž Golob, GFS Institute, Maja Zupančič Pintar, European Blockchain Hub,
Aida Mahmutović, European Blockchain Hub
Graphic design by: Andrea Plavljanić, plava.eu
Photographs by: Željko Stevanić, IFP d.o.o.

All rights reserved. No part of this report may be reproduced in any form by any electronic or mechanical means (including photocopying, recording or information storage and retrieval) without permission in writing from the GoForeSight Institute.

©GFS

Published in 2019 by the GFS Institute, Cesta na Kurešček 46, 1292 Ig, Slovenia, EU.
www.goforesight.eu

ORGANISERS:



City of
Ljubljana

PARTNERS:

European Blockchain  HUB



SPONSORS:

