

# Circular Czechia

**Circular economy as an opportunity for  
successful innovations of Czech companies**

**A** concept of circular economy is a chance  
given to us on a silver platter, for a turn for  
the better, for the Czech Republic.





# Editorial

# Circular Czechia 3

As early as in 2019 we heard at The World Trade Forum a message from Gary Hamel, a world renowned expert in Business Strategy: „**The world is changing faster than organizations manage to become resilient.**” He defined Change as dual – trivial and profound, the latter usually rising from a crisis. Eleven years later he returns to the topic of adaptation in an interview for Forbes magazine. He pointed at COVID 19 as an extraordinary test of adaptation and resilience of all organizations. The truth is, I do not know any other disruptive black swan floating into our little Czech pond with such force and impact. I have lived thirty years of my life seemingly peacefully, in joy and freedom. **However, the world renowned expert does not see COVID 19 as the only challenge. Climate change and mass economic migration were also mentioned.**

This is the beginning of a publication which was created together with other Czech partners for the third time. Let us compare crises that we have encountered these days and try out a few action steps which might aid us significantly. That does not mean becoming 100% resilient, but rising from this crisis strengthened, interconnected and wiser. Let us turn our sights towards circular opportunities. Having scrutinized them for six years I dare to claim that **a concept of circular economy is a chance given to us on a silver platter, for a turn for the better, for the Czech Republic.**

**Despite incredible contemporary dynamics and the absolute inundation of media by COVID 19, there is an inevitable challenge in Czechia. A challenge which cannot be resolved either by a vaccine nor quarantine. It is a crisis of sources.** This crisis has expanded in the past years in those sources that are essential for the development of our society. We are struggling with a lack of water, our woods have been hit by a bark beetle, the emergency shutdown exceeded all predicted scenarios. Construction speed is high, but construction materials do not get recycled, with all the construction waste ending up in landfills. All this brings about other unpleasant news – in five years’ time, we will be

on the verge of a building material crisis with a lack of stone and sand. Such serious issues at such a fast pace. The complexity of problems escalated by climate change is immense. The drought renders mining unfeasible, multiplies the risk of blasts and defines concrete measures. This might lead to a situation when our vital systems of economic development, based on engineering, find themselves in the worst periods without water. Engineering is, despite all digital innovation, an important propeller of various industrial processes from steel to automotive.

The answer to the complexity of troubles nowadays are, in my opinion, several action steps which might be taken by companies, states and individuals. In Czechia the biggest potential lies in the hands of scientists. After inspecting them, I know that **we have a recipe for the recycling of all building materials. From waste oil, we are able to create one of a few kinds of plastic which is actually compostable in a natural environment. We know how to recycle disposal water in newly-built areas and we are capable of returning organic mass back to soil in various forms of fertilizers enriched, for example, by a biocoal manufactured by sediments from a sewage treatment plant which are otherwise dried and burnt at a high cost. We can reuse power station fly ash for new building projects.** We simply need to demand such technologies. The language of public tenders must be translated from quantity and price to a language of quality and endurance. New business opportunities show us ways to digitalize waste management in order to bring savings instead of expenses to companies. With such a combination, we can close the loop of material usage at the local level and create new job opportunities. **However, recycling itself is not omnipotent.** We can support new business models: local repair stations which are becoming more relevant and professional with the possibilities of 3D printers. New business models are being adapted by companies offering printers, furniture, lighting or transport. All these businesses provide us with an option of leasing or renting instead of possessing and thus

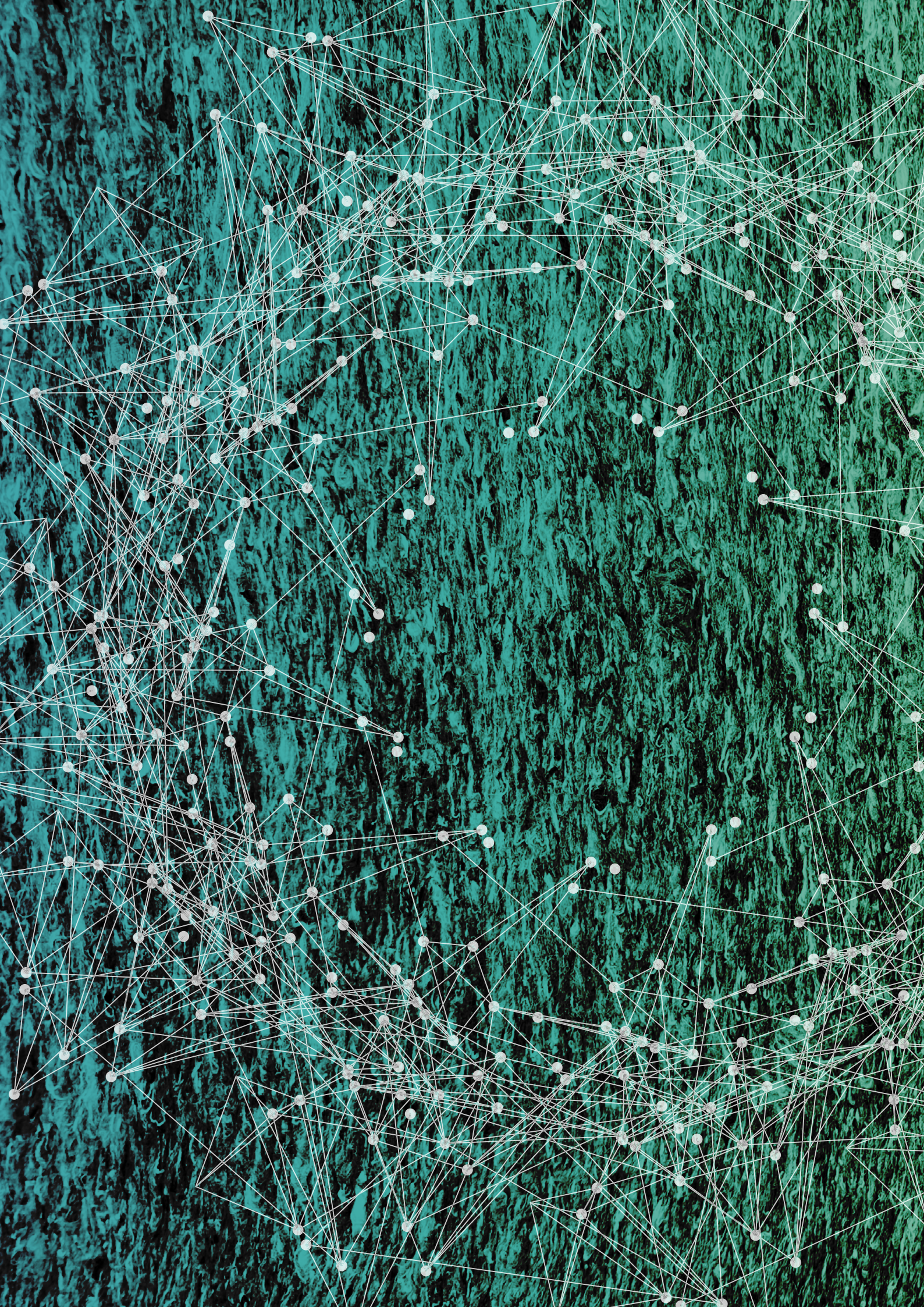
free us of a burden of dealing with the objects while moving frequently.

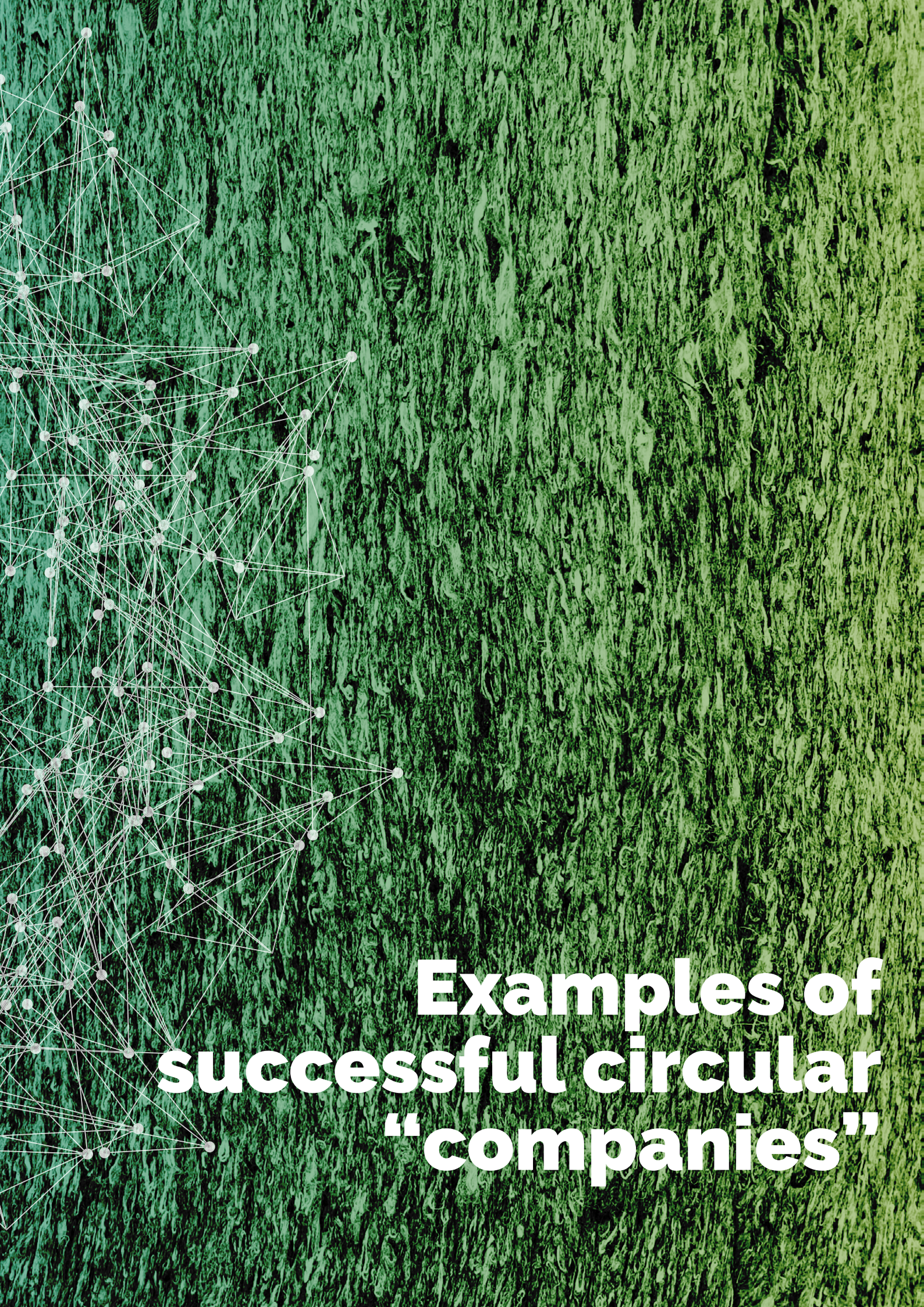
We always prepare Circular Czechia as a bright rainbow of inspiration. Stories of these companies are timeless and we can go back to them in every single published issue full of impulses and real Czech projects that we can be proud of. **Circular economy brings concrete steps reacting to global challenges without a delay and with a sustainable economy.** I can assure you of one thing – as soon as you immerse yourself in this topic, you will soon discover that almost all implementations require a real systematic form of cooperation and new forms of Customer Supply chains. Such chains for which we ensure are not just linear, but also a circular way of functioning for raw and other materials. This way you will welcome loyal customers as well as products coming back to be repaired or reconditioned. Once you read up on all these publications, set one or two particular goals – I especially recommend to ask your waste management company, which is responsible for both mixed and sorted waste: “Where does my waste end up?” and as a second step ask your Purchase Department to buy Czech paper, a bench from recycled plastic or to rent repairable furniture next time. In case you still find yourself struggling with where to start, ask anyone of the collective authors of this publication. I can guarantee you that **there is no question that we would not find an answer to.**



**Soňa Jonášová**

CEO Institute of  
Circulare Economy





# **Examples of successful circular “companies”**

The company ČEZ ESCO offers a solution to the energy needs of its customers in the ranks of companies and public administration. It focuses mainly on decentralized energetics with the emphasis on new technologies and efficient energy use.

## challenge

Energetics is perceived as a relatively complicated, conservative and, for an end-customer, a hardly manageable and influenceable industry. The shift to renewable sources of energy, including the installation of photovoltaic power plants, is often connected with a large administrative burden, significant investments and long-term rentability. "People speak about reducing carbon footprint a lot, sadly it is not often transformed to real-life practice."

**"We have been trying to find a solution to make the transformation to RSE as easy as possible for our customers and to remove the barriers which prevent them from doing so,"** says the ČEZ ESCO Manager of Innovations, Jiří Novotný, who is responsible for the new product Photovoltaics for 1 crown (Czech currency).

## solution

**Photovoltaics for one crown offers** a simple solution for companies and institutions and **enables customers to install photovoltaic panels without the necessity of initial investments. All that comes with a minimum of administrative steps.** The investment into photovoltaics is paid by ČEZ ESCO and the customer pays it back successively in the form of monthly payments for electricity.

At the same time, the price is either the same or even lower than the fee to a current contractor since there are no regulated fees for net usage and the like. After passing the arranged time period, the power plant for 1 crown becomes the property of the customer or ESCO runs it until the end of the product lifespan and guarantees its recycling and ecological disposal. "Another advantage is the fact that our customer does not need to solve any technical aspects of photovoltaics because we operate it, service it and maintain it in maximal performance during its whole lifespan. ESCO also arranges all permits and administrative tasks linked to the installation and operation of the power plant," explains Jiří Novotný.

## result

**The product Photovoltaics for one crown was developed together with customers. ČEZ ESCO reacts directly to their needs and is now working on the first pilot installations both for grand manufacturing plants and for small villages and self-traders.** "We continue the development of the product and after receiving feedback from our customers we enhance it in order to make it accessible for as many clients as possible," adds Mr. Novotný. ČEZ ESCO will launch this innovative business model this year.



**Jiří Novotný**

Strategy & Innovation Manager at ČEZ ESCO

**"***The whole concept of Photovoltaics for one crown seemed very meaningful to us since the very beginning both for its ecological and economical side. That is the reason why we decided to work on it in detail and although we encountered several problems and barriers on the way, we have brought it to the finale. The strongest argument was our customers' obvious need and our awareness that they would not be able to or would not want to purchase it without this model.*

# MIWA

The Czech company MIWA has developed a complete business ecosystem on the basis of reusable packaging enhanced by smart technologies. Since 2014, MIWA has been offering solutions which help customers, traders and manufacturers to overcome obstacles while adopting waste prevention methods.

## challenge

Single-use packaging has become a common part of our everyday lives. They play an important role in the hygienic and mechanical protection of goods. This role is, however, fulfilled just for a short period of time. After that, the disposable packaging turns into waste. **The contamination of the packaging, complicated sorting and a plentiful range of materials make it difficult to recycle efficiently.**

Relying on recycling is partly freeing us of the sense of responsibility. "The usage of single-use packaging has become so mundane for a consumer that it is hard to change their habits now. It is a great challenge for us to present an innovation which will make the way to waste prevention easier," says Mrs. Sobolíková, the person responsible for the operation of MIWA and maintaining relationships with investors.

## result

**The MIWA system was installed in two Country Life stores in Prague last year and in cooperation with Nestlé it has also been installed in Switzerland. We expect to enter the French and subsequently German markets by the end of 2020.** "France, Germany and Benelux are our key markets for the upcoming period – mainly for the approach of local consumers, who actively search for more environmentally friendly packaging solutions. However, we have also received requests from Australia, USA and East Asia," says Ivana Sobolíková.

*The fact that we have reached the point of serious ecosystem endangerment of the whole planet is not a mere activistic proclamation. An old Indian approach, according to which a human should weigh in the impact of his behavior on the seventh future generation, has never been so imminent. We, as MIWA, are proud to be a part of the way to more sustainable shopping. Additionally, it brings us joy that this innovation was born in Czechia.*

## solution

An alternative solution emerged in the mind of businessman Petr Báča in 2014 when he got familiar with the concept of so called precycling. Precycling focuses on waste prevention instead of waste disposal.

**The resulting product is a MIWA system which not only brings to the customer a friendly form of shopping for basic food in reusable packaging, but it also minimizes waste across the whole supply chain.** Thanks to using principles of packaging for reuse as well as closing the loop of material cycles, MIWA has as much as 70% lower environmental impact than a standard single-use packaging system.

The movement of goods and packaging materials is incessantly supervised by RFID/NFC technology. This technology enables automatic ordering, tracking sales in real time and possibly also quick removal of defected batches from the market. All of this leads to operational efficiency which is commonly inconceivable for zero waste distribution. Ivana adds, "Although our solution is innovative, it is more of a 'plug-in', fully-respecting current logistic and Supplier-Customer relationships. The implementation of the MIWA system is usually much easier than retailers expect."



**Ivana Sobolíková**  
Investment Manager at MIWA

# Stabilplastik

Stabilplastik is a Czech company that manufactures plastic products solely from recycled residual plastic while using zero waste technologies. It solves a beautiful equation: **100% purchased recycled plastic = 100% inlet material for manufacturing plastic pallets and gutters.** We are able to process more than four thousand tons of plastic which would otherwise have ended up in landfills or in waste incineration plants. We give the material a new life and purpose.

## solution

They needed to give up products made by injection molding which requires much cleaner material. They decided to follow the way of plastic filling gutters. Do you think that an alternative to well-known wooden (natural) pallets is not necessary? "We had an LCA study made. **Our plastic pallets have as much as 74% lower environmental impact than the wooden ones. Besides, they are 100% recyclable.**" Some of our customers claim that they still have our pallets from the first years of our production – that means twenty years. "Plastic is stigmatized in the current world, but that is wrong. Plastic is a great material which would be difficult to replace. It is a question of learning its long-term processing and usage."

## challenge

"Sending waste to third-world countries is a stain on the conscience of Western civilization. Since our planet is round, all the waste has started coming back. A circle is the base of everything, it comes back in the soil, the circulation of water and in the sea," ponders Patrik Luxemburk from Stabilplastik. That is why they have used plastic waste as their inlet material since the very beginning. However, their product is ahead of our time.

First, pallets made completely from recycled plastic were launched into the world as early as in 1999 – at the time when Czech society was at the beginning of the whole recycling concept. Czech customers are still shy when it comes to recycled materials and that is a reason why Stabilplastik is still the Cinderella of the Czech market in comparison with foreign markets. Yet, this Cinderella can **manufacture even the plastic residuals which would otherwise end up in landfills or incineration plants – for example, hard dishwashing detergent bottles or kitchen oil bottles.**

## result

Stabilplastik is doing exactly that. This company processes as much as 360 tons of plastic waste and it keeps working on innovations. They are currently co-working with AdAstra company on a new smart pallet – a plastic pallet with a chip in it, which will allow tracking of the movement and changes of the surrounding environment. It will enable optimization of the transport of goods and the maximum use of a particular pallet, thus prolonging its longevity. **Apart from the technological solution, Stabilplastik incessantly engages in market education and the persuasion of the public about the importance of circular economy.**



**Patrik Luxemburk**  
Executive at Stabilplastik



*It depends on us whether we stay in a rut and let ourselves be penalized by the European Union for our non-economical and non-ecological behavior or whether we will rather walk the path of innovation and show everyone that we are capable of setting the rules on our own. When, if not now. Whom, if not us?*

# HUTIRA – BRNO

Companies acting on behalf of the brand HUTIRA (with the parent company HUTIRA-BRNO) might cover this whole page with the range of their products. Simply put, they focus mainly on gas industry, energetics and water engineering. In all these branches they are trying to find ways to close the loop. They are walking a new path for green gas and supplying systems for the maintenance of underground and surface water. Recently they have set their sights on ecological waste processing.

## challenge

"Six years ago, we started to look into the matter of how to use waste gases and how to clean them in such a way that they could be used in the frame of gas infrastructure or transport. The greatest experience is not gained solely by building something, but also by running it," says Radek Kundrata, the general director of HUTIRA – BRNO. For this reason, they decided to work on their own project – **they remanufacture old tires, which would otherwise be stored in a landfill. The output of this process is (apart from green gas) carbon particles utilizable in cosmetics, pharmaceuticals and the rubber industry.** "However ecological natural gas is, it is still fossil. We want to participate in making it a greener source of energy and, in addition, even partly renewable," adds Kundrata.

## result

The technology for such water cleaning already exists – it is offered by a subsidiary company HUTIRA – VISION. Due to its humble size it is mobile and can be used anywhere, for example in aquaparks where it saves hectoliters of new pipeline water (which does not need to be pumped in). HUTIRA would also like to see such a mobile device in the branch of gas industry and waste processing. **"Our idea is a device which would come to a landfill, sort out usable materials and annihilate the rest.** A green energy, for example green gas, would be generated during this process. We believe that we will have such technology soon enough."

*"Planet Earth has been just lent to us from our children, it is not ours and we have to return it in a better condition than in which we had got it from our ancestors. I put a lot of hope into future generations. I perceive a new way of thinking in my kids and the children of my friends. However young, they know very well that the best way to manage waste is not to create any and if creating some, they ask themselves, 'What should we do with it?'"*

## solution

They possess technologies for gas treatment and the pressing of it into the pipe system (or transport vehicles). The source is right here and it is "just" a question of putting a smart solution into common practice and changing the way people think. For that matter, this is the hardest part in water management as well: there are 50 billion cubic meters of rainfall in the Czech Republic annually, but unfortunately a great part of it flows into the seas with no use. Even the director Kundrata himself points this out. **"There is a dramatic plunge of groundwater levels, yet some industrial plants still rather pump out rare groundwater (and sometimes even artesian water) for their production for economic reasons. It is cheaper for them to do so instead of using surface water which is running in the immediate neighborhood or their grounds."**



**Radek Kundrata**  
CEO at HUTIRA – BRNO s.r.o.

# ARCA Chrast

The ARCA Chrast company has been recycling textile cut-offs and primary production residuals since 2009. It annually accounts for approx. 2,600 tons of material which would otherwise have been incinerated or stored in landfills. Instead of that it is turned into cloth rags. This material is then used in the car and textile industry, in the construction industry or in agriculture and furniture manufacturing.

## challenge

"About 87,000 tons of textile production waste is made in the Czech Republic yearly. As much as a fifth never becomes a reusable material. We have decided to change this ratio using our own possibilities," explains Miroslav Válka, the representative of ARCA Chrast. ARCA takes their material mainly from the producers of primary textile production – from weaving mills, spinning mills, cutting rooms and sewing workshops. A minor part – denim and sweaters – is gained from used common cloth-store wear. **Everything is processed on a pulling line with the output being cloth rags, which are then used in many industries, for example as a rug or filling for cars or as insulation layers in the construction industry, as geotextile or a cleaning textile.**

## solution

ARCA Chrast was founded in 2009, in the time of an economic crisis when banks did not support projects in the textile industry as it was seen as a risky investment. Because of that, our beginning was not easy. "We had to build the project from scratch. I gained inspiration from abroad and even from a former owner from whom I had bought the pulling line." **Difficulties usually emerged (and they still do) from legislation and the societal situations.** "Companies focusing on recycling are supported in no extra way nor do they have any benefits. Awareness in society is slowly changing, but it is primarily due to the planned reduction of storing in landfills and the threat of higher fees for disposal of such materials."

## result

**The production of cloth rags is still more of a service to the future generation than a big money-making business.** Were it not for ARCA Chrast technology, 220 tons of textile material would end up in a landfill or be incinerated monthly. "We believe that our activity will be supported by the society and more and better legal conditions will be set. After that, it will become an opportunity for the growth of our economy." ARCA wants to actively participate in setting legal conditions for textile recycling. It is also looking for other industries which could use their product.



**Miroslav Válka**  
CEO at ARCA Chrast s.r.o.



*Our dream of environmental protection came true with the project realization. A lot of people support us and the awareness of our activity is rising. Knowing this, together with the good feeling of 'doing our share of good' keeps us working and improving the project for the future."*

# KOGAA

KOGAA is an international creative agency working in the field of architecture, urbanism and interior design. They are trying to “close the loop” in all of the aforementioned. It sees its field and the impact of it on the surroundings in a wider and deeper context. It solves the topic of sustainability (buildings and their equipment) on both the environmental and financial level – in regards to their future life and operability.

## challenge

“We do not consider our tendency to work with circular economy as something differing us from the rest of the respective field. It is an aspect which is seen abroad as a completely common and ubiquitous topic. Perhaps we just find ourselves in a period when Czech architecture is looking around and searching for a way to adapt this topic to our environment,” says one of the three architects, Tomáš Kozelský. KOGAA decided to be one of the first to walk this path in Czechia. **While designing, they work with the collective concept – they communicate with the future users of particular buildings and also with the affiliated community – and with the concept of “slow development”.**

## result

Apart from construction, KOGAA engages in the conversion and adaptation of existing buildings. Even here they put emphasis on the communication with future users. One of their most successful projects being The Distillery and Lyceum – **originally brownfield buildings which these architects remade into multifunctional centers, so called social reactors, that are buzzing with life.** Another successful project is the DADA Distrikt – a residential and cultural district from a brownfield industrial zone. “The main result, brought about by our effort, is a city compound by forming projects allowing mutual interaction. For example, residential – educational – commercial. Such interaction is then a real circular usage of the city,” supposes Tomáš Kozelský.

## solution

Unlike classic development which is focused primary on the result, slow development concentrates on the tools in such a way that the final project could be adjusted to the environment, local community and even changing situations any time if necessary (the COVID 19 crisis has just assured us of the necessity). **“Reducing the construction of monofunctional centers, such as shopping zones or business districts, will allow cities to build up clusters containing residential parts and parts for education, culture and also commercial activities,”** adds Kozelský. As a result, it would not be necessary to build up (unsustainable) parking infrastructure. Parking places will be shared in various parts by several users.

*“Our studio is trying to make every process rounded. Even if we do not succeed in making a full loop, every single cleansing of old tools rusted by the flow of ignorance of the environment is a big victory for us. We take all aspects related to sustainability and circular economy seriously and we put them on the same level with the main investment determinants of every project.”*



**Tomáš Kozelský**  
Co-founder at KOGAA

# Brokisglass

Brokisglass is a completely unique, brand new product made by the Czech Glass factory Janštejn and the company Brokis, which belongs to the group Janštejn Glass Group. It represents an ecological and very universal material made of recycled glass shards. It was created with the goal of using a waste material which emerges during the production of the handmade glass blown lightning collections of Brokis brand. This way BROKIS creates a strategical circular economy helping to maintain a good relationship between the environment and the human society.

## solution

Thanks to fervent work, the determination of many experts and a financial investment, a new innovative and efficient technology has been developed. The beginning was full of demanding testing, setting, calibration, model examinations of temperature, speed and material resilience so that the process would meet the necessary parameters. **Glass shards are grounded to the requested size and remade through regulated thermal melting into a compact, pliable material with outstanding properties.** This method brings new application of glass into architecture as well as a new dimension and esthetics. The material has great potential in combination with other materials such as iron, stone, clay, wood or marble.

## challenge

Although Janštejn Glassworks added recycled glass into its production, there was still a lot of residual glass. It created about 140 tons of non-used glass shards every year. The only way to dispose of them was via landfill storage. The glass factory owner, Mr. Jan Rabell, was not blind to that and he started to think about ways in which this material could be reused fully and recircled. It was not a simple task since their material contains several layers and all layers need to be compatible in order to create a new compact material.

## result

We can find a use for these glass decorative crystal panels in both interiors and exteriors. The project Brokisglass uses up around 95% of the waste shards from Janštejn Glassworks. It represents a new ecological and economical method of recycling glass shatters. This unique material is used mainly for custom-made products, but an e-shop Brokisglass, where you could buy standardized products, is being prepared. Mr. Jan Rabell, the owner of Janštejn Glassworks and the company Brokis and also the initiator of the Brokisglass product, says, **"It is logical to treat nature and the environment with respect and not to waste materials if so much work and raw material lies beneath it. I personally felt sick with the thought of not doing anything with that waste."**



**Jan Rabell**

Owner and Director at Janštejna and Brokisglass



*It is logical to treat nature and the environment with respect and not to waste materials if so much work and raw material lies beneath it. I personally felt sick with the thought of not doing anything with that waste.*

# Butterflies & Hurricanes

This is a design studio which believes that design can bring solutions to problems. Apart from their standard services such as packaging design, branding, illustration and web design, they also offer consultations in the area of mattering and communication strategy with emphasis on the principles of the circular and regenerative economy, ecological packaging, zero waste solutions and the activation of these campaigns in the media. They are helping companies to transform their way of work into a responsible one and they help them to deal with all due risks. They have undergone such transformation themselves.

## challenge

At the beginning of their transformation there was a loss of sense of their work. They started to feel a strong moral responsibility for the products that they were helping to create, for everything that they worked on together with their clients and for what brands give to people and what they can influence. They accepted the challenge of **not being a source of waste and not launching evil together with new brands which consciously lie or are turning a blind eye to problems.** Butterflies and Hurricanes help these brands to be a part of the solution. They also focus directly on the brands with which they are in accord.

## result

**The studio is experiencing their first satisfactory year, the first one in 10 years of their whole existence. Their client portfolio has changed into those to whom they feel much closer with.** Particular orders come primarily from companies which are built on similar principles and thus the cooperation is easier and more open. Michaela Linda Thomas, the founder of the studio, adds, "Thanks to this inner transformation we have a more stable team bound by communal values."

*There is nothing to wait for – it is time for a change. Let us tell a new story, let us build a society where ethics, humanity and empathy are a part of everyday company practice. Let us free ourselves of the old story. Let us begin to narrate a new one in which lies, half-truths or manipulation have no place. Let us change the way we think, from niche groups to real people, from marketing to mattering.*

## solution

They started to incorporate the principles of mattering into their projects. **Mattering principals are such in which relationships work on the principle of equal cooperation together with the return to humanity. Communication transmissions are fully honest and respectful.** They build up on the values of honor, humanity, ethics and trust. A part of the hope for marketing transformation is the protection of our planet, a fight with consumerism, rejection of manipulation and shunning disrespect to people. It is essential to be able to explain things decently and to learn to say "no" to clients with whom you do not feel to be on the same wavelength. They do not stop learning in the context of circularity, sources, print or working with people.



**Michaela Linda Thomas**  
Founder at Butterflies & Hurricanes





# Business Makes Sense

An innovative agency JIC was founded 17 years ago by South Moravian Region, the Statutory City of Brno, Masaryk University, the Brno University of Technology, Mendel University in Brno and the University of Veterinary and Pharmaceutical Sciences Brno. Their assignment was to **support business development** in the South Moravian Region. Since that time JIC has become one of the **most important initiators of local ecosystems**. By no doubt it is a merit of JIC that this region belongs to the innovative leaders of Central Europe. Several businesses emerged and evolved into global players due to the activity of JIC.

Through the support of businessmen, JIC wants to **contribute to a positive change in society** and to the solutions to global challenges such as cyber-safety, population aging or climate change. It leads their clients to a long-term sustainable entrepreneurship from the view of the economic success of the company but also from the point of the impact on its broad surroundings in which it functions. They promote a thesis that global challenges bring about **business opportunities**.

*I believe that business is one of the strongest tools that can make this world a better place. If the work makes sense to people, then they are successful and satisfied at the same time. And it is their stories which are the best inspiration and motivation for others.*

Among the experts of JIC you may find **experienced businessmen**, people from the real world and professional consultants. It is them who support company owners in moments of challenge – whether it is a matter of internal functioning or, for example, the expansion to foreign markets. Together with company owners they seek possibilities to help the company in its development while taking a responsible approach and implementing circular economy elements. One of the outputs of such cooperation is a concrete plan reflecting a context of production and non-production companies and also the environment. The plan is real, quantifiable and it has a positive business impact – gaining new customers, saving sources (material, water, energy), profit on selling waste or a new business model. This model shows companies how to operate responsibly towards the place where they are situated and also make an economic profit at the same time.



**Petr Chládek**  
Director at JIC

# It Starts with Design, even in Circular Economy

*The implementation of circular business models has become quite popular lately. Apart from environmental protection, it also gives a clear economic sense. The biggest potential is seen in those branches where clients buy new versions of products and the older models end up in the dust. It could also be possibly used where products stay in the stand-by mode most of their time, waiting to be actually used for their original purpose. Changes of business models towards circularity do not have to be necessarily revolutionary, they may be realized as partial experiments.*

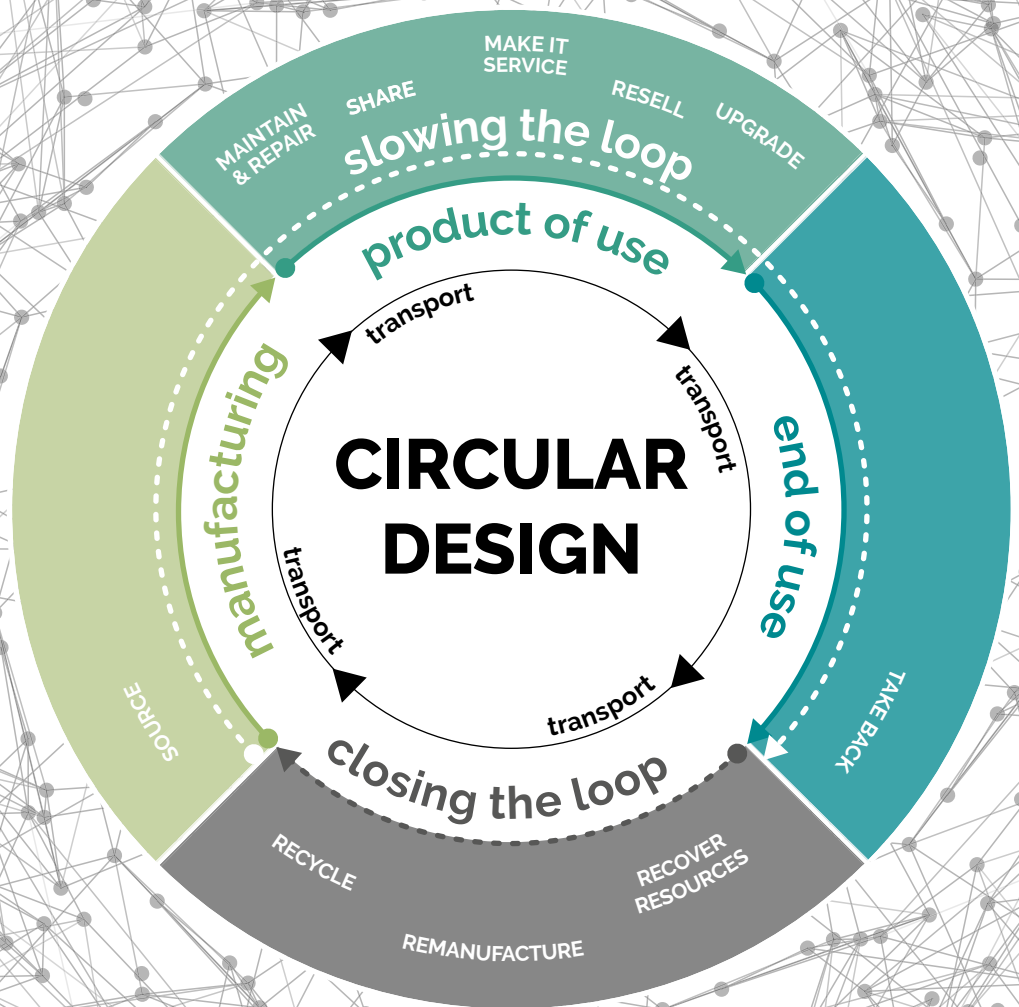
A concept of circular economy comes as a reaction to the unsustainable rise of consumption of both renewable and non-renewable resources. Its main goal is to stop this trend. It offers two simple principles: firstly, it puts emphasis on once used materials staying in the circle as long as possible, being repairable and improvable and thus eliminating the need to rapidly produce new ones (**slowing the loop**). Secondly, once the product has come to its definite end, the effort leads to reduce the amount of waste created this way, ensuring possible remanufacturing and recycling of used components and materials from which it had been made (**closing the loop**). The concrete way the companies are able to fulfil these principles and business models are on their shoulders. The rule of thumb is that it makes sense to even try out small steps and partial experiments, however, it is advised not to waver for too long.

**Pragmatism is always first – lower the risks, higher the profit**

Companies start to use circular models of business more when they know it will be economically beneficiary and they believe that the model is sustainable. **Many companies have been intuitively implementing elements of circularity for several years already because it simply “pays back”.** These models go hand in hand with the praiseworthy thought of preserving the planet for future generations. At the same time it is a down-to-earth way to reduce risks of unavailable natural resources and a way to make use of opportunities in order to increase the profit. **Implementing principals of circularity may also be attractive in the field of marketing.** This trend is, however, so powerful that there are maybe two to three years before circularity becomes a standard and a necessity.

**Manuals are not sufficient. The key to success is a creative design and an innovative process**

There are several time-proven pieces of recommendation which can lead you through the process of implementing circular business models. You can see them in the attached diagram. The exact way of their application is always a job for the designer team in a particular company. A designer is seen as an expert who prepares a product or a kind of service for the market together with all aspects from market research, through development and testing to price modelling, sales channels and so on. **Contrary to the traditional concept, a circular designer considers materials and sources which are going to be used and their recyclability, take-backs and post-use remanufacturing.** Their task is to solve not only



*Contrary to the traditional concept, a circular designer considers materials and sources which are going to be used and their recyclability, take-backs and post-use remanufacturing.*

the responsibility of the producer for the manufactured goods towards society, but mainly to explore new opportunities and possible income sources or savings in circularity.

The innovative process plays an inherent part. Circular economy may not work without innovation. That is a reason why we, in Direct People, become strategic partners to companies which are thinking about implementing circular business models and the related change of value proposition. **Typically, it is fundamental to consider the fact whether it is necessary for a customer to own the product or if it makes more sense to them if he just rented or shared it.** We can spare the customer the worries with storing and servicing. The producer can optimize transport and they do not lose precious material. The current possibilities of digital technology allow us to connect customers

and products in real time, avoiding idle time and reducing transport to its minimum. It is necessary to keep thinking creatively, to test, to iterate and not to fall in love with the idea, but more with the problem itself.

#### **Hold your head high and make the first step**

**Circularity is now the new standard, there is no question whether it is necessary. If you see the whole business model shift as too big a step, make a first prototypical little step.** Look at the life cycle of a product and search for the most problematic moments. Create a pilot project in a particular department, on one product, at one branch, do the testing, learn, find a partner who will help you on the way. Just walk this way to circularity and be happy for the results it will bring about.



**Jaroslav Mojžíš**  
Innovation Lead Direct People



# Circular Waste Management

In today's linear world, economic growth is inherently connected with rising material consumption. People extract about 100 billion of tons of material and only 9% are put back to the circle. We are getting rid of waste and paying for it dearly. However, there are solutions. In circular economy, we monitor not only the necessary legislation, but also the minimization of waste production because we know its real value.

## 1. We prevent waste creation and minimize it

Ideal waste is that which is never made in the first place. Try to think about the production process or transport in your company in order to reduce waste. For the beginning it is good to focus on the groups in which the biggest amount of waste is made and discuss its elimination with your colleagues. Single use pallets are often the source of waste in many companies. Try to transfer to plastic pallets which are typically more expensive, but they last longer and the rentability of such investment is quite fast. Another problem is the fact that we dispose of many things which are actually not waste. Typically, these are packaging materials (kegs, paper boxes and the like) and instead of selling them, we pay for them as for waste.

## 2. We sort waste into recyclable components

We have waste which is inherently a part of our production or the operation process and then we start to transfer it to another use. The waste value is the equation solution of its variables - quality, sorting purity and amount. In order to sell plastic foils for 4 500 CZK per ton, instead of paying for them as for waste 300 CZK per ton, as it was being done by one unnamed chain store, it is necessary to sort the waste well and to have an adjusted process. You also have to compress this material in order not to transport air. The compressing machine could be rented by your recycling partner.

## 3. We sell the already made waste and we know where it goes

Waste has a value. A worker of a waste company may not share our enthusiasm, but we may get **paid for plastic, paper, glass, wood and others**. Not a long time ago, one Slovakian branch of a big furniture wholesaler came to us with the matter that their waste-collecting company asks for approx. 500,000 CZK (about 19,000EUR) for their 126 tons of plastic waste. A week ago, thanks to Cyrkl.com, they even got paid for this "waste". By the connection to the final manufacturer you find out where the waste really goes and at the same time, you will find a partner who will see a valuable material and his opportunity in your waste.

## 4. We close the loop of recycling

Recycling itself is a big step forward. However, significant environmental and financial costs are aligned with the transport and logistics in general. **The advantage of a closed recycling loop lies in the fact that YOU recycle your own waste**, you do not have to pay for it, you have a high-quality input for your production and you know exactly its composition.

## 5. We use secondary materials

Using secondary materials is, if there is good quality supervision, a great source of potential savings on the purchase. A rising number of companies has, thanks to purchasing new technologies and a better system of waste collection, high-quality plastic recycled granules. At the time of economic conjuncture, they are as much as 50% cheaper compared to primary source granules whose price is dependent on the price of BRENT oil. If you are an e-shop, you can buy second-hand boxes. The developer appreciates that there are many recycled building materials with certification. Additionally, you know exactly what to do with it for just a fraction of the price of the primary source material.

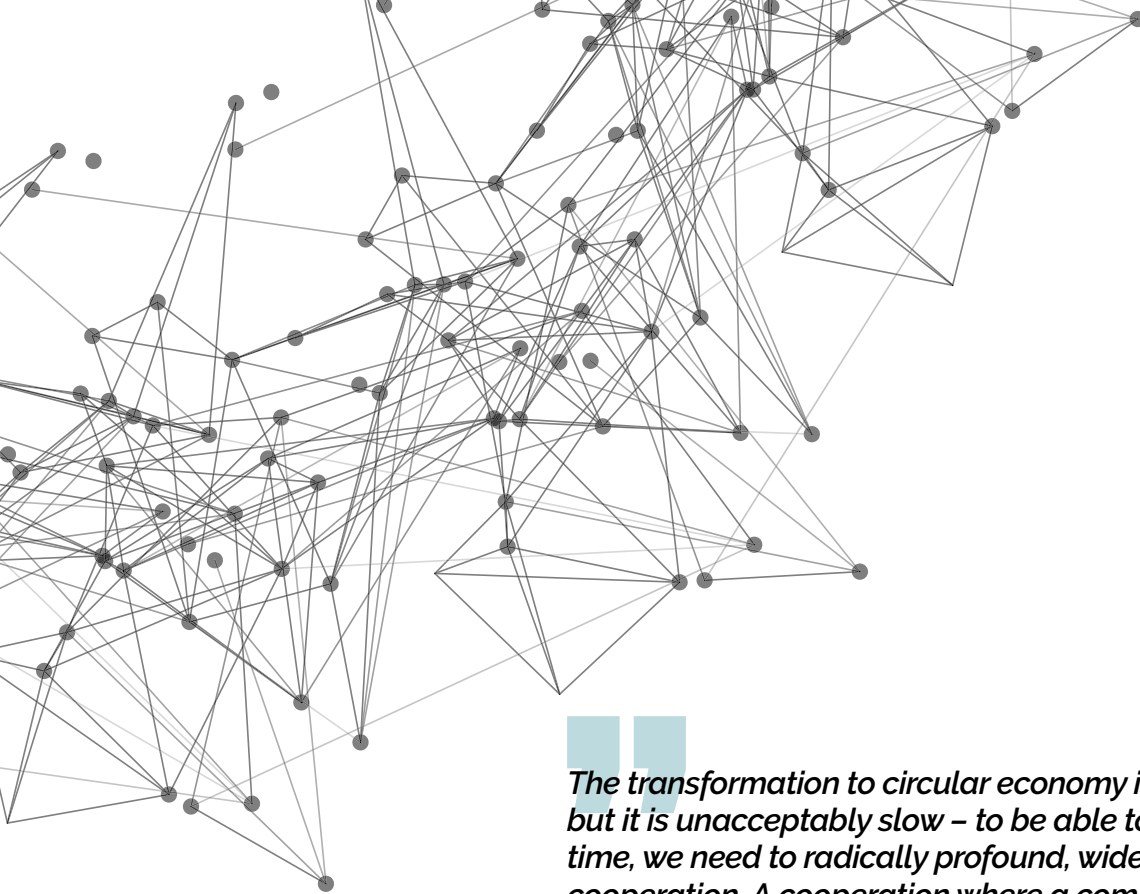
## 6. We know the composition of our products and we know that they are recyclable

This is important for several reasons. If we know that our product comes from recyclable material, moreover, if we know that it will really be recycled in set conditions, we will prevent the risk of ruined reputation. **We do not want to see our product littered**. Apart from a thank you from a CSR manager, you will be in accordance with the principles of eco-design and the new European legislation which significantly broadens the duties of producers.

The right company ecology can help a business to save from hundreds of thousands to millions of crowns. As soon as the current crisis passes, the effect will not only be an efficient setting of waste management, but also an efficient way of using sources and the better condition of our planet. Explore your potential in a circular economy!



**Cyril Klepek**  
CEO & Founder at Cyrkl.com



*The transformation to circular economy is already happening, but it is unacceptably slow – to be able to manage everything in time, we need to radically profound, widen and accelerate our cooperation. A cooperation where a common goal will be more important than affiliation to a particular organization.*

# From the Eternity Point of View

We live in a time period of ever-accelerating changes. During my life, since 1980, we as humankind have emitted more CO<sub>2</sub> than in the whole history of people's existence until that time. Human beings have set off the 6th massive extinction of animal and plant species in the history of planet Earth (the pace of extinction has accelerated by 100 to 10,000 times compared to a natural pace) and so we live in Anthropocene: a human is the biggest force on our planet. **It is more and more obvious that the climate crisis, biodiversity and ecosystem disintegration are the biggest global problems we have ever faced as humankind.**

While reading the book *Sapiens* from Yuval Harari it dawned on me that most human societies have not lived in accordance with nature since leaving their lifestyle of hunters and gatherers – after settling in a certain area they caused an ecological catastrophe (cutting down woods, contamination of water sources by husbandry, local overpopulation), which has contributed to its downfall or forced them to move elsewhere. **Wherever a human came and settled, they caused a minor or major disaster.**

**However, nowadays we have most technological tools at hand to be able to break this destructive, if you will, linear way of thinking and acting** and to move towards a circular, sustainable way of thinking and acting. It is the first time in history whatsoever, so it will be inevitably demanding,

but this transformation of global economy towards sustainability is ceasing to be a matter of choice and is becoming a must.

The transformation to circular economy is already happening, but it is unacceptably slow – to be able to manage everything in time, we need to radically profound, widen and accelerate our cooperation. A cooperation where a common goal will be more important than affiliation to a particular organization.

We, in Impact Hub, are trying to implement these principles into our lives. **We are aiming at carbon neutrality, we have certified zero waste processes, we minimize our carbon footprint (by preferring vegan catering at the events we organize), we host various communities with a positive impact, we realize acceleration programs**, such as Impact Hub Climate Challenge and Future of Food, **we cooperate with big corporations, foundations and a public sector, we create a space for education, interconnection and inspiration.** We see that the bottleneck is not in the ideas, but in the implementation, the ability to find a functional business model, the right products, sales and service channels, price making, team making and the right structure of financing. Simply put, in the practical parts. And it is exactly these things that stand in the way of demonstration of the fact that the future of business is not about maximizing the market value for their owners, but it goes beyond common, everyday decision-making based on the

profitability versus risk view. It inevitably has another, third dimension: aggregate, sociable and environmental impact.

As a consequence, this impact does not mean anything else but a long-standing approach in decision-making. I mean Spinz's and Masaryk's sub specie aeternitatis, from the eternity point of view. **In other words, some Indian tribes used to make decisions considering their impact on 7 generations of their descendants. To turn circular economy into reality, we do not need to wait for new technologies, higher regulation or more conscious consumers, but this long-term mindset.** Unfortunately, this mindset remains more of a marginal phenomenon and our hopes for the rational managing of global problems or humans are small.



**Petr Vitek**

The co-founder of the Impact Hub and Tilia Impact Ventures network, a member of the Board of Directors of Česká spořitelna Foundation



## **CIRCULAR CZECHIA 3**

**Circular economy as an opportunity for  
successful innovations of Czech companies**

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**Chief Editor:** Cyril Klepek

**Authors of texts:** Soňa Jonášová, Cyril Klepek, Petr Vitek, Petr Chládek,  
Martin Gillár, Miroslav Londýn, Pavla Olbrzymková, Petr Vitek, Barbora  
Janhubová, Pavel Zedníček, Daniela Velová a Jaroslav Mojžíš.  
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**Proofreading:** Tereza Ocetková, **Graphics:** Kristýna Lipenská

Prepared by companies JIC, Interest Association of Legal Persons  
(Purkyňova 649/127, 612 00 Brno-Medlánky), Direct People Ltd.  
(Jankovcova 1603/47a, 170 00 Praha 7), INCIEN, NPO  
(Hybernská 998/4, 110 00 Nové Město, Praha 1) CYRKL, Information  
Source Platform (Bolzanova 1, Praha 1) a Impact Hub  
(Drtinova 557/10, 150 00 Praha 5-Smichov)