

Lithuanian Cleantech Ecosystem 2022



Sunrise
Tech Park



CLEANTECH
CLUSTER
LITHUANIA

Summary

In 2017 the consolidation of the Lithuanian cleantech market began. Since then, investments in local cleantech have reached 705 mil. EUR. Energy, transportation and resources sectors have been booming the most with 48 startups and scaleups attracting more than 50 investment rounds during the period.

Lithuanian Cleantech Ecosystem 2022 Review' is published by one of the largest science startup ecosystem in Lithuania **Sunrise Tech Park**. In the review we analyze local energy, mobility and resource startup ecosystems, as well as engineering and production scaleups with globally recognized cleantech products & services.

This exact combination of both traditional and disruptive new generation companies are amalgamating into the explosive mix of opportunities that lead the way for the business growth of truly global proportions.

However, despite that, the sector faces problems in attracting capital and investments, there is a lack of state attention in creating more favorable conditions for the companies in this field and developing a more friendly regulatory environment.

The review aims to highlight the importance of Lithuania's clean technology sector for the local economy and position Lithuania in the context of the global economy. As **renewable energy, new mobility and related cleantech sectors** are attracting major global investments, it is hoped Lithuania should play an important role in this process.



Laima Balčiūnė, PhD
*Director, **Sunrise Tech Park***

This review was carried out analyzing data from the Registry Center of Lithuania, interviewing Lithuanian VC investors, startups, scaleups & thought leaders. The study is based on the Global Cleantech Group methodology.

Word from Lithuania's Startups ecosystem

2022 was a year of turbulence for all businesses worldwide, and we're very happy that the Lithuanian startup ecosystem showed great resilience.

We have effectively navigated the challenges, pivoted to changing market conditions, and sustained our growth trajectory. In 2022, our ecosystem witnessed the emergence of its second unicorn, Nord Security, and the largest exit to date, with Lithuanian startup MailerLite fetching an impressive EUR 84 million. Our startups have successfully secured investments, attracted top-tier talent (as evidenced by a 13% increase in employee numbers compared to 2021), and achieved notable sales growth.

We are proud to assert that Lithuania is becoming a "hot spot" as a prime destination for startups in Europe. Our ecosystem is gaining recognition from foreign investors as a hidden gem, and we invite them to experience firsthand our flourishing and dynamic community.

Furthermore, we recognize the paramount importance of **cleantech startups** in addressing environmental challenges and forging a sustainable future. As we see a lot of potential in this sector in Lithuania, we are eager to showcase our cleantech startups innovation and potential to investors.

I encourage investors and startups worldwide to explore the opportunities that our friendly, vibrant, and growing startup ecosystem has to offer.



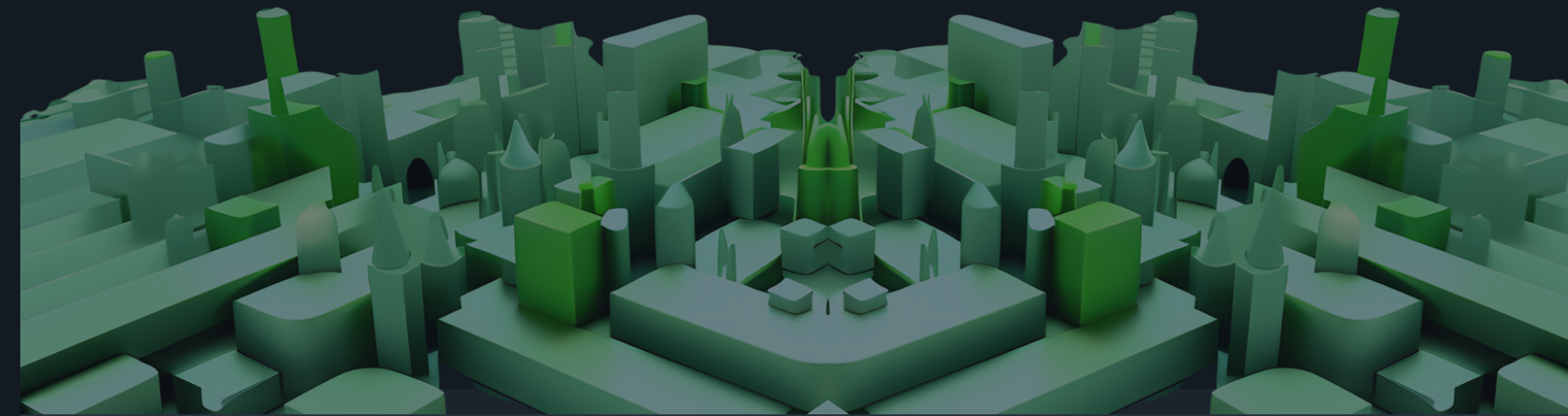
Roberta Rudokiene
*Head of **Startup Lithuania***

Dominant sectors

In the last few years, the Lithuanian cleantech landscape was confidently taking a more articulated shape and form. Various facilitating institutions and new startups have sprung up. As the cleantech sectors are evolving all around the world and Baltics, Lithuania is in a good position to jump the train and head towards a circular and sustainable future, together with neighboring partners from Latvia and Estonia.

Lithuania, being the country of 2,6 million inhabitants, always preferred quality over quantity. This applies to the Lithuanian cleantech market as well - it is compact, but well articulated.

At the end of 2022, looking at Lithuanian cleantech market from a birdview, all in all we locate at least 48 fast growing cleantech startups with global expansion ambitions, as well as a handful of mature companies (scaleups), that act as important cleantech industry enablers and know-how centers for the local newcomers to cleantech business.



This exact combination of both traditional and disruptive new generation companies are amalgamating into the explosive mix of opportunities that lead the way for the business growth of truly global proportions. Today there are 3 major industries that are driving Lithuanian cleantech into the future:

- 1. Renewable energy**
- 2. Transportation**
- 3. Resources & Environment**

Dominant sectors

Besides that, the other one distinct sector with strong cleantech elements is gaining traction and should be considered as an important part of the ecosystem: marketplaces with the business models based on circular economy principles, first and foremost enabling consumers to reutilize the goods and materials in a true circular way.

Looking back one can acknowledge, that the majority of new projects and startups in Lithuania are evolving in **energy, transportation & environment** areas because of two important reasons for that:

1. Lithuanian **engineering industry**, which spans its history from the second world war, and has built since then a strong engineering knowledge base and tradition, penetrating entrepreneurial spirit.

2. Lithuanian **education ecosystem**, with 4 major universities in Vilnius, Kaunas and Klaipėda, nurturing and supporting the engineering spirit of local innovators.



Energy



Transportation



Environment

Public stakeholders

The most important public cleantech market stakeholders are educational institutions that facilitate and supply the majority of engineering oriented talent to the local market. These are:



Vilnius University (VU, est. 1579) – the oldest and largest Lithuanian higher education institution. University provides R&D-based and innovative solutions that create value for its partners in academic or business domains. More than 160 teams of researchers in all R&D areas – biomedicine, physical and technological sciences, humanities and social sciences – develop innovative interdisciplinary solutions for business and society.

Vilnius University is an active participant of the innovation ecosystem, licensing technologies and patents, establishing startup or spinoff companies or nurturing ideas in the technological business incubator and/or co-working spaces of science and technology parks.

Vilnius University collaborates with international business companies located in Lithuania and abroad as well as it works with startup companies that have niche demands for R&D based and innovative solutions, offering 450+ open access R&D services and infrastructure in all R&D and innovation areas: biomedicine, physics, technologies and humanities and social sciences.



VILNIUS TECH (VGTU, est. 1956) is one of the biggest research universities in Lithuania, focusing on technologies, engineering and prioritizing university-business cooperation.

To prevent even greater climate change, the University's researchers are developing technologies that minimize negative environmental impacts and ensure sustainable, resource-efficient growth through the development of clean technologies and sustainable business solutions. Air purification and wastewater treatment facilities are being developed to reduce greenhouse gas emissions, renewable energy systems are being improved, and ways to use 7 different types of waste into raw materials or products are being sought.

In the international ranking of universities „QS World University Rankings 2022“ VILNIUS TECH takes 751-800 place. In „QS University Rankings: Emerging Europe and Central Asia ranking - 56 place.



Kaunas University of Technology (KTU, est. 1922) provides a wide range of studies on engineering, technologies, physical and social sciences, humanities and arts. The research groups working at KTU contribute to the global scientific knowledge by conducting cutting edge interdisciplinary research on the most important questions of current time.

The University's mission is to provide research-based studies at international level; to develop and to transfer knowledge and innovative technologies for sustainable development of the State and development of innovations; to create an open creative environment which inspires talents and leaders.

The University's activities are based on development and transfer of knowledge and technologies.



Klaipėda University (KU, est. 1991) sets itself an ambitious goal of becoming the leader of universities in the Baltic region. In the world of science, the qualification and reputation of **marine** researchers working at KU is reflected in the Shanghai Ranking (Academic Ranking of World Universities): in accordance with it, KU is among the 200 universities in the world best in the area of oceanographic sciences.

Public stakeholders

Besides the universities, there are two major public organizations, that are directly related to local cleantech ecosystem:



Sunrise Valley Science and Technology Park.
The founder of CleanTech cluster & various startup programs.

Sunrise Valley Science and Technology Park has started to promote impact-driven entrepreneurship in 2015. Since then, the Park runs the annual national competition of Climate Launchpad - the world's largest green business ideas competition. Park has developed a sustainable business pre-acceleration programme Futurepreneurs aimed to increase the number of sustainability startups and help solving the challenges of the sector, including social ones, through business. Additionally, Sunrise Tech Park organizes various hackathons to help to-be-entrepreneurs on the ideation stage.

Over the 5 years of running Futurepreneurs in Lithuania, Sunrise Valley Science and Technology Park has supported more than 700 people aiming to develop a sustainable business. His contribution to tackling the most pressing environmental problems has been recognized multiple times, including winning one of the most important environmental awards worldwide - the Energy Globe Award.

Sunrise Tech Park is partner of the European Institute of Innovation Knowledge and Innovation community EIT Climate KIC. Since 2015, under the leadership of the KIC, Sunrise Tech park act as a national lead of the global green business ideas competition Climate launchpad.

Back in 2018 Sunrise Tech Park established Cleantech cluster of Lithuania with the aim to unite business, science, NGO organizations that contribute the sector with talents, research, innovative products and services.

In 2022 Sunrise Tech Park joined "Cleantech for Baltic" - cleantech incestors and overol ecosystem advocacy initiative, established by the Breakthrough Energy. Breakthrough Energy was founded by Bill Gates in 2015 to accelerate the clean energy transition and help the world reach net-zero emissions by 2050.



Cleantech Cluster Lithuania.
The major cleantech sector unifying body.

Cleantech Cluster Lithuania was founded in 2018 and unites 44 organizations, working in the field of circular economy and building climate-friendly solutions. The cluster connects small and medium enterprises, startups, NGOs, science and research institutions, and other entities that collaborate and co-create to increase awareness of the circular economy and the competitiveness of the cluster members.

Cluster facilitates the collaboration between its members, provides innovation support services and access to a strong network of cleantech experts, organizes various events (conferences, seminars, training), participates in a dialogue with policymakers, raises awareness of the climate crisis, and promotes the products and activities of its members.

In 2022, The European Secretariat for Cluster Analysis (ESCA) awarded Cleantech Cluster Lithuania with the Bronze Label of the European Cluster Excellence Initiative. To be awarded the Bronze Label is a recognition of the cluster management work and the benchmarking process provides the guidance for further improvement.

Cleantech Cluster Lithuania fosters economic growth through green innovation. Within the cluster, universities and research institutions are shaping the green solutions of the future, startups and companies are transforming the market, and the ecosystem players are influencing the political environment.

Cleantech Cluster Lithuania was founded by Sunrise Tech Park, a non-profit organization, established in 2003 to accelerate the digital economy ecosystem in Sunrise Valley campus. As a business support organization, Sunrise Tech Park offers a co-working space, pre-acceleration and incubation programs as well as premises for knowledge intensive companies.

Close cooperation with Vilnius Gediminas Technical University, Vilnius University, Physical and Technological Science Center and Life science Centre within the campus is the backbone to support SMEs in R&D and tech transfer.

Private & venture capital ecosystem

Under the private stakeholder umbrella there are 4 local venture capital funds as well as close to 10 accelerators, incubators and hubs, engaging with cleantech initiatives, projects and startups. Such VC funds as Coinvest Capital, Practica Capital, 70ventures and Contrarian Ventures are leading the market with an average of 5 investments per fund.



Contrarian Ventures is an exception with at least 11 cleantech investments under the belt and brand new second fund targeting 100 million Eur to close the funding gap for future climate-tech founders and mobilize the resources needed for climate action.

The fund will focus specifically on seed stage investments and is dedicated to backing pioneers building technologies that will support the infrastructure of tomorrow. The VC is also expanding across Europe with new bases in London and Berlin and adding to its LP base, which includes Molten Ventures and the Grantham Foundation. Founded in 2017 by ex-investment bankers Rokas Peciulaitis and Tomas Kemtys, the VC utilises a collaborative, hands-on, founders-first approach to support future climate-tech founders.

Contrarian Ventures typically work with companies with a focus on smart grid, energy efficiency, big data and analytics, energy storage solutions, e-car infrastructure, smart homes, e-services for customer support, distributed generation, renewable energy solutions and virtual power plants.



Katalista Ventures focuses on catalyzing and connecting people to help them achieve their potential while finding solutions to global challenges. As an early-stage accelerator, the fund looks for resilient ventures that have a high potential for global scalability, and for financial, environmental, and social sustainability.

Katalista team helps corporate businesses on their journey of sustainable transformation to establish partnerships with startups and to provide solutions that positively impact lives and the environment.



70Ventures has finished its active investment period and will continue providing acceleration and fund management services to our two current funds - 70Ventures Accel and Seed. 70Ventures team is still active in the Nordic and Baltic start-up ecosystem. The team is able to invest and support start-ups directly as angel investors and advisors. 70Ventures portfolio companies are growing rapidly and provide a wide range of appealing career opportunities.



Practica Capital is an early-stage VC dedicated to backing Baltic founders. VC has invested exclusively in tech potential in the Baltic States for the last 10 years, backing founders in their ambition in seed and selected pre-seed and A stages partnering with them as company builders.

Practica Capital manages three funds with €52M assets under management, with more than 60 investments, including great companies like TransferGo, PVcase, Ovoko, Trafi and others. It is probably the most active Baltic syndicate partner co-investing with local, regional, and international VCs & PEs, accelerators & incubators, angels, corporates, public agencies, banks, crowdfunding platforms and others.

Private & venture capital ecosystem



LITHUANIAN
BUSINESS
ANGELS
NETWORK

Lithuanian Business Angel Network (LitBAN) fosters business angel activity through communication, events, networking, syndication of deals both locally and across Nordics by uniting wealthy individuals, successful entrepreneurs, and executives that are curious about angel investing activity, are interested in sharing their knowledge and network with new entrepreneurs.

LitBAN was founded on the 14th of March, 2018 and marked a crucial step forward in the young Lithuanian startup ecosystem. LitBAN now has over 200 members and our community grows stronger with each and every individual joining it: unheard insights, larger networks and new joint investment possibilities.



Lithuanian Private Equity
and Venture Capital
Association

The LT VCA monitors and helps to improve the regulatory and business environment which is necessary for a healthy functioning of the private capital market in Lithuania.

LT VCA was established by UAB LitCapital Asset Management, BaltCap, and SEB Venture Capital in May 2009. Currently, LT VCA unites all the main PE&VC market participants in Lithuania, by having 52 active (19 full & 33 associate) members covering different types of private equity and venture capital business activities.

The association also serves as a central platform for the representation and promotion of the Lithuanian private equity and venture capital market to institutional investors, policymakers, and the general public on local and global levels. The LT VCA is also the main research and statistics provider on Lithuanian PE&VC market.



COINVEST
CAPITAL

ColInvest Capital invests in start-ups and companies undergoing business development and growth in cooperation with groups of business angels or private venture capital funds.

Fund caps its investment return to 6% annually during the investment period. Excess return is a premium to private investors who co-invest with the Fund. The Fund is acting as a silent investor.

Total ColInvest Capital investments portfolio reached 29 with 1 exit, founded in 2017, ColInvest Capital is a corporate venture firm and is based in Vilnius, Lithuania. The firm seeks to invest in the consumer durables, mobile, cleantech and manufacturing sectors.

Investments, deals and growth numbers

At the end of 2022 there were in Lithuania 48 companies, both startups and scaleups, that would typically represent the cleantech ecosystem with entrepreneurial activity and innovation aiming to create a more sustainable economic system through the development of clean technologies.

On top of environmental technologies, cleantech also represents companies that produce productivity and efficiency enhancing goods and services.

As the Lithuanian cleantech ecosystem is constantly evolving, there are a number of new projects that could develop into new fresh startups in the future. The report will update this data on every such occasion.

Renewable energy

Energy transition plays an important role in mitigating the effects of climate change and meeting the European Union's long-term climate objectives requires diverting investment towards cleaner technology.

At the end of 2022 Lithuanian renewable energy market contained 16 energy startup and scaleup technology companies operating in the fields of renewable energy and energy digitization in Lithuania. During the analyzed period, companies in the sector have attracted 60 mil. EUR – the least of all three sectors, analyzed in the report.

This shows the energy companies have been bootstrapping very successfully in the past.

Lithuanian renewable energy companies have demonstrated the most resilience and have overcome the initial market entry barriers, avoiding the typical lack of capital at this stage of development.

As the cleantech term embodies a new wave of entrepreneurial activity and innovation aiming to create a more sustainable economic system through the development of clean technologies, we recognize these above-mentioned companies as “enablers” of the true cleantech ecosystem.

At the core of Lithuanian renewable cleantech ecosystem are true startup companies, ones that innovate, manufacture and distribute the new generation technologies and services, pioneering both in the Baltic and the global markets.

These entities are both early-stage and scaleup cleantech businesses with an established good access to the market. The solartech manufacturing companies like “SoliTek Cells”, as well as solar engineering software providers “PVcase”, “Inion” are leading this cluster with a strong global presence and active growth metrics.

They have overcome the initial barrier of market entry and have gained strong credibility from the global business and consumer markets. They seem to face less difficulties in their scaleup phase and require less support, having sufficient capital for growth both from investors and their own revenue streams.

Some smaller players, like innovative remote solar energy plant developer and distributed platform operator “Solarbank”, are still preparing for a larger growth phase and searching for access to new capital. As this type of funding is often short-lived, they still have some way to go to reach the scaleup phase.

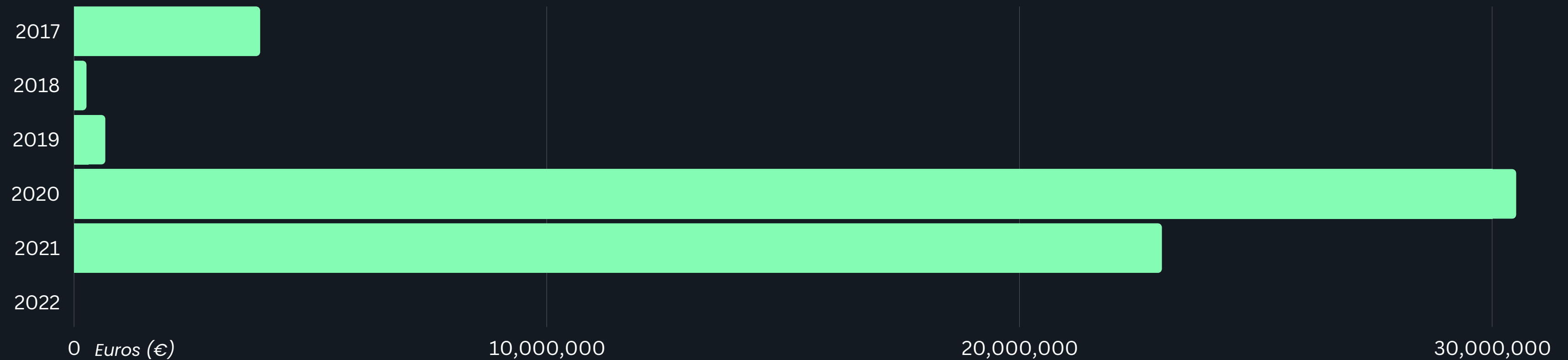
There are still a great number of very early-stage cleantech energy projects, developing in Lithuania, that we possibly will be able to cover in the future quarterly Lithuanian Cleantech Landscape reviews.

Companies to watch:



Raised investments

Renewable energy



Scaleups & startups



New mobility

The sector contains 17 new mobility startup and scaleup companies, which have attracted 180 mil. EUR of investments. It is the fastest growing segment, compared to other Lithuanian cleantech sectors.

The new mobility and transportation sector is perhaps the most disruptive and fast growing, compared to the rest of Lithuanian cleantech industries. The auto manufacturing and public transportation sectors traditionally are among the most conservative businesses, with enormous amounts of capital, talent and technologies needed for it to operate smoothly.

“New mobility & transportation” sector contains three interconnected layers of innovative and entrepreneurial activities that enable holistic transformation of the urban transportation systems and environments: electronic vehicles & components developers and manufacturers, charging infrastructure developers and multimodal mobility service providers.

Multimodal mobility is defined as a mobility behavior that is characterized by flexible usage and a combination of different transport modes according to the situation and to the available transport means. Trafi, probably the best known European multimodal mobility platform provider, is leading the pack with operations in at least 10 countries worldwide.

The company builds connected mobility solutions that help people, cities and companies move towards a sustainable future. The company is encouraging the global shift to shared mobility systems that are managed by cities, enhanced by companies and used by people. Ideally, such a platform will combine under one roof all the global and national shared mobility resources, such as Uber, Bolt, CityBee, Spark car sharing systems, as well as urban and intercity public transportation systems, even private vehicles, available for sharing for third parties.

In order to fulfill the needs and demands of the circular economy, the new mobility industry must be powered by 100% renewable energy. Here come the other two important pillars of the sector - electric vehicles (EV) and motors manufacturers, as well as charging infrastructure providers.

Lithuania is unique in this perspective among the other neighboring countries - it has a strong auto manufacturing cluster that makes a strategic shift from internal combustion engines to 100% electric power trains and vehicles. This is presented by the cluster of two EV bus manufacturers Altas Auto and Dancer Bus, in cooperation with two electric powertrain manufacturers Elinta Motors.

These companies may have been the traditional automotive industry representatives in the past, but today they are the main drivers of the new Lithuanian mobility cleantech cluster. The new means and models of manufacturing cars in easily built and effective modular EV plants will open up the new global possibilities for these Lithuanian companies to enter greatly expanding global EV transportation markets.

The third important pillar of the new mobility sector is the cluster of charging infrastructure providers. Elinta Charge, Teltonika Energy, Inbalance Grid and a few smaller startups & entrepreneurs are developing unique charging solutions for the expanding urban electric transportation systems.

Important aspect for this segment of the cleantech landscape is the high activity of angel investors and successful global entrepreneurs (like Mantas Mikuckas from Vinted), who are actively investing in EV charging related Lithuanian startups.

Companies to watch:

STUART Trafi I>>

ALTAS AUTO

TELTONIKA | Energy

ELINTA MOTORS

citybee

DANCER
ELECTRIC TRANSPORT SYSTEMS

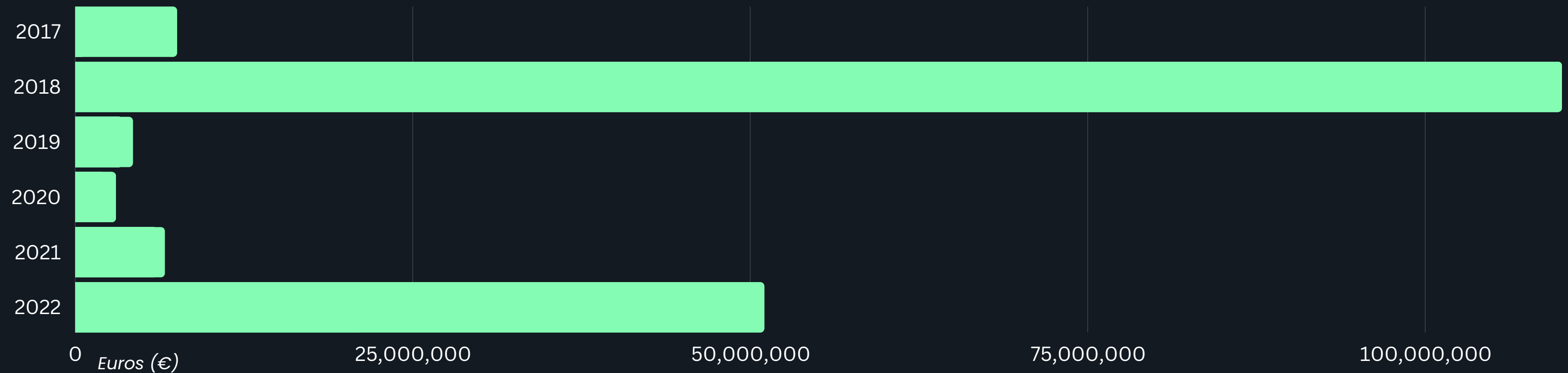
ELINTA CHARGE

Inbalance grid

SPARK

Raised investments

New mobility



Scaleups & startups:



Resources & Environment

This sector is focused on resource management, food chain innovations and vertically integrated second hand marketplaces. A total of 15 startup and scaleup companies operate in the sector, investments have reached 468 mil. EUR.

This sector is dominated by Vinted, the largest online marketplace for used clothes in Europe, which already has 45 mil. users base making a real impact on the global textile sector by introducing a smarter use of clothing worldwide.

The company headlines today the global movement of reducing textile waste around the world enabling users to sell unwanted clothing online, instead of putting it in the trash bins. Therefore we include this scaleup in this report, but as the total investment size of Vinted surpasses that of the whole Lithuanian cleantech market, its data is separated.

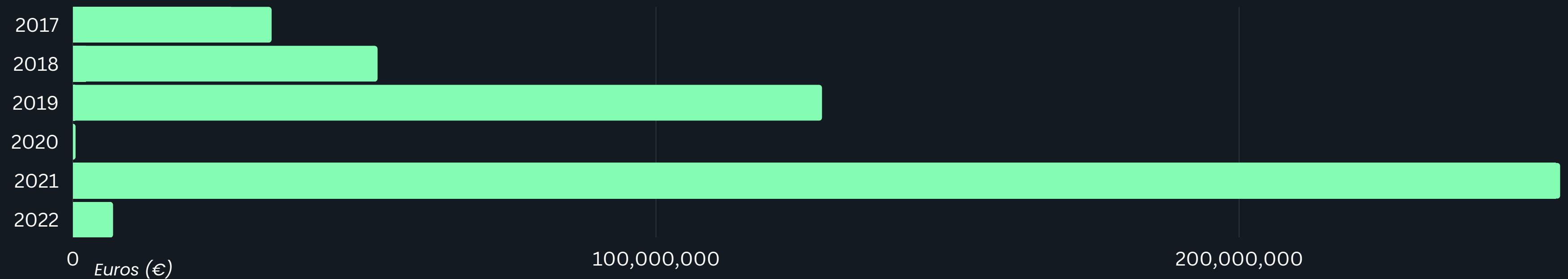
Vinted is the largest online international consumer-to-consumer marketplace in Europe dedicated to second-hand fashion, with a growing user base of 45 million members. Company is active in 15 countries. The company is, probably, the most famous Lithuanian unicorn, in the decade of operations raising more than 480 million EUR capital.

Another great success story and good example of smart business model adoption to different sectors is startup Ovoko. Being the global marketplace for used car parts, it has the potential to repeat the Vinted success story.

Companies to watch:



Raised Investments

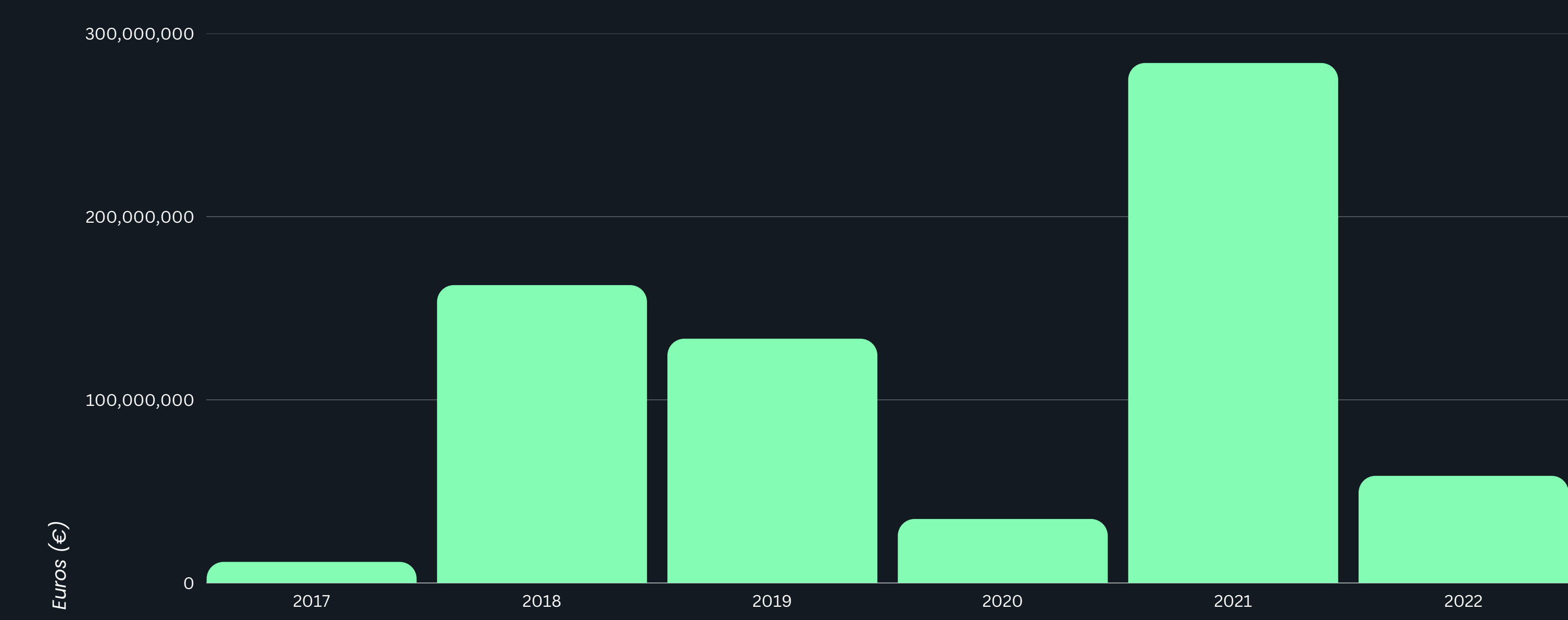


Scaleups & startups:

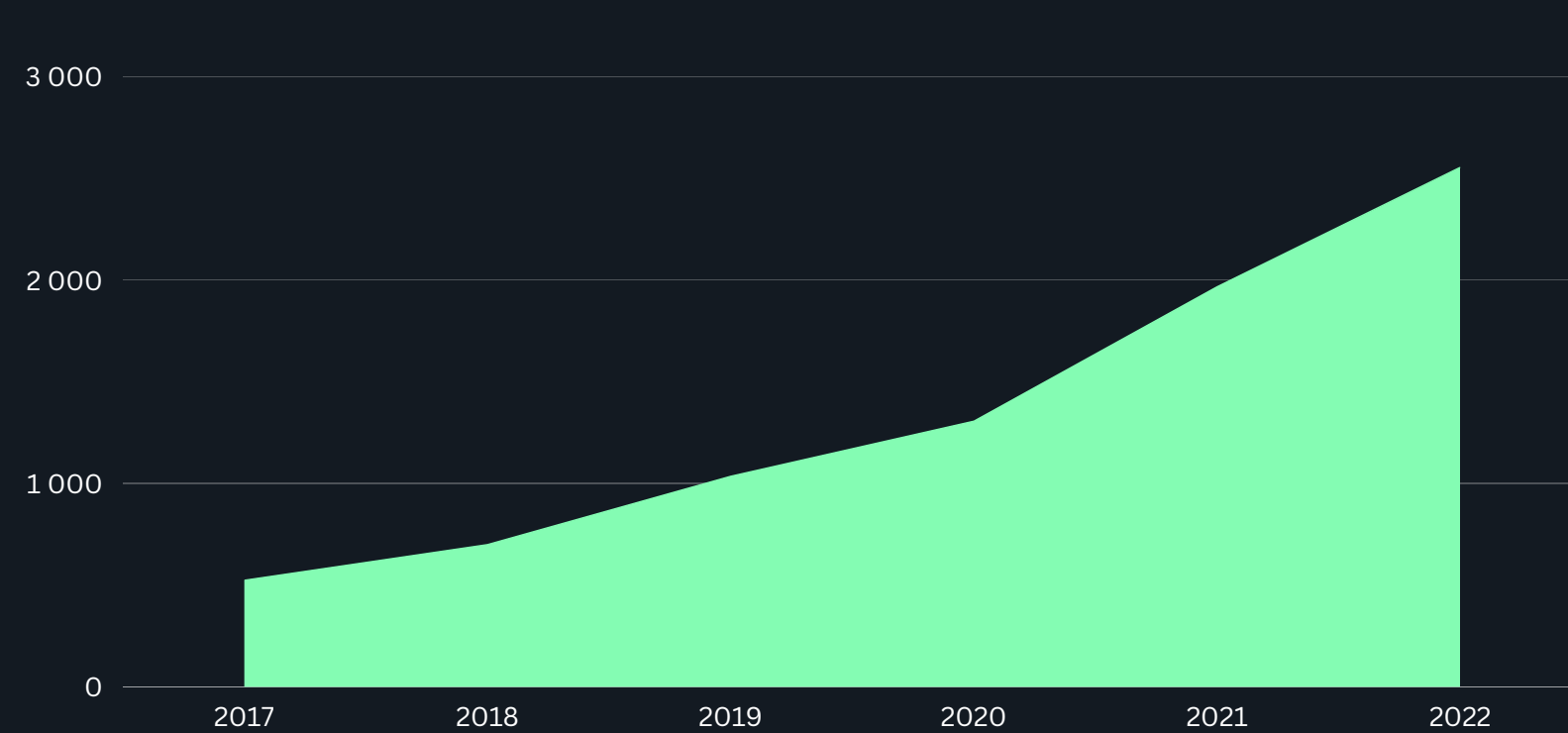


Raised Investments (total)

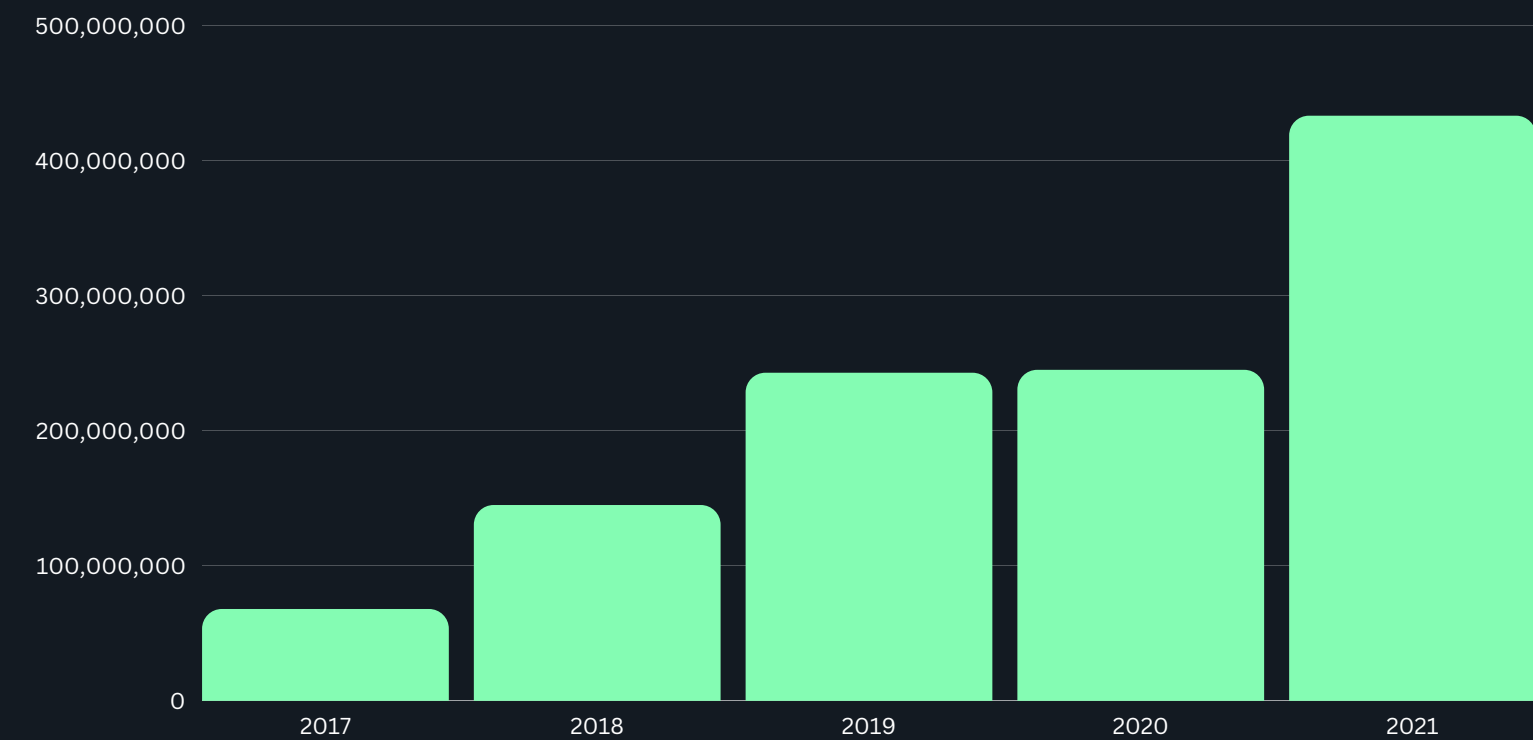
Deal counts: 60







Employees



Turnover



Top Lithuanian Cleantech market investments 2018–2022

-  Marketplace
-  Transportation
-  Energy
-  Resources



Main opportunities

On the country level, main opportunities in Lithuanian cleantech landscape could be articulated distinguishing 2 major directions:

1

Regional renewable energy innovation leader with 100% vertically integrated market in place:

- solar technology manufacturing and R&D
- dedicated software engineering know-how
- remote solar electricity generation legislation

2

N. European electric transport manufacturing hub with 3 interconnected layers of innovative and entrepreneurial activities enabling transformation of the urban transportation systems:

- e-vehicles & e-components manufacturers
- charging infrastructure developers
- multimodal mobility service providers

Main opportunities according to startup founders and VC investors:



Before Russia's war in Ukraine, companies were hesitant to move to renewables either as a service provider or to use it for electricity. Now everybody wants to move there but understands that the talent and resources is scarce in the Baltic countries and started looking for solutions abroad.

We should do it according to the best case practices from the start. As the sector is just under development we can take the best practices from the market, learn from their mistakes and shoot for the stars. The analogy would be with IT and internet cables in Baltic countries - it is easy to have one of the fastest internet in the world when all your infrastructure is young and modern.

Continental and international funding opportunities for the cleantech industry. Positive policy and market trends in Europe continent for renewable energy value chain.

Best global cleantech adoption examples that could be beneficially adopted in the Baltics? The Netherlands. This country has the best solar capacity adoption per capita. Its policy makers support decentralized power generation. The Netherlands also has the adoption of the prosumer model.

Main opportunities according to startup founders and VC investors:



inobiostar



Tatjana Paulauskienė, CEO



Combining VC investors with foundations and government funds to create a larger and more patient capital market. To develop resources and build the network for cleantech startups (Business incubators and accelerators etc.)

Creating demand-side policies and navigating the political and regulatory landscape. Policymakers at the state level are given a tremendous opportunity to shape market conditions.

Best global cleantech adoption examples that could be beneficially adopted in the Baltics? Bridging the commercialization gap - the period between a technology's R&D phase and large-scale commercialization, when a company can expect to start making profit. Funding the full clean technology innovation cycle and establishing a clean technology development program to help new projects attract private capital.



Main opportunities according to startup founders and VC investors:



Julius Sakalauskas, CEO



We have to invest much more in the visibility of our own Baltic cleantech ecosystem achievements. Bringing global attention to our cleantech startups, the new capital possibilities will arise, the innovation will be boosted and our governments will get a chance to lead by good example. Promotion of the industry and its products at national level is a must.

Government support in various topics and fields - it will bring very many benefits to our country in the long term. We as a country have deep engineering roots and know-how, so it is possibly the easiest way to get traction by streamlining the investments and support into the ecosystem.



Main opportunities according to startup founders and VC investors:



Tomas Kemtys, General Partner & Rokas Pečiulaitis, Managing Partner

Pre-VC funding: piloting incentives/grants for deep decarbonization technologies (think Darpa-E model).

Specialization: Focus on specific sectors and becoming leaders as a country - batteries, hydrogen, CCUS, sustainable materials, etc.

Regulatory push: Regulation sandbox for piloting, trying, and operating novel solutions (think fintech light regulation in Lithuania).

Best global cleantech adoption examples that could be beneficially adopted in the Baltics? Darpa-E grant model (where grants are flexible and attract the right companies), and they are supported heavily at early stages of industry development - think China for Solar and Batteries, US for O&G, Sweden for Batteries etc.

We should implement dedicated FoF strategies to support VC funds targeting sustainability (numerous countries launched Sovereign Wealth Fund carve-outs dedicated to investing in climate tech funds Ireland, Denmark, Poland etc.) And we need our governments to support and push in COP events to showcase innovation from respective countries.



Main opportunities according to startup founders and VC investors:

S T U A R T



Austė Pranckutė, CEO



Collaboration – we definitely could do much more together than separately. Integration - in a small market with limited resources it is hard to do everything, so integration with or in other systems is a key to growth. Market demand for more sustainable solutions and strong governmental support for the clean tech sector worldwide.

Best global cleantech adoption examples that could be beneficially adopted in the Baltics? All I can think of is already adopted or even implemented in Lithuania and the Baltics. I think our remote solar energy legislature is worth mentioning. It gives a possibility to have a remote solar plant to those who cannot implement it on their own rooftop: ones who live in apartment buildings, shared dwellings and similar.

Vertical farming has many perspectives and we should look into it more precisely in the Baltics. We are facing the time when every new product or service has to be created with a sustainable approach, so this is the time of new possibilities.



Main opportunities according to startup founders and VC investors:

70ventures



Gytenis Galkis, Partner

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Waste recycling. In our view, Austria is doing a phenomenal job, when it comes to everyday waste recycling. Yes, it is more challenging for the user, but everyone has to do it.

Best global cleantech adoption examples that could be beneficially adopted in the Baltics? Tilos of Greece has become the first in the entire Mediterranean to become fully self-sufficient in energy, thanks to a strong investment in renewables. Some cities of the Baltics, especially Neringa, could take this as an example.

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Main challenges according to startup founders and VC investors:

1

Achieving net zero emissions implies a **reindustrialization process**. It is a time and capital intensive process with a tremendous amount of need for governmental, institutional and infrastructural support.

2

More **public and private cooperation** to support R&D and the scaleup of cleantech business is extremely needed.

3

Need for **change in cleantech investment models**, as businesses in this sector in particular need more time to develop & implement innovations.

Policy and support system overview

According to the policy review in Lithuania, over 21 documents (including national strategy, strategic/programming/activity level planning documents) could be identified that are broadly related to clean technologies. The main government institution that is responsible for long-term policy and support management for cleantech is the Ministry of Economy and Innovation and subordinate the main agency – “Innovation Agency”.

In addition, the Ministry of Energy and the Ministry of Education, Science and Sport have few relevant long-term goals and objectives related to clean technologies, but in general, these ministries provide infrastructure development plans or direct investments more than funding aimed at technologies and innovation.

In Lithuania, there is a clear tendency to focus on the energy sector the most, as only one-third of electricity generation is domestic which raises both geopolitical and economical risks. A quick expansion of renewable energy technologies is expected until 2030, therefore, accompanying clean-tech solutions like hydrogen technologies and electricity storage solutions are prominent. The industry sector is the second most visible in policy documents, in part, due to the heightened discourse on climate change, and circular economy.

The transport sector is also in the spotlight as it emits the most GHG in Lithuania, however, most of it is direct investments to electrify transportation, but this sector lacks innovation funding mechanisms. Similarly, innovation aspects are lacking in the agriculture & food sectors.

The Ministry of the Environment deserve a special mention. The Ministry is responsible for implementing climate change policies to change consumption patterns, increase energy efficiency and promote the use of renewable energy sources and technologies. One of the main documents, curated by the Ministry - National Energy and Climate Action Plan - is being updated and current 18th government of Lithuania intends made the process more collaborative. Ministry of the Environment, together with the Ministry of Energy of the Republic of Lithuania, did set up sectoral decarbonisation working groups, where representatives of business, science and NGOs agreed on GHG reduction measures.

Five economic sectors in Lithuania are covered: agriculture and forestry, energy, industry, transport and waste/circular economy. Some of the initiatives were selected for further approval and integration to the strategic documents. Representatives of the coordinating ministries assured that funds will be allocated and projects implemented (starting 2024).

Startup support ecosystem Map 2022

Private & venture capitals

 **Contrarian Ventures**

 **KATALISTA VENTURES**

 **70 Ventures**

 **COINVEST CAPITAL**

 **Practica Capital**

 **LITHUANIAN BUSINESS ANGELS NETWORK**

 **LTVCA** Lithuanian Private Equity and Venture Capital Association

 **baltic sandbox**

 **Iron Wolf Capital**

Non-profit

 **CLEANTECH CLUSTER LITHUANIA**

 **Sunrise Tech Park**

 **VITP** VISORIAL TECHNOLOGY PARK

 **KLAIPEDA SCIENCE AND TECHNOLOGY PARK**

 **TECH-PARK KAUNAS**

 **Climathon**

 **ClimAccelerator**

 **ClimateLaunchpad**

 **HACK VILNIUS**

 **EVOLUT 4.0**

 **FUTUREPRENEURS**

Public



- Ministry of Environment
- Ministry of Energy
- Ministry of the economy and innovation
- Ministry of transport and communications

 **VILNIUS TECH**

 **ktu** 1922

 **Klaipeda University**

 **Innovation Agency LITHUANIA**

 **INVEGA**

 **TECHHUB**

 **apva** The Environmental Projects Management Agency under the Ministry of Environment of the Republic of Lithuania

 **intelligent energy lab**

 **Vilnius TechFusion**

Private

 **Rockit**

 **tech zity**

 **BALTIC TECH PARK**

 **Startup Division** Powered by CIVITTA

 **ignitis** | innovation hub

 **MOBILITY INNOVATION CENTER**

Startup ecosystem support opportunities

Additional support mechanism in Lithuania is well developed network of institutional support. In general, there are four different types of support: (pre)accelerators, venture capital funds, network organisations, innovation and support organisations.

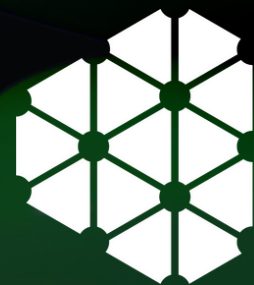
For cleantech innovations, there are many **(pre)accelerators** to choose from. With only an idea or prototype for a scalable product, it is possible to receive mentorship and resources to fund MVP, team members, test the with clients. In Lithuania 9 active pre-accelerators were identified that provide support from counseling to financials, ranging from 10 000 Eur to 50 000 Eur. Most of them focus solely on climate solutions and related sectors – energy, transportation, food, construction, industry.

Venture capitals in Lithuania are also well established. Usually just after first revenues in the company entrepreneurs can make use of the venture capitals that provide various expertise, finance, access to their networks that helps to launch new business. 9 venture capitals were identified in Lithuania, offering from 50k to 2 mln. Eur financial support in all cleantech sectors.

In addition, **innovation support / network organisations** are present and active in Lithuania. Usually they offer support services in different regions and cities. For example, expert assistance in the development of prototypes and innovations, expert R&D consulting services, intellectual property management legal advice, marketing consulting, assistance in preparing applications for R&D grants, event rent of premises or virtual office. 12 active organisations in Lithuania were identified.

However, in some cases, attracting finance can be an issue. This is especially relevant for young enterprises when financial institutions see the lack financial assets as an obstacle to lend money. INVEGA – the financial entity incorporated by the State provides loan based **financial (loan based) support for new companies**. For example, start-ups can get a loan support through peer-to-peer lending platform up to 0,5 mln. Eur through "Alternatyva Instrument". Loans up to 3 million euro in case of investment financing could be provided for the growth of a start-up via "Startuok". Also, compensation of loan interests is possible with instrument "Compensation of Loan Interest" for up to 95 % of the actually paid amount and up to 200 thousand euro.

All questions and ideas are welcome: info@ssmtp.lt



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