



THE BALTIC STATES IS A BOOMING SPACE FOR STARTUPS



Despite their small size, the three Baltic countries are showing impressive results in digitalization and being a booming space for startups. Continuously ranked among places with best tax regimes, ease of doing business, and tech savviness, the Baltic states are quite an interesting phenomenon in the European startup scene. Estonia alone is home to some of Europe's fastest growing companies - including four unicorns. In the meantime, the neighbouring countries of Latvia and Lithuania are also catching up.

This is the second time the Startup Wise Guys accelerator and EIT Digital join their forces to publish the Baltic Startup Scene Report. While each Baltic country regularly comes up with data and reports, the region is rarely analyzed as a whole and benchmarked with other countries and regions in Europe.

Last year's report was well-received – 500 printed copies were distributed among stakeholders from the Baltics and abroad. There were also close to 1000 downloads of the digital version of the report.



For some time, the international perception of the Baltics was synonymous with Estonia.
Recently, however, Latvia and Lithuania have been striding towards closing the gap. So, what is the status now? Are the ecosystems closer in development than outsiders consider them to be? This report sheds light on the true case of the Baltic ecosystems, and where they stand in the larger European context.

Fabio Pianesi EIT Digital

After publishing the first report in 2018, we saw deep curiosity and positive rivalry among Baltic ecosystem players. In the meantime, many stakeholders from abroad, like investors, tech journalists, CxOs of corporations, were impressed with how the small Baltic countries have managed to be frontrunners in all things digital and startups. We were happy to see that data combined with quality insights sparked in them a deeper interest in Baltics.

Therefore this year we have kept the best from the first report, but also upgraded and added more founder stories and experiences, indicated some challenges faced by ecosystems and startups, added a new section on women in tech and top events to attend, listed not only local, but also foreign VCs interested in the Baltics, and last but not least – added new verticals to our curated Startups to Watch list. We hope you will enjoy this report!

Zane Bojare Startup Wise Guys

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BALTICS INA NUTSHELL

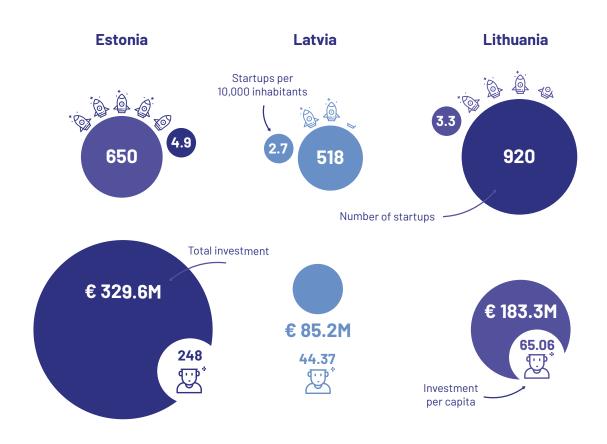




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STARTUPS & INVESTMENT

NUMBER OF STARTUPS (AS OF JULY 2019) & INVESTMENT PER CAPITA (2018)



Source: Latvian Startup Association, Startup Lithuania, Startup Estonia Ministry of Economics of Latvia

FACT 01

In 2018, Latvia and Lithuania saw a significant increase in the amount of startups documented. For example, Lithuania reported 572 more startups than the year before, while the number of Latvian startups grew by 66.



Startup Wise Guys publicity photo

STARTUP FUNDING

Since 2013, Estonia has seen a linear funding growth – in 2018, there was a 21.4% increase when compared to the year before. Both local and foreign VC funds and business angels are actively investing in Estonian startups, contributing to the country's efforts to brand itself as an innovation hub.

Investments in Latvian startups are also continuing to grow. According to the Ministry of Economics of Latvia, in 2018 local startups attracted 85.2 million, which is over 30% more than in 2017.

However, Latvia is still lagging behind Lithuania and Estonia. The funding data shows that in 2018, Latvia raised 2 times less than Lithuania and nearly 4 times less than Estonia. The reasons behind this difference vary – bureaucratic obstacles and insufficient industry support at a national level are some of them.

Finally, Lithuania has demonstrated increased funding activity when compared to previous years. That is partly related to the fact that public authorities have made a decision to dedicate a part of EU Structural and Investment Funds to various equity instruments, like accelerator funds, seed and venture capital funds, development (growth) funds, and business angel co-investment funds.

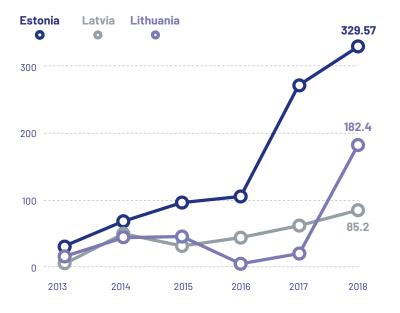
Lithuania saw impressive funding growth in 2018 – by 788% when compared to the year before. That being said, CityBee's €110M investment accounts for as much as 60% of the total investment raised in that year.

FACT 02

44

EU funding and other public intervention give a huge boost to the startup ecosystem. In 2018/2019, new equity funds were launched in Lithuania, including accelerators financed from EU structural funds. That gave another impulse for the development of the ecosystem – there was an increase in the number of investments, as well as more possibilities for startups to get acceleration services and initial investments," explains Vilija Sveikauskiene, Senior Project Manager at INVEGA.

FUNDING GROWTH OVER THE LAST 6 YEARS



Google Public Data, Baltic Startup Scene Report 2017/2018, crowdsourced data (Estonia, Latvia, Lithuania), Dealroom.co, Ministry of Economics of Latvia

PER CAPITA



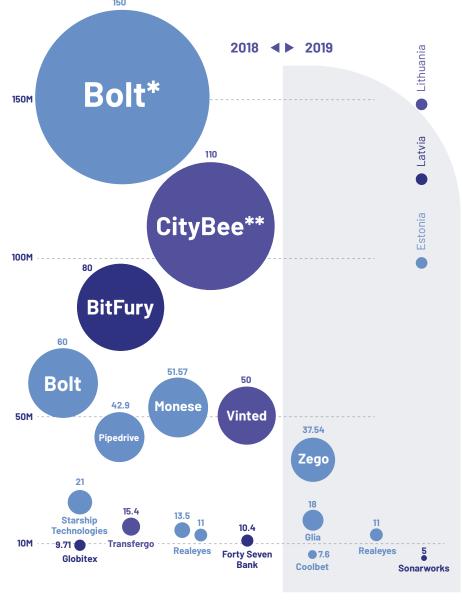
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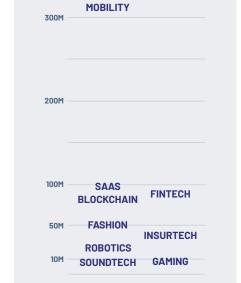
BIGGEST DEALS

In 2018 and up to Q3 of 2019, Estonian, Latvian and Lithuanian startups continued to attract funds, with the biggest deals exceeding one hundred million euros

Estonia is still the leader within the Baltics – 7 out of the 13 biggest deals in 2018 and 3 out of the 5 top deals in 2019 (Q1–Q3) belong to Estonian startups. For Latvia, the size of the most notable deal was 80 million euros, raised by the blockchain startup Bitfury. And while we haven't included data from 2019 Q4, it needs to be noted that Lithuanian startup Vinted raised 128M euro in the end of November, thus becoming the first Lithuanian unicorn.

BIGGEST FUNDS RAISED BY BALTIC STARTUPS IN 2018 AND 2019 (Q1-Q3), IN EURO.





Source: crowdsourced data (Estonia, Latvia, Lithuania) Ministry of Economics of Latvia

^{*} Investment received as Taxify, before rebranding to Bolt

^{**} Investment by the parent company ModusGroup

Bolt (ex. Taxify) was founded in Estonia, but the business idea was born in Kyiv, Ukraine, when one of the co-founders, Martin Villig, was visiting the city. He tried to order a taxi online, but that turned out to be quite a hassle. That's when he came up with the idea and decided to make ride-sharing easier.

FACT 03

EXPERT **01**

Does rebranding impact further investment attraction?

We rebranded to Bolt in 2019 to bring the brand identity in line with the company's broader vision of transportation that had already expanded from ride-hailing, with cars and motorbikes, to scooter sharing and more. However, our investors trust us because of our track record and vision, rather than the name.

Marek Unt Director of Communications, Bolt



BLOCKCHAIN AND THE AFTERMATH OF THE ICO CRAZE

The ICO gold rush has ended, and as the dust settles, only the strongest are left standing. It also makes way for true, lasting, blockchain-based innovation to be launched and implemented to create the groundbreaking changes foreseen by the technology.

THE JOURNEY FOR TRUST

Last year it was mostly Lithuania shining in the media headlines about ICOs and raising a reported \$500M in ICOs and ranking 3rd globally in raised funds. It has also brought some scam cases along, causing the Bank of Lithuania to launch various investigations. This year it is Estonia that stands in the forefront, ranking as the 5th country globally by the number of ICOs, according to the ICO Bench report. The combination of Estonia's flexible e-Residency program and slightly careful and strategic approach to ICO regulation has led to many international ICO projects to be registered in Estonia. There are many online resources and businesses established to help ICOs register in Estonia.

It is possible that in the light of fraud and scams, serious founders launching ICOs might favour the link with e-Residency and the fact that people behind Estonian-registered ICOs as holders of e-Residency status have been checked by the Police and Border Guard Board, thus earning additional trustworthiness.

The only Lithuanian-based ICO registered in ICO Bench in 2019 was Swace, a gaming-related project with an undisclosed amount raised, and is currently being actively traded. Meanwhile, Latvia has been rather silent and has fallen victim of some scam cases. For example, the Buratino ICO, which raised over \$10.5M was registered in Latvia, though research shows founders are based in Saint Petersburg, Russia.

FACT **04**

The Ministry of Economics and the Latvian State Revenue service organised the Tax Blockchain Hackathon to look into ways how blockchain technology could be utilized for cash register and tax fraud prevention. The 48h challenge was driven by the Startup Wise Guys accelerator and gathered an international crowd of blockchain experts and enthusiasts from the Baltic and Nordic regions.



The Ministry of Economics of the Republic of Latvia publicity photos

BLOCKCHAIN INITIATIVES IN THE BALTICS

Now that the ICO noise has settled, more attention has been directed towards the serious blockchain projects that intend on making a difference. Here are a few of the blockchain initiatives that are currently relevant in the Baltics.



EXPERT **12**

LBChain -The Bank of Lithuania's blockchain sandbox

The Bank of Lithuania was quick to identify blockchain as a major opportunity for the Lithuanian economy. For that reason, in 2018 it announced its intentions to develop a blockchain sandbox for blockchain-based projects to test their solutions on Lithuania's technological and regulatory infrastructure. The project moved into phase two in 2019, with fintech startups being added to the sandbox to begin testing. 21 startups applied to participate in the sandbox, out of those - 6 were accepted.

X-Road - Estonia's proprietary, decentralized information system

X-Road is the information system that laid the foundation for the digitization of Estonia's public services. X-Road went live in 2001 using the e-ID cards, and was placed on the blockchain as of 2008. The implementation onto the blockchain was done by an Estonian company named Guardtime, which remains the dominant blockchain builder in Estonia and is behind most blockchain-based innovations in the country.

Baltic HoneyBadger Bitcoin Conference in Riga, Latvia

For the third year in a row, one of the globally leading Bitcoin conferences has been held in Latvia. It is organized by Hodl Hodl, the P2P Bitcoin exchange. The event brings together globally leading individuals in the blockchain sphere and as they claim themselves "The Baltic Honeybadger conference is driven by the cypherpunk movement. We're not promoting various so called altcoins, ICOs, banks and other blockchain-based "snake oil".

FACT **05**

Riga, Latvia is the birth-place of BitFury group - the world's largest full-service blockchain technology company.

The ICOs seem to have turned down their PR to a minimum, but still keep on working on their products. For example, Monetha claims that it has finished working on its whitepaper and has fulfilled its obligations to the token-holders, the question remains - what do they do next? In general, there is a lack of buzz about blockchain in the local startup ecosystem but there is also no active leader to facilitate this action. Civitta lately got into 3 pan-European blockchain ecosystem development projects and will be funding up to 100 blockchain projects as part of the extended consortia.

New blockchain projects are hardly coming, if they do - they are financed through grants, rarely equity investments. Hence, the European Commission and local EU grants have a major role to play during the crypto market's downturn in order to finance new action. There are corporates and serious SMEs across Europe steadily experimenting with blockchain, however, they do almost no PR for it.

Danielius Stasiulis Civitta.ee, BitDegree

BENCH MARK





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BALTIC BENCHMARKING WITH EUROPE



Startup Wise Guys Batch 10 off-site, founders from CostPocket and Pomodone app. Startup Wise Guys publicity photos

Central Eastern European countries, which also include the three Baltic states, had a record year in 2018 in terms of VC funding – startups based in or originating from this region managed to raise €1.3 billion. Baltic countries, especially Estonia and Lithuania, have significantly contributed to this record-breaking year and account for as much as 46% of the total amount raised in the CEE region.

The Baltic countries also look strong next to the Nordics – the region that is often named as one of the top-tier tech hubs in Europe. In fact, if we look at funding per capita, Estonia, Latvia, and Lithuania slightly outperform the five Nordic countries. Their exceptional performance, however, has not extended into the CEE region, where the region's startup funding per capita still looks quite dismal in comparison.

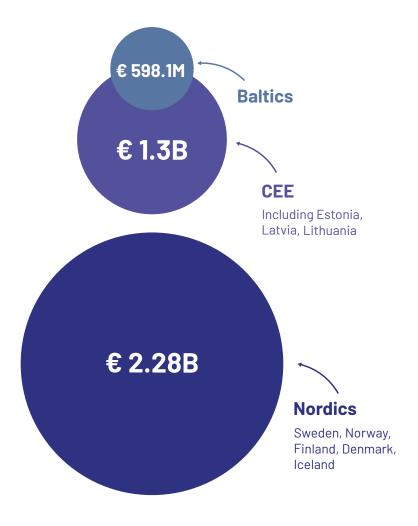
While attracting funds from local and foreign VCs doesn't seem to be a problem, it still leaves an open question – can the Baltics become a globally leading startup hub? Despite the general tech savviness, impressive funding rounds, unicorns and buzzing ecosystem, the region is still often associated with its Soviet past and reminded of its humble size of the market, namely six million inhabitants per all three countries.

EXPERT 03

Estonia's growth has been particularly driven by e-Estonia and a couple of good exits. However Estonia is more of a regional player, compared to London which is centralized, and I'm wondering if the region can be self-sustaining without finding people and funding from the outside. At the same time, the Baltics are more internationally-minded than other regional players like Latin America and until recently, France, which could be the leg up necessary to not rely on local markets.

Raph Crouan
Disrupt Venture

STARTUP FUNDING IN THE BALTICS, CEE AND NORDICS, 2018



Sources: crowdsourced data (Estonia, Latvia, Lithuania), Ministry of Economics of Latvia, Dealroom.co

FUNDING PER CAPITA, 2018



Source: Google Public Data, Baltic Startup Scene Report 2017/2018, crowdsourced data (Estonia, Latvia, Lithuania Dealroom.co

LIVING & WORKING IN THE

BALTICS

Life in the Baltic cities is comparably cheaper than in the large startup hubs, like London, Paris, or Berlin. However recent tendencies show - as local startup ecosystems grow, so are company maintenance costs and living expenses.

For example, Tallinn, the city with the arguably most matured startup ecosystem within the Baltics, is becoming increasingly more expensive over the years. That has motivated some of the country's most successful tech companies to open offices in other regions - not just to access customers and investors in these markets, but also due to lower operational and employment

COST OF LIVING



617.00 21.58

London 2724.75

370.00 3.00 16.75

Amsterdam

2461.12



11.50

2059.44







375.00 1.84 Barcelona

1620.61



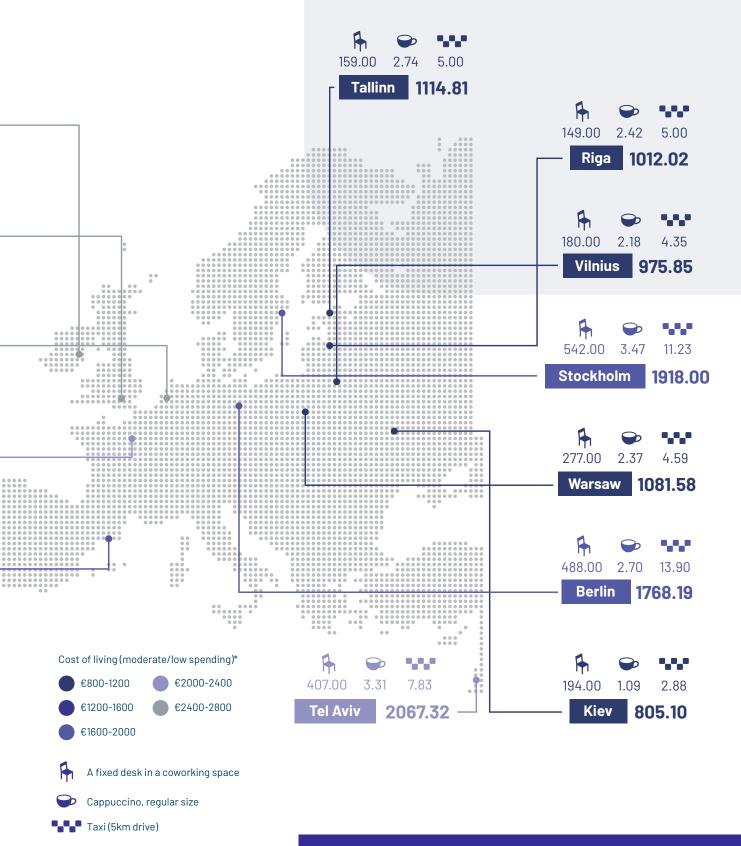




Lisbon

1309.90





^{*} These calculations are based on Numbeo.com algorithms and assumptions about a lifestyle that includes: renting a one-bedroom apartment outside the city center, using public transport, occasionally taking a taxi, not spending too much on eating out, leisure, clothing, moderate spending on coffee, alcoholic beverages, travel, and not including child-related expenses.

A fixed desk in a modern, fully-equipped co-working space in Riga will cost you 4x less than in London. For the money you'd save, you could buy three return flights from Riga to London (AirBaltic, avg. price €154).



HOW MUCH DOES IT ACTUALLY COST TO LIVE IN THE BALTIC STATES?

Six startup founders share the actual costs of living in the capital cities of Estonia, Latvia, and Lithuania.





Eero Veider, 29
Founder, eXpact

RIGA, LATVIA



Fabrice Amalaman, 31
CEO, PayOin.com

- From the USA
- Lives alone in a one-bedroom apartment within walking distance from the city center

Gabriel Appleton, 27

Co-founder, Vumonic Datalabs

- Walks to work
- Shops at Balti Jaam and Selver
- Eats out for lunch
- Low spending on entertainment

Total monthly costs:

1000 Euro

What's surprisingly expensive in Estonia? **Groceries.**

- From Estonia
- Lives in a shared apartment in the city center
- Rides a bike to work or takes public transport (which is free for locals)
- Shops at a grocery store in the neighborhood
- Brings lunch to work
- Low spending on entertainment

Total monthly costs:

700 Euro

What's surprisingly expensive in Estonia? **Rent.**

- From the Ivory Coast
- Lives alone in a one-bedroom apartment in the city center
- Takes a taxi to work
- Shops at Rimi
- Eats lunch at the office cantine
- Low spending on entertainment

Total monthly costs:

1250 Euro

What's surprisingly expensive in Latvia? **Groceries.**



FACT **07**

RIGA, LATVIA



Ainars Klavins, 31 Co-founder & CEO, Overly

- From Latvia
- Lives with a girlfriend in a 50m² apartment in the city center
- Walks to work
- Shops at Rimi
- Eats out for lunch
- High spending on entertainment

Total monthly costs:

1000 Euro

What's surprisingly expensive in Latvia? Groceries.

VILNIUS, LITHUANIA



Jaanika Jelistratov, 31 CEO. VITS

- From Estonia
- Lives in a shared apartment outside of the city center
- Takes a bus to work (30min drive)
- Shops at Rimi or Maxima
- Eats lunch at the office bistro
- Moderate spending on entertainment

Total monthly costs:

1200 Euro

What's surprisingly expensive in Lithuania? Rent and public transport.



Laimonas Noreika, 31 CEO & Co-founder, ZITICITY

- From Lithuania
- Lives with a family (3 people) in a 65m² apartment 5km from the city center
- Drives to work by car
- Shops at an online grocery store Barbora.lt
- Brings lunch to work (75% of the time)
- Moderate spending on entertainment

Total monthly costs:

1300 Euro (per family)

What's surprisingly expensive in Lithuania? Apparel.



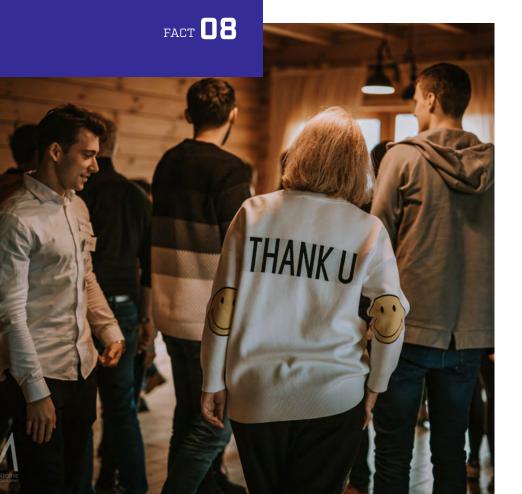
STARTUP VISAS IN THE BALTICS AND EUROPE

Startup visas offer companies a plethora of benefits. For example, the chance to enter a new market or establish and grow a business in a more startupfriendly environment than where you currently reside. And when it comes to EU member states – it gives direct access to a market of 28 countries and over 500m people.

There's a significant benefit to countries as well. Startup visas are a way to attract a highly qualified workforce, innovation, and in the long-term – new jobs and more funds in the country's budget.

Today, nearly every EU member state has some kind of startup visa policy in place, which allows qualified entrepreneurs and their employees to receive a temporary residence permit in the country. Here are the best startup visa regimes for non-EU startups and how they compare to each other.

In 2010, Chile became the first country in the world that introduced startup visas.
Since then, more than 20 other countries worldwide have opened similar programs.



BEST VISA REGIMES FOR NON-EU STARTUPS

Some of the most popular startup visas in the EU, compared side-by-side with startup visa regimes in the Baltic countries.

tartup Wise Guys publicity photo

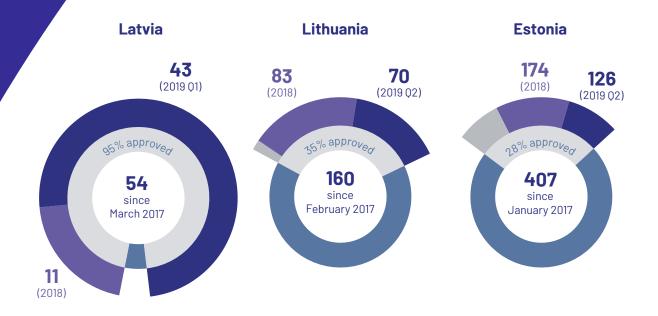
	Estonia	Latvia	Lithuania	France	UK*	Denmark	Italy
Time it takes to register and receive a decision	1-2 months	30 days	1-2 months	3 months max	3 weeks	1 month	30 days
Online application	~	×	~	~	~	~	~
Application 100% in English	~	~	~	~	~	~	~
Price	60-180 eur	100 - 400 eur	120-240 eur	368 eur	Innovator: £966 - £1,277 Startup: £308 - £493	1,900 DKK (254.69 eur)	96.46 eur
Level of innovation will be reviewed	~	~	~	~	~	~	~
Length of stay	1 year	3 years	1 year	4 years	Innovator: 3 years Startup: 2 years	2 years	1 year
Length that can be renewed	183 days	can apply for other type of residence permit	2 years	×	2 years	3 years at a time	2 years
Interview required	×	×	video	×	×	×	×
Application location	Home embassy or in Estonia	Home embassy or in Latvia	Online, then in Lithuania	French consulate in the home country or in France	Online, then in the local UK visa application center	Online, then at a Danish diplomatic mission abroad	Online, then at the Italian Embassy or Consulate
Amount of financial "buffer" required in bank account	1,680 eur	5,160 eur	Nothing set, you decide how much you'll need	18,254.60 eur	£945 for 90 consecutive days before you apply	137,076 DKK (approx. 18,374.76 eur) if alone	50,000 eur (can be an investment)
Prior investment necessary	×	×	×	30,000 eur	Innovator: Yes (£50,000 - for new companies, per team member) Startup: No	×	×

 $Sources: Startup\ Estonia, Startup\ Visa\ Lithuania, La\ French\ Tech,\ Gov.co.uk,\ Ny\ i\ Denmark,\ Italiastartupvisa.mise.gov. it$

^{*} The UK has two types of visas for non-EU founders: the Innovator and Startup Visa. The Innovator visa is for experienced business people, whereas the Startup Visa is for early-stage but high-potential entrepreneurs.

BALTIC STARTUP VISAS IN NUMBERS

The total number of founders that have received a startup visa in the Baltics, 2017-2019



Top 5 most active countries in 2019, based on the number of applications received

1. Russia
2. Belarussia
3. China
4. Ukraine
5. India

India
 Iran
 Turkey
 Russia
 Ukraine

1. Iran
2. India
3. Egypt
4. Pakistan

5. Russia

Source: Startup Estonia, Startup Lithuania, Magnetic Latvia



EXPERT **14**

Lithuania pays significant attention in order to attract high-skilled talents and innovative non-EU entrepreneurs. Startup Lithuania coordinates the programme called "Startup Visa Lithuania" and since the beginning of 2017, an increasing number of startups from non-EU markets have shown interest in Lithuania. In the first half of 2019, "Startup Employee Visa" – easier migration procedures for startups to attract foreign employees – was launched. The Lithuanian parliament has also recently passed a legal amendment that will allow foreigners to obtain the status of an e-resident starting in January 2021.

Roberta Rudokiene Head of Startup Lithuania

INPUT FROM STARTUPS



Ivan Ladan
Co-founder, Marine Digital System

Nationality: Russian Holder of: Latvian startup visa



Cihat Kahraman Co Founder, VSight

Nationality: Turkish
Holder of: Lithuanian startup
visa



Edilson Osorio Junior CEO, Original My Blockchain

Nationality: Brazilian Holder of: Estonian startup visa

How long did it take to get the visa?

We were well-prepared before applying, so the whole process took approximately 2 months.

What was the hardest part of the process?

When I was applying, OCMA (Office of Citizenship and Migration Affairs) was probably not so experienced with this type of visa. Employees were a bit nervous because they didn't fully understand the procedure.

How does the visa function?

The Latvian startup visa allows you to live and work in Latvia, as well as access other European markets.

How long did it take to get the visa?

Approximately 55 days.

What was the hardest part of the process?

Getting an appointment with the Migration Department. It took one month for the first stage (visa application) and one month for the second stage (getting the accommodation agreement and receiving health insurance).

How does the visa function?

It allows non-EU residents to enter and stay in the Schengen zone for 1 year. As a non-EU citizen, it is very practical.

How long did it take to get the visa?

Normally the process takes 2 months, but in my case, it took 3 – that's because I applied iust before Christmas.

What was the hardest part of the process?

The hardest part was waiting for my TRP (temporary residence permit) card to arrive. My tourist visa was ending, but I had to travel outside of Estonia. Even though I had a letter that stated I was granted the TRP, I still had trouble on the border when returning to Estonia.

How does the visa function?

The Estonian TRP allows me to live and freely travel around Europe for my business. I can also use public transportation for free. What it doesn't allow – to use entry points for "EU residents" in some airports. I'm usually put in the general queue, which is always long.



Startin Wise Guys nublicity

ECOSYSTEM





TECH EVENTS IN THE BALTICS⁺

The Baltics are booming with festivals, events, conferences, and forums where people from startups, tech, and businesses can meet and make great ideas happen. What's more – they're all within less than a day's travel. As a bonus we have also included some of the hottest events in our neighbouring countries. Explore our event calendar and plan your agenda accordingly!

JANUARY 2020

sTARTUp Day

Tartu, Estonia. 29-31 January

The biggest early-stage business festival in the Baltics bringing together startups, investors, executives, world-class experts, and media. The event has grown organically out of the Tartu startup and student ecosystem. Alongside loads of hands-on seminars, there are world-class speakers and a pitching stage where young talents unveil their big ideas.

Attendance: 4000 participants

Best for: entrepreneurs, business executives, startups, investors

FEBRUARY 2020

TechChill

Riga, Latvia. 20-21 February

The largest Latvian startup and technology conference and networking event. Each year, the festival handpicks leading visionaries, game-changers, and tech-heads to deliver you the new and the unexpected. For startups, TechChill is the place to meet the most relevant investors, learn about the industry trends, and gain visibility within and beyond the Baltics.

Attendance: 2000+ participants (71% local, 29% international)

Best for: the Baltic startup community – startups, corporations, investors, tech enthusiasts



North Star Al

Tallinn, Estonia. First half of March

An applied machine learning & data science conference for developers. The topics range from data engineering to meta-learning with applications in speech recognition, text processing, healthcare, transportation, deliveries, music, movies, etc.

Attendance: 630+ participants 33% international)

Best for: developers, CTOs, Al experts, data scientists, analysts, and startup leaders

APRIL 2020

GameDevDays

Tallinn, Estonia. 11-12 April

An international cross-platform game development and marketing conference.

UX Tartu

Tartu, Estonia. Middle of April

A tech event for UX designers, developers, product owners.

Deep Tech Atelier

Riga, Latvia. 3-4 April

An entrepreneurship forum dedicated to deeptech startup creation and development.

MAY 2020

Latitude59

Tallinn, Estonia. 28-29 May

The flagship startup and tech event of e-Estonia – the world's first digital society connecting investors with startups. A cosy, yet influential startup festival that focuses on the future of tech, education, humanity, ethics, government, living environment etc.

Attendance: 2500+ participants (33% international)

Best for: startups, entrepreneurs, investors, digital governance enthusiasts

Login

Vilnius, Lithuania. 28-29 May

A technology and innovation festival and conference focusing on creativity. One of the core activities of the festival is the closing event including the Internet Awards ceremony, celebrating the greatest internet projects of the previous year.

Attendance: 6000 participants

Best for: tech-savvy innovators, digital enthusiasts, trend setters, startups, entrepreneurs, corporates

Latitude59 publicity photo



It will take you 7 hours and 40 minutes - or 604 km - to get from Vilnius to Riga to Tallinn by car. If you're up for a challenge, this makes it possible to visit an event in each of the Baltic capitals in just one day! Start with Login (Vilnius), drive over to Riga DevDays (Riga), and finish your journey in Latitude59 (Tallinn).



Emerge

Minsk, Belarus. 29-30 May

The hotbed for deep tech, founders, community leaders, bigger companies, and investors from across the New East (including Eastern Europe, the Balkans and Central Asia).

Attendance: 1500 participants from 22 countries

Best for: startups, entrepreneurs, investors

Riga Dev Days

Riga, Latvia. 26-28 May

A tech conference and annual meeting point for developers in the Baltics.

Startup Fair

Vilnius, Lithuania. 21-22 May

The main international startup ecosystem event in Lithuania.

Arctic15

Helsinki, Finland. 26-27 May

The most effective matchmaking event and startup-investor conference in North Europe. The goal of the event is to enable quality networking, foster meaningful relationships, and real returns on investment.

Attendance: 800+ participants from 50 coun-

Best for: startups, investors, entrepreneurs

AUGUST 2020

iNovuss

Riga, Latvia. 28-30 August

An innovation, technology, and music festival that takes place outdoors. The event is mostly organised around Latvian speakers and experts.

Attendance: several thousand visitors

Best for: Latvian companies, startups, tech enthusiasts

SFPTFMBFR 2020

Baltic Honeybadger

Riga, Latvia. Middle of September

Major Bitcoin conference.

Tech Day

Tallinn, Estonia. Middle of September

Estonia's biggest technology conference focusing on the latest technology news.

TechBB0

Copenhagen, Denmark. 17-18 September

An international tech-startup summit by and for the startup community.

Oslo Innovation Week

Oslo, Norway. 21-25 September

An innovation conference with a series of pitching contests, hackathons, workshops, seminars and company crawls.

GeekOut

Tallinn, Estonia. End of September

A technology conference and show for developers focusing on newest tools, solution architecture, programming.

OCTOBER 2020

Riga COMM

Riga, Latvia. First half of October

A business technology fair & conference with various thematic tracks, for example, fintech conference, digital marketing stages etc.

Attendance: 4800 participants (90% locals, but the event is foreigner-friendly)

Best for: business tech enthusiasts, corporates, SMEs

NOVEMBER 2020

Digital Freedom Festival

Riga, Latvia. Middle of November

A boutique, yet influential technology, startup, and lifestyle festival discussing the latest trends in digital tech. In 2019, Digital Freedom Festival focused on sustainability, impact, and the humanity aspect of tech to discuss and answer what is our role and challenges in the digital world.

Attendance: 1600 participants from 30+ countries

Best for: digital era and tech enthusiasts, policymakers, investors, startups, consumers

Slush

Helsinki, Finland. 19-20 November

The focal point for European and Asian startups and tech talent to meet with top-tier international influencers, investors, and media. Truly a one-of-a-kind event that allows startups to connect with investors and the key players of the fastest growing companies in the world.

Attendance: 25 000 participants from 130+ countries (including 4000 startups and 2000 investors)

Best for: startups, investors, people & media working in tech

Tallinn Startup Week

Tallinn, Estonia. Middle of November

Tallinn Startup Week is a five-day celebration of the entrepreneurial mindset and startup community with 60+ events across Estonia.

5G Techritory

Riga, Latvia. End of November

The Baltic Sea region 5G ecosystem forum.

FinTech Inn

Vilnius, Lithuania. End of November

A financial technologies conference.

DECEMBER 2019

Robotex International

Tallinn, Estonia, End of November, beginning of December

The biggest robotics festival on the planet.

Devternity

Riga, Latvia. Beginning of December

Devternity is one of the top tech, IT, and software development conferences in Europe. The second day of the conference usually hosts a series of practical workshops.

Attendance: 800 people

Best for: developers of all kinds - coders, software architects, project executives

WHY IS IT IMPORTANT
TO ORGANISE
INTERNATIONAL-SCALE
TECH CONFERENCES IN
THE BALTICS?

EXPERT **05**

I consider tech festivals as meeting platforms of great minds; and there is no doubt that where great people meet, magic happens. One cannot boost innovations in isolation, and the Baltic countries have a lot of things to offer – great and ambitious talent, a supportive ecosystem, great infrastructure – we have it all! Tech events help us to make meaningful connections and build mutual trust, which is the basis for successful growth in this very competitive innovation environment.



Dagnija Lejina Co-Founder and CEO, Digital Freedom Festival

EXPERT 06

We've seen a year on year increase in international visitors at Latitude59. So much so that in 2019, we had attendees from 58 different countries, including investors from 30 different countries. There's definitely a growing interest in the region, so it's important to keep organizing such top quality events to showcase the vibrant startup ecosystems of all three Baltic States.



Maarja Pehk CEO, Latitude59

EXPERT **17**

FACT 10

The first edition of TechChill was actually called TechCrunch Baltics. It was organized in partnership with TechCrunch as a launch event of the first co-working space for startups in Riga – TechHub Riga, in 2012.

Startup Lithuania organizes the main startup event in Lithuania, Startup Fair, as we believe that international events are essential for a successful startup ecosystem. Such events foster knowledge and experience-sharing, as well as create great opportunities for startups to meet foreign investors and partners. We think it's a long-term investment, which brings economic and social benefits.



Roberta Rudokiene Head of Startup Lithuania

STARTUP FUNDING IN THE BALTICS

Baltic startups have access to several funding options – from local and foreign VC funds to business angels and accelerators.

According to Vilija Sveikauskiene, Chief Project Manager of INVEGA (Lithuania), actively supporting startups and providing them with opportunities to attract investments is extremely important for the development of the local ecosystem.

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The lack of funding can hinder the potential creation of new startups and the development of the existing ones. If the founders manage to establish a startup, without further funding these young innovative companies can succumb, perish, or move out of the country, chasing finance and a more favorable environment for its activity. As a result, the country can lose its "brains" and enterprises that are developing innovative products," she warns.

FACT **11**

Local investors – VC funds, business angels, and startup accelerators – accounted for 18.5% of the total startup investment in the Baltics in 2018/2019.



Φ

VC FUNDS

MOST ACTIVE LOCAL VC FUNDS

Estonia, Latvia, and Lithuaniabased VC funds with at least 3 investments in 2018 and 2019 (Q3), and funds that have a noteworthy historical activity (15+ investments) in the Baltic region.

ESTONIA

Tera Ventures

Focus: seed stage digital startups creating network effects, applying machine learning and other enabling technologies to business models

Portfolio: 20

Startups from the portfolio: Monese (Estonia), Scoro (Estonia)

Investments made 2018 - 2019 (Q3): 5

Karma Ventures

Focus: Information and Communications Technology startups with initial commercial traction

Portfolio: 14

Startups from the portfolio: Realeyes (Estonia), Sonarworks (Latvia)

Investments made 2018 - 2019 (Q3): 4

United Angels VC

Focus: early stage B2B, SaaS, marketplace startups

Portfolio: 30

Startups from the portfolio: Bolt (Estonia), Monese (Estonia), Funderful (Latvia)

Investments made 2018 - 2019 (03): 12

trind.vc

Focus: early stage B2B, SaaS, marketplace startups

Portfolio: 13

Startups from the portfolio: RangeForce (Estonia), Speakly (Estonia), Vumonic (Estiona-India)

Investments made 2018 - 2019 (Q3): 13

LATVIA

Imprimatur Capital

Focus: pre-series A stage B2B Software & Data, Digital Health & Lifestyle, Learning & Training, and Robotics/Automation startups

Portfolio: 35

Startups from the portfolio: Edurio (Latvia), Playgineering (Latvia)

Investments made 2018 - 2019 (Q3): 1

Livonia Partners

Focus: successful, medium-sized companies, market leaders in the region and beyond

Portfolio: 15

Startups from the portfolio: Finestra

(Estonia), Scoro (Estonia)

Investments made 2018 - 2019 (Q3): 2

ZGI Capital

Focus: companies with proven business models and firmly established home markets and now entering new export markets or looking to increase capacity, develop new business directions, improve the profitability, or automate manufacturing

Portfolio: 20

Startups from the portfolio: Hansamatrix

(Latvia), Mobilly (Latvia)

Investments made 2018 - 2019 (Q3): 2

LITHUANIA

Iron Wolf Capital

Focus: seed to early growth stage startups with an innovative product offering, innovative technology, or unique business model.

Portfolio: 3

Startups from the portfolio: Sprana (Lithuania), Millo (Lithuania), Monimoto (Lithuania)

Investments made 2018 - 2019 (Q3): 3

Contrarian Ventures

Focus: early stage emerging technologies

Portfolio: 15

Startups from the portfolio: Last Mile (Lithuania), AERO Diagnostika (Lithuania),

HEPTA (Estonia)

Investments made 2018 - 2019 (Q3): 6

Open Circle Capital

Focus: early stage tech

Portfolio: 7

Startups from the portfolio: Whatagraph (Lithuania), Teamgate (Lithuania)
Investments made 2018 - 2019 (03): 7

Practica Capital

Focus: seed, early and growth stage ventures, cross-industrial and tech-driven husinesses

Portfolio: 40+

 $\textbf{Startups from the portfolio:} \ \mathsf{TransferGo}$

(Lithuania), ZitiCity (Lithuania),

Sonarworks (Latvia)

Investments made 2018 - 2019 (Q3): 6

PAN-BALTIC

Change Ventures

Focus: pre-seed or seed stage technology startups

Portfolio: 9

Startups from the portfolio: Nordigen

(Latvia), Giraffe360 (Latvia)

Investments made 2018 - 2019 (Q3): 3

BaltCap

Focus: fast growing companies with proven and profitable business models; in cooperation with JBIC IG Partners – early stage startups in ICT/Deep Tech sectors (incl. Autonomous Mobility, Digital Health, AR/VR/MR, Al. Robotics, IoT)

Portfolio: 100+

Startups from the portfolio: EKT (Estonia), Fitek (Estonia), Coffee Address (Lithuania)

Investments made 2018 - 2019 (Q3): 7

Source: crowdsourced data (Estonia, Latvia, Lithuania), websites of VC funds, Dealroom.co

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FOREIGN VC FUNDS INVESTING IN BALTIC STARTUPS

*Foreign VC funds that have made at least two investments in Baltic startups in 2018 and 2019 (03).

PAN-EUROPEAN

Draper Esprit

Focus: Consumer Tech, Enterprise Tech, Hardware & Electronics, Digital Health & Wellness

Investments in Baltic startups (2018/2019): 2

Recent deal: Realeyes (Estonia) – €11M (+ 4 other VCs)

POLAND

Black Pearls VC

Focus: Deep Tech & Enterprise Software

Investments in Baltic startups

(2018/2019): 3

Recent deal: Teamscope (Estonia) - €550k

(w/ Jaan Tallinn)

FINLAND

Inventure

Focus: Tech startups (Enterprise Software, Health Tech)

Investments in Baltic startups

(2018/2019): 2

Recent deal: Nordigen (Latvia) - €734k (w/

Seedcamp)

Icebreaker VC

Focus: Tech startups (Enterprise

Software)

Investments in Baltic startups

(2018/2019): 3

Recent deal: Klaus (Estonia) - €1.68M (w/

Creandum and business angels)

SWEDEN

Creandum

Focus: Tech startups (Enterprise Software, Media, Fintech)

Investments in Baltic startups

(2018/2019): 2

Recent deal: Bolt (Estonia) – €60M (+10 other VCs and business angels)

US

The Entrepreneurs' Fund

Focus: Cloud-based B2B Software,

Cognitive Computing

Investments in Baltic startups

(2018/2019): 2

Recent deal: Realeyes (Estonia) - €11M (+ 4

other VCs)

Morpheus Ventures

Focus: Enterprise Software, Robotics,

Fintech

Investments in Baltic startups

(2018/2019): 2

Recent deal: Starship Technologies (Estonia) – €36M (+ 4 other VCs)

Insight Venture Partners

Focus: Enterprise Software, Fintech, Marketing, Security, Media, Education

Investments in Baltic startups

(2018/2019): 3

Recent deal: Vinted (Lithuania) – €50M(w/Sprints Capital & Hubert Burda Media)

TURKEY

Revo Capital

Focus: B2B Cloud, Neo-Commerce &

Enablers, and IoT startups

Investments in Baltic startups

(2018/2019): 2

Recent deal: Sonarworks (Latvia) - €5M (+

4 other VCs)

Polish venture capital funds are increasing their interest in startups from the Baltics. This interest is mostly driven by the region's success stories like Skype, Transferwise, Bolt, BitFury or Vinted (among others), and also the global mindset of the founders that think of going big from day one due to the small market size. In comparison, a lot of Polish startups start in the local market with intention to scale internationally in a matter of few years.

Pawel Maj

Investment Director, bValue

FACT 12

Some of the biggest names that have invested in Baltic startups in 2018/2019 are Ashton Kutcher, Taizo Son, and Gokul Rajaram.

UK

Passion Capital

Focus: Tech startups (Fintech, Enterprise Software)

Investments in Baltic startups

(2018/2019): 2

Recent deal: Lift99 (Estonia) – €2M (+7 other VCs and business angels)

AUSTRIA

Speedinvest

Focus: Network Effect, Fintech, Industrial tech startups

Investments in Baltic startups

(2018/2019): 2

Recent deal: Investly (Estonia) – €564k (+ 4 other VCs)

Source: crowdsourced data (Estonia, Latvia Lithuania), VC fund websites, Dealroom.co



BUSINESS ANGELS

MEMBERS OF BUSINESS ANGEL ASSOCIATIONS

With 148 members (as of 03 2019), Estonia has the most active **Business Angel Network within** the Baltic states. They've also initiated the Nordic Angel Program - a training and investment program for angel investors in cooperation with Danish, Finnish and Norweigan BAN's. Startups have the possibility to receive investment from these syndicates. Latvia's LatBAN has 50 active members, while Lithuania's LitBan has 64, even though it only started to operate in 2018. Prior to that, **Business Angels in Lithuania** acted individually or were united under private initiatives.

BUSINESS ANGEL INVESTMENTS IN 2018

ESTBAN

EstBAN helps startups by providing capital, time, knowledge and network. They're looking for teams with innovative business models or solutions for a major problem. To apply, the startup should have at least a team, product/MVP, and strong market validation with relevant traction. The association organizes different events for its members, including training, networking, and pitching events – all events are marked on their online calendar.

Total amount invested in 2018: €7.1M

Portfolio size in 2018: 99

Average investment per project:

80K-200K

Recent noteworthy deals: FoodDocs, Fractory, GuestJoy, Zelos, VideoCV

LATBAN

LatBAN aims to extend and develop the network of investors in Latvia to support new and perspective projects. For startups and investors, the association organises Investment Sessions – events during which investors and new entrepreneurs meet with each other. Follow LatBAN's event calendar on their website.

Total amount invested in 2018: €2M

Portfolio size in 2018: 21

Average investment per project: €86K

Recent noteworthy deals: VividTech,

ZitiCity

LITBAN

LitBAN fosters business angel activity through communication, events, networking, and syndication of deals – both locally and across the Nordics. For startups, LitBAN organises monthly pitch events, which is a chance for them to present their ideas to angel investors. Apply via their website.

Total amount invested in 2018: €1.1M

Portfolio size in 2018: 39

Average investment per project:

50K-100K

Recent noteworthy deals: Interactio,

Attention Insight

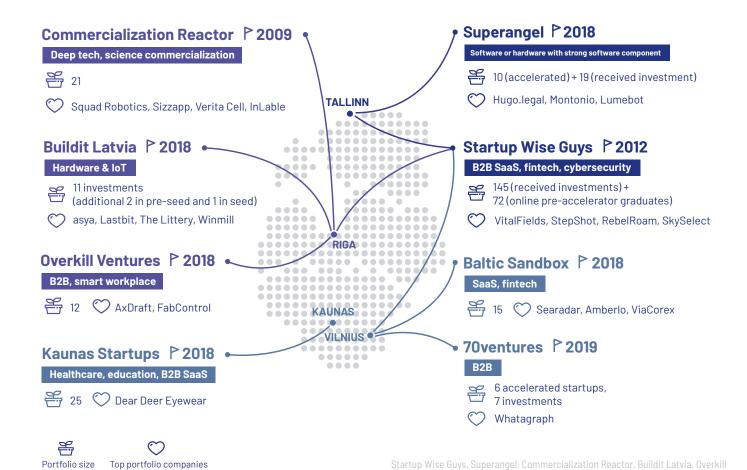
FACT 13

Once established, LitBAN quickly gained great interest from local startups – in its first year, the association received over 140 applications for investments.

STARTUP ACCELERATORS

Startup Wise Guys has been named one of the most international startup accelerators in Europe by the Startup Heatmap project. There are founders from more than 40 countries in their portfolio.

FACT **14**



There are several startup accelerators that are active in the Baltics. Most accelerators run locally in their home countries, but there are exceptions, such as Startup Wise Guys, who have been pan-baltic as of 2019, when they ran their first batch in Lithuania.

The majority of accelerator programs have received financial support from the European Regional Development Fund. Baltic Sandbox is the only accelerator that runs entirely on private funding, whereas Startup Wise Guys has private funding in two out of three countries.

Baltic accelerators are also available to foreign and non-EU founders. Most programs require company registration in the Baltics and, if founders are interested, they can also apply for the Latvian, Lithuanian, or Estonian startup visa – it allows them to continue the development of their products in the Baltics after the accelerator program is finished.

Ventures, Baltic Sandbox, 70ventures, Kaunas Startups, crowdsourced data

ACCELERATING AT HOME VS. ABROAD

Five startup founders share their experience and analyze the pros and cons of accelerating in their home country vs. accelerating abroad.



Sigvards Krongorns Co-founder of CastPrint

From: Riga, Latvia

Accelerator: Startup Wise Guys, Batch 9 (Riga, Latvia)



Moving out of our hometown was a lesson in "home economics", an important test of the team's cohesion, and an opportunity to build a second regional network of contacts. All this has come in handy since then.

What are the pros of participating in an accelerator in your own hometown?

"Home-field advantage", meaning – you work in a well-known environment, and that makes life slightly easier. Another important advantage is that you have your support system (outside the startup "bubble") close by, which significantly helps to push through the tough moments.



Karl Erik Kalmus C00 at SmartVent

From: Tartu, Estonia

Accelerator: Startup Wise Guys, Batch 10 (Riga, Latvia)

What are the cons of participating in an accelerator in your own hometown?

The main challenge to a home-town accelerator is that being close to family and friends can sometimes be distracting and steal some of your attention from the startup.



If you already know where vour first customers are. go for an accelerator abroad they're great "door openers" to new markets, especially if they have their own local networks. However, if you're still not sure who your customer is, apply for a local accelerator. There's a close startup community in the Baltics, which is a great environment for startups to define their customers, get first pilots, early traction, and then go abroad with a defined concept.

What are the pros of participating in an accelerator abroad?

A completely new network - that's if you actively attend local events. Also, if you build a globally scalable business, accelerating away from home will teach you to live anywhere, commute to anywhere, and make contacts with anyone. And you will need that in the future.

What are the cons of participating in an accelerator abroad?

Your team's basic expenses, such as accommodation and transport, increases quite significantly. In our case, approximately 25% of accelerator funding went towards these additional costs.



The best place to accelerate is where your clients are. If your clients are based in Germany, there is no point to join an accelerator in the USA. And the second important question is whether there's money because sooner or later you'll need funds to grow your business.



Matiss Brunavs
Founder & CEO at Squad Robotics

From: Riga, Latvia

Accelerator: Startup Wise Guys (Tallinn, Estonia) & Startupbootcamp IOT (London, UK)

What are the main benefits and challenges of accelerating in the Baltics?

The Baltics is an excellent sandbox for startups to try things out. Local accelerators are perfect for very early-stage startups, as well as founders with little or no entrepreneurial experience – this region is more forgiving to mistakes and failures, so it's perfect for experiments. On the other hand, if you start out in the Baltics, scaling the business may take more time due to the small market size.

What are the main benefits and challenges of accelerating in a large startup hub like London?

When compared to the Baltics, people in London have a completely different mindset. The market is extremely competitive, so everyone's ready to do whatever it takes to get in front of customers, partners, and investors. Accelerating in a large startup hub will definitely push the boundaries of your comfort zone and broaden your perspective, which helps you further grow the business.



Adomas Baltagalvis
Co-Founder & CMO at

From: Vilnius, Lithuania
Accelerator: Techstars Toronto
(Toronto, Canada)

EddyTravels.com

What are the main benefits of accelerating in Canada?

If your target market is English-speaking countries, Canada is a good entry-point. It's also a great place to develop AI and machine learning technologies – Canada is one of the world's leaders in these technologies. And atop of that, the local startup ecosystem in Toronto is superb – with a ton of talent, dozens of events happening every month, and many venture capital funds operating there.

What are the challenges when accelerating in Canada?

Moving to a completely new city or country will take some time to adjust. The overall business culture can also be very different from what you are used to. For these and other reasons, going through an accelerator oversees can be quite an overwhelming experience.



The program allowed us to refine our operations and crystalize our activities. We met with over 150 founders, partners, and investors during the program and received invaluable feedback and advice from them. Techstars has an incredible global network that we can now utilize for developing and scaling Eddy Travels.



Think big and go where your customers are.



James Berdigans
CEO & Founder, Printify

From: Riga, Latvia
Accelerator: 500startups, USA

What are the main benefits of accelerating in the US?

The US is a huge market with better-developed technologies, when compared to the EU. A local accelerator is a step towards entering that market and reaching over 300 million people who speak the same language. There is also the same legislation across all states (unlike in the EU), which makes it easy to do business there.

What are the challenges when accelerating overseas?

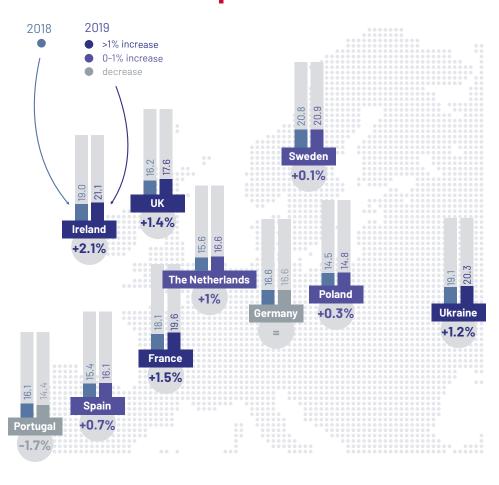
When you leave home to start accelerating overseas, you don't have a network of contacts as it is in your home country. You are on your own. On top of that, you don't know the local culture, policies, and customer expectations – you have to start from zero.

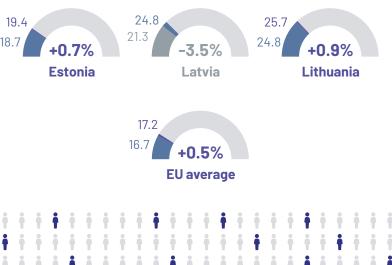
BALTIC WOMEN IN TECH

In 2019, 17.2% of information and communication technologies (ICT) specialists in Europe were women. When compared to 2018, that's just a 3% increase, which shows that to close the tech industry's gender gap, Europe still has a long way to go.

Out of the three Baltic states, Lithuania shows the most notable results – over one fourth of ITC specialists in Lithuania are women. Estonia and Latvia are also above the EU average.

This year's data, however, shows that Latvia has a decrease in women ICT specialists since 2018. But Anna Andersone, Board Member of Riga Tech Girls, says that there is no cause for concern: "If we look at the absolute numbers, it's clear that there are more women in IT than ever. Today, there are already several companies in Latvia with a 50/50 proportion of men and women in IT positions. Women's interest in IT is growing as well when compared to the past two years."







Sources: Europa.eu, Duo.ua

WOMEN IN TECH ORGANISATIONS IN THE BALTICS

On the European map, the Baltic states stand out with rather high representation of women in tech. Here are five organizations from Estonia, Latvia and Lithuania that are actively working on involving women and girls in tech.



Johanna, co-founder of Zelos, Latitude 59 publicity photo

ESTONIA

Tech Sisters

A community organisation with a mission to inspire, educate, and encourage women and girls in technology and IT.

Mission: To demystify technology and advance women in IT.

Members: 50+

Activities provided: hands-on workshops in web and software development, robotics and design, networking events for women who work in tech, and workshops for teenage girls (DigiGirls) to get inspired by tech.

LATVIA

Riga Tech Girls

The first community in Latvia dedicated to educating and inspiring women about technology.

Mission: To empower women and girls to be architects of the future.

Members: 942

Activities provided: Free practical workshops, inspirational meet-ups, scholarship programs for programming courses, providing #womenintech speakers for conferences and other events, international collaboration and networking opportunities.

LITHUANIA

Vilnius girls code

A community and a place where IT women of Vilnius meet and share their stories.

Mission: To unite all women developers in Vilnius to inspire, educate, and be more active in the creation of the newest technologies.

Members: 650+

Activities provided: meetups, workshops,

discussions

Future Heroes (ex. Superheroes)

A growth mindset driven leadership and business accelerator for 13-17-year-old girls to unlock their potential and create a positive impact in the world.

Mission: To grow and encourage a new generation of confident and committed women leaders.

Members: >170

Activities provided: leadership and business accelerator programs for teenage girls, as well as diverse masterclasses on different topics (from mindfulness to financial literacy and storytelling) for youth and adults alike.

FACT 15

Women are driving the tech ecosystem in the Baltics – the majority of the local accelerators, biggest tech conferences, and other tech events in the region are led by women. Additionally, Baltic Sandbox, the Vilnius-based accelerator, launched the first ever Women in Tech Batch for female founders and cofounders in fall 2019.

Women Go Tech

The first mentoring and counseling program in Lithuania for girls and women seeking a career in the technology sector.

Mission: To empower women to seek out professional careers within the tech sector.

Members: 240

Activities provided: Individual mentoring sessions, tech workshops and presentations, events, conferences, tours and visits to tech companies, community building events and activities.

WHY DOES GENDER BALANCE IN TECH MATTER?

EXPERT **09**

It has been proven that diversity in leadership, governing boards, development of products and services makes firms more productive. Neurology demonstrates that working in a team of like-minded people can lull the brain into the state of complacency that will diminish performance and discourage innovation. Therefore, the gender balance in teams needs to be fostered to increase the competitiveness, productivity, and chances of innovations and flow.



Solvita Kostjukova Co-founder & CEO, ALINA LLC

EXPERT 10

Aayush Mahadik once said that "you cannot solve a problem with the mind that created it". And this is certainly true in the world of tech. As the use of tech grows – and with it, the problems we wish to solve – so does the need for diverse and new thinking. To meet this demand, there needs to be a growing diversity in the workforce enabling this growth. The expanse of tech knows no bounds, and so those working in tech need to reflect this with a diverse and rich mix of individuals, spanning gender, background, education, and society. The wider the use of tech grows the wider the industry will need to throw the net for individuals to meet those expanding horizons.

Clare Lain
Former Cyber Strategist,
NATO Cyber Defence Centre of
Excellence

EXPERT 11

Gender diversity in tech matters for several reasons. First of all, it makes the team more creative – different standpoints and experiences boost innovation and productivity, as well as lead to better decision making. Second, employers that are open to diverse candidates, have more chances to hire the best talents in the market. And finally, gender diversity allows businesses to reflect customer needs much better – when you get different perspectives, you can build a product that both men and women will use.



Renata Sumskaite Mentor, Women go Tech

FACT 16

According to Crunchbase, over \$20 billion globally has been invested in female-founded and co-founded startups so far in 2019.
Out of those \$20 billion, approximately \$5 billion has been invested in female-only founded startups.

CORPORATE INNOVATION IN THE BALTICS

The average company lifespan of companies on the S&P Index is down to less than 16 years from nearly 60 years. The corporate answer to this is a general push towards innovation. A lot of corporate innovation vehicles are used from Internal innovation departments and Intrapreneur programs to Open Innovation and Corporate accelerators.

Looking at the Baltics, there are only a few examples where innovation is run externally, i.e., as a co-creation activity with startups, corporate venture fund, or external corporate accelerator program. Most typical cases involve a dedicated Innovation manager position internally, Intrapreneur program and internal hackathon or incubator setup.

CORPORATE-STARTUP COLLABORATION

In terms of innovative environments, according to the European Commission Innovation Scoreboard, since 2018, Estonia has graduated into the category of "strong innovator", while Latvia and Lithuania remain in the "Moderate Innovator" category, though all 3 Baltic countries were named as demonstrating the most rapid growth rate, along with the UK, Malta, Greece, and the Netherlands.



EXPERT COMMENT

12

Nurturing innovation internally can be rather risky. In 2017 alone - 20 corporate innovation labs were launched per week globally, and 90% of those failed to produce any results. 80% of innovations are created by someone outside the field where the innovation occurred. This reaffirms the practice of using external expertise, especially from outside the industry, to drive disruptive innovation.

This practice can be seen by the growing ties between accelerators and corporations. In 2017 CB Insights reported 67.2% of accelerator revenue coming from corporate collaborations. The need for this collaboration is quite clear. Most corporate innovation processes excel at idea generation, whereas accelerators – in execution.



Farid Singh Startup Wise Guys



EXAMPLES OF SUCCESSFUL CORPORATE INNOVATION CASES

The general impression about the corporate innovation scene in the Baltics is that it is driven by international corporations with their HQ elsewhere and clearly structured innovation programs. This is mostly related to IT giants like Google, Microsoft, Accenture, also Swedish banks - Swedbank, SEB. In terms of local companies, most successful startup-corporate collaboration cases can be seen in the telco sector, although there also seems to be some stirring and movement in the energy, forestry and other sectors, where companies are often fully or partly owned by the government.

This prevalence of a few industries that are taking the lead in corporate-startup innovation demonstrates the extent of how early-stage this type of cooperation is in the Baltics. It is also clear that those sectors that are leading the development tend to be those with money to spare.

BANKING

The Fintech movement and the advent of challenger banks has made it evident that for traditional banks to survive, they need to innovate to suit a changing audience's needs. The good news is they have guite a lot of resources at hand to do that. The PSD2 directive, anti-money-laundering (AML) allegations and client authentication challenges are additional factors why lately banks seem to treat Fintech startups less as competitors and more as potential partners and service providers in areas where startups tend to move faster. Most banks in the region have set up an Open Banking platform and are testing various formats of collaboration. Here are some examples of bank and startup collaboration in the Baltics.

CITADELE + KLIX.APP

Citadele bank is one of the rare cases of intrapreneurship where a corporation has created a startup under its wing. Klix.app is a universal login system for e-commerce checkouts. It is intended to cut 20+ checkout steps to just a few, to help online retailers sell more. The startup is fully funded by the bank, which is also the sole shareholder. There is a team of 9 people working on this project and they have established their first customers in the Latvian market.

SWEDBANK + STARTUP WISE GUYS

Swedbank, the largest bank in the Baltics, has established collaboration with an external accelerator to test their Open Banking platform, look for business development possibilities and change company culture. Fintech programs are run by the Startup Wise Guys accelerator and after 2 successful batches in Latvia, the concept has expanded to Lithuania, where the third Wise Guys Fintech program is in action in collaboration with Swedbank and other corporate partners.

SEB VENTURE CAPITAL

The investment program for Baltic Fintechs was launched in 2018 with the intention to invest into 10 - 20 startups from the region. This financing is available both to startups working in the financial services area as well as companies that have ideas for potential applications in the financial industry, for instance, through automation, machine learning, or artificial intelligence solutions. Currently, no investment in Baltic startups has been made, however, the bank is in active negotiations and on the lookout for startups.

TELECOMMUNICATIONS

The telco industry has the perfect precondition for innovation, having the infrastructure and funds, side-by-side with a demanding audience, be it the tech-savvy young generation or elderly that need to tap into using modern technologies. Baltic telcos have also been in the forefront of running international accelerator programs and breeding in-house startups or co-creating with founders.

ELISA ESTONIA

A branch of the Finnish telecommunications company, Elisa Estonia is known is known for institutionalized startup collaboration. They've had successful projects together with startups such as FlyDog, SuperHands, MindTitan, and Hoopy.

LATVIAN MOBILE TELEPHONE (LMT)

LMT has dedicated a branch of R&D to innovative projects and startup collaboration. Most recently, they've collaborated with the Zinoo team to test high-altitude internet with a rocket, as well as have previously worked with Aerones, the drone startup that was a finalist at the Slush pitching competition in 2018.

TELIA ESTONIA

Telia Estonia has a dedicated startup program called VUNK. They have launched 87 projects to date through the program. Previsouly the program included a startup accelerator, which currently works on a case-by-case basis.

MOQ

An application for shopping by phone developed by Lithuania's three largest mobile network operators – Bitė Lietuva, Tele2 and Telia Lietuva. They already have over 53 000 active users on the app. Mobile operators are shareholders of the company and have funded its development.

ENERGY

Energy is facing a revolution as a sector globally due to limited resources. It is expected to garner an increasing amount of collaboration between startups and corporations to develop new business models and infrastructure. Until recently, the energy sector in the Baltics has been rather conservative, as the larger companies are fully or partly owned, and functioning in a closed market. In recent years, however, there seems to be movement towards innovation and energy companies are looking into various collaboration opportunities.

IGNITIS GROUP

The Lithuanian energy company has set up a Smart Energy Fund managed by Contrarian Ventures. This year together with Honda they have invested in smart battery company Moixa. They also run an accelerator program called Accelerator One, and organize hackathons twice per year. The company is open to developing proof of concepts with startups and to provide access to their infrastructure.

LATVENERGO

The Latvian energy provider has teamed up with smart home solution Istabai to sell white-labeled smart home solutions to their clients.

ENEFIT

In the Baltics, Enefit is organizing the Enefit Idea Hub, which is a pitching competition for startups in smart mobility, smart services and smart city verticals, complete with a mentorship program. The winner receives 30,000 EUR for developing their idea.



Marite Aleksandra-Silava, Fintech Community Manager at Swedbank at TechChill

EXPERT COMMENT

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Innovation cannot happen in a silo. It takes a diverse ecosystem and "bridging" between different mindsets, experiences and infrastructures. I like the example in Germany, where a telco company, municipality, and an air carrier are all looking into ways to develop a drone management system for the future. They wouldn't be able to properly innovate on their own, as each would lack an important

element. Of course, the telco industry has been one of the clear early adopters in terms of corporate innovation, and it is also very understandable why a startup would go to them – they have a user-base, big data, and extensive technology infrastructure. But this shift can be seen across many industries.

In terms of the Baltics, I'm especially happy to see the academic sector become increasingly involved. There's a mindset change towards applied research and that gives amazing opportunities even for large IT companies like us to test things. For example, we have been working with the University of Latvia on a project called dBaby - developing a robot that is able to navigate the environment and locate and pick up defined objects, as well as software to control movements and sense devices.

Kristaps Banga Accenture Latvia Innovation Lead





Rather than bombard you with the typical success stories and unicorns, we've curated a more unusual list of Startups to Watch. This year, we're focusing on companies that deserve the spotlight, represent fresh aspects of each of the verticals highlighted, have had recent success peaks, or are well-hidden treasures – so far, noticed by only a few.

To put this list together, we crowdsourced opinions and surveyed a bunch of startup ecosystem players over the entire Baltic region: startup organisations, selected Business Angels and VCs, accelerators and others. Then, we re-checked the collected information and opinions heard with startups' websites, Crunchbase, and other publicly available sources.

This Startups to Watch list is meant to give an insight into the Baltic startup ecosystem, and not to be considered as evaluation or ranking of investment attractiveness or business potential of the startups included.

Startups were only compared within their respective industry and categorised into 6 verticals and 3 categories – The Usual Suspects, On the Radar, and The Hidden Treasure.

THE USUAL SUSPECTS

The Usual Suspects are the ones that don't need much introduction. They've made headlines and are role-models in their countries. Those are startups that have raised more than €1M, are global, have a team of more than 30 people, and are steadily growing. That being said, we have excluded unicorns and extraordinarily fast-scaling startups - they already receive enough attention.

ON THE RADAR

The startups that have already made a mark in the market and ecosystem and are put into the 0n the Radar category. Startups in this category have raised above €100K, launched their product and attracted paying customers, and have moved outside of their home market. These startups have a significant media presence and/or have received noteworthy awards.

THE HIDDEN TREASURE

In The Hidden Treasure category, we have included early-stage startups that have raised below €50K, are launched in their home markets, are showing great potential, but might not have any significant traction just yet. Nevertheless, some of the startups listed in this category have traction, but lack visibility in the market and ecosystem. This category is curated, highly relying on the stakeholders' input and recommendations.

B2B & SOFTWARE AS A SERVICE

While a small market of 6 million inhabitants is probably not the perfect place to test and grow B2C startups, it offers a lot of advantages for the B2B segment. To name a few: easy access to high-level executives and "the region's comparably

high tolerance for mistakes" something repeatedly emphasized by a number of startups interviewed for this report. That makes the Baltics a great, low-risk place for testing new business models and products.

There are quite a few successful B2B and SaaS startups that are putting the Baltics on the world map. Estonian startups Pipedrive, Scoro, and Realeyes have altogether raised €80.5M - and that's just in 2018/2019. Latvia, in the meantime, is becoming almost a synonym for printing and drop-shipping businesses thanks to Printful and Printify. And of course, there's Lithuania's B2B startup Oberlo, now owned by the Canadian e-commerce heavyweight Shopify and one of the region's exit success stories.

LITHUANIA

ESTONIA

THE USUAL SUSPECTS

FRACTORY

Online marketplace for sheet metal fabrication services

MEETFRANK

Talent recruitment app

LATVIA

LOKALISE

Translation management system

SELLFY

E-commerce platform for creators

EDURIO

FULFILLI

ASYA.AI

by Ethical Al

OROCON

Web-based tools for education quality improvement

CGTRADER

3D models for VR/AR and CG projects

PIXEVIA

Retail automation and analytics automation for creators

WHATAGRAPH

Marketing analytics and social media reporting

INTERACTIO

Zero-hardware, real-time translation and interpretation solution on the mobile phone

OMNISEND

Email marketing designed for e-commerce

ON THE RADAR

PACTUM

Al-based system for contract negotiation on a massive scale

DASHBIRD

Serverless monitoring and de-bugging platform

TIMBETER

Digital timber measurement solution

ZELOS

Volunteer management app

VUMONIC DATALABS

Market tracking and competitive intelligence

CENOS

3D modelling & simulation software for induction heating applications

Construction management platform

Marketplace for digital agency services

App for mindful conversations powered

THE HIDDEN TREASURE

Artificial intelligence for corporates

Virtual health and safety specialist

AGROPLATFORMA

B2B marketplace to connect grain growers, Pomodoro timer for productivity tools grain buyers, and the stock market

PARTLY

Mobile application that connects trusted service providers with on-demand job opportunities

POMODONE APP

BALTIC STARTUP SCENE Report 2018-2019



Aleksandrs, Co-founder of OROCON, Techchill Publicity Photo

INTERACTIO

Country: Lithuania **Year of founding:** 2014

Founder(s): Henrikas Urbonas, Simona Andrijauskaite, Domas Labokas

Investment: €1.3M Website: interactio.io

Interactio is a mobile system for real-time interpretation in events like conferences, training, meetings, webinars, etc. Some of their best-known clients include WebSummit, Google, Microsoft, and Amazon.

Before Interactio, the co-founders developed real-time audio broadcasting solutions for events. As demand grew, the team took a closer look at the problem and realized that there's a huge problem no one is tackling. Just in the US alone, there are around two million business meetings every year, a growing Spanish-speaking population, and no cost-effective and easy-to-use solution. So, they created Interactio.

Where are they now? Five years after launch, Interactio is a market leader in the Interpretation & translation industry, has clients in over 60 countries, and is used in close to 600 events every month. Needless to say, the company is growing at lightning speed and has tripled their revenue in 2019.

FACT **17**

In November 2019, Interactio was used in WebSummit in Lisbon – one of the world's leading tech conferences. "Our solution enabled WebSummit speakers to address the crowd of 70k+ people in 5 different languages," says Henrikas Urbonas.

FACT **18**

Zelos' CTO Viktor Lillemae was once retweeted by Nassim Nicholas Taleb, the famous Lebanese-American essayist, scholar, statistician.

ZELOS

Country: Estonia Year of founding: 2018

Founder(s): Johanna-Mai Riismaa, Viktor

Lillemäe

Investment: €317K Website: zelos-app.com

Zelos is a task management app for causes and communities that get things done with the help of volunteers. The company gives cause-oriented organisations the means for engaging with volunteers in a modern way, improving communication, task management, and collaboration.

After 15 years of coordinating large volunteer teams for events and festivals in Estonia, cofounder Johanna saw an opportunity to make the crowd management process more efficient with a simple and standardised job dispatch format.

Zelos is one of the very few Estonian startups successfully engaging the non-profit sector. The startup has users in 28 different countries, some of their customers including Latitude59, Odessa International Film Festival, and Burning Man Ukraine.

OROCON

Country: Latvia Year of founding: 2016

Founder(s): Aleksandrs Svaikovs, Andrejs

Cumakovs

Investment: €245K Website: orocon.me

OROCON is a construction site management solution that helps reduce construction operational problems. Focused on business daily requirements, the software collects data used for business analytics, risk management, and experience sharing between team members.

Prior to co-founding OROCON, Aleksandrs Svaikovs had spent 15 years in construction project management. Having experienced what it's like to manage six projects in different towns at the same time, he realized that communication over a long distance is often ineffective. Processes, as well as data and information exchange had to be changed, hence the idea of OROCON was born.

In 2019, the OROCON team has grown from 20 to 35 people, their solution is used in the Baltics, Poland, Finland, and Spain. The startup recently closed an A round investment and is one of the top solutions in the construction market.

FACT 19

OROCON is a team of hardworking individuals. There's even an inside joke – when someone asks how many hours a day they work, the answer is: "From 8am to 8pm, just half of the day."



EXTENDED FINTECH

At the moment, Fintech is one of the dominant startup verticals in all three Baltic countries.

Interestingly, many of the region's current Fintech superstars seem to have been born from challenges that the founders experienced while living abroad, especially in the UK. Estonian unicorn **Transferwise**, as well as **Monese** (Estonia) and **TransferGo** (Lithuania), are tackling common challenges people face when living and working abroad, such as money transfer fees and complexity of opening a bank account.

Due to Latvia's friendly peer-to-peer (P2P) regulations, it's no surprise that some of the country's best-performing startups are P2P loan providers **TWINO** and **Mintos**. Another common segment in the region – Fintech solutions related to ticketing and payments. Although neither **Ridango** (Estonia), nor **Mobilly** (Latvia) are considered startups anymore, they're still worth mentioning – their solutions have become an integral part for people taking public transport or paying for parking.

The ICO craze that we observed in 2017/2018, has left a mark on the Baltic Fintech scene, especially in Lithuania. How could it not after such successful ICOs like **Monetha** that raised \$37 million in 18 minutes and **Change Bank** that raised \$17.5 million? Now, the ICO noise has ceased, but you'll still find various projects related to crypto and blockchain.

We call this vertical Extended Fintech, as the list also includes LegalTech and InsurTech startups. However, you will find startups tackling KYC, authentication, and verification in the Cybersecurity vertical.

ESTONIA

THE USUAL SUSPECTS

INSLY

Cloud-based insurance software for insurance brokers and agents

XOLO

Company set up platform in the EU

NORDIGEN

Account data analytics solution for credit scoring

LATVIA

CRASSULA

Digital banking for entrepreneurs

FACTRIS

Flexible credit lines and invoice factoring

LITHUANIA

ON THE RADAR

HUGO.LEGAL

Al-powered legal service platform

MONTONIO

Financing solution with comparable credit offers

LASTBIT.10

A platform to securely store and manage cryptocurrency

COINGATE

Payment gateway for cryptocurrencies

MOO

Application for shopping by phone

THE HIDDEN TREASURE

CACHET

Personalised insurance for ride-hailing drivers

SCORIFF

Behavioural business credit scoring

BAILSMAN

Third party guarantee solution

KLIX.APP

A digital wallet to streamline the checkout experience for shopping online

OONIO

Peer-to-peer insurance solution

HODL FINANCE

European Digital lending company

CACHET

Country: Estonia **Year of founding:** 2018

Founder(s): Hedi Mardisoo, Kalle Palling

Investment: €300k Website: cachet.me

Cachet is a consumption-based insurance platform and wallet, currently focused on gig economy service providers. Their first customers included Bolt, Uber, and Yandex.Taxi drivers.

When Hedi and Kalle started Cachet, there was a heated debate in the media around ride-hailing platforms and the lack of suitable insurance products. The price part-time drivers were required to pay for insurance was unfairly high. The founders noticed this issue and decided to offer a solution – flexible insurance products for gig economy workers.

In the first two weeks after launch, nearly 10K price offers were generated through the platform. Cachet also managed to sign up almost 10% of their total target audience to their platform.

As of November 2019, the startup has partnered up with Bolt, Uber, Yandex.Taxi, and BTA Insurance. Next, the team is looking towards the hospitality industry with Booking.com and Airbnb at the forefront.

FACT 20

Neither of the co-founders had experience in the insurance industry. "We constantly annoyed our advisor with wrong insurance terms," says Hedi Mardisoo, CEO. But that didn't stop them – they knew the insurance pricing for parttime drivers was unfair, and they were determined to solve the problem.

FACT **21**

HODL Finance was launched and the founders' kids were born in the same year. Now five years old, Vytautas and Gintautas call HODL Finance their "toddler".

KLIX.APP

Country: Latvia Year of founding: 2018

Founder(s): Citadele Banka (led by Eduards

Timofejevs)
Investment: n/a
Website: klix.app

Klix.app is a new checkout standard for smarter shopping. It enables faster checkout for online shoppers by using previously-stored checkout details, including payment information and delivery address. This helps online retailers significantly improve checkout speed, cut down the cart abandonment rate, and, at the end of the day, sell more.

Nearly 70% of online shopping carts are abandoned because people are unwilling to fill long forms or remember yet another login and password. After conducting over 2000 surveys and user tests, as well as extensive market research, the creators of Klix.app confirmed their suspicions: there is a massive demand for a streamlined checkout experience when shopping online. Klix.app was created as a solution.

In one year, Klix.app has grown to a team of nine people and managed to land ForumCinemas, one of the largest film theaters in Eastern Europe, as one of their first clients.

HODL FINANCE

Country: Lithuania Year of founding: 2018

Founder(s): Vytautas Zabulis, Gintautas

Scerbavicius

Investment: undisclosed **Website:** hodlfinance.io

HODL Finance helps crypto apps to offer banking services to their customers, like crypto-backed loans, interest payment for bitcoin, and simple and easy on-ramp services. All these services are delivered via API.

The idea of HODL Finance was born when the founders started to offer crypto-backed loans in euros to their customers. They quickly learned that this kind of service is interesting to many crypto applications, and the rest is history.

Today, the startup works with some of the industry leaders and leading crypto applications. The startup has also received investment from Pirate Equity VC and just this autumn, made a deal with one of the largest crypto wallets that the company cannot yet disclose.

FACT 22

The creators of Klix.app have counted that it takes on average 23 steps for an online shopper to go through the checkout process. That's around 95 seconds – enough to change one's mind, get distracted, and abandon the checkout.

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CYBERSECURITY & VERIFICATION

Due to their geopolitical situation, the Baltics have always been security- focused. In 2007, Estonia survived a major cyber attack and later on, cybersecurity became one of the key focuses for the Startup Estonia organisation.

Looking at the startup scene today, there are some high growth companies originated from this region: **Tesonet** (Lithuania), **Cujo Al** (of Lithuanian origin), and **Defendec** (Estonia), to name a few.

In 2018 Startup Wise Guys, in close collaboration with the Estonian defence industry, launched Europe's first Defense Al and cybersecurity-focused accelerator program called "CyberNorth". The program served as a magnet for international cybersecurity startups that came to base their businesses in the Baltics.

With the rise of Fintech, the PSD2 directive coming into play, areas like verification, AML, KYC, and encryption are receiving a lot of attention. And many startups in the Baltics are rushing to tackle these challenges. One of the frontrunners is the YC graduate, Estonian startup Veriff, that provides web and mobile identity verification solutions. Founded in 2015, the company has raised €7.2M and grown their team to 300 people.

ESTONIA LATVIA LITHUANIA

THE USUAL SUSPECTS

RANGEFORCE

Cybersecurity training platform

ON THE RADAR

WEBARX

Web application security platform

SALV

AML platform to beat crime

TRAPMINE

Next-generation endpoint protection platform

THE HIDDEN TREASURE

AUTOM8

Source code security analysis enabled by machine learning

KEYSTROKE DNA

Behavioural biometric authentication service

CYEX

Al based tool for personalized cybersecurity exercises

INLABLE

Most versatile labeling and authenticity verification system that cannot be reproduced or compromised, both physically and digitally

NOTAKEY

Secure way to notarise digital transactions and electronic documents

ENTANGLE

Quantum encryption for business and private communication

LAHDES

eDocument management system with strong customer authentication

IDENFY

Identity verification services

ONDATO

Real-time video customer identification and KYC services



BALTIC STARTUP SCENE Report 2018-2019

ENTANGLE

Country: Latvia Year of founding: 2017

Founder(s): Maris Kronbergs, Girts Kronbergs

Investment: n/a Website: entangle.tech

There are many ways how someone with sufficient interest and resources can eavesdrop on your smartphone by exploiting the ever-growing tech vulnerabilities. Entangle has developed a device that, put onto your smartphone, creates an encrypted quantum communication channel for business and individual users to share confidential information.

Entangle founders noticed that cybersecurity and privacy are degrading rapidly, which pushed them to develop new tools for communication. That resulted in the Entangle quantum communication system. At the moment, the product is in a prototyping and testing phase and is planned to be finished in 2020.

The Entangle team is collaborating with the leading national academic research institution, Riga Technical University, the Faculty of Electronics and Telecommunications, in the further development of their quantum-based technologies.

FACT 23

Entangle founders are creatively spirited – they play music and create graphic designs in their free time.

FACT 24

Before starting Autom8, the founders were both working at their own Artisan Bakery & Patisserie in their free time. Serkan Cavusoglu has a Diplôme de Pâtisserie Certificate from Le Cordon Bleu.

AUTOM8

Country: Estonia Year of founding: 2019

Founder(s): Pinar Soyata, Serkan Cavusoglu

Investment: €40K Website: autom8now.com

Autom8 provides vulnerability detection – supported by machine-learning – for securing enterprise applications. Their approach is a revolutionary and highly effective way to secure applications in real-time, allowing to ensure rapid resolution of security vulnerabilities with the highest accuracy.

Having spent more than 7 years focusing on static code analysis, the co-founders noticed that the traditional SAST approaches to source code security are failing in terms of speed and accuracy. The team felt that there's an urgent need for a new approach that would replace the legacy system with a brand-new perspective, in order to ensure rapid identification of security vulnerabilities.

In 2019, Autom8 launched their SaaS platform, where students and freelance developers can test the security of their applications. This platform is free to use but has a constraint of 2 million lines of code. For now, the startup plans to stick to this business model for the purpose of supporting and educating students.

NOTAKEY

Country: Latvia Year of founding: 2016

Founder(s): Gints Kiršteins, Jānis Kiršteins,

Jānis Graubiņš Investment: €215K Website: notakey.com

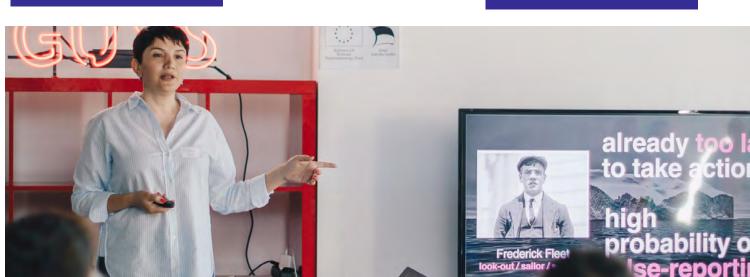
Notakey is a smartphone-based platform that provides e-businesses and enterprises with a highly secure user authentication, as well as single-sign-on and password-less solutions based on Multi-Factor Authentication (MFA). Their technology provides the same level of security as hardware-based e-signature solutions.

Notakey not only replaces inconvenient hardware solutions, it also helps companies comply with PSD2 (the second Payment Services Directive), designed by the European Union. Among other things, the directive requires stronger identity checks when paying online, which is where Notakey comes into play.

Their solution is already used by a number of enterprise-level companies in Latvia. Some of their biggest clients include the national airline AirBaltic and one of the country's leading telecommunication operators, LMT.

FACT 25

Two of Notakey's co-founders are brothers Gints Kirsteins and Janis Kirsteins, who were also involved in the development of the Latvian State ID Card and electronic signature architecture.



Pinar, Co-founder of Autom8

PROPTECH

In spring 2018, Lithuania introduced the first PropTech sandbox in the world, aimed at companies worldwide and inviting them to test their solutions and launch pilot projects in the Baltics. It's also one of the few business areas where startups and companies from all three Baltic countries have managed to work together and create a network of innovation, called PropTech Baltics.

Looking at the curated Startups to Watch list, it becomes obvious that the scene is dominated by marketplaces and Proptech startups that go hand in hand with Fintech – P2P lending, crowdfunding, and similar. However, to give you a broader spectrum of Proptech in the Baltics, we have also included projects related to short-term renting, as well as professional imaging services.



ESTONIA

THE USUAL SUSPECTS

ESTATEGURU

Marketplace for short-term propertybacked loans

ON THE RADAR

CONSORTO

Marketplace for commercial real estate

GUESTJOY

Guest management system

MODERAN

Commercial real estate lease lifecycle management software

THE HIDDEN TREASURE

LATVIA

GIRAFFE360

Subscription product for real estate companies to streamline professional quality photographs and floor plans

BULKESTATE

Real estate crowdfunding and groupbuying platform

CLUSCO

Marketplace for construction equipment rentals

LITHUANIA

VARTUS

Real estate valuation tool

PROFITUS

Property backed investments

HOUSEYS

Professional short-term rent management

UNTU

Marketplace for real estate owners and agents

HOUSEYS

Country: Lithuania **Year of founding:** 2018

Founder(s): Tomas Grizas, Agota Luksaite,

Eduard Titov Investment: €30K Website: houseys.com

Houseys is a solution that helps real estate owners maximize their revenue, provides short-term rent and revenue management, as well as welcome guests to these accommodations.

Houseys co-founder Tomas "fell in love" with the idea of the sharing economy back in 2013/2014. He put his loft on Airbnb, which helped him make new contacts in the industry. Soon after, he already had other apartments to manage. When Agota joined with "bags of experience in hospitality" and Eduard with technical expertise, the founding team was completed.

In the first three quarters of 2019, Houseys welcomed more than 7000 guests from 70+ countries and generated €500K in bookings. In 2020, the company is planning to reach €1.5M in bookings and grow the revenue 3.5 times – and that's in Lithuania alone.

FACT 26

One of Houseys' guests once complained that he's not happy with the apartment. "He said that there was no bed, so he had to sleep in the armchair. But it turned out that he had simply missed that there's another room in the apartment – the bedroom, with a bed and everything!"

FACT 27

Founders of Moderan take the saying "building a startup is a marathon, not a sprint" very literary. The trio say they train their endurance by regularly attending the 63K Tartu crosscountry skiing marathon.

MODERAN

Country: Estonia Year of founding: 2015

Founder(s): Kristi Hakkaja, Jaanus Sellin, Raiko

Uri

Investment: €270K

Website: moderansolutions.com

Moderan is a SaaS platform for real estate management automation. Some of the leading real estate players across the Baltics and Germany use Moderan to maximize their property revenue and value – including Rotermann City in Tallinn, VEF quarter in Riga, coworking brands TechQuartier (Frankfurt) and Workland (Baltic).

The founders saw a huge unmet market demand – 65% of all companies were still managing real estate in Excel. The existing software solutions were built for the large players in the industry, and were too complex and expensive for SMEs. Moderan was made as a solution that fills the gap.

As of today, real estate with the combined value of more than €1 billion is already managed in Moderan. According to the founders, even though the industry is difficult to enter, clients are very loyal – instead of churn, existing customer revenue keeps growing organically. And so does the company.

VARTUS

Country: Latvia Year of founding: 2017

Founder(s): Oskars Gavrisevs, Raul Abreu

Investment: n/a **Website:** vartus.eu

Vartus helps home-owners, home-seeker, and financial institutions to assess the value of a property before they make a big decision. As they say themselves, Vartus can answer any question about the value of real estate with data. The company aims to become a major player in Proptech in Eastern Europe.

For the past two years, Vartus has been working on gathering data, developing Al tools, and making strategic partnerships. In 2019, the company partnered with Colliers International, the global real estate organization and one of the leading players in the Eastern European region.

Their other achievements include collaboration with a number of enterprise-level companies and assisting them with their real estate portfolio valuation. Vartus also works on developing custom Al-powered calculators for their clients and plans to expand to other Baltic states in the near future.

FACT 28

Oskars is from Latvia, while Raul comes from Mexico. Oskars codes in Java, Raul - in Python. Oskars is a software engineer, Raul - an economist. The co-founders are very different, yet they both share a passion for solving big problems with data and technology.





SUSTAINABILITY & HEALTH

The Baltics have a long history and tradition of deep engineering. While still being a part of the Soviet Union, the region was well-known for its engineering innovations and manufacturing companies like VEF (Latvia). Understandably, a great focus was put on education in the fields of science and tech. Decades later, there's still a strong R&D culture in educational institutions of all levels.

While DeepTech, HealthTech, and various science-based startups are common in the Baltics, business angels and VCs tend to be hesitant to invest in early stage rounds due to slow initial traction. Therefore, access to Horizon2020 and other EU-supported programs like EIT Climate kic and others, have played an important role in supporting R&D programs in universities and startups.

The Baltic states are a desireable location drawing many international students. Not only do universities provide internationally recognized education, they're also tapping into innovation, organising various HealthTech hackathons and programs. It's

therefore no surprise that many startups in this vertical are tackling questions of how people can live longer, heal faster, and diagnose diseases earlier.

This vertical also includes startups focusing on sustainability – a topic currently being more important than ever. There are examples from the energy sector, Science-Tech, and GreenTech, all working on creating a better future for humankind.

ESTONIA

THE USUAL SUSPECTS

LATVIA

LITHUANIA

Clay mineral materials to substitute hazardous chemicals in construction

EXONICUS

ALINA

VR-based medical trauma simulator

OXIPIT.AI

Al-based medical imaging solutions

SOFTNETA

Medical imaging and intelligence

ON THE RADAR

POWERUP FUELCELLS

Sustainable energy generation products

CONELUM

Rapid microbiological diagnostic tests for the food and drink industry

CASZYME

Innovative applications and research in the field of CRISPR based molecular tools

THE HIDDEN TREASURE

PRECISION NAVIGATIONS SYSTEMS

Software and hardware solutions for precise GPS positioning and navigation

VERITACELL

Methodology for enhanced skin renewal

ARTUSYSTEM

Universal alternative fuel retrofit for diesel common-rail engines

PVSTREAM

Web-based all-in-one platform that supports Solar Project development

BRACHYDOSE

Cancer treatment quality control tool for oncologists

DROPLET GENOMICS

Precision microfluidics for molecular biology

VERITACELL

Country: Latvia Year of founding: 2018

Founder(s): Aigars Vītoliņš, Arsenijs Sergejevs, Christopher John Dunnill, Evija Vaščenko, Kaija Kurme-Jansone, Nikolaos Georgopoulos,

Commercialization Reactor Fund

Investment: €50K Website: veritacell.com

VeritaCell is a biotech startup developing a medical kit for surgeons, which enhances skin regeneration in cases of large skin wounds and damages when the skin's natural ability to heal is lost. With their product, surgeons can prepare a solution with the patient's own cells to be applied to the damaged area. That can be done in 30 minutes, straight in the operating room, and with no laboratory equipment needed. Areas of application include large burns, scar and tattoo removal, beauty care, and 3D skin printing.

The idea came from the University of Huddersfield where two of the founders, Nikolaos Georgopoulos and Christopher John Dunnill, did their research on the possibility to isolate dermal cells in no-laboratory conditions. The product is now in its developing phase, planned to be in the market by the end of 2020.

In September 2019, VeritaCell won the local round and went to the finals of She Loves Tech 2019 in Beijing, China. The team attracted attention and interest from a number of Chinese companies and investors.

FACT 29

The VeritaCell team says they believe in miracles and that science fiction is just a prediction. FACT 30

The Precision Navigation Systems team comes from Siberia, or "the middle of nowhere", as they say themselves. "This fact is a source of a lot of jokes about cold weather, riding bears topless, traveling to Europe by bus in 4 days, etc."

PRECISION NAVIGATION SYSTEMS

Country: Estonia Year of founding: 2018

Founder(s): Simon Litvinov, Dmitrii Kislenko

Investment: €88K Website: prns.io

Precision Navigation Systems is developing software and hardware solutions for the variety of non-standard applied and infrastructural tasks using precise GPS positioning technologies.

Their flagship project – HIVE – is a cloud-based solution that allows self-driving cars, drones, robots, and other GPS-equipped autonomous systems to be positioned, navigated, and tracked in real-time and with up to 1-inch precision.

Prior to launching HIVE, the team was focused on R&D projects and GPS-hardware. Then, their business model pivoted from hardware to software and resulted in HIVE.

The project Precision Navigation Systems works on is unconventional, futuristic, and complex. But the team has already proven that they can build great things. One of such things is the largest service for land surveyors, built in Russia.

As of today, the company has already connected HIVE to four GPS reference stations in Latvia, Estonia, and Sri-Lanka. They've also launched pilot projects with Starship Technologies, Zubax, Lumebot (Estonia), Motor Ai (Berlin), PILOT Automotive Labs (Singapore/ USA).

DROPLET GENOMICS

Country: Lithuania Year of founding: 2016

Founder(s): Linas Mažutis, Karolis Leonavičius,

Dalius Kučiauskas, Juozas Nainys

Investment: €500K

Website: dropletgenomics.com

Droplet Genomics develops tools for complex disease diagnostics. Their solutions are based on droplet microfluidics technologies, which allow to analyze patient samples at single cell resolution. This provides unparalleled insight into complex biological systems, for example – cancer tumors.

The idea of Droplet Genomics came from one of the founders, dr. Linas Mažutis. He had developed a technology for high-throughput analysis of genetic material of single cells. It became clear that this technology could revolutionize how complex biological samples are analyzed, and therefore has the potential beyond fundamental science applications.

As of today, Droplet Genomics is a team of 12, they've launched 3 hardware products and delivered over 250 orders. The team has also completed 2 contract research projects and 15 custom manufacturing projects.

FACT 31

How does the Droplet Genomics team stay focused and energized? "We've probably consumed more than 1000 RedBull energy drinks since founding the company three years ago," reveals company CEO Juozas Nainys.

HARDWARE, IOT & ROBOTICS

Lately, seeing Starship
Technologies' autonomous robots
in the streets of Tallinn, minding
their business doing deliveries,
has become a common sight.
Rumour even has it, there might
be other robots cleaning the snow
from the streets this winter. And
speaking of Estonia and robotics,

the country also hosts one of the largest robotics conferences in the world – Robotex.
Lithuanians, in the meantime,

Lithuanians, in the meantime, are praising their education programs in robotics, while Latvians often bring home prizes from international Robot Sumo championships.

LATVIA

Now, all robots and jokes aside, startup founders in the Baltics are well known for their readiness to tackle complicated challenges. This is where a lot of unique solutions in the sectors like hardware, robotics, and IoT have come through.

We've left out superstars like **Starship Technologies** (Estonia) and **Click&Grow** (Estonia) from our Startups to Watch list, as these startups already have all the global fame they deserve. Instead, in our curated list you'll find a variety of startups that are building the next engineering masterpieces – from drones to guitar pedals, from sensors to 3D printing, and even a robot-bartender and robot-muralist.

ESTONIA

THE USUAL SUSPECTS

OPTOFLUID TECHNOLOGIES

Sensors for real-time and on-line dyalisis quality monitoring

SPRAYPRINTER

Smart spray paint technologies and robot muralist

AERONES

Industrial heavy lifting drones

LITHUANIA

NANOAVIONICS

Multi-purpose nano-satellite bus

ON THE RADAR

10T

Cellular conectivity for IoT

LUMEBOT

Autonomous street cleaning robots

REBELROAM

Data traffic optimization service and onboard Wi-fi routers

SMARTVENT

Software add-on for existing building automation systems

YANU

Fully autonomous AI and robot empowered bartending unit

THE HIDDEN TREASURE

FLOK

Narrow-band IoT GPS-tracking device

KINGDOM TECHNOLOGIES

Robotic lawn mower for large terrains

GAMECHANGER AUDIO

Hardware products for musicians

HACKMOTION

Specialized wrist measurement and training tool

VIVID TECH

Interactive shelf edge displays

CASTPRINT

3D printed medical casts

SOUAD ROBOTICS

APMS and indoor marker sensors for manufacturers of cleaning machines

RUBEDOS SISTEMOS

Unmanned missioning and computer vision solutions for industrial applications

ATLANT3D

Atomic 3D printer with material versatility

SNOWISION

Automatic small-sized sensors for projecting 3D maps of snow cover

AERODIAGNOSTIKA

Multifunctional fixed-wings drones and aerial diagnostics services

BALTIC STARTUP SCENE Report 2018-2019



LUMEBOT

Country: Estonia **Year of founding:** 2019

Founder(s): Andres Kõiva, Kaspar Kikerpill, Juhan Viik, Siim Medijainen, Alvar Suun, Arnold Kasemaa, Ulf Anso, Joonas Annok, Taavi Sööt

Investment: undisclosed **Website:** lumebot.com

Lumebot develops autonomous street cleaning robots that sweep streets from dirt and snow, depending on weather conditions. Their robots make it possible to automate routine cleaning tastsk and provide street cleaning 365 days a year.

The team met at a robot-building competition with a special focus on robots for snow removal. Even though they were left second in the competition, the founders saw the market potential and opportunity for their newly-built solution.

According to one of the co-founders Kaspar Kikerpill, the startup has already reached a point where the market demand for their robots is overpowering the ability to supply them. Due to climate change and a lack of a blue-collar workforce, this demand is only going to grow. The startup plans to reach over €45 million in annual revenue by 2025.

FACT 32

Lumebot's office is located in an old sauna building that's now turned into a robot studio. "We can safely say that we have the biggest office sauna in Estonia!"

- Kaspar Kikerpill

FACT 33

Flok once received a Facebook message from a customer who was interested in ordering trackers for his giant tortoises. "That was something new and funny for us. But apparently, those tortoises are fast!"

FLOK

Country: Estonia Year of founding: 2015

Founder(s): Pearu Praakle, Triinu Hansen

Investment: €120K

Flok is the next-generation GPS tracker that uses the new LTE-M/NB-IoT technology, instead of 3G. The use of the latest technology allows Flok to offer the most reliable tracker in the market with maximum positioning accuracy and a long battery life.

The idea for the Flok tracker was born when one of their co-founders lost his dog. That's when he realized that the market is lacking a reliable and accurate tracking device that would not only allow you to keep an eye on your belongings, but also loved ones – family members, pets, etc.

Until November 2019, the company has sold over 1000 units and is currently negotiating partnerships with some of the leading telecom companies in the Nordic region. Flok is also about to launch their Kickstarter campaign in the US market.

GAMECHANGER AUDIO

Country: Latvia Year of founding: 2016

Founder(s): Ilja Krumins, Martins Melkis, Kristaps Kalva, Didzis Dubovskis

Investment: n/a

Website: gamechangeraudio.com

Gamechanger Audio's mission is to create new musical instruments that stretch the imagination of musicians and engineers alike. The company was started in 2016 by four friends who shared the passion for music.

The founders say they're honored that their products – PLUS Pedal and PLASMA Pedal – have already become an important part of artists' creative processes. Some of the music legends, including Jack White, members of The Rolling Stones, Tool and Rammstein, are fans of their products.

In 2019, Gamechanger Audio closed another successful crowdfunding campaign for their latest product Motor Synth – the first electromechanical commercial desktop synthesizer. It has already received positive reviews from globally-known electronic artists Jean-Michel Jarre and Richard Devine.

FACT 34

Gamechanger Audio's recent Kickstarter campaign for Motor Synth reached its fixed goal of \$50,000 in just ten minutes and \$100,000 in two hours.



TRANSPORTATION, MOBILITY & LOGISTICS

The mobility sector is clearly booming in the Baltics. The region is not only home to Uberchallenger and European unicorn Bolt (ex-Taxify, Estonia), but also Lithuanian mobility platform Trafi. So far, the startup has raised €14M and has a team of 70 employees to

help cities like Berlin, Prague, and others to embrace the mobility revolution.

It's also worth mentioning that, looking back at the biggest funding rounds in the Baltics, the mobility sector definitely stands out. Mobility startups Bolt and CityBee (Lithuania) dominate the top of biggest funding deals in 2018/2019.

While globally ride-sharing is becoming mainstream, it's interesting to see how Baltic startups are moving towards micro-mobility, creating services and platforms for electric cars, and building hardware-based solutions for security, monitoring, and environmentally friendlier commuting.

ESTONIA

THE USUAL SUSPECTS

CLEVERON

Robotics-based parcel terminals and click and collect pickup solutions

SKYSELECT

Enterprise marketplace for airline industry

AMPLER BIKES

Light electric bike producer

BIKEEP

Commercial bike racks and bicycle parking systems

ON THE RADAR

COMODULE

Digitalization tools for the light vehicle industry

LATVIA

CITYBEE

Carsharing for vans, passenger cars and

LITHUANIA

CARGURU

The first car sharing service in Latvia

4SMARTSTREETS

Smart parking systems

MONIMOTO

Smart GPS alarm/tracker for motorcycles

SPARK

Fully electric car sharing app

ZITICITY

Same-day deliveries for businesses

CHRG NETWORK

Software platform for EV charging

THE HIDDEN TREASURE

SEARADAR

International yacht charter aggregator

SIZZAPP

Vehicle tracking and monitoring device

MARINE DIGITAL

Warehouse management system for bulk terminals

GORAMP

Online transport management system

SEARADAR

Country: Estonia Year of founding: 2017

Founder(s): Dima Beznasiuk, Max Terbov

Investment: n/a https://searadar.com/

Searadar is a marketplace for yacht booking. The company helps professional captains to find and book yachts from all over the world, with special discounts and custom options.

The founders met and came up with a business idea when passing their exams for a skipper license. They saw a lack of technology in the yacht industry and decided to combine Dima's skills in IT and Max's knowledge in yachting to launch Searadar.

Today, Searadar offers one of the best-known yacht booking solutions in the industry. The startup is scaling incredibly fast, despite having received no outside investment. As of the end of October 2019, the company had more than 300 paid charters and over €700K of Gross Merchandise Volume (GMV).

FACT 35

When the British digital journalist Stewart Rogers interviewed one of the founders of Searadar, he named his podcast "The Bad Boys Of Tech". "Maybe we look like harsh sea wolves?" Dima wonders jokingly.

FACT 36

Ugnė Palionytė, GoRamp's COO, is the only woman in the fourperson founding team. "We are very proud of her," says CEO Jevgenij Polonis.

GORAMP

Country: Lithuania Year of founding: 2018

Founder(s): Jevgenij Polonis, Marius Repečka, Ugnė Palionytė, Justas Maziliauskas

Jgne Pallonyte, Justas Mazillaus

Investment: €120K https://main.goramp.eu/

GoRamp is a transportation management system that helps SME manufacturing companies deal with the problem of decentralized information exchange and lack of transparency during supply chain management. Their solution promises to automate 70% of manual work, increase communication 4x, and save 20% of the budget spent on logistics.

The founding team has a total of 21 years of experience in logistics and, as one of the founders says, they perfectly know the pains of the industry and SMEs. That helped them build a solution to ease these pains, which is already well-received and recognized. Today, GoRamp has 15 manufacturing companies as paying customers, and they've onboarded more than 500 transportation companies as service providers.

SIZZAPP

Country: Latvia Year of founding: 2017

Founder(s): Vjaceslav Gorbacov, Denis Moldovan

Investment: €50K

https://www.sizzapp.com/en

SIZZAPP is an automotive safety and services platform that connects vehicle owners and users with their cars and favorite services via mobile app.

Having spent over 10 years in the industry, the founders noticed that while the world is going towards digitalization and connectivity, there were no proper solution for private vehicles – and decided to build one.

Today, the startup has put a special focus on motorcycle riders and has already caught attention from industry giants like Schaeffler AG, ADAC, and Harley Davidson. SIZZAPP has 6 employees and their solution works in 18 countries worldwide, though for now, it's only available for purchase in Latvia. The company has 200 users, the team has also signed contracts with 20 companies and 2 international distributors – ALSO Holding AG and Euro DK.

FACT 37

Vjaceslav's and Denis' wives are active users of SIZZAPP, especially when the cofounders are in the office working late. "My wife can always check my location through SIZZAPP that's installed into my car. In a way, SIZZAPP supports strong and trusted families!" Vjaceslavs says.



LONGER READS





ACCESS TO TALENT IN THE BALTICS -WHAT CHALLENGES **DO LOCAL** STARTUPS FACE?



The total population of the Baltic states is just over 6 million, but when it comes to availability of qualified workforce, this region may look more tempting than some other European countries.

According to the latest data by OECD (Organisation for Economic Co-operation and Development), nearly 47% of the Baltic workforce between the ages of 25 and 34 has a higher education. That puts the region next to countries like France, Iceland, and New Zealand.

The countries also see a constantly growing number of graduates in the field of ITC (information and communications technology) - in 2018, 4.4% of university graduates in the Baltics were in ITC. That's above the EU's average of 3.5% and nearly a 19% increase when compared to the year before.

Finally, the Baltic states are well known for their multilingualism -92.6% of the population speaks at least two languages. For this and the other reasons mentioned above, as well as due to comparably lower salaries, several international companies have opened their offices in this region.

Take Swedbank as an example. Not too long ago, the Swedish bank moved its mainframe administration functions to Riga, as maintaining the team there was more cost-efficient than in Stockholm. Another example the payments startup SumUp that recently opened an office in Vilnius, and mentioned



the available tech talent pool for recruiting as one of their reasons.

However, there are some but's

Even though the Baltics can be proud of their highly qualified workforce, there are also some serious hiring challenges local businesses are facing. Here are the main reasons why some of the Baltic startups feel the need to open offices in other countries, outsource specific skills, and import their workforce from abroad.

SMALL POND, STIFF **COMPETITION FOR TALENT**

The small population of the region also means that the talent pool - in absolute numbers - is rather limited. In other words, there just aren't enough people to satisfy the hiring needs of global, fast-growing startups.

What's more, because of the constantly high emigration that the three countries are experiencing, the number of talent in the region is constantly decreasing. In the meantime, there's also a catastrophically low birth rate, meaning that in the future, the situation will only get worse. In fact, the overall population is ageing so rapidly that by 2050, the working-age population could reach an all-time low.

Already today, local companies are fighting for the workforce, as the demand is higher than the supply. As a result, to grow their startups, founders often need to import staff from other countries.

"The Estonian startup ecosystem is growing very fast, and we've reached the point where the demand for talent is simply much higher than the local market's supply. Hiring abroad not only helps to keep the quality of hires high, but also brings the international experience and best knowledge in-house," says Julia Jolkin, CEO of IT Talent Estonia - a recruiting company that helps Estonian startups find and import talent from abroad.

For example, Bolt has more than 40 different nationalities working in their Tallinn offices. According to their recruitment manager Nikolai Kabatsikov, the company has a team of 10 dedicated recruiters who are working on proactively attracting talent both in Estonia and from abroad. "Since the country is small and the scene is vibrant, we are constantly attracting foreign talent to complement local talent," Kabatsikov

In the meantime, those startups growing their teams locally, often don't have much

choice but to take employees away from other local businesses. Such practice can mainly be observed between growth-stage startups that need to scale their teams as quickly as their businesses grow.

That being said, "it's important to keep in mind that the local workforce making the rounds through startups is a natural thing," says Raimonds Kulbergs, serial entrepreneur, former CEO of Klix.app, now Salto.co co-founder and Chief Revenue Officer. According to him, it's not always about startups luring employees from each other, but rather about the general trait of early-stage companies - they're very dynamic and changing. And so are their teams.

LACK OF PROFESSIONALS WITH "UNICORN-LEVEL" **EXPERIENCE**

Another challenge local startups face is the lack of senior-level professionals with the experience to grow a company from startup to enterprise level. While the region has highly-motivated and well-educated people, they often lack the relevant know-how to drive businesses to world-class enterprises.

For example, one of the most successful Lithuanian startups Vinted, the online marketplace for secondhand clothing and accessories, has therefore opened an office in Berlin. That gives the company access to experienced professionals that the local ecosystem in Lithuania was lacking.



The Estonian startup ecosystem is growing very fast, and we've reached the point where the demand for talent is simply much higher than the local market's supply.

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Latvian startup Lokalise - the globally recognized translation management platform - is facing a similar problem and plans to open an office in Dublin to solve it.

"We feel lucky with recruiting a talented individual in Latvia now and then. However, we stand a better chance to find a professional with global-level experience in hubs like Berlin, London, or Dublin, who can eventually share their knowledge and expertise with the bright minds in Latvia" says Petr Antropov, co-founder of Lokalise who's managing the company's business development.

According to Antropov, since these well-known startup hubs have a high concentration of fast-growing international companies, that's also where the talent is. For that reason, startups are taking shortcuts by opening offices there.

Asked why they've chosen Ireland for their next location, he says: "Ireland is where global companies like Hubspot, Dropbox, Intercom, and Facebook are based. We're looking to source experienced professionals from global leaders like these to help us to accelerate even further."

position. In comparison, stats from the job search website Glassdoor show that US employers need approximately 1.7 months to find a new employee. That's two times faster.

In the meantime, Ribaciauskaite also notes that it very much depends on the position. "Junior and non-tech employees are always much easier to find, whereas hiring tech people, especially senior developers, may take you up to 6 months. That being said, we've also tried hiring in Ukraine and the US apart from Lithuania, and our experience shows that hiring tech people is always hard, regardless of the country," she concludes.

Generally, the longer is the hiring process, the more expensive are the overall recruitment costs. It means that for startups with fast-growing teams, hiring in larger and more populated startup cities, such as Berlin or Barcelona, may end up costing less than finding the right talent locally, in the Baltics.

Astra Pudane, assignment manager of the global recruitment company Amrop, notes that sometimes it's founders' expectations that make the recruitment process unnecessarily long and complex.

TransferWise, the Estonian unicorn company with their HQ in the UK, has offices in 11 cities around the world. Yet, its largest office is in Tallinn, Estonia – the majority of the company's 1700+ employees are based there.

FACT 38



We stand a better chance to find a professional with global-level experience in hubs like Berlin, London, or Dublin, who can eventually share their knowledge and expertise with the bright minds in Latvia.

ARE HIRING COSTS REASONABLE IN THE BALTICS?

Due to the rather small talent market and stiff competition for experienced professionals, hiring in the Baltics can end up being a long and costly process.

According to Rimante Ribaciauskaite, COO of the Lithuanian startup Omnisend, it takes them on average 3.5 months to fill a

"The Baltic startup ecosystem is more active than ever. The unemployment rate is at an all-time low – in Europe, it's just 6.5%. What does this mean? Just like the rest of the world, Baltic startups must find ways to grow in a tight talent market. In the meantime, we often see startups that aren't ready to accept that the Baltics have reached the Western European level when it comes to salaries, and are still hoping to find superstar employees with years of relevant experience for "cheap". Obviously, that's a challenge," she says.

TO SUM UP

Despite the fact that the Baltic talent market is quite limited, hiring locally is still relatively easy and cost-efficient. At least, for now.

As noted by Nikolai Kabatsikov, Bolt's recruitment manager, "total talent hiring costs in Estonia are lower than in Western European countries but higher than in African markets." This observation comes from a company that operates in over 30 countries globally. Frankly, this sounds about right.

COMPANY CULTURE IN THE BALTIC STARTUP SCENE

Having a fully fleshed-out company culture is a trademark of every successful modern enterprise. Whether it's an up-and-coming startup, operated by a handful of college buds, or the corporate hallways of a seasoned company. Apart from being a clear sign of a forward-thinking enterprise, company culture is directly linked to employee satisfaction and productivity – a crucial relationship, and one that's best not overlooked by any business-savvy team leader out there.

66

Today, a healthy, positive company culture is at the top of the qualities that job seekers hope to find when looking for their new job.

A DIFFERENT TAKE ON THE THEME

With a ripening local startup scene, the Baltic states display pretty much every quality that would feel at home in any other startup ecosystem, be it that of the United States or any other developed Western Country. While it's easy to picture colourful yoga balls during a brainstorming session, the reality of the Baltic startups is a bit different.

To get a better mental image, try picturing the same colourful startup scene you'd associate with the entrepreneurial giants residing in San Francisco, but distil it with a bit of Nordic restraint, a shared appreciation for punctuality and less enthusiasm for abrupt changes.

Practising a blend of team-first culture, horizontal corporate culture and clan culture, startups in the Baltics tend to endorse collaborative process, employee independence, internally-driven work process and a family-like atmosphere.

Today, a healthy, positive company culture is at the top of the qualities that job seekers hope to find when looking for their new job. However, it's one thing to be aware of the concept and an entirely different one to successfully implement it in real life.



HOW COMPANY

Many companies, startups, and scaleups have embraced an internal company culture. Some more vocally than others. And while there's no one-size-fits-all approach, it is clear that the devil lies in the details and the most important factors to implementing company culture in an organization are: early implementation, repetition, communication and prioritization.

Here are a few ways Baltic startups are making these principles present in their organizations.

Clear communication of values

One of the defining factors of a company culture is making it known to everyone within the organization. This lays the foundation for everyone to be on the same page and allows each individual to participate in driving the organization towards one unified goal.

For example, the founder and CEO of Bolt, Markus Villig, famously quipped that the initial company culture revolved around the idea that "there are no rules". This has been a driving factor in continuing their rapid growth and "move fast and break things" attitude. This is still reflected in their approach to hiring, where they emphasize employee adaptability and resilience.

Startup Wise Guys, meanwhile, has a set of clearly-defined, get-shit-done-centric values, which must be continually communicated, as their program participants change with every batch. Being clear on what they stand for and what their approach is has helped attract startups and various partners that share the same values. As of this year, they have included a company



100+ founders at the annual Startup Wise Guys Getaway in Spain culture and performance module in the acceleration program, and teach their startups early on that aside from product development, they actually have a company and team to build.

A different approach to the implementation of company culture is demonstrated by Printful, which provides new employees with a list of must-read books, such as "Rework" by Jason Fried and Daniel Heinemeier Hansson to teach employees principles on "working smarter, not harder". This contributes to the overall goal of maintaining a lean startup approach to a rapidly scaling company.

Regardless of the values chosen by the startup, the most important factor in its implementation is the clear and regular communication of them, in any way possible.

Ownership of culture

Culture doesn't just materialize out of thin air – it requires a mindful approach to defining and aligning responsibilities. This requires prioritizing the time to define core values. As noted by expert Stoyan Yankov, startups can take rather different approaches in the process. He has interviewed a number of Baltic startups for a book on performance that he is co-authoring with Cristobal Alonso.

"Take for example the founders of Printify and Nordigen. Both are successful companies from the region, and both agree that values are important to talk about at an early stage. Yet - they have different approaches towards the way it should be done. Printify believes the founders should be the ones to set up the values in the first place, to build up the underlying DNA of the culture, and then have the team join them on the mission. Nordigen follows more or less the opposite approach. The team, while guided by the founders and team leads, is expected to take a leading role in defining the values. The premise is that by including the team closely, they will be more likely to "buy in" to the values and really live them."

Yankov highlights that there is no right or wrong approach, but that what is most important is consistency, and making the space for culture a priority. He highlights that this is not a "sexy" process, but is necessary, because when it's time for a company to scale, it's too late to start artificially implementing a culture.

44

Regardless of the values chosen by the startup, the most important factor in its implementation is the clear and regular communication of them, in any way possible.

Culture of mental health

One aspect of company culture that is receiving increasing amounts of attention in the startup community is the topic of mental health, burnout, emotional resilience, and grit.

Yankov highlights that the Baltics are doing a particularly good job at addressing the cultural aspect of mental wellbeing.

"The Baltics, comparatively, are doing quite alright. For example, principles of Asian mindfulness are not new, and are being actively implemented. While traveling around I still run into startups relying on sweets and energy drinks to push through productivity barriers rather than a health-based approach."

These trends seem to echo in the startup products as well, for example, one of the currently trending Latvian startups Asya.ai is developing a mindful conversation app, whereas freshly re-branded Lithuanian startup Qoorio (former Humansapp) is tapping into knowledge-sharing that is not based on career-related or academic experience, but rather life lessons, thus creating a platform where people can connect and learn from each other.

Mental health in startups and founders is a topic that has been highlighted by thought-leading events, such as TechChill and the Digital Freedom Festival, bringing in specialists to talk about the need for

conversations on mental health, and Buddist monks leading meditation exercises. It is no surprise, then, that these values have trickled further into the cultural fabric of local startups.

THE PRESENT AND THE FUTURE OF CULTURE-DRIVEN COMPANIES IN THE BALTICS

With a high number of operating startups, tech hot spots, great entrepreneurial potential score on the global chart and undeniable zeal for getting things done, the Baltics have their fair share of successful, world-famous culture-driven startups.

Is the culture-driven model working for them? Judging by the million-dollar investments and new offices opening all over the world, we're inclined to believe it does. Is there still some room left for growth? Absolutely.

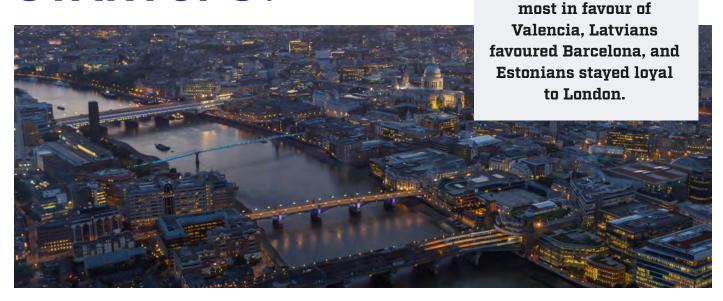
With nearly a decade's worth of industry experience, plenty of role models, and increasing international recognition, it's about time for the companies operating in the Baltic states to offer their original take on company culture to the rest of the world.

Hubspot is one of the role-models in terms of company culture in the startup world.
They have developed a Culture Code. Interestingly, ever since first writing it down, the company has changed the code 25 times, proving that company culture is like a living organism.

FACT 39



WHERE IN THE WORLD ARE BALTIC STARTUPS?



The Baltic countries are a great place to get your startup going. A progressive, tech-savvy society, fast internet connections, a comparatively low cost of living for a quality lifestyle. But for startups that experience rapid growth, they might begin to start looking elsewhere to continue to stimulate their business' growth.

Interestingly, a few cities stand out as common destinations for growth relocation. Research done by the European Startup Heatmap demonstrates that most surveyed participants highlight large cities as their preferred "tech hubs". In addition to large cities, the Baltic countries had their own set of interesting preferences. It turns out that founders from Lithuania were most in favour of Valencia (Spain), Latvians favoured Barcelona (Spain), and Estonians stayed loyal to London.

What is it that makes different startup ecosystems gravitate to different cities?

We're on the search to find out.

LONDON – NOT ONLY A MAGNET FOR FINTECH

London is one of the largest financial centers of the world, and by extension, equally impactful within a European context. There is no shortage of Baltic startups that have established a presence in London.

Notably, fintech startups are particularly drawn to London. This can be attributed to the city being a major global financial center – the UK is the highest net exporter of financial services globally, and London held the title of "top financial center ranking" worldwide for five years in a row, until it lost it to New York amid Brexit uncertainties in 2019.

One such company is Monese. While being of Estonian origin, they opened their HQ and started working exclusively within the UK market, and only 4 years later spread to the Eurozone (in 2017). Besides London, they also have offices in Tallinn and Lisbon. They note that London offers a wide and diverse, but expensive talent pool, while in Lisbon they are able to hire locals at a lower cost.

"It's a question of availability of talent, which is a bit of a problem everywhere everybody is chasing the same types of people. But I guess in certain markets you would find people more willing to work for startups and join the next big thing. These would be the typical startup hubs, like Berlin, Amsterdam, London. There are a lot of startups around, people are used to them and it's not considered anything strange for someone to go and change a very safe, blue-chip company job for a startup job. In Eastern European countries, I think we're mentality not quite there yet." says Lauri Haav, Head of International Expansion at Monese.

Turns out that founders

from Lithuania were

Similar to Monese, Revolut also began its Fintech development immediately within the UK. Only recently has it reverted to its Lithuanian origins by obtaining a Lithuanian banking license in order to provide EU transactions. We would be remiss not to mention TransferWise and TransferGo as Baltic Fintechs with heavy ties to the UK, both with their headquarters, as well as their original markets based there.



Attracting startups from various industries

London demonstrates its strength as a startup ecosystem by attracting startups also from other industries. This clearly is a nod to the larger market as well as to the international hub and opportunities.

Latvian 360 imagery startup, Giraffe360, started operating in London as soon as it could. In fact, they would pretend they were locally based before they even were, in order to ease the way of securing meetings with skeptical locals.

"When developing products from Latvia, we would often speculate about what people want in that far-away international market. Rather than having to philosophize about what's happening in the world, just go to the world.

It opens your eyes to reality. When you're in a far away, small market, you get used to thinking of competitors as something abstract. But here, when you realize that 600 companies are pitching the same client with a slightly different product, you realize how hard you have to fight for the same client's attention." xplains Mikus Opelts, founder and CEO of Giraffe 360.

CRM software developer Pipedrive is another example of a startup that has expanded internationally, including to London. One of the reasons noted was to be able to be closer to and to serve the "thriving financial and tech ecosystem". Therefore the proximity to the market that Pipedrive had identified as a goal was an important factor, a testament to the size and activity of London's SMB community.

CHASING THE SUN (SPAIN, PORTUGAL)

While London is a common choice among Baltic startup founders to relocate to, you equally often hear of startups choosing warmer climates in Western Europe. Namely - in Portugal and Spain.



Cost-efficient hiring with a wider talent pool

For some Baltic startups, the interest to expand to these countries may be driven by an interest in the Iberian market, and then potentially expanding to Latin America. For example, Printful opened an office in Barcelona after seeing sales in the Spanish market triple over the last year. However, in most cases, the reasons behind relocation or opening offices are more related to standards of living and access to talent.

Not only are founders and their teams tempted by moving to sunnier shores, but so are many talented international individuals, who prefer the quality of life, good weather, food and wine in the cities like Barcelona and Lisbon. And while other large talent pools like London could still seem tempting in terms of human resources, the cost of talent is significantly lower on the lberic coast.

For example, according to Payscale, the median yearly software engineer salary in London is 52,000 eur, while in Lisbon the same profession has an average of 26,700 eur per year. That's almost half.

As a result, it's unsurprising that many growth-scale Baltic startups have open vacancies in Lisbon and Barcelona – including Pipedrive, Monese, Mapon, Printful, and more.

In most cases, the reasons behind relocation or opening offices in Iberia are more related to standards of living and access to talent.

The obvious choice – after London was ruled out

Interestingly for a fintech startup, London was not Nordigen's first choice for an international office. After establishing in Riga, Latvia, their first international office was in Madrid, Spain. Though London offers plenty of available capital and funding, Nordigen's product relies on open banking, and they considered the UK to have a relatively conservative financial environment for their business.

Portugal and Spain are certainly not global hubs such as London, though they do provide certain bonuses – a lower cost of living, an international bunch of individuals who populate the talent pool, and certainly not unimportant for the northerly Baltic countries, they also provide a certain amount of vitamin D that you just can't get during the Baltic winters.

BERLIN - STILL POOR AND SEXY?

Berlin is the second most populated city in Europe, behind London. Over the past five years it has established itself as an attractive location for creative and tech startups. On top of reasonable living costs, Berlin began its transformation into a startup hub when several high-profile investments were made into local Berlin startups, such as \$19M into Wunderlist and Bill Gates' investment of \$35M into ResearchGate, kicking off a focus on Silicon Valley-style businesses and investments.

Many startups are looking to Berlin as their next location for their office, including fintech startup Mintos:

"It made perfect sense to set up an office in the capital of Germany - we have a lot of investors in Germany, also it is a big draw to access the Berlin talent pool. Our team now has professionals joining Mintos from Paypal, N26, Zalando and other industry companies."

- Mārtiņš Šulte, Mintos CEO and Co-Founder

Lithuanians - Berlin-bound

Of the notable startups from the Baltics, those that have the most interest in Berlin are overwhelmingly from Lithuania.

Oberlo, the successful Lithuanian dropshipping platform that was acquired by Shopify, is headquartered in Berlin. TransferGo, who have offices in London and other locations, are also significantly present in Berlin. Trafi opened offices in Berlin. Vinted shut its doors in places such as London, only to later open up again – in Berlin.

"We opened the office in Berlin because of two reasons: first, Germany was our biggest market and we needed to fix it. Second, it was a good place to attract international talent that would not so easily move to Vilnius."

- Thomas Plantega, CEO of Vinted

Why are Lithuanians so drawn to Berlin? Edita Lobaciute is the Global Community Lead at one of the major coworking spaces - Mindspace. She says:

"The city feels a bit like a start-up itself. You can feel the movement and creativity everywhere. Berlin is a very attractive city, still pretty low cost in comparison with

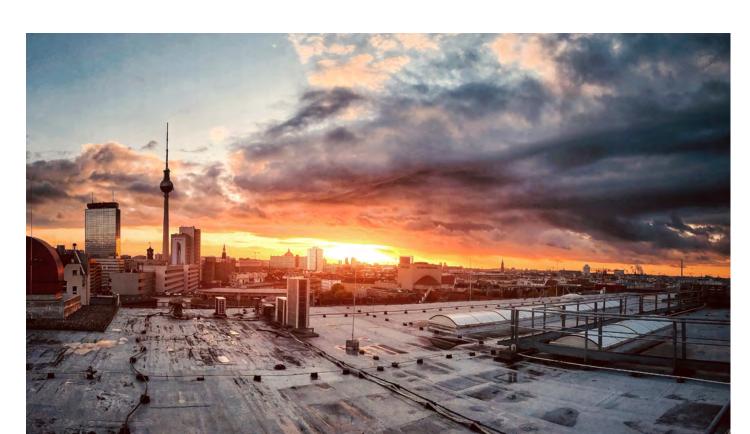
other cities. Next to San Francisco and Tel Aviv, Berlin is one of the leading startup and tech hubs in the world. The city is an international melting pot and coworking spaces are the ideal and flexible options to live and breathe the concept of "New Work"."

Berlin was described by its mayor Klaus Wowereiet in 2003 in a slogan – "Berlin is poor but sexy". This was intended to attract students and young artists, to enjoy the low cost of living while simultaneously enriching the economy. Now, Berlin is ranked 19th in the Nomader's list of best cities for remote work (of over 1200). The city draws plenty of creative, young individuals, who are also then potential candidates in the job pool for startups looking to hire.

CONCLUSIONS

As startups grow, they inevitably face the question of expansion. Whether to expand, and if so, where to. We can see that in terms of Baltic startups, clear frontrunners in Europe can be found, and those are London, Berlin, Spain, and Portugal.

The reasoning for expansion to different cities can vary – growing human resource accessibility, or for increasing proximity to the target market. What's interesting is that for the most part, the target cities with a strong foothold, at least for the Baltics, don't change.



METHODOLOGY

This report is created as a collection, comparison, and analysis of publicly available information, combined with data and insights from 25+ stakeholders from the Baltic startup ecosystem (startup organisations, VC funds, Business angel associations and individual investors, accelerators, startups, support organisations, governmental entities and opinion leaders). Data about Baltic countries has been benchmarked against other regions, cities and countries to provide a unique angle in startup ecosystem analysis.

Both quantitative and qualitative methods have been used in the research process. In some cases, data has been interpreted and analysis offered through the lense of the joint EIT Digital and Startup Wise Guys perspective.

A lack of publicly available, comprehensive registered data on the current state of startups within the Baltics has caused us to turn to the next best thing – crowdsourced data – which has been compiled by each of the Baltic states since 2008. This data has not only been trusted by us, but has also been used as the foundation for reports by the Ministry of Economics of Latvia, Karma VC, and more.

As the data used mostly relies on publicly available information, a possibility exists that the data does not reflect a comprehensive and definitive status of the topic at hand. With these limitations in mind, analysis has been made to the best of report authors' ability and taking the most trustworthy raw data available. Though the data may contain gaps in information, it does not diminish the report's ability to point to tendencies.

CREDITS

This report is a result of the joint efforts between EIT Digital and Startup Wise Guys. It could not have been completed without the help of various organizations and individuals who have participated by providing their insight, knowledge, and perspectives that shaped this report. It is also made possible by the various previously published research that this report was abe to use as a foundation to build on.

EIT Digital is a leading European digital innovation and entrepreneurial education organisation driving Europe's digital transformation. Its way of working embodies the future of innovation through a pan-European ecosystem of over 200 top European corporations, SMEs, startups, universities and research institutes, where students, researchers, engineers, business developers and entrepreneurs collaborate in an open innovation setting. This pan-European ecosystem is located in Amsterdam, Berlin, Braga, Budapest, Brussels, Eindhoven, Edinburgh, Helsinki, London, Madrid, Milano, Munich, Nice, Paris, Rennes, Stockholm, Trento, and San Francisco.

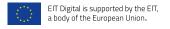
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Startup Wise Guys is Europe's leading B2B startup accelerator, present in all three Baltic states with participants from around the world, also voted VC fund of the year 2019 in CEE. SWG displays a 77% survival rate, and is one of the most active early stage investors in the Nordics & CEE region with more than 145 portfolio companies.

www.startupwiseguys.com







DATA SOURCES

Latvian Startup Association

Startup Lithuania

Startup Estonia

Baltic Startup Scene Report 2017/2018

Estonian, Latvian, Lithuanian open-source in-

vestment data sheets

Ministry of Economics of Latvia

DealBook of Ukraine 2019 edition, by AVentures

Nordic Venture Capital report, by Dealroom.co

Central & Eastern Europe: Startup & Invest-

ment Landscape, by Dealroom.co

Google Public Data Explorer

Dealroom.co

Women in Digital Scoreboard 2019, Europa.eu

Women in Digital Scoreboard 2018, Europa.eu

DOU.ua

Numbeo.com

Wework.com

Coworker.com

Investment and Development Agency of Latvia

(LIAA)

Organisation for Economic Co-operation and

Development (OECD)

The Baltic Review

European Startup Heatmap

Crunchbase

Tech.eu

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