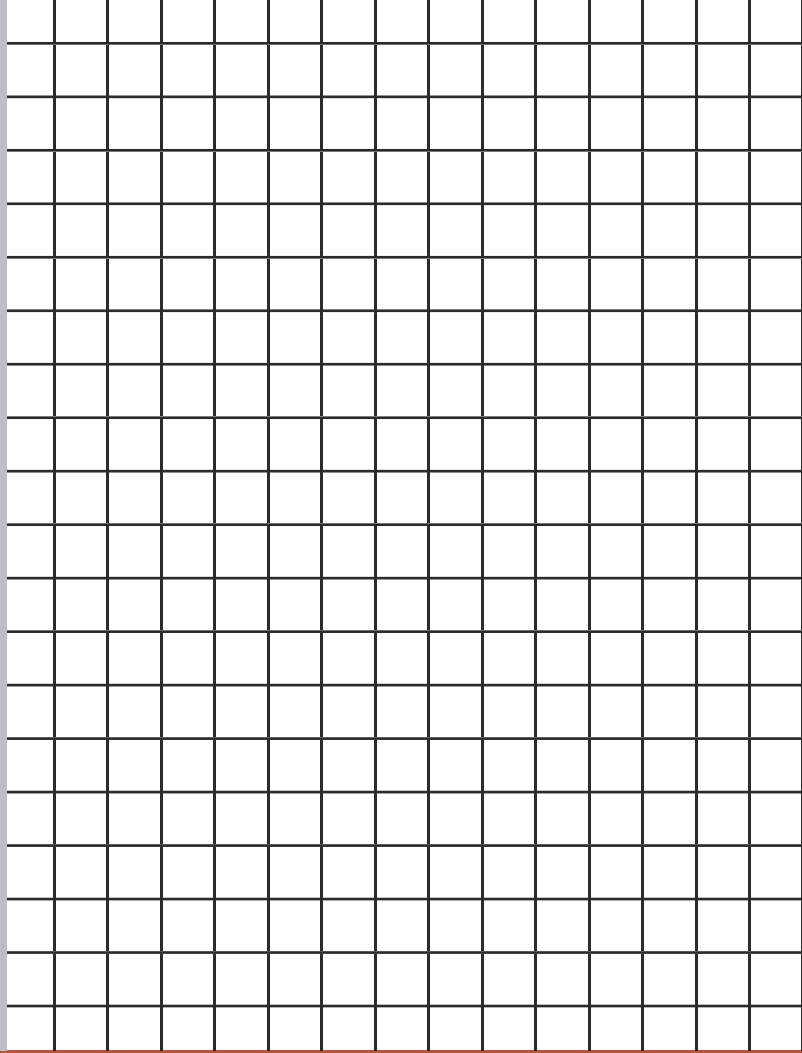


BELARUS STARTUP REPORT 2020

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

- The ICT sector is a driving force of the Belarusian economy. During the last five years, it grew at a rate of 13% CAGR – 1.3 times faster than the overall economy. The number of developers increased from 45K to 70K in just 3 years.
- More than 90% of ICT sector production goes on export. ICT services export per capita reached 247 USD in 2019.
- Together with Poland and Ukraine, Belarus forms a strong outsourcing cluster in the CEE. The main competitive advantages of the region are highly competent developers with a good command of English and quality education that is proven by best world coding rankings.
- The massive success of the outsourcing businesses fuels the development of the local startup scene. The number of startups in our database has increased by 35% in 2019 and reached 263. Along with the considerable increase in a number of startups, we see that the community is growing: according to Atomico, Belarus holds 3rd place by growth rate of active members in tech-related MeetUp groups with Minsk recognized as one of the fastest-growing hubs in Europe (7th place).
- Currently, we see that the ecosystem is boosted by success stories of companies, such as Viber, Maps.me, MSQRD, etc. whose founders become serial entrepreneurs willing to reinvest in local projects. It is necessary to stimulate the entrepreneurial initiative further to unlock the potential of the ecosystem.
- As of 2019, the majority of Belarusian startups are developing enterprise software (17% of all startups), which can be partially explained by the strong outsourcing sector. Around 50% of startups can be classified as deep tech companies, with Artificial Intelligence and Big Data being the most prevalent technologies.
- Since 2013, around 500 million USD was invested in Belarusian startups. Though there are no proven unicorns in Belarus, according to Dealroom, at least three companies are on the way to achieving this status: Flo Health, Behavox, Profitero, and Workfusion.
- Due to the relatively small size of the ecosystem, a couple of large investment deals dramatically impact the overall dynamics: the Workfusion and Behavox deals account for 60% of the total amount invested since 2013.
- However, in recent years small deals have been gaining momentum owing to the increasing early-stage investment from local business angels, accelerators, and funds. In 2019, 28 deals cumulatively worth more than 5 million USD were closed.
- The most systematic financing is coming from Belarusian ecosystem members and the US, investment from other countries is very fragmented.
- Almost 30% of visible operating Belarusian startups can be considered as purpose-driven, contributing to a certain extent to one of the UN's Sustainable Goals (SDGs). Owing to the large share of MedTech and Health startups Sustainable Goal 3: Good Health and Well-Being are the most commonly targeted SDG's.
- In general, we see the problem of undermining the size of the Belarusian startup ecosystem in most of the global databases and research agencies as startups created by Belarusian founders, with the majority of the team in Belarus but officially registered abroad are recognized by the country of registration.

A WORD FROM BULBA

For the second year in a row, we're partnering with CIVITTA Belarus to release a comprehensive report, documenting the development of the local startup ecosystem. This second chapter of the report is published in times that are very challenging to Belarusian society as a whole. We consider ourselves and the local tech community as ambassadors of the great talent and incredible creative energy Belarusian tech companies share. And we want to keep on showcasing the Belarusian startup ecosystem to the world.

The first report was intended to map all of the ecosystems' actors and help a general audience understand the dynamics and major drivers of change for Belarusian tech. Now, we are diving deeper to see which industries are driving growth, to have a deeper look at the AI startups in Belarus, and to map local purpose-driven tech companies.

One of the major discoveries of this year was the fact that every 4th startup in Belarus is addressing to some extent at least one of the UN Sustainable Development Goals. Seeing that founders are building purposeful and sustainable businesses gives a lot of optimism for the future.

Times of change are moments of both challenges and growth for entrepreneurs and leaders. We hope that the Belarusian startup ecosystem will demonstrate its readiness to quickly adapt and develop, to use the challenges it faces as an impetus to change itself and the world.

Please, feel free to reach out if you want to work with us or have ideas and suggestions for the 2021 report.

Stay safe & take care.

Andrei Avsievich
Cofounder and GP, Bulba Ventures



A WORD FROM CIVITTA

This is the second time CIVITTA Belarus joins forces with Bulba Ventures to create an analytical report about the startup ecosystem in Belarus. The goal of the **first report (Tech in the New East)** was to map all the major ecosystem players and provide stakeholders with data to intensify discussion about ecosystem size (number of startups, deals, etc.). This time we aimed to dig deeper to present more accurate and detailed data, find out what drives particular changes in the ecosystem, which industries and companies lead the growth, and how sustainable this growth will be in the long run.

We have prepared this report primarily for foreign readers who want to familiarize themselves with what is going on in the Belarus startup ecosystem. We should note that the majority of this data was gathered prior to the current turbulent situation in Belarus, and, like any changing situation, it is challenging to predict its future trajectory. We hope that the Belarusian startup ecosystem, as well as Belarusian society, will become stronger during these times of change.

I would like to draw your attention to several facts presented in the report that we can be proud of:

- Cumulatively 500 mn USD was invested into BY startups from 2013 to the first 4 months of 2020 that boosted interest in the sphere and launched the “re-genesis wheel”: successful local founders become investors, their former employees become founders and former students have a wider range of job opportunities to get the required knowledge to become founders in future. This process is irreversible. However, the open question will the pace of this transformation be fast enough to make Belarus recognizable on a global scale.
- At the beginning of 2020, in our database, we’ve had 35% more active visible Belarusian startups than a year ago. Impressive growth! Though the absolute figure of 263 active visible Belarusian startups can be disputable. There is always a temptation to include every company calling themselves a startup or every team with just an idea to the database, inflate the numbers and show a skyrocketing increase but our work ethics do not tolerate such an approach. We believe that double-checking



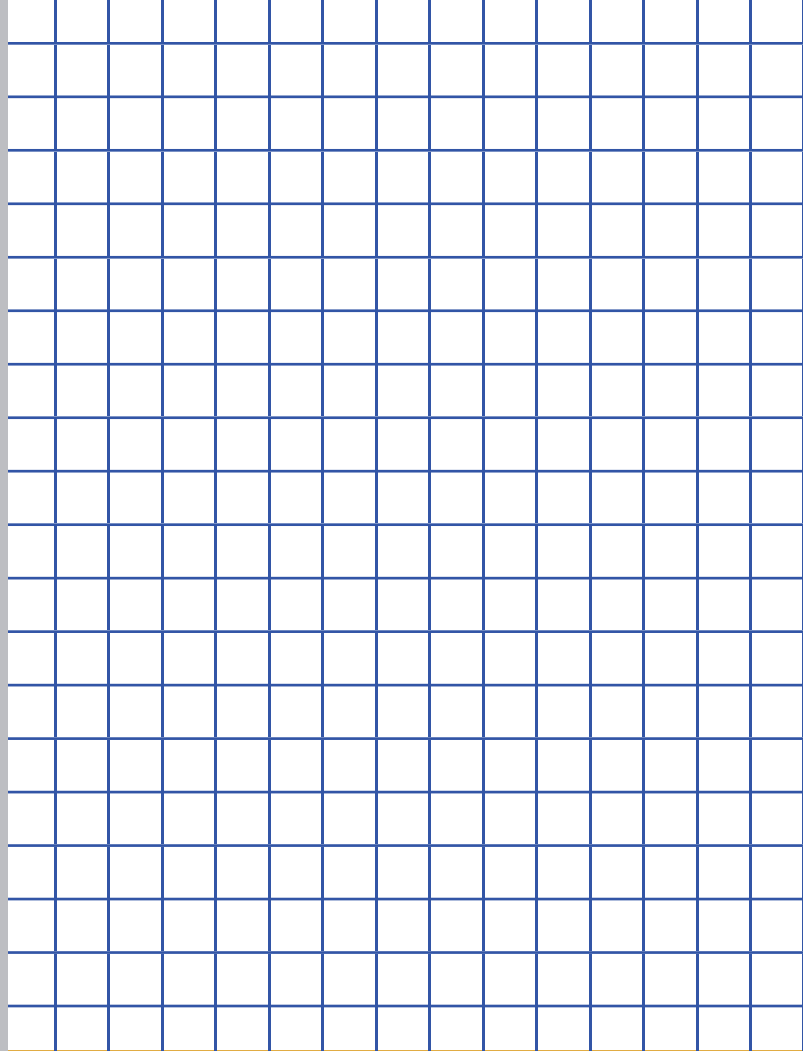
every company and being a bit skeptical contributes to the credibility of the report and the whole ecosystem.

- According to our data, more than 50% of all the visible Belarusian startups can be classified as deep-tech companies with Artificial Intelligence dominating the scene. This is why we dedicated the third chapter to presenting several cases of successful local startups. We assume that soon, Belarus can be associated with AI in Europe in the same way as Lithuania is associated with FinTech today.

As a European company with headquarters in Estonia, we pay a lot of attention to corporate social responsibility ourselves, and we were pleased to learn that every 4th startup in Belarus is tackling to some extent at least one of the **UN Sustainable Development Goals**.

More insights inside. We are more than happy to discuss our findings with everybody.

Andrei Palunosik
Associate Partner, CIVITTA



SNAPSHOT OF THE ICT INDUSTRY

ICT SECTOR IS A DRIVING FORCE OF THE BELARUSIAN ECONOMY

KEY FACTS AND FIGURES



6.2%

Share of ICT in GDP (2019)



70K+

Developers located in Belarus



5.0K+

ICT Companies

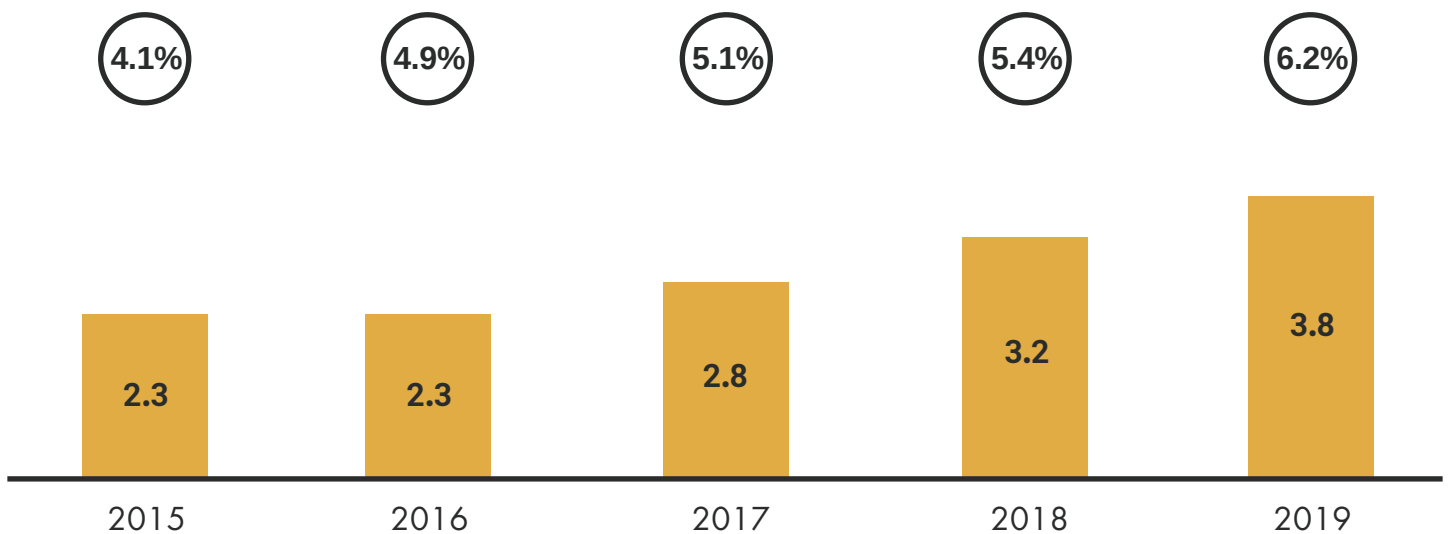


13%

CAGR* of ICT sector (2015-2019)

- In 2018 and 2019 ICT was a key driver of economic development providing half of GDP growth.
- ICT sector grew by 60% in 2015-2019 with a CAGR of 13%, which is almost 1.5 times higher than overall GDP growth.

VALUE ADDED BY ICT SECTOR AND ITS SHARE IN GDP, 2015-2019, BN USD



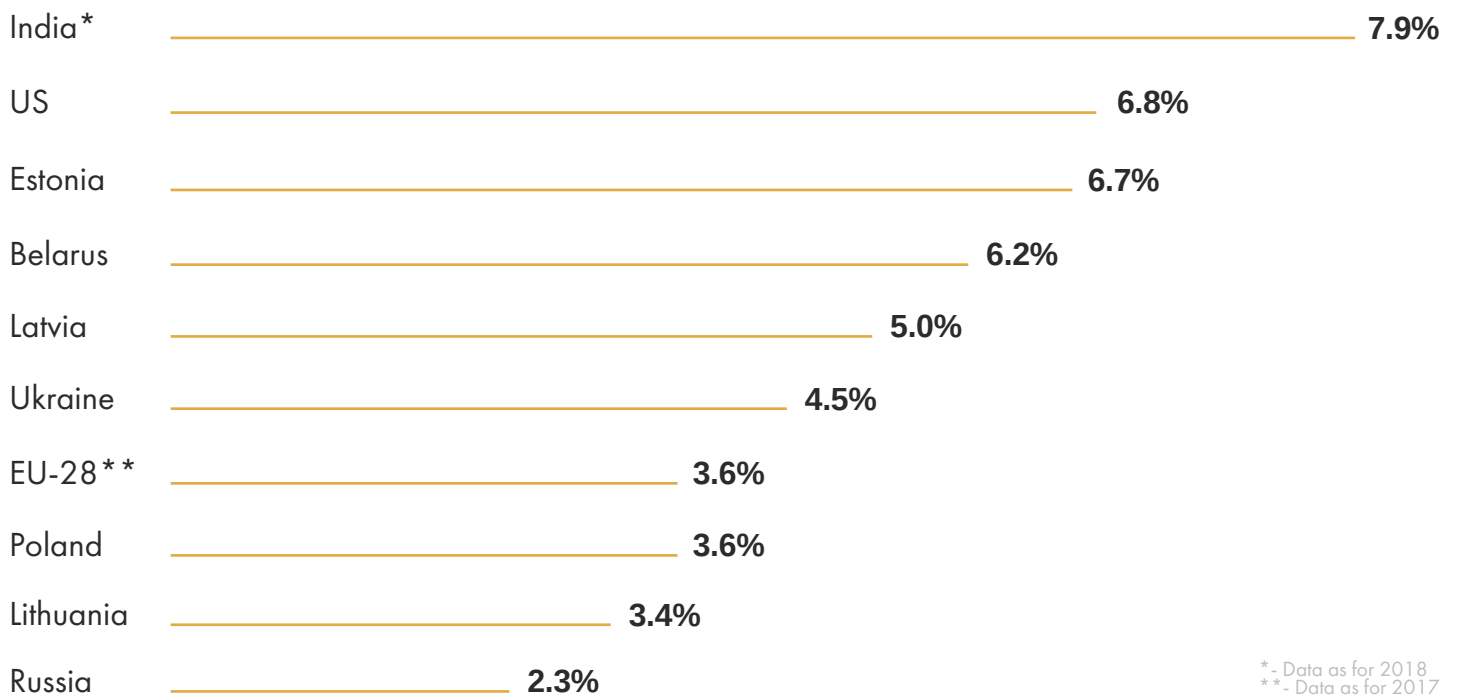
Source: National Statistical Committee of the Republic of Belarus

*- CAGR – compound annual growth rate

BELARUSIAN ICT SECTOR HAS ALL THE PREREQUISITES TO BECOME A SIGNIFICANT PLAYER OF GLOBAL ICT INDUSTRY

- Belarus is unofficially labeled by multiple investors as an emerging Silicon Valley of Eastern Europe, which is proved by benchmarking with neighboring countries and large tech ecosystems.
- By value-added in GDP, the Belarusian ICT sector surpasses the EU average and its neighbors and is close to tech leaders, such as the US and Estonia.

SHARE OF ICT SECTOR IN GDP BY COUNTRY, 2019, %

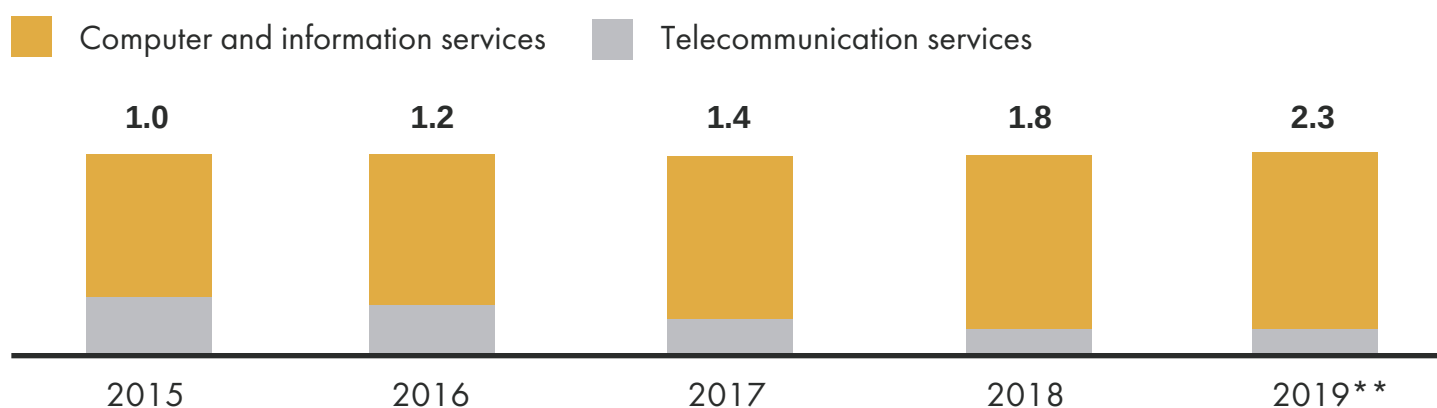


Source: Eurostat, National Statistical Committee of the Republic of Belarus, Central Statistical Office of Poland, State Statistics Service of Ukraine, Official Statistics Portal of Lithuania, Atradium, Bureau of Economic analysis, Statistics Latvia, Statistics Estonia, Federal State Statistic Service

MORE THAN 90% OF ICT SERVICE PRODUCTION GOES ON EXPORT*

- The total export of ICT services amounted to 2.3 BN USD in 2019 with 88% of it attributed to computer and information services.
- 91% of computer and information services produced in Belarus are exported due to the limited Belarusian market capacity.
- Approximately 40% of ICT services are exported to the US and Canada, with 30% to the EU. The share of ICT services export in all services exported reached 24% in 2019 and grew by 9 percentage points since 2015.

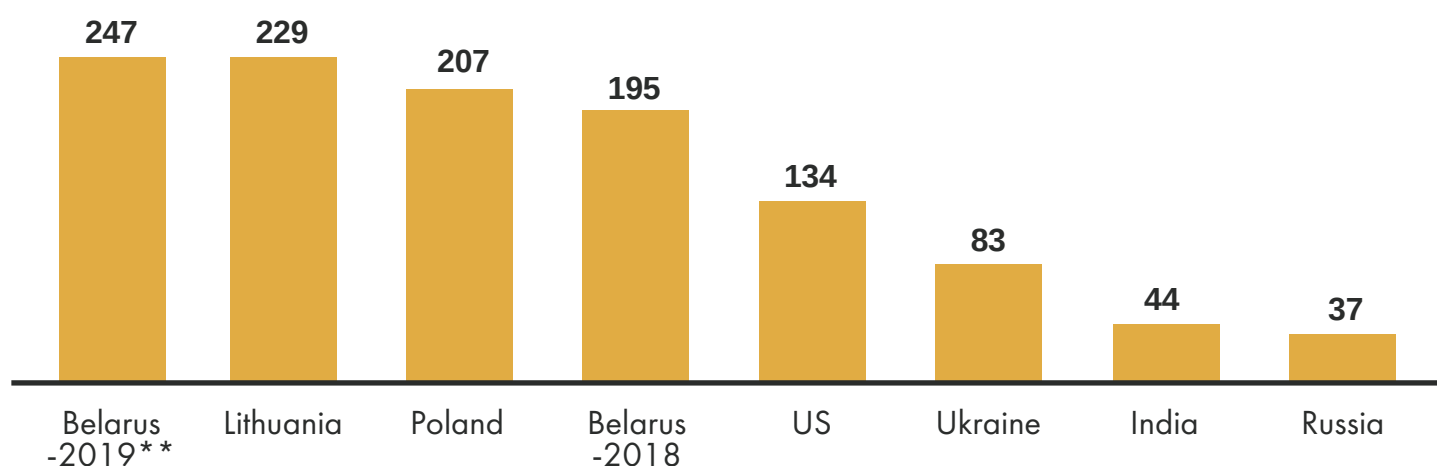
TOTAL BELARUSIAN EXPORT OF ICT SERVICES, 2015-2019, BN USD



Source: National Statistical Committee of the Republic of Belarus

- Owing to high growth rates we expect that the ICT services export per capita will reach 247 USD in 2019 and will close the gap with neighbors.

ICT SERVICES EXPORT PER CAPITA BY COUNTRY, 2018, USD



Source: National Statistical Committee of the Republic of Belarus, UNCTADStat

* - Computer and information services (not including telecommunication services)
 ** - Estimated

BELARUS, POLAND, AND UKRAINE FORM A STRONG ICT CLUSTER IN EASTERN EUROPE



HIGHLY-COMPETENT DEVELOPERS

Top Coder ranking | Poland, Ukraine, and Belarus hold #5, #6, #7 positions in the world by software development skills



TOP OUTSOURCING COMPANIES

Global Outsourcing 100 (2020) | 11 Belarusian and 18 Ukrainian companies



HIGH-QUALITY EDUCATION

UN Education index | Belarus ranked #53 in education, Ukraine - #83 and Poland - #35



GOOD COMMAND IN ENGLISH

EF English proficiency index score | Out of 100 countries Poland holds #11 place in the global ranking. Belarus and Ukraine have #47 and #49 accordingly

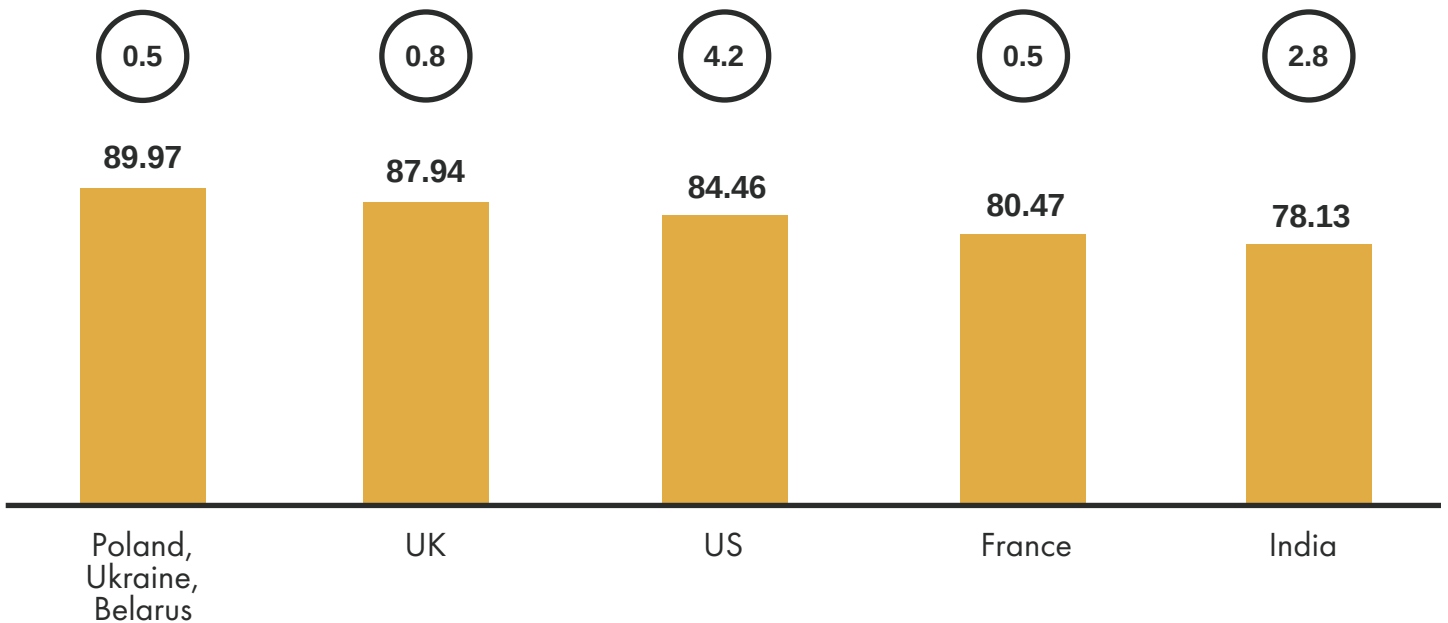


COMPETITIVE DEVELOPMENT RATES

20-40 USD per hour (Belarus and Ukraine), 50-60 USD (Poland)

Source: IAOP, EF English Proficiency Index 2020, Top Coder, UNDP

AVERAGE SCORE OF DEVELOPERS BY THE SKILLS, 2018



Source: Stack Overflow, Pentalog



Number of professional developers, millions

HI-TECH PARK IS A CORNERSTONE OF BELARUSIAN ICT INDUSTRY PROVIDING CLEAR ECONOMIC BENEFITS

- HTP numbered 818 companies at year-end 2019 with 69 foreign companies registered that year. New HTP members come for the talent pool of experienced engineers, governmental support of ICT and HTP as an emerging cluster
- Hi-Tech Park, created in 2005, offers a special legal and fiscal regimes for its residents
- HTP activity is based on an extraterritorial principle. Any company fitting HTP criteria can become a member and use its benefits, regardless of geographical location within the territory of Belarus

KEY HTP BENEFITS

TAX

- **TAX EXEMPTIONS.** Income tax, VAT, tax on the income of foreign businesses that do not have a permanent office in Belarus, offshore fees, property tax, land tax, customs duties
- **TAX REDUCTIONS.** 9% individual income tax, 5% tax on the income of foreign businesses with a permanent office in Belarus, social security fees
- Social security fund contributions are calculated on the basis of the average salary in Belarus

FOREIGN ECONOMIC ACTIVITY

HTP members are entitled:

- To use e-money, issued by foreign companies
- To buy foreign currency on the internal exchange market without restrictions on its use
- To open accounts in foreign banks
- To conclude foreign trade transactions without a time limit

ACCOUNTING

- HTP members are subject to a simplified paper flow

MIGRATION

- Temporary stay without a visa up to 180 days for foreign staff
- Foreign citizens don't need to obtain working permission

HI-TECH PARK IN FACTS AND FIGURES

818

Companies

2.1K+

Foreign IT specialists relocated (2018-4M 2020)

91%

Share of HTP services export in total Belarus IT services export

2.5x

Growth in the number of foreign IT specialists in 2019 compared to 2018

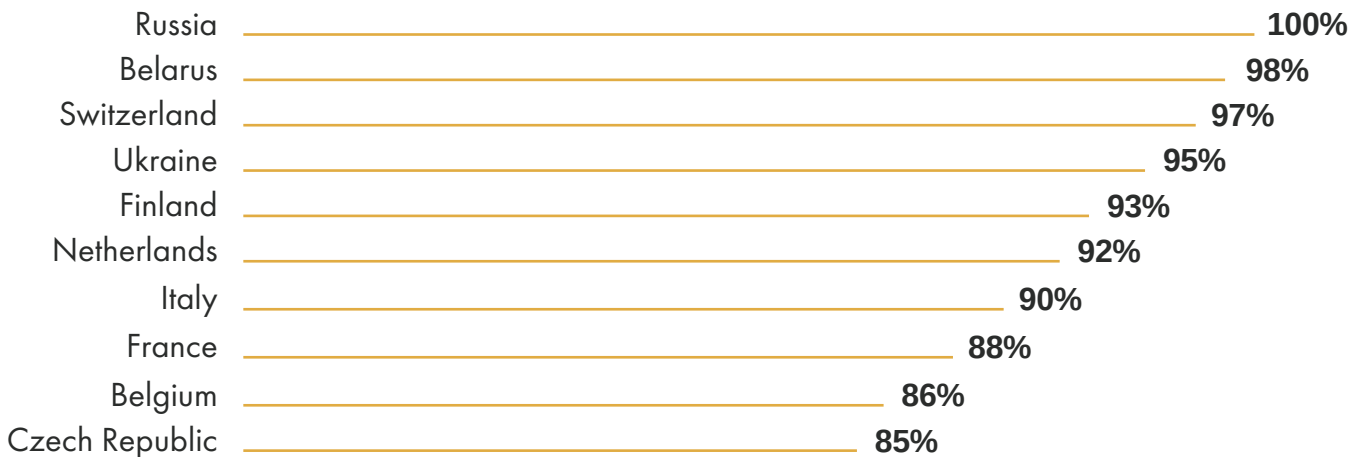
69

Foreign companies registered in HTP in 2019

BELARUS IS AMONG THE MOST SKILLED COUNTRIES IN TECHNOLOGY AND DATA SCIENCE

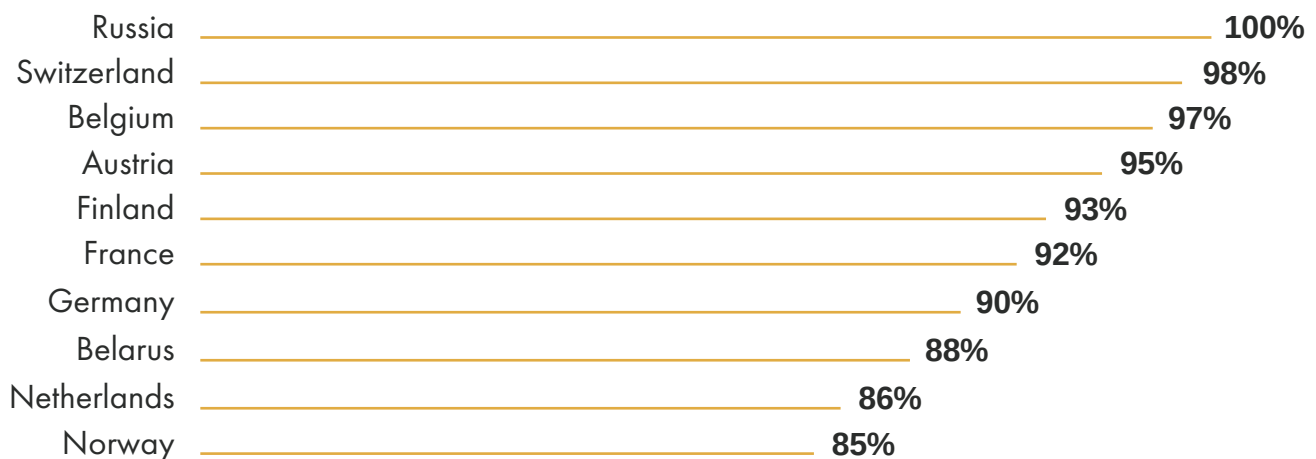
- Belarus produces some of the most talented Software Engineers in the world who are ahead of many countries in programming contests.

TOP COUNTRIES BY SKILL INDEX IN TECHNOLOGY, 2019



- In data science, Belarus shows outstanding performance in math, statistics, machine learning, statistical programming, and data management.
- Belarusian STEM education is well developed: 10 universities with specialized STEM faculties, 70+ IT specialties, around 22% of all students are enrolled in technological disciplines
- STEM education is largely supported by business sector programs: courses, research, and training labs, etc.

TOP COUNTRIES BY SKILL INDEX IN DATA SCIENCE, 2019



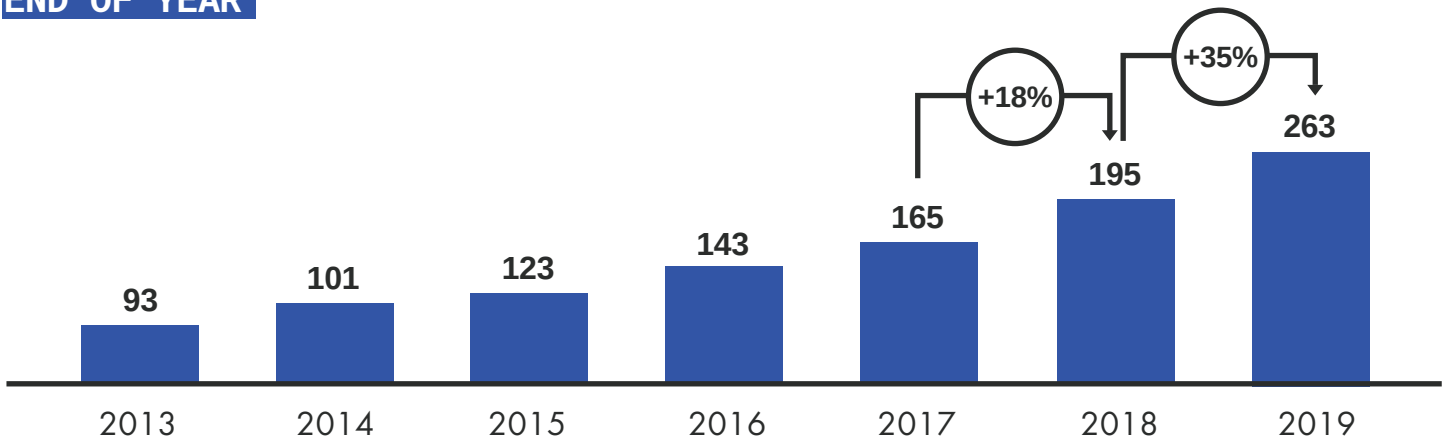


GENERAL STARTUP ECOSYSTEM OVERVIEW

NUMBER OF STARTUPS GREW BY 35% IN 2019

- The number of startups has doubled since 2013 and accounted for 263 at year-end 2019 with a growth of 35% that year.
- 3 of startups are considered as future unicorns with valuations over 200M USD but less 1 BN USD: Flo Health, Behavox, and Workfusion (Dealroom estimation).
- We estimate that the real number of startups is even higher but a significant part of them are not visible. Moreover, several companies are not considered as startups due to the stringent selection criteria

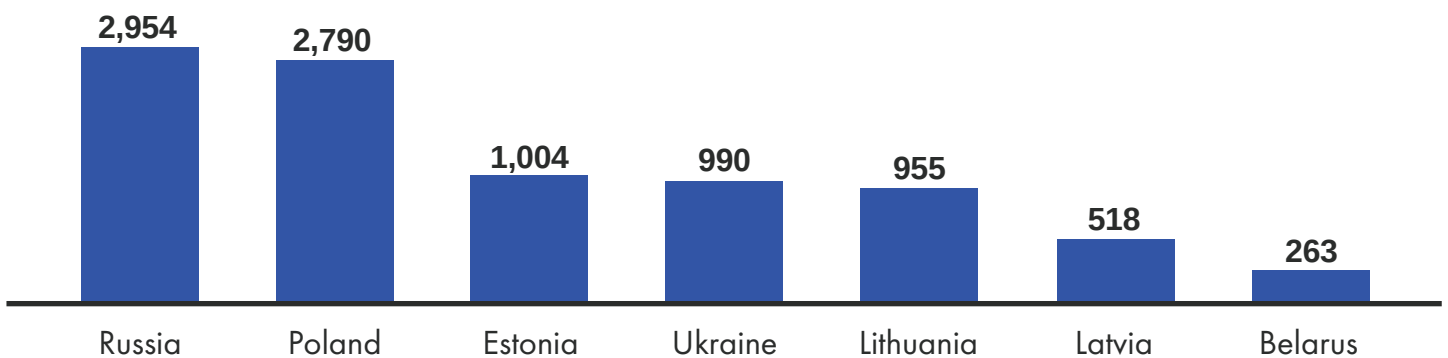
NUMBER OF OPERATING & VISIBLE BELARUSIAN STARTUPS*, 2013-2019, END OF YEAR



CIVITTA startups database

* - Startup is a company that features innovative technologies and business models, strives for substantial growth and scalability, founded in Belarus de facto or de jure with majority of the team in Belarus or with at least one founder from Belarus while the company is positioned as from Belarus.

NUMBER OF OPERATING & VISIBLE STARTUPS BY COUNTRY, 2019



Source: CIVITTA startups database, Dealroom, Crunchbase, Startup Estonia

CYRIL GOLUB, BOARD MEMBER, ANGELS BAND

Our business angels network observes a steady growth of applications during the past two years. More and more startups from the CEE region are applying for pre-seed and seed investments every month.

Both the quantity and quality of venture projects are growing. Whereas the business development level of Belarusian startups looks the same as in neighboring countries, they've got significant advancements in technology.



SUCCESS STORIES BOOST ECOSYSTEM GROWTH

EXITS | Exits of startups contribute largely to the development of the whole ecosystem as they energize the flow of capital and transfer of knowledge and skills.

Yury Melnichek (founder of Maps.me, AIMatter, Bulba Ventures)

Eugene Nevgen (co-founder at MSQRD, an early investor at Flo, and cofounder at Loona)

Sergey Gonchar (co-founder at MSQRD, an early investor at Flo, and cofounder at Loona)

Yury Gurski (cofounder at Viaden Media and Haxus, president at Flo)

Viktor Prokopenya (cofounder at Viaden Media, founder at VP Capital)

Michael Rumiantsov (CEO and Founder at FriendlyData, Inc.)

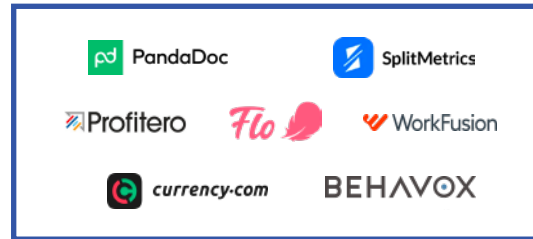
INTERNATIONAL EXPERTISE | A number of startups have passed through **acceleration programs** abroad (Y Combinator, Boost VC, Startup Wise Guys, etc.) and **returned to Belarus to develop the ecosystem** at a conceptually new level.

Founders of **Storyline** (Y Combinator alumni) are actively developing the ecosystem by **organizing community meetings for startup founders**.

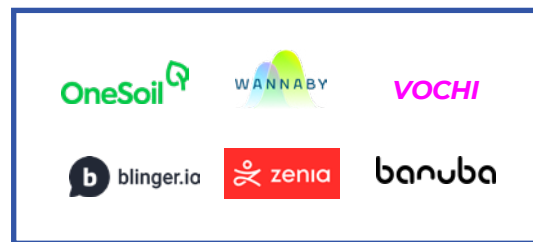
EXITS



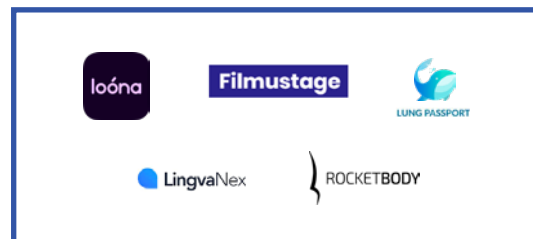
MOST VALUABLE STARTUPS



VALUABLE STARTUPS



RISING STARS



CAPITAL, TALENT AND ENTREPRENEURIAL SKILLS

YURY SHLAGANOV, ASSOCIATE, FLINT CAPITAL

As long as the Belarusian internal market is very small - the whole country's GDP is about \$60 billion - Belarusian founders are not trapped into the framework "we will launch on the domestic market and then go worldwide," which often leads to startup failures. Belarusian founders are developing their competitive products for worldwide markets from scratch.



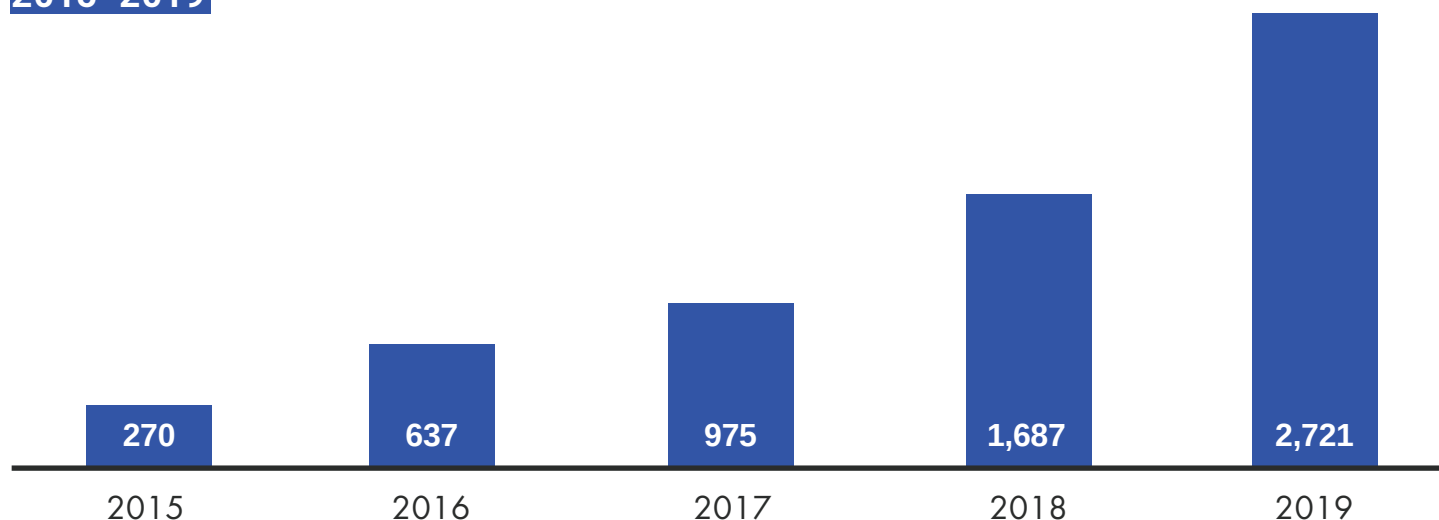
LOCAL STARTUP COMMUNITY IS GROWING BY 78% ANNUALLY BY THE NUMBER OF ACTIVE MEMBERS IN TECH-RELATED MEETUP GROUPS

- Belarus is in 3rd place in Europe, following Albania and Macedonia according to the growth rate of active members in the community from 2015.

78%

Compound annual growth rate of the tech community in Belarus (2015-2019)

NUMBER OF ACTIVE MEMBERS IN TECH-RELATED MEETUP GROUPS IN BELARUS, 2015-2019



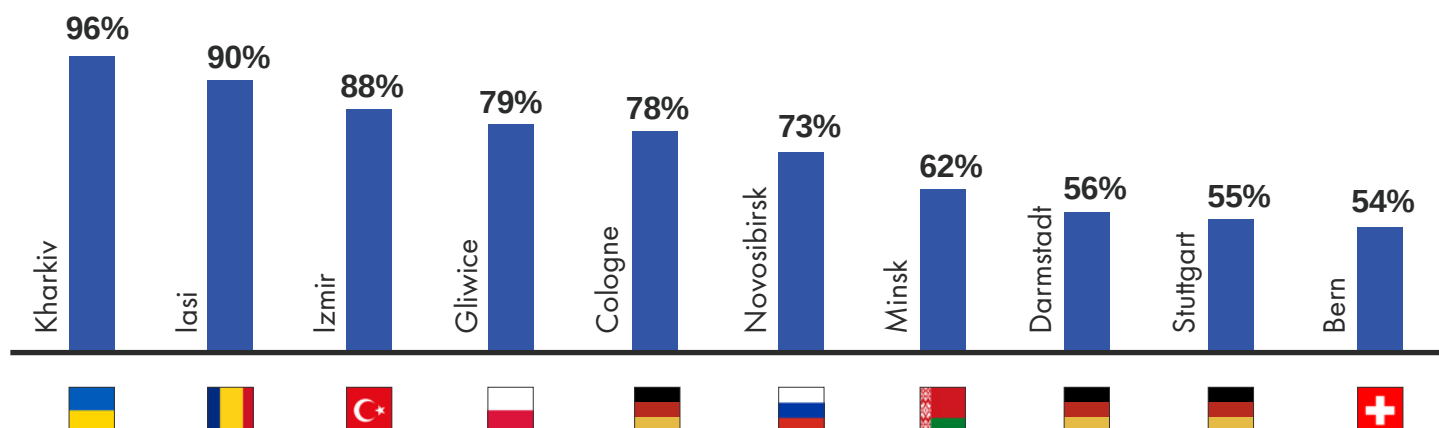
Source: The state of European Tech (2019 Report by Atomico)

- In 2019, Minsk was recognized as one of the fastest-growing hubs in Europe by year-on-year growth of attendees to tech-related Meetup events. The city also holds 7th place among top European hubs according to the year-to-year growth rate of active members in tech-related Meetups.

44%

Year-on-year growth of attendees to tech-related Meetup events in Minsk

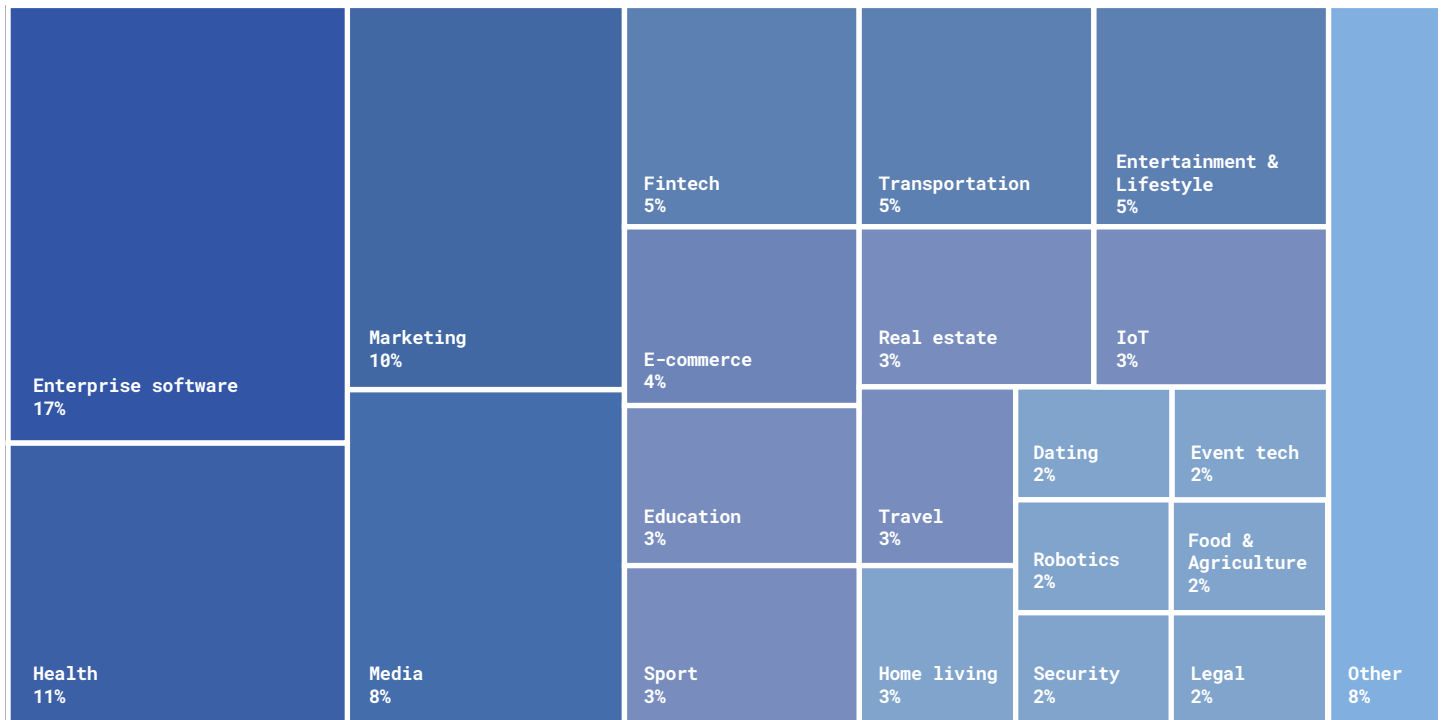
TOP-10 FASTEST-GROWING HUBS IN EUROPE BY THE GROWTH RATE OF ACTIVE MEMBERS



Source: The state of European Tech (2019 Report by Atomico)

MOST STARTUPS SPECIALIZE IN THE DEVELOPMENT OF ENTERPRISE SOFTWARE

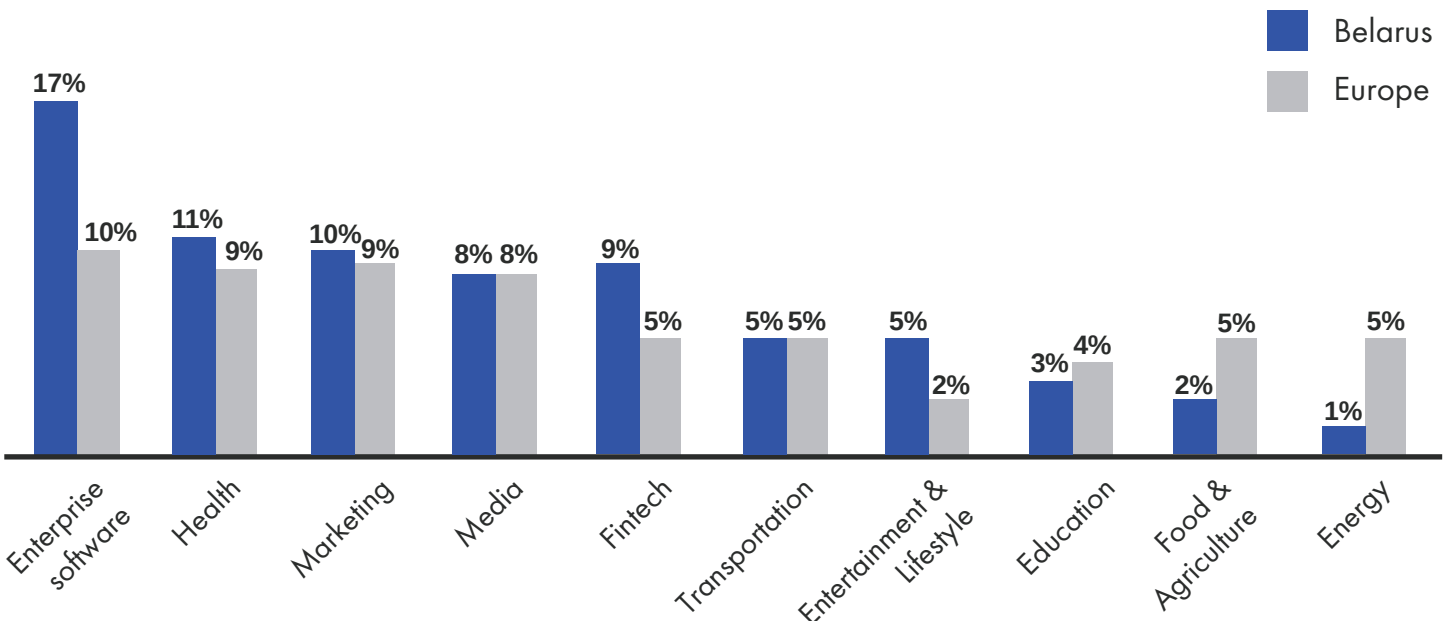
OPERATING & VISIBLE STARTUPS BY INDUSTRY IN BELARUS, 2019, %



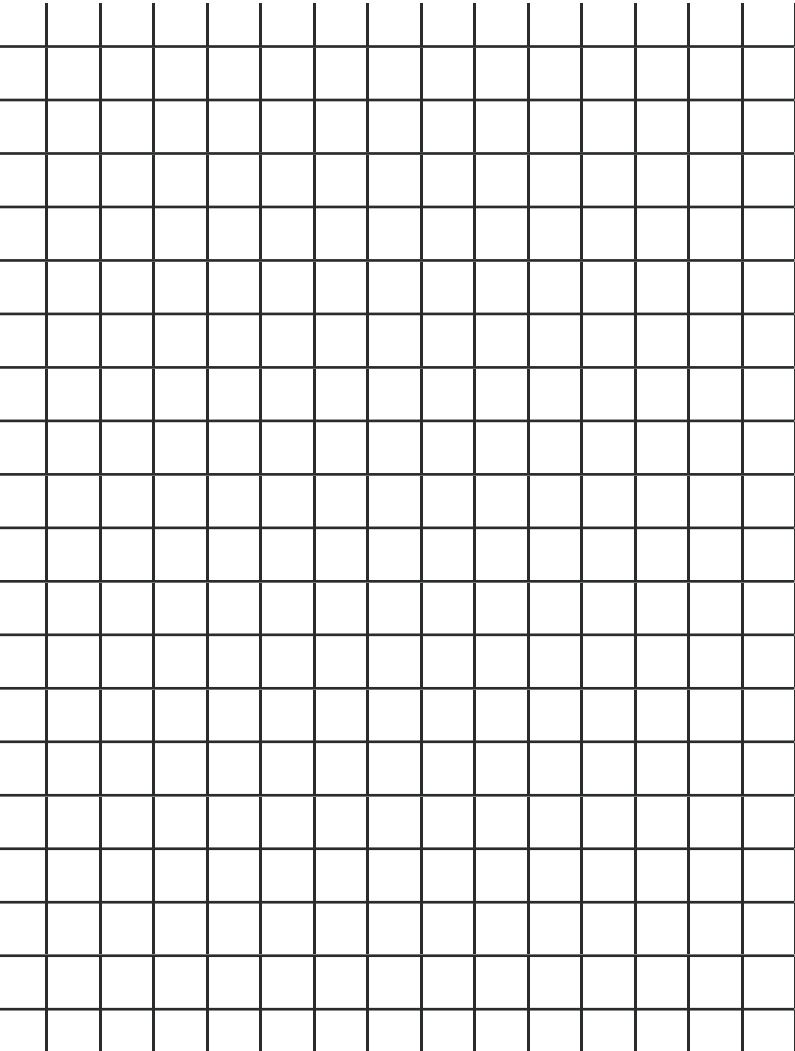
Source: CIVITTA startups database

- The strong presence of Enterprise Software can be partially explained by the strong outsourcing sector.
- Enterprise Software, Health, and Entertainment are notable industries for Belarus, while the share of Fintech, Food, and Energy companies are lower than in Europe.

STARTUPS IN BELARUS AND EUROPE BY INDUSTRIES, %



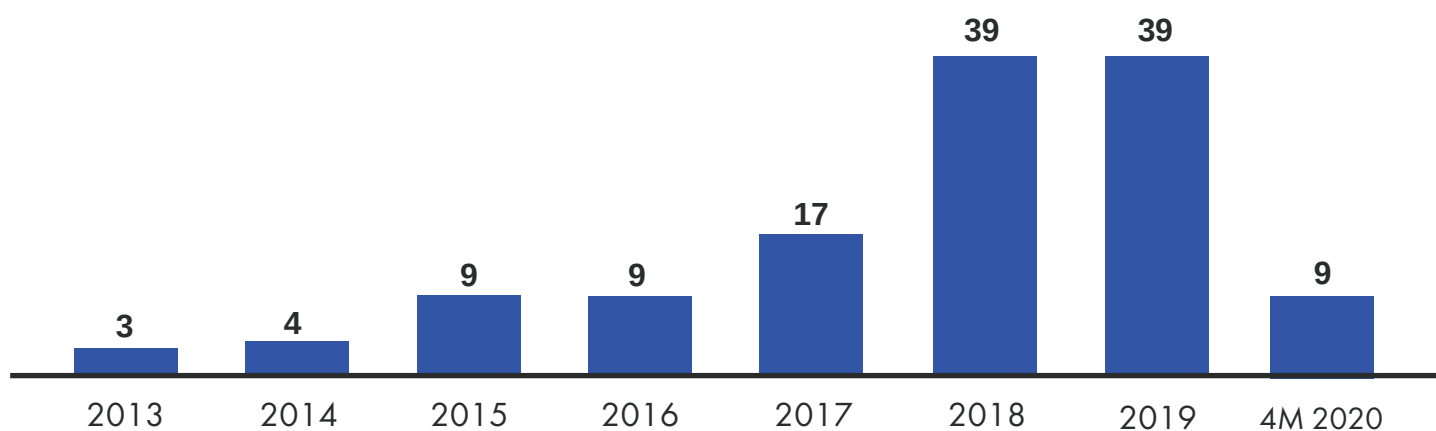
Source: Dealroom, CIVITTA startups database



INVESTMENT INTO BELARUSIAN STARTUPS

IN 2019 EARLY STAGE FUNDING ACCOUNTED FOR MOST OF THE DEALS

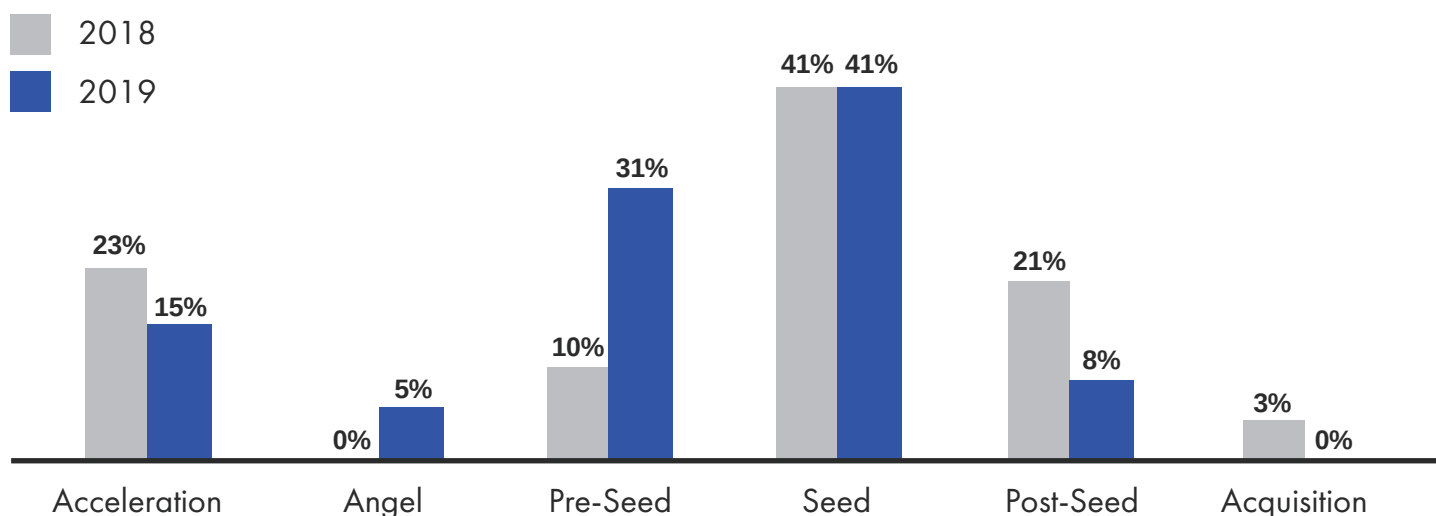
NUMBER OF INVESTMENT DEALS OF BELARUSIAN STARTUPS, 2013-2020



Source: CIVITTA startups database

- Compared to the structure of the deals in 2018, Belarusian startups saw a rise in angel and pre-seed investment, while the share of post-seed deals decreased dramatically.

STRUCTURE OF INVESTMENT DEALS IN 2018-2019, %



Source: CIVITTA startups database

DMITRIJ SOSUNOV, MANAGER AT STARTUP WISE GUYS

BY ecosystem is developing with decent speed, going forward. I hope that the advantage of other neighboring countries' experiences will be taken and lessons learned will be implemented.

There are signs that the Belarusian government understands the opportunity and impact tech companies are bringing to the economy and is responding with the creation of more favorable conditions.

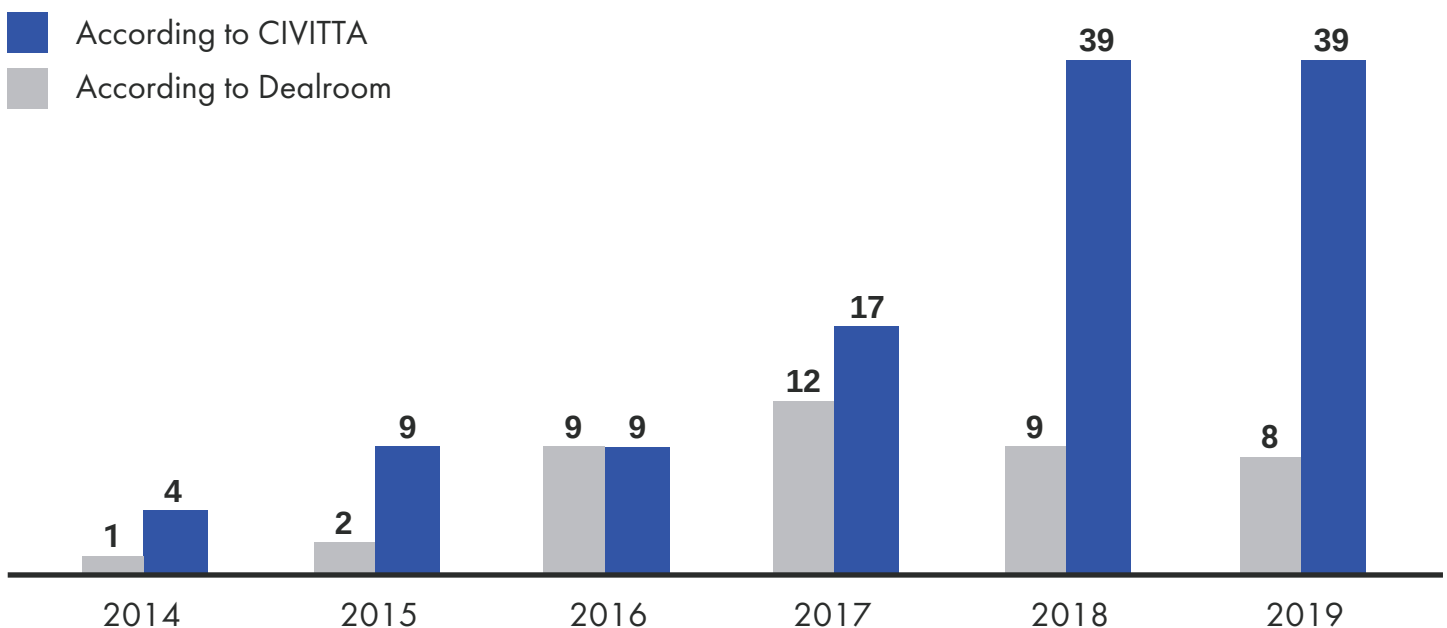
I foresee that investors will become more and more interested in Belarusian startups: there is already high interest from the Baltics (and not only). Foreign investors are interested in the Belarusian IT sector because of the great tech teams with high ambitions, building international companies from day one, partly because of the limitation of the home market, but also because of success stories and advice available from the US diaspora.



LOCAL STARTUP ECOSYSTEM IS UNDERREPRESENTED IN GLOBAL REPORTS AND PLATFORMS

- The number of investment deals in this report significantly varies compared to the number of deals that other reports published.
- While, in our methodology, we consider startups founded and registered in Belarus or with Belarusian founders and decision-making teams based in Belarus, other methodologies count deals based on the HQ principle.
- The majority of deals are invisible outside the country. Considering this fact, the next important challenge for the Belarusian ecosystem is to become more open and strengthen its brand.
- One bright example of a strong startup ecosystem and a credible transparent business environment is Estonia, with Startup Estonia. It contributes a lot to the image of the country and the ecosystem's openness: the initiative successfully manages a database of Estonian startups with open data. It has been gathering data about the startup scene since 2016, and regularly publishes the insights, and the ecosystem's reviews, etc.

NUMBER OF INVESTMENT DEALS OF BELARUSIAN STARTUPS, 2014-2019



Source: Dealroom., CIVITTA startups database, Startup Estonia

MARGO LAZARENKOVA, FOUNDER, EMERGE CONFERENCE

Although we do have many achievements to be proud of, I would mention such common things as a limited talent pool, lack of series A deals, and connections with other tech hubs globally. In particular, the startup ecosystem in Belarus today reminds me of a forest with not enough grass. We do have success stories, which started several years ago and now have grown into beautiful trees, yet if you look down to the ground, you won't see so many seeds for the next generation. What we miss today is epic hackathons, university startup hubs, and simple locations like coworking spaces and hubs for a startup culture to brew in it.



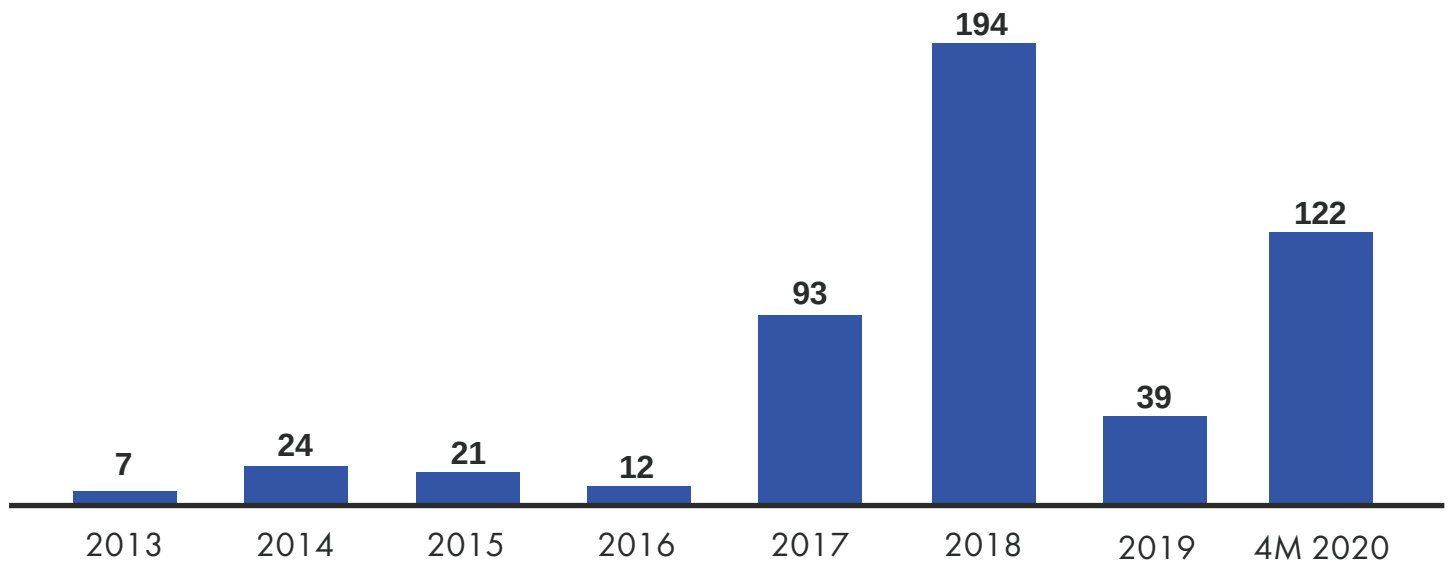
SINCE 2013 BELARUSIAN STARTUPS HAVE ATTRACTED MORE THAN 500M USD CUMULATIVELY

- Belarus experienced a significant decline in 2019 in investment. However, by the start of 2020, recovery was well underway.
- 2018 was a record year for Belarus with Workfusion and Behavox investment deals accounting for as much as 60% of the total investment raised that year.
- Considering the relatively small Belarusian ecosystem such mega-deals impact the overall dynamics.

512M \$

Cumulative investment
2013-4M 2020

INVESTMENT INTO BELARUSIAN STARTUPS, 2013-2020, M USD



Source: CIVITTA startups database

Since 2013, the investment dynamic has not been very smooth:

1

MEGA DEALS

- Quite often a few mega deals form the majority of the total investment.
- In Belarus where large, usually late stage, investment deals are not common, this can affect the investment dynamics significantly

2

REPORTING LAG EFFECT

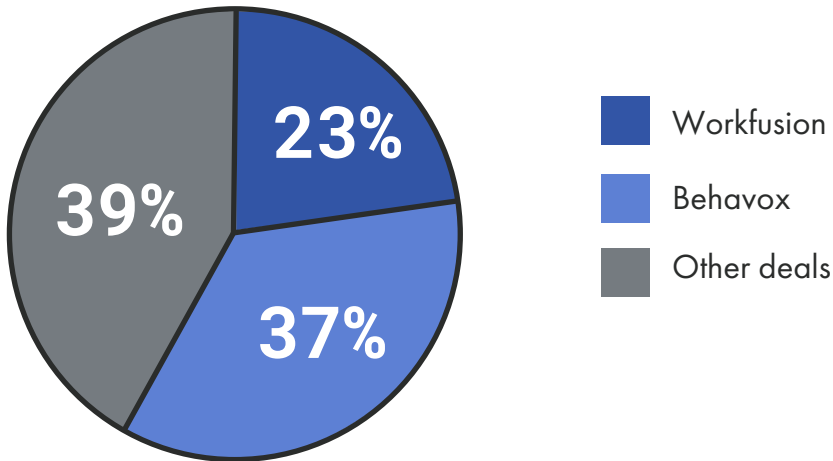
- Many investment rounds are only captured after a significant delay.
- This 'reporting lag' means the final totals are not known until a significant time period has elapsed after the end of the year in question.

1

MEGA DEALS

WORKFUSION, BEHAVOX AND OTHER DEALS, 2013-2019, M USD

- Since 2013, Workfusion and Behavox deals together represent 60% of cumulative investment in Belarusian startups (119M USD and 191M USD respectively)



Source: CIVITTA startups database

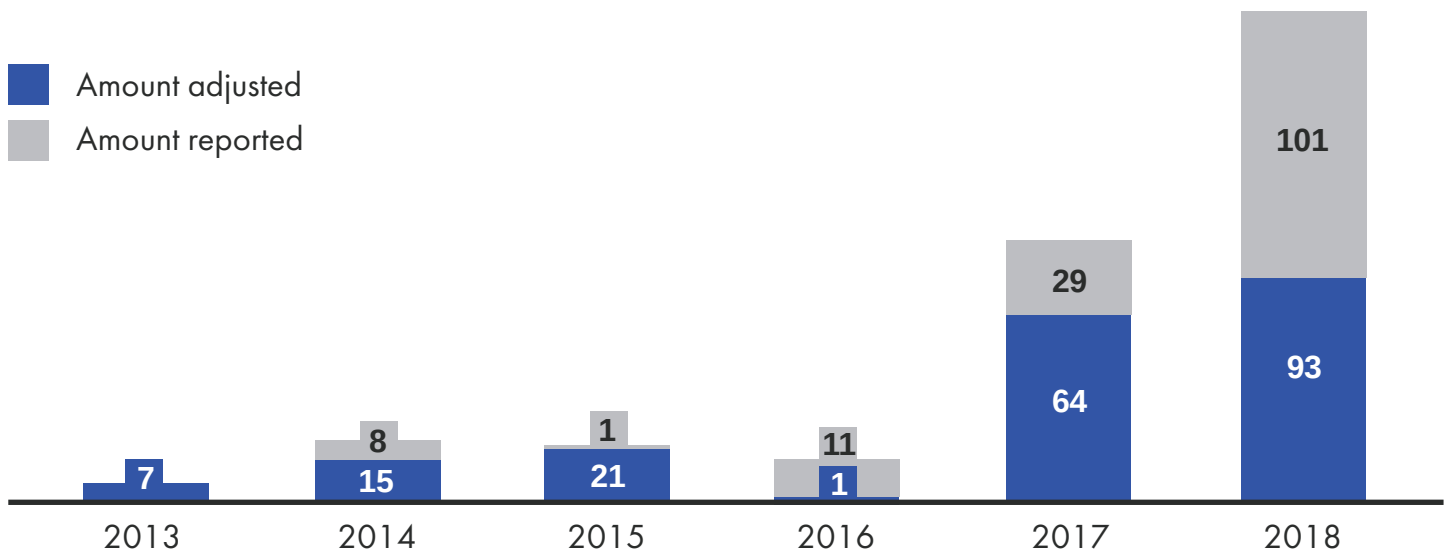
2

REPORTING LAG EFFECT

- Because of the investment lag effect this year we have adjusted the annual totals from the previous year report.
- The most significant adjustment is seen in 2018 with more than 10 newly reported deals (among them Behavox, OpenCare, Profitero, Currency.com, Lung Passport, etc.)

INVESTMENT ADJUSTED FOR REPORTING LAG EFFECT, 2013-2018, M USD

■ Amount adjusted
■ Amount reported

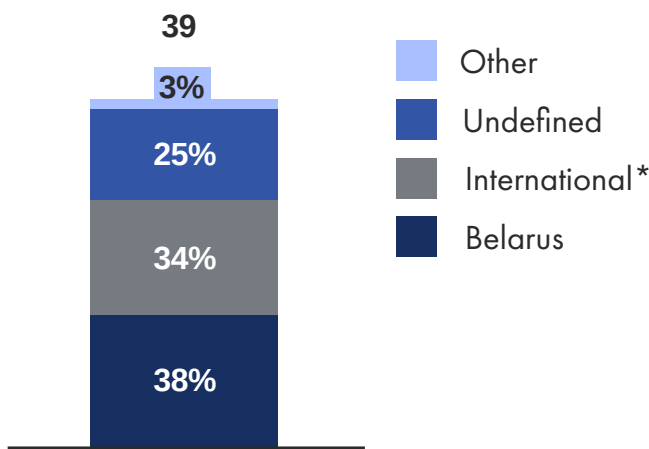


Source: CIVITTA startups database

IN 2019 BELARUSIAN CAPITAL DOMINATED THE STARTUP INVESTMENT SCENE

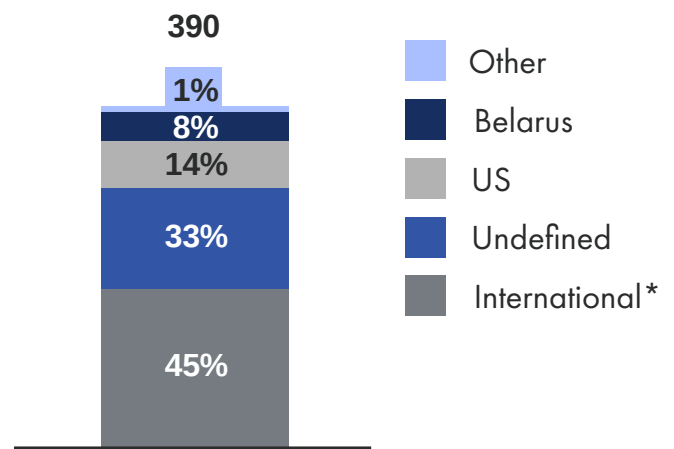
- The most systematic financing is coming from Belarusian ecosystem members and the US, investment from other countries is very fragmented.
- Compared to 2018, investment from Belarus has grown significantly but this is much the exception. In 2019, the Mediacube deal (10M USD) with Zubr capital is considered Belarusian, while a large deal with PandaDoc (10M USD) is classified as international due to the presence of a European fund.

INVESTMENT STRUCTURE BY COUNTRY, 2019, M USD



Source: CIVITTA startups database

INVESTMENT STRUCTURE BY COUNTRY, 2013-2019, M USD



Source: CIVITTA startups database

VLADIMIR BATAEV, PRINCIPAL CONSULTANT, ZAZ VENTURES & SME ADVISOR, EBRD

Startups from Belarus are definitely getting more & more noticeable: OneSoil, GiniMachine, Flo & others not only have proven their worth at the global scale—they have set a threshold for other European companies to aim at.

Our tech ecosystem is strong by European standards, yet I don't think it is living up to its full potential in producing deep tech disruptive innovation. I'd like to see more tech transfer from academia & more startups that focus on the EU Green Deal pillars or address other pressing societal challenges.

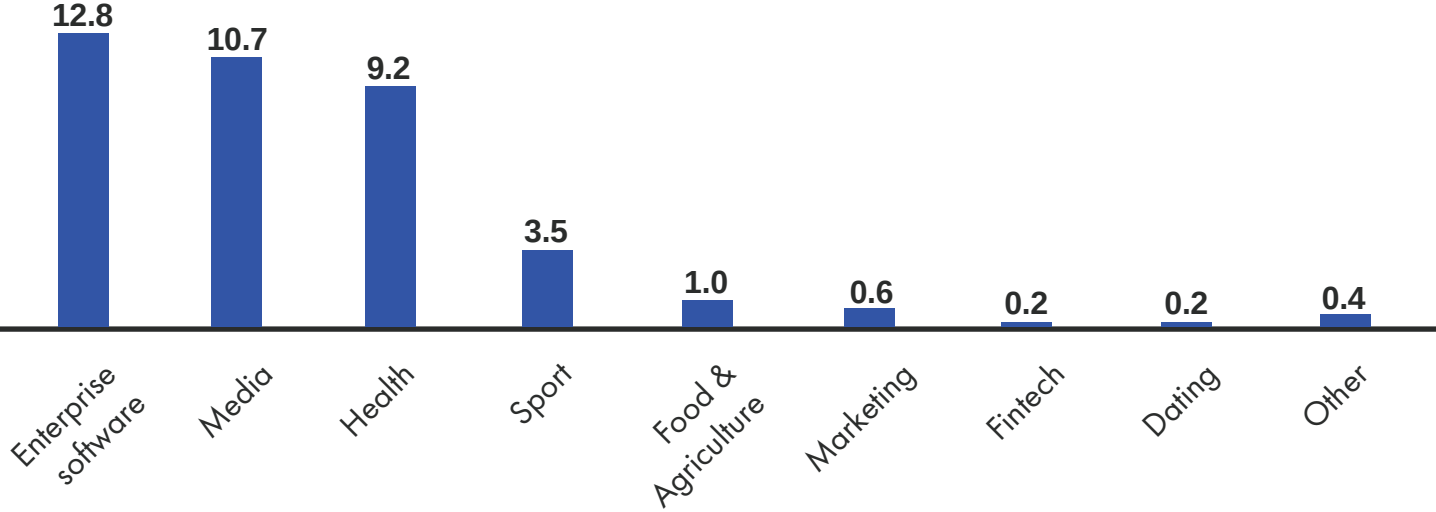


* - International capital includes deals with investors from multiple countries and funding from European institutions such as European Bank for Reconstruction and Development

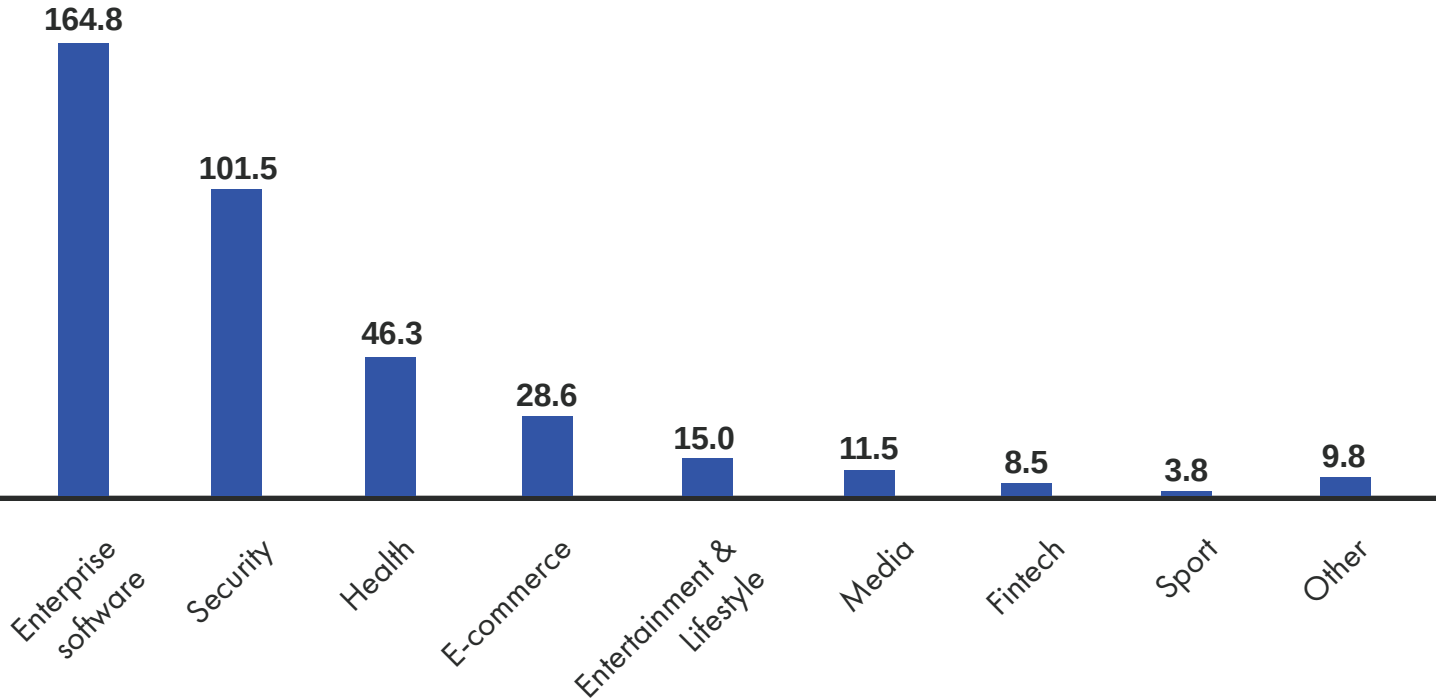
INVESTMENT BY INDUSTRY: ENTERPRISE SOFTWARE IS A CLEAR LEADER

- In 2019 Enterprise software, Media and Health were the most cash-rich startups in Belarus while in Europe the most prominent industries were Fintech, Enterprise software, Health, and Energy.
- Looking cumulatively over the last 6 years, Enterprise software companies followed by Security and Health have been the major beneficiaries with 80% of all capital raised. However, these three categories were driven mainly by large deals of Workfusion, Flo, and Behavox.

INVESTMENT BY INDUSTRY, 2019, M USD



INVESTMENT BY INDUSTRY, 2013-2019, M USD



Source: CIVITTA startups database

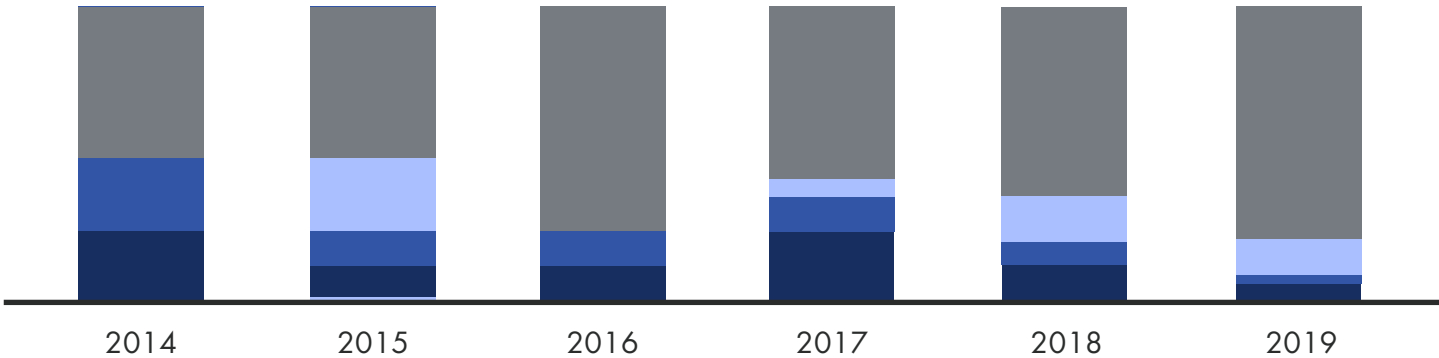
INVESTMENT BY SIZE: EARLY-STAGE DEALS CONTRIBUTED SIGNIFICANTLY IN THE TOTAL INVESTMENT IN 2019

- In Belarus, the majority of all deals are investments under 1M USD, while large deals of more than 10 million are driving the growth of capital invested.
- However, in recent years, deals of up to 10 million have been gaining momentum. The main reason for that is the increasing early-stage investment.
- We foresee an increase in the share of large deals in 2020.
- In contrast, in Europe, the share of small deals is decreasing, giving the way to deals of more than 100 million reflecting partially the maturity of the European startup scene.

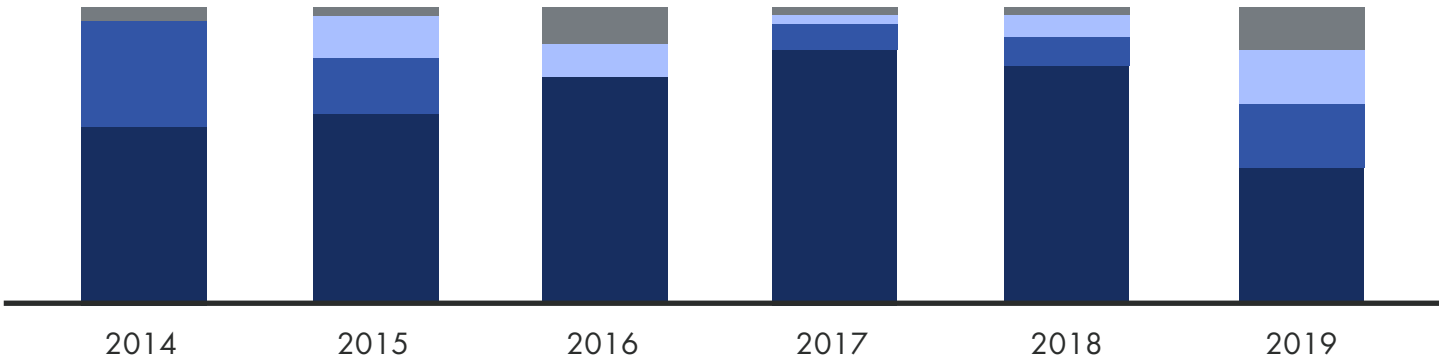
48%

Of all funding raised by Belarusian startups was driven by deals up to 10M USD

INVESTMENT DEALS BY ROUND SIZE, 2014-2019, NUMBER OF DEALS



TOTAL INVESTMENT BY ROUND SIZE, 2014-2019, M USD



0 M USD - 1 M USD
 1 M USD - 5 M USD
 5 M USD - 10 M USD
 10 M +

THE MAJORITY OF DEALS IN BELARUS ARE UP TO 1 M USD SHOWING THE RISE OF EARLY STAGE DEALS

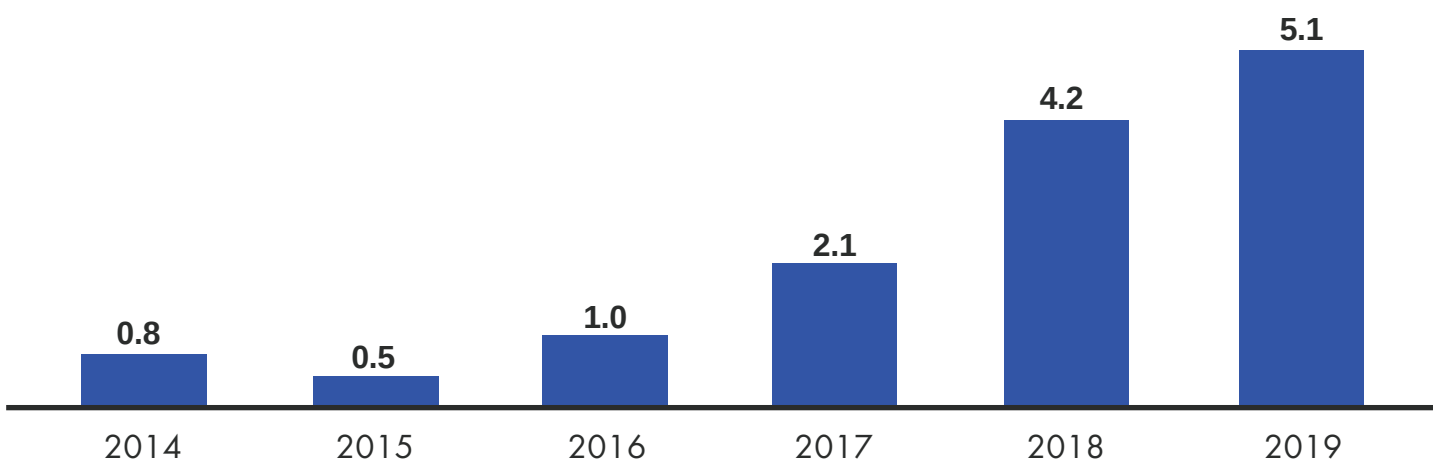
In 2019, we saw a significant growth of deals up to 1M USD:

- The number of deals has increased by 33%
- The total amount of capital by 21% compared to 2018.

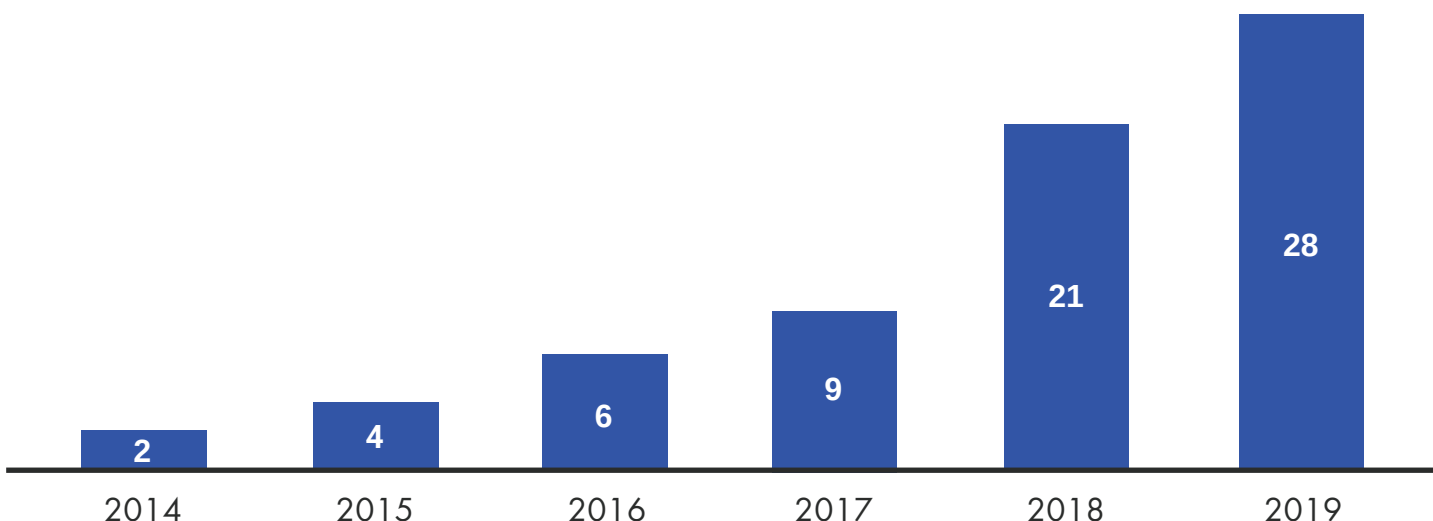
66%

Share of deals up to 1M USD
(in the total number of deals)

INVESTMENT UP TO 1M USD INTO BELARUSIAN STARTUPS, 2014-2019, M USD



NUMBER OF INVESTMENT DEALS UP TO 1M USD INTO BELARUSIAN STARTUPS, 2014-2019



ANGELS BAND CONTRIBUTES SUBSTANTIALLY TO THE EARLY-STAGE INVESTMENT DEVELOPMENT IN BELARUS

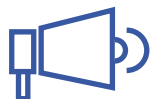
ANGELS BAND IN FIGURES (2019)



229 New projects



88 # of business angels, 2019



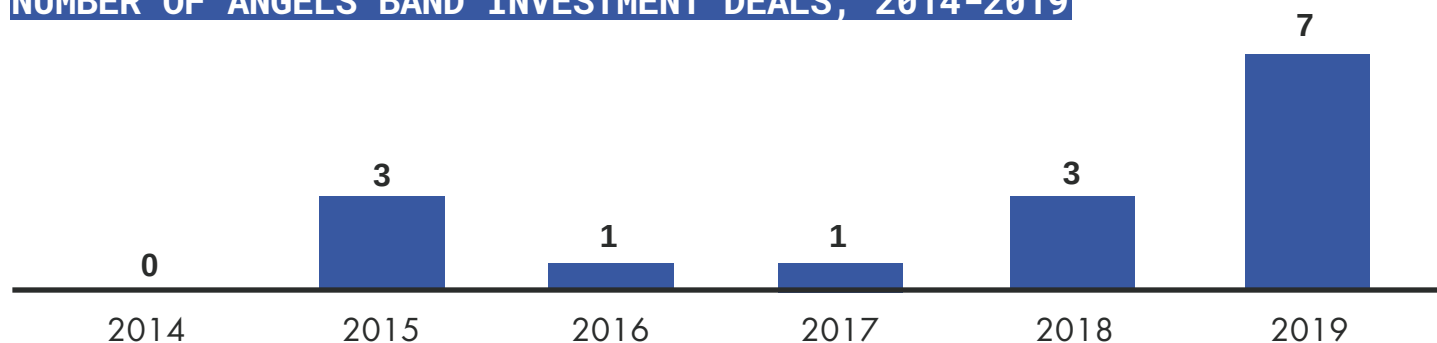
68 Pitches



10 Pitch sessions

- Angels Band is an angel investor network, founded in 2018.
- More than 400K USD was invested in 7 startups including Mobiwis, Cashew, Skinive, and Scooter.API.
- Although the number of business angels in the network has not grown in 2019, the network as a whole ensured an increased number of investment deals (more than two times), and an increased amount of money invested (at least 5 times).

NUMBER OF ANGELS BAND INVESTMENT DEALS, 2014-2019



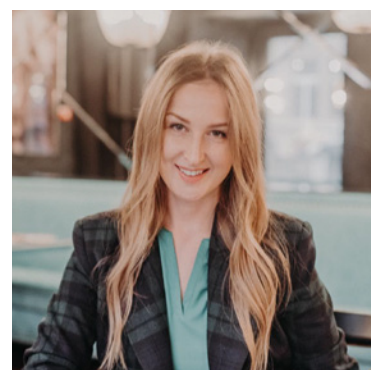
LIDA MATVEEVA, CHAIR OF THE BOARD AT ANGELS BAND

Angels Band aims to create favorable conditions for investing in startups in Belarus. Today, we are the only business angels network in Belarus and are the main spot where startups can get investments at their earliest stages.

The venture capital financing market in Belarus is now in the sandbox area, and we, as an active player in this market, are striving to give it a boost for growth.

Since the foundation of the network, we have seen how the business angels' interest and desire to invest in technology startups is increasing. Last year our network formed 7 syndicates with a total amount of \$0.5 Million.

An important feature of the network is the increasing number of individual deals with startups from the Angels Band pipeline. Presumably, last year, there were several dozen individual deals, with tickets from \$10K to \$50K. Therefore, we assume that only last year, the amount of investment in Belarusian startups by Angels Band could have reached \$1M.





PURPOSE-DRIVEN INVESTMENT

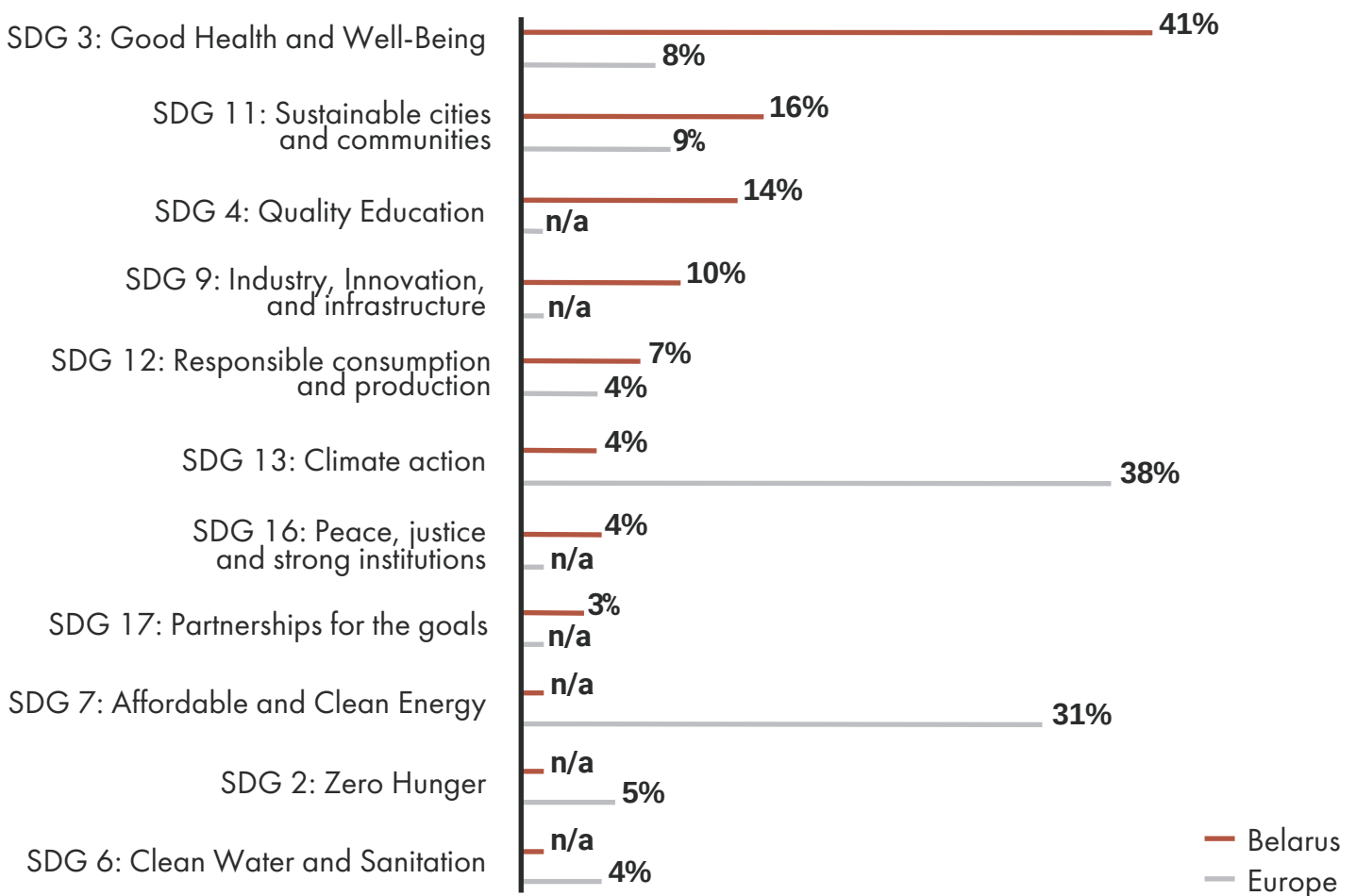
EVERY 4TH STARTUP IN BELARUS IS CONTRIBUTING TO SUSTAINABLE DEVELOPMENT

- 70 startups in Belarus (every fourth startup) are tackling, to a certain extent, at least one of the UN's SDGs* as a core part of their mission.
- SDG 3 on Good Health is by far the most addressed goal. In contrast, in Europe, this goal is the 4th most popular with the SDG 13 on Climate Action and SDG 7 on Affordable and Clean Energy as leaders.

27%

of operating and visible Belarusian startups meet, to a certain extent one of the UN's SDG's

STARTUPS IN BELARUS AND EUROPE BY SUSTAINABLE DEVELOPMENT GOAL, % OF PURPOSE-DRIVEN STARTUPS



Source: The State of European Tech (2019 Report by Atomico), CIVITTA startups database

Within the research, in order to classify companies, we tried to follow Atomico's methodology. However, the share of local purpose-driven startups is higher than in Europe (Atomico defines only 528 unique purpose-driven companies). There are several reasons for such difference:

- **SDGs** | Atomico analyzed companies related to only seven SDGs of the seventeen, while our analysis did not have such a focus
- **Methods of analysis** | For the analysis Atomico made the mapping to keywords (related to each SDG) on Dealroom.co; our research was based on the analysis of each specific startup which gave us more information on their activity.

* - The Sustainable Development Goals (SDGs), were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030

PURPOSE-DRIVEN STARTUPS



FLO HEALTH | AI-powered women's health platform that encompasses accurate cycle predictions, personalized daily health insights, and a closed, secure community of experts and peers.



LUNG PASSPORT | System based on an electronic stethoscope and a mobile application that recognizes breathing sounds using neural networks and can identify the five most common diseases.



LOGICLIKE | Online educational platform for the development of logical thinking and mathematical abilities.



VIBRO BOX | Digital signal processing service focused on prescriptive maintenance, vibration diagnostics, and condition monitoring algorithms for equipment.



ECONTAINER | Urban farming for healthy living.



KEEPL | Application for sharing your stuff with friends.



ONESOIL | Precision farming platform for field monitoring and production of smart soil sensors.



SWEELY | Social ecosystem that unites Sponsors, Volunteers, and Non-profit organization.

ONESOIL IN FIGURES



>10

Pilot projects



149K

Number of users



180

Countries using OneSoil



377M

Hectares of fields added by users

FOUNDED | 2017

FOUNDERS | Slava Mazai, Sasha Yakovlev, Usevalad Henin

CURRENT STAGE | Early Growth

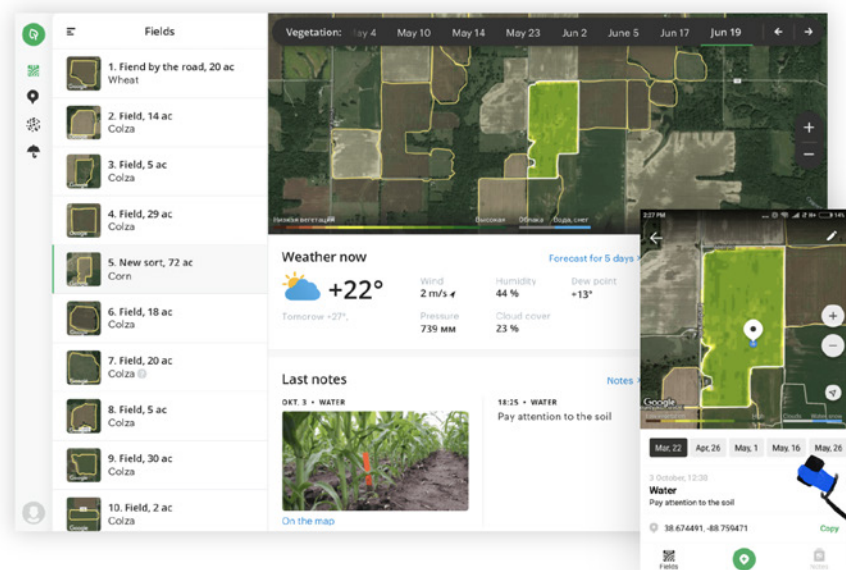
INVESTMENT | Undisclosed amount. Investment by Bulba Ventures and Leonid Lozner (Angel investor and EPAM co-founder)

SHORT DESCRIPTION | OneSoil develops an AI-powered platform for precision farming which offers automatic field and crop detection, remote plant monitoring, maps for variable rate fertilizer application, analysis of field operations, weather monitoring and more. The OneSoil apps run on satellite images, machine learning algorithms, and big data analysis

PLATFORM

Monitor fields

Control plants, leave notes, check the weather and calculate nitrogen, phosphorus and potassium fertilizer rates in the free OneSoil platform. All you need is Internet access — the rest we do ourselves.



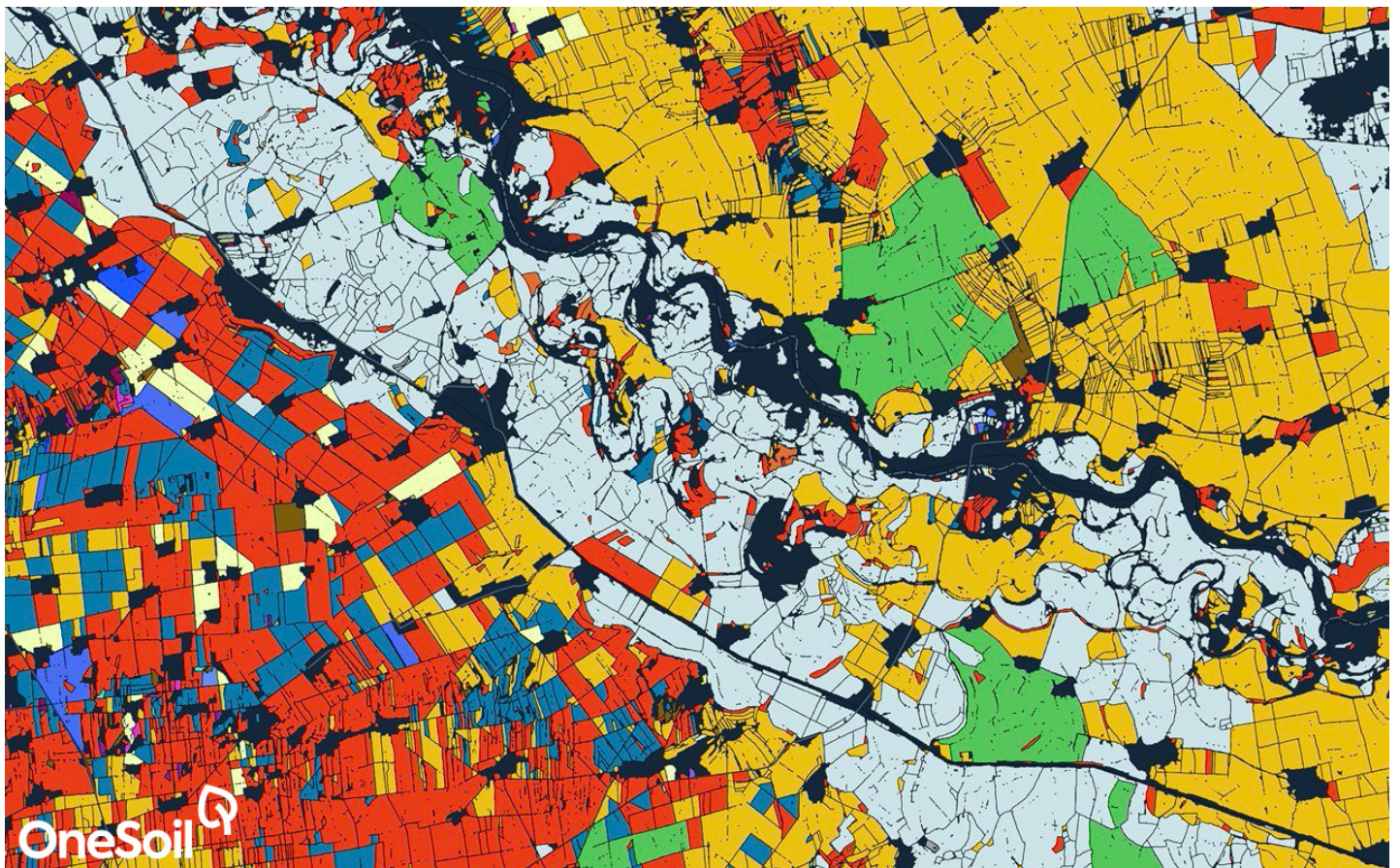
The technologies behind OneSoil help to simultaneously optimize yields and decrease wastage of inputs, thus minimizing the ecological footprint.

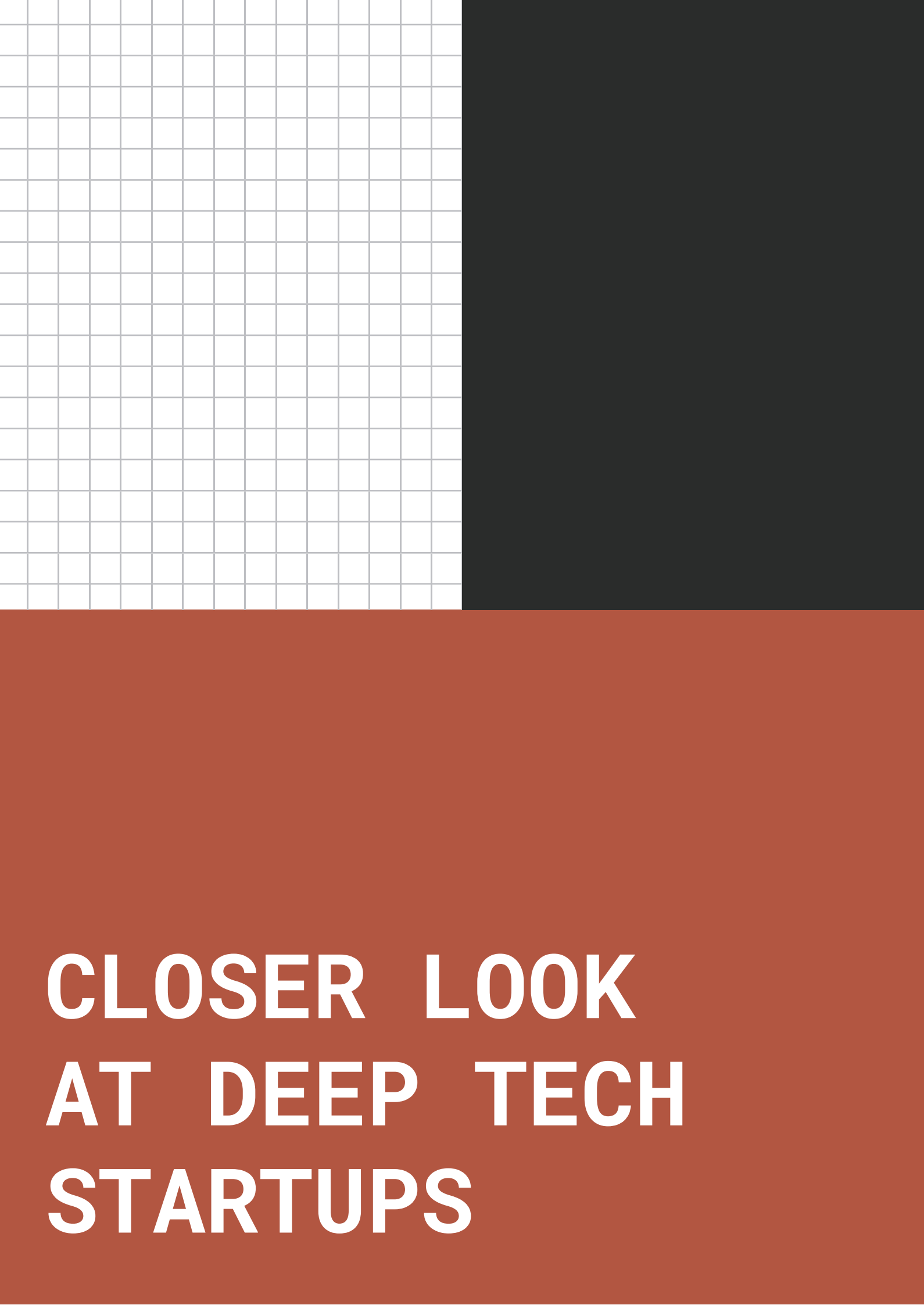
NDVI | The application calculates NDVI (the normalized difference vegetation index), which is an indicator of plant health. When a farmer knows the NDVI, while scouting, they can skip the parts of the field that are developing well and go directly to the problem areas.

FERTILIZERS | The app calculates rates of nitrogen, phosphorus, and potassium fertilizers for differentiated applications. This feature helps to decrease the wastage of inputs, save money, and minimize the pollution of groundwaters.

+25% FERTILIZER SAVINGS

+20% SEED SAVINGS





**CLOSER LOOK
AT DEEP TECH
STARTUPS**

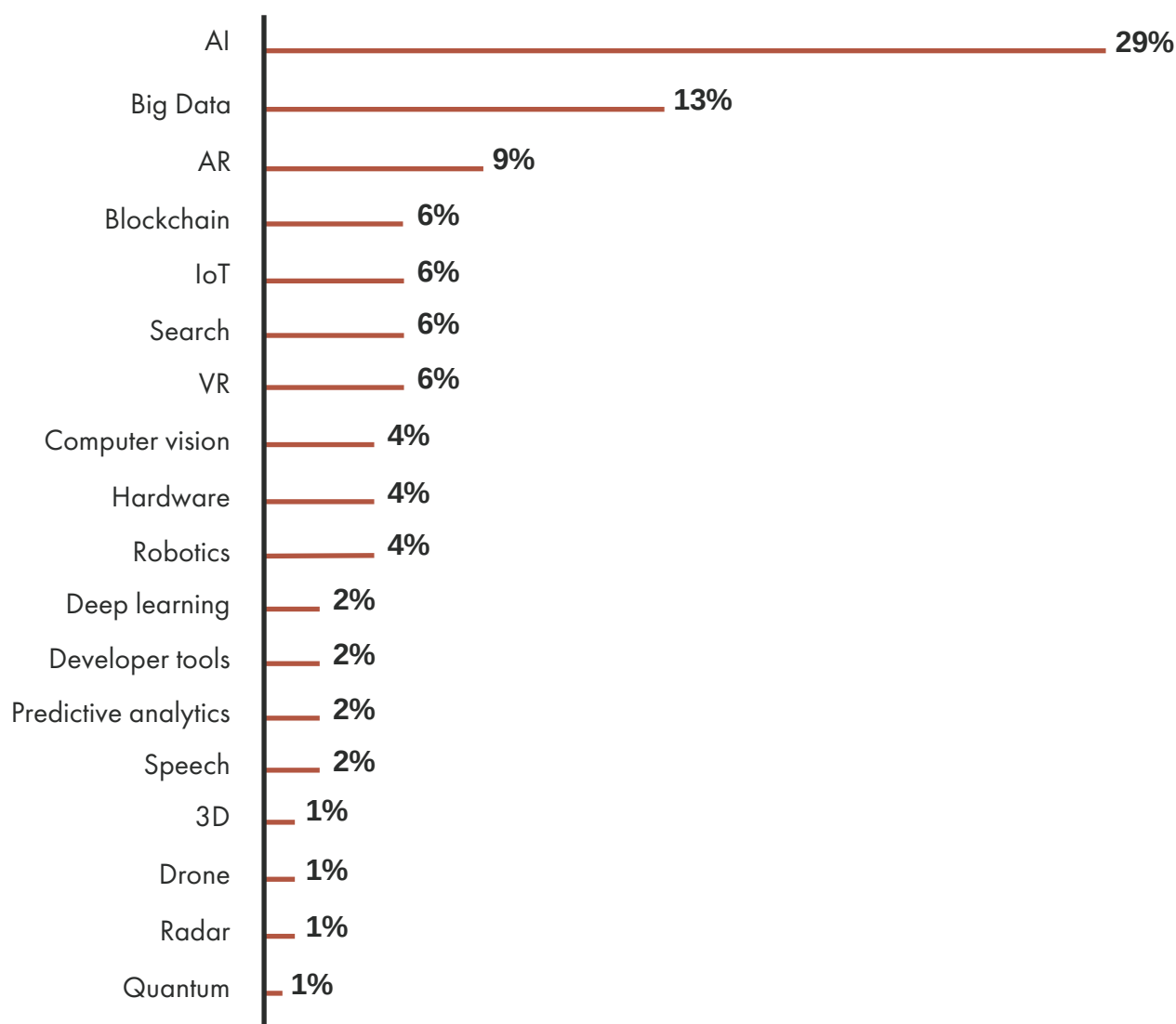
THE MAJORITY OF BELARUSIAN STARTUPS ARE DEEP TECH WITH AI AS A KEY CATEGORY

- Slightly more than half of the startups can be classified as deep tech companies. Among them, AI startups dominate, Big Data follows.
- Currently, AI can be called an area of specialization of Belarus: thanks to the strong engineering pool, we have a large number of companies developing AI products or products powered by AI.
- According to the number of AI companies, Belarus outpaces its neighbors.

54%

of startups can be considered deep tech companies

VISIBLE OPERATING STARTUPS BY DEEP TECH SUB-CATEGORY, 2019, % OF ALL DEEP TECH STARTUPS



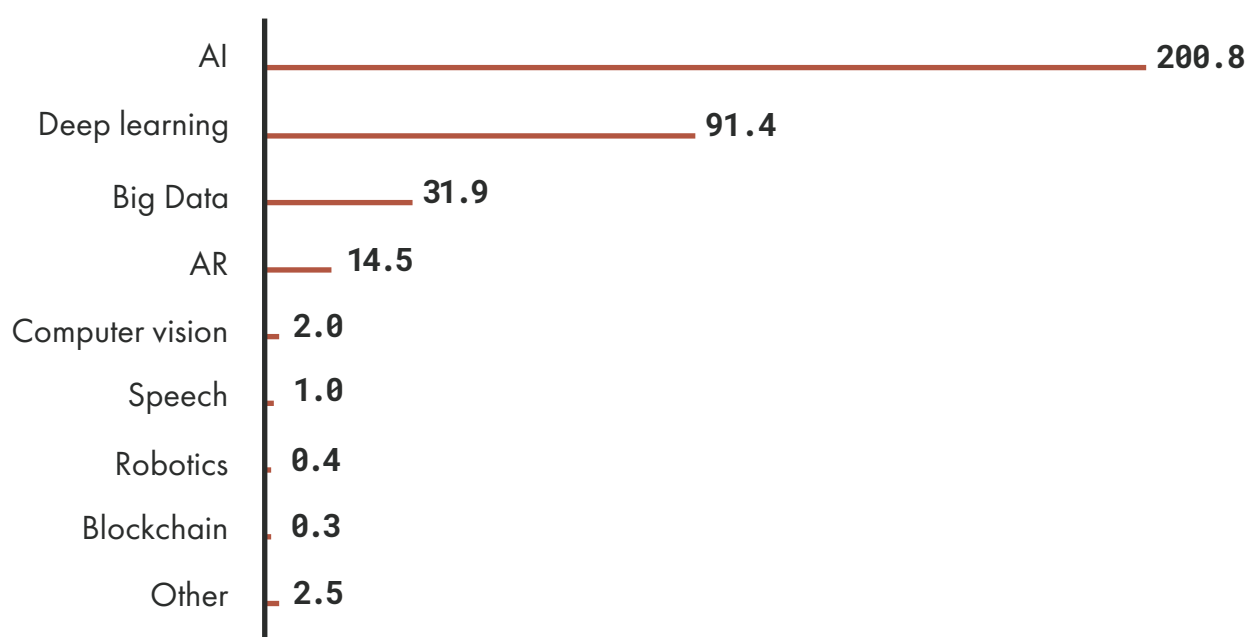
AI STARTUPS DOMINATE DEEP TECH COMPANIES BY INVESTMENT

- Over the last 6 years, deep-tech startups (54% of all startups) attracted almost 90% of all investment.
- AI dominates the capital invested in deep tech: this subcategory alone attracted 52% of all investments into deep tech companies. AI also has the majority of deals in the selected period

88%

Share of deep tech companies in total investment in 2013-2019

INVESTMENT BY THE DEEP TECH SUB-CATEGORY, 2013-2019, M USD



YURY MELNICHEK, CO-FOUNDER, BULBA VENTURES

Success stories from recent years, together with the strong talent pool and active data science community, sparked a new wave of promising ML startups in Belarus. The tax and legal system of the Hi-Tech Park allow funders to start running their operations locally. All of this, including a growing entrepreneurial community, puts Belarus in the spotlight and contributes to its image of a growing ML hub.



FLO IN FIGURES



137M

Number of installations



34M

Number of monthly active users



#1

Most downloaded health app in the App Store



9.9M

Daily active users

FOUNDED | 2015

FOUNDERS | Dmitry Gurski, Yuri Gurski, Max Skrobov, Andrew Kovzel

CURRENT STAGE | Late growth

INVESTMENT | 20.5 M USD by Founders Fund, Mangrove Capital, Flint Capital, Social Discovery Ventures, Haxus, and others.

SHORT DESCRIPTION | Flo is an AI-powered health app that supports women throughout their entire lives – from first menstruation to early motherhood to menopause. Flo provides curated cycle and ovulation tracking, personalized stories and content library, expert recommendations, and a private community for women to share their questions and concerns.

AI / ML TECHNOLOGY BEHIND THE APP

Data & Machine Learning (ML) lie at Flo's core. There is a ML community inside Flo with regular internal meetups to generate ideas that could be integrated into the product.

ML is involved in the following cases:

USER PROFILE. A centralized knowledge base is created (symptoms logged, information from Health Assistant chats, surveys, etc.) using data from the user profile. ML uses this information for several purposes. These include cycle predictions, identifying symptom patterns, delivering personalized health insights and topics in the community section, as well as finding the right moment for Health Assistant interaction. In other words, it helps to deliver the most relevant information at the right moments.

ACADEMIC RESEARCH. Flo provides either analytical reports or anonymized subsets of datasets through its partnerships with universities to conduct various large-scale research.

SELF-ASSESSMENT TOOLS. ML helps improve the accuracy of self-assessment tools' summaries aimed at identifying the possible increased risk of certain conditions (e.g., PCOS, endometriosis).

COMMUNITY. Flo uses an auto-moderation system based on ML that helps identify inappropriate comments and provide the first stage of the moderation process. ML is also used for building a relevance algorithm.

PARTNERSHIPS



8 Collaborators (universities, medical associations, health organizations)

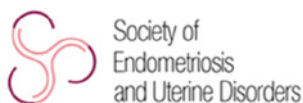


50 Medical experts (from Europe and North America)



UNFPA (UNITED NATIONS POPULATION FUND)

- Content creation on reproductive health, contraception, and breast cancer
- Collaboration and support on global and local campaigns
- Joint research projects on information for sexual reproductive health and gender issues



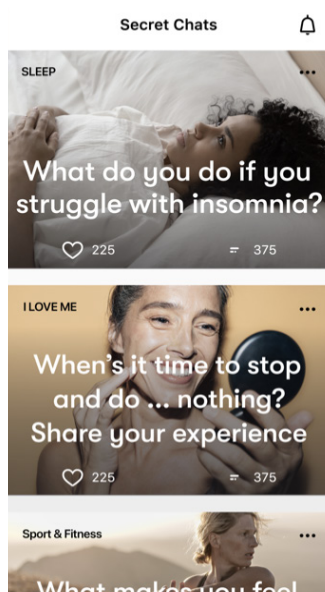
SEUD (SOCIETY OF ENDOMETRIOSIS AND UTERINE DISORDERS)

- Raising global awareness about endometriosis by creating special content, as well as a free multimedia course in the Flo app

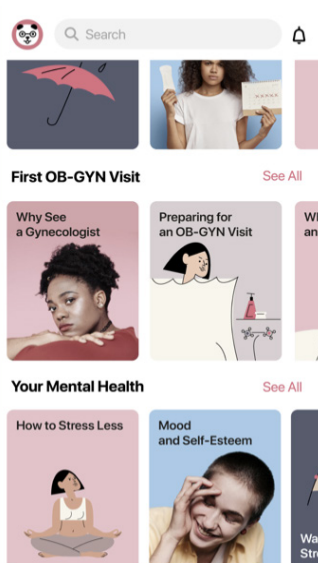
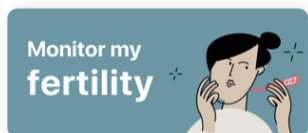
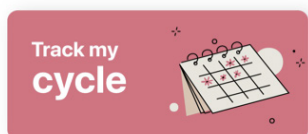


MYOVANT SCIENCE

- Joint development of a digital tool inside the app to screen women for heavy menstrual bleeding (HMB)



How can I help you?



LUNGPASS (1/2)



LUNG PASSPORT

LUNGPASS IN FIGURES



90.8%

Average accuracy of lung-sound detection



~100

Patients participated in clinical studies and trials



11

Team size



1M EUR

Total investment

FOUNDED | 2017

FOUNDERS | Helena Binetskaya, Maksim Ziabko, Yuliya Narushevich, Aleksey Karankevich

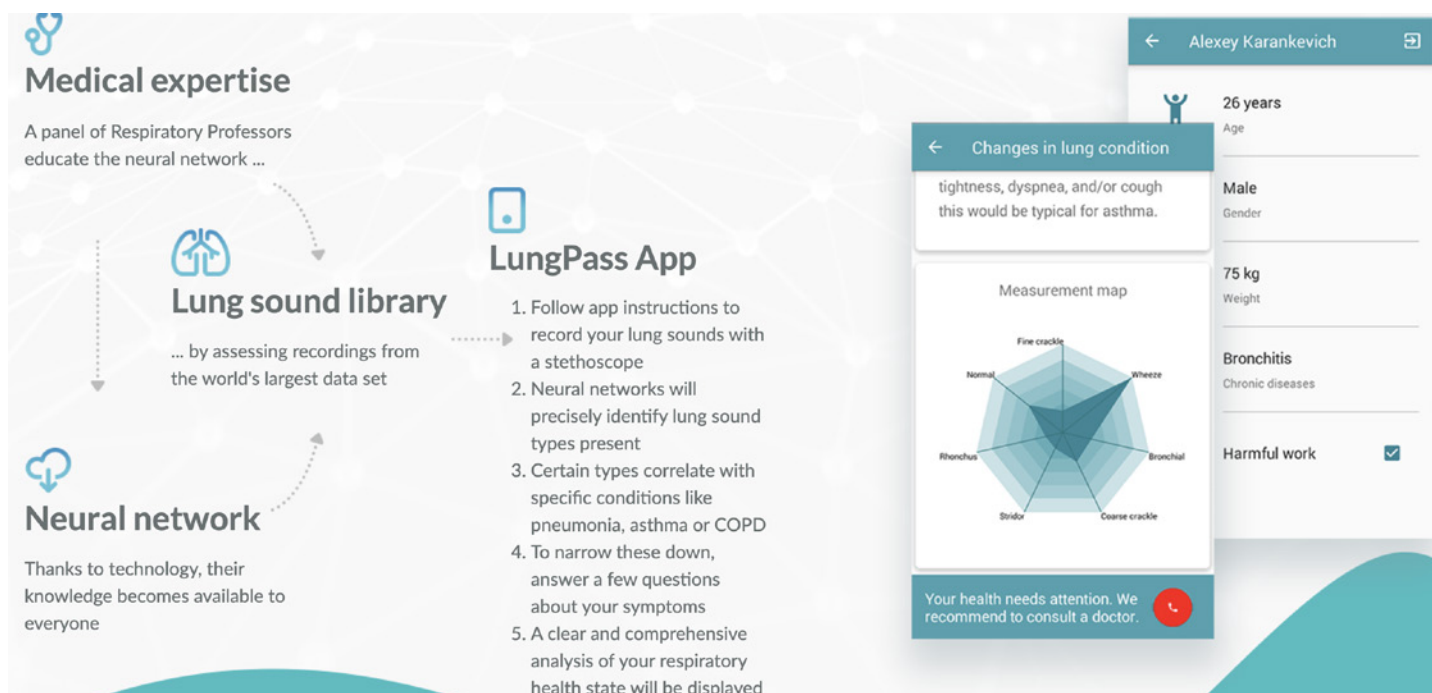
CURRENT STAGE | Early growth

INVESTMENT | 1M EUR by Verge HealthTech Fund (Singapore), Beurer GmbH (Germany), business angels from Belarus, Russia, Italy, and Estonia

SHORT DESCRIPTION | LungPass is the world's most affordable smart stethoscope that detects the early signs of a respiratory condition and monitors its progression. Relevant for COVID-19, COPD, asthma, and pneumonia. For home and professional use.

AI / ML TECHNOLOGY BEHIND THE APP

DETECTION OF THE LUNGS SOUND. Lung Passport uses Deep Learning (AI) for the lung sound spectrogram recognition task. The purpose is to differentiate between normal breathing, wheezes, rhonchi, coarse crackles, fine crackles, and environmental artifacts.



Source: Lungpass



PARTNERSHIPS



BEURER

- Commercial partnership with #1 German distributor of medical and wellness products for home use



BELARUSIAN MEDICAL ACADEMY OF POSTGRADUATE EDUCATION

- Partnership for clinical trials



Evidence based

To increase credibility and reliability of LungPass sound analysis, we have been testing it against a sequence of objective tests like CT-scans, X-Rays, blood tests - with very positive results so far (clinical studies in progress).



Condition focused

COPD, asthma, bronchitis, pneumonia, cystic fibrosis pose their unique challenges. LungPass was co-developed and tested with patients groups and clinicians to address those in a tailored way, spanning from usability and adherence issues to early detection of both exacerbations and acute conditions.



Highly scalable

Simply put, it is by far the most affordable device capable of early deterioration detection of a wide range of respiratory conditions. Ideal wherever there is a shortage of healthcare resources and a large population.

BANUBA IN FIGURES



30

B2B Customers



1.6M

Number of monthly active users



150

Team size



31

Patent applications in the US, EU, and Australia

FOUNDED | 2016

FOUNDERS | Vadim Nekhai, Dmitry Ogievich, Yury Hushchyn

CURRENT STAGE | Late growth

INVESTMENT | 18M USD by VPCapital, Larnabel Ventures

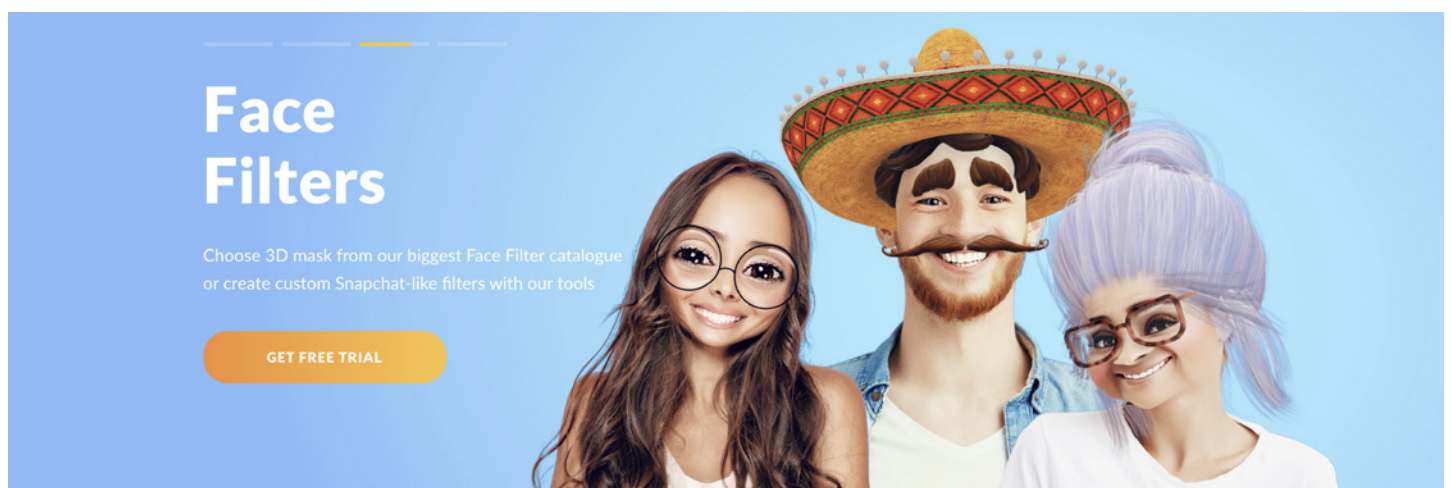
SHORT DESCRIPTION | Banuba is a computer vision lab that pioneers face-augmenting reality. The company builds ultra-immersive camera apps with the world's fastest Face Augmented Reality SDK. Banuba's FaceAR SDK combines augmented reality software like Face Filters, Beautification, Avatars, and Analytics.

AI / ML TECHNOLOGY BEHIND THE APP

Banuba uses artificial intelligence and deep learning to teach the camera to see and sense the world as humans do. Banuba uses artificial intelligence for face, body, and hand tracking. Furthermore, image segmentation is enabled by AI.

FEATURES. AI, combined with augmented reality, allows users to use face filters, backgrounds, video editors, create avatars, and try on virtual makeup with Beauty AR SDK – one item or complete makeup looks.

INDUSTRIES. Banuba brings innovative AI experience to e-commerce, advertising, healthcare, and telecom.

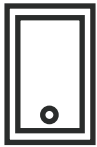


PARTNERSHIPS



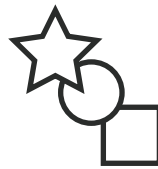
AGORA . IO

- Agora.io is recognized as one of the leading voice, video, and data streaming providers
- Together with Agora, Banuba tries to empower real-time engagement in apps as Banuba SDK face filters, beautification, 3D avatars, and background separation can be integrated into Agora interactive video and voice SDK



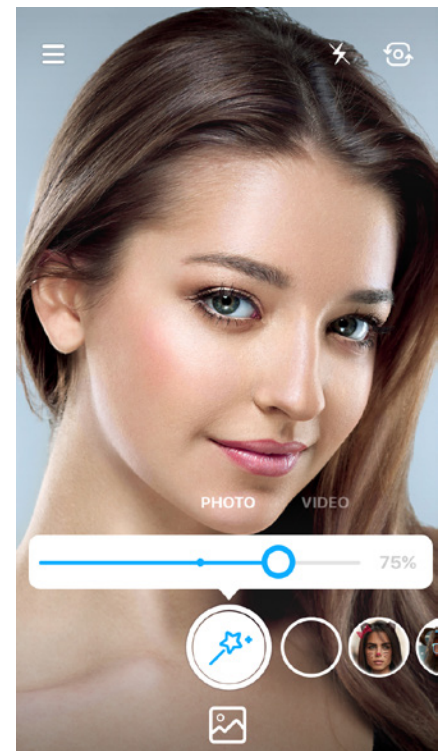
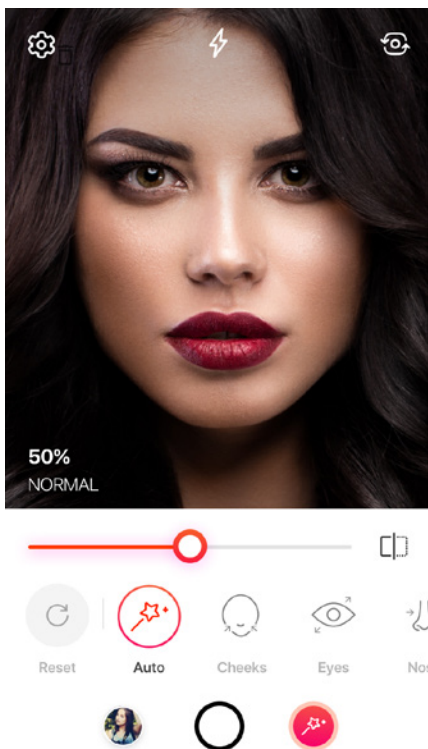
4 mobile apps

EasySnap, Banuba Face Filters, GifYou, TeasEar



2 SDKs

- Face AR SDK for brands and developers
- AI Video Editor SDK for developers



PANDADOC (1/2)



PANDADOC IN FIGURES



30%

Reduced time-to-close in deals



20B+ \$

In closed deals in 2019



250+

Team size



6.6+M

Documents created in 2019

FOUNDED | 2011

FOUNDERS | Mikita Mikado, Sergey Barysiuk

CURRENT STAGE | Late growth

INVESTMENT | 21.1M USD by Microsoft Ventures, HubSpot & Rembrandt Venture Partners

SHORT DESCRIPTION | Sales teams use PandaDoc to improve deal workflow, insights, and speed while delivering an amazing buying experience. Over 17,000 customers use PandaDoc all-in-one document automation software to streamline the process to create, approve, and eSign proposals, quotes, and contracts.

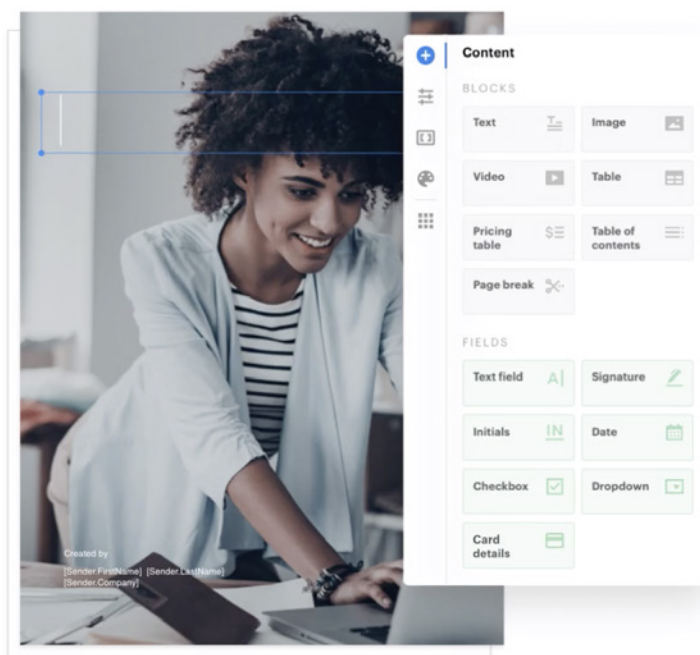
Crush your quota from propose to close

Sales teams use PandaDoc to improve deal workflow, insights, and speed while delivering an amazing buying experience.

[Start free 14-day trial](#)

[Request a demo](#)

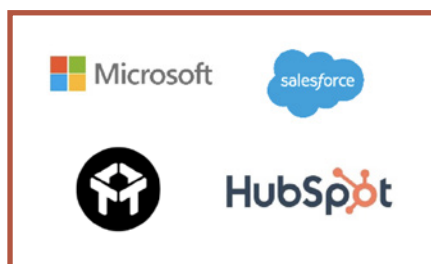
No credit card required



PANDADOC (2/2)



PARTNERSHIPS



- PandaDoc works with a vibrant community of sales evangelists, influencers, integrators, and partners including Salesforce, Microsoft, Drift, G2, HubSpot, and others

JOINT REPORT WITH G2



- G2 is the world's largest B2B tech marketplace and review site for software and services
- In partnership with G2, PandaDoc released their first annual state of deals research report: **State of Deals 2020: The New Sales Framework for Today's Buyers**
- The report contains an analysis of surveys with sales leaders, sales reps, and decision-makers, as well as PandaDoc platform data, and examines the inner workings of a deal and the relationship between buyer and seller

AI / ML TECHNOLOGY BEHIND THE PRODUCT

Machine Learning (ML) is an integral part of PandaDoc's internal operations to support marketing, customer success, sales, and finance teams.

- For example, **the lead scoring solution** helps to score and rank leads in real-time using Apache Airflow and send the qualified prospects to the sales team almost immediately.
- Another example is the **customer segmentation solution**, which uses user in-product behavior to identify expansion opportunities or churn risks.

WANNABY IN FIGURES



50+

Team size



190K

Number of monthly active users



1.6M

Number of installations



90K

Number of monthly installations

FOUNDED | 2017

FOUNDERS | Yury Melnichek, Alexey Melnichek

INVESTMENT | 3.2M USD by Haxus and Natalia Vodianova

Short description | Wannaby is a fashion-tech startup from Belarus, creator of Wanna Kicks, the try-on shoe application that uses AR technology to let users virtually wear sneakers and other footwear. The company makes fashion universally accessible to everyone through a digital yet realistic full-look experience.

Already available as an iOS and Android app, the company's innovation utilizes proprietary 3D geometry algorithms and neural networks to deliver a life-like effect to shoppers trying on products.

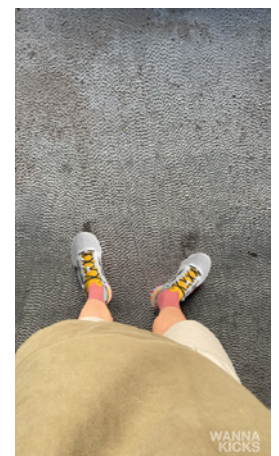
AI / ML TECHNOLOGY BEHIND THE PRODUCT

The technology behind Wanna Kicks includes foot tracking solutions that allow developers to create ML lenses that interact with the feet. It works by identifying the feet within a live image in seconds and applying a footwear filter to allow an end-user to see their products in real-life.

By taking the try-on experience further and increasing user engagement with their technology, WANNABY is bringing new methods of interaction between customers and fashion products to the market.

TRACTION

The average session time in the app went from 40 seconds in December to 1 minute 50 seconds in June.



TEAM



ANDREI PALUNOSIK
Associate Partner, CIVITTA



ANDREI AVSIEVICH
Cofounder, Bulba Ventures



VITALY LABETSKY
Senior Analyst, CIVITTA



ANNA POZNIAK
PR Partner, Bulba Ventures



OLGA LAIKOVA
Analyst, CIVITTA