

# CZECH STARTUPS REPORT 2016

Authors:

Maria Staszkievicz  
Daniela Havlíková



# Table of contents

---

			Introduction	04
--	--	--	--------------	----

---

CHAPTER 1		CHAPTER 2		CHAPTER 3	
Main findings	06	Methodology and definition of a startup	10	Czech startups profile	12

---

CHAPTER 4		CHAPTER 5		CHAPTER 6	
Czech startups profile	16	Business models	20	Capital and non-financial support	26

---

CHAPTER 7		CHAPTER 8		CHAPTER 9	
Employment	38	Sales and Export	40	Innovation	42

---

CHAPTER 10		CHAPTER 11			
Environment	44	Recommendations	48	Thank you	54

---

# Introduction

---



**Maria Staszkiwicz, Deputy Executive Director at the Aspen Institute Prague and co-author**

” The Startup Survey was a unique project aimed at analyzing the ever-changing environment of Czech innovative entrepreneurship. In recent years, the interest in startups has skyrocketed, and the word has become, for better or worse, a synonym for the innovative way of doing business. Subsequently, “supporting startups” became an indispensable part of many public and private innovation and development strategies, often without a real understanding of what startups are and what they do and do not need. Therefore, one of the objectives of the survey was to **map their environment in search for possible trends and common problems Czech startups may have.**

Even though the study is based on a sound sample of replies, it is **exploratory in nature and as such the results should not be deployed to make general conclusions about all startups operating in the Czech Republic.** The material presented below however, can be used as inspiration to all who shape the entrepreneurial playing field, and engage in the process of incubation and acceleration of innovative business ventures.

The analysis of the Czech startup scene was a first step of the project the Aspen Institute Prague has conducted with its Visegrad partners. The next phase of the project will comprise an outlook of the startup ecosystem in the whole Visegrad region., i.e. Czech Republic, Hungary, Poland and Slovakia. The reason for such a comparison is not only the recent coordination of startup support on the V4 level but also the fact that investors now more often than before search for innovative businesses in the whole region. We hope that the presented data along with comments by experts will benefit both policy-makers and stakeholders directly involved in startups.



**Tomáš Prouza, State Secretary for European Affairs and Government Coordinator for Digital Agenda**

” Czech startups and Czech innovators in general have a lot to offer to the world. Unfortunately, unnecessary complications such as administrative barriers, obstacles to enter foreign markets, poor e-government and/or e-consultancy services often hinder Czech innovations. The above facts have been confirmed by the study results.

In the long term, we strive to simplify the environment for starting entrepreneurs and provide them with services in order to have a better chance to succeed – the National Innovation Fund is under preparation as a source of funding for the proof-of-concept stage. CzechInvest has launched CzechStart-er, a consultancy project and the activities of CzechAccelerator will continue to offer mentoring and office space for businesses. The Czech presence in international trade fairs and exhibitions where entrepreneurs can participate has been steadily increasing. For startups, it is important to raise awareness about their activities abroad therefore we co-operate within the Visegrad Group under the We4Startups initiative in order to jointly enhance the visibility of our startups. The objective of the platform is to promote the region as a whole all over the world, including Silicon Valley, and convince the investors that we are no longer only a cheap industrial country, but that we have a developed innovation ecosystem drawing on the industrial tradition. Personally, I would like to see the Czech startups being more closely linked with European centres such as London, and therefore I believe that joint promotion of the region as a sixty-million market is the right way forward.

# Main findings

---

**1** Having created a database of 550 startups, we invited all of them to take part in the survey. **Moreover, the survey was distributed via Czech incubators, acceleration programs, CzechInvest and other popular channels for Czech startups, which maintain their own databases.** Due to the constant creation and launching of projects, and no agreement on the definition of startup, it is impossible to give a precise estimate of the number of startups operating at a given time.

**2** 141 relevant subjects replied to some or all of the questions, **whereas 125 respondents completed the entire survey.** Because the survey was open to all entities which identify themselves as startups according to the applied definition, we cannot calculate the exact response rate.

**3** Nearly 70% of the surveyed startups are in the **early stages of development** (pre-seed and seed stage), whereas only 15% of them are in the scale-up phase.

**4** In a multiple choice question about target customers, **56% of the surveyed startups identified individuals as their target group.** Around 50% of the respondents sell to large businesses (of more than 250 employees) and 43% mentioned public institutions (e.g. schools, hospitals, municipalities) as their customers.

**5** Slightly above 60% of startups claim they offer new services or products, and almost 23% of them work on an improvement of an existing service or product.

**6** Startups mainly operate in the following fields: **SaaS (28%), web services (21%) and mobile software services (17%).** Other often chosen areas are: analytics/business intelligence (16%) and cloud services (12%). Interestingly, around 10% of startups mentioned Internet of Things and education as industries they operate in.

**7** **Collaboration with universities and commercial R&D centers is not a common trend** and only a few of the surveyed startups began in academia or research centers. This is also reflected in the areas where the surveyed startups operate – most of them bring in new IT products and services rather than technological solutions.

**8** 78% of the Czech startups surveyed **have used finances from their own resources.** Local business angels or the startup's network (the so called 3F – friends-family-fools group) financially supported 13% of the surveyed startups.

**9** Only about 9% of startups used public money and only 18% plan to do so in the next six months.

**10** More than half of studied startups (57%) intend to finance their projects from own capital and slightly above one quarter (26%) want to attract a strategic business investor. About 20% of them aim to engage a local VC fund or business angel (19% and 21%, respectively).

**11** One fifth of the startups began bringing in stable, expected and sufficient revenue by the end of the first year of operation. At the same time, 47% of the surveyed subjects have not started bringing in any stable revenues.

**12** Among the surveyed startups, almost 25% do not export. Only 22% get more than half of their income from abroad.

**13** Almost every third startup has a registered patent or trademark.

**14** 14% of the surveyed startups claim to be a university or research spin-off.

**15** The vast majority of companies surveyed are micro-enterprises, employing up to 10 people. More than 65% of them increased their number of employees in the past six months by at least one person.

**16** One third of the respondents engaged at least one unpaid person.

**17** When asked about the biggest internal challenges, the surveyed startups listed human resources (53% of responses) and finances/investments (43%) as the top two.

**18** Entering foreign markets and exporting was named as the most important external challenge (43% of responses).

**19** 19% of the respondents had at least one woman among the founders. Nearly 9% had someone with a PhD.

**20** The vast majority of startup founders and CEOs are in their 20s or 30s and have a university degree.



**Jan Klesla, Chief Economic Editor,  
Lidové noviny**

” Startup doesn't mean a garage or designer coworking offices, it doesn't mean a cup of coffee with smooth foam, it doesn't mean parties or even amusing presentations. **Although all of this is, more or less, part of it. Startups in developed economies are mostly the drive for real innovation.** The type of innovation that in five or ten years will be leading the whole country or even the region. The Czech startup scene is already mature enough, so it is appropriate to have clear ambition to be the driving engine of our future.

It is therefore very strange that the vast majority of startups here, according to the results of the presented study, aim at software and applications, but only a small percent of them operate in the fields of the future, such as healthcare, biotechnology, advanced processing, robotics, IoT, or even transportation. At the same time, it is industry, especially the automotive one, which is the base of our economy and as such it offers an important support also in terms of human capital in the society of shared know-how or tradition. How many startups produce shoes in the Zlín region?



From this perspective, it is possible to observe the amount of collaboration between startups and academia as very low. After all, it is companies such as Cognitive Security that emerged from the academic background, and that belong to the few real success stories of the Czech startup environment of the last years. It gives us a point for reflection; instead of focusing on the fields and areas in which we excel in international comparisons, such as security, young Czech entrepreneurs are mainly trying to imitate silicon fairy tales from abroad.

**The companies built upon solid and real innovation in fields with Czech added value at the same time tell a clear story for foreign investors, who at the moment constitute only a little more than one tenth of all investors.** Such companies will have a real chance to export and expand abroad, which is what they really want, according to the result of the study.

In this regard, this is where the state comes in. To finance even a few years of research and development is simply not in the power of the capital owners, their families and

friends. There may be a sufficient amount of private funds on the market as well, but the high capital demands altogether with traditionally high risk may be insuperable in those cases. Public co-financing can – and should – be able to allow those investments – directly as well as through emerging innovation centers.

Public organizations and professional associations should also motivate private corporations to engage in mutually beneficial collaboration with startups. At the same time, they have the irreplaceable role in the opening of new opportunities abroad. This is most needed in markets which are not traditional targets of Czech startups, such as Latin America, Asia or Africa. **A necessary condition is also the protection of small companies against large ones.** On the other hand, it is the opening of the possibility of financing through the stock exchange, e.g. in smaller shares or in the form of private placement. With that, startups could contribute to the revival of the domestic capital market.

# Methodology and definition of a startup

---

**1** The V4 Startup Survey is the first attempt to map and compare startup ecosystems in the Visegrad region (Czech Republic, Hungary, Poland and Slovakia). In the first phase, national reports such as this one analyzed the metrics, business trends and challenges of the ecosystem. The second phase will offer a comparison of the information collected from all four countries.

**2** Why try to map such a fast growing and versatile environment, which startup ecosystems present? **The underlying reason was the immense interest of public and private subjects in supporting startups, which results in the creation of programs and policies aimed at innovative entrepreneurship.** Having some statistical and qualitative data on startups could help better calibrate such programs.

**3** Therefore, at the end of the report we present **recommendations for administrative and legislative changes** based on collected data and conducted interviews.

**4** In this study we use the following definition of a startup: an entity from any industry branch that:

- develops a single product or service that is unique in place and/or time
- tries to solve a problem in a unique and innovative way
- has the potential of rapid growth in terms of revenue and customers
- where founders play the main role in operations
- needs investment for further growth

**5** This definition was employed in order to distinguish a startup from just any new business, and not to limit startups only to those operating in digital technologies.

**6** The survey was also restricted to entities **registered in the Czech Republic or having at least one founder who is a Czech citizen.** In the latter case it must satisfy an additional condition; namely, it must at least partially operate in the Czech Republic.

**7** The survey content and structure were inspired by several similar projects, especially the Polish Startup Report 2015. The survey contained 33 substantial questions: 28 single and multiple choice questions and five open ended questions. Two additional queries asked the respondents to comment on the survey's content and form. All questions were optional. The questionnaire was available in two language versions, Czech and English.

**8** The survey ran in two periods, from June 20 to August 15, and September 5 to 18. Startup CEOs and founders were invited to participate via e-mail, social media and intermediaries such as incubators or during interviews. We also conducted telephone follow-ups.

**9** All gathered data was anonymized and the report does not include names of companies nor assign responses to specific entities or individuals.

**10** Upon analyzing the raw data, the authors singled out 141 relevant subjects who replied to all or some of the questions. 125 respondents completed the entire survey.

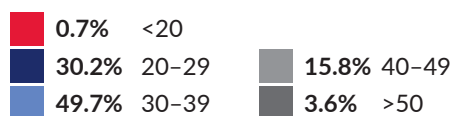
**11** The survey was performed using the web application [Webankieta.pl](http://Webankieta.pl), which also provided some analytical tools.

**12** Correlations were calculated using SPSS software with the support of the Institute of Sociology of the Czech Academy of Science. Despite the fact that we calculated many correlations among the gathered replies, it turned out that in most cases the sample was too small to be able to determine a specific trend.

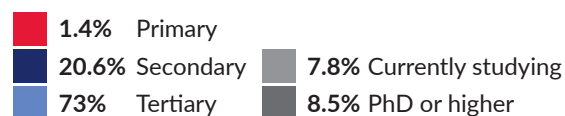
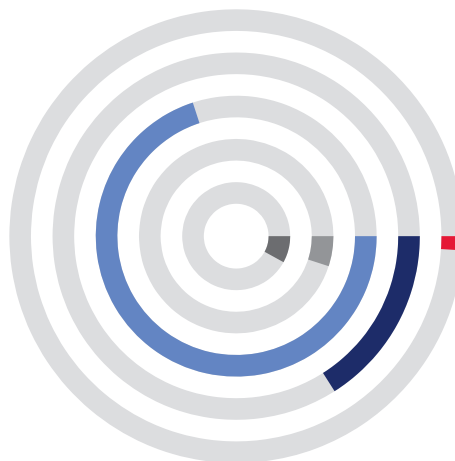
**13** Apart from data analysis and recommendations the report includes personal opinions and insights of experts dealing with the startup environment.

# Czech startupers profile

## Age



## Education



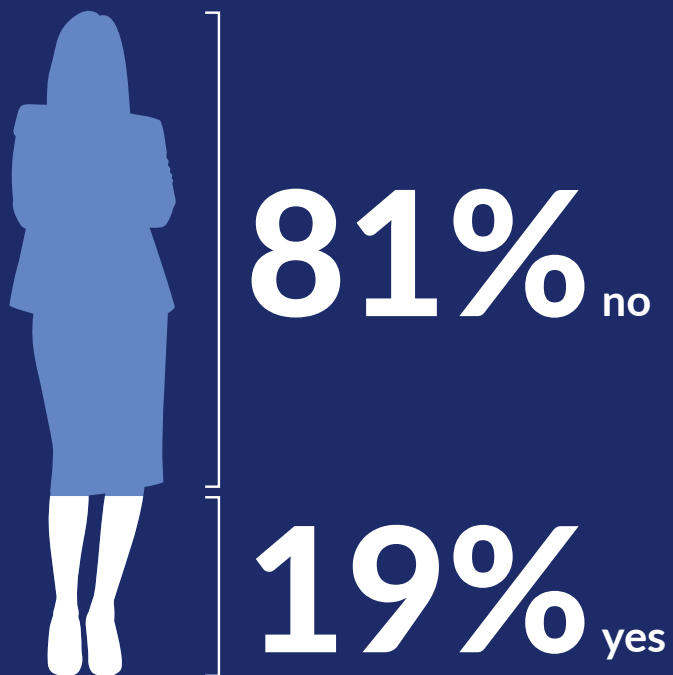
Unsurprisingly, 80% of the CEOs and founders are between the ages of 20 and 40, with exactly half of them being in their 30s. Interestingly, almost 16% of startups are being founded and/or managed by people over 40.

Four in five already have a university degree (bachelor, master or PhD), 8% are still studying and almost 9% have a PhD or higher degree. There is no trend as to the area of studies: half of the startup founders studied technical or natural sciences (including computer science, electronics and mathematics), and the other half studied social sciences or humanities (including economics and law).

Among the respondents with higher education, 17% mentioned graduating with more than one specialization.

Almost half of the respondents had previously been involved in another startup and slightly more than 50% of them worked in corporations.

Was/is there at least one woman among the founders?



Nearly 19% of the surveyed startups mentioned that there is at least one woman among their founders, whereas only 2% indicated that there is one woman among their owners.



**Michal Andera, ePORT Program Manager,  
xPort, University of Economics, Prague (VŠE)**

” These days, almost everyone knows the word startup. Not such a long time ago, this word was in the vocabulary of only a few people. As a consequence of the media interest in successful Czech companies, more and more people have ambitions to have their own startup. This is also connected to the deformation of this term. The word startup was originally used as a description for quickly growing technology companies, but today it is used to describe the beginnings of small companies as well, e.g. for coffeehouses.

Although this fact can be upsetting for some experts, personally I think the change can be viewed as positive. More and more young people consider their own startup as an attractive alternative of the employment status. It is also connected to the popularity of successful en-

trepreneur stories such as global entrepreneurial stars Mark Zuckerberg, Steve Jobs and Bill Gates. As for the Czech Republic, the founders of companies include Avast, Y Soft and Apiary, all globally successful companies. Even their founders consider their business as a tool for positive change. It is great that entrepreneurship is becoming a tool of social change.

A whole ecosystem of business support is developing. In our research in the Czech Republic, we registered 51 business incubators, most of which are located in Prague. 23 accelerators are privately owned, 21 are public and 7 accelerators have combined ownership. Moreover, there are more than 80 coworking centers in the Czech Republic. They provide shared spaces and with this they support startup businesses. Most of them organize educational events and

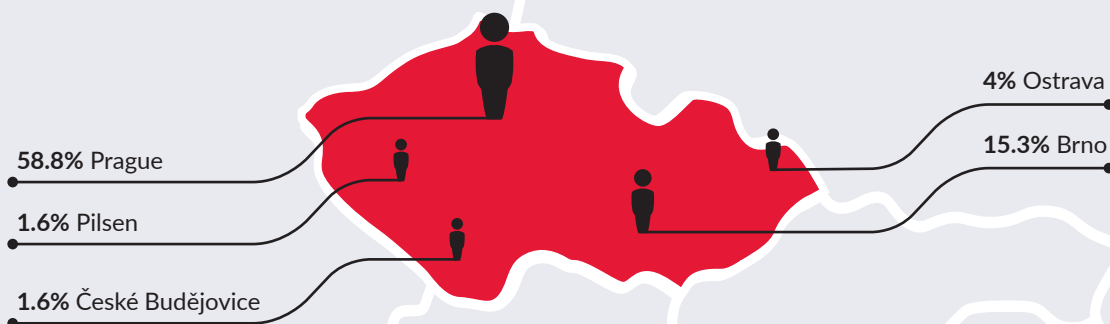
support the startup community. The possibilities for startup business are continuing to grow.

After finishing their studies, young people are choosing their career path. The decision to be an employee, or to start their own business, is important. Nowadays, there is a trend of the development of creativity, critical thinking and of the entrepreneurial spirit. Universities allow their students to focus on education in relation to the foundation and development of their own business. **The Department of Entrepreneurship was established at the Faculty of Business Administration of the University of Economics in Prague.** It provides students with a complex educational program focused on the foundation and development of their own business. Students can study with a minor specialization

in Entrepreneurship. In addition, the University of Economics opened the business accelerator xPORT in 2015. This trend is also visible at other universities. The Czech Technical University in Prague has Point One, while the Technical University of Ostrava has a business center.

Among students there is a visible change of attitude to the future career. Ten years ago, the main aim was a manager position in a big company or a career in one of the important advisory companies. **These days, graduates are more and more choosing the path of their own business or they are gaining experience in the startups of their colleagues.** The change of preferences has enabled the creation of the project startupjobs.cz, focusing on job offers exclusively within startup companies.

# Czech startups profile

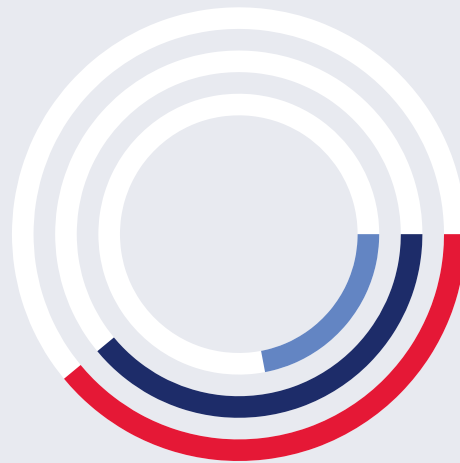
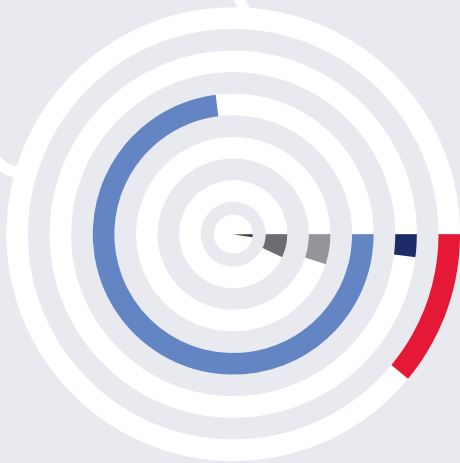


## Location

Czech startups are concentrated in the capital city: almost 60% of those who participated in the survey are registered in Prague. The second largest startup city is Brno, with 15%. Three other cities with active incubator and/or accelerator centers on the map include: Ostrava (4%), České Budějovice and Pilsen (both 1.6%). 11.5% of startups are registered in other Czech cities.

Startups registered abroad (7.2%) are mostly based in the United Kingdom, followed by the United States.





- |  |  |
|--|--|
| <span style="color: red;">■</span> 11.3% Joint-stock     | <span style="color: grey;">■</span> 4.3% Self-employed   |
| <span style="color: darkblue;">■</span> 2.1% Partnership | <span style="color: grey;">■</span> 7.1% Foreign company |
| <span style="color: blue;">■</span> 73% LLC              | <span style="color: black;">■</span> 2.2% Other          |

- |   |   |
|---|---|
| <span style="color: red;">■</span> 39% 2015–2016      | <span style="color: blue;">■</span> 22% Before 2013 |
| <span style="color: darkblue;">■</span> 39% 2013–2014 |   |

**Legal form**

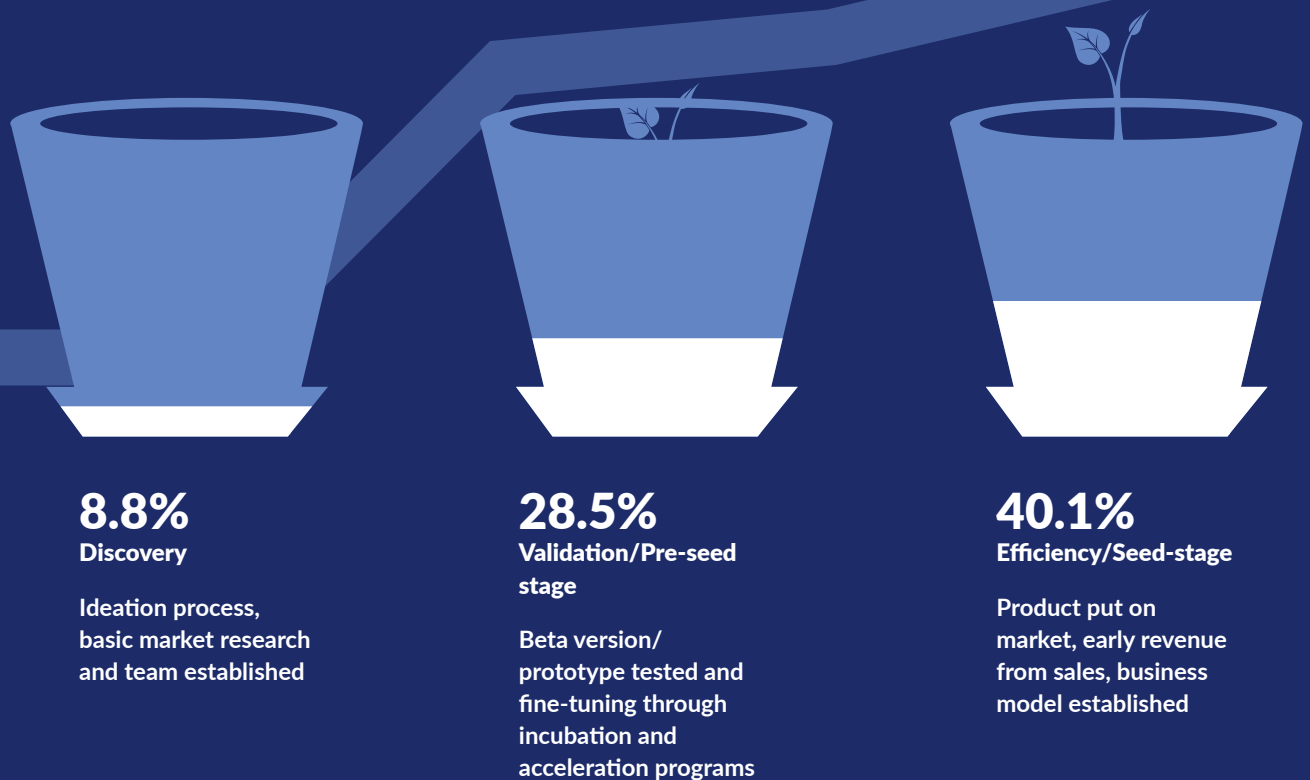
Three out of four (73%) startups participating in the survey are limited liability companies, whereas only 11% are a joint stock company and a small fraction (4.3%) are self-employed.

**Registration date**

Among the startups surveyed, 85% were registered in the last five years. Specifically, almost 39% had less than two years of operation (i.e. established in 2015 or later), and another 39% were registered in the years 2013–2014. 22% of startups were founded before 2013.

### Development stages - distribution of the number of startups at different stages of development

The study asked startups to indicate their current stage of development. We proposed six stages, which were characterized as follows:



The startups that took part in the survey are in the early phases of development. This is not surprising, given the fact that most of them were established in the the last five years. Three quarters (77%) are in the first three stages: discovery (8.8%), pre-seed (28.5%) and seed stage (40.1%). This means that most of the studied startups have already started offering

their product to customers and are now focusing on testing business and revenue models. On the other hand, only 15% of them are in the scale-up phase, which brings an increase in revenue and market share.



**15.3%**

Scale/  
Series A

Increasing revenues  
and market share,  
growth strategies  
developed

**5.1%**

Establishing/Series B

Established user base  
and business model

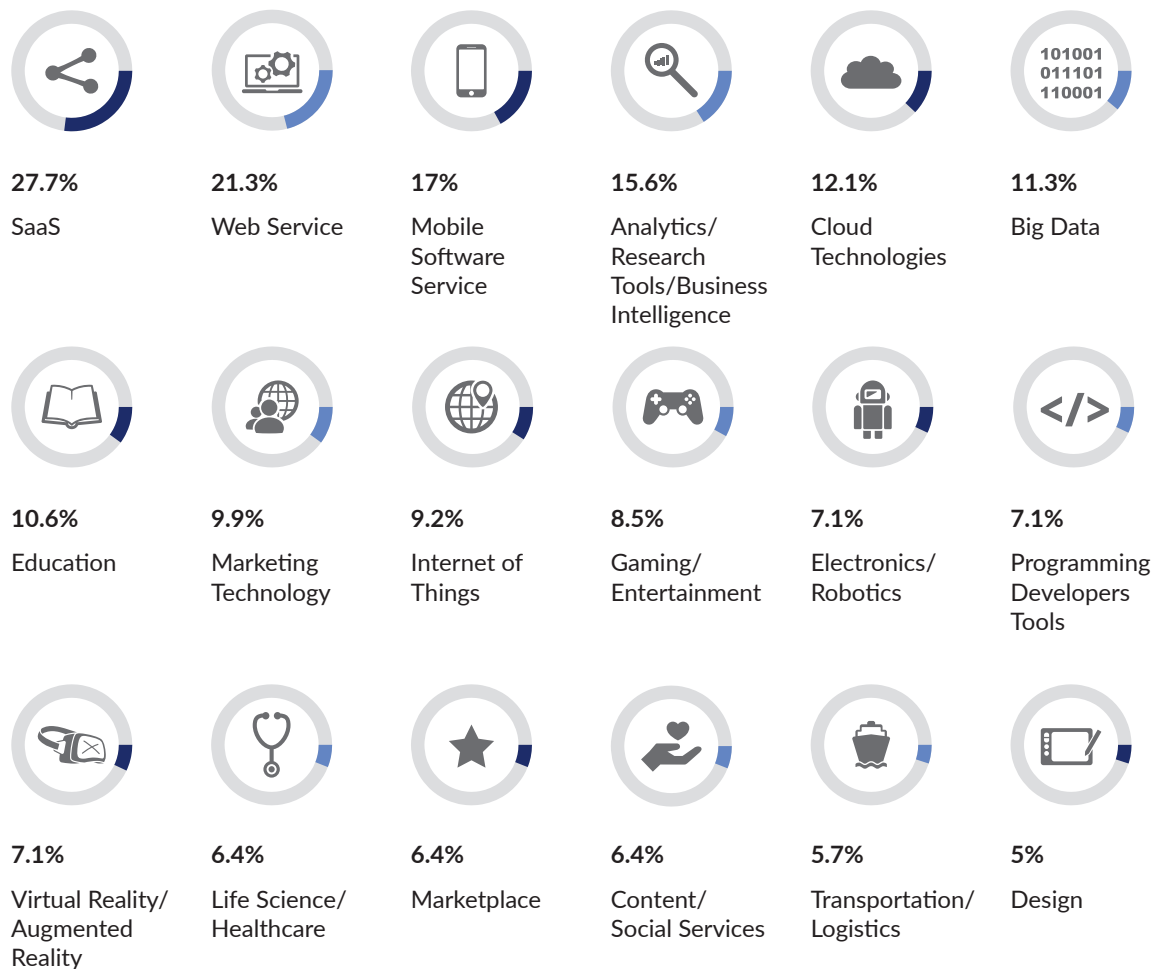
**2.2%**

Maturing/Series C

Expanding and  
acquisitions

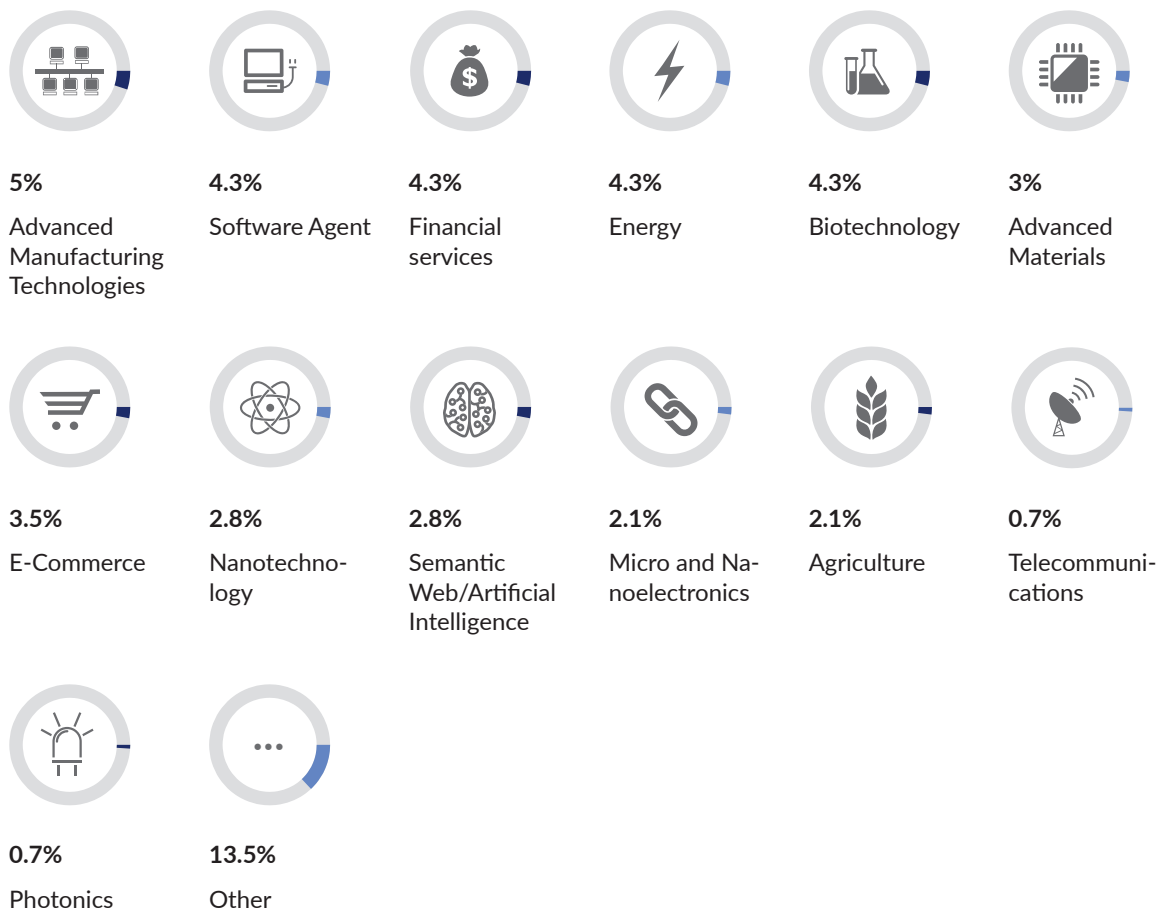
# Business models

Industry branch in which the startups operate  
(multiple choice question)



Czech startups mainly operate in the following fields: SaaS (28%), web services (21%) and mobile software services (17%), analytics/ research tools / business Intelligence (16%) and cloud services (12%). Interestingly, around 10% of startups mentioned Internet of Things and ed-

ucation as industries they operate in. In general, the surveyed startups are established in industries tightly connected to digital technologies rather than in the core key enabling technologies such as nanotechnology or advanced materials.



**How do you create your product?  
(multiple choice question)**

In-house



70.2% Programming  
23.4% Manufacturing  
11.3% Materials

Outsourced nationally



21.3% Programming  
18.4% Materials  
17% Manufacturing

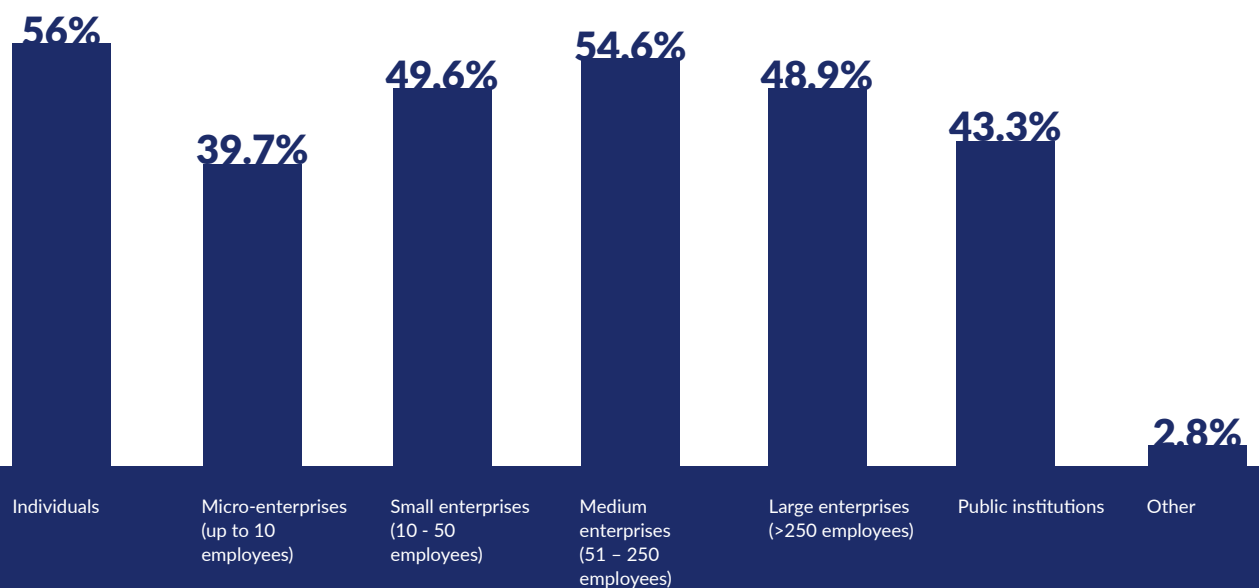
Outsourced abroad



4.3% Programming  
5.7% Manufacturing  
8.5% Materials

When their product requires programming, almost three quarters of Czech startups use their in-house programmers or outsource it to other Czech IT specialists (21.3%). This tendency of deploying national rather than foreign suppliers is apparent in the manufacturing and production of material. Most of the products are software-based.

**Target customers**  
(multiple choice question)



In a multiple choice question about target customers, 56% of the surveyed startups identified individuals as their target group. Around 50% of the respondents sell to large businesses (of more than 250 employees) and 43% mentioned public institutions (e.g. schools, hospitals, municipalities) as their (potential) customers.



**Renata Nemkyová, TechSquare Scout**

” At TechSquare, we work mostly with startups that are in the phase of scaling, rather than with idea-stage startups. People in general have many ideas for the consumer market, as people themselves are consumers. But the **Czech Republic is not a market large enough for any startup, definitely not in B2C.** We believe that the biggest potential lies in technological startups targeting the enterprise market: startups that can develop and test their solutions within the local markets and simultaneously prepare their ground for international or global expansion. History seems to agree, as many notable

global startups that began their journey in the Czech Republic capitalized on gaps in the enterprise level solutions market (Cognitive Security, GoodData, Y Soft or SocialBakers).

**There are large numbers of technical founders who are miles from the „young guys in a garage” ethos.** Ever so often I meet and work with people who used to be specialists in a certain field in the corporate world for 10 or even 20 years. Consider enterprise level security, business intelligence or network infrastructure. Having strong insights into what kind of problems



corporations deal with in these highly strategic areas, these individuals have a clear vision of what their solution should look like, and what standards it should comply with.

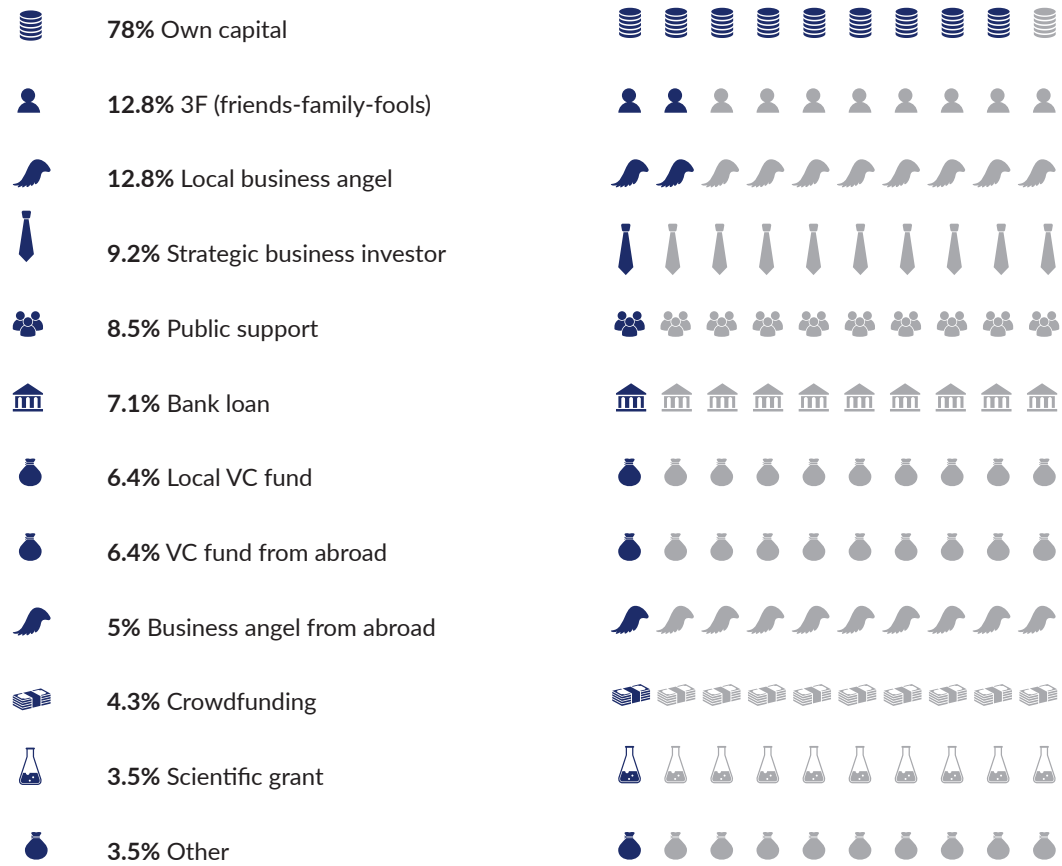
What helps this trend immensely is the way large enterprises are finally beginning to think about their businesses. In-house innovation is expensive, traditional suppliers and vendors are not flexible enough, and again are costly options. **But if nothing changes, large corporations will lag behind when new markets are created.** This is when they look at the startup

scene. It is not always „eat or be eaten”; there is a great scope for collaboration.

All in all, I believe that the Czech startup scene is maturing, realizing that raising capital is not a goal, but a tool. Startups simply need to reaffirm the product/market fit, sell their solutions and give value back to their investors. **They need to be viewed by their corporate customers or strategic partners as equals.**

# Capital and non-financial support

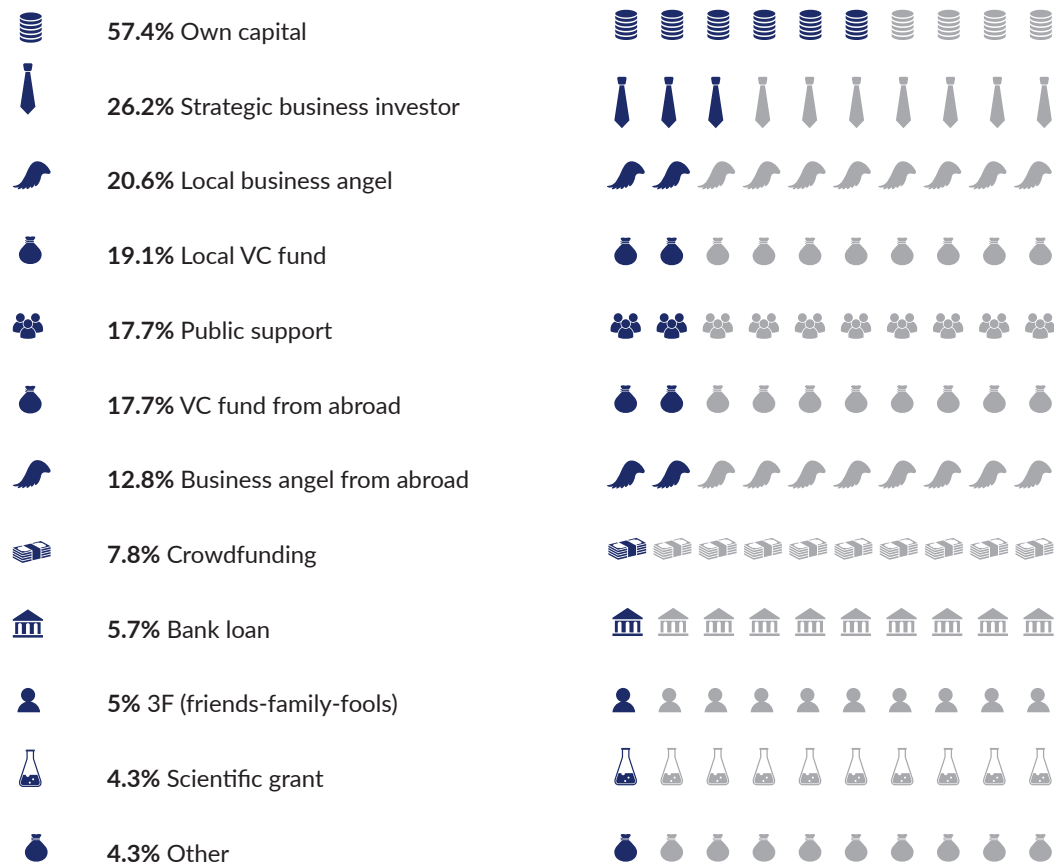
What sources of financial support has your startup used?  
(multiple choice question)



78% of the Czech startups surveyed have used their own capital to finance their ventures. The significance of this source of financing in the surveyed startups (the majority of them in early development stages) shall drop in the next six months, hence we can presuppose that own capital becomes less important with the growth of companies. Instead, finding a strategic business investor is an aim for one fourth of all startups. This source was marked as the second most important in raising capital.

Both local business angels and the startup's network (the so-called friends-family-fools group) financially supported 13% of the surveyed startups. Local business angels and local VC funds seem to step in as vital capital sources in the later developmental stages, probably also to fill in the gap of decreasing financial support from the startup's personal network.

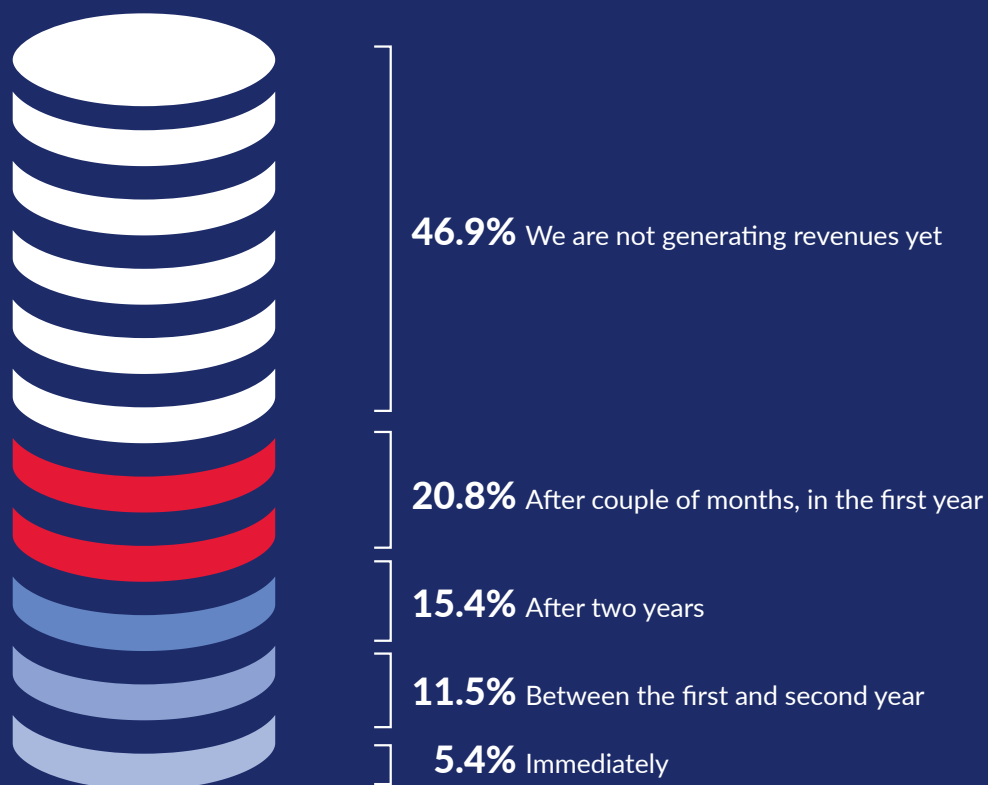
**What sources of financial support do you plan to use?  
(multiple choice question)**



Even though their interest in using it seems to grow in time, only 18% startups plan to apply for public support in the next six months, and merely 9% of entrepreneurs have already used it.

Getting a bank loan or running a crowdfunding campaign are both a rarer choice; it is a bit surprising, however, that more startups prefer to raise money from the crowd (8%) than through a bank loan (6%).

Almost one fifth of startups began to bring in stable, expected and sufficient revenue by the end of the first year of operation. At the same time, 47% of the surveyed subjects have not started to bring in any stable revenues.

**Stable, expected and sufficient revenue**



**Jan Dejl, Director of the Department for Support of Financial Instruments, Ministry of Industry and Trade**

” The Ministry of Industry and Trade wants to support the new generation of starting entrepreneurs and help them to survive the “valley of death” in the implementation of their innovative ideas on the global scale. The venture capital market in the Czech Republic is still underdeveloped and in terms of investment it is one of the weakest in the EU. **Unlike all of its neighbouring countries, the Czech Republic has not yet introduced state aid to promote risk finance investments that has become major source of startup and seed funding in Europe.** Based on the examples from abroad the Ministry prepares several capital investment support schemes that will draw money from the EU funds.

In the short term, there are plans to set up two funds managed by the European Investment Fund with the allocation of EUR 40 million from ESIF. The EIF will distribute the funds in several private venture capital funds focused on investment into businesses in the startup and seed stages. The objective is to drive the development of new investment entities on the market and attract private investment that

would match public money in individual funds. Startups will be able to apply for first investments in early 2018.

At the same time, the **Ministry also prepares the setup of its own National Investment Fund (Národní inovační fond, investiční společnost a.s.) (NIF)**, which will be in charge of the implementation of all capital instruments in future. The first activity to be implemented is the venture capital co-investment fund with EUR 12 million that will start functioning in the Q4 2017. The fund will focus on direct co-investment, especially in the seed stage businesses and high-tech sectors that are not sufficiently covered by the market (e.g. spin-offs implementing the results of research and development, life-science projects, nanotechnologies, etc.). The public investment will be combined with private co-investment at the level of individual projects. **The private investors will be motivated by the option of preferential profit distribution from successful exits.** In 2018, NIF shall implement the Proof-of-concept Programme focused on pre-seed commercialization of research and development in research institutions. We would like to contribute to the evolution of new academic spin-offs and higher level of application of Czech research potential. The startup funding and selection process will not differ much from market practice. The startups will not receive subsidies but revolving funds. The proceeds from successful exits will be returned to the state and reinvested. The startups will be in contact with investment experts only, not directly with the state. The state fund will not compete with private companies. On the other hand, the state wants to provide adequate support to engage private investors through joint co-investment and/or equity investment into venture capital private funds and risk sharing. **The NIF activities will provide complementary synergic financial aid to counselling, coaching, mentoring and support to startup infrastructure offered by CzechInvest.**



**Philip Staehelin, Managing Partner,  
Roland Berger**

” The Czech startup ecosystem has seen tremendous change in the past few years... but we started a bit late and are playing catch-up with some of our close neighbors, and certainly still have a long way to go to join the European leaders. **One of the ways in which we can accelerate our momentum is to develop a stronger network of „angel investors” in the market.**

A robust Czech angel investor community is a necessary cornerstone of a well-functioning startup ecosystem, as early access to capital ensures more ideas will make it down the long road to becoming profitable companies. We've seen a growing wave of successful entrepreneurs that have started to invest some of their returns into startups; we have a maturing VC fund environment that certainly acts as a stimulant in slightly more mature startups, and we have seen a few successful crowdsourcing campaigns

that bring in some new investors. But by and large, all of these funding mechanisms have the luxury (in this market) of targeting slightly later stage startups. We're still lacking a true network of angel investors that are ready and willing to invest in early stage concepts. What can we do?

- **Educate the market.** Many potential angel candidates don't self-identify themselves as possible angels in the first place, so we need to show them the way. A coordinated angel development program needs to be launched, using new and existing channels to educate the market. But let's define education more broadly, which may also mean celebrating angel investors more and giving them market visibility. Let's make sure we highlight angel role models in society, so that those people that could be angels can start to become aware of the possibilities.

- **Let's create a tax relief scheme for angel investors** (such as the UK has implemented) that can remove some of the downside risk of these highly speculative investments. The government may lose a miniscule amount of tax income in the first phase, but in exchange they can reap huge corporate taxes in the future should an idea become successful.
- **Let's create a "matching funds" program where startups that gain angel investment can apply to a government program for matching funds, as we see in Singapore for instance.** The money required to launch such a program is small, whereas it again creates an environment where angel investors' money can be leveraged to provide startups with a longer runway to successfully launch their concepts, which also reduces the risk to angel investors.
- And finally, although a bit controversial and not directly linked to angel investors, **we can think about providing small monthly grants to qualified entrepreneurs that would provide them with a subsistence living standard for a certain period of time so they can focus their efforts on developing a startup.** This type of "grant" is already paid to the unemployed anyway, so why not pay a similar amount to hardworking, passionate entrepreneurs that can be the engine for future growth?

I'm very excited by the way things are evolving on the startup scene, but if we want to overcome our late start and take our rightful place in Europe in the startup premier league, we need to do more to accelerate our efforts.

Are you interested in receiving public subsidies?

57%  
YES

43%  
NO

Apart from asking startups about their preference on public funding, we inquired about their motivation behind applying for or refusing to utilize public money:

IN FAVOR	AGAINST
Facilitate cash flow	Deform market
Help start a business and accelerate its growth	Too rigid requirements on usage
Enable R&D	High administrative overhead
Good to train human resources	Too long turnaround time
It is there, so why not use it?	Priorities of public programs set incorrectly





**Juraj Atlas, founder and CEO, Liftago**

” I remember times around 4-5 years ago when there was quite a boom of young entrepreneurs venturing mostly into technology based startups. **At the same time innovation hubs, incubation/acceleration programs opened up. A great ecosystem started.** Except that it had a bit of a flawed direction – one that quite a lot of emphasis was put on teaching founders how to pitch and raise money. Luckily this era did not last too long and the ecosystem sifted quickly through get-rich-fast entrepreneur types. **There were intentions of bringing more seed money**

**into the ecosystem, in the form of state seed fund to invest directly into innovations and startups.** I am very grateful that this idea did not succeed. Instead, the state should support the ecosystem indirectly – through supporting various types of incubation/acceleration centers and co-working spaces.



**Markéta Havlová, Director of Startup Department, CzechInvest**

” Entering international markets is not an easy task for any company, let alone a startup. Given the size of the Czech market, for some startups, nevertheless, there is almost not another option than growing internationally if they want to provide for their future growth. Almost one half of the startups stated in the survey that they are moving towards the global market, which naturally stems from their business activities focused on new products and services. However, in most cases their

own resources (mentioned by respondents as their main source of funding) are not sufficient for such a step since entering a new market is demanding in terms of finance as well as management know-how. The missing resources thus may come in the form of venture capital investment, mentoring and/or trial activities on international level. **Today’s mantra of “scale fast” is true – unless the startup takes advantage of its opportunity, somebody else will do it. Such opportunities are offered by acceleration programmes abroad.** Of course, majority of them are private-based and in return for invested resources (financial or human capital) they require a share in the company or another “barter” option. Also, competition abroad is immense and only really the best ones can succeed. Thus it is not surprising that only less than eight per cent of the surveyed companies participated in an international acceleration programme. From this point of view – this is quite a good figure though and I believe it will continue to grow steadily.

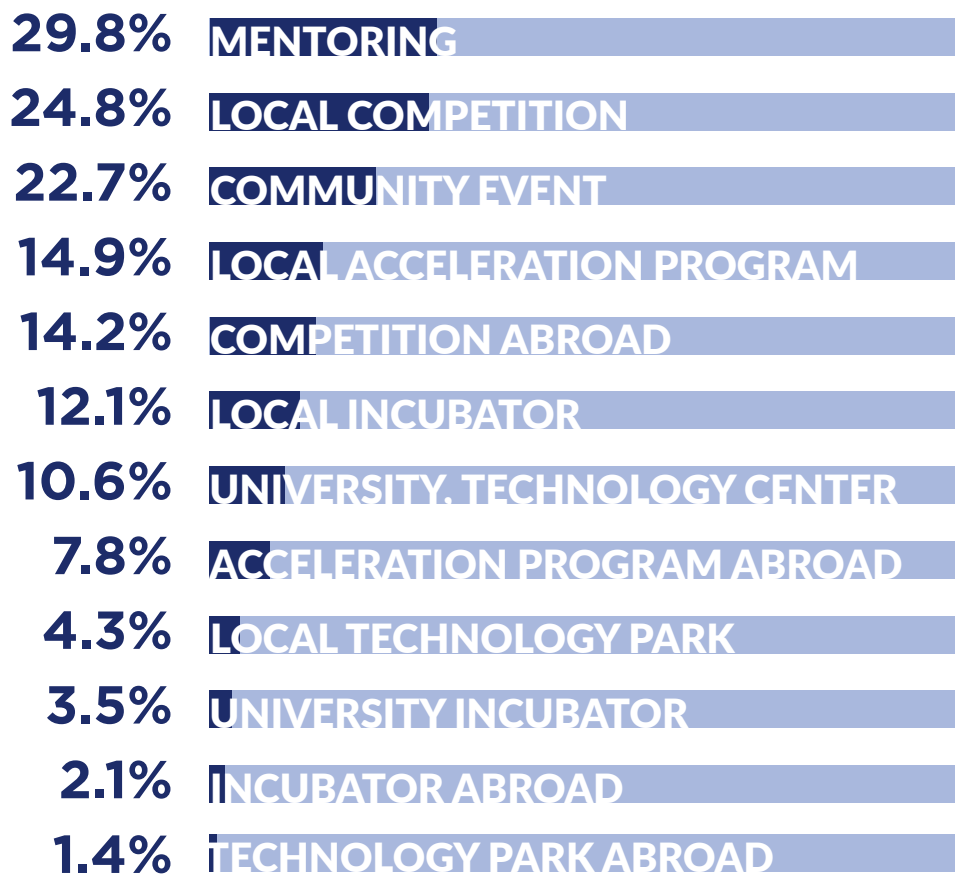
Through projects organised by CzechInvest we strive to help startups to establish themselves on international markets and provide them with support in technologically advanced regions. **A couple of years ago, experience from and/or opportunities on the international level were hard to find.** There were only very few startups

such as Videoflot, which took their own initiative and expanded abroad. Later on, Futurelytics and TeskaLabs followed. Some international accelerators, such as StartupYard, JIC, and – for a while – Wayra, focusing on the support of international startups from abroad and their entrance to the global market carry out their activities also in the Czech Republic and thanks to that the awareness of how to conduct a global business is raising. We can see positive results in the case of startups that participated in our programmes, being it newly launched cooperation, acquired investments, company growth and/or the fact that they were able to test their activities on a foreign market and got a realistic benchmark against their international competitors. **The companies themselves appreciate mainly the fact they were able to gain practical managerial skills, experience and/or inspiration from the leading world technology markets and to speed-up their company development.**

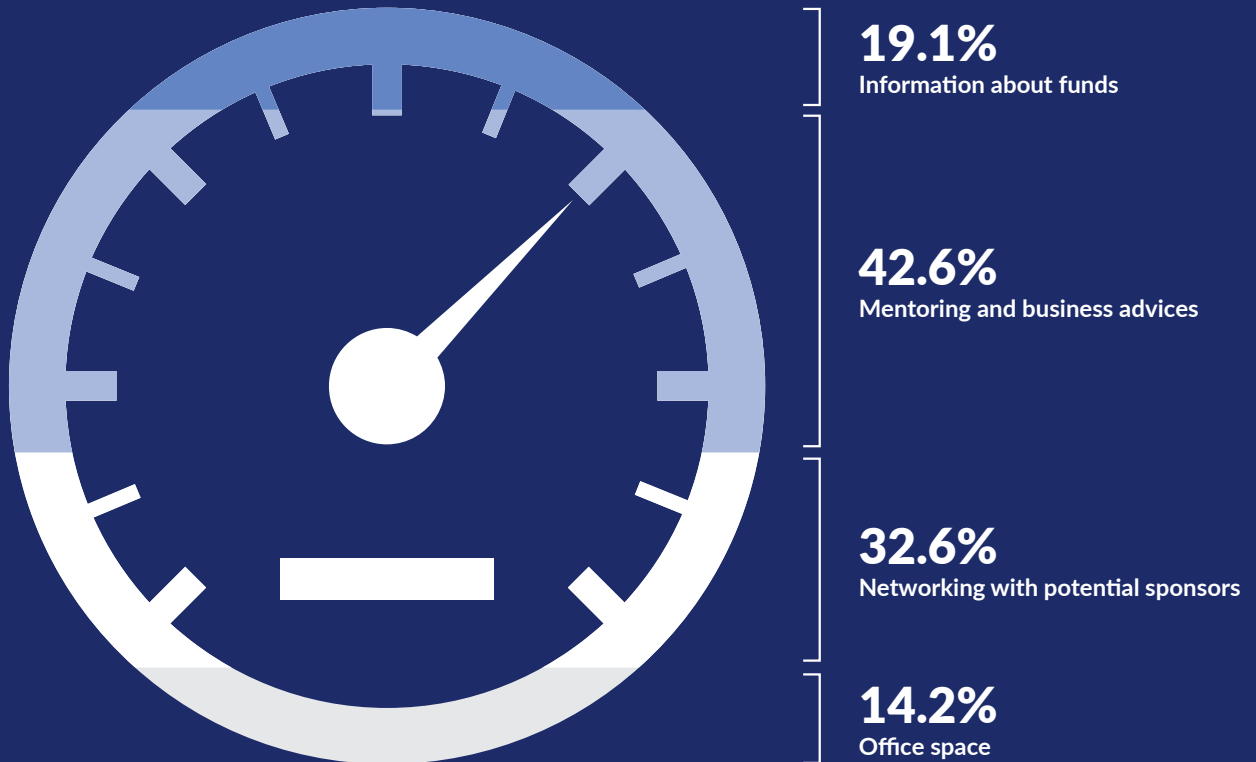
Generally speaking, Czech entrepreneurs have excellent technical knowledge and skills, they know how to implement hi-tech products, however, when compared to their American counterparts, they lack the soft-skills – such as self-promotion and product marketing. Czech startups might learn from the American experience in the area of the so called MVP (minimum viable product) – i.e. instead of offering

their customers a fully developed product, come up with let's say a beta version, test it first and then based on the feedback from the customers improve it further and thus reach better results. **It is great that we can see more and more positive examples, share success stories, especially from abroad, and transfer the know-how into the Czech business environment.** Together with our partners, we have also launched CzechStartups.org – a website focusing on the news from the world of startups. Thanks to this platform/website all potential as well as existing entrepreneurs have an opportunity to get all the necessary information in one place.

Non-financial support used  
(multiple choice question)



If you have used the services of a business incubator or accelerator, what was your motivation?  
(multiple choice question)



The three favorite instruments of non-financial support among the surveyed startups are: mentoring (29.8%), local competition (24.8%) and community events (22.7%).

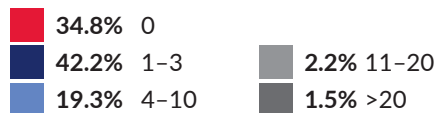
These “softer” and short-term instruments are preferred over more time-consuming ones such as acceleration programs.

Moreover, local tools are used more frequently than those abroad. It may be because the motivation behind utilizing these opportunities is to gain contacts and business advice, which is often context-dependent.

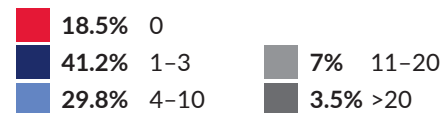
# Employment

## Changes in employment

Increase in the last 6 months



Plan for the next 6 months



Around 33 % indicated having just one founder, and 23 % mentioned having two founders. Among the lone founders there were only 15 % women. A prevalent number of Czech startups, around 90 %, are micro-enterprises, employing less than 10 people. Roughly one third of them do not mention deploying any unpaid workforce at all.

The key question in the context of employment was if startups contribute to employment. A total of 65% of the surveyed companies increased their number of employees in the past six months, mostly by 1–3 people (42% of them),

while only about 4% of businesses hired more than 10 new people in the past six months. The majority (82%) of the surveyed startups plan to expand their team: mostly by one to three new employees (41%), although 30% of them have optimistic projections of hiring more than three people.



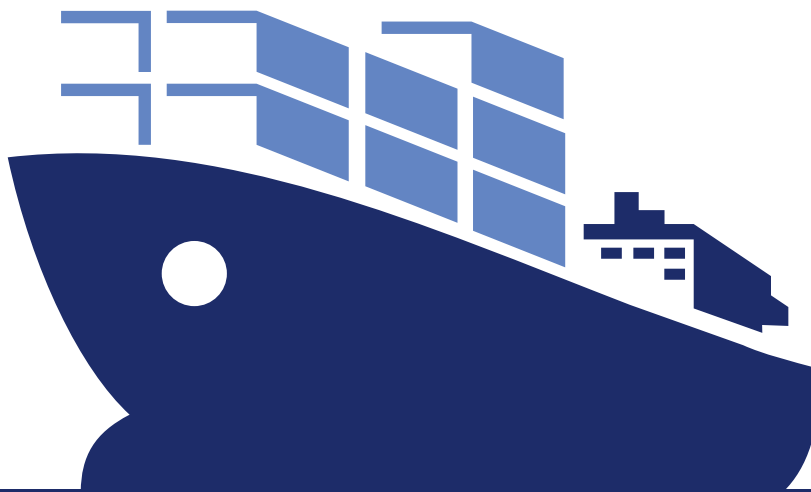
**Petr Vitek, Co-Founder, Impact Hub**

” The state should help to develop the innovative business culture, rather than thinking about the specific support for the individual forms of the business. This includes keeping the law and taxation system simple, decreasing the administrative burden, lowering the corruption, opening the data to be an example in transparency, reducing the influence of interest groups lobbying at the expense of others, and working on the harmonization of the legal framework in the EU. Flexibility and horizontal justice in the

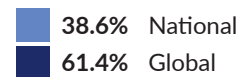
job market could also help to improve situation (e.g. the big gap between the tax benefits for entrepreneurs and employees). **At the same time, the state should change its immigration policies, not only because the state has the shortage of about 200 thousand employees, but also because we have a moral obligation to take care of them.** In the area of active policy steps to support startups, the inspiration could be taken from the Austrian initiative aimed at startups – e.g. their solutions such as a digital one stop shop, startup visa, or the effort to involve the academia.

The state could also be active in setting the framework for the employment of women. A higher amount of part-time job offers could help women on maternity leave to get back to the work environment. The state could deal with the availability of a good quality (progressive, respecting) pre-nursery care, eventually it could provide the portfolio guarantee to the bank willing to finance the progressive education for responsibility and citizenship. Overall, it is necessary to change the attitude; children should be independent and responsible for their own lives, not as the employees. **I believe, it is good to raise children as "change makers", which means to lead them to the ability to decide for the change in their lives and in their surrounding, and to be able to implement these changes.**

# Sales and export



## Primary market



Almost 40% of the studied startups define the Czech Republic as their primary market. Among those who perceive global markets as their primary market, 78% claim they develop an entirely new product or service, whereas almost 60% of startups are improving an existing idea. Those who claim they are copying a product or service see the domestic market as their primary market.

56% of those oriented towards the global market started to bring in stable revenue by the end of the first year of operation. The number of domestically focused startups in this category is 44%, which might indicate that concentrating on the global market gives slightly higher chances of securing stable revenue in the first year.



What portion of your sales come from abroad? (%)  
Distribution of the number of exporters according  
to the share of foreign sales in overall sales:



### Main export destinations

When asked about the main direction of exports, startups usually choose the United States and the European Union, specifically the UK and Germany. Other export destinations, such as Australia, are much less popular. These replies correspond to the startups' destination for establishing a branch. Continental Europe, the United States and United Kingdom are the most popular destinations for foreign branches of Czech startups. Besides Great Britain, other favored EU destinations include neighboring countries: Germany, Slovakia and Poland. Out of the surveyed startups, 17% have and 45% intend to open an office abroad.

The question about the share of export in sales was not answered by 37% of the startups. With certainty we can say that at least 38.3% of the surveyed startups sell their products or services abroad. About 22% of the exporters get more than 50% of their revenues from sales abroad. At the same time, nearly 40% of the exporting startups get less than 30% of their sales from abroad.

# Innovation

What is the character of the product or service you offer?



Patents and trademarks



Quantifying the level of innovation and developmental activities in an enterprise is not an easy task given the nature of the data, and startups are no exception. In this section of the survey, we decided to analyze two key and importantly measurable indicators of levels of innovation: patent activity, and collaboration with scientific research centers. We also asked startups to rate the innovativeness of their products.

Slightly more than 60% of startups claim they offer a new service or product, and almost 23% of them work on improving an existing service or product, whereas about 60% of the latter category focuses on the domestic market. One in three studied startups have registered a patent or trademark. The analysis did not show any strong correlations between the type of financing used (e.g. public money and scientific grant) and the number of patents.

### Research and development (multiple choice question)



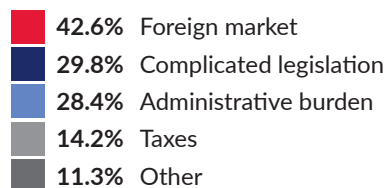
29.8%	Informal consultations with university
17%	Collaboration with university on product development
9.2%	Informal consultations with commercial research center
3.5%	Collaboration with commercial research center on product development
14.2%	Are you a spin-off?

We asked startups about any collaborations that take place in the framework of their research and development. Almost 30% of respondents declared an informal collaboration with a university and even fewer startups collaborate with commercial research centers. When asked if the startup was founded by university scholars, students, or by companies with a research department, only 18 respondents (14.2%) replied positively, and a majority of

them do business in more technical fields such as life sciences, energy or robotics. A very broad conclusion would be that very few companies start in academia or use the R&D potential of universities or other research centers. This is also reflected in the areas where the studied startups operate – most of them bring in new IT products and services rather than technological solutions.

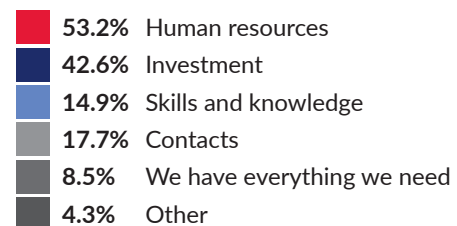
# Environment

External challenges  
(choice of two)



Critical for the startup ecosystem is the legal, technological and social environment in which they operate. Red tape, quality of education, entrepreneurial mindset and university openness towards collaboration with the commercial sphere (and vice versa) are among the factors that have a decisive impact on innova-

Internal challenges  
(choice of two)



tive entrepreneurship. To find out what Czech startups perceive as the biggest obstacles in business, we posed two semi-open questions in the survey, where we asked respondents to choose their two main external and internal challenges and provide an explanation on their choice.

When asked about the two biggest external challenges, respondents mentioned **export and entering foreign markets** (43%) and **complicated legislation** (30%), followed tightly by **administrative burden** (28%). When asked to specify the challenges of expanding to new markets, respondents often pointed out to the following ones:

- Reliable **contacts** in new markets and distribution networks
- **Direct sales** in foreign markets
- **High initial costs** of entering an unknown environment
- Hard to start a "global first" business as this requires truly innovative solutions

In regards to complicated legislation, startups complained about:

- Intricacy of intellectual and property rights as well as licensing and certification
- **Lack of advisory points** for specific export regions; what would also help would be a database of **contract templates**, so that startups do not have to employ expensive advisors every time they sign a contract. Moreover, tracking quickly changing legislation is a time-consuming activity. There are no well-functioning or well-known one-stop-shops where an entrepreneurial novice could learn all their duties, also in regard to operating in foreign countries.
- **Incomplete e-government**: many administrative actions are not available online or still require physical contact. Furthermore, authorities often do not communicate among themselves, which results in the need to resubmit the same document several times.

- **Asymmetrical approach** towards deadlines, where companies have to complete administrative tasks within a short period of time and delays are toughly sanctioned, whereas authorities are often late in their replies
- High costs of employing workers outside the Czech Republic

**Taxes did not rank high** and when surveyed startups mentioned them as an external burden they mostly did not refer to the amount of taxes to be paid but to the red tape related to them. Startup founders often complain that to be able to fulfill all of the tax requirements, they need a dedicated employee and thus they bear additional costs. Respondents also mentioned too frequent and often uncoordinated controls by several public authorities. If they mentioned the financial aspect of paying taxes, the obligation to pay VAT tax on yet unpaid invoices was indicated as an adverse factor as it negatively influenced cash flow.

**Human resources** came out as the crucial internal challenge in almost **53%** of all responses. The creation of a **well-functioning team** was indicated as one of the most important prerequisites for success. Respondents complained about problems with composing the "right team" more than they did about the lack of a skilled labor force. Unsurprisingly, raising funds for investment was acknowledged as the second biggest problem; this may be due to the fact that most of the surveyed startups are in the first development phases.



**Hubert Palán, Founder & CEO, ProductBoard**

” The biggest problem is in the approach to entrepreneurship and the toleration of risk taking. This is the main obstacle which exceeds the bad intellectual property laws, the difficulties in setting up businesses, and the inflexible and too complex legal environment in general. There is a lack of passion to do new, previously untried things, a lack of power and energy to be independent, and at the same time, there is a lack of ambition to do business globally. The vast majority of all people prefer to work for big companies. We are afraid to take the personal responsibility connected with running a busi-

ness, because Czech society doesn't tolerate failure. We are envious of each other, instead of trying to learn from others how to do things differently. **We don't want to share - we don't know how partnership in business works (which is the difference between Europe and the U.S. in general, including investors).** This is, of course, a generalization as not everyone is like this.

Unfortunately, my own personal experience with hiring job applicants in the Czech Republic is that they were more interested in a personal

profit rather than in how they could help my company. In the U.S., people write a motivation letter with points relevant to our business, they prepare a thorough analysis of our product, and they try to be part of the vision and mission. It is a completely different approach and mindset. **At the government level, there is a need for modern and active politicians who truly understand the need for innovation and not those who are involved only to gain popularity or because someone gave them instructions to do this.** One possible way to change people's mentality is the presentation and promotion of

stories of successful entrepreneurs who succeeded in global business. There should be a description of their beginnings with an emphasis on the reason why they started their business, what their motivation was, what were the obstacles and how they overcome them, what is their satisfaction and what is pushing them forward. **The most important task of politicians and non-profit organizations is to create enthusiasm in people, to focus on emotions, to encourage the desire to do things differently, to motivate society, to learn, and to have the power to get over failure and try things again.**

# Recommendations

---

One open question of the survey gave startups the possibility to share their ideas about **how public institutions could help their business**. Generally, startups in the Czech Republic are divided into two camps. The first one considers state involvement as undesirable, thus prefers public institutions not to interfere much with entrepreneurial activity. The other group would appreciate public financial support and assistance in entering foreign markets. Both groups highlighted the need to ease bureaucracy and migrate the majority, if not all, of administrative actions to the online environment, which are the two points always raised when discussing the state's role in enhancing entrepreneurship.

Based on the replies, we have grouped startup comments and drafted a list of areas for possible action by government and public administration, educational authorities, companies and startups themselves.

## Environment

- **Entrepreneurial skills** (e.g. sales, marketing skills, how to set up a company) should be taught in the early stages of education. There are many good examples to borrow from abroad such as business simulation games (eg. lemonade stands) or promote domestically (eg. iKid project by KPMG, or Digital Garage by Google).
- Tax and other authorities should function more **as a service provider and partner not a mere controller**.
- Creation of a **startup advocacy** group that could help entrepreneurs lobby for legislative change or put through their interests. Such groupings do not have to be open-end but ad hoc and issue-specific, such as the newly established Czech Fintech Association, whose goal is to influence legislation associated with the implementation of the revised Directive on Payment Services (PSD2).
- **One stop shop** for legal, financial and administrative **advice**. Despite the fact that there exist some public portals providing overview of acts and obligations pertaining to entrepreneurs (e.g. Businessinfo, CzechStartups.org), they are either not specifically dedicated to startups, do not offer exhausting information on all aspects or are unnecessarily complicated.



## Legislation

- **Women entrepreneurship** should be streamlined and supported by the state by means of facilitating part-time work and facilities for children.
- Simplify the conditions of contractual obligations between shareholders, investors and owners in a company by means of introduction of **new legal entities such as simple joint stock company** (upon Slovak example) or **convertible note** as means of financing startups.
- Startups complained about the lengthy process of employing (both short-term and long-term) workers from non-EU countries. Therefore, **startup visa** should be implemented in line with the European Startup Visa scheme.
- **Tax holidays** in the first year of operation, especially in regard to social security and health insurance, or making **employment contracts more flexible** in the early phases of startup operations would definitely help.

## Financing

In terms of financial support, startups would welcome the following:

- more and easily accessible **innovation and entrepreneurial vouchers**,
  - introduction of support programs for **middle-age entrepreneurs** (often with families),
  - providing more **travel grants** for conferences and fairs,
  - establish a **seed fund**<sup>1</sup> for startups in the **proof-of-concept phase**,
  - adjust the application process and payment calendar to better reflect the dynamic character of startups.
- Public money should not compete directly or indirectly with private funds but provide co-financing to enable them to enter capital-intensive and risk investments.

<sup>1</sup> Since the National Investment Fund is still in the making, neither the author nor the startups can comment on its functioning



**Jan Beránek, Lupa.cz**

” Do startups need the state? Yes, but not in the way the government may think. The Czech startup scene has come of age. It has a clear structure, it has institutions, an established community and celebrities. So, what is going on now? There is a new beginning. A new beginning, but just for the sake of appearances. As is often the case in the offline world, it reacts too late and in its specific way. In the words of a military historian – it is preparing for a war that had already finished. So, after the first startups grew roots in Silicon Valley and domestic investors are not afraid to invest more than a million dollars in a single project, there comes a period of carpet-bombing startup support – both the state and the organizations that can utilize their partner corporations' money to get ideas.

The word startup, however we define it, has entered the dictionary of politicians and the mainstream media. Reporting on the promising and innovative becomes more like writing about emerging bands: „we started in a garage, we've organized some DIY concerts and are now looking for a label that will finance our first album”. In the past two years, there might have been more startup competitions than startups themselves. And newborn companies can get several awards before even entering the market.

**Startups are clichés.** On startups, there is being more said than done. Investors have already started to scan the region so that they do not constantly meet the same few projects, generated by the Czech scene. Free money is abundant, good teams are scarce.

The state, quite sensibly, has stood aside and supported those who managed to get through to it in the maze of paperwork. But now it is offering money. The project for the National Innovation Fund comes out as more complex than the original seed fund, and it envisages support for university spin-offs. Investors, however, watch its establishment suspiciously as they see the fund, and EU subsidies, as a competitor. This reluctance may just be a result of protecting investors' territory or even a lack of information. The state is opening up yet another funding source, which can help some projects. Why not? After all, there is not that much money at stake. In the words of one of the investors: „Do not expect miracles – 1.4 billion is still only one kilometer of Czech motorways”. It is understandable that officials from the Ministry of

Industry and Trade want to deploy public money to support entrepreneurship. Nonetheless, public support should also aim at facilitating the entrepreneurial environment. The state should clean rather than open new ways. To buy applause is easy, but it is not a long-term solution.



**Tereza Jandáčková and Ondřej Mánek, Novalia, Attorneys at law**

**”** In our opinion, startups would benefit from the simplification of the current legislation, particularly in the area of investments. We represent a large number of startups and Czech investors. From our point of view, there is a lot of money available both in the Czech and European markets. The problem is complicated laws; they make the investment process long and expensive.

**A good example (one solution to this problem) is convertible notes; these notes work well and are a popular way to finance startups. Our clients would like to use them, but since**

no such instrument exists in the Czech legal environment we have worked out a Czech alternative, a convertible loan. **Similarly complicated in the Czech legal environment is the concept of distribution of shares among employees (i.e. employee stock ownership plan).**

Embedding these instruments into the Czech law would significantly enhance the process of investing. It would lead to an increase in the number of investors, including foreign ones, and enlarge the volume of venture capital in circulation and ultimately would result in a livelier and better startup scene.

## About the authors



### Maria Staszkievicz

Maria Staszkievicz has worked in the non-profit sector since 2006 and has held several managing and executive positions. Before joining the Aspen Institute, Maria was Director at the Association for International Affairs. In 2008–2010, she served as European civil servant in the Secretariat General of the Council of the EU. Throughout her career, she has been responsible for strategic planning and development, advocacy and policy activities, as well as overall organization management. At Aspen Institute Prague, Maria has been responsible i.a. for digital agenda and creative industries, areas in which she has conducted projects and published articles. In 2015 she became part of the New Europe 100, a list of individuals from the Central and Eastern Europe, who are changing the region with ideas about the digital world.



### Daniela Havlíková

After graduating from the Faculty of Social Sciences at Charles University, Daniela spent 2 years in civil service working for the Ministry of Justice where she was responsible for e-Justice, European Parliament relations, coordination of the CZ PRES activities as well as administration of the EU funds. She was also engaged in the Bellona Foundation for the comparative study on RE support in 30 countries. In 2011 she earned a LL.M. degree in ICT Law from the University of Oslo with expertise in personal data protection, intellectual property law, e-commerce and Internet Governance & telecommunication. Her focus is on privacy and data protection with published articles on this topic in Lupa.cz and Tyinternety. Since February 2016 she has worked for the Aspen Institute Prague on the digital agenda with particular interest in startups.

# Thank you

The authors would like to thank all those who helped prepare the report:

- **CzechInvest and International Visegrad Fund** for the financial support
- **Startup Poland Foundation** for consultation on the survey and report design
- **Tomáš Čížek** from the Institute of Sociology of the Czech Academy of Science for consultation related to statistical calculations
- **All authors of comments presented in the report**, i.e. Michal Andera, Juraj Atlas, Jan Beránek, Jan Dejl, Markéta Havlová, Tereza Jandáčková and Ondřej Mánek, Jan Klesla, Renata Nemkyová, Hubert Palán, Tomáš Prouza, Philip Staehelin and Petr Vitek
- **Webankieta.pl** for providing the survey app
- **All incubators**, acceleration programs and other institutions, which helped us promote the survey. We would like to thank especially Impact Hub in Prague, JIC in Brno and the Agency for Regional Development in Ostrava.
- **Tyinternety and Lupa.cz** for promoting the survey
- **Lenka Kučerová, Nikola Rafaj, Jan Roháč, Kateřina Hendrychová and Vladimír Šandera** for personal insights and comments
- **Novalia and Visibility s.r.o.** for providing workshops and **UP21** for expert training



Should you have any comments or remarks, please send them to:  
[ms@aspeninstitute.cz](mailto:ms@aspeninstitute.cz)

Aspen Institute Prague  
Palackého 740/1  
Prague 110 00  
Czech Republic

