



AUSTRIAN STARTUP MONITOR 2018



AUSTRIAN
STARTUP
MONITOR



2018

Contents

ACKNOWLEDGEMENTS

Austrian Startup Monitor 2018
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ISBN 978-3-200-05768-5
Online: www.austrianstartupmonitor.at
Published in Vienna, July 2018

MEDIA OWNER AIT Austrian Institute of Technology GmbH, Center for Innovation Systems & Policy, Giefinggasse 4, 1210 Vienna, www.ait.ac.at

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PRINTED AND BOUND
NEOGRAFIA, a.s. Sučianska 39A
038 61 Martin-Priekopa Slovakia

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DEFINITION OF STARTUPS

Startups are defined as companies with the following characteristics:

1. STARTUPS are younger than 10 years old.

2. STARTUPS are innovative with their products, services, technologies or business models.

3. STARTUPS have a significant employee or revenue growth or strive to do so.

INTRODUCTION

Startups are considered the spearheads of technological and economic change. This is because they create the markets of tomorrow and positively affect the economic growth and competitiveness of a country. Two things could be observed in Austria: The importance of startups increased rapidly in recent years and, in the meantime, the topic has gained the attention of the general public. Just a few years ago, the term “startup” was foreign to many people. Today, just about everyone has an opinion about it. This image is far too seldom based on actual figures, data and facts. No wonder – after all, to date, no scientifically sound pool of data has existed concerning the founding, dynamics, and evolution of startups in Austria.

In order to close this gap, the Austrian Startup Monitor (ASM) was initiated. The Austrian Startup Monitor is a joint project financed by Austria Wirtschaftsservice Gesellschaft mbH, the

Austrian Federal Economic Chamber, the Austrian Council for Research and Technology Development, the Austrian Research Promotion Agency, the Federation of Austrian Industry, the Vienna Economic Chamber and the Vienna Business Agency. We are proud that, with the first 2018 edition, we have succeeded in being able to draw a meaningful, profound, and fact-based image of the Austrian startup scene.

The Austrian Startup Monitor answered a series of relevant questions: Who starts up a company when, where, how and why? What is characteristic for startups in Austria? What are some of the problems and issues they currently face? What are they seeking from political decision-makers? What strategies do they pursue? And, last but not least: What are they planning in the future?

That and much more is available for you to discover in the first Austrian Startup Monitor! This being said, the ASM also

has longer-term goals beyond conveying a current image of the startup scene’s situation. It forms the foundation of a long-term project, which is similar to existing initiatives in Germany, Switzerland and the Netherlands. The ASM seeks to identify all Austrian startups, find out where they are located and accompany them in the years ahead on a continual scientific research basis. In this context, the ASM can be used as a key reference source and guideline in the coming years to make analysis and further development of the startup landscape possible. We are convinced that the present report is a milestone in the development of the Austrian startup ecosystem and are looking forward to a lively discussion of the results. We hope you enjoy reading it and getting better acquainted with the Austrian startup scene!

On behalf of the study team,

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AND BUSINESS)

STATEMENTS CONCERNING THE AUSTRIAN STARTUP MONITOR 2018



austria
wirtschafts-
service

AUSTRIA
WIRTSCHAFTS-
SERVICE
GESELLSCHAFT MBH

Startups make an important contribution to the innovative strength of the country and ensure the success of Austria as a business location in co-operation with existing companies. As federal business development bank, aws supports innovation and growth throughout all phases of company development. One of aws financing and funding focuses lies in ICT, digitalization, physical and life sciences.

DI Bernhard Sagmeister and Mag.^a Edeltraud Stiftinger, Managing Directors of Austria Wirtschaftsservice GmbH

vienna
business
agency

A service offered by
the City of Vienna

AUSTRIAN
RESEARCH
PROMOTION AGENCY
(FFG)

Startups are one of the main drivers of the Austrian innovation system. Therefore, these young innovative companies also represent an essential target group of the FFG. The FFG provides support from the very first idea through product development, all the way to market launch and market development. The digitalization agency of the Austrian Research Promotion Agency will also make a significant contribution for startups in the future.

Dr. Henrietta Eggerth and Dr. Klaus Pseiner, Managing Directors of the Austrian Research Promotion Agency

VIENNA BUSINESS
AGENCY

Vienna is the nucleus of the local startup scene. In the face of international competition, the Vienna Startup City is shining more vividly than ever. Of course, we know that so much more is possible. Figures, data and facts are the basis for other efficient development steps. They are now available at a very high quality. We will utilize these in Vienna in order to more effectively support startups in being successful. Here in Vienna, in Europe and around the world.

Mag. Gerhard Hirczi, Managing Director of the Vienna Business Agency



AUSTRIAN COUNCIL
FOR RESEARCH AND
TECHNOLOGY
DEVELOPMENT

Innovative startups are the basis for economic momentum and social prosperity. This is where new ideas happen, where the courage to try things lives, and where we shape the future. For this reason, from the point of view of the council, it is a key aspect of forward-looking economic and social policy to provide startups in Austria with the best possible space for them to develop. Fortunately, successful first steps have already been taken. However, there is still a great deal of untapped potential.

Dr. Hannes Androsch, Chairman of the Council for Research and Technology Development

WKO
WIRTSCHAFTSKAMMER ÖSTERREICH

AUSTRIAN FEDERAL
ECONOMIC
CHAMBER

The Austrian Economic Chamber actively supports startups and established companies when going international. The Economic Chamber establishes beneficial parameters for all companies, because economic activity functions as a whole.

Dr. Harald Mahrer, President of the Austrian Federal Economic Chamber

iv
FEDERATION OF
AUSTRIAN INDUSTRIES

FEDERATION OF
AUSTRIAN INDUSTRY

For the industrial sector, startups can represent crucial partners, giving a competitive advantage when bringing new products to market and creating innovative business models. Therefore, in order to increase the dynamism of innovation in Austria, collaborations between young and established innovative companies must be increasingly made possible and taken advantage of.

Mag. Georg Kapsch, President of the Federation of Austrian Industry

WKO
WIEN
VIENNA CHAMBER OF COMMERCE
AND INDUSTRY

VIENNA ECONOMIC
CHAMBER

The startups of today are the shooting stars of tomorrow. It is crucial to optimize the use of our regional economy as a network. That's why we, as the Vienna Economic Chamber, set two levers into motion: On the one hand, we support startup founders and, on the other, we build bridges to existing companies. In this way, we create a new dynamic for Vienna as a business location, which everyone can benefit from.

Walter Ruck, President of the Vienna Economic Chamber

Key Facts

The Austrian Startup Monitor 2018 is the first comprehensive report about the status, perspectives, and ecosystem of startups in Austria. The survey also covers questions from the EU Startup Monitor. We gathered insights from 512 founders or CEOs of Austrian startups in a survey conducted in spring 2018. By collecting data from different sources more than 1,500 startups have been identified, which were invited to participate in the survey.





ABOUT THE AUSTRIAN STARTUP MONITOR

METHOD

The Austrian Startup Monitor (ASM) is a long-term project with the aim of compiling and continuously analyzing information about the status quo and development of Austrian startups over time. As a first step, **Austrian startups** were identified based on various sources, characterized with the aid of publicly available data and compiled into a database. In an **online survey**, the startups were asked about their perspectives as well as their perception of the Austrian **startup ecosystem**. In addition to the data from the database, the results of the ASM Survey form the central empirical basis for the **ASM 2018**.

Note concerning interpretation of the figures:
In some cases, due to rounding differences, the responses do not always add up to 100%.

ASM DATABASE

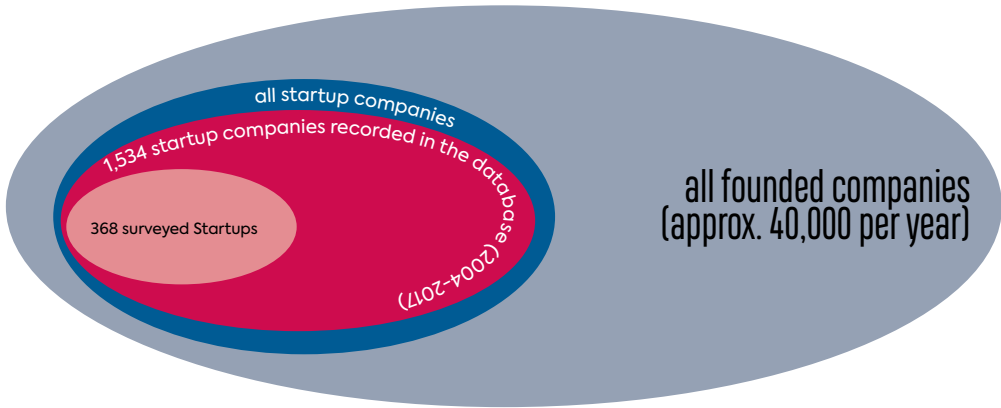
With the ASM database, for the first time, Austrian startup companies are documented to the furthest extent possible.

In Austria, no publicly available information, such as statistical surveys, registrations or similar sources concerning startups exists to date. This deficit made it impossible to record and quantify them until now. According to the Austrian Federal Economic Chamber, in recent years, the number of companies founded amounted to between 37,000 and 40,000 (including approx. 10,000 personal consultants) per year. In order to be able to narrow down and identify startups, a wide variety of search strategies needed to be used to filter the relevant data from all founded companies. Startups often settle in particular locations, for example, in the vicinity of incubators and other facilities that provide support for founders as well as coworking spaces.

Numerous startups could be found in this environment. The analysis of competitions and events (e.g. Pioneers Festival, Fifteen Seconds, Startup Live, Entrepreneurship Avenue) was also enlightening. In turn, a different search strategy entailed focusing on the systematic analysis of the media coverage on startups. Since they use specific forms of financing, such as venture capital, crowdfunding, or public subsidies programs, the publicly available information surrounding this funding was used for the evaluation. Databases such as Startablisth or Crunchbase were also important sources when locating startups.

Based on publicly available information, it was then possible to collect a great amount of data concerning the characteristics of enterprises and their innovation activities. Against the background of the aforementioned definition criteria, a group consisting of 1,534 startups were identified for this first edition of the ASM. They were all established between 2004 and 2017 and the vast majority – more than 90% – were founded after 2008 and are thereby are a maximum of ten years old, in accordance with the definition. Due to the chosen approach, not all startups were able to be identified and it is assumed that the population of founded startups in Austria is higher. Nevertheless, the pool of data contained in the ASM database represents the most comprehensive population of all startups in Austria to date.

TOTAL POPULATION OF STARTUPS



Note: The graph is not proportional to the data.

ASM SURVEY

All the startups counted during the course of building the ASM database were invited to an online survey.

The aim of the survey was, above all, to find out how founders evaluate the Austrian startup ecosystem and identify specific company characteristics. The development of the survey took place in close collaboration with the project leads of the EU Startup Monitor (startupmonitor.eu). The EU study is supported by the European Commission and compares European startup ecosystems and also contributes to the SME annual report issued by the European Commission. The corresponding annual Congress "SME Assembly" took place in Austria in 2018. The results of the survey were published using a stand-alone report in the fall of 2018.

The online survey was carried out from the beginning of March to the end of April, 2018. The startups were mainly contacted by AustrianStartups. In addition, several disseminators have

communicated the importance of the survey within the community. Overall, the survey had 532 participants, whereby more than one person participated in some cases. The majority of the participants – 88% – were the startup founders. To enable a more in-depth analysis, participants were asked to state the name of the startups on a voluntary basis. Ultimately, in this way, 368 companies were identified as startups by definition. The difference between the total number of all responses and the number of responses from companies classified as startups can be traced back to multiple expert answers or anonymized participation. For the questions of the Austrian Startup Monitor 2018, both groups were included in the data pool depending on the relevant questions. In view of the entire population (1,534 startups), that is a

response rate of about 24% calculated on the startup level. If comparisons between the survey (368 startups), and the database (1,534 startups) are taken into account with regard to the geographical distribution of local startups, a similar pattern is evident. Therefore, the data obtained through the survey can be deemed representative of the entire Austrian startup ecosystem, taking their distribution throughout the federal states into account.

Two differences between the data pool and the survey were apparent: The startups that responded to the survey are younger on average and are in earlier stages of development than those from the existing data pool.

ASM REPORT

The first ASM report for the year 2018 is based on data in the ASM database and the ASM Survey. Concerning the ASM Survey, a differentiation should be made between the total group of participants and the group of identified startups. Differentiating between the data source, ASM

Survey participants (N max. 532, depending on the completeness of the respective question) and ASM Survey startups (N max. 368) ensures this. On a case-by-case basis, reference is made to the results of other studies, such as the European Startup Monitor (ESM),

the German Startup Monitor (GSM) or the Community Innovation Survey (CIS). They allow for a rough classification of the current findings to be made on a national level.

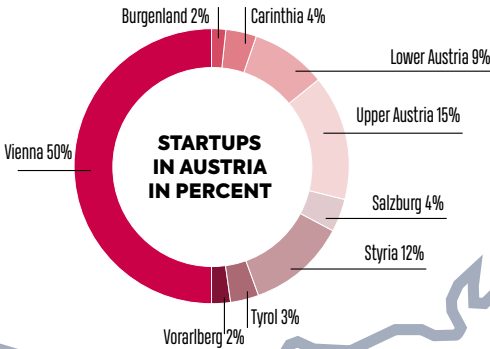
STARTUPS IN AUSTRIA

NUMBERS AND LOCATIONS

The importance of startups has significantly increased in public perception. This does not only have to do with a few famous examples of success and media coverage that have become more intense over the years, but it can also be seen on an empirical level. In principle, it is ascertainable that the number of startup companies listed in the

database between 2004 and 2016 has steadily increased: Only 25 startup companies were listed in 2004, 12 years later there were 227, and 180 last year. Since the listing of startups in the ASM database can only be compiled with a certain time delay, it can be assumed that the number of startups in 2017 is higher than in the previous year and thus, the growth rate continued.

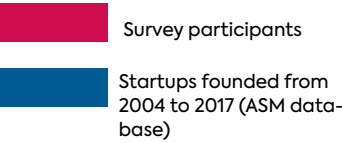
On average, the number of startup companies listed in the database has grown by around 20% annually between 2004 and 2016.



NUMBER OF STARTUPS IN AUSTRIA

Fig. 1. Source: ASM Survey (startups) and ASM database

Totals 1,534

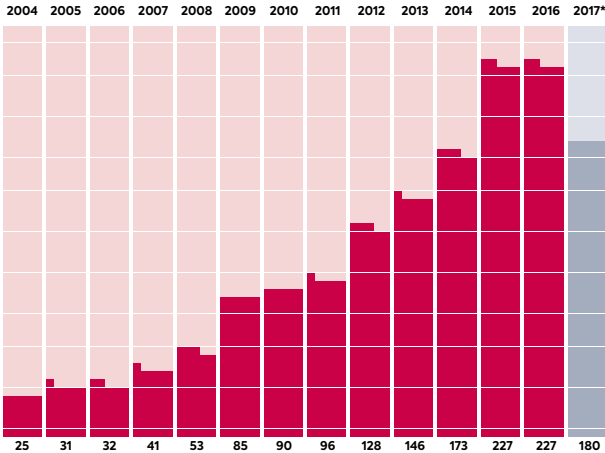


NUMBER OF STARTUPS IN AUSTRIA, 2004 TO 2017

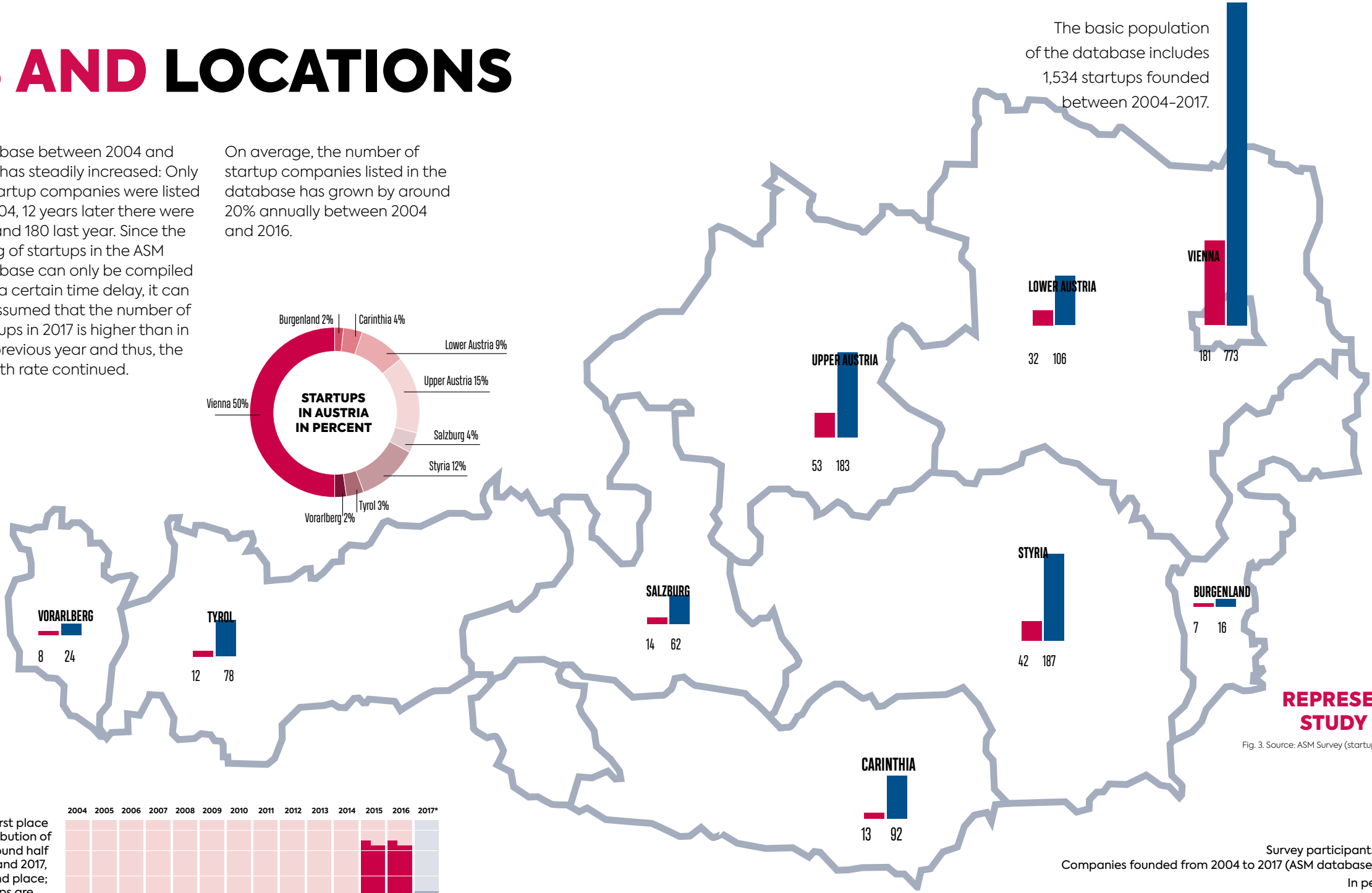
Fig. 2. Source: ASM database, N=1,534

In a federal-state comparison, Vienna clearly ranks first place as a startup location, shown by the number and distribution of startups. In specific figures: 773 startups, meaning around half of all Austrian startups that took root between 2004 and 2017, settled down in Vienna. Upper Austria follows in second place; Styria is in third place. Approximately 13% of all startups are respectively located in both federal states. There too, startups are concentrated in the respective state capitals, Graz and Linz. In other federal states, the quota is considerably under this. A total of 9% of startup companies were in Lower Austria, followed by Carinthia with 4% and Tyrol with 3%. When it comes to founding new startups, Vorarlberg and Burgenland are in last place with a share of less than 2%.

* Due to the selected search strategies (see Chapter ASM DATABASE) and the startup infrastructure, which is first built up during the first few years of its existence and makes identification easier, it was particularly difficult to identify startups in the years prior to 2010. Here, the number of startups founded is probably higher.



The basic population of the database includes 1,534 startups founded between 2004-2017.



REPRESENTATIVE STUDY RESULTS

Fig. 3. Source: ASM Survey (startups) and ASM database

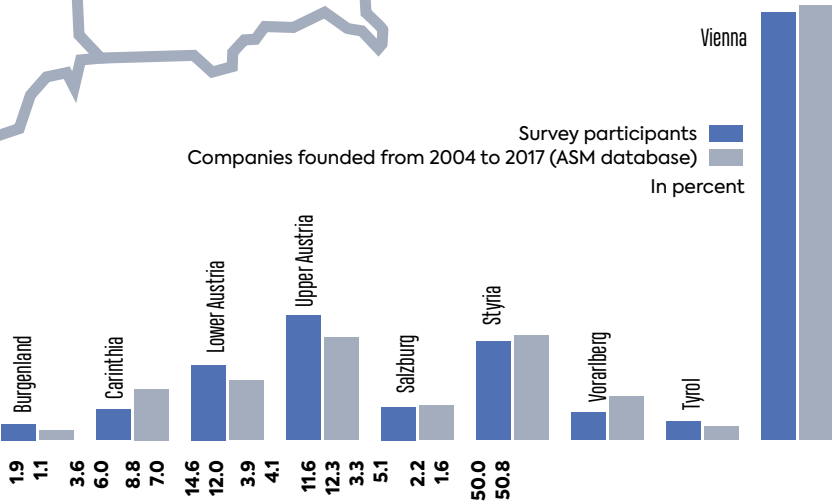


Fig. 3 shows the distribution of startups that took part in the survey. The percentages somewhat correspond to the basic population of all startups listed in the database. In the survey, only startups from the federal states of Carinthia and Tyrol are somewhat less frequently represented than in the basic population. On the whole, however, a representative data pool can be assumed.

DEVELOPMENT PHASE

The results allowed for an analysis of what development phase the surveyed startups are currently in. As is customary, we differentiate between seed, startup, growth and the later-stage phases.

The majority (44%) is in the startup phase, followed by the growth phase at 34%, and around 14% of the surveyed startups are in the seed phase. The distribution of the development phases and age of the

companies surveyed are closely related. About one-fifth of the companies are less than one year old, and are usually in the seed phase. Another third are between two and three years old and mostly in the startup

phase. Companies that are older than four years tend to have graduated to the growth phase. They account for about one-third of the companies surveyed.

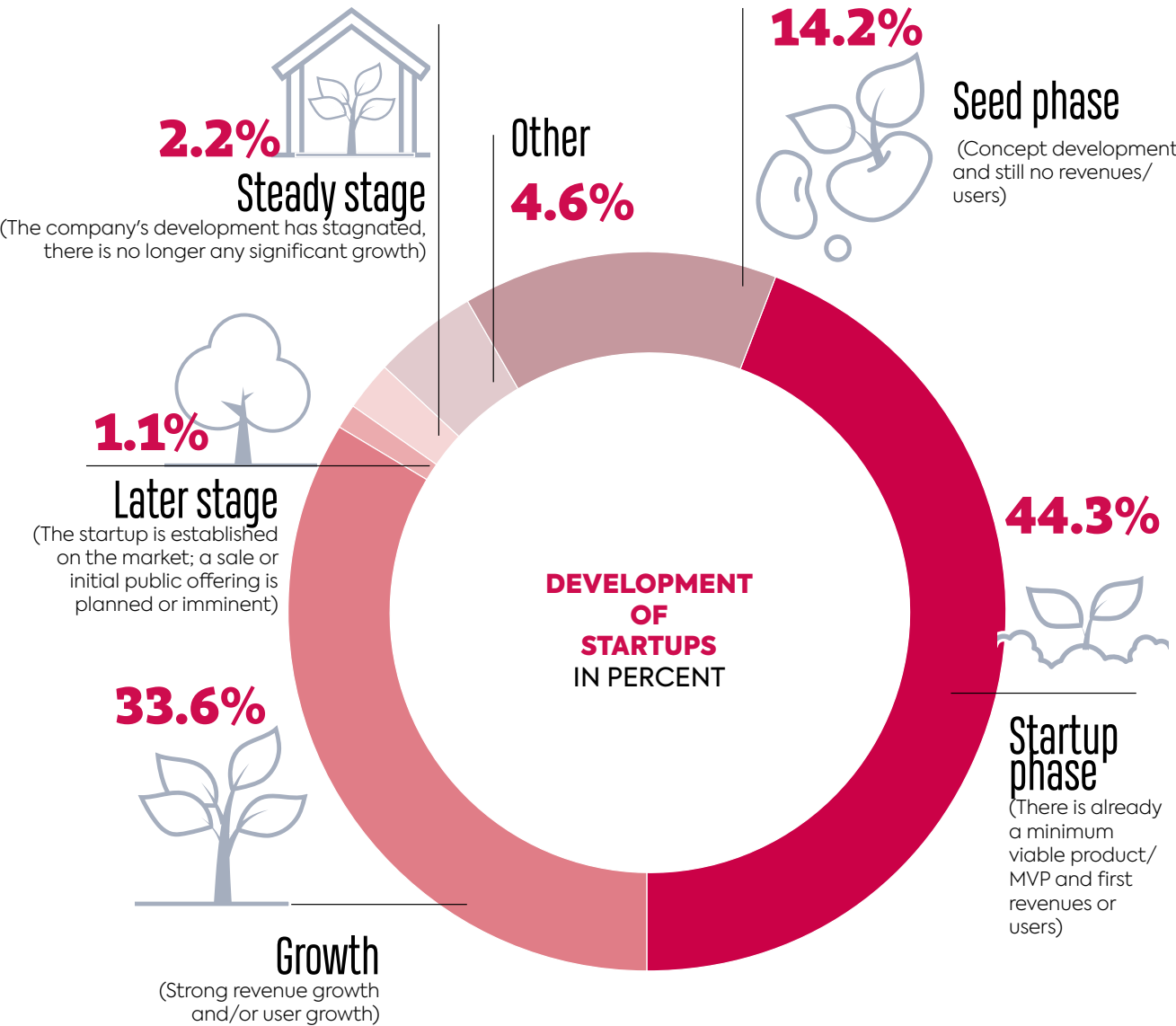


Fig. 4. Source: ASM Survey (startups), N=366

TYPES OF STARTUPS

Startups have different origins and development histories. The ASM 2018 investigated how different business types are represented throughout Austria. The

evaluation showed that the majority of surveyed startups (87% or 316 companies) are independent companies. A minority of around 6% were created as spin-offs

from a university, college, or research institution or as a spin-off from a well-established company.

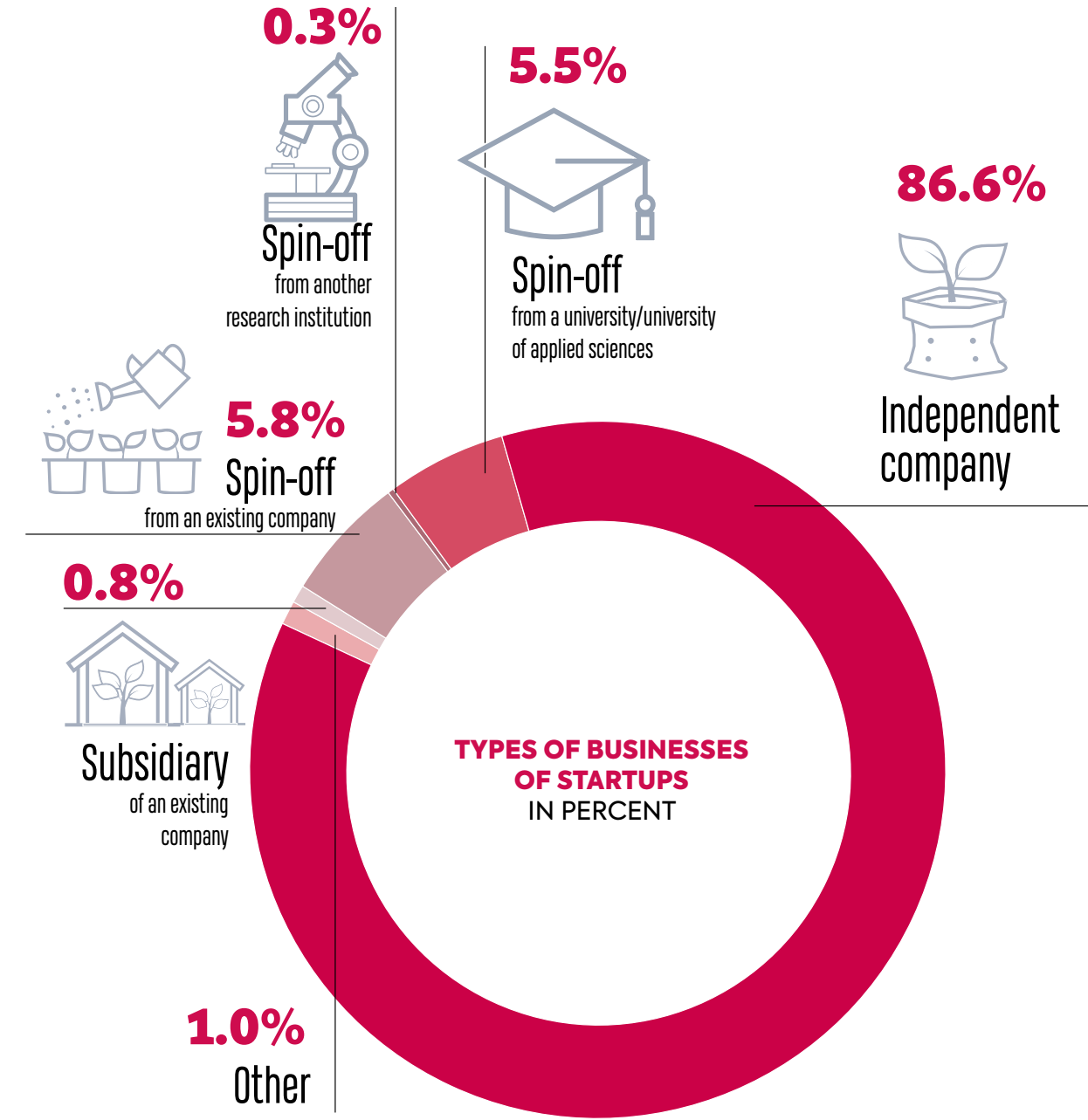


Fig. 5. Source: ASM Survey (startups), N=365

SECTOR

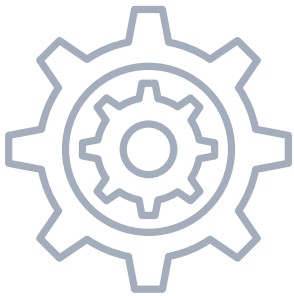
In order to find out what sectors have the most Austrian startups, the survey covered a wide range of industries (22 in total).

The results show that the IT and software development fields dominate. As the ASM Survey 2018 has shown, these two sectors account for around 35% of startups. With considerable distance, the fields of “life sciences” (including biotechnology, healthcare, medical and pharmaceutical) and “industrial technology/production/electronics/electrical engineering” follow with around 10% respectively. Companies of the latter type are frequently referred to collectively as “hardware startups”. Creative industries (communication/marketing and media) and the field of consumer goods (clothing/textiles, consumer goods, food products) are in fourth and fifth place at around 7%, ultimately followed by trade (6%), ultimately followed by trade (6%) in sixth place. Other industries

play a subordinate role at a share of under 5% of startups. With the dominance of the two industries, IT and software development in startups, Austria is part of an international trend. A comparison with other studies on sector distribution confirmed this and companies founded in these fields are the most prevalent in Germany and Switzerland. If this is contrasted with the “enterprise birth” statistics published by Statistics Austria, which lists all founded companies, it also becomes evident that startups are founded in the fields of IT and software development at a disproportionately frequent level. Another interesting insight of the study is that startups more frequently inhabit the fields of life sciences, industry, or hardware

and finance than the overall average of all companies founded. On the other hand, startups in the fields of trade, construction, hotels and restaurants are more seldom than the overall average of company founding statistics.

9.6%



HARDWARE Industrial technology/production and electronics/electrical engineering

7.4%



CREATIVE INDUSTRIES Communications/marketing and Media

6.6%



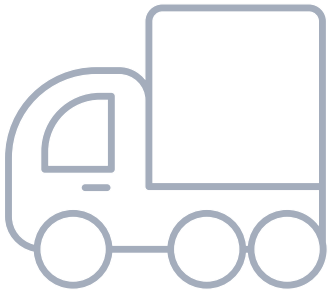
CONSUMER GOODS Clothing/textiles, consumer goods and food items

6.3%



TRADE

4.1%



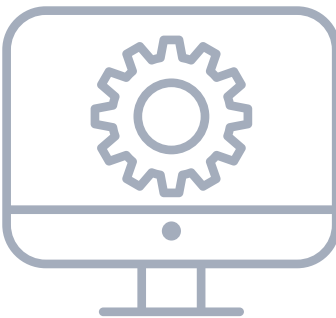
ENERGY & TRANSPORT LOGISTICS

4.1%



FINANCE FINANCIAL TECHNOLOGY

34.9%



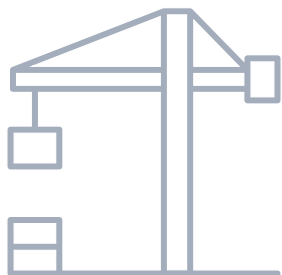
SOFTWARE IT/software development

10.2%



LIFE SCIENCES biotechnology, healthcare, medical and pharmaceutical/laboratory technology

3.0%



CONSTRUCTION REAL ESTATE

1.9%



TOURISM

1.6%



EDUCATION

Fig. 6. Source: ASM Survey (startups), N=364



FOUNDERS IN AUSTRIA

FOUNDER TEAM

The **ASM Survey** represents over 1,700 startup founders from 368 startups. In Austria, founding a startup tends to be the result of a team effort: More than **four out of five (81%)** were built by a team. The average team size is 2.5 founders. **About two-thirds of the startups were founded by two (39%) or three people (21%).**

The comparison with the Austrian data from the ESM 2016 (**77% team company foundations with an average of 2.3 founders**) shows two trends: Both the proportion of founding teams and the size of the teams has risen slightly.

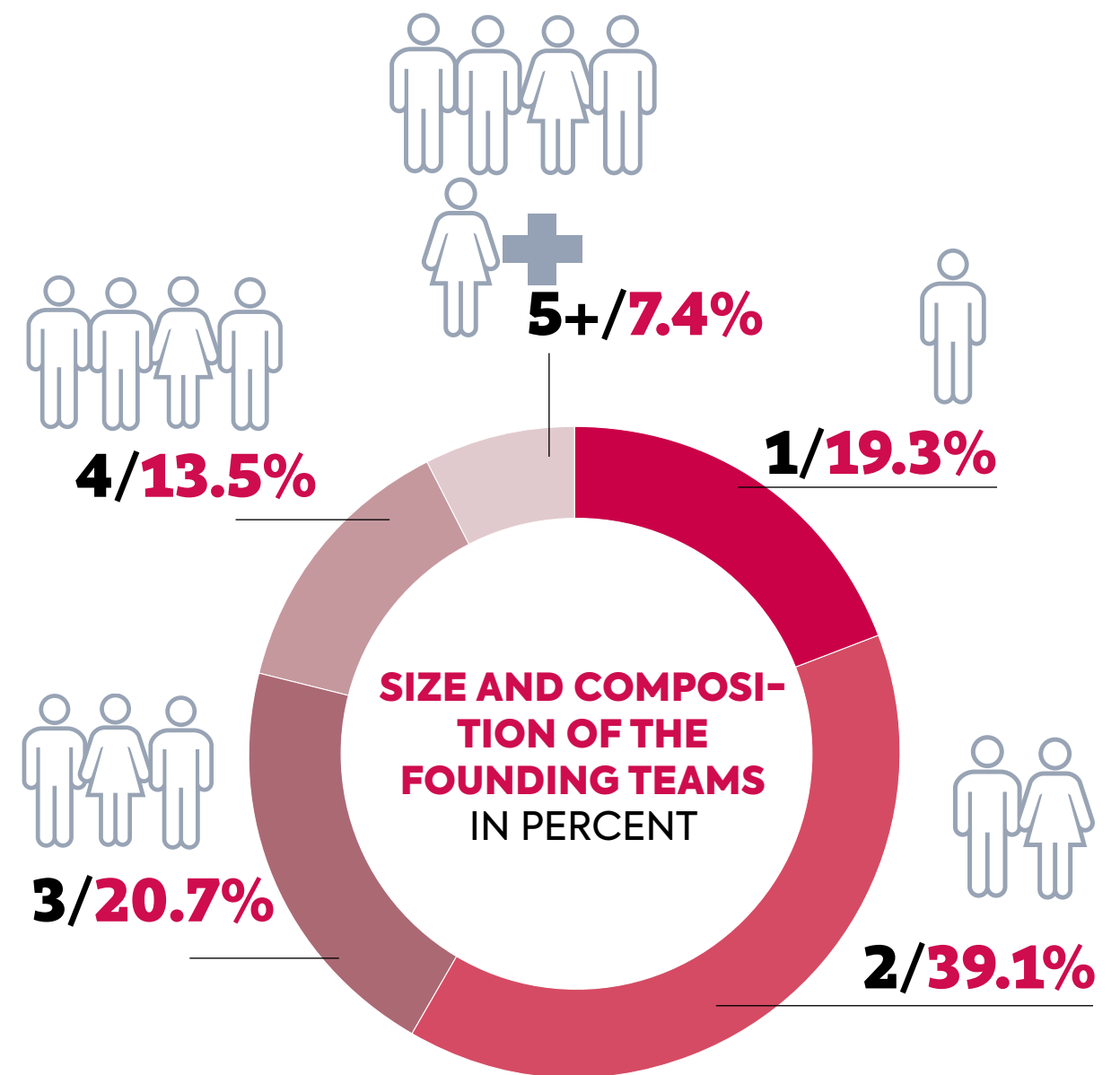


Fig. 7. Source: ASM Survey (startups), N=366

GENDER OF THE FOUNDERS

For the first time, the ASM 2018 not only enquired about the size of the team, but also its composition according to the gender of the members of the founding team.

In the ESM surveys up until this point, in Austria, only the gender of those who participated in the survey was ascertained. That makes it possible to get a more nuanced picture of the Austrian startup landscape in this respect. Almost a quarter of the surveyed startups (23%) were built by mixed-gender teams. In contrast, 6% of the startups were founded (exclusively) by women (including 4% being single founders) and 71% (exclusively) by men (including 15% being single founders). In the case of 29% of startups, at least one woman is a member of the founding team. It is striking that the relative share of single companies being founded by women is three times higher at 60% than is the case with single companies being founded by men (21%). In this regard, startup teams consisting of only men have more founding members on the average than women

(exclusively) by men (including 15% being single founders). In the case of 29% of startups, at least one woman is a member of the founding team. It is striking that the relative share of single companies being founded by women is three times higher at 60% than is the case with single companies being founded by men (21%). In this regard, startup teams consisting of only men have more founding members on the average than women

startup teams (average team size: 2.9 vs. 2.3). Mixed gender teams usually consist of three team members. The proportion of women in founding teams is 12%. This is an increase of 4.4% compared to the ESM 2016. The percentage of women in Austrian founding teams is still below the European average of 15%.

NUMBER OF FOUNDERS

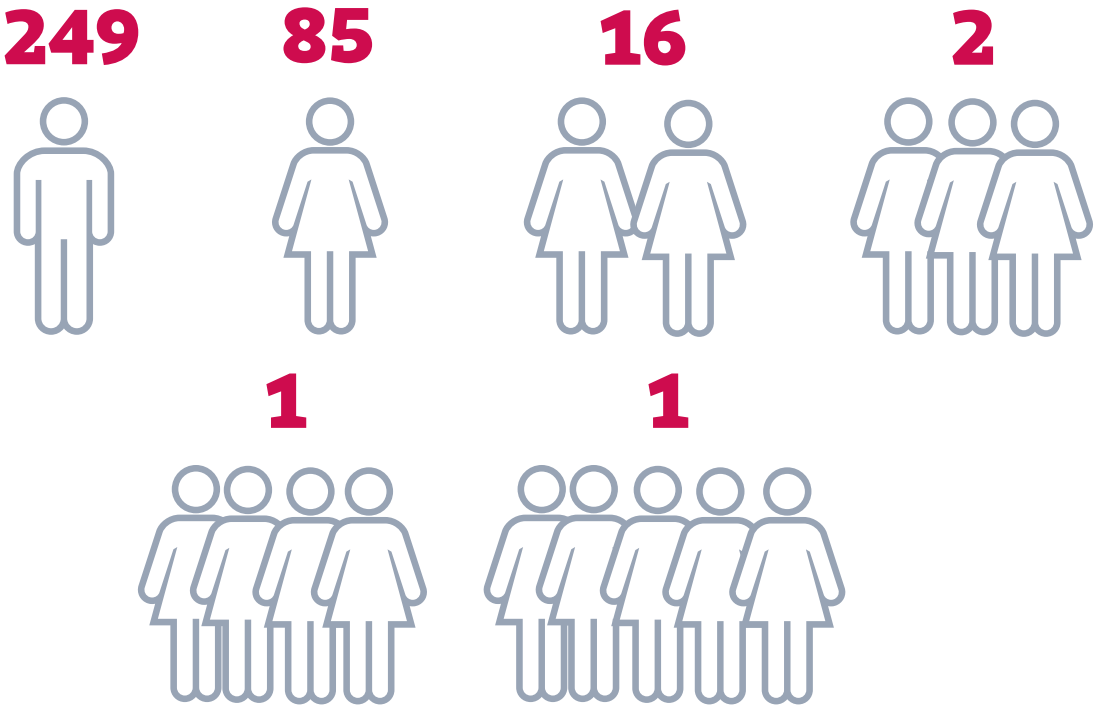


Fig. 8. Source: ASM Survey (startups), N=354

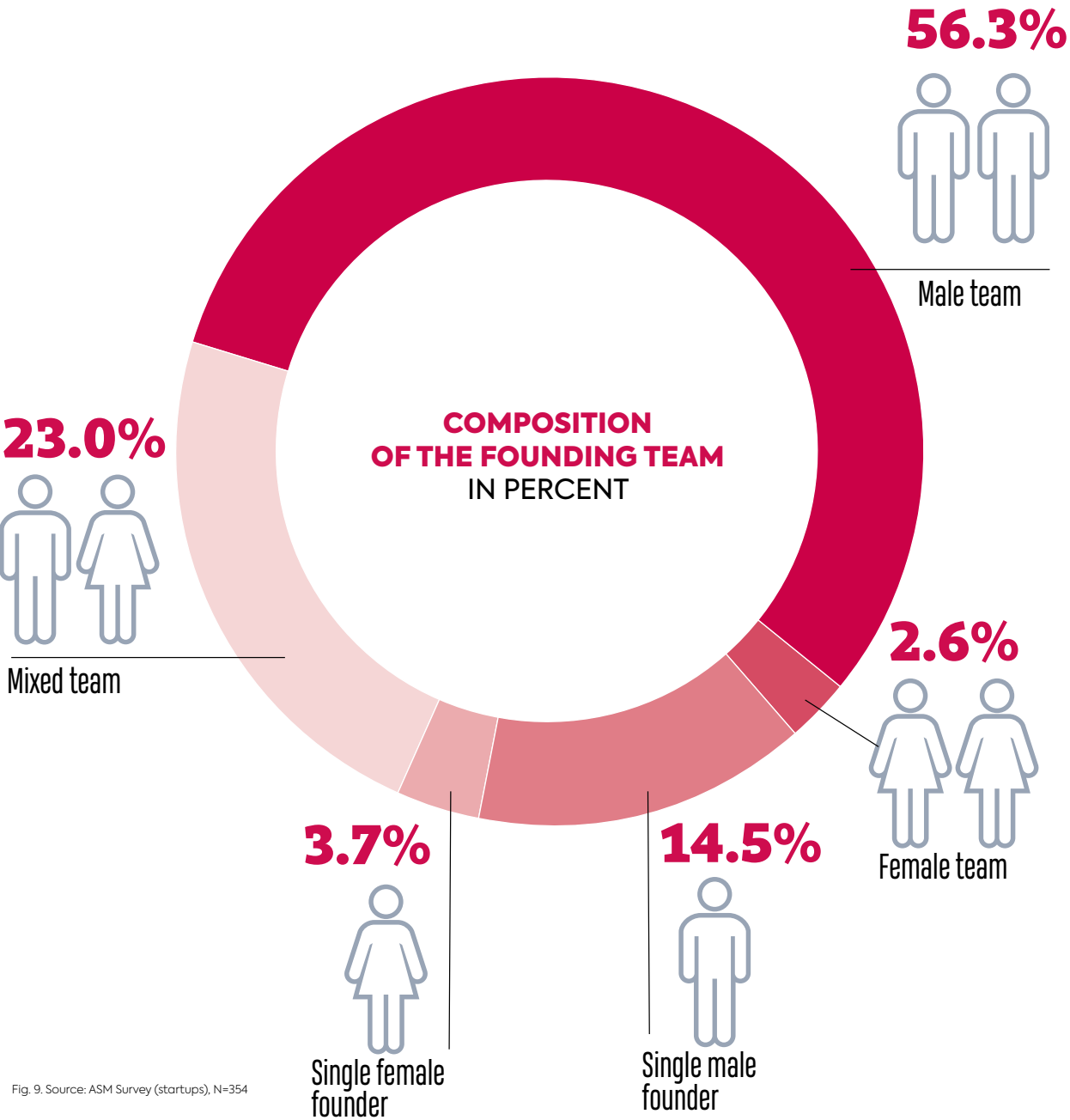


Fig. 9. Source: ASM Survey (startups), N=354

AGE OF THE FOUNDERS

Startup founders are mostly under 40 years of age. The average age of the participants of the ASM survey is 36.6 years old.

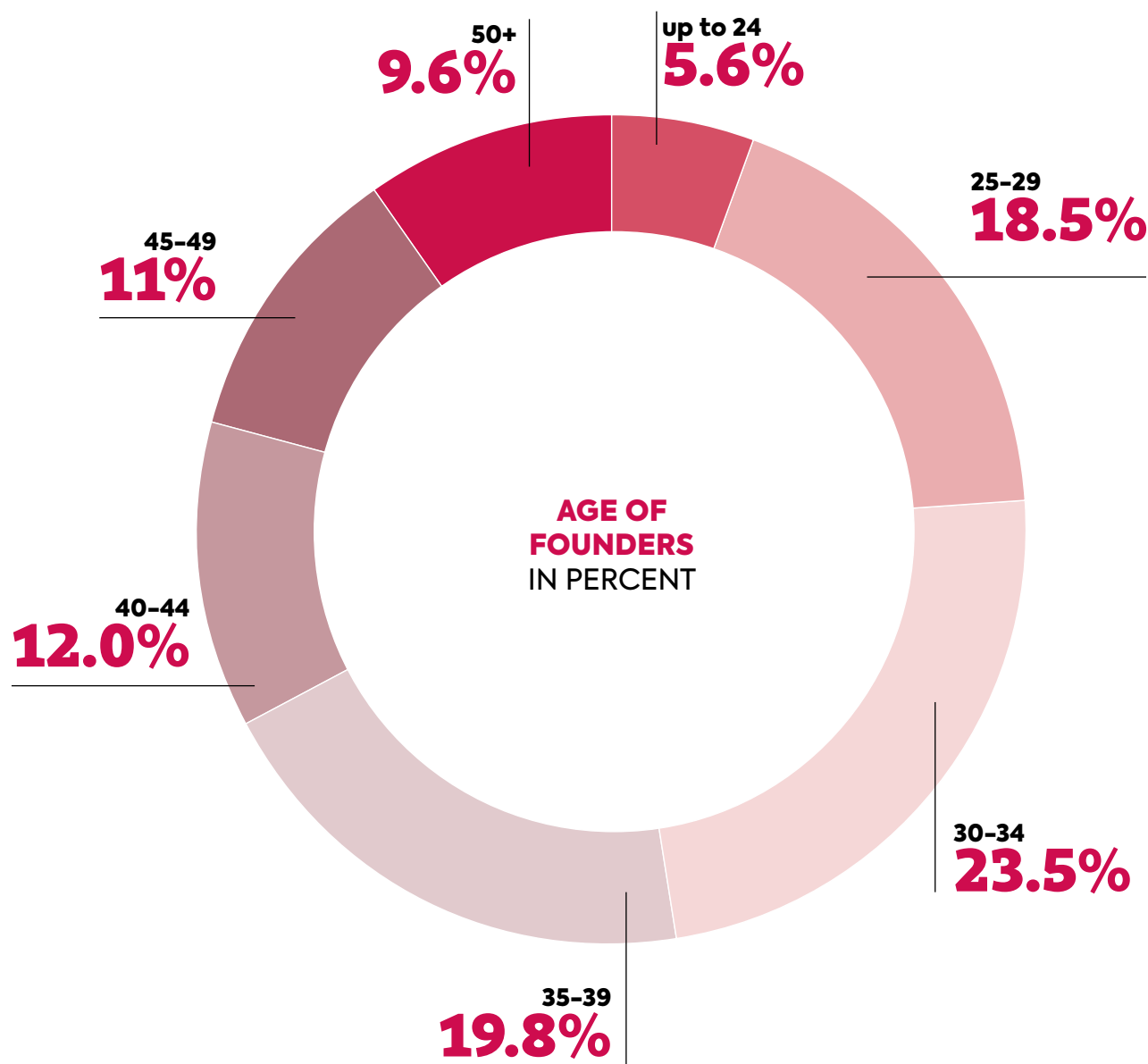


Fig. 10. Source: ASM Survey (startups), N=327

At 24%, you will find the most founders in the age group between 30 and 34 years of age. Those who are in the end of their thirties aged between **35 and 39 make up the second strongest group with 20%**. Founders between the ages of 25 and 29 years old follow in third place at 19%. Furthermore, it is interesting that around half of the participants built their current startup before the age of 30.

EXPERIENCE AND EDUCATION OF THE FOUNDERS

Austrian startup founders are well-educated, seeing as three out of four have a college degree. If you look at this group in detail, every second founder (49%) has completed a master's degree. The proportion of those who have a bachelor's degree is 16%, and 10% hold doctorates, whereas 6% dropped out of university, as was clearly indicated by the ASM Survey. Another 12% state the matura (high-school diploma) as the highest educational achievement, 3% have successfully completed an apprenticeship and 1% have taken a master craftsman's examination.

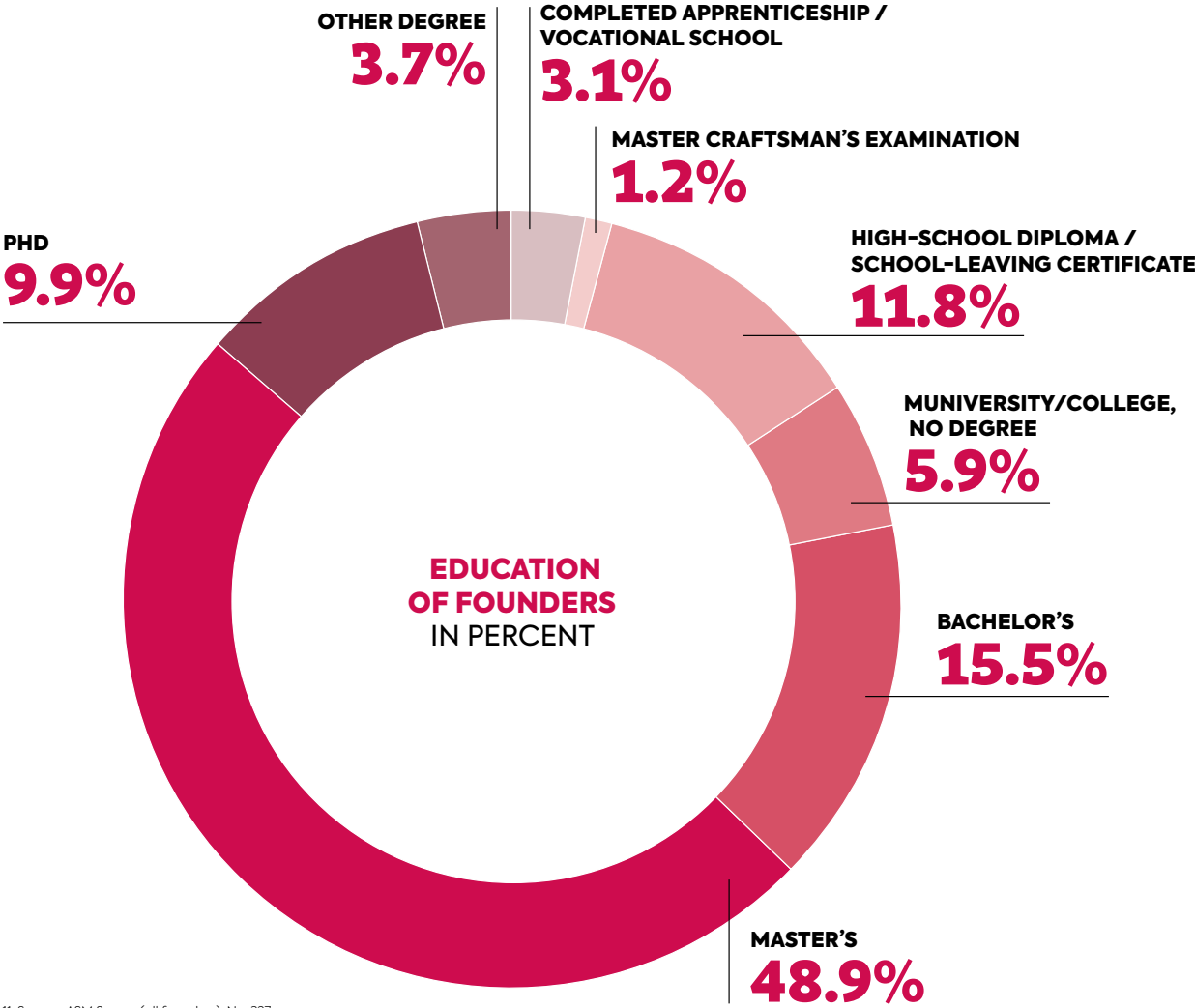


Fig. 11. Source: ASM Survey (all founders), N = 327

The ASM 2018 also brings an interesting detail to light: 42% of the participants had already founded a company before their current startup, meaning that they are serial entrepreneurs. Concerning the number of startups, most (26%) had established another company prior to the current one. In the case of 10%, it was two, for 2%, it was three, and more than three companies were built up by 3% of the participants. At 42%, the share of serial entrepreneurs is at a similar level as the results of the survey conducted for the ESM 2016. At that time, the proportion was 41%.

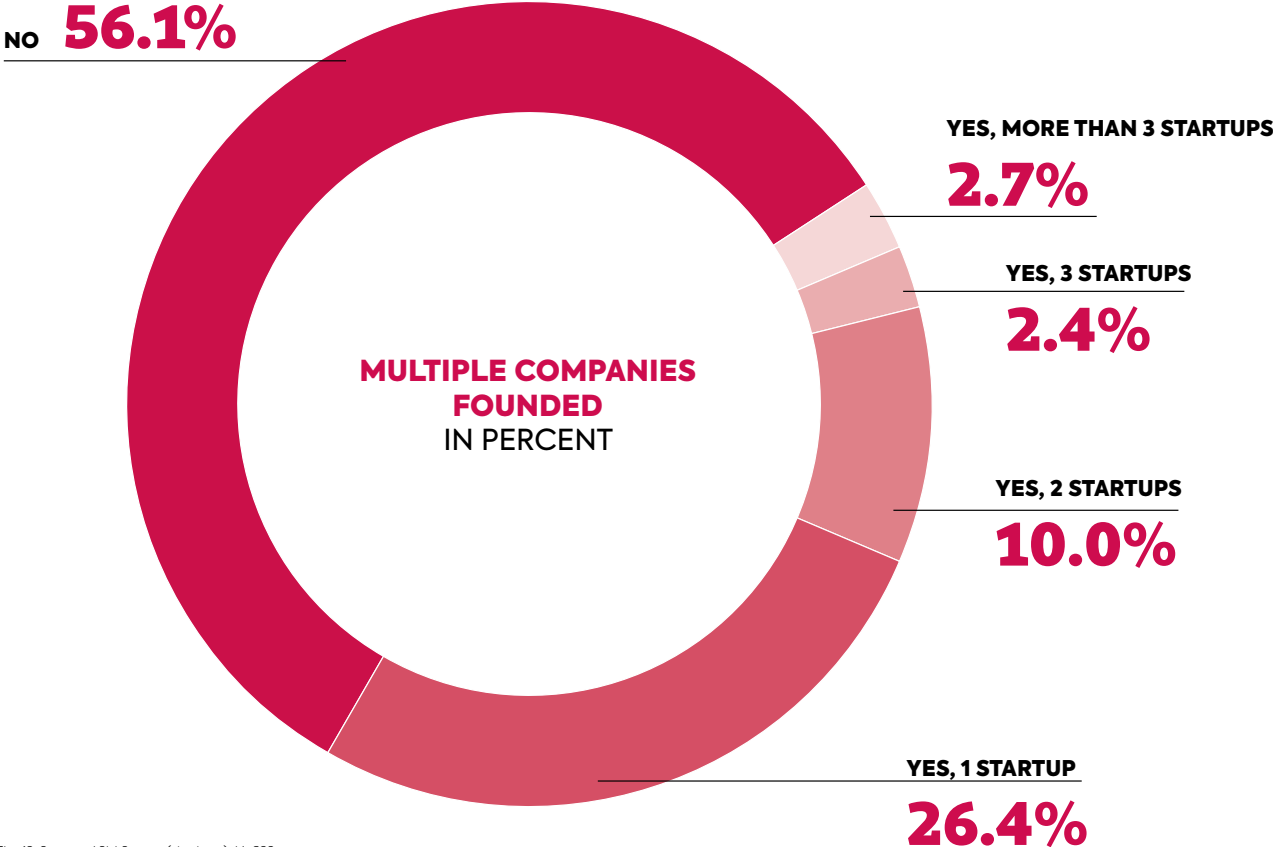


Fig. 12. Source: ASM Survey (startups), N=322

NATIONALITY OF THE FOUNDERS

The majority (86%) of survey participants have Austrian citizenship. Approximately every seventh founder (14%) comes from abroad. 10% are EU citizens (incl. 7% German citizens) and 4% come from a non-EU country.

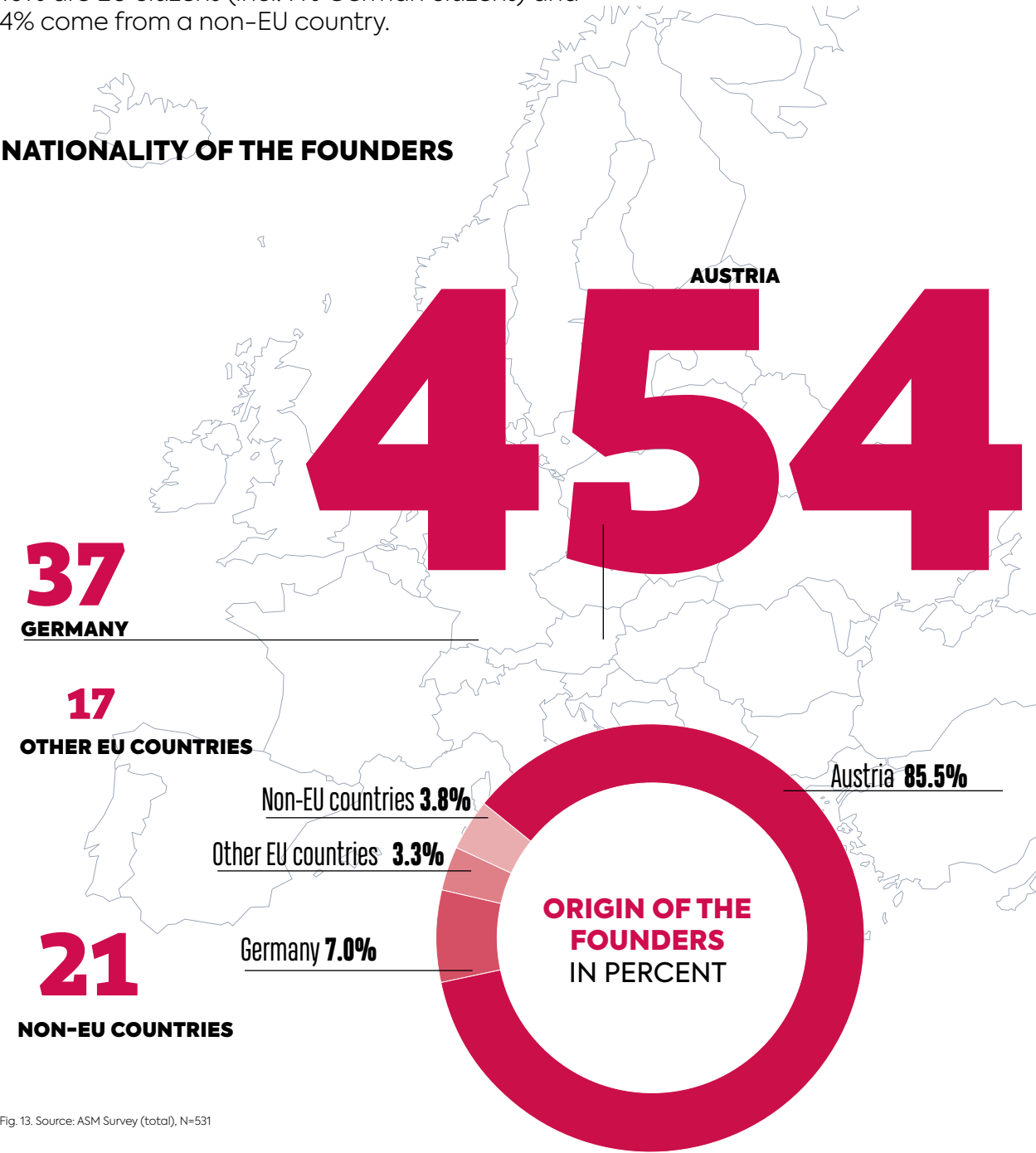


Fig. 13. Source: ASM Survey (total), N=531

Furthermore, the survey investigated if members of the founding team moved to Austria to found their startup here. The results show that this was the case for every ninth startup (11%).

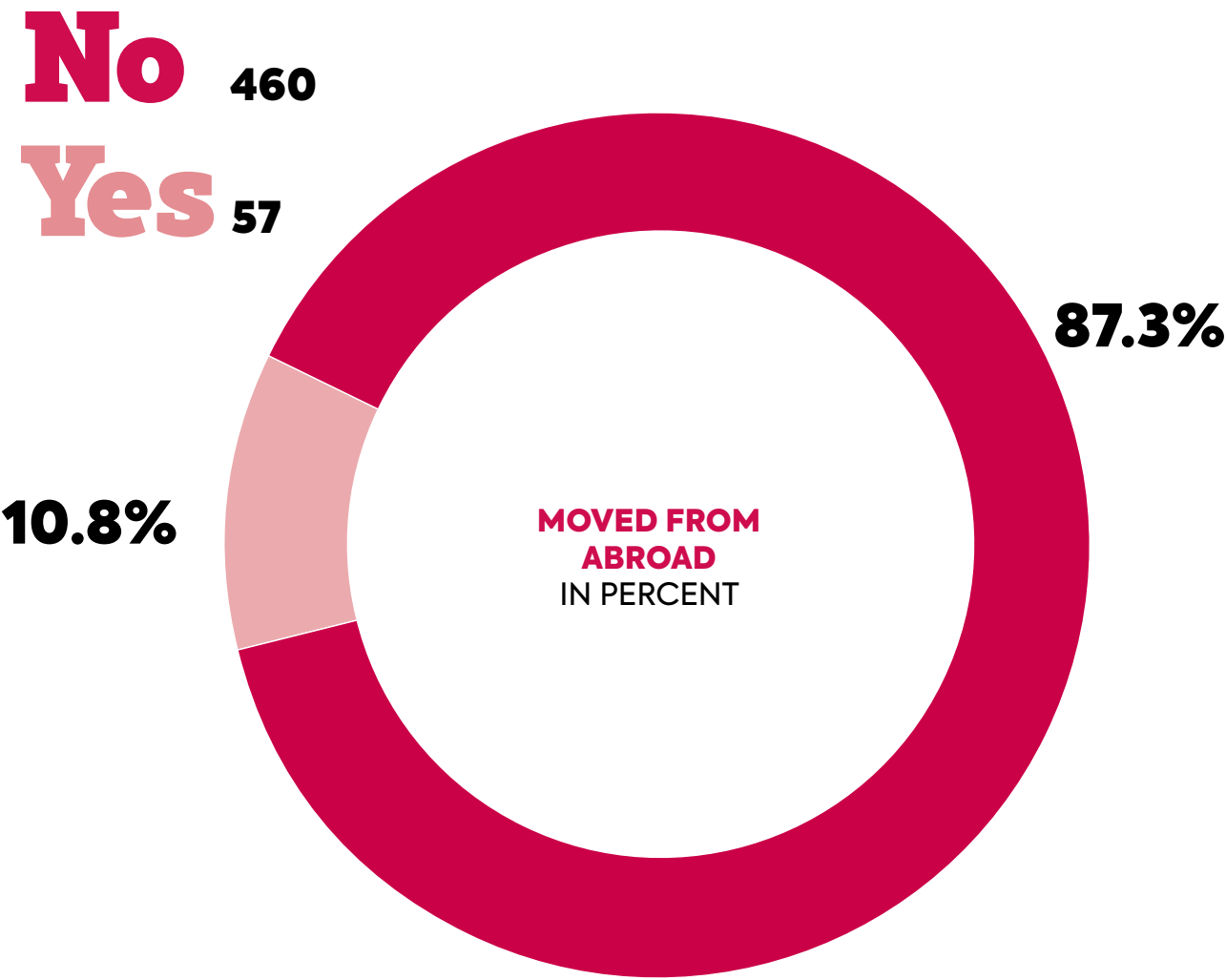


Fig. 14. Source: ASM Survey (total), N=527

REASONS FOR FOUNDING

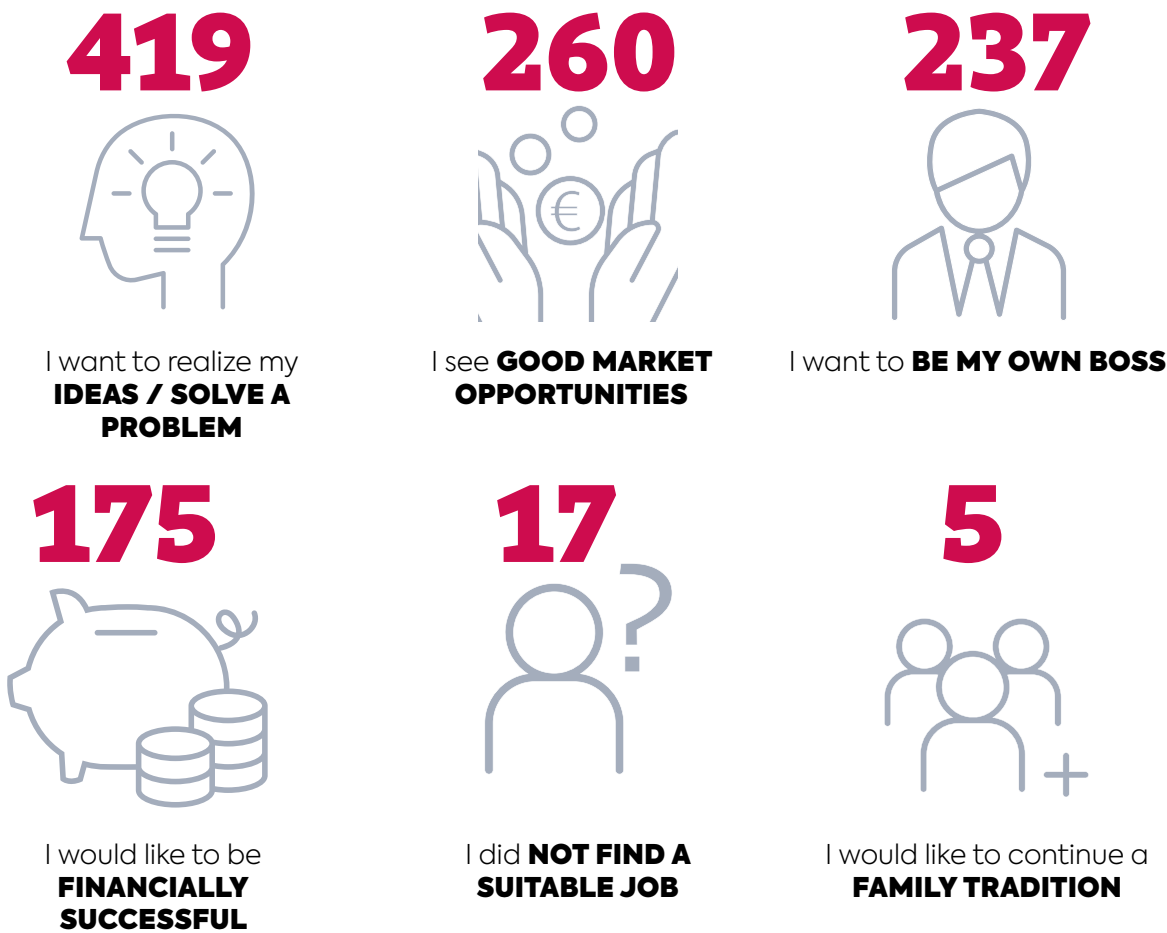
The central reason to found a startup for almost all (91%) participants is the ability to realize one’s own idea or solve a problem. Austrian startup founders can mostly be characterized as “opportunity driven entrepreneurs”.

Also, a positive assessment of the market opportunities plays a role and was indicated by 56% as a significant trigger. A very strong driving force (51%) is typically also the desire for professional autonomy and after that, being one’s own boss. At some

distance behind, financial interests follow. Financial success is only a fundamental factor for a little more than a third (38%). Furthermore, it is interesting that only 4% founded their company out of necessity because they did not find a suitable job

and wanted to create one for themselves. The desire to continue a family tradition with the startup was relevant only for 1% of the surveyed entrepreneurs.

REASONS FOR FOUNDING



REASONS FOR FOUNDING IN PERCENT

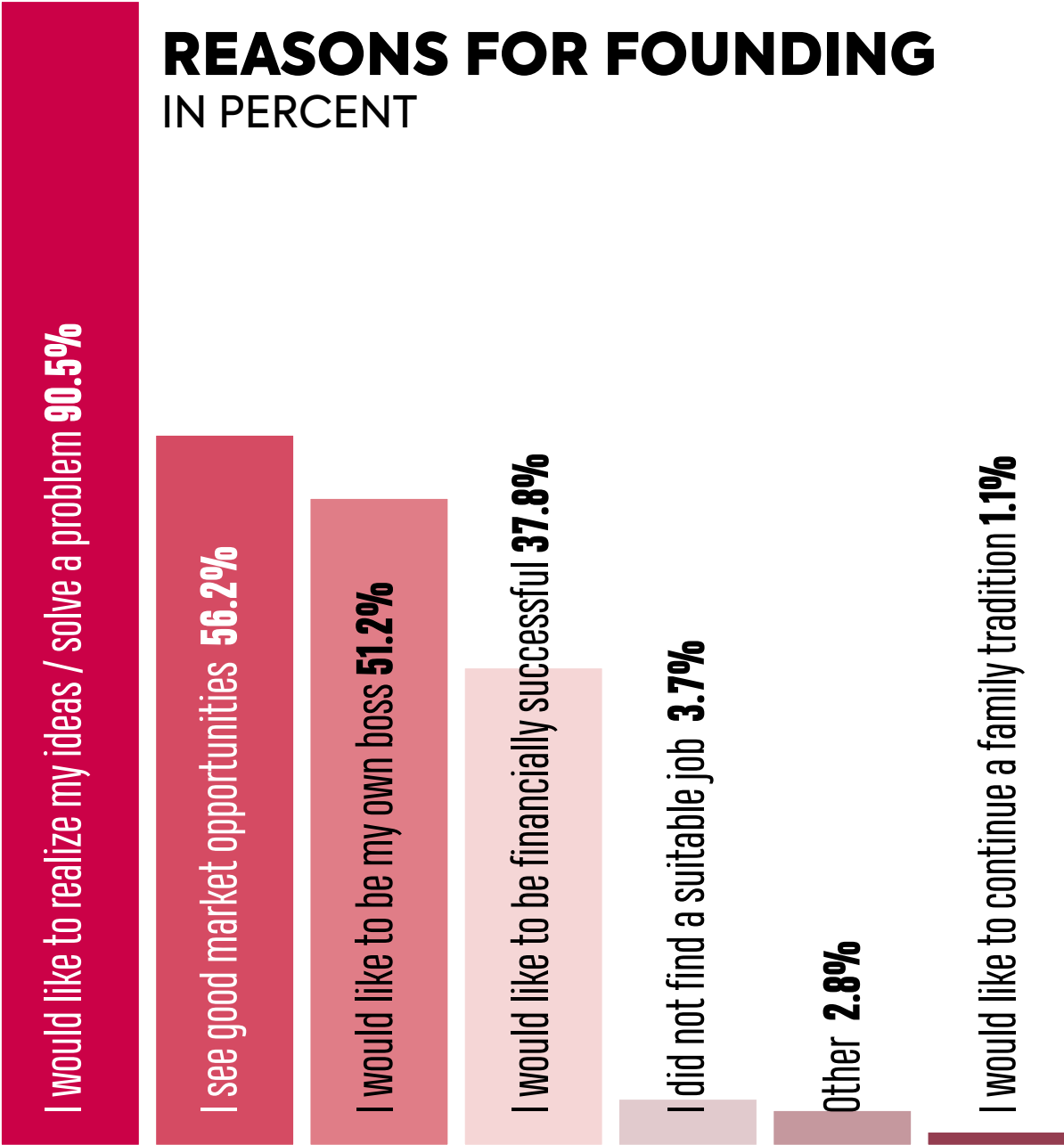


Fig. 15. Source: ASM Survey (total), N=463 (multiple answers possible)

LONG-TERM PERSPECTIVES

When it comes to long-term perspectives, the desire for stability plays a crucial role. The vast majority (73%) want to build up a solid and profitable company and retain ownership of it. This value coincides with the founding motives, because in nine out of ten cases, a startup was created to make the founders' idea a reality, or to solve a specific problem. Every fifth founder aims to sell the company and 6% want to launch their startup onto the stock exchange.

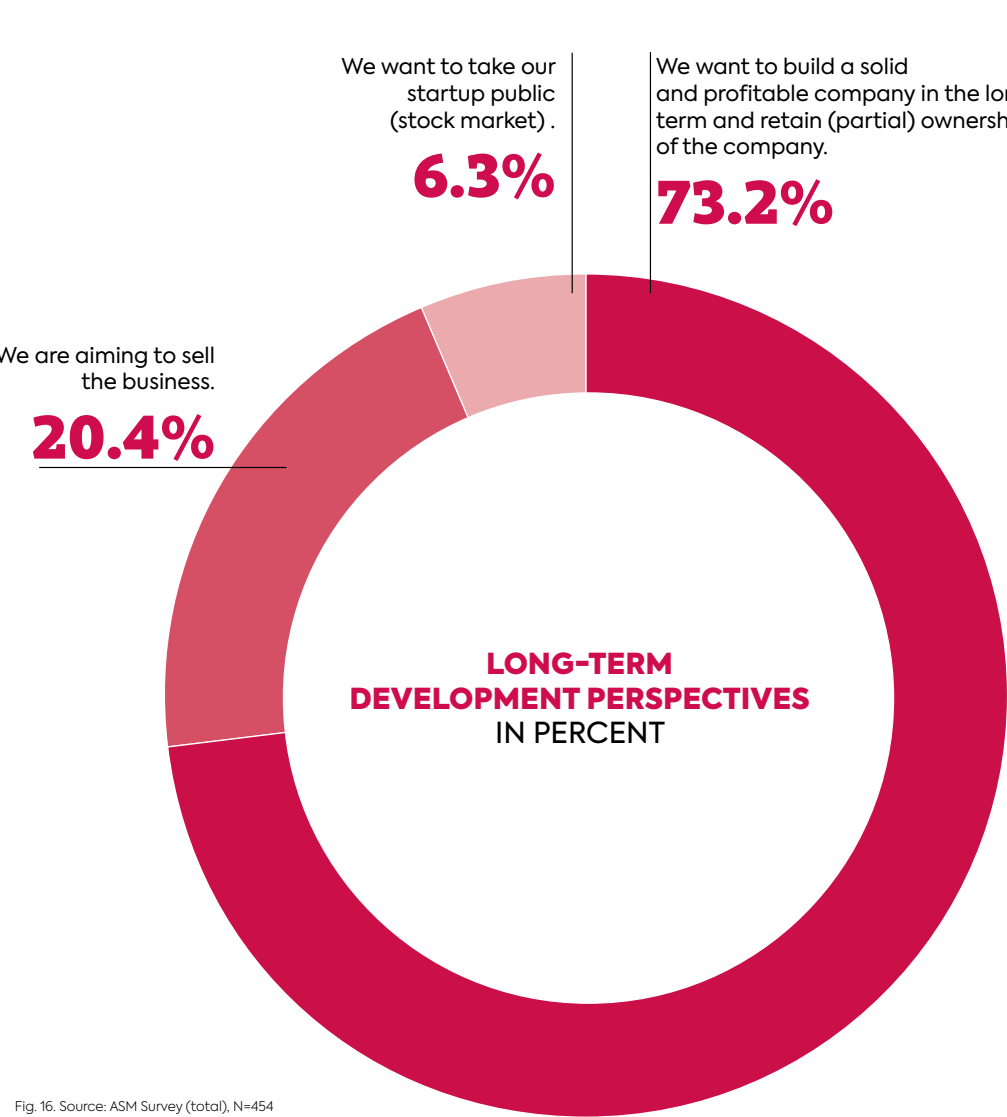


Fig. 16. Source: ASM Survey (total), N=454

The possibility of their company failing is a continuously present thought in the minds of startup founders. The participants were also interviewed within the framework of the ASM Survey concerning the following: What would you do if your startup fails? It became clear that founders are characterized by a high degree of resilience: About two-thirds (65%) would start a startup again in this case, 19% said they would change sides and work as an employee in a company and 13% want to work as a freelancer or consultant.

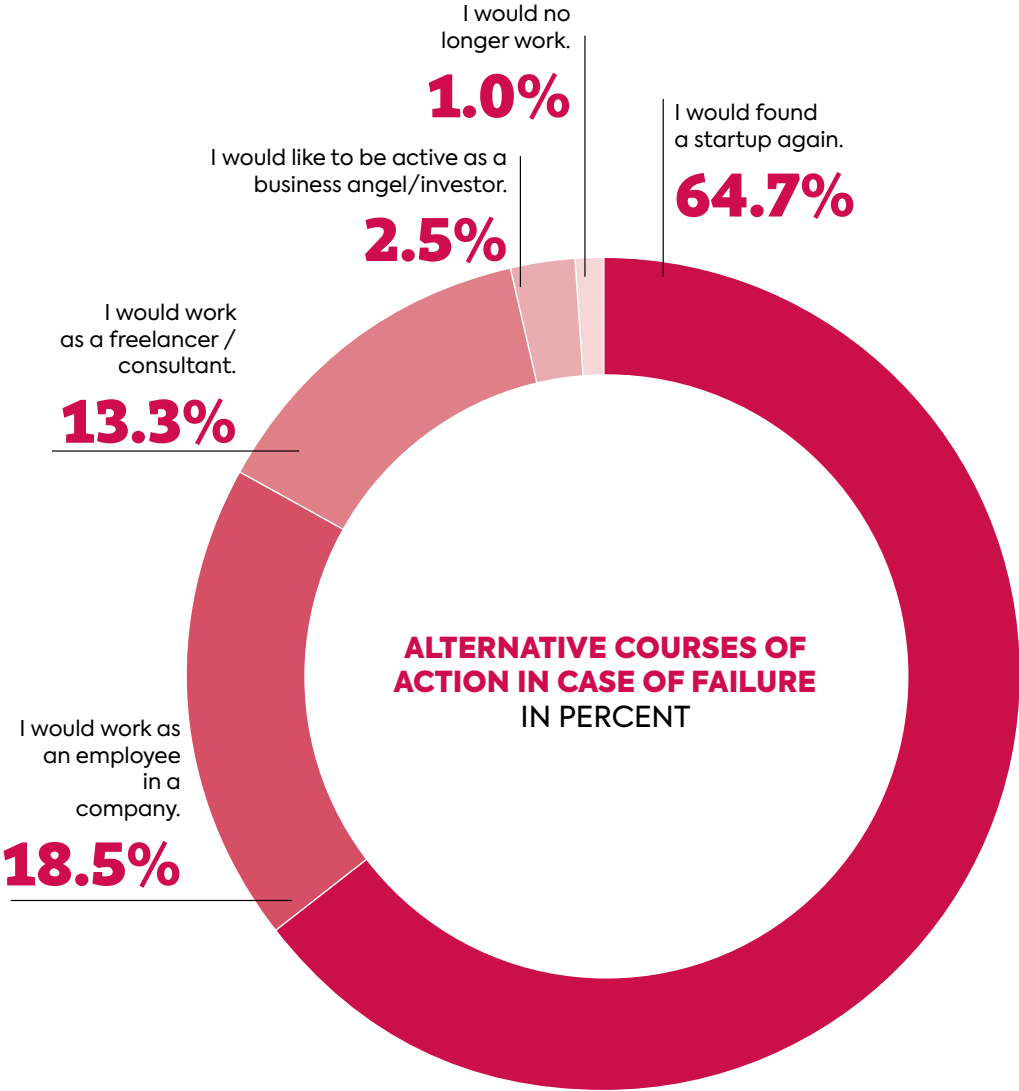


Fig. 17. Source: ASM Survey (total), N=450

MANAGEMENT TASKS

The responsibilities of startup founders are extremely varied and extensive. They not only include working at the companies (e.g., product development, customer acquisition, recruitment), but also work on company development (e.g., fundraising, organizational development, acquisition and maintenance of partnerships).

So how do founders allocate their working hours across the various fields of responsibility? For the first time, the ASM 2018 provides concrete empirical insights in this regard: On aver-

age, product development and operational involvement in the company accounted for 25% respectively. The other half of the work time is primarily used for management tasks (21%). Fund-

raising (acquisition of capital) at 12%, research (9%) and recruiting (5%) account for considerably less time.

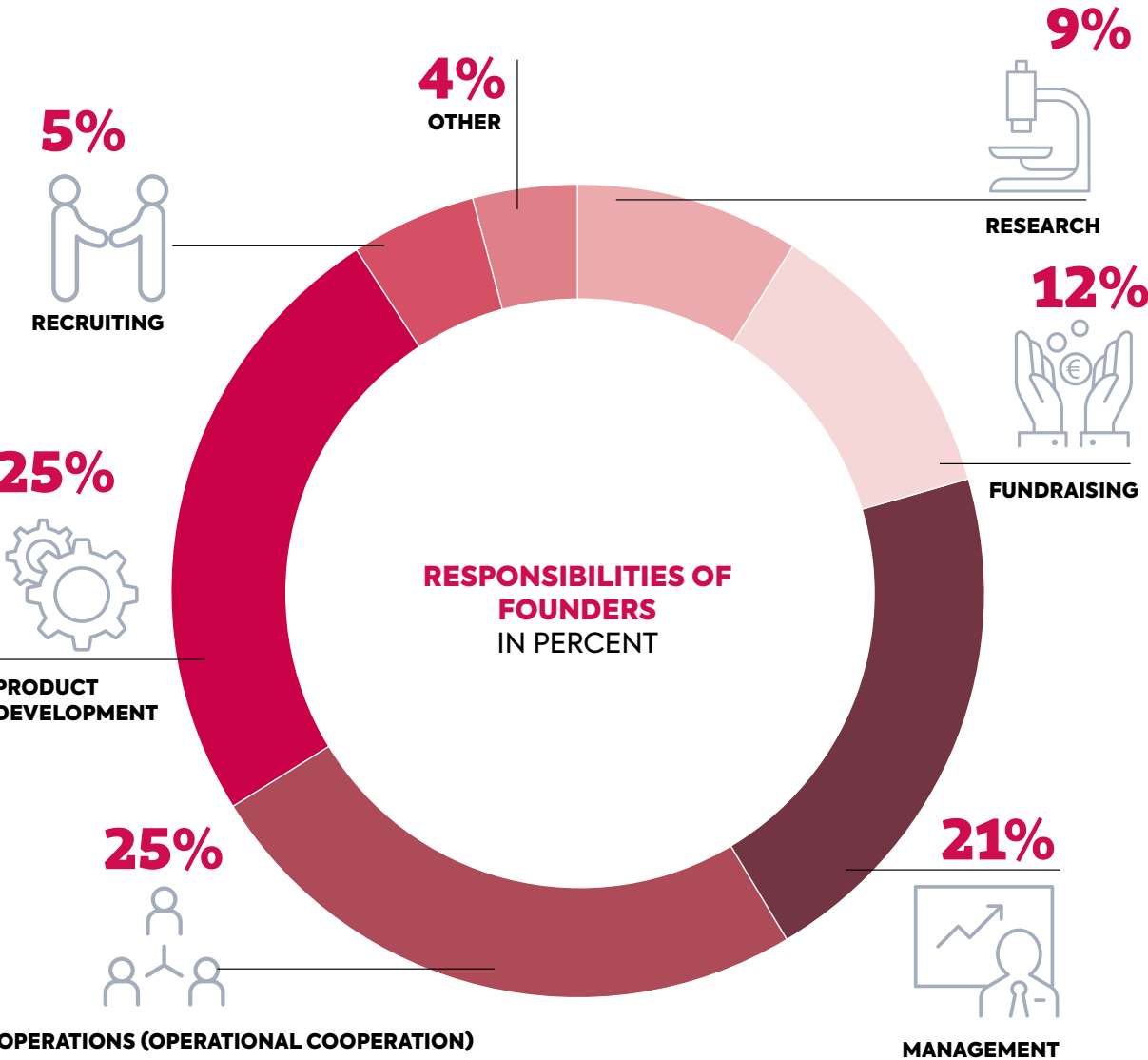


Fig. 18. Source: ASM Survey (total), N=447

FAILURE AND LEARNING

Successful startups are typically characterized by a high degree of flexibility, adaptability and learning ability. In particular, in the early development phases however, all are faced with the challenge of coping with several uncertainties, so-called “known and unknown unknowns”.

True to the motto “fail early to succeed sooner”, numerous founders orient themselves on experimental or agile models and methods. With the aid of consistent feedback loops, for example, with customers or partners, the company’s assumptions concerning the development of the company, product or business model are tested and refined until a sustainable and profitable business model is established. Failures and setbacks tend

to be the rule rather than the exception along the way. In order to learn from their own, but also others’ mistakes, the ASM 2018 asked the founders what errors they made during the development of their company from their own viewpoint. The top 3 of the most important and most common errors include: (1) “too little feedback received from the market” (23% of the mentions), “wrong

co-founder” (21%), as well as “waited too long to fire employees” (21%). Expressed in other words, mistakes made during the founding stage mostly trace back to (a lack of) external orientation, how well the founding team works together and difficulties in HR management. The wrong business model (14%), an excessive “burn rate” (12%) and the wrong market (10%) are other sources of error.

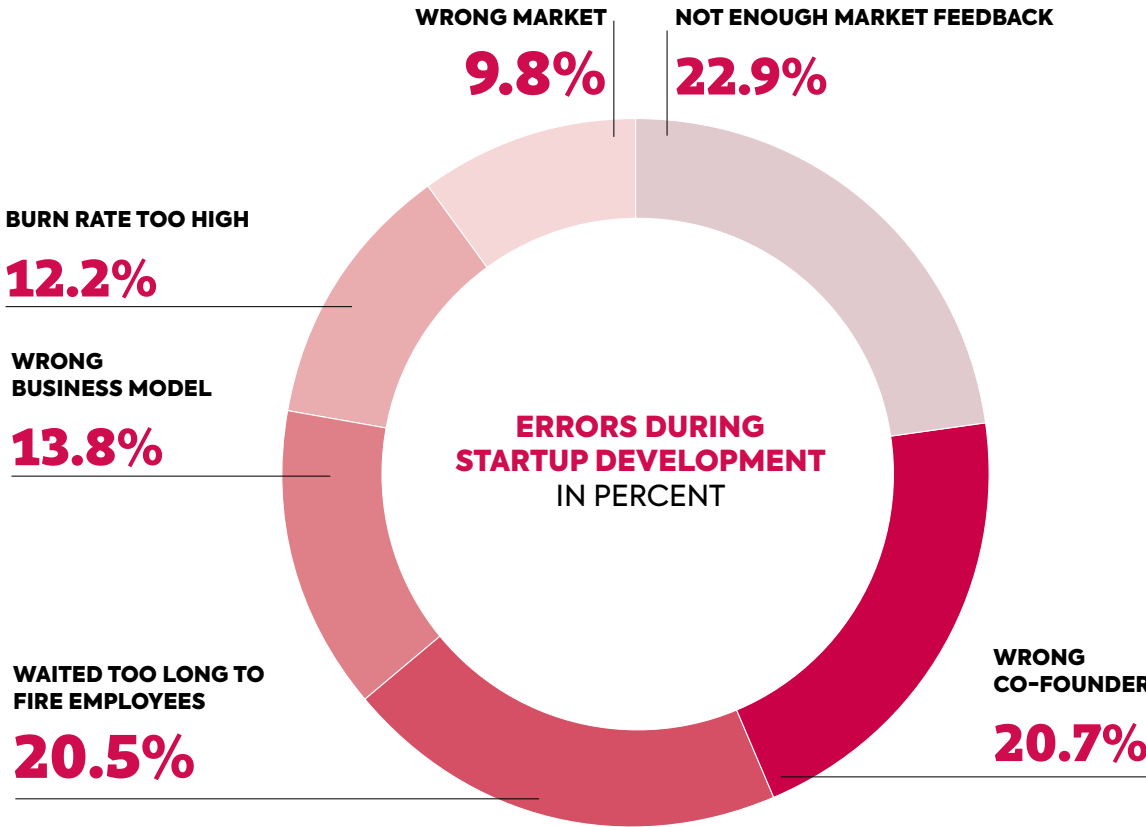


Fig. 19. Source: ASM Survey (total), N=417



EMPLOYEES

EMPLOYMENT

With their innovative products, business models and ideas, startups drive economic and structural change. They create jobs and can trigger dynamic effects in their environment. An assessment of these two factors is only reliable if followed over a longer period of time. For the ASM survey, we asked founders about their current and planned numbers of employees and asked them to specify what challenges and measures they can identify in the field of human resources management.

The surveyed startups currently employ around 3,000 people according to the self-reported data provided. On the average, they employ 8.2 employees – 6 full-time and 2.2 part-time employees (<35 hours per week). Almost three quarters of the

staff are full-time (>35 hours per week). If these values are extrapolated across the total number of Austrian startups, this results in considerably more than 10,000 employees in total. Therefore, startups are gaining in relevance on a labor-market-policy level.

The average employee numbers are at a similar level to those in the surveys carried out for the ESM 2015 (7.5 employees) and 2016 (8.7 employees).

EMPLOYMENT

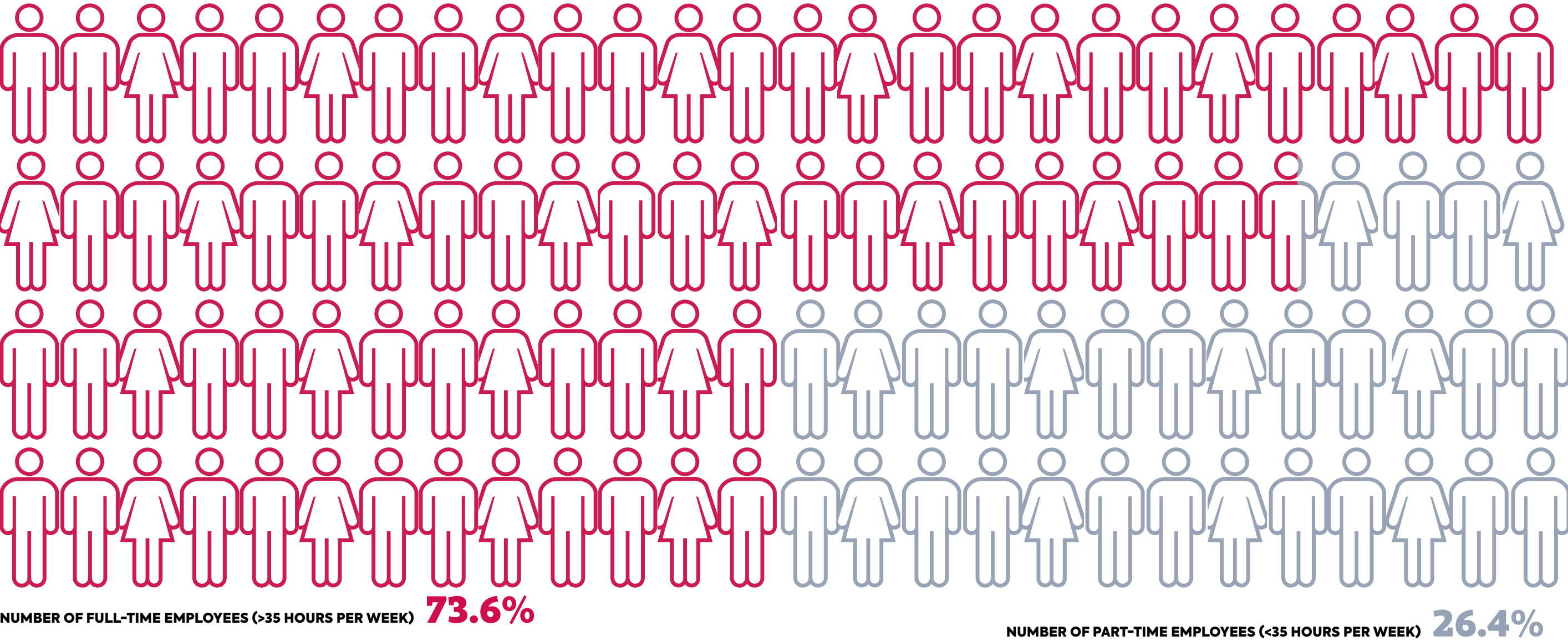


Fig. 20. Source: ASM Survey (startups), N=359

GENDER OF EMPLOYEES

The gender ratio among the employees of startups is 1:2. On average, 68% of employees are male and approximately half as many (32%) are female.

GENDER OF EMPLOYEES



Fig. 21. Source: ASM Survey (startups), N=366

ORIGIN OF EMPLOYEES

A look at the origin of employees shows that the surveyed startups exhibit a high degree of internationalization. Around every second startup (55%) employs staff from abroad: 50% of the startups employ people from other EU countries and almost one out of four startups (24%) employs people from non-EU countries.

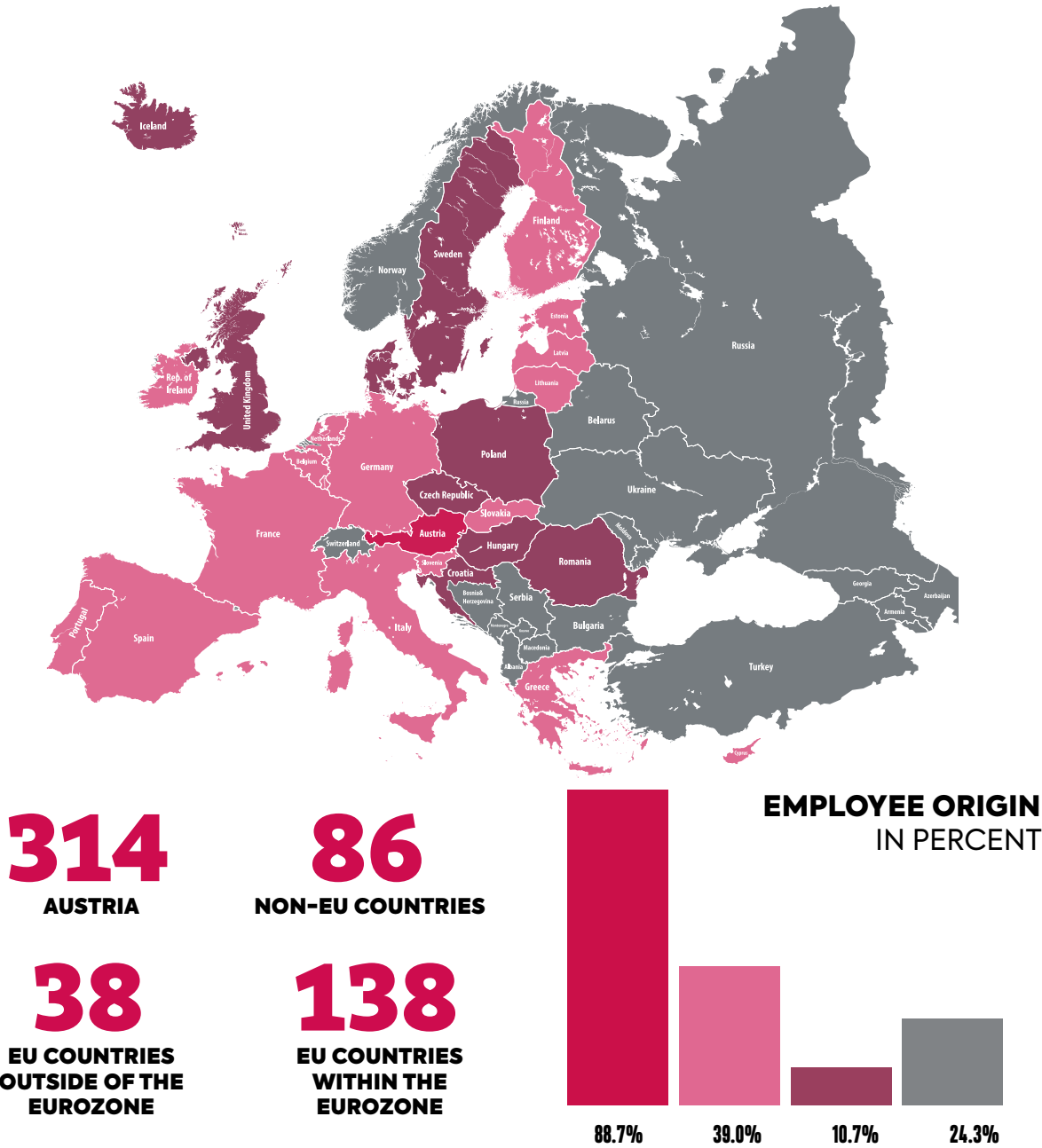


Fig. 22. Source: ASM Survey (startups), N=352

PLANNED NEW RECRUITS

In the next 12 months, 87%, meaning nine out of ten startups, are planning on hiring further employees. Extrapolated, this would mean that 1,300 jobs could potentially be created by the startups surveyed for ASM 2018 alone.

This corresponds to an average increase of 4 new employees per startup and a planned employment growth of 48% in the next year. If this is extrapolated across the total population of all 1,500 startups, up to 5,000 jobs could be created over the next 12 months.

NEW RECRUITMENT OF EMPLOYEES IN THE NEXT 12 MONTHS

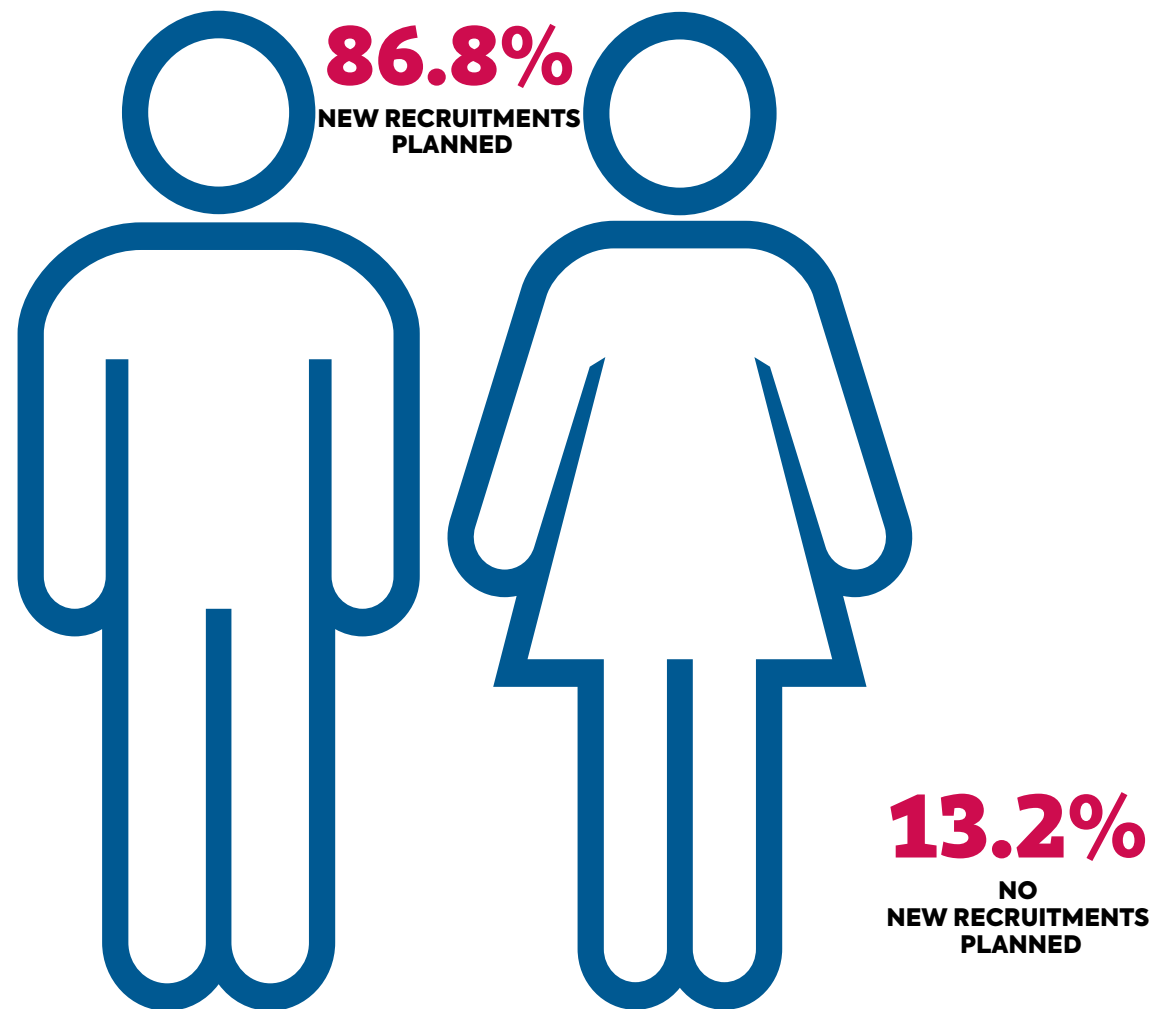


Fig. 23. Source: ASM Survey (startups), N=333

The greatest demand for employees is in sales: Nearly two-thirds of the startups (60%) intend on hiring new employees in this sector within the next 12 months. The demand is also high in the fields of IT (51%), marketing (49%) and product development (42%). At a considerable distance, design, production, research and finance follow, areas in which currently, only 10 to 17% of the startups plan to recruit new employees. The fact that 60% plan on expanding in terms of personnel can certainly be seen as an indicator for upcoming growth spurts, which will also become clear in the next chapter, because “revenue growth” is currently the key company goal of the ASM startups.

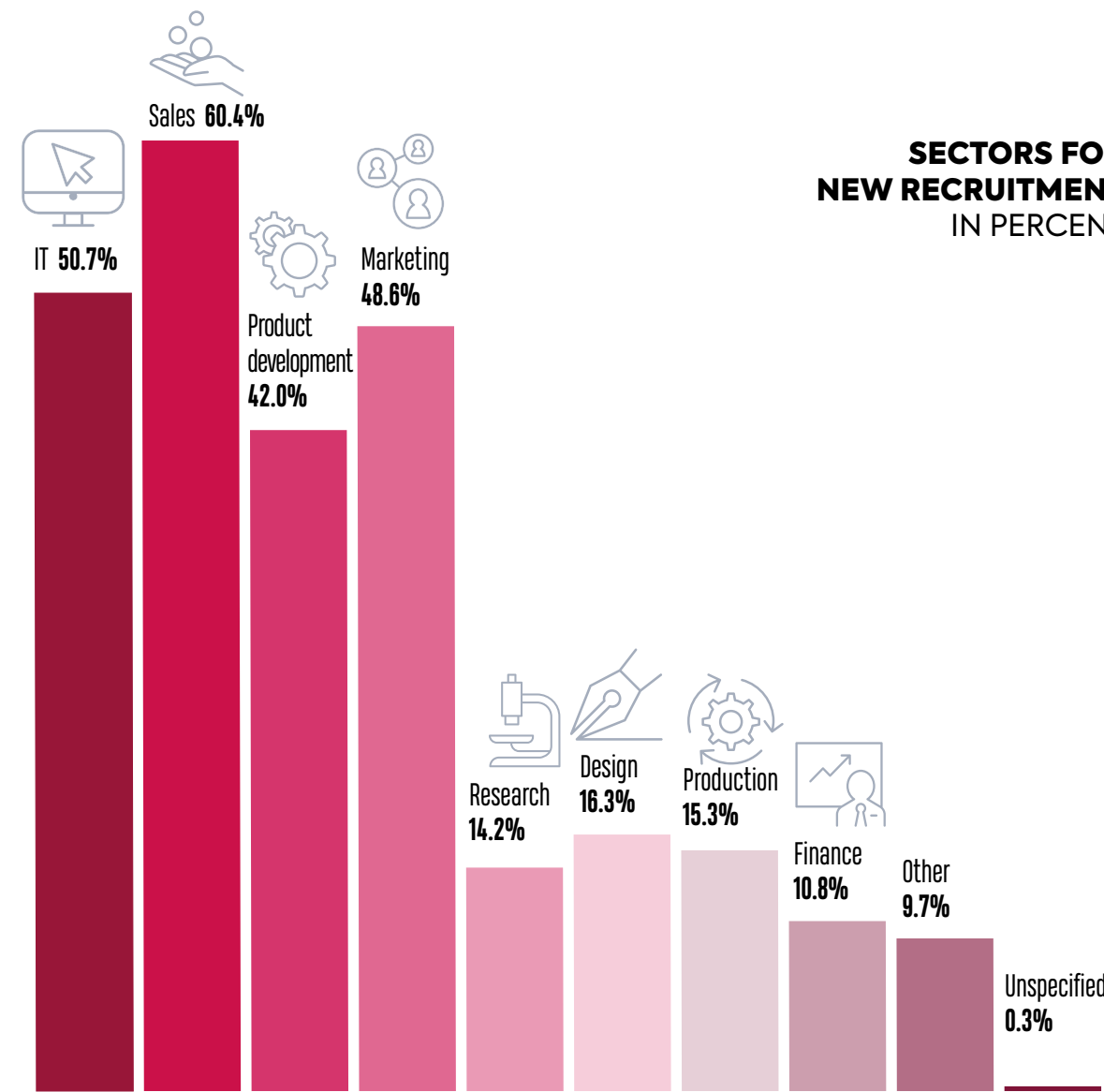


Fig. 24. Source: ASM Survey (startups), N=289

RECRUITING

Startups see searching for qualified employees as a major challenge. Almost half had difficulties in finding hires in the previous year (2017). Here, the ASM Survey presents concrete figures: 23% of the surveyed startups assess recruiting as very difficult, 26% as difficult. About 18% of the startups did not hire any new employees in 2017 and only 13% stated that recruiting was not difficult or not difficult at all.

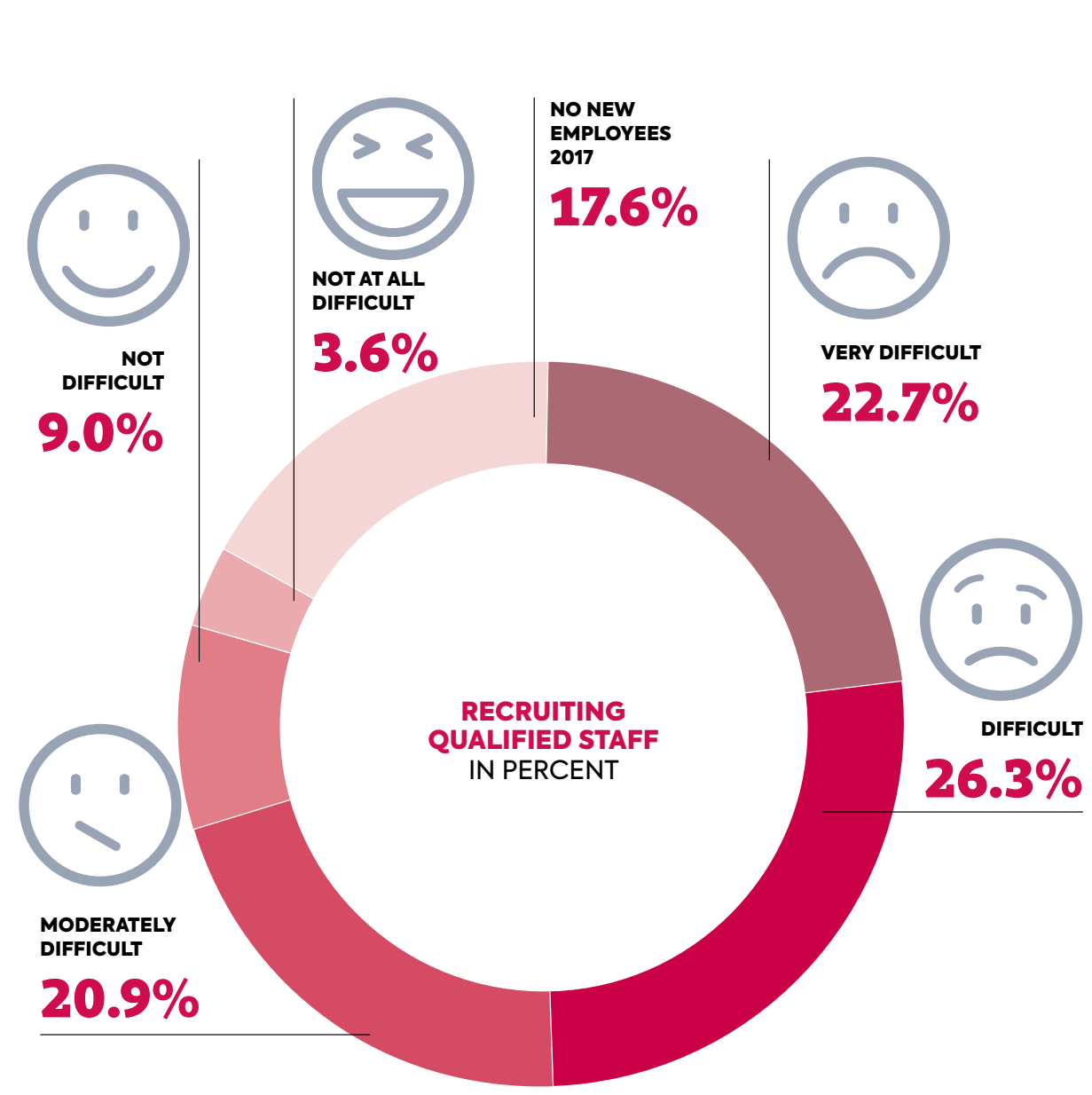


Fig. 25. Source: ASM Survey (startups), N=335

For startups, the greatest challenge when it comes to recruiting is in filling IT positions. Almost every second surveyed startup (45%) stated that finding employees in the field of IT was the

difficult. Sales positions (30%) and jobs in product development (23%) are also difficult to fill. Only 11% of startups face challenges in finding staff for the field of marketing. It is even

simpler in the case of design, research, production and finance. Less than 10% of the respondents indicated positions there as being difficult to fill.

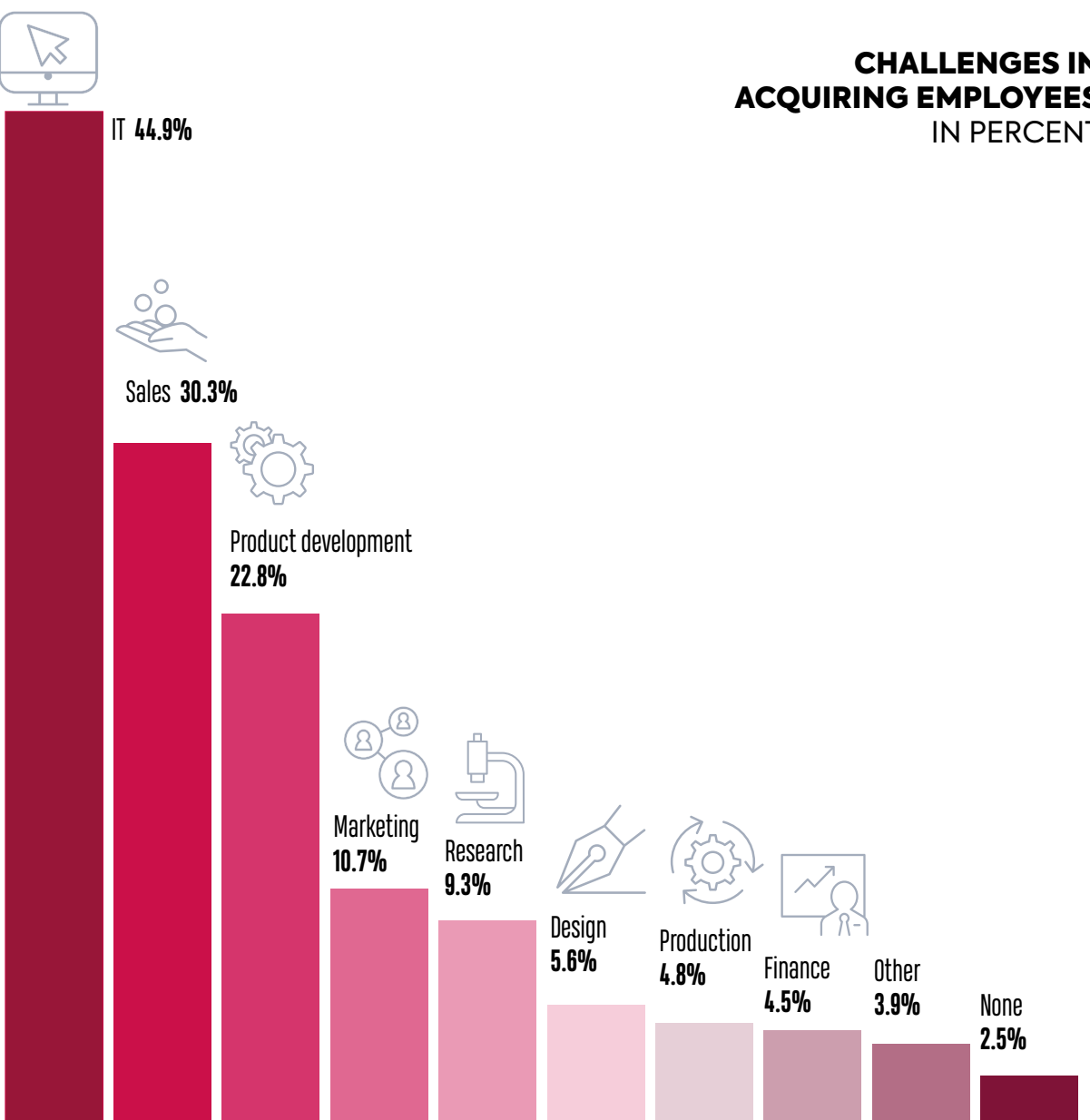


Fig. 26. Source: ASM Survey (startups), N=359

INCENTIVES FOR EMPLOYEES

In order to be successful in the competition for the best employees and to keep them in the company, ASM startups use numerous incentives. Allowing flexible work hours, which is practiced by more than three quarters, tops the list. In second place, 59% of the startups offer their employees the possibility to have a say or co-decide.

Concerning financial incentives, 35% of the startups give their employees bonus payments and in the case of 28%, these have an investment in the company. Half of the startups make wage

or salary payments via the collective labor agreement. Another popular “goodie” is providing free food and drinks at the office – a tool which is used by every third startup. On

average, two or three of these incentives are offered in the startups. The majority – more than two thirds – even uses four or more of the incentives listed.

INCENTIVES

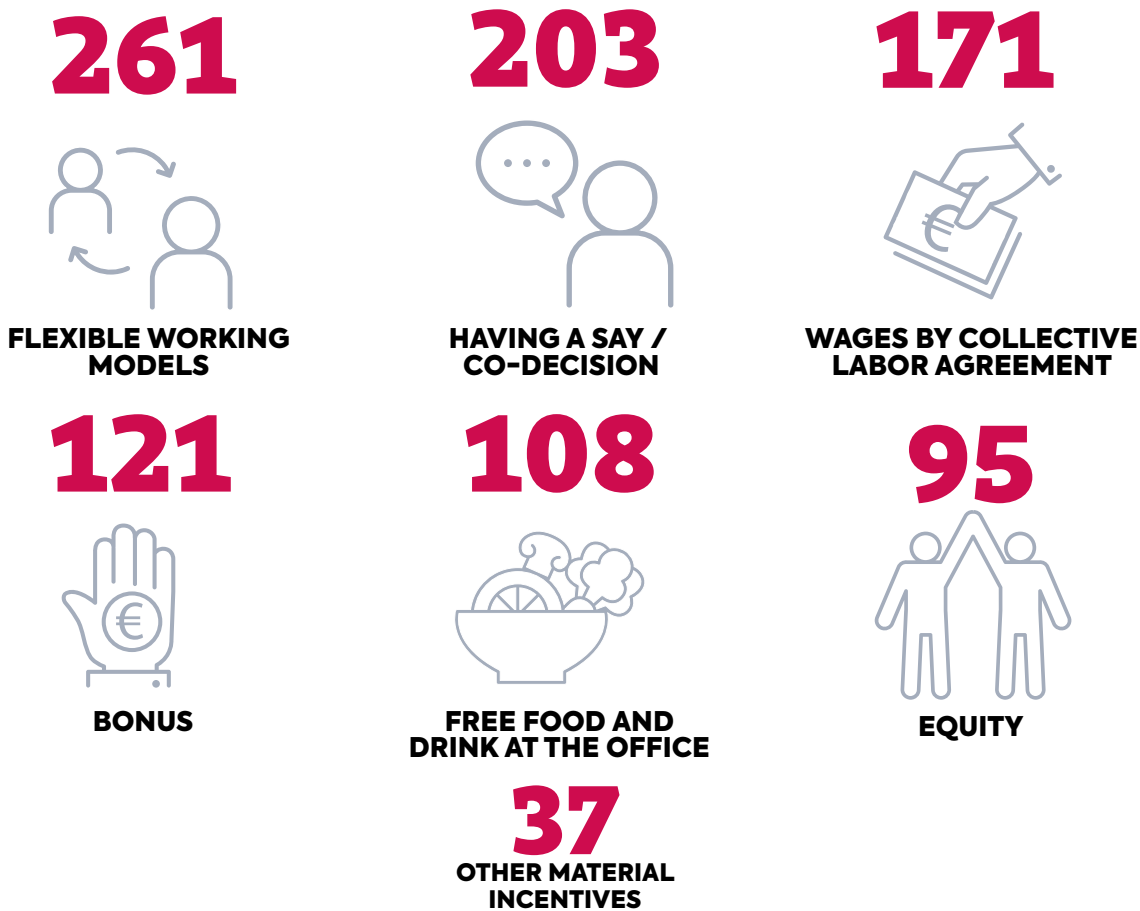


Fig. 27. Source: ASM Survey (startups), N=366

INCENTIVES FOR EMPLOYEES IN PERCENT

Flexible working models **75.9%**

Having a say / co-decision **59.0%**

Wages by collective labor agreement **49.7%**

Bonus **35.2%**

Free food and drink at the office **31.4%**

Equity **27.6%**

Other material incentives **10.8%**



STRATEGY & BUSINESS MODEL

COMPANY OBJECTIVES

When asked how they orient themselves when it comes to (further) company development and what their most important company goals are, startups cited one key aspect: Growth.

Among the surveyed startups, it is the greatest priority. Revenue growth is very important for 61% of the companies, and important to another 19%. On the average, the question was rated 4.3 on a 5-point scale from 1 (insignificant) to 5 (very important). About half of the respondents (56%) indicate that users or user growth is an essential objective for them. Here, the average rating of 4.1 is also high and just as significant as product development. This is classified as important or very important by 48% of the startups. Profitability

is in fourth place of the company goals and is considered very important (4.1) by 48%. If the company goals are analyzed according to the development phases, it has been shown that strategic priorities change depending on the startup's degree of maturity. For startups in the seed stage, product development closely followed by user growth are the two most relevant business goals. In contrast, in the later and steady stage, profitability becomes a top priority. If the startups are in a later

development phase, there is an increased inward focus. Much greater attention is given to tackling internal challenges, such as organization development (the development of structures and processes), employee motivation and staff development, and strengthening corporate culture. Internationalization is classified as "very important" by one third of the participating startups and particularly gains in importance in the growth phase.

COMPANY OBJECTIVES



Fig. 28. Source: ASM Survey (startups), N=366

(1) insignificant to (5) very important

Furthermore, the survey also enquired whether startups primarily pursue social or ecological goals. It was found that 27% of the startups surveyed stated that social or environmental objectives are very important to them.

No 234

Yes 98

UNSPECIFIED 32

UNSPECIFIED 8.8% YES 26.9%

NO 64.3%

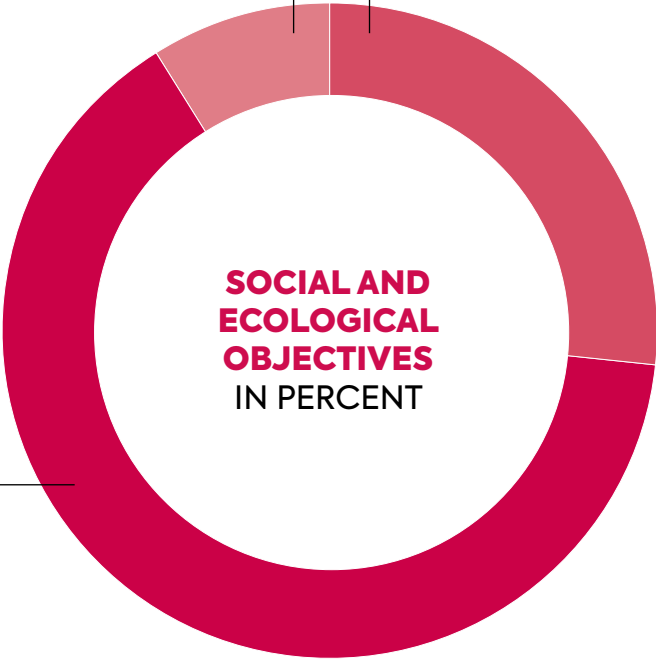


Fig. 29. Source: ASM Survey (startups), N=364

COMPANY STRATEGY

The young age of the company, the small size and the limited resources require startups to implement specific corporate strategies in order to successfully establish themselves in the market.

The ASM survey determined what measures and strategies startups apply in order to gain and to sustainably maintain a competitive advantage. Establishing customer contacts as well as speed with respect to competitors are the key strat-

egies startups cited. Of the surveyed startups, 60% indicated customer contacts and 59% indicated speed as very important. The design and maintenance of the partner network is in third place and considered very important by 45%. Con-

versely, secrecy as a competitive strategy is very important to only every fifth startup (19%) and a difficult imitability of the business model is only considered a decisive competitive factor by 13% of startups.

COMPANY STRATEGY

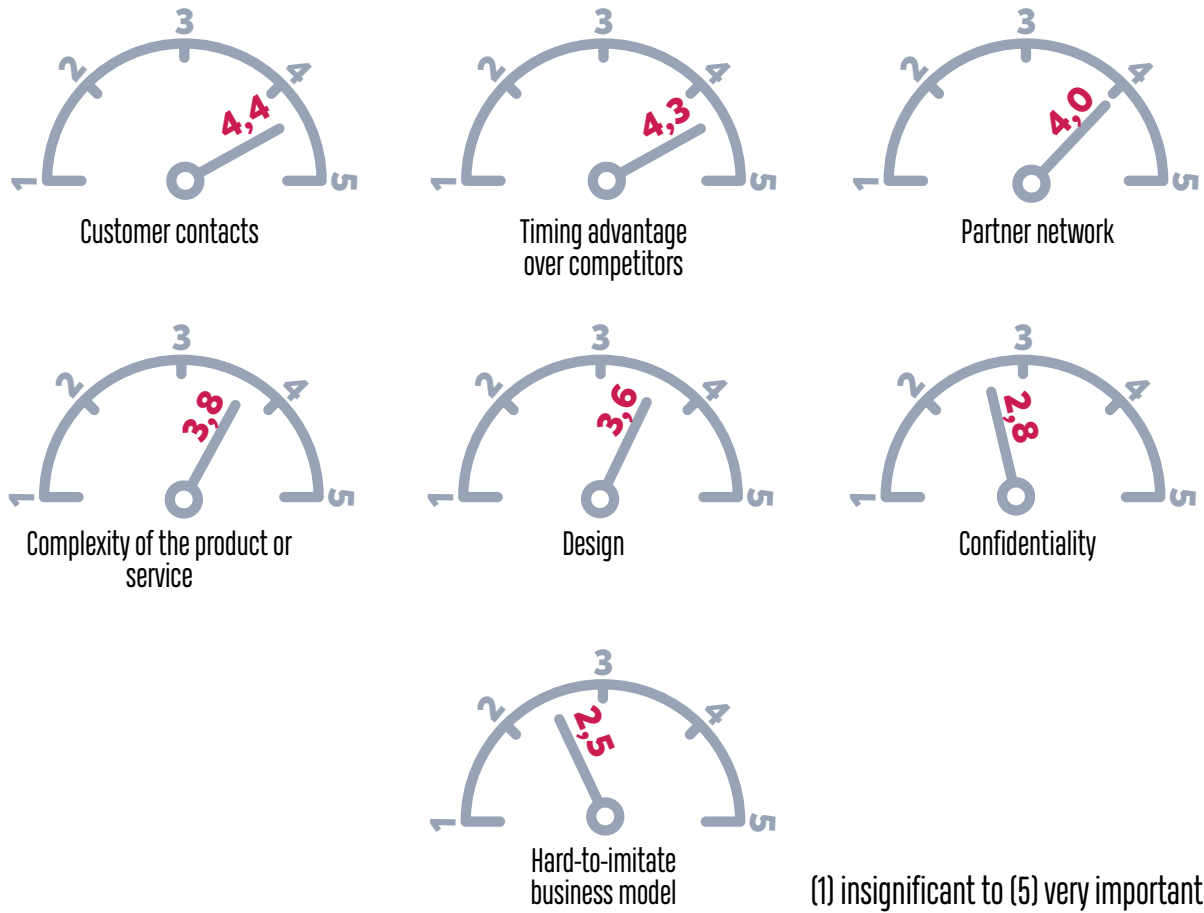


Fig. 30. Source: ASM Survey (startups) [without IP], N=366

BUSINESS MODEL

The vast majority of startups have a “digital” business model.

In addition to industry affiliation (see Chapter 2), the survey investigated what business model best characterizes the activity of the startups. Eleven typical business model categories were available to choose from. According to the results, most of the surveyed startups (21%) describe their business model as a “Software as a Service” (SaaS). Product

sales (hardware) comes in second place with a share of 15%, 9% offer IT / software development and approximately 8% operate e-commerce, an online marketplace, or mobile or web-based applications. Not far behind come online services with 6%, followed closely by a 5% share of engineering and licensing respectively. The ASM 2018 showed that a to-

tal of only slightly more than 4% of startups have offline services and location-based business models. Therefore, the findings show that the digital economy is the preferred breeding ground for of Austrian startups. In comparison with the results of the ESM 2016, the proportion of SaaS increased from 17% to 21%.

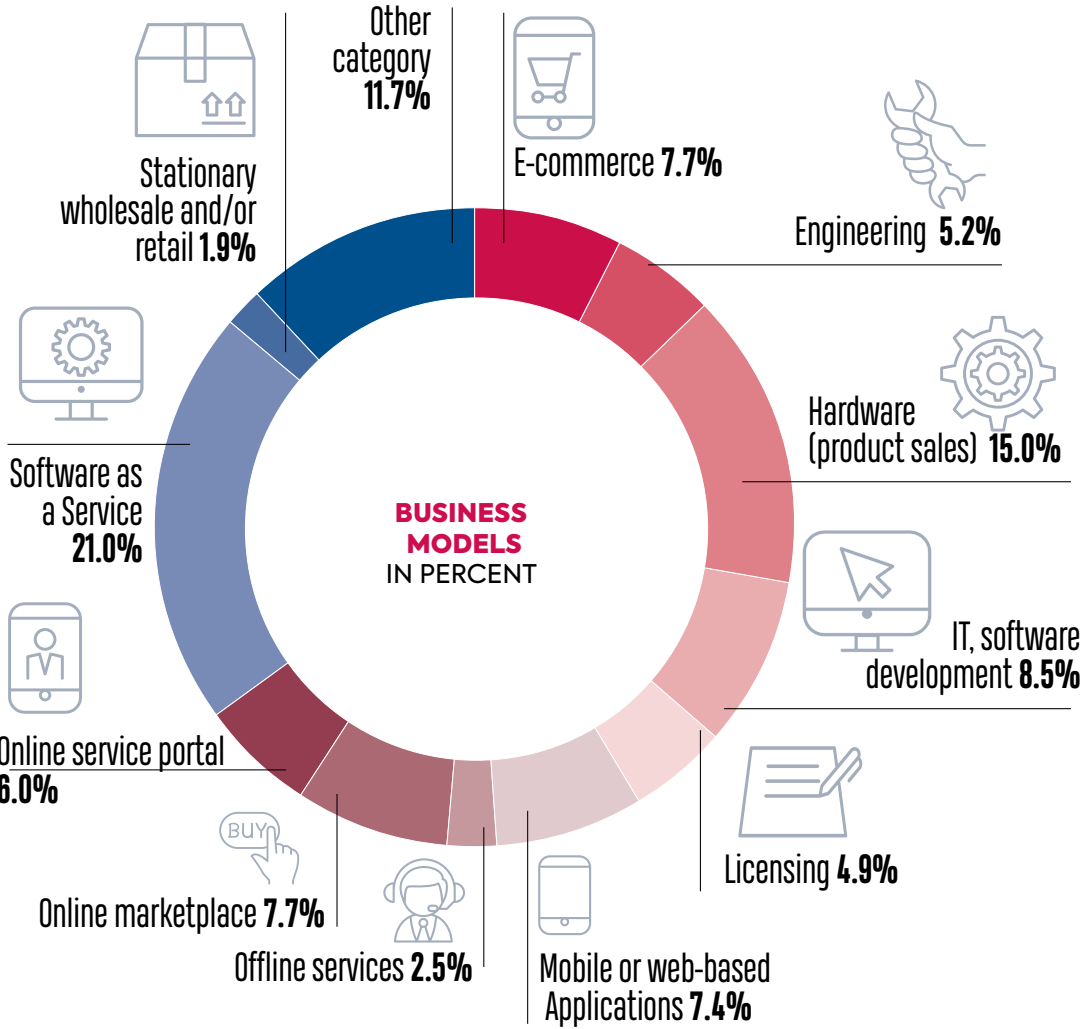


Fig. 31. Source: ASM Survey (startups), N=366

USERS AND CUSTOMERS

The ASM survey differentiates between users of an offering (possibly also being free of charge) and customers who generate revenue. This differentiation is particularly important for companies in the digital economy since, in that space, users and customers make a significant difference in the business model.

Concerning the range of users, most of the Austrian startups are active in the B2B segment. 29% indicate that they only address companies and another 21% mainly do this. One

third of the surveyed startups address both consumers and companies and only every sixth startup (17%) primarily or only addresses consumers directly. The proportion of those start-

ups who equally want to attract consumers and companies rose from 24% to 33% in comparison to the ESM 2015.

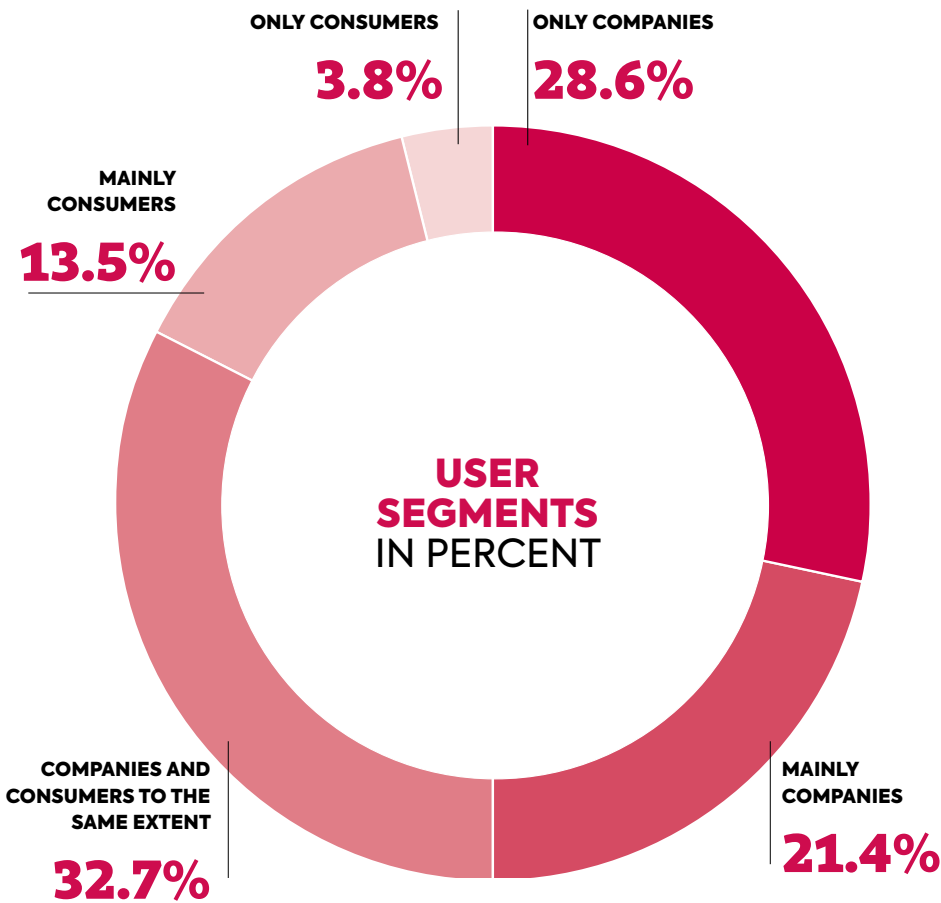


Fig. 32. Source: ASM Survey (startups), N=365

The B2B segment is vastly more significant when it comes to (paying) customers than in the user-based model.

The percentage of startups that generate their revenue only or mainly from companies is 38% and 27%, respectively. Only 2% of the surveyed startups generate revenue with public organizations. Overall, approximately two-thirds make their

revenue from B2B customers. Conversely, only about every fifth startup makes its revenues primarily (14%) or only (5%) from consumers. It is striking that a total of only 13% of the ASM startups, which act as both B2C and B2B busi-

nesses in the case of users, also make their revenues, in the case of (paying) customers, from consumers and companies alike.

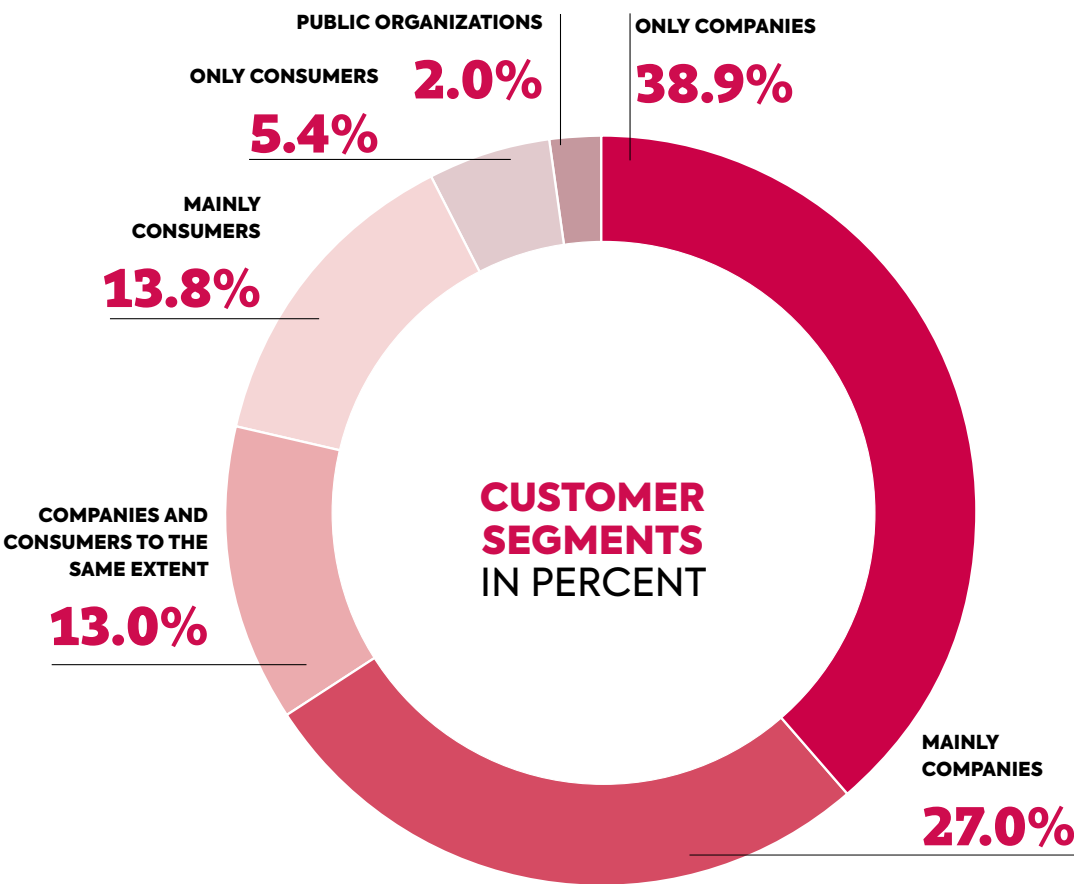


Fig. 33. Source: ASM Survey (startups), N=364



INNOVATION

INNOVATION OF PRODUCT, PROCESS, TECHNOLOGY, AND BUSINESS MODEL

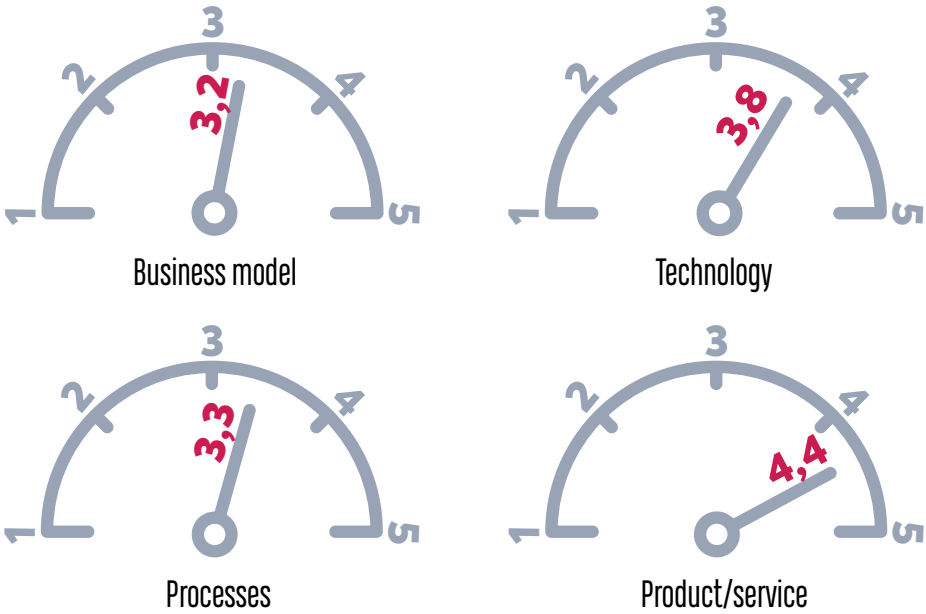
An essential characteristic of startups is their innovative character. But innovative activities are diverse. Innovation may include new products and services, as well as processes, technologies, and business models.

The development of new products or services is the most important form of innovation, as the survey of Austrian startups has shown. The majority (around 86%) stated about themselves that, when it comes to innovation, their startup is innovative or very innovative. The average value is very high up on a scale from 1 (not at all innovative) to 5 (very innovative), being at 4.37. The field of product innovation is

followed by technology, which has been classified as being important or very important by 61% (average 3.77). By their own assessment, about half of the startups are inventive and resourceful in terms of processes. On average, startups are more frequently innovative in the case of business models than not innovative, however, this area carries less weight on the whole. That is associated with the fact that the possibilities for

establishing innovative business models are limited. The results also showed that the majority of surveyed startups (approximately 80%) are highly innovative in at least one of the four mentioned fields. In this regard, further analysis showed that startups are often highly innovative in several fields. In order to be hard to copy and obtain competitive advantages, they often combine innovation activities in a variety of dimensions.

INNOVATION ORIENTATION



(1) not at all innovative, (2) rather not innovative, (3) rather innovative, (4) innovative, (5) very innovative

Fig. 34. Source: ASM Survey (startups), N=363

INNOVATION EXPENDITURE

Startups are innovative. However, to what extent are the innovations (exclusively) internally developed or made possible by third-party activities?

The survey found that 22% of the total innovation-related expenditures were associated with third-party services. These were to address challenges that arise during product development or transitions in production. In this

regard, startups not only provide new momentum, but also generate a demand for services, both on a national and international level. In comparison to the results of the Community Innovation Survey (CIS), where inno-

vative small and medium-sized enterprises (10–50 employees) were surveyed, this share is considerably higher in the case of startups today. The segment surveyed by CIS only amounted to around 8% in 2014.

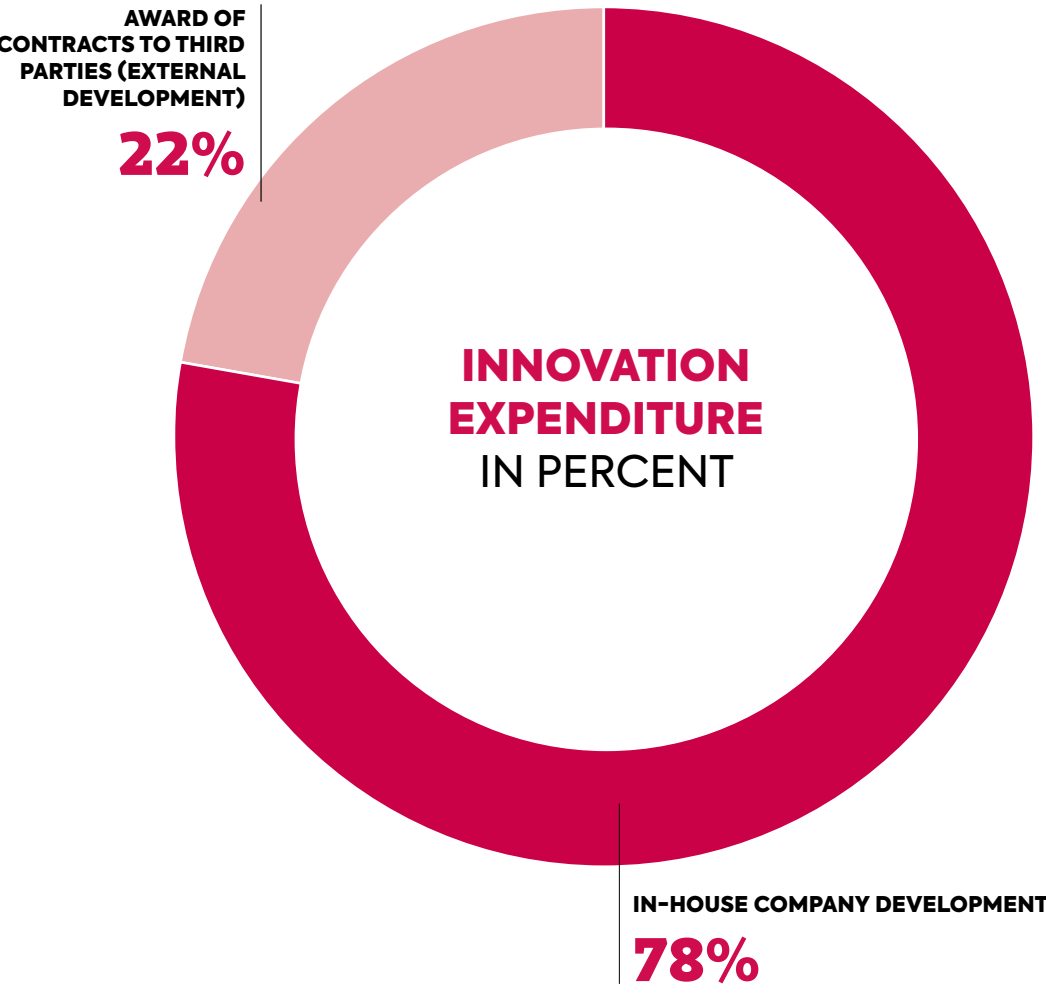


Fig. 35. Source: ASM Survey (startups), N=353

PROPERTY RIGHTS STRATEGIES

In order to develop innovation products and services and to persevere on the market adequate strategies and mechanisms are necessary to protect ideas and expertise. For the surveyed startups, the legal protection of trademarks has the greatest importance followed by patents and copyright.

The significance of different competitive strategies, such as speed (“time to market”), has already been pointed out. In addition to the non-disclosure of ideas, legally protecting innovative products also offers security. According to the ASM Survey, trademark protection has the greatest relevance for startups and is very important for almost a third. This is followed by pat-

ents and copyright protection, which is of very great concern for 20% and 11%. Overall, around 40% of the surveyed startups deem at least one of the three legal protection mechanisms very important. Legally protecting inventions and creative ideas plays a greater role for startups than for other companies. A comparison with the group of all innovative

small and medium-sized enterprises, which were surveyed in the Community Innovation Survey (CIS) in Austria in 2014, shows that patents, copyright and trademarks all have a higher level of significance. Trademark protection has a disproportionately high level of relevance to startups.

PROPERTY RIGHT STRATEGIES

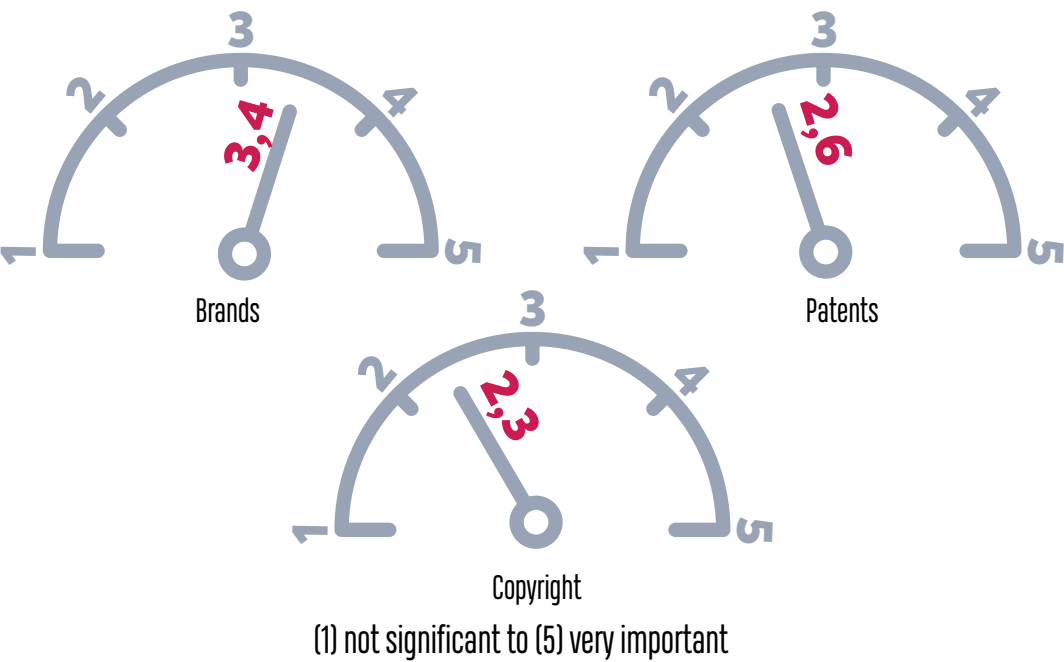


Fig. 36. Source: ASM Survey (startups), N=337





AUSTRIAN & INTERNATIONAL MARKETS

INTERNATIONALIZATION

When it comes to startups and their future plans to internationalize, it became clear that 76% are planning (further) internationalization efforts in the next 12 months. Furthermore, 20% of respondents want to tap into foreign markets for the first time during the same time period.

The ASM Survey shows that 93% or nine out of ten Austrian startups are already internationally active or will be in the near future. For the surveyed startups, the most important new

sales markets were within the EU: 70% are planning to put their next growth steps into motion in other EU countries within the eurozone, 25% in other EU countries outside the eurozone. In total, 17% will address

other European countries outside the EU for the first time in the next 12 months. Furthermore, 22% of the surveyed startups plan to expand to North America, 13% to Asia, 9% to the

Middle East, 6% to South America and 4% to Africa, as well as Australia / Oceania respectively. Advantage Austria's range of services is known by 70% of startups that are planning (further) internationalization steps in the next 12 months and has already been taken advantage of by 43%.

What strategy is the international expansion based on? What are the greatest challenges in the process?

As the results show, the majority of startups (58%) tap into foreign markets step by step as part of a sequential internationalization strategy. Those who plan on an international

orientation and global market since their founding and want to be internationally present can be referred to as "born globals" and their share is 42%.

Yes, into other EU countries outside the eurozone **70.2%**

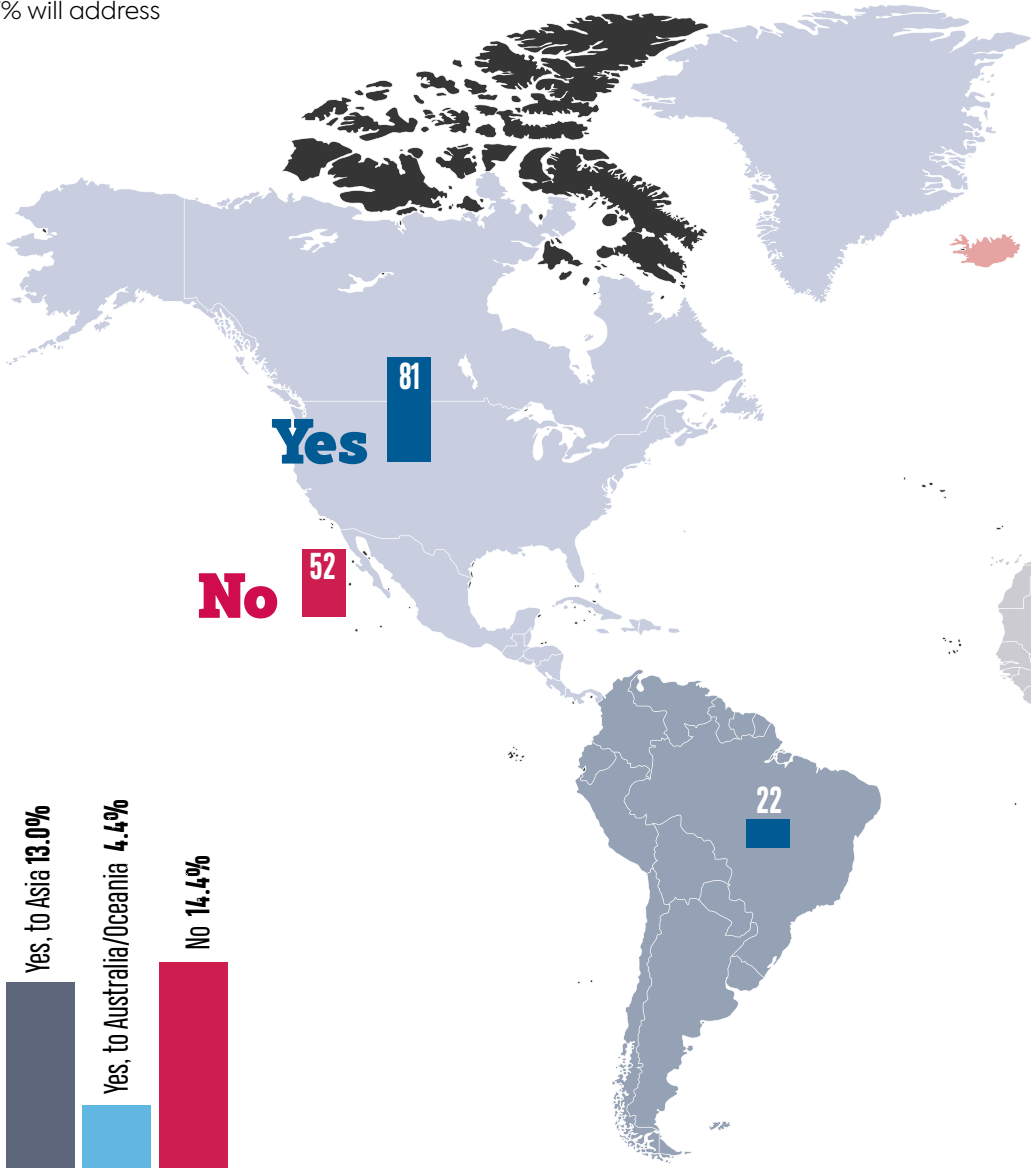
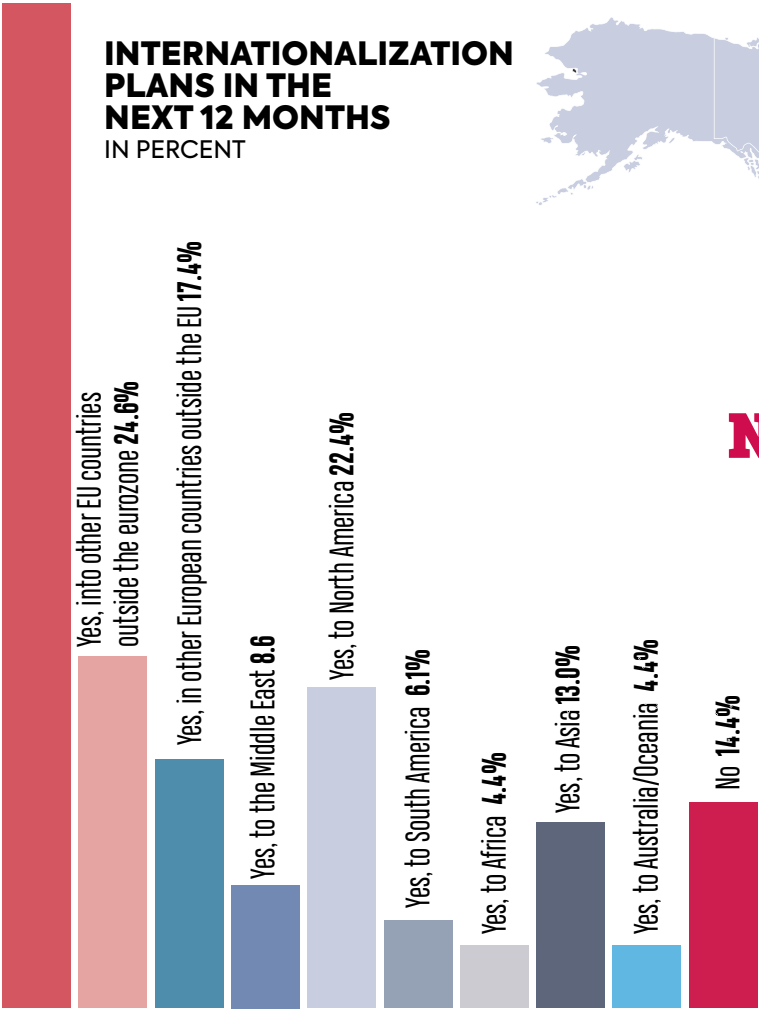


Fig. 37. Source: ASM Survey (startups), N=335

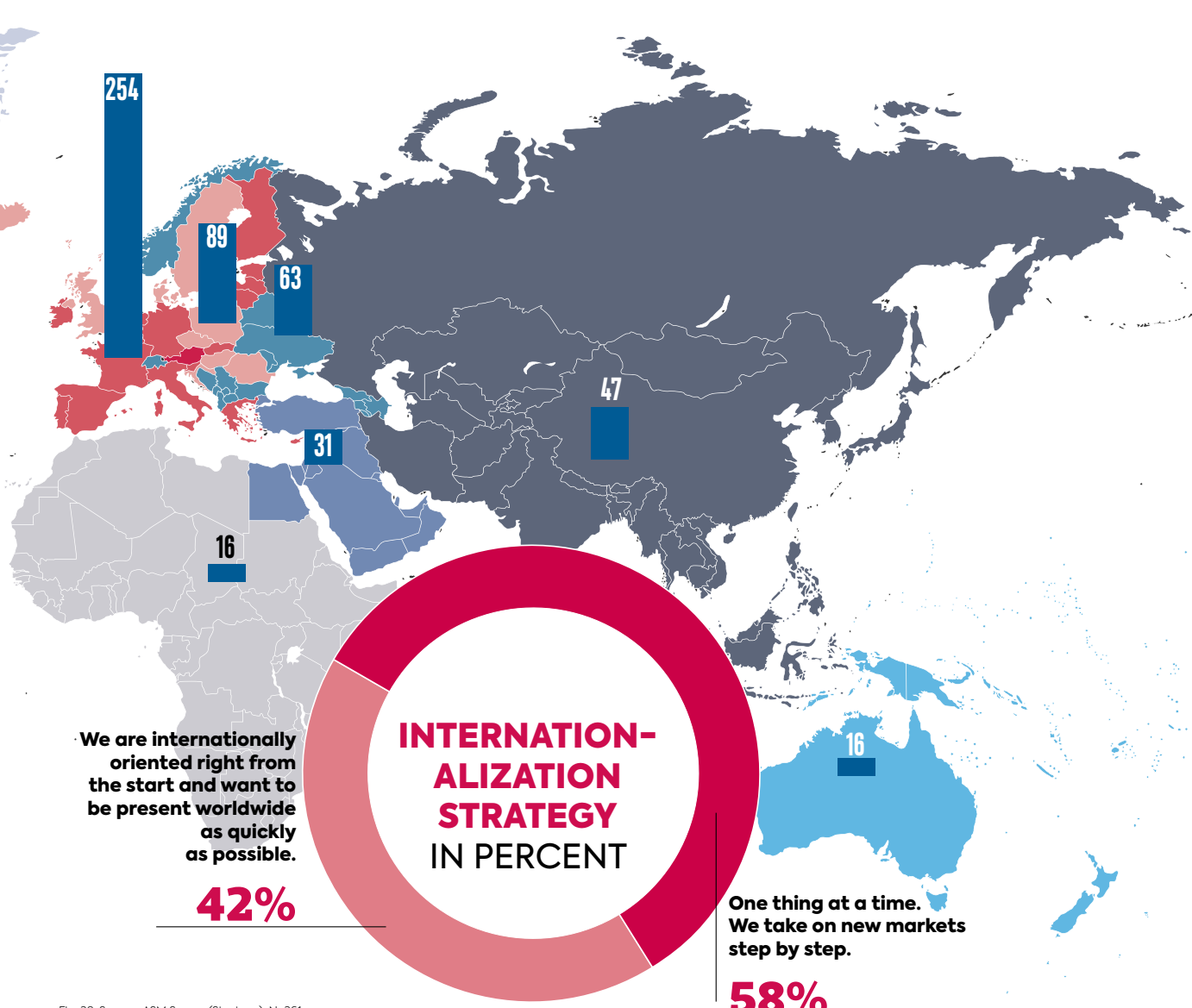


Fig. 38. Source: ASM Survey (Startups), N=361

However, the step towards internationalization poses a great deal of challenges for startups.

The ASM Survey shows that finding appropriate partners and networks represents the most significant issue for 58%. Also, 53% cite (a lack of) financial resources as a major obstacle,

and 46% think that the varying legal frameworks are particularly challenging. Less significantly, any necessary adjustment of the product to different local customer requirements (29%), as

well as cultural differences (23%) follow as inhibiting factors. Approximately 19% of startups have to fight with language barriers and differences in taxation.

CHALLENGES OF INTERNATIONALIZATION

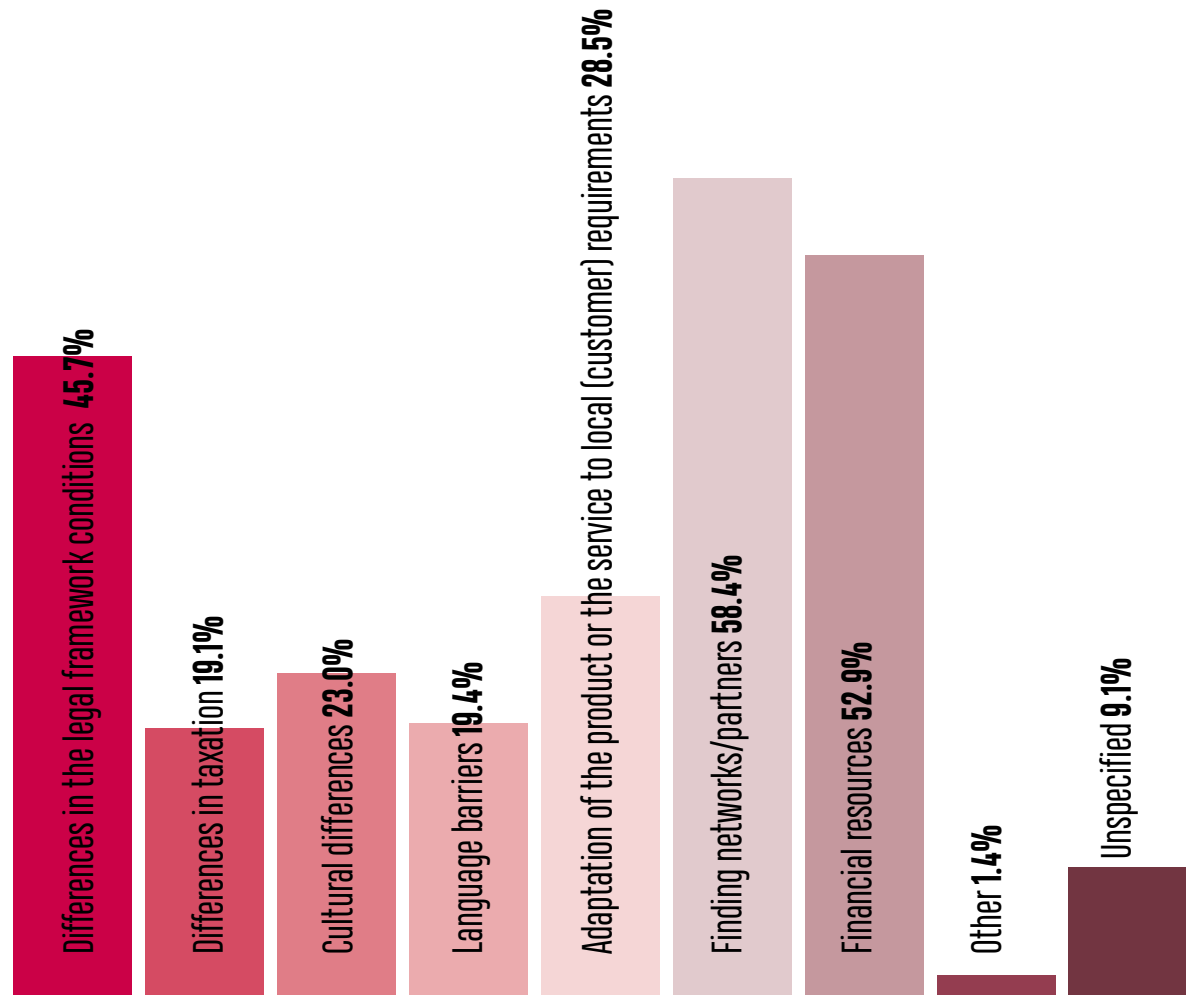


Fig. 39. Source: ASM Survey (startups), N=333

CURRENT MARKETS

The ASM startups make the majority (59%) of their revenue in Austria. Approximately three quarters (73%) of the surveyed startups have already tapped into international markets and generate export revenues.

About 30% of the revenue is generated from customers from other EU countries. The revenue share of EU countries within the eurozone is ten times as high

with 28% as that outside of the eurozone (3%). Other European countries that do not belong to the EU make up approximately 1% and

North America makes up 5% of revenue. Overall, 4% of the revenue is made in other markets.

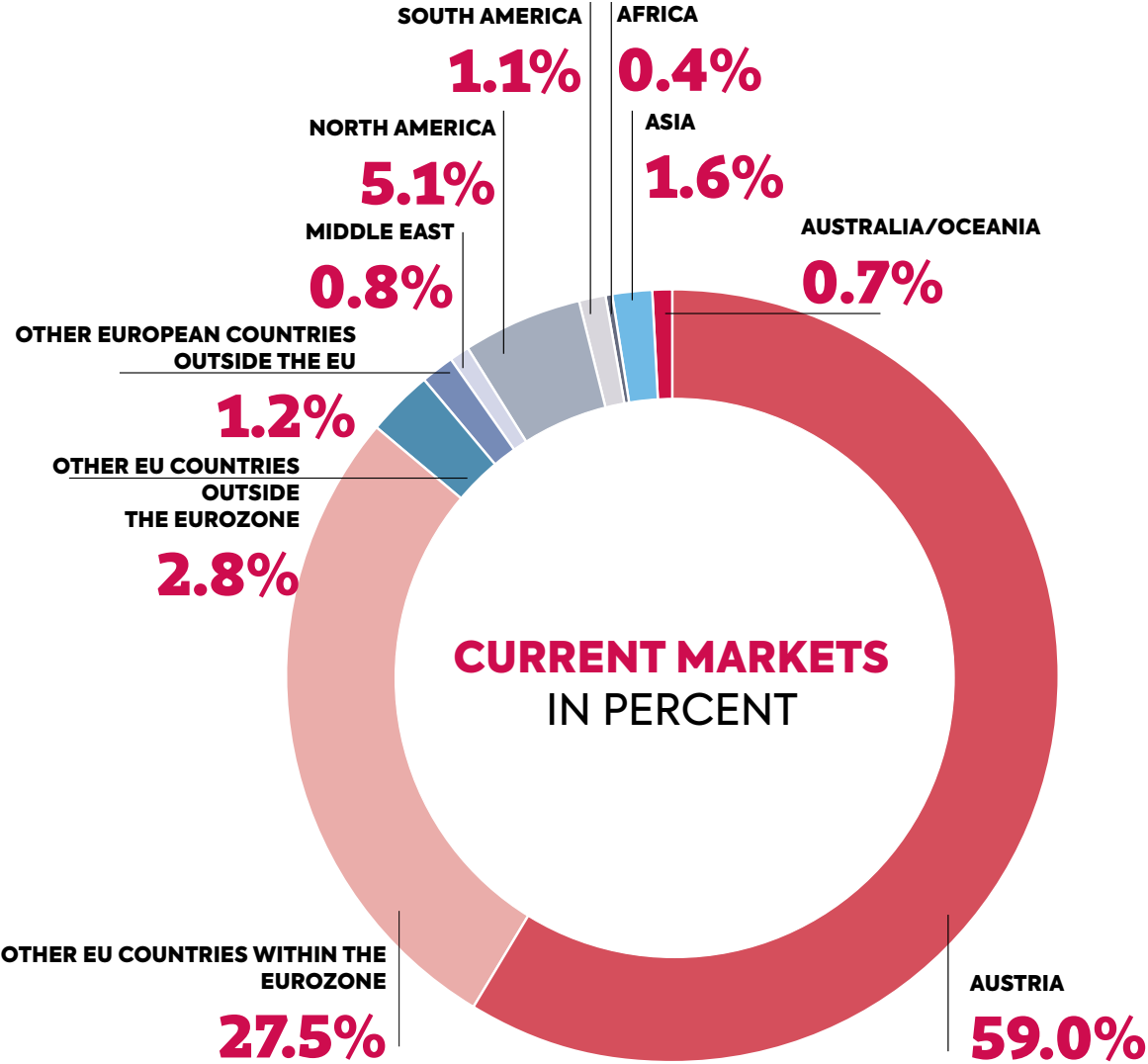


Fig. 40. Source: ASM Survey (startups), N=355



COOPERATION

COLLABORATIONS BETWEEN STARTUPS & ESTABLISHED COMPANIES

During their business development, startups are reliant on cooperation partners in various ways and very consciously enter into strategic partnerships. The ASM survey found that 90% of the startups cooperate with small and medium-sized enterprises (SMEs), other startups, large companies, universities as well as research institutions, public institutions or NGOs; 75% of startups also cooperate internationally.

Cooperation is the voluntary cross-company collaboration beyond pure contract-related relationships. Of these, partnerships with small and medium-sized enterprises (SMEs) have the greatest significance. Nearly 80% of all surveyed startups indicated that they partner with small and medium-sized enterprises.

In the case of cooperations with small and medium-sized enterprises, it also has to do with cross-border partnerships for more than half of the startups. Collaborations with other startups are relevant to approximately 65%. Approximately 64% of the surveyed startups cooperate with large companies, nearly two-thirds of them also with partners from abroad. 60% of the startups cooperate with universities and research institutions. However, in this group, national partners, with whom cooperations primarily take place, are predominant. Cooperation with public institutions, especially on the national level, are still of relevance for almost half (46%). Approximately 27% of the companies enter into partnerships with NGOs and similar institutions. Only every tenth startup has not become involved in cooperations with external partners; a total of over 75% cooperate internationally.

SIGNIFICANCE OF DIFFERENT COOPERATION PARTNERS

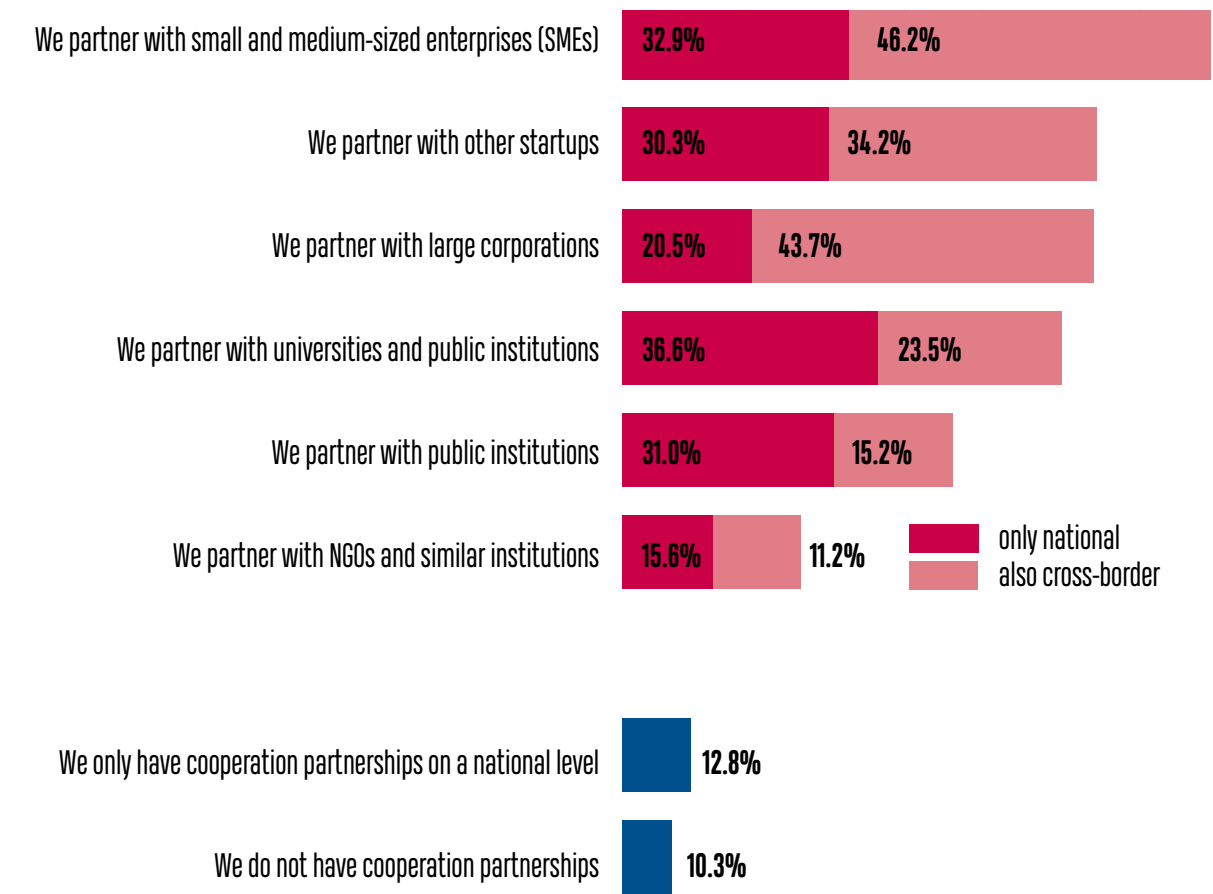


Fig. 41. Source: ASM Survey (startups), multiple answers possible, N=341

COOPERATION WITH FORTUNE GLOBAL 500

While a total of almost two thirds of the surveyed startups cooperate with large companies, 15% of the surveyed startups even collaborate with Fortune Global 500 companies, meaning the largest international corporations worldwide. These provide access to global markets and enable growth.

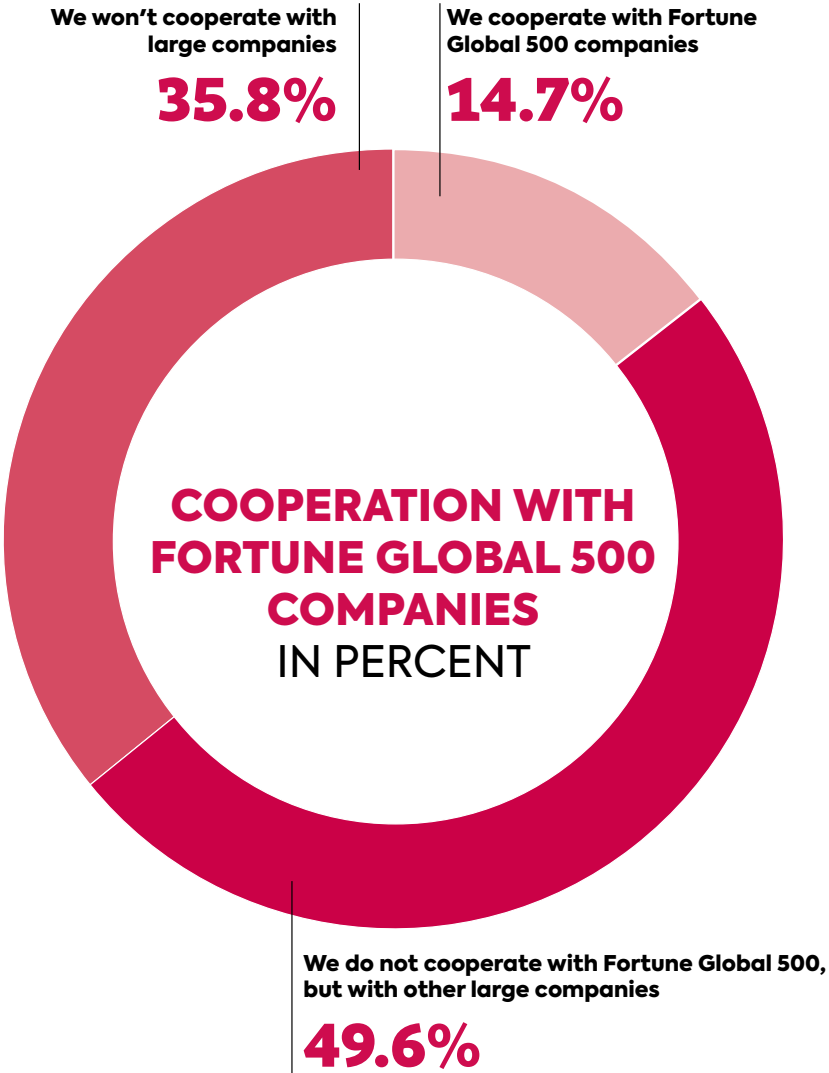


Fig. 42. Source: ASM Survey (startups), N=341

OBJECTIVES OF THE COOPERATION

The range of cooperation partners is wide. The goals that startups pursue through cooperation with a wide variety of cooperation partners are equally complex.

A total of 76% of the surveyed startups cooperate in order to obtain access to markets, 66% for the development of products and 63% in order to gain access to technologies. The differences are evident in the choice of co-operation partner. With respect to small and medium-sized enterprises, two aspects are key: access to markets (49%) and developing products and services (42%).

When cooperating with large companies, the motives on the part of startups are diverse. For 50% of the startups, access to customers and markets is essential. But also reputation and image transfer carry weight, as every third startup cites this as an aim when cooperating with large companies. In the case of cooperating with other startups, developing products and services as well as increasing the

innovation capability are of the greatest importance. In view of universities and research institutions, it is hardly surprising that access to technology (34%) and increasing the capacity for innovation (29%) are paramount. This is not so in the case of public institutions: Here, fundraising (19%) is the most significant.

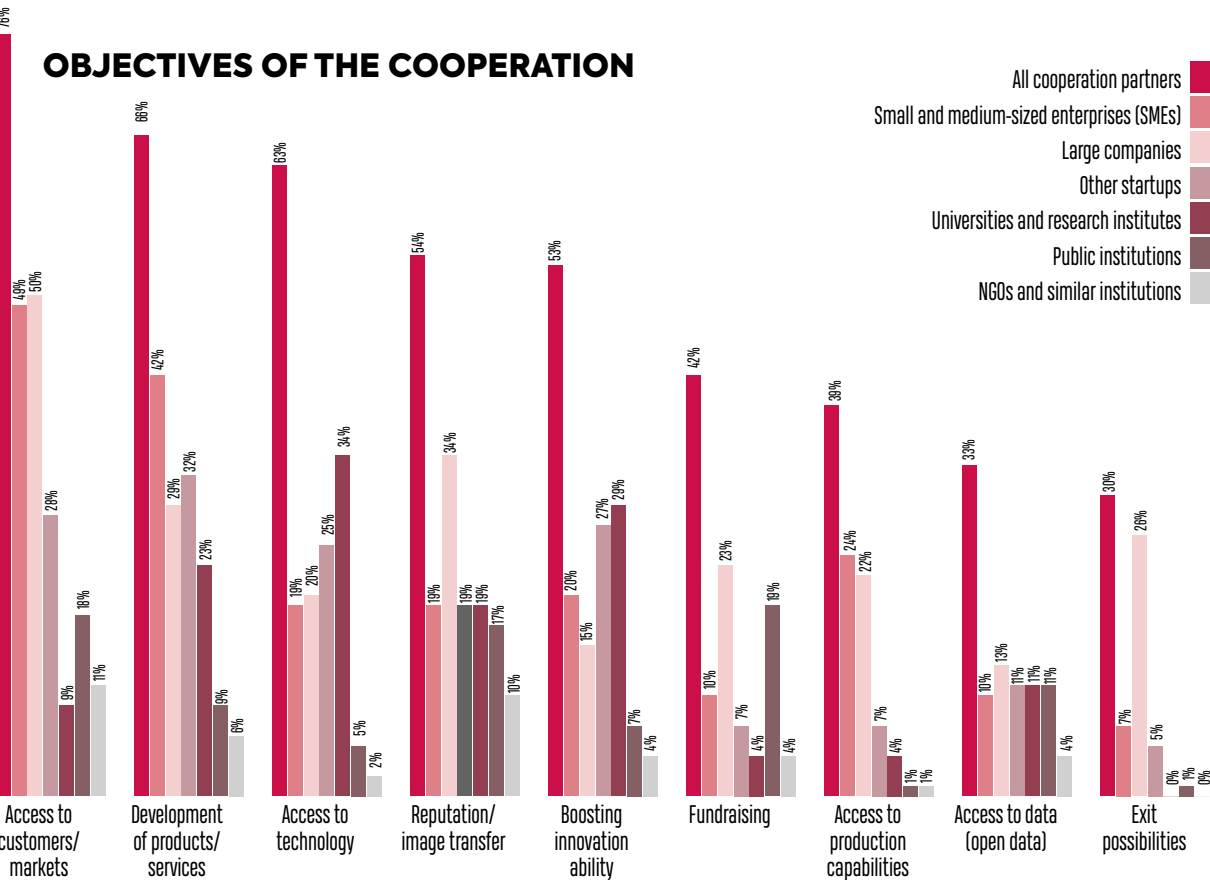


Fig. 43. Source: ASM Survey (startups), multiple answers possible, N=307

COOPERATION & DEVELOPMENT PHASES

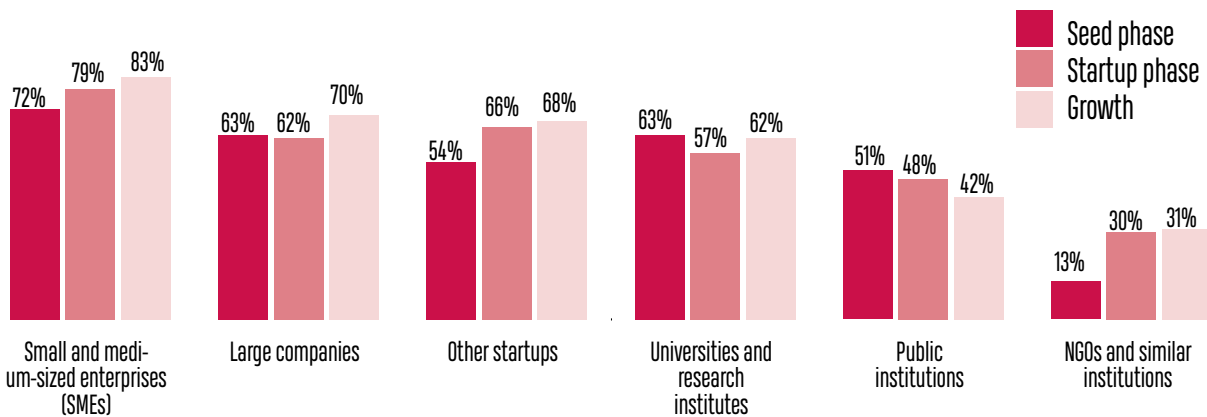
During their business development, startups rely on cooperation partners in various ways and very consciously enter into strategic partnerships.

Partnerships are of great importance to startups in all phases of development. Starting in the seed stage, the new companies fall back on various cooperation partners. However, differences in partnership choices are evident beyond the phases of develop-

ment. The importance of cooperation with corporate partners is great from the start, however, it increases as the company develops. This can be explained by the increasing significance of market access after the initial development phases. Universi-

ties and research institutions are of similar importance across the entire course of development. The collaboration with public institutions is strong in the seed phase, in which fundraising represents a key goal, making these institutions all the more relevant.

COOPERATION PARTNERS AND DEVELOPMENT PHASES



COOPERATION OBJECTIVES AND DEVELOPMENT PHASES

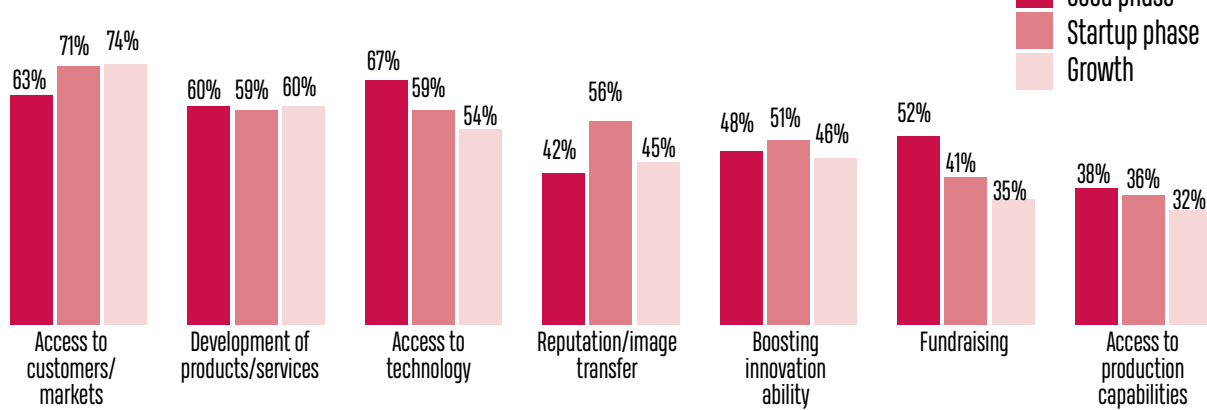


Fig. 44. Source: ASM Survey (startups), multiple answers possible, N=337

CHALLENGES WITH COOPERATIONS

Startups deem it very important to identify suitable cooperation partners and form partnerships with them. More than 90% of the analyzed companies have already had experience with cooperation partners.

In practice, startups perceive the difference in speed (of innovation) as very difficult. On a scale from 1 (no problem) to 5 (big problem), this aspect was classified as particularly

severe at 3.7 and 57%, meaning more than half, see this as a (big) problem. Lack of flexibility is a (big) difficulty for 39% of startups and is rated at 3.1 on average. Other challenges relate

to different corporate cultures (2.6) and non-compliant business processes (2.4). In contrast, geographical distance or lack of confidence is assessed as being less problematic.

PROBLEMS WITH COOPERATIONS

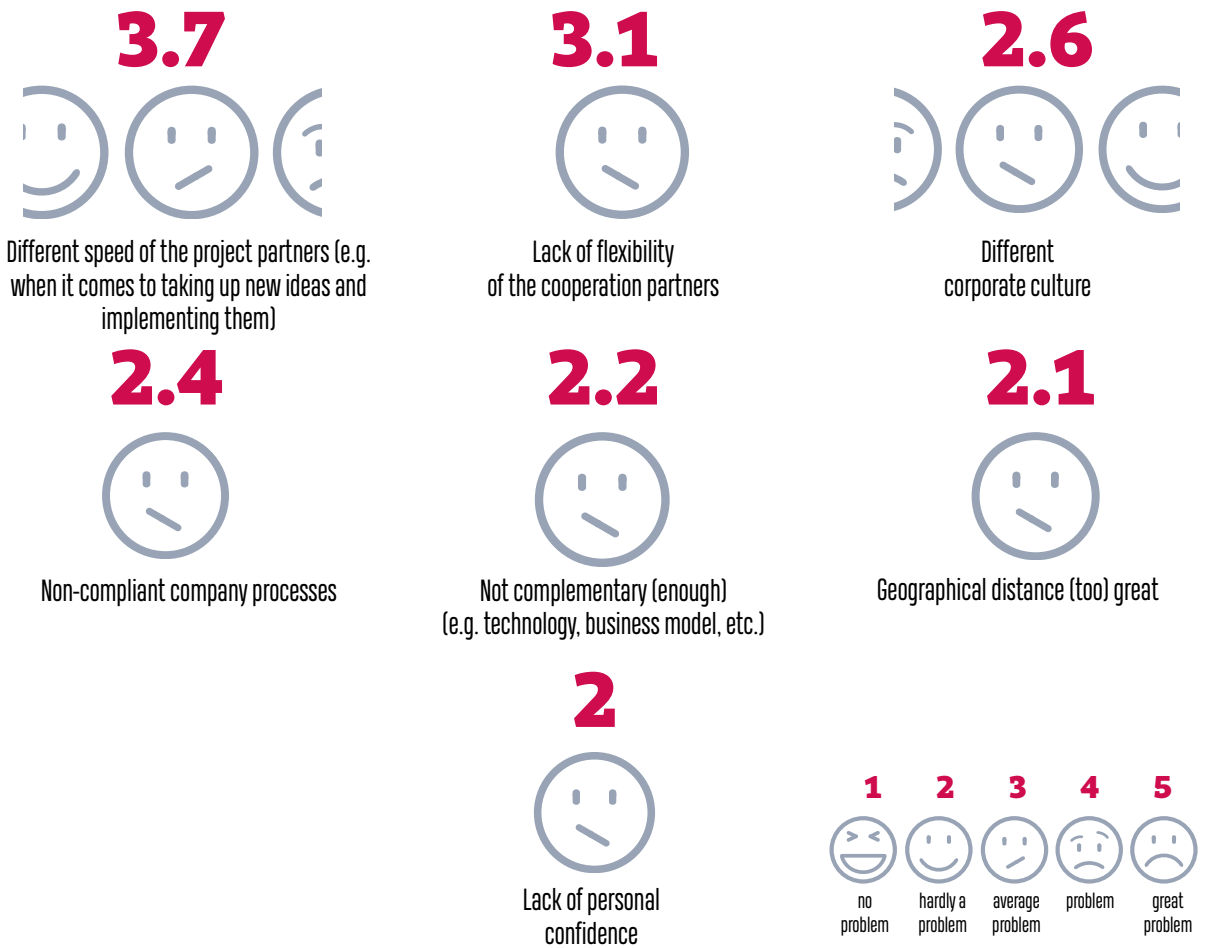


Fig. 45. Source: ASM Survey (startups), N=243

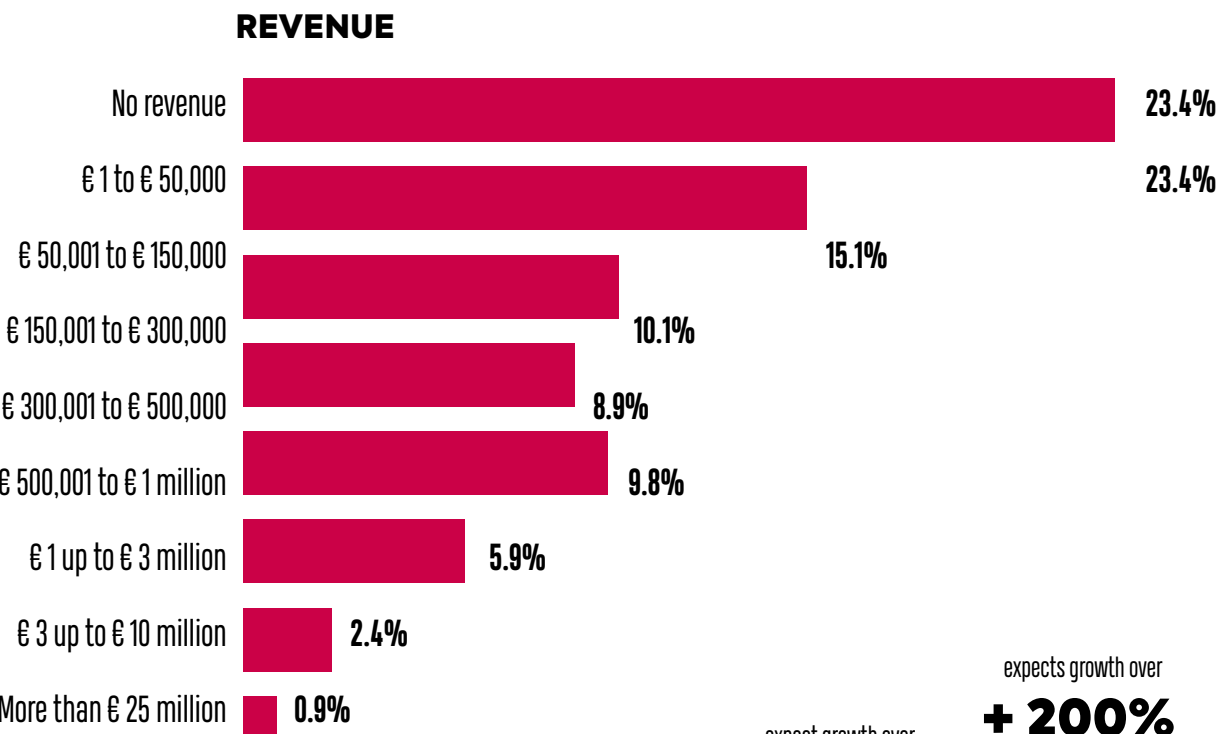


REVENUE & FINANCING

REVENUE AND REVENUE GROWTH

77% of surveyed startups generated revenue in the previous year (2017).

Just under one fourth (23%) of startups reached up to 50.000 euros in revenue. Another fourth reached revenue between 50,000 and 300,000 euros (25%) or between 300,000 and 3 million euros (25%). Almost every tenth startup (9%) generated more than one million euros in revenue. In Chapter 2 (Startups in Austria), it has already been shown that approximately 58% of the surveyed startups are in the seed or start-up phase. This result coincides with the sales analysis stating that, during the last fiscal year, 62% of startups still did not have any sales revenue or revenue amounting up to 150,000 euro.



REVENUE DEVELOPMENT

In addition, the startups were asked to indicate the revenue they have made up until this point and offer projections for the future. On the average, the startups were able to almost double their annual revenue from the previous year to this one: The results showed that startups were able to almost double their annual revenue from the previous year to this one with a revenue growth of 95%. Projections were characterized by optimism seeing as the startups aspire to achieve a doubling of revenue from this year to the next.

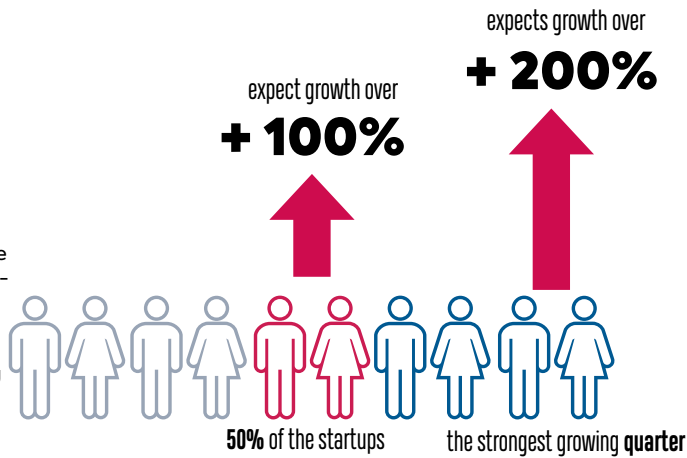


Fig. 46. Source: ASM Survey (startups), N=363

PROFITABILITY

Every sixth startup is already making a profit.

The participants of the ASM survey were asked how long it would still take until their startup reaches profitability. For one in six startups (18%), this is already the case. Another 14% indicated that they will generate profits for the first time during the current fiscal year. Accordingly, almost every third startup has already reached the break-even point or is anticipated to achieve this within a year. The largest group, 36% of startups, aims to be profitable within one or two years. In contrast, for 29% the break-even point is at least two to five years away. Only 1% of the startups surveyed stated that the achievement of profitability is not a priority for them.

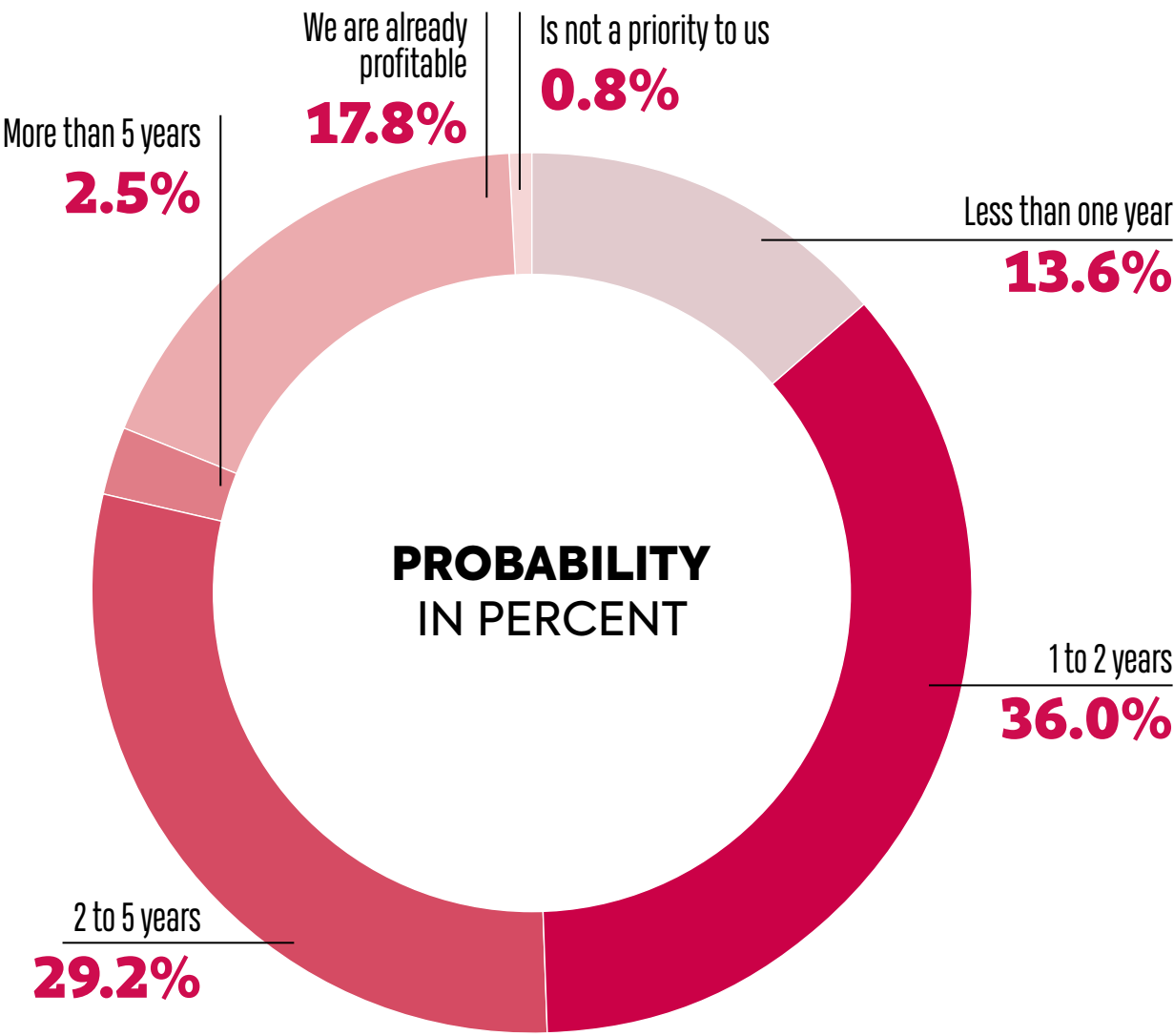


Fig. 47. Source: ASM Survey (startups), N=363

SOURCES OF FINANCING

In many cases startups face long time stretches before the break-even point or before generating any revenues, posing a fundamental challenge for startups: financing of company development. What financing sources have been used so far?

The founder's own savings is the most frequent source of funding. In the case of 81% or four out of five startups, the founders invested their own financial resources to launch and develop it. About a quarter of the surveyed startups (23%) received financial support from their private network (i.e. family and friends). Public subsidies and grants are in second place for the main sources of funding for Austrian startups. Slightly more than half (55%), have already taken advantage of these. The percentage of funded startups has remained constant compared to the ESM 2016 (55%). On average, every fourth startup (27%) was financed via public subsidies, as reported by the ESM 2016. In Germany, the percentage is

higher, namely 35%. A detailed representation and distribution of funding and grants can be found on the following pages. However, we do see a significant increase in financing by business angels. One in three Austrian startups has already benefited from this form of financing. Compared with the ESM 2016, their share increased from 21% to 33%, increasing by more than half. Incubators and company builders also play an important role – 19% of startups received financial support from them. Another 14% of Austrian startups have raised venture capital. About one-third finance themselves from cash flow (29%) and every fifth company (22%) is funded by bank loans. A doubling of the percentage

can be observed in the case of crowdfunding or crowd investing. If it was even 5% of the startups according the ESM 2016, it is already 10% or every tenth startup according to the ASM 2018. A small group (1%) stated that they have made an initial coin offering (ICO). ICO is a relatively recent phenomenon, however, it has gained increasing importance. The startups were therefore asked to give their assessment on whether ICOs will represent a relevant alternative to the venture-capital financing in the future. This was affirmed by around a quarter of the surveyed startups (24%).

**No alternative
to VC**

139

Unspecified

136

Alternative to VC

85

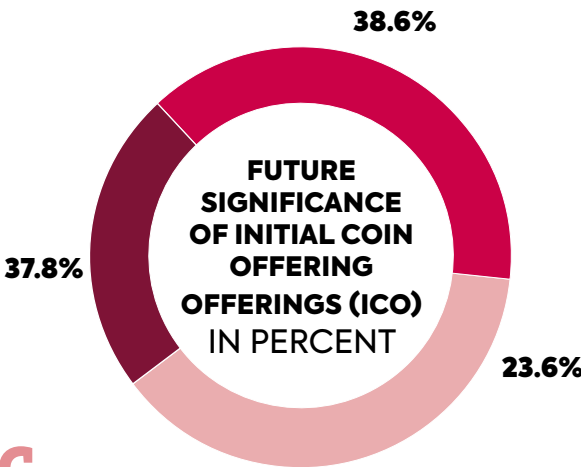


Fig. 48. Source: ASM Survey (startups), N=360

SOURCES OF FINANCING



Savings (financial means of the founders) **81.2%**



Public subsidies and support **55.0%**



Business angels **33.4%**



Internal financing (cash flow) **29.3%**



Family and friends **22.9%**



Bank loan **21.8%**



Incubator/company builder/accelerator **19.3%**



Venture Capital (VC) **13.8%**



Crowdfunding/crowdinvesting **9.9%**



Other financial sources **6.9%**



Other loans **2.8%**

ICO Initial Coin Offering **1.1%**

Fig. 49. Source: ASM Survey (startups), N=365

EXTERNAL CAPITAL

A large portion (72%) of the surveyed startups have received external capital. In detail, it has been shown that 27% were financed with up to 150,000 euros. Every tenth startup received sums between 150,000 and 300,000 euros. Only a little less than half of the surveyed startups (45%) received up to 500,000 euros. In the case of one out of eight startups, the funding volume is between half a million and one million euros (13%). A total of 15% of the startups received more than one million euros. A minority of 5% were able to successfully acquire more than three million euros.

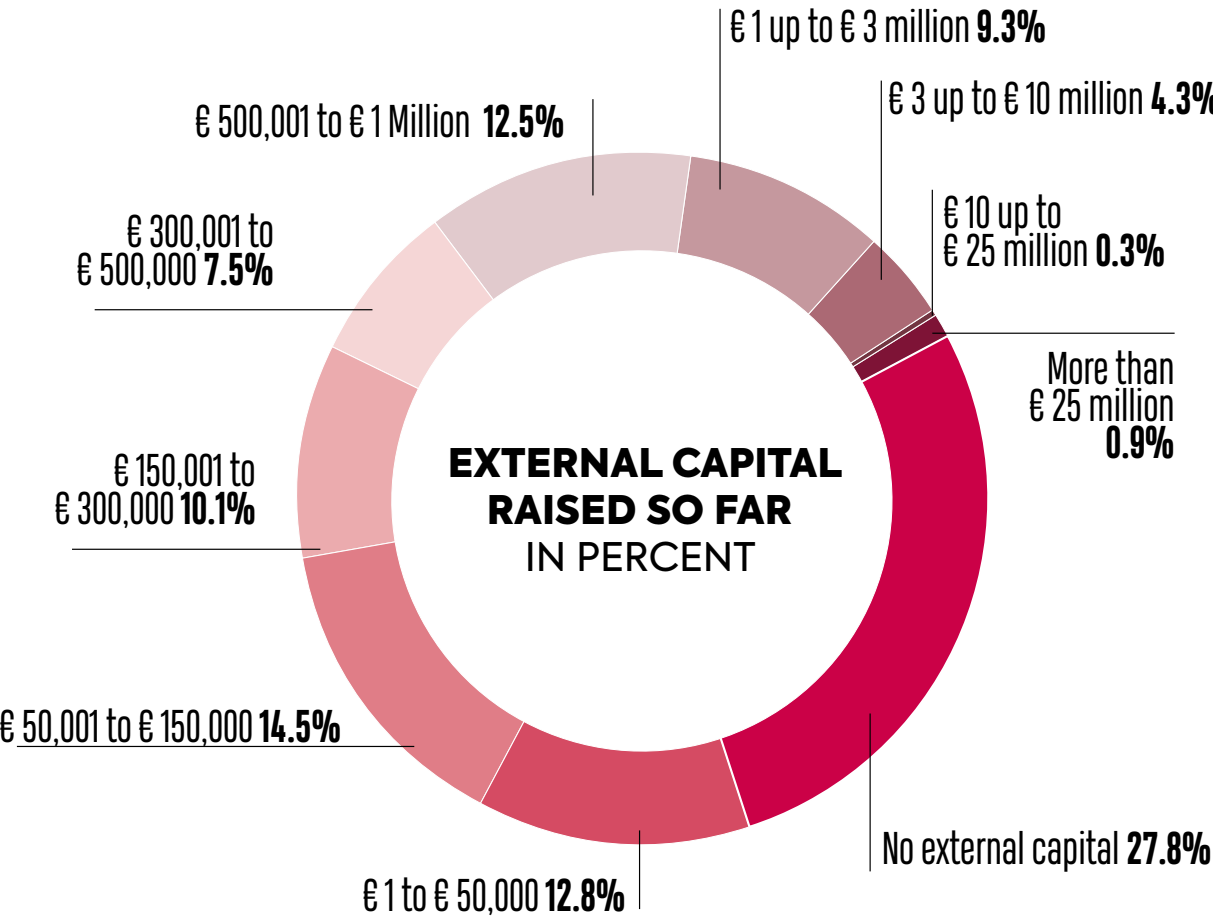


Fig. 50. Source: ASM Survey (Startups), N=361

Concerning future plans in terms of financing, 69%, meaning more than two thirds are planning a (further) round of financing in the next 12 months. 5% plan on bringing together seed amounts of up to 50,000 euros and 21% would like to collect between 50,000 and 300,000 euros. 14% are planning to raise venture capital between 500,000 and 1 million euros. Every fifth startup surveyed (20%) intends to raise more than one million euros.

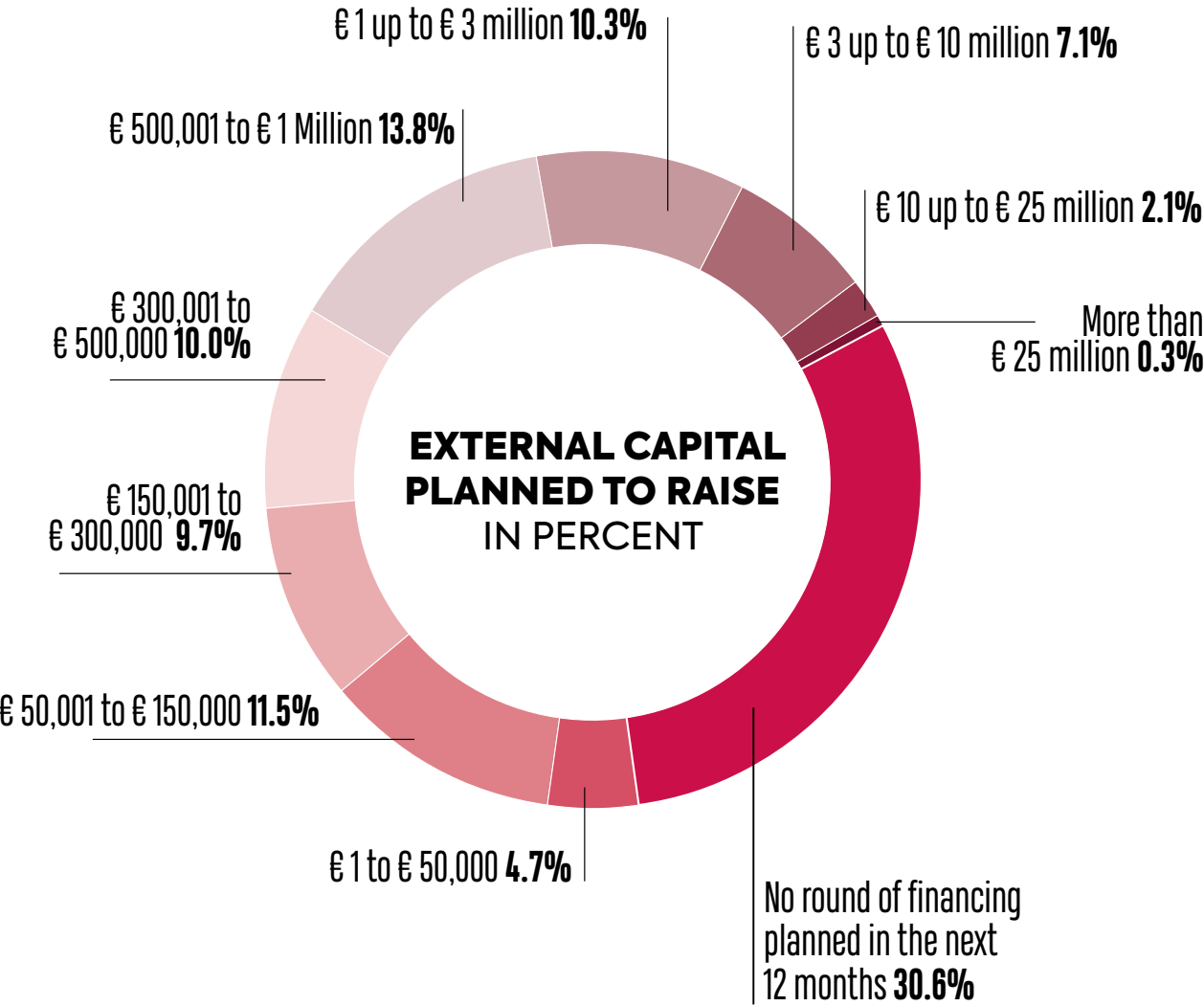


Fig. 51. Source: ASM Survey (Startups), N=361

VALUATION BY INVESTORS

For the first time, the ASM survey was able to ascertain how high startups were valued during their respective financing round. The results show four approximately equal-sized groups for the 154 startups with external financing that answered this question: 21% of the venture-capital-funded startups were appraised at up to one million euros. Somewhat more than a fourth respectively got an appraisal of between 1 and 2.5 million euros (28%) and between 2.5 and 5 million euros (26%) during the last financing round. A quarter of the startups (25%) was appraised as being worth more than 5 million euros.

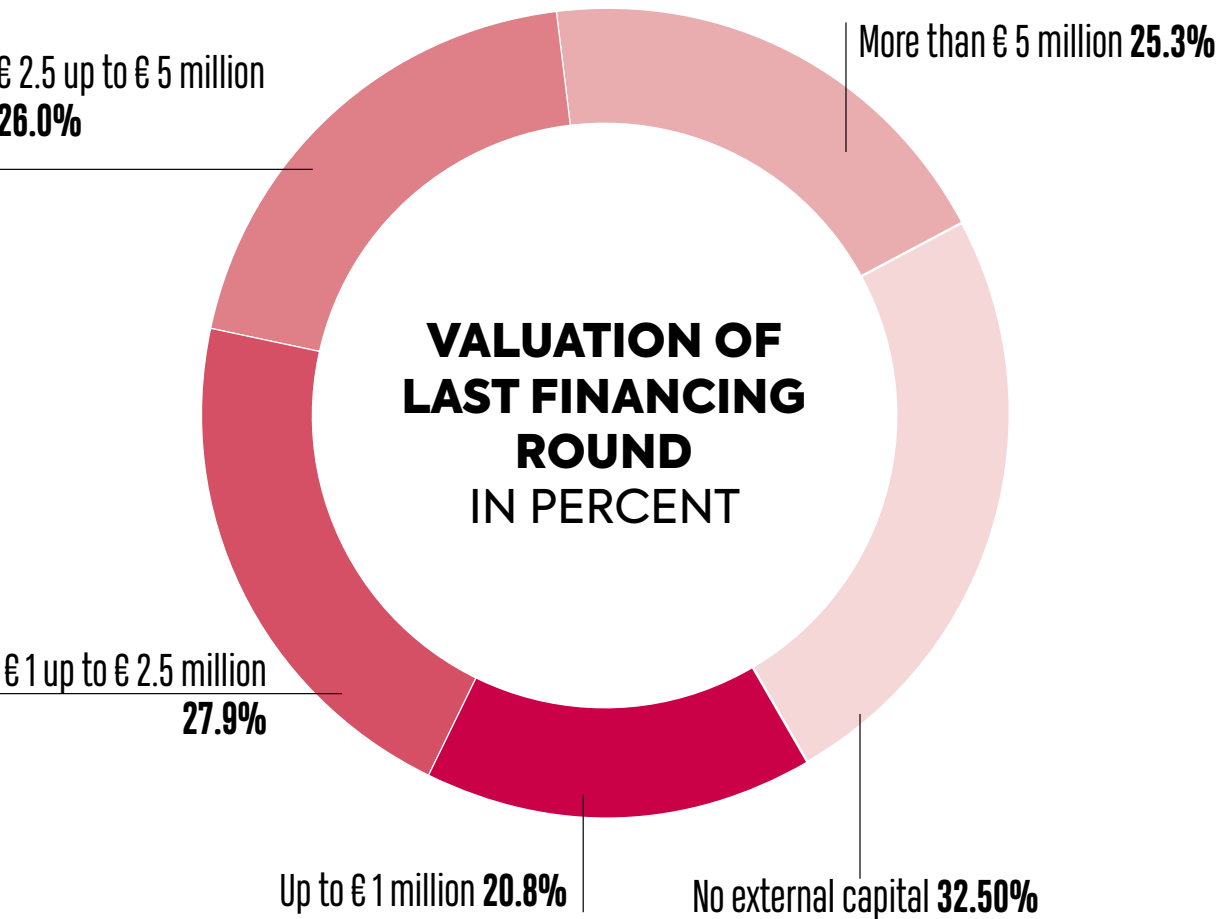


Fig. 52. Source: ASM Survey (startups), N=354

ORIGINS OF VENTURE CAPITAL

Startups that have been financed by business angels or other venture capital were asked about the origin of the venture capitalists within the scope of the ASM Survey.

They mostly come from Austria, whereby 84% were financed by private domestic venture capitalists and 28% were financed by public venture capital (e.g. aws Gründerfonds, tecnet, etc.).

Outside of Austria, Germany still plays an important role: A quarter of the funded startups in the survey are supported by investors from Germany. For 22%, the venture capital

comes from other EU countries (including the Great Britain). 13% have investors from Switzerland and 11% work with US venture capitalists.

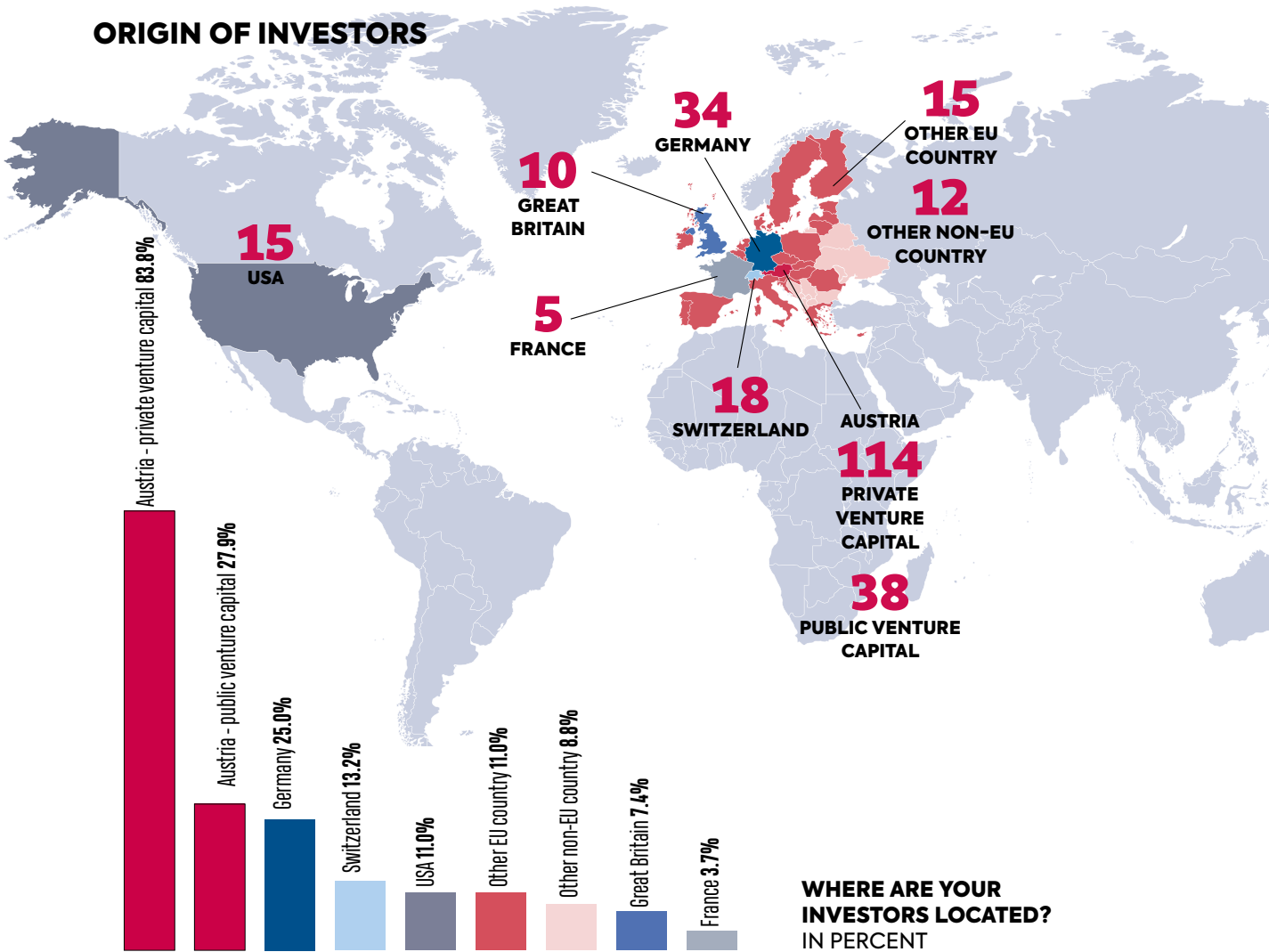


Fig. 53. Source: ASM Survey (startups), N=256

PUBLIC SUBSIDIES AND GRANTS

Public subsidies and supports are an extremely important source of financing for Austrian startups – also compared to the rest of Europe. The startups that have received public subsidies (55%) were asked in the ASM survey what grants, funding programs, subsidies and supports they have taken advantage of.

The ASM 2018 shows which funding institutions play an essential role for startups. Funding from the Austria Wirtschaft Service (aws) and the Austrian Research Promotion Agency (FFG) are of great importance. Furthermore, the support by federal states or communities is relevant – around a third of startups (38%) received funding from these sources. Every eighth startup or 12% benefited from EU subsidies. When it comes to concrete initiatives

and programs, the following emerged as favorites: More than a third (36%) of respondents received an Austrian Research Promotion Agency (FFG) support consisting of a grant and a loan (e.g. Start-up-Funding and General Programme) or an aws grant (e.g. PreSeed or Impulse XS/XL). Almost every third startup took advantage of the research premium (31%) or an Austrian Research Promotion Agency grant (Patent Check, Innovation Check) (29%).

Almost one third (26%) of the surveyed startups are or were part of the university incubator network AplusB. 15% were supported within the scope of the internationalization initiative and 12% took advantage of the employment bonus. 17% of startups have used aws guarantees (e.g. double equity, other loan guarantees) and aws indirect-labor-cost subsidies. Furthermore, 12% of the surveyed startups are or were in the aws seed-financing program.

PUBLIC SUBSIDIES AND SUPPORTS

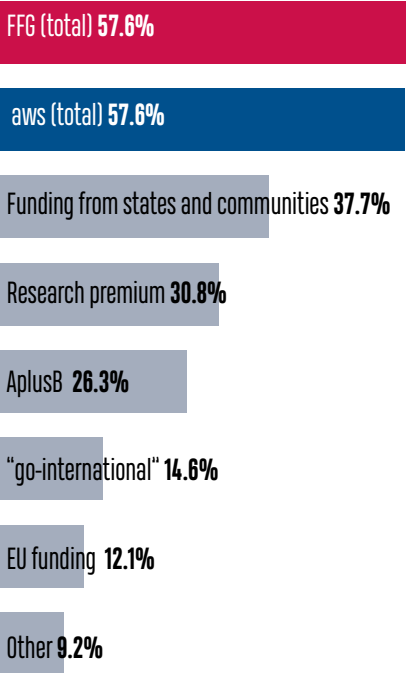
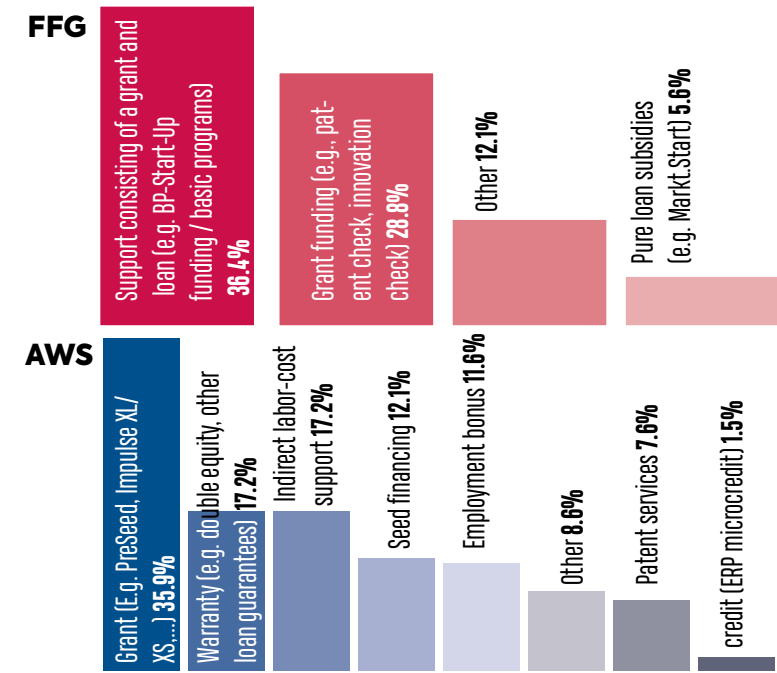


Fig. 54. Source: ASM Survey (startups), N=191



SUPPORT WHILE RAISING CAPITAL

In order to be successful in fundraising, startups often get external support. So, who do they turn to?

This question was posed within the scope of the ASM Survey and rated on a five-point scale from 1 (no support) to 5 (significant support). Existing investors, such as business angels, support startups the most significantly. 43% stated that existing investors are important or very important for further capital acquisition. On the average,

this point was rated with 3.1. Incubators/accelerators/company builders are in second place in terms of the acquisition of capital: 36% thought it was important or very important (average rating: 2.7), promotion advisors were important or very important to 32% (2.7) and the startup community was considered important or very

important to 31% (2.6). Investors networks also play an important role (2.5) for 29% for the acquisition of capital. In contrast, only every fourth startup indicated that they had been significantly supported by business consultants (24%) and lawyers (23%).

SUPPORT DURING THE ACQUISITION OF CAPITAL

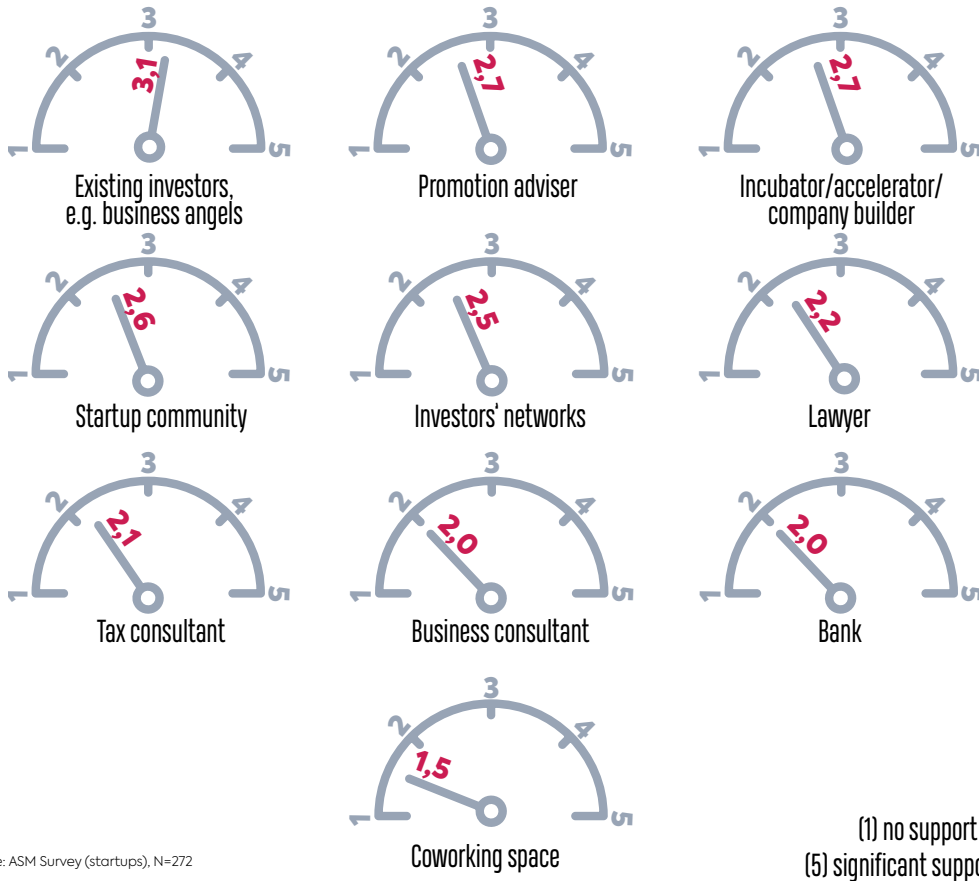


Fig. 55. Source: ASM Survey (startups), N=272

(1) no support to (5) significant support



ENVIRONMENT & DEVELOPMENT

CURRENT BUSINESS SITUATION

The business climate depicts the overall mood, for example concerning revenue and profit expectations. Thus, it is an important early indicator for showing companies' perspectives and economic developments.

The assessment of the current business climate suggests a positive mood. In total, slightly more than half of the participants of the ASM Survey assess the current business situation as being very good (18%) or good (35%). However, 39% rate it as satisfactory. Just about every thirteenth startup rated the current business situation as bad or very bad. Today, the business situation is rated as being better overall compared to the ESM 2016. At that time, 29% of Austrian startups indicated an at least good and 62% indicated a satisfactory assessment.

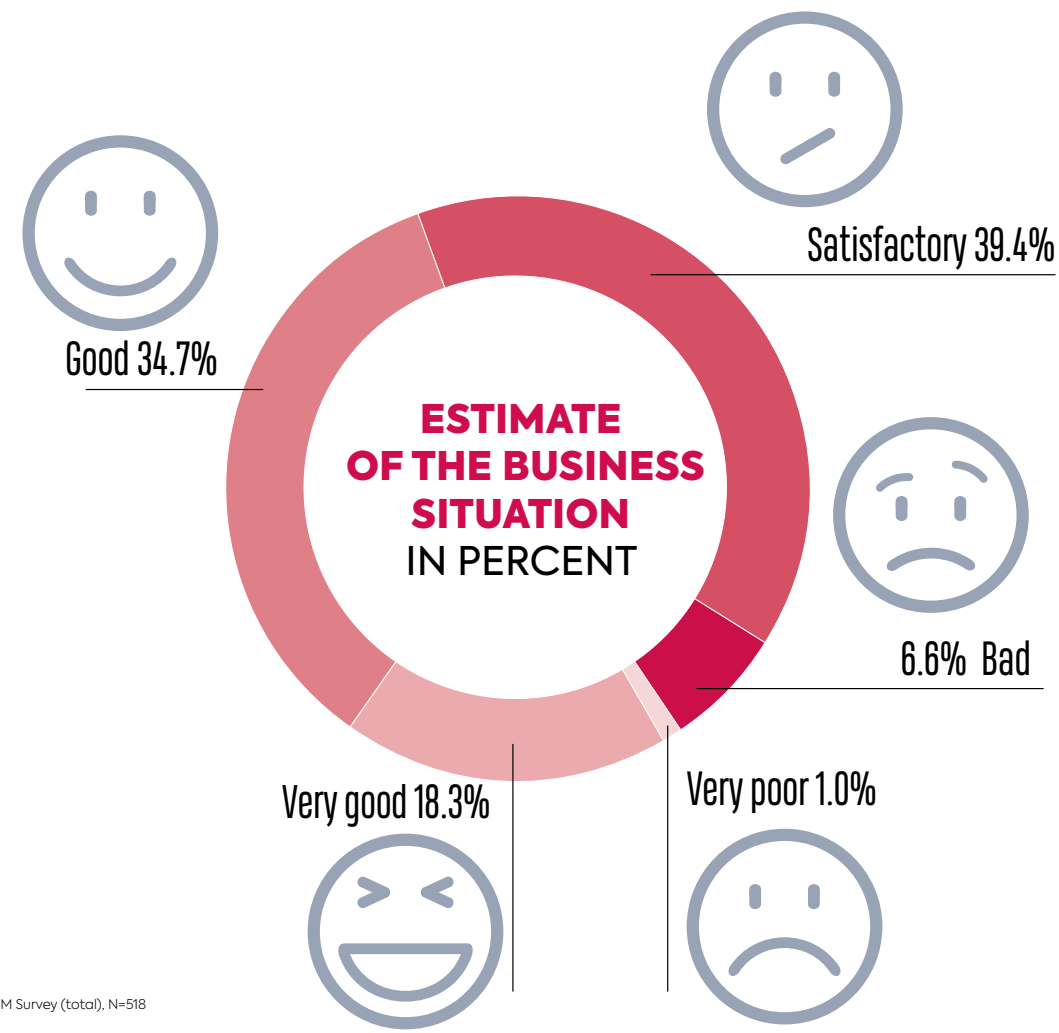


Fig. 56. Source: ASM Survey (total), N=518

KEY CHALLENGES

To gain a better understanding of the current situation of the startups, the participants were asked to rate their biggest challenges.

These include sales and customer acquisition, as well as revenue growth. The responses took place on a five-point scale from 1 (not a challenge) to 5 (a great challenge). The average rating for the two aforementioned fields is 4.2 and 4.2. These topics are classified as being very challenging by almost half of the respondents. In third place, product development follows, and is deemed a huge challenge for 28% (average: 3.5). About a third of the startups stated that managing liquidity (3.4) profitability, capital acquisition and internationalization (3.2 respectively) were currently among their greatest challenges. More internal problems such as the design of processes and organization (2.9) and team development (2.7) are deemed very challenging by approximately every tenth startup.

CURRENT CHALLENGES

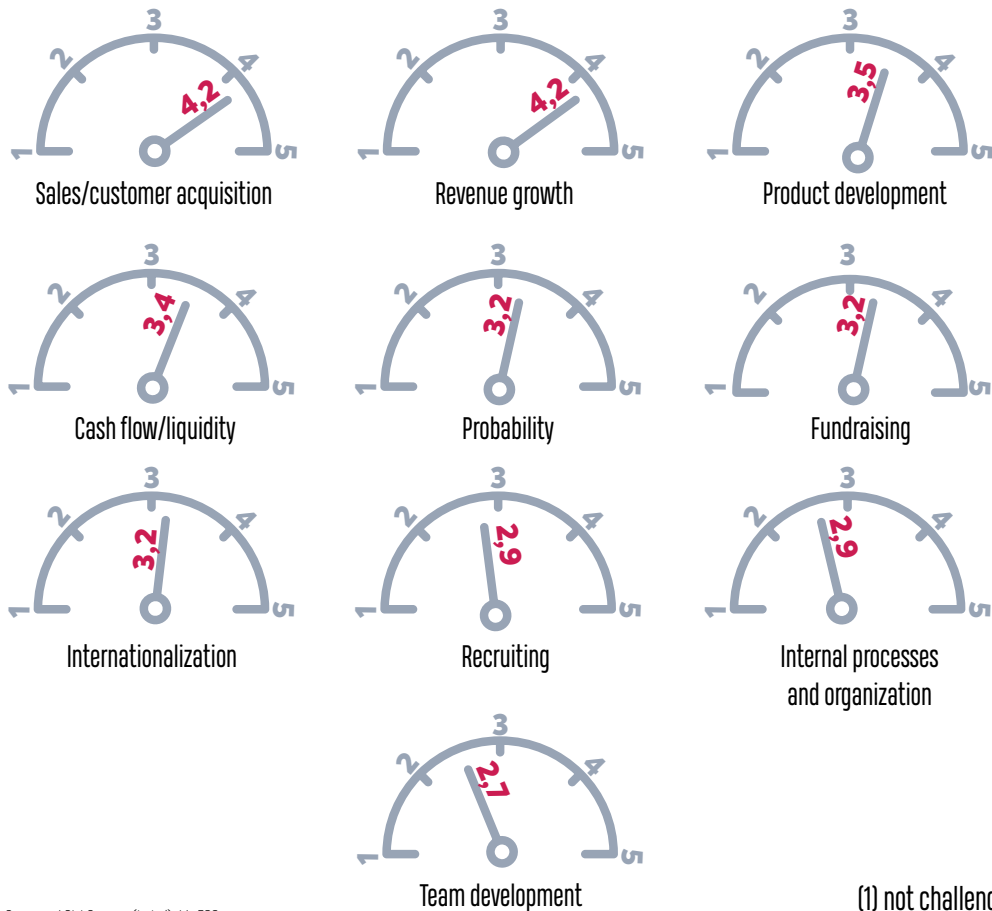


Fig. 57. Source: ASM Survey (total), N=532

(1) not challenging
to (5) very challenging

SUPPORT BY PUBLIC INSTITUTIONS

Concerning the topic of public authorities, two questions are particularly relevant to startups: How does the collaboration and support by public institutions work? What do they expect from policy-makers with regard to their entrepreneurial activity?

The evaluation was carried out on a scale of 1 (very negative) to 5 (very positive). The majority cite negative experiences: 33% of the participants. They evaluated the cooperation with 2.9 on a scale of 1 (very negative) to 5 (very positive). Only a quarter have good things to very good things to report concerning public institutions and have stated that they have had positive experiences with them. Here, it must also be taken into account that the results were not analyzed in detail nor were did the survey inquires as to the causes (e.g. little atten-

tion to programs). The current range of digital services (e.g. Corporate Service Portal, Online Patent Registration) is rated as satisfactory by 34% of respondents and as good by 26%, and has an average rating of 2.8. In this context, startups' assessment of the interest of the Austrian federal government in the situation of startups is important: Only 12% or every eighth participant is of the opinion that the government has a serious interest in supporting startups. Around one fourth (26%) are undecided and the majority (62%) state that they

have the impression that the federal government has little or no serious interest in supporting startups. Participants were also asked about experiences at the EU level, beyond national borders. Results showed that the experiences with EU institutions were rated a bit worse than national ones (2.5 vs. 2.9), however, participants saw the EU institutions as having a greater interest in supporting startups than the Austrian federal government (2.6 vs. 2.2)

COLLABORATING WITH PUBLIC INSTITUTIONS



2.9



How positive would you rate your experiences with public authorities/institutions?

2.8



How to find the current range of digital services (e.g. corporate service portal, online patent registration etc.)? How positive would you rate your

2.5



experiences with EU institutions?

2.2



Do you think that the federal government has a serious interest in supporting startups?

Fig. 58. Source: ASM Survey (total), N=532

EXPECTATIONS TOWARDS POLICY MAKERS

The startups were asked about their specific wishes or expectations from the political sphere in this context. These results should serve as impulses for the future design and development of policies to improve the Austrian startup ecosystem.

According to analysis, reducing indirect labor costs is the top priority for startups. This was stated by 75% of the participants as a concrete expectation from policy makers. A large majority (70%) also wants to remove bureaucratic and regulatory hurdles. More than half indicated that they saw a need for tax cuts/breaks (55%) or generally a better understanding (54%) of

the special characteristics of startups. In turn, 51% would like to improve the framework conditions for venture capital investment and 44% seek improved conditions for acquiring of capital. In addition, with regard to their entrepreneurial activity, startups have more expectations of policy-makers and see deficits: Improving the image of entrepreneurship in

society (39%), improving communication between policy-makers and startups (38%), establishing entrepreneurship in the education system (37%) and bettering the support for founders (e.g. local support and consultation) (36%). These findings correspond with the economic barometer of the Austrian Economic Chamber conducted every six months.

EXPECTATIONS OF WHAT POLICY-MAKERS SHOULD DELIVER

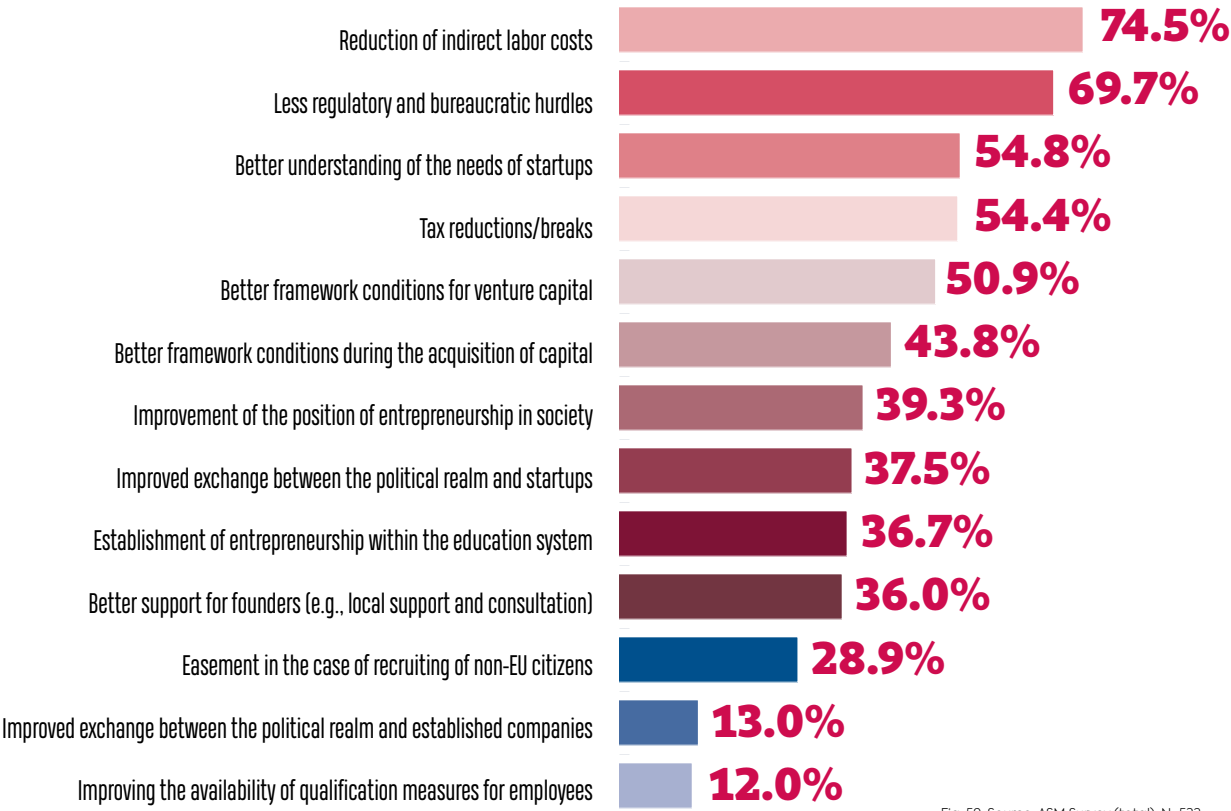


Fig. 59. Source: ASM Survey (total), N=532

INNOVATION & TECHNOLOGY TRENDS

How do startups rate the future potential of current technological trends?

The top three technology trends based on a five-point-scale rating from 1 (no potential) to 5 (very great potential) include: artificial intelligence (4.5), big

data (4.2) and autonomous vehicles (4.1). These three technologies are ascribed “enormous potential” by more than half of the startups respectively. The

fields of robotics (4.0) smart medical devices (3.9) and quantum technology (3.9) are also deemed to be promising.

Furthermore, startups were asked what innovation topics are (still) given too little attention in Austria in their opinion. Here, this results in an overlapping, because the results showed that those technologies

with the greatest potential are also those that receive too little attention from the participants’ perspective. More than a third of the startups (39%) are of the opinion that artificial intelligence does not receive enough

attention, 27% indicate that this is the case with autonomous vehicles, followed by big data (22%), blockchain (21%) and the Internet of things (20%).

POTENTIAL OF INNOVATION AND TECHNOLOGY TRENDS

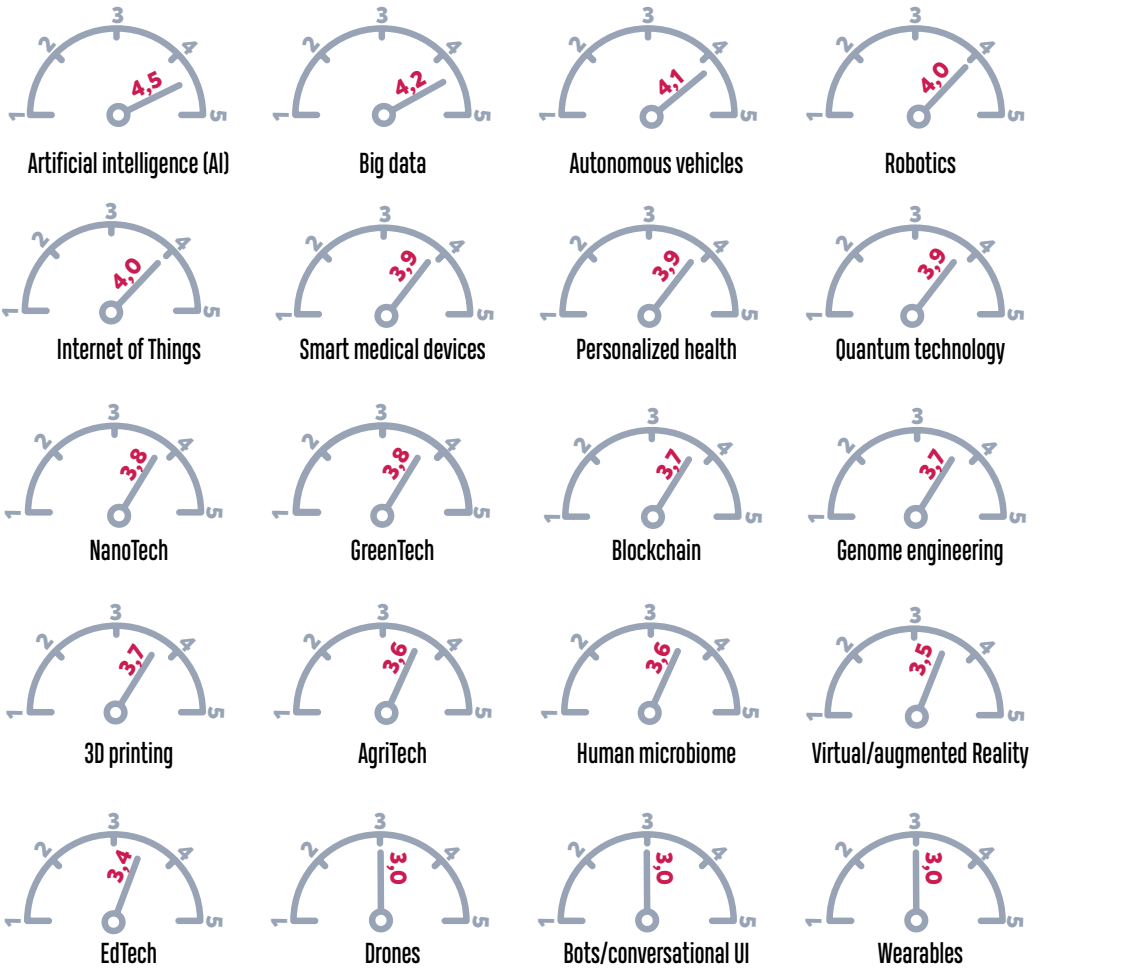


Fig. 60. Source: ASM Survey (total), N=532

(1) no potential to (5) very great potential

LACK OF ATTENTION FOR INNOVATION AND TECHNOLOGY TRENDS

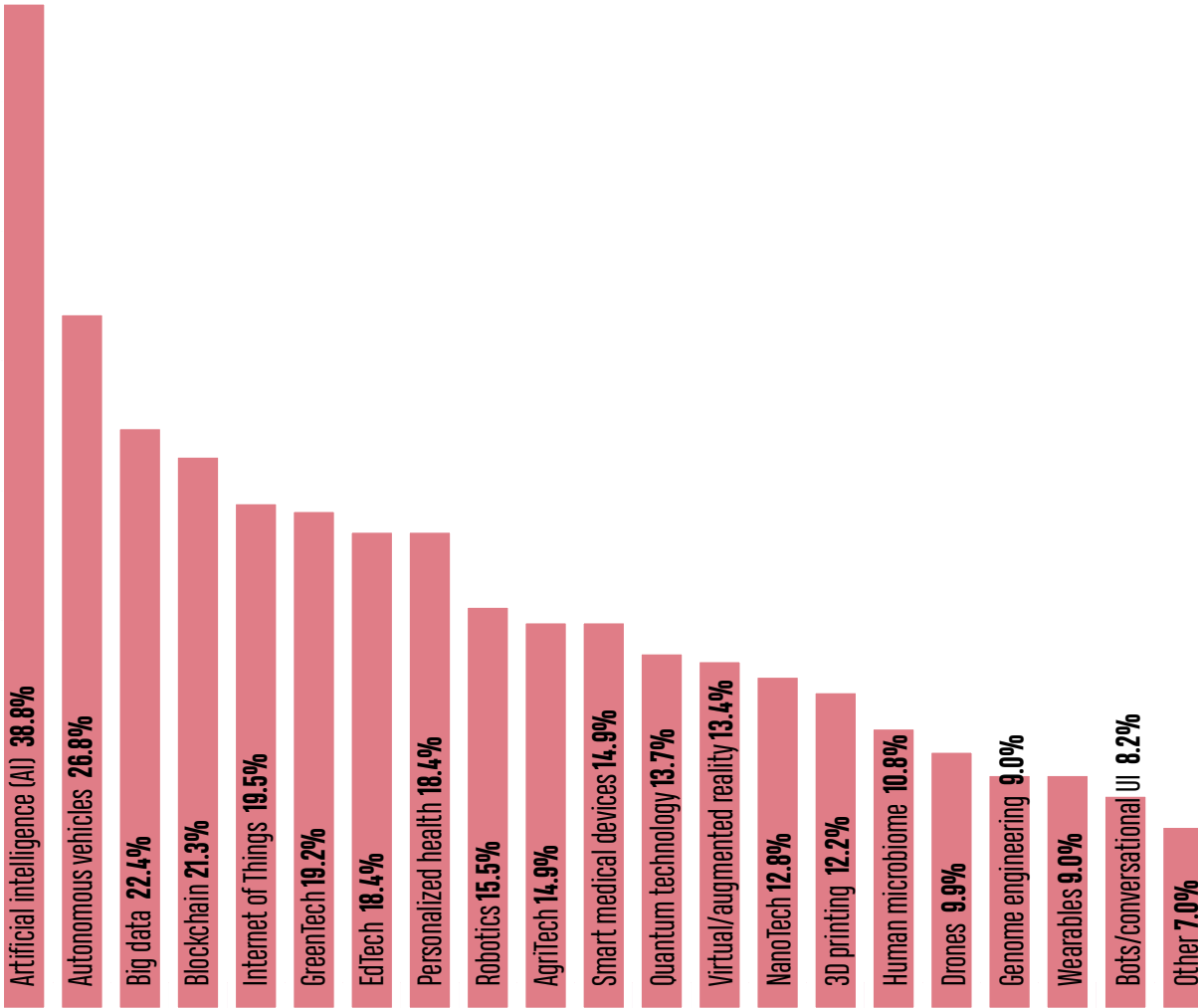
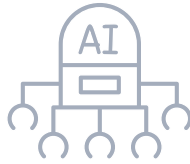


Fig. 61. Database: Survey (total), multiple answers, N = 511

CONTRACTING ENTITIES & PROMOTERS

133



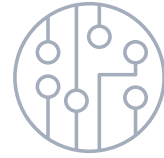
ARTIFICIAL
INTELLIGENCE (AI)

92



AUTONOMOUS
VEHICLES

77



BIG DATA

73



BLOCKCHAIN

67



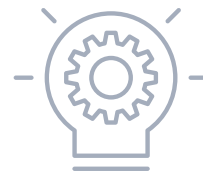
INTERNET OF THINGS

66



GREENTECH

63



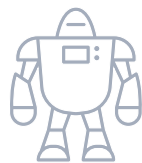
EDTECH

63



PERSONALIZED HEALTH

53



ROBOTICS

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AGRITECH

51



SMART MEDICAL
DEVICES

47



QUANTUM TECHNOLOGY

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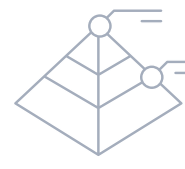
VIRTUAL/AUGMENTED
REALITY (AR/VR)

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NANOTECH

42



3D PRINTING

37



HUMAN MICROBIOME

34



DRONES

31



GENOME ENGINEERING

31





WEARABLES

28




BOTS/
CONVERSATIONAL UI

The financing of the Austrian startup Monitor was carried out by the following institutions:





AWS

The Austria Wirtschaftsservice Gesellschaft mbH (aws) is the Federal business development bank. It supports innovative startups from the initial idea all the way to achieving international market success. The aws provides low-interest loans, guarantees, equity capital and grants. In addition, startups are supported by a variety of coaching and consulting services. www.aws.at




AUSTRIAN RE-SEARCH PROMOTION AGENCY (FFG)

The Austrian Research Promotion Agency (FFG) is Austria's national support institution for company research and development. It was founded on September 1, 2004 and is fully owned by the Republic of Austria. Supporting organizations including the Federal Ministry of Transport, Innovation and Technology and the Federal Ministry for Digital and Economic Affairs. The aim is to strengthen Austria as a prime location for research and innovative business. www.ffg.at




BMDW & BMVIT

The Austrian startup Monitor was supported by the Federal Ministry for Digital and Economic Affairs and the Federal Ministry for Transport, Innovation and Technology.




VIENNA BUSINESS AGENCY

As a first point of contact for national and international companies, the Vienna Business Agency offers wide-ranging services with grants, real estate, discussions and workshops. It supports startups and young companies with a series of free and multilingual initiatives. www.wirtschaftsagentur.at




FEDERATION OF AUSTRIAN INDUSTRY

The Federation of Austrian Industry (IV) is the voluntary and independent interest group for Austria's industrial sector and sectors associated with it. A federal organization, nine state groups and the Brussels IV Office represent the concerns of their current 4,400 members, from the fields of production, the banking and insurance sector, infrastructure and industry-oriented services. Member of the Federation of Austrian Industry represent more than 80% of domestic production. www.iv.at




AUSTRIAN FEDERAL ECONOMIC CHAMBER

The Austrian Federal Economic Chamber (WKO) is the nationwide interest group for business owners. Their main concern is actively shaping of the framework conditions for businesses in Austria. For more than 517,000 member companies, it offers a comprehensive range of training and services and its actions are based on the principles of the social market economy. www.wko.at



AUSTRIAN COUNCIL FOR RESEARCH AND TECHNOLOGY DEVELOPMENT

The main task of the Council for Research and Technology Development (RFTE) is providing fact-based and independent consulting for the federal government in the field of research, technology and innovation policy. The aim is to promote a future-ready RTI policy. The strategies drawn up by the Council represents a crucial basis, such as the current "Strategy 2020." www.rat-fte.at



VIENNA ECONOMIC CHAMBER

The Vienna Economic Chamber (WKW) currently represents around 110,000 members in the nation's capital, Vienna. The focus is on promoting Vienna as a business location. Among other things, the Vienna Economic Chamber is committed as an advocacy for entrepreneur-friendly economic and tax policy. www.wko.at/service/w/wirtschaftskammer.html

The following multipliers have supported the project and, in particular, motivated startups to take part in the survey.



The following partners provided prizes for the participants of the survey:



The implementation of the Austrian Startup Monitor was also supported by the Centre for Entrepreneurship and Applied Business Administration of the Karl-Franzens-University in Graz.



THANKS AND ACKNOWLEDGEMENTS

Special thanks also go to the following people: Lara Agneter, Benjamin Braun, Johanna Einsiedler, Georg Furlinger, Lukas Leimgruber, Kevin Oczon, Christoph Pokorny, Elisabeth Sabeditsch, Sebastian Stumpf, Remo Taferner, Lukas Vasold.

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ASM 2018 AUTHORS

The Austrian Startup Monitor is produced by the AIT Austrian Institute of Technology, AustrianStartups and the Entrepreneurship Center of the WU Vienna.

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

The AIT is the largest applied research organization in Austria. The Innovation Systems & Policy Center has more than 25 years of experience in the field of innovation research and has conducted numerous innovation policy studies at national and international level. A major focus of the Center is the longer-term analysis of the development of companies and the analysis of startup ecosystems. The AIT is the academic lead partner of the Austrian Startup Monitor.

AUSTRIANSTARTUPS

AustrianStartups is Austria's leading think tank for innovative entrepreneurship. The non-profit platform collaborates with more than 30,000 supporters to promote a future in which entrepreneurship is as second-nature as skiing in Austria. AustrianStartups combines the experience of successful startups with an extensive network of experts, helping to demonstrate and guide the way to establishing a company-friendly climate in Austria.

VIENNA UNIVERSITY OF ECONOMICS (WU) ENTREPRENEURSHIP CENTER

The WU Entrepreneurship Center Vienna was established in June 2015 as a WU center of excellence and represents a consistent continuance of activities to promote entrepreneurship and interdisciplinary networking. The WU Entrepreneurship Center has been a scientific partner of the Europe-wide project since the first implementation of the European Startup Monitor in 2015 and carries out the national survey and evaluation.

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Startups create the markets of tomorrow and are the key factor to developing dynamic economies.

The Austrian Startup Monitor 2018 provides an analysis of the status, perspectives and environment of Austrian startups based on a broad investigation of the ecosystem. This is the first analysis of its kind, offering a well-founded database of the Austrian startup sector for the interested public, policy makers and the start-up community. The topics addressed range from comparing characteristics of founder teams to the business models they pursued and their financing strategies as well as their plans for the future and their assessment of the ecosystem's current circumstances.



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ISBN: 978-3-200-05768-5