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Entrepreneurship Zeitgeist 2030

Making start-ups Germany's next economic powerhouse

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Introduction and key messages

Driven by the economic success of large corporations from German core sectors, such as automotive, mechanical engineering, and chemicals, and a larger number of well-established medium-sized businesses, called the German Mittelstand, Germany's steady GDP growth has guaranteed prosperity, stability, and social security for decades. However, this long-standing and proven path to economic success is now at risk of coming to an end more or less abruptly. Germany is facing a decade marked by some of the greatest transformations the country has ever seen: transformations with a focus on digitalization and connectivity, talent, sustainability, and business models are just some of the major changes that Germany needs to master to stay internationally competitive and preserve its prosperity.

In order to accomplish this, a robust start-up ecosystem will have to play a key role. With their product and service innovations, entrepreneurial teams have created entirely new industries like fintech, cleantech, insurtech, healthtech, or biotech, which in turn have created further economic value and new jobs that are needed against the back-drop of the changing world of work. At the same time, new start-up-initiated business models and products have also helped traditional industries innovate in ways that strengthen both their own performance and the overall economy.

However, while the economic potential of a dynamic start-up ecosystem is enormous and the essential foundations to be built are clear, Germany will need to enable and significantly accelerate its entrepreneurial activities. This is arguably the only way to create and establish new world champions and powerful domestic economic engines in sufficient numbers so that these can act as growth drivers on par with Germany's traditional Mittelstand and the country's largest industrial titans.¹

Against this backdrop and based on the findings and insights from a major new McKinsey research effort, this report presents a forward-looking perspective of a start-up ecosystem for Germany and a blueprint for how to bring it about. To this end, the next three chapters offer the following:

1. A perspective of a start-up ecosystem (including its value creation and employment potential) that can become an integral part of Germany's growth engine in 2030, including its key pillars and principles for success
2. A map of how it is possible to make start-ups Germany's next economic powerhouse with an absolute value creation of €2.3 trillion by 2030—both through doubling the number of new start-ups and significantly increasing the extent and probability of success
3. Guidance on how players and stakeholders of the ecosystem can create a common entrepreneurship zeitgeist to contribute to the realization of the target perspective.

Text Box 1:

About the research

Insights in this article were generated from two main sources:

1. **Proprietary McKinsey quantitative model.** All figures presented in this report are based on a quantitative model developed to predict the impact of the German start-up ecosystem by 2030.
2. **Qualitative interviews.** In addition to the quantitative model, we conducted more than 20 qualitative interviews with key contributors and decision makers of the German start-up ecosystem in August and September 2021.

For further details on the sources and methodologies, see technical appendix.

¹ This development is already visible in the US where seven out of the nation's top ten companies have been founded after 2000—in Germany, this is the case for only two companies. This observation correlates with the falling value share of German companies in the world's top 30 companies—which only stresses the importance of transformation and acceleration. See: Capital IQ, Thomson Eikon, OECD.

Core messages

1. Start-ups founded between now and 2030 could contribute an estimated nearly €2.3 trillion—exceeding the market capitalization of today's DAX40 companies by over 20 percent—as well as more than 1.44 million new jobs to the German economy.
2. In order to be successful, the German start-up ecosystem needs to build on the unique strengths of the German economy and society instead of trying to copy characteristics of other international entrepreneurship ecosystems
3. For a prosperous economy, Germany will depend on both hypergrowth companies to provide outsized economic impact and serve as role models as well as medium-sized start-ups to form the “New German Mittelstand”, that contribute overproportionally to job creation and innovation.
4. To capture this value, Germany needs to create a new entrepreneurship Zeitgeist to (1) encourage more people to create start-ups, primarily by fostering an entrepreneurial mindset and offering the proper education and opportunities at universities as well as (2) improve conditions for start-ups' success, such as better access to funding in later rounds.
5. All parts of the start-up ecosystem, including society in general, should work together to capture the potential of a thriving German start-up ecosystem. In turn, all stakeholders in the start-up ecosystem need to accept their responsibilities arising from their economic and societal importance and take their place at the center of the economy and society.

Perspective: Building a prosperous German start-up ecosystem 2030

How can a German start-up ecosystem of 2030 realize its potential? What contributions and actions do all stakeholders involved need to take? By 2030, the German start-up ecosystem will likely be fundamental to Germany's economy and German society as a whole. At that point, entrepreneurship could be an integral part of German culture. The perspective of entrepreneurship in Germany in 2030 (Exhibit 1) is an inclusive one in which many regionally and thematically dispersed ecosystems, which we term clusters, will interact with and empower each other to create a self-reinforcing ecosystem of ecosystems.

Exhibit 1

Germany 2030: ecosystem of ecosystems

Ecosystem of ecosystems

Nation-level ecosystem could evolve from the interconnection of clusters across the country that mutually reinforce each other's growth

Legal and financial preconditions

National-level government structures could support the ecosystem and its members, eg, through limited bureaucracy for founders, simplified regulations for ease of hiring for employers, financial safety net, favorable taxation

German way: social partners, sustainability

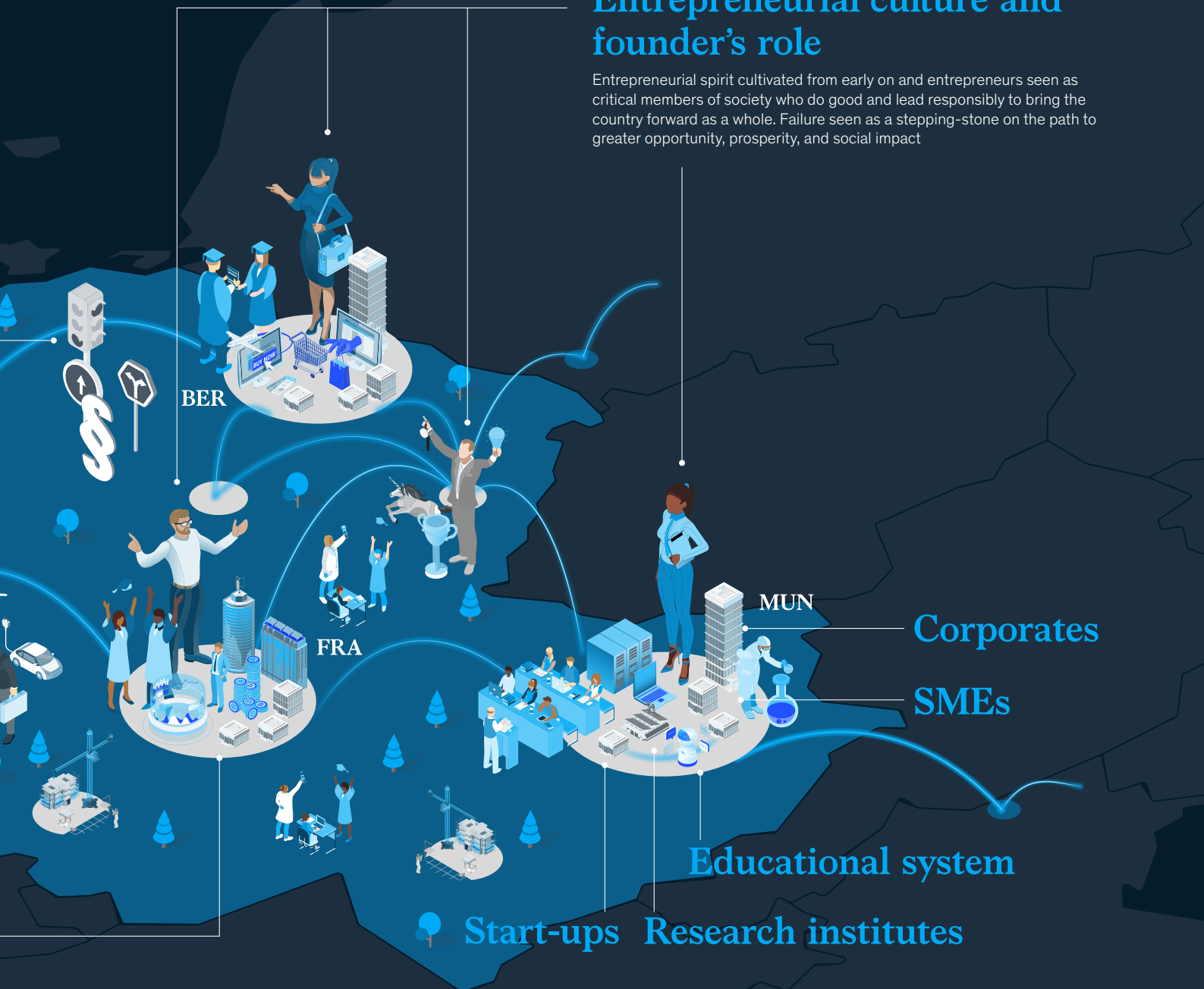
Innovation could be supported by traditional values of German industry—lasting employability, fair employment conditions, and social partnership—and could continue the tradition of considering environmental impact and sustainability

Cluster/local ecosystem

Local ecosystem in a particular region with a unique technical or industry orientation comprised of relevant start-up players, corporates, SMEs, educational institutions, and public agencies

Entrepreneurial culture and founder's role

Entrepreneurial spirit cultivated from early on and entrepreneurs seen as critical members of society who do good and lead responsibly to bring the country forward as a whole. Failure seen as a stepping-stone on the path to greater opportunity, prosperity, and social impact



€2.3 tn economic impact and
1.44 mn jobs could be created by start-ups founded between today and 2030

“We have a different awareness of sustainability in Germany—we don’t just act sustainably because investors demand it but because it’s part of our DNA.”

Verena Pausder, serial founder and entrepreneur

“We are more of a founders’ nation than we think.”

Ramin Niroumand, founder and CEO at FinLeap

“In Germany we have to shift away from a strong culture of envy, resulting in entrepreneurs often not talking about their success in public, while in the US entrepreneurs are celebrated as heroes.”

Gloria Seibert, founder and CEO at Temedica

The “German way” of entrepreneurship

In 2030, German start-ups should be built on the industries and values that Germany has been well known for. German start-ups will innovate for instance in the areas of industrial automation, sustainability, and environmental impact. Their founding teams should demonstrate more commitment to job security, employee protection, fair wages, and other values central to the German social market economy (soziale Marktwirtschaft). In addition, founders as well as investors should aim to reinvest within Germany and Europe to further boost the momentum of entrepreneurship and help economic growth further continue to flourish.

Bringing this sense of responsibility for employees, environment, and sustainable economic growth into the country’s entrepreneurial activity could underpin the German way of founding. It could grow the economy to the next level, increase economic competitiveness, and build a new economic backbone.

Reframed public opinion: a society that celebrates entrepreneurship

In fact, by 2030, entrepreneurship will be valued and seen as a social imperative and integral part of a new entrepreneurship Zeitgeist. Public discussion could be filled with reminders that entrepreneurship is what built the German Mittelstand in the past, and the current commitment of starting scalable, digitally enabled companies is an extension and modernization of that heritage.

Founders can become role models for society, especially for younger generations that have strong potential to become impactful founders in their own right. That reframed public opinion may include a perception of founders as servants of the German economy and society. In addition, founders should consciously embrace the responsibility to serve society by, for example, engaging politically, establishing foundations and educational initiatives, and contributing to sustainable economic development, which in turn will bring them recognition.

As the connection between ideas and innovation and the overarching economic and social added value become increasingly apparent, entrepreneurs will be valued and seen as critical members of society.

The next generation will be empowered to choose an entrepreneurial career path

The change in perception of entrepreneurship will almost certainly characterize the attitude and

“One day, when you ask a child what they want to be when they grow up, they will enthusiastically say, ‘An entrepreneur!’”

Miriam Wohlfarth, founder of Ratepay and Banxware

the way institutions that touch young people's lives—most prominently schools and universities—cultivate an entrepreneurial spirit. The education system in Germany in 2030 could not be predicated on developing a workforce to fit and fill current industrial needs but on encouraging students to explore their interests and the corresponding economic as well as social opportunities behind those interests, build on their strengths, identify needs, and make changes in the world with their own ideas and with themselves as employers. In addition, the future generation of founders could well be motivated by today's new generation of parents encouraging their children to consider a career path as an entrepreneur.

Entrepreneurially minded people from all walks of life may be inspired to take the leap into the start-up world—regardless of gender, social, educational, or cultural background.

The cluster: a unique ecosystem among many

In 2030, all economic players—start-ups, large corporations, SMEs, financial institutions, such as banks and venture capitalists as well as educational institutions—could be inspired to form an ecosystem together. They could innovate in agile clusters that each have their own unique combination of resources, technology specialties, and industries. As the clusters throughout the country are significantly different and complementary, their interaction is likely going to be mutually beneficial, laying the groundwork for a unique ecosystem of ecosystems.

Clusters can be regional, such as an industry cluster located in the Rhineland, or thematic, such as a healthcare cluster comprising healthcare players from all across Germany. Following the example of the fast-growing B2C cluster in Berlin, by 2030, many clusters may have emerged, including the German “Space Valley” in Munich, Aachen's deep tech center and the emerging financial data start-up ecosystem around Frankfurt.

In addition to a wide range of businesses, a cluster consists of a variety of other essential players: educational institutions would not only teach the foundations of entrepreneurship, but they could foster an entrepreneurial Zeitgeist, create excitement about entrepreneurship early on, and offer assistance and advice to prospective founders. Innovation hubs could provide a platform for start-ups to find the skills needed and develop partnerships with established corporations, investors, and others in a structured yet flexible manner.

The self-reinforcing flywheel effect of the ecosystem of ecosystems

Our thinking of entrepreneurship 2030 is built on the creation of a self-reinforcing flywheel effect that manifests itself not only in the retention, but also the enrichment of capital, talent, and innovation within the ecosystem.

Reinvesting exit returns in Germany and the European Union could make the start-up ecosystem financially more self-sustaining. In the future, there will be more venture capitalists covering all phases of the start-up funding cycle—including later stage growth funding—located in Germany and the EU with a significant share of the funds also coming from within the German start-up ecosystem. Funding sources could be both private and public, and more institutions would be able to invest in start-ups.

Serial founders are one indicator of a healthy start-up ecosystem and are nearly twice as likely to succeed with their second venture than first-time entrepreneurs.² In 2030, the conditions for starting and growing a company could be such that experienced founders will want to launch new start-ups and employees of start-ups will be encouraged to apply what they have learned and become founders themselves.

The future ecosystem could be defined by a much closer collaboration between start-ups and established players. Corporations, SMEs, and public institutions would make logical early customers of start-ups. This would not only help start-ups generate the traction required for growth and follow-on funding, but these customers would also support the shaping of product development and innovation.

In summary, in 2030, start-ups could be the next generation of both Germany's hypergrowth companies (today's corporate titans) and the (New) German Mittelstand.

Text Box 2

Three questions to Franziska Teubert, managing director at German Startup Association

To your mind, what will the ideal German start-up ecosystem look like in 2030?

In the past, Germany has been known as the land of the engineers. High-tech innovation has been the key driver of our export-oriented nation. But digitalization and climate change are big challenges for our society and our economy. Start-ups offer solutions to these global challenges. By continuing to build a highly diverse, well-funded, and globally competitive startup ecosystem, we are creating the base of our future prosperity.

What is the "role" of the start-up ecosystem and its stakeholders for the German society and economy?

Start-ups are driving innovation in Germany and therefore, are a cornerstone of our future prosperity. They are creating jobs, transforming the

economy in terms of innovation, digitalization, and climate neutrality. In order for Germany to remain a leading economic country in the world, we need to foster entrepreneurship and new business models.

What is your encouragement toward the next generation of founders to create most value of the German economy and society?

Today's founders are the future leaders. They build companies, create jobs, and shape the way we work. They are visionary and highly motivated. They are true European citizens. I encourage these future leaders to voice their opinions, foster diversity on all levels, and bring their entrepreneurial mindset to every discussion as they are shaping our future.

² Performance Persistence in Entrepreneurship, Harvard Business School, 2012.

Grow and nurture: Making start-ups Germany's next economic powerhouse

If Germany can turn the target laid out in the previous chapter into reality, start-ups founded between now and 2030 could, based on our model, reach a market capitalization of €2.3 trillion. Not only would this exceed the total equivalent valuation of DAX40 companies by more than 20 percent, it could also generate over 1.4 million additional jobs. Both aspects—value and job creation—are important for Germany's future economic strength given the structural transformations the German economy is currently experiencing.

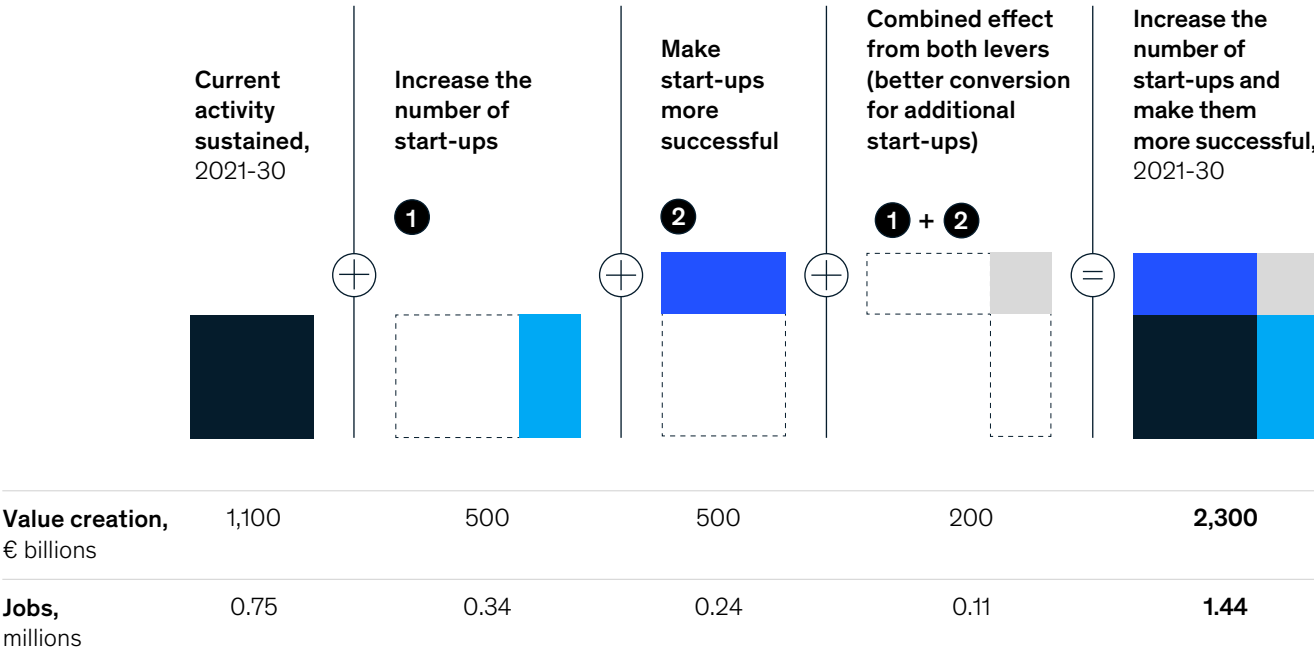
To reach these numbers, the already high dynamic of the start-up ecosystem today—with approximately 2,900 new start-ups being founded annually—needs to be accelerated. Our modeling of the effects of stakeholders' actions shows that the current level of founding activity, already contributing €1.1 trillion, can be further increased by an

additional €1.2 trillion in value creation, leading to a total of €2.3 trillion by 2030, as a result of two thrusts (Exhibit 2):

- 1 Doubling the number of start-ups founded annually in 2030 compared to today could create €500 billion in value.³
- 2 Increasing the likelihood for start-ups' success could contribute another €500 billion in value.
- 1 + 2 If both levers are combined, the enhanced success of additional start-ups founded would create an extra €200 billion in value to reach the €2.3 trillion stated above.

The same thrusts could also create a total of 1.44 million new jobs in start-ups founded between today and 2030. All numbers are summarized in Exhibit 2.

Exhibit 2
2 thrusts with high impact on value and job creation
 2021-30



Source: McKinsey

3 Doubling in 2030 will result in a 50% increase of start-ups founded between now and 2030, accounting for a ramp-up of effects.

The model assumes that not all levers can be pulled at once or will be effective immediately, leading to a ramp-up of effects between now and 2030. In turn, this means that if the end state of 2030 can be sustained for the decade thereafter, an effect even significantly above the numbers communicated in this report is conceivable.

1 Increase the number of newly founded start-ups in Germany

In theory, the entrepreneurial journey is straightforward. It begins with an innovative thinker or team feeling empowered to start a business and ends with the founders either selling their start-up or continuously managing the business profitably. The reality, however, is that for many, the entrepreneurial journey stops before it even begins. Currently, half of those surveyed see entrepreneurship as a viable professional path for themselves, and 11 percent have definite plans to start a company.⁴ However, too few people decide to found companies in the end; currently, only half of the people with definite plans, or 5 percent, actually follow through with their plans.⁵ There are two reasons for this: the lack of a clear entrepreneurial mindset and obstacles in the founding process, like the fear of financial insecurity, the lack of entrepreneurial knowledge, or complicated processes.

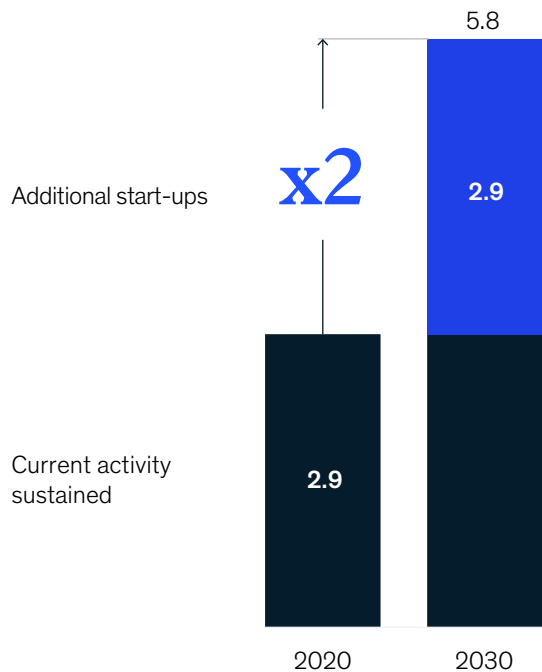
Other countries illustrate what is possible when an entrepreneurial mindset is fostered early on: if Germany could achieve the same entrepreneurial activity⁶ as the Netherlands have today, founding activity in Germany would double compared to today.

Launching a business is still too difficult and time-consuming in Germany. Local and national governments could explore ways to halve the number of tasks related to founding a company.⁷ For comparison, in just four days founders in France and Denmark⁸ are able to get sign-off on disclosures, registration, and other administrative requirements. Besides simplifying the process, regulatory consistency, particularly in the financial sector, could ease the burden on founders, nearly half of whom now cite regulatory complexity as their biggest hurdle.⁹ A simplified, digitalized bureaucracy and taxation process for companies up to a certain size

Exhibit 3

A new entrepreneurial Zeitgeist can double the number of annual start-ups founded

Annual number of start-ups founded, thousands



Source: McKinsey

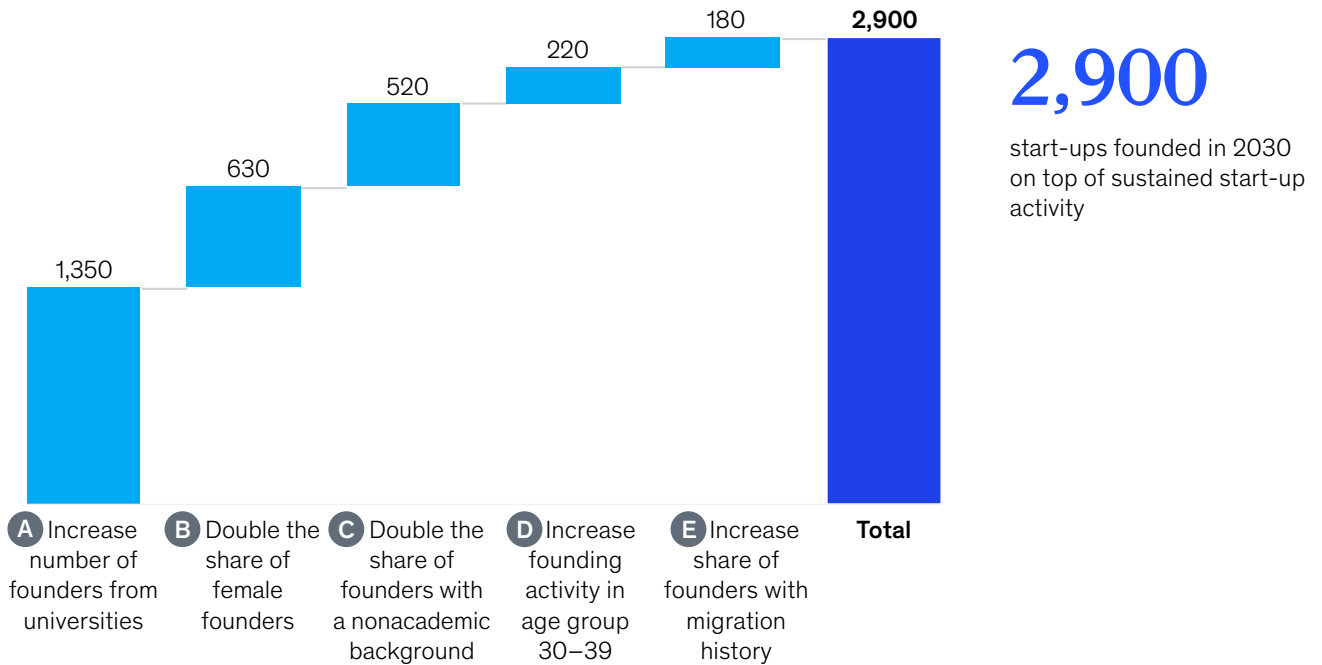
could also significantly reduce the time, effort, and costs associated with registration. Streamlining this process could enable founders to focus on what really matters.

Digging deeper, there are five specific sources for additional start-ups that could collectively double the number of start-ups being founded in the year 2030 in Germany, adding an additional 2,900 start-ups to reach a total of 5,800 start-ups founded (Exhibit 3). Taking ramp-up effects into accounts, this translates to a 50 percent increase in the total number of start-ups founded in the timeframe

4 McKinsey & Company survey, March 2021.
 5 Entrepreneurial Behaviour and Attitudes, Global Entrepreneurship Monitor, 2020/21.
 6 Relative to population size.
 7 "Das ist so typisch für Deutschland, diese Attitüde, bloß kein Risiko einzugehen," Welt Online, March 2021, <https://www.welt.de/wirtschaft/article228677947/Start-ups-Kritik-an-Justizministerium-wegen-buerokratischer-Huerden.html>.
 8 Distribution of entrepreneurs in the Netherlands in 2014 and 2019, by gender, Statista, February 2019.
 9 See footnote 7.

Sources of additional start-ups founded in 2030

Number of start-ups founded 2030



Source: McKinsey

between now and 2030, or 41,00 start-ups in that timeframe (see Exhibit 4 and Text box 1: Five sources can double the number of start-ups in 2030).

Even if future start-ups were no more successful than today's start-ups, this increase in number would lead to the envisioned additional €500 billion in value creation over the 2021 to 2030 growth trajectory.

Text Box 3

Five sources can double the number of start-ups in 2030

A Increase the number of spin-offs from universities and research institutions

Taking the lead on fostering entrepreneurial talent and concepts can contribute to all universities becoming as enterprising as today's most entrepreneurial universities.¹⁰ By taking advantage of existing strengths, universities can help facilitate the creation of 1,350 additional start-ups annually in 2030.

German universities already provide a crucial element of national entrepreneurship as they lead in basic research of numerous cutting-edge technologies. Yet up to now, many have not been as successful at laying a foundation to transfer this research into the business world (in other words, commercialize research results). Technology screening or dedicated entrepreneurship centers at universities as well as interdisciplinary skill match-

¹⁰ In our benchmark, we focus on "Volluniversitäten", that is, universities with a broad spectrum of subjects covered versus pure business schools, which can have even higher entrepreneurial activity.

ing, for example, with business schools, can significantly contribute to increased translation of the latest technological trends into new business ideas and bring these ideas to life.

Besides establishing these processes, universities can establish an entrepreneurial mindset in their curricula and the interplay between different disciplines—such as innovation hackathons. Alumni networks and guest lectures from clusters can reinforce this mindset and encourage students. Universities can also provide infrastructure, such as labs and incubators, and link those efforts directly to relevant industrial contexts.

B Double the share of female founders

Women in Germany are nearly as willing as men to build a company (48 percent).¹¹ But when it comes to actually starting a company, there is a significant gender gap, as only 16 percent of today's founders are women. The disparity is attributable to a number of obstacles outlined below. By addressing these obstacles and doubling the share of female founders, Germany could reach a level comparable to the Netherlands (36 percent female founders in 2019¹²), leading to 630 additional start-ups being founded annually.

Reaching this global goal will require supporting female entrepreneurs through structured mentoring programs and networking. With the help of experienced entrepreneurs, industry experts, investment funds, and well-established companies, female entrepreneurs may be able to overcome what they report as obstacles to entrepreneurship: lack of financial security (33 percent), uncertainty about personal skills (30 percent), and fear of failure (28 percent), as these are significantly—up to 40 percent—more prominent inhibitors for women to start a company than they are for men.¹³ An additional winning factor here is to have already established female entrepreneurs lead such programs, since female founders still lack female role models: only 31 percent of women and only 8 percent of men in Germany can name one successful female entrepreneur.¹⁴

Especially in the context of female entrepreneurship, investors may be able to help create an environment that make founding a start-up more attractive. For example, they can ensure equal representation in investment committees, or encourage founders of all genders to take parental leave or to work, to some extent, part time. Investors can also help founders of their portfolio companies create conditions that support flexible working models, keeping in mind that the employees of a start-up may be the founders of a company in the future.

Only 5.2 percent of women-led start-up teams have received €1 million in funding compared to 27.8 percent of those led by men.¹⁵ Additionally, 90 percent of all angel investors in Europe are men, hinting at a similarity bias within the funding process.¹⁶ Building public awareness of and tackling this gender bias in funding processes and promoting opportunities for women-founders to showcase their start-ups can lead to greater inclusivity and diversity of thought in entrepreneurship.

C Double the share of founders with a non-academic background

Almost half of Germans with a high school diploma express an interest in founding a company,¹⁷ yet today entrepreneurship in Germany is largely the domain of the university educated. More than 80 percent of new founders have a university education despite the fact that this group only represents around 20 percent of the population.¹⁸ While universities are a crucial springboard for start-ups, higher education does not have to be a prerequisite for entrepreneurship. By doubling the share of founders without university degrees to almost 40 percent, Germany can generate 520 additional annual start-ups being founded in 2030.

First, making entrepreneurship an essential part of secondary education could plant the seeds of what is possible professionally and give prospective founders tools that they can use immediately

11 Germany 2030: Creative Renewal, McKinsey & Company, June 2021.

12 Distribution of entrepreneurs in the Netherlands in 2014 and 2019, by gender, Statista, February 2019.

13 Representative Population Survey, commissioned by McKinsey & Company, conducted by Appinio, September 2021.

14 Advancing Female Entrepreneurship, Moving Ahead and McKinsey & Company, February 2020.

15 Female Founders Monitor, German Startups Association, 2020.

16 Advancing Female Entrepreneurship, Moving Ahead and McKinsey & Company, February 2020.

17 Germany 2030: Creative Renewal, McKinsey & Company, June 2021.

18 https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bildung-Forschung-Kultur/Bildungsstand/_inhalt.html.

after graduation. Second, a public campaign that highlights the success stories of founders who chose not to attend university could help reset expectations about what entrepreneurship actually requires. This could even include raising the prospect of a second career for those who didn't pursue their initially chosen profession for whatever reason.

D Increase the founding activity for people in their thirties

Looking at famous tech pioneers could easily give the impression that founders need to be barely out of university to become successful. But research has shown that the average age of a successful start-up founder is 45.¹⁹ Having the same share of people in their 30s and 40s found a start-ups as do in their 20s could lead to 220 additional start-ups founded annually in 2030.

Overcoming the age bias could be one of the key levers to nurture the growth of the German start-up ecosystem. Dedicated programs for experienced professionals can open the set of start-up possibilities for people in their 30s and older. This accounts for people standing on the threshold of a total new career path or those in stable jobs that might be incentivized by their employers to build a new venture within the corporate environment. A collaboration between private employers and the public sector, for example, could enable employees to take a paid leave of absence to try out their own business. The employer could guarantee the option of returning at the end of their leave, while the government could provide a base

salary as needed—thereby mitigating much of the risk of taking the leap. After all, the entire ecosystem benefits when an innovative, entrepreneurial-minded person with significant real-world professional experience has the freedom to explore a second career and, at the same time, launch what could be the next start-up success.

E Increase the number of founders with immigrant backgrounds

There is a rich history of highly talented international migrants launching start-ups, who were able to do so after they changed his or her country of usual residence, irrespective of the reason for migration or legal status. Today the migrant community or their descendants report higher interest in starting a company than their non-migrant peers (59 percent and 49 percent, respectively) but they make up only 20 percent of current founders. According to the Institute for Employment Research (IAB) at least 30 percent of Germany's residents in 2030 will have a migrant background.²⁰ This will result in a significant talent pool accessed that could lead to 180 additional start-ups in Germany founded annually in 2030.

Systematic support could include identifying potential talent pools within communities and bridging potential language barriers in the start-up registration and foundation process and closing possibly existing financing gaps and biases. Increasing the number of migrant founders could become an important driver of economic value creation.

¹⁹ Research: The Average Age of a Successful Startup Founder Is 45, Harvard Business Review, July 2018.

²⁰ Brücker: Jeder Dritte in Deutschland wird Migrationshintergrund haben, DW.com, November 2019, [online] <https://p.dw.com/p/3SaJE>

2 Fuel start-up success

Increasing the sheer number of start-ups is only one aspect of the path toward a more robust, entrepreneurship-fueled economy in Germany. Supporting their growth and successful value creation is just as critical.

Success comes in two distinct ways (Exhibit 5):

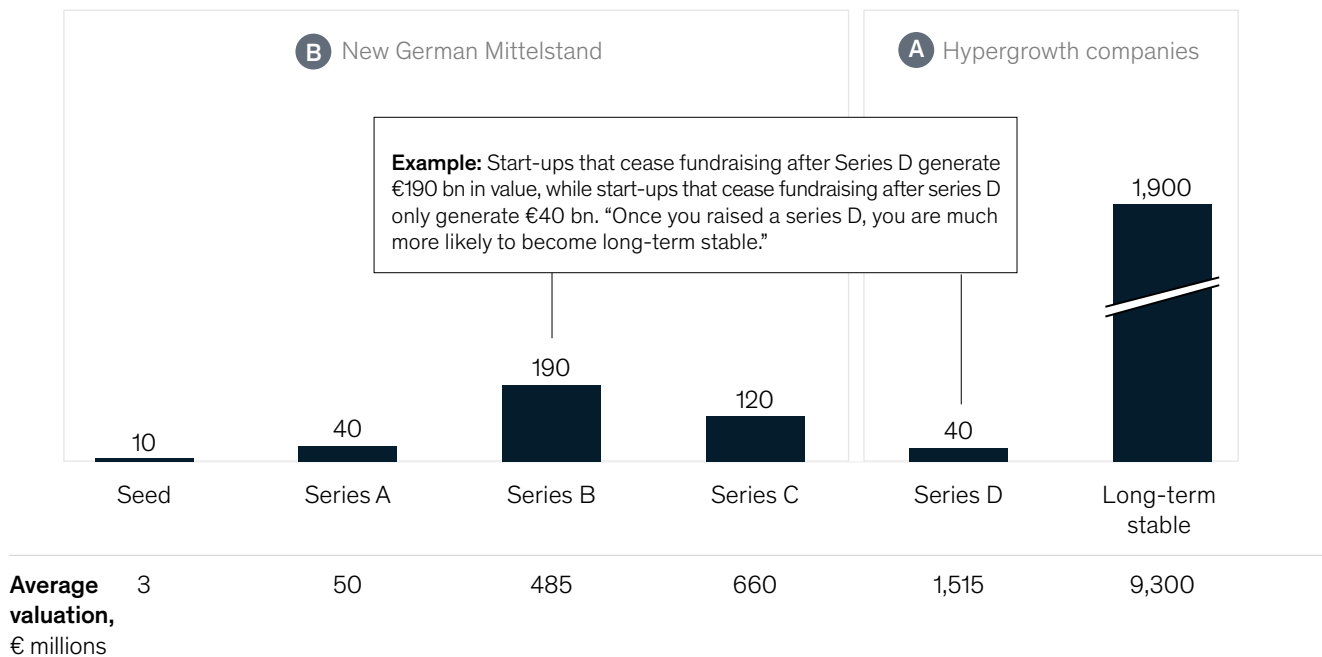
A Hypergrowth along the entrepreneurial funnel to achieve an exit valued in the billions and become stable companies in the long term. These hypergrowth companies contribute 85 percent of the overall value between today and 2030 by reaching a “long-term stable” state.

B Focusing on a sustainable path toward profitability or an early exit that would lead to significant job creation. This group, which would form the New German Mittelstand, would contribute only 15 percent of the overall value but 30 percent of the jobs created in start-ups founded between today and 2030.

Exhibit 5

2 start-up groups with different impact levels but high importance for Germany

Value created by start-ups exiting at respective stage, € billions



€2.3 tn value created by start-ups founded between today and 2030

85% of the total value creation by start-ups founded between today and 2030 will be driven by hypergrowth companies

Source: McKinsey

A Hypergrowth companies—growing global leaders of tomorrow

Hypergrowth companies move well beyond their unicorn²¹ designations, often undertaking an IPO and becoming global lighthouses in their markets. According to our analysis, nearly 85 percent of the total value contribution of start-ups in Germany by 2030 would be driven by long-term stable hypergrowth companies.

Historically, German start-ups have been less likely than their US peers to attract enough later-stage funding to enable such growth. Whereas a seed-stage German start-up has a 7 percent lower likelihood than its US peers of raising Series A funding, that gap doubles for a Series C start-up trying to raise Series D funding. Overall, a US start-up is 1.5 times more likely to become a unicorn than its German peers (Exhibit 6).²² The ratio is even higher comparing Europe and the US.²³ Together with the higher overall founding activity in the US, this leads to approximately 4.5 times more unicorns per 1,000,000 people when comparing the US to Germany.²⁴

This is especially critical because value creation mostly takes place in later funding rounds: while roughly 1 in 330 start-ups reaches a long-term stable state, 95 percent of the value creation is happening after Series C.

By increasing access to later-stage funding on par with US peers, nearly 75 additional German start-ups could become unicorns or successfully undertake an IPO among the start-ups founded between today and 2030. With contributions from other start-ups advancing further, including both hypergrowth companies and the New German Mittelstand, an additional €700 billion in value could be created, assuming founding activity is accelerated simultaneously as laid out in the previous section

To achieve this, the conditions for scaling a company in Germany will need to improve, especially in the areas of access to talent, markets for increasing a start-up's traction, and growth capital.

Facilitate start-ups' ability to secure top talent.

When seeking top talent, start-ups may be at a disadvantage compared to corporates because they simply cannot compete with large, well-established companies on salary. In a survey by the German Startups Association, 81 percent of founders said that they find hiring talent from within and outside Germany difficult or very difficult. One way to mitigate this competitive disadvantage would be for start-ups to consider augmenting lower salaries with employee stock option pools (ESOP). To help make that more feasible, Germany could explore ways to become more conducive to such compensation schemes, similar to other EU countries and regions such as the Baltics and France. Germany today taxes employee stock options at the general income tax rate instead of at the lower capital gains rate.²⁵ Likewise, the current burden of ancillary payments can sometimes make it hard for young companies to compete for talent.

Enable easier access to international markets.

Besides increased later-stage growth funding, ambitious German start-ups could greatly benefit from building the traction required to secure follow-on funding. One challenge here is the limited size of the German market: While it may be possible to build a sufficiently critical mass of customers to scale a B2B business just within Germany, that is much harder to do in the German B2C market, with 65 million²⁶ potential customers compared to 210 million²⁷ in the US. As a result, many German start-ups may want to consider internationalizing earlier than their US peers. To support this, the EU could take steps to simplify access to international markets, including on such issues as cross-border taxation as well as uniform regulations for specific industries such as banking and insurance.

Provide growth capital from within the German ecosystem.

Simply launching new German venture capital growth funds is not enough. It is important that the required growth capital comes from within the German and European ecosystem for two reasons: first, it would be easier to approach investors familiar with the home market of these start-ups, particularly in later funding rounds. Second, these domestic investors would be more likely to reinvest exit proceeds within Germany's ecosystem.

21 A pre-IPO start-up with a valuation above €1 billion is referred to as a unicorn.

22 McKinsey & Company analysis based on a sample of start-ups in Germany and the US.

23 Europe's innovation wunderkinds: The rising B2B start-up ecosystem, McKinsey & Company, April 2021.

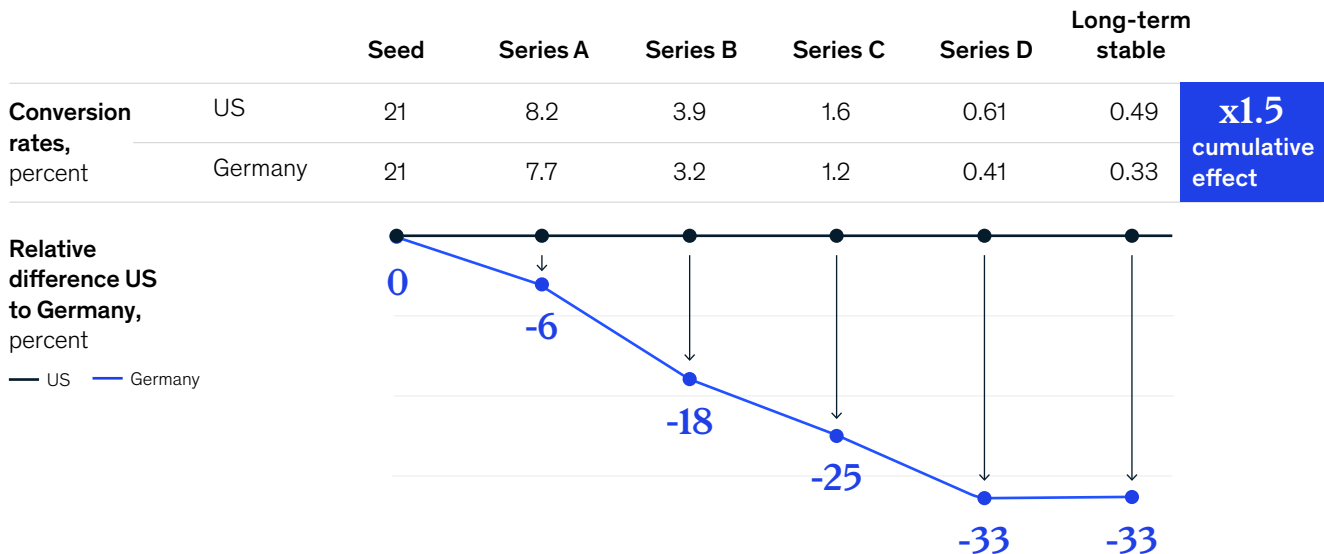
24 Germany 2030: Creative Renewal, McKinsey & Company, June 2021

25 Die neuen Regeln für die Mitarbeiterbeteiligung enttäuschen die Start-up-Branche, Handelsblatt, July 2021.

26 Statistics on the population in Germany, Statista, July 2021.

27 Statistics on the US, Statista, September 2021.

Later funding rounds are critical for value capturing



1 in 330 of the start-ups founded currently reaches a long-term stable state—in 2030, the ratio will increase to 1:200

95% of the value creation happens after Series C

Source: McKinsey

“By 2030, Germany will need three to five growth investors from within the ecosystem each managing at least one billion to address the funding needs in later-stage investment rounds”

Hendrik Brandis, co-founder and managing partner at Earlybird Venture Capital

Yet the country’s pension funds account for just 8 percent of venture capital funds’ invested capital, compared with 20 percent in the US.²⁸ Current German regulation restricts similar institutions from investing in the start-up ecosystem. This would be a significant shift, but Germany is well-positioned to make it happen. Germany has one of the highest accumulations of private wealth (ranked 18th globally).²⁹

In addition to private investors, public growth funds already help fill the void in other parts of the world. Their role is especially relevant for high-risk investments that could have a significant societal impact but will only generate returns far off in the future. In addition to significant capital investment, such a fund requires, professional and performance-focused management that can act with the same flexibility, professionalism, and speed as in the private sector. One role model for such a public

²⁸ Europe’s start-up ecosystem: Heating up, but still facing challenges, McKinsey & Company, October 2020.

²⁹ Ranking by share of adults with over \$1 million in wealth, Credit Suisse Research Institute’s “Global Wealth Databook,” Table 3–1, published 2021.

growth fund is Israel's Yozma Group, which played a vital role in creating Israel's reputation as one of the leading global start-up hubs. It successfully invested in more than 40 tech start-ups, and its initiative led to more than 30 foreign-based venture capital firms to establish themselves in Israel.³⁰ The government also directly co-invests alongside private investors in a highly diverse, performance-oriented, and professionally managed portfolio of start-ups.

Undertake more IPOs in Germany. Besides scaling, the exit of a start-up is the most critical phase in its value creation journey. Currently, many German start-ups conduct their IPOs outside Germany,³¹ primarily because the process is faster and easier, as well as often more remunerative. To keep value within its start-up ecosystem, Germany can seek to improve efficiency of going public to retain more exits.

B New German Mittelstand—building on the tradition of Germany's economic success

Scaling a company through venture capital or an IPO is not the ultimate goal for every founder. Start-ups that evolve into members of the New German Mittelstand often stop raising money after a few rounds yet still find success; take the example of

think-cell, a hidden SaaS champion that was recently acquired for more than €1 billion with barely any venture capital funding.³²

These companies may only drive some 15 percent of the value created measured at their last funding round by start-ups founded between today and 2030, but they will contribute twice as many jobs relative to their market capitalization (around 30 percent, Exhibit 7).³³

This example of think-cell also highlights that the value of companies in the New German Mittelstand is likely higher than what we can measure through looking at its last funding round.

Their focus on profitability earlier in the entrepreneurial funnel means that the jobs they create will tend to be more stable than their hypergrowth peers'. Also, start-ups comprising the new German Mittelstand are typically not as concentrated in urban hubs and contribute jobs to more rural areas, where they are even more embedded in the ecosystem of regional players. As in the traditional Mittelstand, these start-ups are usually founder-run with a regional or national shareholder structure, ensuring that returns remain within the ecosystem.

Exhibit 7

2 main pillars of Germany's ecosystem in 2030: Hypergrowth companies and New German Mittelstand

	Hypergrowth companies	New German Mittelstand	Total
Value, € billions	1,920 (85%)	350 (15%)	2,270
Jobs, thousands	1,020 (70%)	420 (30%)	1,440

Source: McKinsey

30 Yozma, OECD (2003): Venture Capital Policy Review: Israel.

31 More IPOs made in Germany (in German), Deutsches Aktieninstitut, July 2021, <https://www.dai.de/en/blog/article/2021/07/19/mehr-boersengaenge-made-in-germany/>.

32 Das ultraprofitable Start-up der Unbekannten, Manager Magazin Online, July 2021, <https://www.manager-magazin.de/unternehmen/tech/think-cell-arno-schoedl-und-markus-hannebauer-kassieren-in-aller-still-a9a5dc176-0002-0001-0000-000178442777>.

33 These numbers are estimated at the last publicly reported funding round. It is likely that these numbers significantly underestimate the actual impact of the New German Mittelstand as many hidden champions will develop significantly beyond that but with no reported valuation available, as the abovementioned example of think-cell illustrates.

Public grants and scholarships are especially relevant to the development of the new German Mittelstand. Founders aiming to build these medium-sized but highly profitable companies often face difficulties raising money from typical growth investors. Many of these start-ups will probably be bootstrapped without any external funding (Text Box 4). For some professionals thinking about a second career as entrepreneurs, the prospect of having to build a start-up that way stops them from taking the leap.

Building a profitable company can be learned—the role of educational institutions

Since start-ups comprising the new German Mittelstand frequently have less funding than their hyper-growth peers, they typically have to focus much earlier on profitability. To prepare to take on that responsibility means that the next generation of entrepreneurs could have their first experience with the challenges of building a business much earlier, even in school. Universities could provide

introductory knowledge on certain financial and entrepreneurial matters regardless of a student's field of study or planned profession, which could help equip future founders with the skills needed to avoid mistakes early on.

The ecosystem of ecosystems helps leverage opportunities for exit

For start-ups comprising the new German Mittelstand, exits within the ecosystem of ecosystems are especially important and can be supported by improving the way established players, both large corporations and SMEs, and start-ups collaborate. Such collaboration can begin simply as a sales partnership or customer-supplier relationship, which can also be a stepping-stone for an acquisition of a start-up. To achieve this kind of collaboration, established enterprises may want to be more open-minded about working with start-ups at an early stage, focusing on the potential rewards rather than risks.

Text Box 4

The fate of start-ups when funding ends

Big funding attracts big attention, but valuable information is lost when an end to funding turns the spotlight away from a start-up. To explore the New German Mittelstand and to understand more about the fate of start-ups that do not pursue subsequent funding rounds, we conducted in-depth analyses of around 150 randomly selected companies that stopped raising money between their seed and Series C funding round. Here are the findings:

45 percent of post-funding B2B start-ups are still succeeding. Their disappearance from funding circles keeps them out of media headlines, but many of them comprise the new German Mittel-

stand. B2B start-ups are more likely to become (or be close to becoming) profitable (38 percent) or be acquired by established corporations or private equity.

38 percent of post-funding B2C start-ups are successful. B2C start-ups are less likely than their B2B peers to become profitable or close to it (18 percent) and more likely to be acquired by other companies or private equity firms.

55 percent of post-funding start-ups ceased to exist. Just over half of start-ups that did not complete a funding round beyond Series C ended up closing their doors.

Call to action: Sparking Germany's New Entrepreneurship Zeitgeist

There is significant economic potential—both value and job creation—in the German start-up ecosystem. To realize this value, all stakeholders—not just the start-ups and founders—should seriously consider aligning their contributions and actions accordingly. But that duty cuts both ways. While it may be necessary for all of society to work together to realize the value, founders and start-up executives may also need to consciously take on their rising responsibility, not only toward their investors, but also toward their employees, the environment, and the surrounding society, becoming role models in the process. Achieving this goal also depends on Germany's ability to build its start-up ecosystem in a way that is wholly aligned with the country's strengths, traditions, and values.

Equipped with the prerequisite skills learned in school and convinced of their business idea, prospective **founders** should feel confident and enabled to take advantage of every opportunity to develop their entrepreneurial endeavor, for example, in their secondary school curriculum or university coursework.

By sharing the lessons they have learned—including the challenges and trade-offs along the way—**experienced founders** can serve as powerful role models for the next generation of founders.

Both current and future founders, of course, can only do so much on their own. They also rely on other key stakeholders, including investors, corporations, and SMEs, as well as educational and public institutions, to help establish a framework and infrastructure for early-stage and growth support.

The role of **established players**, be it **corporations** or **SMEs**, is twofold. First, they can learn from start-ups' fast iteration and decision making in order to promote innovation and entrepreneurship internally, fostering more openness on agile processes and even enabling spin-off companies. They can also collaborate with start-ups in numerous ways, as customers, as partners cross-selling complementary products, and as evangelists promoting joint value creation. To increase chances of success, established organizations need to bring their

“Strategic partnerships with start-ups are Chefsache [top management topic].”

Miriam Wohlfarth, founder of Ratepay and Banxware

A-teams and dedicate time and resources to make the relationship personal.³⁴

By considering venture capital as an attractive asset class and funding IP-heavy innovations, **institutional investors** can boost the resources for entrepreneurship in Germany. This could lead to an increase in the amount of professionally and actively managed growth capital as well as the creation of specific funds for German growth topics (for example, green tech), which should better position Germany to lead global innovation in these areas.

Besides their investment role, **venture capitalists** have a strategic interest in not only helping with funding and follow-on funding but also supporting their start-ups in a variety of other possible ways; by including perspectives on balancing entrepreneurship and family life, calling for and supporting diversity within the founding structure, helping start-ups work toward fulfilling criteria of environmental sustainability, and setting a good example for their own company. Moreover, they may want to become aware of the economic implications of the origin of their investors (LPs) as well as guidance and steering they give their portfolio companies' management.

Educational institutions play a vital role in shifting the mindset of future generations toward entrepreneurship. Secondary schools, universities, and other educational institutions can encourage entrepreneurship by inviting founders to speak about their professional journeys. At career events for students, they can present start-ups as employers that are as equally attractive as established organizations. These institutions can not only equip students with the fundamentals of entrepreneurship, but they can introduce practical components that allow students to apply their knowledge in the real world while completing their studies and offer guidance when former students are ready to launch a business. Finally, some institutions may be in a position to support the commercialization of research via entrepreneurship centers that could serve as a joint educational/private-sector platform to develop ideas

while gaining access to potential customers, partners, and investors.

Public institutions can create conditions that facilitate entrepreneurial success. In start-ups' early stages, local, national, and EU government agencies could work to remove the barriers to entry by reducing bureaucracy and risk for founders. In later stages, governments could create more fertile ground for new businesses to grow by changing regulations, policies, and customs that prevent public institutions from buying products and services from start-ups that have not yet met the requirements for doing business with government.

Economic development is an integral part of and basis for social peace, and **society** as a whole has a role to play in ensuring that the start-up ecosystem is successful in the long term and recognize start-ups making traction. The broader society can also expect start-ups to keep the social market economy top of mind, thereby bringing to life the idea of the self-reinforcing flywheel effect.

In summary, Germany's community of start-ups has a good chance to be much more valuable by 2030 and the continuously growing ecosystem may well have gained a new economic and societal relevance, and thus, responsibility. Focusing on this new German entrepreneurship Zeitgeist in 2030 makes evident that it is on all of society to secure economic health and societal well-being.

34 You can't buy love: Reimagining corporate-start-up partnerships in the DACH region, McKinsey & Company, September 2021.

Technical appendix

This appendix provides additional details about the main sources of data and methodologies and explains terms used in this paper.

About the research

The numbers presented in this report are based on a quantitative model developed to predict the impact of the German start-up ecosystem by 2030. In addition, we conducted more than 20 qualitative interviews with key contributors and decision makers in the start-up ecosystem in August and September 2021 to derive concrete recommendations of how to achieve the goal of making the German start-up ecosystem more relevant and to shape the target perspective for that ecosystem by 2030. A representative online poll of more than 1,000 adults from Germany (aged 16 to 65) gave insights into the perception of entrepreneurship in Germany.

The advancement of a start-up can be measured as the stage of funding the start-up has received. With each funding round, both the market capitalization and typically also the size of a start-up increases. Not all companies make it all the way through the funding funnel; some start-ups are either forced or decide to not fund further. For the companies dropping out of the funnel, three possibilities remain: a company can either cease operations altogether (for example, due to bankruptcy), become successful and continue doing business without any additional external funding, or be acquired.

The value of a company is, simplified, considered equal to the valuation of the last funding round. Only successful start-ups are considered for their value creation. Companies are considered successful when they reach hypergrowth and undertake an IPO, are acquired, or become profitable, while the value of acquired start-ups is corrected for potential double counting.

The job impact considers all jobs created in any company, regardless of its fate. The reason is that even if a company is terminated, jobs were created and former employees can move on to work at another company—either bringing innovation to corporates or joining another start-up within the ecosystem.

To forecast the future development of the German start-up ecosystem, two main drivers were considered: (1) an increase in the number of start-ups founded and (2) increased success of start-ups.

Input for the model is based on Crunchbase data sources:

Start-ups. The key characteristics and success of more than 130,000 companies founded from 2010 to 2020 in Europe and the US, out of which approximately 77,900 are B2B start-ups and approximately 56,600 are B2C start-ups.

Start-up success. A random sample of approximately 150 companies with detailed information on midsize exits, profitability, as well as bankruptcies of start-ups that do not continue fundraising after a seed to Series D round. Here we relied on public databases and press research.

Funding rounds. The timing and valuations of more than 85,000 recorded funding rounds, out of which approximately 70,000 specified the funding stage—for example, seed; Series A, B, C, D; and later stage.

In reality, the impact of the start-up ecosystem is likely to exceed the modeled impact as a number of simplifications in the model were made that tend to underestimate the resulting impact: first, other than in our model where value growth is only measured by funding rounds, many companies will still see a significant increase in value even after the end of venture capital funding through, for example, organic growth. Second, only start-ups with external equity funding were considered. This left out a number of successful but bootstrapped or debt-financed start-ups. Thirdly, we neglect effects of inflation and continuous productivity increases.

36 Representative Population Survey, commissioned by McKinsey & Company, conducted by Appinio, September 2021.

Glossary of terms

Start-ups: Start-ups are young companies that have already received one round of funding from professional investors and that use innovative technology or business models to satisfy a previously unmet customer need; they generally have high growth ambitions and are building (or plan to build) a scalable product or service.

Unicorns: Start-up companies with an estimated market capitalization above €1 billion before an exit or IPO.

Hypergrowth companies: The term is used in this report to describe all companies scaling beyond the market capitalization of €1 billion. This is typically the case for all companies reaching a series D funding round.

Mittelstand: Alongside several industrial giants, Germany is home to a far larger number of well-established medium-sized enterprises that span industries and have frequently proved to be globally competitive. These businesses comprise the country's Mittelstand and have played a significant role in national economic growth over the past several decades.

New German Mittelstand: The increasing number of start-ups that have grown sustainably, become reliable employers, and contributed significant value to the German economy but do not aim for hypergrowth or fast exits represent the growing New German Mittelstand.

Cluster (local ecosystem): A cluster is a local ecosystem of relevant start-up players and stakeholders within a particular region. It comprises start-ups themselves as well as large corporations, SMEs,

universities and other research and academic institutions, and public agencies that facilitate entrepreneurship. Based on the specific cultural and economic development of a region over time, each cluster tends to have a unique technical or industry orientation.

Ecosystem of ecosystems: Clusters are not entirely siloed systems; instead, their individual players are interconnected across the country and mutually reinforce each other's growth. Together they create a countrywide ecosystem of ecosystems. This interplay between regional clusters can link a player of one region-based cluster (for example, a founder) to a player in another (for example, an R&D lab) in ways that support the aims of the individual players and build the capacity of each cluster while supporting overall economic growth.

Job: For the purposes of this report, a job is a long-term paid position of regular employment. We are explicitly excluding gigs and freelance or contractor jobs from this definition.

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