

Munich Startup Employment 2023

March 2023



Foreword

Startups are an important component of a successful economy. They are essential for the rapid translation of cutting-edge research into applications and solutions, keep young and well-trained specialists in the region, and create new jobs.

That is why Munich Startup, together with its partners and other local players, is dedicated to making Munich and the region the first choice for high-growth startups in Europe. Since 2015, we have been the first virtual contact point for technology-oriented, innovative startups in Munich and the surrounding area. We've also increased transparency within the startup scene and promoted networking between founders and potential partners, investors, and mentors.

With this report, we show how important startups have become for the job market in Munich. Our analysis highlights the strengths of the Munich startup scene, how a startup ecosystem is self-reinforcing, and how a new generation of founders can emerge from employees of successful startups.

> Gabriele Böhmer Head of Munich Startup



Why this report?

This is the first edition of Munich startup employment report. It is designed to bring transparency to the state of startup employment in Munich. The findings of this report are here to help measure the size of the startup & innovation ecosystem from the standpoint of (local) value creation, as well as to identify the needs of its participant to take the city's startup sector to the next level.

The analyses in this report cover a wide range of metrics to help readers navigate the city's startup ecosystem, including where most jobs are created across the startup lifecycle, the ecosystem's biggest sectors and fastest growing niches, as well as job creation in VC-backed startups and beyond.

A few words on our methodology.

This edition covers startup employment at Munich-based startups, on the basis of data collected in 2022. The majority of the data presented in this report is made available by Munich Startup on the Startup Map, which is powered by Dealroom in partnership with Munich Startups.

This report focuses on local jobs, i.e. jobs at local (homegrown) startups, based in the Munich Metropolitan Area. Throughout the report, "startup" is used to commonly refer to all subtypes of eligible companies, including startups, scaleups and grownups. Foreign startups and tech companies with a presence in Munich, and startups founded in Munich but relocated elsewhere are not included. **Please refer the methodology section at the end of this report for more details on our approach.** 66

The flywheel is set in motion and has gained an incredible momentum of its own. Munich startups are a real driving force for jobs."

The report impressively shows the considerable influence of startups on the Munich economy. It is remarkable how the ecosystem mutually fertilizes and supports each other."

Clemens Baumgärtner Head of the Munich Department of Labor and Economic Development





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Co-authors:



Carla Napoleão Innovation Analyst at **Dealroom.co**



Louis Geoffroy-Terryn Ecosystem Research Lead at Dealroom.co



Maximilian Feigl Editor at Munich Startup



Alex Hamilton Innovation Analyst at Dealroom.co

With contributions from:



Andreea Chirilov Talent Acquisition Team Lead at Konux



Jerome Geyer-Klingenberg Head of Academic Alliance at Celonis Arzu Celik-Seidelmann Head of Talent Acquisition & Employer Branding at IDnow



What you need to know.

Munich's startup ecosystem creates over 41K jobs in Munich, with younger companies creating over half of all jobs.

Munich's homegrown startups, scaleups and grownups generate over 96K jobs globally: 41K jobs in Munich, an additional 12K jobs created in the rest of Germany, and another 43K jobs abroad.

Job creation is driven by younger companies: 1K+ startups founded in Munich since 2009 account for over half of local startup jobs.

Munich has strong networks capable of fostering the next generation of entrepreneurial talent.

Startups that were founded by former unicorn employees currently generate over 7.6K jobs globally, of which 3.3K are based in Munich.

Das Münchner Startup-Ecosystem schafft über 41.000 Arbeitsplätze in München. Die Hälfte dieser Arbeitsplätze entfallen auf junge Unternehmen.

Münchener Startups, Scaleups und Grownups schaffen weltweit über 96.000 Arbeitsplätze: 41.000 Jobs in München, weitere 12.000 Jobs im übrigen Deutschland und 43.000 Jobs weltweit.

Junge Unternehmen treiben die Entstehung von Arbeitsplätzen voran. Über 1.000 Unternehmen, die seit 2009 in München gegründet wurden, stellen mehr als 50% aller lokalen Arbeitsplätze.

München verfügt über starke Netzwerke, die die nächste Generation von Unternehmertalenten fördern können.

Startups, die von ehemaligen Unicorn-Mitarbeitern gegründet wurden, schaffen derzeit weltweit mehr als 7.600 Arbeitsplätze, 3.300 davon in München.

Impact and Deep Tech startups are creating a growing number of jobs.

There's a new generation of startups targeting deep tech and impact, which are creating a growing number of jobs.

84 impact startups based in Munich employ 10% of all startup jobs in the city.

Deep Tech startups create 14.6K jobs, or 30% of the total . Beyond old glories, like Infineon, a new generation of deep tech successes is emerging.

Impact- und Deep-Tech-Startups schaffen eine wachsende Anzahl von (Startups-)Arbeitsplätzen.

Wachstumsbranchen, vor allem die neue Generation von Startups, die sich auf Deep Tech und Impact konzentrieren, schaffen zunehmend mehr Arbeitsplätze.

84 Impact-Startups mit Sitz in München beschäftigen 10% der gesamten Startup-Belegschaft in der Stadt.

Deep-Tech-Startups hingegen beschäftigen 14.600 Mitarbeiter (oder 30% der gesamten Startup-Belegschaft). Neben altbekannten Unternehmen wie Infineon Technologies zeichnet sich eine neue Generation von Deep-Tech-Erfolgen ab.

Visit the Munich startup database to explore the city's tech ecosystem in greater depth.

The first open digital database covering startups, scaleups and funding in the Munich Area.

The platform catalogues the collective regional tech ecosystem covering areas such as: newly founded and scaling companies, funding, investors, accelerators, and job opportunities.





Visit the platform



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1 Startup Jobs in Munich



Jobs split by company size.

Jobs in Munich by startup size

At first glance, Munich startup employment seems more or less equally distributed between three types of companies – startups (2 to 50 employees), scaleups (51 to 500 employees) and grownups (500+ employees).

Looking at the bigger picture, companies with fewer than 500 employ the most people.

In grown ups segment, Infineon Technologies –the biggest employer in Munich's startup ecosystem – generates 15% of all jobs and 44% of all grown up jobs. When excluding Infineon Technologies from the analysis, only 19% of all startup jobs are created by grownups.

Bigger companies tend to be older and tend to employ more people.

Grownups are on average nearly 10 years older than startup.





Startup jobs by cohorts.



Local jobs by founding year of Munich startups

Younger companies are the biggest employers.

We observed that companies founded after 2009 are the biggest job providers in Munich, contributing over 50% of the total of startup jobs. The 1K+ companies currently generates 23.5K jobs in Munich.

There are fewer older companies than younger startups.

80% of all job-creating companies were founded after 2009, and only 266 active startups were founded before 2009 (or 20%).

Notably, Infineon Technologies, Munich's largest startup employer, and one of the biggest semiconductor manufacturers globally, was founded when the semiconductor operations of the former parent company Siemens AG spun off.

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Startups founded since 2009 account for over half of all startup jobs in Munich.

The 1K+ homegrown startups founded since 2009 provide the biggest share of employment, with over 23.5K local jobs generated from this group of companies.

This group of companies creates jobs across different industries, but nearly half of all jobs are generated in a few industries, such as Transportation, Health and Enterprise Software. This group of companies also leans more towards impact focus, concentrating over 80% of all impact jobs in Munich.

23K+ Jobs at startups founded since 2009	13 Median team size (global headcount)	3.3K Impact jobs				
Top 5 Industries by number of local jobs By companies founded since 2009						
Transportation		2.9k				
Health	2.2k					
Enterprise Software	2.2k					
Fintech	1.9k					
Energy	1.7k					

Promising startups founded since 2009 to watch out for using **Dealroom SIGNAL**

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Startups and job creation in the context of Munich's economy.

Although startups only account for only a fraction of total jobs, they are job-growth engines. In the end of 2022, Munich's tech industry employed 41K people locally, accounting for roughly 4% of the total workforce in the city¹

Munich ranks amongst the top German ecosystems in terms of startup density and funding per employee, further proving the scale and impact of Munich's ecosystem in the national context.

Berlin 693 Munich 402 Hamburg 363

269

159

133

Cologne

Frankfurt

Stuttgart

Startup density per 1M inhabitants²

VC Funding per employee (2023)³



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 Source: Bundesagentur f
ür Arbeit (Federal Employment Agency, BA. Data: 939,542 people were employed in Munich as of end of 2022.

Page / 11 2. Source: Dealroom.co. Number of verified companies founded after 1990 as of March 2023. 3. Source: Dealroom.co. VC funding raised during 2022 (full year).

2 Job creation, value and VC investment





Munich startups raised €2.4B in 2022, down 50% from 2021, but 80% higher than in 2020. Late-stage funding experienced the biggest pullback.



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VC funding fuels job creation.

There's a positive strong correlation between VC funding and the job growth trajectory over time. On average, Series A+ startups scale 3.4x faster than startups in Seed stage.



Average team size (local) by total VC funding in Munich, 2022

VC-backed or not: very different growth trajectories



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In Munich, over half of all startup jobs are created by non venture backed startups.



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While enterprise valuation is concentrated at the top of the pyramid, nearly half of all jobs are created by smaller companies.



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Homegrown unicorns are responsible for a quarter of jobs in their respective sectors on average.



Local startup jobs in sectors with at least one Unicorn*

Source: Dealroom.co. *Analysis excludes overlap between industries.

Page / 17 A unicorn is defined as a rapidly scaling company (and tech enabled) that has reached a \$1 billion valuation, on the basis of a funding round (unrealised), acquisition or IPO (realised).



3 Jobs by Industry



Health, Transportation and Energy startups provide the most jobs, while eCommerce startups have the largest teams.

In Munich, **Health** is the top industry by number of startups and number of local jobs. MorphoSys, ITM AG, and Ottonova are amongst the biggest employers in Health.

Zooming in at each sector, **Health**, **Transportation** and **Energy** are the largest employers in the Munich ecosystem, comprising over ¼ of the total local jobs (11K jobs). While eCommerce startups have the largest teams on average.

Although **Semiconductors**, **Travel** and **Jobs Recruitment** are amongst the top industries by number of local jobs, their biggest employer concentrate over 50% of the total jobs in the industry. In the Semiconductor case, Infineon Technologies comprises 90% of the total of jobs created by semiconductor startups.



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Munich-based impact startups provide 3.9K local jobs, or 10% of all startup workforce.

1 in every 10 startup employees in Munich works at an impact startup*



Largest Munich impact startup employers

Company	Impact topic	Munich-based Employees in 2022*
🔸 เเเบก	Aviation & Aerospace	650+
FLiX	Mobility	400+
) ClimatePartner	Carbon tracking & offset	300+
SONO	Electric Mobility	250+
THE MOBILITY HOUSE	Electric Mobility	150+
tado°	Green Buildings	100+
Blickfeld LiDAR / scan your world	Autonomous Mobility	100+
Hydrogenious 👓	Hydrogen energy	100+
torqeedo	Electric Mobility	90+
ΙΟΠΙΤΥ	Electric Mobility	90+

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Dataset: 84 impact companies. 3.9K jobs in Munich Metropolitan Area. Period: 2022 (full year). Source: Dealroom.co. *To be an impact company means having sustainable development at the core of the business's values. To learn more about Dealroom's Impact methodology consult the <u>knowledge page</u>.



Impact startups are a major employer in Munich – placed third overall only behind Semiconductors and Health.



Startup jobs by industry, 2022*



Energy is by far the most impact intense industry, followed by Transportation and Food.





Job vacancies at impact startups make up 9% of all job openings in Munich.



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There are currently 14.6K+ jobs at deep tech companies, which make up 30% of total startup jobs in Munich.

In Munich, Deep Tech startups generate 14.6K jobs. The sector is driven largely by Infineon Technologies. Alone the grownup represents 42% of jobs in Deep Tech. Excluding Infineon Technologies, Deep Tech still is a major employer in Munich, representing 20% of all jobs in the city. A new generation of deep tech successes is emerging. Startups like **Celonis** and **Lilium**, are rapidly growing their workforce.

> 3 in every 10 startup employees in Munich work at a deep tech startup.



Largest deep tech startups employers



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4 Skills



In which areas do you find it particularly difficult to fill vacancies?

"The biggest challenge is to find the right balance when hiring for the engineering department.

Software engineers and DevOps Engineers are in high demand. There is a limited pool of experienced developers, intense competition for talent, and high salaries. This is especially challenging as we are looking for top-notch people combining software with cloud computing experience, who can bring new things to the table, challenge and think outside the box."



Andreea Chirilov Talent Acquisition Team Lead at Konux

» Read the full interview





A quarter of all vacancies opened in 2022 were tech-intensive, while the majority of roles were non-technical positions.



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What other strategies have you developed to address the skilled labour shortage?

"We are currently evaluating an add-on which, uses predictive analytics to adapt the communication to the personality type of the recipient in order to achieve a better response rate.

We are open to trying out new technologies which help us increase our efficiency. In addition, we recently learned more about marketing techniques in recruiting as part of a workshop to better reach and convince our target group with authentic stories."



Arzu Celik-Seidelmann Head of Talent Acquisition & Employer Branding at IDnow

» Read the full interview





Munich's flywheel is in motion, with talent from its unicorns now founding the next generation of entrepreneurial talent.

Munich unicorn factories



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Munich corporates are a fertile ground to train entrepreneurial talent.

Corporation	Number of Munich-based founders [*]	Selected startups
SIEMENS	70+	Cagile Robots O avi medical 나 더 꾸 더
BMW GROUP	15+	ບດວ re INVENT 🎆 ດບຕາເ
Berger	15+	eco. mie hakuna. insureQ
Allianz 🕕	5+	KEWAZO
OSRAM	5+	🍥 presize.ai 📿 voltstorage 🛞 XO Life
(C) KNORR-BREMSE	5+	XALERIS 📆 Zen ML
🗯 BRAINLAB	5+	CEREGATE LARALAB

Startups founded by founders with previous work experience in a homegrown corporate <u>» view online</u>

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	incuda GmbH 🖷				



Munich is an attractive hub for foreign companies, with several of notable companies tapping into the local talent pool.



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Universities are a breeding ground for startup talent, in Munich and in Europe.

European Universities by

Alumni Founded Unicorns

Munich-based universities by Number of Munich-based Founders

NAME	NUMBER OF ALUMNI FOUNDERS	SELECTED STARTUPS	NAME	NUMBER OF EUROPEAN UNICORNS	SELECTED UNICORNS
Technical University Munich (TUM)	250+	<u>Pansonio'</u> ♣ LILIUM NAVVIS	Technical University Munich (TUM)	9	RAZOR GROUP
Ludwig-Maximilians-Universität München (LMU)	40+	ALPHAPET	Copenhagen Business School (CBS)	9	рчео Boozt
Munich Business School	10+	∉<u>K</u>ELLER SPORTS	London Business School	9	@ wayflyer
Munich University of Applied Sciences (HM)	10+	OCELL Tutor	Eidgenössische Technische Hochschule Zürich (ETH Zurich)	8	GoStudent
Munich University of the Federal Armed Forces (UniBw M)	5+	STABL	IE Business School	7	COMPASSION Resigning Mercal Health Pethwaye

Discover all Munich universities' alumni companies » view online

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€	Machines with V	SimScale	Celonis		GoCaspr	Wegatech	BE S
₿	Molabo	AR-Experts	Beamler	NavVis	FromAtoB	RideBee	VKI
*	RefresherBoxx	Naventik	Weeve (formerly	ONDEWO	FAZUA	Remerge	
£8 	Climedo Health	IDEAFOX	MotionMiners	HUH SCHOOL	Fyber	BIOStartr	50
	Bliq	KIPROTECT	Endiio	Wermon	TrustYou	Threads Styli	ng
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Munich's universities are fostering the next generation of startup talent.

"A significant share of our employees in Munich come from abroad. Many of them joined Celonis after studying at one of the universities in Munich.

Celonis cooperates with around 700 educational institutions worldwide (especially universities) as part of its Academic Alliance. [...] In Munich alone, around 200 Celonis employees have a TUM (Technical University Munich) background."



Jerome Geyer-Klingenberg Head of Academic Alliance at Celonis



On average, Munich startups with at least one female founder raise significantly less funding, and have much smaller teams.





Startups with gender-diverse founding teams create over twice as many jobs per € raised, as startups founded by all-male teams.





5 Methodology



Companies in this report.



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We aggregated startups from Munich & its surroundings to provide the full picture of the local tech ecosystem.

The Munich Metropolitan region (Metropolregion München) is used as the default geographical scope of this report. It includes the <u>City of Munich</u> and its surroundings ("Munich Area"), incl. <u>Garching</u> and its research campus, to <u>Planegg</u>' biotech cluster. This area is comprehensively mapped on the Munich Startup Database, which is powered by Dealroom.

In addition, the Metro area includes startups based out of some of Bavaria's most innovative hubs, which are within the immediate vicinity of Munich such as Augsburg, Ingolstadt, Landshut and Rosenheim, and therefore considered as part of the broader innovation ecosystem of the city.

In doing so, the report truly depicts the size of Munich's startup and innovation ecosystem.

It also allows a fair comparison between Munich and leading ecosystems, from Berlin to Amsterdam, to Melbourne.

Page / 38 Note: companies founded in the Munich Metropolitan Region, which relocated out of the region, were excluded from the analysis.



Companies in this report.





Methodology & definitions.

What is a startup?

"A startup is a company designed to grow fast" wrote <u>Paul Graham</u>, the legendary startup builder, investor and co-founder of Y Combinator. At Dealroom, we've found this the most useful explanation of the term startup.

> What is a startup? By Dealroom.co

What about tech?

Indeed, most startups are tech enabled. But so are lots of companies. Many traditional companies work more deeply on technology than the majority of startups. The real common denominator is not tech, but the intention to scale very rapidly.

This report considers all startups founded since 1990.

This is in contrast to the <u>Munich Startup Map</u>, which only considers recent startups. We often get asked why we include older cohorts. The purpose of a startup is to grow fast and to become very big. This is what makes startups relevant to the economy. Getting big often takes two decades (although sometimes shorter). Not including these companies – or late-stage startups – would narrow the scope of this report in a way that would defeat its purpose.

One of the strongest indicators of the maturity of a startup ecosystem is seen through its ability to recycle talent, generating a **flywheel effect**. Thus, this reports includes companies such as Infineon Technologies, which in the context of employment are relevant and play an important role in being a breeding ground for new entrepreneurial talent.

Startup jobs?

"jobs" and "employees" are used interchangeably. Number of local jobs represents the total number of employees at homegrown startups in Munich. Global jobs are jobs created by Munich-based startups globally, including jobs in headquarters and in the rest of Germany.

The report excludes data about companies founded in Munich, which since their inception moved abroad.

Job numbers are sourced from publicly available data, incl. company statements and professional social media. WII jobs at startups are counted, not just tech jobs (i.e. mechanics, receptionists, helpdesk, ...). However, gig workers (e.g. riders, babysitters, ...) are generally not counted. Jobs at companies not covered in the report are not counted.

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Methodology & definitions.

Venture Capital, Investors

Investment numbers refer to rounds such as Seed, Series A, B, C, ... late stage, and growth equity rounds. VC investment figures exclude debt or other non-equity funding, lending capital, grants and ICOs. Investment rounds are sourced from public disclosures including press releases, news, filings and verified, user-submitted information.

Glossary & Definitions

Sectors & Industries

Industry classification follows Dealroom's proprietary taxonomy, which was built specifically for startups. A given startup may belong to up to two industries.

Valuation

The combined valuation of the tech ecosystem is based on their market cap or latest transaction value. Transaction value is realized from exit or implied unrealised valuation from the latest VC round, which is either announced or estimated by Dealroom based on benchmarks.

Underlying Data

Dealroom's proprietary database and software aggregate data from multiple sources: harvesting public information, user-submitted data verified by Dealroom, data engineering. All data is verified and curated with an extensive manual process.

Munich Metropolitan Area

Munich Metropolitan Area (or *Planungsregion München*) is the capital region and one of the 18 planning regions of the Free State of Bavaria. It consists of the state capital Munich and the districts of Dachau, Ebersberg, Erding, Freising, Fürstenfeldbruck, Landsberg am Lech, Starnberg as well as their cities and communities. The region has a population of 2.9 million (source).

Munich Metropolitan Region

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This reports includes data from companies based in Munich Metropolitan Area, which consisting of the agglomeration areas of Munich, Augsburg, Ingolstadt, Landshut, Rosenheim and Landsberg am Lech. The region has a population of approximately 5.9 million (source).

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The data on which this report builds is available on <u>app.dealroom.co</u>. For more info please visit dealroom.co or contact <u>support@dealroom.co</u>.



Munich is Germany's third largest city and is renowned for its resilient, strong economy. It is brimming with opportunities for entrepreneurs, innovative minds, and talented people and organizations from all sectors.

Under the umbrella of munich business, the Department of Economic Development and the Department of Municipal Employment Policy and Qualification have teamed up to support business and the economy in Munich.



Munich Startup is the official startup portal for Munich and the surrounding region. It was developed by the City of Munich, the Chamber of Commerce and Industry for Munich and Upper Bavaria and the four entrepreneurship centers of the Munich universities within the framework of the Entrepreneurship Strategy Munich.

The portal is run by Münchner Gewerbehof- und Technologiezentrum GmbH (MGH), the organization that operates Munich's industry centers.

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Dealroom.co is the foremost data provider on startup, early-stage and growth company ecosystems in Europe and around the globe.

Founded in Amsterdam in 2013, we now work with many of the world's most prominent investors, entrepreneurs and government organizations to provide transparency, analysis and insights on venture capital activity. Our offerings include data sets via SaaS and API as well as custom reports and bespoke ecosystem platforms.



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