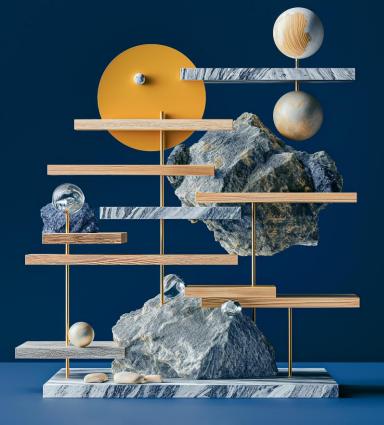


Sweden tech

2023 REPORT



February 2024

Foreword

66

The Sweden Tech Ecosystem database and this annual report are the results of a cross-actor collaboration between Business Sweden, Vinnova, The Swedish Agency for Economic and Regional Growth, The Swedish Institute, and Swedish Incubators and Science Parks (SISP). It is an important part of our ongoing effort to make ecosystem data freely accessible to everyone. The website, Swedish Tech Ecosystem, serves as a digital showroom of activities in our innovation ecosystem. Furthermore, we hope that this will enable investors and startups to match, companies to find partners for business dialogues, and media to pick up on great stories worthy of sharing! In addition, talents can explore opportunities and companies may advertise their needs.

The key takeaways this year are that despite an unstable global economy, Swedish startups continued during 2023 to raise investments amounting to \notin 4.7B. Close to 75% of the total venture capital investment was raised by impact startups, making Sweden #2 in Europe. With a staggering combined worth of \notin 239B,

Swedish startups have not only doubled in value over the last five years but have also created 41 unicorn

companies, solidifying Sweden as a powerhouse and the place to be in the global tech

Scene. The Swedish Ecosystem is now starting to benefit from a snowball effect as alumni staff

from successful unicorns spin out and become founders to several new startups. We also see how startups contribute to the economy. Swedish startups have created an estimated 138,000 jobs globally, including 79,000 jobs in Sweden. Startups, not

including top companies and unicorns, are creating 96% of new local jobs. We're proud that Sweden continues to rank high on the global innovation scoreboards and, despite global instabilities, manages to attract investors, talent, and new deals. We are therefore committed to continuing our efforts to ensure that Sweden delivers world-class conditions for startups to thrive."





Global startup and venture capital intelligence platform

Dealroom.co is a global intelligence platform for discovering and tracking the most promising companies, technologies and ecosystems. Clients include many of the world's foremost organizations such as Accel, Index Ventures, McKinsey, BCG, Deloitte, Google, AWS, Microsoft, Stripe. Dealroom partners closely with local tech ecosystem development agencies and enablers, to create a comprehensive multi-dimensional blueprint of the tech ecosystem, including capital, talent, innovation, entrepreneurship and overall economic dynamism.



Business Sweden helps Swedish companies grow global sales and international companies invest and expand in Sweden

Business Sweden is commissioned by the Government and the Swedish industry with a unique mandate and a mission to help international companies gain access to the Swedish market and help domestic ones utilize it as a platform for expansion. Their clients range from startups via small- and medium-sized businesses to multinational enterprises – with tailor-made services catering to all of these segments.

Public agency that promotes interest and

trust in Sweden around the world

The Swedish Institute operates in the fields of culture, education, science and business in seeking to strengthen international relations ties, and promote development. The agency builds up lasting relations between Sweden and other countries to enhance Sweden's nation brand and international relevance. To this end, the Swedish Institute disseminates information, develops skills, promotes cultural exchange and cooperation, and provides funding and grants.



Swedish Agency for Economic and Regional Growth

Swedish Agency for Economic and Regional Growth

The Swedish Agency for Economic and Regional Growth (Tillväxtverket), is a government agency under the Ministry of Enterprise and Innovation, tasked to promote sustainable business development and regional growth in all parts of Sweden. Tillväxtverket supports companies and regions by offering knowledge, networks for collaboration and financing.



Swedish Incubators & Science Parks

Swedish Incubators & Science Parks (SISP) is the member association for Sweden's incubators and science parks as regional areas of innovation across the country. SISPs members support knowledge and technology based startups and scaleups, as well as established industries and the public sector, to develop a sustainable society through innovation. Several members also run business angel networks and seed capital funds.

VINNOVA

Sweden's Innovation Agency

Vinnova is Sweden's governmental innovation agency. Our mission is to strengthen Sweden's innovative capacity and contribute to sustainable growth. We identify areas where our efforts can make a difference, and we create opportunities and incentives for organisations to work together to meet important societal challenges. Our financial support gives companies and organisations the opportunity to experiment and test new ideas before they become profitable. Through open calls, Vinnova invests approximately 300 m€ annually in research and innovation in the form of grants.



What you need to know.

Swedish startups are now worth a combined €239B.

The Swedish tech ecosystem is collectively worth almost a quarter of a trillion dollars, including 41 unicorns. The combined ecosystem value has doubled in the last five years.

Swedish startups attracted €4.7B of investment in 2023.

Sweden maintains its position as 4th in Europe by VC investment raised, behind just the UK, France and Germany. It ranks 3rd in Europe for deep tech investment and 2nd for Impact.

€4.7B VC investment raised In 2023

Key Figures.

Sweden ranks 4th in Europe for VC investment raised. €3.5B Impact VC investment

raised in 2023. Sweden ranks 2nd

in Europe for impact VC investment raised.

Two Swedish Universities are among Europe's top 20 for producing VC-backed founders.

KTH ranks 10th in Europe by number of alumni who have raised €10M+, the University of Stockholm ranks 18th. Sweden ranks 5th in Europe based on university spinout value created. 7 counties across Sweden are now home to more than 50 VC-backed companies.

However, geographical distribution of startups and VC investment remains largely centralized, with Stockholm county capturing 90% of VC investment since 2019.

€239B Ecosystem Valuation

Growing x2 since 2019.

41 Unicorns

Sweden ranks 9th globally by number of unicorns.



1 The Swedish Tech Ecosystem

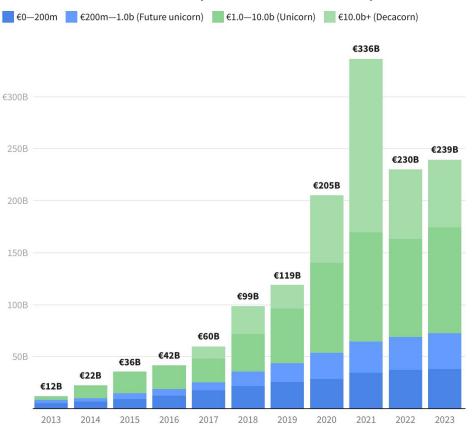
- 2 Innovation and Ecosystem Enablers
- 3 2023 VC investment update
- 4 Regional trends



Swedish startups are now worth €239B, growing 2x since 2019.

The value of the Swedish ecosystem has decreased by 28% since 2021, due to a drop in the value of Swedish decacorns: the private decacorn Klarna as well as top public companies like Spotify.

View live »

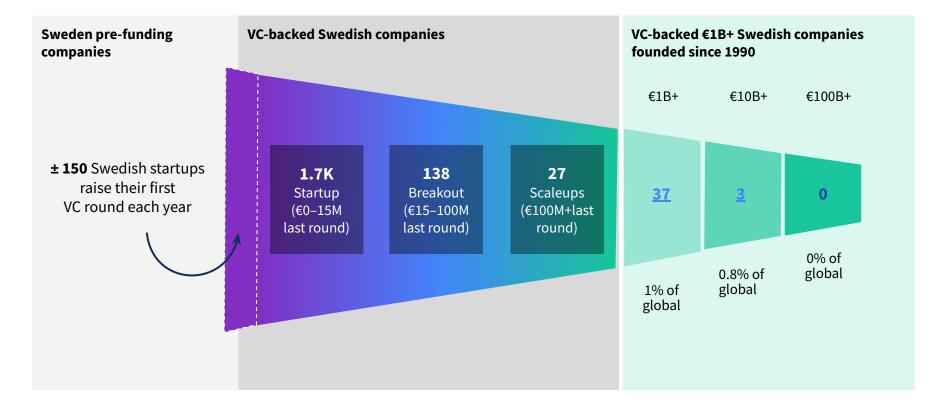


The combined enterprise value of Swedish startups



dealroom.co

Sweden is showing a promising funnel of startups, breakouts and scaleups.





The top 100 startups in Sweden according to dealroom SIGNAL

Dealroom's powerful predictive algorithm helps surface the world's most promising companies.

The input for each Signal's algorithm includes company growth (team size, product growth), founders strength, completion score and contextual data (does the company fit into segments of interest), timing (is the startup likely to raise their next round soon) and team composition.

» Top 100 Swedish Startups to watch

NAME	JEALROOM SIGNAL	~	MARKET	Y TYPE Y	GROWTH 12 months gro
Turbotic AB ★ Creates self-driving companies an		82	B2B enterprise software	artificial intelligence subscription saas	
Carla ★ ♠ Building the most convenient, tran.		80	B2C transportation search, buy & rent	commission marketplace & ecommerce	/
Hexagem ★ ♥ Hexagem Produces advanced GaN-based wa.		80	B2B energy semiconductors	deep tech nanotech commission manufacturing	~
SVEA Solar * * • SUPplies green energy and installs .		80	B2B, B2C real estate energy energy providers clean energy	commission manufacturing	_
Elsa Science ★ ¥ Strive for fewer as well as healthier.		79	B2C health health platform	deep tech mobile app commission saas	
Billhop ★ Pay your bills using credit cards		79	B2C fintech payments	commission	_
×nomad ★ A marketplace platform for short-t.		79	B2B, B2C real estate real estate services search, buy & rent	subscription marketplace & ecommerce	~~~~
Dema \star		=0	B2B	commission	

Sweden remains a global top 10 country by number of unicorn startups created.

Total before 2023 2023 unicorns 1550 +44 United States 392 +20 China United Kingdom 168 +6 115 Israel +4 India 107 +1 +4 71 Germany 62 +3 Canada 50 +2 France 41 +0 Sweden 33 +1 Australia +1 Brazil 32 32 +2 Switzerland

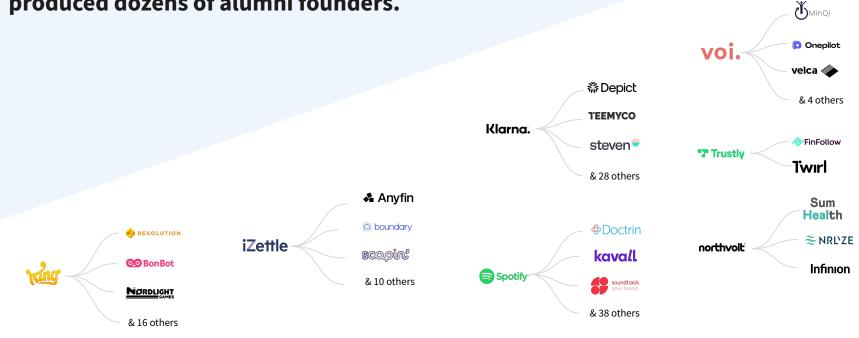
Top countries by number of unicorns

Explore Swedish unicorns and 1B+ exits >> view online

Instabee * Instabee was founded in 2022 after2022\$1.4bImage: Scale Steel * Large-scale steel producer based o2022\$6.6—9.9bImage: Scale Steel * Parent company of businesses dev2022\$5.1bImage: Scale Steel * Parent company of businesses dev2022\$5.1bImage: Scale Steel * Produce PCBs for demanding cust2022\$1.2bImage: Scale Steel * Produce PCBs for demanding cust2022\$1.1b	NAME		JF YEAR COMPANY BECAME ↓ UNICORN	VALUATION 🗸
Impresented Large-scale steel producer based o 2022 \$6.6-9.9b Impresented Parent company of businesses dev 2022 \$5.1b Impresented Parent company of businesses dev 2022 \$5.1b Impresented Produce PCBs for demanding cust 2022 \$1.2b Impresented Impresented Impresented Impresented	0 9P	In beau of a	2022	\$1.4b
Parent company of businesses dev 2022 \$5.1b NCAB Group * Produce PCBs for demanding cust 2022 \$1.2b Byredo * End Company End Company End Company	Higreensteel		2022	\$6.6—9.9b
Produce PCBs for demanding cust 2022 \$1.2b	+		2022	\$5.1b
	MCAB GROUP		2022	\$1.2b
	B		2022	\$1.1b
Einride * * * • A technology company that develo 2022 \$800m-1.2b	٢		2022	\$800m—1.2b
Storytel * Providing audiobook subscription 2022 \$457m	storytel		2022	\$457m



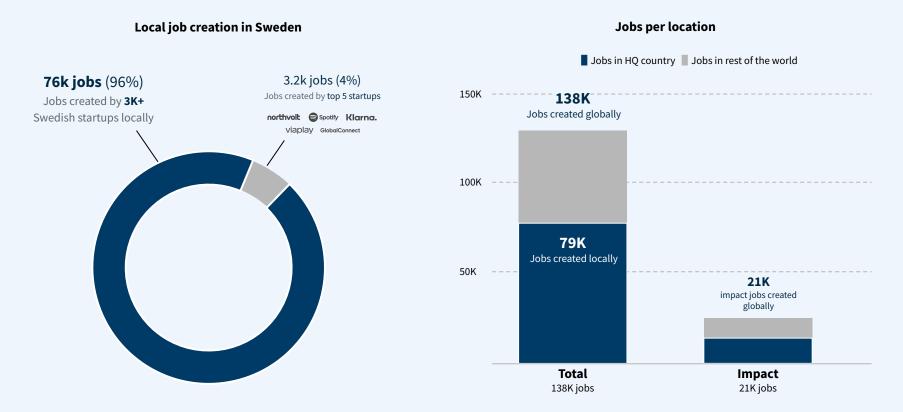
Success breeds success: Swedish unicorns have produced dozens of alumni founders.



Startups founded by former employees of Swedish unicorns



Swedish startups create 138K jobs globally, including 79K jobs in Sweden. Startups outside top companies and unicorns are creating 96% of local jobs.





1 The Swedish Tech Ecosystem

2 Innovation and Ecosystem Enablers

- 3 2023 VC investment update
- 4 Regional trends



The Swedish Innovation Ecosystem

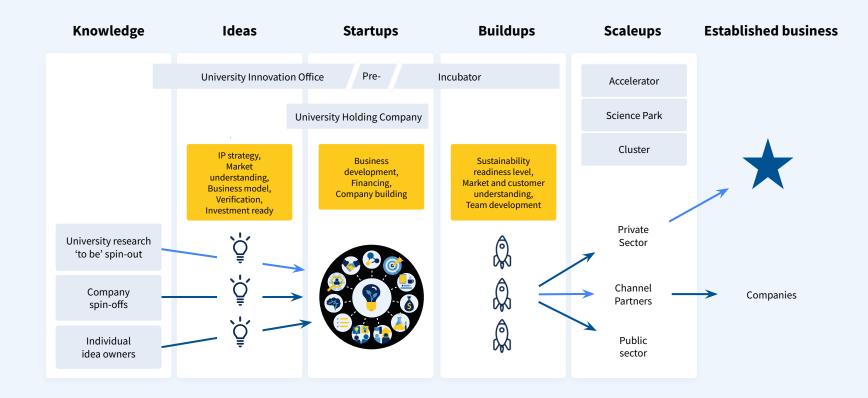
Sweden is known as one of the world's most innovative countries, consistently ranking high in international rankings year after year. In 2022 it ranked **#1 in the European Innovation** Scoreboard and **#3 in the Global Innovation Index 2022**.

Swedish universities has a high number of scientific publications with high relevance for development of deeptech innovations. The unique Professor's privilege policy means that researchers and teachers own their research and IP, which also means great opportunities for researchers who want to build a company upon their research. This includes foreign researchers who perform their research at Swedish universities. Swedish universities are at the forefront of research in areas such as information technology, engineering, and life sciences. Most universities have holding companies performing their commercial activities and functions often as investors in very early phases of a company's development.

Sweden has a world-class innovation support system. Throughout the country, there are innovation-supporting entities that can assist researchers and entrepreneurs in taking research all the way from idea to the international market. Sweden has 16+ *universities, 19 holding companies, 13 innovations offices, 38 university-close incubators and 30 Triple Helix-based science parks, plus great clusters.* The world-class national incubator program has proven track records. This ecosystem plays a pivotal role in fostering technological advancements, entrepreneurship, and collaboration between academia, industry, and the public sector.



From research and idea to established company.





Page / 15



Research and innovation at Universities

Sweden's 16+ universities, 19 holding companies and 13 innovations offices.

Selected Universities

Uppsala University Lund University University of Gothenburg Stockholm University Karolinska Institute Umeå University **KTH Royal Institute of Technology** Linköping University Swedish University of Agricultural Sciences Luleå University of Technology Karlstad University Örebro University Mid Sweden University Linnaeus University (Växjö University + Kalmar University) Malmö University



Holding companies Chalmers Ventures **GU** Ventures Högskolan i Borås Holding Högskolan Kristianstad Holding HHU AB (Halmstads högskola) Karlstad Universitet Holding **KI Holding KTH Holding** LiU Holding LUD AB (Linnaeus University) LU Holding Holding Mau Holding Miun Holding (Mittuniversitetet) SLU Holding SU Holding UmU Holding Uppsala University Invest

Örebro University Holding

Innovation offices

Chalmers Innovation Office Research & Innovation Office at Gothenburg University KI Innovation KTH Innovation LiU Innovation LTU Business LU Innovation Innovation Office South: Fyrklövern Innovation Office Malmö Innovation Office Stockholm University Innovation SLU Holding Innovation Office North at Umeå University UU Innovation



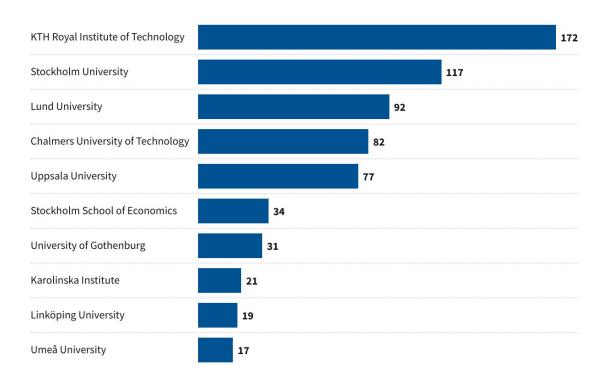
Sweden's top universities are a breeding ground for fostering entrepreneurial talent, in Sweden and abroad.

Swedish Universities in the European top 20





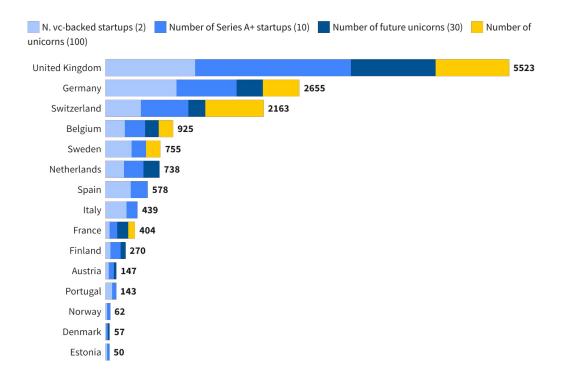
University alumni that founded startups that raised >€10M <u>» view online</u>





Sweden ranks 5th among European countries based on spinout value created.

European countries by spinout value created





To stay innovative and grow the ecosystem in the future, Sweden needs to make strategic investments in emerging technologies like AI and quantum technology especially education, research and supporting early stage startups in these areas.



Joseph Michael Investor Partnerships Manager at Google

One of the main strengths of the tech ecosystem in Sweden is the unique combination of talent in software development and design. This combination of skills has allowed a wide range of successful companies to launch innovations with a human centric approach.

Google is working closely with the Swedish tech ecosystem to support entrepreneurs and innovators in the region. For example, Google launched the <u>Google.org Social Innovation</u> <u>Fund on AI</u> to provide capital, share expertise and grow the AI ecosystem. Specifically, €1M of the fund will be dedicated to non-profits helping to strengthen and grow social entrepreneurship in Sweden. We also launched a new AI startup program last year that provides cloud credits and hands-on support to AI first startups."



Business developing and ecosystem enablers

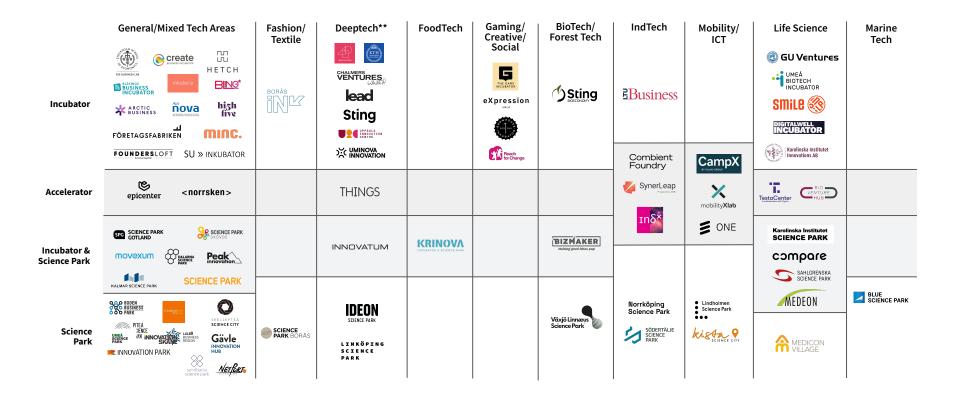
Sweden's university-close incubators and Triple Helix-based science parks (in categories on the next slide)



Page / 20



Sweden's incubators, accelerators and science parks by tech segment*



Page / 21 Source:

Many of the incubators. accelerators and science parks can support startups and scaleups in various tech areas, but this map gives an overview of some of their specific strongholds.

** Advanced materials, nanotechnology, additive manufacturing, drone and robotics, radar, photonics and electronics, semiconductors, micro and nanoelectronics, computer vision, artificial intelligence, big data, swebski incusators quantum technology, deep and machine learning, blockchains, loT, virtual reality, autonomous systems, cyber security for advanced industrial digitization, edge computing, digital twins. Sweden Sverige

dealroom.co

National Incubator Program

Drives towards excellence and global sustainability

Sweden's national incubator program ranks as world class, and several of the incubators rank among the best in the world. Vinnova's funding is aimed at incubators that demonstrate excellence in the incubator process, have global sustainability goals and an equality perspective as a driving forces. At the turn of the year 2022/2023, there were 655 companies in the incubators. Independent innovators, business and academia contribute business ideas to the incubators.

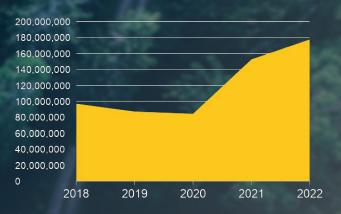
The results from the national incubator program are consistently positive, with increased turnover, employees and attracted capital. The incubators also have an important role in promoting sustainability and equality in the business world.

The availability of equity capital for companies in incubation has increased dramatically in recent years, despite reduced availability of risk capital. The life science sector attracts the most capital from both government and private sources.





Attracted equity



Equity per industry (2022)

Life science
 Industry
 Food and agriculture
 Creative
 Software & ICT
 Environment and energy
 Other



1 The Swedish Tech Ecosystem

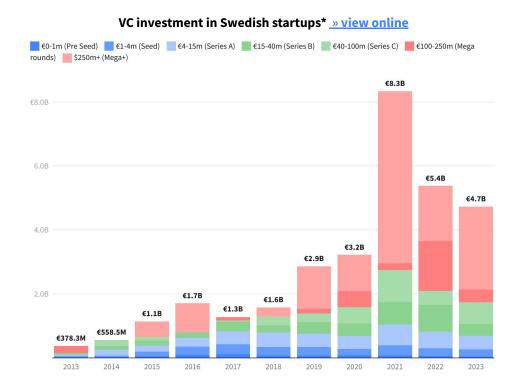
2 Innovation and Ecosystem Enablers

3 2023 VC investment update

4 Regional trends



Swedish startups have raised €4.7B in 2023.



Top rounds in Swedish startups, 2023

NAME		ţF	LAST ROUND	~	DATE	~	
Higreen steel	H2 Green Steel Large-scale steel producer based		€1.5b GROWTH EQUI	TY VC	Sep 20)23	Alte
northvolt	Northvolt On a mission to establish a supply		\$1.2b CONVERTIB	LE	Aug 20	023	C
northvolt	Northvolt On a mission to establish a supply		\$200m CONVERTIE	ILE	Nov 20	023	Caisse de
м	Mathem Online grocery shopping site in Sw		SEK1.0b LATE VC	:	Jun 20	023	\ B
3	Ingrid Capacity Building the necessary infrastruct		SEK1.0b LATE VC	2	Apr 20)23	
	Aira Innovative, highly efficient heat pu		€87.0m LATE VC		Oct 20)23	Co Alto Lin
.Å.	Kameo FinTech startup currently developi		SEK700m LATE V	с	Apr 20)23	In



Sweden maintains its position in Europe as 4th country for VC investment raised.

VC investment decreased by 12% since 2022, the lowest year on year change besides Denmark.

Top 10 European countries by VC investment raised in 2023

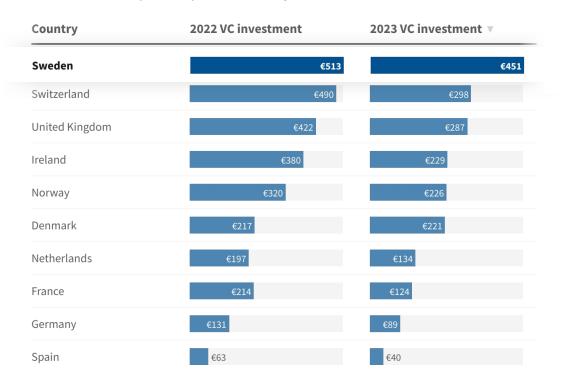
Country	2022 VC investment	2023 VC investment	Growth 2022- 2023
United Kingdom	€28.2B	€19.2B	-32%
France	€14.5B	€8.4B	-42%
Germany	€11.0B	€7.5B	-32%
Sweden	€5.4B	€4.7B	-12%
Switzerland	€4.3B	€2.6B	-39%
Netherlands	€3.5B	€2.4B	-32%
Spain	€3.0B	€1.9B	-37%
Denmark	€1.3B	€1.3B	2%
Norway	€1.7B	€1.2B	-30%
Ireland	€1.9B	€1.2B	-40%



Source: Dealroom.co. *Includes only companies HQ'd in each respective ecosystem. Includes convertible rounds.

Sweden ranks 1st per capita among top European countries.

VC investment per capita Of top 10 European countries by VC investment raised in 2023





Sweden ranks 3rd in Europe for deep tech VC investment in 2023, and 7th at early-stage.

Top European countries Deep tech VC investment in 2023

Top European countries Early stage deep tech VC investment in 2023

United Kingdom	€4.6B		United Kingdom	€605M
France	€3.6B		France	€564M
Sweden	€3.1B		Germany	€424M
Germany	€1.8B		Netherlands	€290M
Netherlands		€736.4M	Spain	€212M
Switzerland		€647.2M	Switzerland	€159M
Norway	€35	64.7M	Sweden	€123M
Italy	€31	3.1M	Italy	€118M
Spain	€29	6.4M	Norway	€115M
Finland	€198.	7M	Finland	€95M

Page / 27 Source: Dealroom.co. *Includes only companies HQ'd in each respective ecosystem. Includes convertible rounds. Early stage rounds include rounds below €15M.



Sweden ranks 2nd European country for impact investment in 2023, and 6th at early stage.

Top European countries Impact VC investment in 2023

United Kingdom United Kingdom €778M €6.2B Sweden €3.5B France €511M France €2.8B Germany €490M Germany €2.3B Netherlands €216M Netherlands Norway €746.4M €205M Sweden Norway €200M €639.0M Spain Spain €572.3M €137M Ireland €569.1M Switzerland €133M Switzerland Italy €563.4M Finland Denmark €327.6M

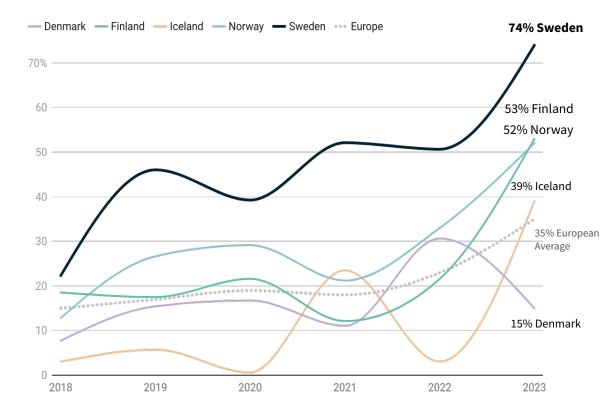
Top European countries Early stage Impact VC investment in 2023

€101M €92M





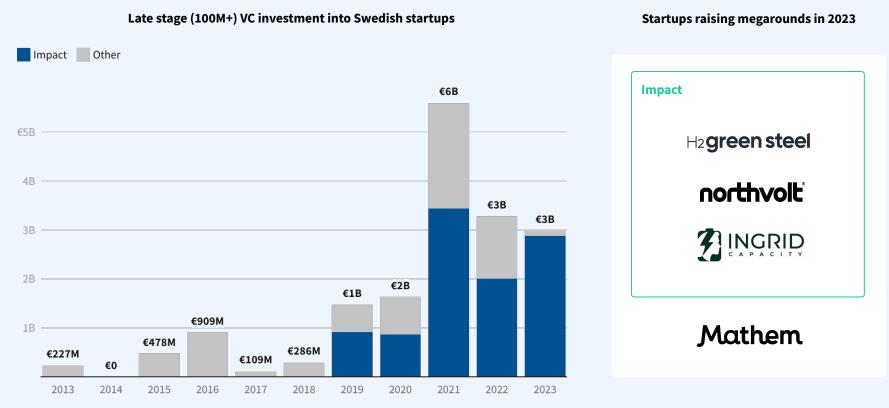
Impact startups contributed close to 75% of total VC investment in Sweden this year, the first in the Nordics.



Impact investment as a percentage of total VC funding



96% of late-stage VC investment in Sweden was raised by impact startups in 2023.





580+ Swedish startups tackling SDGs.

climate action (#13)

Climate Action (#13)

<u>Northvolt</u> <u>Re:newcell</u> <u>Normative.io</u> +200 more...

Partnerships (#17)

<u>TransferGalaxy</u> <u>Material Exchange</u> <u>Doconomy</u> +20 more...

Industry innovation and infrastructure (#9) H2 Green Steel Enginzyme Charge Amps +100 more...

Life below water(#14)

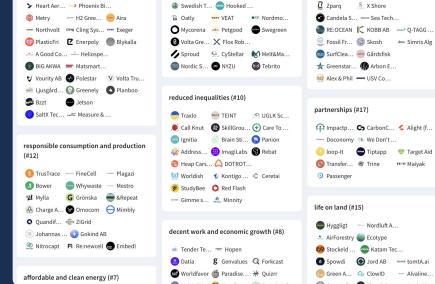
<u>X Shore</u> <u>Swedish Algae Factory</u> <u>Nordic Sea Farm</u> +20 more...

Zero hunger (#2)

<u>Matsmart-Motatos</u> <u>Karma</u> <u>Oatly</u> +60 more...

Reduce inequalities (#10) UGLK Science Panion

<u>EdQu</u> +50 more...



zero hunger (#2)

Explore the Swedish impact landscape



life below water (#14)

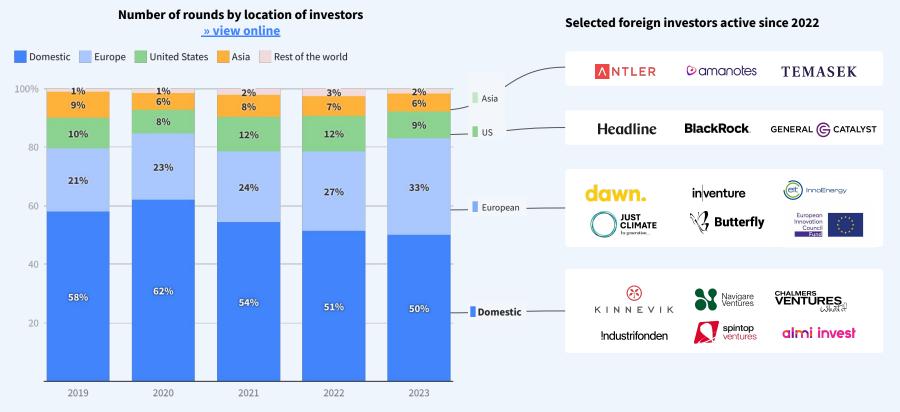
Impact is one of Sweden's startups' absolute strongest areas, and this is confirmed in the figures seen in this report. I now hope that many more investors and customers will open their eyes to these rapidly growing companies. Here are many answers to our global challenges and now is the time to rally together for scaling up!"



Stina Lantz CEO at Swedish Incubators & Science Parks



Participation from Swedish investors decreased, while investors from the rest of Europe participated in 33% of rounds.





- 1 The Swedish Tech Ecosystem
- 2 Innovation and Ecosystem Enablers
- 3 2023 VC investment update
- 4 Regional trends



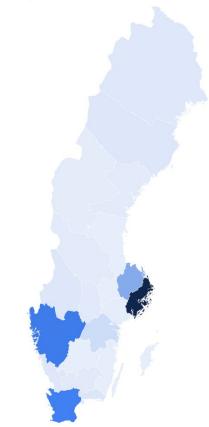
Geographical distribution of VC investment remains unequal, with Stockholm county capturing 90% of total.

Top 3 counties for VC investment raised since 2019 include Stockholm County, Västra Götaland County and Skåne County. They capture more than 98% of total VC investment since 2019.

€435M was invested outside of the top 3 counties since 2019.

VC investment since 2019

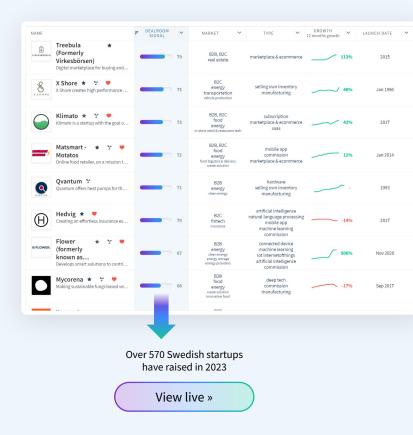






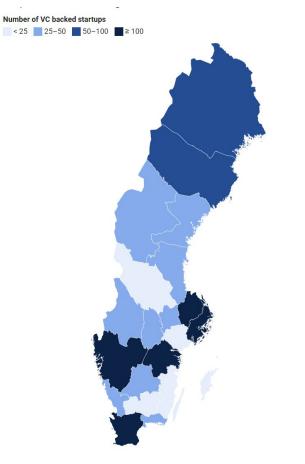
Startups from close to 50 cities across Sweden raised VC funding in 2023.







7 counties in Sweden are now home to more than 50 VC-backed companies, across all of Sweden.





Promising startups are growing throughout the country.

	Norrland Gävleborg, Jämtland, Norrbotten, Västerbotten and Västernorrland	Svealand Dalarna, Örebro, Södermanland, Uppsala, Värmland and Västmanland	Götaland Blekinge, Gotland, Halland, Jönköping, Kalmar, Kronoberg, Östergötland, Skåne and Västra Götaland		
VC Backed	CODEMILLimage: remosimage: remosCurest.image: remosimage: remosBrainimage: remosimage: remos	Image: Stream Analyze	 Hexagem orbital Hexagem orbital Herrighted Sweigan parakey Noodl Min Doktor MYCORENA JUNI 		
Not (yet) funded	EXECUTOC AssetBook SOLASK Paylio Execution of the	CELLCOMB Malueguard Fibu FarmPharma KLARAVIK kontiger metacon CE TWISTSHAKE RE:OCEAN	RISON Synthetic images Since OAVIDNOTE Visage Technologies NUKKA MABEL klimator Simply no waste		



C The West Swedish ecosystem is a hotspot for innovation thanks to the public and private sectors working in convergence. We have won many prices globally as the front runner in sustainability and we call ourselves masters of collaboration.



Klementina Österberg CEO at GU Ventures We are closely affiliated to both academia and industry. The strength of the region is its many industry clusters working in sector convergence, for instance mobility, shipping, telecom, defence, energy, pharma, biotech and medtech connected to the biggest harbour in the heart of Scandinavia with long relations for instance to Asia.

We have two well-known universities in close collaboration with the hospital and the healthcare system, all of them famous for their innovations in collaboration with industry. As the Swedish law allows the researchers to own and commercialise their own ideas, we have also many new companies spun out from our universities, alongside with all other entrepreneurs building new businesses."

Read full interview »



Our methodology.

What is a startup?

Companies designed to grow fast. Generally, such companies are VC-investable businesses.

When startups are successful, they develop into scaleups (>50 people), grownups (>500 people) and result in big companies. Only companies founded since 1990 are included in this report.

What is a startup?

What is a unicorn?

Unicorns are (former) startups that reached US€ 1B valuation or exit at one point in time.

What is a Unicorn?

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.

The data on which this report builds is available via <u>app.dealroom.co</u>. For more info please visit dealroom.co or contact <u>support@dealroom.co</u>. Data for this report was taken in December 2023.

Venture Capital, Investors

European investors includes the entire European continent, the UK and Russia, but excludes Turkey and Sweden.

Investment are referred to by their round labels such as Seed, Series A, B, C, ... late stage, and growth equity. VC investments exclude debt, non-equity funding, lending capital and grants.

Regional Breakdown

While many startups founded in Sweden relocate beyond their borders, most maintain business-critical ties to their homelands.

In order to take this reality into account, the first chapter of this report includes both Sweden-based startups, which maintain their main center of business (HQ) in their country of origin, and Sweden-founded startups, which relocated their HQ outside of Sweden.

Following chapters (VC investment numbers) only include companies currently HQ in Sweden.



Glossary.

What is an impact startup?

A startup company that addresses one or more of the UN Sustainable Development Goals (SDGs) at the core of its business. Our litmus test: If you remove the impact you also remove the business.

Within the context of the EU Sustainable Finance package, the report focuses on companies and products with "environmental objectives", as in Article 9 in the EU Sustainable Finance Regulation, and those that significantly contribute to a sustainability objective in the EU taxonomy.

> More on Impact by Dealroom.co

What is a Deep Tech startup?

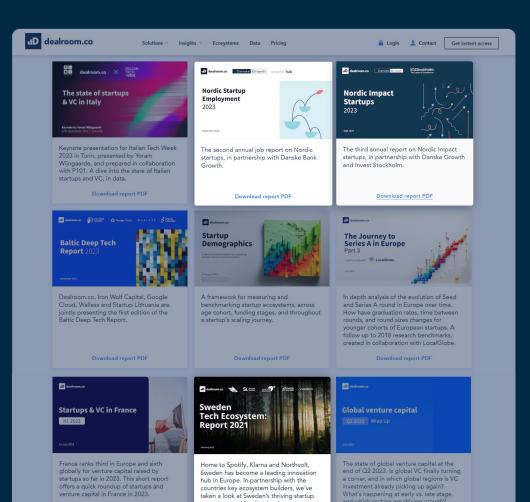
Deep Tech includes startups working on innovative technologies that are closely linked to the frontiers of science and engineering. These companies inherently take on risk relating to the feasibility of their technologies (R&D risk), as well as the risk in proving market demand for the product which has likely not been seen before in the market (Product/Market fit risk). Deep Tech startups often start with an extended R&D phase, have a higher share of technical staff and involve hardware and/or IP.

> More on Deep Tech by Dealroom.co



Dive Deeper in Central Nordics Tech with dealroom.co/**reports**





Discover the most promising companies in Sweden on:

Sweden.dealroom.co

