

November 2019



Startup**Hansa**



STARTUP HUBS 2019

Amsterdam, Berlin, Gdansk,
Phoenix, Stockholm



STARTUP HUBS 2019

Amsterdam, Berlin, Gdansk, Phoenix, Stockholm

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Gdańsk, November 2019

INTRODUCTION

Dear Friends,

We created this report to show that emerging ecosystems in key business and technology hubs have different strengths and weaknesses, and show how we can integrate them to bring sustainability.

There are only a few places in the world that managed to develop a full ecosystem that gives direct access to the talent, capital, and markets capable of supporting a startup growth from inception to a billion-dollar exit.

For those who are building their businesses outside of London, Silicon Valley or New York City, it is much harder to grow exponentially.

In October 2019, during the Startup Hansa Conference, we signed an open Letter of Intent to establish Startup Hansa formally.

Our mission is to build a sustainable startup ecosystem across the globe that will provide data intelligence, soft-landing programs, and will influence regulators to support sustainable development goals.

We believe that collaboration will let us grow our startups, funds, enterprises, and communities in a better way, enabling entrepreneurs to make a positive impact on our lives faster and with more consideration.

We would like to invite you to join that journey.

Sign up at www.startuphasa.com to learn how you can contribute and benefit.

Sincerely,



Tomasz Szymczak

CEO

Gdańsk Business Incubator Starter



Matt Kurlito

CEO

Neoteric



Agnieszka Cichocka

Strategy and Development Manager
Gdańsk Business Incubator Starter

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STARTUP HUBS - WHAT ARE THEY?

We have all heard this term before, but when it comes to defining it how precise can we be? The simplest explanation is a city, place or organisation important to the startup ecosystem. Neil Petch in his article for Entrepreneur goes further and says *"Startup hubs are places that provide ideal conditions for entrepreneurs to flourish and accelerate the growth of their businesses"*¹.

But what are these ideal conditions? Low taxes, access to funding, tech and science support, friendly legal environment, access to talented people, free desks at coworking spaces, reasonable cost of living? Can anyone make a list of key features describing Startup Hubs and define what are those ideal conditions? As Startup Hubs are located around the world, it is really hard to specify a list universal for all of them. The ideal conditions mean something different in America, in Europe, in Asia and still something totally different in Africa. And startups originate in really different conditions: in garages, basements, student halls or living rooms, but as well in air-conditioned co-working spaces in perfect A-class office buildings.

However, some things are common for all of them. One of them is gathering together similar entrepreneurially oriented people. A lot of Startup Hubs gather foreigners or people of different origins. They are open, inclusive and diverse. Norbert Herrmann from Startup Affairs at Senate Department for Economics, Energy and Public Enterprises in his *"Brief presentation of the Berlin ecosystem"* presented a list of startup ecosystem alumni and pointed out that none of them are originally from Berlin. The second thing is access to talent. Without talented people with skills from different areas, not limited to tech, startups can't grow and that ecosystem is dying. But we have to remember that life is not a fairytale and every day founders and team members need to pay for food, for rent and other stuff and money is important. If you have to fight every day to stay above water, you can't say these are ideal conditions for starting and growing your business. That's why access to funding is one of the key features of successful Startup Hubs.

3 KEY FEATURES OF STARTUP HUB



inclusiveness



talent



money

Everything else is good to have and unique for each of the locations. Government and regulatory bodies support can be a positive push and really help the startup community to thrive. But their startup oriented thinking can be ambiguous and its impact hard to measure properly.

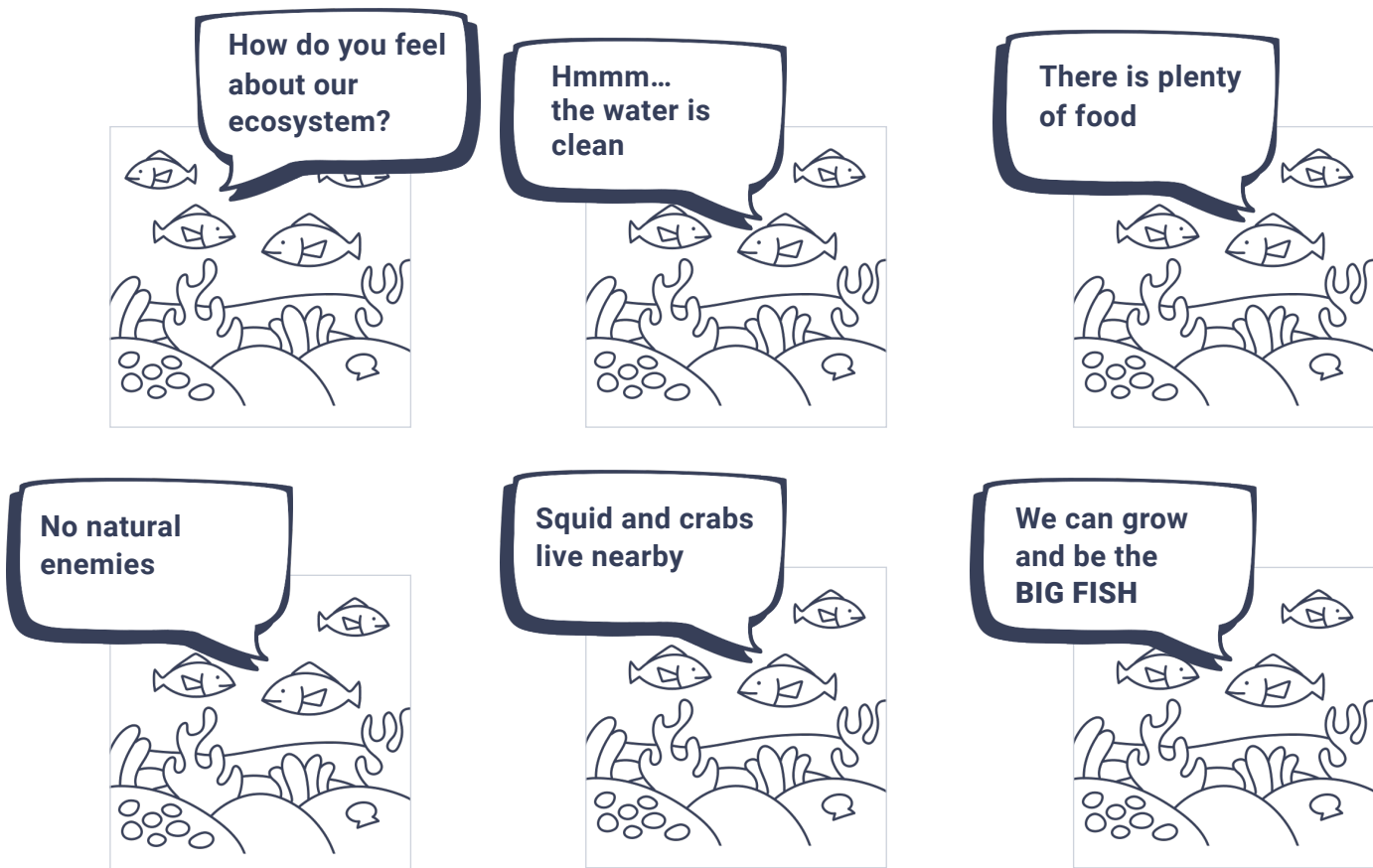
There are some features that can be identified in part of the Startup Hubs that have some impact on them, but at the same time, other hubs can do without them. For some of Startup Hubs the cooperation with big companies, industry partners and universities is a key to the success, for others it is not that important. It is worth noticing that there is a significant

¹ Entrepreneur Middle East: **Building Up A Startup Hub: Dubai Is Committed To New Businesses** - Neil Petch Chairman, Virtugroup May 4, 2017 - <https://www.entrepreneur.com/article/293747>

connection between the maturity of the community and its needs, how a number of startups being created and success stories change the understanding of these ideal conditions and stimulate others to join the community. Understanding the uniqueness of your own Startup Hub and its needs is crucial for governments, organisations and communities supporting startups.

In this report, we are making an attempt to measure, evaluate, but at the same time appreciate, the uniqueness of every Startup Hub and point out strengths and weaknesses of 5 Startup Hubs: Amsterdam, Berlin, Gdansk, Phoenix and Stockholm. We are analysing the above-mentioned hubs in 3 main dimensions: talent, capital and cooperation with the enterprise market and trying to conclude how these Startup Hubs can cooperate together.

Sea Hub story



AMSTERDAM

SUMMARY



Cost of Living
(without rent)

€ 865.36



Rent
(1 bedroom in the City Centre)

€ 1 567.25



Average Salary
(after Tax)

€ 2 521.36



Round size
(series A)

€ 5.12 M



Coworking
(per month)

€ 237



Internet
(60 Mbps or More)

€ 40.19

SOURCE: NUMBEO, CRUNCHBASE, NOMAD LIST, OWN CALCULATIONS

AMSTERDAM FOR STARTUPS

Everyone knows Amsterdam is home for many amazing startups. Easiest to say, it is a place where unicorns like Booking.com, WeTransfer, TomTom or Takeaway.com have started and since then have become global players in their respective fields. KPMG in its 2019 report *"Technology Innovation Hubs"* ranked Amsterdam as 16th (4th in Europe) city outside Silicon Valley seen as a leading technology innovation hub. And KPMG is not alone in their opinion, Amsterdam has also been mentioned in many reports as being breathing down the back of London. But how come the capital city of a country with 17 mln population has become such an important Startup Hub? The internal market size does not stand out when compared to markets of the United Kingdom, France or Germany. Startus Magazine explains that Amsterdam hosts over 180 nationalities within its borders, the use of English is widespread and the city is crucially located, allowing for expansion to the markets of above-mentioned countries and comfortable travel either by plane or train. The city also boasts high quality of life and its famous for bike riding to work, instead of long commutes that are often a plague in lots of other locations.

MOST KNOWN STARTUPS



Booking.com



Adyen



Takeaway.com

Amsterdam's Startup Ecosystem is mature and sophisticated and right now mainly focused on strengthening and bringing in new talent. A rough estimation shows that there are around 2-2,5k startups based in Amsterdam.

TOP INDUSTRIES



marketing



enterprise software



fintech

One of the most important things to know is that 13% of the jobs in Amsterdam (69,000) are created by startups and tech companies with an annual growth rate of 12%. To understand how big that is, you need to know that this is more than all of the people working in the finance or creative sector combined, almost 2 times more than the hospitality sector and almost 3 times of more than in retail. Only Picnic in 2 years (from December 2016 - December 2019) created 3,625 jobs.

There are now 10 tech companies in Amsterdam we can call unicorns: Booking.com with \$90B valuation, Adyen, Gemalto, Elastic, Tornier, Flow traders, TomTom, TomTom Telematics, Takeaway.com and Bitfury.

TOP BUSINESS MODEL



subscription



commission

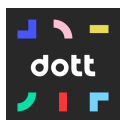


marketplace

The Startup Amsterdam community is well organised, packed with angels, accelerators, funds and venture capitalists. Amsterdam is a city where it is easy to find funding and clients, but the domestic market is rather small. With a population of little more than 17 mln people, the Netherlands are an ideal test market and because of European Union regulations, it is easy to scale to the surrounding countries.

NOTICEABLE STARTUPS FROM AMSTERDAM

We have picked 6 startups founded in 2016 or later, with the biggest funding up to date, with their headquarters in Amsterdam according to Dealroom's data.



Dott

transportation

Amsterdam-founded e-scooter startup which raised an enormous €50M in 2 rounds (€20M in a Seed and €30M in Series A) within a year. They offer dock-less, shared electrical scooters and bikes. Their unique value proposition is to get a city's approval first, educate riders and safety by design.

<https://ridedott.com>



Digital Insurance Group

fintech

Digital insurance platform that enables insurers, banks and brokers to offer fully integrated digital insurance solutions to their customers at a record speed. In the last Series B funding round they raised €15M and investors included Finch Capital and Zurich Insurance Group.

<https://digitalinsurance.io>



Crisp

foodtech

The supermarket app for fresh food, offering same and next day delivery. Their unique value proposition is to offer premier selection of fresh, good and healthy food, that previously could only be found at farmers' markets and specialty stores. They raised €8M in 2 rounds (€3M in a Seed and €5M in Series A).

<https://www.crisp.nl>



Cobase

fintech

This Dutch startup allows companies to access accounts in different banks from one place. In June 2018 they raised €7.5M from ING Ventures, a corporate VC fund from the Dutch branch of ING bank.

<https://www.cobase.com>



Happeo

enterprise software

Digital workplace and collaboration platform with a social intranet. Designed for Google G-Suite, user-friendly and stunning beautiful interface are making Happeo stand out from the competition. In June 2018 it raised €7.3m from international investors, including UK and Silicon Valley-based DN Capital and Helsinki-based Maki.vc and Vendep Capital. Worth mentioning is that their clients include BMW.

<https://www.happeo.com>



Hiber

IoT

Low-power and low-cost satellite connectivity network, which will enable global and affordable IoT connectivity. In 2018 it fired two nano-satellites into space and raised €5M from Finch Capital.

<https://hiber.global>

AMSTERDAM INVESTORS

According to Crunchbase, companies from this hub attracted 1,168 investors. We have picked 6 funds² with the highest number of rounds done in the last 24 months.



Finch Capital

<https://www.finchcapital.com>

Thematic investors participating in funding of projects in FinTech (Financial Services, Real Estate, Insurance) and DeepTech (AI enabled transformation, Security, IoT). Invest in verticals that include marketplaces (e.g. deposits, lending, tax, auto, legal), security (e.g. fraud, network, firewall), online distribution models (e.g. mortgages, insurance), software (e.g. AI focused SaaS, data management, payments) and IoT (application layer).

They have participated in 33 rounds, have 27 companies in their portfolio right now and have exited from 8 companies.



INKEF Capital

<https://www.inkefcapital.com>

Primarily focuses on opportunities in two technology sectors: Healthcare-related technologies (Biotechnology, Medical Devices, Diagnostics and Digital Health) and Technology (Enterprise Software, SaaS, Internet, New Media, Fintech). Looking for life sciences, digital health or tech entrepreneurs.

They have participated in 42 rounds, have 26 companies in their portfolio right now and have exited from 6 companies.

² By a fund we understand venture capital, corporate venture fund, angel fund, private equity, investment fund



HPE Growth

<https://hpegrowth.com>

Mainly interested in Enterprise Software (SaaS), B2B, Consumer Internet, Fintech, eHealth and Digital Platforms and companies with an annualised revenue of at least €10M, +40% year-on-year revenue growth. Active and on the ground across Northern Europe, with a focus on Germany and Benelux. Supported by the European Union.

They have participated in 27 rounds and have 14 companies in their portfolio right now.



LSP Life Sciences Partners

<https://www.lspvc.com>

Focused on health care companies addressing some of the medical needs that are not met by current products or technologies. Team has scientific expertise in areas such as molecular biology, biochemistry, biotechnology and medical sciences, but also have knowledge of the pharmaceutical industry and its workings, an understanding of the regulatory complexities associated with the development of drugs and medical devices, experience in starting, growing, financing and selling companies.

They have participated in 79 rounds, have 30 companies in their portfolio right now and have exited from 23 companies.



HenQ

<https://hengq.vc>

Focused on B2B software startups from Europe. They invest in pre-seed, seed and series A.

They have participated in 32 rounds, have 20 companies in their portfolio right now and have exited from 6 companies.



Peak Capital

<https://peak.capital>

Mainly interested in marketplaces, SaaS or data startups. In return for the invested capital and support, Peak Capital acquires a minority share. Their initial investment ranges between EUR 250K and EUR 2.5M and thereafter can eventually amount up to EUR 5M. Peak Capital has a successful track record with investments in Catawiki (winner of Fast50 EMEA 2016), IENS (exit to TripAdvisor, NASDAQ: TRIP), Radionomy (exit to Vivendi, Euronext:VIV) and CheapCargo (exit to PostNL, AMS: PNL).

They have participated in 24 rounds, have 17 companies in their portfolio right now and have exited from 5 companies.

COMMUNITIES, ORGANISATIONS, INSTITUTIONS

Amsterdam's ecosystem is well organised where funds, accelerators and incubators, governmental agencies, startups, investors, universities, corporates are active and it is easy to find them through dedicated websites.



Startup Amsterdam

City of Amsterdam



Ace Incubator

Incubator and accelerator



Rockstart

Accelerator



AMSxTech

Slack community



BSSA

B. Startup School Amsterdam



Silicon Canals

Technews websites

EVENTS



The Next Web Europe brings tech leaders to Amsterdam. This gathering brings together 20,000 of the world's top technology leaders, venture capitalists and entrepreneurs.



IoT Tech Expo Europe explores the latest innovations within the Internet of Things and covers the impact it has on other industries. 4 Co-Located Events gather 36,000 Attendees, 1500+ Speakers and 950+ Exhibitors.



MVNOs World Congress is an event about telecommunication, Internet of Things, mobile virtual networks, blockchain and fintech topics. It brings together over 800 senior MVNOs professionals from around the globe who can learn from and network with 130 speakers.



AI & Big Data Expo is a global conference and exhibition exploring Deep Learning, Business Intelligence, Machine Learning, VR/AR, Automation & RPA, Big Data, Data Analytics, AI Algorithms, Virtual Assistants, Chatbots and more.



IBC (International Broadcasting Convention) is the premier annual event for professionals engaged in the creation, management and delivery of entertainment. It combines a highly respected and peer-reviewed conference with an exhibition that gathers more than 1,600 leading suppliers of state of the art electronic media technology and provides unrivalled networking opportunities.

BERLIN

SUMMARY



Cost of Living
(without rent)

€ 766.49



Rent
(1 bedroom in the City Centre)

€ 879.22



Average Salary
(after Tax)

€ 2 241.42



Round size
(series A)

€ 5.09 M



Coworking
(per month)

€ 158



Internet
(60 Mbps or More)

€ 30.71

SOURCE: NUMBEO, CRUNCHBASE, NOMAD LIST, OWN CALCULATIONS

BERLIN FOR STARTUPS

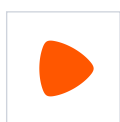
Berlin nowadays is recognised as one of the most important startup cities. However, it has not always been so. Lacking in major industrial companies which located their HQs mostly in former Western Germany, Berlin needed to find its own way. In the 90s it was renown for being a capital of techno music and for a number of years it has been considered rather a place for fun than for business. Back in 2005 unemployment rates oscillated around 19%. But this has changed significantly. Nowadays, Berlin prides with big tech companies that started just some years ago as small startups.

Berlin has become a seat for a number of German venture capital funds, incubators and accelerators that can provide funds for founders as well as additional services like mentoring, networking and coworking spaces. It has been connected to a global network through international organisations like Techstars or events like Techcrunch Disrupt.

German corporations have recognised the potential of startups and many of them, including Deutsche Bahn, Axel Springer or Deutsche Telekom, have decided to organise their startup activities in Berlin.

The Berlin startup community is highly organised, having regular startup digest updates, facebook groups and event catalogues.

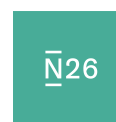
MOST KNOWN STARTUPS



Zalando



Delivery Hero



N26 Group

Berlin can sport some of the world's most famous startups. The list includes Zalando - an online fashion platform offering a broad assortment of fashion, which carries over 1 500 brands and over 150 000 product choices for over 17 million customers in 15 countries, Delivery Hero - a worldwide network of online food ordering sites, operating in 21 countries and with over 73,000 restaurant partners or N26 - a mobile banking service offering online banking that includes making and handling of current accounts, fixed accounts and other banking services, letting customers manage and control their banking details via a smartphone application easily.

TOP INDUSTRIES



marketing



enterprise software



media

In Berlin among top industries by Dealroom you can find marketing projects, enterprise software and media related ones. These projects can address both the needs of a big local market, including German corporates, as well as scale outside of Germany and be successful at that.

Berlin is located much closer than other big hubs to huge talent rich countries like Poland, Czech Republic, Romania or Ukraine (who are outside of the EU and not a part of the common market). Berlin authorities dedicated a lot of effort into attracting talent also from outside of the EU (like Ukraine and other countries) and make settling in the city easier. Among others they are running Business Immigration Service and Berlin Startup Scholarship.

TOP BUSINESS MODEL



subscription



commission



marketplace

The most common models found in Berlin are subscription, commission and marketplace. These are well represented by both the aforementioned well-known startups and by a huge number of up-starters, just at the beginning of their road.

NOTICEABLE STARTUPS FROM BERLIN

We have picked 6 startups funded in 2016 and later, with the biggest funding in the last 24 months and with their headquarters in Berlin according to Dealroom's data.



Frontier Car Group

transportation

Berlin-based startup building used car marketplaces, targeting high-growth, emerging markets. In November 2019 OLX announced that it would invest \$400M in Frontier. Post-money valuation after this transaction was \$700M. Frontier offers buyers and sellers a range of services: in addition to basic inventory listings, there are inspection reports, financial, pricing guides, warranties and insurance.

<https://www.frontiercargroup.com>

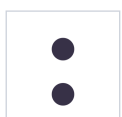


Quarters

real estate

Offering co-living hubs in locations around the globe, i.a. Berlin, New York, Chicago, Washington, Rotterdam, Frankfurt, Munich, Hamburg, Amsterdam, Hague. It features beautifully designed apartments with fully equipped kitchens, co-working spaces, areas to relax and meet the community. In January 2019 they raised \$300 million for U.S. expansion.

<https://www.quarters.com>



FRIDAY

fintech

Digital car insurance with features like per-kilometre billing, monthly terminability, and completely paperless administration. In March 2018 they raised €75M in Series A funding from Baloise Group and €39M in form of media-for-equity from SevenVentures and German Media Pool VC.

<https://www.friday.de>



SolarisBank

fintech

Banking platform with a full banking license, allowing other companies to offer their own financial products. Last €56.6M funding round Series B in March 2018 gathered names like BBVA, Visa, Lakestar, Arvato, SBI Group and ABN AMRO Digital Impact Fund.

<https://www.solarisbank.com>



TIER Mobility

transportation

German e-scooter company, currently operating in 46 European cities, including Berlin, Frankfurt, Hamburg, Oslo, Paris, Stockholm, Vienna and Zurich. €55M Series B was led by Mubadala Capital and Goodwater Capital and it brought on board AXA Germany and Evli Growth Partners as new investors and included all existing ones, such as White Star Capital, Northzone, Speedinvest, Point Nine, Indico, Kibo Ventures and Market One Capital.

<https://tier.app>



Tourelane

travel

Booking platform for customised travel packages, offering multi-week experiences to over 30 countries worldwide. Tourelane works directly with service providers and offers customers flights, accommodations, tours, activities and transfer options all in one place. March 2019 Series C \$47M round was led by existing investors Sequoia and Spark Capital with participation from previous investors like DN Capital and HV Holtzbrinck Ventures. Tourelane in total has raised €71.6M.

<https://www.tourelane.de>

BERLIN INVESTORS

According to Crunchbase companies from this hub have attracted 4,221 investors. We have selected 6 funds³ with highest number of rounds done in last 24 months.



Global Founders Capital

<https://www.globalfounderscapital.com>

Berlin GFC office is one of 16th global offices of the fund. They are present in cities like San Francisco, New York, London, Paris, Stockholm, Tel Aviv, Dubai, Singapore and Beijing. Known as investors of Facebook, Slack, LinkedIn, Zalando, Delivery hero, Revolut, Trivago and many more.

They have participated in 274 rounds, have 190 companies in their portfolio right now and have exited from 21 companies.



btov Partners

<https://btov.vc>

Focused on digital tech and industrial tech, they invest in B2C and B2B oriented businesses in the fields of commerce, marketplaces, mobile and software and deep tech, e.g. in Industry 4.0, resource efficiency, industrial AI, IoT, enterprise software,

³ By a fund we understand venture capital, corporate venture fund, angel fund, private equity, investment fund

cyber security and medtech. Average ticket size amounts to around €1M and maximum reaches €5M. They have been closing 30-40 rounds per year, of which approximately 30% are new investments and 70% are follow-on investments in their existing portfolio.

They have participated in 123 rounds, have 97 companies in their portfolio right now and have exited from 29 companies.



Target Global

<https://www.targetglobal.vc>

With €700 million in assets under management, they are investing in fast-growing online platforms, targeting trillion \$ markets. The Target Global portfolio includes companies such as Auto1, Delivery Hero, Omio, Dreamlines and WeFox.

They have participated in 84 rounds, have 46 companies in their portfolio right now and have exited from 12 companies.



Cherry Ventures

<http://www.cherry.vc>

They do not have industry focus and invest into broad range of industries and sectors. Most of the companies that they backed has been B2C or dedicated to small companies. They invest usually between 300k and 3M Euro in Seed round. They make around 12-15 seed investments per year.

They have participated in 80 rounds, have 49 companies in their portfolio right now and have exited from 8 companies.



IBB Beteiligungsgesellschaft

<http://www.ibb-bet.de>

They invest in technology-oriented companies and the ones from the creative industries with a focus on hardware and software, network technology, new media, and internet and mobile technologies, biotechnology and media technology, software, PPS, supply chain management, micro and nanotechnology, environmental and power technology, automation, manufacturing technology, transport technology and logistics and new materials. They typically invests between 250k and 3M Euro per transaction.

They have participated in 126 rounds, have 75 companies in their portfolio right now and have exited from 32 companies.



Earlybird Venture Capital

<https://earlybird.com>

They are managing 3 dedicated funds: the Digital West Fund focused primarily on early stage digital technology opportunities in GSA, Nordics, UK, Benelux, France and Southern Europe; the Digital East Fund focused on early stage ICT investment opportunities in Eastern Europe and Turkey; the Health Fund focused on early and later stage opportunities in digital health, medical devices, diagnostics and enabling technologies throughout Europe.

They have participated in 165 rounds, have 94 companies in their portfolio right now and have exited from 26 companies.

COMMUNITIES, ORGANIZATIONS, INSTITUTIONS

Based on the data from <https://startup-map.berlin/> powered by Dealroom in Berlin there are almost 3,000 startups, almost 1,000 investors and 66 accelerators. There are many pages, hashtags and Facebook groups connecting members of the community. In 2015, the State of Berlin and partners from the startup industry founded the Berlin Startup Unit, which is aimed at improving city-hub conditions.



Berlin Startup Unit

City of Berlin



Axel Springer

Plug and Play Accelerator



Hubraum

Accelerator



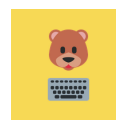
Silicon Allee

Space



B!GRÜNDET

Public



Startup Berlin

Chat Group

EVENTS



Tech Open Air is a technology festival. 150+ thought-leaders from tech, art and science share their visions on how they see the world evolving. TOA's 4.000m2 exhibition arena is taken by workshops and exhibitors sharing their latest projects.



Lean Startup Summit Berlin gathers experts, authors, founders, entrepreneurs and C-level leaders. Alongside keynotes and case studies, the event offers workshops and mentoring sessions, roundtable discussions, networking and matchmaking.



NOAH Berlin brings together future-shaping executives and investors active across segments driven by digital revolution. 5,000+ senior executives, leading experts and investors meet to discuss partnerships, investments or broaden their network.



TechCrunch Disrupt gathers the best and brightest entrepreneurs, investors, hackers and tech fans for on-stage interviews, the Startup Battlefield competition, a 24-hour Hackathon, Startup Alley, Hardware Alley and After Parties.



WeAreDevelopers is the largest developers' congress and gathers more than 10 000 developers and tech experts. It covers topics of Frontend & Backend, Cloud, Security, DevOps, Quality Engineering, AI, Blockchain, IoT, Robotics, AR/VR/XR, Mobility and Coding Society.



SUMMARY



Cost of Living
(without rent)

€ 484.69



Rent
(1 bedroom in the City Centre)

€ 523.35



Average Salary
(after Tax)

€ 824.90



Round size
(series Seed)

€ 0.31 M



Coworking
(per month)

€ 92



Internet
(60 Mbps or More)

€ 12.26

SOURCE: NUMBEQ, CRUNCHBASE, NOMAD LIST, OWN CALCULATIONS

GDANSK FOR STARTUPS

Gdańsk is still a relatively small and young ecosystem, still in the beginning of understanding the roles of potential players and attracting VC and startups. But does that mean that Gdańsk has nothing to offer? If you thought so then you should review your understanding - Gdańsk has the most valuable resource - talent. Polish developers are among the best in the world and this has been proven by many rankings. But how come that Polish developers are so good? Poland has more than 500 universities and 9 of them are listed in 1,000 best universities in the world ranking. It is worth mentioning that education in Poland is free, even in those top 9 universities. And Poland is producing engineers in huge quantities, a stunning 15,000 new specialists annually are joining the talent pool, and almost 1,000 comes from Gdańsk University of Technology and University of Gdańsk. Poland manages to attract engineers from neighbouring countries, especially from Ukraine, which is also known for the outstanding developers itself. If you combine affordable prices and extremely good code quality, Gdańsk is an ideal place to develop MVPs and manufacture products. A lot of startups have already noticed that and opened their R&D centres here or have hired Polish teams. A major developer conference called Infoshare is organized every year in Gdańsk.

Gdańsk is not only an outsourcing hub, the authorities and corporations try to bring funding into the ecosystem. Startups from abroad can apply for Inkubator Starter's Poland Prize acceleration program which helps them to move to Poland, provides funds and it equity free. Space3ac runs a Scaleup Program that connects startups with corporations and provides equity free funding to stimulate cooperation.

MOST KNOWN STARTUPS



UXPin



Finebite



SzybkaFaktura

The most known startup from Gdańsk is UXPin, an online design platform which allows users to create wireframes and cooperate online. Finebite, formerly known as Everytap, is a startup providing users with a possibility to get discounts through posting a review of a restaurant. SzybkaFaktura is an online invoicing tool supported by MCI Management S.A.

TOP INDUSTRIES



marketing



enterprise software



fintech

As we have already established, Poland is famous for its excellently skilled developers and that affects the choice of major industries where startups have decided to operate. They mainly revolve around tech and software.

TOP BUSINESS MODEL



subscription



commission



manufacturing

Gdańsk is extremely close to 2 other cities: Gdynia and Sopot, with which it creates a metropolitan area called Tricity. The Pomeranian region has the lowest unemployment rate - 4,9% and the highest GDP growth rate - 5,8%. Pomerania owes it to the incredible growth of jobs in the region, about 250.000 in the last 10 years and a lot of them are in tech.

NOTICEABLE STARTUPS FROM GDANSK

We have picked 6 startups funded in 2016 or later, with the biggest funding headquartered in Gdansk according to Dealroom's data, Crunchbase's data and our research.



SaaS Manager

telecom

Churn reducing software which uses AI to predict, which customers might leave your service and optimize offers to keep them engaged. This software is right now being used by major Polish telecoms, which are struggling with churn and customer retention.

<http://www.saasmgr.com>



DEBN

health

Unique prostate biopsy needle that delivers effective antibiotic combination directly to the prostate. It is right now on the clinical trial stage and plans to start selling the needle in the next 2 years on the EU market. For that purpose it has secured 2 rounds of funding from Alfabeat and Kvarko.

<http://www.debn.eu>



SentiOne

marketing

Social media monitoring service that allows brands to monitor any topic and automate reactions using AI. It also helps to find right influencers, monitor their work and increase brand awareness. SentiOne is used by companies like T-Mobile, LG, Nivea and P&G. It has received \$3.5M from Trigon TFI.

<http://sentione.com>



Poltreg

health

It works on new method of diabetes type I treatment using T-regulatory lymphocytes obtained from the patient's blood. In July 2018 it secured €2.5M grant from one of the Horizon 2020 programs as well as an investment from Innoventure, Venture FIZ and Paan Capital.

<http://poltreg.tech>



Robocamp

education

Lessons, exercises, workshops and ready to start sets that enable teachers to start teaching robotics in primary and secondary schools. In November 2018 it secured €470k funding from Alfabeat.

<https://www.robocamp.eu>



Green Goods

food

Oils containing omega-3 from algae obtained in cruelty free and ecological way. In July 2018 it received a €700k seed round from Black Pearls VC.

<http://greengoods.pl/>

GDANSK INVESTORS

According to Crunchbase companies from this hub have attracted 38 investors. We have picked 2 funds⁴ with the highest number of rounds done in the last 24 months.



Black Pearls VC

<http://www.blackpearls.vc>

They are focusing on Life Quality Technologies, deep tech & enterprise software solutions. Investing primarily in Polish entrepreneurs. They are looking for projects improving the quality of human life to address the most pressing social changes, particularly within the scope of demographics, labour and business. They invest between €100k and €1M.

They have participated in 29 rounds, have 24 companies in their portfolio right now and have exited from 8 companies.



Alfabeat

<https://alfabeat.com>

Looking for B2B Enterprise Software projects for vertical markets. Alfabeat has invested in Andiamo, Daily, DEBN, Fibrattech and Intiario.

They have participated in 11 rounds, have 10 companies in their portfolio right now and have exited from 1 company.

⁴ By a fund we understand venture capital, corporate venture fund, angel fund, private equity, investment fund

COMMUNITIES, ORGANIZATIONS, INSTITUTIONS

The Gdańsk community is relatively small and concentrated around one spot, supported with public funding and continues to grow. It is missing a website, a community name or a hashtag, which makes it harder for a person from the outside (especially for foreigners) to explore it. Although Inkubator Starter is planning to open one-stop shop service for the startup ecosystem next year.



Inkubator Starter

Incubator



Space3ac

Accelerator



O4

Coworking



GPNT

Gdansk Science and Technology
Park



ARP

Pomerania Development Agency



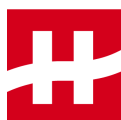
Techseed.me

Accelerator

EVENTS



Infoshare is a tech conference for developers, startups, investors, executives, innovation leaders and marketers. It gathers 5,500+ attendees from around 40 countries, 120+ keynote speakers and 250+ startups. The prize in the Startup Contest taking place during Infoshare is €20,000.



Startup Hansa is a biannual (spring and autumn) conference bringing together representatives from public authorities, accelerators, investors, startups and corporations from Amsterdam, Berlin, Gdansk, Phoenix and Stockholm.



Geek Girls Carrots Gdańsk is a part of the Polish Women in Tech community. It is organizing meet-ups, workshops and special IT meetings for women in tech. Typical event consists of 2 lectures and finishes with a networking party.



FuckUp Nights Trójmiasto is a part of global movement where stories about business failures are shared monthly.

PHOENIX

SUMMARY



Cost of Living
(without rent)

€ 777.18



Rent
(1 bedroom in the City Centre)

€ 1 090.29



Average Salary
(after Tax)

€ 3 061.22



Round size
(series A)

€ 5.05 M



Coworking
(per month)

€ 224



Internet
(60 Mbps or More)

€ 66.26

SOURCE: NUMBEO, CRUNCHBASE, NOMAD LIST, OWN CALCULATIONS

PHOENIX FOR STARTUPS

Phoenix, with competitors like New York City or San Francisco, has never had an easy job with building its own ecosystem. But the people there have worked hard to create a haven for entrepreneurs. The state authorities have successfully reduced regulations by introducing several laws in the last two years, specifically to address the needs of financial and real estate startups. Arizona was the first state that has introduced regulatory fintech sandbox that allows startups to test their products for up to 2 years and serve 10,000 clients before applying for a regular license. In March 2018 Arizona set up a similar act, bringing to life a similar sandbox for real estate. This is so unique that real estate startups are relocating their employees to Phoenix. To make this complete, the state government has introduced laws that make it easier for people from outside of the States to work legally in Arizona. The fight for startups is often very brutal and competitive and it can be pictured by the campaign called #CAstruggles, aiming to convince startups to move to Phoenix. Inc. in their ranking has put Phoenix on 11th place of the best places in America for starting a business.

Arizona also perfectly understands that a Startup Hub needs talent to evolve and grow. They do not only try to attract talent by introducing laws. They are also growing their own. Arizona State University runs Entrepreneurship + Innovation program and Startup School. At the workshops they teach how to do an elevator pitch, complete Business Model Canvas, identify Minimum Viable Product, understand various cost and revenue models. Universities try to fill tech talent gap but still struggle with that.

MOST KNOWN STARTUPS



Symphony Health



Axway



Solera Health

The Community starts to benefit from the success of Phoenix based startups, as the founders and employees representing them try to give back to the community and provide mentorship and knowledge.

The Phoenix startup community is called #yesphx. It has started as a hashtag but since then has grown fast and evolved into a community. The community is well organised and provides step by step guides for people who want to connect. This is really important if you have in mind their goals like bringing new talent to Phoenix.

TOP INDUSTRIES



marketing



health



fintech

Phoenix stands out as a hub with its healthcare and bioscience projects. During the next 2 years more than 7,000 jobs in healthcare and bioscience will be created. The city of Phoenix invests in building bioscience infrastructure and due to this attracts companies and startups from this sector. One of the investment created through that activities is Phoenix Biomedical Campus.

TOP BUSINESS MODELS



subscription



commission



manufacturing

Phoenix has been playing its cards well, they have more sun and lower cost of living compared to the other hubs in US. But is it missing something? What are Phoenix's biggest struggles as a hub? Definitely one of them is the lack of trusted VCs. Right now they do not see a good reason to open a permanent office in the city. They are just visitors there as the good flight connections make it easy to visit Phoenix when needed (San Francisco is just 2h direct flight from Phoenix) and therefore do not make a permanent impact on the ecosystem. The local government is working hard on increasing access to funding. Phoenix is also home to the Arizona Innovation Challenge, which is one of the startups competitions worth your attention as twice a year they award startups with up to \$3M.

NOTICEABLE STARTUPS FROM PHOENIX

We have picked 6 startups established in 2016 and later with the largest funding headquartered in Phoenix according to Dealroom's data.



Qwick

food

On-demand staffing as a service platform that connects service industry professionals with food and beverage shifts in real-time. Qwick raised \$4,8M in pre-seed (\$1,3M) and seed round (\$3.5M).

<https://www.qwick.com>



SurchX

fintech

By recognising a credit card on the moment of transaction SurchX counts a fee and provides a possibility to pass it onto the customer. SurchX is one of the 3 winners of Thompson Reuters Global RegTech Competition.

<https://www.surchx.com>



Chassi

enterprise software

Customer Experience Engineering (CXE) platform. Chassi engine leads each customer through his personalised journey, identifying common trouble spots and predicting outcomes. Chassi provides APIs for developers that can assist in implementing Chassi directly into their solutions. In September 2018 they secured \$2,5M seed round from Rise of the Rest.

<https://www.chassi.com>



Mindset Medical

health

Medtech startup producing a mobile application to collect outcomes remotely and monitor patients' progress. In March 2018 they raised \$1.3m investment capital for the release and expansion of this app. They are bringing mobile check-in experience to medicine.

<https://mindsetmedical.com>



Prospectify

marketing

Data intelligence company that helps sales teams correctly identify and connect with qualified leads and close deals. Included by Venture Beat on a list of 10 AI startups blossoming beyond Silicon Valley.

<https://prospectify.io>



Insurmi

fintech

Customer engagement tool powered by conversational AI. In September 2019 it secured an additional \$1M in the round led by Coplex and with participation from a group of prominent international angel investors and Global Insurance Accelerator (GIA). Semifinalist in the Fall 2019 round of the Arizona Innovation Challenge.

<http://insurmi.com>

PHOENIX INVESTORS

According to Crunchbase companies from this hub have attracted 247 investors. We have picked 4 funds⁵ with the highest number of rounds done in the last 24 months.



Social Leverage

<https://www.socialleverage.com>

Mainly focused on software companies from 3 areas: finance, enterprise SaaS and B2C. They invest on early- and seed-stage. Their notable investments include StockTwits, ChartIQ, eToro, Robinhood, BillGuard, ApplePie Capital, ProducePay, Assistly, Embedly, Kustomer and Narvar.

They have participated in 89 rounds, have 40 companies in their portfolio right now and have exited from 27 companies.



Grayhawk Capital

<http://grayhawkcapiatal.us>

They look for mobile computing, cloud/SaaS, enterprise software, security, business intelligence, finance and healthcare IT. They mainly invest on early revenue stage but as well invest before revenue and growth stage. They invest in US and Israel.

They have participated in 25 rounds, have 11 companies in their portfolio right now and have exited from 6 companies.

⁵ By a fund we understand venture capital, corporate venture fund, angel fund, private equity, investment fund



Arizona Founders Fund

<https://azff.co>

They invest in software startups from Arizona. As they say they are writing checks between \$50,000 and \$400,000. They have invested in eVisit, AllBound, ShelvSpace, BayIQ, InHouse and LawLytics.

They have participated in 7 rounds and have 4 companies in their portfolio right now.

COMMUNITIES, ORGANIZATIONS, INSTITUTIONS

The Phoenix community is well organized, open and easy to explore. There has been a lot of effort to maintain and develop it by universities, serial entrepreneurs and the local government.



yesphx
Community



ASU
Arizona State University



Seed Spot
Accelerator



AZ TechCelerator
Accelerator



Draper University
Entrepreneurship Program



CEI
Center for Entrepreneurial
Innovation

EVENTS



1 million cups is a weekly event that brings the Phoenix Entrepreneurship Community together over coffee and conversation. Every week entrepreneurs present business ideas to the local community and learn how those around them can support their business in its growth.



Manhattan Momentum conference is held by Manhattan Associates. It brings more than 1,000 customer attendees who enjoy three days of inspiring, informative content from global thought leaders, market changers and trend setters.



inc. 5000 Conference & Gala is an annual three-day event gathering celebrated companies that appear on *Inc.* magazine's prestigious ranking of America's fastest-growing privately held companies. The conference culminates in a black-tie gala. All current and past Inc. 5000 honourees and entrepreneurs and business leaders from all industries and company sizes are welcome to attend.



Startup Grind is a worldwide community in partnership with Google for Startups, present in Phoenix. They are hosting monthly events on various topics. The ticket costs around \$15 per event.



PHX Startup Week powered by Techstars is an annual event lasting 6 days and including 100+ events. Every year it has attracted over 2,000 attendees on keynotes, panel discussions, workshops and mentorship.

STOCKHOLM

SUMMARY



Cost of Living
(without rent)

€ 816.13



Rent
(1 bedroom in the City Centre)

€ 1 112.02



Average Salary
(after Tax)

€ 2 351.00



Round size
(series A)

€ 5.93 M



Coworking
(per month)

€ 417



Internet
(60 Mbps or More)

€ 27.35

SOURCE: NUMBEO, CRUNCHBASE, NOMAD LIST, OWN CALCULATIONS

STOCKHOLM FOR STARTUPS

The capital of Sweden is by many acclaimed to be the second best hub globally after Silicon Valley, mostly because of its 7 unicorns. It is especially impressive when you take into consideration the population of the city itself (less than 1M in the municipality and 2,4M in the metropolitan area). This gives Stockholm the highest per capita number of unicorns outside of Silicon Valley. These success stories, together with the capital created and being re-invested and people with skills and experience, have helped to establish and mature startup ecosystem.

However, there are some other factors that may have played their role. Sweden has a long lasting tradition of engineering and design companies, which include companies like Saab, Volvo, Electrolux and Ericsson among the others. It is worth pointing out that 18% of the workforce works in tech and this number is rising. Higher education is relatively inexpensive and that, along with a good number of universities and technical colleges, assures a high volume of tech graduates entering the market every year.

Swedes possess high proficiency in English which helps them scale outside of the local market (there is only around 10 mln inhabitants in the country). Sweden has also one of the fastest broadband speeds worldwide and thanks to governmental subsidies to personal computers in the 1990s has a very high computer literacy level.

Among factors that may be harder to quantify is the quality of life. The Swedes love to point out how beautiful the nature in the country is and the possibility to achieve work life balance (lengthy holidays, maternity/paternity leaves, etc.).

MOST KNOWN STARTUPS



Spotify



Klarna



Mojang

Stockholm is a place where many famous startups have been born and/or have grown significantly. The list includes ones like Spotify - a popular global music streaming service with over 96M paying subscribers, Mojang - a game developer which created Minecraft, King - another gaming company, which created among others the hit Candy Crush and Klarna - global tech bank, providing online financial services such as debt collection, online storefronts and credit payments.

TOP INDUSTRIES



marketing



enterprise software



fintech

Among most popular industries in Stockholm you can find marketing, enterprise software and fintech. They seem to reflect the advantages of the ecosystem: online access, engineering skills and scaling out of the country fast.

TOP BUSINESS MODELS



subscription



commission



manufacturing

Stockholm companies proved to have a long lasting presence in online services. They take advantage of the features of the ecosystem and start to scale early. They have managed to succeed in securing their positions in subscription and commission based models (music streaming, game publishing) and manufacturing, taking advantage of opportunity to digitalise traditional engineering, which had a long tradition in Sweden.

NOTICEABLE STARTUPS FROM STOCKHOLM

We have picked 6 startups created in 2016 and later with biggest funding and headquartered in Stockholm according to Dealroom's data.



Northvolt

energy

Produces high-quality, green batteries - recyclable and with a minimal carbon footprint. It has offices in 3 countries: Sweden, Poland and Japan. In June 2019 it raised €886 million in a round led by Volkswagen and Goldman Sachs, after receiving €350 million loan from the European Investment Bank to build a gigafactory.

<https://northvolt.com>



Voi Technology

transportation

E-scooter operator, launched in September 2018, has right now more than 4M scooters and has scaled to 9 countries and is operating in almost 40 cities. Just last month (November 2019) it raised an enormous round of €77M in Series B to put even more scooters on the streets.

<https://www.voiscooters.com>



Bynk

fintech

A mobile loan app. Users can easily apply for a loan of up to SEK 300,000 (~ €3200) for buying a car, home renovation, consolidation or any different reason. The unique features are the possibility to manage loan through the app by making payments, changing repayment period and pay off date. It also is starting to provide their own credit cards. In the beginning of 2019 it received €48M in equity funding from Schibsted and LMK Industri. Schibsted right now owns 32% of the company and has followed up 3 times on the initial seed round.

<https://bynk.se>



ITBMed

health

Biopharmaceutical developing specific immunomodulatory biologics primarily for organ transplantation and stem cell transplantation. In April 2018 it raised \$67M led by Mr. Pablo Legorreta, the founder and CEO of Royalty Pharma. These funds are used for further development of Siplizumab-based treatment that can potentially free post transplant patients from taking immunosuppressants.

<http://itb-med.com>



MyVox Ultrasonics

robotics

Develops disruptive contact-free HMI and MMI ultrasound technology. The technology developed by MyVox can be applied in automotive, industry automation and robotics, smart home, med tech, wearables and gaming. The company is mainly publicly backed.

<https://www.myvoxultrasonics.com>



Embark Studios AB

gaming

Game studio founded by former Electronic Arts and DICE executive, Patrick Söderlund. In November 2018 it secured approximately \$41M from Nexon, a South Korean producer of MMORPG and other online games.

<https://www.embark-studios.com>

STOCKHOLM INVESTORS

According to Crunchbase companies from this hub have attracted 1973 investors. We have picked 6 funds⁶ with the highest number of rounds done in the last 24 months.



Almi Invest

<https://www.almi.se/en/almi-invest>

Primarily focused on Tech (Enterprise and Consumer Software, Mediatech, Data & Security, eCommerce, Fintech, VR/AR, IoT, Gaming, HR Tech), Life Science (Medtech, Drug Development, eHealth), Cleantech (Renewable Energy, Energy, Recycling Systems), Industry (Industrial Equipment, Materials, Agritech, 3D-printing). They are making around 50 new investments annually.

They have participated in 267 rounds, have 264 companies in their portfolio right now and have exited from 13 companies.



Creandum

<https://www.creandum.com>

They have offices in 3 cities Stockholm, Berlin and San Francisco. Their smallest initial ticket so far has been €200k and the largest one - €8M. The value of their exits in 2018 amounted to astonishing €35B, the main part of this sum resulting from exit from Spotify (\$29.5B). However, iZettle's acquisition by PayPal for \$2.2B and Giant Games' by Zynga for \$700M are also worth noticing.

They have participated in 129 rounds, have 60 companies in their portfolio right now and have exited from 23 companies.

⁶ By a fund we understand venture capital, corporate venture fund, angel fund, private equity, investment fund



Northzone

<https://northzone.com>

Probably best-known for being an early backer of Spotify. They have 4 offices in Stockholm, Oslo, New York and London. They are mainly interested in Series A and B investments but also do some exceptions and invest in seed rounds.

They have participated in 170 rounds, have 67 companies in their portfolio right now and have exited from 50 companies.



EQT Ventures

<https://eqtventures.com>

The fund does not focus on any particular market or industry and has multi-stage strategy. That is why the typical equity investment ranges between €1M and €75M, from A round all the way to growth rounds. Their notable investments include Oden Technologies, Holidu, Riskmethods, Min Doktor, Wolt, Verto Analytics, Unomaly, 3D Hubs and Watty.

They have participated in 65 rounds, have 46 companies in their portfolio right now and have exited from 2 companies.



Kinnevik

<https://www.kinnevik.com>

They focus on Fashion & Food e-Commerce, Online Marketplaces, Financial Services, Healthcare and TMT projects. They are interested mostly in projects using technology to address material, everyday consumer needs. They invest around the world, but most of the investments they have made are located in Germany, Sweden and USA. However, they also invest in South Africa, Brazil and Singapore.

They have participated in 68 rounds, have 32 companies in their portfolio right now and have exited from 14 companies.



Vostok New Ventures

<https://www.vostoknewventures.com>

A fund focused on Internet and consumer sectors around the globe, especially Russia, Pakistan and Egypt. Vostok New Ventures is listed on the NASDAQ Stockholm Exchange with the ticker VNV SDB. Their most known investments are Blablacar, Gett, Delivery Hero and Booksy.

They have participated in 36 rounds, have 20 companies in their portfolio right now and have exited from 5 companies.

COMMUNITIES, ORGANIZATIONS, INSTITUTIONS

Stockholm's startup ecosystem is well developed and there are lots of organizations playing an active role. It is a good example of successful public-private cooperation which resulted in establishing entities like Sting - publicly backed, but acting according to the best business practices.



Startup Sthlm

Non-profit



Vinnova

Sweden's Innovation Authority



Sting

Incubator and accelerator



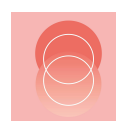
SUP46

Start-Up People of Sweden



#sthlmtech

Community



SSES

Stockholm School of
Entrepreneurship

EVENTS



STHLM TECH Meetup is a monthly meetup presenting the latest community news, every meetup hosts special guest speakers and 3 startups pitch live to invited investors.



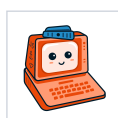
STHLM TECH Fest is an annual conference bringing together hundreds of tech entrepreneurs, founders, investors, designers, developers and journalists. Conference includes demo day for investors, a hackathon and safari trips presenting the ecosystem.



Annual Swedish Startup Gala hosted by SUP46 is a gala with prizes awarded in the following categories: Swedish Startup Hall of Fame, Startup Launch of the Year, Startup Team of the Year, Startup Expansion of the Year, Pay it Forward Investor of the Year. Every year there is a different theme, in 2019 it was „diversity & the first time”.



Brilliant Minds have been started by Spotify's co-founder, Daniel Ek. The conference has hosted President Barack Obama, Secretary John Kerry, Gwyneth Paltrow, Naomi Campbell and Evan Spiegel. The event is a week-long festival with experience of creative house at the intersection of tech and music. Known as the “Creative Davos”, the conference is accessible by invitation or through very pricy tickets.



Nordic.js is a two-day conference for JavaScript developers. The conference hosts internationally renowned speakers and rising stars in the JavaScript community. It gathers 1 000 developers and designers on both structured and informal networking sessions.



Sting Day is an exclusive, invitation-only event for 400 carefully selected guests. The list includes 60 selected startups from all over Sweden and 200 investors from 15 countries. They are not selling tickets.

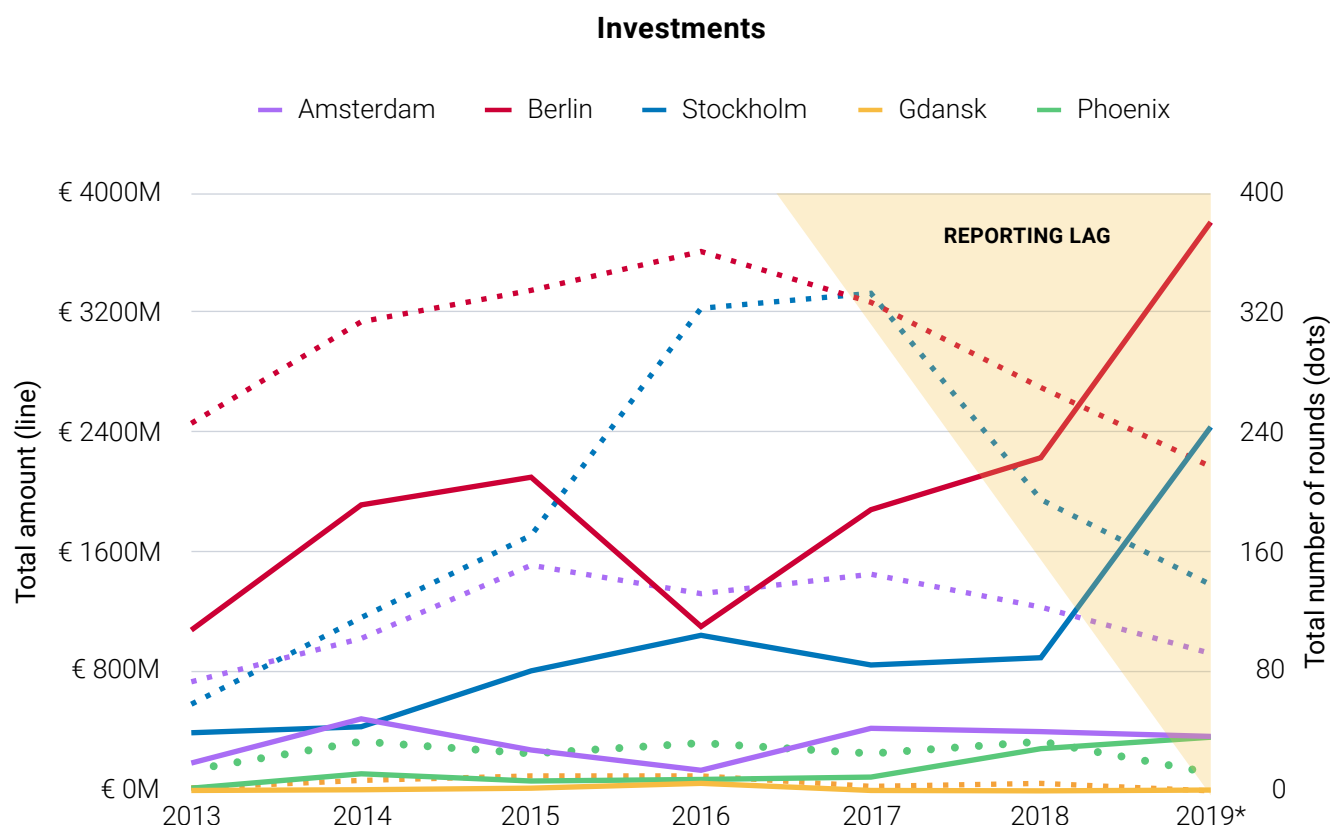


Artic15 is a matchmaking startup event. The focus is on making deals and quality networking. The 2-day event brings together a focused international crowd of startups, investors, corporates, media and influencers. Focused on various industries, technologies and topics ranging from Digital Health and AI to Social Impact and Scaling. Industry players can use the time efficiently and gather under one roof. The core of it all are one-on-one meetings in Deal Room.

HUBS COMPARISON

INVESTMENTS

The total amount of investments and the number of rounds in which they have been executed is the most basic metric of a Startup Hub as it gives a perspective on the ability of companies from this hub to raise money and the probability of finding an investor inside it.



Definitely Berlin and Amsterdam are the most powerful hubs among the five chosen for this report. This is visible not only in the number of deals and their amount but also in the number of investors present⁷ in this hub: 4206 in Berlin and 1973 in Stockholm. Both of these hubs are mature, sophisticated and growing.

Amsterdam seems to maintain stable conditions but if one takes into consideration reporting lag and the missing Q4, the data for Amsterdam will probably show a slight growth as it is also a mature ecosystem and has attracted 1169 investors.

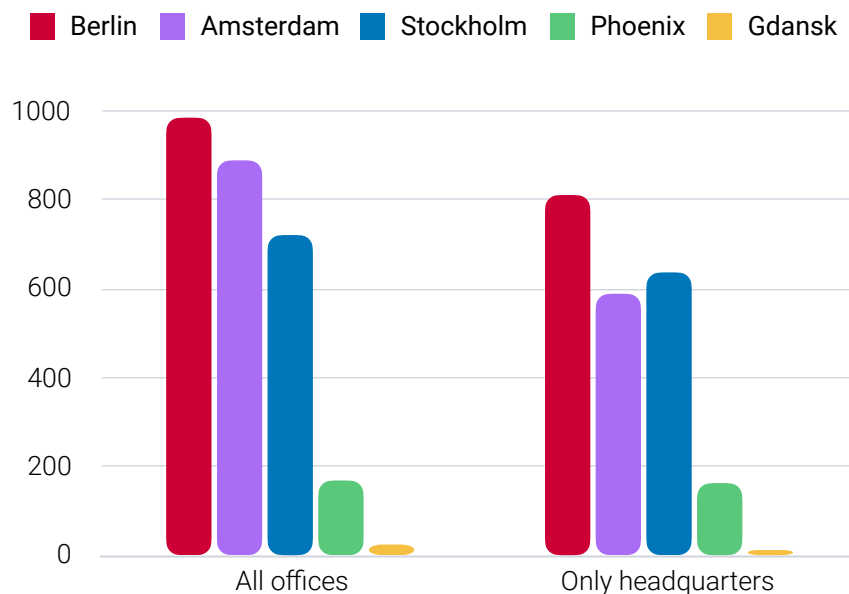
Phoenix is in the development stage and has started attracting investors, noticing slight growth in the last 2 years. In total 247 investors have invested in companies from this Hub.

Gdańsk sadly struggles with attracting investors and only 38 have financed the companies from this hub.

⁷ Investor which invest in the company from the hub.

The presence of investors can be measured not only by the sheer number of investments in the companies from a given hub but also by their physical presence, i.e. having an office in the area of a given hub. A high volume of investors established in the hub increases the chances of getting funded by the companies from the hub. The most common cause of a hub's death or lack of a hub's development is the absence of capital. If there is no investment cash in a given hub and there are other hubs located in proximity and there is capital there then talent will simply move to that location.

Investors - physical presence

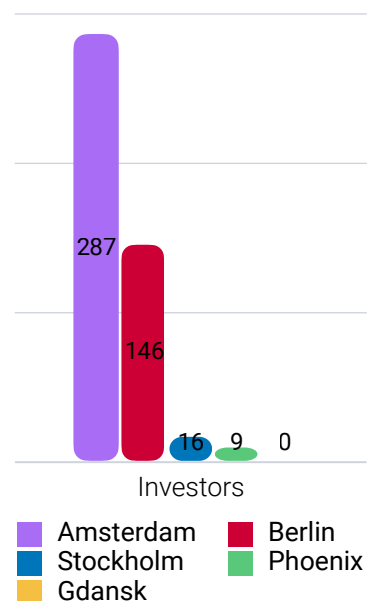


Berlin, Amsterdam and Stockholm offer that possibility and in this way they attract startups and founders and because of that they encourage even more new investors to settle there. It is worth noting that a huge amount of investors who are present in the hub have headquarters (HQ) in that city: 83% of investors present in Berlin have HQ in Berlin, 89% in Stockholm. Gdańsk struggles with the lack of investments which is caused by the absence of investors from outside of the city.

Attractiveness of the hub can be also measured by how many investors the hub has attracted and encouraged to open an office in it, especially investors coming from outside of the country. Amsterdam is the best in attracting foreign innovators, it has convinced 287 companies to open an office in the city. Berlin has managed to convince almost exactly half as much - 146. Surprisingly, Stockholm has totally failed in this task and almost all of the investors are from within the city or have relocated all of their operations there.

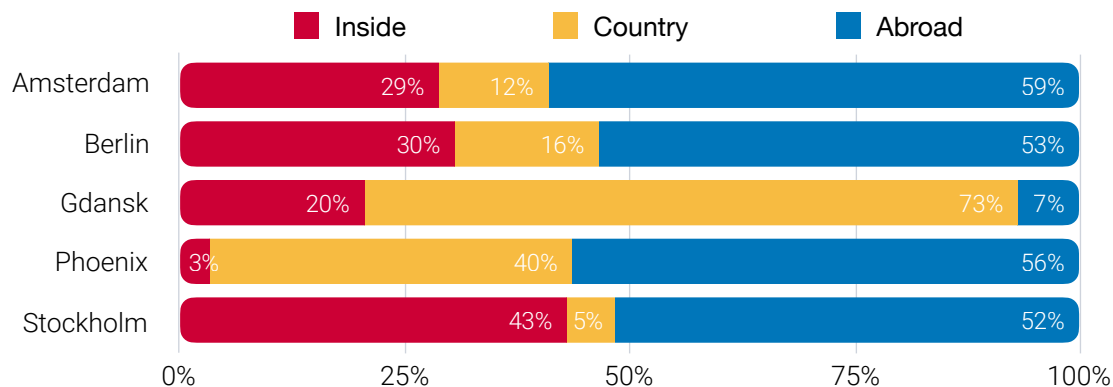
But how does this correlate with financing rounds? How many of the rounds are coming from inside the hub and how many come from outside. Does having investors inside the hub secure the funding for companies within it?

Number of foreign investors that the hub has convinced to open an office



The ability to attract capital from abroad is very important for the hub and its inhabitants. The UK can be proud of their tech companies which were able to attract €3.31B in the first 7 months of 2019. Their strong recognition and long-standing reputation have convinced investors from the US and Asia to continue putting their money in and maintaining in their belief in the companies from this country. The biggest hub in the UK, in London, more than half (51%) of the funding rounds come from foreign investors. Similar distribution can be also observed in Tel Aviv (56%).

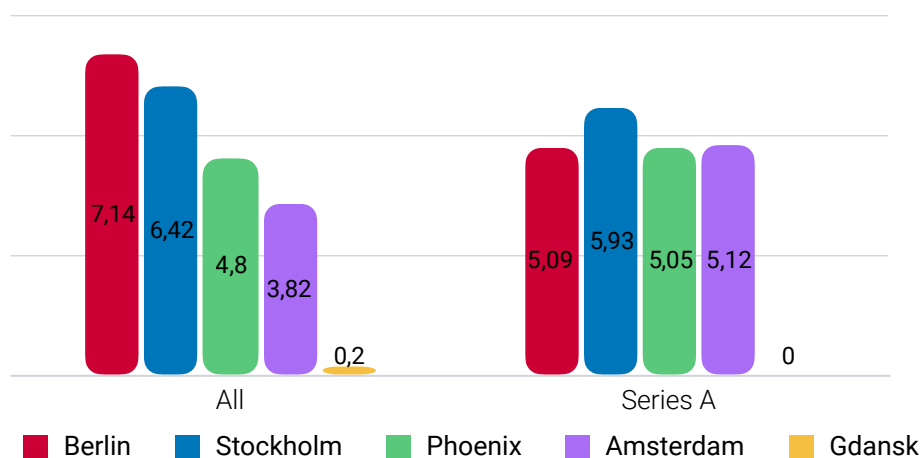
Investment rounds by source of capital



Mature ecosystems like Amsterdam, Berlin and Stockholm have similar distribution, around 30-40% of investments come from within the hub, more than 50% from foreign investors and the rest from other cities within the same country. That seems to be the secret sauce of proportions, ensuring the right amount of money on the market.

If within the country there are one or more competitive hubs or if there are some in close proximity, we can observe that lot of investments may come from there and that was the case for Gdańsk and Phoenix. The proximity of a larger hub can be helpful or be deadly, it can bring easy money into hub's ecosystem but it may as well lead to brain drain. A really good strategy of keeping the local talent and convincing new talent to relocate has been presented by Phoenix in the way of creating new legal solutions (i.e. fintech and real estate sandboxes) and pointing out advantages like lower cost of living. The authorities are trying not only to inspire startups to move there but also to convince investors to invest their money there.

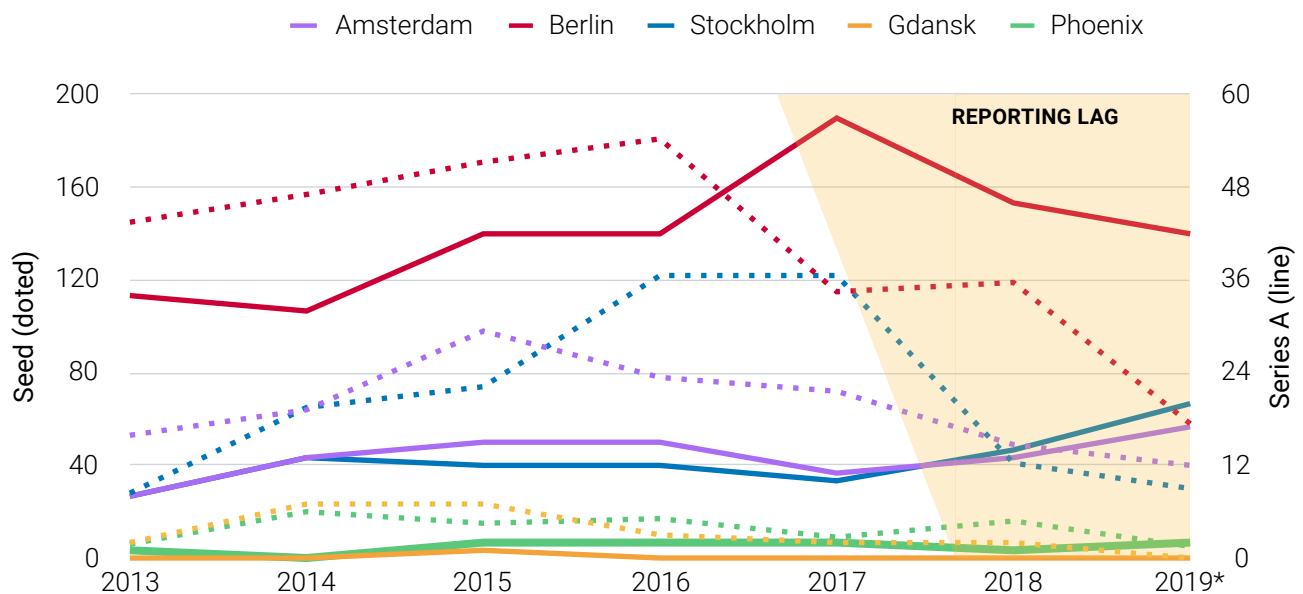
Average round size in M €



The average Series A round oscillates at a level close to 6 mln EUR. Four of the hubs: Amsterdam, Berlin, Phoenix and Stockholm meet this point. Massive D, E and growth equity rounds (+€1B) in Berlin and Stockholm have managed to boost the average size of total rounds.

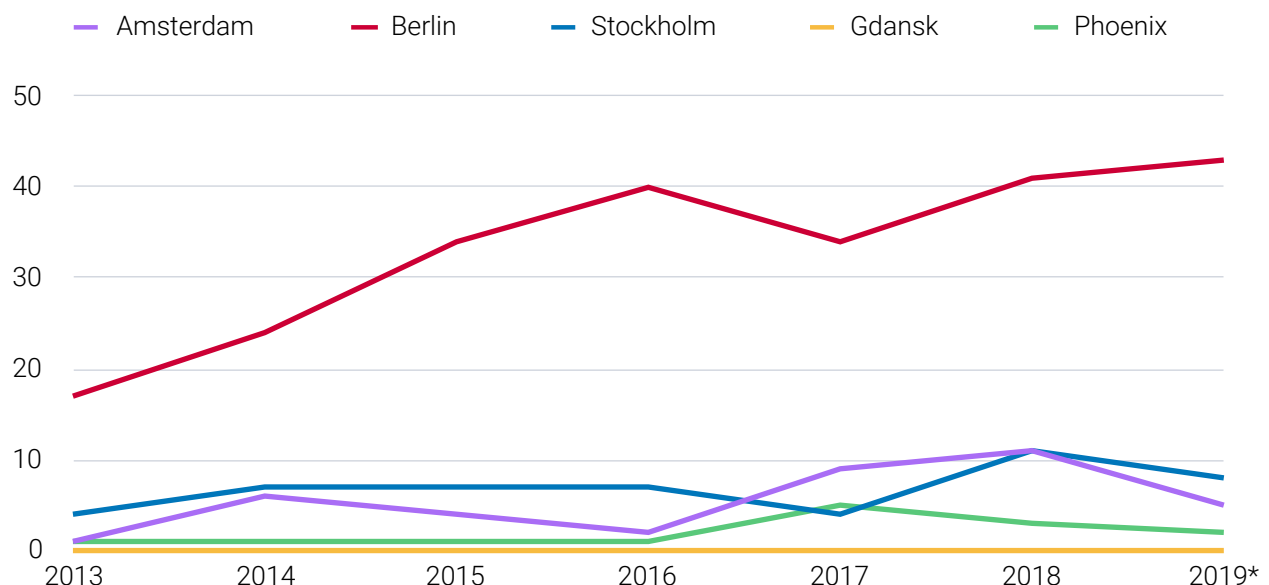
By evaluating the stages of funding rounds throughout the years we can notice how developed and mature the hub is. A large number of seed investments and the lack of Series B+ characterises a fast growing but young ecosystem, while a dropping number of seed rounds can be a sign of trouble.

Number of Seed and Series A rounds



The dropping number of seed rounds in Berlin, Stockholm and Amsterdam might indicate that they have reached their limit of talent - gifted entrepreneurs are already working on their projects and new talent is not coming in the amount that is needed to maintain growth. Reporting lag can explain some small discrepancies in the data but the difference is too stark for this to be the only explanation.

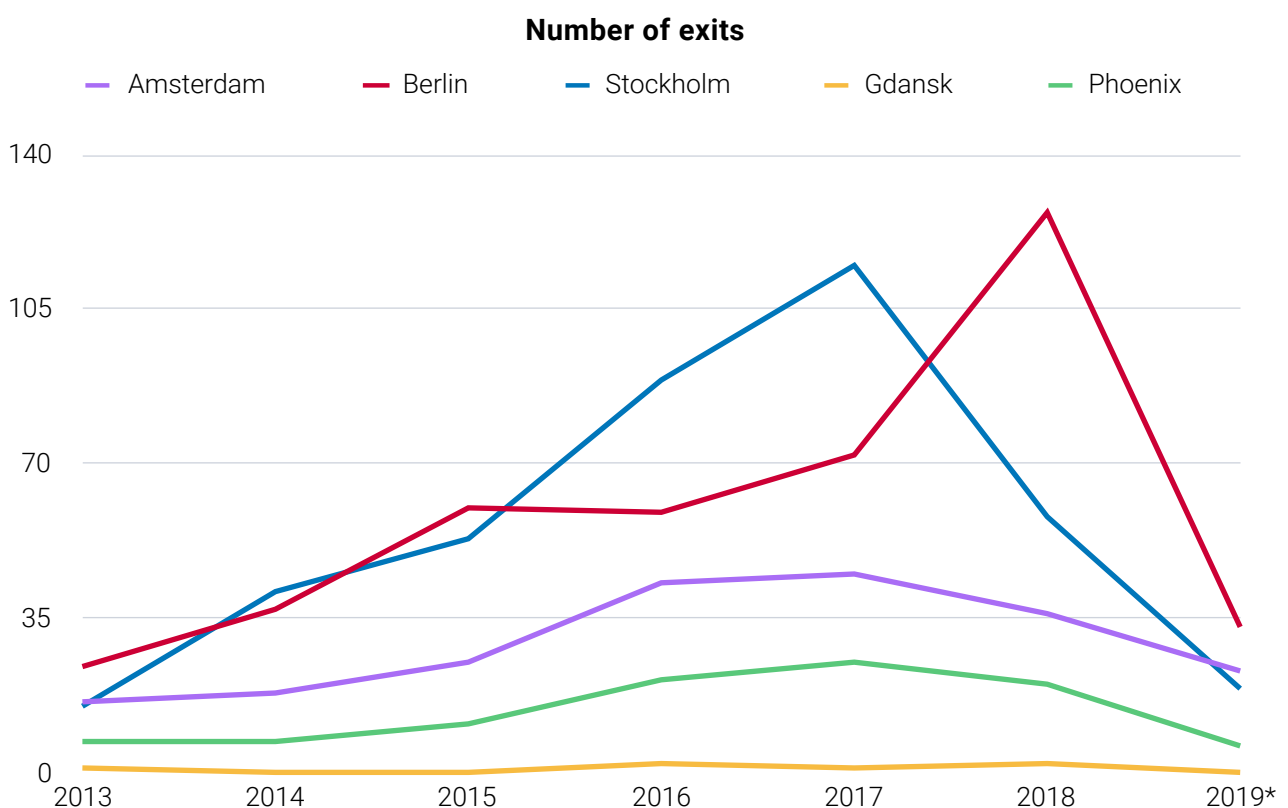
Number of Series B+ rounds



The growing number of B+ rounds in Berlin seems to confirm that the hub has matured and is going into the next stage of development. Growing and scaling startups are “consumers” of talent. Zalando employs more than six thousands people and is still growing, while SoundCloud and Delivery Hero with more than one thousand people each. Berlin needs to closely observe their ecosystem and if the number of seed rounds is really dropping, then it needs to start attracting fundable talent from outside. B+ rounds in Stockholm and Amsterdam have stalled rapidly which is something that should be considered to be even more alarming.

EXITS

Not only investments are the measure of a hub’s success - also exits are an important metric and they are more vivid and definitely more spectacular. A good exit can bring attention to the hub from investors around the globe. Startup successes are not enough to convince an investor to engage in the ecosystem but significant exits are one of the ways to do it.

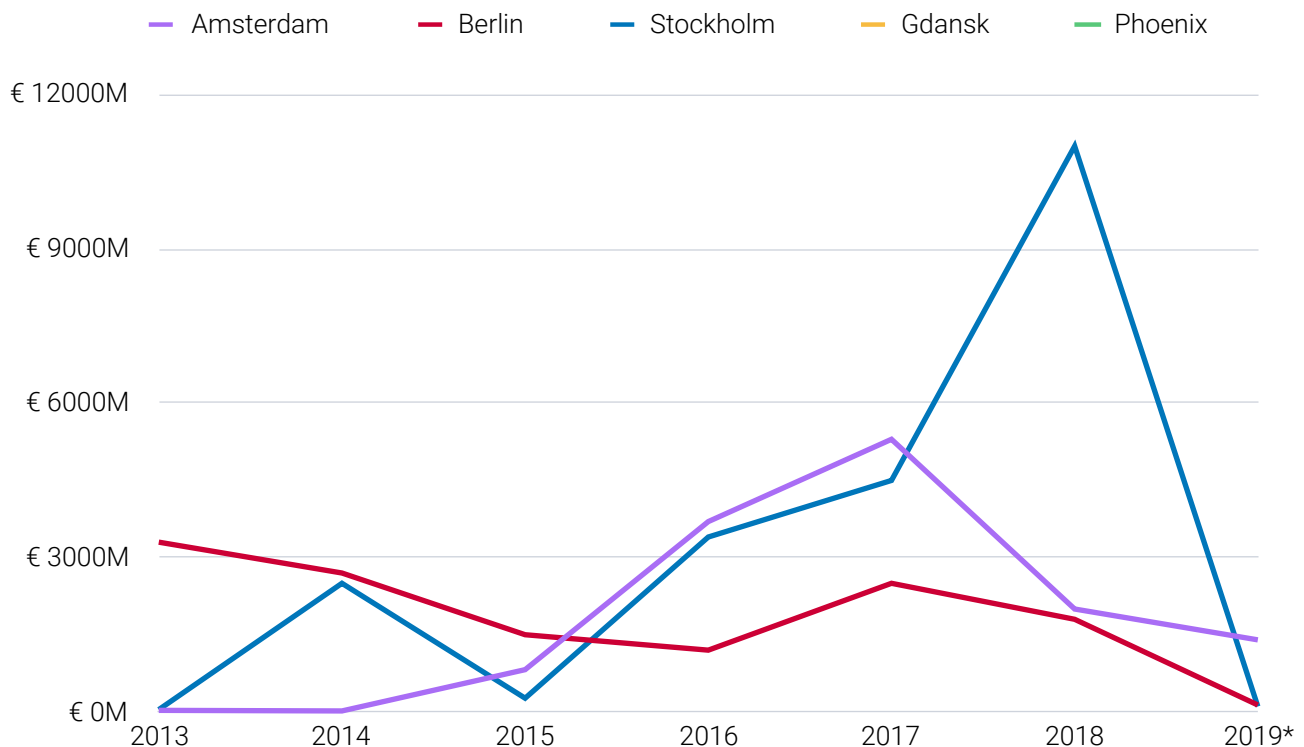


In April 2014, Techcrunch wrote as follows : “What’s missing in the Berlin tech ecosystem? Well, a few things. But the **elephant in the room really is one – no, a few – sizeable exits.**”⁸ While Berlin was missing notable exits, it already had success stories like Zalando and Delivery Hero, but nobody has decided to sell a significant portion of their shares. On average, European startups exit after 10 years, that is not odd, but the pressure for exiting has been extreme. Fortunately Techcrunch did not have to wait long as in September of the same year Zalando made their IPO with a valuation of €5.3B and raising an additional €605M, that made it the biggest IPO since the listing of Deutsche Telekom. As much as Zalando has been Berlin’s successful exit story, the same can be said about Spotify in Stockholm. Adyen, the famous

⁸ Techcrunch: **Let’s Talk About Exits, Berlin** - April 26, 2014 - <https://techcrunch.com/2014/04/26/lets-talk-about-exits-berlin/>

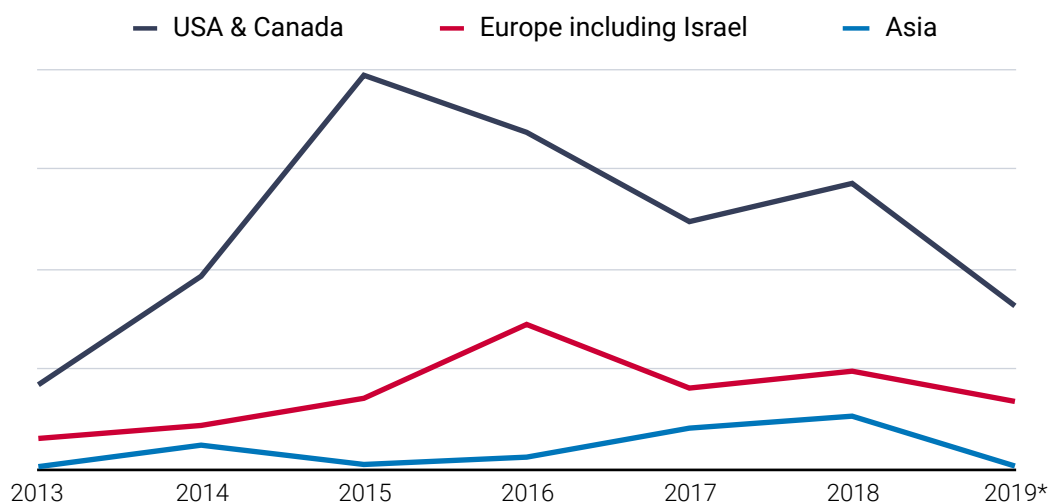
Amsterdam fintech startup, has been priced at €240 per share and company valuation has reached €7.1B. We have seen a large growth in the number of exits between 2014-2018 in Berlin. It was especially good news as Berlin startups have exited before the average European startup in their 5th, 6th, 7th, 8th and 9th year of operations. But 2019 seems to be a huge disappointment in the matter of exits, not only for Berlin.

Total amount of exits



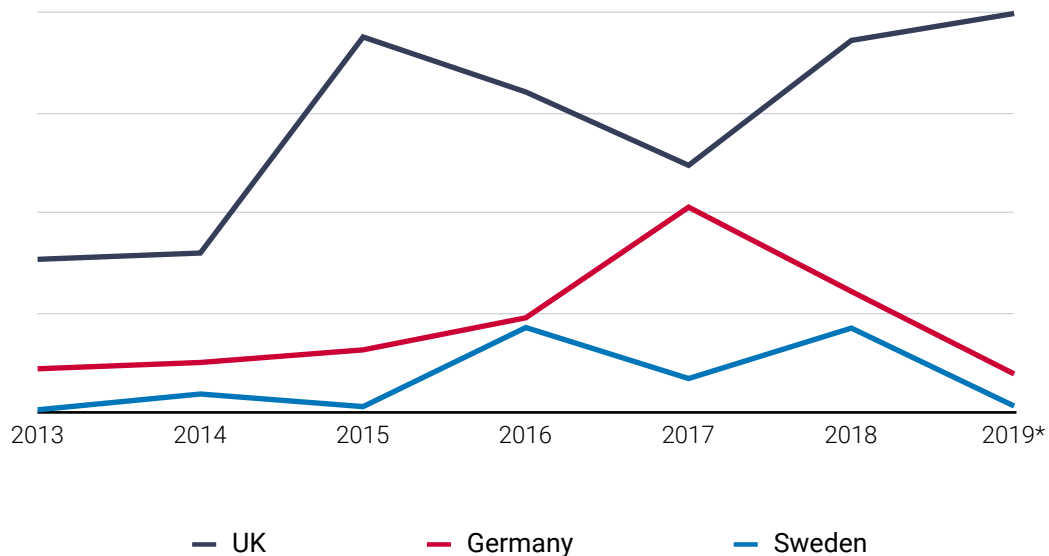
Stockholm startups reported only €105M exits compared to €11B in 2018. In Berlin startup exits amounted only to €134M in comparison to €1.8B in 2018. Amsterdam seemed to have levelled down from the year before, however it has kept some level of significant enough exits while in other locations this indicator has dropped to some very unimpressive amounts. Is it a sign of something we should be afraid of or is it normal? Startup exits happen only after achieving some particular stage of growth and some years can be "empty". To figure this out an overview on the global situation may be highly beneficial.

Total amount of exits



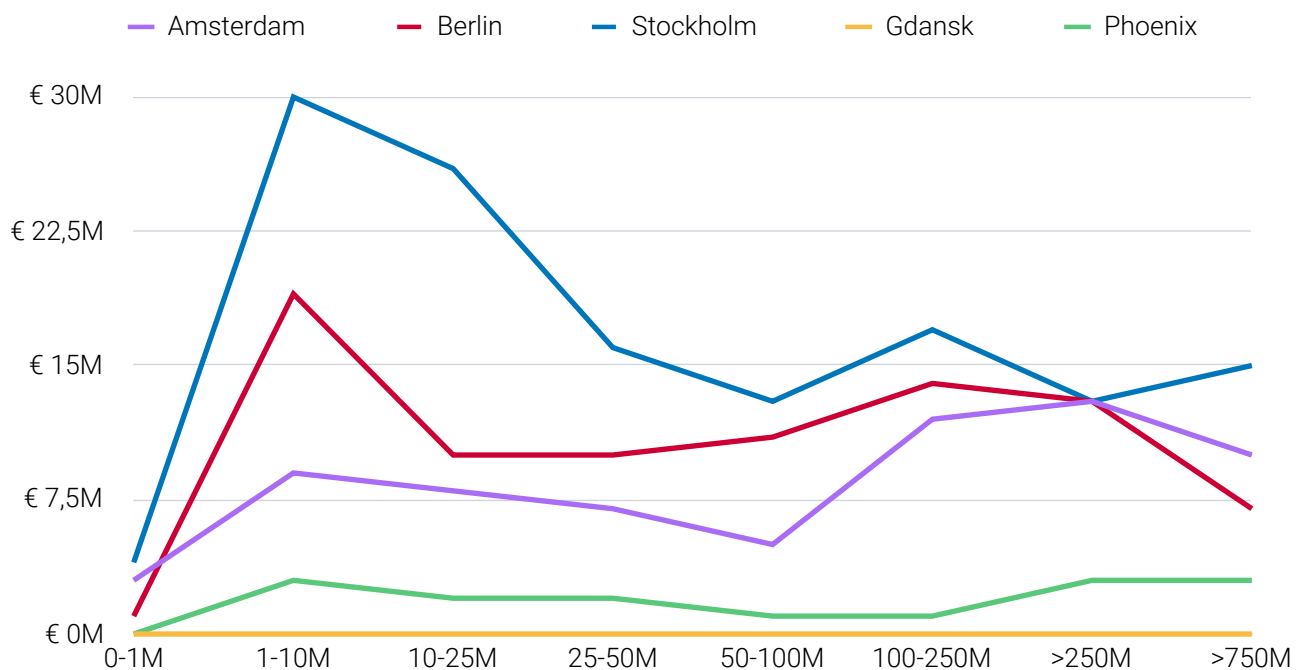
Exits in US have dropped from almost €500B in 2018 to a little bit over €280B in 2019 at point of writing this report. Of course some of them may not have been reported yet but in the last 5 years the biggest transactions have been made in October at the latest and the amounts oscillated around €30-40B. Right now the four biggest exits have been made in the first quarter of the year where the most significant of them amounted to €15.7B.

Total amount of exits



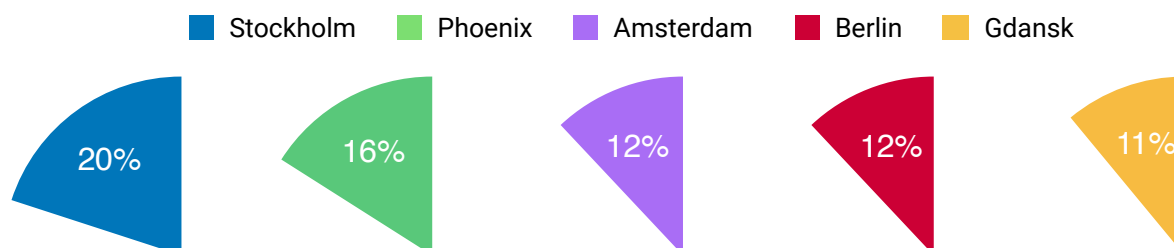
The data seems to be inconsistent on this topic. UK startups seem to be exiting a lot in the last 3 years but this may be in a way connected to Brexit. Is it a way to liquidate unsure British assets? Or is it realising gains? Germany and Sweden are dropping. Close monitoring of the exit numbers and amounts in coming months is needed.

Exits size



Exits happen mainly in two cases: in €1-50M area which is basically getting back investment with some profit or loss or €50+ M when it is a big win. Stockholm startups have been the most successful at exits, Amsterdam is definitely a longterm player and Berlin seems to be impatient.

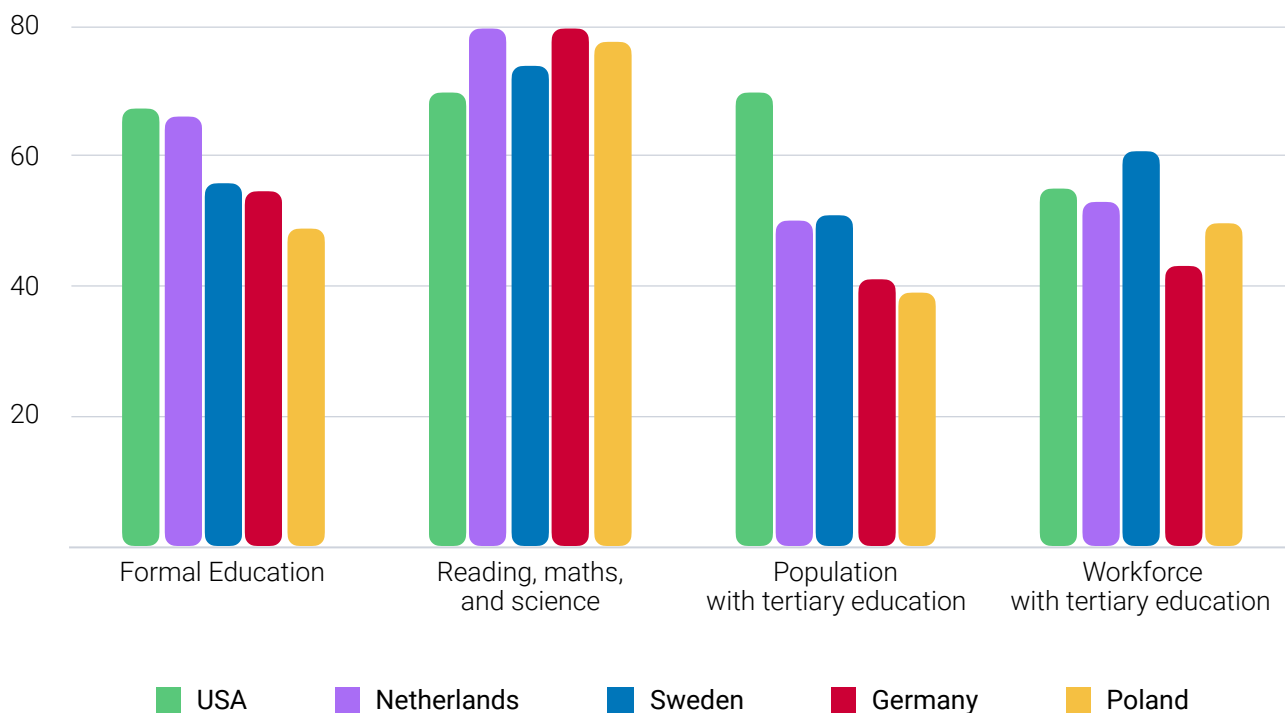
Percentage Acquired Companies



TALENT

Talent is the second biggest metric showing the power of the hub. As investors like to say the idea makes an initial buzz but the execution is where it really matters. We have used The 2019 Global Talent Competitiveness Index: Entrepreneurial Talent and Global Competitiveness to establish the talent pool within the hubs. As there is no data specific to the cities and migration of talent within countries is not limited, we have used the country data.

Education



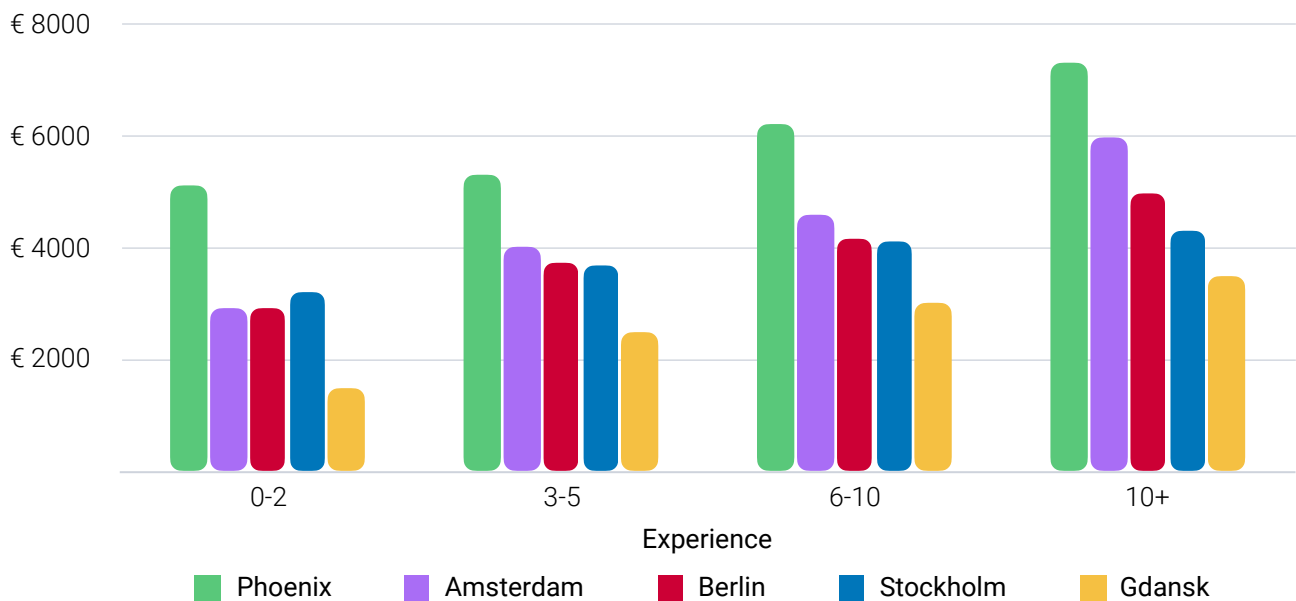
Skills and talent are strongly connected to education, especially to tertiary education. But at the same time according to BerlinStartupJobs **The Berlin Startup Salary Report** “university dropouts earn more than graduates, only surpassed by respondents that hold Ph.Ds. Dropouts earn on average €450 more than university graduates and only €300 less than Ph.D. holders. But 81,8% of startup employees in Berlin are university graduates, only 6% are dropouts and only 2,3% have Ph.D.” It is worth noting that the majority of people looking for jobs in startups

in Berlin are quite young - 23,6% are 25-26 years old, 41% are 25-30 years old and 22,6% are 31-35 years old, that is a total of 87,2%. A group of respondents in the Nordic Startup Salary Survey 2018 covering Denmark, Finland, Norway and Sweden were a little bit similar. 9% of responders were 18-24 years old, 52% were 25-34 that gives in total 61% of all employees.

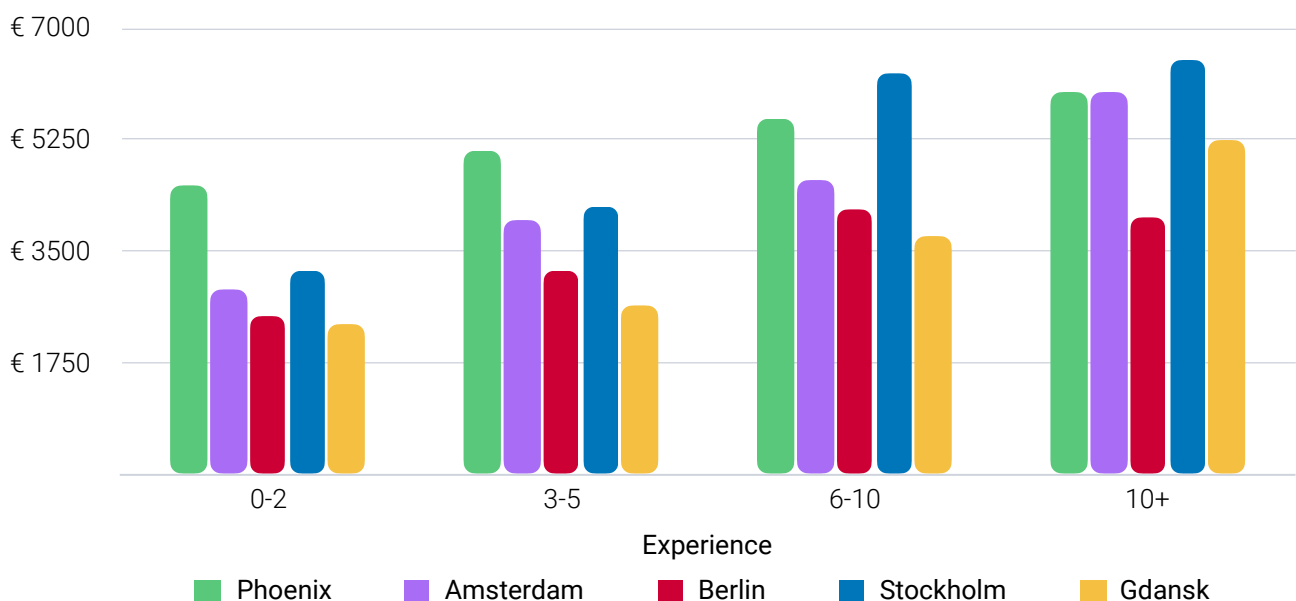
32.8% of people looking for a job in startups in Berlin have up to 3 years of experience and 33.1% have between 3-5 years of experience. And the Nordic report states that 54% have less than 5 years of experience.

The highest salaries in startups are paid to software developers (or generally technical people) and managers, even if they have little experience. In Berlin software developers working for a startup can earn from €2900 to €5000 per month, in Sweden from €3200 to €4100, in Amsterdam from €2600 to €6,000+.

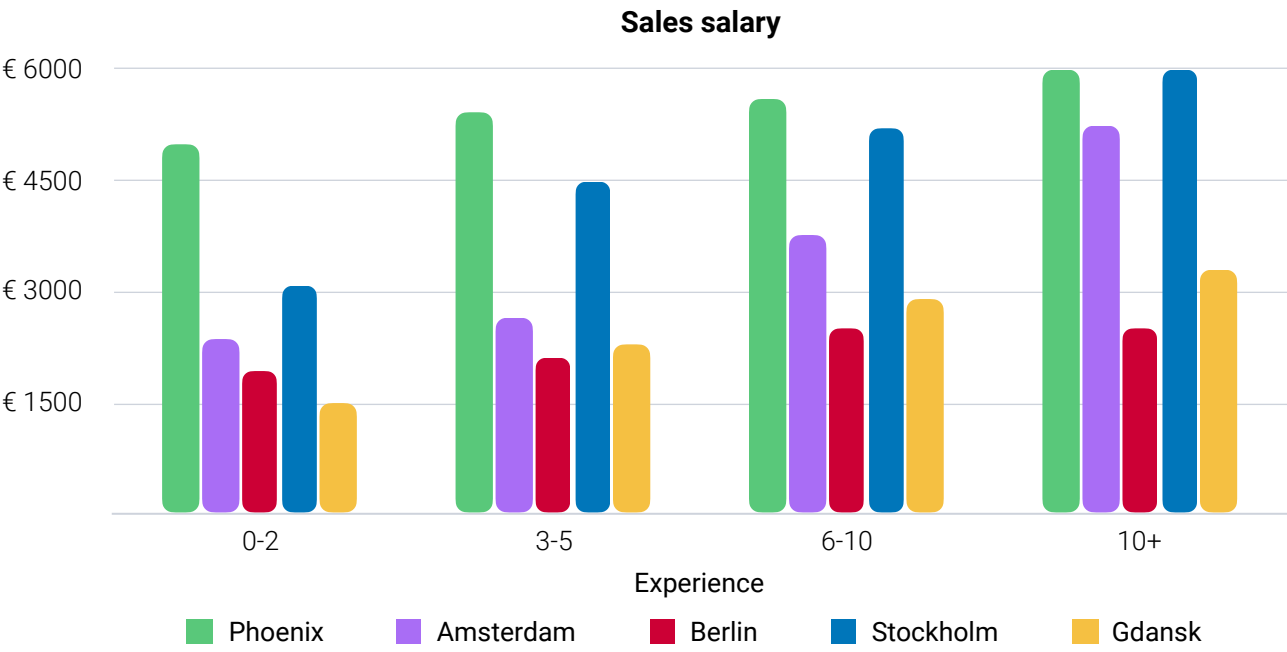
Software developer salary



Management salary



Reports show that sales and marketing staff in Amsterdam and Berlin are not well paid in the startup industry.



Not only does the cost of salary need to be taken into consideration. Also the quality of work is important and for analysis we have used HackerRank ranking. Based on the many coding challenges published on the portal HackerRank the list has been published showing the countries with the best developers.

Which Country Has the Best Developers?

Ranked by Average Score Across All HackerRank Challenges

Rank	Country	Score Index	Rank	Country	Score Index
1	China	100.0	26	Netherlands	78.9
2	Russia	99.9	27	Chile	78.4
3	Poland	98.0	28	United States	78.0
4	Switzerland	97.9	29	United Kingdom	77.7
5	Hungary	93.9	30	Turkey	77.5
6	Japan	92.1	31	India	76.0
7	Taiwan	91.2	32	Ireland	75.9
8	France	91.2	33	Mexico	75.7
9	Czech Republic	90.7	34	Denmark	75.6
10	Italy	90.2	35	Israel	74.8
11	Ukraine	88.7	36	Norway	74.6
12	Bulgaria	87.2	37	Portugal	74.2
13	Singapore	87.1	38	Brazil	73.4
14	Germany	84.3	39	Argentina	72.1
15	Finland	84.3	40	Indonesia	71.8
16	Belgium	84.1	41	New Zealand	71.6
17	Hong Kong	83.6	42	Egypt	69.3
18	Spain	83.4	43	South Africa	68.3
19	Australia	83.2	44	Bangladesh	67.8
20	Romania	81.9	45	Colombia	66.0
21	Canada	81.7	46	Philippines	63.8
22	South Korea	81.7	47	Malaysia	61.8
23	Vietnam	81.1	48	Nigeria	61.3
24	Greece	80.8	49	Sri Lanka	60.4
25	Sweden	79.9	50	Pakistan	57.4



In this ranking Poland scored the highest with a 3rd place on the list, Germany is next with 14th place, then Sweden on 25th and right after there are the Netherlands in 26th place and finally the USA with 28th place.

Poland has also been recognised as a country with the best Java Developers, second best in Python and writing algorithms and 4th place in understanding Shell and Tutorials.

Countries With the Best Developers By Domain

(Ranked By Average Score)

Algorithms

Rank	Country
1	Russia
2	Poland
3	China
4	Switzerland
5	Taiwan

Java

Rank	Country
1	Poland
2	Bulgaria
3	Hungary
4	Switzerland
5	Russia

Data Structures

Rank	Country
1	China
2	Taiwan
3	Philippines
4	Russia
5	Japan

C++

Rank	Country
1	France
2	Russia
3	Hungary
4	Italy
5	Switzerland

Tutorials

Rank	Country
1	Hungary
2	Italy
3	Switzerland
4	Poland
5	Sweden

Mathematics

Rank	Country
1	China
2	Czech Republic
3	Finland
4	Ukraine
5	Japan

Python

Rank	Country
1	Hong Kong
2	Poland
3	Bulgaria
4	China
5	Russia

SQL

Rank	Country
1	Denmark
2	Finland
3	Switzerland
4	Russia
5	Hong Kong

Shell

Rank	Country
1	Czech Republic
2	Hong Kong
3	Hungary
4	Poland
5	China

Artificial Intelligence

Rank	Country
1	Japan
2	Belgium
3	Vietnam
4	Russia
5	Ireland

Functional Programming

Rank	Country
1	China
2	Switzerland
3	Russia
4	Japan
5	Taiwan

Databases

Rank	Country
1	Switzerland
2	Italy
3	Denmark
4	Taiwan
5	Hungary

Ruby

Rank	Country
1	Finland
2	Nigeria
3	Switzerland
4	France
5	Poland

Distributed Systems

Rank	Country
1	Sri Lanka
2	Malaysia
3	Pakistan
4	Ukraine
5	Finland

Security

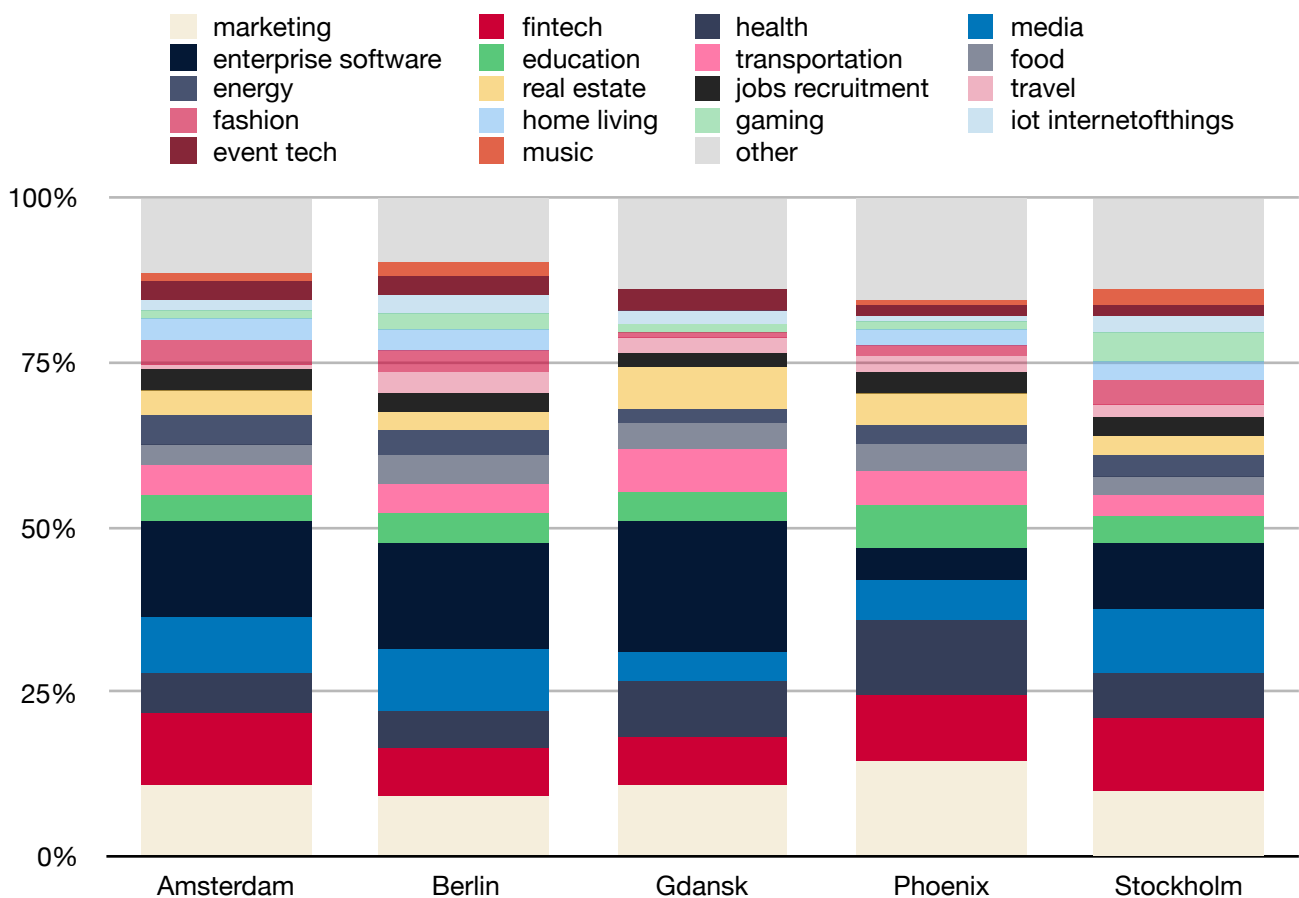
Rank	Country
1	Ukraine
2	China
3	Switzerland
4	Czech Republic
5	Colombia



INDUSTRY

We want to believe that hubs have their own specialisations, for example that the best music startups come from Stockholm. But the data does not confirm that. Exactly twice the number of startups in Berlin work in music industry than in Stockholm. The overview of startup industries suggests that distribution of startup industries is almost exactly the same in each of those 5 hubs.

. Industry of startup



SWOT - AMSTERDAM

Strengths

- A huge number of investors interested in companies coming from this hub
- Mature and well recognised ecosystem
- A significant number of accelerators and incubator programs
- Highly educated workforce
- Presence of foreign investors
- Good connection with other hubs
- Work-life balance
- Headquarters or development teams of Tesla, Uber, Optimizely, Netflix, Atlassian and Nextdoor
- A well organised and easy to enter ecosystem
- Great web resources in English about the ecosystem
- Startup visa program

Opportunities

- Investors from the hub invest abroad
- Close distance to London may encourage relocation after Brexit
- Good tax opportunities for VCs established in the Netherlands
- Single European currency - Euro
- 30% tax-free rule

Weaknesses

- Expensive to live in
- Highly priced workforce
- High cost of developing MVP
- Finding an apartment in Amsterdam can be difficult and rental is costly
- High income taxes
- Need a local card to pay in some places

Threats

- Need a BSN number for basic things like opening an account in a bank
- Small local market
- Not sufficient digitalization of legal affairs and government
- Complicated process of firing employees
- Long holidays for employees generate higher work costs

SWOT - BERLIN

Strengths

- A huge number of investors interested in companies coming from this hub
- Funds enabling investments at various stages
- Incubators and accelerators helping companies grow
- International multicultural society
- Amazing success stories of investments and exits.
- Still relatively low costs of living, rent and hiring people
- High number and volume funding rounds
- High quality of life
- Presence of foreign investors
- Startup visa program

Opportunities

- Possibility of a few big exits coming in the near future
- Single European currency - Euro
- Ability to attract the largest amount of startups from outside of the country

Weaknesses

- A decreasing number of investments in the Seed stage
- Expensive software engineers
- High taxes
- Conservative market outside the "hipster city"
- Finding an apartment in Berlin can be difficult and the rent is still affordable but getting higher every year
- People are not used to paying with a card and there are a lot of cash only places
- Language barrier

Threats

- Bureaucracy - registration of the company still requires a visit at the notary and around 15 days
- Gender pay gap bigger than in other areas of the economy
- Long holidays for employees generate higher work costs
- Need to register (Anmeldung) as a resident for basic things like opening an account in the bank

SWOT - GDAŃSK

Strengths

- High-quality developers
- Possibility to build MVP in 3 months for a quarter of price than in the other cities
- Low cost of living and rent
- Inexpensive labor
- Inexpensive office and industrial space
- Everyone in the community speaks advanced English and the majority of regular city residents have communicative English
- Poland Prize by Starter program dedicated to startups from abroad providing grants to help set up their activities in Poland
- Scaleup by Space3ac program helping startups to cooperate with corporations and providing grants
- Being at the beginning of the way
- Amazon, Intel, Boeing and Nordea R&D labs
- Opening of a factory and research centre for the Swedish unicorn Northvolt

Opportunities

- Access to a large local market (over 38mln population) open to innovation with sufficient buying power
- LLC company can be created online in s24 system
- A new type of LLC dedicated for startups available from March 2020
- A lot of grants from EU for innovation

Weaknesses

- Lack of investors
- VC funds are supported by public money
- Lack of active private investors
- Lack of a single site explaining the ecosystem and its participants to help newcomers to navigate around and unite the ecosystem
- Not enough materials and information in English
- Lack of local success stories
- Early-stage of development with a hard to predict outcome
- No substitutes for key players caused by a limited number of participants
- Lack of a community name
- Startups are not reported in global database (like Crunchbase and Dealroom)

Threats

- Bureaucracy, especially related to grants and public money
- Lack of legal solutions helping the startups to grow (eg. sandboxes)
- Expensive and complicated employment rules
- Being ignored by foreign investors
- VC market in the country dependence on public money
- More mature and active hubs nearby which can lead to brain drain

SWOT - PHOENIX

Strengths

- Regulatory solutions dedicated to startups i.e. fintech sandbox, real estate sandbox
- Increasing access to funding
- Presence of foreign investors
- Industry players that can be clients or partners
- Startup school and involvement of the University of Arizona
- Low cost of living compared to neighbouring states
- Well organized community (with hashtag, website, a guide for newcomers)
- inc. 5000 Conferences & Galas

Weaknesses

- Not a significant number of investors
- Expensive labour compared to Europe
- Costly development of product due to the high rates of developers
- You need a car for basic things (cycling is possible but still need a car as a backup)
- Heat can be a problem in the summer
- Economy is dependent mostly on real estate and construction
- High Crime rate

Opportunities

- Access to US Market
- The ability to convince investors to settle in the hub permanently not just to visit
- Easy to hire and fire employees

Threats

- The proximity of bigger and more well-recognised hubs

SWOT - STOCKHOLM

Strengths

- A huge number of investors interested in companies coming from this hub
- Talent availability
- Established and experienced community, with a pay it forward attitude
- Presence of foreign investors
- Investors from the hub invest abroad
- Success stories such as Spotify, Klarna and Mojang

Opportunities

- Government programs and organizations dedicated to helping startups
- Startup culture and openness of the market to new solutions
- High computer skills literacy within the population
- Supportive government

Weaknesses

- Extremely hard to find accommodation and cost of rent
- The high cost of coworking
- The high cost of living
- The high cost of developers
- The high cost of services

Threats

- High taxes
- Small local market (less than 10 million people)
- Reserved culture
- Long holidays for employees generate higher work costs
- Need a Personnummer for basic things like opening an account in the bank

***Fighting for the first location
won't bring us closer to the goal,
only cooperation can bring us
closer to achieving it.***

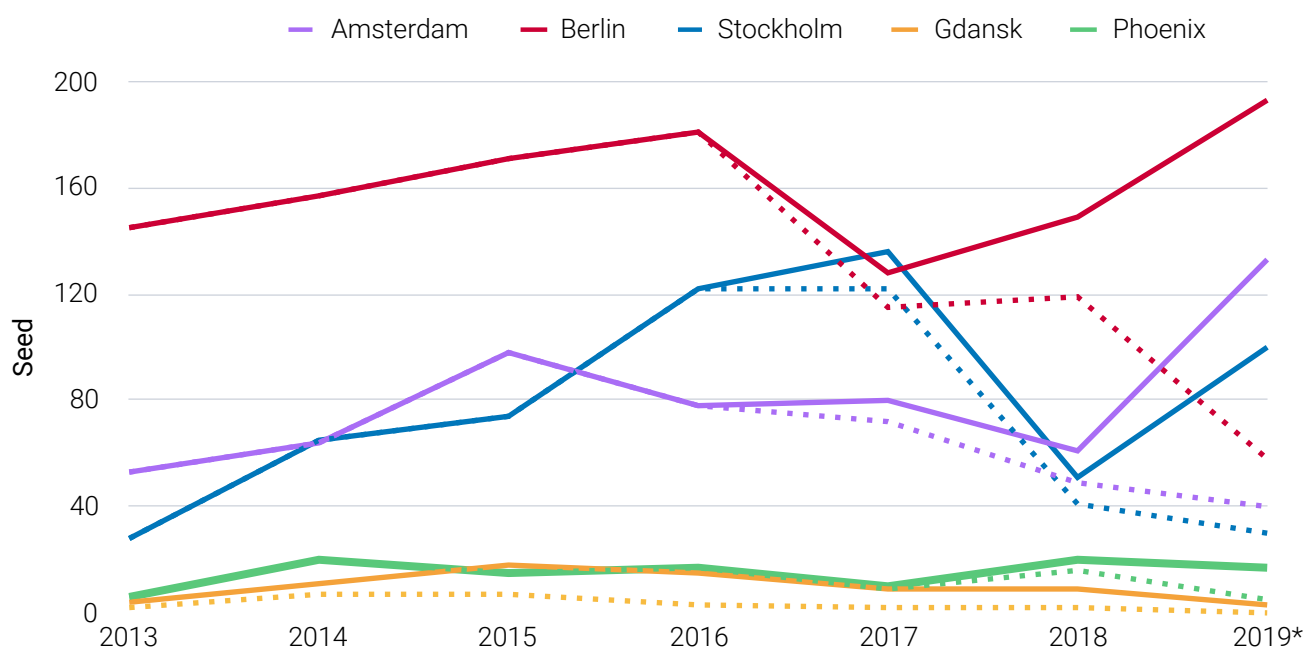


CONCLUSIONS

The hubs that we have compared are all on differing stages of development: Amsterdam, Berlin and Stockholm are mature and sophisticated. Phoenix and Gdańsk are at the beginning of their journey and are trying to win recognition. As we have seen, there isn't any real ecosystem specialization happening. Problems and solutions that are being developed need to be global in order to create a unicorn. Some ideas are spreading at a blink of an eye and result in many startups working on the same subject in a similar way. For example e-scooters: in this report we talked about 3 companies with massive funding rounds relating to the e-scooter concept - Dott, TIER Mobility and Voi Technology. And there are so many others around the world: Lime, Bird, Hive, Vogo, Loggi and many more. We can just hope that European startups will scale globally outside of the continent and won't settle on fighting each other for the next European cities. Cooperation between the hubs can help us to avoid factitious rivalry and spread ideas and startups faster through the network of investors.

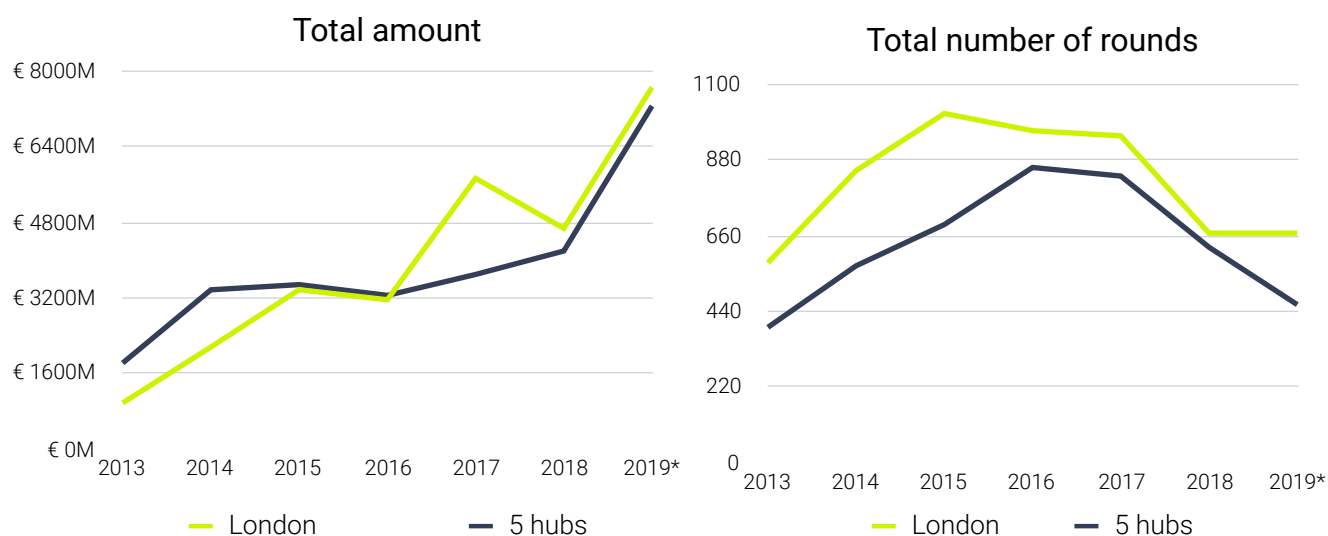
The data analysis has results that observe the number of exits are dropping and that is no surprise as in 2019 the market has not been kind to startups going public. Even the large and long awaited ones like Uber have not performed as expected. According to Business Insider, "Nearly half of all companies to go public in 2019 are trading below their offer prices". Therefore it is no wonder that some companies are canceling or postponing their IPOs. Should we expect a huge amount of IPOs in 2020? Oh, that depends. A growing fear of recession and market volatility may move them further into the future.

The data shows signs of a decreasing number of seed investments in mature and sophisticated hubs. Some of it can be explained by reporting lag and missing Q4 data but the difference seems too much. According to Dealroom in 12 months around 80% of seed rounds between \$1-4M are reported and 90% after 18 months. And if we assume that only 30% is reported now in 2019, we will still see a drop in the number of seed financing rounds in the Stockholm ecosystem and a bit of growth in Berlin. That might indicate that they reached the capability of their current talent pool and new talent is not coming fast enough to maintain the growth.



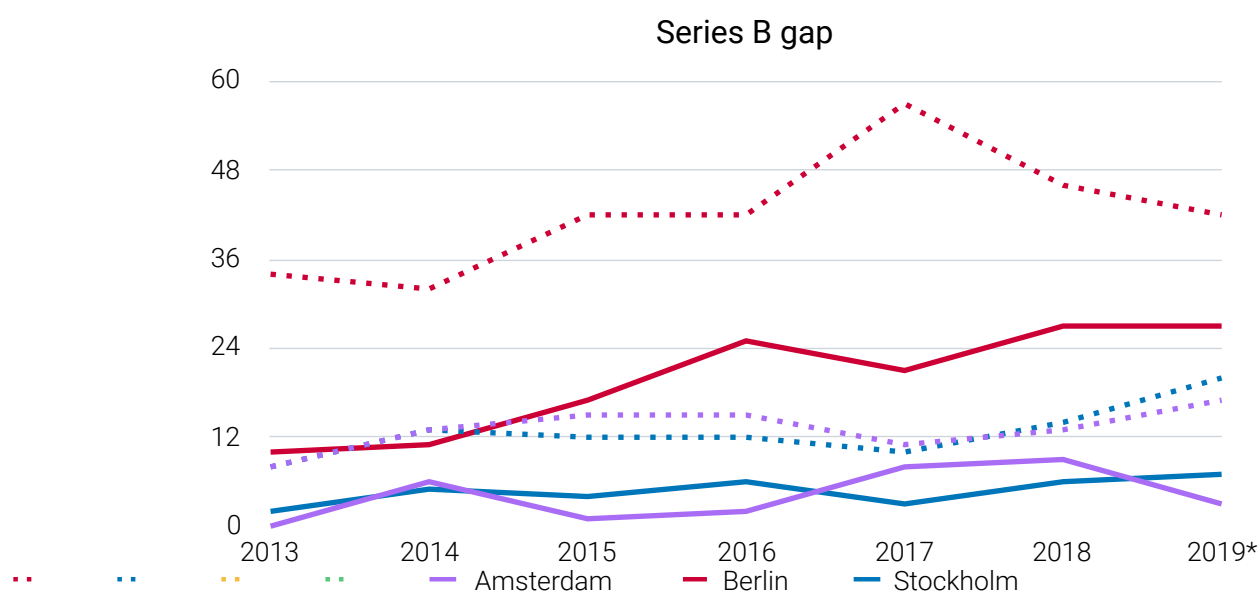
For them, hubs in the early state can be a good source of possible seed funding and Series A investments.

Numbers of rounds and amounts of investments can be impressive but if you compare them to the number one hub like London, the gap is really noticeable. Even if you will add all 5 hubs together London is still performing better. Alone Berlin, Stockholm and Amsterdam can fight for second place in Europe after London but the gap is so big that only cooperation with others can fill it.



For growing ecosystems like Gdańsk and Phoenix, cooperation with experienced hubs and looking at best practices can help to avoid mistakes and speed up the development process. At the same time, the older hub can benefit from their talent pool or market to make their companies more efficient or scale to other markets.

Developing an MVP in Gdańsk will be cheaper and faster due to the access to the Polish developer pool. Even now startups from abroad are doing it by opening R&D in Poland (i.e. SmartRecruiters, Revolut), developing their products from scratch in Poland, opening customer service centers (i.e. Uber, Airhelp) or moving production and opening factories (i.e. Northvolt). The cost of labor can be up to 2 times lower in Gdańsk than in other hubs.



There is a Series B gap in Europe and startups from European hubs have a problem to secure later-stage investors due to lack of the late-stage VC with appropriate ticket size. Late-stage European Investors are focused on the financial model and the discounted cash flows which basically means that startups need to be profitable or be on the path to be to get series B+ financing, whereas in the US it is not required. That is why around 40% of round Bs in Europe is done by US funds and some by funds from Asia. Phoenix can be a connector to the US investors and at the same time benefit from pools from other hubs.

It is important to point out that there is a significant lack of knowledge about the activities of other hubs and only a limited number of people are making an effort to educate themselves in this matter. Most people are living in a bubble and are oblivious to what is happening elsewhere. In these conditions cooperation is virtually impossible and more interaction between the hubs is needed either by direct visits of members from each of the hub's communities, spreading knowledge and lessons learnt or appointing a dedicated contact person who can be a single point of contact for all cross border hub activities.

There is also a lack of a unified way of presenting and explaining the ecosystem. Every hub is discovering how to do it by itself. Amsterdam's iamsterdam is full of valuable data, #yesphx has chosen the more modern but less condensed way. Dealroom's map of an ecosystem solution seems to look like a must-have for every hub (<https://startupmap.iamsterdam.com/> <https://startup-map.berlin/home>), but there is a lack of standards in communication and some information is missing. It would be good to create a unified standard of presenting resources that are available in the given hub like coworking spaces, software houses, manufacturing opportunities, legal firms, accountants, etc. It is worth remembering that online research is probably the first contact with the hub and in some cases also the only one.

Ignoring global tools like Dealroom or Crunchbase and not reporting funding rounds can be harmful and result in making a hub more isolated and insignificant. Also not utilizing global tools for meetups and events makes it harder for people traveling to explore the ecosystem.

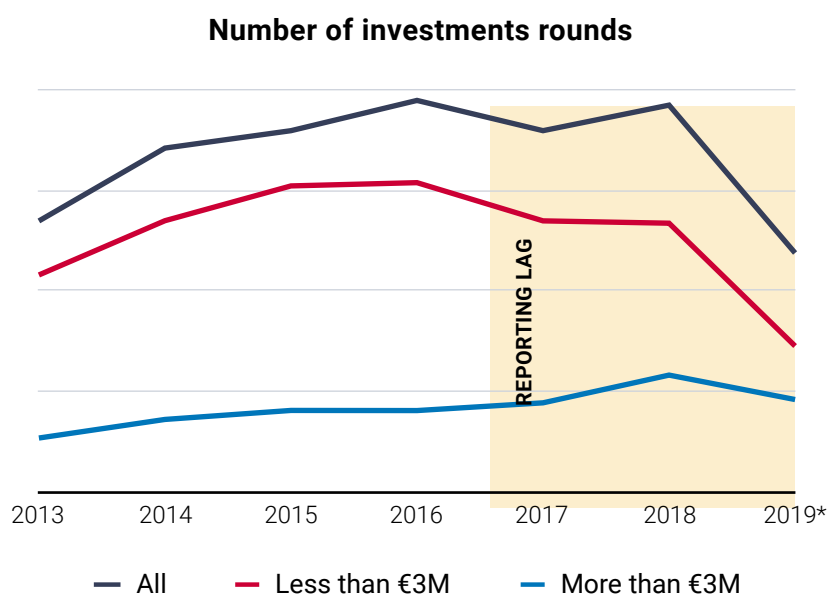
METHODOLOGY

DATA SOURCE

The majority of the data that has been used in this analysis was obtained from Dealroom and Crunchbase. Data was collected at October and November 2019.

REPORTING LAG

Reporting lag is a lack in data due to a reporting delay of small pre-seed and seed rounds (smaller than €3M) and it usually takes around 1-3 years to be collected. This effect mostly affects rounds smaller than €1M but is also visible in rounds in the range of €1-2M.



MISSING Q4

This report was created in November 2019 by comparing the number of deals from Q4 2019 to ones from previous years based on their relative performance compared to other quarters throughout the year. We can anticipate that we are missing a significant portion of deals usually done at this time of the year as they are either not completed or not reported yet.

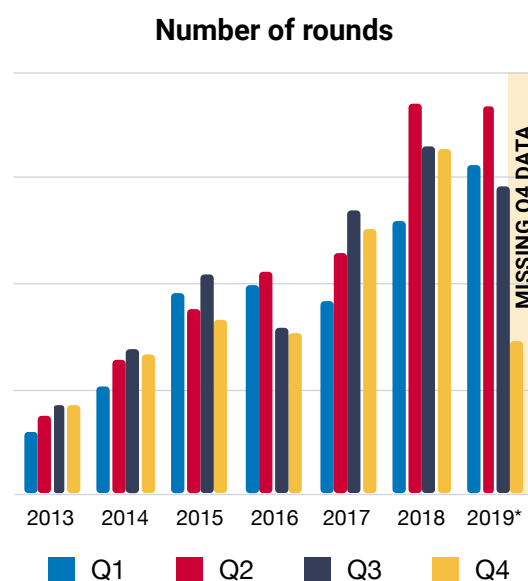
CURRENCY

We have used exchange rates from the European Central Bank as of November 1st, 2019:

USD 1,1139

SEK 10,6993

PLN 4,2535



WORLD LIVING CONDITIONS

For the data like cost of living, rent, average salary, and price of internet we have used Numbeo. Numbeo is the world's largest database of user contributed data about cities and countries worldwide.

For cost of living we have picked costs of a single person monthly costs without rent. For Rent cost of 1 bedroom apartment in City Centre. For average salary - average monthly net salary after tax.

Data for Amsterdam was based on 3009 entries in the past 18 months from 413 different contributors and last update on October 2019.

Data for Berlin was based on 3787 entries in the past 18 months from 604 different contributors and last update on October 2019.

Data for Gdansk was based on 2083 entries in the past 18 months from 168 different contributors and last update on October 2019.

Data for Phoenix was based on 1709 entries in the past 18 months from 238 different contributors and last update on October 2019.

Data for Stockholm was based on 3229 entries in the past 18 months from 459 different contributors and last update on October 2019.

Data was collected in October 2019

COWORKING

For cost of the coworking space we have used Nomadlist. Nomadlist is a global community of international travelers working remotely around the world.

Data was collected in November 2019

SALARIES

For an average salary we have used Berlin Startup Jobs Report crated by BerlinStartupJobs, The Nordic Startup Salary Survey, Amsterdam salaries article by Adams Multilingual Recruitment, Glassdoor and Pracuj.pl data.

DEVELOPERS RANKING

We have used and quoted HackerRank research on this topic posted on Aug 25, 2016 <https://blog.hackerrank.com/which-country-would-win-in-the-programming-olympics/>

ACKNOWLEDGEMENTS



We would like to thank City of Gdańsk for supporting the creation of this report by providing funding and suport.

We would like to thank Dealroom for giving us access to their service and providing valuable data which we used for analysis of the startup ecosystems.

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- **LSP Life Sciences Partners** - <https://www.lspvc.com>
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