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Dutch Healthtech 2021 Report: unlocking its untapped potential



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Techleap.nl is a non-profit organisation, funded by the Ministry of Economic Affairs and Climate Policy, helping to quantify and accelerate the tech ecosystem of the Netherlands. Empowering Dutch leaders in tech to scale with programs and initiatives for improving access to technology, market, capital and talent. Special Envoy for Techleap.nl is Constantijn van Oranje.

Foreword

Healthtech is exploding. Many new solutions are being developed addressing the hard challenges facing healthcare. Embracing the vast opportunities to improve health outcomes and empower patients, health workers and doctors. COVID-19 has shown us the vulnerabilities of healthcare systems, as well as the massive potential of innovation.

However, innovations may also be disruptive. They can lead to supply chain and system inefficiencies if they are not well embedded. They are likely to challenge legacy systems, relations, processes and institutions. Therefore the health system may actually resist innovations or prevent them from scaling, even though most parties would agree that innovations are absolutely essential for the future of healthcare.

Techleap.nl analysed the Dutch tech market and identified the healthtech sector as critical in terms of impact, volume and underserved potential. The many innovative startups in this sector are struggling to grow and establish themselves as global players. This means that many patients, doctors, scientists and care providers will not get access to these solutions, products and services. It also means that a large market for future employment remains untapped. This report looks into the most pertinent factors that are holding Dutch healthtech entrepreneurs back and suggests effective remedies.

It is very clear that many challenges remain, but this should not hold us back. The need for change and momentum to collaborate to make this happen have never been greater. We have the technologies, the scientists, the entrepreneurs and the capital to make a massive impact. We are the only ones holding ourselves back. No one else will change the system for us. We need to act now to unleash the innovation potential of healthtech in the Netherlands!

Constantijn van Oranje,
Special Envoy Techleap.nl

Highlights



The healthtech sector in 2020 had more deals and VC investment than any other sector in the Netherlands

29%

The Netherlands has a low startup to scaleup conversion in healthtech compared to other European countries. Of a relatively large population of healthtech startups, only 29% become scaleups.



Invested amounts (ticket sizes) in Dutch healthtech are lower than in other leading ecosystems.



Many academic founders in healthtech struggle in the process of negotiating the IP transfer out of universities.



The Dutch healthcare system is not an ideal breeding ground for healthtech startups, due to the complexity of the healthcare environment.



Many Dutch healthtech founders focus on technology and product instead of developing their business or expanding abroad.



Dutch startups struggle to get relevant access to healthcare providers in order to test, pilot, sell and integrate their solutions within the healthcare system.

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Introduction

Over the past 40 years, healthcare costs have substantially increased in the Netherlands and worldwide. Global healthcare expenditure is now around \$8 trillion and is projected to grow by 5%+ per year, to \$10 trillion in 2022 (Source: [Dealroom report](#)). Similarly, in the Netherlands the healthcare costs have been increasing by ~3% per year (Source: [CBS](#), [RIVM](#)), amounting to ~3 billion euro per year. Structural trends will continue to drive healthcare costs upwards: ageing population, chronic diseases including obesity, and the rising costs of drug development. As standards of living rise, healthcare expenditures also increase.

Digitalisation and the use of smart technology has helped many other industries improve customer experience while reducing costs. However, the capability of the healthcare system to absorb innovation remains low, even though the COVID-19 pandemic has moved adoption of digital and remote care forward.

Healthtech startups can be the catalyst for change and innovation within this sector. They have the potential to be an effective and fast vehicle for turning new scientific innovations into medical solutions and scaling them into big companies. For this to happen, however, the conditions under which these startups operate need to be optimised. Too many barriers remain for these companies to grow into tech giants like we have seen emerging out of the Netherlands in other sectors.

Startups in Dutch healthtech face many structural challenges, which their peers in other European countries, Israel, US, and Canada don't face to the same extent. Product development, commercialisation, attracting the right kind of investors and raising appropriate amounts, getting certification, and setting up clinical trials are some of the key challenges reported by Dutch startups as they seek to innovate and scale.

State of healthtech in the Netherlands

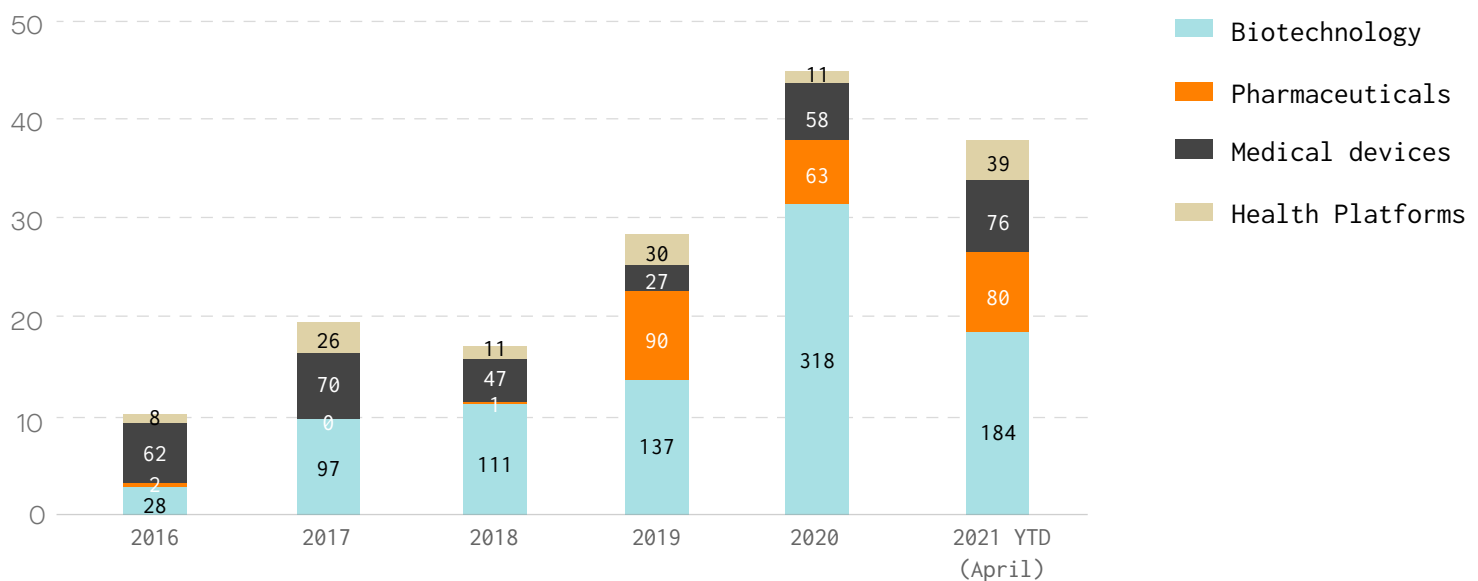
The Netherlands counts over 1000 healthtech startups of which ~350 received some sort of external funding, beyond grants and subsidies (Source: [Healthtech Mini Report 2021](#)). Compared to other ecosystems, the Dutch healthtech ecosystem has a high number of startups (around 10.8 per million people), whereas countries such as Germany or France have 3.2 and 6.1 startups per million people respectively.

The healthtech sector has been the biggest tech startup sector in the Netherlands in terms of number of deals and VC spend in 2020.

It has seen a substantial increase in capital year-over-year, with the sector heading to another record year with over €500M in funding by April 2021.

Noteworthy, the average deal size in Dutch healthtech has exploded in the past year - from about €8M in 2020 to about €30M as of July 2021, with pharmaceutical¹ and biotech as the two leading subsectors. The largest rounds by July 2021 were raised by New Amsterdam Pharma (€160m [series A](#)), Lumicks (\$93m [series D](#)), and Castor (\$45m [series B](#)).

Funding amount (€M) raised in the Dutch Health industry (2016 - 2021)

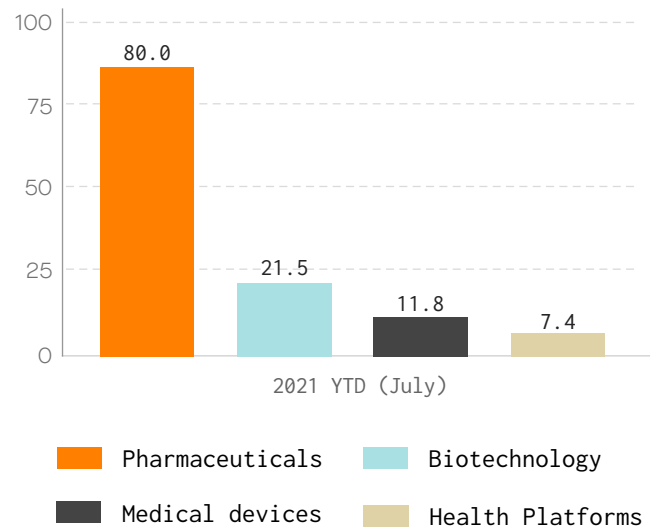


¹ | As of July 2021, only two funding deals have been closed by pharmaceutical companies.

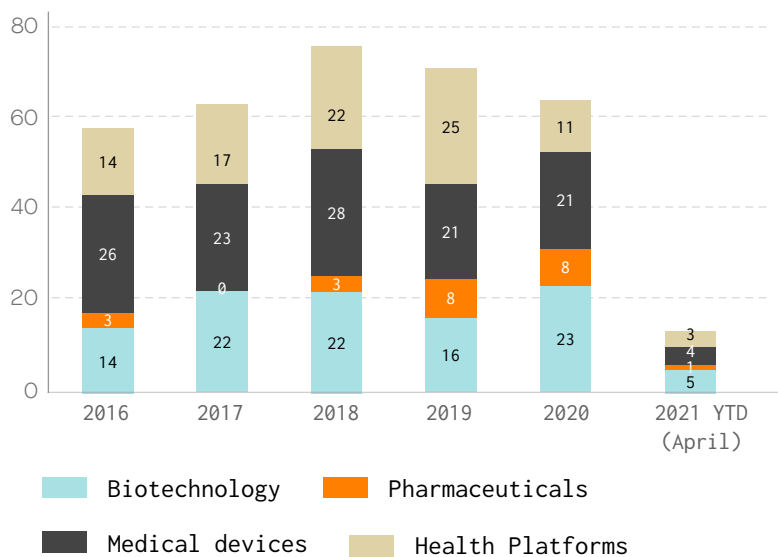
Though there is clearly an increase in the total healthtech investments raised year-over-year, the Netherlands still lags behind compared to other leading ecosystems. The Dutch ecosystem ranks 6th in both the volume of healthtech investments raised per capita and in absolute numbers.

The Netherlands is thus outperformed by Switzerland, Israel, Germany, the UK, and France (see Annex 3.1 & 3.2.).

Average deal size (€M) in the Dutch Health industry in 2021 (per subsector)



Funding Rounds (#): NL Health Industry



Moreover, the number of funding deals within Dutch healthtech has significantly dropped in 2021 compared to 2020, whereas the average round size has increased. This shows that the funding is not equally distributed throughout all stages of the ecosystem.

This potentially poses a threat to the current funnel of startups that will reach scaleup status as the overall number of startups raising capital has reduced.

This way, the Netherlands has a low startup to scaleup conversion in healthtech compared to other European countries; i.e. of a relatively large population of healthtech startups, only few become scaleups (**29%**).



Scaleup to startup ratio across leading healthtech ecosystems

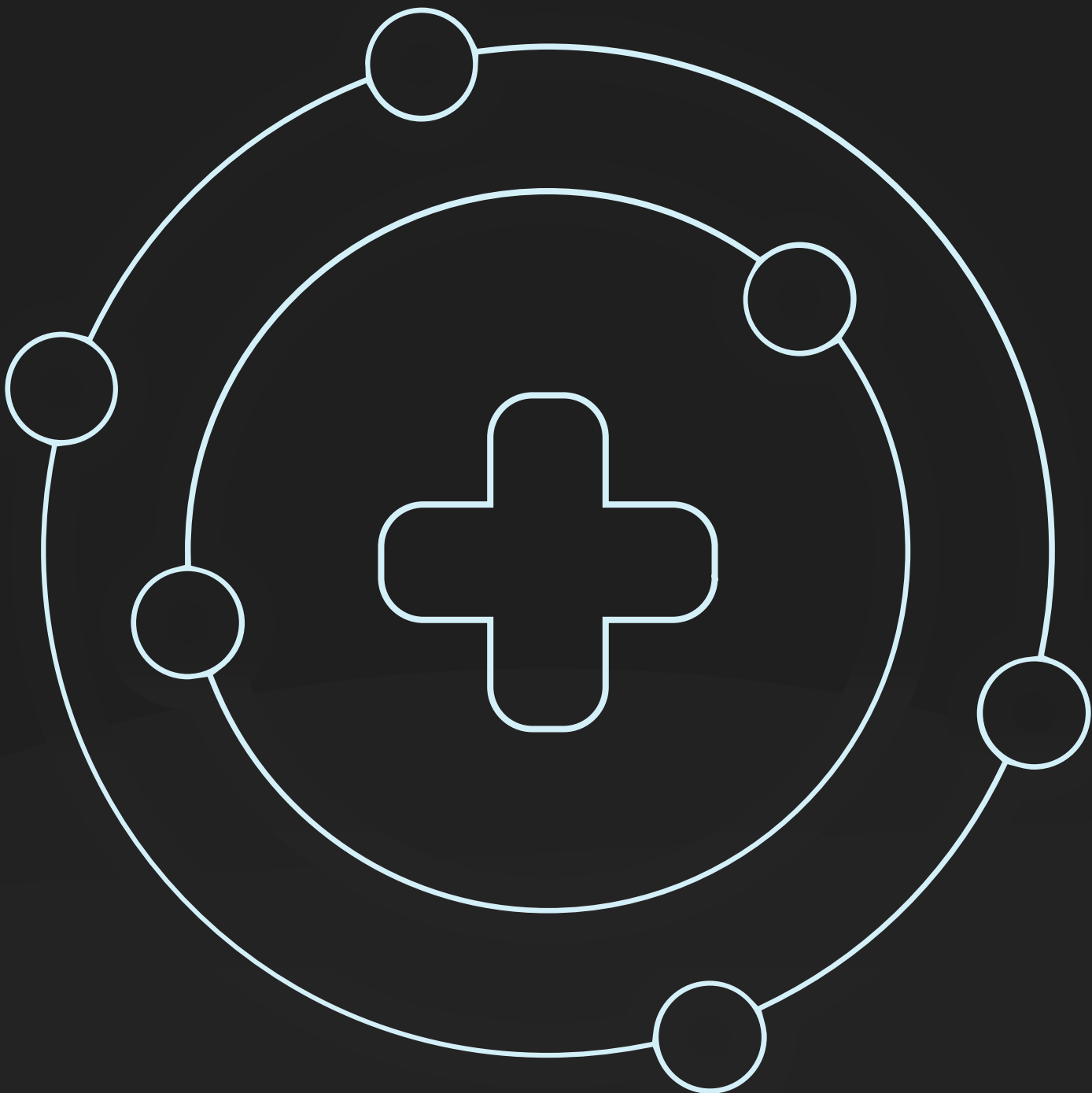
	Start-ups (>€100k- €10M funding)	Scale-ups (>€10M funding)	Scaleup/ startup ratio	Population (M)	Start-ups (# per million people)	Scale-ups (# per million people)	Total Health Companies (min €100k funding): # per million people
Netherlands	185	54	29%	17.18	10.8	3.1	13.9
United Kingdom	678	237	35%	68.27	9.9	3.5	13.4
Germany	265	104	39%	84.07	3.2	1.2	4.4
France	400	149	37%	65.43	6.1	2.3	8.4
Sweden	212	45	21%	10.17	20.8	4.4	25.3
Israel	177	125	71%	8.07	21.9	15.5	37.4

This is partly explained by the lack of capital. However, these companies also face other difficulties that are largely linked to the complexity of the Dutch healthcare system.

The following sections explore the challenges healthtech startups experience when:

1. Developing the product;
2. Commercialising the product;
3. Scaling to international markets;
4. Building balanced founder teams;
5. Raising smart capital;

Key challenges of Dutch healthtech startups



1.1

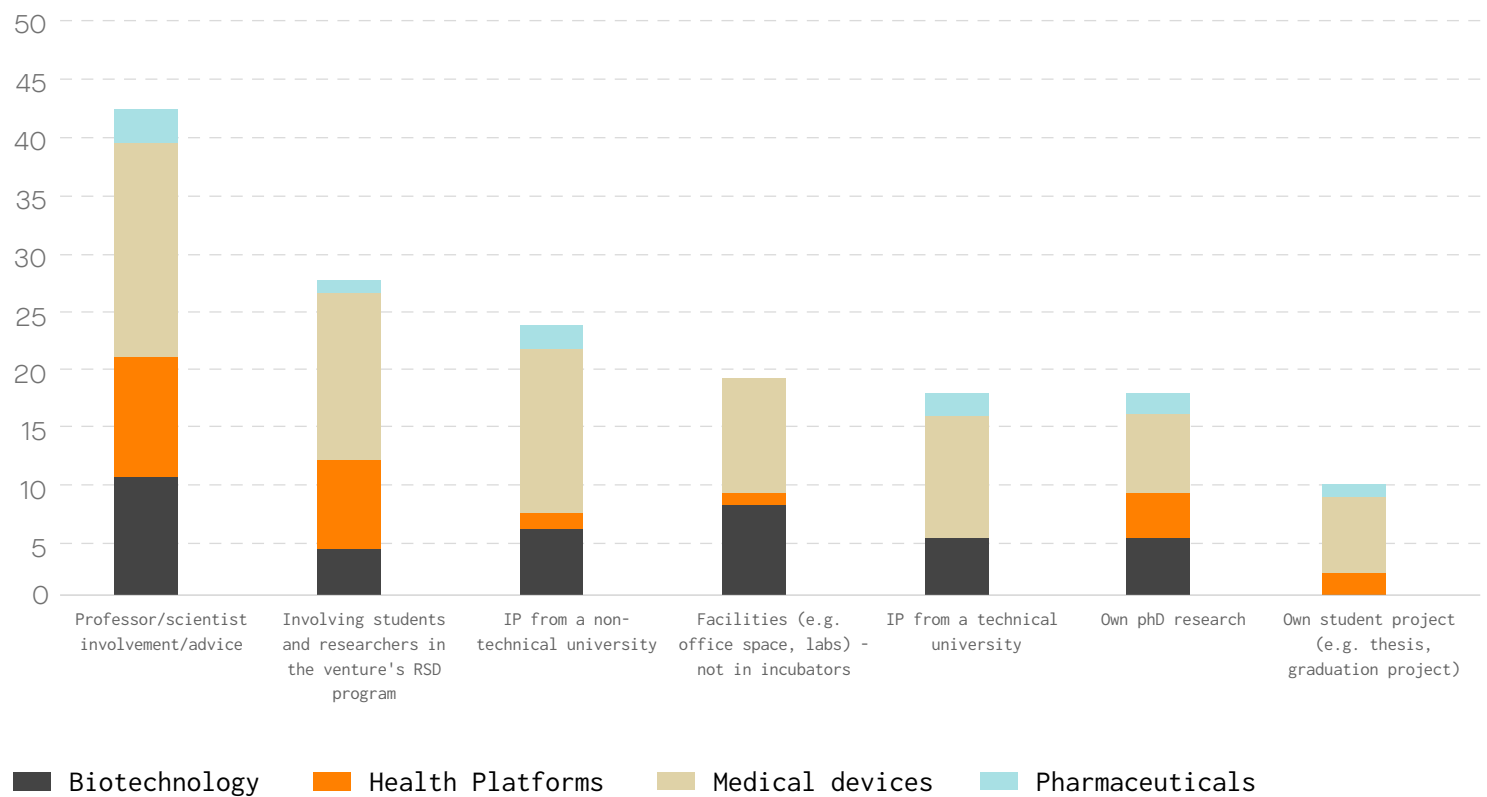
Developing the product

Founders struggle to negotiate IP transfer out of universities

Developing healthtech products and services in the Netherlands is strongly tied to the university system including University Medical Centres.

Almost half of all surveyed healthtech startups have built up their business from knowledge gathered from a university or a research institute, though the degree varies by category.

Knowledge sources of Dutch healthtech startups



While the value of partnerships with universities is evident, many academic founders (both in healthtech and other industries) struggle in the process of negotiating the IP transfer out of universities.



“Universities (Technology Transfer Offices) are taking advantage of first-time founders. University-IP commercialisation should be regulated differently and the cost should be lowered for startups to gain access to IP”.

- Comment from a healthtech founder

This challenge was more specifically analysed in the AWTI report “Beter van Start” report (2020). Surveyed founders were said to be “quite negative about the relationship between knowledge-intensive startups and the Knowledge Transfer Offices (KTOs) and Technology Transfer Offices (TTOs). They have experienced that it often proves difficult to become independent of the parent institution at a later stage.

Also some respondents believe that KTOs/ TTOs are mainly concerned with the interests of the knowledge institution (in this case university) and less so with those of the startups.”

Therefore it is important to build constructive partnership agreements between startup and university that go beyond the point of IP transfer.

Healthtech startups using AI struggle to negotiate access to quality medical data

When it comes to developing their solution, healthtech startups strongly rely on high quality medical data to be able to validate their Minimum Viable Product (MVP) and continuously improve their solutions at the later development stages.

Multiple founders point out the need for health data and ways to collect, process, and share medical data in a privacy friendly and safe way.



“Startups would be best helped by creating easier access to data by enabling institutions to provide it in a safe, legal, and valuable way. It would be really helpful if there was a platform where startups could be linked to hospitals/ doctors to easily set up clinical trials or share data.”

- Comment from a
healthtech founder

Although initiatives like Health RI² will address many of these data issues, there is currently no standard protocol to facilitate ongoing accessibility to health data. This results in a time consuming process for startups in negotiating access while adhering to privacy regulations and security requirements at healthcare institutions.

The adoption of a regulatory framework that opens up access to high-quality health data, as other countries³ have, would address these challenges.

2 | Dutch national initiative to facilitate and stimulate an integrated health data infrastructure accessible for researchers, citizens, care providers

3 | Via Finland's Social & Health Data Permit Authority, researchers have a national one-stop-shop access to data. This includes population-based biobanks, digital healthcare registers & electronic medical records. Finland's Act on the Secondary Use of Health and Social Data (2019) and Biobank Law (2012) elevate research, innovation & investment opportunities across health and wellbeing with a full focus on data privacy and security

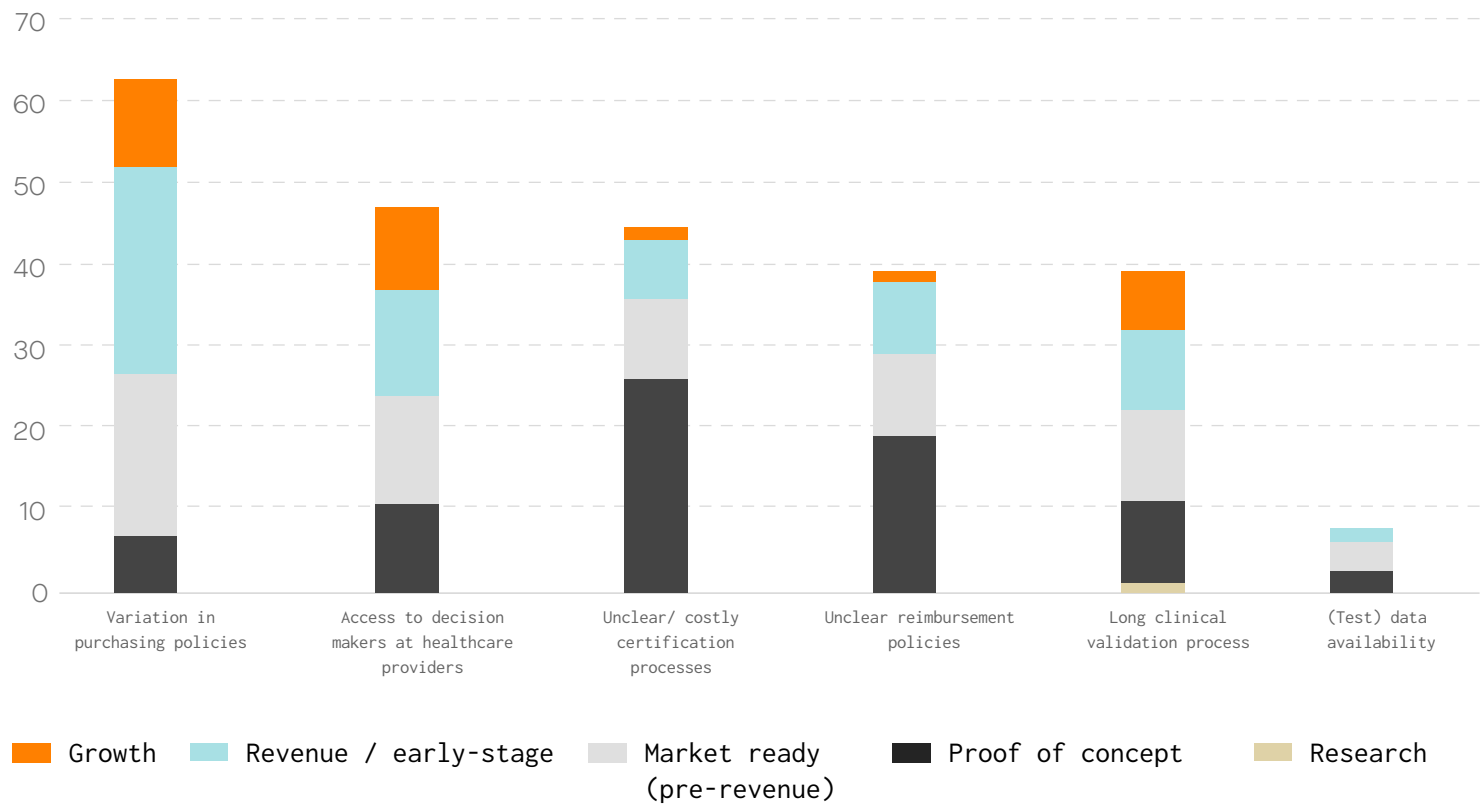
1.2

Commercialising the product

For all healthtech startups the route to growing and commercialising their products is an intricate process. Lots of factors need to be considered from an early stage during product development due to complex regulations and robust technical processes.

Based on the surveyed pool of entrepreneurs, most of their product development and commercialisation challenges are linked to the organisation of the Dutch research and healthcare systems. The most cited challenges relate to purchasing policies, access to decision makers at healthcare providers, and unclear/ costly certification processes.

Challenges in product development experienced by Dutch healthtech companies (per growth stage)



Certification for startups and scaleups takes a long time and is costly

Most healthtech startups have to first obtain their product certification. Founders indicated that the certification process takes long and that the conditions in the Netherlands that have to be met are unclear.

Companies that moved to the US testified that their experience with The Food and Drug Administration (FDA) was much more efficient.

In particular, the FDA supportive practices were noted stating that the FDA welcomes consultation by pre-sub meetings, helping companies to meet regulatory requirements and helps them with entering the US market.

Survey data suggests that this process in the EU takes longer and that it is less transparent. The Dutch government and possibly also the EU could consider doing the same to help speed up the go-to-market of innovative products and services and avoid a black box that (unintendedly) protects the status quo.

Healthtech startups suffer from slow sales cycles and reimbursement policies remain unclear

Furthermore, Dutch startups struggle to get relevant access to healthcare providers to test, pilot, sell and integrate their solutions within the healthcare system. Time is lost in dealing with decentralised purchasing departments at hospitals.

This pattern leads to many startups either quitting or leaving the Netherlands prematurely. Some Dutch startups move to other countries, like Germany and the US, where conditions and the regulatory frameworks for healthtech startups and scaleups are often more favorable.



“It's not possible to put into words how hard it is to deal with Dutch hospitals, and how long a deal cycle is. It almost kills any startup who wants to get in there”

- Comment from a healthtech founder

When it comes to reimbursement, Dutch regulation/policy is regarded as unclear or insufficient. There are few organisations, such as ZorgvoorInnoveren, that offer information and guidance about reimbursement requirements.

The Netherlands could benefit from a tailored healthtech support/fast-track programme similar to German Digitale Gesundheitsanwendungen (DiGa) (which stands for Digital Health Applications in English).⁴

Additionally, the topsector Health-Holland offers a wide range of financial and network support instruments. However, a clear pathway from innovative (digital) care to reimbursed healthcare is still missed.

Alternatively, the Netherlands could look at countries like Belgium (mHealth validatie pyramide) and/or Denmark (Danish Health Technology Council).



Everybody is happy with the status quo but not realising what impact tech will have on the organisation of care. We have organised sessions with hospital executives, insurers etc. But we need a “delta plan” like Germany did with DiGa”

- Comment from a healthtech founder

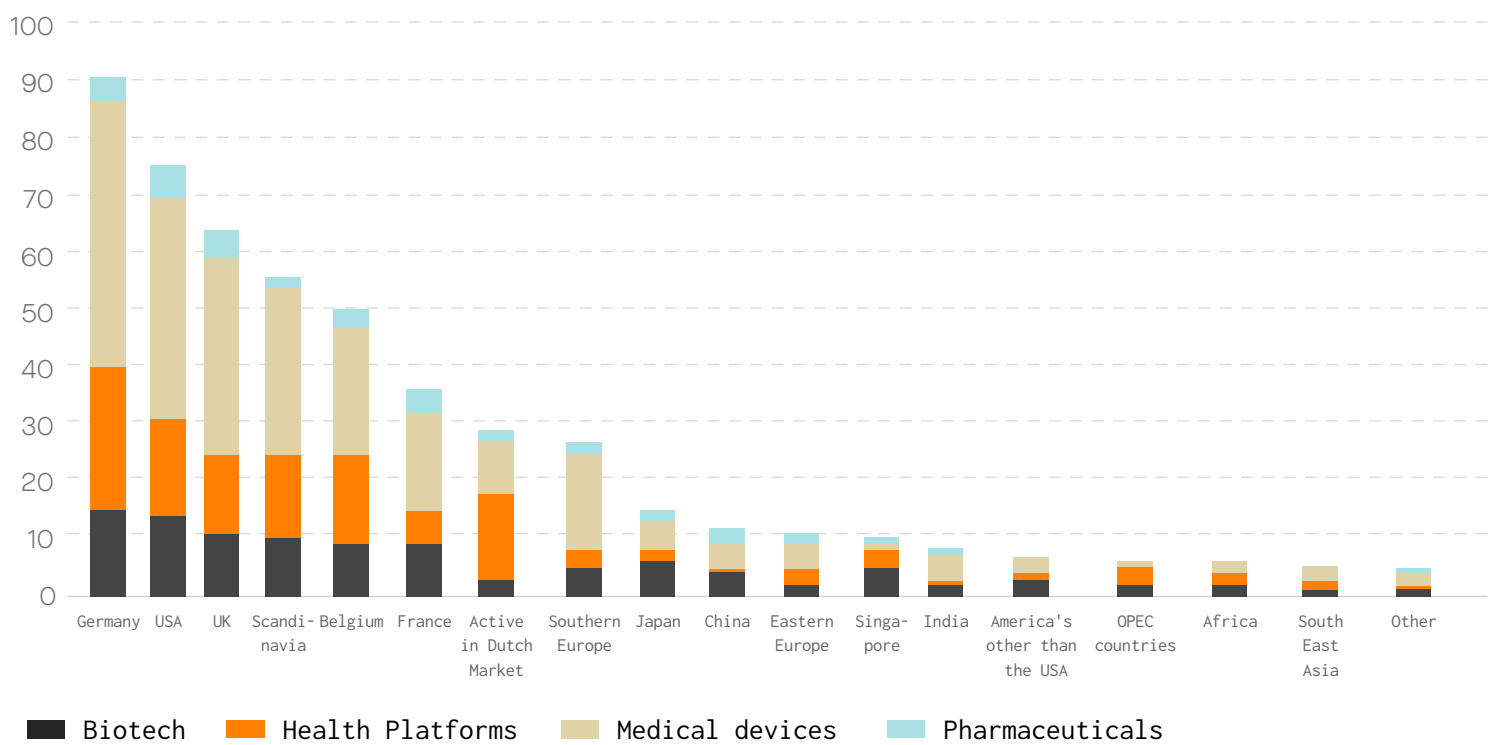
⁴ | The German government, health insurers, and healthcare institutions joined forces under the 2019 Healthcare Act and created DiGa in order to get products faster to market. They created an outline in which healthcare innovations can prove through a fast-track programme that they meet the conditions to be included in insured care in terms of safety and (cost) effectiveness. This implies that medicine can be prescribed by doctors via apps and that costs will be reimbursed through German health insurance.

1.3

Scaling to international markets

According to the survey, the preferred international markets across subsectors (medical devices, health platforms, pharma and biotech) for Dutch healthcare companies are the US and Germany (except for pharma), followed at some distance by the UK, Belgium, the Nordics and France.

International markets Dutch healthtech companies plan to focus on in the upcoming 12 months



- Comment from a healthtech investor



"Digital health platforms require international markets to reach relevant scale. Dutch home market is in most cases not the winning focal point."

However, expanding abroad also requires identifying potential customers and dealing with unclear regulations in target countries.

Founders indicate that understanding these foreign healthcare ecosystems is difficult and time consuming. Effective market entry requires the right contacts, networks and partners.

Attracting local investors can be a pragmatic way to address these challenges. The value of having an international investor in the expansion phase of their business has also been acknowledged by Dutch founders. However, further discussions with surveyed investors highlight that startups lack plans to internationalise.

These (international) go-to-market plans are crucial to support a higher valuation independent of where the funding is raised. Therefore, a gap in expectations between investors and founders is evident.

When going abroad, founders with international ambitions in their go-to-market strategy could also consider approaching experienced founders and a reliable network that can guide them through the specifics of the region's healthcare ecosystem (including regulation and procurement procedures) as this is often seen as an obstacle. They could also connect with Netherlands-based healthtech founders that have successfully internationalised.



“When exploring expansion to the US we struggled with understanding the [health] system and partnering with the right organisations. Even though we hired one of the top law firms, we found out afterwards that we had to set up 30 different entities - one for each state.”

- Comment from a healthtech founder

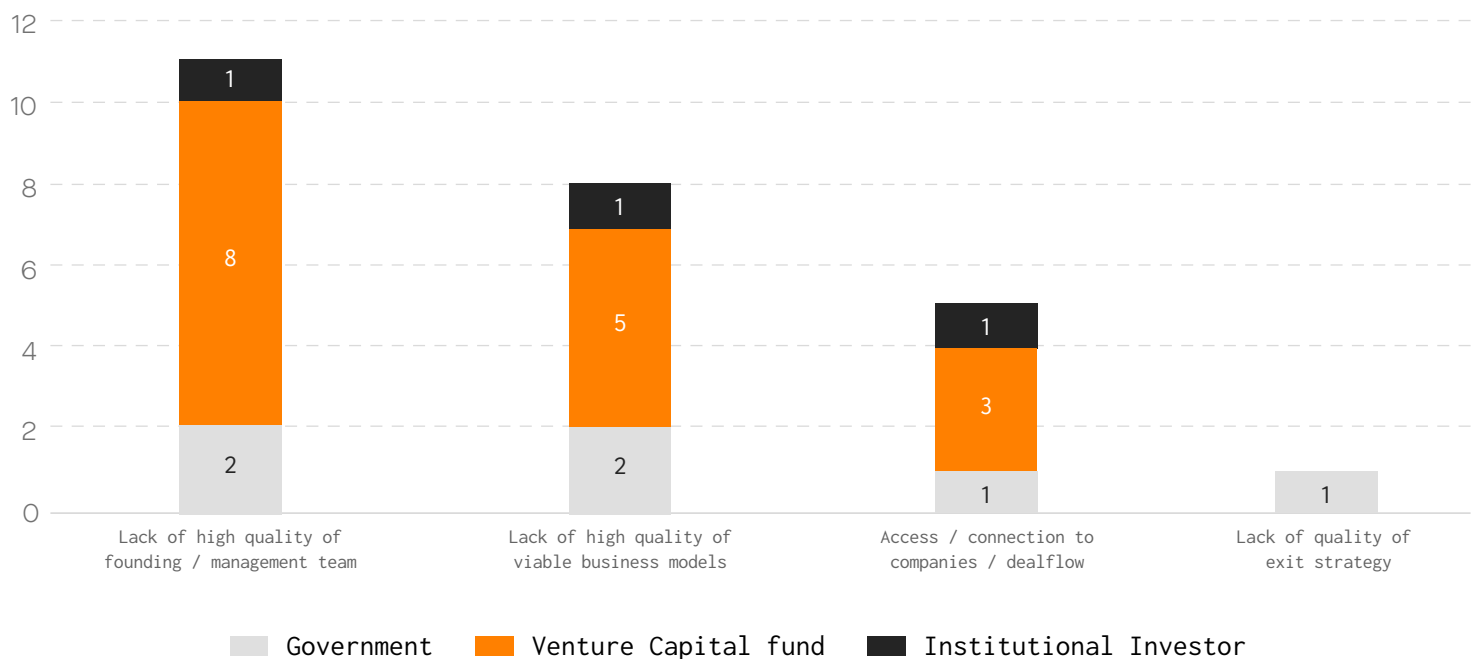
1.4

Building balanced founder teams

Many healthtech companies are built on research and science. This is reflected in the composition of founding teams, which tend to be dominated by healthcare professionals and researchers, with a strong focus on purpose, technology and product.

Founders and investors indicate⁵ the need for more diverse founder teams particularly with regards to the business and management skills. Noteworthy, more than 40% of surveyed investors note the lack of a high quality founding team or business model as the main challenge to invest in Dutch healthtech companies.

Challenges to invest in Dutch healthtech companies



5 | As part of the survey and the webinar

Most founders agree that forming a balanced team is challenging and that they would benefit from having a clear benchmark for the composition of successful founder teams. In particular, they pointed out the need for onboarding more professionals with commercial skills, who understand that the commercialisation cycle is different in the healthtech industry.

However, to be able to make the switch to a more business-driven company strategy, founders acknowledged the need for external expert help from mentors, VCs, and accelerators that understand both the research and the business side of healthtech.

This fact is reinforced in multiple statements from founders, who cite that startups “would appreciate some good mentorship from an experienced group of experts from different fields”. Nevertheless, this kind of targeted healthtech support is still underdeveloped in the Netherlands, which further underlines the need for a stronger, more engaged healthtech community. Moreover, it is important to foster the creation of more specialised healthtech growth/ accelerator programmes (such as [MassChallenge HealthTech](#) in Boston) which would aim at addressing the knowledge/ expertise gaps in founder teams from the healthtech sector in particular by providing access to experienced mentors.

- Comment from a healthtech founder



“More community-building with related companies is required, we need to share knowledge”



“Regular support from experienced entrepreneurs/ coaches would be of great value for healthtech startups”

- Comment from a healthtech founder

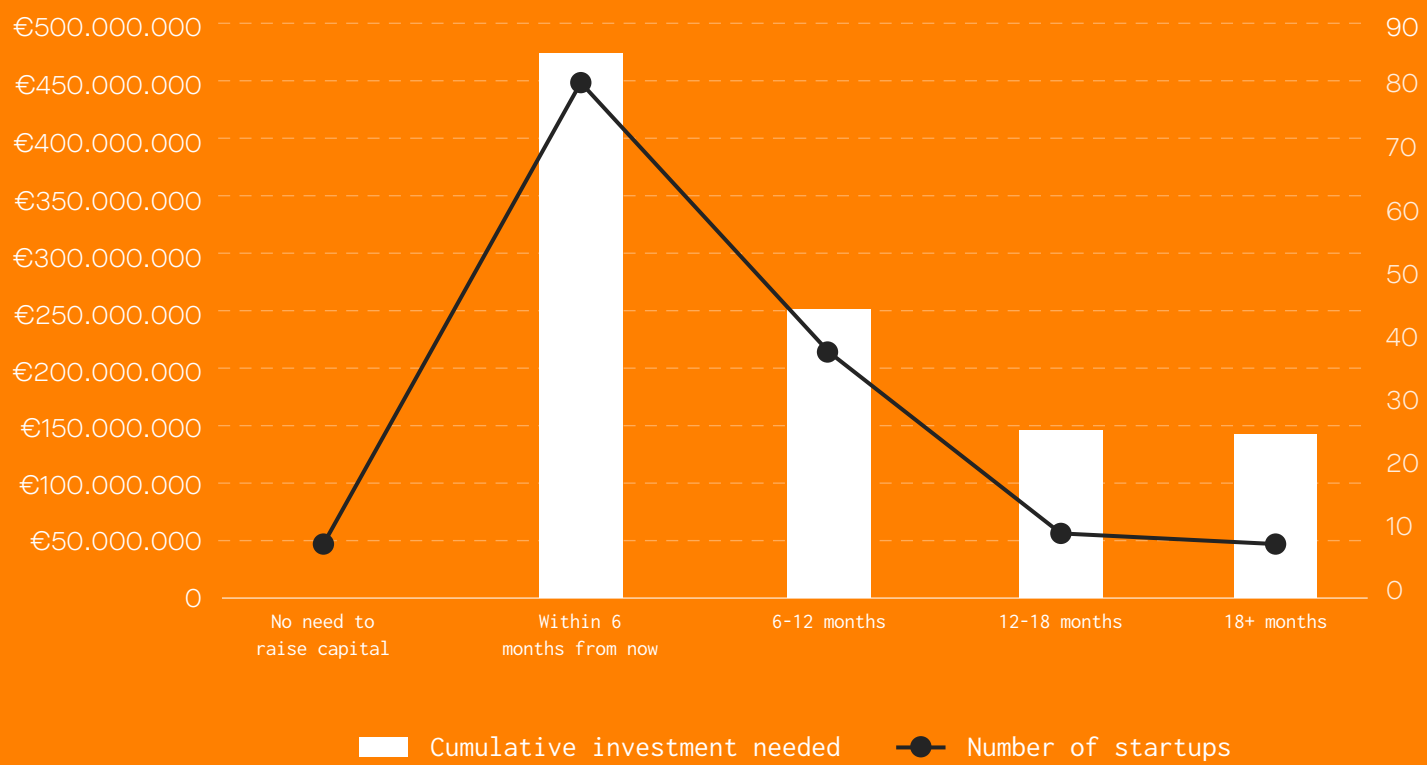
1.5

Raising smart capital

As healthtech startups develop, improve, and subsequently commercialise their products within various international markets, their needs for funding grow significantly.

Based on the Techleap.nl survey results, Dutch healthtech startups have indicated that they would require a total capital of over €1B within the next 1.5 years. Given the current growth trajectories within the Dutch as well as international healthtech sectors, this number is expected to further increase.

Total funding that surveyed startups would like to raise in the upcoming round



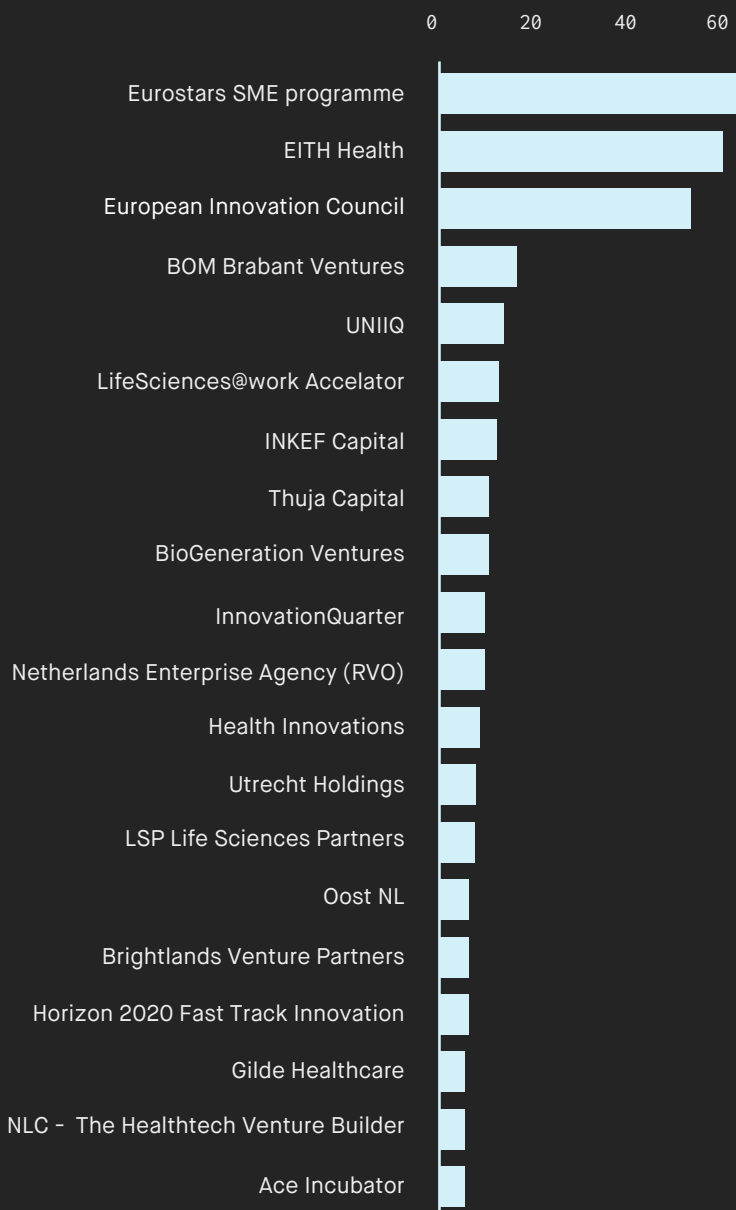
Despite record funding raised by Dutch healthtech companies, survey results indicate that founders still find it challenging to raise capital from investors who understand the healthtech sector and its growth trajectory, as well as raising the adequate ticket size needed to spur growth.

Bottlenecks experienced by startups preventing growth in relation to capital by latest funding type



Top investors in the Dutch healthtech sector (based on the number of companies invested)

Source: Dealroom



Early-stage startups depend on public funds

Startups in healthtech typically develop innovations and technologies with public research funding. The first equity investments are also mostly provided by public funds from European, national or regional sources, such as the Eurostars SME programme, EIT Health and the European Innovation Council, and regional development funds (ROMs).

This large involvement of public funds is not atypical when compared to competing ecosystems in Europe. The situation is different in the US, where startups are almost completely privately funded, which is instrumental for rapid growth.

However, founders express frustration with the nature of public investors in the Netherlands. They note that there is a low-risk mentality and limited understanding of what is needed in the early stage to take the business to the next level.

- Comment from a healthtech founder



“They [ROMs] avoid all risks as if they were a bank and not a venture capital fund. Unless you are very well connected it is a big challenge to attract capital”



“Regional Development funds provide proof of concept loans that seem perfect for the early stage that we are in. But the experiences of many entrepreneurs with those funds are really bad. The convertible loans often cause many problems later on. Can those funds be helped in any way to learn to be more supportive to startups?”

- Comment from a
healthtech founder



- Comment from a
healthtech investor

“RVO and other seed funds are not really seed funds anymore. They require sales and market traction which is in most cases not the case with seed development cases.”

To close the existing early stage funding gap and ensure that Dutch healthtech startups are able to keep building equity within their initial growth phase, it is essential to increase non-dilutive public funding.

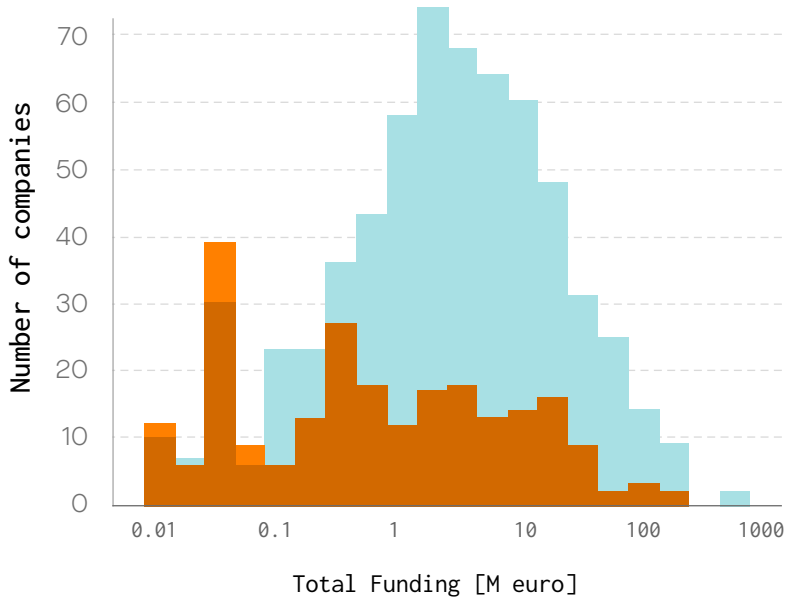
Given the need for considerable long-term investment in healthtech startups, the Netherlands needs to bridge the co-investment gap between public and private investors through new funding structures and innovative financial tools.

Dutch startups struggle to raise early stage capital and receive smaller investments than their international peers

The challenge in early-stage funding is also evident when looking at the average ticket size within the Dutch ecosystem and when comparing it to other countries (see also annex 3.3).

Healthtech startups in the Netherlands, in all phases, receive less funding than in competing ecosystems, such as the UK & Israel, with particular shortage in tickets around €5M - €10M as well as in tickets beyond €10M.

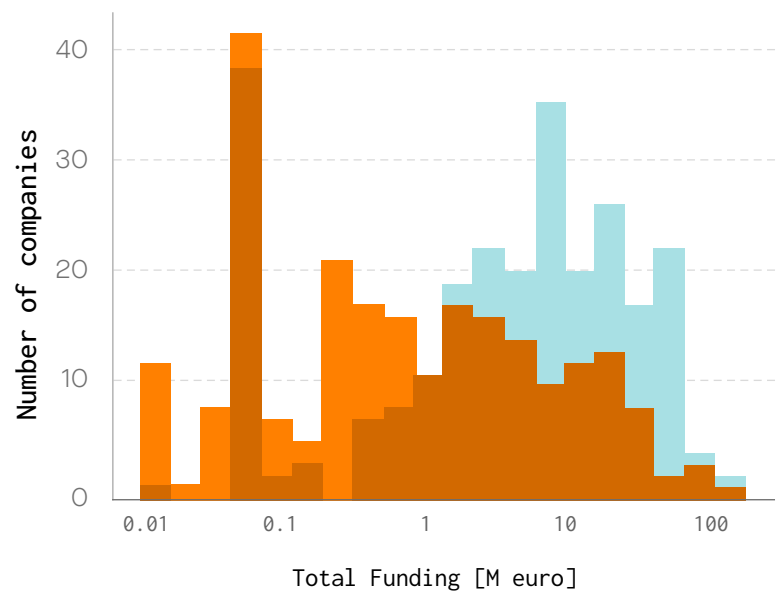
Distribution of funding across different growth stages: comparison between the Netherlands and the United Kingdom



HQ country: ■ United Kingdom ■ Netherlands

The comparison to the UK startup ecosystem reflects the large difference in the total available domestic market sizes between the UK and the Netherlands. In the UK, a second funding peak is seen around €3M. The Netherlands does not show a similar peak, which suggests that there is a funding gap between €0.1 - €10M.

Distribution of funding across different growth stages: comparison between the Netherlands and the Israel



HQ country: ■ Israel ■ Netherlands

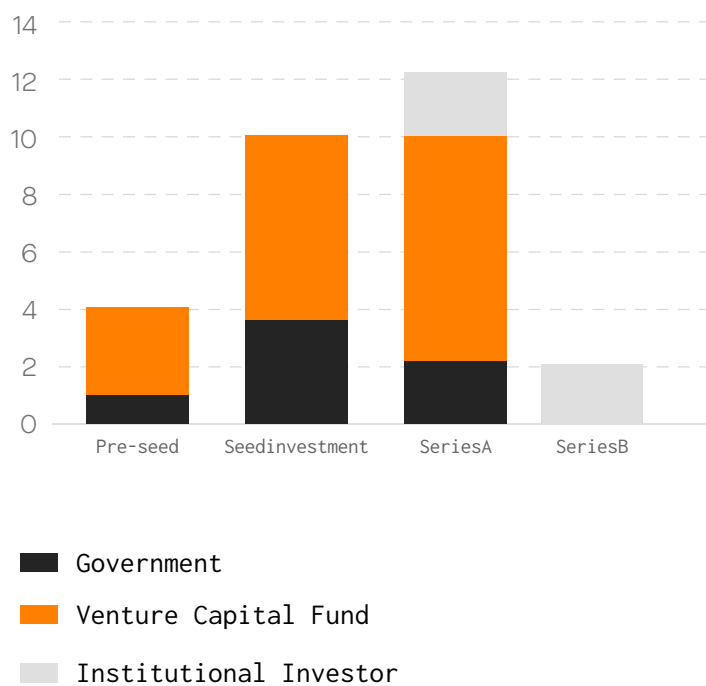
Although Israel is more comparable to the Netherlands with respect to the total number of companies, in Israel, the distribution peaks around €10M total funding. This may impact the conversion of startups to scaleups.

“

“There is still a gap between seed and Series A for medtech, particularly for larger tickets. VCs are risk averse and government bodies like InvestNL, ROMs and RvO are inadequate to fill the gap.”

- Comment from a healthtech founder

The most challenging funding stage to invest in



As a result, Dutch startups - depending on their growth stage - may end up in funding ranges where they can not find investors that are willing to take the risks.

This is also confirmed by surveyed investors, who highlight that series A and earlier are the most challenging funding stages to invest in.

Moreover, as some existing early-stage investment funds in the Netherlands have previously successfully raised bigger funds, they indicated that they are now more focused on investing in more mature startups, which further increases the existing early stage funding gap.

“

- Comment from a healthtech founder

“We also see few ambitious healthcare investors in the Netherlands, most are interested in participation but are quite clear in having a small horizon - making it big in the Netherlands and then exit. Most investors also proposed low valuations (want a large share), which makes it almost impossible to make it big (no shares left for additional rounds).”

Need for more local and foreign specialist investors

Dutch healthtech companies have indicated that access to VC funds specialised in healthtech is limited in the Netherlands. (see graph on page 22)

Founders have also stated that investors often lack the understanding for slow sales cycles, product development and growth trajectory.

- Comment from a healthtech founder



“My concern is that investors ask us for more clinical evidence and traction in the market. This takes a lot of time and money before generating any significant revenue. Also reimbursement needs clinical evidence. How many valleys of death will we encounter?”

Furthermore, generalist VCs and late stage investors rarely have the deep understanding or deep pockets required by healthtech startups in their growth stage. Instead they may prefer to invest in healthtech startups which operate outside the regulated and clinical environment.

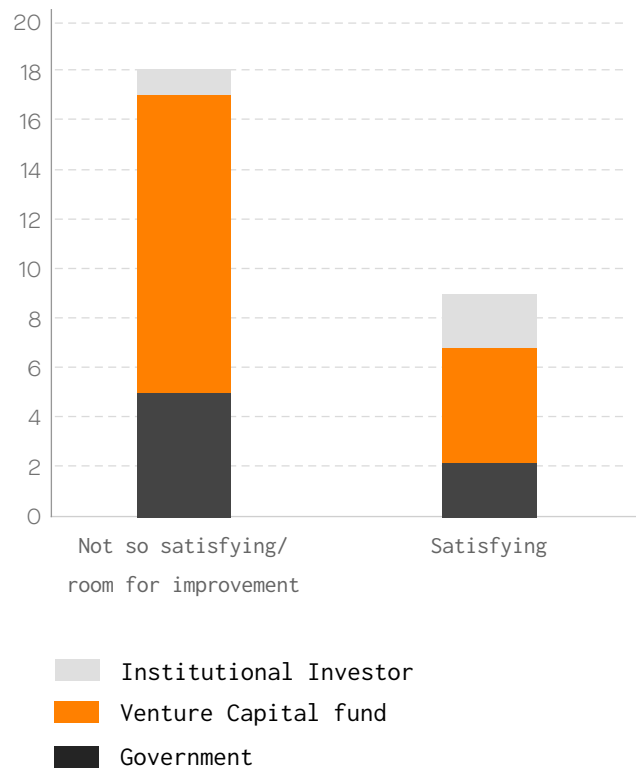
Due to the lack of access to specialist investors in healthtech, there is a limited competition between funds for deals. This increases the negotiation power of existing investors over founders and impacts valuations.



“As a pre-seed investor I barely face competition - which is good for our fund, but not for the companies.”

- Comment from a healthtech investor

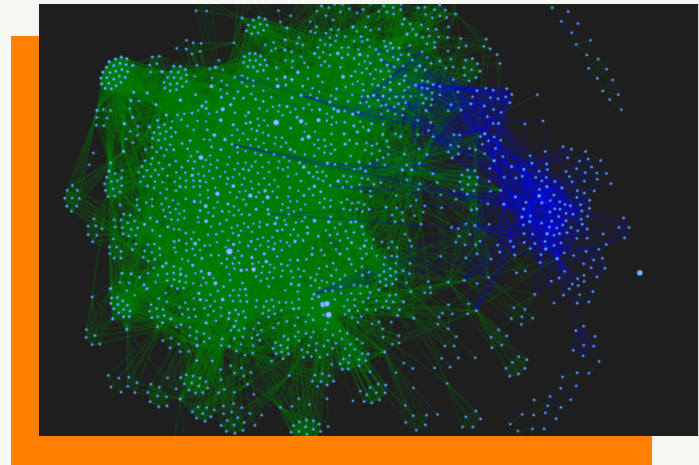
How would you rate deal flow quality in the Dutch healthtech sector?



On the other hand, investors indicate that there is also a lack of good investment opportunities. The majority of investors have pointed out as part of the survey that the deal flow quality within Dutch health tech sector is either unsatisfactory or has room for improvement.

Additionally, investors are less connected to each other in The Netherlands and Europe in comparison to Silicon Valley in the US. Through the co-investment network centrality analysis - as shown in the graph on the right - one can see that in and around Silicon Valley, the investment networks are dense and well-connected via knowledge hubs. This is not the case in the Netherlands, where the market is smaller, less mature and where less capital is available.

Investor connectedness map - Silicon Valley (green) vs. the Netherlands (blue)



This lack of connectedness between Dutch VCs on a local and international level poses an additional challenge for startups in securing early-stage funding. As a result, there is more friction in later rounds, as the lack of co-investment between public and private Dutch investors as well as international VCs subsequently complicates the startups' funding efforts.

Noteworthy, the majority of surveyed investors (more than 70%) don't acknowledge this challenge and consider co-investments relatively easy.

- Comment from a healthtech founder

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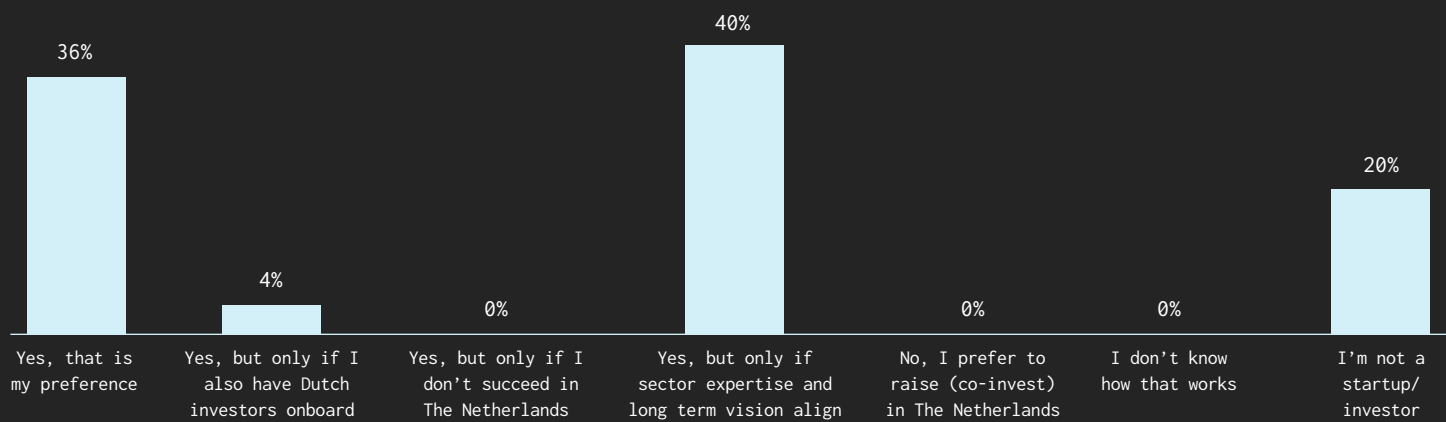
“It is very difficult to find investors who are willing to bridge the gap between startups and scaleups. Startups often go abroad. I can't understand why nobody sees this: innovations that are born here [in the Netherlands] are sold off, such a pity and waste. We might have to do the same.”

Given the lack of specialisation and volume of available capital, Dutch healthtech companies may need to consider raising money outside of the Netherlands. In our consultations founders confirmed that they would like to raise money from an international investor if sector expertise and long-term vision align.

International investors, especially from the US, Israel, and Switzerland, have more capital and are willing to grant higher ticket sizes than Dutch VCs. However, these investors bring more than just capital. They also open markets, provide connections and relevant local expertise.

Interest of Dutch healthtech startups in raising capital from an international investor

Would you consider to raise money from an international investor?

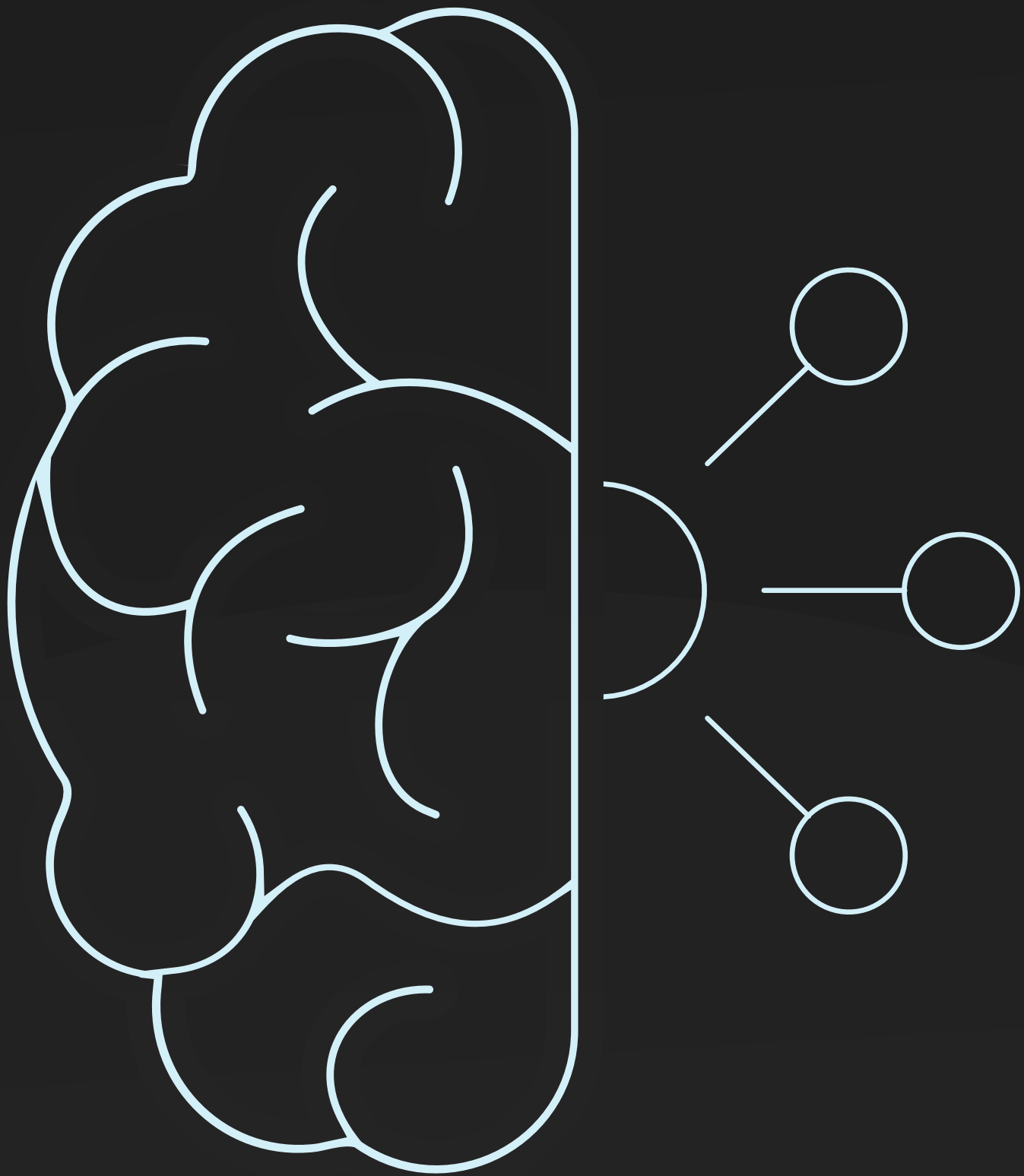


- Comment from a healthtech founder



“Terms and speed [of US investors] are way better than what is provided by Dutch VCs.”

Conclusions



Conclusions

1. Healthtech is booming in the Netherlands when it comes to the number of startups. It was the most invested sector in 2020 and there still is a lot of unlocked potential. The volume of investment and ticket size are behind the international trend.

2. Dutch startups don't scale like in other ecosystems, due to: low levels of early stage funding and growth capital, lack of access and systemic barriers in the healthcare system, and an absence of support programmes for early stage companies.

3. There is an apparent disconnect/mismatch between Dutch founders and investors because they can not agree on investability, investment periods, risks and rewards; and also between public and private investors about terms, equity shares and valuations.

4. The strong involvement of universities boosts research, innovation, and venture formation, but at the same time it holds back venture scaling and growth. More focus on entrepreneurial spirit/business development is needed within the tech transfer practices of universities.

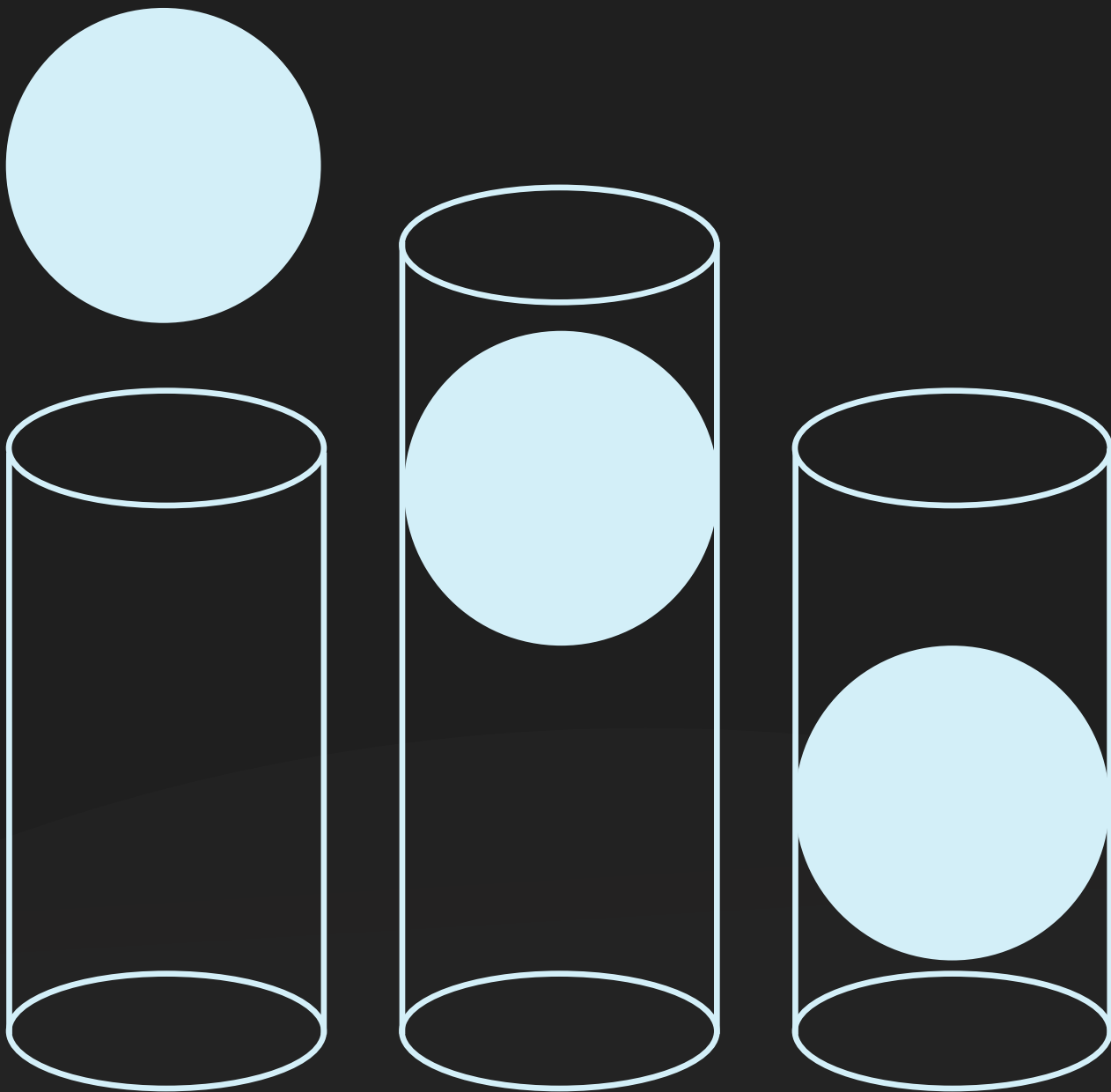
5. Leadership teams should be more diverse in terms of experience that they bring to a startup, as many founders have a background in research or healthcare and seem to be focussed on product and/or technology and not on commercialising and developing the business.

6. Startups have difficulty entering the Dutch healthcare market due to slow sales cycles, clinical validation/certification and because of unclear reimbursement policies. They also have to deal with fragmented and risk averse procurement practices within the Dutch healthcare system, which is not always open to innovation.

7. Dutch healthtech companies should think about going international early in the process, making sure they tap into the network of experienced peers or international investors.

8. Dutch healthtech entrepreneurs do not always feel as connected as they would like to be because often they do not have access to a network of trusted advisors with the right expertise or to their peers.

Recommendations



Recommendations

Change is needed to release the potential of Dutch healthtech startups, and the impact that they can have on the Dutch and international healthcare systems. To address the current challenges within healthtech, close collaboration between all stakeholders (including policy makers/regulators, health innovation professionals and executives in the healthcare sector in the Netherlands) is essential.

Only through collective effort and equally shared accountability between parties, we can achieve the desired results. Therefore, as a first action starter, Techleap.nl provides the following recommendations, based on this report's findings. These are either general calls to action or aimed at specific stakeholders. Techleap.nl will also co-develop certain interventions to address the challenges of Dutch healthtech startups.

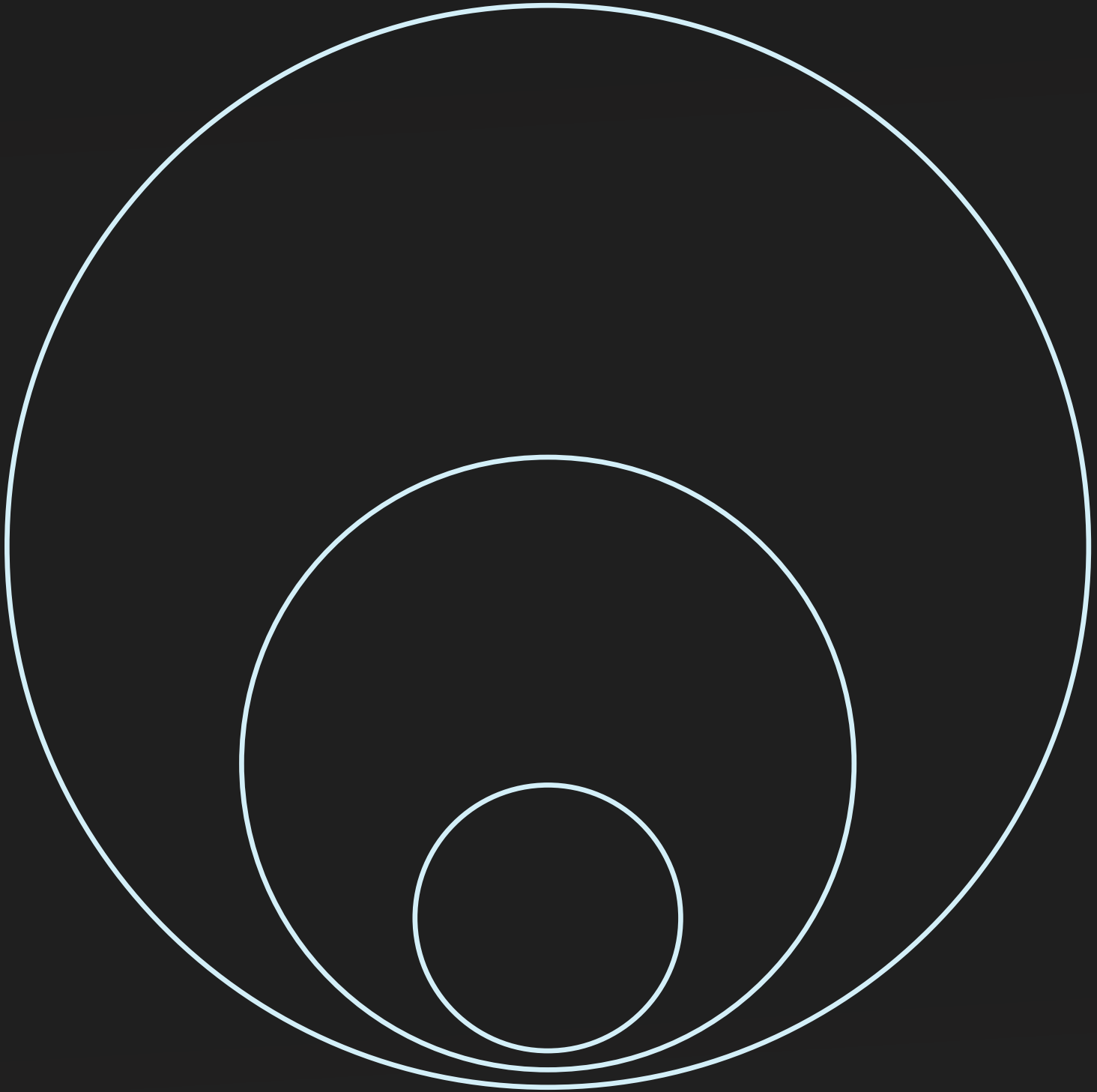
What needs to be done?

- + Go-to-market barriers for Dutch healthtech startups and scaleups have to be removed as much as possible by setting up a fast-track programme for healthtech startups. For example, for digital healthtech startups this can be achieved by implementing a similar initiative to DiGa in Germany.
- + A commercialisation strategy has to be embraced by local and national thematic tech transfer offices as it is not only about creating an innovative product and/or the technology but also about getting it to market and selling it.
- + A coordinated pilot scheme has to be put in place in the Netherlands whereby the results in one hospital will be generally applicable to all.
- + A national health data infrastructure with a solid legal framework should be set up for collecting, storing, processing, and sharing of data and ensuring interoperability and access. The Netherlands should be taking inspiration from best practices in Finland, Germany, and France.

What Techleap.nl can do:

- + Build communities that connect healthtech founders, mentors and investors.
- + Launch a Rise healthtech batch to help scale the most promising Dutch healthtech companies with a focus on access to capital, IP, leadership teams and internationalisation.
- + Strengthen the support system for early stage healthtech startups in close cooperation with existing incubators. The “Pole Position initiative”, created in collaboration between Techleap.nl and four incubators, YES!Delft, UtrechtInc, Braventure and NovelT, will aim at helping deeptech startups grow. The first batch will particularly focus on deeptech startups within healthtech and will bring founders, experts and icons together to share best practices and build connections in order to make it easier to bridge the “valley of death”.
- + Provide guidance around internationalisation and expansion to the US with Techleap.nl’s GoGlobal platform/tool kit.
- + Help healthtech leadership teams onboard professionals with a strong commercial, managerial skill set. From the companies’ side, that usually means bringing in an experienced external CEO, COO and/or CCO that could help these companies become more successful in their go-to-market approach/strategy and help them roll out internationally.
- + Increase access to smart capital by attracting top tier international VCs to co-invest in Dutch healthtech companies.
- + Intensify collaboration in the Dutch healthtech ecosystem by enabling closer cooperation between selected stakeholders in the healthtech sector who are willing and able to change the status quo and are willing to make the difference, including Topsector LSH, HollandBio, NLHealth, Health Valley and HealthInc.

Rise







Rise





To further empower the Dutch healthtech sector, Techleap.nl Rise programme chose to support the growth of 10 high-impact healthtech scaleups as part of its 5th batch.

Techleap.nl Rise is an exclusive programme. In a trusted environment, scaleup founders share and discuss their growth challenges during tailor-made sessions with experienced entrepreneurs and scaling experts.

The programme focuses on empowering the participants' ambitions and lets them learn from the expertise that the Dutch ecosystem has to offer, and vice versa.

Meet the 11 scaleups

Rise Scaleups	Value proposition	Founding year	FTE
	LeQuest has developed a software platform that enables healthcare professionals to be trained in the use of (complex) medical equipment.	2011	45
	Manometric is the orthopaedic company 2.0. Their mission is to transform orthoses and prosthetics from necessities to products people love to wear.	2017	20
	Ancora aims to empower people to take ownership of their health, wellbeing and performance through data-driven assessments and lifestyle therapeutics.	2018	37
	DEARhealth realises significant cost reductions for chronic diseases by moving care pathway management to the lowest possible line of care.	2019	17

Rise Scaleups	Value proposition	Founding year	FTE
	<p>Founda Health's mission is to improve collaboration, knowledge sharing and innovation through better interoperability in healthcare. They disrupt the sector by replacing old, expensive and single purpose connections with deep and scalable integrations in healthcare IT systems. Founda Health invests in reusable infrastructure and connections, healthcare only pays for usage.</p>	2019	30
	<p>Vivolta revolutionises medical devices by facilitating the development of nano and micro fiber-based implants that help the body to heal itself and to form new, healthy tissue.</p>	2008	15
	<p>MRI Guidance has developed a revolutionary software solution, called BoneMRI. It generates a CT-like image to complement the soft tissue images derived from an MRI scan. This results in the world's first imaging solution that visualises all human tissue types and it allows for imaging of the bone without the need to expose the patient to harmful radiation.</p>	2016	13
	<p>NewCompliance has developed a modern, interoperable IT platform to improve safety & reduce costs in hospitals. The ACTIQ platform supports caregivers with predictive dashboarding and analytics solutions for Surgery and Acute Care Departments.</p>	2007	40

Rise Scaleups

Value proposition

Founding year

FTE



Pacmed Critical is a personalised risk predictions and decision support software suite, powered by machine learning. It can be used for optimising recovery, improving discharge and capacity management. This will improve patient outcomes, reduce costs and give doctors back valuable time to spend with patients and family.

2015

32

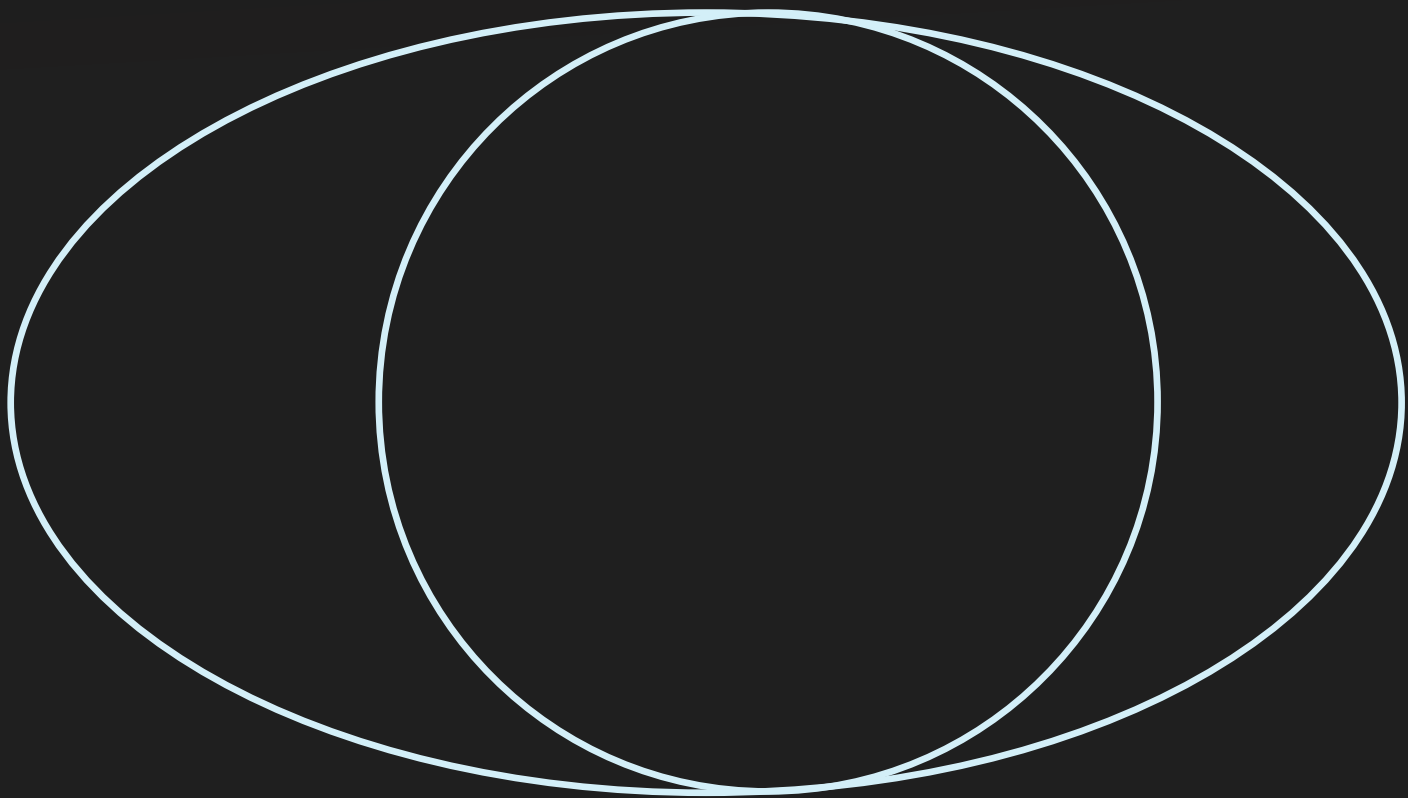


Prolira's deltaScan solution objectively detects delirium in an early stage and improves patient care in hospitals.

2015

13

Annex



Glossary (in alphabetical order)

AI - Artificial Intelligence

Biotechnology - A technology that utilises biological systems, living organisms or parts of this to develop or create different products. Many diseases and medical conditions are detected more quickly and with greater accuracy because of new, biotechnology-based diagnostic tools.

DiGa - Stands for Digitale Gesundheitsanwendungen, which means Digital Health Applications in German.

Digital Health - The broad scope of digital health includes categories such as mobile health (mHealth), health information technology (IT), wearable devices, telehealth and telemedicine, and personalised medicine. Digital health technologies use computing platforms, connectivity and sensors for health care and related uses.

Early stage startups - The stage in which companies test their Minimum Viable Product (MVP). Typically, at this stage startups already have a team, independently of the size, if they cover the required areas and run the initial tasks. Now is the moment to have a business model defined, even if it's not complete.

FDA - Food and Drug Administration, a regulatory body in the US.

Healthcare sector - the whole sector: including healthcare system(s) hospitals, doctors and health insurance.

Healthcare industry - all commercial activity in health and medicine

Health platforms - A health platform is the integration of applications and technologies to provide a customised, end-to-end, healthcare solution. Health platforms improve patient engagement and try to provide quality care for significantly less cost. These platforms can be run to provide digital data - transmitted, stored, and retrieved electronically - for clinical, educational and administrative processes. These platforms usually require hardware and an operating system on which software can be run to acquire and process the data.

Healthtech - Startups and scaleups that use technology (databases, applications, mobiles, wearables) to improve the delivery, payment, and/or consumption of care, with the ability to increase the development and commercialisation of medicinal products. It also refers to the use of technologies developed for the purpose of improving any and all aspects of the healthcare system. From telehealth tools to robotic-assisted surgery.

IGJ - Inspectie Gezondheidszorg en Jeugd, the Dutch healthcare regulator.

IP - Intellectual Property

KTOs - Knowledge Transfer Offices within universities.

LPs - Limited Partners; Investors of venture capital (vc) firms are called Limited Partners (LPs). LPs are the institutional or individual investors that have invested capital in the funds of the firms that they are investing VC off of. LPs include endowments, corporate pension funds, sovereign wealth funds, wealthy families or high-net-worth individuals, and funds of funds.

Medical devices - these devices generally have a physical or mechanical effect on the body or are used to measure or monitor functions of the body.

Medtech - Encompasses a broader scope than medical devices and it includes medical devices with IT connectivity.

MDR - European Medical Devices Regulation

MVP - Minimum Viable Product; a development technique in which a new product with basic features is introduced in the market by a startup, but that has been sufficiently developed to get the attention of the consumers or other types of users.

RvO - Rijksdienst voor Ondernemend Nederland

Pharmaceutical companies - Commercial businesses licensed to research, develop, market and/or distribute drugs, most commonly in the context of healthcare. They can deal in generic and/or brand medications.

Series A financing round - Series A financing refers to an investment in a privately-held startup company after it has shown progress in building its business model and demonstrates the potential to grow and generate revenue.

TTOs - Technology Transfer Offices within universities.

Valley of death - a common term in the entrepreneurship world, relating to the serious challenge of covering the negative cash flow in the early stages of a new venture, before the innovation (service or product) is generating revenue from real customers.

VCs - Venture Capitalists

1.

Methodology

This report identifies and analyses the main challenges for healthtech in the Netherlands by qualifying the data gathered through a Techleap.nl survey under Dutch healthtech companies, a Techleap.nl healthtech-themed webinar, and a review of literature and companies' data from three databases: Dealroom, Pitchbook and CBInsights.

Within the context of this report, Techleap.nl defines a healthtech company as a company working in medicine that uses technology to prevent, diagnose and treat human diseases.

This can be broken down further into the fields of biotechnology, medical devices, health platforms, and pharmaceuticals.

The report provides an overview of startups and investors within these 4 subsectors of the health market. It does not cover the healthcare sector as a whole, although these are logically intertwined.

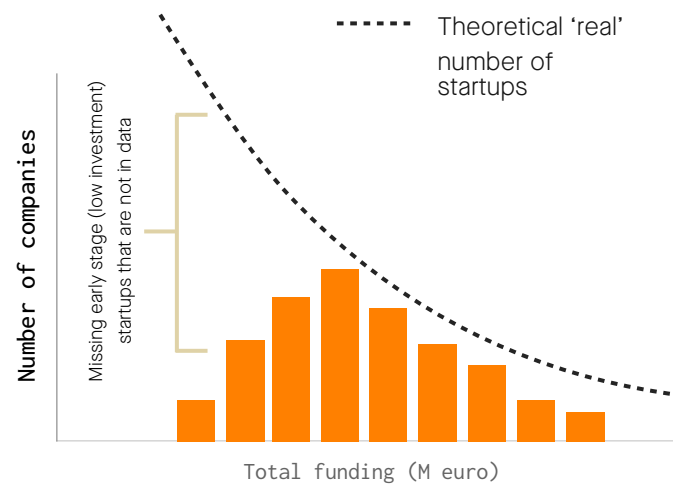
Getting a helicopter view on international healthtech startup ecosystems

If we want to compare ecosystems to each other, it is very important to get a quantitative helicopter view on all startups and all investors. We can learn a lot about the relation of funding and the number of startups in an ecosystem by looking at the startup histogram distribution as a function of total funding.

The data shows us which startups have already raised substantial funding and therefore are picked up in commercial transaction databases such as Dealroom. Obviously there is a strong selection effect in our data, as many early stage startups are still under the radar as funding is not yet known. This is the hidden population of startups.

The data platforms that we use for our research (Dealroom, Pitchbook and CBinsights) do not always find all deals. As the overview below shows, the most frequent investors in Healthtech are not similarly ranked. In our research and analytics, we merge the databases whenever that is possible to get the most comprehensive overview of startup data.

However, as Dealroom provides the most comprehensive datasets on the Dutch ecosystem, we consider the coverage of Dealroom to be most suited for startup analysis from the Netherlands.



We use the funding distribution overviews in our ecosystem analysis in five different ways. First, we compare the Dutch Healthtech ecosystem to other competitive countries that also have well funded Healthtech startups. Secondly, we can look at how many startups each sector in each country has. Third, the data shows us the VCs and other investors in foreign countries that are relevant in Healthtech. We learn which VCs co-invest with each other.

Finally, we can estimate the total number of startups in a country by looking at the slope of the funding distribution at higher funding rates (the right side of the diagram). The number of startups is inversely proportional to the total funding. We have to take into account that there is a large hidden population of startups that are not yet in our databases. Our estimation based on the funding distributions is that the total startup population can be twice as large as in the databases.

2.

Survey and online webinar methodology

2.1. Survey methodology

What type of questions were asked in the survey?

We asked startups and investors what they thought were the biggest challenges and the most effective solutions in access to capital, markets, technologies and talent. In addition, startups and investors gave their personal, and very valuable insights on how to grow the healthtech ecosystem.

How many Healthtech startups in total did we reach with our survey?

Our survey was directly sent to 391 startups. We got 106 responses from startups directly via our email outreach. In addition, we got another 43 responses from health platform and medical devices startups that found our survey indirectly via social media or via other channels. Note that there is a hidden population of predominantly early stage startups that is not yet in our data. We are satisfied with our outreach and confident that we collected input from as many healthtech startups as we could.

How representative is the survey?

The response rate is 27% which we consider to be well representative. Of course we do not know how many startups there are in the ecosystem, so we made a simple model to estimate the total number of startups that would fit our scope.

In total, we estimate that there are about 550 startups in Healthtech that saw our survey. Hereby we assumed that there is a proportionally sized hidden population of unresponsive startups.

Do you get the same survey results if you held the survey again?

Yes and no. To answer this question, we need to know if the survey results are significant. For a total population of 550 startups and a survey sample of 149 responses, we derive a margin of error of 7% for a confidence level of 95%. This means that choices to survey questions that are answered with a difference of at least 10 responses are significant. However, survey responses that show smaller differences may still be indicative of trend, but at lower confidence levels.

Has the survey validated our assumptions on the challenges and solutions in the ecosystem?

Our results significantly validate and confirm that most of the challenges and solutions that Techleap has identified beforehand are relevant. This means that Techleap has built up confidence that our programs and initiatives are well aimed to tackle the challenges and work on the most effective solutions.

How data is collected

Using a long list compiled from the Techleap Finder: there are 950+ startups and scaleups when looking into the health sector, after filtering TL's definition which are the following:

- No sole proprietorship
- Companies are founded within the last 20 years
- Not a subsidiary, status is operational
- Headquarters is located in the Netherlands

After doing a manual check and consultations with industry experts, we specified the list to 391 companies that are fitted to our health theme. This list is used during the recruitment process of our RISE program.

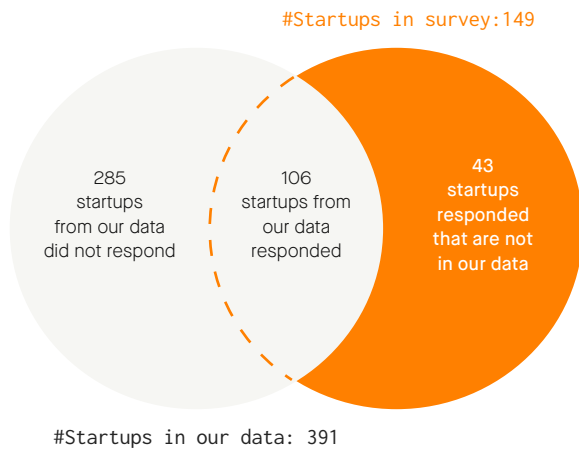
The health survey was released on May 6th and was open until May 31st . The purpose of the survey is to further understand current challenges, categories and the stage of startups, scaleups and investors within the health sector. Survey collection is done by approaching companies from our cleaned list of 391 companies and sharing the survey link through our social media platforms and newsletter. A total of 149 startups and 27 investors answered the survey. Some other responses fell outside of the scope for this research.

Survey reflections & learnings

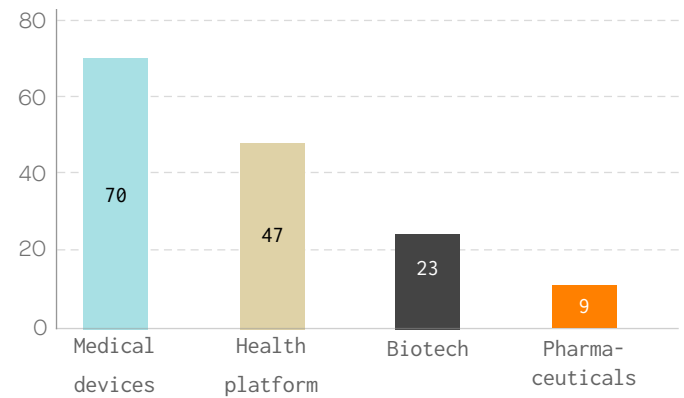
- Are there differences in the responses of Biotech, Medical devices, Health Platforms and Pharmaceuticals?
 - *Startups in these sectors seem to have similar challenges and solutions. Our sample is not large enough to indicate significant differences in these sectors.*
- Are there differences in the responses of early stage startups versus scaleups?
 - *The number of scaleups in our sample is too low to observe significant differences in their responses compared to startups.*
- Did we miss key challenges and solutions in the survey?
 - *Our survey results show relatively little attention to the talent related challenges for startups. From experience and research, we know that the quality of the founders are key for growth. Most often, the limiting factors are not being able to attract the right talent and insufficient growth ambition. It could be that the importance of access to talent is more subtle than our survey could capture and, or the founders are more inclined to address external rather than internal challenges and solutions.*

Mapping the survey respondents

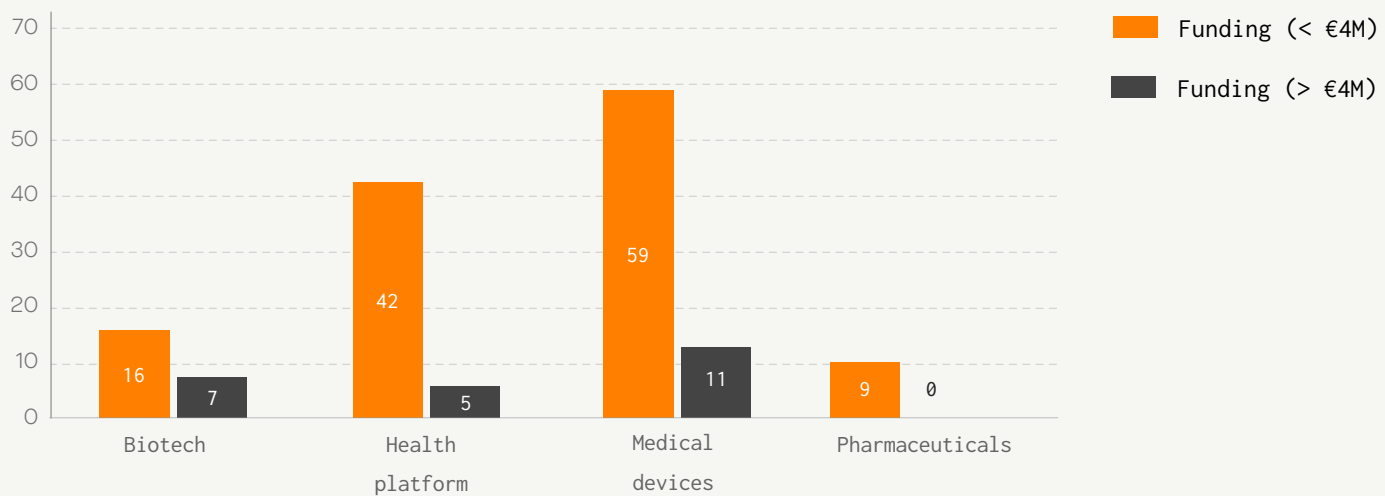
1. Healthtech startups;



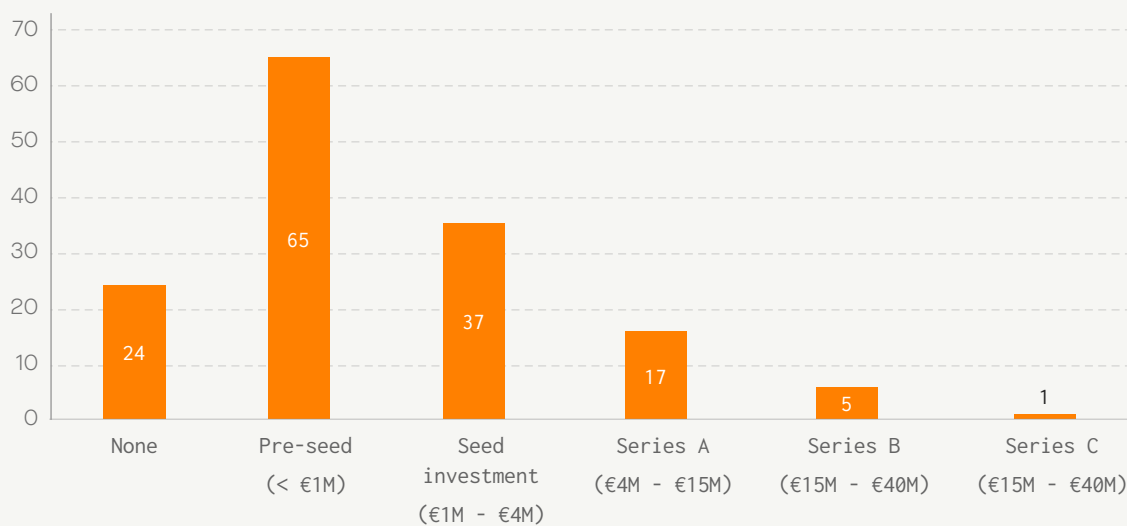
2. Subsectors which surveyed startups have been active in



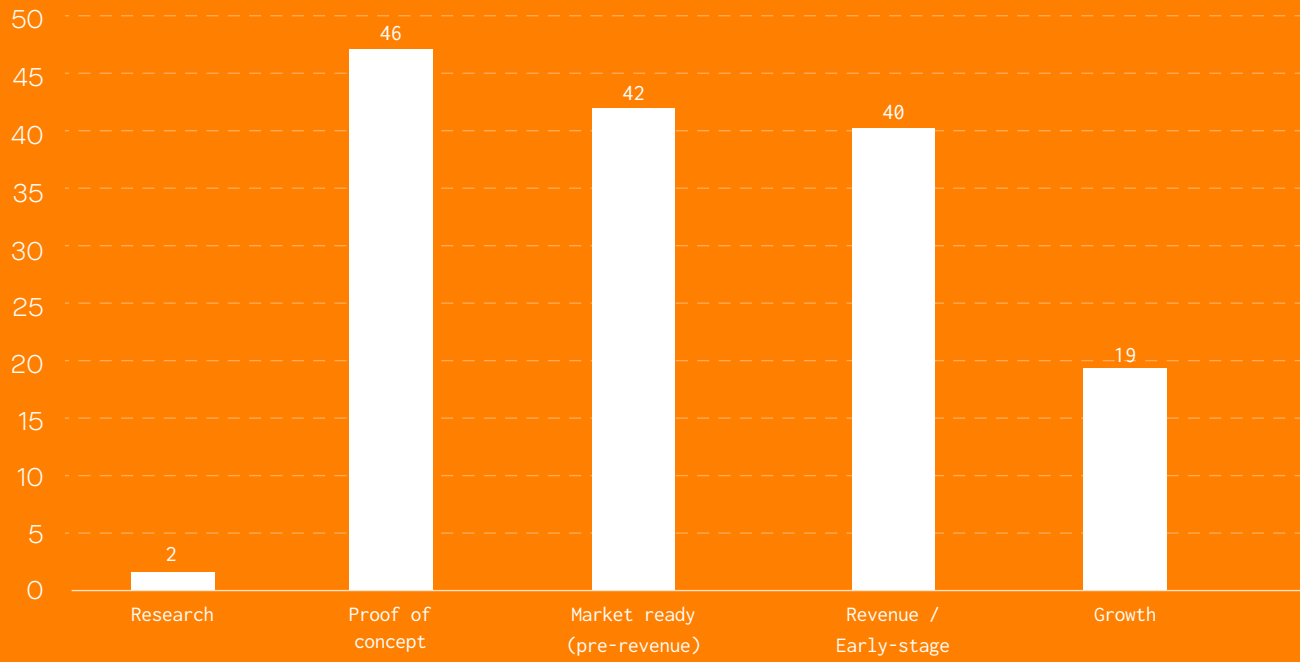
3. The size of the last funding round that startups have raised (by subsector)



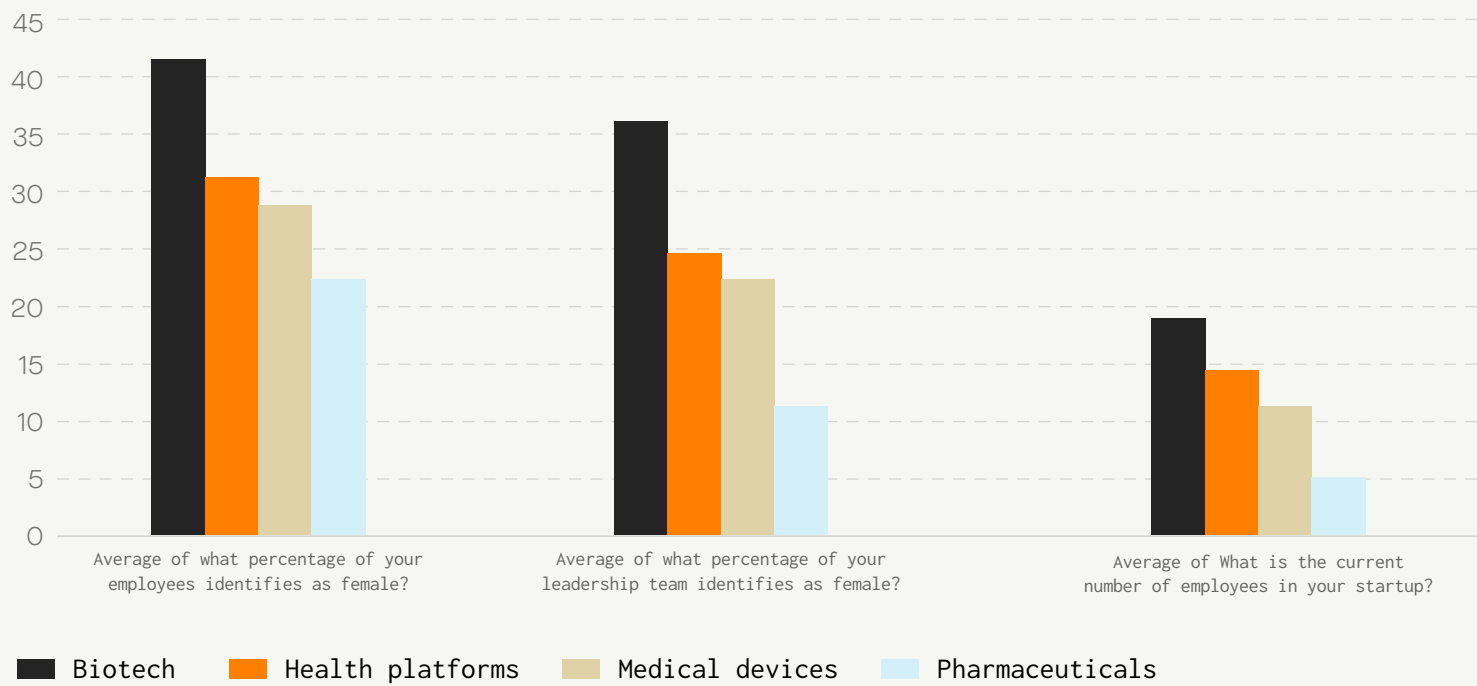
4. The size of the last funding round that surveyed startups have raised (per growth stage)



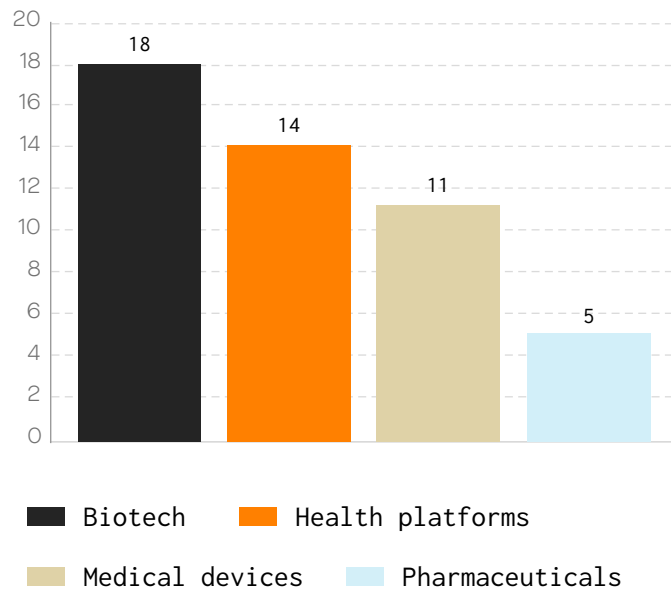
5. The growth phase of the surveyed startups



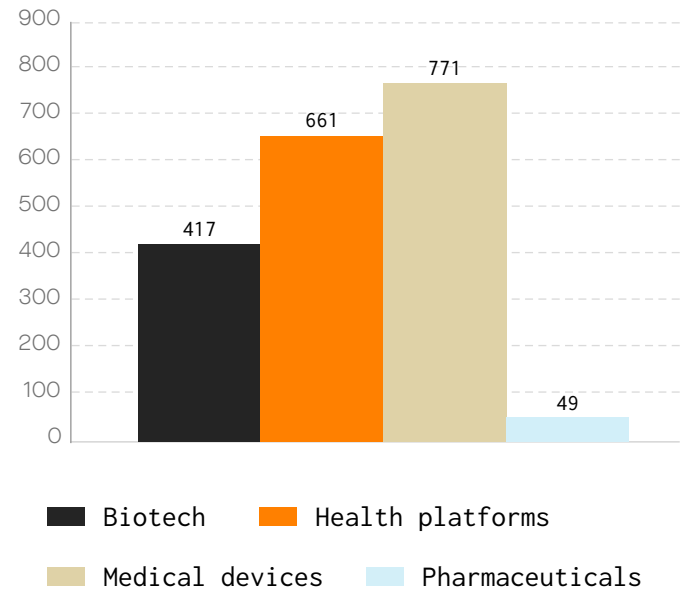
6. The percentage of female vs male within the leadership team of surveyed startups (by subsector)



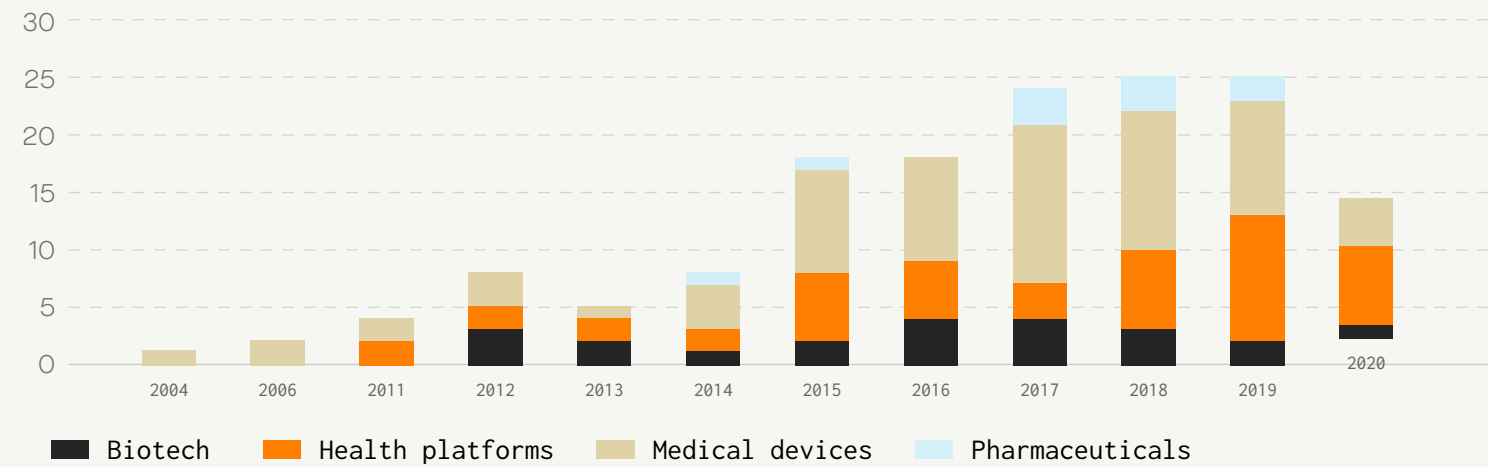
7. The average number of employees within surveyed startups by startup / subsector



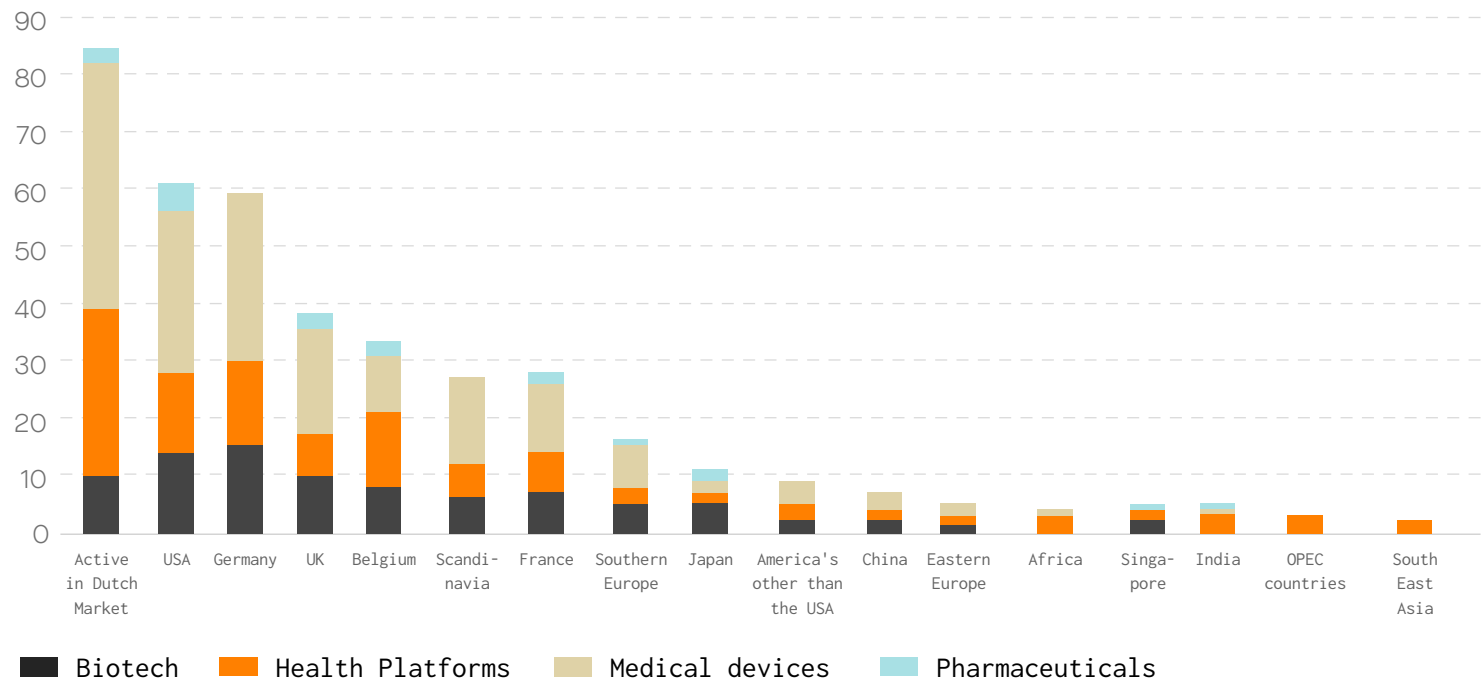
8. The total number of employees within surveyed startups by startup / subsector



9. The founding year of surveyed startups (by subsector)



10. Countries in which surveyed startups spend >10% of their resources (by subsector)

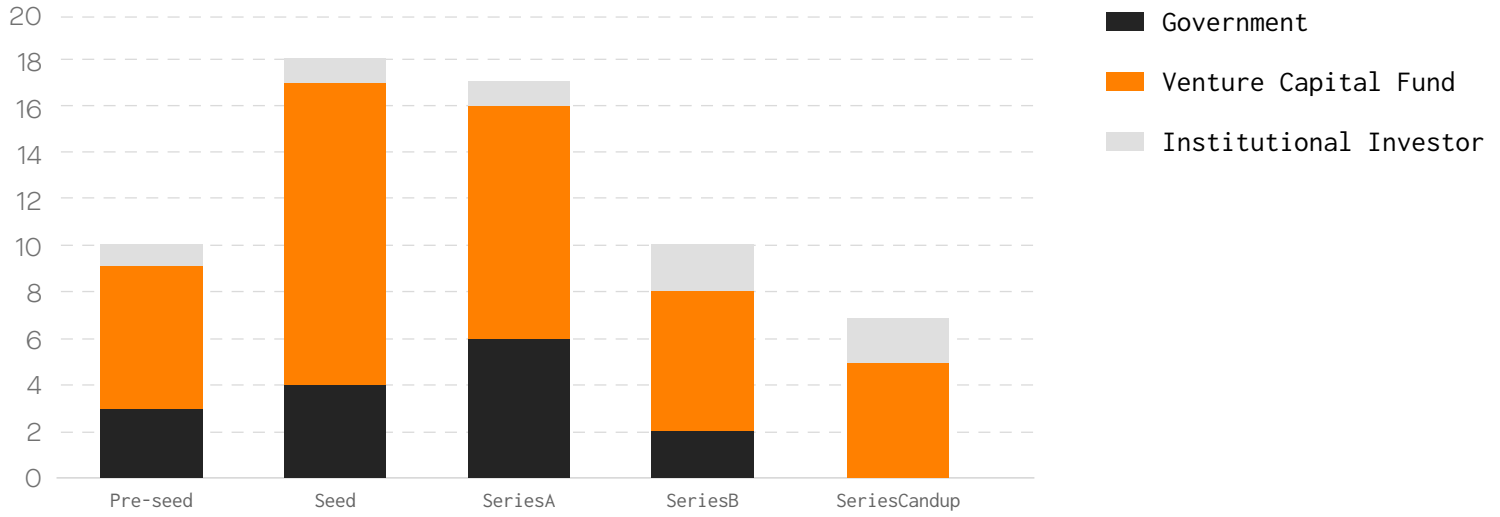


11. Location of surveyed startups:

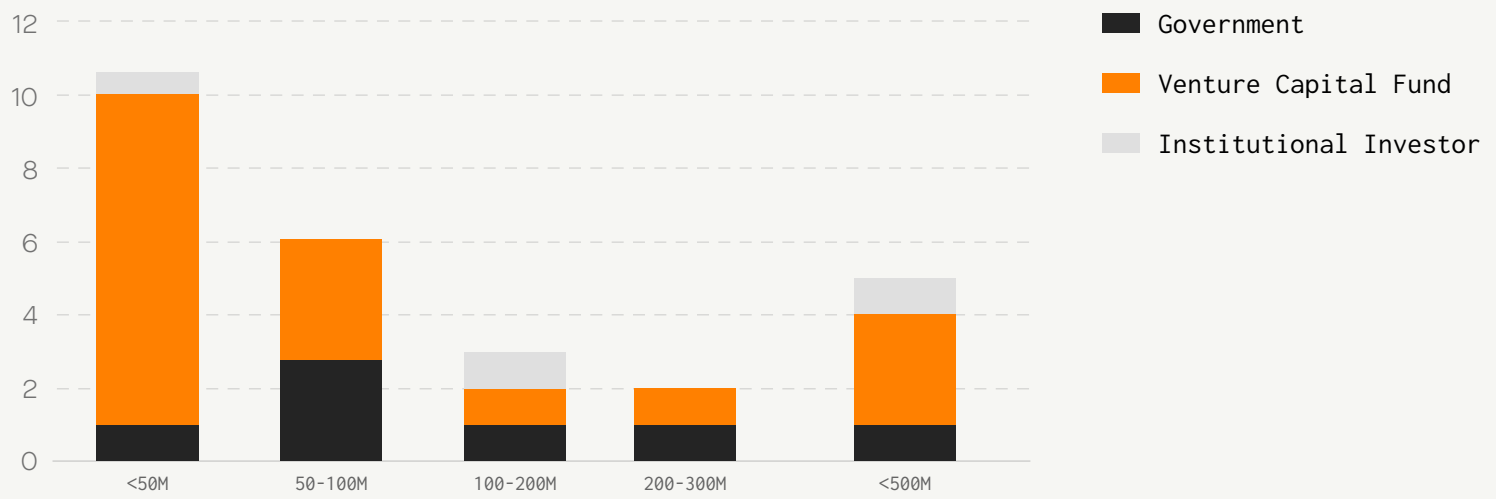


Investors

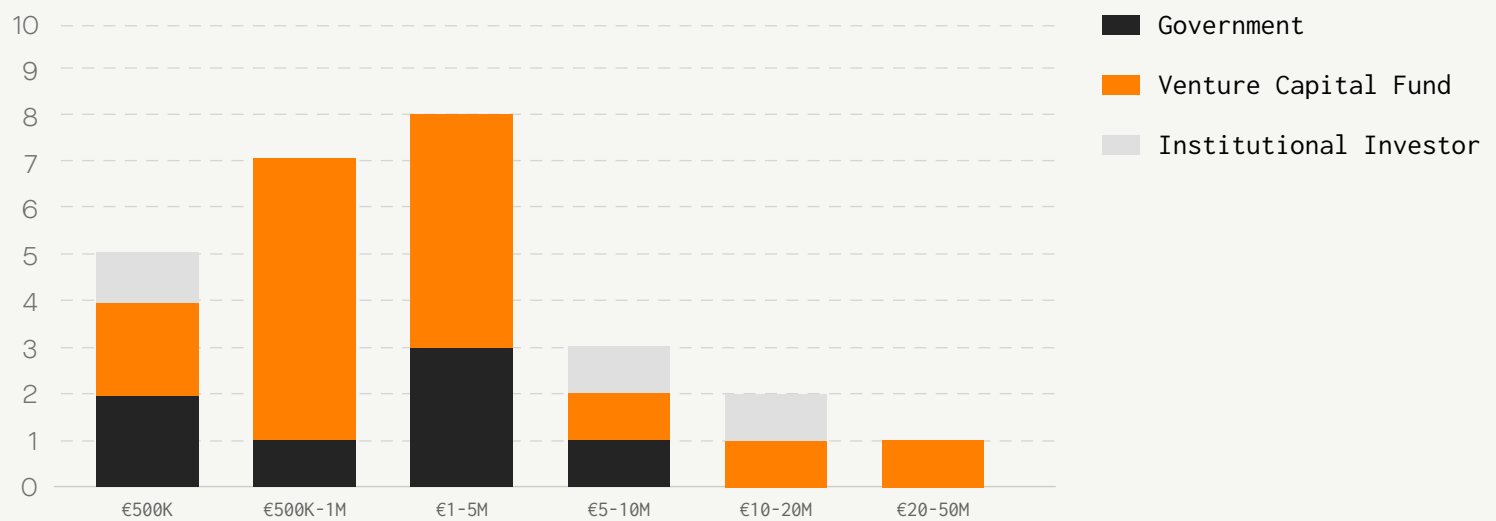
1. Investors: Stage they typically invest in



2. Investors: Their Assets under Management (AUM)



3. Investors: Typical deal size



2.2. Online webinar methodology

To get more detailed qualitative insights into the challenges that Dutch healthtech startups currently experience and their potential solutions, Techleap.nl organised - on September 2nd 2021 - a 1.5 hour webinar featuring 66 participants, the majority of them being startup founders. The format of the webinar featured 3 topical breakout sessions and a collective discussion, hosted by two moderators.

Each topical breakout session aimed at validating the key survey & research findings by conducting in-depth 40-min discussions with about 10 expert participants per topic.

The second half of the webinar aimed at holding larger discussions with all participants about potential solutions to solving the challenges highlighted during the breakout sessions as well as outline the potential role which Techleap.nl could play in this regard.

3.

Overview: Funding comparison international

3.1. Funding raised per country per capita (2020 vs 2021)

Country	Funding (€ per capita) 2020	Funding (€ per capita) 2021 YTD July	Rounds (#) 2020	Rounds (#) 2021 YTD July
Netherlands	€ 24,5	€ 32,2	51	36
United Kingdom	€ 33,1	€ 57,1	217	167
Belgium	€ 34,2	€ 26,1	22	16
Sweden	€ 38,5	€ 47,5	35	23
France	€ 16,4	€ 10,9	123	51
Germany	€ 17,7	€ 10,2	81	48
Switzerland	€ 119,3	€ 74,3	73	30
Israel	€ 115,8	€ 92,1	81	43
USA & Canada	€ 107,5	€ 99,5	1.353	874

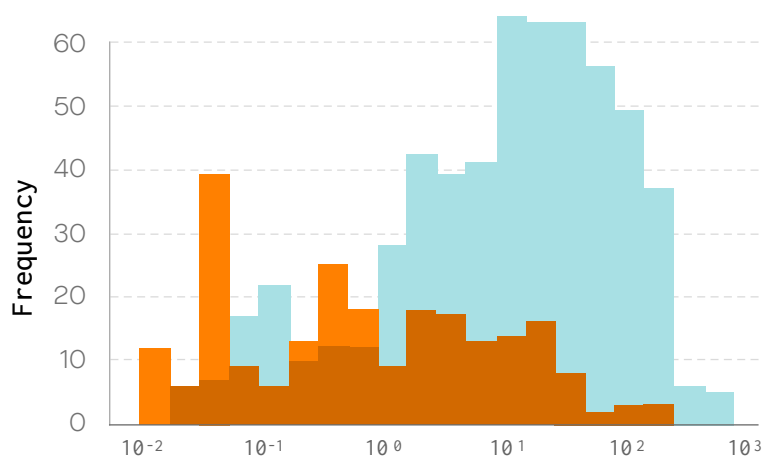
3.2. Funding raised per country in absolute numbers (2020 vs 2021)

Country	Investments		Deals	
	2020	2021 (April)	2020	2021 (April)
USA and Canada	€ 34.795.794.455,00	€ 25.580.766.395,00	879	497
United Kingdom	€ 2.143.950.557,00	€ 3.174.690.416,00	164	104
Germany	€ 1.456.639.964,00	€ 775.668.179,00	98	38
France	€ 1.061.731.407,00	€ 695.364.545,00	69	36
Israel	€ 962.736.180,00	€ 689.999.984,00	61	32
Switzerland	€ 944.095.036,00	€ 569.942.048,00	39	24
Netherlands	€ 420.361.360,00	€ 446.997.056,00	29	16
Sweden	€ 395.179.122,00	€ 411.868.300,00	58	17
Belgium	€ 376.116.361,00	€ 300.368.180,00	18	14

3.3 Distribution of funding across different growth stages: comparison between the Netherlands and other leading ecosystems

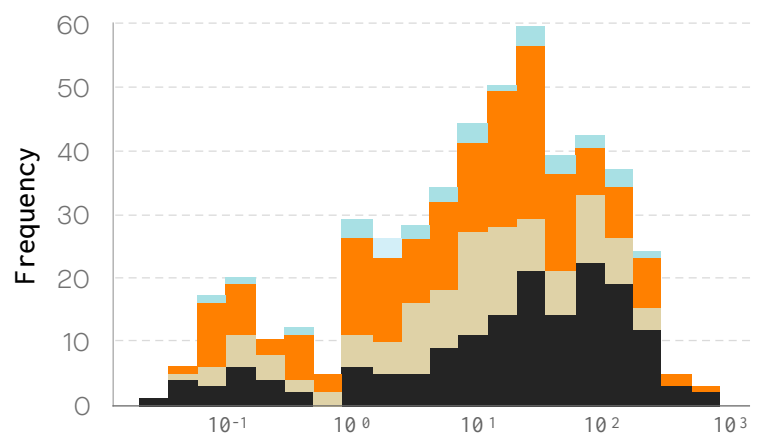
Silicon Valley & the Netherlands

Only startups with a headquarter in Silicon Valley are shown below. It is clear that Silicon Valley has a lot of startups with very high funding.



HQ country:

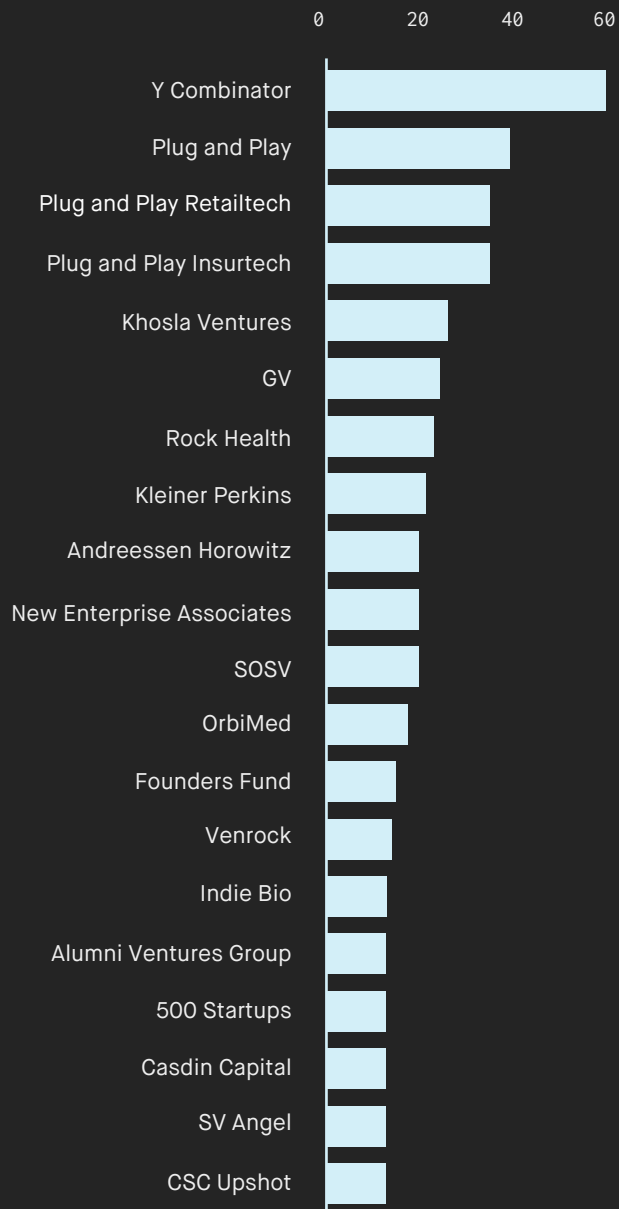
United States (light blue) Netherlands (orange)



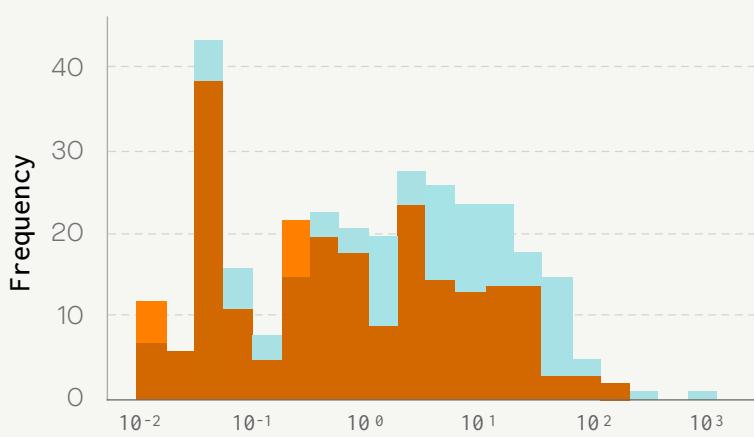
Sub industries

Biotechnology (black) Medical devices (tan)
Health platform (orange) Pharmaceutical (light blue)

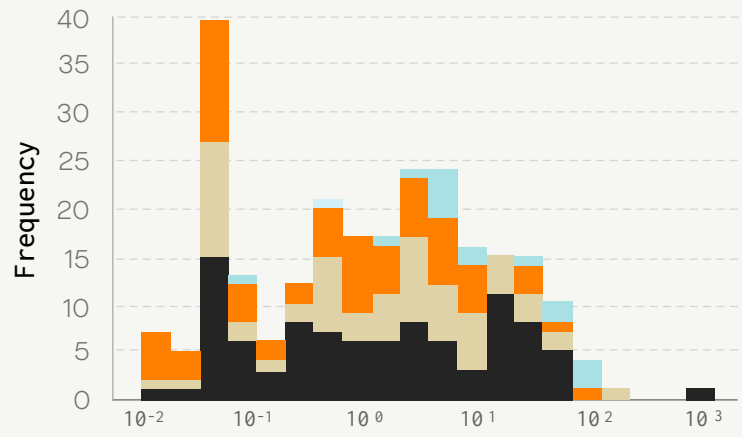
Top investors in Silicon Valley:



Germany & the Netherlands

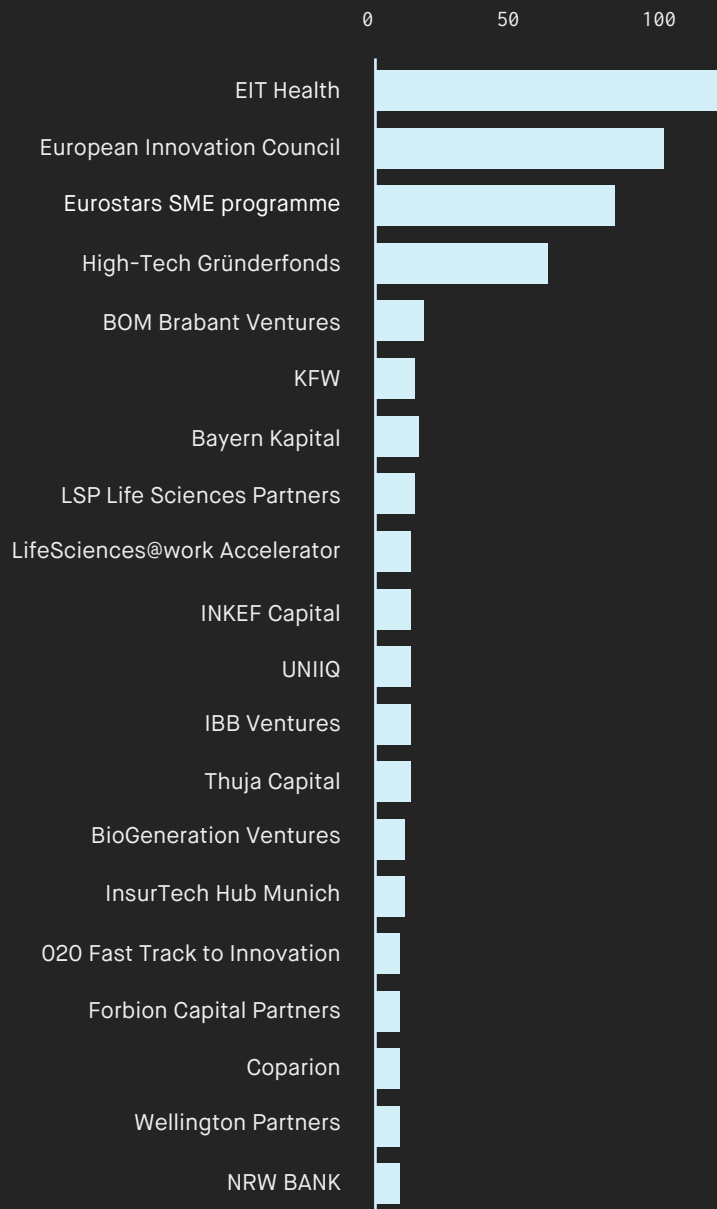


HQ country:
■ Germany ■ Netherlands

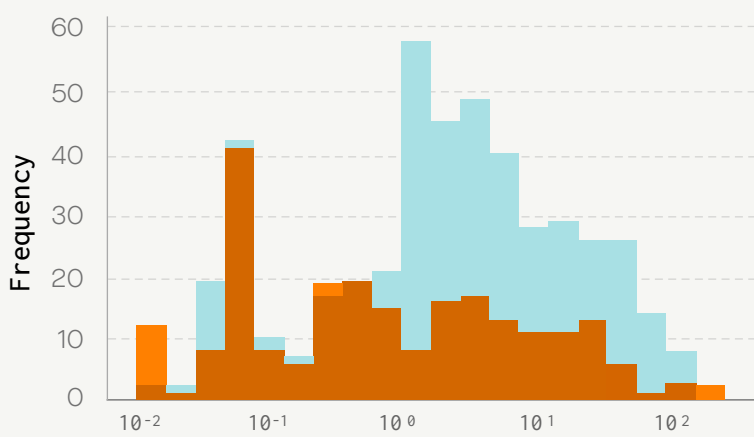


Sub industries
■ Biotechnology ■ Medical devices
■ Health platform ■ Pharmaceutical

Top investors in Germany

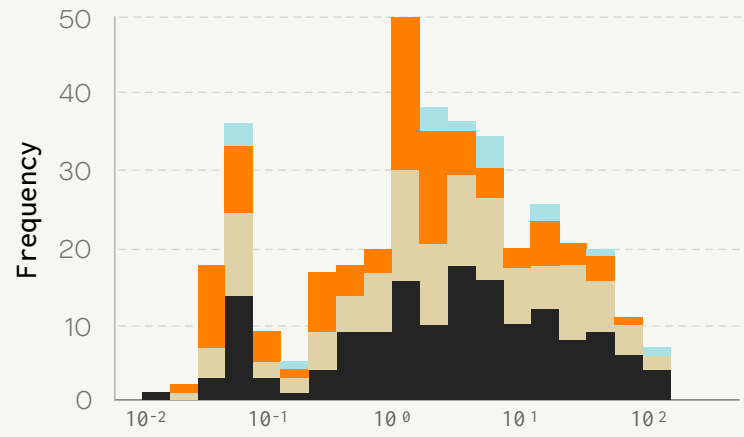


France & the Netherlands



HQ country:

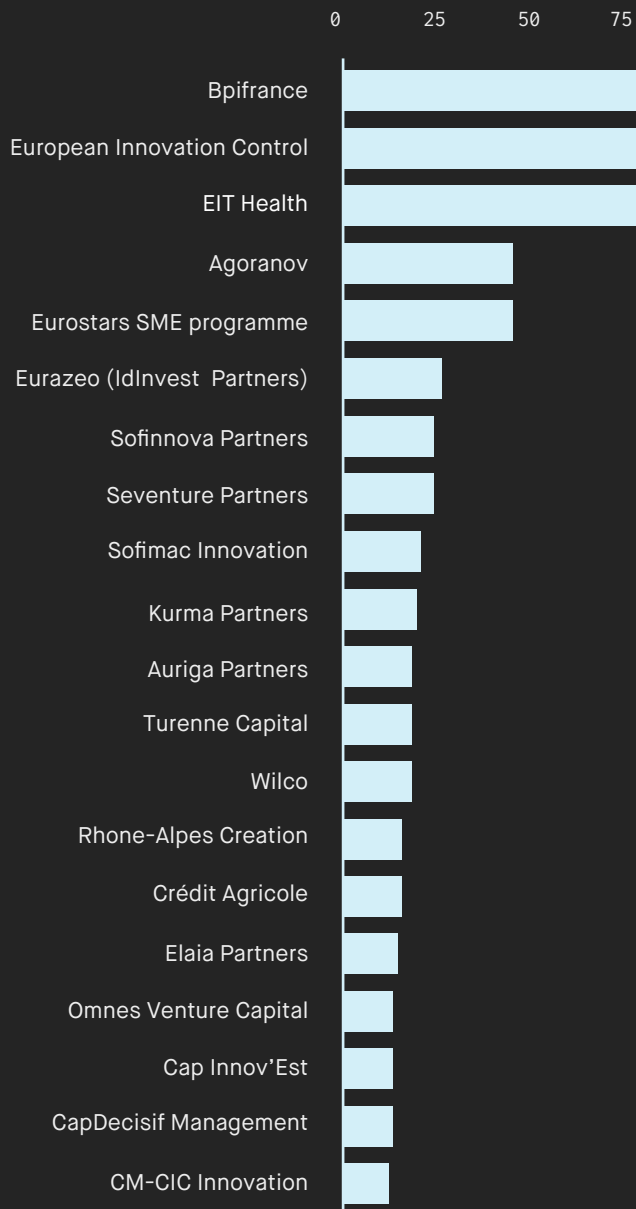
France (light blue) Netherlands (orange)



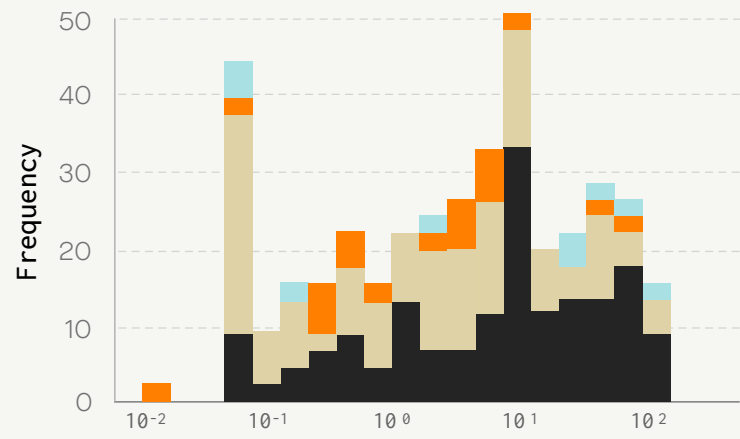
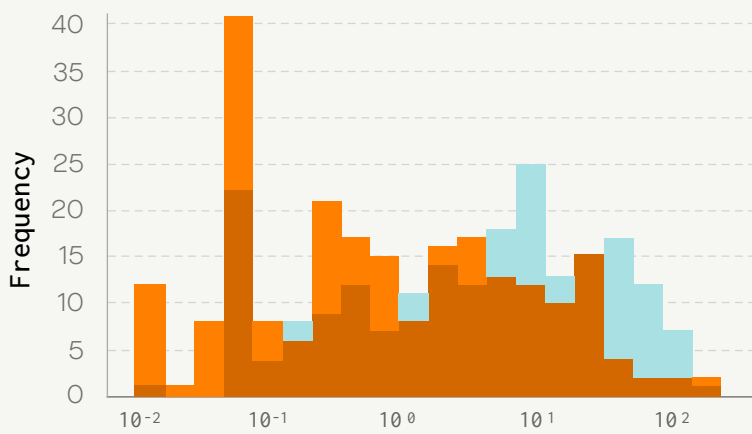
Sub industries

Biotechnology (black) Medical devices (tan)
Health platform (orange) Pharmaceutical (light blue)

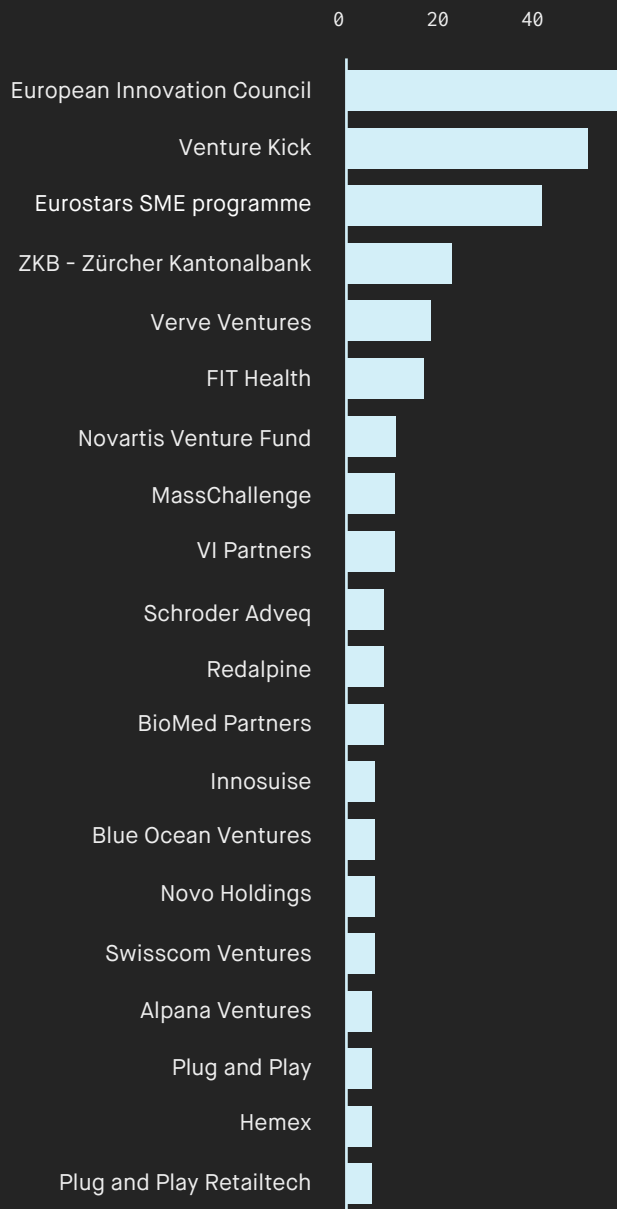
Top investors in France



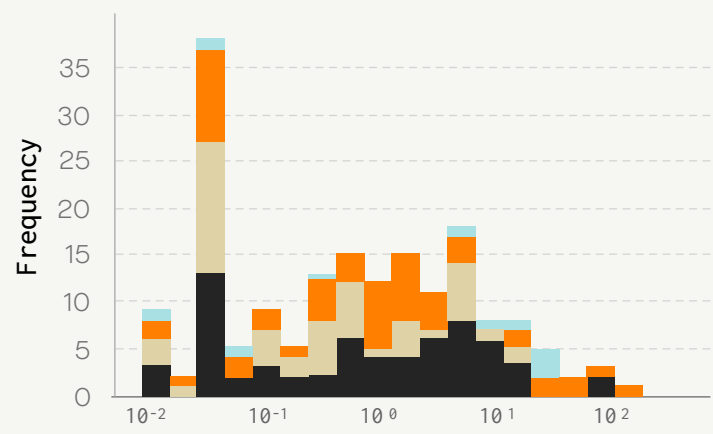
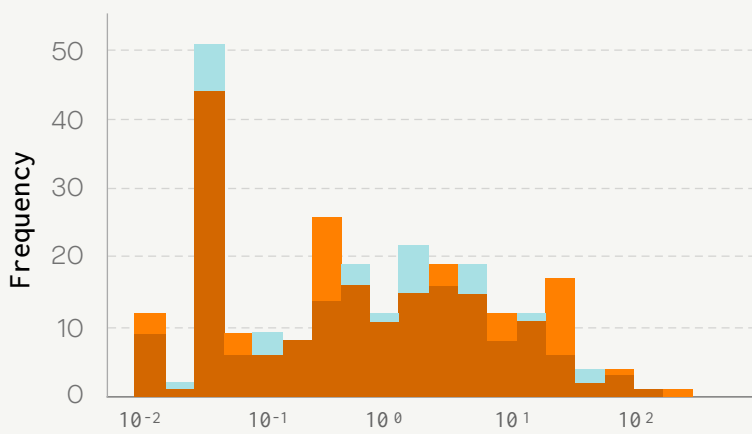
Switzerland & the Netherlands



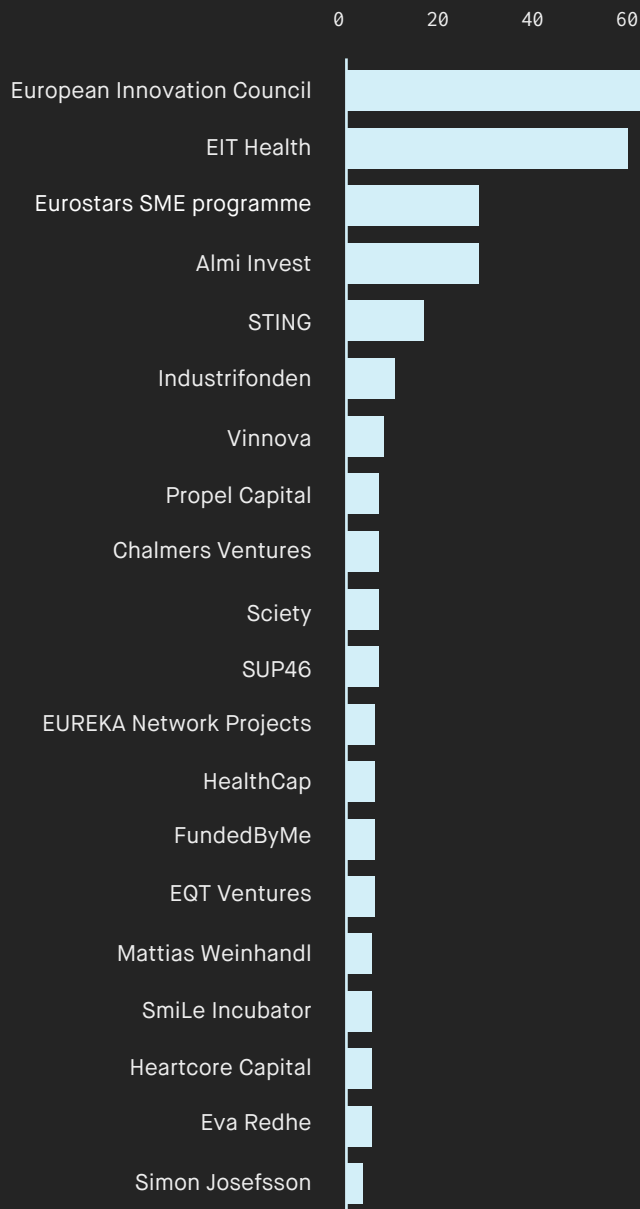
Top investors in Switzerland



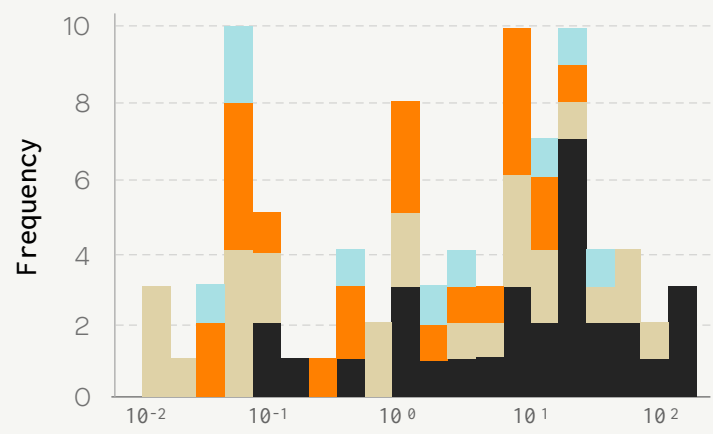
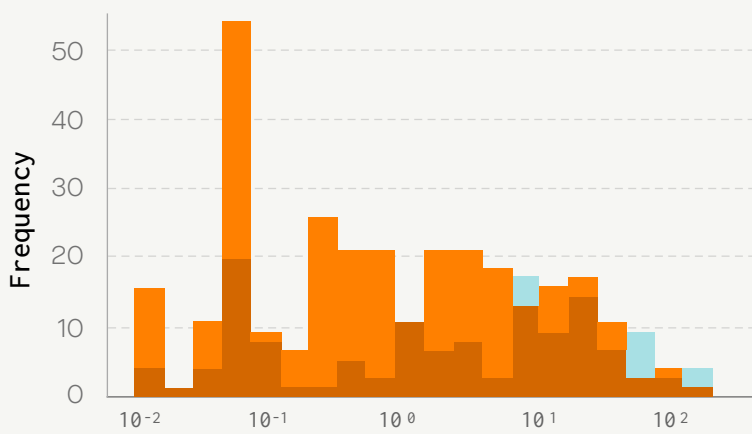
Sweden & the Netherlands



Top investors in Sweden



Belgium & the Netherlands



Top investors in Belgium

