

Addressing skills needs in the European health sector

Skills gaps, solutions, and strategies
for VC-startup cooperation



Addressing skills needs in the European health sector

**Skills gaps, solutions, and strategies
for VC-startup cooperation**



Disclaimer

This report represents the views and opinions of the experts and stakeholders involved in the consultation processes organised by the WorkInHealth Foundation and EIT Health. The insights and solutions presented are based on the discussions and interviews conducted during the project's development.

The findings in this report were further informed by the EIF annual VC survey and other data collected up until March 2024. Therefore, some content may reflect the state of knowledge and context as of that time and might not align with subsequent updates or developments.

The WorkInHealth Foundation and EIT Health do not assume any responsibility for the accuracy or completeness of the information provided. This report is intended to offer a comprehensive overview based on the collected data and does not constitute professional advice.

This report should not be referred to as representing the views of the EIF or of the European Investment Bank Group (EIB Group). Any

views expressed herein, including interpretation(s) of regulations, reflect the current views of the author(s), which do not necessarily correspond to the views of EIF or of the EIB Group. Views expressed herein may differ from views set out in other documents, including similar research papers, published by EIF or by the EIB Group. Contents of this report, including views expressed, are current at the date of publication set out above, and may change without notice. No representation or warranty, express or implied, is or will be made and no liability or responsibility is or will be accepted by EIF or by the EIB Group in respect of the accuracy or completeness of the information contained herein and any such liability is expressly disclaimed. Nothing in this report constitutes investment, legal, or tax advice, nor shall be relied upon as such advice. Specific professional advice should always be sought separately before taking any action based on this report.

Reproduction, publication, and reprint are subject to prior written authorisation of EIT Health and the EIF.

Contents

6–16

- 6 Foreword
- 10 Methodology
- 13 Acknowledgements
- 14 Abbreviations

15–19

Chapter 1

Introduction: Defining the biotech, medtech, and digital health subsectors, and their principal trends and challenges

20–36

Chapter 2

Soft skills: Key skills and skills gaps across the three subsectors – integration of both quantitative and qualitative analysis

37 – 50

Chapter 3

Hard Skills: Key skills and skills gaps across the three subsectors – integration of both quantitative and qualitative analysis

51–66

Chapter 4

Solutions to address the skills gaps

67–69

Chapter 5

Enhancing communication and talent strategy evaluation between venture capital funds and startups

70–78

Chapter 6

Diversity

79–89

Conclusions and contributors

- 80 Conclusions
- 81 EIF researchers and contributing authors
- 83 Appendices

Foreword

The European health sector is experiencing a significant transformation driven by technological advancements and shifting health priorities. Digital innovation is being leveraged to address patients' needs through improved access to health services, personalised treatment options, and enhanced communication with providers. However, these advancements have underscored the critical need for skilled professionals who can adeptly navigate this evolving landscape.

Who will emerge as the driving force behind this transformation?

What essential skills will be required, and how can companies address the urgent talent shortage?

To tackle these questions, Europe has launched a series of initiatives, most notably the European Year of Skills, aiming to support quality job creation and assist small and medium-sized enterprises by showcasing national and EU funding options. Key actions of this initiative included investing in training and upskilling to enhance job retention and acquisition, aligning skills with employer needs through strategic partnerships, matching aspirations with job opportunities—particularly in the green and digital sectors—and attracting skilled individuals from around the world to meet specific demands.

Within the broader context of the European Year of Skills, this joint report by the European Investment Fund (EIF) and WorkInHealth Foundation (WiH), created by EIT Health, delves into the worsening shortage of skills and talent within the health sector across Europe. It offers diverse perspectives from venture capital (VC) firms, startups, and experts, examining the lack of competency and expertise in the industry to better understand how this shortage is driven by technological advances, demographic shifts, regulatory complexities, and the increasing demand for specialised knowledge, particularly in digital health, personalised medicine, biotechnology, and other areas.

This publication combines quantitative and qualitative insights into the skills gaps within the sector, specifically from the viewpoint of the contributors and those in their network, including venture capitalists, startups, and industry experts.

The **European Investment Fund (EIF)**, leveraging its unique role in the European venture capital and private equity ecosystem, focuses on addressing market gaps and challenges whilst improving access to finance for European startups, SMEs, and mid-caps. As part of its EU public policy objectives, the EIF offers dedicated financing support for education, skills, upskilling, and reskilling. The EIF has contributed to this report with unique insights from its EIF VC Survey — the largest annual survey of VC fund managers in Europe.

The **WorkInHealth Foundation**, created by EIT Health, addresses Europe's growing health skills gaps by aligning sector needs with professionals and fostering innovation. Its focus on talent attraction, upskilling, retention, and reskilling is critical for ensuring sector sustainability and growth. Through the **Skills Observatory**, the WiH Foundation identifies emerging skills shortages and guides the development of tailored education programs, ensuring a capable and adaptable health workforce.

EIT Health, part of the European Institute of Innovation and Technology (EIT), has focused on addressing societal challenges in health, demographic change, and well-being within the EU since its establishment in 2015. With approximately 120 partner organizations collaborating across academia, business, research, and care delivery, it reinforces excellence and encourages innovation to deliver impactful outcomes for citizens and patients. EIT Health's unique innovation ecosystem model combines diverse partners and funding sources to catalyse evidence-based policymaking and health transformation.

Additionally, EIT Health and the EIF have partnered to operate the **Venture Centre of Excellence (VCoE)**, mobilising finance and expertise for European SMEs in health and life sciences. The VCoE connects investors with small businesses, offering support for fundraising and access to EIT Health services for Series A, B, and pre-IPO rounds. In its support activities, the VCoE regularly identifies the skills-based challenges faced by beneficiary startups and investors within its network, and assists them in tackling issues related to reskilling and upskilling teams, recruitment, and developing effective skills strategies.

We extend our sincere thanks to the **EY team**, whose expertise and dedication were instrumental in writing and compiling this report. Their thorough analysis and professional support significantly enhanced the quality and comprehensiveness of our findings.



Jean-Marc Bourez
CEO of EIT Health

As the CEO of EIT Health and an entrepreneur, I often hear that the most critical aspect of any venture is the team—its skills, leadership, and cohesion. This sentiment, frequently echoed in pitches and evaluation juries, raises important questions: How do entrepreneurs best present their team strategy, recruitment, and skills development? Startups typically follow standardized procedures for pitches and business plans, yet there is little established conduct for developing talent and skills. The EIF’s VC Survey highlighted talent as the second major concern when investing in a startup, prompting us to explore this issue further. Hence, this report aims to inspire health entrepreneurs and investors to strategically cultivate and invest in talent, addressing this critical gap in startup development.

At EIT Health, we firmly believe that a more sustainable and resilient healthcare system begins with collaboration. We are immensely proud of the work produced through the partnership between EIF and the WorkInHealth Foundation in addressing skills needs. This effort builds on the already successful cooperation between the EIF and the VCoE initiative within the European co-investment program and continues with the *Industry-Led Pact for Skills Partnership*.

Enjoy the insights gathered in this analysis and join us in shaping a brighter future for healthcare.



Céline Carrera
Chairwoman
of WorkInHealth
Foundation, created
by EIT Health

As the Chairwoman of the WorkInHealth Foundation, I am honoured to introduce this joint publication by the EIF and the WorkInHealth Foundation, created by EIT Health. Our health sector is at a pivotal moment, driven by rapid technological advancements and shifting health priorities. This transformation demands a workforce equipped with the necessary skills to navigate an increasingly complex landscape.

The report you are about to read delves into the critical need for future skills, emphasizing the importance of talent attraction, upskilling, and reskilling. Through initiatives like the Skills Observatory, we identify emerging skills shortages and guide tailored education programs, ensuring a capable and adaptable health workforce. By combining quantitative and qualitative insights, this publication provides a comprehensive understanding of the talent gaps within the sector. It aims to offer diverse perspectives from venture capital firms, startups, and experts, underscoring the need for a coordinated approach to skills development.

Our goal is to foster innovation and sustainability in health by aligning sector needs with professional development. This report is a testament to our commitment to building a resilient and future-ready health system. We trust you will find this reading valuable.



Marjut Falkstedt
EIF Chief Executive

In our 30th anniversary year, and following a successful European Year of Skills to which we contributed, I am delighted to introduce this joint publication of the EIF and the WorkInHealth Foundation, created by EIT Health.

We are building on an already very successful partnership between our organisations, launching the Venture Centre of Excellence (VCoE) programme in October 2020. Together we have already invested over €600 million and counting.

In addition to our own support for fund managers and innovative businesses in the European health and life sciences sector, the VCoE remains one of our flagship cooperations leveraging both funding and expertise, and crowding-in additional private sector participation from corporates.

Applying a collaborative approach is crucial in everything we do. The EU's public policy goals for a green, digital, and inclusive future, alongside other 'megatrends' around us such as artificial intelligence, robotics, but also an aging population across Europe, are reshaping our economies and societies.

Pursuing a skills strategy that is aligned with our vision is vital in this context. Feeling relevant and being part of the change rather than left behind, is a fundamental human right. Across all sectors – including health – this could be a critical factor of our success.



Helmut Kraemer-Eis
EIF Chief Economist,
Head of Impact
Assessment

I hope our in-depth analysis, bringing together quantitative evidence based on the EIF's annual VC Survey (2023 edition), and further qualitative insights from EIT Health's network, contributes to a better understanding of skills needs and skills gaps in the health sector. By valuing and understanding research-based evidence, we are hoping to enable informed decisions, innovative solutions, and meaningful progress for all.

Since its establishment, the EIF has had one fundamental purpose: to empower our ecosystem of financial intermediaries, partners, and entrepreneurs with the necessary funding, as well as our unique market knowledge, to shape a better future in Europe.

Skills are an essential ingredient of that future. We wish you an informative reading.

Methodology

In-depth explanation of the quantitative and qualitative analyses featured in the publication

This report is the culmination of a series of interactions with various members of the European health industry. It aims to comprehensively understand the skills gaps in this field from multiple perspectives, including the viewpoints of investors, startups, associations, established corporations, and regulatory authorities.

To gain a deeper insight into the skills gaps in the European health industry, the EIF undertook a **quantitative** analysis based on the EIF VC Survey. The 2023 wave of the **EIF VC Survey** includes **anonymized** responses from **472 VC fund managers representing 371 VC firms**. The VC firms contacted were predominantly headquartered in the 27 EU countries. Firms with headquarters outside Europe were still included in the sample if they had an office in Europe and were active in the European VC market. The main topics covered in the 2023 survey were market sentiment, scale-up financing, European strategic autonomy, and the focus of the current publication: the role of human capital (with a particular focus on skills and diversity). For this topic, the objective was to identify skills gaps within VCs' teams and the startups in their portfolios. In this study, sectoral focus has been defined based on the survey question: "*Please select the most important industries in which your firm invests in ventures*"; respondents

were divided into those who selected biotech, health, or another sector as the most important industry in which they invest. Overall, 8% cited the health sector, 14% answered biotech, and 78% primarily invest outside the health and biotech sectors.

Additional survey background: In order to improve the availability of information for evidence-based policy interventions, the EIF routinely conducts the EIF VC Survey and the Private Equity Mid-Market Survey. The EIF equity surveys are online surveys, directed towards venture capital (VC) and private equity (PE) mid-market (MM) fund managers operating within the European market. These surveys encompass both EIF-supported and non-EIF supported fund managers and are conducted anonymously. The majority of respondents in the VC and PE MM surveys are CEOs or Managing/General/Founding Partners, suggesting that their responses offer insights on the decision-making perspectives within their VC/PE firms. This report draws upon the results of the EIF VC Survey.

Visit www.eif.org/research for more information about the EIF equity surveys.

Building on the initial findings from this **quantitative** survey, specifically those regarding health and biotech, a comprehensive **qualitative** initiative was launched to promote **interviews** with industry experts, aiming to explore skills gaps more deeply. The expert selection leveraged the EIT Health ecosystem, which encompasses a broad community of startups, venture capitalists (VCs), and beyond.

Initially, 7 interviews were conducted with professionals from various segments of the European health industry, ensuring a broad spectrum of insights:

- Consulting firms/VC builders: Product Life Group and Home Biosciences
- Corporates: Astrazeneca
- Investment fund managers: Sofinnova Partners and HealthTech for Care
- Recruitment specialists: Strammer
- Regulatory authorities: GMED

Each interviewee was sent pre-readings in advance, specifically the quantitative survey and the list of questions to be administered during the interview. The list of macro topics remained the same among all interviewees; however, the specific questions varied slightly based on the role of the interviewee. For instance, questions for participants from consulting firms, VC builders, and investment funds primarily focused on the portfolio companies or clients they managed, while questions for corporate interviewees (e.g., Astrazeneca) focused on the company itself or the interviewee's own department.

These initial interviews were open discussions structured with questions in four main topics:

1. The scarcest and most important soft skills
2. The scarcest and most important hard skills
3. Solutions to address the skills gaps
4. How companies are addressing the diversity gaps

Interviewees provided the EIT Health team with insights on skills gaps from different perspectives: investors, corporations, and regulators. Additionally, these discussions generated actionable strategies for addressing these gaps.

With this enriched understanding, a new set of discussions was orchestrated to facilitate three **roundtables** between investors and startups, focusing on skills gaps and potential solutions for them. C-level profiles from various companies, mainly CEOs or Co-Founders, were invited to take part, offering valuable insights into their sector of expertise. Participant selection was carried out through the Europe-wide EIT Health network. To ensure balance among the participants, the EIT Health team engaged a total of 6 participants for each of the 3 roundtables, specifically 3 VCs and 3 startups. The roundtables covered the three most well-known health subsectors, digital health, biotech, and medtech. With each roundtable focusing on one subsector, and participants were selected based on which one they belong to.

Prior to the roundtable, each participant received a series of pre-reading materials, including the quantitative survey, a literature study on skills in the health sector, documents outlining the main trends for each subsector discussed during the respective roundtables, and the questions that would be asked during the online meeting. These semi-directed roundtables, structured to facilitate diverse viewpoints and frank exchanges between

participants, were organized around the following five topics:

1. The scarcest and most important soft skills
2. The scarcest and most important hard skills
3. Solutions to address the skills gaps
4. How companies are addressing the diversity gaps
5. Enhancing communication and talent strategy evaluation between venture capital funds and startups

This last topic aimed at drafting guidelines for improving investors' assessments of startups and people/talent development strategies.

Both the results of the EIF VC Survey and the qualitative component (the interviews and roundtables) have been analysed and integrated by EIF and EIT Health with the support of EY to provide a comprehensive view of the health sector. The quantitative part (EIF VC Survey), which was primarily utilised in the soft skills chapter, has been integrated with the qualitative part, which summarises key points for each discussed topic and collects a few use cases to offer a clearer picture of the discussions.

Acknowledgements

This report would not have materialised without the invaluable contributions and dedication of numerous individuals and teams.

For EIT Health

The oversight and coordination of expert interviews, the roundtable series, and the consultation process, as well as the development of this report, were ensured by the EIT Health and EY teams.

Steering committee:

Jean-Marc Bourez, EIT Health CEO; Céline Carrera, WorkInHealth Foundation Chairwoman; Claire Nassiet, Head of the Innovation Adoption & Healthcare Transformation; Jérôme Fabiano, Deputy Director EIT Health France.

Project lead:

Urška Bux, Senior Programme Manager

- **Access to Finance and VCoE Team:** Isaac Middelman, EIT Health Accelerator Director –Strategic Fundraising; Hélène Mathieu, Access to Finance and Investor Relations; and Allegra Mulas, Venture Portfolio Manager.
- **EY Team:** Nihal Filali Boubrahmi, Partner – Digital Health Sciences; Antoine Chaudieres, Director - Digital Health Sciences; Enrica Mustacchio, Senior – Digital Health Sciences; Pedro Kasprzykowski Soares Magalhães, Senior – Digital Health Sciences.

We also wish to thank all other stakeholders who participated in the roundtables and expert interviews organised by EIT Health and EY teams. Please find more information in Appendix A.

For the EIF

The EIF team’s insights from surveys, collaboration, and support have been instrumental in shaping the findings and recommendations of this report.

We extend our gratitude to Marjut Falkstedt (Chief Executive), Helmut Kraemer-Eis (Chief Economist), Frank Lang and Antonia Botsari (survey coordinators in EIF Market Assessment and Research), and Reka Mazur (EIF Marketing). Their contributions have significantly enhanced the quality and comprehensiveness of our findings, ensuring a better understanding of the skills needs and gaps in the health sector, and beyond. All errors are attributable to the authors.

In addition, the EIF would like to thank the respondents of the EIF surveys. Without their support and valuable replies, this project would not have been possible. This paper benefited from comments and inputs by many EIF colleagues, for which we are very grateful. In particular, our thanks go out to Cindy Daniel, Oscar Farres, and Laoura Ntziourou for their further insights.

The EIF VC Survey 2023 was conducted with the support of Invest Europe. We express our gratitude for the fruitful collaboration, support, and advice to Julien Krantz and Lucrezia Lo Sordo.

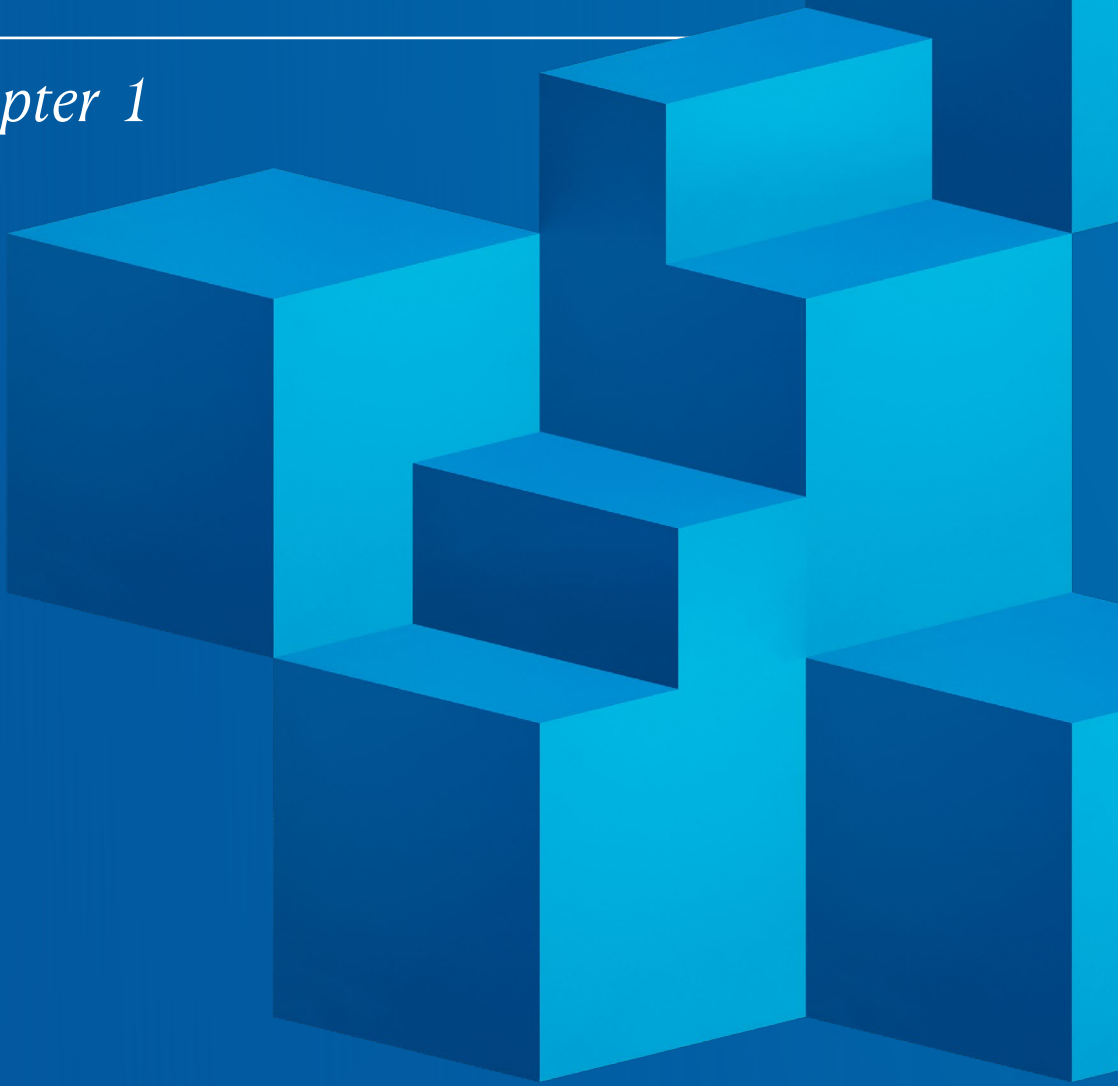
Editor:

Helmut Kraemer-Eis, Chief Economist

Abbreviations

CEO	Chief Executive Officer
CMC	Chemistry, Manufacturing, and Controls
CV	Curriculum Vitae
DiGA	Germany's Digital Health Applications
DNA	Deoxyribonucleic Acid
ENPS	Employee Net Promoter Score
ESG	Environmental, Social, and Governance
EU	European Union
FDA	Food and Drug Administration
GDPR	General Data Protection Regulation
HR	Human Resources
IP	Intellectual Property
ISO	International Organisation for Standardisation
IVDR	In Vitro Diagnostic Regulation
KPI	Key Performance Indicator
MBA	Master of Business Administration
MD	Medical Device
MDR	Medical Device Regulation
QARA	Quality Assurance and Regulatory Affairs
SME	Small and Medium-sized Enterprises
STEM	Science, Technology, Engineering, and Mathematics
VC	Venture Capital

Chapter 1



Introduction

*Defining the biotech,
medtech, and digital health
subsectors, and their principal
trends and challenges*

The analysis focuses on three main subsectors within the health sector: biotech, medtech, and digital health. To clarify the scope of reference for these sectors, these three subsectors are defined as¹:

- **Biotech²**: The use of living organisms, systems, or processes to develop products and technologies that improve human health, such as pharmaceuticals and diagnostics.
- **Medtech³**: The use of technology, devices, and equipment to diagnose, monitor, and treat medical conditions, including medical devices, electronic instrumentation, and diagnostic tools.
- **Digital health⁴**: digital health covers mHealth, IT, wearables, telemedicine, and personalised medicine. These technologies, ranging from mobile medical apps to artificial intelligence, enhance diagnosis, treatment, and overall health. Digital technologies utilise computer platforms, connectivity, software, and sensors for general well-being and medical diagnosis.

1.1 Biotech

Main trends and challenges

The biotech subsector is continuously evolving. According to the European Commission⁵, in 2021, the total European biotechnology market was valued at EUR 86.4 billion⁶. In March 2024, the European Commission presented its biotechnology and biomanufacturing strategy with a clear leadership ambition for Europe's biotech industries. The strategy proposed several improvements, including reducing the assessment periods and creating sandboxes for cutting-edge products. However, it also suggested lower baseline incentives and unpredictable modulation for novel medicines, including those for rare diseases, which could negatively impact the biotech ecosystem. For more information, visit '[Commission Takes Action to Boost Biotechnology and Biomanufacturing in the EU.](#)'

1 In the EIF VC Survey question "Please select the most important industries in which your firm invests in ventures", the sectors used in this publication were presented to survey participants as "biotech", "Health-medical devices, equipment and supplies" and "Health institutions and services". For the purpose of this report, the survey responses of the latter two categories were merged into one "Health" sector.

2 Bia - UK Bioindustry Association, "What is Biotech?"

3 MedTech Europe, for diagnosis to cure, "What is medical technology?"

4 FDA - U.S. FOOD AND DRUG, "What is Digital Health?"

5 Brussels, 20.3.2024 COM (2024) 137 final. Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions. Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU. EUROPEAN COMMISSION

6 The value of the biotechnology market refers to the entire market encompassing various application areas, including medical and pharmaceutical, agri-food, industrial and environmental, and with marine biotechnology.

What are the main trends and challenges?

The key trends shaping the future of this subsector include **digital transformation**, chiefly the integration of **artificial intelligence (AI)** and **machine learning**. As highlighted by a participant from a venture capital firm in our biotech roundtable: *“AI is not just a trend but a necessity for future competitiveness. Companies and startups without AI integration may struggle to remain relevant, yet challenges in finding AI specialists and implementing new tools persist.”*

In addition to AI impacting various sectors, **stem cell technology** stands out as a significant trend due to its remarkable ability to differentiate into different cell types. This capability holds the potential to revolutionise regenerative medicine by offering new and innovative approaches to tissue repair and regeneration.

Additionally, **personalised medicine** is gaining traction, propelled by rapid advances in DNA sequencing technology. These advances allow genetic information to be decoded more quickly and cost-effectively, making personalised medicine more accessible and relevant across various medical fields.

Lastly, **tissue engineering and bioprinting** are revolutionising medicine by creating functional organs and tissues through a combination of biology and 3D printing with living cells.

However, like any major industry or sector, challenges exist that might hinder its development. One common theme across discussions is the issue of **regulations and standards**. Below are a few examples of how regulatory and standardisation challenges affect biotech companies:

- **Approval delays:** biotech firms face prolonged regulatory approval processes for products, delaying market entry.
- **Compliance costs:** Meeting diverse regulatory requirements and standards, like GMP and ISO certifications is expensive.
- **Global market hurdles:** Varying regulatory standards across regions hinder market access for biotech companies.

The industry is grappling with a disparity between the pace of innovation and regulatory standards, compounded by regional differences. The divergence between the US and the rest of the world, as well as differences between the US and Europe, pose significant challenges for companies navigating regulatory landscapes. Other challenges mentioned include **underdeveloped equity markets**, **lack of institutional investors**, **institutional slowdown in technology transfer** and many others.

1.2 Medtech

Main trends and challenges

The medtech subsector is experiencing significant transformation driven largely by software components and artificial intelligence (AI) that are adding new value to older medical device hardware. This evolution, however, makes it challenging to precisely define what falls under the concept of medtech and digital health. In 2022⁷, the European medtech market was estimated to be roughly EUR 160 billion, the biggest markets of which are Germany, France, the United Kingdom, Italy, and Spain respectively. On a worldwide perspective, in vitro diagnostics (IVD) is the largest sector, followed by cardiology and diagnostic imaging.

What are the main trends and challenges?

Based on the roundtable feedback from startups and investors, these technologies are becoming increasingly more user-friendly, enhancing patient and provider interactions.

Innovation is also increasing particularly in sectors not previously explored, such as neurosurgery. Moreover, the **interoperability** of medical devices with consumer electronics, such as smartwatches, is becoming more important, facilitating a shift towards home-based care and closed-loop health systems that promise a more integrated approach to medical treatment.

Although new technologies are positively influencing the medtech ecosystem, **lengthy delays and high costs associated with market submissions** under the updated EU Medical Device Regulation (EU MDR- 2017/745) are proving to be a bottleneck for some companies. During roundtable discussions, several startups suggested that **enhanced communication with European Notified Bodies** could help reduce these costs and the need for rework. Examples of successful interactions between medtech companies and the FDA underscored the benefits of such relationships. Additionally, there is an escalating focus on **data protection regulation and cybersecurity** within the subsector as their importance grows.

Finally, the attractiveness of medtech for venture capital investments is apparent, though big investors are now focusing on a smaller number of companies and often invest collectively. Despite this interest, the time required to sell and deploy products, even in local markets, remains lengthy, and **sales and deployment cycles often do not align**. This discrepancy can lead to considerable investor frustration when products and processes are delayed.

⁷ The European Medical Technology in Figures, MedTech Europe from diagnosis to cure, October 2023

1.3 Digital health

Main trends and challenges

The digital health subsector is rapidly advancing, driven by both emerging trends and enduring challenges. The European digital health market size was anticipated at EUR 61.2 billion⁸ in 2023⁹. The increasing prevalence of chronic diseases, shortage of medical professionals, and growing aging population in Europe are some factors anticipated to drive market growth. In addition, the advancement of digital technologies, improved internet connectivity, and increasing demand for virtual health services are also contributing to the market growth.

What are the main trends and challenges?

Key trends shaping the future of this subsector include **Insilico trials**, which are revolutionising how clinical trials are conducted by using computer simulations to improve treatments. **Biomarkers** are also gaining prominence for their role in streamlining diagnoses and tailoring treatments to individual genetic profiles. One notable shift in the subsector is the downturn in traditional medtech, contrasted by the rise of **digital therapeutics**. Countries like Germany and France are at the forefront, with Germany's Digital Health Applications (DiGA) initiative pioneering this transition. The integration of AI and personalised medicine is positioned to transform patient care, using big data and radiomics to offer pattern analysis and predictions that are particularly effective in oncology.

Additionally, **virtual and augmented reality** applications are expanding from treatment simulations to surgical procedures, enhancing the precision and effectiveness of medical interventions. Innovations in clinical trials and the patient recruitment process are ongoing, aimed at improving efficiency and reach. **Telemedicine** continues to expand, driven by advances in technology and the increasing need for accessible health. Although technologies like robotics, virtual/augmented reality, and blockchain are becoming more important, they can still be considered future trends.

However, the digital health subsector faces several challenges, including how to handle diverse datasets from different populations which can complicate universal application and efficacy. **Regulatory and data protection** issues remain prominent as these companies need to manage vast quantities of patient data. **Market fragmentation and inconsistent reimbursement policies** also pose significant obstacles to widespread adoption and development. Finally, some industry consolidation is still necessary to help small players enter the market.

⁸ Current exchange rates, USD 66.2 billion is approximately EUR 61.05 billion. This conversion is based on an exchange rate where 1 USD is equivalent to about 0.9225 EUR, from the European Central Bank, 24th May 2024

⁹ Europe Digital Health market size, Grand View Research

Chapter 2

Soft skills

*Key skills and skills gaps across
the three subsectors –integration
of both quantitative
and qualitative analysis*

Driven by new technologies and changing user behaviours, the trends and challenges shown in the last chapter highlight the rapid evolution occurring in the three health subsectors. As a result, the health workforce must adapt to these trends. As noted by numerous interviewees, this shift will require well-developed soft skills. While many participants acknowledged the high level of technical skills within the European health sector, startups and investors agreed when Bruno Virieux, CEO of Predisurge, emphasised the critical need for enhanced soft skills:

“Hard skills are not an issue, but we have a gap in soft skills.”

BRUNO VIRIEUX Predisurge

Multiple interviews and roundtables revealed that participants from the three subsectors were unanimous regarding the most important soft skills. The table below summarises these key skills shared across all subsectors:

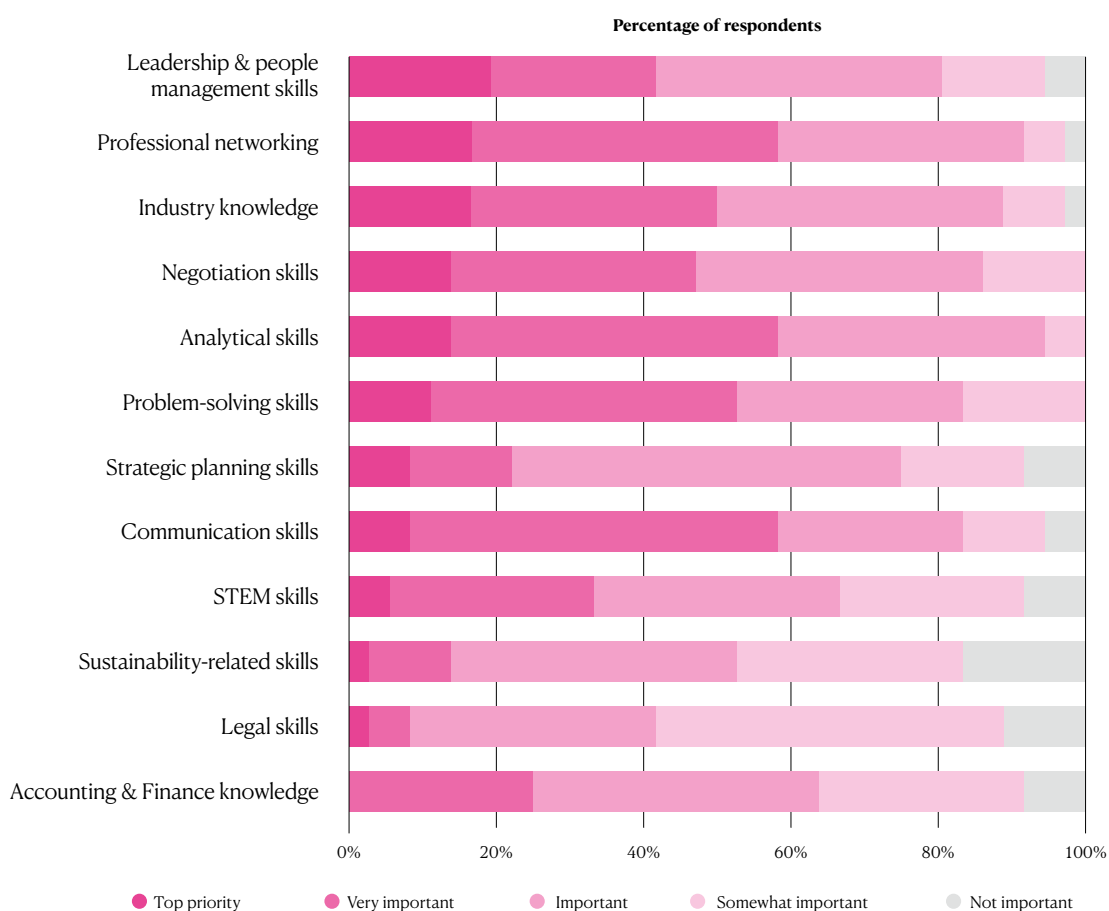
<i>Skill</i>	<i>Description</i>
<i>Leadership & people management skills</i>	Ability to motivate and guide a team toward a common goal by making strategic decisions and communicating clearly.
<i>Entrepreneurial skills</i>	Ability to take risks in creating something new or in solving previously unsolved problems.
<i>Strategic planning</i>	Ability to create and manage a strategy with clear objectives.
<i>Communication skills</i>	Ability to adapt a message to communicate effectively with anyone, overcoming potential communication barriers.
<i>Business development and networking</i>	Ability to effectively convey and receive information and ideas in the workplace setting.

2.1 Key conclusions from an investor point of view – Quantitative analysis from the EIF VC Survey

2.1.1 Important skills for investor teams

The EIF VC Survey found that VCs¹⁰ focused on the health sector prioritise leadership & people management skills, professional networking, and industry knowledge as the most important skills for their team (see Figure 1), whereas industry knowledge and STEM skills proved to be more important for biotech-focused VCs (see Figure 2).

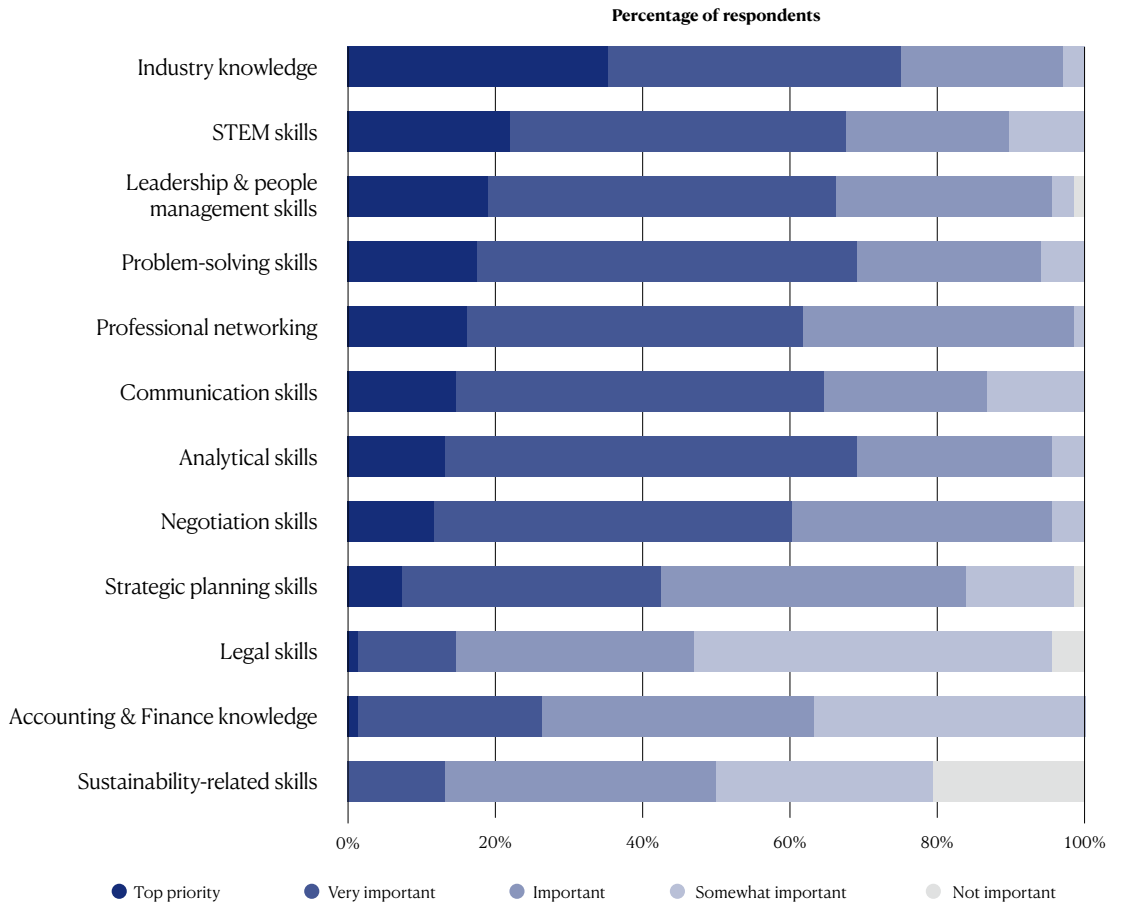
Figure 1: Important skills for health-focused VC investor teams



Sustainability-related skills refer to specific scientific and technical green skills or knowledge and understanding of sustainability and climate action. Source: EIF VC Survey

10 In this report, we use the terms “VCs (Venture Capitalists)”, “VC investors” and “VC fund managers” interchangeably.

Figure 2: Important skills for biotech-focused VC investor teams



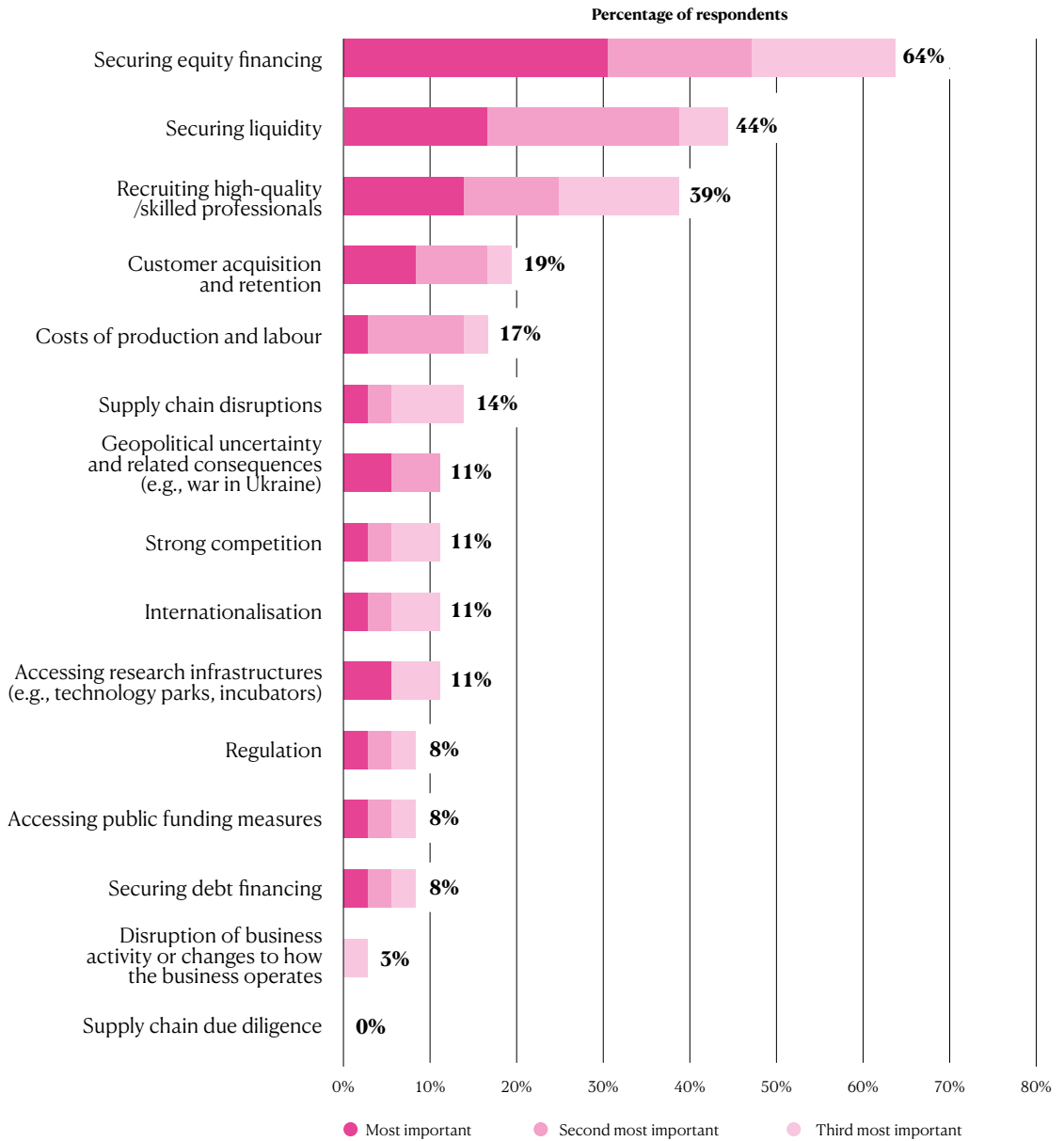
Source: EIF VC Survey

As seen in the figures above, many of the most relevant skills from an investor point of view are defined as soft skills.

2.1.2 Important skills for portfolio company teams

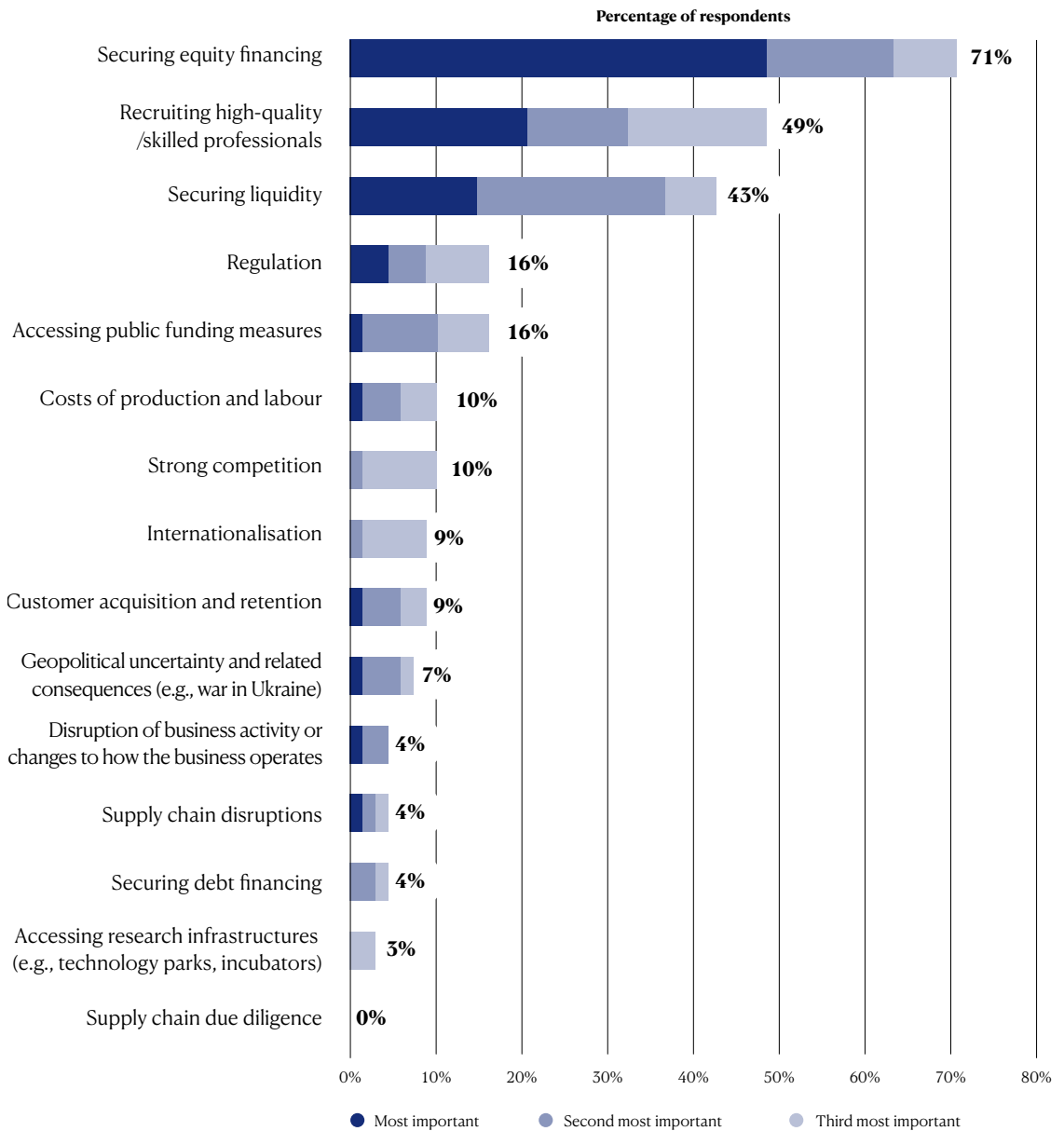
In the times-series of the EIF VC Survey results, recruiting high-quality professionals has always emerged among the top challenges facing VC portfolio companies. This was also the case in 2023 (see Figures 3 and 4).

Figure 3: Challenges for health-focused VC-backed companies



Multiple selection possible — Source: EIF VC Survey

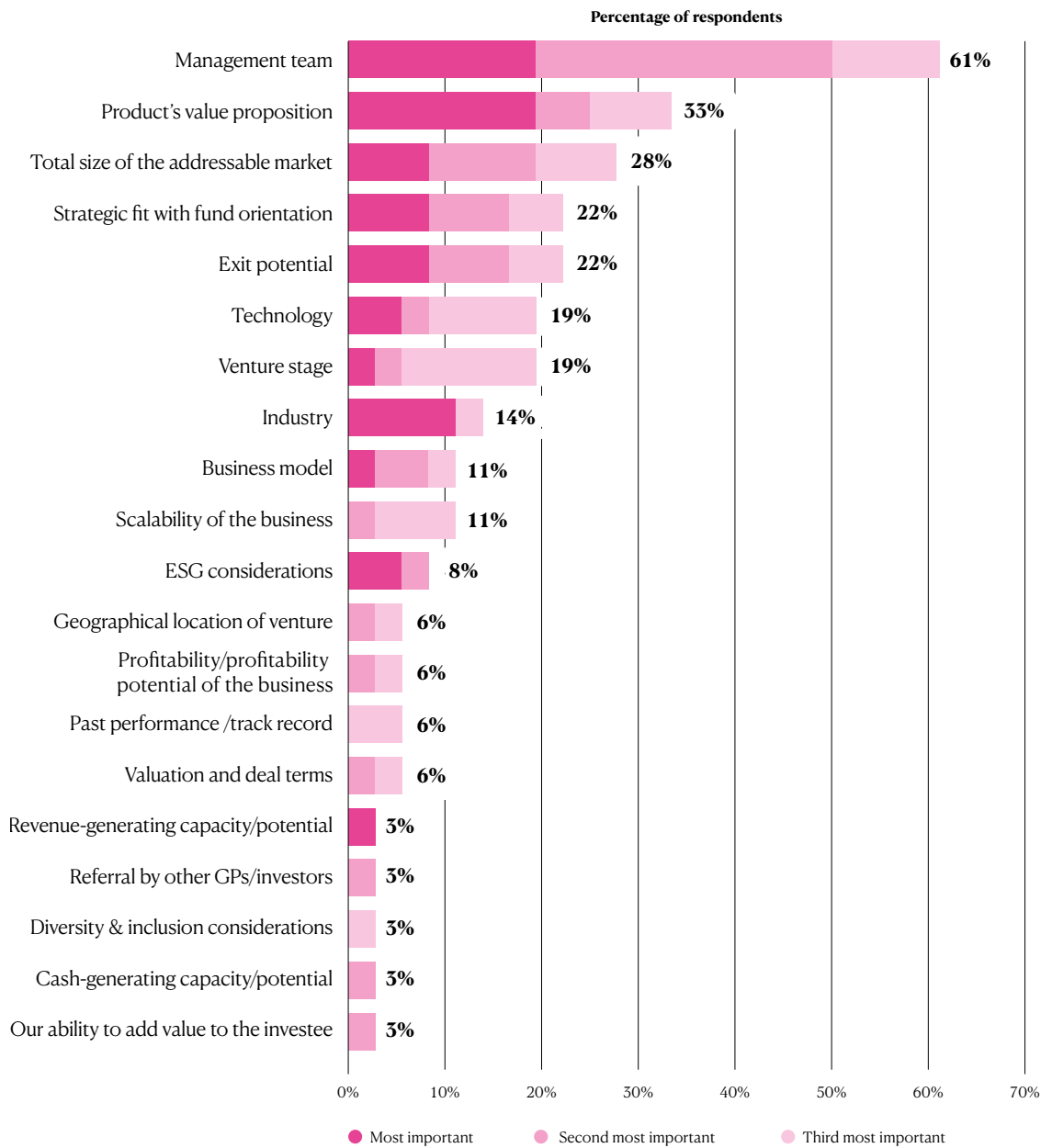
Figure 4: Challenges for biotech-focused VC-backed companies



Multiple selection possible — Source: EIF VC Survey

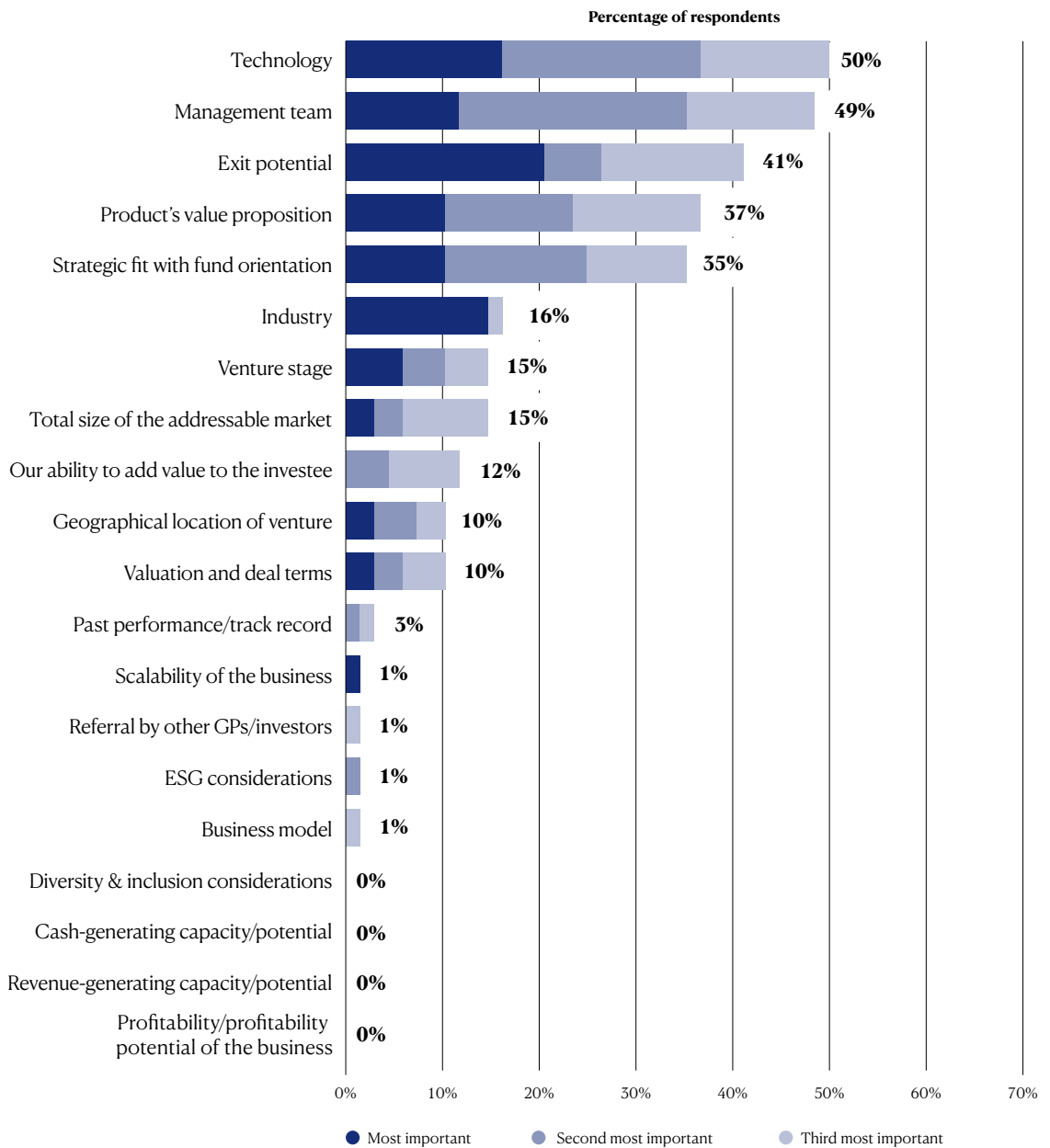
This evidence echoes another finding in the survey: the management team (see Figure 5) is the most important investment selection criterion for health-focused VCs (and the second most important for biotech-focused VCs (see Figure 6).

Figure 5: Investment selection criteria for health-focused VC investor teams



Multiple selection possible — Source: EIF VC Survey

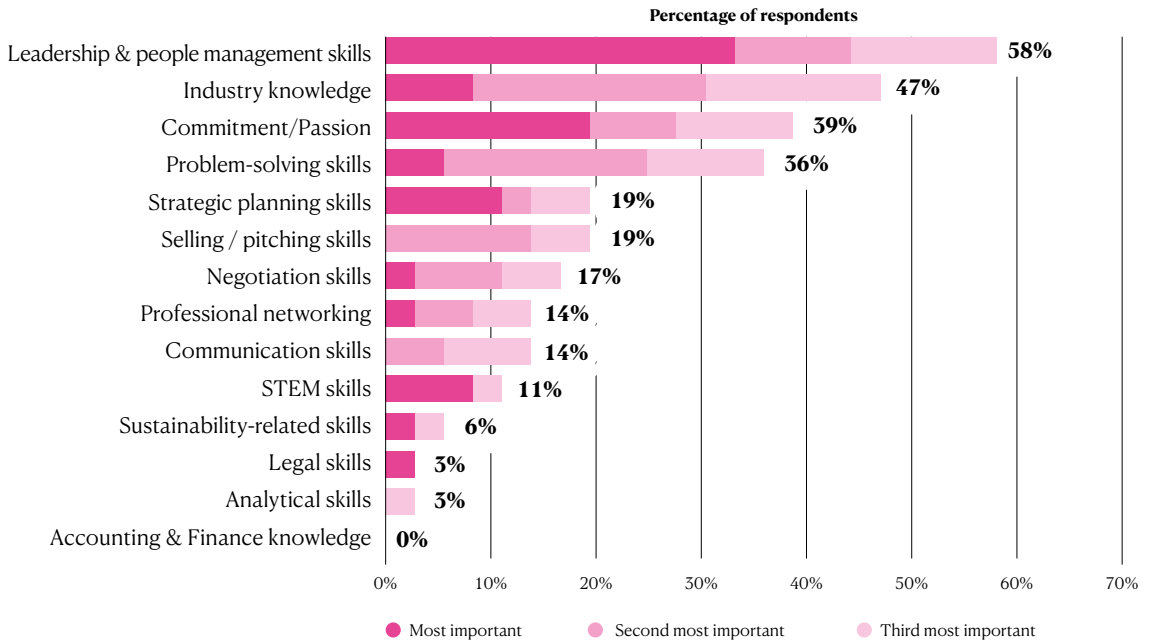
Figure 6: Investment selection criteria for biotech-focused VC investor teams



Multiple selection possible — Source: EIF VC Survey

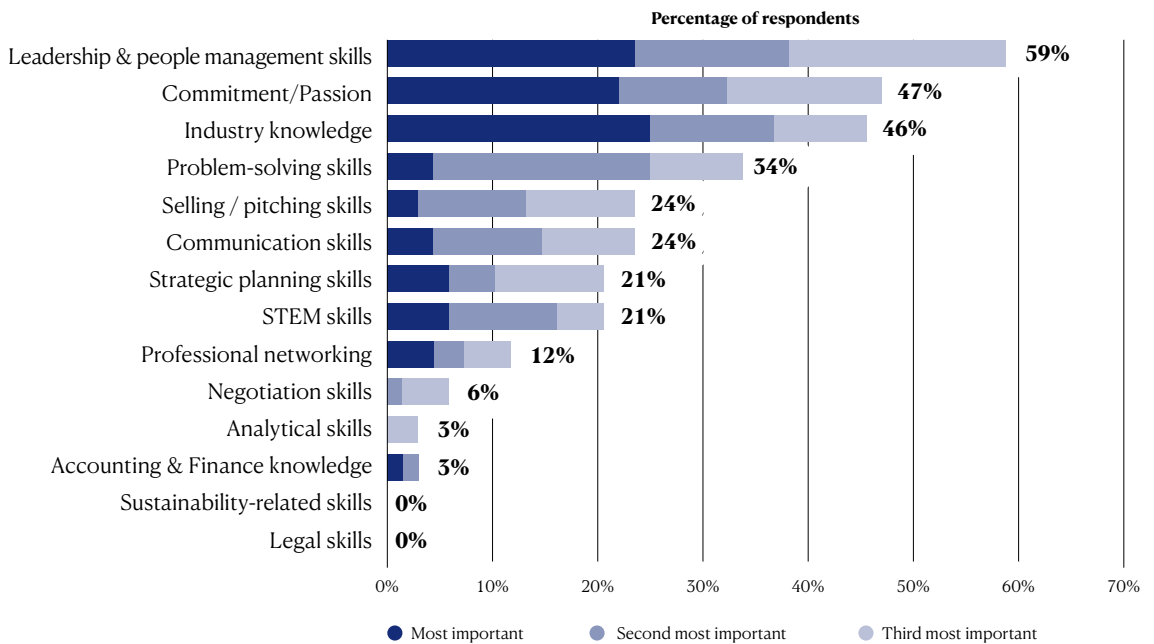
Looking at the skills perceived as important for the management teams of VC portfolio companies, the survey results reveal that leadership & people management skills, industry knowledge, and commitment are the three most important soft skills, as shown in Figures 7 and 8 below.

Figure 7: Important skills for health-focused portfolio company teams



Multiple selection possible — Source: EIF VC Survey

Figure 8: Important skills for biotech-focused portfolio company teams



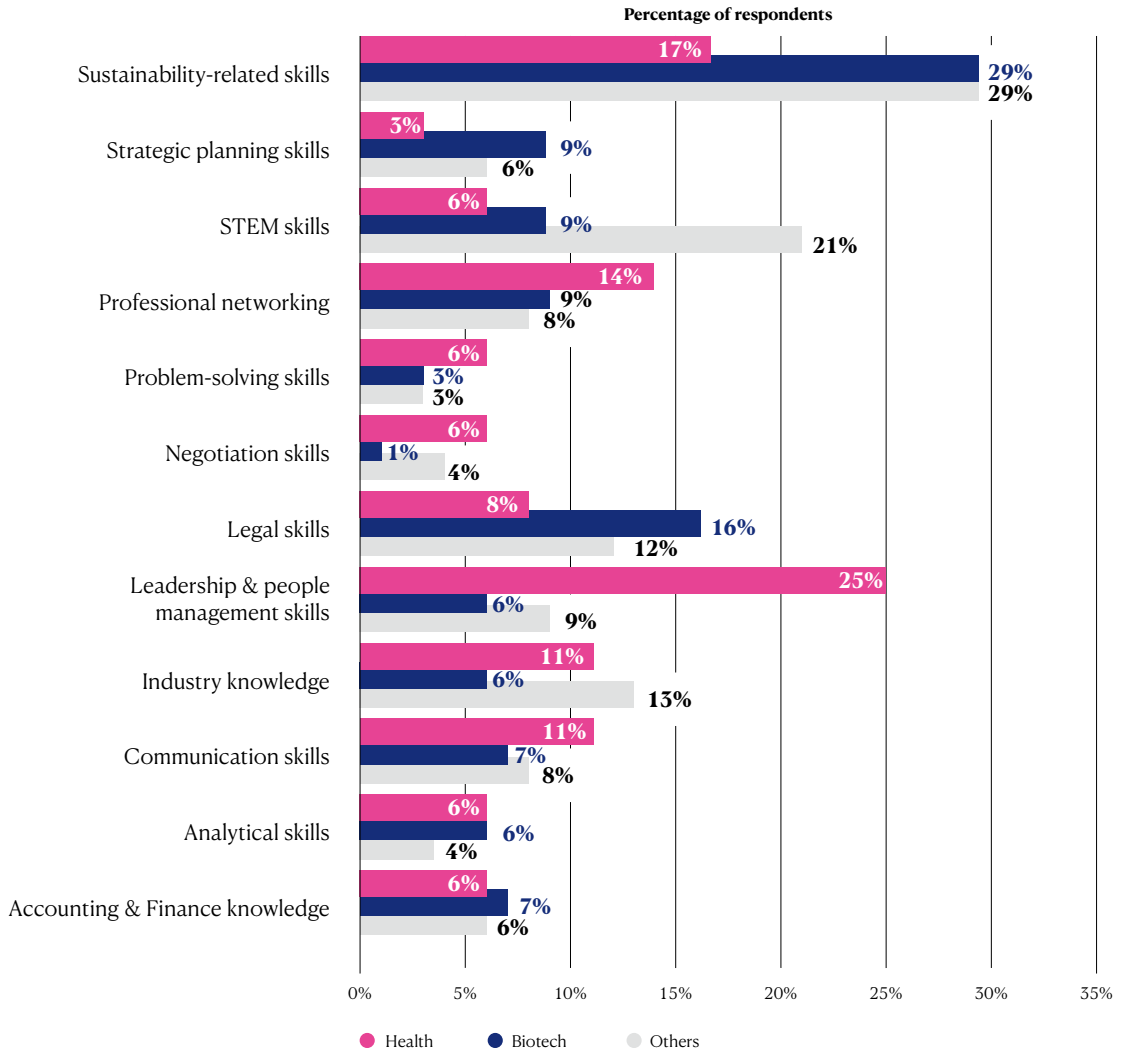
Multiple selection possible — Source: EIF VC Survey

2.1.3 Missing skills in investor teams

As the most important skills, leadership and people management are notably lacking within the teams of VCs focused on the health sector. Expertise related to sustainability and industry knowledge are also sorely lacking in these VC teams (see Figure 9).

For VCs specialising in biotech, the lack of sustainability expertise stands out, followed closely by legal skills, both of which are crucial for success in this sector (see Figure 9).

Figure 9: Missing skills in VC investor teams

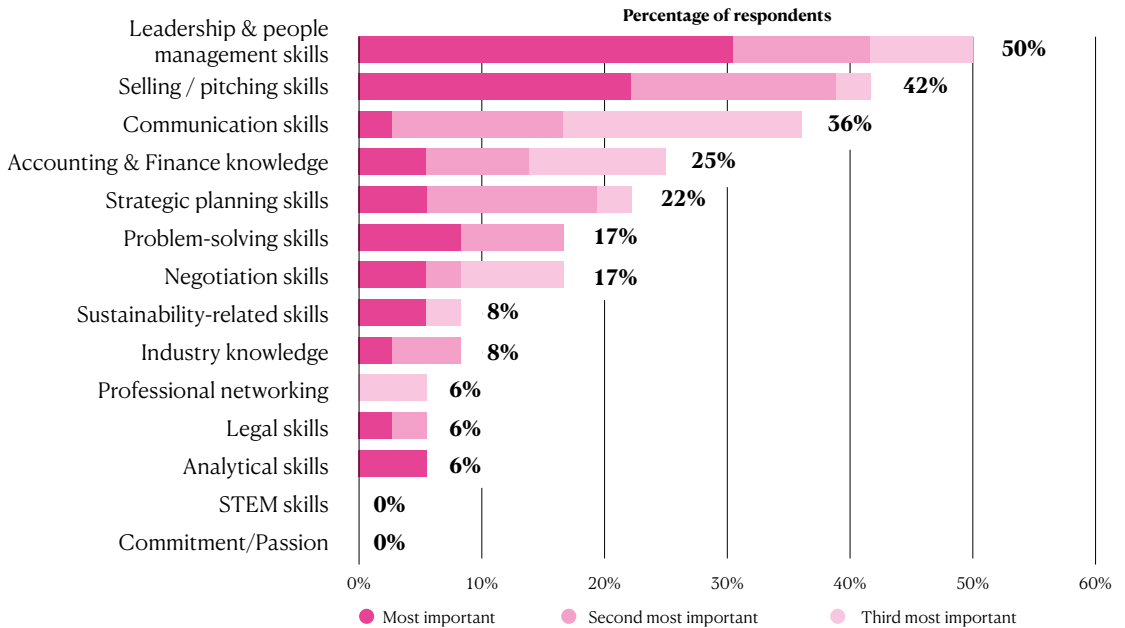


Multiple selection possible — Source: EIF VC Survey

2.1.4 Missing skills in portfolio company teams

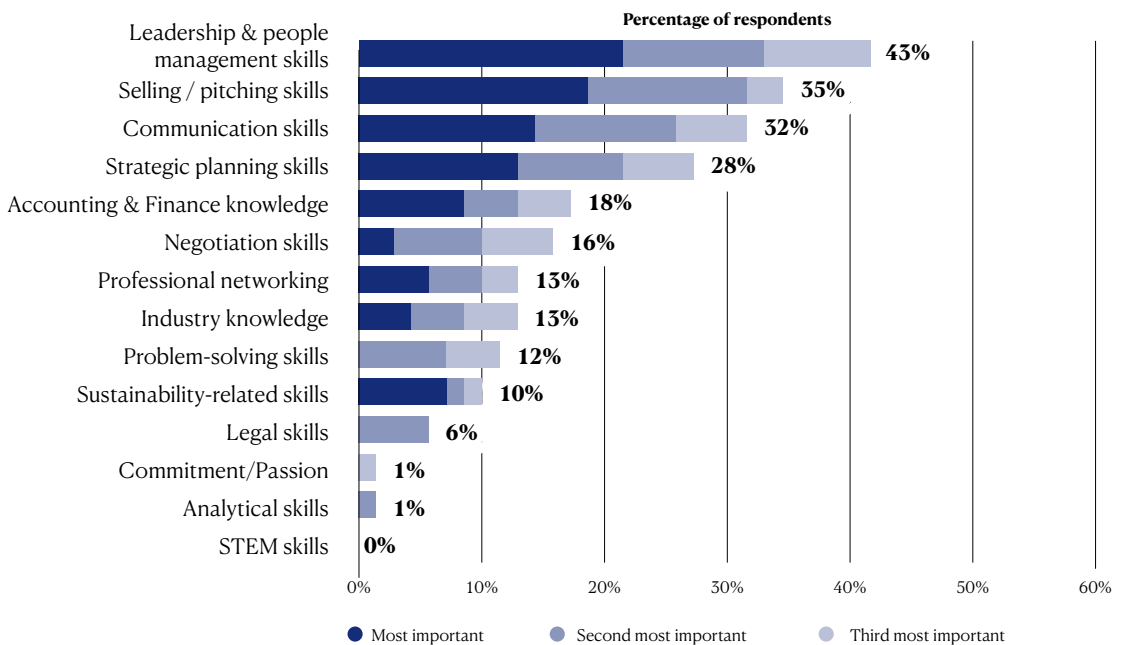
For both health and biotech, leadership & people management skills are the skills missing the most, followed by selling and communication skills – as shown below in Figures 10 and 11.

Figure 10: Missing skills in health-focused VC-backed companies



Multiple selection possible – Source: EIF VC Survey

Figure 11: Missing skills in biotech-focused VC-backed companies



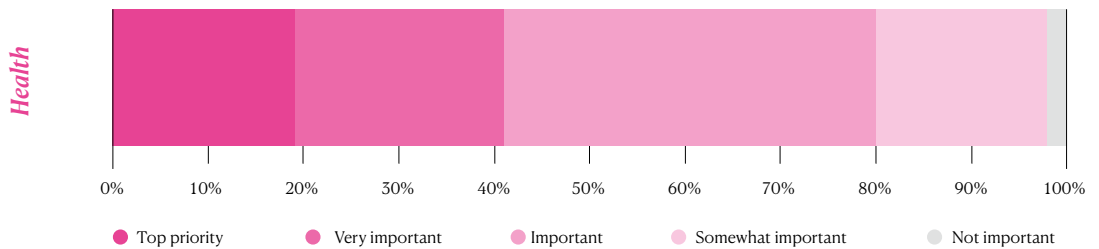
Multiple selection possible – Source: EIF VC Survey

2.2 Key insights – Common points of view – Qualitative and quantitative analysis

2.2.1. Unanimous agreement: Leadership & people management skills ranked as essential

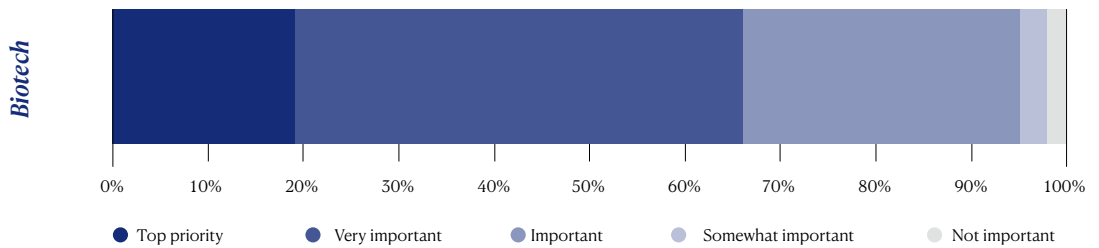
During the multiple discussions on soft skills, leadership consistently emerged as one of the most important skills. This skill was mentioned as important by 100% of industry experts during the interviews and by at least three participants (50%) in each one of the three roundtables. Moreover, as previously discussed in the survey-based analysis for both the health and the biotech sectors, leadership & people management skills are among the three most important skills for venture capital investors, being the category most frequently selected as the top priority for health-focused fund managers (see Figure 12), with almost 80% of respondents considering these skills (at least) important. In biotech (see Figure 13), 95% of respondents agree that leadership is (at least) important for the respective investor teams.

Figure 12: How important leadership & people management skills are perceived for health-focused VC investor teams



Source: EIF VC Survey

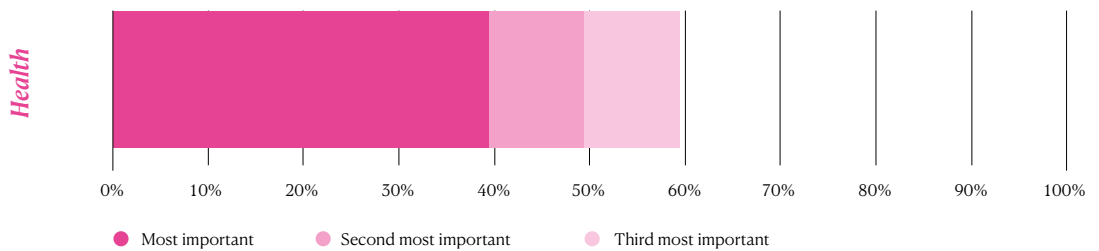
Figure 13: How important leadership & people management skills are perceived for biotech-focused VC investor teams



Source: EIF VC Survey

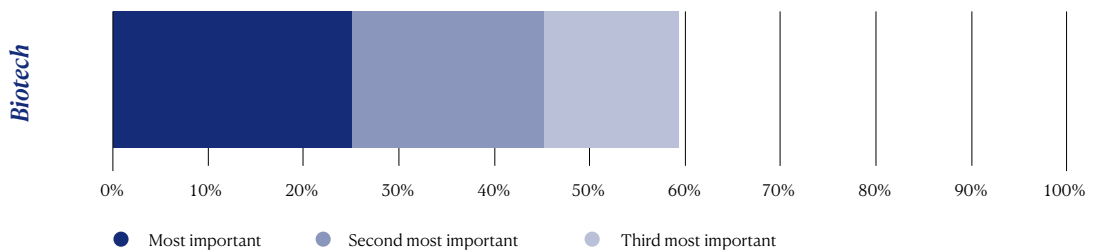
Similar patterns emerge for the management teams of VC portfolio companies in both health and biotech. Leadership and people management skills are the top priority for both sectors, with 58% of the respondents considering it one of the three most important skills for the management team of health-focused portfolio companies (see Figure 14), and 59% for biotech (see Figure 15).

Figure 14: How important leadership & people management skills are perceived for the management teams of health-focused portfolio companies



Source: EIF VC Survey

Figure 15: How important leadership & people management skills are perceived for the management teams of biotech-focused portfolio companies



Source: EIF VC Survey

Why is leadership so important?

Several reasons why leadership is fundamental in the industry were mentioned during the discussions. Leadership skills were linked to specific abilities necessary in the European health sector:

- **Motivating top talent and consistently inspiring teams** to achieve excellence and drive innovation, as stated by Simon Turner from Sofinnova Partners.
- **Managing stress and frustration** within teams in an industry where strategies and plans can change quickly to adapt to the environment. Given the uncertainty inherent in startups, the role of the leader often becomes paramount in maintaining the company's momentum and motivation.

-
- **Being able to break silos and mobilise a team for cross-cutting projects**, as mentioned by Gabriele Breda from Product Life Group.
 - **Being able to communicate with multiple stakeholders** and guide team members through the complex landscape of startup funding.

How to be a leader nowadays

When discussing methods to practice leadership, recruitment specialist Kahina Senhadj from Strammer emphasised the importance of avoiding micromanagement. Overbearing methods are not well-suited to the new industrial requirements for workforce creativity and freedom of thought.

Additionally, given that leadership and people management skills are identified as the most important gap in this industry, many participants value individuals who combine management and technical skills to effectively fulfil leadership roles.

Furthermore, it was noted during interactions that leadership is now considered a necessary skill not only for C-level positions but for every company member, especially in middle management (operational managers and directors).

“ These people are in contact with the entire workforce, and they need to be encouraging these people as leaders.”

BEATRIZ LLAMUSI Arthex Biotech

An essential, but missing skill

At the same time, leadership skills have been identified in the EIF VC Survey as the skill most missing from health-focused VC investor teams (see Figure 9) and from the management teams of portfolio companies in both health and biotech (see Figures 10 and 11). These results thus highlight a clear skills gap to be solved in the European health sector. Multiple interviewees mentioned that several companies experience difficulties in finding individuals who possess all the necessary soft skills for effective leadership. Many leaders may feel overwhelmed with parallel tasks, making it difficult to implement proper management structures. Consequently, it is essential to select team members who are autonomous, proactive, and skilled in problem-solving, in addition to their specific expertise. This proactive mindset can help cope with the dynamic nature of startups.

One possible solution, especially for developing individuals with all the necessary soft and leadership skills for C-level roles such as CEO, would be to mentor them. Indeed, as Luis Pareras from Invivo Partners stated, finding the right CEO for a company can sometimes be challenging, but a potential CEO can be effectively mentored by an experienced chairman:

“ Sometimes we hire executive chairmen to mentor CEOs.”

LUIS PARERAS Invivo Partners

2.2.2. Entrepreneurship: Risk-taking and self-sufficiency are crucial in the health sector

The consensus on the importance of leadership within teams of investors and portfolio companies is also due to inherent features of the health sector, which demands entrepreneurial skills to tackle unprecedented challenges – a sentiment echoed by numerous roundtable participants. As Kahina Senhadj from Strammer, a recruitment expert, noted:

“Entrepreneurial skills are required in almost every job description.”

KAHINA SENHADJ Strammer

Entrepreneurship was consistently highlighted in the interviews and roundtables, underscoring its critical role in the industry. To illustrate the significant impact of this skill, several demonstrative examples were mentioned:

- A leader initiates a **new project or company**, accepting the **risks** of establishing a business.
- A manager demonstrates resilience by **sustaining business operations in an unstable environment**, such as navigating the **complexities of product development** that may include clinical trials.
- Employees exhibit the courage to **address previously unsolved problems**, such as adapting to new regulations like the European MDR and the EU AI Act.

2.2.3. Interdisciplinary and intercultural communication skills in an international sector

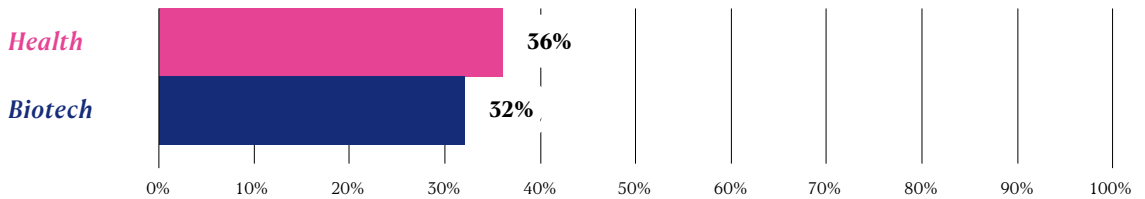
Additionally, communication skills are vital in an industry where frequent interactions with various stakeholders, such as health providers, investors, and regulators—who may have diverse educational and cultural backgrounds—are common.

Some examples of how communication skills are important were provided during the interviews and roundtables :

- **Managing relationships with different notified bodies across countries** to introduce products, an important skill for managers in the medtech industry.
- **Public speaking when raising capital**, where persuasion has become more challenging than ever.
- Adapting messages for multiple stakeholders with a goal of **business development or for partnerships in a global context**.

Indeed, communication skills, even if not considered a top priority skill for investor or portfolio company teams, were the third most commonly missing skill in VC portfolio companies, according to the EIF VC Survey (see Figure 16).

Figure 16: How many investors believe communication skills are lacking in the management teams of their portfolio companies (Diagram shows the aggregated percentages for the response categories “most important”, “second most important”, and “third most important” common skills gaps)



Source: EIF VC Survey

Moreover, roundtable participants stated that especially in an industry such as biotech, where the CEO and co-founders usually have scientific backgrounds, their communication skills must be developed further in the workforce.

Finally, it is essential to note how communication skills gaps interact with other soft skills gaps discussed in the report, such as leadership and business development. Indeed, to be an exemplary leader and develop a successful business, communication skills are essential. Developing these will further prepare individuals in the health sector to put other soft skills into practice.

2.2.4. Strategic and long-term vision are not only for C-level positions

Strategic and long-term vision were mentioned as key skills, especially for managing the complex and lengthy processes of product development and market entry for medtech and digital health companies.

Startups pointed out that they are now facing longer product development cycles, which have become increasingly challenging due to the risk assessment requirements of the new EU MDR.

This environment demands a strategic vision and a long-term mindset, not only from C-level executives but also from middle management, who are required to provide excellent reporting to managers, investors, and regulators to sustain innovative projects.

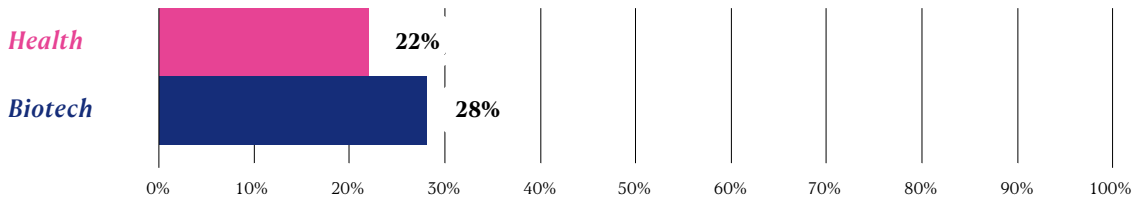
Moreover, the necessity of a strategic vision was emphasised further by an investor during one of the roundtables:

“Being a startup, you need to be fast and adaptable, but sometimes we are missing the long-term plans and vision, which for VCs is critical since we want to support the company during their initial phases but also make their model scalable in the long term.”

MAITE MALET Asabys Partners

Along with leadership abilities, these skills were underscored as fundamental during discussions with startups and venture capitalists, and approximately a quarter of the biotech and health respondents ranked strategic planning skills among the three most commonly missing skills in the EIF VC Survey (see Figure 17).

Figure 17: How many investors believe strategic planning skills are lacking in the management teams of their portfolio companies (Diagram shows the aggregated percentages for the response categories “most important”, “second most important”, and “third most important” common skills gaps)

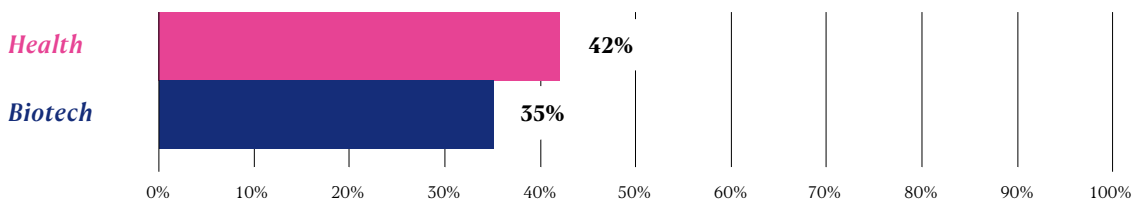


Source: EIF VC Survey

2.2.5. Business development skills are expected, especially in the biotech subsector

Another significant skills gap was brought up during the roundtable discussions: sales and business development skills, particularly in biotech where partnerships with pharmaceutical corporations can significantly boost smaller companies. Without such skills, startups risk missing valuable business opportunities and partnerships due to their inability to adapt effectively to market changes. It is crucial for a startup workforce to have the ability to understand their market and implement a strategic plan for business development. These skills were identified as the second most commonly missing skill in the EIF VC Survey, as indicated in Figure 18.

Figure 18: How many investors believe selling/pitching skills are lacking in the management teams of their portfolio companies (Diagram shows the aggregated percentages for the response categories “most important”, “second most important”, and “third most important” common skills gaps)



Source: EIF VC Survey

Enhancing business development skills is not straightforward; it requires significant experience and exposure to multiple company lifecycles. Consequently, these skills can be considered a blend of both soft and hard skills. We will further explore this topic on hard skills in the next chapter.

Chapter 3



Hard Skills

*Key skills and skills gaps across
the three subsectors – integration
of both quantitative
and qualitative analysis*

This chapter relies mostly on insights derived from qualitative analysis (interviews and roundtables), and to a lesser extent on the quantitative EIF VC Survey.

Furthermore, upon identifying differences between subsectors (biotech, medtech and digital health) in terms of hard skills, we also conducted a subsector-specific analysis. This approach facilitated a clearer identification of insights, procedures, and technologies specific to each subsector.

The biotech subsector demands critical technical skills like data science and bioinformatics for innovation and research. In medtech, challenges instead revolve around the lack of regulatory and technical expertise. Digital health requires increased expertise in sustainability & ESG as well as artificial intelligence. Addressing these gaps is essential for the sector's success.

Here, a table showing the common or very similar skills among the 3 subsectors:

Technical proficiency / STEM skills	Ability to master the specific technologies of the subsector.
Data analysis	Skill in analysing and interpreting data collected during research and development.
Familiarity with regulatory environments	Knowledge of the subsector's regulations and standards, necessary for ensuring compliance.

3.1 Key insights – Common points of view – Quantitative analysis

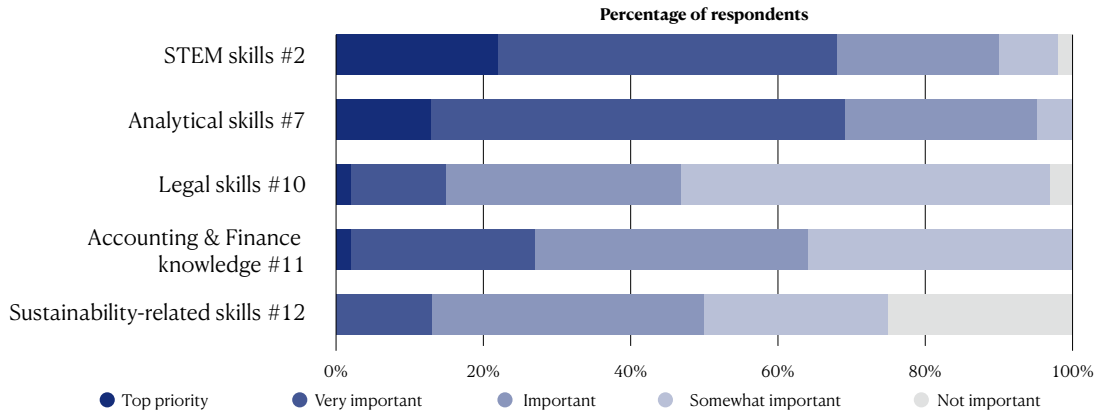
3.1.1. Important skills for investor teams

Among the various skills analysed in the EIF VC Survey, we can identify the following five as hard skills: **STEM skills**, **analytical skills**, **accounting & finance knowledge**, **legal skills**, and **sustainability-related skills**. The others are predominantly soft skills, which were examined in the previous chapter.

How do VCs perceive the importance of the five hard skills?

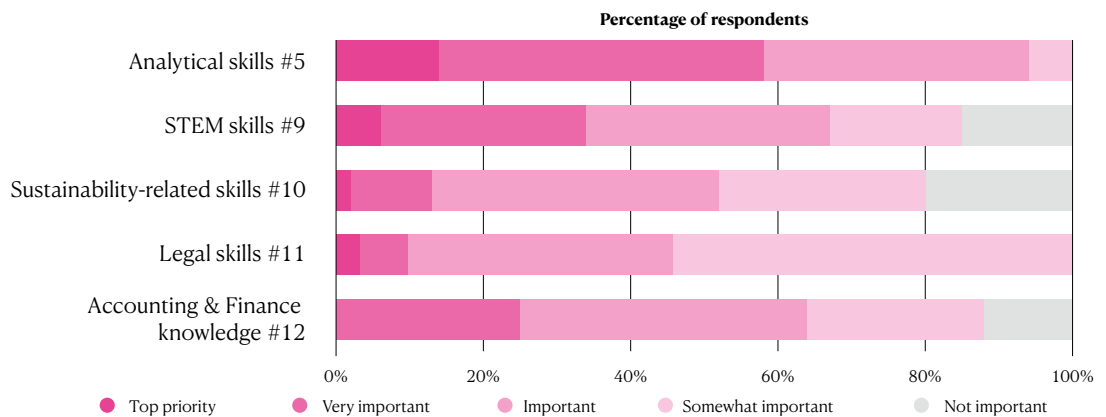
In the biotech subsector, VCs consider STEM skills to be one of the most crucial, specifically ranking it second after industry knowledge (see Figure 19), while analytical skills, accounting & finance knowledge, and legal skills rank lowest in terms of importance to a VC investor team. VCs focused on the health sector rank all five hard skills in the bottom half of the most important skills (see Figure 20).

Figure 19: How investors see STEM skills, analytical skills, accounting & finance knowledge, sustainability-related skills, and legal for investor teams in the biotech sector



Note: the number next to each skills reflects the ranking of this skill among the 12 most important for a VC investor team
Source: EIF VC Survey

Figure 20: How investors see STEM skills, analytical skills, accounting & finance knowledge, sustainability-related skills, and legal skills for investor teams in the health sector

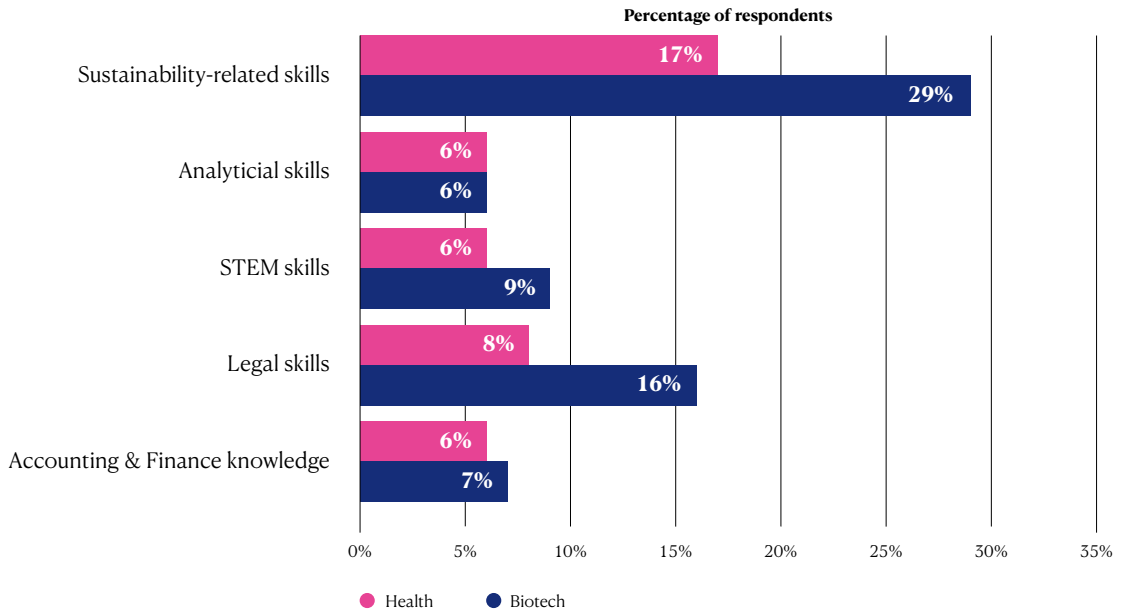


Note: the number next to each skill reflects the ranking of this skill among the 12 most important for a VC investor team
Source: EIF VC Survey

3.1.2. Skills missing from investor teams

Sustainability-related skills are the first-most lacking hard skill in the health sector, while in biotech the two most lacking hard skills are sustainability-related skills and legal skills (see Figure 21).

Figure 21: Which hard skills are seen as missing the most in health- and biotech-focused VC investor teams

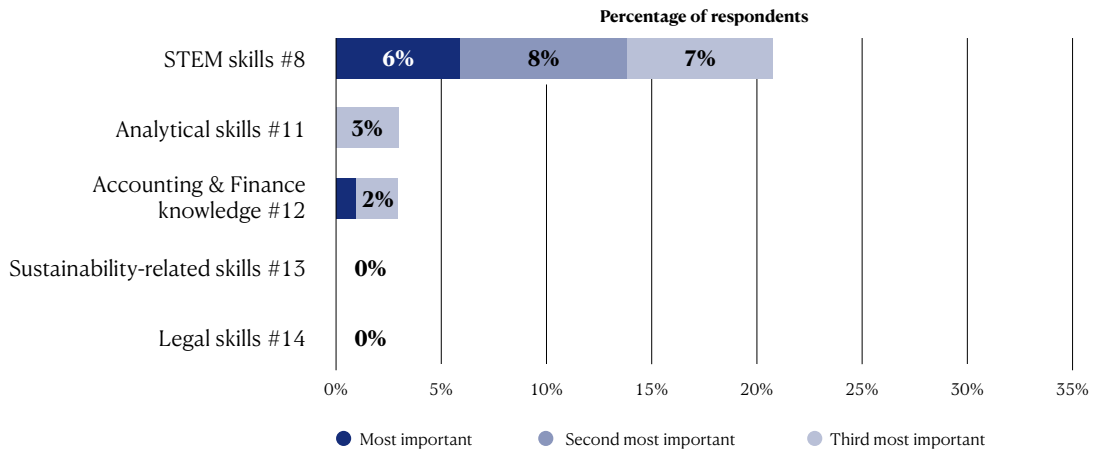


Multiple selection possible — Source: EIF VC Survey

3.1.3 Important skills for portfolio company teams

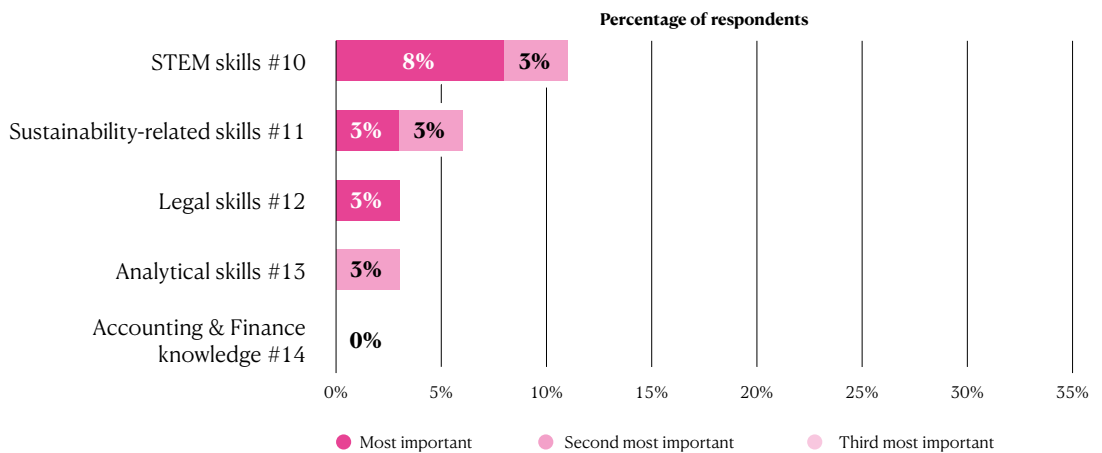
In general, hard skills are not perceived as most important for the management team of portfolio companies in either the biotech or the health sector (see Figures 22 & 23).

Figure 22: How VCs perceive the importance of hard skills for the management of portfolio companies in the biotech sector



Note: the number next to each skill reflects the ranking of this skill in the list of the 14 most important skills for a VC investor team
Multiple selection possible — Source: EIF VC Survey

Figure 23: How VCs perceive the importance of hard skills for the management team of portfolio companies in the health sector

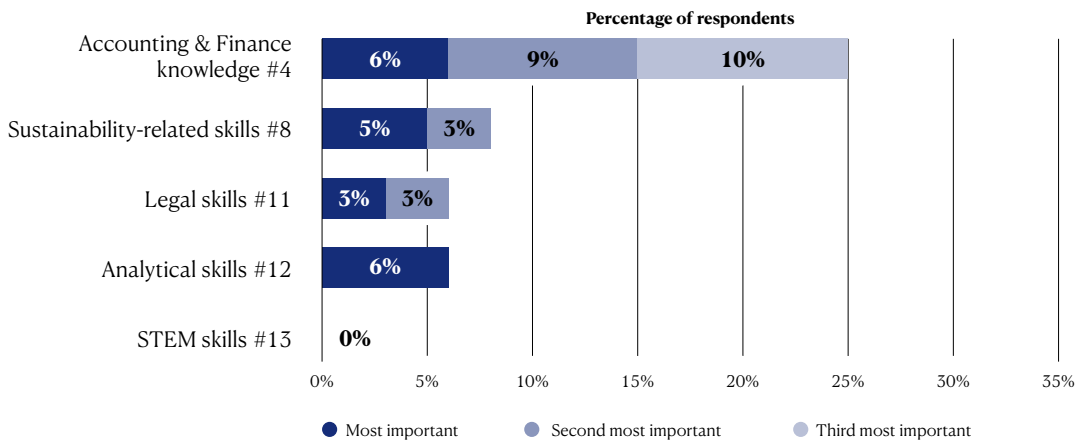


Note: the number next to each skill reflects the ranking of this skill in the list of the 14 most important skills for a VC investor team
Multiple selection possible — Source: EIF VC Survey

3.1.4. Missing skills in portfolio company teams

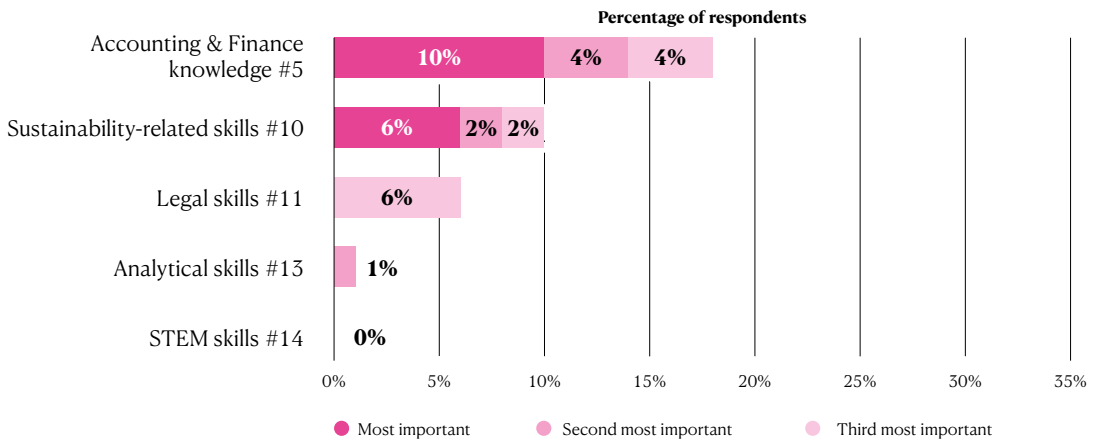
In the health sector, accounting and finance knowledge ranks fourth among the most missing skills, while other hard skills appear much lower in the ranking (see Figure 24). Similar findings are observed in biotech (see Figure 25).

Figure 24: Which hard skills are missing the most in the management teams of portfolio companies in the health sector



Note: the number next to each skill reflects the ranking of this skill in the list of the 14 most missing skills for a VC investor team
Multiple selection possible — Source: EIF VC Survey

Figure 25: Which hard skills are missing the most in the management teams of portfolio companies in the biotech sector



Note: the number next to each skill reflects the ranking of this skill in the list of the 14 most missing skills for a VC investor team
Multiple selection possible — Source: EIF VC Survey

3.2 Key Insights – Common points of view – Qualitative analysis

3.2.1 Biotech:

STEM skills

In the realm of biotechnology, certain hard skills are not just valuable but essential for driving innovation, growth, and success. Insights gathered from interviews and roundtable discussions have shed light on the critical importance of various hard skills within the biotech industry.

Scientific, technological, and technical expertise within startups are the foundation of biotech endeavours. A profound comprehension of biology, chemistry, and technology is essential to create and understand innovative solutions.

Furthermore, in the age of big data, proficiency in data science and bioinformatics is becoming increasingly crucial. The capacity to analyse extensive datasets, utilise machine learning algorithms, and employ bioinformatics tools is pivotal in discovering significant insights and propelling advances in biotech research and development. STEM skills have emerged also as important hard skills for the biotech subsector in the EIF VC Survey.

Why are STEM skills so important?

- **Technological innovation:** STEM expertise enables biotech professionals to develop and utilise cutting-edge technologies to research and develop new drugs, therapies, and medical devices. For example, in the field of nanotechnology, researchers can develop innovative drug delivery systems by engineering nanoparticles at the molecular level. This allows scientists to create carriers that precisely target diseased cells while sparing healthy ones.
- **Data analysis:** Mathematical and computational skills can be used to efficiently analyse large amounts of biological and molecular data to help identify patterns and trends useful for research and development.
- **Development of new therapies:** Scientific and engineering skills are critical for designing and developing new biological therapies, including gene and cell therapies, which can revolutionise the treatment of chronic and rare diseases.
- **Advanced diagnostic solutions:** STEM skills are essential for developing and implementing new diagnostic technologies, including genetic tests and molecular diagnostics, enabling early and more accurate disease diagnosis. The usage of **CRISPR-Cas9** (Clustered Regularly Interspaced Short Palindromic Repeats) is an example of how STEM skills can be employed in biotechnology to enhance the precision and effectiveness of genetic disease diagnosis.

-
- **Automation and robotics:** Engineering and technological skills can enhance the automation of research and production processes in the biotech subsector, increasing efficiency and reducing the time and costs of development.

Paul Bravetti, CEO of Brenus Pharma, recognises the importance of certain technical roles and strives to ensure their presence in his company:

“There are fundamental hard skills, such as data science and bioinformatics. Because of our reliance on artificial intelligence, we also depend on data mining. We’ve noticed the proliferation of many companies, as well as numerous new models and innovations. Therefore, we recently brought some bioinformatics experts and facilities in-house. I believe this change has significantly impacted our approach, as we’ve come to realise that what was being sold often came at a very high price.”

PAUL BRAVETTI Brenus Pharma

What other hard skills are lacking in biotech? As mentioned by Beatriz Llamusi, CEO & Co-Founder of Arthex Biotech:

“Finding CMC, chemists and analysts is very challenging. Once you finally have someone trained with good mentors, or you resort to outsourced consultants, it becomes easier to find good work opportunities in some of the big companies. However, attracting this talent onboard is difficult. Therefore, it’s essential to invest in shaping and retaining them. I believe there’s a significant gap between the industry’s needs and the available talent pool.”

BEATRIZ LLAMUSI Arthex Biotech

The issue of skills in the biotech subsector is significant, as discussed in the European Commission’s report “Building the future with nature: Boosting Biotechnology and Biomanufacturing”¹¹. “Among the various challenges highlighted in the biotech world (e.g., regulatory complexity, IP, value chain obstacles), skills are explicitly mentioned. Specifically, European biotech and biomanufacturing companies face rapidly evolving skills needs. Biotech products, compared to others, are more intricate to develop, requiring highly specialised equipment and a multidisciplinary workforce. Amid the European Year of Skills, ongoing training and reskilling are crucial to meet industry demands, aligning with the EU’s target for 60% of adults to engage in training annually by 2030.

Expertise in life sciences, digital technologies (AI, big data, robotics), regulatory frameworks, and quality assurance is essential. Some biotech products, especially

¹¹ Brussels, 20.3.2024 COM (2024) 137 final. Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions. Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU. European Commission

medicines, demand specific skills for patient administration. Moreover, the EU risks losing these skills to regions with more supportive environments for biotech projects' development."

Clearly, technical skills are a hot topic, with increasing attention on this subject. The next chapter will delve deep into current solutions to address skills gaps. Another hard skill brought up is project management.

Project management: An essential hard skill for overseeing a project

"Project management ensures people, whether they possess work in CMC or other segments, are capable of effectively executing the project."

JAN VAN DEN BOSSCHE Andera Partners

Effective project management within startups is another cornerstone of success in biotech. The capacity to meticulously plan, organise, and execute projects, encompassing everything from clinical trials to regulatory submissions, is indispensable for meeting critical milestones and adhering to timelines. Moreover, specialised project management skills for overseeing clinical trials and navigating regulatory hurdles are often lacking, resulting in delays and inefficiencies in product development processes.

Project management is important for the following reasons:

- **Risk management:** Projects may be subject to various risks, including safety issues, unforeseen scientific complications, or restrictive regulations. Good project management enables individuals to identify these risks in advance and develop mitigation plans to effectively address them.
- **Project complexity:** Biotech projects often involve various scientific disciplines such as molecular biology, chemistry, genetic engineering, and more. Effective project management allows individuals to effectively coordinate these areas of expertise to ensure smooth progress.

3.2.2. Medtech:

Hard skills play a crucial role in driving success within the medtech industry. Participants emphasised the critical role of hard skills in achieving goals.

Advanced technical skills in AI and machine learning

Advanced technological skills, especially in AI and machine learning, are crucial for medtech innovation, but skills gaps and educational disparities exist, showing how important mathematics is in technical education.

In particular, the essential nature of advanced technological skills, especially in areas such as AI and machine learning, was highlighted as a way of remaining competitive and innovative in the medtech subsector. Simultaneously, gaps were noted in AI and machine learning skillsets, indicating areas where improvement is needed to effectively address industry needs and challenges (e.g., academic and industrial collaborations or specialised training). Moreover, one participant noted certain discrepancies between university and technical college graduates, suggesting potential differences in educational approaches and outcomes.

Mathematics was recognised as fundamental in technical education for developing a strong foundation in problem-solving and analytical reasoning.

“ We have a lot of technical engineers that come from non-university backgrounds, and while they possess some knowledge, they lack the depth of mathematical understanding necessary to excel. So, I'd say mathematics is one area, and perhaps another is the ability to formulate algorithms and equations comprehensively.”

CARMEN PAULINE RIOS BENTON Doctomatic

The need for hardware engineers in startups

Additionally, **programming skills** were highlighted as crucial for **hardware engineers**, who design and optimise hardware systems at startups. Furthermore, data analysis skills across engineering disciplines were cited as important to making informed decisions and deriving insights from complex datasets.

“ We encounter a problem where individuals have a very strong theoretical background, but sometimes lack practical knowledge. For example, they might be very competent at understanding the theoretical and physical background behind electronic components but lack the practical knowledge to design and build full electronic circuit boards. They may understand software components, but when it comes to designing complex electronic circuits, they often lack proficiency. This knowledge gap poses a significant challenge.”

NICOLAS VACHICOURAS Bioelectronics

While technical skills are crucial in the health sector, regulation, particularly highlighted in the medtech roundtable, is another important theme.

The complexity of medical device regulation in Europe

Familiarity with quality systems and regulatory environments, such as the International Organisation for Standardisation (ISO), is considered essential for ensuring compliance and adherence to industry standards. Regulation is a term that came up at least once in every interview and roundtable conducted.

Why is regulation so prominently mentioned, especially in the medtech subsector? And what is the current situation in Europe?

According to a MedTech Europe¹² publication – “There are over 35,000 medical technology companies in Europe – 92% of them SMEs – currently providing around 500,000 medical technologies to European patients. At least 17% of today’s In Vitro Diagnostics (IVDs) and 20% of the medical device product portfolios are expected to be discontinued in Europe due to the expectation that costs of the transition to the In Vitro Diagnostic Regulation (IVDR), or Medical Device Regulation (MDR) outweigh product revenue, particularly among SMEs. Due to the unpredictability (in terms of time, cost, and changes) of the IVDR and MDR, 28% of IVD manufacturers and 48% of medical device manufacturers are deprioritizing the EU market as their first choice for regulatory clearance of new devices.

Four primary gaps related to regulations:

<i>Decision-making and efficiency</i>	There is no structured approach for making system-level decisions, addressing inefficiencies, managing notified bodies, or adapting to technological advances swiftly.
---------------------------------------	--

<i>Ecosystem oversight</i>	There is no entity driving the development of a healthy ecosystem, which includes fostering innovation in Europe, aligning with EU research agendas, ensuring regulatory consistency with other product laws, educating the public, and establishing system standards.
----------------------------	--

<i>Guidance and support</i>	There is a deficiency in providing guidance within the decentralised system to support competent authorities and notified bodies. This includes interpreting laws, balancing safety and innovation, setting timelines, and facilitating dialogue during assessments.
-----------------------------	--

<i>Representation</i>	There is no single representative who can effectively communicate and collaborate with other jurisdictions and agencies, both within Europe and globally.
-----------------------	---

¹² The Future of Europe’s Medical Technology Regulations: MedTech Europe’s vision for an efficient, innovation-focused, and well governed regulatory framework, Position paper – MedTech Europe from diagnosis to cure - 2023.

How do today's startups and companies ensure they have the right people with regulatory expertise, especially when the subject matter is challenging to grasp?

We will detail the solutions in the next chapter, but one of the main solutions mentioned by companies is that they often engage external experts/consultants to support them in these areas, as well as for quality assurance.

3.2.3. Digital health

The need for sustainability and Environmental, Social, and Governance (ESG) expertise in the startup and VC industry

“One thing that's missing nowadays are ESG experts, both at startups and VC's. The world has finally realised and highlighted the importance of implementing environmental, social and governance activities within organisations, which is being reflected in the form of new laws and regulations. We need talent that's able to define, implement and track relevant and credible actions within their organisations, ultimately impacting society in a positive way.”

MAITE MALET Asabys Partners

The importance of ESG in the startup and VC landscape cannot be overstated. Startups are increasingly expected to incorporate ESG considerations into their business models, addressing environmental and social impacts alongside governance practices. Likewise, VCs are now evaluating ESG performance when making investment decisions, recognising its potential to mitigate long-term risks and enhance returns.

However, despite growing awareness, there remains a notable gap in expertise within organisations, hindering their ability to fully embrace ESG principles. This deficiency poses challenges in meeting evolving market expectations and regulatory requirements.

Nevertheless, the integration of ESG practices is essential for fostering sustainable growth, enhancing stakeholder trust, and creating lasting societal and environmental benefits. As such, efforts to bridge the knowledge gap and prioritise ESG considerations are critical for the future success of startups and venture capital investors alike.

Another skill that was often brought up was **versatility**.

CEOs and founders of startups must have individuals who are able not only to sell, but also look to the future.

The ability to sell may be considered a soft skill, but when viewed holistically and in connection with other competencies such as understanding context and looking

to the future, it becomes something complex. Developing skills of this nature is often challenging, especially for those whose experience and exposure to different companies are limited. There was a recognition of the need for professionals who can effectively bridge the gap between sales, strategic thinking, and understanding medicine. This includes individuals with both sales skills and strategic acumen to drive business development within the subsector.

“ We’re really focusing on the mindset needed to position the company effectively going forward. This mentality is crucial not only for fundraising but also for navigating partnerships and eventual exits. When engaging with startups, it becomes apparent that some lack insights into industry trends and reactions, which underscores the importance of being forward-thinking.”

THOM RASCHE Early Bird Venture Capital

Addressing the challenges of evolving regulatory compliance

“ Regulation is always a crucial topic that tends to be overlooked, given its fast-paced evolution. Companies often lag in staying updated on these changes. It’s imperative for them to constantly adapt to new regulations. In fact, if you work in a regulated industry, it becomes essential to master this skill.”

PIOTR LORENZ Infermedica

The significance of regulatory compliance skills came up frequently in the roundtables. Participants said that having in-depth knowledge of regulatory frameworks such as ISO standards and the newly adopted European Health Data Space (EHDS) regulation¹³ to ensure data security and privacy within the digital health subsector is important.

Finally, while not directly addressed, the question of cybersecurity and GDPR compliance loomed large in the discussions. Concerns about handling sensitive health data and ensuring compliance with regulations like GDPR were recognised as critical to companies operating in the digital health space.

Key areas discussed included:

- **Regulatory compliance:** Staying updated on regulatory changes and ensuring adherence to them, particularly in a fast-changing regulatory landscape.
- **Regulatory knowledge:** Understanding and keeping up to date with ISO regulations.
- **Cybersecurity:** Protecting sensitive health data and ensuring compliance with GDPR and the NIS¹⁴ directive.

¹³ European Health Data Space: Council and Parliament strike deal. Press release was updated on 22 March 2024. Council of the European Union

¹⁴ Supporting the implementation of Union policy and law regarding cybersecurity. ENISA – European Union Agency for Cybersecurity

Gaps in data analytics, software development, and artificial intelligence

Additionally, there was a discussion about the need for technical expertise, including proficiency in data analytics, software development, and artificial intelligence.

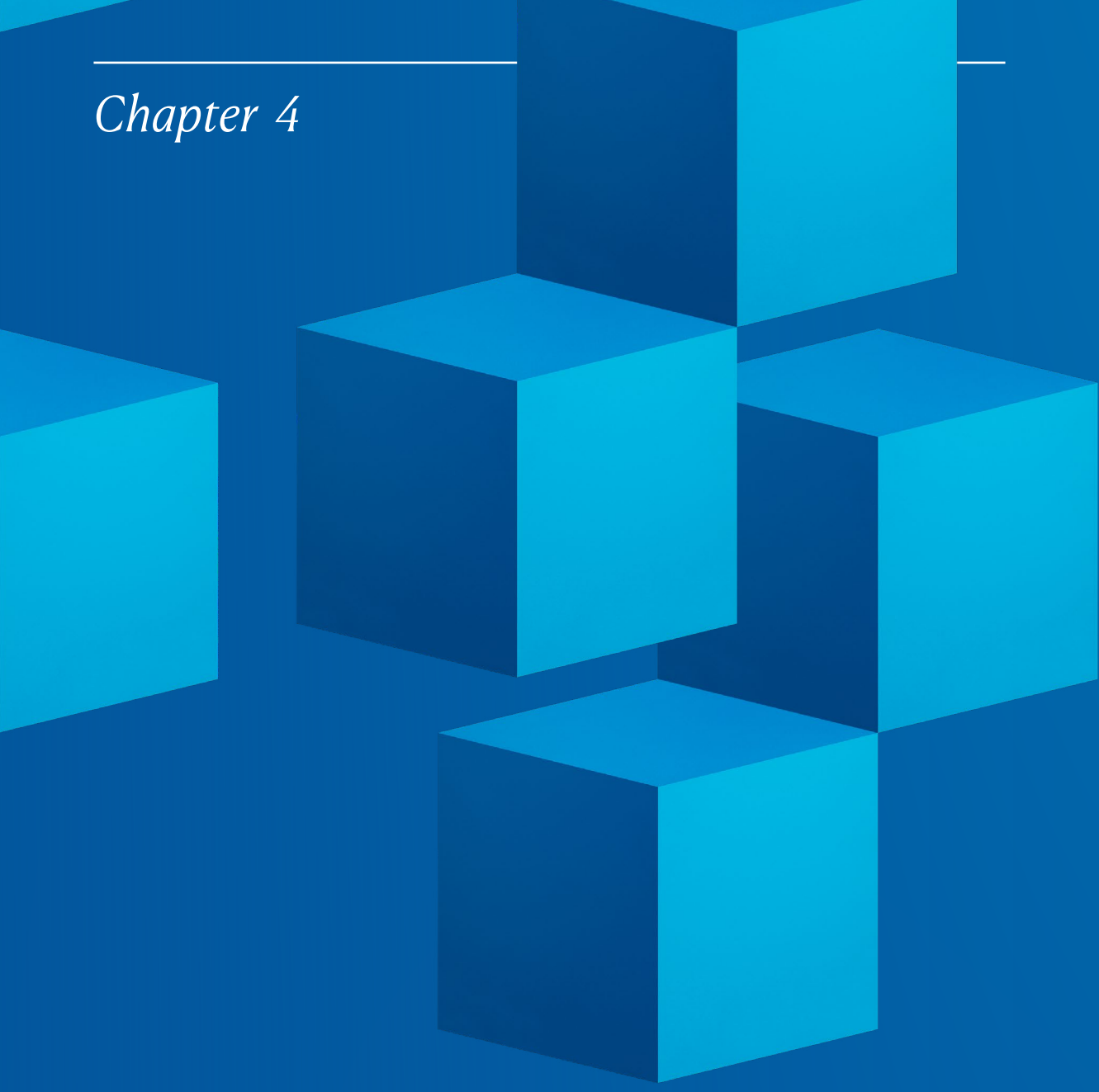
Key areas of technical expertise highlighted included:

- **Data analytics and big data expertise:** Deriving actionable insights from complex datasets to inform decision-making processes.
- **Software development engineering:** Developing robust and scalable software solutions tailored to the unique needs of the digital health sector, with a particular focus on emerging technologies like artificial intelligence (AI).
- **AI expertise:** Developing AI solutions to enhance various aspects of health delivery, with special attention to emerging fields such as natural language processing, predictive analytics, and GenAI.

“From my perspective and position, the hard skills that stand out include proficiency in data analytics and big data expertise. These skills are essential for extracting actionable insights from complex datasets. However, software development engineering poses a challenge for many companies due to a shortage of engineers in the market, which is a widespread issue. Moreover, linking this with the ongoing discussion about artificial intelligence, there is a shortage of experts in this field, particularly with the emergence of large language models. This skills gap demands our attention and underscores the need for collective action to address it.”

PIOTR LORENZ Infermedica

Chapter 4

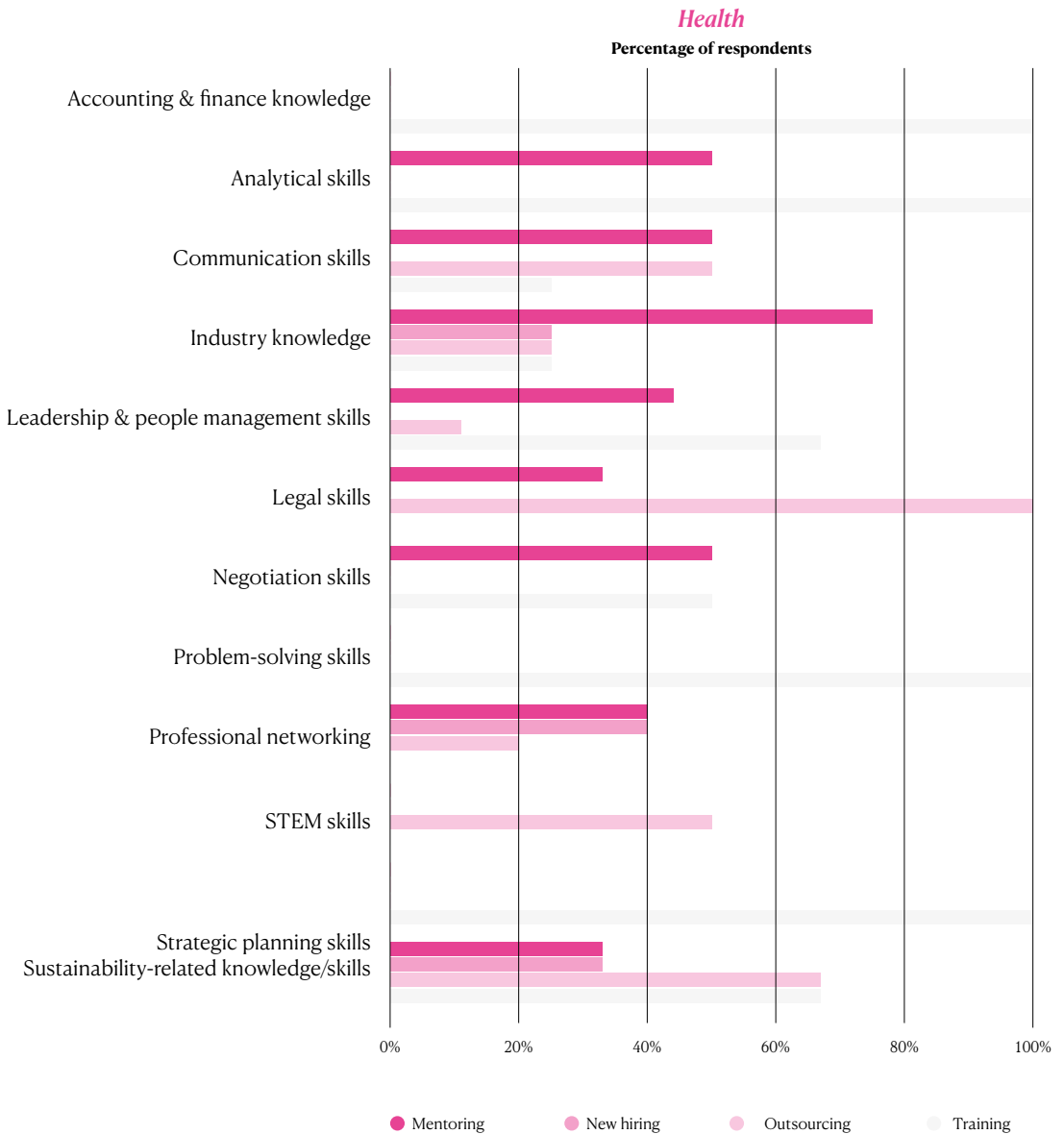


**Solutions to address
the skills gaps**

Addressing the skills gaps identified in the health sector is a crucial responsibility of its management teams.

This chapter introduces the EIF VC Survey results with regard to measures to fill skills gaps and outlines practical solutions drawn from concrete examples gathered during our discussions with industry experts, venture capitalists, and startups. It also aims to present a range of strategies that have been successfully implemented, offering a clearer pathway to overcoming these challenges.

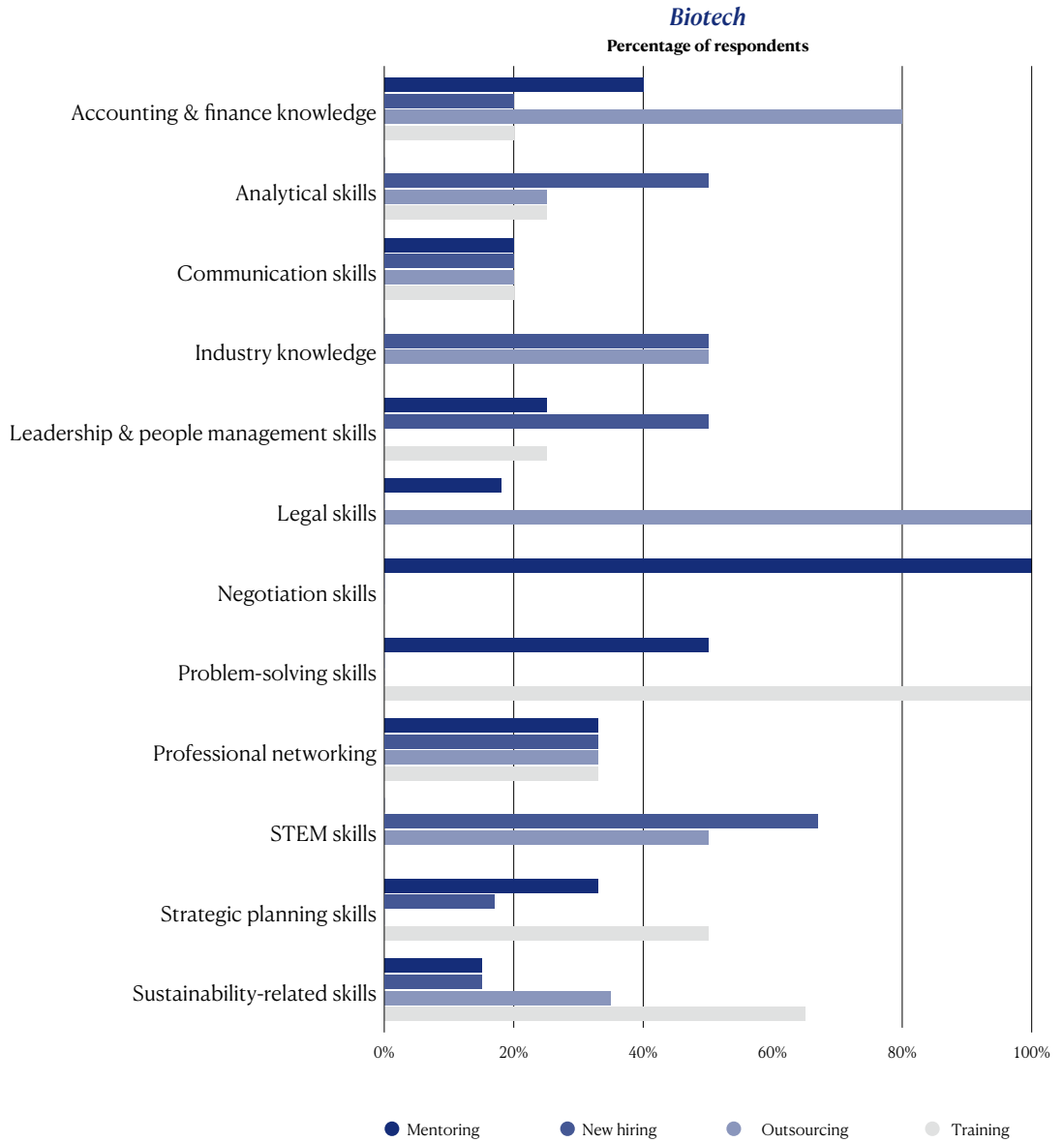
Figure 26: How investors intend to fill the gap of experience in a health-focused VC team



Percentage of respondents who stated that the related skills category is missing in their VC team (multiple section possible).

Source: EIF VC Survey

Figure 27: How investors intend to fill the gap of experience in a biotech-focused VC team



Percentage of respondents who stated that the related skills category is missing in their VC team (multiple section possible).
Source: EIF VC Survey

In the EIF VC Survey, training emerged as the most common method used to address many soft and hard skills gaps among VC fund managers in the health sector.

In health-focused VC investor teams, outsourcing was identified as an effective solution to fill gaps in specific skills, like STEM and legal expertise, while mentoring is predominantly utilised to bridge gaps in industry knowledge.

Investors specialising in biotech cite training as a way to enhance problem-solving, strategic planning, and sustainability skills. However, they often resort to hiring new talent to address STEM deficiencies.

Five key strategies to mitigate these skills gaps emerged from roundtables and interviews: **New hiring, training and upskilling, talent retention, mentoring, and outsourcing.**

<i>Solution</i>	<i>Definition and main insights</i>
<i>Hiring</i>	Recruiting new employees with the necessary skills and experience to fill specific roles within the organisation.
<i>Outsourcing</i>	Engaging external organisations to manage tasks or functions traditionally performed internally, which can lead to cost savings and access to specialised expertise.
<i>Mentoring/Community of experts</i>	Connecting company employees with a network of experts or mentors to enhance their skills through guided learning and experience-sharing.
<i>Training/upskilling</i>	Investing in the development of the current workforce to equip them with the necessary skills required to meet evolving job demands.
<i>Talent retention</i>	Implementing strategies to reduce turnover and increase the loyalty of current employees, turning them into brand advocates to attract top talent and keeping their knowledge and expertise within the company.

4.1. Hiring

Hiring can be a strategic method used by companies to acquire new skills based on their needs.

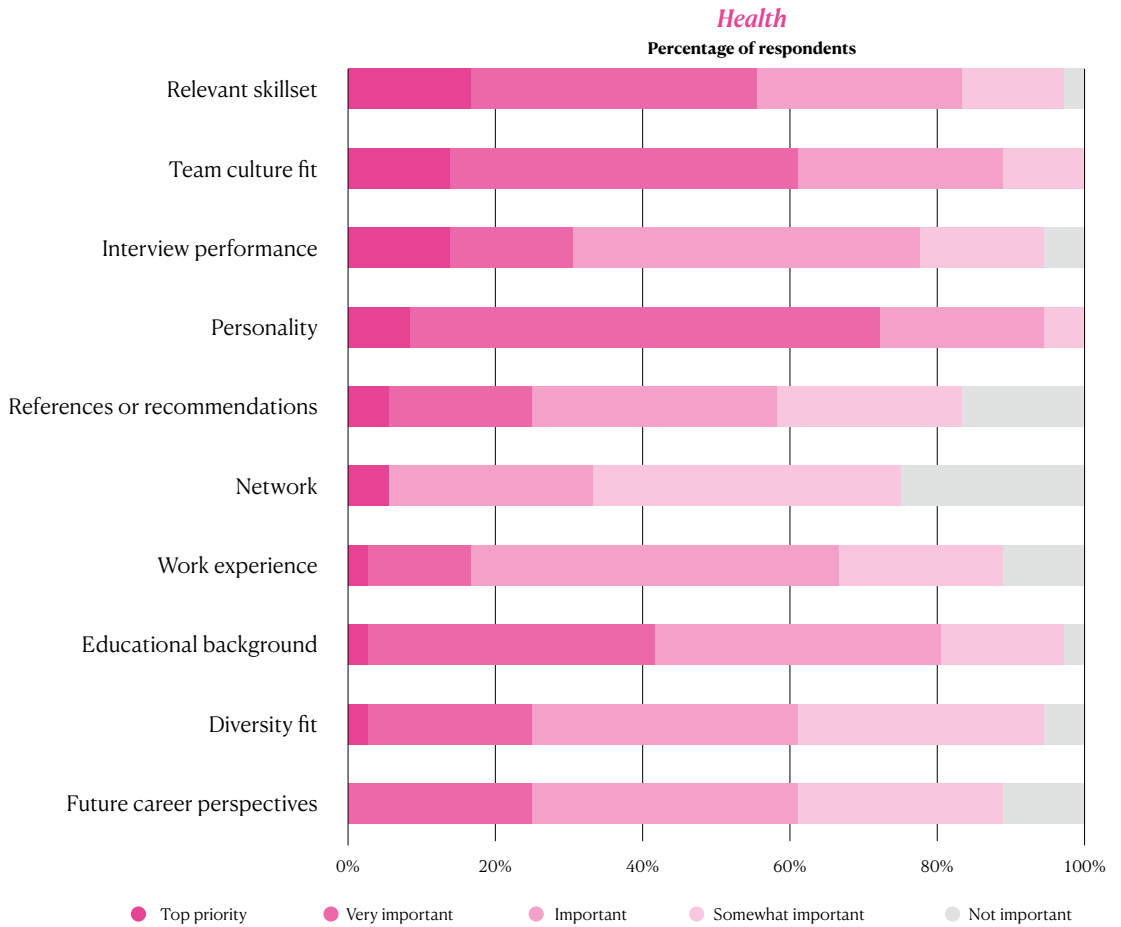
During the roundtable discussions and interviews, hiring within the health sector was characterised as highly specialised, focusing primarily on the experience of the candidates in health-related subjects and their skillsets. Many startups and VC funds emphasised the necessity for a “plug and play” approach, where new hires must be ready to immediately contribute without extensive training or adjustment.

“90%-95% of companies have asked me to look for profiles within the same vertical, specifically in the health and life sciences sectors. The issue is that when searching for these profiles, it is often done in urgency because the need for the ideal candidate existed before the search began. Strong candidates are capable of quickly learning the dynamics of the health sector, including regulations. However, companies generally do not feel they have the time needed for these individuals’ learning curves to flatten out.”

MICHELA BARCELLA Panakès

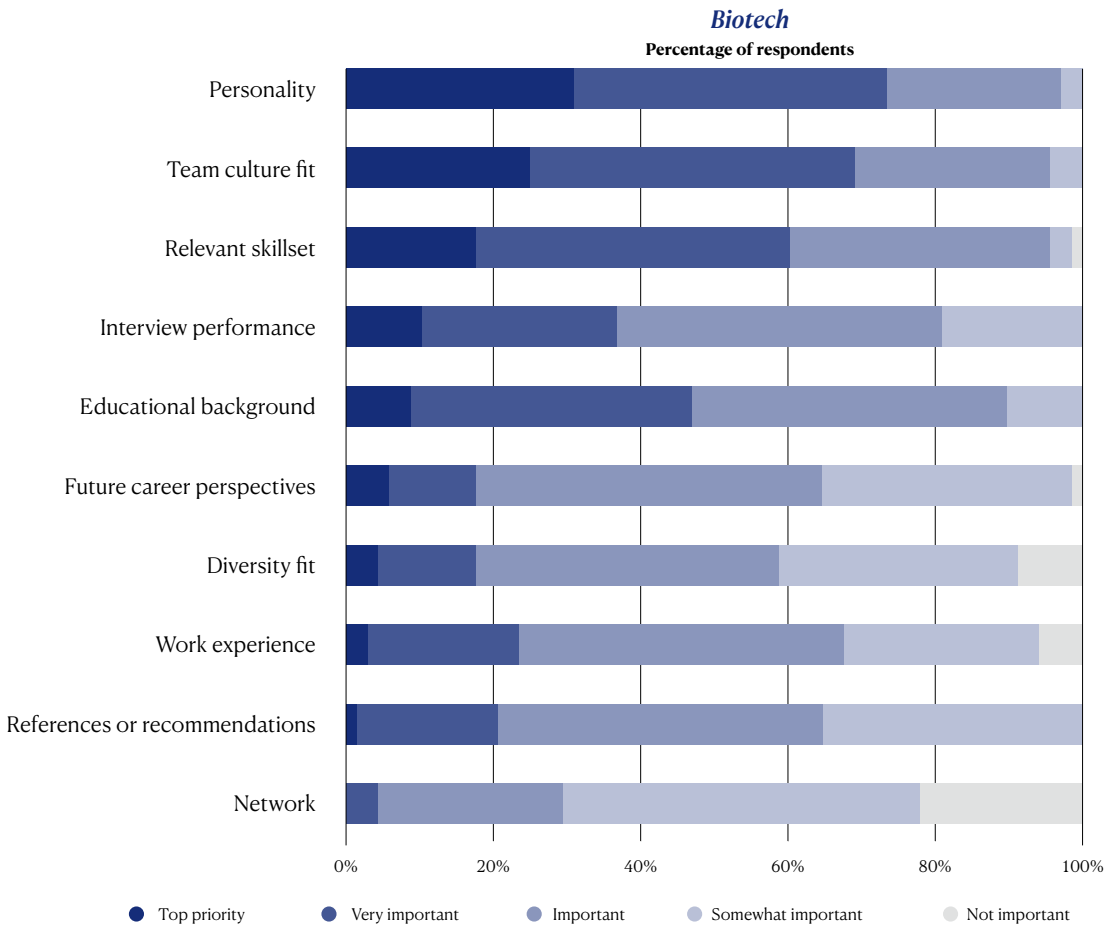
This aligns with findings from the EIF VC Survey, which identified the possession of a relevant skillset as the highest priority for junior talent in health focused VC firms and among the top-three priorities for junior talent in biotech focused firms (see Figures 28 and 29).

Figure 28: The most important qualities when hiring a junior talent in a health-focused VC team



Source: EIF VC Survey

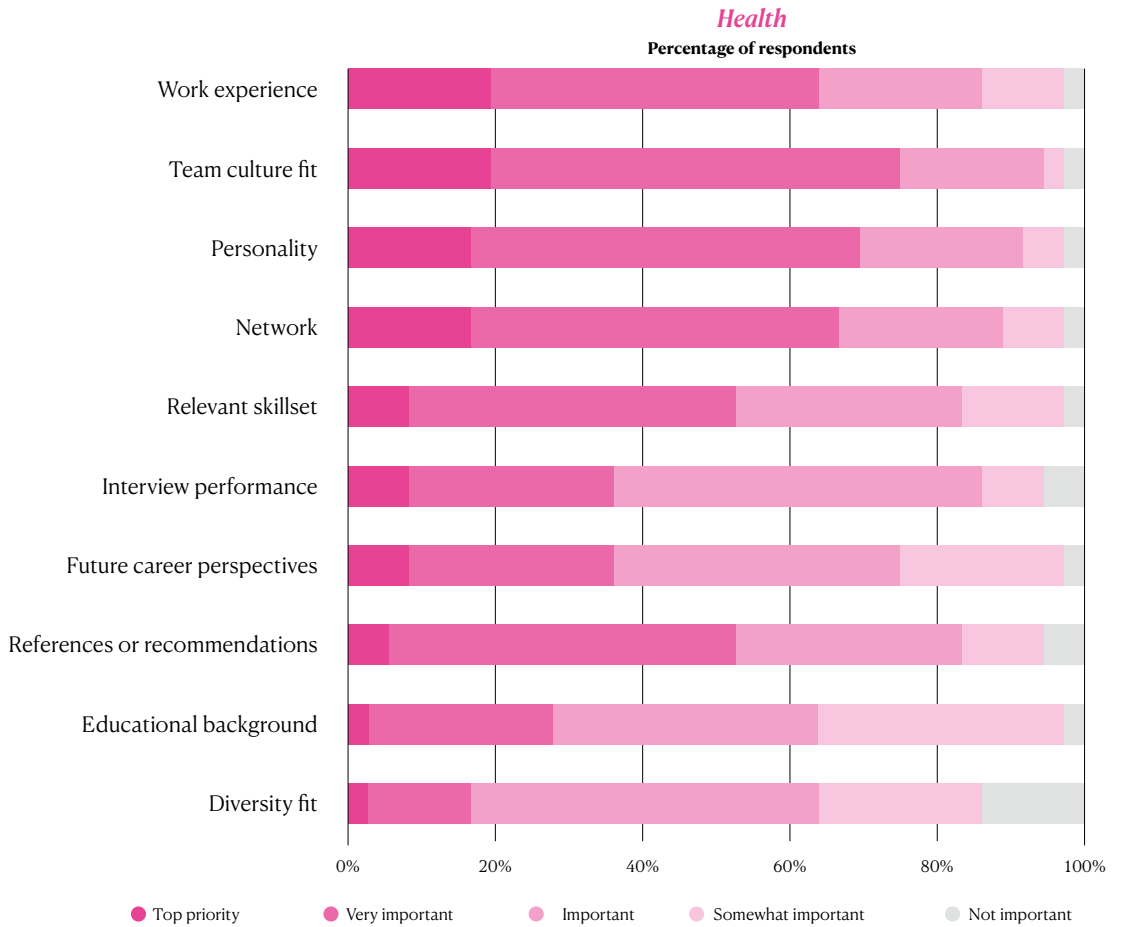
Figure 29: The most important qualities when hiring a junior talent in a biotech-focused VC team



Source: EIF VC Survey

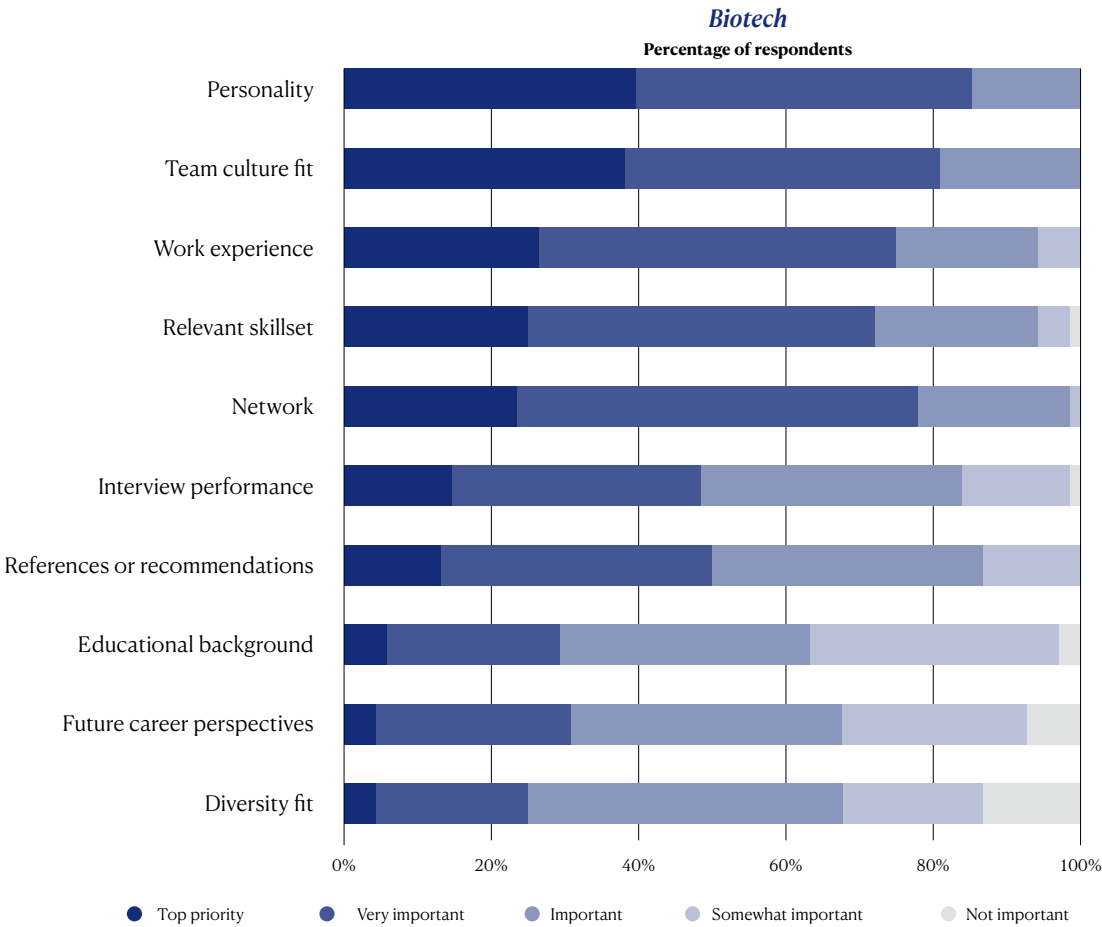
This observation is also consistent with the EIF VC Survey findings on the qualities most important for senior hires in health focused VC investment teams. Work experience, which is linked to the capacity of a candidate to “plug and play”, is ranked as the most crucial skill for health focused investment teams, with 85% of respondents considering it somewhat important or above. It is also the third-most valued skill for biotech focused VC teams, with 94% of respondents acknowledging its importance (see Figures 30 and 31)

Figure 30: The most important qualities when hiring a senior talent in a health-focused VC team



Source: EIF VC Survey

Figure 31: The most important qualities when hiring a senior talent in a biotech-focused VC team



Source: EIF VC Survey

4.1.1. Challenges in hiring

One of the key insights from the interviews and roundtables is that while the talent pool for junior roles is abundant and easily accessible, the pool for senior positions is notably smaller and more challenging to tap into.

“For analysts, no need for head-hunters as a big pool of profiles exist. For assistants, we need to use head-hunters because we cannot find any in the market.”

THOM RASCHE Early Bird.

The position of a CEO in particular presents a significant challenge in the health sector, as mentioned in every roundtable and some of the interviews. This difficulty primarily arises from the demanding requirements for extensive industry experience and, in certain cases, specialised technological expertise. Furthermore, the need for a strong background in fundraising, IPOs, or acquisitions significantly narrows the candidate pool, especially in Europe.

To mitigate this issue, Luis Pareras, Partner at Invivo Partners, suggested appointing chairmen as external mentors to support less experienced yet promising first-time CEOs in their professional development. This can alleviate the dearth of experienced CEOs in Europe, as fewer experienced candidates could also be considered in the hiring process.

Additionally, certain roles were identified as particularly challenging to recruit for:

- In biotech, positions requiring business development skills are difficult to fill.
- In digital health and medtech, roles requiring expertise in data analysis and AI combined with biomedical knowledge are scarce.

To overcome these recruitment challenges, headhunting has been extensively recommended as an effective strategy for attracting specialised talent within the health sector.

4.1.2. Hiring from other sectors or other countries

In every roundtable, there was consensus about the uncommon practice of hiring from other sectors, largely due to the need for “plug and play” capabilities, particularly in startup environments. However, for specific roles within the digital health field, it was noted that recruiting from major tech companies such as Google, Apple, Meta, or Amazon, could be beneficial.

Other roles that might suit candidates from outside the sector include finance, cybersecurity, and ESG, as well as hiring pharma professionals for MedTech positions when suitable candidates are scarce, as these professionals are already used to regulated work environments.

Moreover, recruiting from other countries has been recognised as essential, especially in smaller countries where specialised skills are rarer. While this approach is common, participants highlighted potential legal challenges associated with international hiring practices in Europe.

4.1.3. Use case: Hiring before master's programmes

A strategic approach to hiring was highlighted by Robert Lauritzen, CEO from Cerebriu. This involved engaging potential employees in company operations even before the completion of their master's degree and thesis.

His method involves identifying talents who are completing their bachelor's degrees and incorporating them into relevant company projects. This collaboration allows both the company and the students to co-develop the thesis, providing mutual benefits: students receive valuable guidance and real-world experience, while the company evaluates their compatibility and skills.

After the thesis, the company can then decide to fully onboard the students, ensuring they are well-aligned with the company's goals and culture.

4.2. Outsourcing

Another method used by companies in several sectors such as health to address skills gaps is outsourcing. Especially in startups, which often operate with limited budgets, it can be a practical approach to accessing expertise without the long-term commitment of hiring full-time specialists. Many tasks that are not core to the business, limited in workload, or temporary in nature are typically outsourced.

4.2.1. Strategic Outsourcing: What to outsource and how to do it effectively

Some examples of roles and activities that could be outsourced in the health sector were mentioned, such as:

- CMC for biotech companies
- Legal and intellectual property services
- Quality assurance and regulatory affairs
- Human resources
- Accounting and finance

During the discussion, it was noted that when engaging external consultants, it is crucial to maintain internal staff who can manage them. This ensures that while the consultants

bring specialised knowledge, internal team members can integrate and leverage this expertise effectively. External consultants are also valuable for mentoring newly hired or junior employees, helping to develop in-house expertise over time.

Finally, it is also important to manage such engagements carefully to ensure the retention of intellectual property. A special attention is needed when selecting outsourcing services from other countries, which may endanger some corporate IP.

4.2.2. Use case: Outsourcing public relations activities

An interesting case highlighted by Nicolas Vachicouras, CEO from Neurosoft Bioelectronics, illustrates the benefits of strategic communication and public relations outsourcing. By sharing news on social media, with the help of outsourced consultants, Nicolas observed an increase in investor contacts, demonstrating the value of enhanced external communications.

“I received more spontaneous contact from investors since we started sharing news on social media.”

NICOLAS VACHICOURAS Neurosoft Bioelectronics

4.3. Training and upskilling

According to the EIF VC Survey, training and upskilling internal staff is the primary method for addressing skills gaps.

This approach is underscored by the existing disparity between the current curriculum and the skills demanded by companies and the broader industry, as highlighted by Beatriz Llamusi:

“The skills for the top ten future jobs requirements are not even present in the curriculum of universities.”

BEATRIZ LAMUSI Arthex Biotech

But as mentioned by other participants, regulatory and quality affairs have been introduced into some university programmes to begin addressing the gaps between academia and the sector’s skills needs .

“The distance between education/university and real work life is still being addressed. We shall still take a while to see it reduce.”

CARMEN PAULINE RIOS BENTON Doctomatic

These improvements are also the result of partnerships between university programmes, industry, and government.

4.3.1. Use case: Paris-Saclay and LNE partnership for enhancing knowledge

An interesting use case of a partnership between an educational institution and a private institution to improve student education in sector-specific topics was mentioned during the interview with Maud Plombas, medical devices certification department manager at GMED/LNE.

The collaboration between LNE (National Metrology and Test Laboratory, France¹⁵) and Université Paris-Saclay, along with its prestigious schools such as CentraleSupélec, ENS Paris-Saclay, AgroParisTech, and Institut d'Optique Graduate School, exemplifies a robust partnership focused on enhancing knowledge and research in several subjects, including regulation skills. In terms of research and value creation, the partnership will strengthen ties through the sharing of resources and pooling experimental means, such as joint laboratories and the combined involvement of staff in standardisation programmes. Regarding education, LNE actively participates in various courses of study and supervises students from Université Paris-Saclay and its member schools, enhancing the practical and theoretical training of the next generation of professionals.

4.3.2. Role of training programmes

Several effective methods for employee training were discussed by roundtable participants:

- Engaging juniors in internships or research projects prior to formal onboarding.
- Offering specialised training programmes, such as ones focused on regulation and QARA (Quality Assurance and Regulatory Affairs).
- Collaborating with international incubators to provide comprehensive development opportunities.

The role of master's degrees and university programmes that teach about entrepreneurship in the health sector is also valuable for VC investors.

Additionally, very specific needs for improvements in the training programmes available were identified in some health sub sectors. Two examples are:

- In biotech, there is a need for CMC training not only for engineers but also for technicians in new specialisations.
- In medtech, basic mechanical design training is required, not just software-oriented courses.

15 Laboratoire national de métrologie et d'essais

Moreover, opinions on the quality of training programmes varied between interviews and roundtable discussions. Some companies in the medtech and digital health subsectors argued for a need to improve the teaching of theory in certain technical subjects. Conversely, during the interviews, many defended the robust level of technical knowledge and hard skills present in Europe, highlighting a division in perspectives on training efficacy.

The discussions also emphasised the critical importance of aligning training programmes with the practical demands of the sector. Training not suited for local production capabilities can render even practical skills merely theoretical, underscoring the need for sector-relevant educational content.

“ Training needs to be supported by a build-up of actual production capacity, otherwise it is theoretical training.”

JAN VAN DEN BOSSCHE Andera Partners

A final topic was the important role of training, not only for the health workforce, but also to teach doctors how to adopt the new technologies in startups' products:

“ We definitely need more integration between engineering and medical school so that the medical community clearly understands the foundations of technologies such as AI and knows how to use it and benefit from it ultimately improving patient outcomes.”

MAITE MALET Asabys Partners

An innovative approach to solve this issue suggested by Thom Rasche from Early Bird involves engaging MBA students to complete their final projects at medical schools, fostering cross-disciplinary learning and collaboration.

4.3.3. Use case: France 2030 programme for improvement in medical education

Another initiative aims to address this skills gap by providing additional training for health professionals in digital transformation and technology. This includes specialised topics such as cybersecurity, data analysis, digital tools, and telemonitoring. The action plan for this initiative is supported by funding provided to medical schools through the “France 2030” programme, intended to equip health professionals with the skills they need to navigate and lead in an evolving digital landscape.

4.4. Retaining talents

When mitigating skills gaps in the health sector, retaining talent is as important as recruiting, outsourcing, and training. Beatriz Llamusi emphasises the need to enhance loyalty, not merely through association but by actively engaging employees.

Strategies for retention

A key insight for retaining talent, especially in highly regulated environments with rapidly changing strategies and where flexibility is required is managing frustration effectively. This was brought up in every roundtable.

Other strategies for talent retention were cited:

- **Flexible working conditions:** Supported by the digital revolution, remote work has gained popularity, enhancing employee satisfaction and retention.
- **Mentoring and career development opportunities:** Providing opportunities for personal and professional growth through developmental events.
- **Organisational culture and horizontal management:** Promoting a collaborative and open work environment through horizontal management.
- **Equity:** Fair recognition and reward for contributions, ensuring all employees feel valued.
- **Addressing the mental health of team members:** Creating a supportive work environment is essential for fostering overall well-being.

Together, these strategies contribute to a stabler, more satisfied workforce, which is needed to close skills gaps and make the organisation a long-term success.

4.5. Mentoring

Apart from the important role of mentoring as a tool for retaining talent, it is also crucial for developing advanced skills in the workforce.

Our discussions emphasised the role of mentoring in refining negotiation skills and enhancing the performance of C-level executives. Mentoring those with a technical educational background or junior employees poised for C-level positions can provide clear guidelines and better preparation for such roles. Guidelines on what to do during negotiations or partnership development are one way experienced employees can effectively mentor others.

Moreover, startups and venture capital funds have been implementing mentoring programmes to enhance employee loyalty and develop soft skills. A concrete example is provided in the use case below.

“There is a growing demand for mentoring.”

PAUL BRAVETTI Brenus Pharma

4.5.1. Use case: Effective mentoring practices for small teams

Carmen Pauline Rios Benton, CEO of Doctomatic, has implemented a personalised mentoring approach for small teams, which involves tailoring career development paths as part of the mentoring process.

As CEO, she personally meets with each member of her team to co-design their career plans. The company’s retention rates have proven the effectiveness of this hands-on approach although complicated to implement on a larger scale.

4.5.2. Participating actively in the community of experts

Mentoring through the power of community expertise was also emphasised as an essential tool to enhance employee skills by leveraging the collective knowledge within the industry ecosystem. During our roundtable discussions, health industry leaders underscored the importance of active participation in several key areas:

- Expert community meetings and masterclasses
- Industry-specific events
- Collaborations with universities and research institutions

Engagement in these forums not only fosters the exchange of information but also enhances employees’ skills and industry knowledge. Moreover, building a professional network, a crucial asset in the health sector, was noted as a significant benefit of such involvement. This proactive participation enriches employees’ capabilities and positions them strategically within the industry landscape.

Chapter 5



Enhancing communication and talent strategy evaluation between venture capital funds and startups

Startups frequently provide feedback on the quality of assessments conducted by venture capital (VC) funds during fundraising or other evaluation processes. In our roundtables, for example, health startups have indicated that new VCs entering the health sector may not fully understand the lengthy timelines required to bring products to market, significantly impacting startups' revenue projections. This feedback underscores the need for better communication between startups and VCs during assessment processes.

This chapter aims to initiate a dialogue on methods to enhance communication between venture capitalists (VCs) and startups specifically on the development of talent strategies within startups. It highlights some key aspects to consider when designing effective talent strategies, drawing on insights from the roundtable discussions. It also aims to provide perspectives on how these strategies can be evaluated from the viewpoint of a venture capital fund, offering valuable insights for both VCs and startups.

During the discussions, startups and VCs mentioned two examples of key areas evaluated during the people workplace strategy assessment:

- **HR policies and practices:** People's workplace strategies are often analysed starting with HR policies. Therefore, it is recommended that startups structure and document their procedures, such as hiring policies and retention strategies, which are often scrutinised during funding decisions. Critical areas include work-life balance initiatives, legal compliance with employment practices and ESG standards.
- **Engagement and retention metrics:** The ability of a startup to engage and retain talent is fundamental. Metrics and indicators that can help VCs to assess these aspects include:
 - ◆ **Employee net promoter score (ENPS)**, measuring employee satisfaction and loyalty.
 - ◆ **Engagement metrics**, assessing staff enthusiasm and commitment.
 - ◆ **Retention rates**, offering insights into the efficacy of the people strategy.
 - ◆ An unconventional yet revealing KPI mentioned during our discussion is the **number of CVs received**, reflecting the company's appeal to potential employees.

Moreover, VCs may vary in how they assess people management strategies. Therefore, startups should align with their VCs to properly prepare key management practices. For instance, the communication skills of the CEO and other executives seemed to be crucial for some VCs, as evidenced by Luis Pareras from Invivo Partners, who emphasises the importance of observing executive team meetings in order to evaluate communication skills of the C-level team.

By focusing on these aspects, venture capitalists can more effectively evaluate the talent management strategies of the companies in their portfolios. Startups can aid this process by reporting on their key management practices, thus providing deeper insights into their practices.

Considering the complex nature of people strategy development within the startup ecosystem, it becomes apparent that ongoing dialogue is essential. Future research and discussions on this topic will allow for further development of structured frameworks to guide both venture capital investors and startups.

5.1. Use case: Enhancing VC-startup communication through technology

During the discussions, an interesting use case of improved startup-VC communication was mentioned by Maite Malet, who is in charge of Investment & Corporate development at Asabys Partners.

She explained how reporting tools can bolster venture capital support and guidance for startups, citing Asabys' implementation of a new platform to monitor ESG metrics:

“ We have been testing new ESG tools to help us and our portfolio companies identify areas to improve, define specific actions, and track them accordingly. We have been working with KARA's ESG software for months now, reviewing their platform and adjusting their processes to our portfolio companies (selecting relevant frameworks for our industry, company stage, etc.) so that it becomes a very valuable tool for our portfolio companies, as the guide for all ESG related activities.”

MAITE MALET Asabys Partners

This approach of utilising platforms to track metrics can also be applied to monitoring people strategy KPIs. This enables venture capitalists to offer timely advice to startups, thereby boosting their strategic alignment and operational efficiency.

Chapter 6

Diversity

Diversity in recruitment and career development is crucial in the health and biotech sectors, with a particular focus on gender diversity. While some VCs prioritise initiatives to increase female representation, competency remains the primary hiring criterion. Despite efforts, some disparities persist, prompting calls to promote diversity at an early stage to foster inclusive leadership and culture.

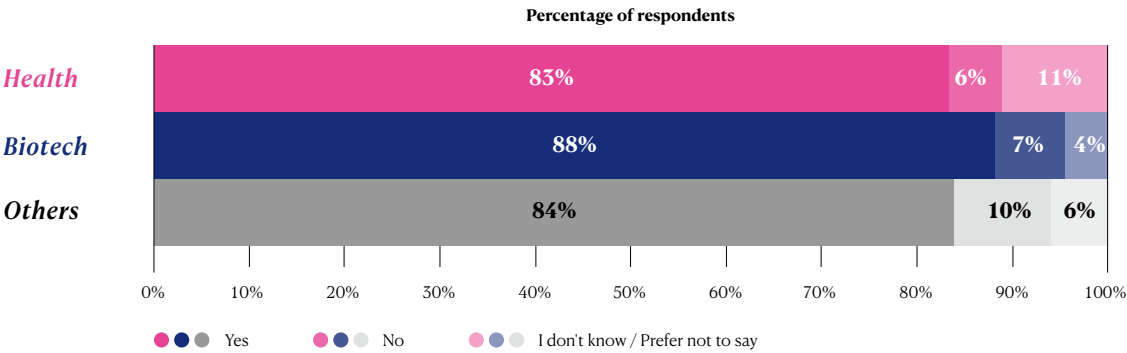
6.1 Key conclusions from an investor point of view – Quantitative and qualitative analysis

6.1.1 Diversity considerations in recruitment and career development

According to the EIF VC Survey, diversity is highly valued in the recruitment and career development strategies of VCs in both subsectors, with a particularly strong emphasis in biotech, where a slightly larger proportion of respondents prioritize it.

Although diversity alignment might not consistently rank as the foremost concern for VCs during talent acquisition, it is nonetheless deeply integrated into their recruitment and career advancement protocols (see Figure 32).

Figure 32: VCs considering diversity in recruiting and career development in their firm



Source: EIF VC Survey

The overall impression gathered from discussions in roundtables and interviews indicates that there is a relatively higher presence of women within the health industry compared to other sectors. Another interesting point raised in interviews and roundtables is that many VCs and startups do not have initiatives to increase the percentage of women in their companies because they already have a significant female presence.

Certainly, this is not universally true, as some roundtables and interviews have highlighted the importance of diversity in hiring decisions, with one VC notably actively seeking to increase its hiring of women. However, it was also noted that competency and capability are prioritized in hiring, with the best candidate being chosen.

A point raised by the CEO of a startup present at the digital health roundtable - Carlos Fernandez from Gogoa:

“ We’ve regained our strength, and we’ve also included a significant number of women in marketing, especially those with backgrounds in biomedical engineering. Interestingly, there are more women than men pursuing biomedical engineering in our local universities (Spain). However, when it comes to more specialised fields like mechanical engineering, it’s indeed more challenging to find women.”

CARLOS FERNANDEZ Gogoa

Gender diversity is a complex subject, but the common perception is that in the health sector, the number of women in C-level positions is increasing. Additionally, in recent years, there are more startups with women CEOs and more VCs where women hold roles in top management.

One last interesting point was made by Luis Pareras from Invivo Partners:

“ In our case, half of the CEOs and half of the top C-level executives in our companies are women. But I also want to emphasise that for top positions like CEO, talking about diversity is a very difficult thing because we are looking for candidates with very specific skills...maybe it will be a woman, maybe it will be a man, it’s about who will be the right person to be there. The best one.”

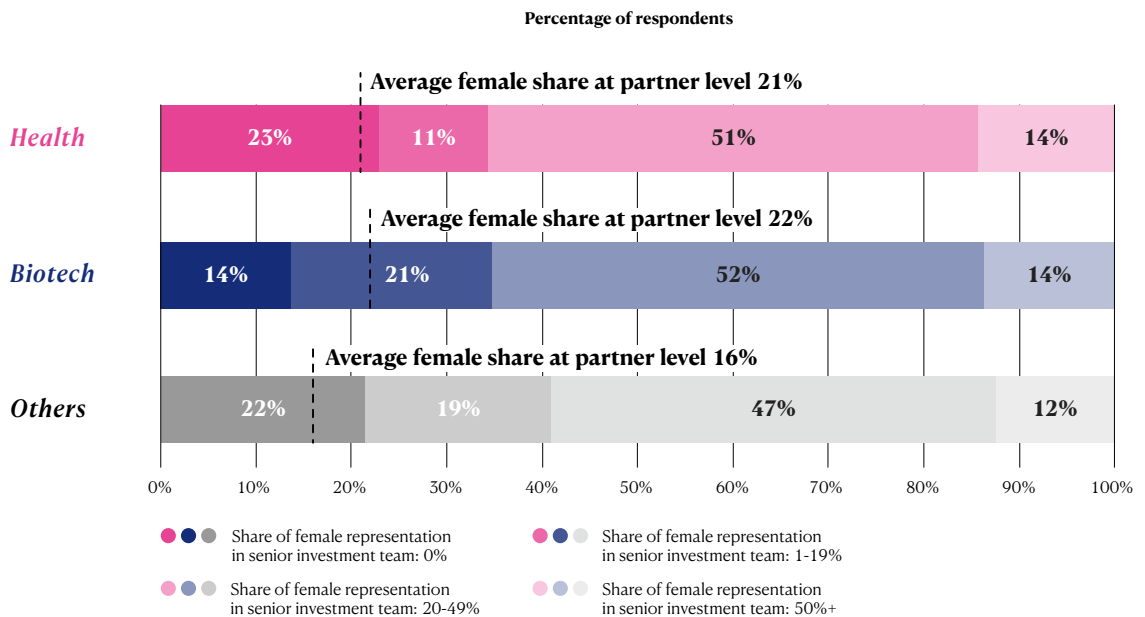
LUIS PARERAS Invivo Partners

In the EIF VC Survey, the average percentage of female partners is very similar between VC firms in the health sector and those in biotech. Nearly one in four (23%) VCs

focusing on health indicate no female representation at senior investment team level, a higher figure than VCs focusing on biotech (14%), see Figure 33.

However, the exact same percentage (14%) of VCs focused on the health and biotech subsectors report a female share in excess of 50% in the senior investment team. Across the surveyed VC firms, the average female representation at partner level stands at 21% for those focused on health and at 22% for biotech. These figures surpass the average for firms focused on other sectors, which stands at 16%.

Figure 33: Share of female representation at partner and senior investment team level of VC firms



Source: EIF VC Survey

It seems that the average representation of women within VCs in health and biotech is slightly higher than in other sectors. However, as already mentioned, there is room for improvement. An interesting point that leads to reflection and was expressed by Maite Males, Investment & Corporate Development from Asabys Partners:

“Diversity within organisations is key, since it fosters different views and ways of doing things, improving communication and collaboration within teams. If we decide to back a startup that has no diversity whatsoever, this will be highlighted as a red flag during our due diligence process, and we’ll work with the management team to change it since we think it’s a key aspect for success.”

MAITE MALES Asabys Partners

Gender diversity in C-level positions is critical for effective leadership and an inclusive company culture. Promoting equal representation of men and women in these positions can bring significant benefits to both startups and VCs. Regarding diversity in C-level positions, the European Commission has introduced the EU Gender Equality Strategy 2020-2025, which outlines policy objectives and targeted actions to achieve significant progress by 2025 towards a gender-equal Europe. The aim is to create a Union where individuals of all genders, ages, and backgrounds have the freedom to pursue their desired life paths, enjoy equal opportunities for fulfilment, and can equally engage in and lead our European society in an equitable manner. One of these initiatives is the **Directive on gender balance in corporate boards**, which seeks to improve gender representation in corporate decision-making roles within the EU's largest listed companies. After ten years of negotiations, the Directive was finally adopted in November 2022. This EU legislation is poised to break the glass ceiling within corporate boards and provide qualified women with genuine opportunities to attain top leadership positions.

Another initiative worth mentioning is a campaign launched by the European Commission to challenge gender stereotypes in March 2023. The *#EndGenderStereotypes* campaign, disseminated throughout 2023, tackled gender stereotypes affecting both men and women in different spheres of life, including career choices, sharing care responsibilities and decision-making.

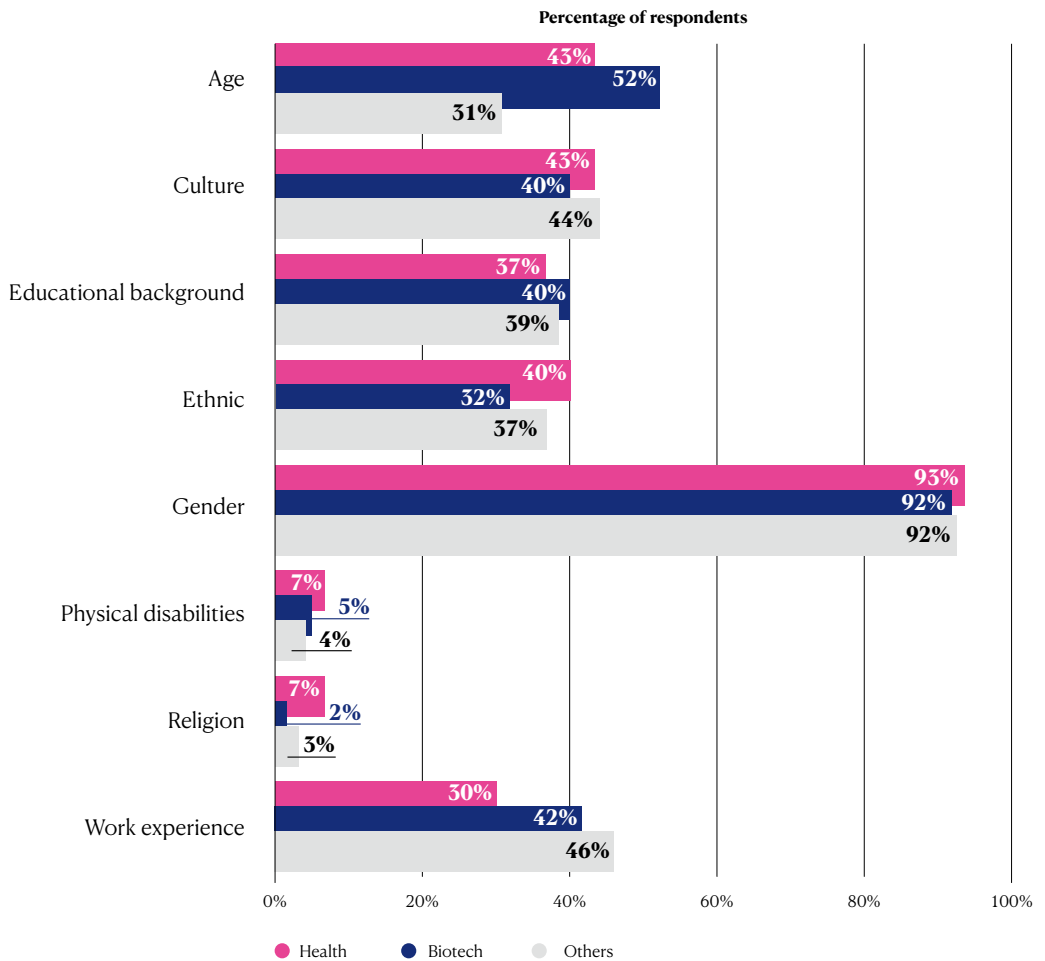
6.1.2 Aspects of diversity in recruitment and career development

VCs focused on health and biotech are interested in gender diversity.

According to the EIF VC Survey, both health-focused and biotech-focused VCs prioritize gender diversity in recruiting and career development, with over 90% of respondents indicating its importance.

In terms of other forms of diversity, such as ethnicity and background, VCs in both sectors show similar attitudes. However, there is a significant difference regarding diversity in work experience, with a smaller percentage of health-focused VCs expressing interest compared to their counterparts in biotech.

Figure 34: Aspects of diversity that VCs are most interested in recruiting and career development



Multiple selection possible - Source: EIF VC Survey

Gender diversity brings creativity and innovation, enhancing communication levels.

Both startups and VCs value gender diversity, though they perceive the industry as already fairly diverse, so it was not considered a top priority during the roundtables and interviews. The discussions primarily emphasized gender diversity over other aspects of diversity. However, Beatriz Llamusi, the CEO & Co-Founder of Arthex Biotech, added an interesting element to the discussion.

“For me, it’s very important to have diversity, not just in terms of gender, but also social and cultural diversity. It definitely fills the gaps when you have people coming from different backgrounds or countries, particularly in terms of communication and skills. They can actually add value by providing insights on how to set things up, for example.”

BEATRIZ LLAMUSI Arthex Biotech

6.1.3 Initiatives to promote diversity in recruitment and career development

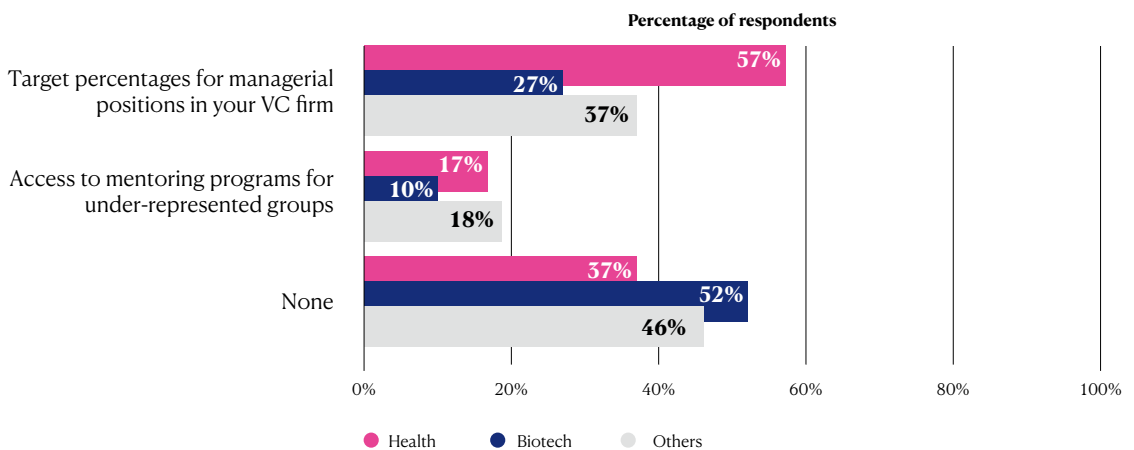
VCs in the health sector show more engagement in diversity promotion compared to VCs in the biotech subsector.

Among the strategies aimed at fostering diversity in recruitment and career advancement, a significant majority of VC respondents in the health sector have implemented target percentages for managerial positions within their firms. However, biotech VCs do so less frequently, with only 27% of respondents reporting such initiatives (see Figure 35).

A notable disparity emerges between the two sectors: 52% of VCs in biotech acknowledge the absence of any diversity promotion programmes in recruitment and career development, while only 37% of VCs in health do so (see Figure 35).

VCs within the health sector demonstrate a greater commitment to supporting underrepresented groups compared to their biotech counterparts, such as offering access to mentoring programmes (see Figure 35).

Figure 35: Policies and programmes that VC firms have in place to promote diversity in recruiting and career development



Multiple selection possible - Source: EIF VC Survey

A Spanish VC tackled the issue through an innovative solution:

Use Case - Asabys Partners – Presentations at universities to address diversity challenges within the venture capital industry

“Asabys Partners collaborates actively with universities and associations to address diversity challenges and gaps within the venture capital industry. By engaging with universities, including those focused on finance, economics, business schools, and scientific institutions, science, and engineering, Asabys Partners aims to educate and inspire the next generation of talent.”

These presentations focus on the role of venture capital, its significance, and the opportunities it offers, particularly emphasising the potential for women to thrive in the industry. By debunking misconceptions and highlighting the diverse career paths available in venture capital, Asabys Partners aims to attract a more gender-diverse pool of candidates.

Through these efforts, Asabys Partners contributes to creating a more inclusive and diverse landscape within the venture capital ecosystem.”

MAITE MALET Asabys Partners

What are some additional initiatives that could reduce the gender gap?

Throughout various interviews and roundtables, several solutions have emerged:

- **Inclusive Leadership programmes:** Implementation of leadership programmes promoting gender diversity and providing professional development opportunities for women, including mentoring, sponsorship, and training specifically designed to support their career advancement.
- **Pay Equity Policies:** Adoption of policies ensuring equal pay for men and women performing the same job or work of equal value, thereby reducing the gender pay gap. With regards to these initiatives, as one of the first deliverables of the Gender Equality Strategy 2020-2025, the Commission proposed binding pay transparency measures in March 2021. The Pay Transparency Directive was adopted in May 2023. The new rules will help to ensure that the principle of equal pay for equal work or work of equal value, enshrined in the Treaty since 1957, is upheld.
- **Support for Female Research and Innovation:** Investing in research and innovation programmes that support and promote the contributions of women in the health sector, encouraging female participation in research and development roles. For instance, Pfizer implements comprehensive leadership programmes aimed at fostering gender diversity and empowering women to advance into leadership roles. These programmes encompass mentorship, sponsorship, and professional development opportunities specifically tailored for women.

For example, Pfizer's Pearl River research site celebrated a historic milestone in August 2023 with the U.S. FDA approval of a pioneering maternal vaccine to help protect infants through 6 months against Respiratory Syncytial Virus (RSV). The accomplishment marks a breakthrough in the battle against the potentially deadly virus, but it holds particular significance for another reason: the endeavour was spearheaded by an all-female leadership team at Pfizer¹⁶.

- **Professional Network and Support:** Establishing professional networks and support groups for women in the health sector, providing opportunities for networking, mentoring, and sharing best practices to promote women's success and professional advancement.

When effectively and consistently implemented, such, can significantly contribute to reducing the gender gap in the health sector and promoting a more inclusive and equitable work environment for all.

¹⁶ How Pfizer's Women Leaders Are Breaking Barriers in Vaccine Science, October 2023



Conclusions and contributors

Conclusions

The European health industry is characterised by a strong heritage of academic knowledge coupled with a diverse workforce, both of which are significant competitive advantages. However, as stated by the EIF VC Survey respondents and confirmed during the roundtable discussions and interviews performed in the context of this study, persistent skills gaps should be addressed, particularly in reference to soft skills.

Regarding soft skills, areas such as **leadership, communication, business development, and strategic planning** showed to be crucial in the health sector despite the high level of technical competencies. These skills combined with **an entrepreneurial mindset** are essential to adapt in the European health ecosystem. While venture capital and startup firms recognise the importance of these skills for driving innovation, they are also the main skills missing within their teams.

Although Europe is recognised for its robust technical skills, significant gaps still need to be addressed to foster innovation. In the health industry, hard skills such as **STEM expertise and data analysis** capabilities are essential, yet they are often identified as areas needing improvement. Moreover, in a sector where innovation progresses rapidly, staying ahead necessitates a workforce that is not only ready to embrace new market trends but also capable of **keeping pace with evolving regulatory requirements**.

A **multifaceted approach**, rather than a single solution, is required to effectively address the diverse skills gaps in the industry. Stakeholders in the European health industry are demonstrating a strong commitment to it, though **further initiatives are still necessary** to fully overcome these challenges. **Collaborative efforts between academia, government, and corporate entities** are proving essential for enhancing workforce training to meet industry demands. Recruitment efforts face challenges due to the **complexities of European labour laws** and the specificity of roles. Additionally, as the market increasingly values **flexible working conditions**, the importance of talent retention is growing. **Mentoring programs**, particularly those that engage employees in **expert communities**, have become key in boosting loyalty and retention. Moreover, they can also help to improve leadership and people management skills. To facilitate better collaboration between VCs and startups, the use of **detailed reporting documents and metrics** is essential for effective communication regarding talent strategies.

Finally, in this dynamic industry, **diversity is not just a buzzword; it's a strategic necessity**. VCs are increasingly prioritising **gender diversity** in recruitment and career development, recognising its **pivotal role in fostering innovation and inclusive cultures**. While competency remains paramount, the industry acknowledges the importance of diverse backgrounds and perspectives in **driving creativity and communication**.

EIF researchers and contributing authors



Helmut Kraemer-Eis

Head of the EIF's Impact Assessment division, EIF Chief Economist

Contact:

[*h.kraemer-eis@eif.org*](mailto:h.kraemer-eis@eif.org)



Antonia Botsari

Senior Research Officer in the EIF's Market Assessment & Research division

Contact:

[*a.botsari@eif.org*](mailto:a.botsari@eif.org)



Frank Lang

Senior Manager in the EIF's Market Assessment & Research division

Contact:

[*f.lang@eif.org*](mailto:f.lang@eif.org)



Clarissa Hahn

was Trainee in the EIF's Market Assessment & Research division



Politecnico di Milano

Prof. Dr. Annalisa Croce (annalisa.croce@polimi.it)

Prof. Dr. Massimiliano Guerini (massimiliano.guerini@polimi.it)

Dr. Andrea Odille Bosio (andreaodille.bosio@polimi.it)



Politecnico di Torino

Prof. Dr. Elisa Ughetto (elisa.ughetto@polito.it)



University of Bologna

Prof. Dr. Laura Toschi (laura.toschi@unibo.it)



Universidad Complutense de Madrid

Prof. Dr. José Martí Pellón (jmartipe@ccee.ucm.es)



University of Luxembourg (SnT)

Prof. Dr. Christian Fisch (christian.fisch@uni.lu)

As part of this research, the EIF has also published a general report (without sector focus) on “Skills in European entrepreneurial finance” - EIF Working Paper 2024/99.

https://www. EIF.org/news_centre/markets-and-impact/index

Appendices

Appendix A

List of interview and roundtable participants

Interviews:



David Schilansky

Co-Founder & CEO

Company:

Home Biosciences



Gabriele Brèda

Research & Innovation Director

Company:

Product Life Group



Kahina Senhadj

Startup Managing Partner

Company:

Strammer



Simon Turner

Partner

Company:

Sofinnova Partners



Sophie Villedieu

Managing Director

Company:

HealthTech for Care



Thibault De Chalus

Operational Excellence & Innovation Director

Company:

AstraZeneca



Maud Plombas

Medical devices certification department manager

Company:

LNE/GMED

Biotech roundtable:



Jan Van Den Bossche

Partner

Company:

Andera Partners



Paul Bravetti

CEO

Company:

Brenus Pharma



Luis Pareras

Founder / Managing Partner

Company:

Invivo Partners



Beatriz Llamusi Troisi

CEO & Co-Founder

Company:

ARTHEX biotech



Edward van Wezel

Managing Partner

Company:

BGV - BioGeneration Ventures

Digital health roundtable:



Bruno Virieux

CEO

Company:

PrediSurge



Maite Malet

Investment & Corporate Development

Company:

Asabys Partners



Piotr Lorenz

VP of People

Company:

Infermedica



Reinhard Meier

Co-Founder & Managing

Company:

YZR



Thom Rasche

Managing Partner

Company:

EarlyBird

Medtech roundtable:



Carmen Pauline Rios Benton

Co-founder & CEO

Company:

Doctomatic



Nicolas Vachicouras

CEO

Company:

Neurosoft Bioelectronics



Carlos Fernandez

CEO, Founding partner

Company:

Gogoa



Robert Lauritzen

CEO

Company:

Cerebriu



Michela Barcella

Network and Portfolio Talent Advisor

Company:

Panakès Partners



Jonas Brameck

Investment manager

Company:

Industriefonden

Appendix B

Pre-reading materials

Leading up to the roundtable, each participant received a series of pre-readings, some specific to their subsector and others common to all:

- For the biotech roundtable:
 - ◆ List of questions for roundtable discussions
 - ◆ *Mural Guide for Participants*, University of Liverpool
 - ◆ *Exploring the Link between Training and Development, Employee Engagement and Employee Retention*, Seema Bhakuni, Sandeep Saxena, February 2023
 - ◆ *The Future of Biotech Talent Acquisition: Trends and Predictions for 2024*, Lucy Walters, January 2024
 - ◆ EIF VC Survey – Skill considerations in the health and biotech sectors. EIF Research & Market Analysis. Survey wave 2023

- For the medtech roundtable:
 - ◆ List of questions for roundtable discussions
 - ◆ *Mural Guide for Participants*, University of Liverpool
 - ◆ *Exploring the Link between Training and Development, Employee Engagement and Employee Retention*, Seema Bhakuni, Sandeep Saxena, February 2023
 - ◆ EIF VC Survey – Skill consideration in the health and biotech sectors. EIF Research & Market Analysis. Survey wave 2023

- For the digital health roundtable:
 - ◆ List of questions for roundtable discussions
 - ◆ *Mural Guide for Participants*, University of Liverpool
 - ◆ *Exploring the Link between Training and Development, Employee Engagement and Employee Retention*, Seema Bhakuni, Sandeep Saxena, February 2023
 - ◆ *Digital talent acquisition is only half the battle on Medtech's path to digital maturity*, Deloitte Insights, April 2024
 - ◆ EIF VC Survey – Skill considerations in the health and biotech sectors. EIF Research & Market Analysis. Survey wave 2023

Appendix C

EIF, EIT Health and WorkInHealth Foundation presentation

The report is a collaboration between:

- The **European Investment Fund** (EIF) is Europe’s largest provider of risk finance for small and medium-sized enterprises (SMEs) and mid-caps with a primary mission to facilitate their access to finance. As a part of the European Investment Bank (EIB) Group, the EIF devises, promotes, and implements equity and debt financing instruments tailored to the specific needs of these market segments. In this capacity, the EIF advances EU objectives supporting innovation, competitiveness, growth, climate, environment, entrepreneurship, and employment. It manages resources on behalf of the EIB, the European Commission, national and regional authorities, and other third parties. The EIF’s support for enterprises is channelled through a diverse array of selected financial intermediaries across Europe. In 2023 alone, the EIF has committed close to EUR 15 billion in financing support, helping to make more than EUR 67 billion of new finance to the market for the benefit of SMEs.
- **EIT Health** was established in 2015, as a “knowledge and innovation community” (KIC) of the European Institute of Innovation and Technology (EIT). The EIT is made up of various KICs which each focus on a different sector, or area, of innovation – in our case, which is health and aging. The idea behind the EIT KICs is that innovation flourishes best when the right people are brought together to share expertise. The so called ‘knowledge triangle,’ is the principle that when experts from business, research, and education work together as one, an optimal environment for innovation is created. EIT Health maintains a regional structure that stretches across Europe, with six co-location centres (CLCs) in cities that have high innovation ratings and feature clusters of innovative corporations (i.e., Pharma and Biotech), universities and research centres. With its headquarters in Munich, Germany, EIT Health has established CLCs in seven regions, Ireland/UK, Scandinavia, Spain, France, Germany/Switzerland, Austria, and Belgium/Netherlands. With the aim of leveraging diversity and driving the potential of emerging innovation clusters, EIT Health has also added the “EIT Health InnoStars” in six countries: Croatia, Hungary, Italy, Poland, Portugal, and Wales (UK). EIT Health is a Knowledge and Innovation Community established by the European Institute of Innovation and Technology (EIT), a body of the European Union.

Since 2019, EIT Health is supporting the WorkInHealth Foundation – A key strategic initiative aiming at closing the talent gap in health industry across Europe and co-fund education programmes to close the skills gap.

WorkInHealth Foundation: The WorkInHealth Foundation, initiated by EIT Health, addresses the evident and growing skills and talent gaps within the European health industry. By aligning health sector needs with appropriately skilled professionals, we drive innovation that benefits all. The sustainability and growth of the health sector hinge on attracting, upskilling, retaining, and reskilling talent. While talent shortages are pervasive, some emerging roles demand specific skill sets in exponential quantities. The WorkInHealth Skills Observatory identifies these gaps through publications like this one and communicates findings across Europe. We also guide our partners in developing tailored, needs-based education and training programmes to address the identified gaps effectively. This ensures that the health workforce remains adaptable and capable, helping organisations navigate the rapid transformation of the sector while maintaining a consistent supply of fit-for-purpose talent.

The report benefited from the support of **Ernst & Young (EY):** Leveraging its expertise in the health industry and an extensive global network, EY contributed to EIT Health’s efforts to identify and analyze skills gaps within the sector. Their involvement included meticulous review of quantitative data, adept preparation and execution of interviews, facilitation of insightful roundtables, and professional copywriting of the final report.

This collaboration underscores EY’s commitment to delivering actionable insights and innovative solutions that address the challenges in the health sector.

About EY’s Global Health Sector: across the world, health care systems and entities are under unprecedented pressure. Spiralling costs, exacerbated by aging populations and emerging market growth, are bringing newfound focus on value and outcomes. Mobile health and data analytics promise to revamp care delivery but are also bringing in competitors from other sectors. For governments, payers, providers and industrials, these trends create a host of challenges: extracting insights from “big data,” partnering in new ways, boosting operating efficiencies and more. EY’s Global Health Sector brings together a worldwide network of more than 15,000 sector-focused assurance, consulting, strategy, tax and transaction professionals with a range of health care and business backgrounds. Our wide-reaching network allows us to rapidly share leading practices and solutions around the globe and deploy diverse delivery teams to meet your needs. ey.com/health



got skills?
LEVEL UP

With the support of



INVEST
EUROPE

