

# AI Scaling Challenges for Dutch Founders

## And 11 Recommendations to Overcome Them

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Executed by:

Techleap

Deloitte

Prepared for:

Dutch AI founders and the Dutch AI Ecosystem

**techleap Deloitte.**



# CONTENTS

<b>FOREWORD</b>	<b>03</b>	<b>FINDINGS</b>	<b>14</b>
<b>EXECUTIVE SUMMARY</b>	<b>04</b>	Key challenges for AI founders	14
<b>AI OVERVIEW</b>	<b>08</b>	1) Funding landscape	16
Setting the scene	08	2) Industry awareness & adoption	18
AI value chain	09	3) Market access	20
Dutch AI Ecosystem	10	4) Talent	21
NL AI scaleup landscape	12	Other observations	23
European AI scaleup landscape	13	Inspirational actions from abroad	24
		Summary	25
		<b>11 RECOMMENDATIONS</b>	<b>26</b>
		<b>CONTACTS</b>	<b>28</b>
		<b>APPENDIX</b>	<b>29</b>
		Methodology & survey sample	29
		Additional survey results	35

# FOREWORD

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Constantijn van Oranje – Special Envoy Techleap

AI is more than a buzz word. It is a set of powerful and transformational technologies that will shape our world like telephony and the internet did before. Its power can hardly be overstated, while its limitations should also be acknowledged. Each layer of the AI stack from the CPU's, LLMs, to based applications pose different challenges and opportunities. How businesses and nations position themselves along the AI value chain has immense strategic relevance. The winners are investing in skills, science, compute capacity, effective guardrails, conditions and the infrastructure needed to hyper scale new AI ventures.

Techleap looks at AI developments through the lens of founders, as we believe that they will be driving most of the disruptive AI innovations along the AI stack. In this report we explore their needs and barriers to scaling their ventures. It is alarming to find that only 4% of founders aim to raise over €10 million, signaling a need for increased ambition among startups. Among investors the necessary deep expertise is still lacking, therefore many have difficulty assessing the risks and opportunities, leading to lower investments and higher risk premiums. With maturing AI propositions companies are increasingly inclined to integrate third-party AI solutions rather than developing proprietary technologies.

As we analyze the current landscape, we draw on successful examples from fellow European nations like France and the UK, which have embraced proactive strategies to elevate their AI capabilities. Considering this, we propose a shift from a mindset of caution to one of strategic opportunity—one that empowers entrepreneurs to lead our initiatives and fosters an environment where innovation thrives and risk-taking is celebrated.

We invite all stakeholders to engage with the insights in this report and encourage discussions around their implications, challenge existing paradigms, and take decisive steps toward implementing the outlined action plan.



AI brings a wave of tech adoption with enormous potential for positive global impact and opportunity to help solve societal challenges. Start- and scaleups are a driving force behind this innovation and the Dutch AI landscape contributes to this as it contains many promising start- and scaleups. Unlocking their promise, solving their challenges and maximizing their impact is key. This report highlights key challenges in the Dutch AI sector, including the need for better funding understanding, improved market access, and addressing talent shortages. By tackling these issues, the sector can enhance its competitiveness and innovation potential.

Jan-Piet Nelissen  
Lead Deloitte  
Scaleup  
Ecosystem

# EXECUTIVE SUMMARY



## Some findings are related to generic scaling challenges in the Dutch Tech Ecosystem

- Scaling challenges within the AI Ecosystem such as talent and funding are also experienced in the broader tech ecosystem
- The Dutch funding landscape poses challenges for founders developing complex AI solutions, much like the scaling difficulties faced by deep tech founders in their ecosystem
- Dutch top AI founders receive most funding from foreign investors, like all tech ventures in the Netherlands
- The investing and innovation culture in AI is less prevalent in the Netherlands, especially compared to the US
- The government finds it challenging to stay connected to AI founders, and AI, like other emerging technologies, remains a complex topic

## Other findings are more related to AI specifically and are incorporated in our recommendations

- 60-70% of the founders surveyed use AI in their core business and services, rather than building hardware or infrastructural software and platforms
- Even though our country is small, AI activity is spread thin across the country. NL lacks a single hub – or limited number of hubs – with enough density and concentration of skills, infrastructure and resources for AI
- NL has very few dedicated AI funds and most founders experience a generic lack of AI Technology knowledge amongst Dutch VCs hindering them to be able to fully assess the risks and rewards
- The ambition of the government as a launching customer is appealing, yet challenging, as founders must comply with costly regulations, diverting focus from their product and team
- Limited investment in AI infrastructure and lack of access to computing power and clean datasets negatively impact the Dutch AI tech talent ecosystem, as the talent seeks complex engineering challenges that are scarce locally

# EXECUTIVE SUMMARY – FINDINGS



AI drives tech sector growth, and AI companies represent 9% of the total NL tech scaleup landscape

AI has been a key driver of growth over the past few years. Founders of AI driven start- and scaleups are crucial for bringing innovative solutions to market. 60-70% of Dutch AI ventures are companies that use AI in their core service. <5% of AI companies can be found spread across the rest of the AI value chain. This implies that few Dutch AI firms are building AI software and infrastructure.

Founders of AI companies experience challenges when scaling in 4 main themes: funding, industry awareness & adoption, market access and talent

Whereas the Netherlands has a proper digital infrastructure, there are challenges in the ecosystem that hinder founders to scale their AI companies successfully. These challenges are visible in different theme areas, of which scaling challenges in the funding theme score the highest.



Most fundraising related challenges are found in the technical due diligence context

**67% of AI founders indicate fundraising as a main challenge.** They face hurdles in securing VC funding that arise from both the founder and VC end. Founders can improve how they explain their solutions and opportunities, while VCs can enhance their technical understanding of the (differences in) AI solutions. Additionally, public funding could be allocated more efficiently, and access to it could be improved.



Industry awareness & adoption of AI is lacking among public and private entities, affecting competitiveness

Key decision makers and influencers in the Dutch AI start-up and scaleup ecosystem are aware of the AI trend but lack specific knowledge to enable founders to flourish. The disconnect between founders and the government leads to unclear and ineffective regulations. There is also a gap with end-users (individuals, corporates), leading to long sales cycles. Lack of proper communication between founders and the media results in misunderstandings and negative sentiment, affecting broader AI acceptance.



Accessing the market is hard, as AI founders lack clean data sets and computational power

Market access means the ability to enter and compete in a market. This also includes access to joint research, testing, and prototyping facilities. Companies that develop expert systems see market access as their biggest challenge. The majority of founders are specifically in need of clean data sets, computational power, and randomized data sets.



AI founders face challenges to attract and retain (technical) AI talent as we are competing with several other AI and tech hubs across the world

There is a shortage of AI talent in technical roles. **48% of founders also find it challenging to hire technical talent,** with the right practical skillset as well as to retain that talent. Carefully listen to the needs of AI tech talent and create packages and partnerships with international universities for early engagement. Equity options for talents are recommended – as well as organizing this within ventures early on.

# EXECUTIVE SUMMARY – TOP AI FOUNDERS SAY

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Douwe Kiela, Co-Founder & CEO of ContextualAI was surprised by the key challenges in the Netherlands. He did not expect as many challenges in the funding landscape. “I was expecting more challenges in the regulatory landscape as that is how the EU is viewed from the US. The regulatory changes and pressure make it less appealing to invest and start-up companies in the Netherlands.” In addition, Douwe mentioned: “Dutch VCs need to improve their technical due diligence skills and regulators need to be at the forefront of innovation to be able to regulate it.”



Elise de Reus, Co-founder of Cradle emphasizes the need to cultivate a robust talent pool. “Particularly in technical fields to keep pace with leading global tech hubs like Zurich, where most of our technical talent is from.” Elise also stresses: “Trust founders when they ask for less fragmentation within innovation ecosystems, as also stressed by Mario Draghi in his recent report.”



Bob van Luijt, Co-founder & CEO of Weaviate argues for a shift in entrepreneurial culture. “A central concern of mine is the risk-averse mentality that negatively influences education and business. A cultural shift is necessary to foster creativity. We need to encourage young people to embrace the challenges of entrepreneurship. By empowering the next generation to understand the value of equity and the benefits of risk-taking, I foresee a more vibrant, innovation-driven ecosystem.”



Co-founder & Co-CEO of Gain.pro, Nicola Ebmeyer stresses that: “To attract and retain technical talent, companies should nurture an inclusive and adaptable workplace culture that resonates with engineers’ needs, while maintaining effective communication in English to bridge diverse backgrounds.” By focusing on these areas, Nicola believes that local startups can thrive and gain the recognition they deserve both domestically and internationally.



As CEO of Pera, Rina Joosten-Rabou navigated the complex landscape of AI. “I witnessed firsthand the reality of under-representation among female entrepreneurs. The journey has been filled with obstacles from securing sensitive data to aligning with investors who often lack technical insight. The long-term nature of algorithm training, taking seven years in our case, highlights the critical need for understanding within the investment community.”



Fabrizio del Maffeo, Co-founder & CEO of AXELERA AI underlines the need for more collaborative ambition. “We are dead on arrival if only 4% of Dutch AI companies are planning to raise more than 10M. This pitiful ambition signals a deeper issue within our ecosystem. It’s time for us to push boundaries, collaborate more and ultimately reshape our narrative in the AI landscape.”

## EXECUTIVE SUMMARY – RECOMMENDATIONS

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- 01 Dutch Founders - Seek Angels and VCs with Relevant AI Expertise In- and Outside of the Netherlands
- 02 Dutch VCs - Enhance Technical AI Expertise and Co-Invest with International AI Funds
- 03 Public Investment Agencies – Centralize and Enhance Public Funding
- 04 Corporates – Refine Innovation Process when Engaging with Founders
- 05 Government –Simplify Impact of Regulatory Framework towards Founders
- 06 Founders – Amplify Success Stories
- 07 Public/Private Partnerships – Facilitate Data Access
- 08 Founders – Improve Talent Attraction Strategies
- 09 Academia – Integrate Practical AI learning and Encourage an Entrepreneurial & Risk-taking Mindset
- 10 Ecosystem builders – Establish a single AI Hub
- 11 Government – Invest in Specialized Expertise and Talent

# AI OVERVIEW

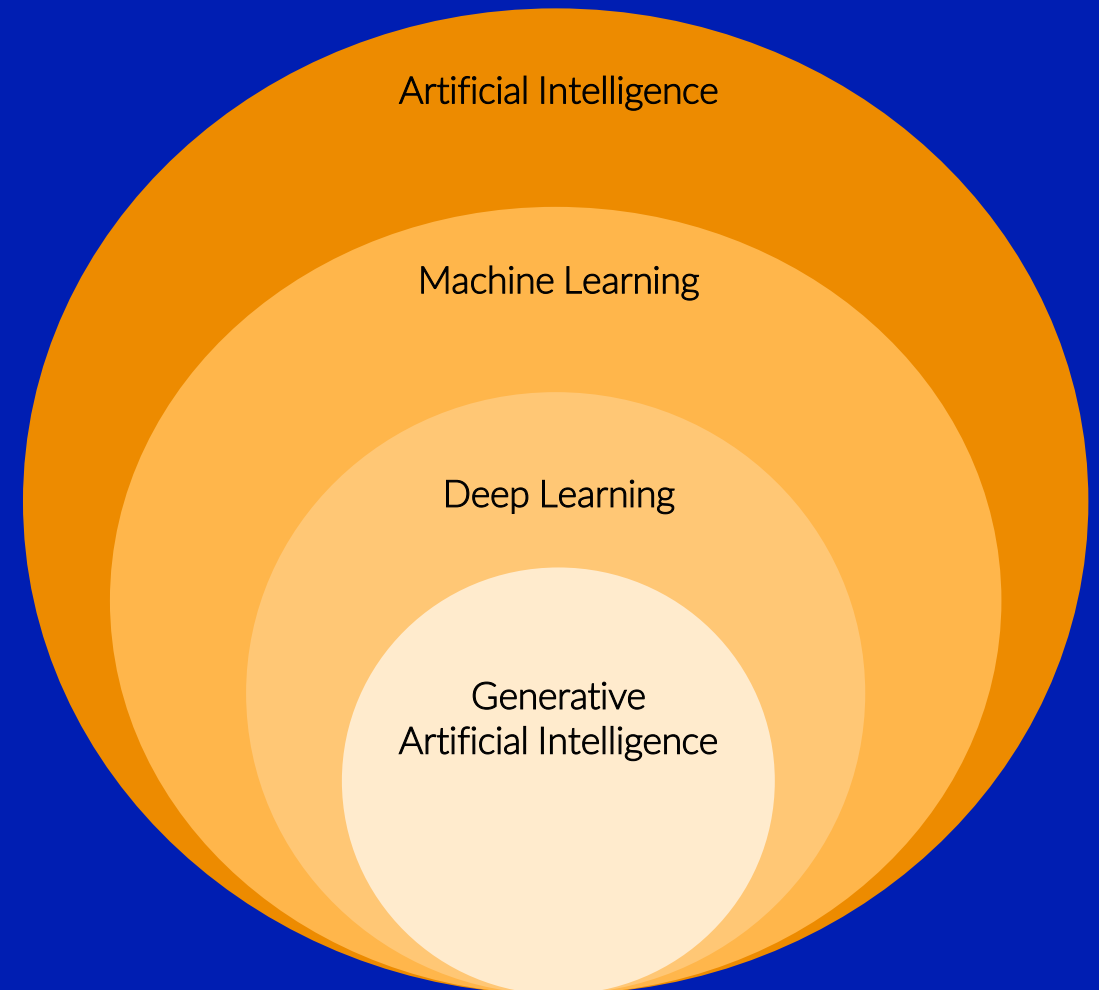
## SETTING THE SCENE

Founders of AI-driven start- and scaleups are crucial for bringing innovative solutions to market. Founders of AI companies work on applying AI in a broad range of fields and tackle current societal challenges. They play a vital role in creating innovative solutions that push the boundaries of what is possible, offering limitless opportunities across multiple sectors.

**Artificial Intelligence (AI) is the capacity to perform tasks simulating human intelligence.** There are various ways people look at AI, with different perspectives from science and other disciplines. The following definition is most helpful from the broadest perspective: AI is the execution of activities by computers that normally require human intelligence and some level of autonomy. These tasks include learning, reasoning, problem-solving, perception, and natural language understanding.

AI encompasses multiple technologies<sup>1</sup>.

- **Machine Learning (ML):** ML models that identify, predict patterns and learn based on human processed data, rather than relying on hard-coded rules
- **Deep Learning (DL):** subset of ML that uses neural networks with many layers (hence "deep") to model and understand complex patterns in data. Neural networks are capable of automatically learning hierarchical representations of data
- **Generative Artificial Intelligence (Gen AI):** a highly sophisticated subset of AI using large source models to create data across a variety of modalities (text, images, music and video). Unlike traditional AI models that focus on classification or prediction, generative AI models create new data instances





# AI OVERVIEW

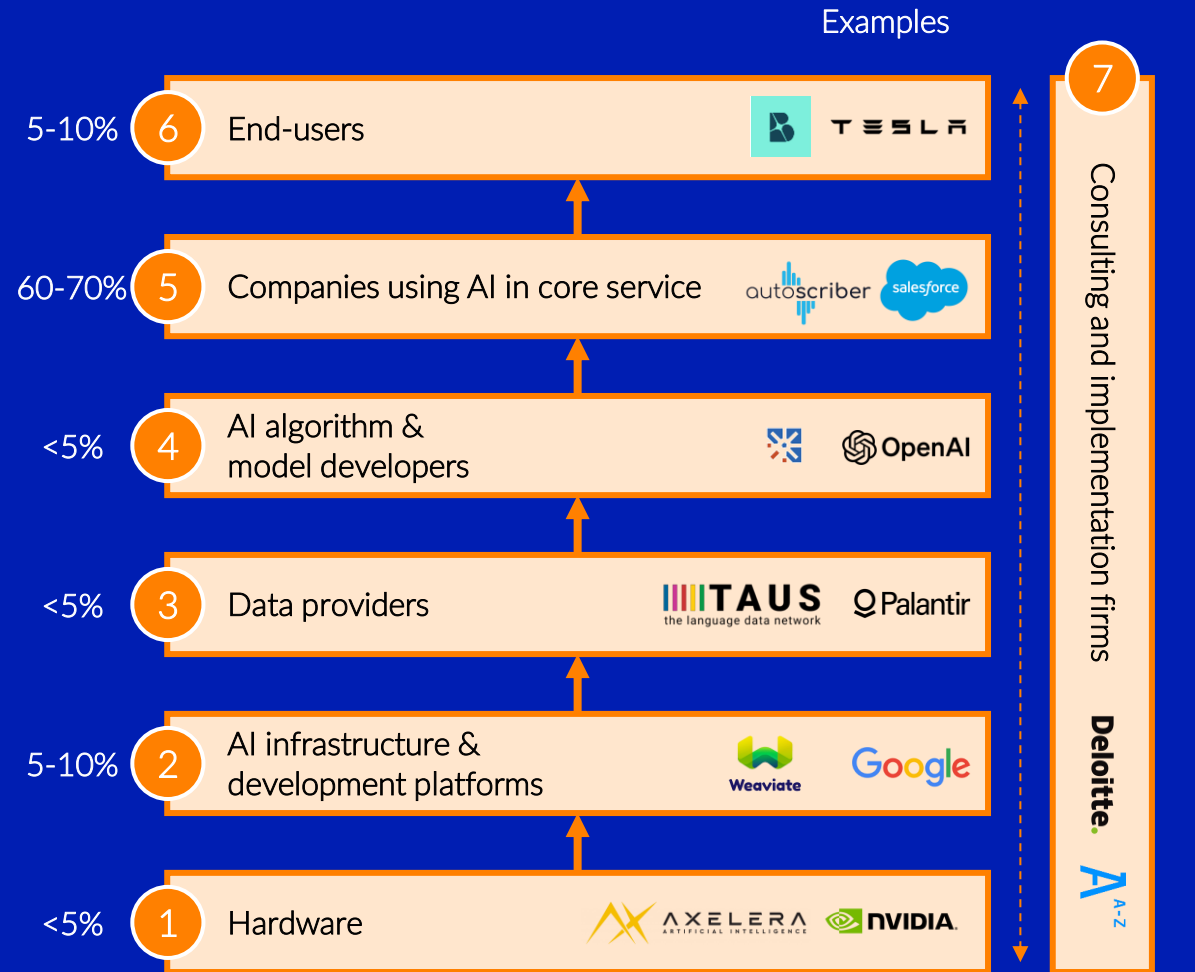
## AI VALUE CHAIN

The AI value chain includes all physical and digital layers delivering AI services to end-users. The AI value chain is a complex setup of physical infrastructure (e.g., hardware such as GPUs) and digital layers (AI algorithms, data, models) that finally deliver AI-driven services to end-users. On the right-hand side, you see an overview of the different players in the AI value chain, which we will use in the remainder of the report to assess challenges of Dutch AI founders.

The AI value chain consists of:

1. **Hardware companies** producing specialized AI hardware (GPUs, TPUs, and chips)
2. **AI infrastructure & development platforms** that offer solutions for model development and deployment, cloud infrastructure and monitoring tools
3. **Data providers** that provide storage data optimized for AI workloads and offer data sets as input for training and deploying models
4. **AI algorithm and model developers** creating cutting edge AI algorithms and models (LLMs)
5. **Companies using AI in core service** are offering vertical-specific solutions for industries, and horizontal solutions (e.g., chatbots) used across multiple sectors
6. **End-users**, both companies and individuals, gaining the value from utilizing these AI-driven products and services
7. **Consulting and implementation firms** providing strategic guidance, integration, training, and support to ensure effective AI adoption and operation

Based on the Techleap survey, most companies in NL are part of group 5.

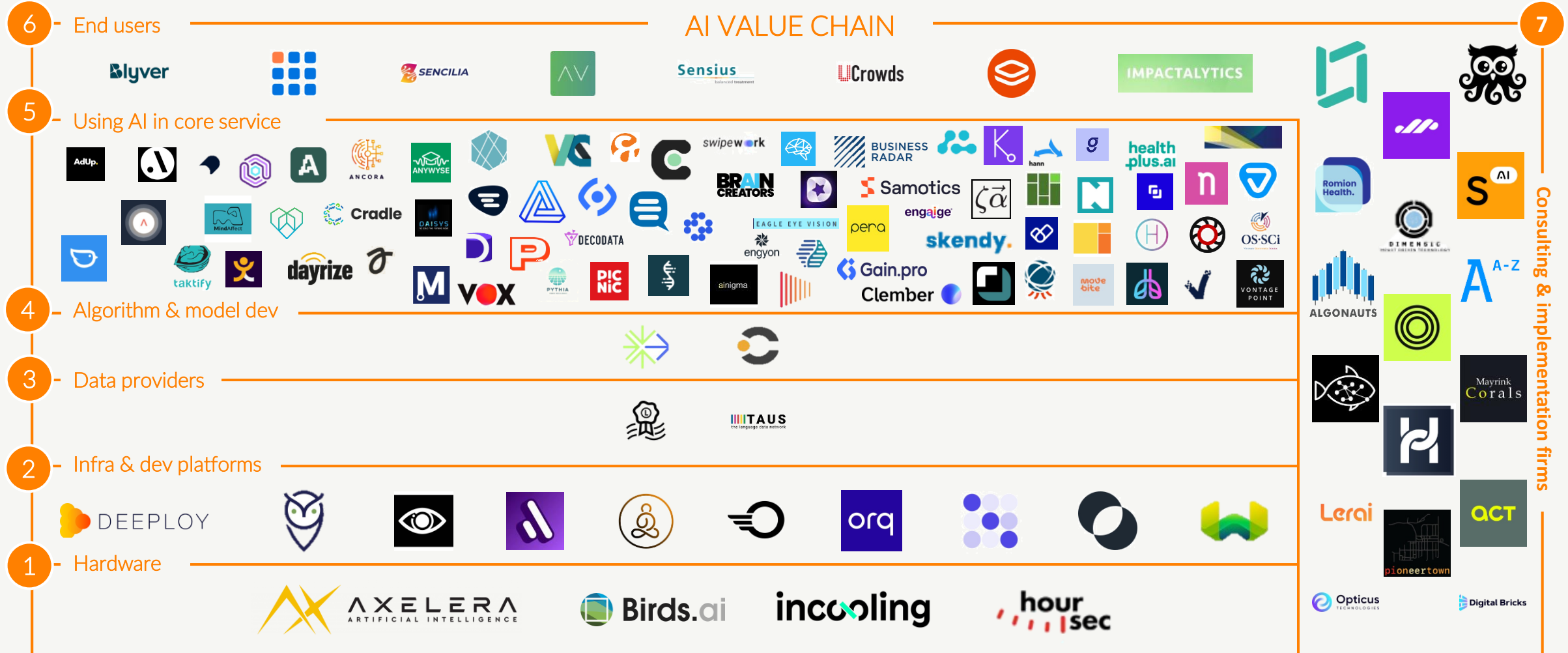


[...]% = share of companies, based on Techleap survey

# AI OVERVIEW



## DUTCH AI ECOSYSTEM – ventures that supported us in our research



\* Companies of whom the logo could be found are included

# AI OVERVIEW

## DUTCH AI ECOSYSTEM

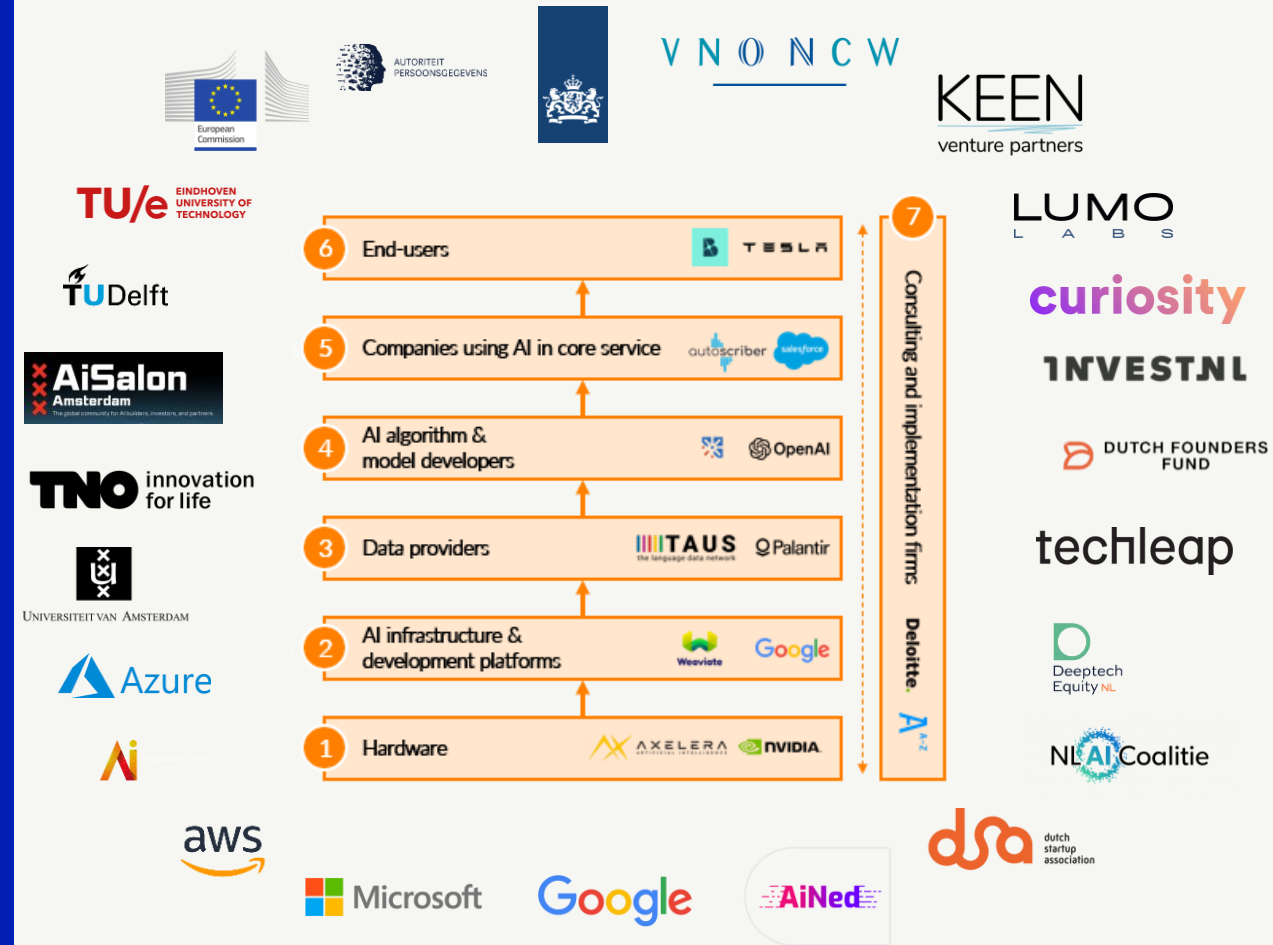
A well-functioning ecosystem is crucial for the successful scaling of AI start- and scaleups.

The AI Ecosystem\* consists of a mix of public and private players. All parties have their own role and added value to the ecosystem:

- **AI Founders** applying AI to tackle modern challenges
- **Academia**, such as higher education, universities and research institutions, providing required knowledge and innovation
- **Governmental bodies**, such as policymakers and regulators, creating a supportive and regulated environment
- **Private market parties**, such as (big) tech companies and investors driving demand and providing funding
- **Enabling parties**, such as industry associations & consortia, NGOs, advocacy groups, incubators, and accelerators, offering support, resources, and opportunities for collaboration
- **Customers (end-users)** are central to the AI Ecosystem, driving demand for AI products and services. Their feedback is vital for developing relevant solutions, and their experiences can influence market trends.
- **Media** is essential in the AI Ecosystem by providing information and education about AI advancements and ethical issues. By reporting on innovations and applications, they shape public perception and facilitate dialogue among stakeholders.

\* The figure on this slide includes a selection of examples and does not encompass all parties in the ecosystem

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# AI OVERVIEW

## NL AI SCALEUP LANDSCAPE

AI companies represent 9% of the total NL tech scaleup landscape<sup>1</sup>:



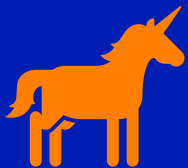
**759**  
NL AI scaleups

**9%**  
NL tech scaleups



**€10B**  
Total valuation of NL AI scaleups

**12%**  
Total valuation of NL scaleups



**3**  
AI unicorns produced in NL

**9%**  
Unicorns produced in NL



Notes: 1) excludes mature companies, nonprofit, outside tech, service providers

Source: Dealroom Aug 2024

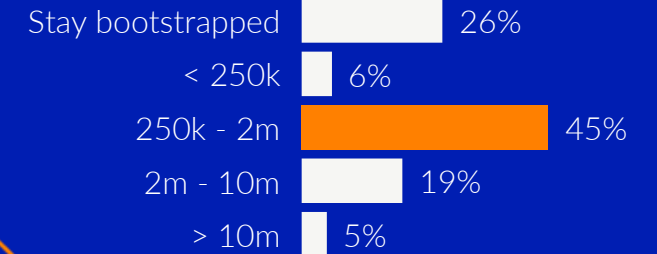
techleap **Deloitte**

Most Dutch AI scaleups have been established recently, and are looking for small funding rounds<sup>2</sup>:

**77%**  
AI scaleups founded in last five years



**45%**  
Most founders look for €250k – €2m



**14%** Female founders

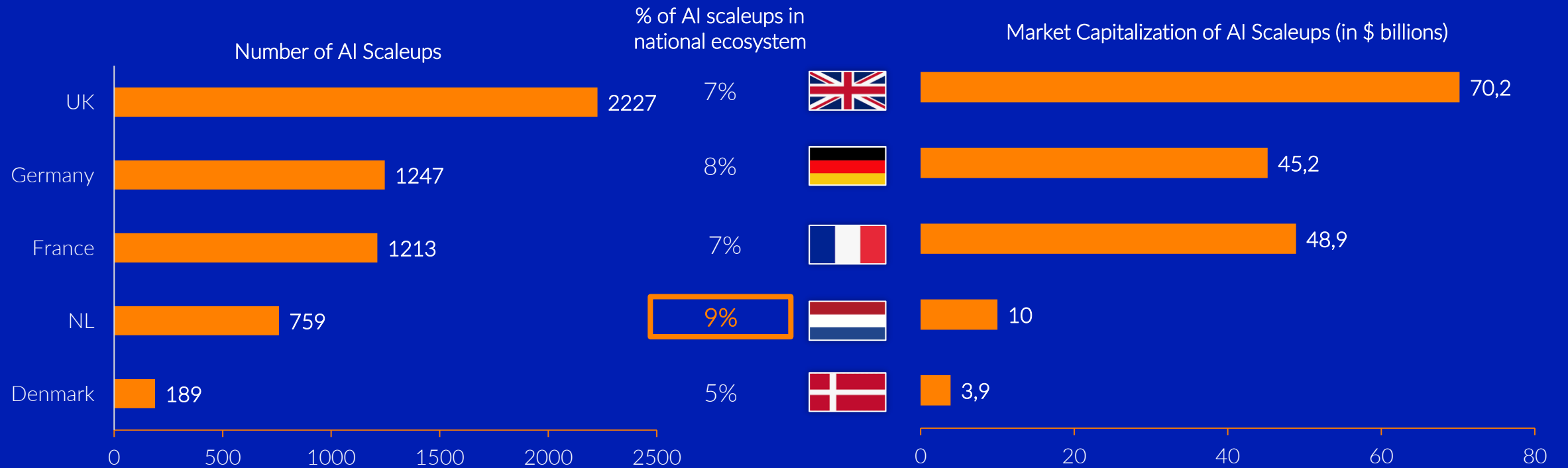
2) insights from Techleap AI founder survey 2024

# AI OVERVIEW

## EUROPEAN AI SCALEUP LANDSCAPE



Despite the Netherlands' smaller number of AI scaleups and lower valuation, it holds the highest concentration of AI scaleups in its tech ecosystem compared to international peers. Even though the Netherlands holds a third of the number of UK AI scaleups, the Dutch AI market capitalization lags behind. This implies that there is unmet potential in the context of Dutch AI ventures.



Notes: excludes mature companies, nonprofit, outside tech, service providers

Source: Dealroom Oct 2024

# FINDINGS

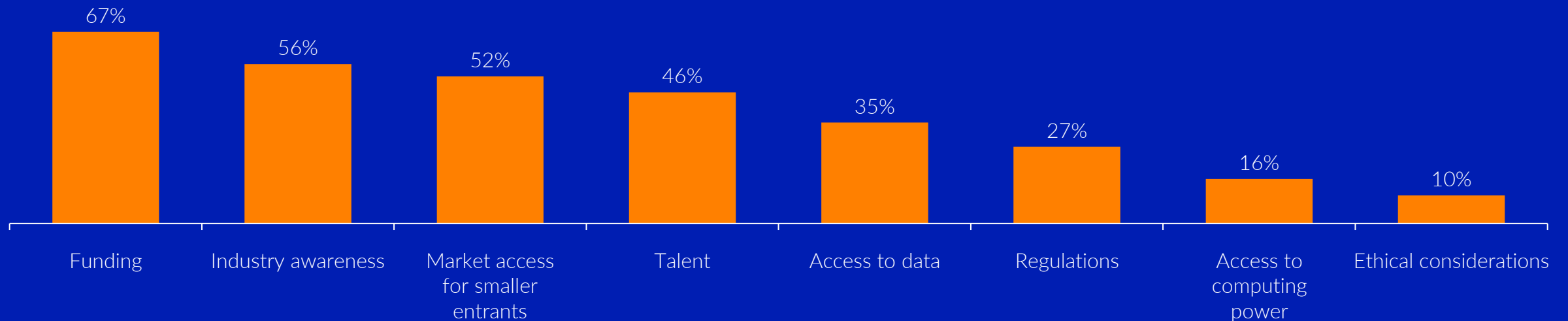
## KEY CHALLENGES FOR AI FOUNDERS

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Techleap has conducted research across AI founders, and the surrounding ecosystem.

Dutch AI founders indicated their main challenges in scaling to identify the main hurdles within the Dutch ecosystem. The 4 most mentioned (talent, industry awareness, market access for smaller entrants and talent) can partially be assigned to the generic character of the Dutch ecosystem, however deeper dives led us to focus on AI specific challenges. The challenge of industry awareness, for example, is mainly due to the quick emergence of AI and its increasingly fast implementation in business and daily life.

What are the main challenges in scaling your company? (select top 3)



# FINDINGS

## KEY CHALLENGES FOR AI FOUNDERS

Whereas the Netherlands has a proper digital infrastructure, there are challenges in the ecosystem that hinder founders to scale their AI companies successfully. These challenges are visible in different theme areas, of which scaling challenges in the funding theme score the highest.

Challenges for AI founders are mostly similar across different demographics and statistics of the respondent sample, only a few exceptions stand out:

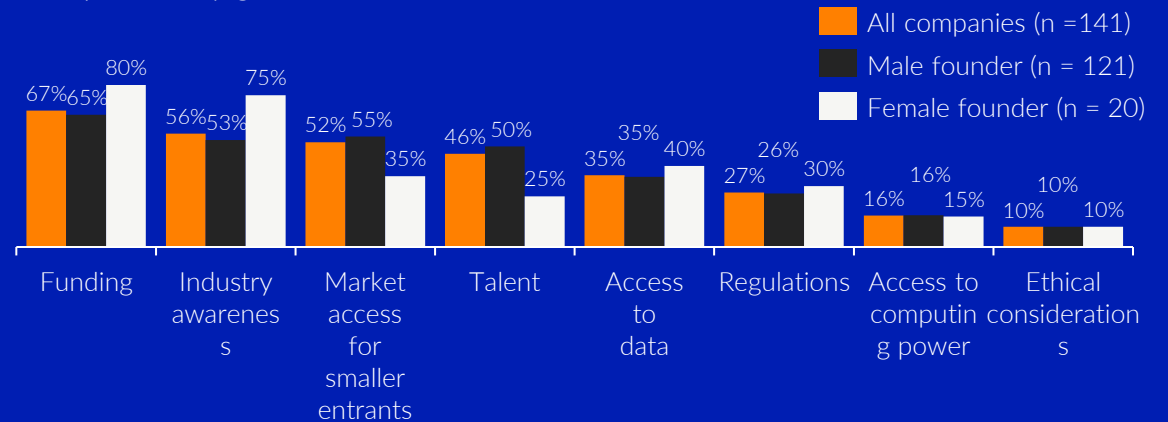
- Female founders see funding and industry awareness as bigger challenges than their male counterparts (80% vs 65%, and 75% vs 53%, respectively); male founders overscore on market access and talent (55% vs 35%, and 50% vs 25%, respectively)
- Service providers see market access as most important challenge (77%, see appendix), followed by the other challenges in the same order as others
- Companies that have been established longer ago see talent as a bigger challenge than the younger companies (55% vs average 46%, see appendix)
- Funding is especially seen as a challenge by companies that raised between €2m and €10m (86% vs average 67%, see appendix)

**Although founders see challenges, they are bullish on scaling opportunities.**

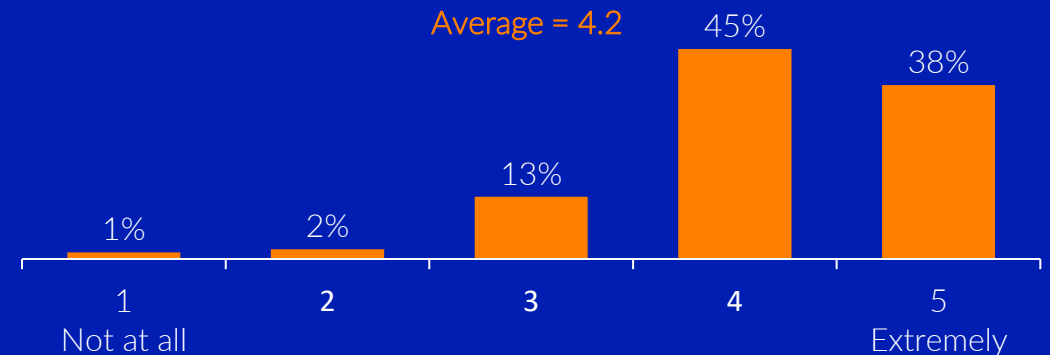
Founders are very bullish on potential applications of AI in other markets and industries, on top of their current market and business model. Of all respondents, 97% scores at least 3 out of 5. This is partly driven by the currently inflated market expectations around everything related to AI, combined with general founder ambitions and optimism.

What are the main challenges in scaling your company? (select top 3)

Comparison by gender of the founder



I understand the potential applications and best practices of AI beyond my own company, enabling me to scale in other markets or industries





# FINDINGS – CHALLENGE 1

## FUNDING LANDSCAPE

One out of three AI scaleups is bootstrapped. The respondents of the survey indicated in one-third of the cases that they don't have any funding raised yet. This is partly because companies just have been founded: roughly 70% of companies without funding today want to raise funding in the future.

Most founders plan to raise in the range of €250k – €2m. Most companies want to raise funding in the range of €250k – €2m in their next round. One out of five respondents is not looking for any additional funding or want to stay bootstrapped.

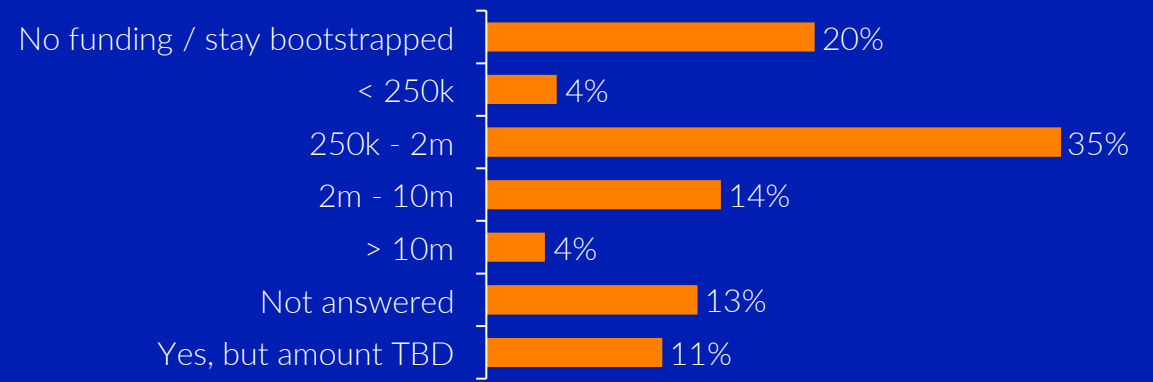
Although finding it a challenge, founders have high confidence in securing funding. Confidence in the ability to secure adequate funding is high: an average score of 3.7 out of 5. Only 10% of respondents are negative.

Female founders are slightly less confident and ask for smaller amounts. Funding is more often mentioned as a challenge by female founders, as shown earlier (80% vs 65%). This also shows in the confidence to be able to secure adequate funding: female founders score an average of 3.4, where male founders score 3.7.

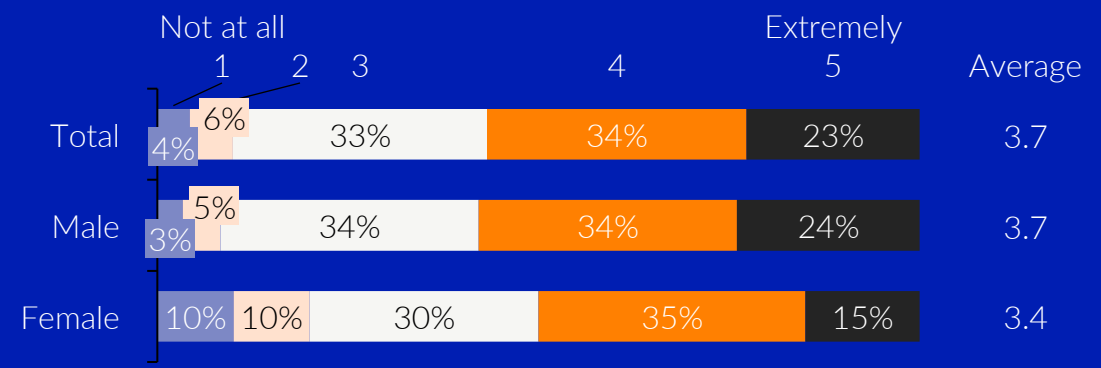
Companies that have more confidence to secure funding are either young and ambitious or have done it before. Young companies (< 2 years) or companies that have already been successful in securing funding have more than average confidence to raise funding (3.9 and 4.1 on average, respectively, see Appendix). Companies that have the ambition to raise over €10m funding have most confidence, as they score on average of 4.2 (see Appendix).



How much funding are you planning to raise? (EUR)



How confident are you in your ability to secure adequate funding? Comparison by gender





# FINDINGS – CHALLENGE 1

## FUNDING LANDSCAPE

According to founders, Dutch VCs are reluctant to invest in AI scaleups. Founders experience a disconnect between investor expectations and their own visionary plans. Founders emphasize the need for increased understanding and due diligence in AI-specific investments by Dutch VCs. As an example, some founders experience that the VCs have limited understanding of the differences between different types of AI solutions and use cases, and therefore how scalable a certain product or solution is. On the other hand, VCs encounter many founder ideas that have limited opportunity or have a high-risk profile, as well as founders that are not well equipped to pitch their ideas.

**Efficiency of allocation of public funding can be improved.** The Dutch government's approach through the Dutch AI Coalition is limited effective in supporting startups to scale due to the only partial focus on scaling challenges, with concerns raised about the acknowledgment of the potential impact of scaling tech ventures, limited understanding of their challenges and inclusivity towards founders in the initiatives. The dispersal of public funds across seven regional AI hubs in a small country like the Netherlands poses additional challenges for AI companies seeking to scale internationally, suggesting a need for more strategic allocation of resources to better support growth and success in the AI sector.

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“There is a critical need for Dutch VCs to improve in identifying practical opportunities by learning through technical due diligence.” – Douwe Kiela, Founder & CEO of ContextualAI



“Securing genuine funding for risk-taking ventures in the Netherlands is a challenging task and falls far short in comparison to the United States.” – Co-founder, AI scaleup

“American investors do not focus on immediate revenue; they understand the timeframe required for developing algorithms and data pre-processing. Founders do not receive this level of understanding by Dutch VCs.”  
- Rina Joosten, CEO Pera



“Securing funding is difficult, especially with local VCs.”  
– Founder, AI scaleup

# FINDINGS – CHALLENGE 2

## INDUSTRY AWARENESS & ADOPTION

According to founders, the AI understanding of government and policy makers **should be improved**. Founders are concerned about the limited understanding of AI by government and policy makers. AI founders rate the government's understanding of AI applications and best practices as 2 out of 5. They believe that the government and policymakers do not have adequate knowledge about AI applications.

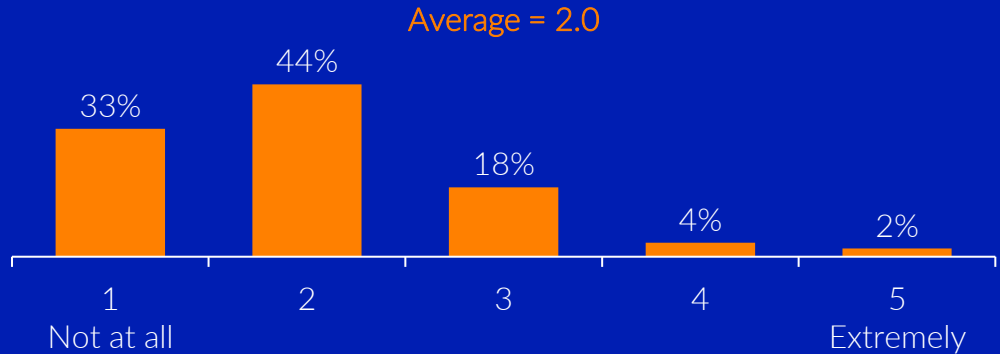
**Improving understanding of AI helps in creating more effective regulations.** The lack of AI understanding among policymakers in the Netherlands poses a significant challenge, as decision makers may struggle to create effective regulations that support innovation, while ensuring the protection of citizens.

**The disconnect between AI founders and government hinders the competitiveness of Dutch scaleups on a global scale.** The disconnect between market creating and regulatory responsibilities (that belong to different teams) of the government hinders the country's competitiveness on a global scale, highlighting the need for increased understanding and collaboration between stakeholders.

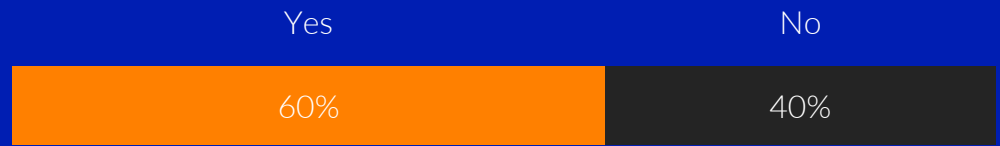
**The implementation measures of the EU AI act still need to be adopted.** Therefore, there remains ambiguity between and for government officials and founders. The overwhelming nature of the EU AI Act for government officials and founders, coupled with a perceived lack of dialogue and understanding between impacted businesses and regulators, adds to the confusion and challenges surrounding AI regulations. A significant share of 40% of founders have the feeling that they don't understand the implications of the EU AI act well enough.



Do you feel that there is an adequate understanding of AI applications and best practices with government and policy makers?



Do you know enough about the EU AI act to understand whether your company will be affected by it?



“The overall mindset appears to be oriented towards observing and measuring rather than creating, underscoring a cultural reluctance to embrace risk and innovation” – **Bob van Luijt**, Co-founder & CEO Weaviate

# FINDINGS – CHALLENGE 2

## INDUSTRY AWARENESS & ADOPTION

Founders feel that there is limited understanding of AI and best practices amongst end-users of their solutions. Founders face challenges in gaining adoption from major players such as government, healthcare, and financial institutions. On average, founders rate the understanding of AI of end-users as 2.5 out of 5. The process of adopting new technology is typically slow. Transitioning from pilot projects to long-term agreements takes time, and despite a clear business case, these organizations remain hesitant.

Many founders feel less acceptance and trust in AI because of negative sentiment in news stories by the media. Founders often struggle to clearly communicate their stories to the press and public. They get stuck between explaining the technology and showing how it adds value to society or businesses. This lack of technical understanding can cause confusion and lead to negative news stories, which harm overall trust in the technology. On average, founders rate the impact of negative portrayals of AI technologies on trust and acceptance of AI solutions as 3.6 out of 5.

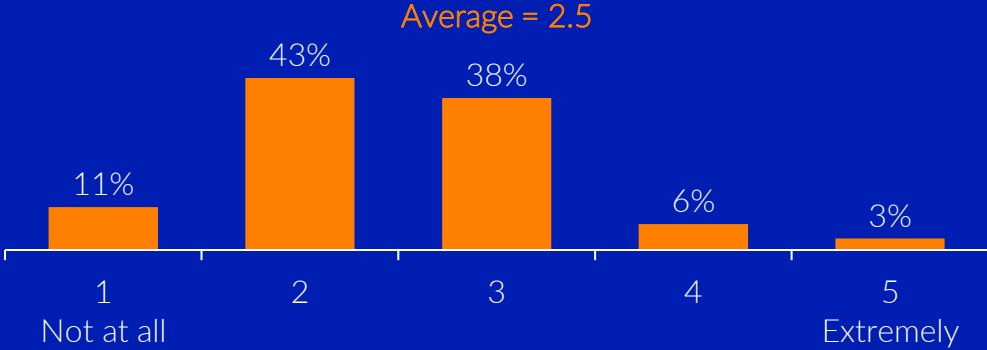
“In the US, large companies are showing interest by approaching ContextualAI, indicating the understanding of potential in collaborative use case development.” - Douwe Kiela, Founder & CEO ContextualAI



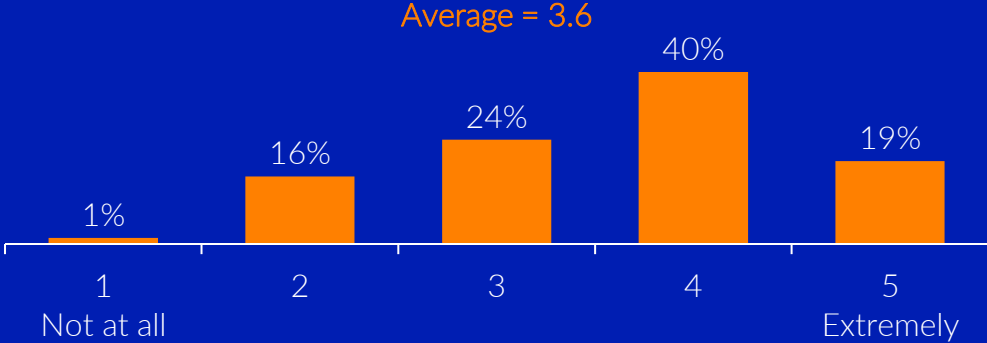
“As an HR tech platform, and a very rapidly AI EU regulations emerging, it is difficult to build with compliance in mind when we're unsure to what we'll need to comply with.” - Co-founder, HR tech company



Do you feel that there is an adequate understanding of AI and best practices with your end-users?



To what extent do you believe negative portrayals of AI technologies in the media and public discourse impact trust and acceptance of AI solutions?





# FINDINGS – CHALLENGE 3

## MARKET ACCESS

Market access is marked as the third biggest challenge for AI founders in scaling their company. Market access means their ability to enter and compete in a market. It involves overcoming barriers like regulations, high competition, and limited resources. Successful market access helps starting companies to reach customers, gain market share, and establish their presence. This also includes access to joint research, testing, and prototyping facilities.

Companies that develop expert systems see market access as their biggest challenge. From the founders that find market access one of their biggest challenges, a lot of companies are offering complex technologies, such as hardware and AI infrastructure and development platforms.

Many founders feel that access to joint research, testing and prototyping facilities could be improved. Founders who feel they lack sufficient access to joint research, testing, and prototyping facilities indicate that they mainly need clean data sets, computational power, and randomized data sets.

“Engineering complexity is important for AI Talent and ventures. In the Swedish ecosystem we see that one of our portfolio companies has access to the High Performance Cluster in Stockholm, where they have additional access to compute power to train their models enabling them to scale faster.” – Herman Kienhuis, Co-founder & Managing Partner Curiosity VC

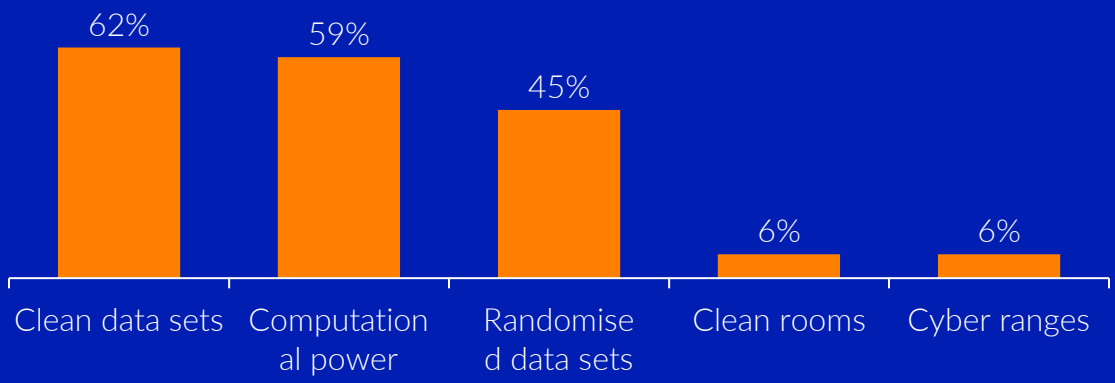


“The Danish framework emphasizes common ethical standards and promotes open public sector data for AI, fostering transparency and trust in AI technologies” – German AI Expert & Lecturer

Do you feel there is sufficient access to joint research, testing and prototyping facilities to scale your company?



If not, what would you need? (max = 100%)





# FINDINGS – CHALLENGE 4

## TALENT

Most talent is currently coming from the Netherlands. For most scaleups, AI talent is coming from the Netherlands: 78% of the respondents indicate that they have Dutch AI employees, after which Eastern Europe (35%) and Western Europe (32%) score the highest.

Technical AI talent such as engineers and developers is most scarce. The scarcity of AI talent, particularly in technical roles such as engineers, developers, and architects, poses a significant challenge for Dutch founders. The survey shows that for 48% technical talent is the hardest type of profile to find. Within the Netherlands, start- and scaleups compete primarily with large tech and finance players, such as Booking.com and Dutch banks.

There is a shortage of AI talent with practical skills, particularly at graduate level. Founders face challenges in finding the right talent with the practical knowledge needed when scaling the company. Additionally, founders find it challenging to upskill their employees, especially while their company is rapidly expanding.

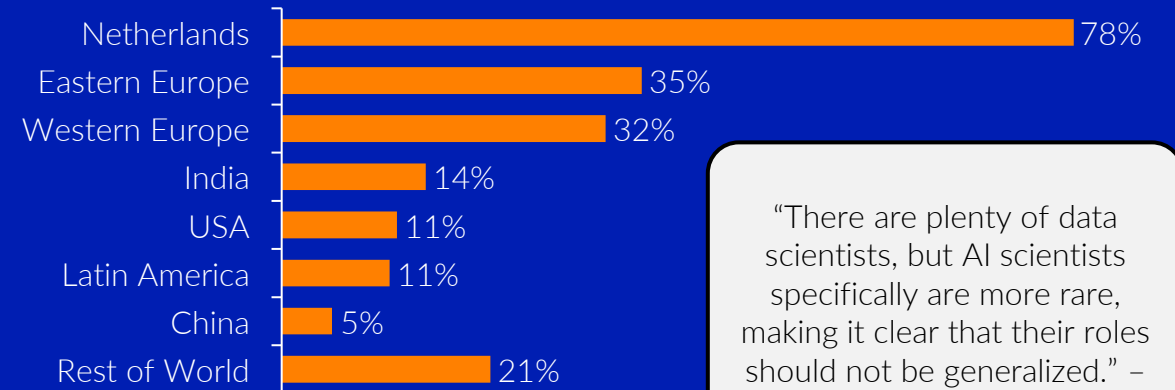
“The report shows that female founders can better attract talent, let’s underline that, because that is cool.” - Elise de Reus, Co-founder Cradle



“There is a lot of talk about supporting talent in the Netherlands. Little action is taken to back it up. This is a worrying trend as we should be open to everyone and promote opportunities for people to build their lives here.” - Founder, AI scaleup

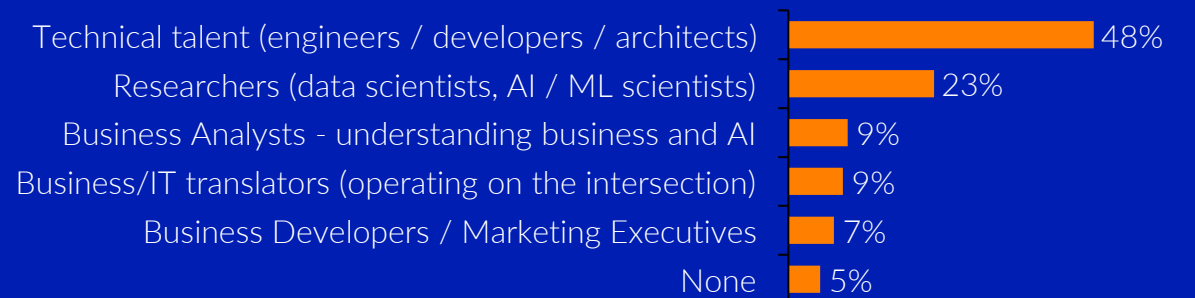


### Where is your AI talent coming from? <sup>3</sup>



“There are plenty of data scientists, but AI scientists specifically are more rare, making it clear that their roles should not be generalized.” - Douwe Kiela, Founder & CEO ContextualAI

### Which AI talent is hardest to find?



3) Participants could select 3 options. Please consider that survey did not specify exactly what type of AI talent



# FINDINGS – CHALLENGE 4

## TALENT

In addition to shortage of the right talent, it is difficult for founders to retain talent. The limited funding opportunities, that contribute to less money available to pay salaries, a lack of awareness about providing stock options to their employees early on and strong competition from the US firms makes it difficult to attract and retain professionals with the required technical and entrepreneurial skills, while talent in general is scarce.

Most AI companies being built in the Netherlands use AI to strengthen their value chain instead of building hard core AI infrastructure. Top AI talent is eager to work on the “real deal”, i.e., building hard core AI infrastructure), which is harder to find in the Netherlands. Therefore, AI talent leaves the country to work at a big tech firm or scaleup in the US. On the other hand, as also mentioned by Tyrone, talent working in those international companies is often unhappy with the work/life balance. This presents an opportunity for Dutch companies to attract / retain (international) talent in case a better work/life balance can be offered than in the USA where the norm is to work really hard, but a lot of tech talent is suffering.

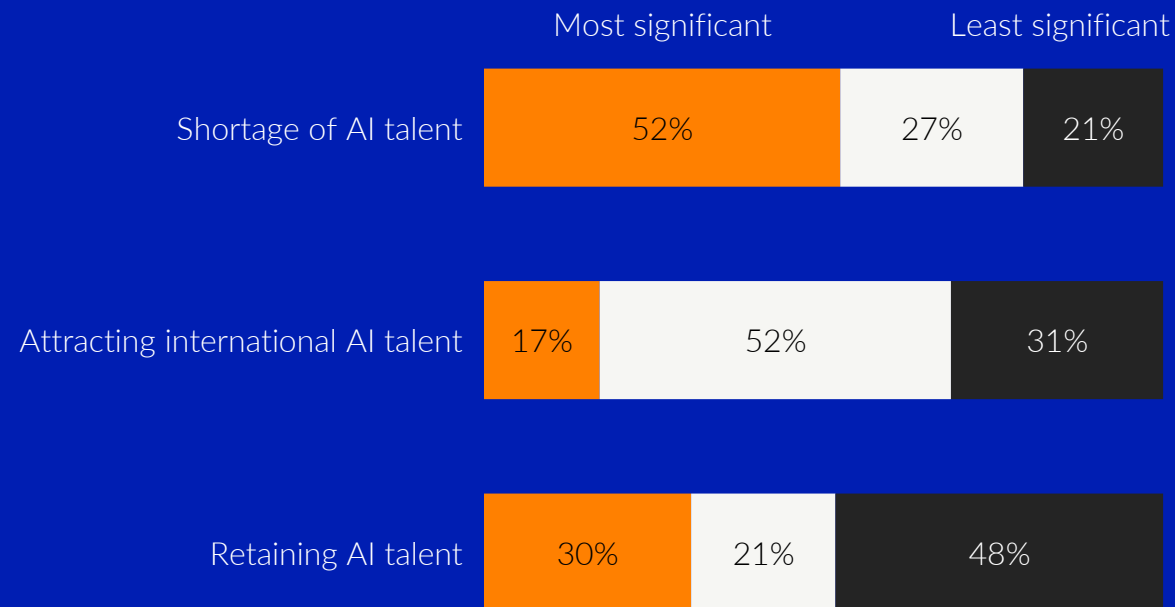
“We see difficulty in retaining skilled talent due to low compensation and equity offerings. Ask critical questions, like: what is the maximum salary you offer to a ML engineer? What is the maximum value of equity you grant to a ML engineer?” - **Fabrizio del Maffeo, CEO Axelera AI**



“Talent working in tech in Silicon Valley “has the dream job”; many are very unhappy. The Netherlands could attract talent based on our work/life balance”- **Tyrone Pater, Tech Diplomacy Fellow, Berkely Risk & Security Lab**



What are the primary challenges you encounter regarding AI talent in the Netherlands? (rank from most to least significant)





# FINDINGS

## OTHER OBSERVATIONS

The Dutch government can take more steps to support the growth and success of the Dutch AI industry such as strengthening their dedicated tech team. For the Dutch AI Ecosystem to flourish, the role of the government is key beyond providing (clarity on) regulations. The industry lacks a collaboration space, where education, awareness and adoption are driven, as well as a dedicated government tech team that possesses over the right technical expertise to support the AI founders.

Whereas AI is an emerging technology that does not consider the boundaries of a nation, ecosystem players across the Dutch AI landscape are very focused on the Netherlands which is hindering founders to grow their companies. The government is swamped with the EU AI Act. This puts pressure on policy makers that lack the time to talk to founders on the ground.

Most AI founders are male (86%), which can impact the products being developed (consider bias) as well as how companies are being run. Attention should be devoted to creating welcoming communities for women in the AI industry in order to enhance more diversity in the founder space, and in turn more representation in the culture and products of AI companies.

Even though there are fewer female founders, the survey indicated that they are better in attracting technical talent compared to their male peers



"Countries like the UK and Denmark are adopting innovative strategies for managing AI, such as recruiting individuals with technical or entrepreneurial expertise and giving them responsibilities in shaping AI policy and development" - Tyrone Pater, Tech Diplomacy Fellow, Berkely Risk & Security Lab



"Government is talking about limitations and scared about the risks, but never excited about the future and what is possible. The AI moratorium is one of the unfortunate effects of policy makers trying to control something that is going faster than the speed of light. In the end, we are all suffering from the lack of experimentation, just because we are trying to control the risk of failure. I'm not advocating for taking too much risk." – CEO, software company

What is the gender of the founder?



# INSPIRATIONAL ACTIONS FROM ABROAD



UK



- **Strategic government initiative:** under the leadership of Science Secretary Peter Kyle, prioritizing AI in the government agenda, aiming for transformative changes in the economy and public services
- **Tech entrepreneur:** appointed Matt Clifford to lead the national AI Action Plan fostering informed decision-making and driving AI ambition
- **Focused and coherent strategy:** dedicated department for digital innovation and entrepreneurship simplifying the execution of AI-related strategies
- **Comprehensive infrastructure planning:** holistic approach to data access, infrastructure and talent development

Denmark



- **National AI strategy:** comprehensive AI strategy, incl. a clear roadmap for responsible development / use of AI
- **Big tech collaboration:** e.g., with NVIDIA to create a national center for AI innovation
- **Clear AI goals:** 1) develop ethical and human-centered AI, 2) promote AI research, 3) foster growth in Danish businesses through AI, and 4) enhance public services via AI
- **Investment in key sectors:** focus on e.g., health, energy/utilities, agriculture and transport sectors, to use resources / expertise efficiently
- **Principles for responsible AI:** emphasize ethical standards and open public sector data for AI

Germany



- **Techboost initiative:** provide tech startups with the necessary resources to scale operations
- **Collaborations via AppliedAI:** AppliedAI, as the largest AI initiative in Europe, creates partnerships with major tech companies
- **Alumni Feedback Loop:** Unternehmer TUM leverages its alumni network to inject real-world experience back into the educational pipeline
- **Active market assessment:** regular assessment of the AI landscape allows stakeholders to better understand trends, challenges and opportunities

France



- **Creation of state-of-the-art AI start-up:** Mistral is at the forefront of AI innovation, showing the potential for French / European AI startups to compete globally in the AI sector
- **Supportive Government Framework:** active promotion of the AI development through funding, strategic initiatives
- **Focus on talent development:** initiatives aimed at strengthening infrastructural AI build in a country, ensuring a more interesting and competitive talent climate



Inspiring actions from abroad



Key insights for the Dutch AI Ecosystem

1. Ensure **swift government action**
2. Engage with **Tech entrepreneurs**
3. Centralize **AI governance**
4. Develop **AI talent & infrastructure**

1. Promote **strategic collaborations** (with big tech)
2. Develop a **national AI strategy**
3. Focus on **key sectors** and define **clear objectives**

1. Find **balance between regulation and innovation**
2. Increase **collaboration with experts**
3. Foster **community initiatives**
4. Enhance **entrepreneurial talent** development via the right partnerships

1. Establish **targeted support programs**
2. Develop a **national AI strategy**
3. Create an **innovation friendly regulatory framework**
4. Anticipate on creating an **interesting ecosystem for talent** to work in



# SUMMARY



## Funding

- Generalist Dutch VC **often lack the necessary understanding** to make effective funding decisions.
- The alarming statistic that **only 4% of founders** are planning **to raise over 10M** signals that many AI companies are still early stage or lack ambition
- **Public funding is fragmented** through different hubs and institutions across NL and hard to find for founders
- Many companies claim to be AI-driven without proprietary development, which can dilute investor confidence



## Industry Awareness & Adoption

- Disconnect between **founders and government** leads to **ineffective regulations**, unclear rules (AI Act), and risks the global competitiveness of AI scaleups
- There is a lack of understanding between AI companies and **end-users** (individuals, corporates), causing long sales cycles
- Founders and media **struggle to communicate properly**, leading to misunderstandings and negative sentiment, affecting AI acceptance



## Market access

- There is an underrepresentation of female AI founders, with the survey indicating that female founders have a harder time attracting AI funding.
- Founders of AI companies have said that **market access is a challenge** when scaling their business. The founders who struggle the most with this are developing **expert systems with complex technology**
- Most founders believe there is **no access** to shared research, testing, and prototyping. They need **clean data, computational power, and randomized data sets** to be able to develop their products and scale their companies



## Talent

- There is **a shortage of AI talent in technical roles**, and currently most talent is recruited from NL
- Talent is spread across the country leading to a fragmented talent pool which potentially hinders further AI development
- **Female founders have less challenges in attracting talent** compared to male founders, which is a positive point for increasing diverse perspective in startup culture

# 11 RECOMMENDATIONS (1/2)



## 1. Dutch Founders - Seek Angels and VCs with Relevant AI Expertise In- and Outside of the Netherlands

Do your research to identify angels and VCs that are actively investing in the AI space to foster better connections and growth opportunities. Don't limit your search to Dutch investors but venture to international parties.

## 2. Dutch VCs - Enhance Technical AI Expertise and Co-Invest with International AI Funds

Participate in a technical AI masterclass and engage with successful AI VCs (e.g. Index, Accel, Sequoia Capital, Gradient Ventures). Make sure to understand the differences between running and training AI models and the implications this have on the ROI cycle. This initiative will enhance due diligence methods, fostering a deeper understanding of AI's technical landscape, resulting in informed AI funding decisions. In addition, when Dutch VCs invest in specific Dutch AI use cases, the barrier is lowered for Dutch CEOs and industry leads to also engage and invest in these ventures.

## 3. Public Investment Agencies – Centralize and Enhance Public Funding

Set up a centralized fund with a focus on high AI adoption areas (aligned with NL priority vertical) and prevent funding from being spread too thin. Streamlining funding efforts will optimize resource allocation. Public funds can enhance accessibility for founders while maximizing the impact of public investments in the AI space.

## 4. Corporates – Refine Innovation Process when Engaging with Founders

The process of spending a few thousand euros on a pilot after which a lot of time passes to scale is considered as a big barrier to ventures to survive. Refining the innovation process for corporates engaging with founders can accelerate the development and scaling of AI Solutions, fostering stronger collaboration and investment in startups. This results in a more dynamic ecosystem.

## 5. Government –Simplify Impact of Regulatory Framework towards Founders

Investigate the potential Dutch AI founders bring to our country in the long-run. Change the narrative and discuss the EU AI Act to clarify its guardrails and ensure founders don't perceive it as limitations. The perception of EU regulation is hindering founders as well as is keeping international investments outside of our country. With a more positive constructive story towards founders and the ecosystem, the AI Ecosystem will thrive more. International investors are also more reluctant to invest here due to the "perceived" impact of the EU AI Act

# 11 RECOMMENDATIONS (2/2)



## 7. Founders – Amplify Success Stories

Engage with media and industry leaders to showcase proven success stories about adopted AI use cases. Elevating awareness and understanding of AI solutions amongst decision makers and the public will encourage wider adoption and endorsement of AI technologies, thus attracting talent and investments to the Dutch AI Ecosystem

## 7. Public / Private Partnerships – Facilitate Data Access

Provide access to data and computing power, through data clearing houses and high-performance computer facilities, that will facilitate market entry for companies working on disruptive innovations. Address data access via data clearing initiatives that enable secure, low-barrier data sharing for businesses to train algorithms. While programs like EuroHPC are gaining traction for computational power, startups remain under involved.

## 8. Founders – Improve Talent Attraction Strategies

Carefully listen to the needs of AI tech talent and create packages and partnerships with international universities for early engagement. Equity options for talents are recommended – as well as organizing this within your venture early-on. Listening to the needs of AI tech talent is recommended by top founders to improve the Dutch Tech Ecosystem to be able to compete with other European tech hubs

## 9. Academia – Integrate Practical AI Learning and Encourage an Entrepreneurial & Risk-Taking Mindset

Introduce practical assignments and an AI alumni network to connect students with top founders and industry professionals. By improving the bridge between academic learning and industry needs, universities can cultivate the next generation of AI builders who are equipped to address real-world challenges in a pragmatic way.

## 10. Ecosystem builders – Establish a Single AI Hub

Create one collaborative AI hub to facilitate networking, education and partnerships. A centralized space for founders, industry players and investors will enable the Dutch AI Ecosystem to focus and drive innovation through collaboration, fostering cross-border partnerships essential in the AI Sector.

## 11. Government – Invest in Specialized Expertise and Talent

Form a dedicated government tech team with arms in Silicon Valley and other prevalent AI Ecosystems across the world like the UK or Denmark. Improved understanding of AI (Technology) and ecosystems across the globe will improve the understanding of what is required to strengthen the Dutch AI Ecosystem

# CONTACTS

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Maxime Lübbers  
AI Ecosystem Lead Techleap



Pepijn Janssen  
Deloitte Scaleup Ecosystem



Tamara Franssen  
AI Ecosystem Support Techleap

# APPENDIX

## METHODOLOGY



Techleap has conducted research across AI founders, and the surrounding ecosystem.

A variety of research methods have been used for this report. It started with desk-research on critical AI Ecosystem players in the Netherlands and abroad, which was followed by a survey in which the scaling challenges of Dutch founders were assessed. Considering the wide-spread adoption of AI across the world, and the fact that the technology does not consider national boundaries when scaling, these international insights were considered as elemental. To validate these insights additional deep-dives with 12 selected scaled AI founders have taken place. As challenges occurred within the ecosystem, we also engaged with relevant AI Ecosystem players, such as the NLAIC, Economic Affairs, Foreign Affairs, and TNO (see Appendix for more details). Lastly, the analyzed data and conclusions have been reviewed by 6 Dutch top founders and a selection of investors, and their feedback is incorporated in this report. Desk research on international best practices has been performed to inspire the action plan. Where possible, we enriched our data with external data sources such as Dealroom.

### Limitations

- **Limited Participant Pool:** The research primarily involved a small group of participants, specifically 12 scaled AI founders and 6 top founders and investors. This small sample size may not fully represent the diverse perspectives and challenges faced by a broader cohort of AI entrepreneurs within the Dutch Ecosystem.
- **Contextual Constraints:** Conducting research mostly within the Dutch ecosystem limits the applicability of findings to other regions with different regulatory, market, and cultural environments. While international insights were considered, the focus on local players might influence the generalizability of the conclusions.
- **Survey Limitations:** The survey conducted to assess scaling challenges may suffer from biases such as self-selection and response bias.
- **Desk Research Constraints:** While desk research on international best practices was conducted, the sources may have varied significantly in reliability and relevance.
- **Temporal Immediacy:** The research's time frame may not account for the rapidly evolving nature of AI technologies and their ecosystems.
- **Dependency on External Data Sources:** The reliance on external data sources such as Dealroom might introduce inconsistencies or inaccuracies depending on the quality and timeliness of the data collected.



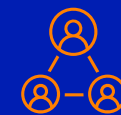
Desk research  
across 5+  
countries



141 respondents  
to survey



22 in-depth interviews  
with 6 Dutch  
top AI founders



3 deep-dives with  
12 founders

# METHODOLOGY – AI COLLIDE – DEEPLIVES WITH SCALED FOUNDERS TO VALIDATE SURVEY INSIGHTS

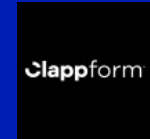
techleap **Deloitte**



Maarten Stolk  
Co-founder & CEO of Deeploy



Tom Griffioen  
Co-founder of Clappform



Helena Samodurova  
Co-founder of Incooling



Jasper Hoogeweegen  
CEO & Co-founder of Samotics



Stefan Tan  
Founder & CFO of Dashmote



Jasper Wognum  
Founder & CEO of BrainCreators



Jorrit Steinz  
Founder & CEO of ChannelEngine.com



# METHODOLOGY – FOUNDER CIRCLE – IN-DEPTH INTERVIEWS WITH TOP AI FOUNDERS TO VALIDATE INSIGHTS

techleap **Deloitte**



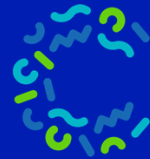
Douwe Kiela  
Founder & CEO of  
ContextualAI



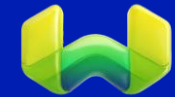
Rina Joosten-Rabou  
CEO of Pera



Elise de Reus  
Co-founder of Cradle



Bob van Luijt  
CEO & Co-founder of Weaviate



Nicola Ebmeyer  
Co-founder & Co-CEO of Gain.pro



Fabrizio del Maffeo  
Co-founder & CEO of AXELERA AI



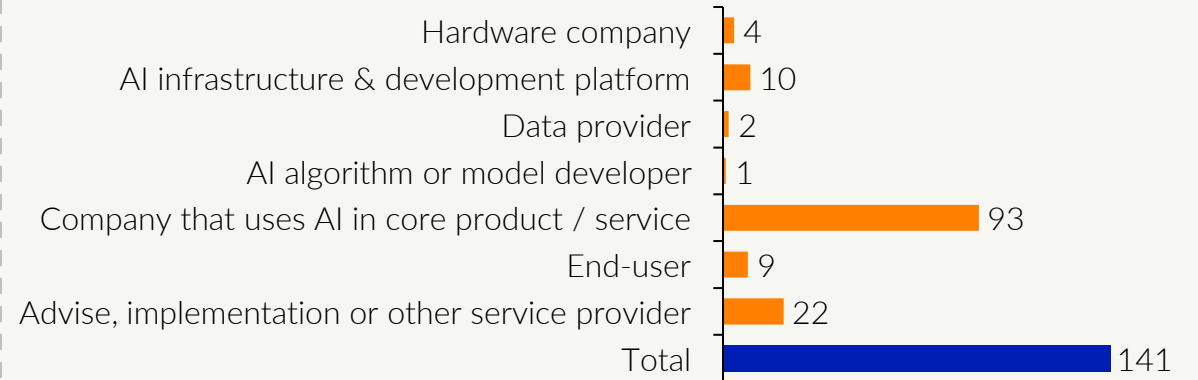
# METHODOLOGY & SURVEY SAMPLE



## Methodology

- N = 160 founders responded, after cleansing the data, n = **141 founders (as given on the right-hand side)** were included for the results of the survey as used in this document
- These results were **enriched with deep-dives with 12 scaled founders** and desk research
- These results were **validated with 6 top founders** (Weaviate, Cradle, ContextualAI, Accelarai, Pera, Gain.pro) and **AI VCs**

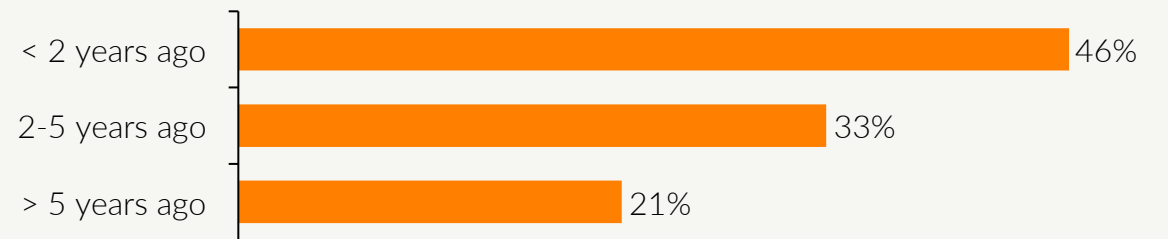
## What type of AI company do you run?



## When was your company established?



## How long has AI been part of your business?

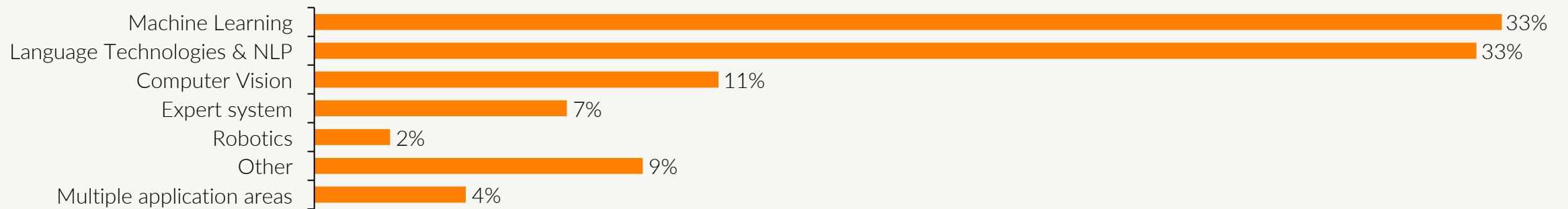




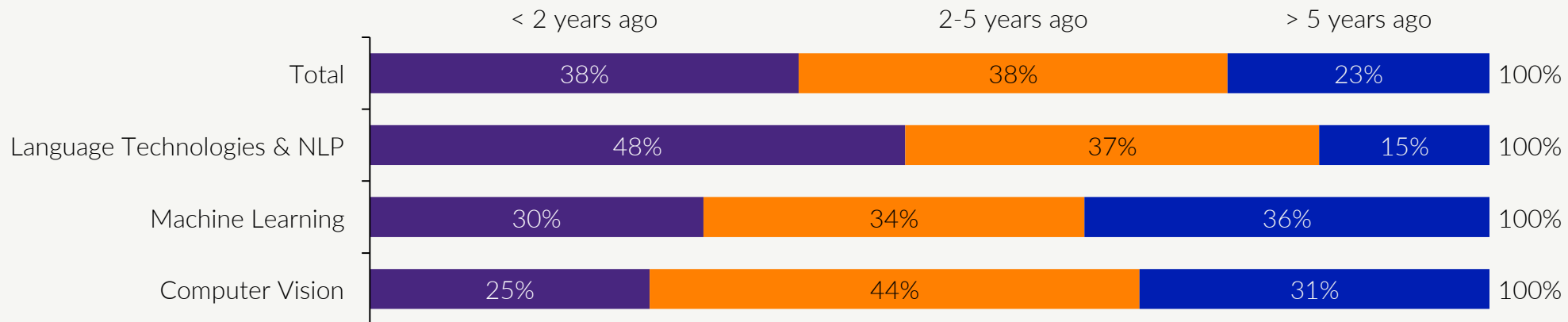
# METHODOLOGY & SURVEY SAMPLE



In which area do you apply AI?



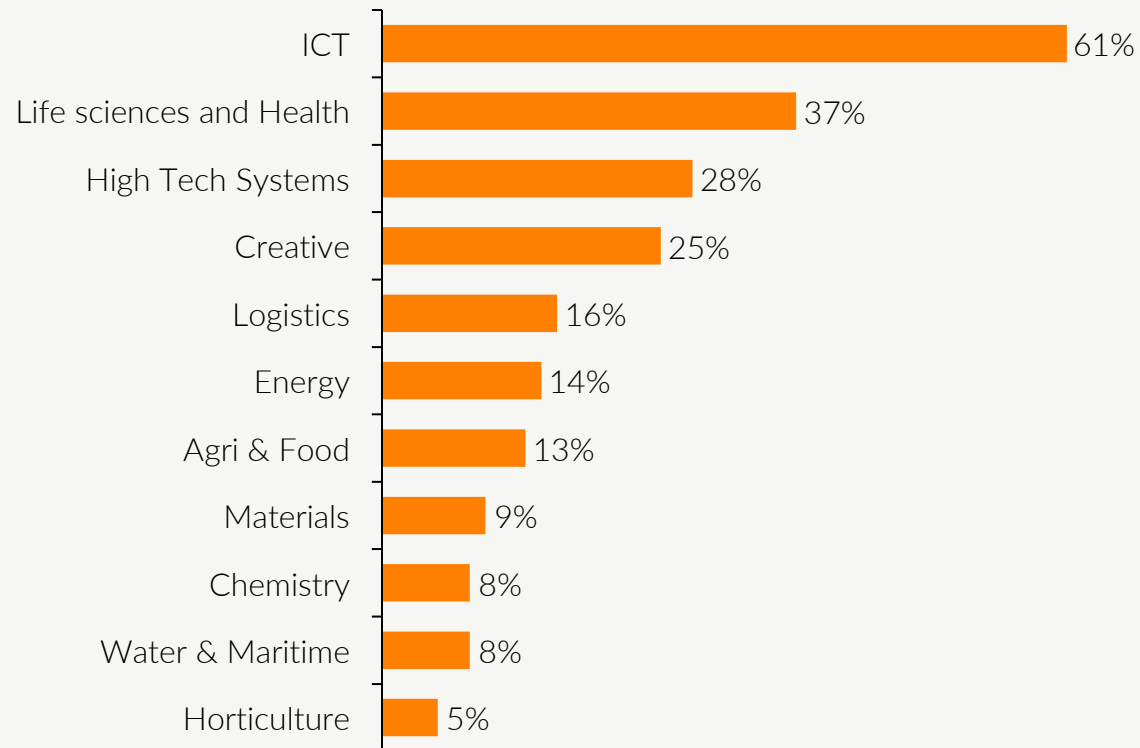
When was your company established? (split per area)



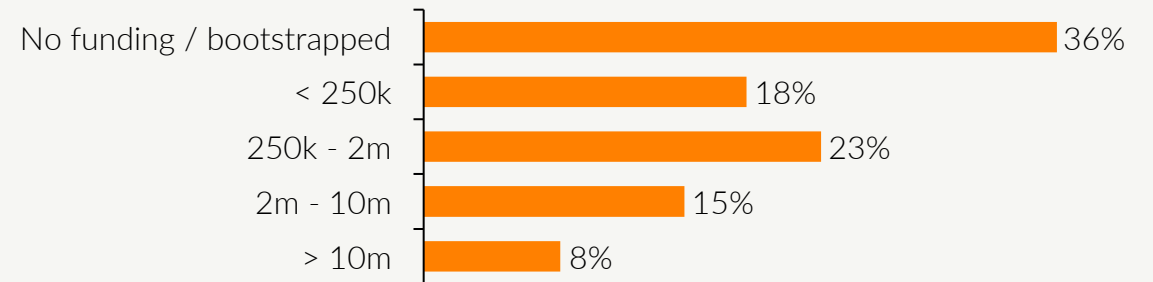
# METHODOLOGY & SURVEY SAMPLE



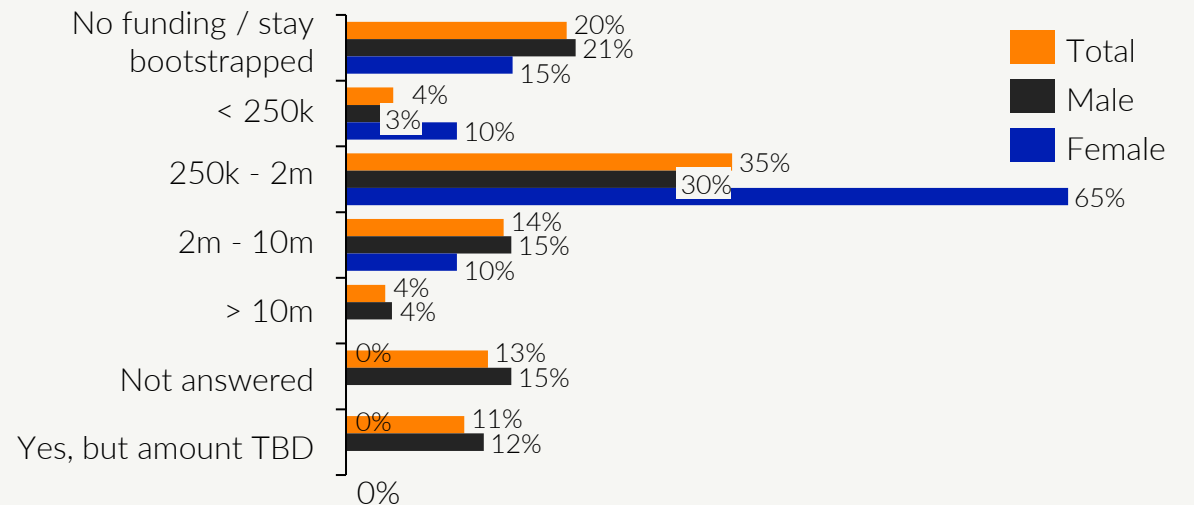
Which industries do you serve? (multiple answers possible)



How much funding have you raised so far? (EUR)



How much funding are you planning to raise? (EUR)

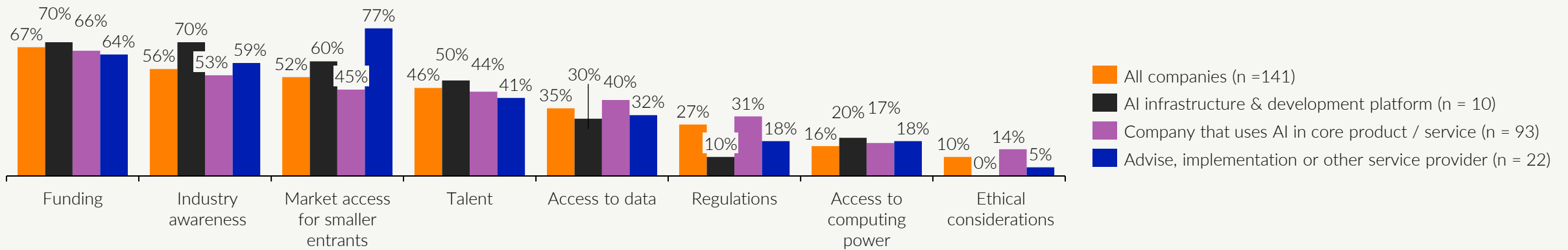


# ADDITIONAL SURVEY RESULTS

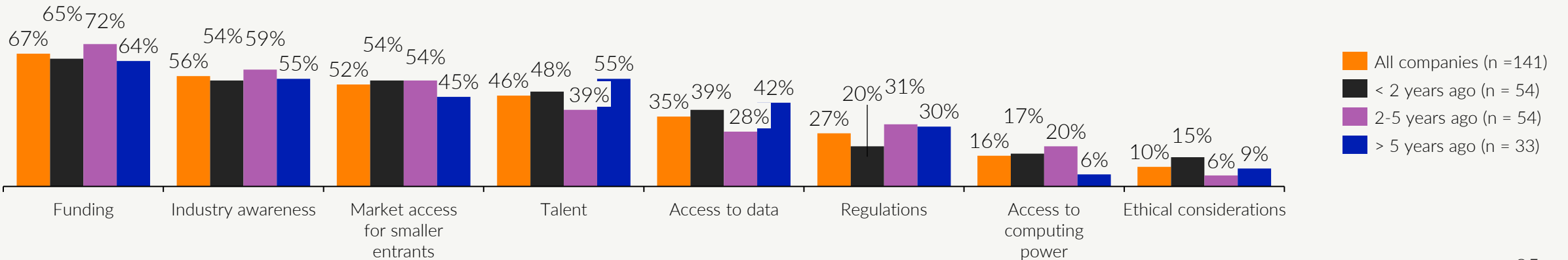
## CHALLENGES



What are the main challenges in scaling your company? (select top 3)  
Comparison by company type



What are the main challenges in scaling your company? (select top 3)  
Comparison by how long ago the company has been established



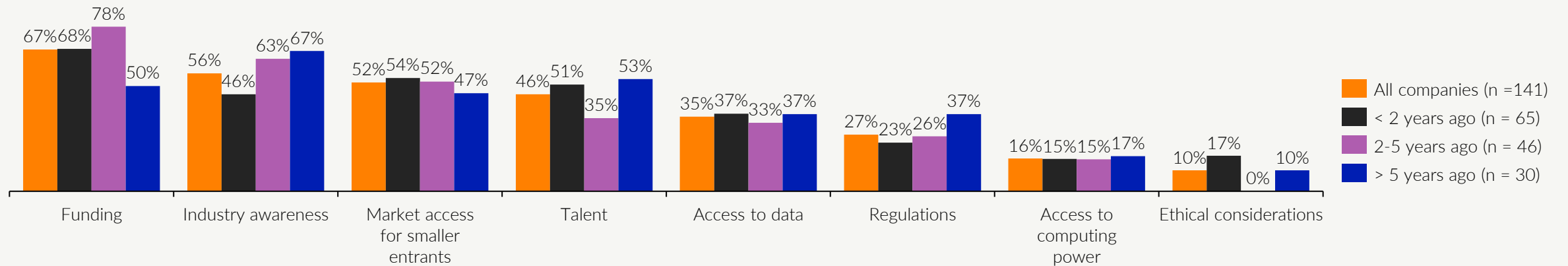
# ADDITIONAL SURVEY RESULTS

## CHALLENGES



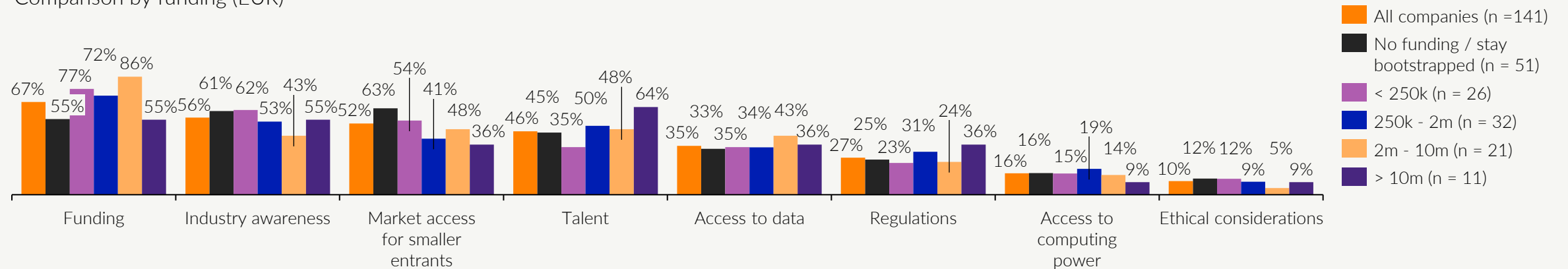
What are the main challenges in scaling your company? (select top 3)

Comparison by how long the company has been using AI



What are the main challenges in scaling your company? (select top 3)

Comparison by funding (EUR)

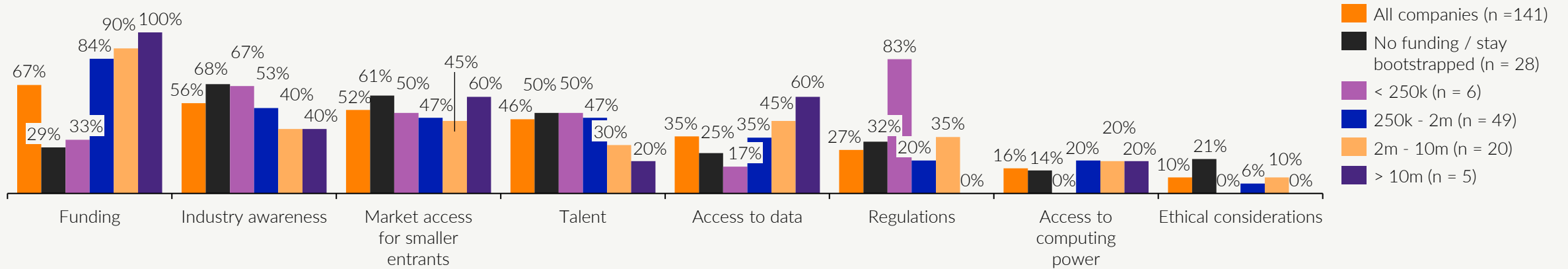


# ADDITIONAL SURVEY RESULTS

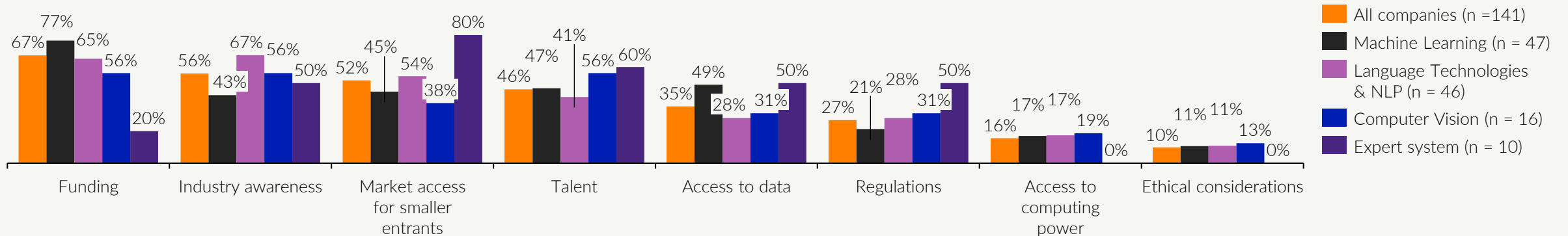
## CHALLENGES



What are the main challenges in scaling your company? (select top 3)  
Comparison by funding ambition (EUR)



What are the main challenges in scaling your company? (select top 3)  
Comparison by AI application area

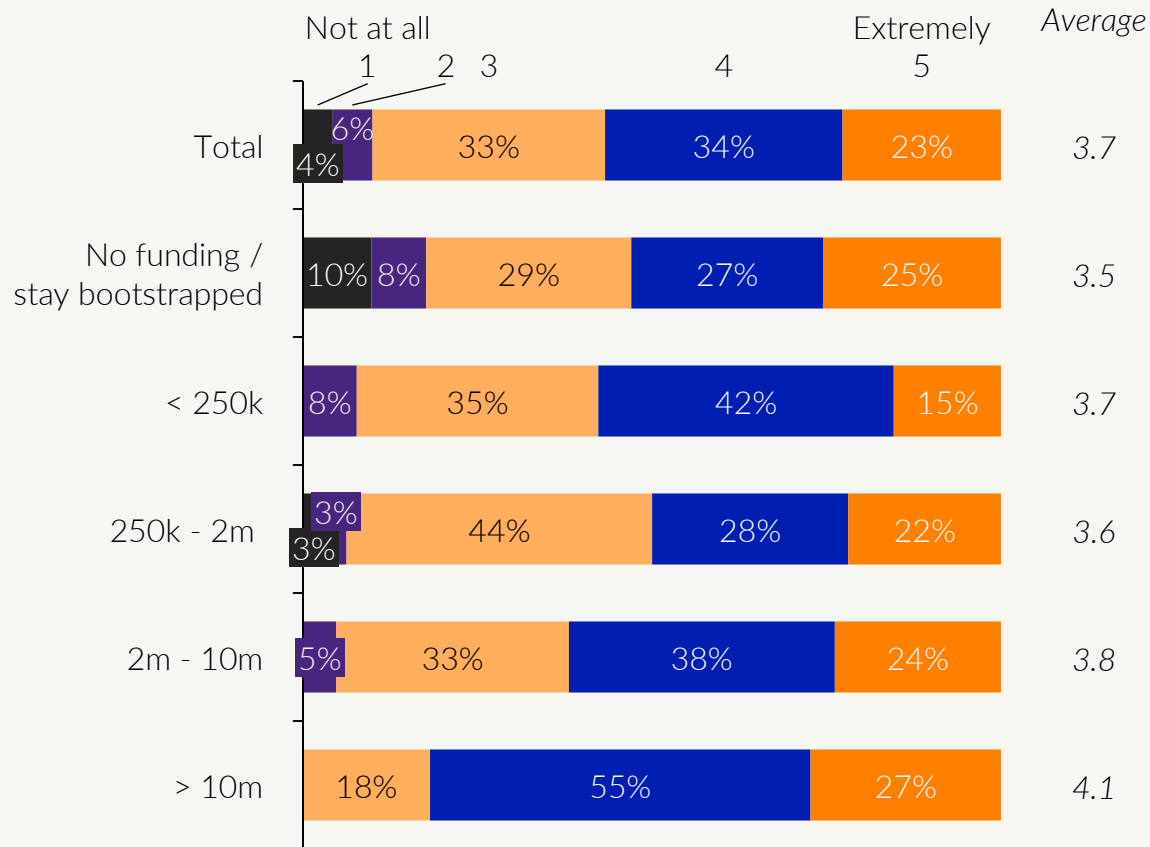


# ADDITIONAL SURVEY RESULTS

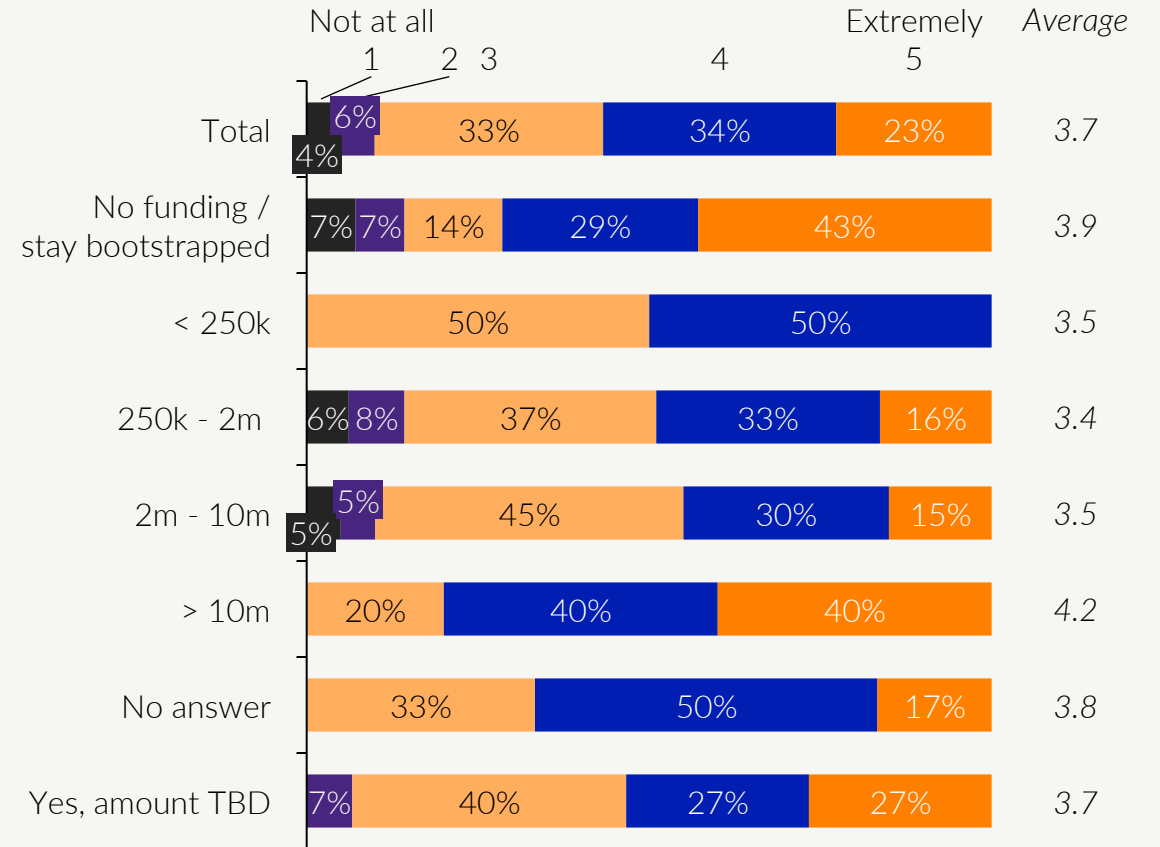
## FUNDING



How confident are you in your ability to secure adequate funding?  
Comparison by funding raised



How confident are you in your ability to secure adequate funding?  
Comparison by funding looking to raise

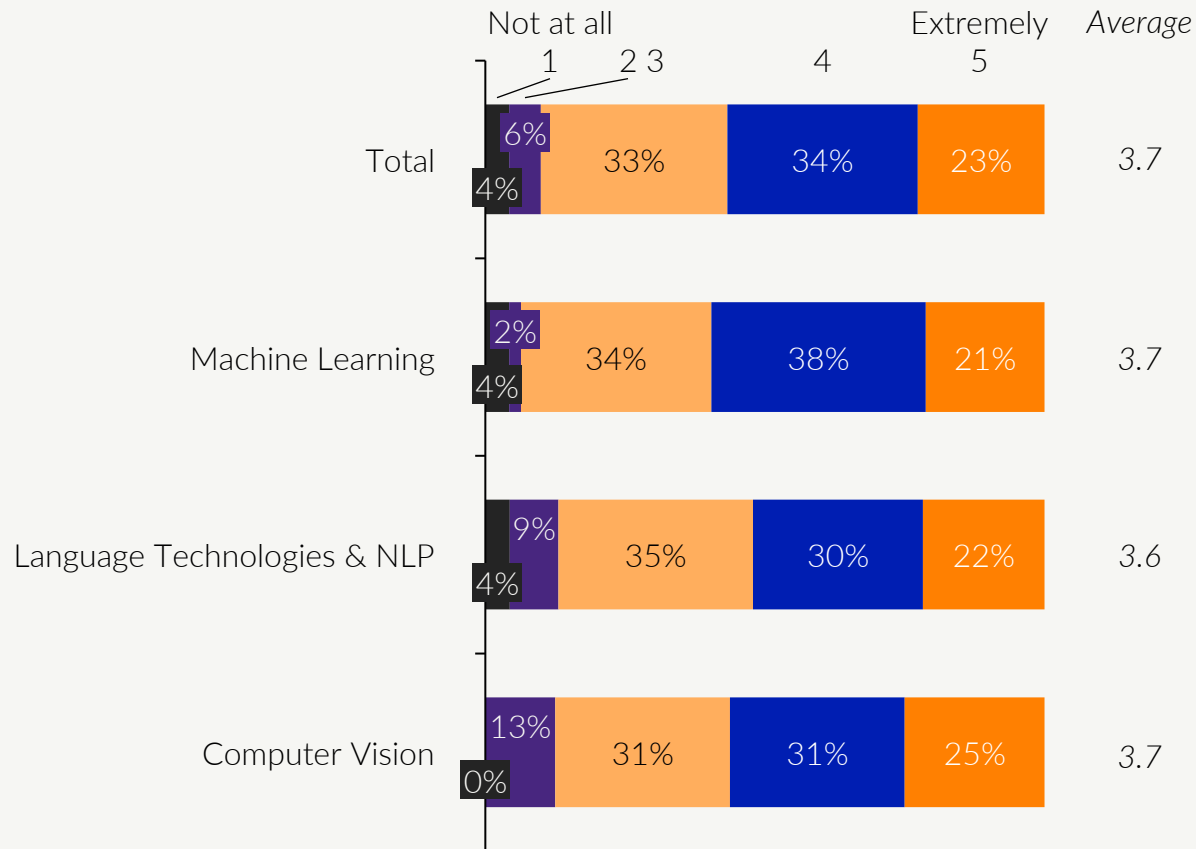


# ADDITIONAL SURVEY RESULTS

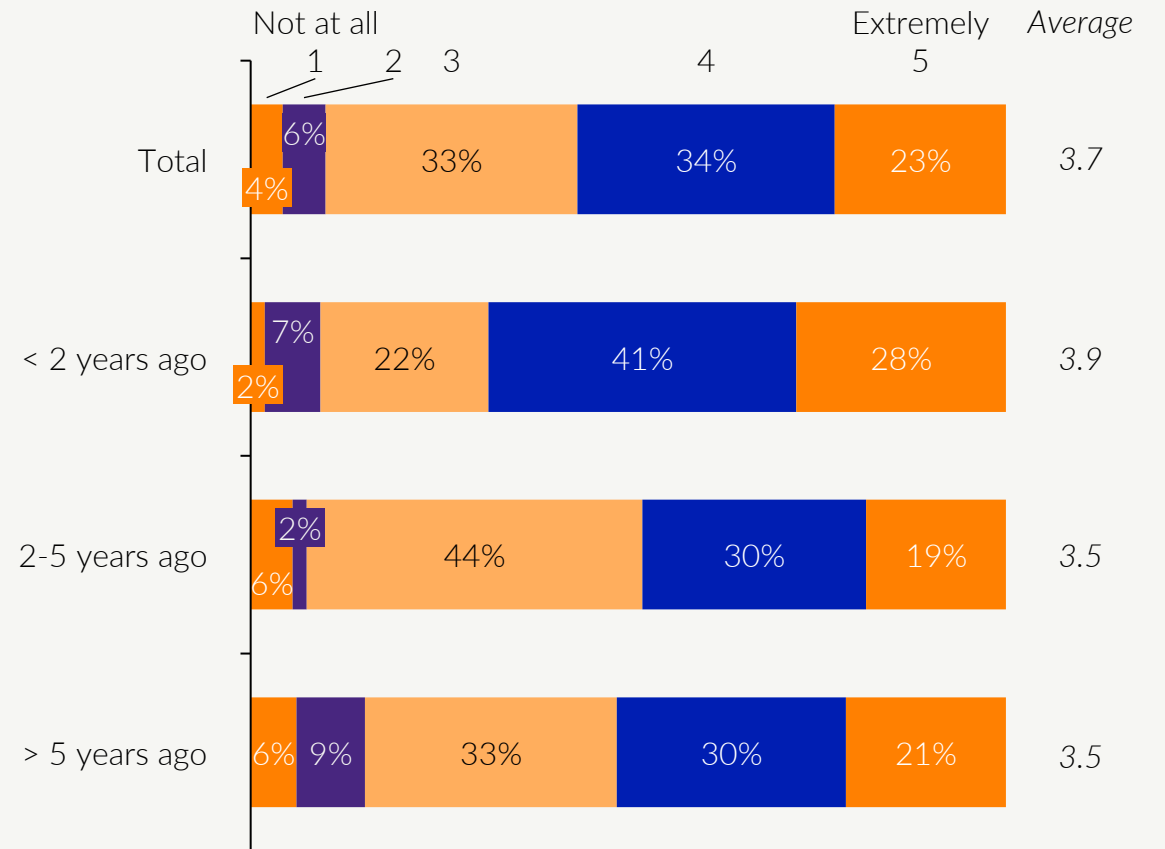
## FUNDING



How confident are you in your ability to secure adequate funding?  
Comparison by AI application area



How confident are you in your ability to secure adequate funding?  
Comparison by company age



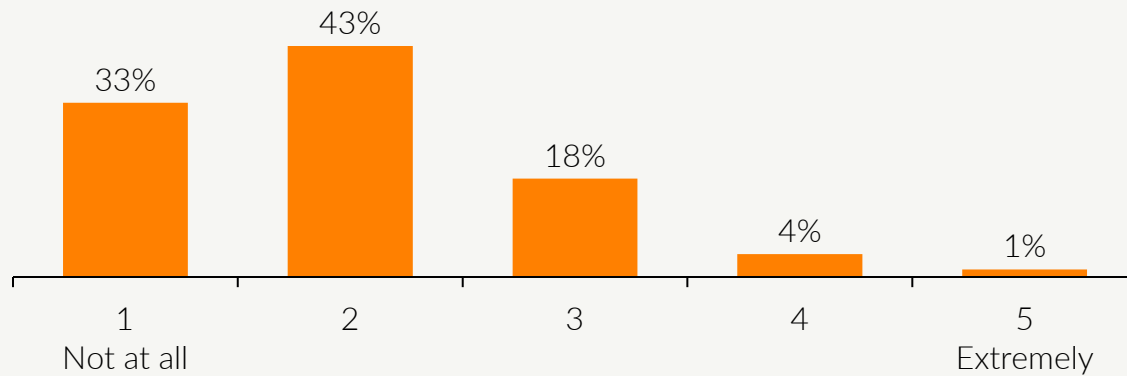
# ADDITIONAL SURVEY RESULTS

## INDUSTRY AWARENESS & ADOPTION



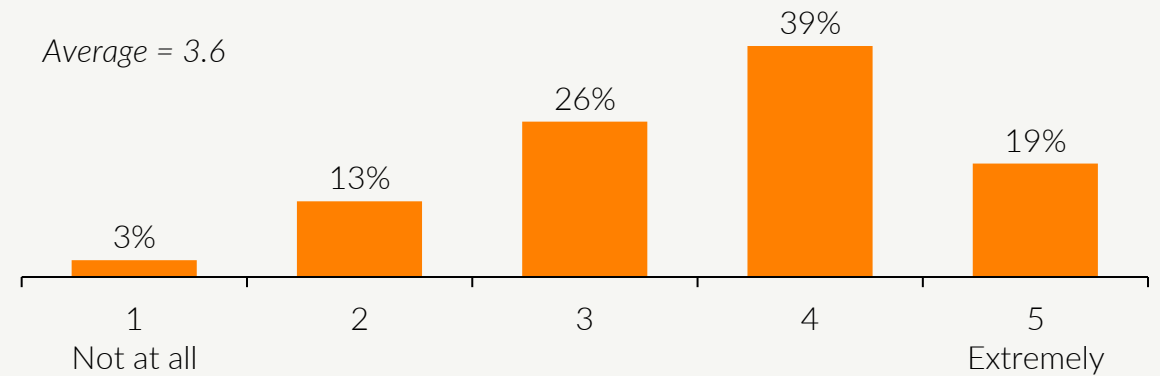
Local governments understand AI:

Average = 2.0



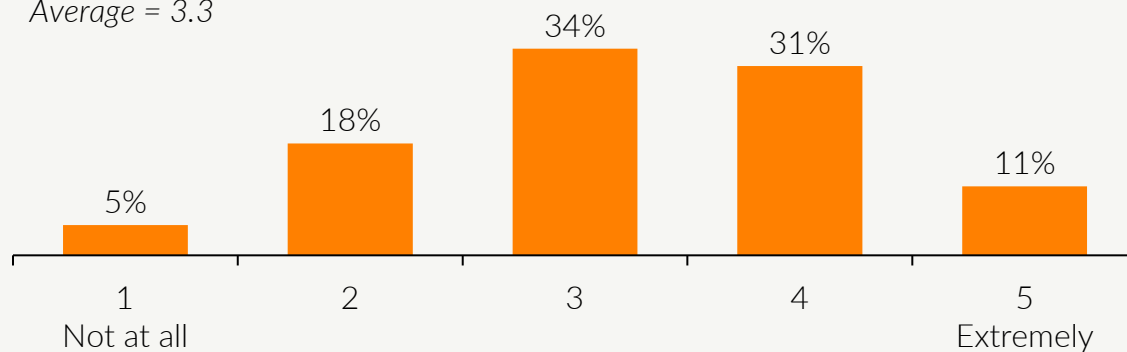
To what extent do educational gaps about AI among the general public contribute to skepticism and resistance towards AI applications in your experience?

Average = 3.6



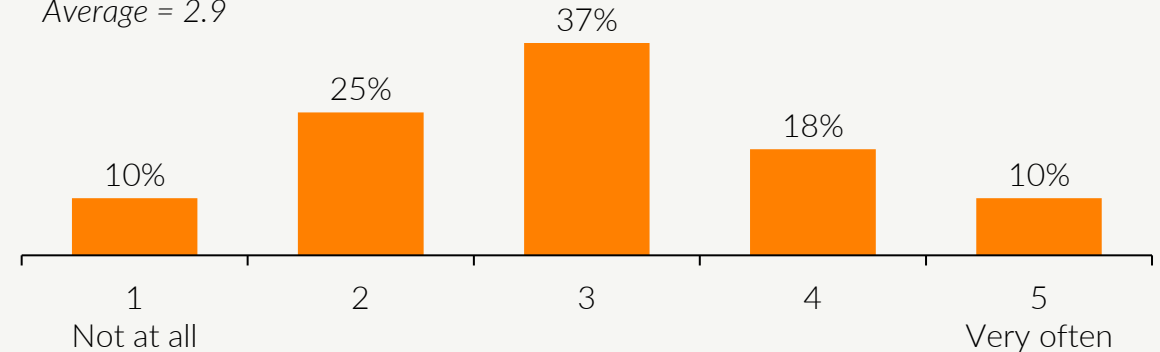
How significant do you perceive perceptions and fear around the implications of AI in gaining public support for scaling efforts?

Average = 3.3



I face scaling risks due to misconceptions around AI and my product with my partners, investors and other key stakeholders

Average = 2.9



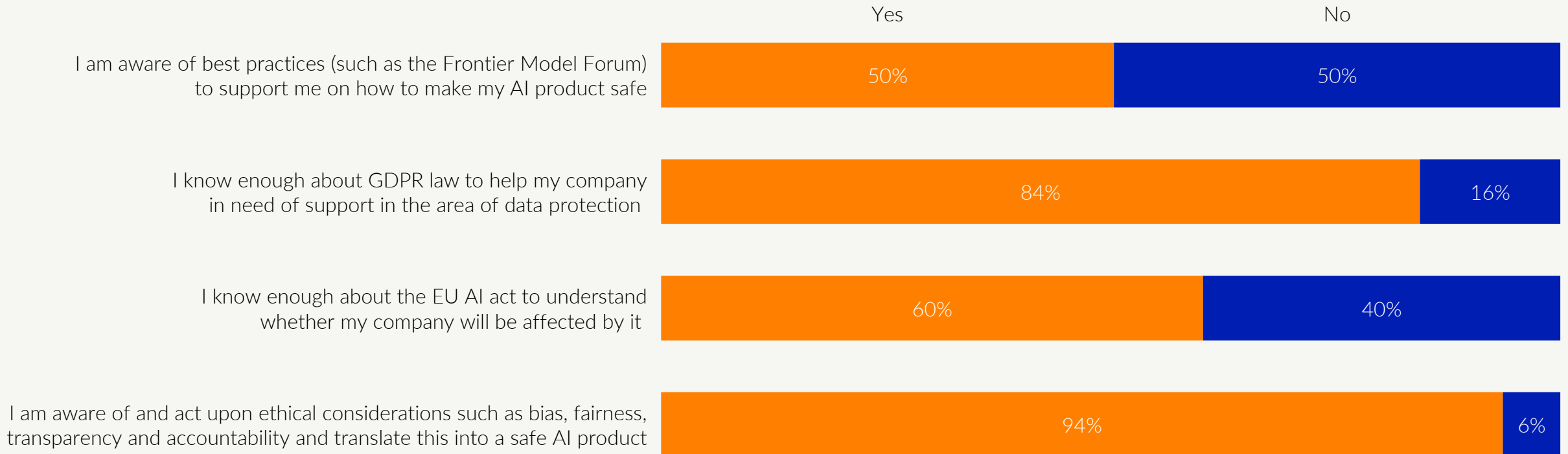


# ADDITIONAL SURVEY RESULTS

## REGULATIONS & ETHICAL CONSIDERATIONS



Regulations, safety best practices, ethics

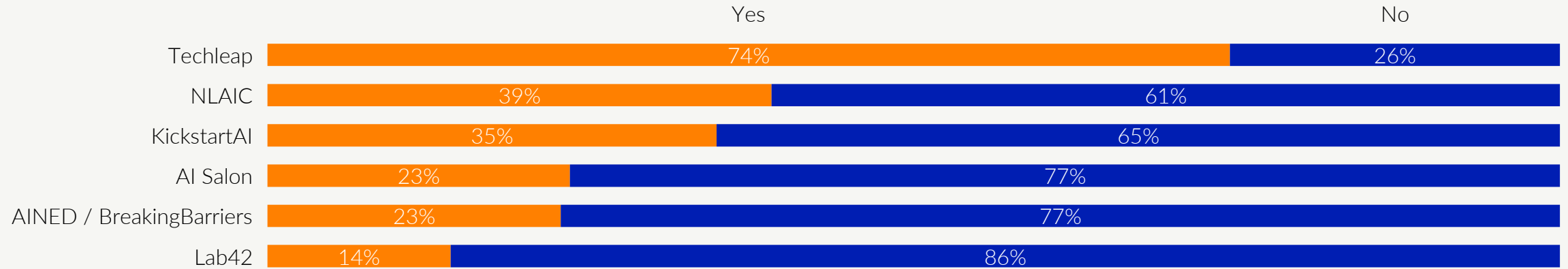


# ADDITIONAL SURVEY RESULTS

## SUPPORT ECOSYSTEM



Are you aware of the following support organisations?



My AI network is:

