



State of Finnish Marine Industry 2023

SURVEY & FINANCIAL ANALYSIS

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Foreword

Tesi has been investing in data analysis capabilities over the past few years to offer precise, data-driven insights into the Finnish economy and key trends shaping its future. This report specifically examines the maritime industry's current state in Finland. It integrates survey results and financial data analysis, paying particular attention to small and mid-sized companies, as well as the role of Finland's four largest shipyards in the ecosystem.

The maritime industry is integral to Finland's economy, with its rich maritime heritage and geographical position. In an increasingly globalized world, the maritime industry is essential for international trade, and Finland's maritime sector is pivotal in national and global economic development.

I want to underscore the maritime industry's importance in Finland, not only economically but also in environmental sustainability and innovation. Finland leads in adopting sustainable practices and technological innovations in the maritime sector, and it is crucial that this momentum continues for the economic and environmental welfare.

This report is a collaboration between Finland's Ministry of Employment and the Economy, Taloustutkimus, and Tesi. I extend my deepest gratitude for their invaluable support and expertise. I also want to thank all the respondents for their time and insights, which have been essential for the report's depth and quality. Additionally, Brahea Center's (University of Turku center of maritime studies) prior extensive work in the industry has laid a solid foundation for this report.

In conclusion, I emphasize the criticality of fact-based decision-making. This report equips decision-makers with vital information for informed, evidence-based decisions concerning Finland's maritime industry. It is imperative that decisions are anchored in robust information and analysis to foster a sustainable and thriving future for Finland's maritime sector. The results reveal a dynamic ecosystem poised for further international expansion.

Personally, I would like to give special thanks to analysts Klaus and Rasmus for their relentless efforts in data collection and analysis. Your dedication and expertise have been indispensable. Data serves as the catalyst for your intellectual prowess.

Henri Hakamo
Chief Strategy and Research Officer

Klaus Majanen
Analyst

Rasmus Varjoranta
Analyst trainee

Executive summary

Finland's maritime industry is a cornerstone of the country's export sectors, with our globally recognized expertise earning us a position among the world's leading nations in the shipbuilding industry. The comprehensive domestic ecosystem includes over 1,000 diverse companies, encompassing a variety of sizes and specializations. Given the sector's heterogeneity, the extensive use of outsourced labor, and the complex value chain, this report refrains from providing estimates for the actual workforce size or total industry sales. Moreover, the focus of our study is on small and medium-sized enterprises (SMEs), due to the integration of maritime operations into other business lines within larger corporations, which makes precise and comprehensive estimates and analyses a challenge.

Despite the consecutive crises of COVID-19 and the Ukraine war leading to high inflation, our research indicates that Finland's maritime industry remains resilient and continues to thrive. Though revenue growth has slowed, companies have demonstrated skill in maintaining profitability. Our survey and financial analyses reveal no significant, broad-based challenges across the value chain. Additionally, Finnish maritime companies exhibit strong competitiveness and display a proactive drive towards international expansion.

Four major shipyards, including the Turku shipyard, play a vital role in the Finnish maritime industry. Approximately two out of three companies in the maritime industry have direct sales connections with these shipyards. The major shipyards are also significant drivers of the industry's development. Beyond their core shipyard operations, these companies engage in a diverse range of business activities both domestically and internationally. This breadth of activity strengthens the ecosystem's resilience and mitigates systemic risks associated with dependence on a small number of buyers.

The maritime industry faces a notable challenge in the form of labor shortages. However, the root of this issue appears to stem from the sector's appeal and the need for enhanced educational opportunities - areas where companies are eager to invest. While some layoffs are expected, their number remains limited. Interestingly, the labor shortage in the maritime industry is marginally less severe than that typically encountered in other industries.

Following recent crises, supply chains within the industry are undergoing significant changes, a trend that is expected to persist. Our survey indicated that as many as 85% of companies have made substantial and primarily permanent modifications to their supply chains, influencing the industry on a broader scale. One in five respondents has increased their reliance on domestic suppliers permanently. Furthermore, 40% of respondents foresee additional adjustments to their supply chains in the future.

In conclusion, based on our survey and financial analysis, we ascertain that the marine ecosystem is currently in good shape and has a strong inclination towards international growth. However, its future success heavily depends on global trends and economic development, as new order intake is crucial for long-term success. Nevertheless, we believe that the value chains demonstrate a reasonable level of resilience to disruptions, at least over a short time period.

Key figures

Finnish marine industry is a healthy ecosystem

Stagnating growth yet healthy profitability

Growth: 10% → 5%

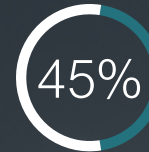
EBITDA%: 12% → 14%
(2022) (2023)

Reasonable investment and R&D-activity

Median investments % of revenue:

5%

% of companies with R&D activities:



Competitive in domestic and foreign markets

% of respondents that are competitive in domestic markets

88%

% of respondents that are competitive in foreign markets

77%

Marine industry is evolving and adapting

Seeking growth from foreign markets

% of respondents aiming to grow in foreign markets:



% of domestic-only companies looking to expand internationally



Supply chains in transformation

% of respondents that have made changes to supply chains

85%



% of respondents that will make changes to supply chains in the next 3 years

40%

Labor shortage as major issue

% of respondents that experience labor shortage



% of respondents experiencing labor shortage in blue-collar positions



Four largest shipyards hold key role in the value chain

Sales to major shipyards an important source of revenue

% of respondents selling directly to at least one of the major shipyards:



Median sales to shipyards of total revenue:

16%

Resilient value chain on the shipyard counterparty risk

% of respondents with great direct dependence on major shipyards:



% of respondents, who sell to only one shipyard



Meyer Turku in the key role within the ecosystem

% of respondents selling to each shipyard

Turku	Rauma	Helsinki	UKI
51%	33%	23%	12%

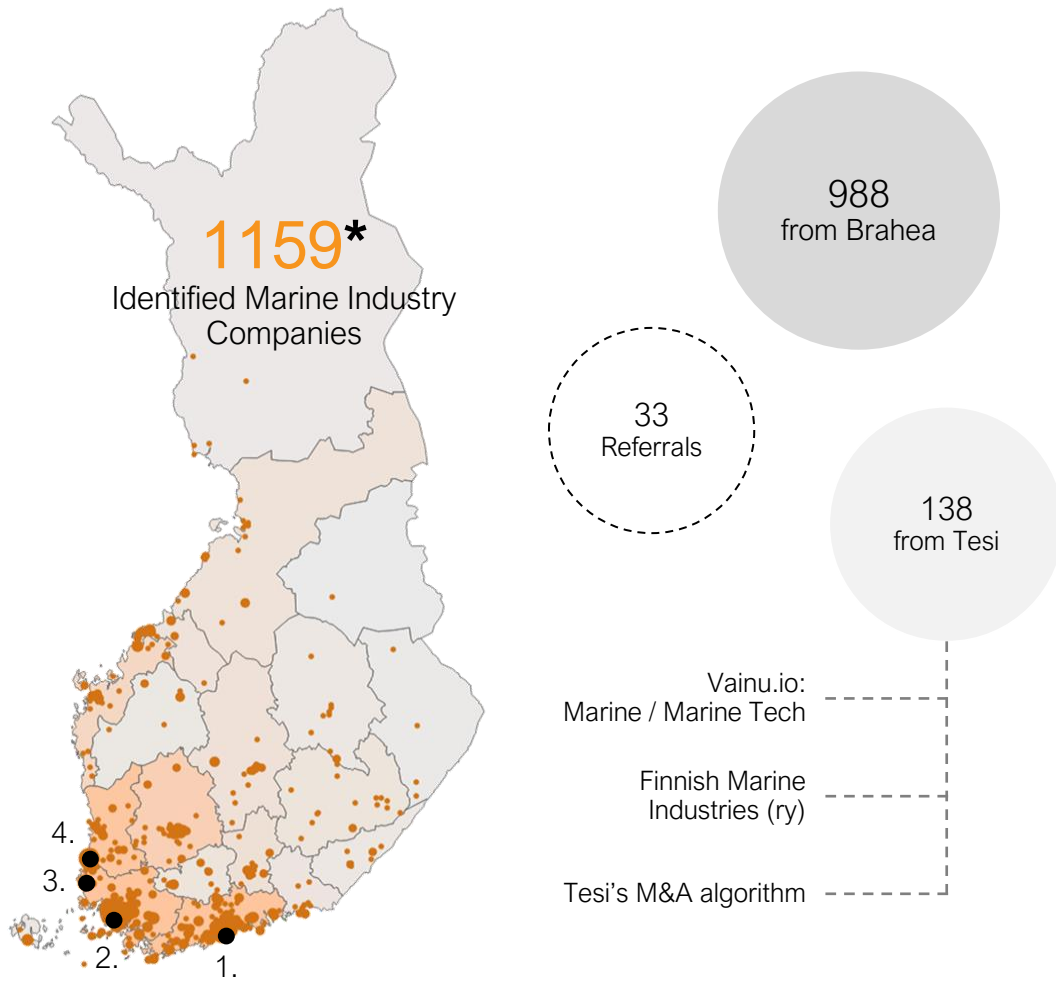


Agenda

1. Description of the research
2. Marine industry & the role of major domestic shipyards
3. Growth and profitability in marine landscape
4. Investments and R&D in marine industry
5. Competitiveness of Finnish marine industry
6. Transforming marine supply chains
7. Addressing labor shortage
8. Cost of production & solvency

Appendix

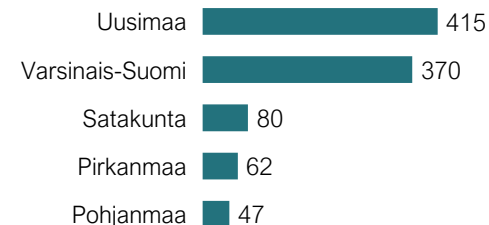
The Finnish Marine Industry



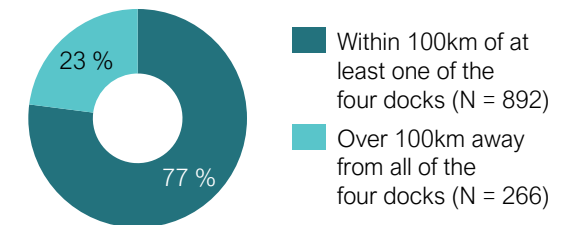
1. Helsinki Shipyard, 2. Meyer Turku, 3. UKI Workboat, 4. Rauma Marine Constructions

- Marine ecosystem encompasses 1159 companies identified by Tesi and The University of Turku's Centre for Maritime Studies (Brahea). We gathered the selection by utilizing our respective databases, additional hand-picked sources, and leads provided by survey participants during the interview process.
- In the study, we paid special attention to companies that conduct business with Finland's four largest shipyards located in Helsinki, Turku, Uusikaupunki and Rauma.
- The main component of the selection was directly provided by Brahea who has historically been one of the key researchers of the Finnish marine industry.
- The secondary component was gathered by Tesi. To detect applicable companies and obtain current information, we used our data model, the public member directory of Finnish Marine industries (ry), and our AI-driven algorithm for detecting M&As and bankruptcies.
- We identified and further examined applicable companies within our data model by using an industry categorization tool provided by Vainu.io. We focused on companies that fall under the categories "Marine" and "Marine Technology"
- Our selection has been manually screened and validated by, for example, cross-matching identified companies throughout several data sources and further categorized by using general TOL industry categorization levels
- We acknowledge that our list of marine companies may be deficient

No. of companies in the five most populated provinces

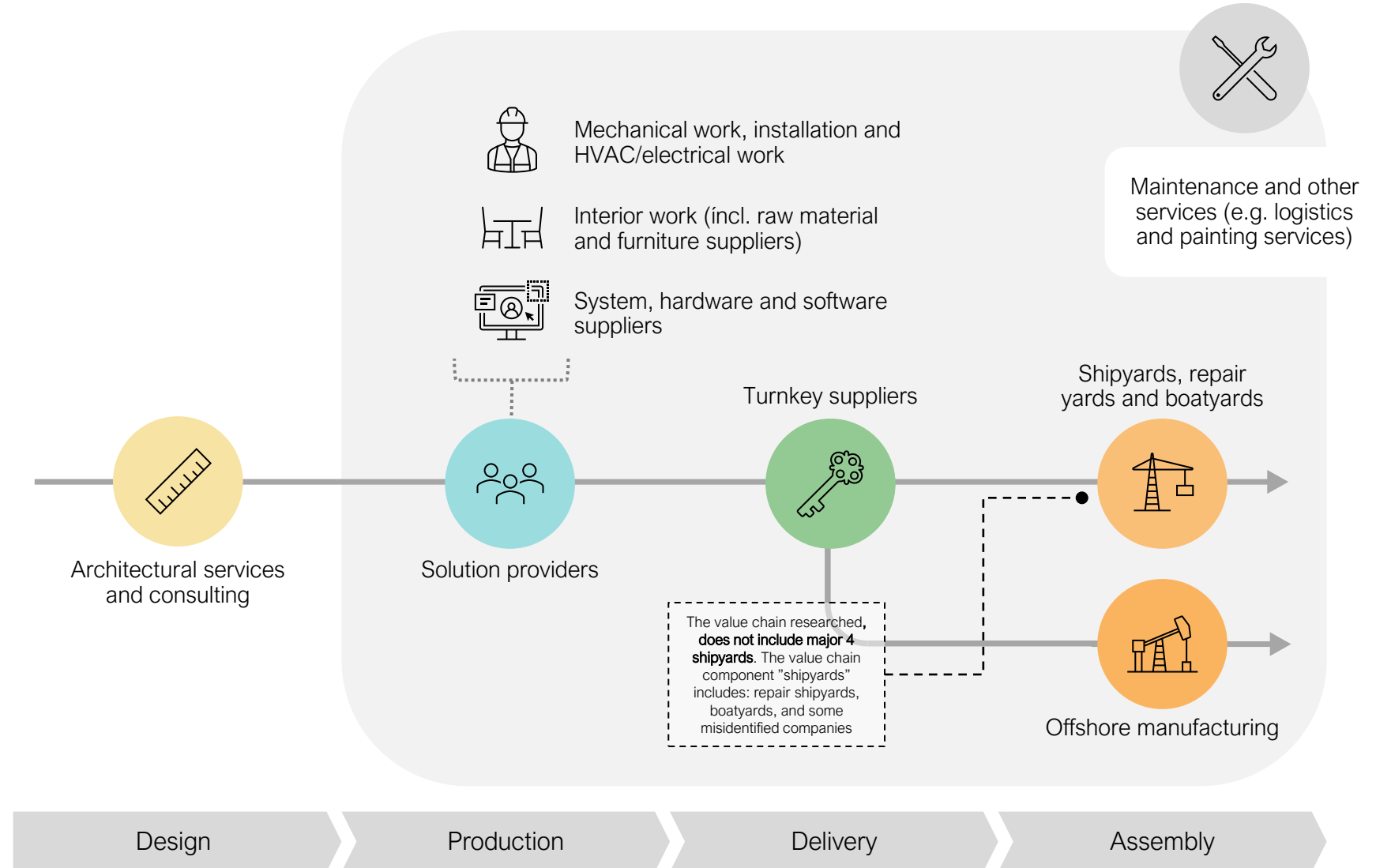


The selection's geographical proximity to the four largest shipyards in Finland



The Finnish Marine Industry Value Chain

- Finnish shipbuilding largely relies on subcontracting and the employment of turnkey suppliers who provide complete ready-to-use components to shipyards (e.g. spas and restaurants)
- Architectural services and consulting are utilized in all parts of the value chain, but they mostly concretize in the initial stages of different projects
- Solution providers carry out manufacturing and specialized production from the ground-up and are typically in business with turnkey suppliers, who combine their work into complete deliverables
- Shipyards assemble final products and conduct business with all parts of the value chain, but focus on turnkey suppliers
- In this study, offshore manufacturing encapsulates all related ground-up production, solution providers and shipbuilding because of its relatively small national significance
- Maintenance and other services are generally used throughout the manufacturing and assembly stages of the value chain



General Survey Information

The Rationale

- We tailored separate survey question sets for both SMEs and large companies to capture accurate and comparable financial information that is directly attributable to marine-related operations
- In the case of large multi-industrial and international companies, we targeted the survey at the division level where applicable and used company-wide metrics to complete the rest of the survey
- We aimed for a sample of 400 companies to achieve an adequately realistic representation of the selected 1159 companies

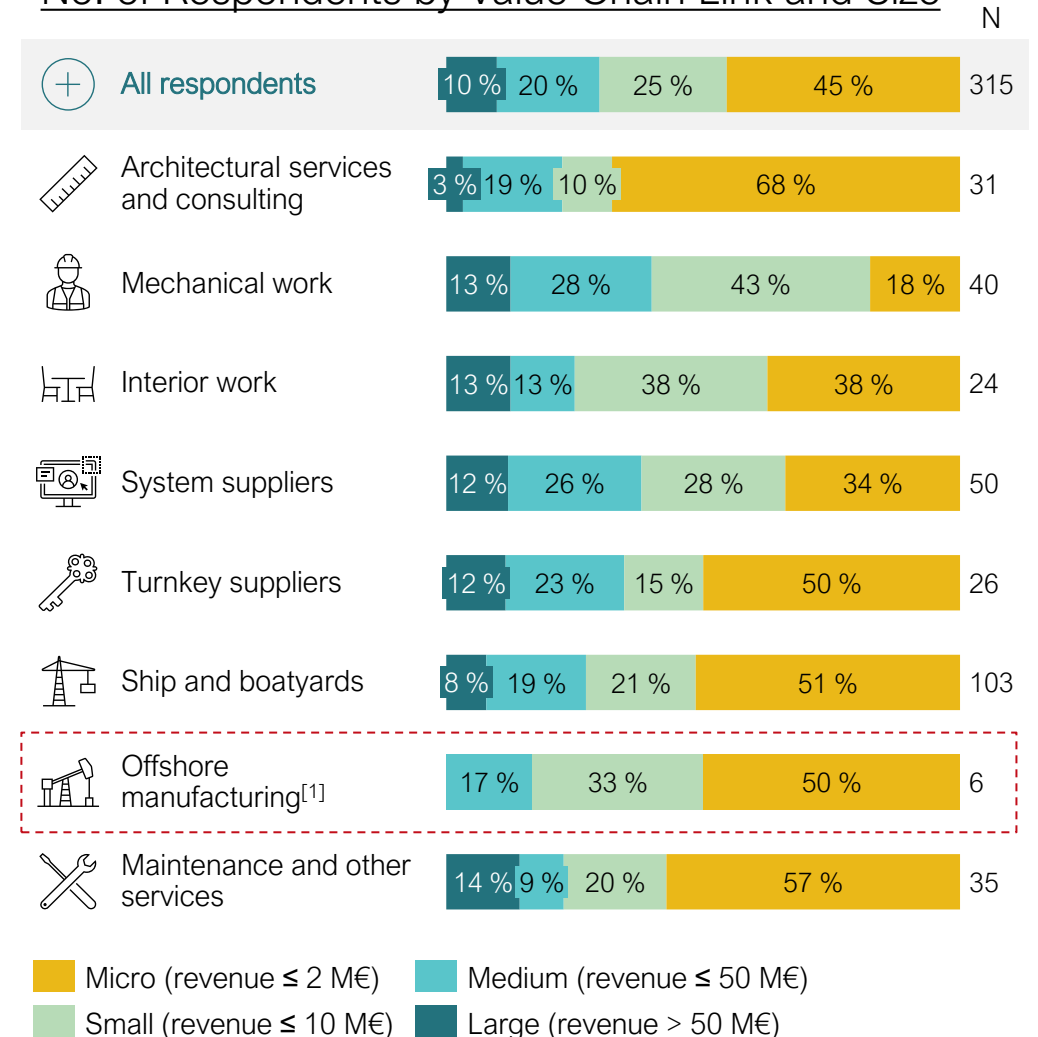
The Sample

- We used 14 different Standard industrial classification (TOL, 2008) quotas^[2] ranging from TOL1 to TOL5 as well as the SME categorization definitions provided by the EU Commission to ensure an evenly distributed sample in terms of size and industry
- The quotas were hand-picked to find matching pool sizes and the relevance of different industries and niches within the selection
- The sample emphasizes larger companies to ensure the integrity of financial information acquired from the survey
- Companies were classified in company size-classes based on their revenue. Large corporates encompass companies with revenue over 50 M€

The Execution

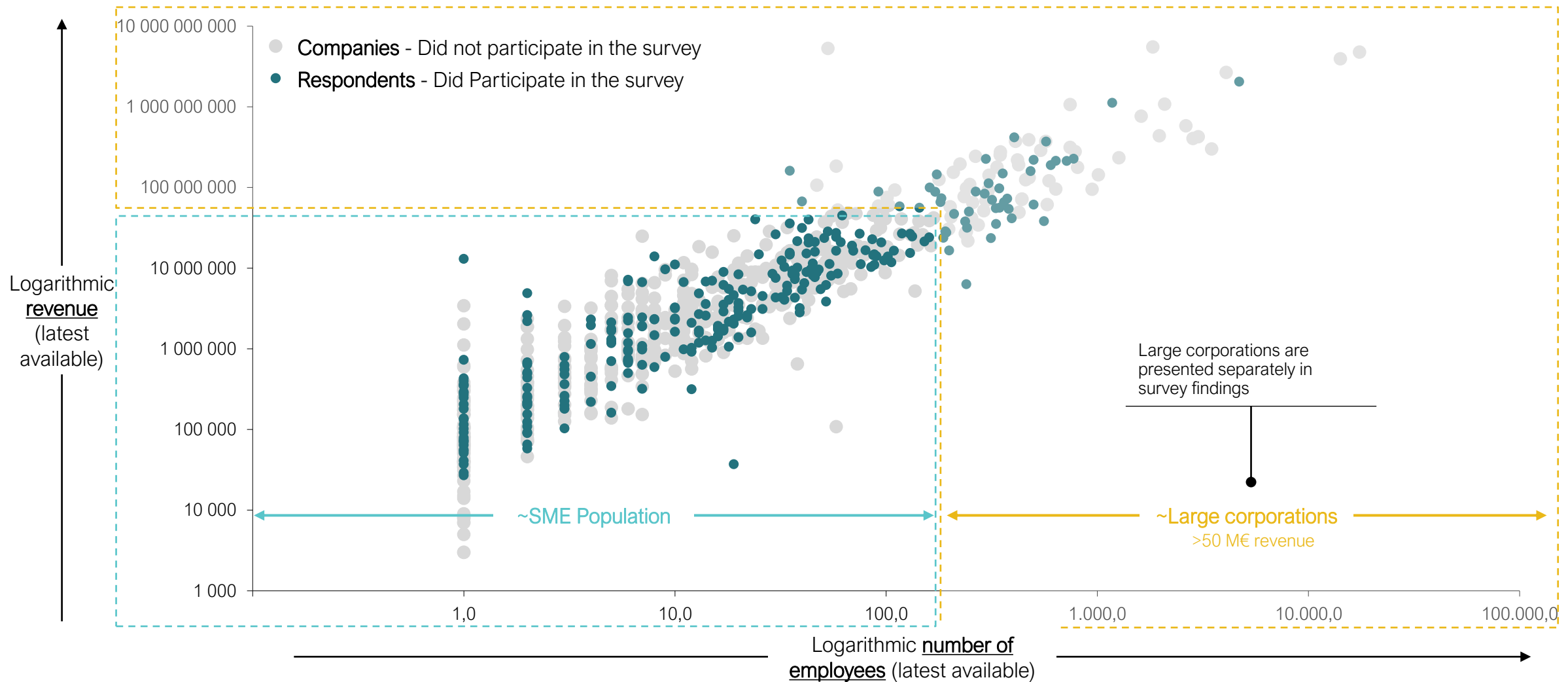
- The survey was carried out by Taloustutkimus Oy who reached out to potential candidates and conducted the survey through telephone interviews with willing participants during 24.3.2023 – 26.5.2023
- Each interview lasted around 22 minutes per company
- Out of the projected sample of 400 companies, Taloustutkimus managed to interview and receive a valid response from 315 companies
- Large corporates answered the questions only regarding the marine divisions inside the larger company structure

No. of Respondents by Value Chain Link and Size

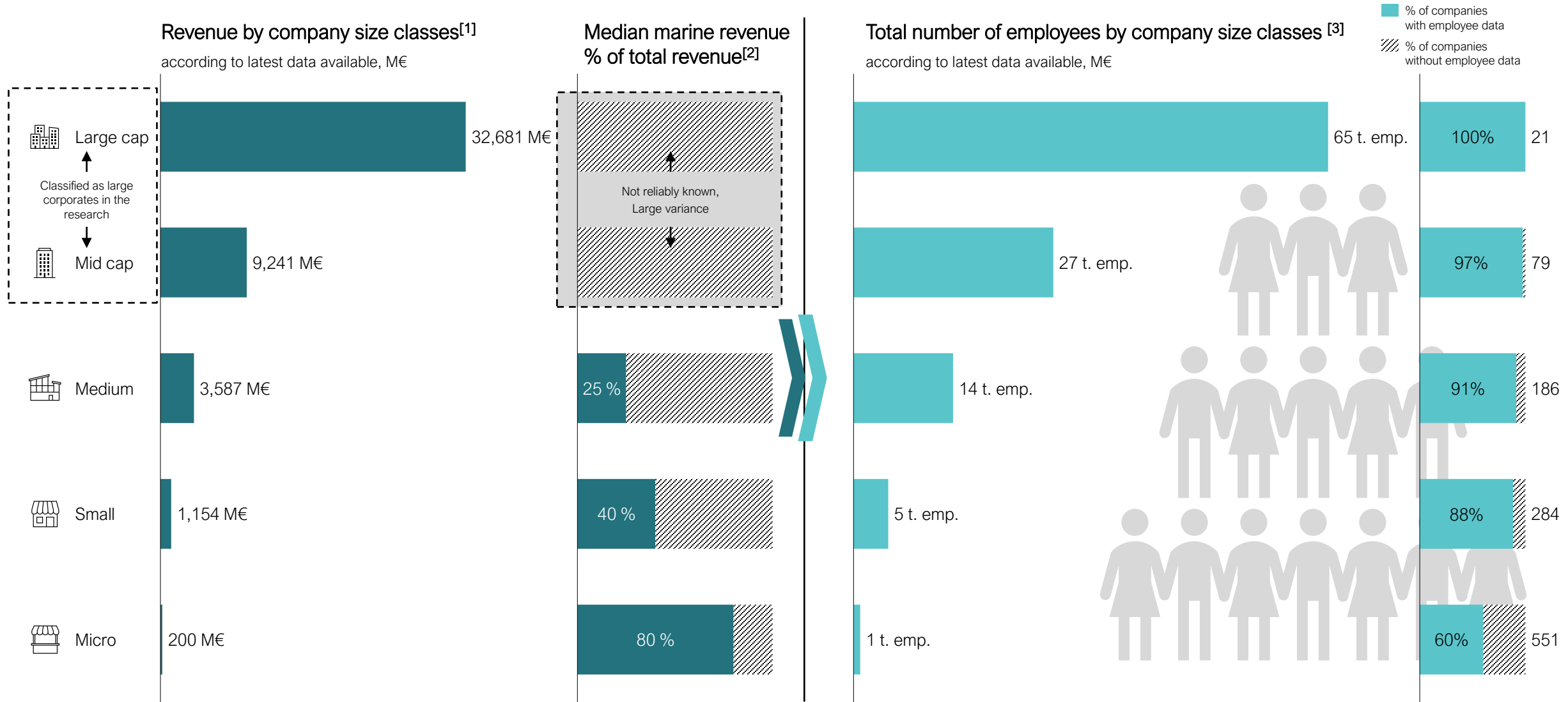


Survey covered significant portion of marine companies through different company size classes

Survey respondents participating in the research out of all marine companies^[1]



Direct revenue and employees within marine industry cannot be estimated accurately



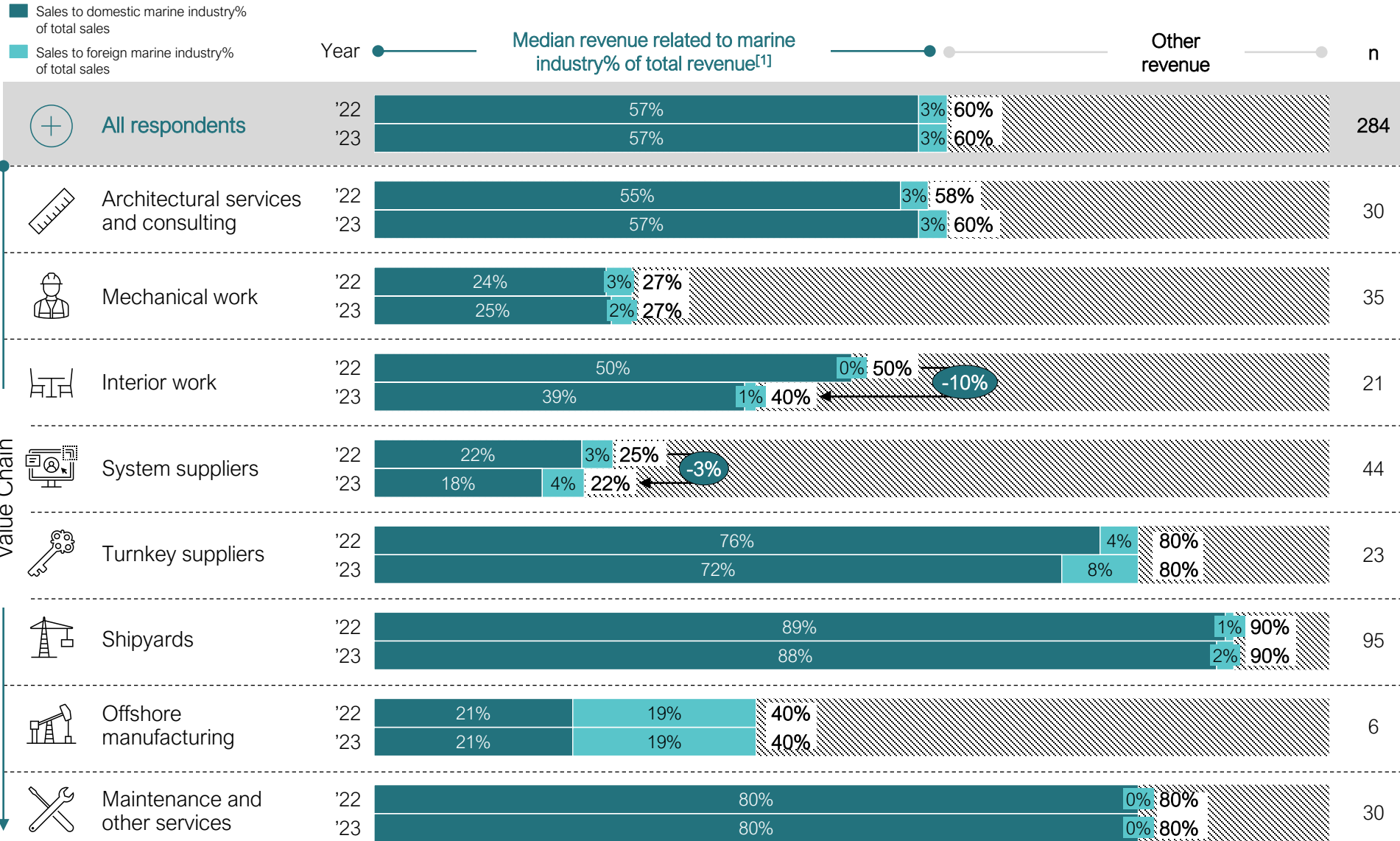


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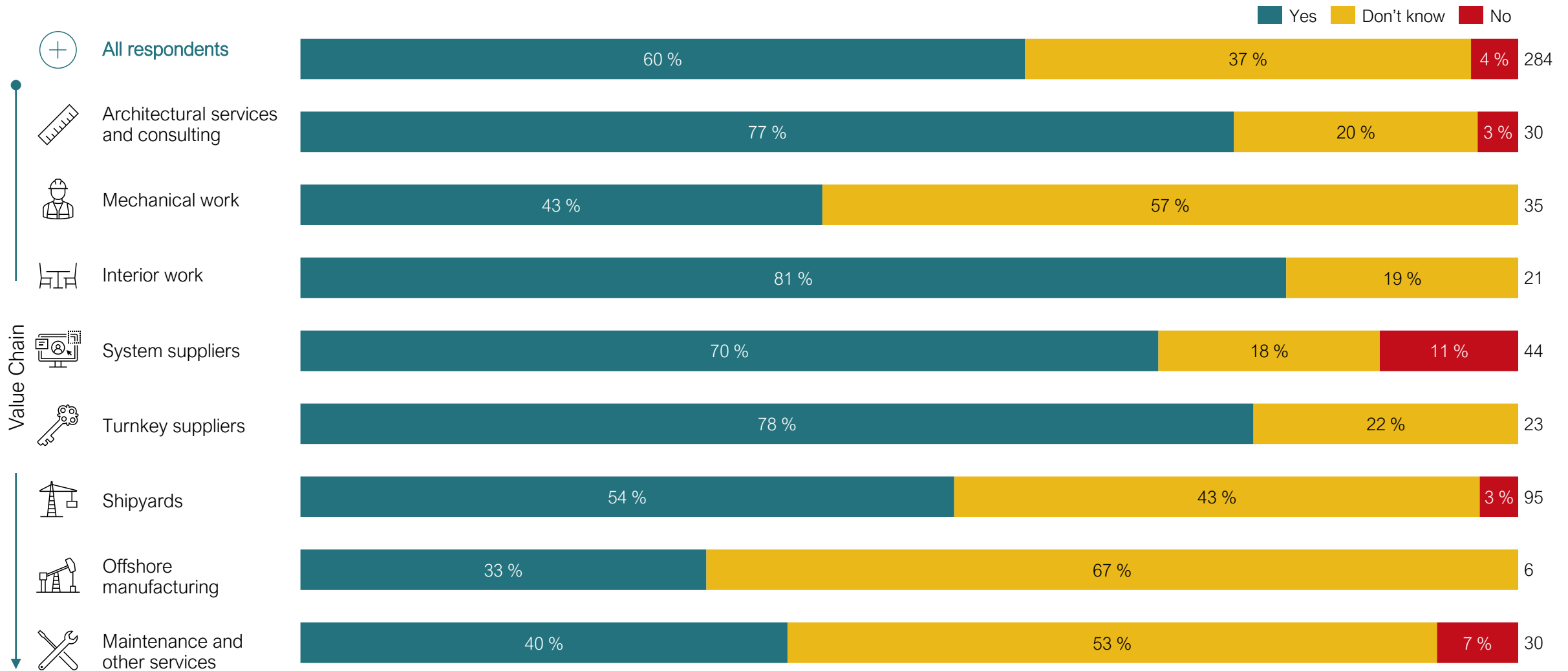
Marine industry represents 60% of the revenue SME respondents create



- Marine industry on median represents majority (60%) of the business amongst the respondents
- Domestic marine industry represents 95% of median revenue related to marine industry overall in years 2022 and 2023 i.e., foreign marine industry represents small part of the revenue Finnish marine companies create
- Across the value chain marine revenue stays stable across the years 2022 and 2023. Most significant outliers are interior work and system suppliers, where the share of marine industry decreases in year 2023
- Foreign marine industry represents largest median share of revenue in Turnkey suppliers, and offshore manufacturing, where as in maintenance and other services on median the foreign marine industry is 0% of revenue

SME respondents believe that domestic marine industry will stay as client until the end of 2030

Question 7.6: Do you believe that the domestic marine industry stays as your client atleast until 2030?



Four major domestic shipyards at the end of the researched value chain

Domestic shipyards represent hundreds of years of gained knowledge and expertise in marine business. **In this research, we try to analyze the current state of the value chain leading to these 4 shipyards**

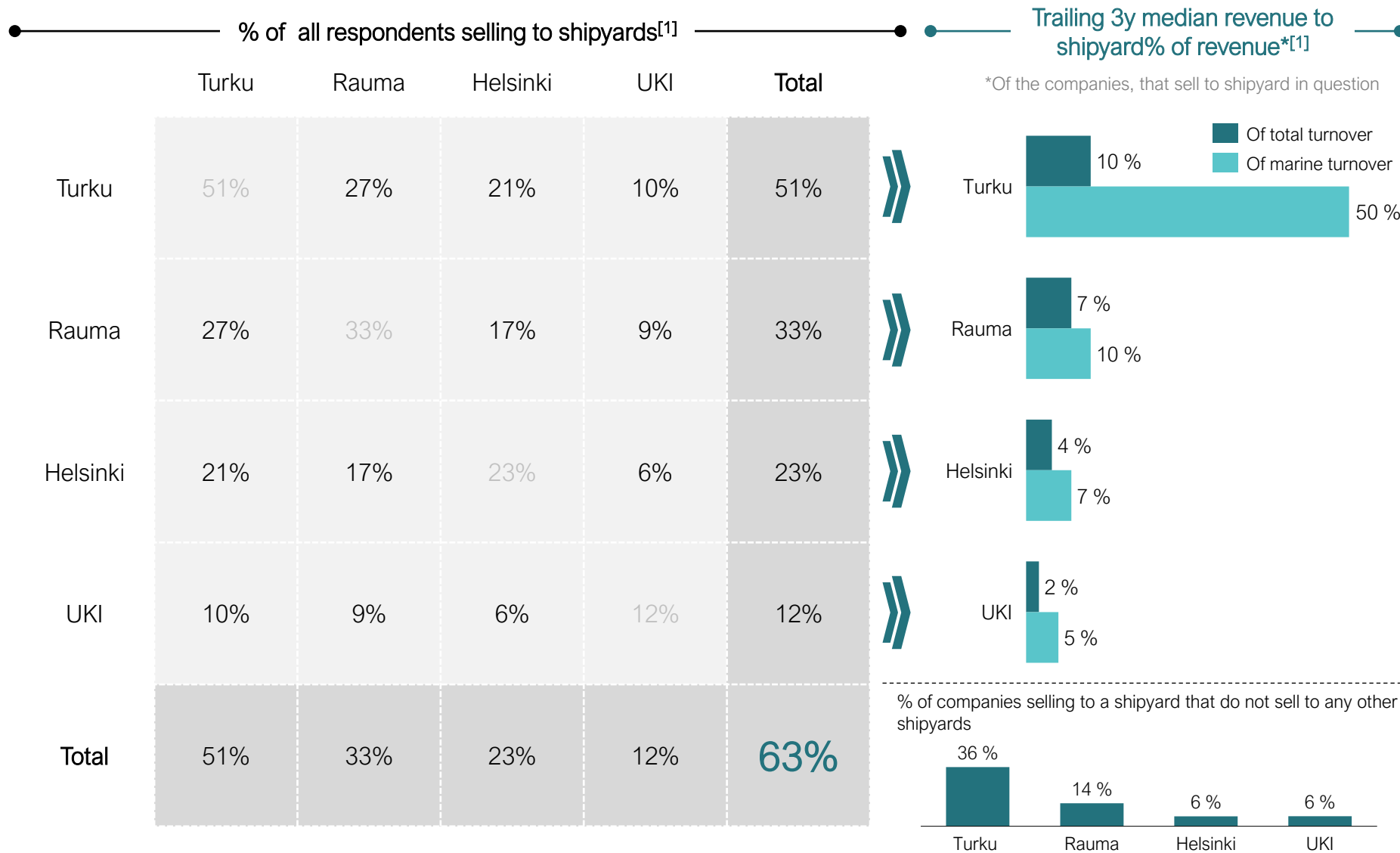
Note: [The value chain researched, does not include these 4 shipyards. The value chain component "shipyards" includes: repair shipyards, boatyards, and some misidentified companies]



Produced shiptypes	Revenue FY2021, M€	3 year average sales % of total revenue going to each shipyard*
Icebreakers, Passenger and car ferries, and ships for authorities and research institutes	135 M€	3 %
Smaller multipurpose vessels for authorities, and smaller ferries	21 M€	1 %
Worlds most advanced cruise ships	1000 M€	13 %
Passenger ships, icebreakers, and superyachts	180 M€	1 %

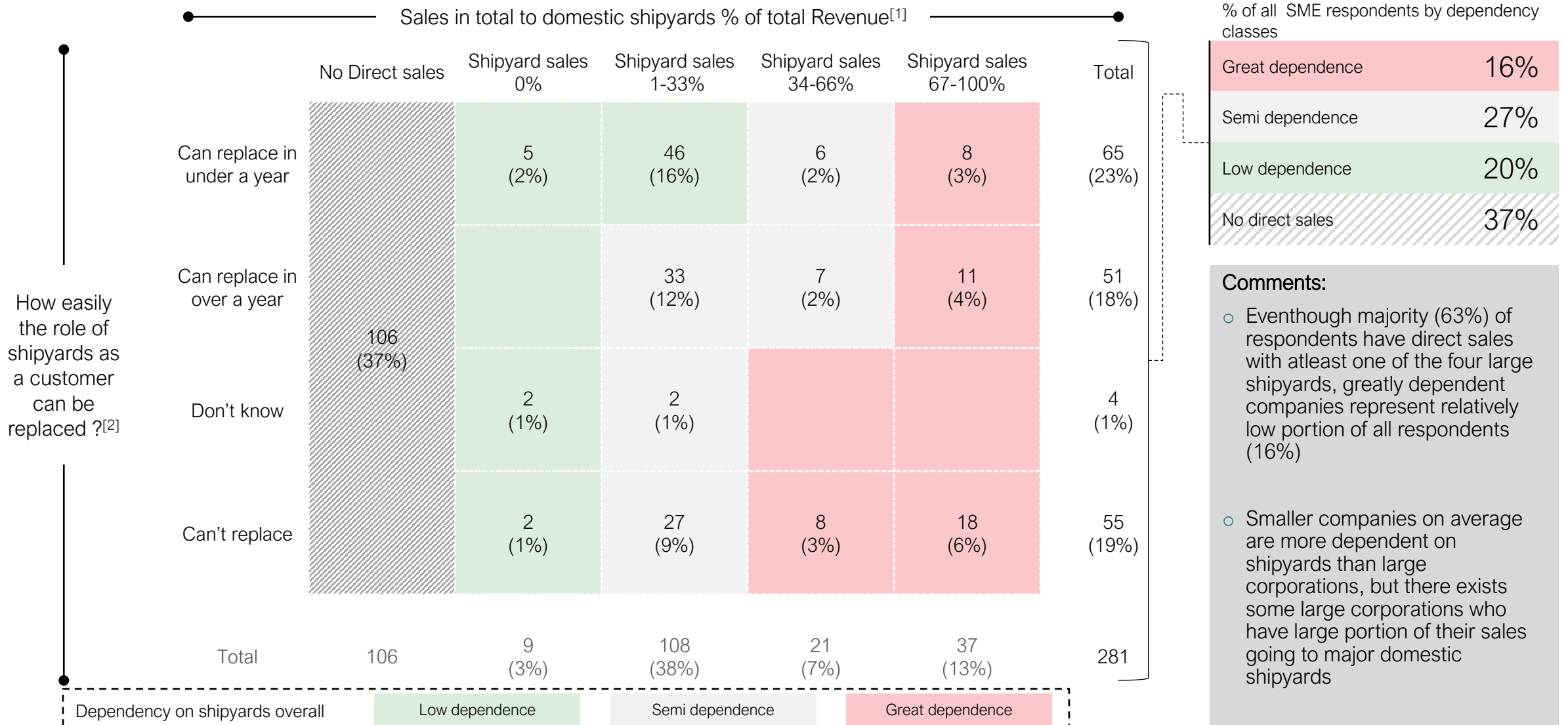
*of all SME respondents in the survey, which encompasses the value chain leading to these 4 major shipyards

Major domestic shipyards are essential for SME respondents



- Shipyards are a major component of Finnish marine industry, **63% of SME respondents sell directly to at least one of the four largest shipyards**
- Meyer Turku is by far the largest shipyard in Finland which is reflected on the data. 51% of all companies in domestic marine industry have direct revenue to Turku. Almost all companies that sell to some other shipyard, sell to Meyer Turku as well
- On the other hand, minority of respondents sell directly to shipyards in Helsinki (23% of respondents) and Uusikaupunki (12% of respondents) and even amongst those companies that do, the direct revenue to shipyard on median represent really small portion of total revenue (4% and 2% respectively)
- Minority (25% of respondents) of marine companies sell to a single shipyard. Most of these companies (73%) are selling to Meyer Turku

SME respondents dependency on major domestic shipyards based on direct sales



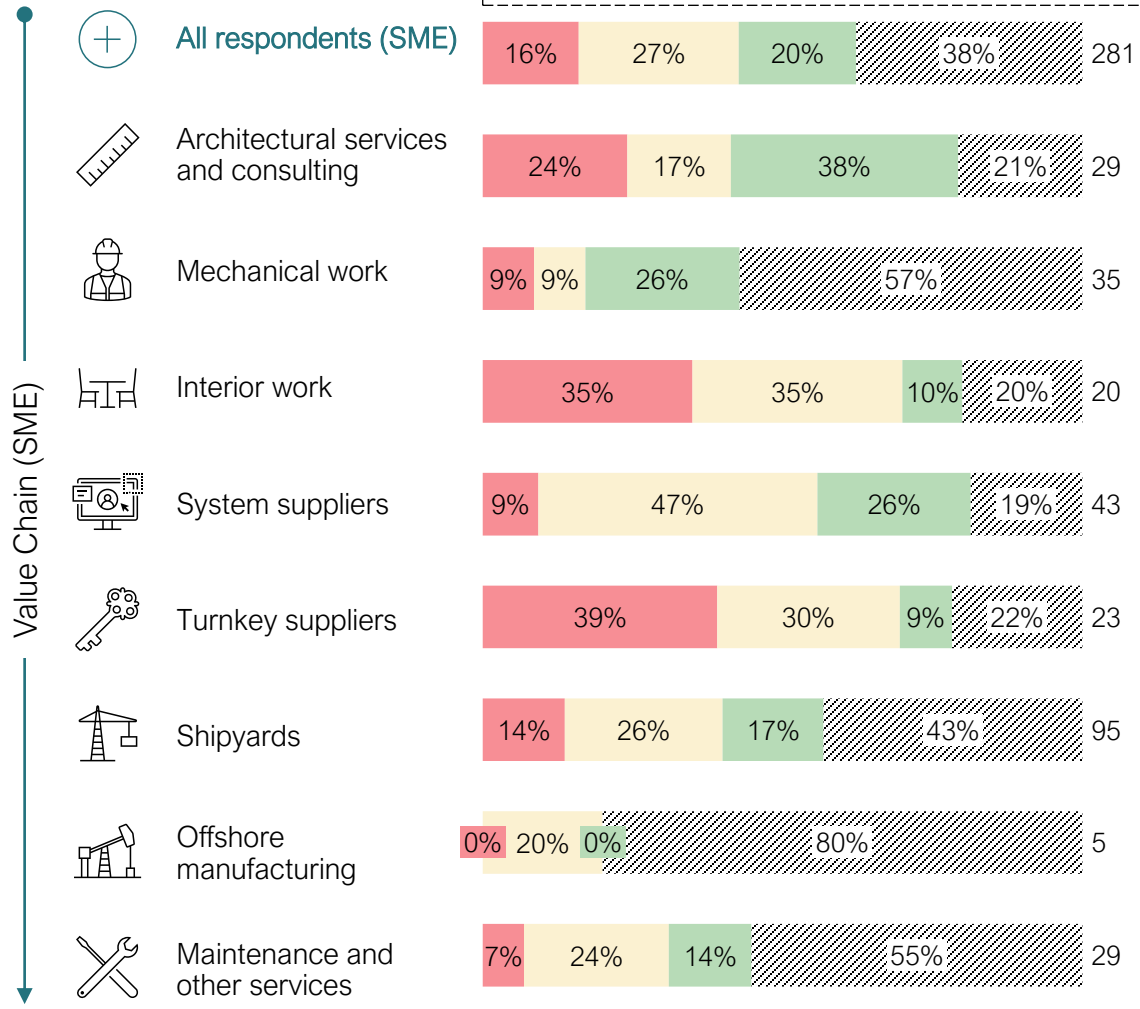
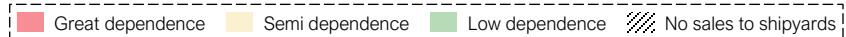
[1] Sum of survey questions 7.1-7.4: How large portion of your marine related sales have been directed to Turku/Rauma/Helsinki/UKI työväne during the last three years

[2]Joined survey questions 7.5 and 7.5.1: "Can you replace the sales directed to these shipyards?" and "If you would replace the shipyard sales, how long it would take?"

Shipyard dependency distribution across the value chain and company size classes

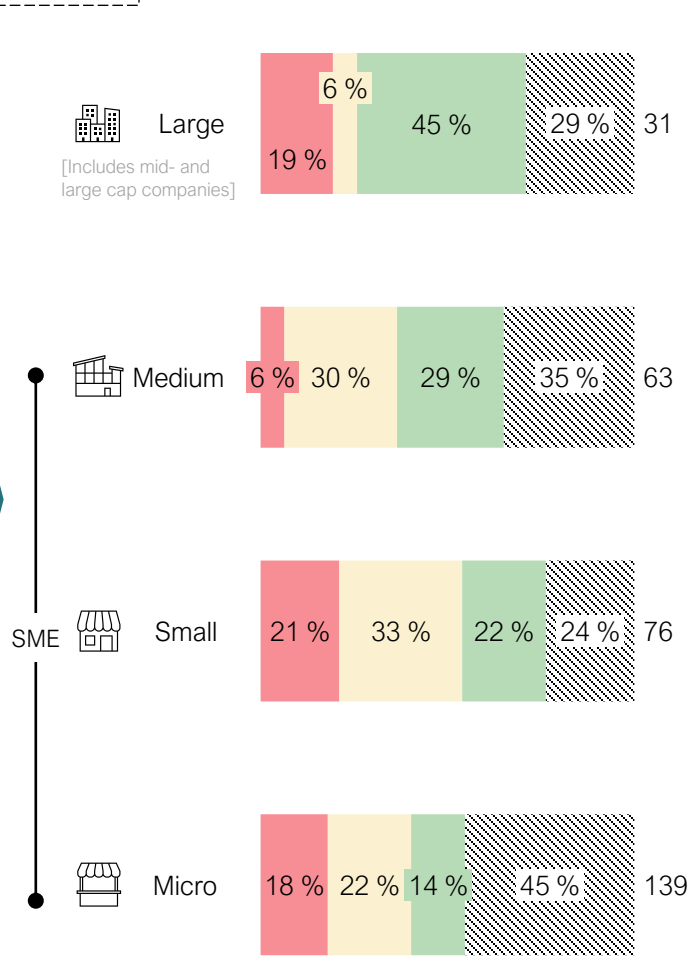
Dependency of major domestic shipyards across the marine value chain...^[1]

% of respondents in the value chain link



...and across the size classes^[1]

% of respondents in the company size class



- Overall, the four major domestic shipyards have wide direct impact across the value chain, and different company sizes. Still, for most companies the direct counterparty risk to shipyards is somewhat limited
- Relatively most shipyard dependent companies across the value chain are in **Architectural services and consulting, Interior work, and Turnkey suppliers**
- Mechanical work as well as maintenance and other services seem to be least dependent on the major domestic shipyards
- From the population of marine companies with sales to major shipyards, small and micro companies have relatively more companies with great shipyard dependence than larger companies

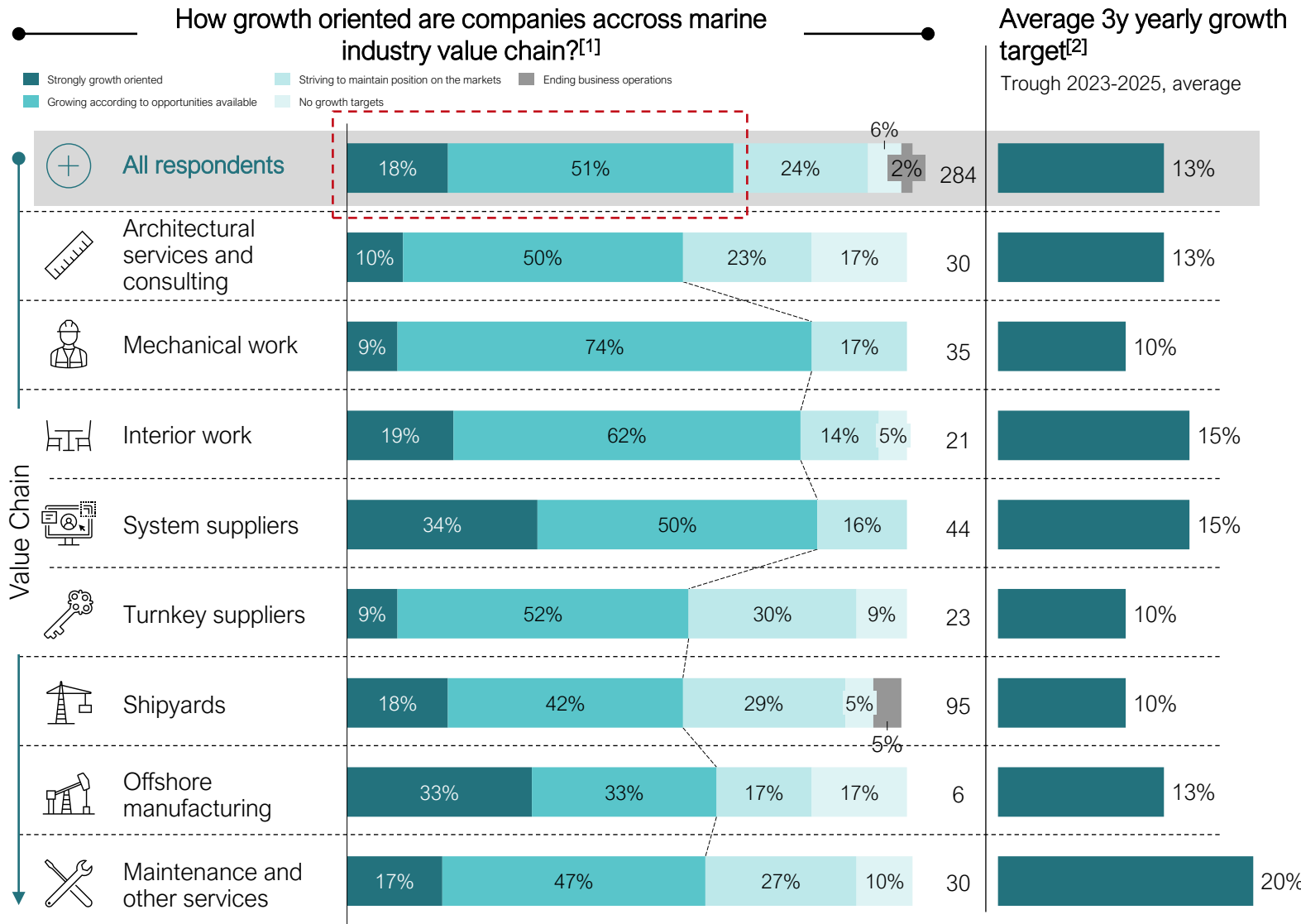


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SME respondents growth orientation follows wider corporate landscape



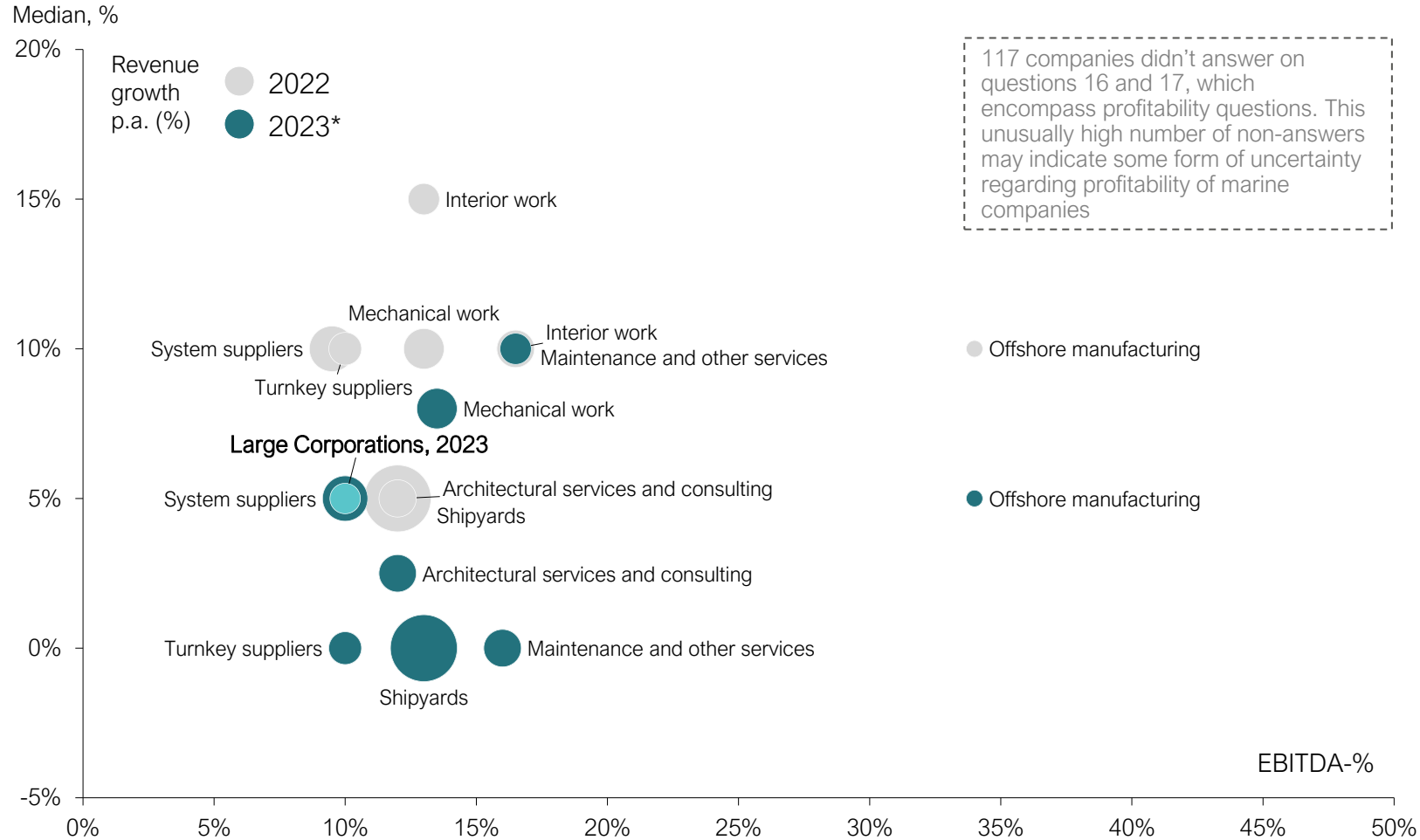
18%
Of the all respondents aim to grow through M&A^[3]

53%
Of the companies aim to grow in foreign markets^[4]

- 18 % SME respondents are strongly growth oriented, and 51% strive to grow according to opportunities available. This distribution is really close to growth orientation distribution of the wider SME corporate landscape, where strongly growth oriented companies represent approximately 16-17% of the population
- Most growth oriented value chain links are system suppliers, and interior work, which also correspondingly have one of the highest median growth targets (yearly growth target 15%)
- Half (53%) of marine companies aim to grow in foreign markets
- Minority of respondents (18%) aim to grow through M&A

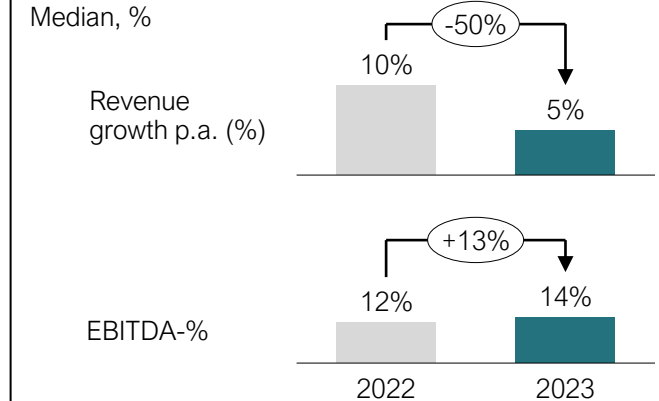
Growth and profitability of the SME respondents

Median revenue growth and EBITDA margin in 2022 and 2023, by value chain link...^[1]



*Estimates for the full year, provided during the interview period

... and by all SME respondents

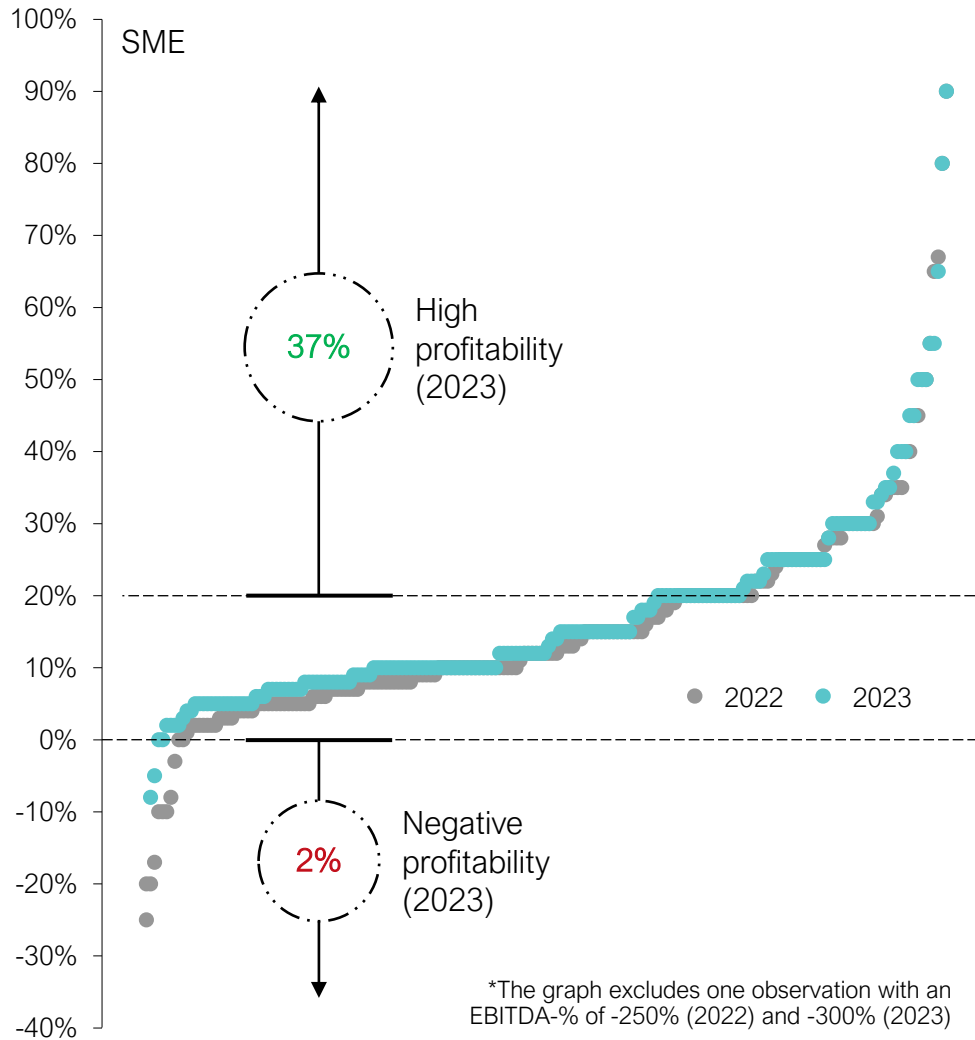


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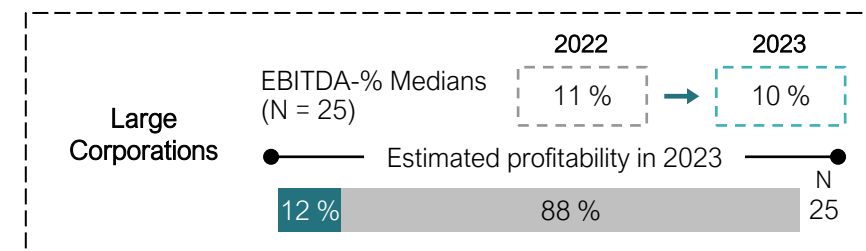
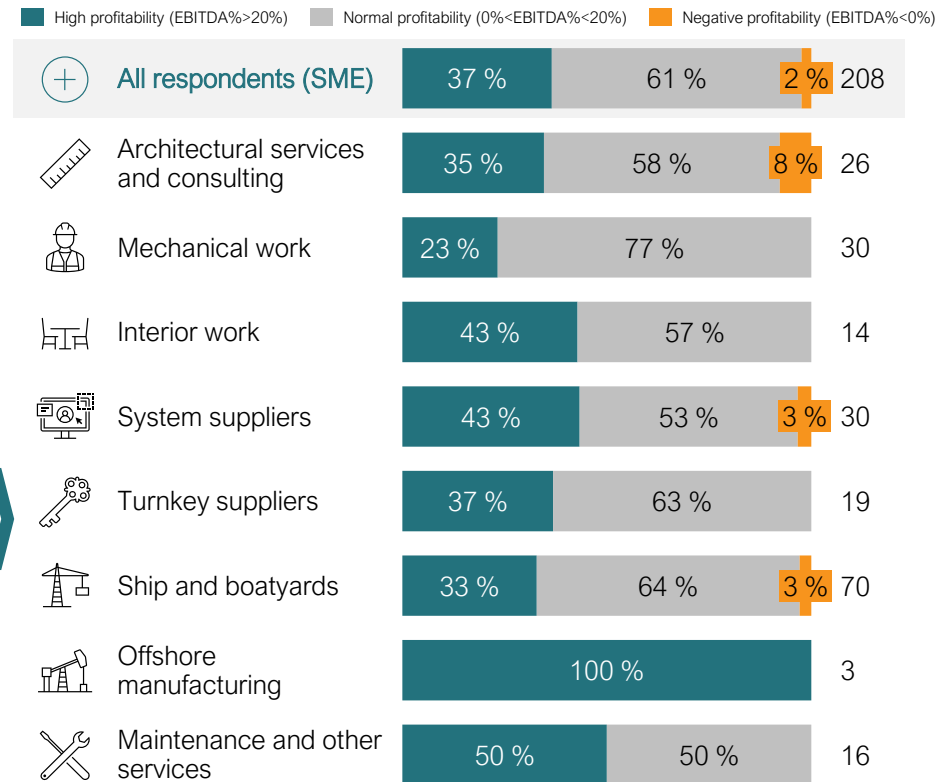
- Growth amongs Finnish marine companies is expected to slow down in 2023, as **the median revenue growth rate is expected to decrease from 10% to 5%**
- Meanwhile margins are expected to stay in extremely healthy levels as **median EBITDA% increases to 14% in 2023 from 12% in 2022**
- Growth slows down most in maintenance and other services, and turnkey suppliers, where the expected growth rate in 2023 is 0%. **Meanwhile the production phase of the value chain expects the growth to continue moderately.** Mechanical work, interior workm and system suppliers expect that the growth in 2023 will be between 5 and 10%

The survey results indicate high profitability across the value chain

Profitability (EBITDA-%) of individual SME Respondents^[1] (N = 198)*

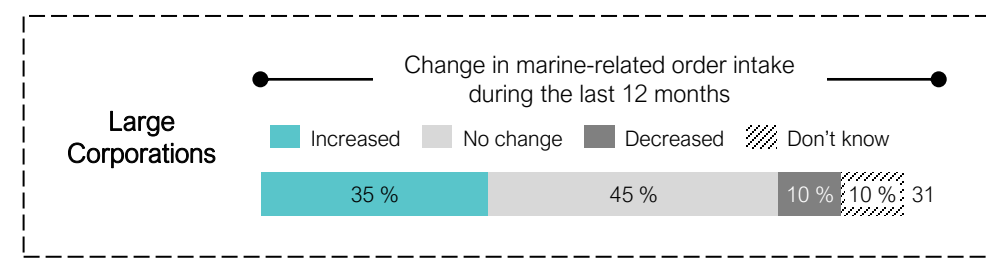
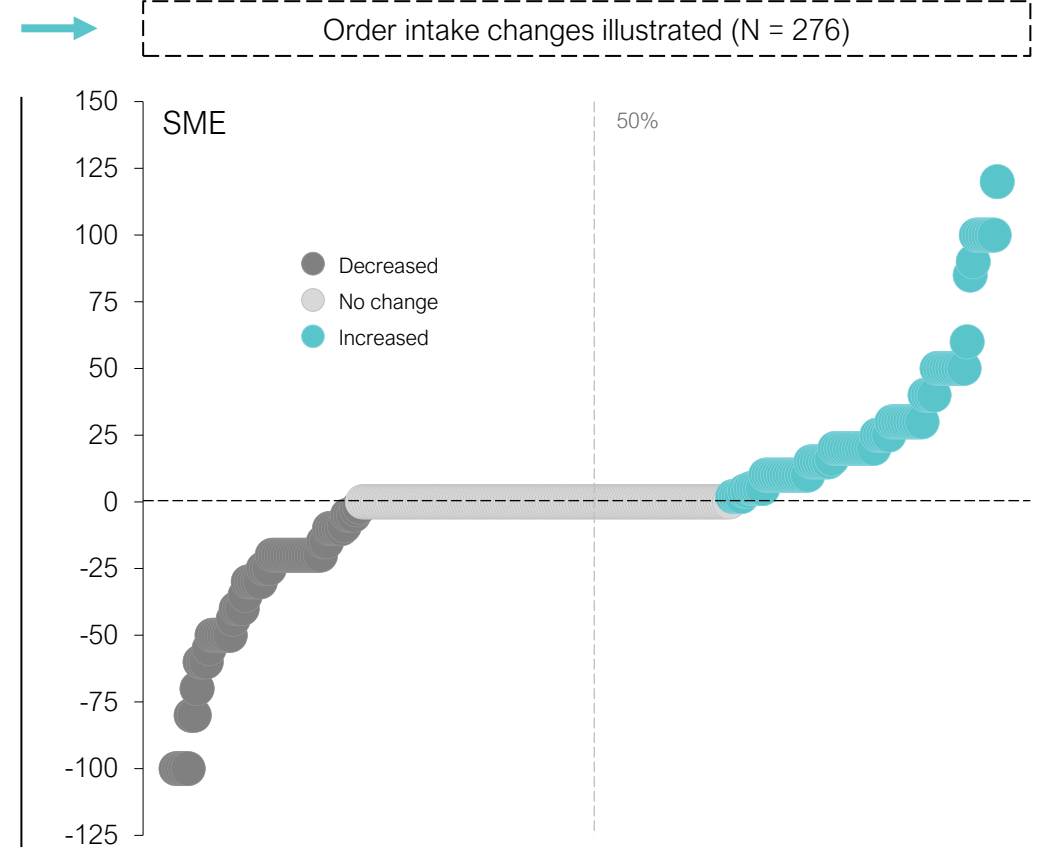
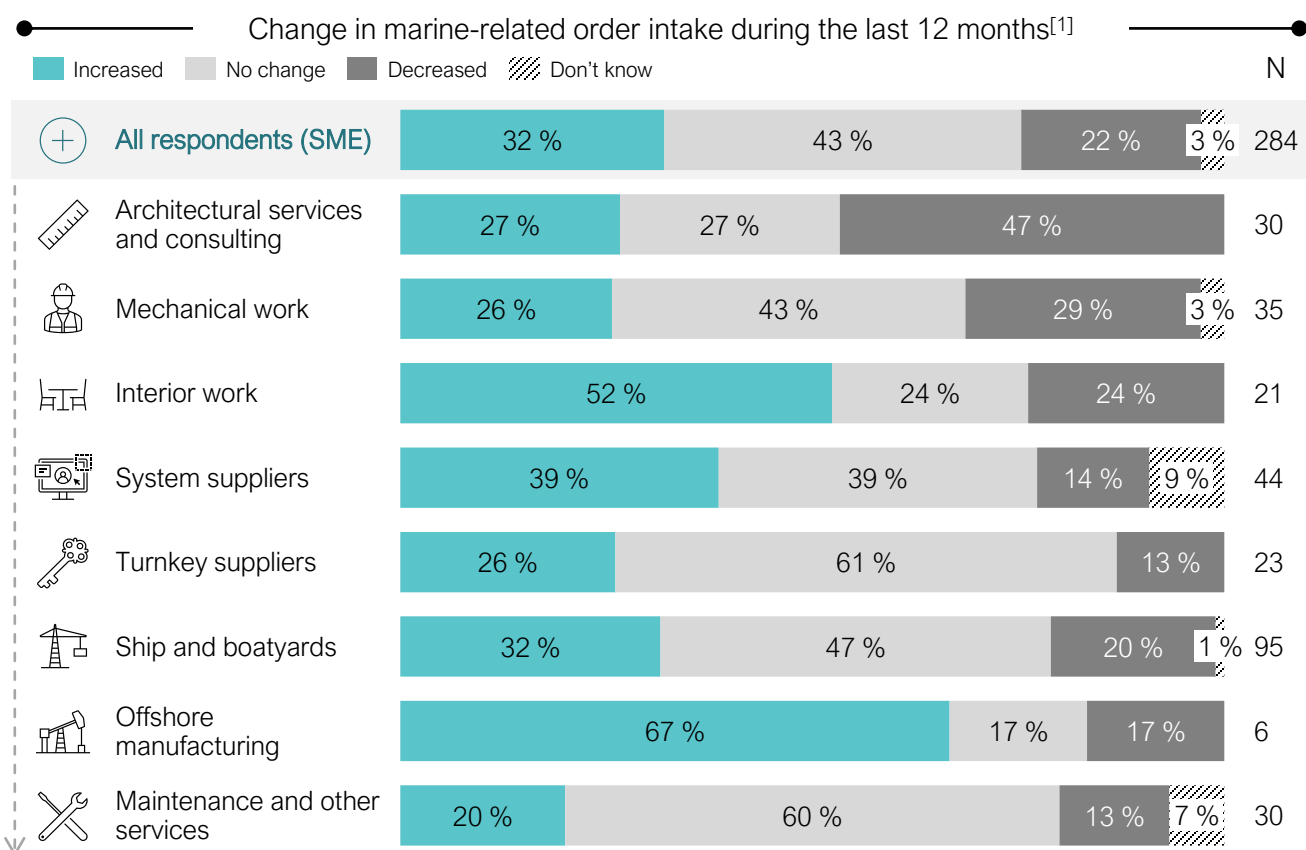


Estimated profitability in 2023 across the value chain^[1]



- Based on their estimations, **37% of all SME survey participants are looking to end the year with an EBITDA margin of 20% or more.**
- Only 2% of SME survey participants estimate a negative EBITDA margin for 2023
- Overall, SMEs estimate to have a significantly larger EBITDA margin in 2023 compared to large corporations. On the other hand, no participating large corporation estimates to have a negative margin during the year.
- High profitability is estimated quite uniformly across the value chain with the exception of offshore manufacturing and maintenance and other services.

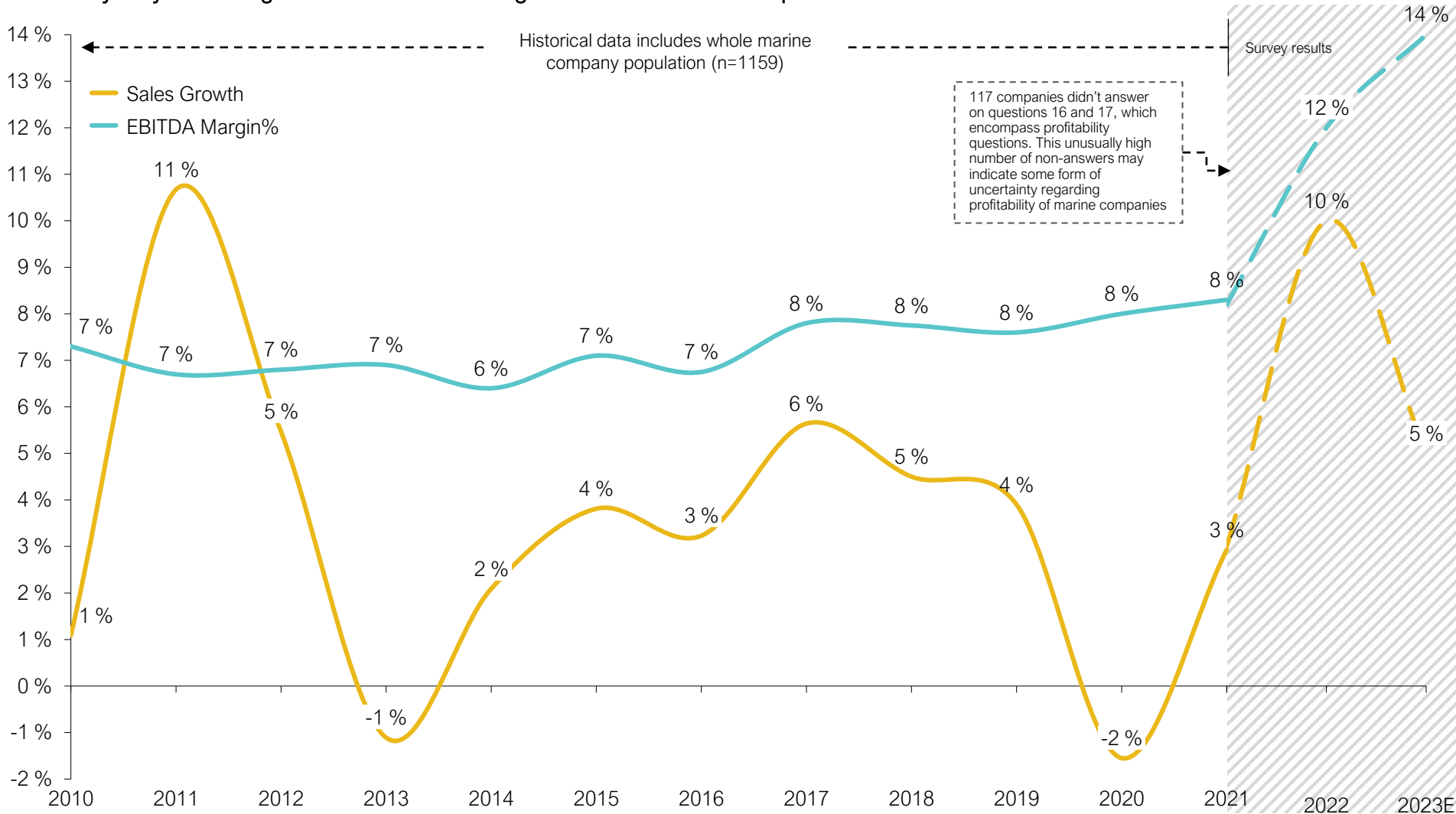
Order intake changes indicate overall growth but vary by value chain link



- Order intake has increased for a significant portion of companies belonging to *offshore manufacturing, interior work and system suppliers*.
- In contrast, almost 50% of companies belonging to *architectural services and consulting* have suffered from a decrease in marine-related order intake.
- Throughout the entire sample, there has been a net positive shift in order intake: 32% of all participating companies have seen an increase while only 22% have seen a decrease.

SME marine companies growth and profitability time-series

Median yearly revenue growth and EBITDA margin of Finnish marine companies^[1]

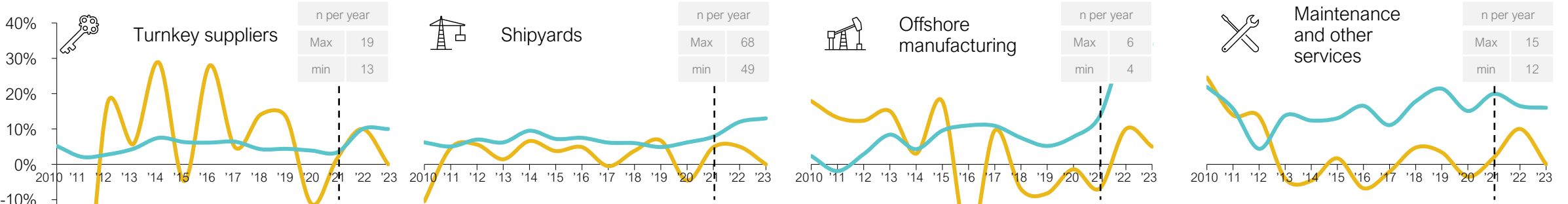
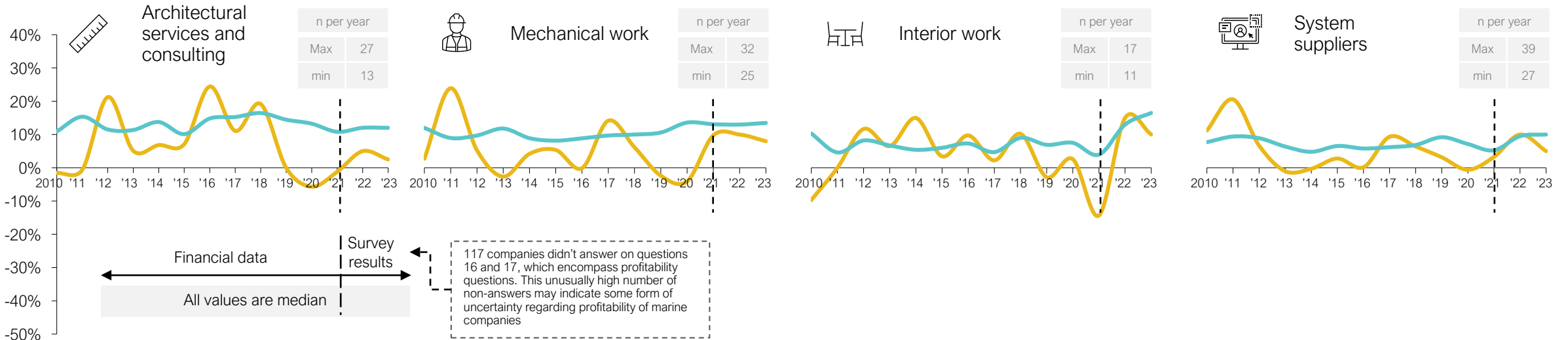
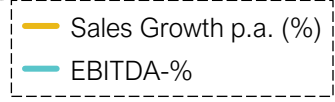


- Overall revenue growth seems to be in line with other manufacturing companies, i.e. the historical growth have been subdued
- Covid-19 pandemic had clear effect on the marine industry. revenue decreased across the whole marine industry value chain as a consequence
- Since the pandemic, the nominal growth have returned (results are not inflation-adjusted)
- Across the marine value chain the median EBITDA margin have been certainly stable, as even in the time of crisis, the profitability have not really decreased

SME companies growth and profitability time-series by value chain segment

Yearly median revenue growth%, and EBITDA% by value chain link^[1]

Includes only companies, that responded to survey



- Comments
- Eventhough different value chain links experience growth cyclically– the profitability accross the value chain have been relatively stable
 - The impact of the COVID-19 pandemic is evident across the entire value chain. The subsequent resurgence in growth has been as widespread as the prior downturn



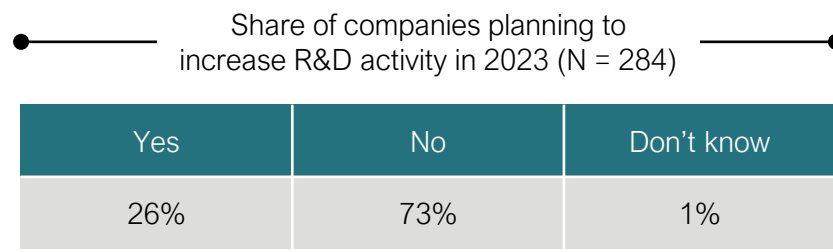
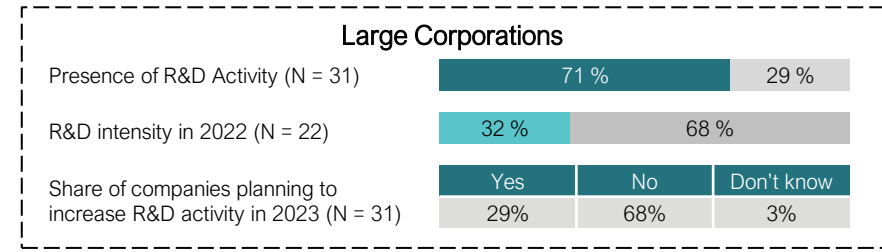
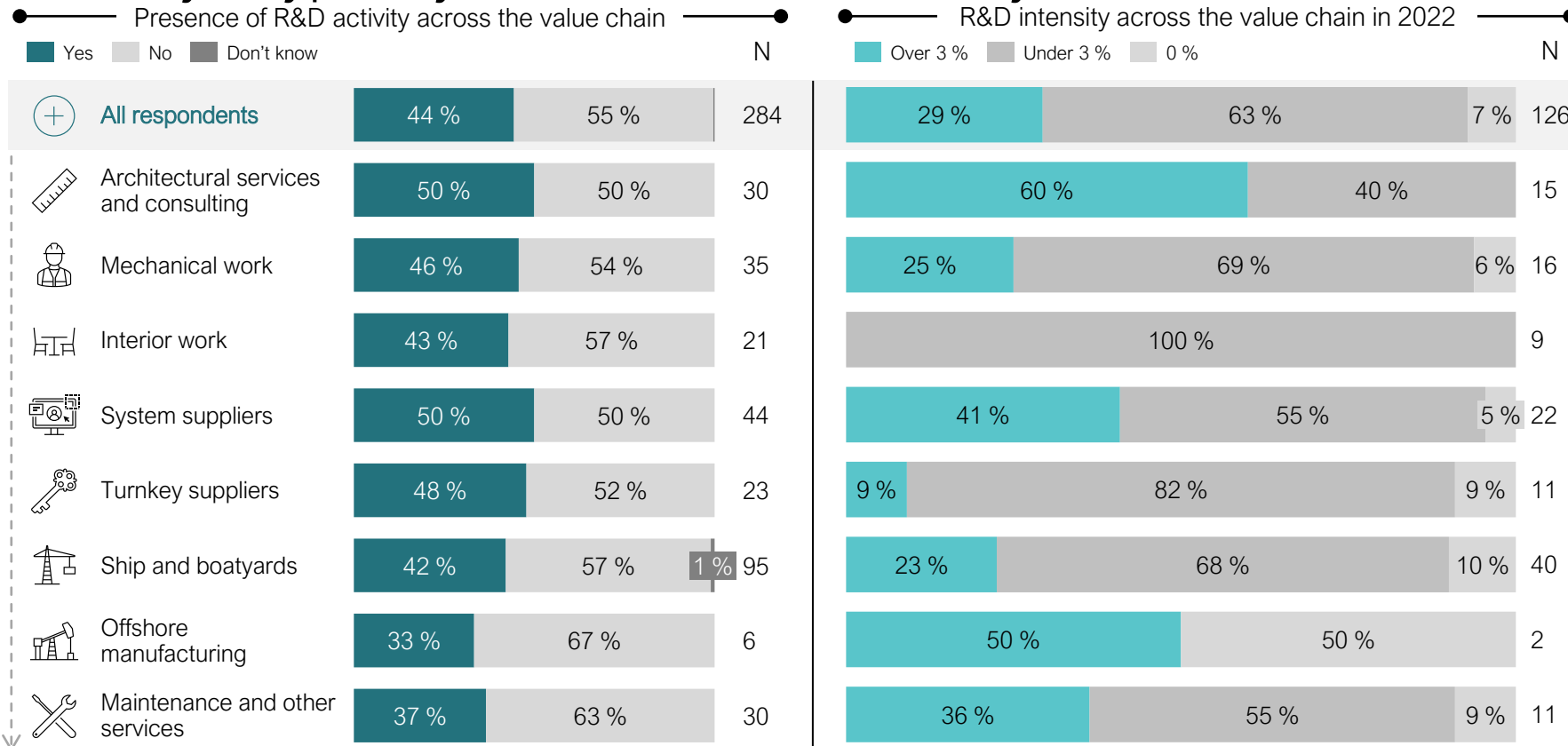
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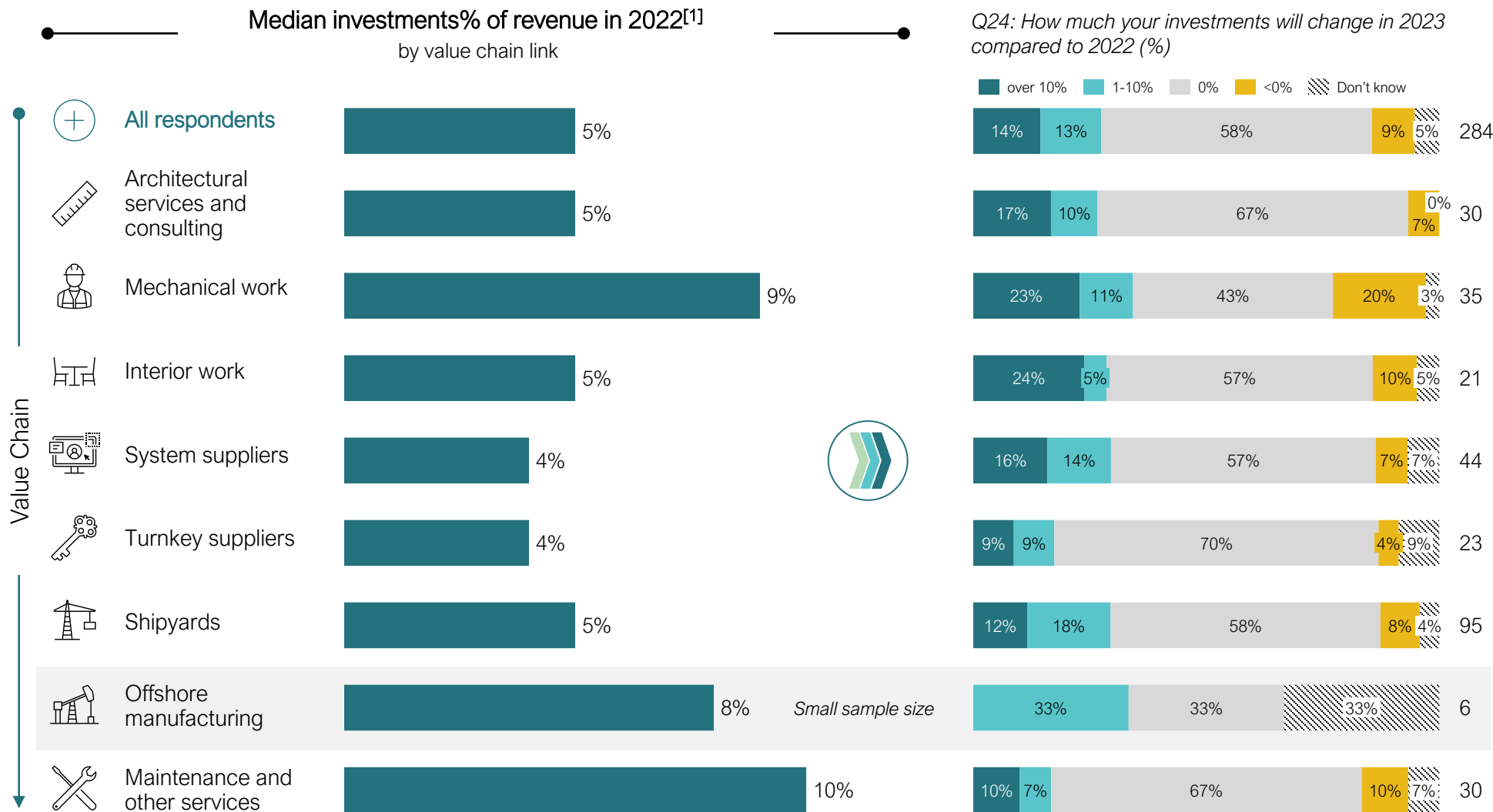
Appendix

Around half of participating SME respondents conduct research and development activity – typically with moderate intensity



- R&D activity is distributed relatively evenly across the value chain with the exception of *offshore manufacturing* and *maintenance and other services* having a slightly lower R&D presence than other value chain links.
- R&D activity is clearly more present in Large Corporations compared to SMEs, but R&D intensity is very similar throughout the entire survey group
- In 2022, R&D intensity was most pronounced in the value chain links that are traditionally most technologically and academically advanced: *architectural services and consulting* and *system suppliers*.
- Approximately 26% of all participants are planning to increase R&D activity in 2023.

SME respondents invest moderately – no significant changes on the horizon

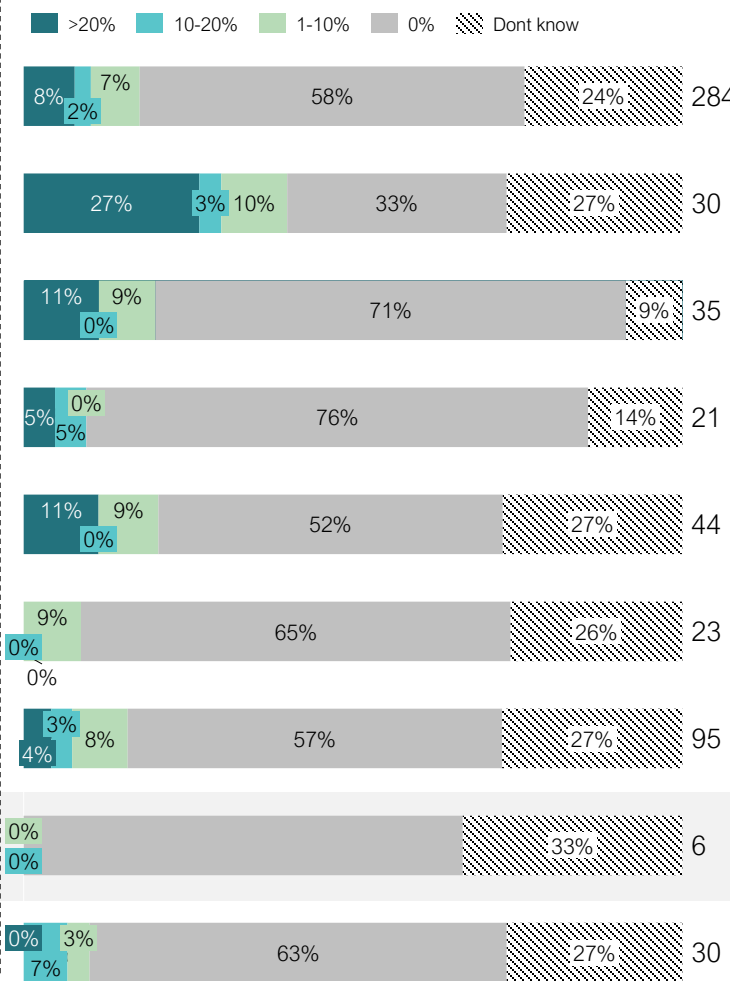
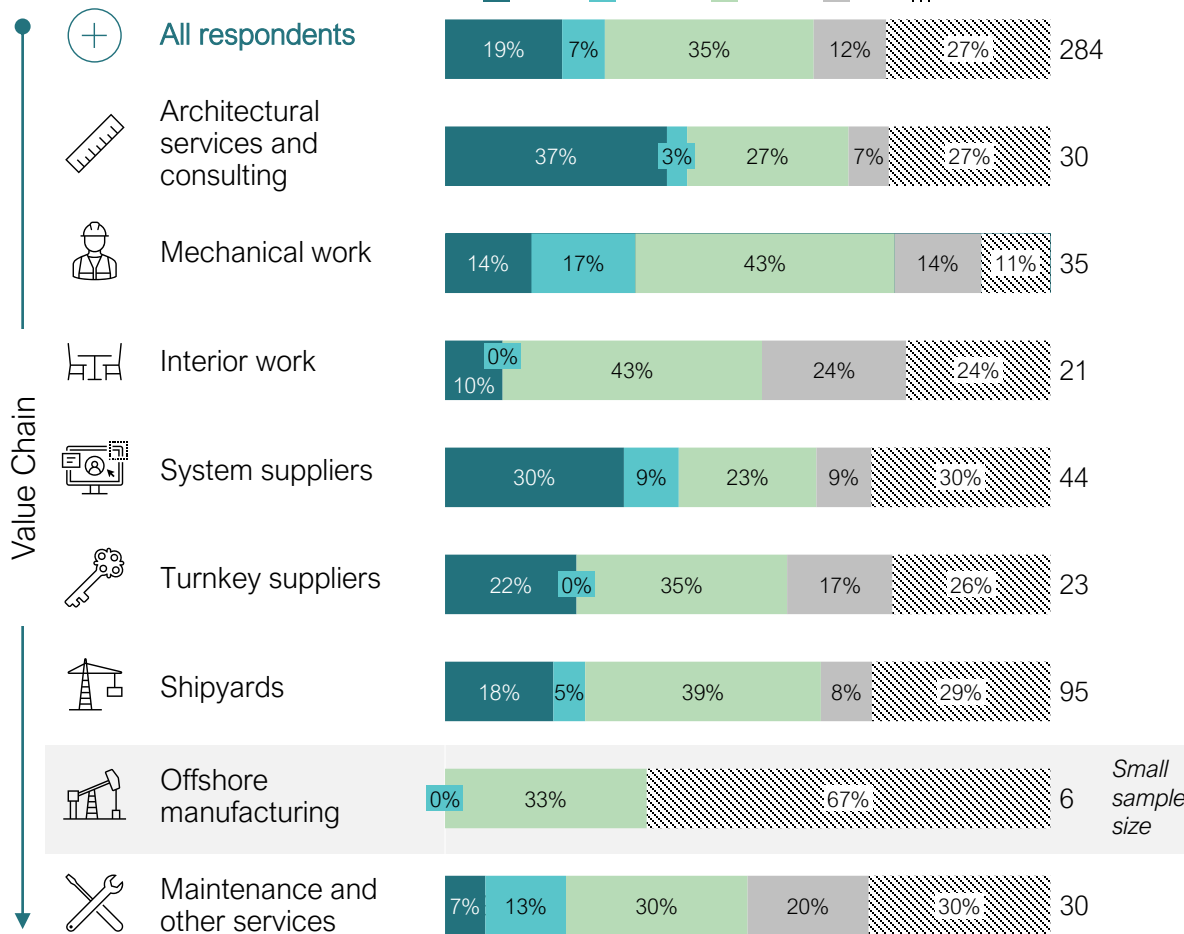


- Marine companies invested on median 5% of their revenue
- Across the value chain, **Mechanical work**, and **maintenance and other services** invested most in relation to their revenue in 2022
- **Median change in investments in year 2023 for all respondents was 0%** i.e., marine companies will invest as much in '23 as the invested in '22
- Relatively most companies increasing their investments (in 2023) across the value chain are in mechanical work, interior work, and system suppliers

Intangible- and foreign investments represented minority for SME respondents in 2022

Intangible investments of total investment%^[1]
2022, by value chain link

Foreign investments of total investments%^[2]
2022 by value chain link



- Intangible investments are in considerable minority across the value chain in Finnish marine industry. **Only 26% of companies invested more than 10% of total investments to intangible assets**, Mechanical work, and system suppliers being most active in investing in intangible assets
- **Foreign investments were rare in 2022 amongst marine industry**, as only 17% of companies invested outside of Finland, and even amongst these companies, foreign investments represented considerable minority of their investments. Architectural services and consulting stands out, as 40% of respondents in the link invested in foreign markets in 2022



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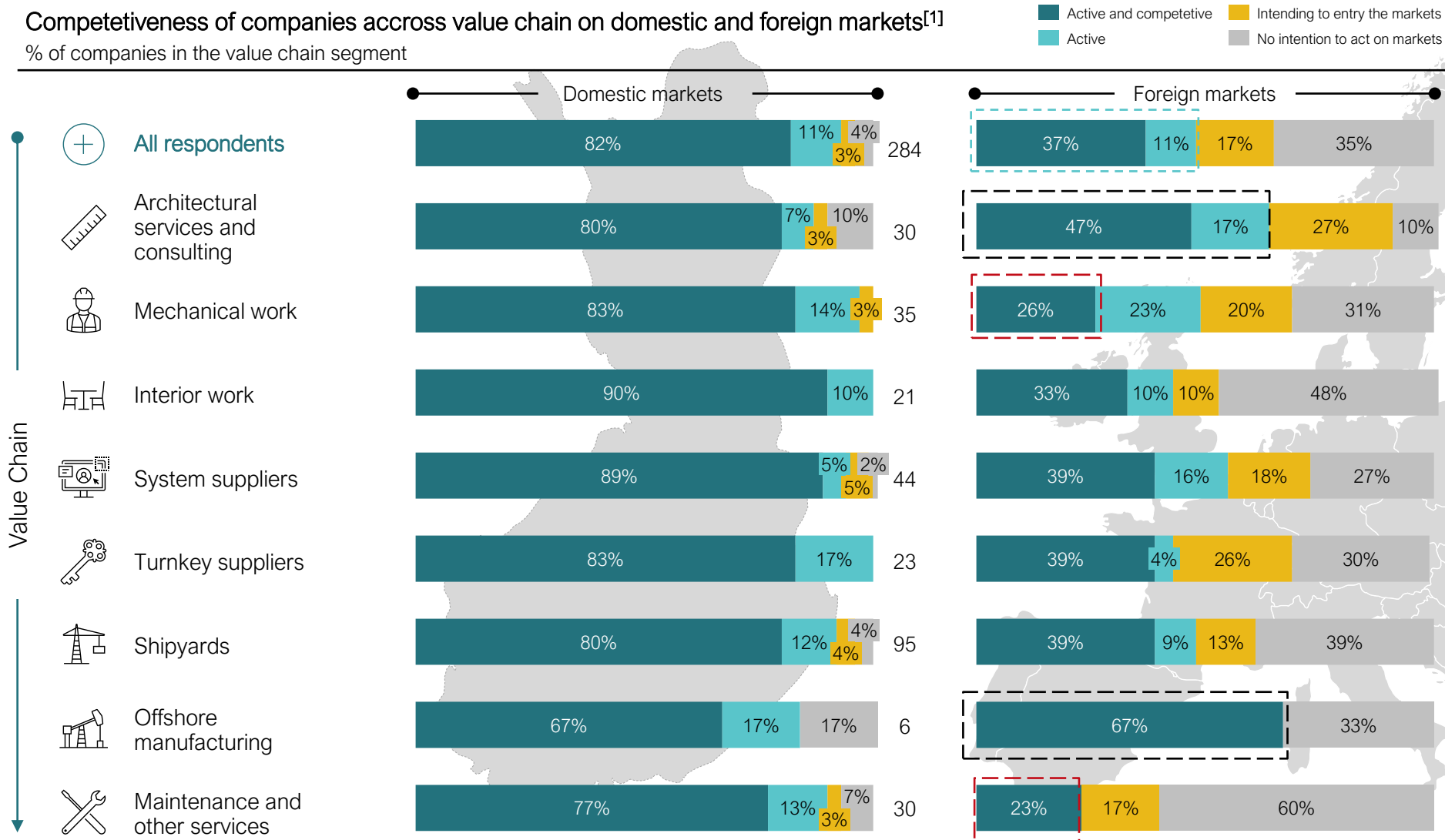
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6. Transforming marine supply chains
7. Addressing labor shortage
8. Cost of production & solvency

Appendix

Competitiveness of SME respondents

Competitiveness of companies across value chain on domestic and foreign markets^[1]

% of companies in the value chain segment



82% of the marine companies estimate that they are competitive on domestic markets. On the other hand 37% of marine companies are active and competitive on foreign markets, while 17% of all marine companies are intending to enter foreign markets. Especially new TK-suppliers, and Architectural services and consulting companies intend to enter foreign markets.

According to their self-assessment, 77% of companies that are already operating in foreign markets consider themselves competitive

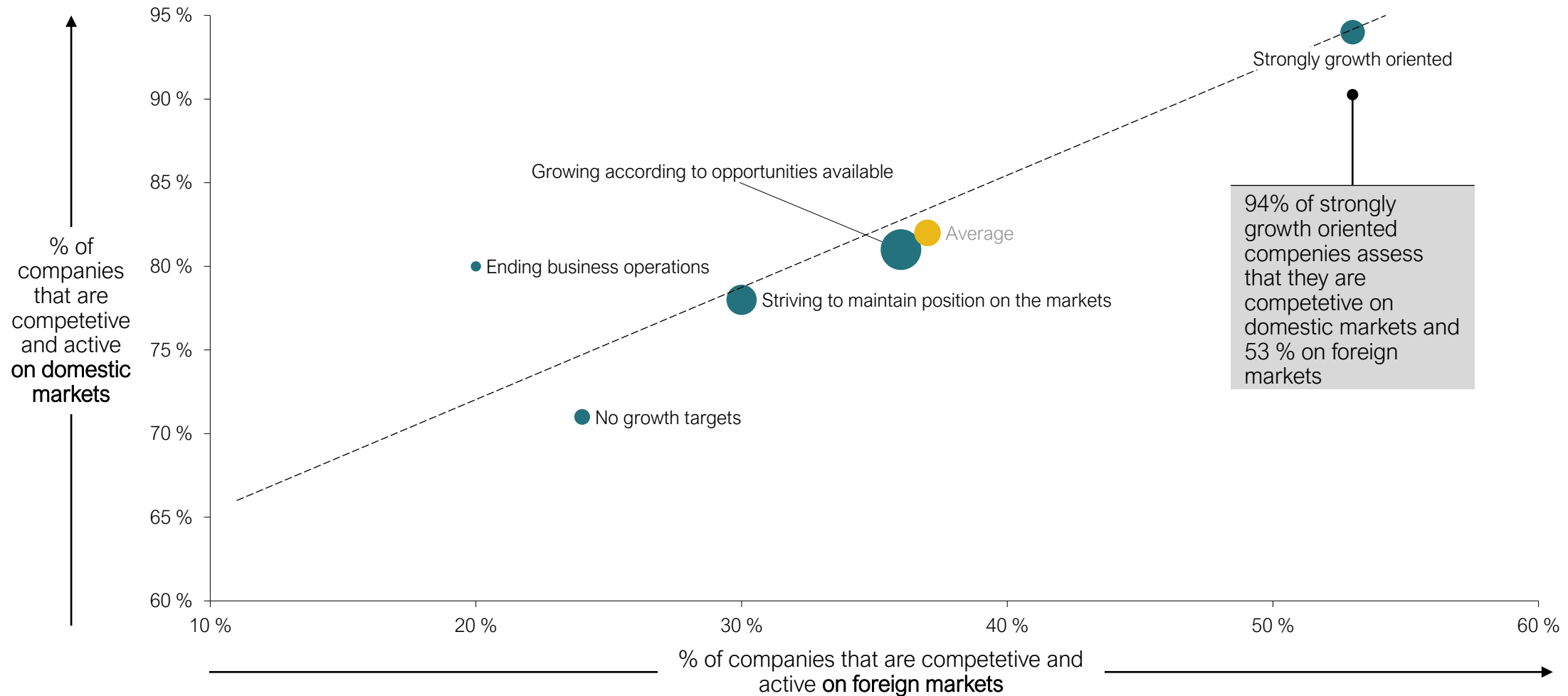
Most foreign activities are in architectural services and consulting as well as in offshore manufacturing. Only 10% of the former do not intend to act on foreign markets at all

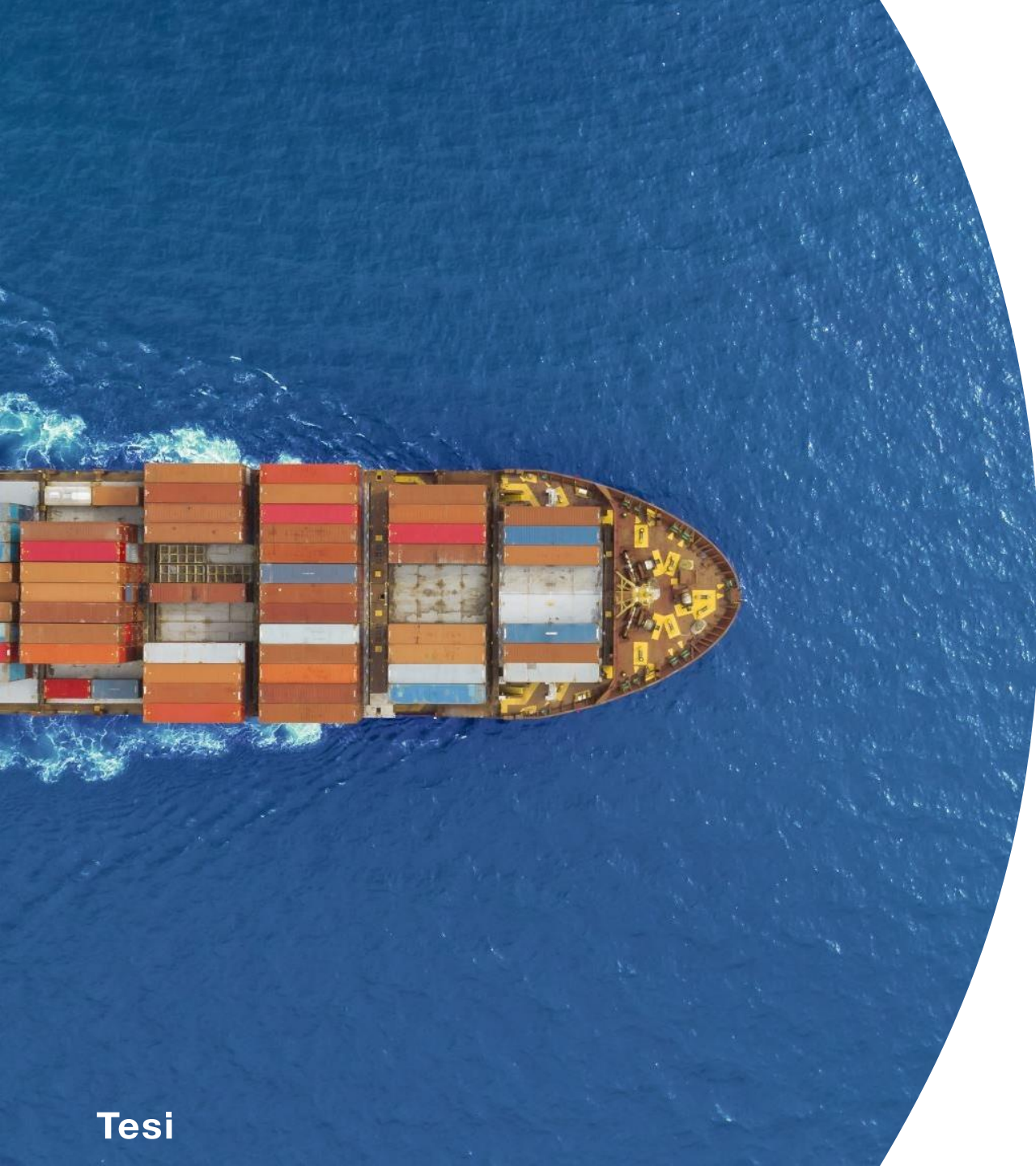
Least foreign activities are in maintenance and other services as well as in mechanical work

Growth orientation and competitiveness correlate amongst SME respondents

Growth orientation and competitive advantage^[1]

% of companies in the growth orientation class that are competitive and active on markets





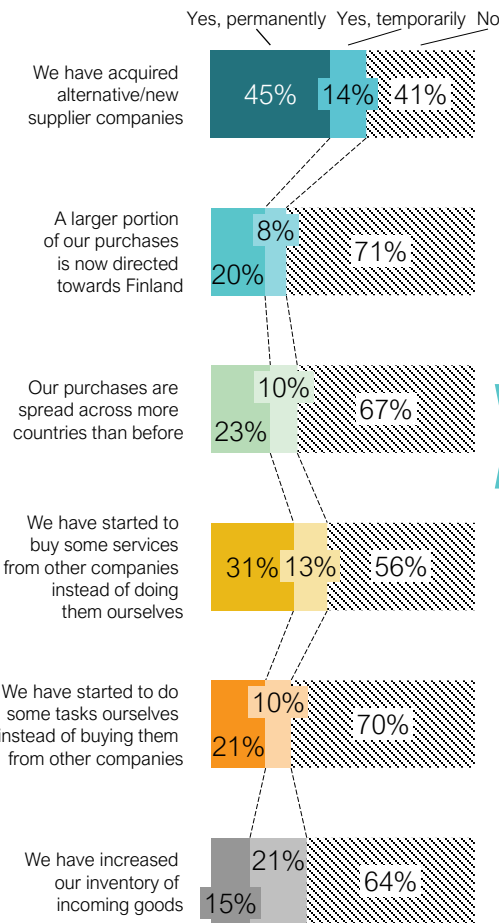
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Appendix

85% of SME respondents have made changes on their supply chains...

% of all respondents, who have made the following changes on their supply chains^[1]



% of companies in the value chain link, that say they have made changes on their supply chains either permanently or temporarily^[1]

By value chain link



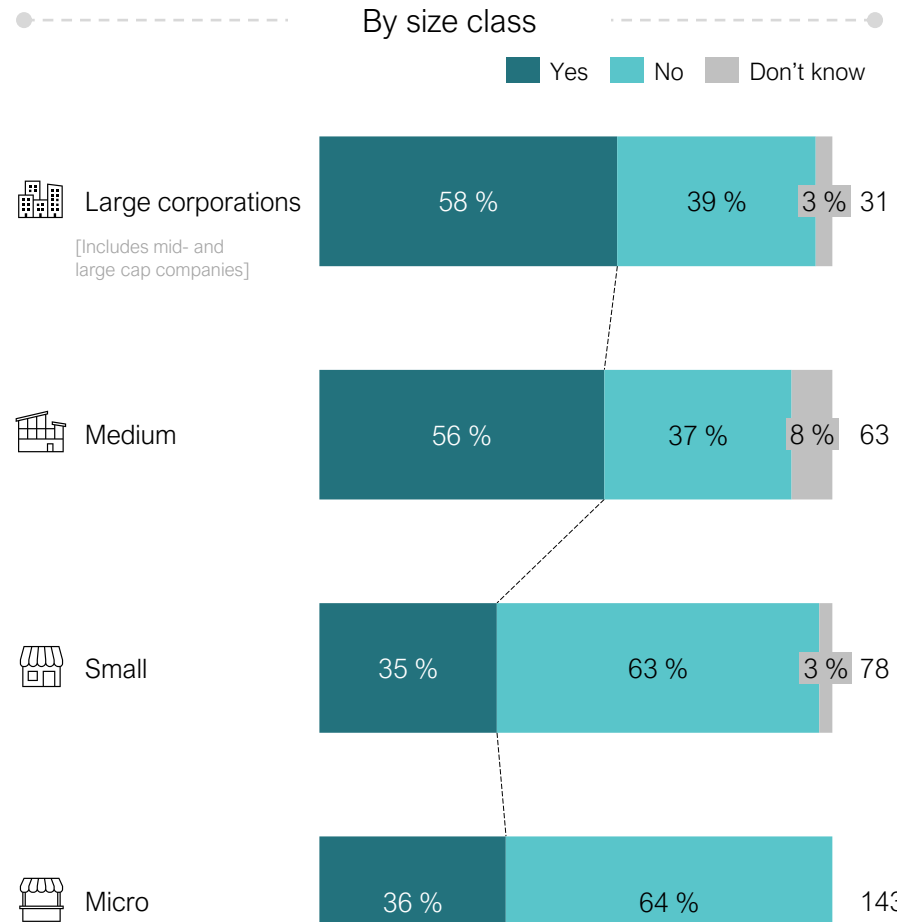
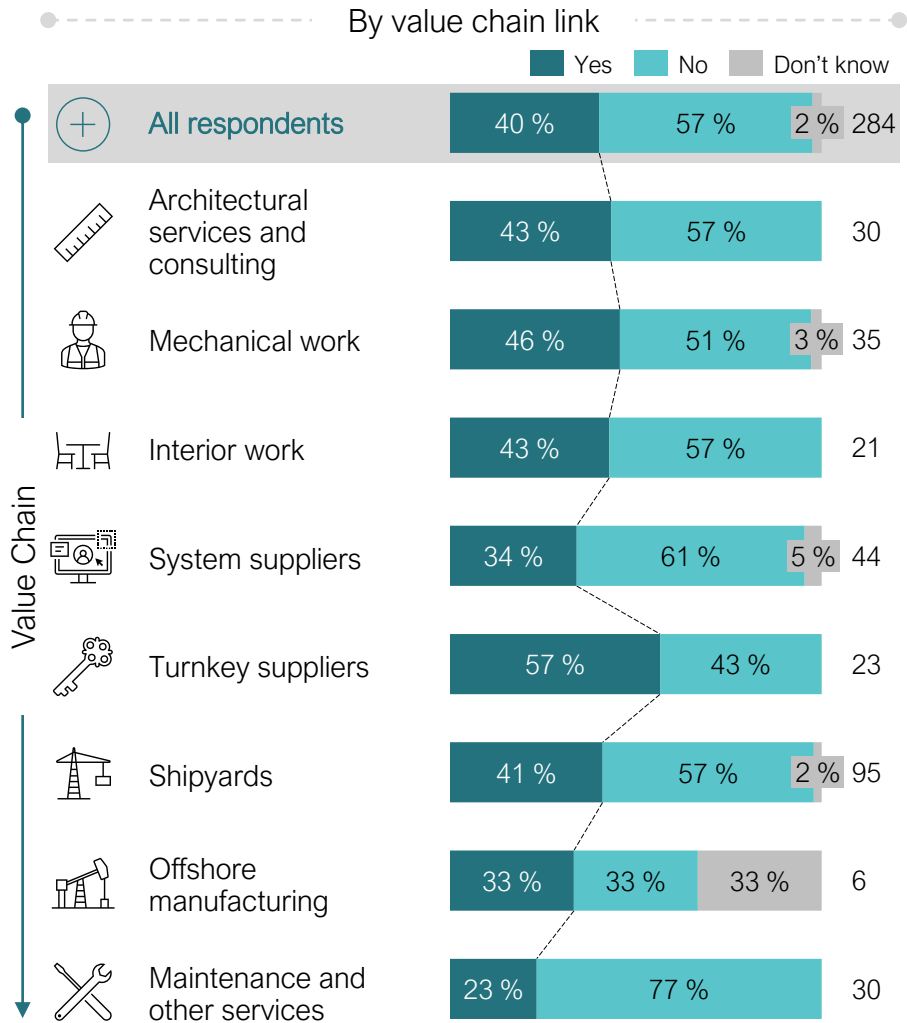
85% of respondents say that they have made at least some type of changes in their supply chains

Most common changes in supply chains have been acquiring **alternative/new supplier companies** (59% of all respondents), and **outsourcing some services** (44% of all respondents)

Across the value chain, **turnkey suppliers**, and **mechanical work** companies have made the most changes in their supply chains. For example, from both links over 80% of respondents have acquired alternative supplier companies

... and 40% of respondents continue to implement changes to supply chains in the future

Q27. Are you planning to transform your supply chains in the next three years (until the end of 2025)?



- Marine companies are reacting to changing geopolitical landscape, and changing global supply chains. **40% of all marine companies are planning to execute changes in their supply chains until the end of 2025**
- Largest share of companies (57%) planning to execute changes in their supply chain across the value chain are in **Turnkey suppliers**
- Company size class clearly affect the need for transforming supply chains. More of larger companies intend to change their supply chains than smaller companies. **58% of large corporations (revenue over 50 m€) plan to execute changes in their supply chains**



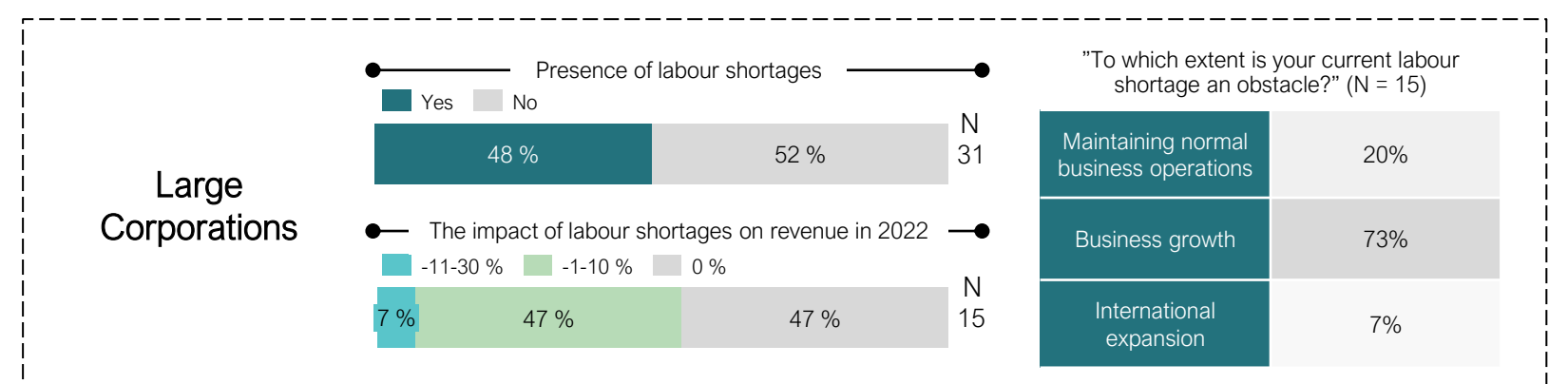
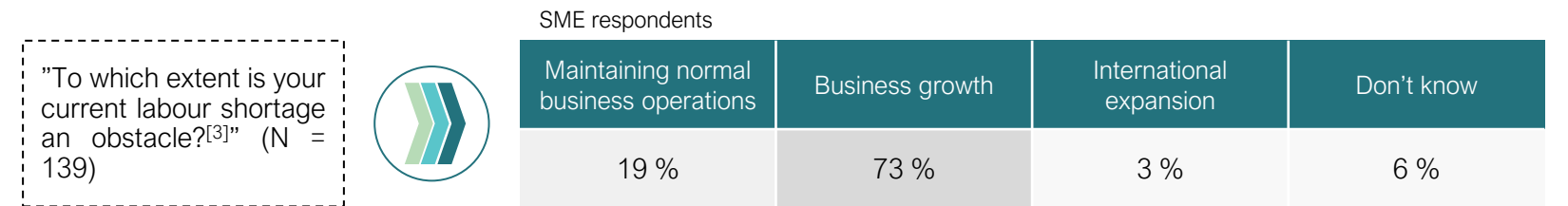
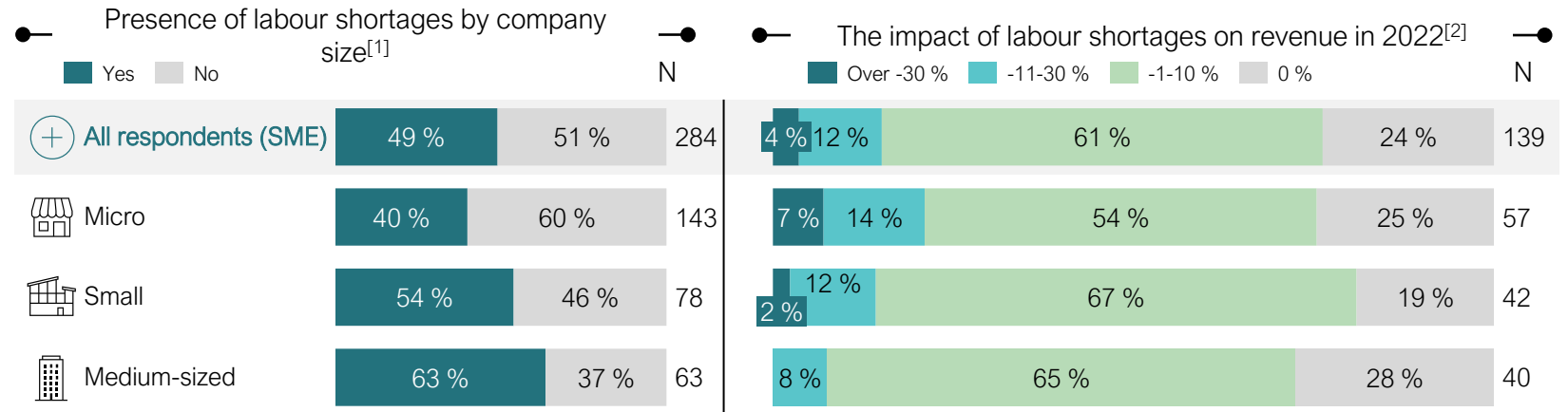
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Appendix

Labour shortages are more common in larger companies and hinder growth across the survey group...

- Around half of the whole survey group is currently experiencing some form of labour shortage. **Labour shortages appear to be slightly more present in small and medium-sized companies (58%)** when compared to micro-enterprises (40%) and large corporations (48%).
- The negative financial implications of labour shortages seem to become increasingly relevant as company size decreases.
- Large corporations, for the most part, seem to suffer only marginal consequences from all forms of labour shortage. In fact, **almost 50% of participating large corporations suffer no revenue impact from their current labour shortages.**
- Labour shortages seem to be mostly an obstacle to growth throughout the survey group regardless of size. **Only around 20% of the survey group considers their labour shortage to be a hazard to maintaining normal business operations.**
- According to our findings, labour shortage estimates seem to distribute evenly across the marine industry value chain.



...but materialize primarily in blue-collar work due to a low supply of qualified workforce

- Approximately four out of every five surveyed companies experiencing a labor shortage state that it specifically pertains to blue-collar jobs. Nonetheless, labour shortages also pertain to white-collar jobs at a significant level.
- The response rate to questions describing labor shortages increases according to the size of the company. Larger companies seem to recognize the structure and underlying factors of their individual labor shortages better compared to smaller companies.
- Especially in the case of larger companies, the perceived low correlation between wages and labor shortages may indicate that the root issue is not related to the companies' weak ability to attain talent in the broader job market, but rather to the **poor domestic availability of suitable talent overall**.
- The perceived high correlation between labour shortages and the need to build industry attractiveness further suggests that **especially blue-collar work in the marine industry may not be very competitive in terms of attracting those seeking new education and long-term careers when compared to other fields**.

"In which positions are you currently facing a labour shortage?"^[1] (N = 139)



SME respondents

Managerial positions	White-collar positions	Blue-collar positions
5 %	37 %	78 %

"Which of the following measures are the best solutions to your labour shortage?"^[2] (N = 139)



(SME respondents)

+ All respondents

Micro

Small

Medium-sized

Increasing the amount of foreign workforce	Increasing the amount of education	Increasing wages	Improving the attractiveness of the industry
34 %	36 %	17 %	44 %
21 %	33 %	18 %	37 %
40 %	36 %	14 %	33 %
45 %	40 %	18 %	65 %

Large Corporations

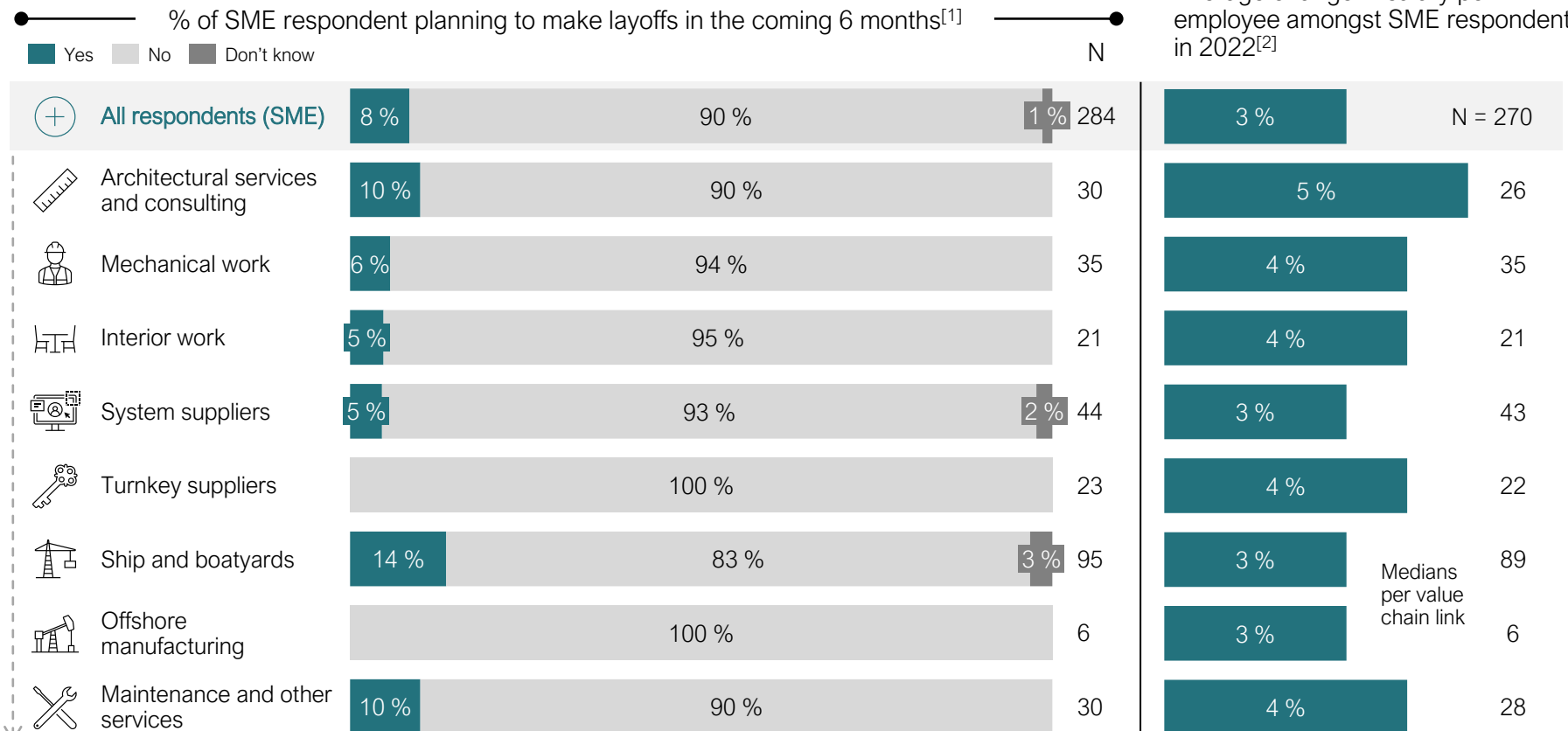
"In which positions are you currently facing a labour shortage?" (N = 15)

Managerial positions	White-collar positions	Blue-collar positions
13 %	40 %	87 %

"Which of the following measures are the best solutions to your labour shortage?" (N = 15)

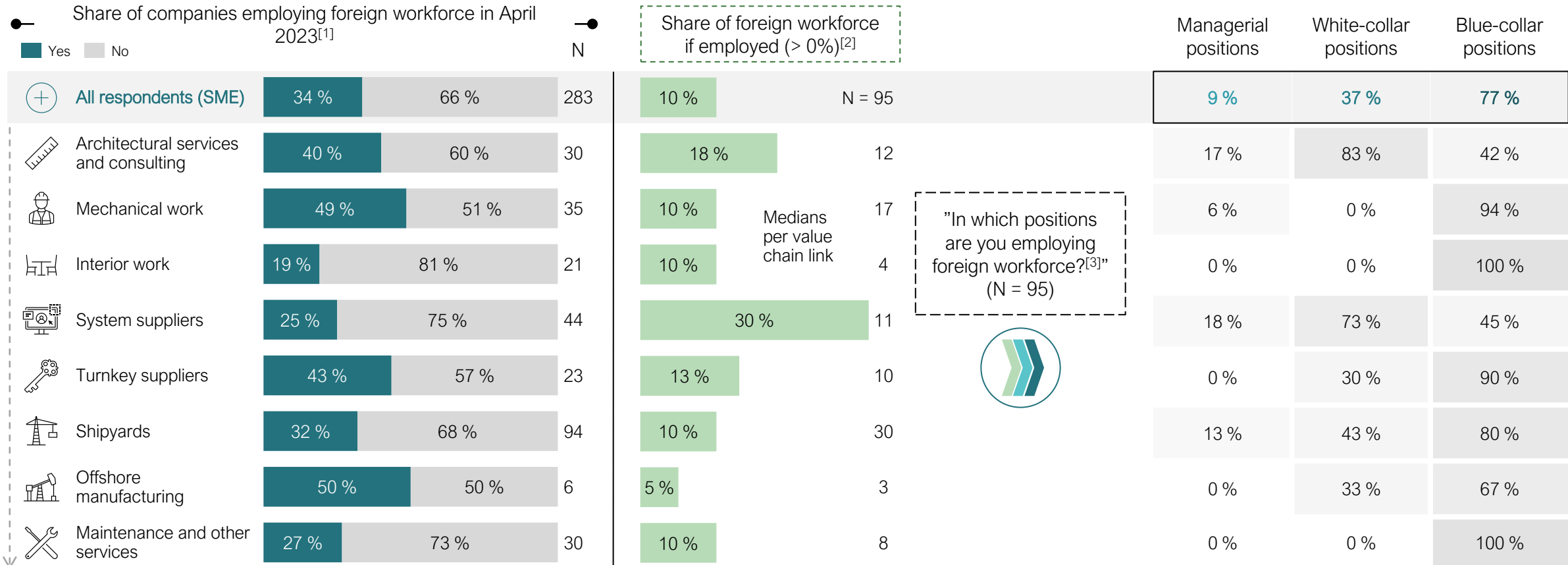
Increasing the amount of foreign workforce	Increasing the amount of education	Increasing wages	Improving the attractiveness of the industry
53 %	67 %	7 %	53 %

Planned layoffs are mostly targeting ship and boatyards while salary development is steady across the value chain

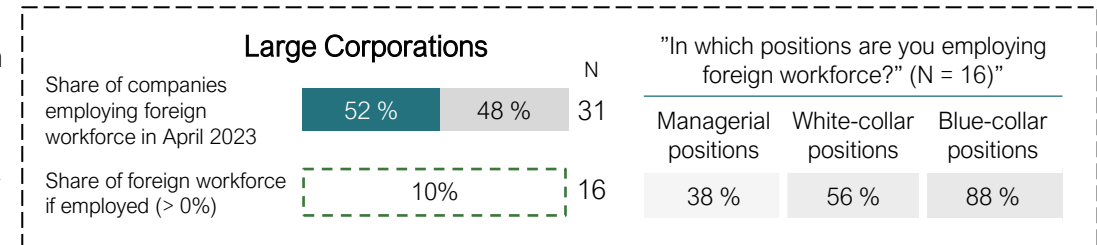


- On average, around 90% of all respondents aren't looking to make layoffs in the near future. This ratio is nearly identical across all company size categories.
- *Turnkey suppliers and offshore manufacturing* are the only value chain links that are not planning to make layoffs. In contrast, *ship and boatyards* is the only value chain link with a share of over 10% planning to make layoffs.
- Salary changes are also relatively uniform throughout the survey group with *architectural services and consulting* having a slight edge in 2022 according to value chain link medians.

34% of SME respondents use foreign workforce to battle labor shortage



- 34% of SME respondents (and 52% large corporations) employ foreign workforce. Use of foreign workforce is the most prevalent in Turn key suppliers and Mechanical work
- Amongst SME respondents who employ foreign workforce, foreign employees on median represent 10% of the workforce
- 77% of SME respondents which employ foreign workforce, use the foreign workforce in blue-collar positions where 37% use foreign workforce in white-collar positions





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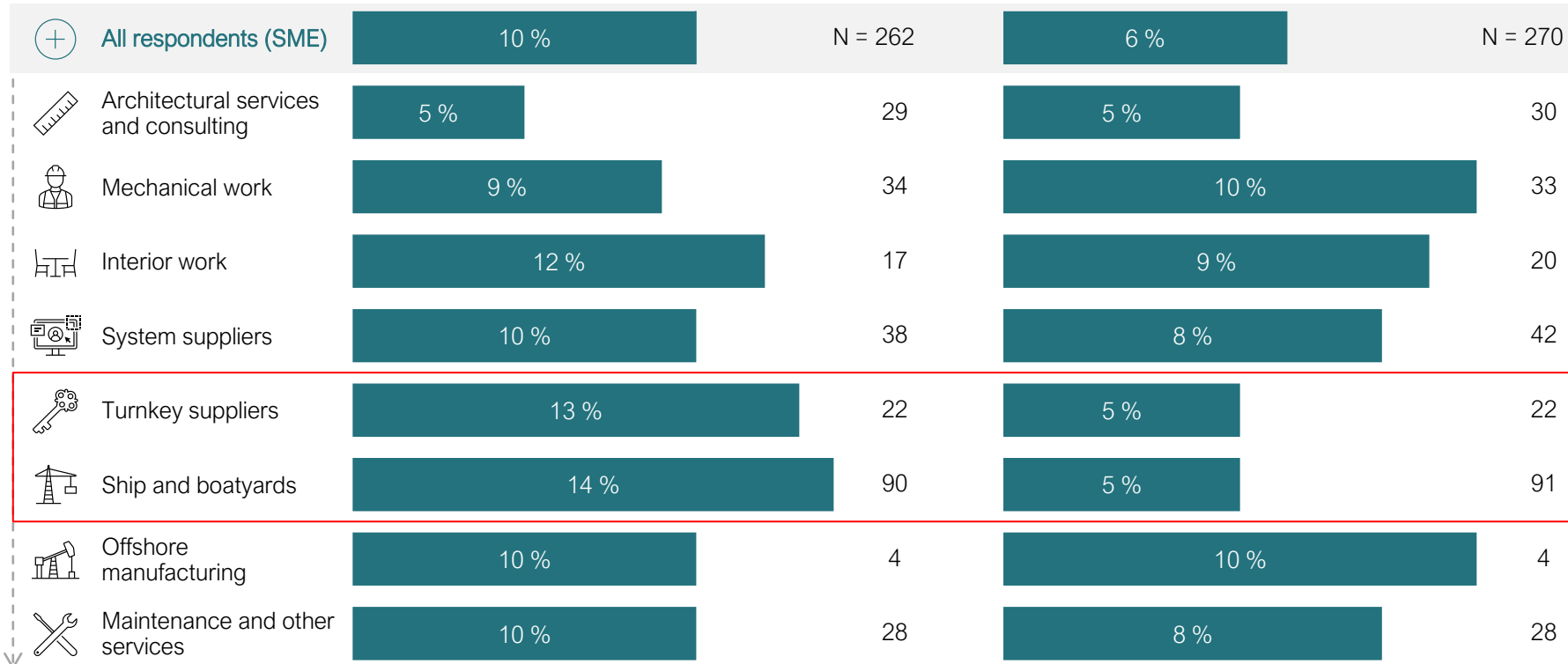
Appendix

Rising costs have mostly remained the burden of marine companies due to slightly stagnating product prices

Median change in **production unit costs** from the beginning of 2022 (up to now)^[1]

Different Time-horizons

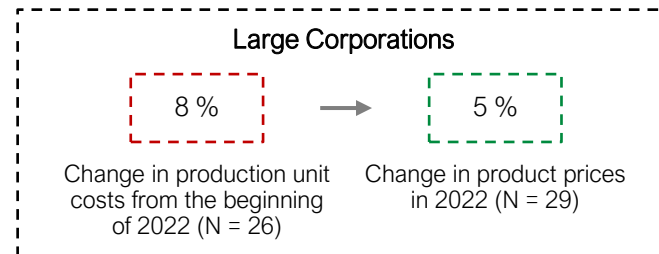
Median change in **product prices** in 2022^[2]



"If any, which of the following production unit costs have increased specifically?"^[3] (N = 284)

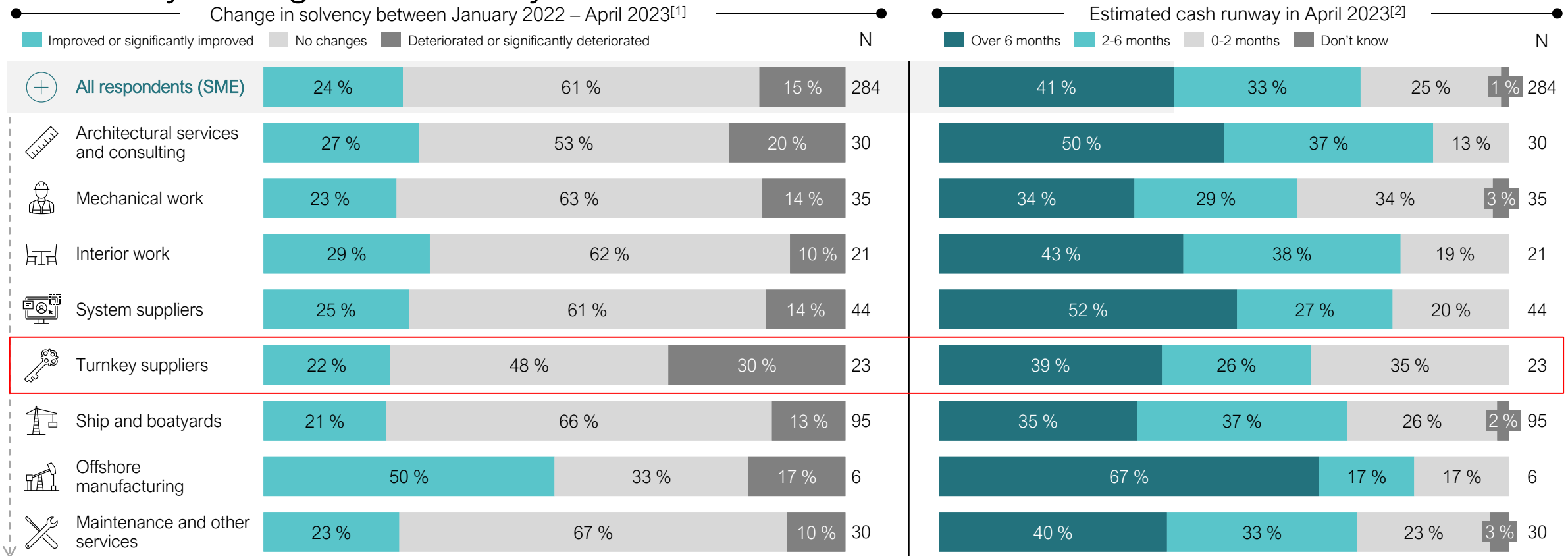
SME respondents

Logistics	Raw materials	Energy	Labour costs / subcontracting	Something else	None in specific
19 %	65 %	24 %	46 %	2 %	8 %



- As the development of EBITDA% in the survey were generally positive, **the marine companies likely have successfully transferred increased production unit costs to product prices**
- Survey results imply that marine companies continued to increase prices in 2023, as the price increases in 2022 don't nearly cover the rise of production costs since 2022
- **Turnkey suppliers and ship and boatyards have suffered the most from inflation:** Their production unit costs have increased more than for other value chain links, but they also were the least capable of translating their rising costs to their product prices in 2022
- According to participating SMEs, the rise of production unit costs has mostly targeted raw materials (65% of respondents) and labour costs / subcontracting (46% of respondents)

SME respondents solvency has, overall, seen slight improvement to boost already relatively strong cash runways



- With the exception of *offshore manufacturing*, the share of companies whose solvency has improved after January 2022 is relatively uniform at around 20-30% for each value chain link.

- **Turnkey suppliers have become less solvent at a significantly larger scale (30%) than other value chain links (13%).** Turnkey suppliers' cash runways are also structurally weaker than average.

- **A large portion of all respondents have a long cash runway spanning over 6 months (41%).** However, cash runways seem to vary across the value chain on both the shorter and the longer end.

- Compared to the entire survey group, *mechanical work* (34%) and *turnkey suppliers* (35%) have an exceptionally strong presence of companies with short cash runways.



Appendix

Survey response rate and average margin of error



Margin of error

Company size-classes	Sample size	Population 2023	Average margin of error at a 95% confidence interval
Micro	n=141	n=548	+/- 6.16 %
Small	n=84	n=301	+/- 7.86 %
Medium	n=62	n=193	+/- 8.88 %
Mid cap	n=24	n=79	+/- 14.46 %
Large cap	n=5	n=23	+/- 33.58 %
<i>In total</i>			
Large corporations	n=28	n=100	+/- 13.61 %
SME's	n=288	n=1044	+/- 4.26 %

~4.3% the average margin of error For SMEs

~13.6% the average margin of error for large corporations

Marine size- and industry matrix

Survey is slightly skewed (as intended) to the larger end of the marine industry, but follows closely the distribution of companies accross industries

Size - industry matrices of the whole marine industry and the survey sample^[1]

% of companies

Marine industry



Industry	Large cap	Mid cap	Medium	Small	Micro	Grand Total
Other industries	0 %	0 %	1 %	2 %	15 %	19 %
Professional, ,scientific and technical activities	0 %	0 %	0 %	0 %	2 %	2 %
Administrative and support services	0 %	0 %	0 %	0 %	0 %	1 %
Information and communication	0 %	0 %	1 %	1 %	0 %	2 %
Transportation and storage	0 %	0 %	0 %	0 %	1 %	1 %
Accommodation and food service	0 %	0 %	0 %	0 %	0 %	0 %
Construction	0 %	1 %	2 %	5 %	8 %	15 %
Manufacturing	1 %	4 %	8 %	12 %	19 %	44 %
Wholesale and retail trade	1 %	2 %	4 %	5 %	4 %	16 %
Grand Total	2 %	7 %	17 %	25 %	49 %	100 %

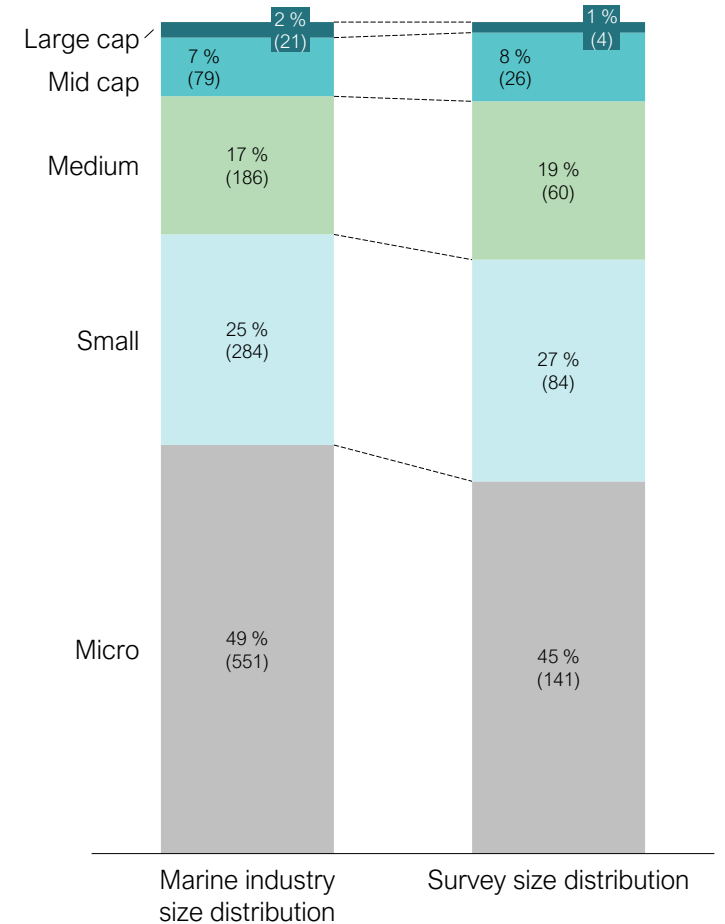
Survey sample



Industry	Large cap	Mid cap	Medium	Small	Micro	Grand Total
Professional, ,scientific and technical activities	0 %	0 %	1 %	1 %	14 %	16 %
Administrative and support services	0 %	0 %	0 %	0 %	3 %	3 %
Information and communication	0 %	0 %	0 %	0 %	0 %	1 %
Transportation and storage	0 %	0 %	0 %	1 %	1 %	3 %
Accommodation and food service	0 %	0 %	1 %	1 %	1 %	3 %
Construction	0 %	2 %	2 %	5 %	7 %	16 %
Manufacturing	0 %	4 %	10 %	12 %	15 %	42 %
Wholesale and retail trade	1 %	2 %	5 %	6 %	3 %	17 %
Grand Total	1 %	8 %	19 %	27 %	45 %	100 %

Size distributions of marine industry and survey sample^[2]

% of companies, (number of companies)



Tesi's industry classification

Moved from other industry

Subindustries have been removed (relative to original TOL industry classification)

Industry	Subindustries, and corresponding TOL 2- or TOL 5 -codes ^[1]				
Professional, scientific, and technical activities	<u>Professional services</u> 69101 69102 69103 69109 69201 69202 69209 70210 70220		<u>Other specialized business services</u> 74101 74102 74109 74201 74202 74300 74901 74909		<u>Scientific research and development</u> 72110 72191 72192 72193 72200
Manufacturing	<u>Regional processing industry</u> 10 11 18 22 24 25	<u>Energy/resource-intensive commodities</u> 16 17 19 23	<u>Global innovations for local markets</u> 20 21 27 28 29 30		<u>Global technologies</u> 26
Construction	<u>Architectural and engineering services</u> 71110 71121 71122 71123 71124 71125 71126 71127 71129 71202	<u>Real estate sales and rentals</u> 68100 68201 68202 68209 68310	<u>Specialized construction activities</u> 43110 43120 43130 43210 43220 43291 43292 43299 43310 43320 43330 43341 43342 43390 43910 43991 43999	<u>Maintenance operations</u> 68320 81100 81210 81220 81291 81299 81300	<u>Excavation and other construction</u> 42110 42120 42130 42210 42220 42910 42991 42999
Accommodation and food service	<u>Accommodation</u> 55101 55109 55201 55209 55300 55901 55902 55903 55909			<u>Catering services</u> 56101 56102 56103 56210 56290 56301 56302	
Transportation and storage	<u>Personal logistics</u> 49100 49310 49320 49391 49392 49399 50101 50102 50300 51101 51102		<u>Goods logistics</u> 49200 49410 50201 50202 50400 51210 52291		<u>Logistics centers</u> 52100 52212 52221
Information and communication	<u>Traditional media</u> 58110 58120 58130 58141 58142 58190 59110 59120 59130 59140 59200 60100 60201 60202 63910 73111 73112 73119 73120 73200	<u>Software</u> 58210 58290 62010 62020 63120 63990		<u>IT infrastructure</u> 61100 61200 61300 61900 63110	<u>Hardware (IT)</u> 62030 62090
Administrative and support services	<u>Business support services</u> 78100 78200 78300 80100 80200 80300			<u>Rental and leasing activities</u> 77110 77120 77210 77220 77290 77310 77320 77330 77340 77350 77390 77400	
Wholesale and retail trade	<u>Unspecialized wholesale and retail</u> 47111 47112 47113 47114 47191 47192 47199	<u>Specialized wholesale and retail</u> 47210 47220 47230 47241 47242 47250 47260 47291 47292 47299		<u>Other wholesale and retail trade</u> TOL 2 (45) + TOL 2(46) + TOL 5 (47301 47302 47410 47420 47430 47511 47512 47521 47522 47523 47529 47531 47532 47540 47591 47592 47593 47594 47595 47596 47599 47610 47621 47622 47630 47641 47642 47650 47711 47712 47713 47714 47715 47719 47721 47722 47730 47740 47750 47761 47762 47763 47764 47770 47781 47782 47783 47784 47785 47789 47791 47792 47793 47799 47810 47820 47890 47911 47912 47913 47919 47990)	