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SMM Maritime Industry Report 2019

Outlook on the future of the maritime sector



Hamburg
Messe + Congress

SMM Maritime Industry Report 2019

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SMM Maritime Industry Report 2019

Background and Objectives



With about 50,000 visitors and more than 2,200 exhibitors, SMM Hamburg is the leading international maritime trade fair. In order to keep track of the latest developments and business climate, the SMM Maritime Industry Report provides valuable insights into shipping and the shipyard industry along with their suppliers. New this time is a special section on marine interiors.

Visitors and exhibitors of SMM Hamburg from all over the world were invited to take part in the SMM Maritime Industry Report survey.

This report collects their assessments of the current situation, outlook on the future and opinions on various topics that concern the maritime industry.

Shipping



Shipyard



Supplier



Marine Interiors



SAMPLE STRUCTURE

6,73% of all invitation links were used and about 1/2 of these interviews were completed by the participants.





Participation rate 2019 (2017)

Number of invitations	44,787* (69,606**)	~ in %	100% (100%)
Interviews started	3,016 (3,794)		6.73% (5.45%)
Interviews finished	1,493 (2,513)		3.33% (3.61%)

A participation rate of over 5% is on a good level for a non-panel sample.

Final sample

	Total				
2019	1493	269	192	932	100
2017	2454	466	315	1673	-

Please note: in 2017, an additional number of 52 interviews with port and port operations were also included. New this year is the category of marine interiors

C=Complete | N = Non-Complete

*Size of adjusted sample, bounce-back addresses were removed from sample after sending out invitations

** Smaller sample base for 2019 caused by data base adaptations according to new data protection standards (GDPR)

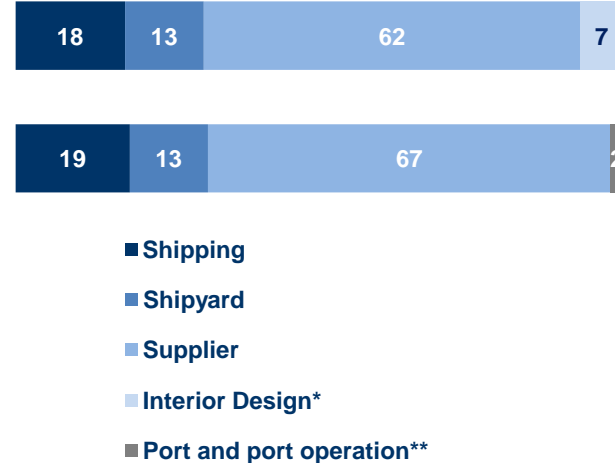
Very similar sample composition compared with 2017, the vast majority are SMM visitors and come from supplier companies.



Categorization



Industry Sector



Please consider for interpretation of all results: nearly all participants are visitors/exhibitors from SMM in Hamburg

Base
S1|S2|S2a: Respective Total (n=2506|1493|2506|1493) | in % | *not asked for in 2017 | **not asked for in 2019
Are you ... | In which of the following sectors can your company/organization be primarily allocated?

As in 2017, participants most commonly carry managerial responsibility and over 2/3 are meaningfully involved in purchasing decisions.



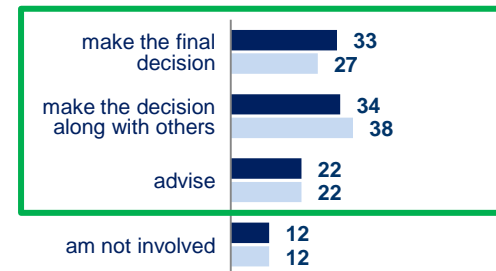
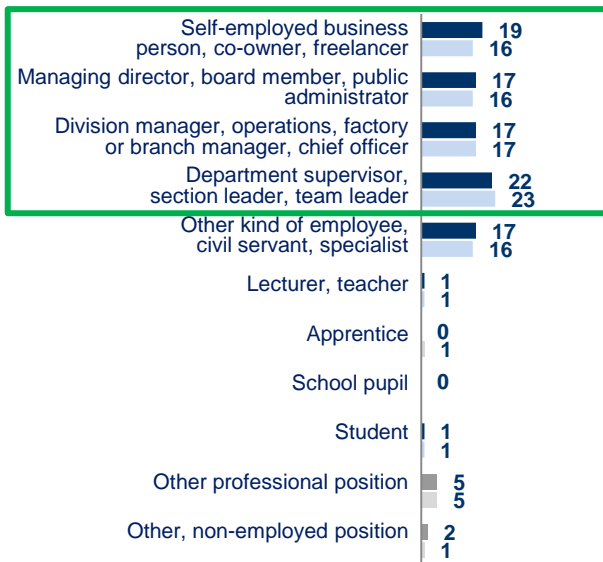
Position

Area of work

Purchase Responsibility

75%

89%



■ 2019
■ 2017

Base
S3|S4|S5

Respective Total (n=1493|2506|1493|2506|1460|2455) | in % | *not asked for in 2017

What position do you hold in your company? | In which area do you work? | To what extent are you involved in purchasing decisions within your area of the company?

BUSINESS CLIMATE



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The Maritime Industry Business Climate Indicator



This indicator is calculated as an approximation of the general business climate in the maritime industry. Based on all questions on business and growth potential from the different industry sectors, a balance of the shares of positive and negative forecasts is calculated.*

This is based on the following questions:



From shipping - R2-R4c: In your opinion, to what extent will the degree of capacity utilization/cargo rates/charter rates change in your fleet by the end of 2020?



From shipyards – W2a-d & W5a-d: In your opinion, how will order/repair activities for the building of new ships develop in relation to cargo ships/ cruise ships/ work ships/ navy ships/ yachts and others up to the end of 2020?



From suppliers – Z3: In general, how do you rate the sales potential of your products in the shipbuilding industry?

*Formula of Business Climate Indicator = $\frac{[(T2B_{R2-4c} \text{ in } \% - L2B_{R2-4c} \text{ in } \%) * n_{R2-4c}) + ((T2B_{W2a-d} \text{ in } \% - L2B_{W2a-d} \text{ in } \%) + (T2B_{W5a-d} \text{ in } \% - L2B_{W5a-d} \text{ in } \%))/2 * n_{W2a-d/W5a-d}) + (T2B_{Z3} \text{ in } \% - L2B_{Z3} \text{ in } \%) * n_{Z3})}{(n_{R2-4c} + n_{W2a-d/W5a-d} + n_{Z3})}$

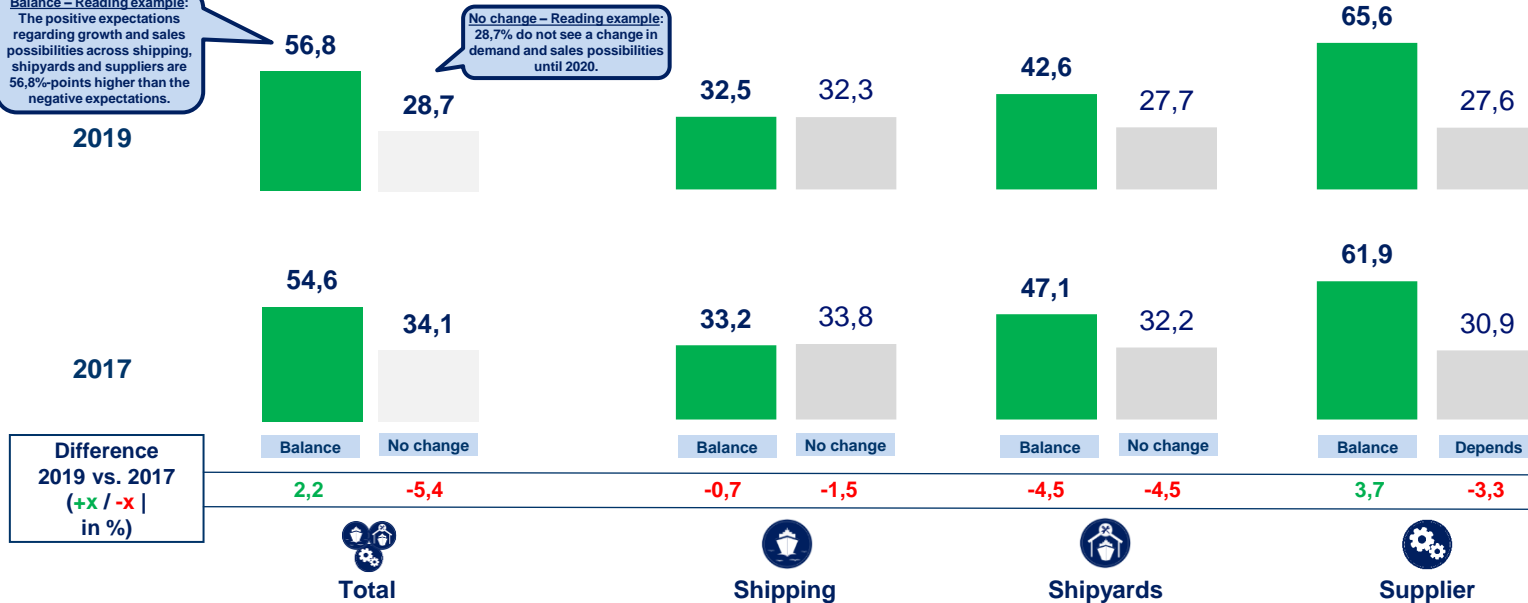
The overall 2020 business outlook is pointing upward, which is mostly driven by the suppliers. In comparison, shipping and shipyards are less optimistic.



Maritime Industry Score

Balance – Reading example:
The positive expectations regarding growth and sales possibilities across shipping, shipyards and suppliers are 56,8%-points higher than the negative expectations.

No change – Reading example:
28,7% do not see a change in demand and sales possibilities until 2020.



This metric is based on the different market prognostics that each industry sector made.

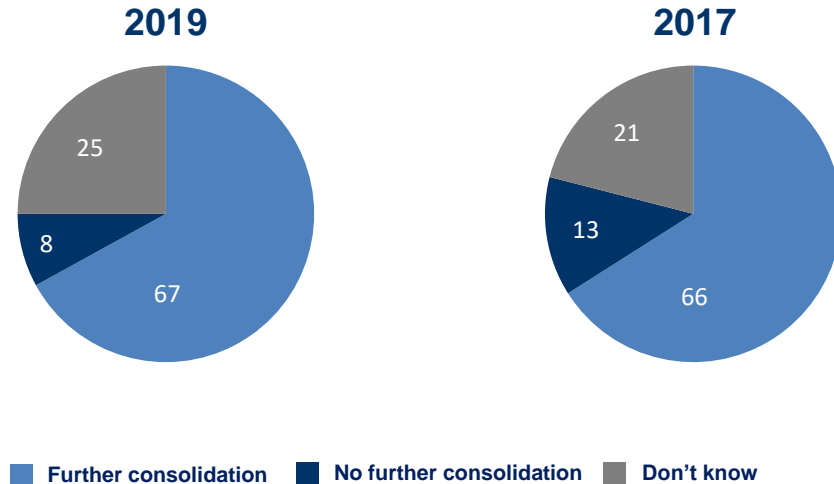
R2|R3|R4|R4c|W2a|b|c|d|W5a|b|c|d|Z3:

Balance of positive minus negative growth in %-points / in %

**The consolidation process within the shipping industry remains in full swing.
As in 2017, 2/3 of the shipping respondents believe that it will continue.**



Consolidation processes*



Consolidation process continues

The shipping sector is still dominated by the three main alliances (2M Alliance, Ocean Alliance and "The" Alliance), which make up almost 80% of the sector.

Additional recent news regarding the process:

- Further consolidation in the first half of 2018 has reduced the number of 15 carriers controlling 70% of fleet capacity to only 10! For example, through the OOCL take over by COSCO.
- Furthermore HMM becomes a member of "The" Alliance after the 2M Alliance refused a full membership.

Source: UNCTAD, *Review of Maritime Transport 2018*

Base
W3: Respective Total (n=192|315) | in %
In your opinion, to what extent will the consolidation processes (takeovers, mergers or insolvencies) develop in your market segment/s?

* Question only asked to shipyards

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What is the situation like?



Overall, the participants from all sectors gave a rather **positive general outlook** on the economical situation of the maritime industry.

In spite of the good business opportunities, **the situation remains tense:**

Especially the shipping and shipyard industry is characterized by fierce competition and very often **consolidation processes** like corporate mergers and acquisitions of smaller companies that couldn't withstand the economical pressure of the highly competitive market anymore. At the same time, the **prospects appear to be much more positive for the suppliers**, who see a considerably greater demand compared with shipping and ship yards.

In the following, the results from each sector will be presented individually to give detailed insights into the current situation and future trends. New this time is a special section on marine interiors.



SHIPPING



Main Content - Shipping sector



- 1 What developments can be expected in terms of business climate?
- 2 What developments can be assumed in the field of investment activities?
- 3 How will the shipping sector be affected by the 0.5% sulphur emissions limit which will be applied world wide by 2020?
- 4 Which improvements will occur in fuel options?
- 5 Establishment of unmanned shipping within the next 20 years?
- 6 How important is cyber security?

Shipping industry members only (n=269)

Most participants have managerial responsibility and are conclusively involved when it comes to purchasing decisions.



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Shipping

Position

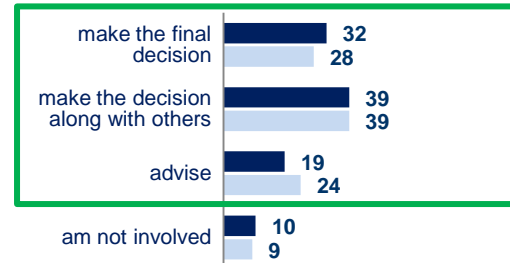
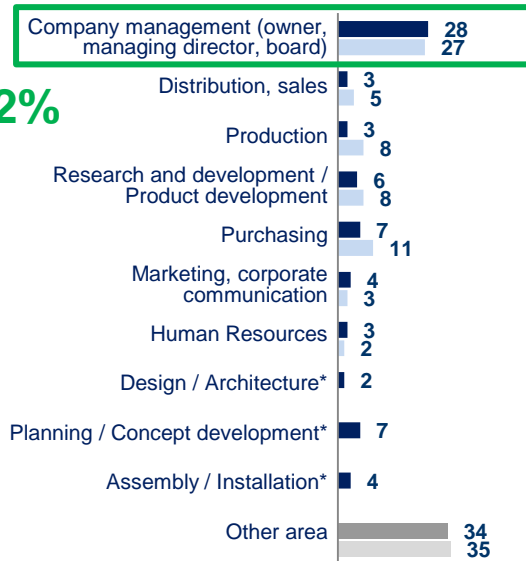
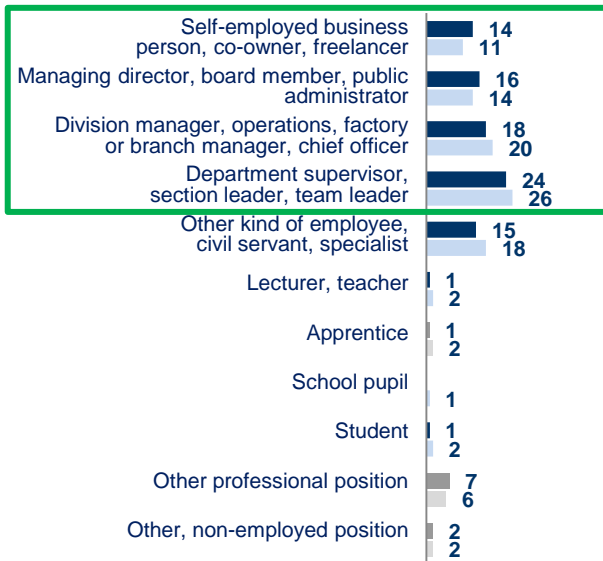
Area of work

Purchase Responsibility

72%

90%

■ 2019
■ 2017



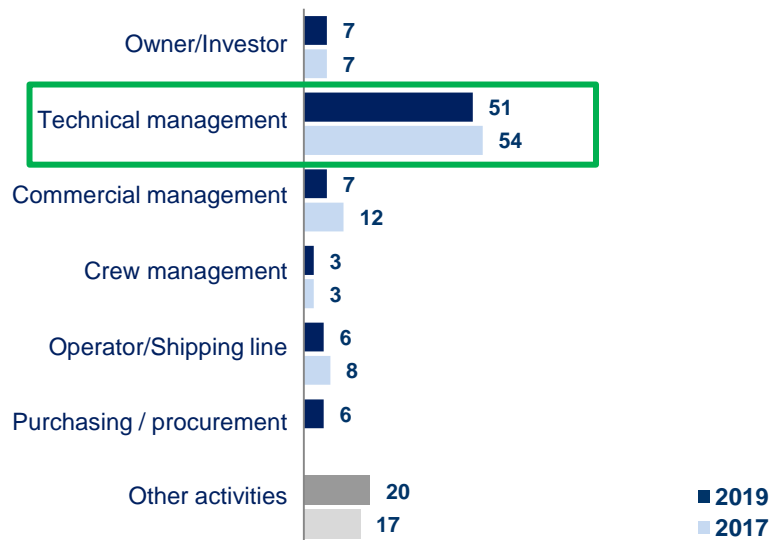
Base
S3|S4|S5

Respective Total (n=269|466|269|466|260|451) | in % | *not asked for in 2017

What position do you hold in your company? | In which area do you work? | To what extent are you involved in purchasing decisions within your area of the company?

Technical management remains the predominant position of the participants from the shipping sector, the various other functions are much less common.

Role in Shipping Company



Large share of technical management in sample grants insights into technical developments.

Base
R1:

Total (n=269|466) | in % | *not asked for in 2017
What is your main activity in the shipping sector?

As in 2017, the outlook remains positive, however, apart from capacity utilization, only very few expect significant increases.



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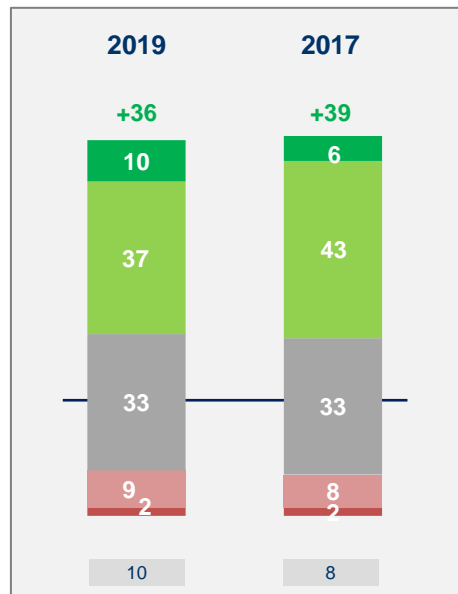
Shipping

1

Capacity
Utilization

Cargo
Rates

Charter
Rates



Balance
Growth - Decrease

Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

Base Respective Total (n=269|466|269|466|269|466) | in %

R2|R3|R4: In your opinion, to what extent will the degree of capacity utilization change in your fleet by the end of 2020? | How do you think the cargo rates will develop up until the end of 2020? | And how do you think the charter rates will develop up until the end of 2020?

Other revenue streams are also likely to increase. The type of revenue is broad, including management fees, port services and technical support.

2

Other revenue besides freight or charter rates

Other revenues show a lot of variation, more often mentioned were:

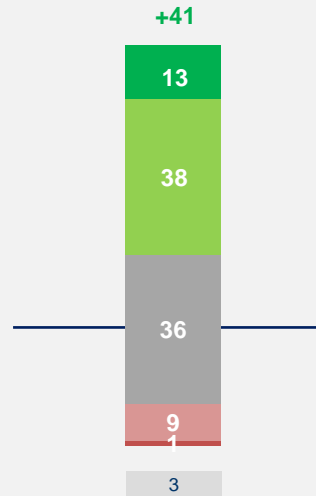
- Ship management fees
- Plant traffic / transport
- Port services
- Cruise line

Also mentioned, but to a lesser extent:

- Supervision, technical support for third parties
- Income from port services
- Research projects
- Decommissioning
- And others

Other revenue until 2020

Estimated revenues



Balance
Growth - Decrease

Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

Base Respective Total (n=77) | in %

R4b|R4c: If you cannot classify your compensation under freight or charter rates, what kind of **other revenue** do you have? How do you estimate the development of your other revenue by 2020?

Less than 1/3 are planning to buy new ships, slightly lower compared with 2017 – an equal amount is unlikely to make a new purchase.



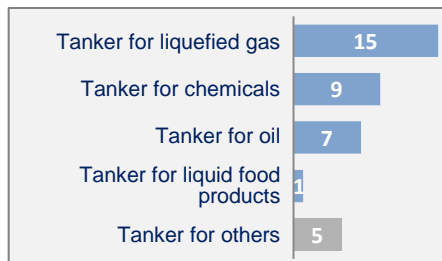
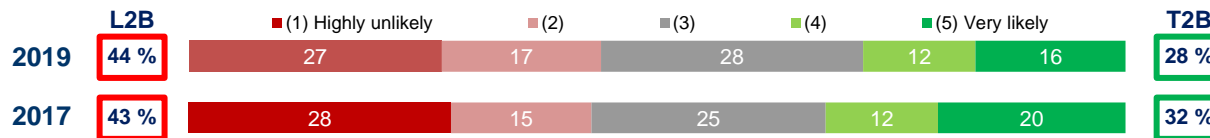
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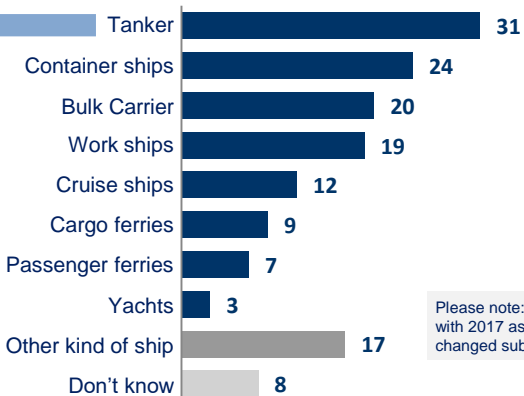
Shipping

2

Purchase intention ships



Wave comparison: 2017 was also topped by container ships (less so this time), bulk carrier and tankers. This time, vast increase regarding tankers for liquefied gas, from 4% to 15%. Work ships are also up from 9% to 19% this time.



Please note: no direct comparison with 2017 as vessel categories changed substantially this time.

Category of ship
n=75

Reading Example Top-2-Box (T2B) and Low-2-Box (L2B)

The Top-2-Box (short: T2B) shows the aggregated share of respondents who selected the *highest* or *second-highest* scale points in the intention to purchase new ships

The Low-2-Box (short: L2B) shows the aggregated share of respondents who selected the *lowest* or *second-lowest* scale points in the intention to purchase new ships

Base: Respective Total (n=466|269|75) | in %
R8|R8a: How likely is it that you will purchase (or recommend purchasing) one or more ships for your fleet by the end of 2020? | Which types of ship are you most likely to purchase for your fleet by the end of 2020?

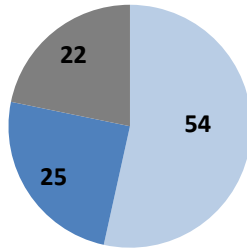
Over 2/3 anticipate investments to adhere to emission standards. Most likely they will upgrade their fleet rather than retire and replace ships.

3

Investments needed due 0.5% sulphur emissions limit which will be applied world wide by 2020

Reason for no investment regarding sulphur emission

- Our ships already comply with the coming standard.
- Our ships are not affected by the new rules.
- Something else



Yes

69

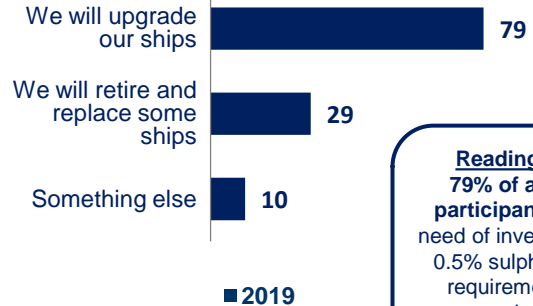
No

24

Don't know

7

Type of investment regarding sulphur emission



Reading example:
79% of all shipping participants who are in need of investments due to 0.5% sulphur emissions requirements want to upgrade their ships. (multiple answer possible)

Base

R5|R5a|R5b:

Respective Total (n=269|185|65) | in %

0.5% Sulphur emissions in Chinese maritime area... Do you think this will require investments in your fleet within the next two years? | To what extent do you think you will need to invest in the fleet? | You stated that no investments will be needed because of the new emissions regulations. Why not?

LNG has the highest single share, but MDO and HFO/MFO combined remain higher. Preference for MDO/LNG declined notably compared with last time.



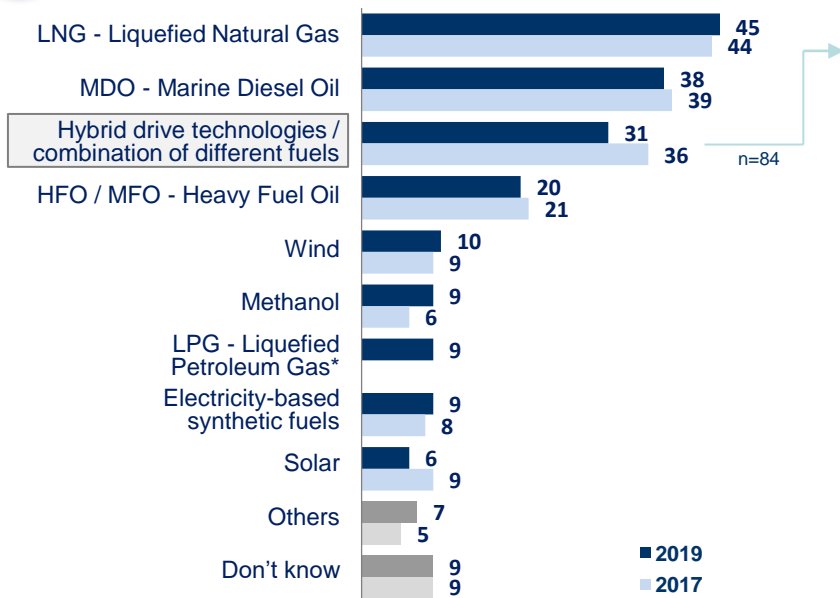
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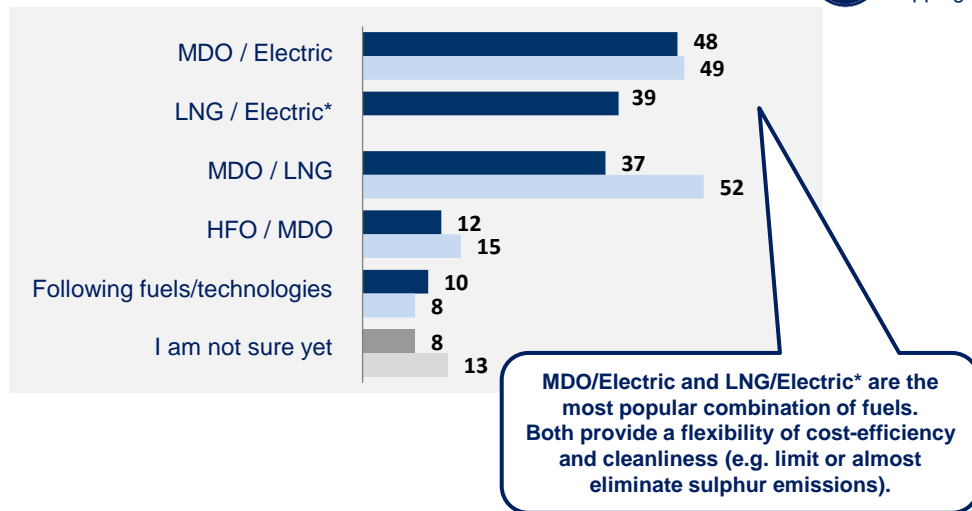
Shipping

4

Choice of fuel



Hybrid drive technology – Combination of fuels



Base: Respective Total (n=269|84) | in % | *not asked for in 2017

R6|R6a: Which kinds of fuels will you prefer when making future investments? | You said that you would prefer a combination of different fuels/drive technologies in future. Which combination(s) of fuels/drive technologies do you mean?

The perception of commercially used unmanned shipping has hardly changed, about 1/3 believe it will become a reality within the next 20 years.



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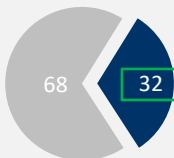
5

Can you imagine using unmanned shipping commercially?

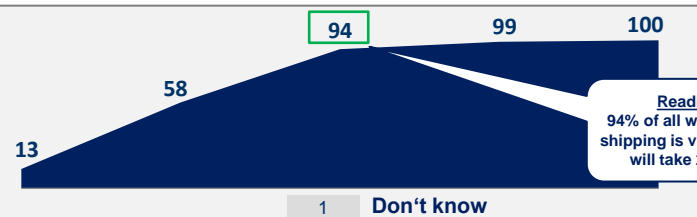
How long do you think it will take that to happen?

2019

■ No
■ Yes



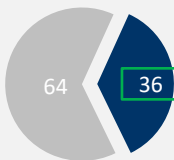
Yes
n=87



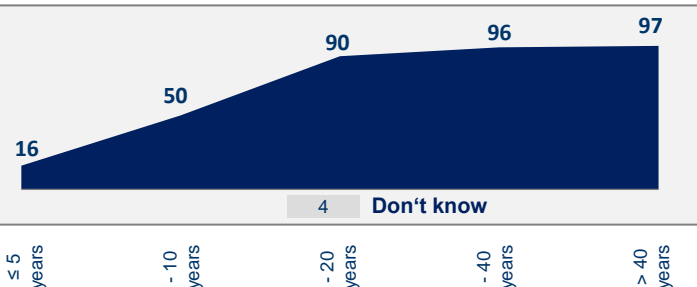
Reading example:
94% of all who think unmanned shipping is viable estimate that it will take 20 years or less.

2017

■ No
■ Yes



Yes
n=167



Base
R7|R7a: Respective Total (n=466|167|269|87) | in %
"Unmanned shipping" ... Can you imagine using this vision commercially? | You stated that the subject of "unmanned shipping" will become reality. How long do you think it will take that to happen?

Over 2/3 don't see unmanned shipping becoming a viable option, but there is a strong belief in a transition of features into the fleet operation centres.



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Shipping

5

Can you imagine using unmanned shipping commercially?

2019



No

n=182

2017

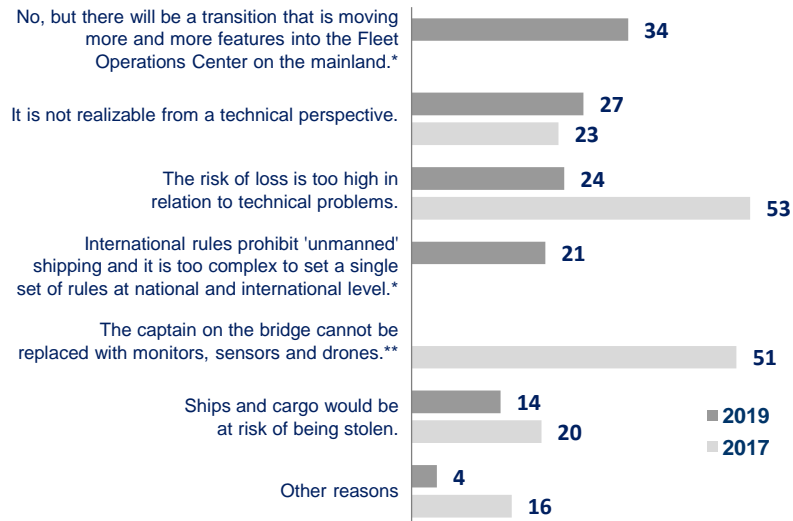


No

n=299

- Yes, autonomous ships
- Yes, remote-controlled ships
- No

If not: For which reasons?



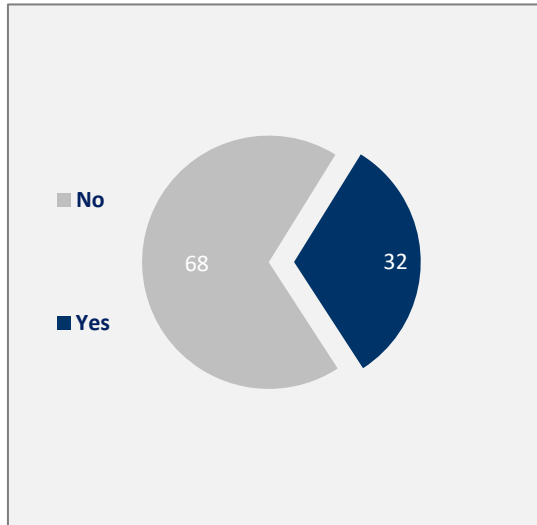
Base Total (n=269|182|466|299) | Shipping industry members only (n=413|270) | in % | *not asked for in 2017 | **not asked for in 2019

R7: "Unmanned shipping ... Can you imagine using this vision commercially? | You stated that the subject of "unmanned shipping" will become reality. How long do you think it will take that to happen?

In case unmanned shipping becomes a reality, freight carrying vessels show the most likely opportunity.

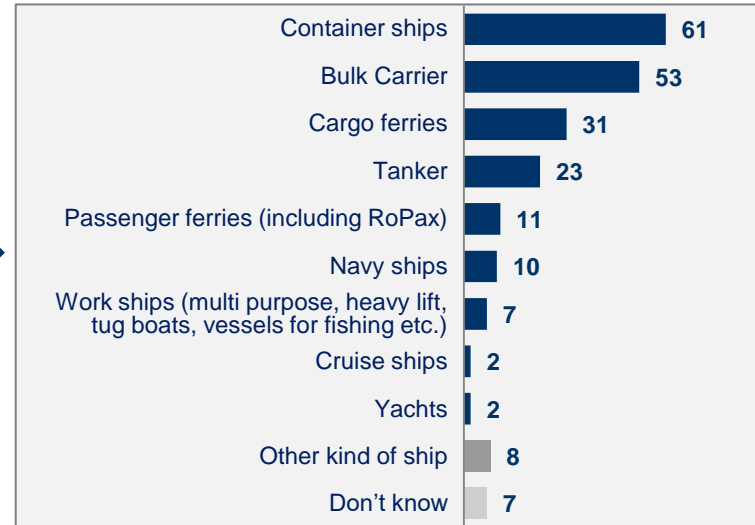
5

Can you imagine using unmanned shipping commercially?



Yes
n=87

Commercial use of unmanned shipping - Forecast
If yes: Can you imagine using unmanned shipping commercially?



Base
R7c:

Total (n=87) | in %
For which types of vessels do you most likely see the commercial use of 'unmanned shipping'?



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Shipping

Cyber security remains a crucial topic for most. Most likely measures in this regard are virus and protection software, training and IT expertise.



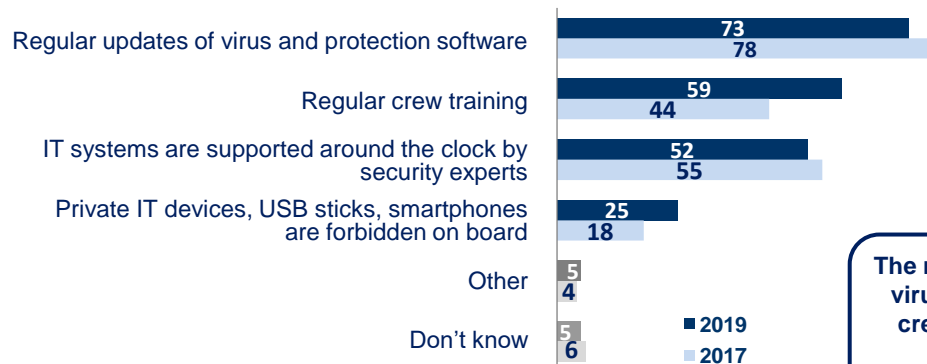
SMM



Shipping

6

Importance of Cyber Security



Cyber Security Measures
n=223

The most common measure is keeping the anti-virus software up-to-date, but 59% train their crew regularly and 52% also maintain a 24h IT support.
Private devices are allowed in most cases.

Base: R10|R10a: Respective Total (n=269|223|466) | in %
In general, how important is cyber security in your company? | You have stated that cybersecurity plays an important role in your company. Which specific measures do or have you carried out?

Summary - Shipping sector



- 1 Most participants expect improved cargo and charter rates, along with a better capacity utilization. The pattern is very similar compared with 2017.
- 2 However, only 28% are planning to buy new ships until the end of 2020, while a relative majority (44%) has no such plans.
- 3 The 0.5% sulphur emissions limit requires fleet investments for about 69%, who strongly prefer upgrading their ships rather than purchasing new ones.
- 4 LNG is the single most promising fuel option for the future, but as in 2017 MDO and HFO/MFO together have a higher share for future investments.
- 5 1/3 see unmanned shipping as a viable commercial option, potentially within the next 20 years, a view that hardly changed compared with 2017.
- 6 Cyber security remains of utmost importance, with virus and protection software, training and constant IT systems support as most crucial measures.

Shipping industry members only (n=269)



SHIPYARDS



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1

What developments can be expected in terms of business climate?

2

Will the sector continue to consolidate?

3

What is the balance between innovation and proven technology when creating the makers list?

4

Which compromises are possible regarding price, delivery times and other industry related aspects?

5

Establishment of unmanned shipping within the next 20 years?

Shipyard industry members only (n=192)

Nearly all shipyard participants are involved in the purchasing process. Almost half work in management, design, planning and development.



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Shipyard

Position

Area of work

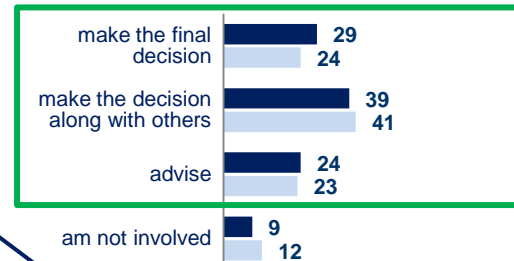
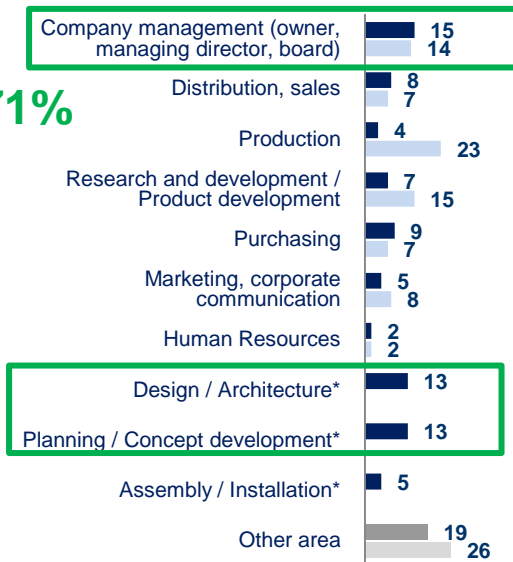
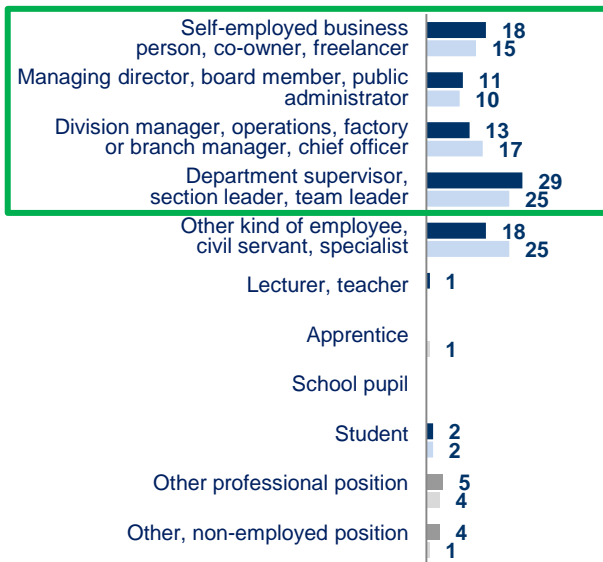
Purchase Responsibility

71%

92%

Decrease in "production"
most likely caused by
newly included work areas,
such as design, planning
and assembly.

■ 2019
■ 2017



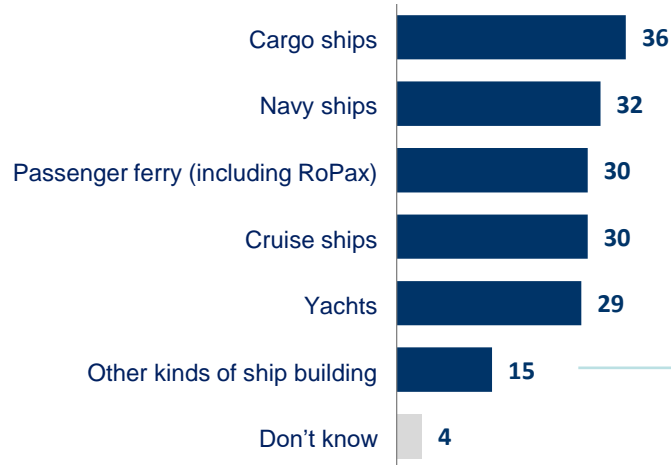
Base
S3|S4|S5

Respective Total (n=192|315|192|315|181|306) | in % | *not asked for in 2017

What position do you hold in your company? | In which area do you work? | To what extent are you involved in purchasing decisions within your area of the company?

Shipyard participants cover all market segments, with cargo ships being the biggest category by a narrow margin.

Market segment ship building



Other kinds of shipbuilding

Out of the variety of other options, often mentioned areas are structures / installations, e.g. wind turbines, oil

Additionally, there are individual mentions of icebreakers, ship repair, consulting and engineering.

Base
W1: Total (n=192) | in %
In which market segments are you active or what types of ships are you building respectively?

The business climate remains positive, particularly for repairs. RoRo ships are in strong demand, much less so are container ships and bulk carriers.



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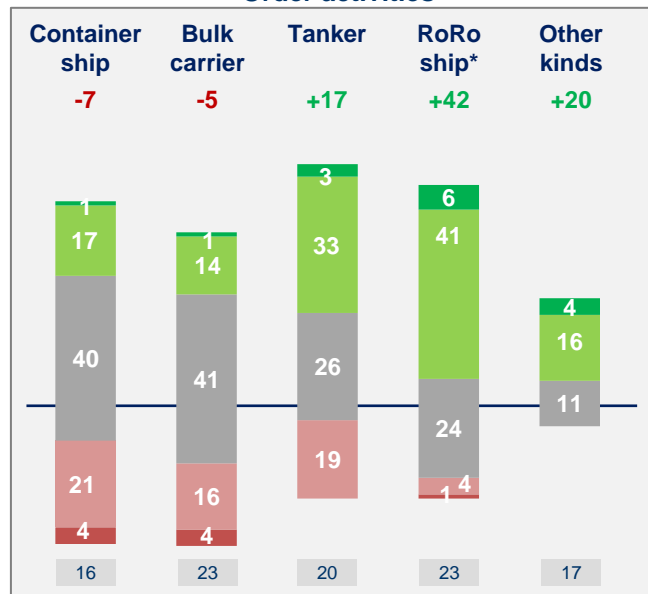


Shipyards

1

Cargo ships

Order activities



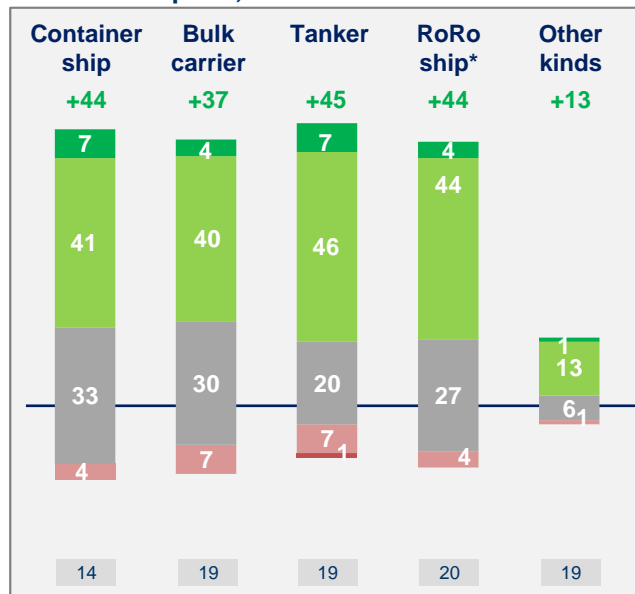
Base
W2a
W5a

Respective Total (n=70|70) | in %

In your opinion, how will order activities for the building of new ships develop in relation to cargo ships up to the end of 2020?

In your opinion, how will the demand for ship overhauls, repairs, refits or conversions develop in relation to cargo ships up to the end of 2020?

Demand for ship overhauls, repairs, refits or conversions



Balance
Growth - Decrease

Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

*In questionnaire asked as "cargo ferry"

Participants of the ferry business see growing demand for new ships as well as repairs. There is a somewhat higher demand for RoPax ferries.



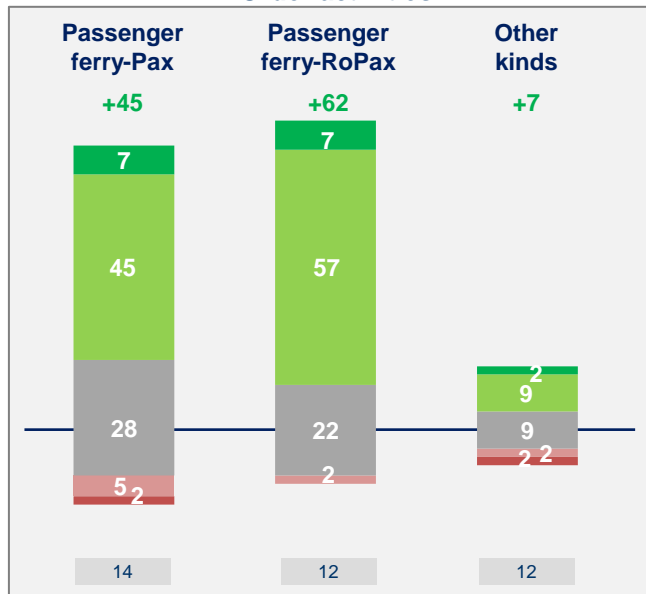
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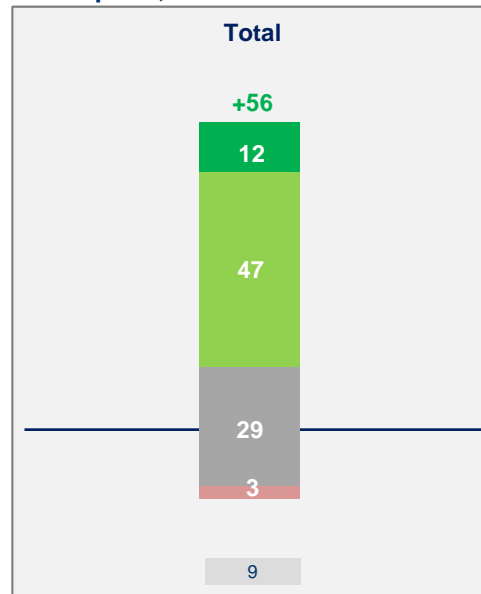
1

Passenger ferries

Order activities



Demand for ship overhauls, repairs, refits or conversions



Balance
Growth - Decrease

Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

Base
W2ab
W5a1

Respective Total (n=58|58) | in %

In your opinion, how will order activities for the building of new ships develop in relation to passenger ferries (Pax and RoPax) up to the end of 2020?

In your opinion, how will the demand for ship overhauls, repairs, refits or conversions develop in relation to passenger ferries (Pax, RoPax) up to the end of 2020?

The demand for all cruise ship types appears to be high – more than 80% see repairs increasing up to the end of 2020.



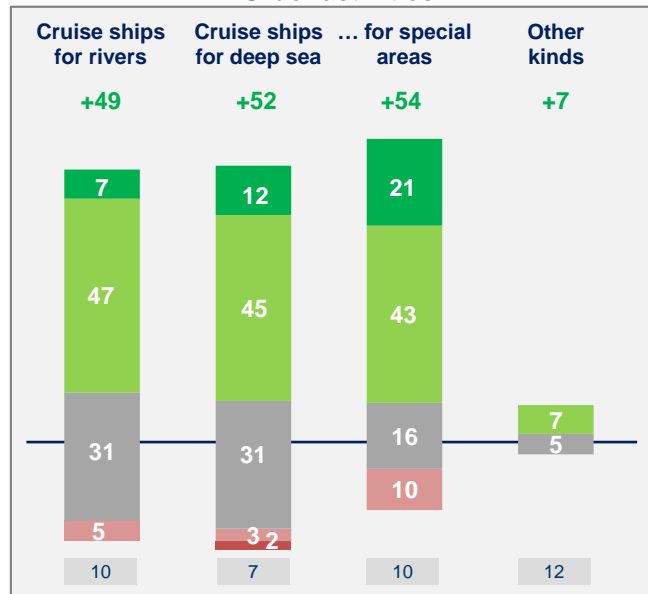
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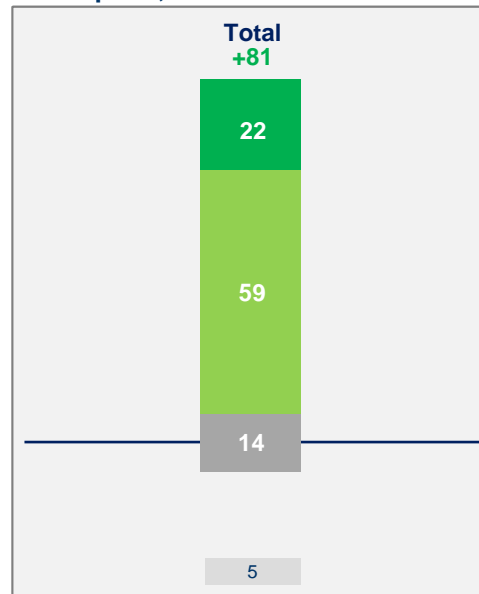
1

Cruise ships

Order activities



Demand for ship overhauls, repairs, refits or conversions



Balance
Growth - Decrease

Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

Base
W2ac
W5a2

Respective Total (n=58|58) | in %

In your opinion, how will order activities for the building of new ships develop in relation to cruise ships up to the end of 2020?

In your opinion, how will the demand for ship overhauls, repairs, refits or conversions develop in relation to cruise ships up to the end of 2020?

Combat vessels show the highest expected increase, but all types of navy ships show a net-demand. Expected need for repairs is also at a high level.



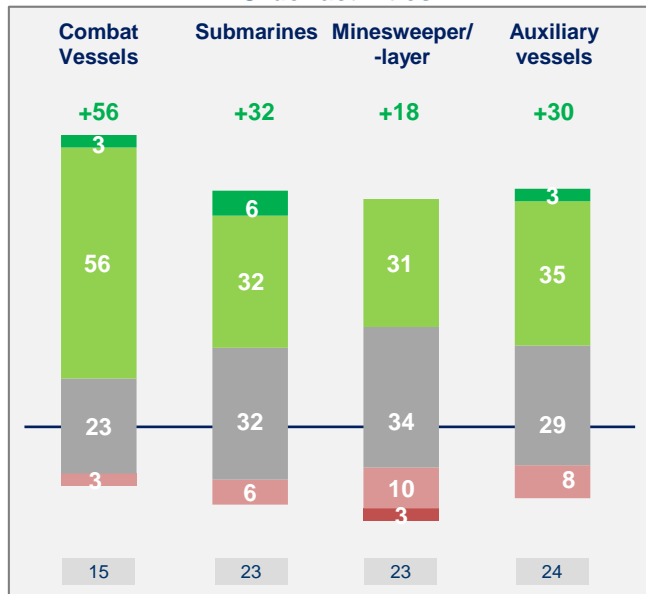
SMM



1

Navy ships

Order activities



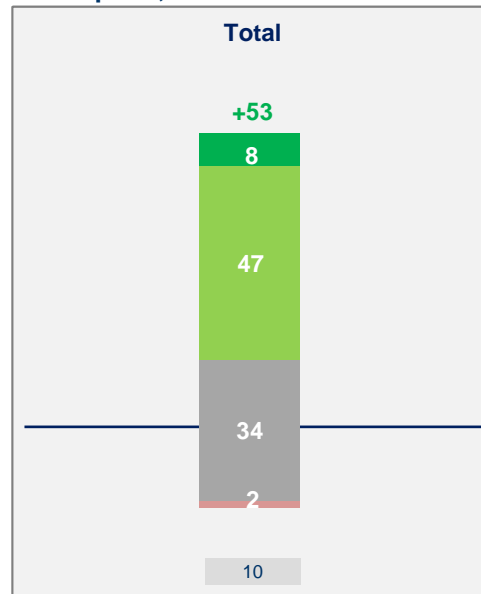
Base
W2c
W5c2

Respective Total (n=62|62) | in %

In your opinion, how will order activities for the building of new ships develop in relation to navy ships up to the end of 2020?

In your opinion, how will the demand for ship overhauls, repairs, refits or conversions develop in relation to navy ship building up to the end of 2020?

Demand for ship overhauls, repairs, refits or conversions



Balance
Growth - Decrease

Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

Yacht and other kinds of ship building also show net-positive increases, but only a minority of the participants see a significant growth.

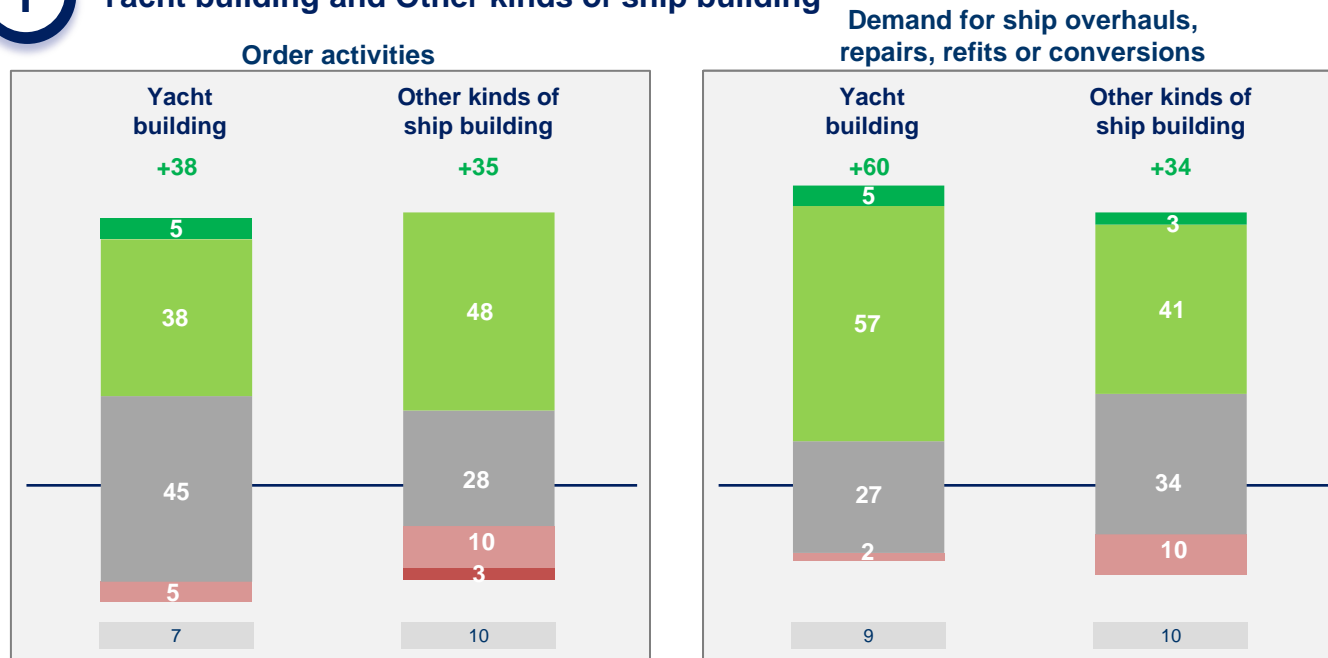


SMM



1

Yacht building and Other kinds of ship building



Balance
Growth - Decrease

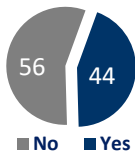
Predicted development

- will increase significantly
- will increase
- will not change
- will drop
- will drop significantly
- Don't know

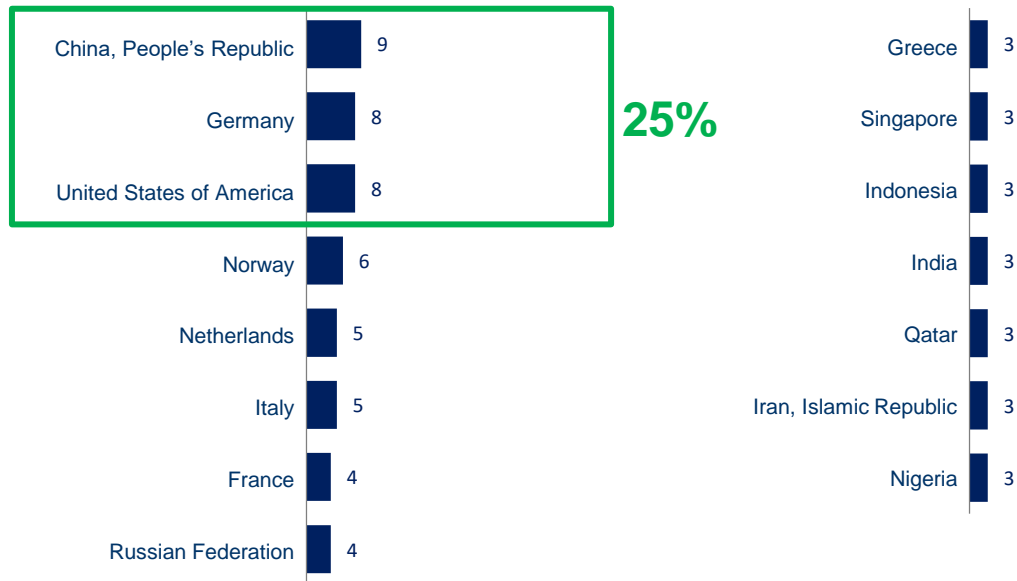
Base W2b1|W2d W5b|W5d
Respective Total (n=56|29|56|29) | in %
In your opinion, how will order activities for the building of new ships develop in relation to yachts/ in the following areas up to the end of 2020?
In your opinion, how will the demand for ship overhauls, repairs, refits or conversions develop in relation to yacht building/ in the following areas up to the end of 2020?

Increasing demand comes from a large array of countries, although 1/4 mentioned China, Germany and the USA.

1



Top 15 Countries with increased demand



Base
W5e

Respective Total (n=192) | in %
Are there any specific countries from which you expect increased demand by the end of 2020?



SMM



Shipyard

**The consolidation process within the maritime sector remains in full swing.
As in 2017, 2/3 of the shipbuilding participants believe that it will continue.**

2

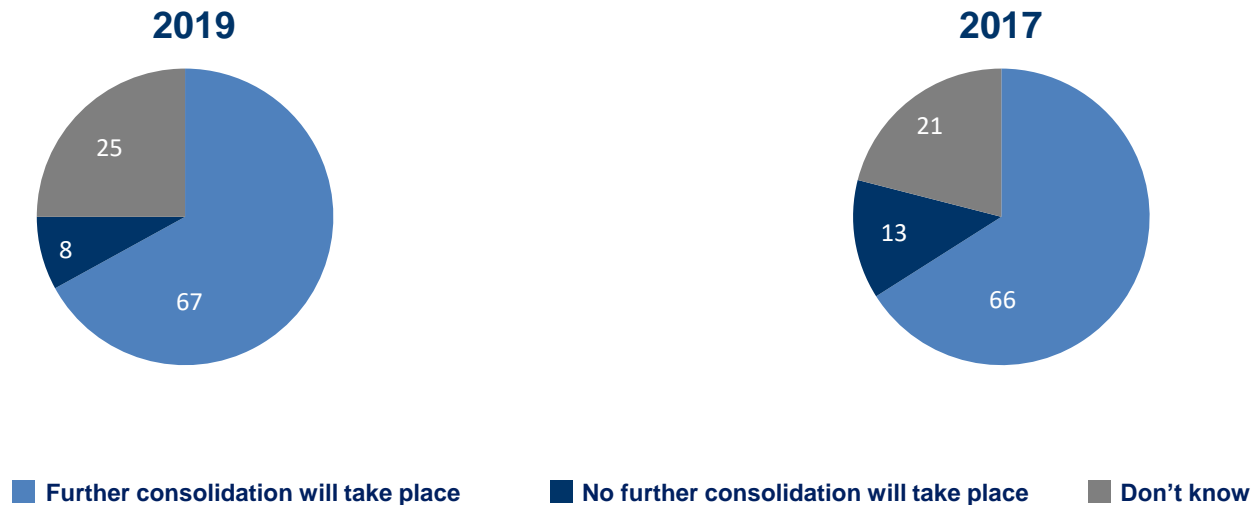


SMM



Shipyard

Consolidation processes



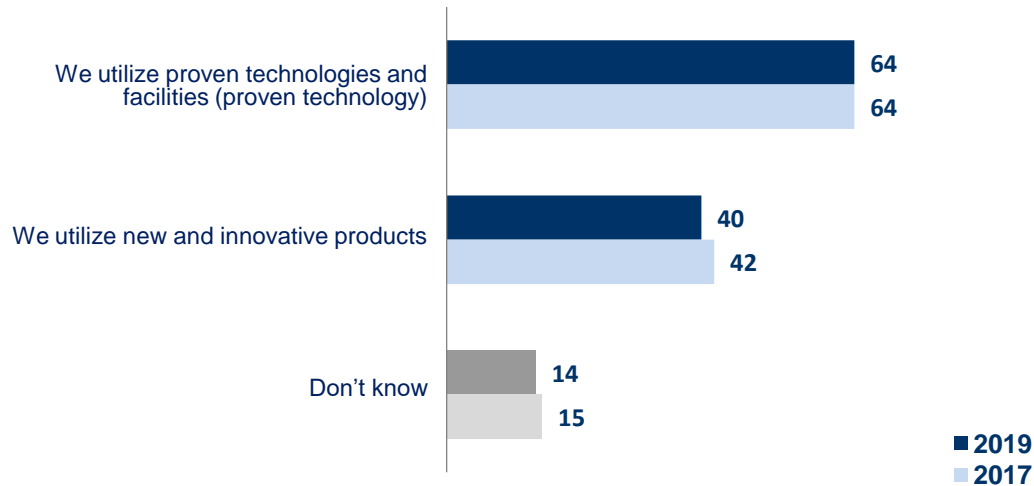
Base
W3:

Respective Total (n=192|315) | in %
In your opinion, to what extent will the consolidation processes (takeovers, mergers or insolvencies) develop in your market segment/s?

Like in 2017, about 40% focus on new and innovative products when creating a makers list for new or conversion projects.

3

Makers list for new or conversion projects



Base
W6

Respective Total (n=192|315) | in % | multiple answers possible
What do you utilize when creating a makers list for new or conversion projects?



SMM

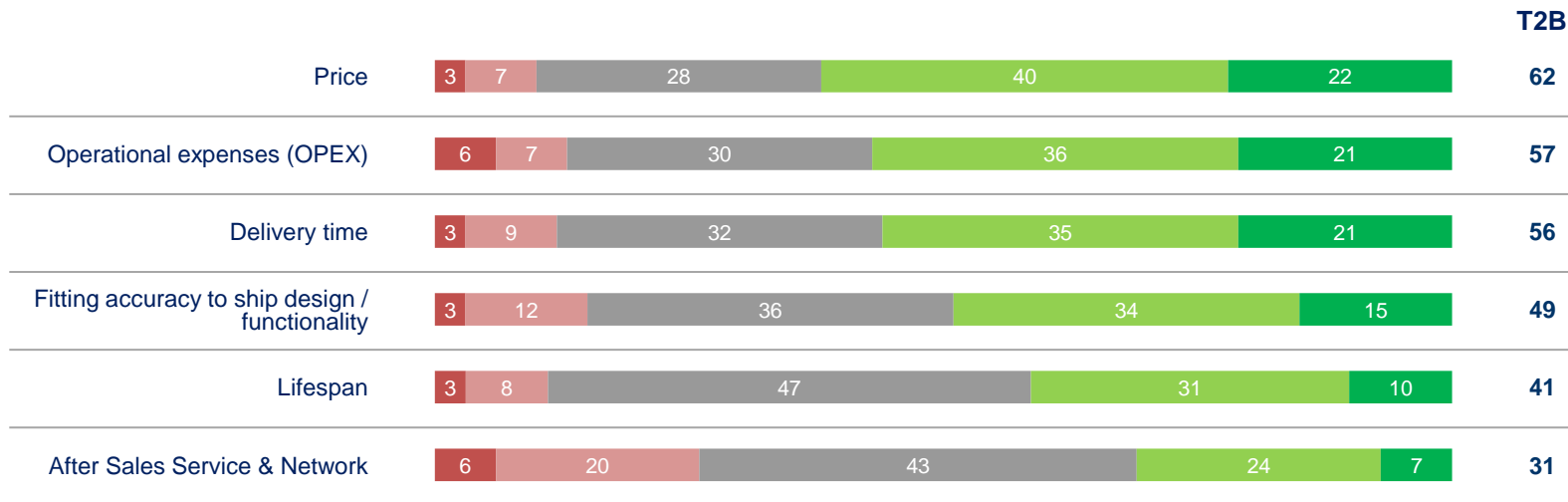


Shipyard

For well over half of the participants, price related aspects and delivery times have become more important over the past five years.

4

Areas that have become more or less important over the last 5 years



- (1) Has become a lot less important
- (2) Has become less important
- (3) Importance has remained the same
- (4) Has become more important
- (5) Has become a lot more important

Base Total (n=157|192) | in %
W7a: Please state for each area whether you think it has become more or less important over the last 5 years.

2/5 of shipyard participants believe that commercially used unmanned shipping becomes a reality within the next 20 years.

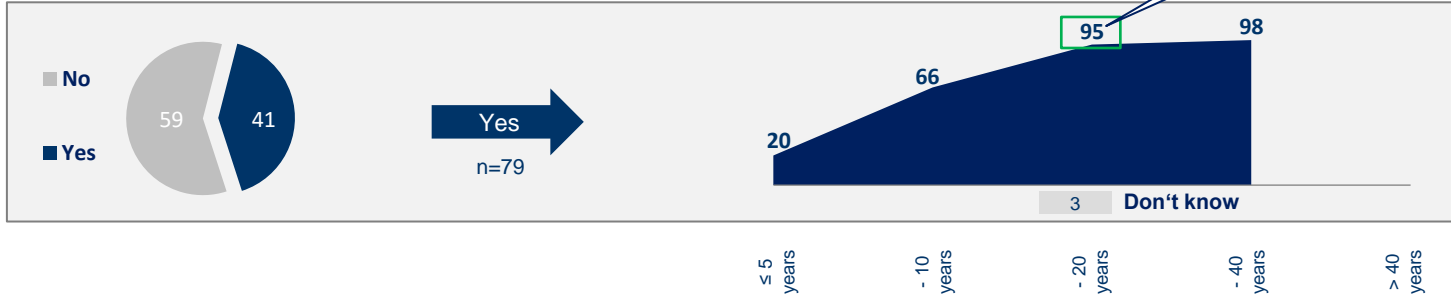
5

Can you imagine using unmanned shipping commercially?

How long do you think it will take that to happen?

Reading example:
95% of all who think unmanned shipping is viable estimate that it will take 20 years or less.

2019



Base
W4|W4a:

Respective Total (n=192|79) | in %

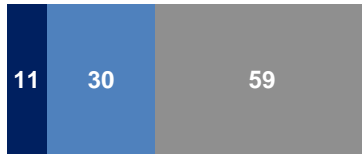
The subject of "unmanned shipping" is currently being talked about a lot, and a number of test ships are currently under development or are in trial already. Can you imagine that this vision can be used commercially? | You stated that the subject of "unmanned shipping" will become reality. How long do you think it will take that to happen?

The majority remains sceptical regarding unmanned shipping, although 1/4 of them see a transition of more features to the operation centre.

5

Can you imagine using unmanned shipping commercially?

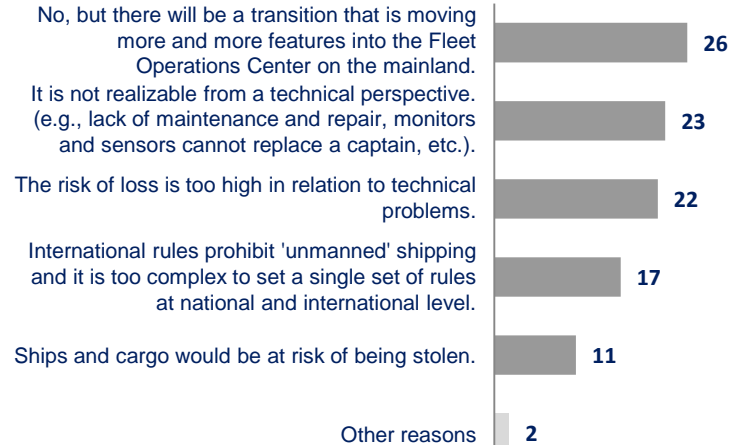
2019



- Yes, autonomous ships
- Yes, remote-controlled ships
- No

No
n=113

If not: For which reasons?



Base
W4:

Respective Total (n=192|113) | in %

The subject of "unmanned shipping" is currently being talked about a lot, and a number of test ships are currently under development or are in trial already. Can you imagine that this vision can be used commercially?

Summary – Shipyards



- 1 Participants remain mostly positive regarding orders until 2020, particularly regarding ship repairs. Cruise ships and ferries are in particular demand.
- 2 The consolidation within the sector will most likely continue, as 2/3 of the participants have this view, which is very similar compared with 2017.
- 3 40% focus on new and innovative products when creating a makers list for new or conversion projects.
- 4 Financial aspects (price and OPEX) and delivery times have become more important for most over the past five years.
- 5 2/5 see unmanned shipping as a viable commercial option, potentially within the next 20 years, which leaves a majority not sharing that view.

Shipyards industry members only (n=192)



SUPPLIERS



Main Content – Suppliers



- 1** What developments can be expected in terms of innovations and business climate?
- 2** What are the attitudes toward innovation?
- 3** Which compromises are possible in regarding price, delivery times and other industry related aspects?
- 4** What importance have LNG and hybrid refuelling systems already from the suppliers point of view?
- 5** Establishment of unmanned shipping within the next 20 years?

Suppliers only (n=932)

Suppliers are mainly present through sales representatives, followed by company management. Most are in decisive or advising positions.



SMM

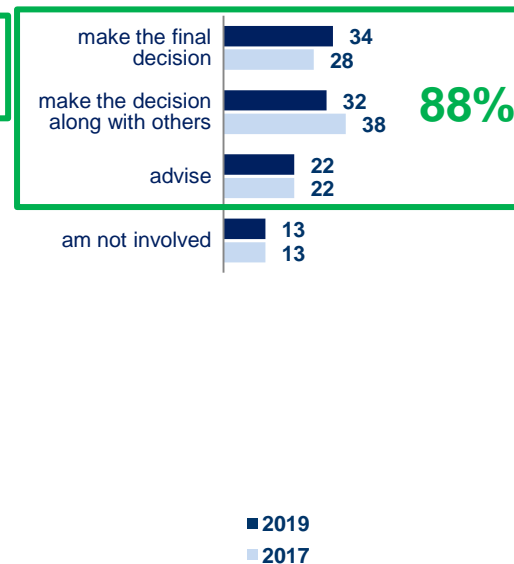
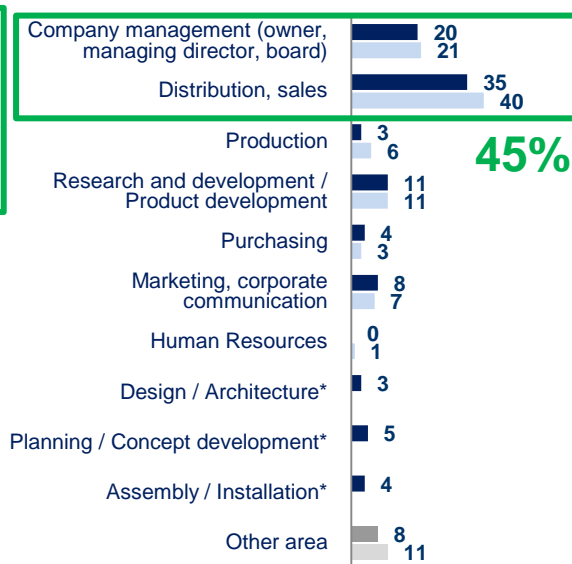
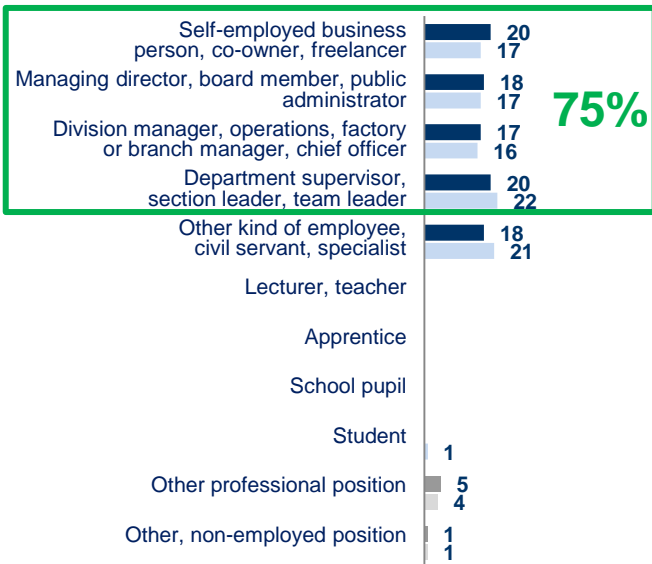


Supplier

Position

Area of work

Purchase Responsibility



Base
S3|S4|S5

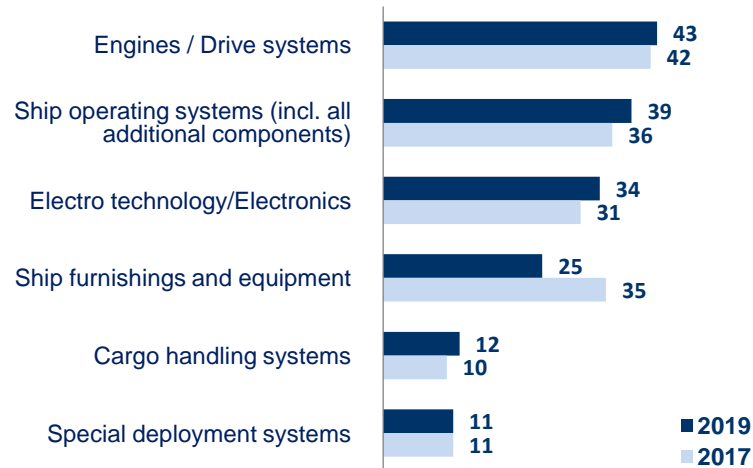
Respective Total (n=932|1673|932|1673|920|1649) | in % | *not asked for in 2017

What position do you hold in your company? | In which area do you work? | To what extent are you involved in purchasing decisions within your area of the company?

Suppliers represent a broad range of product categories, of which the most common are engine / drive systems, ship operating systems and electronics.



Product Categories



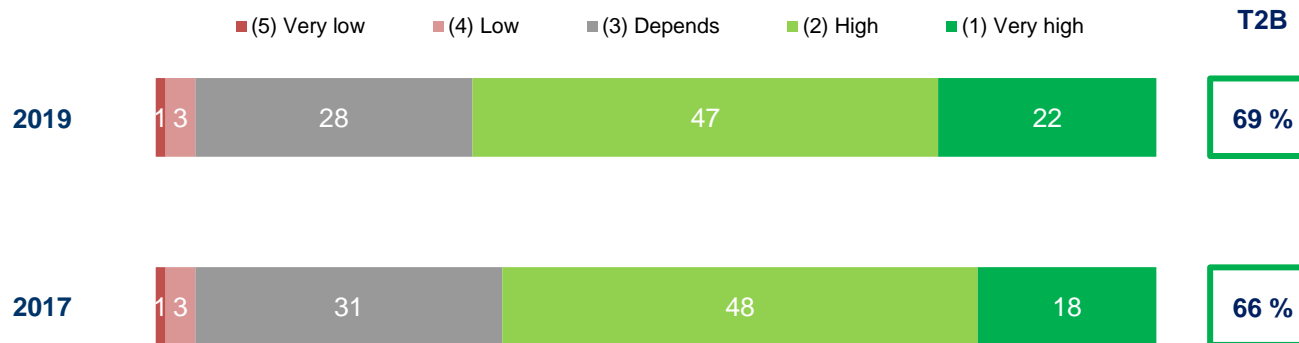
Base
Z1:

Total (n=932|1673) | in %
In which categories do your products generally belong?

The business outlook of suppliers is very positive, over 2/3 see at least high sales potential, with only a very small fraction on the low demand side.

1

Sales possibilities ship building



Base
Z3: Total (n=932|1673) | in %
In general, how do you rate the sales potential of your products in the shipbuilding industry?

Europe (particularly the EU countries) and South East Asia are the largest source of the increasing demand that the suppliers are expecting.

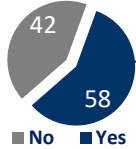


SMM

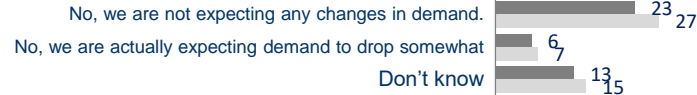
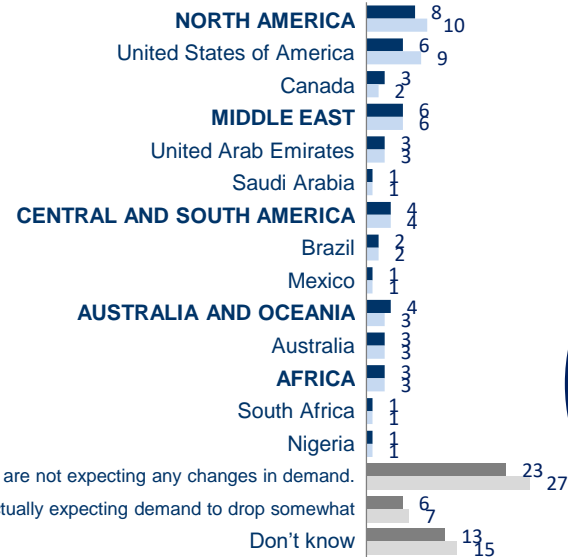
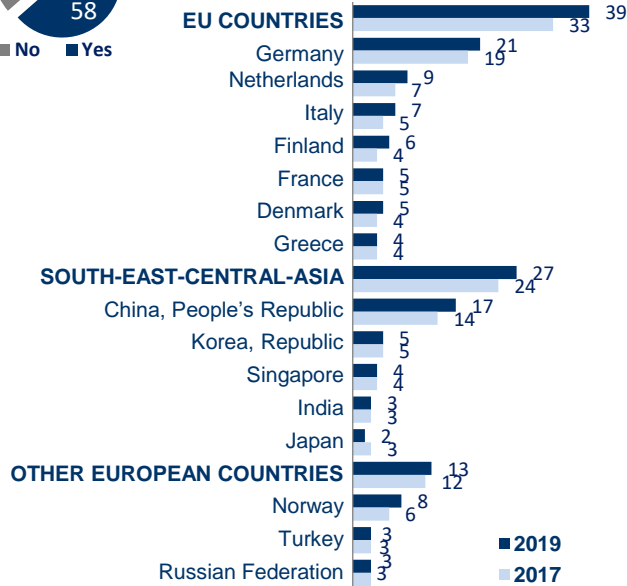


Supplier

1



Countries with increased demand



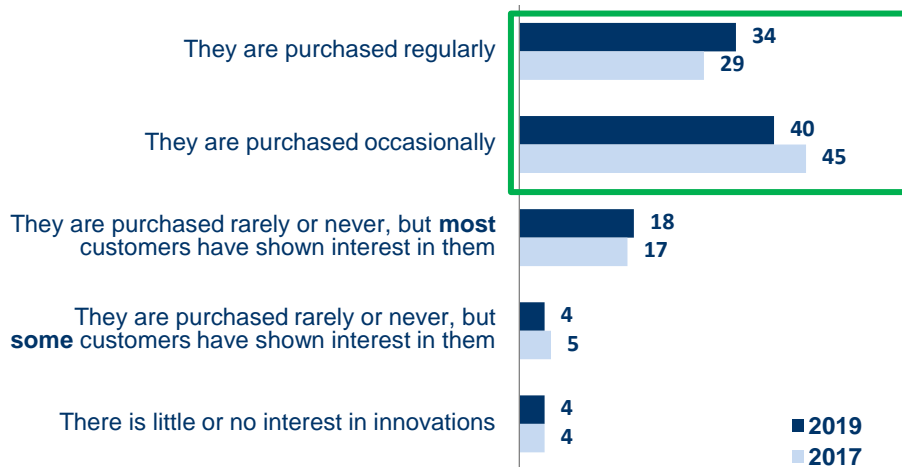
Please consider for interpretation: participants are visitors/exhibitors from SMM in Hamburg

Base: Total (n=932|1673) | in %
Z4: Are there any countries from which you are expecting increased demand by the end of 2020?

Product innovations of the suppliers are accepted by the market: 74% say that they can sell their innovations at least occasionally.

2

Customer attitude towards innovations



74%

Base
Z8:

Total (n=932|1673) | in %
What do your customers think about the innovations that you offer?



SMM



Supplier

Over the last five years, price related aspects have become more important for almost 2/3, followed by After Sales Service & Network (more than 1/2).



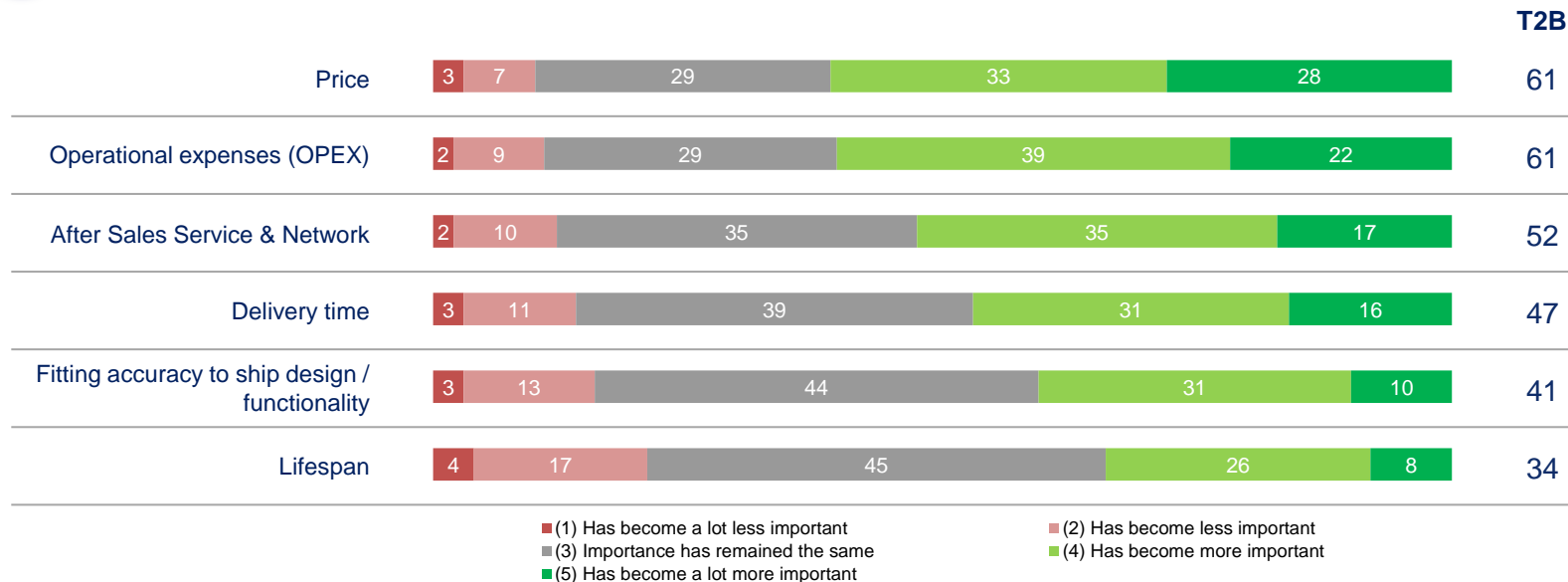
SMM



Supplier

3

Areas that have become more or less important over the last 5 years



Base
Z7a: Total (n=932) | in %
Please state for each area whether you think it has become more or less important over the last 5 years.

Demand for LNG is on the rise, whether as stand alone fuel or within a hybrid drive environment, where LNG / Electric is at the top of the list.



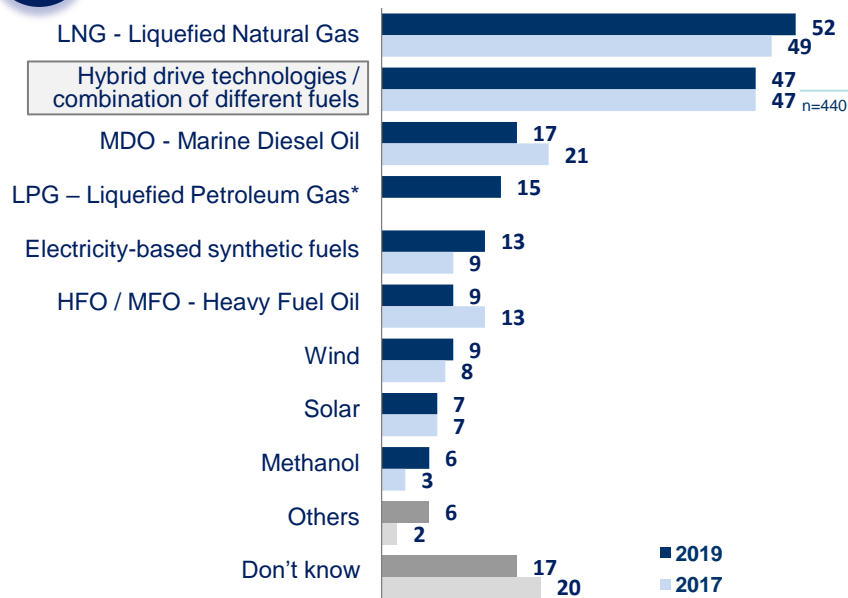
SMM



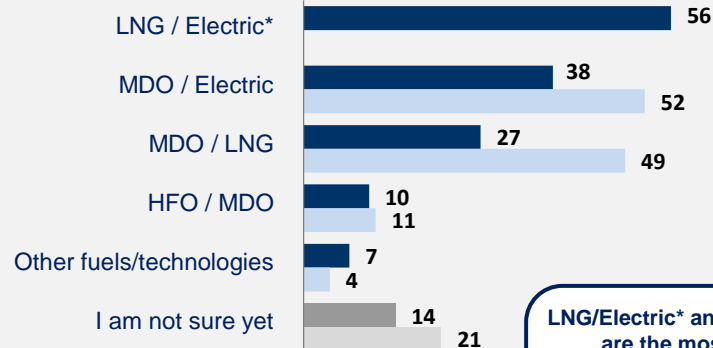
Supplier

4

Choice of fuel



Hybrid drive technology – Combination of fuels



LNG/Electric* and MDO/Electric are the most popular combination of fuels. Both provide a flexibility of cost-efficiency and cleanliness (e.g. limit or almost eliminate sulphur emissions).

Base

Z5|Z5a:

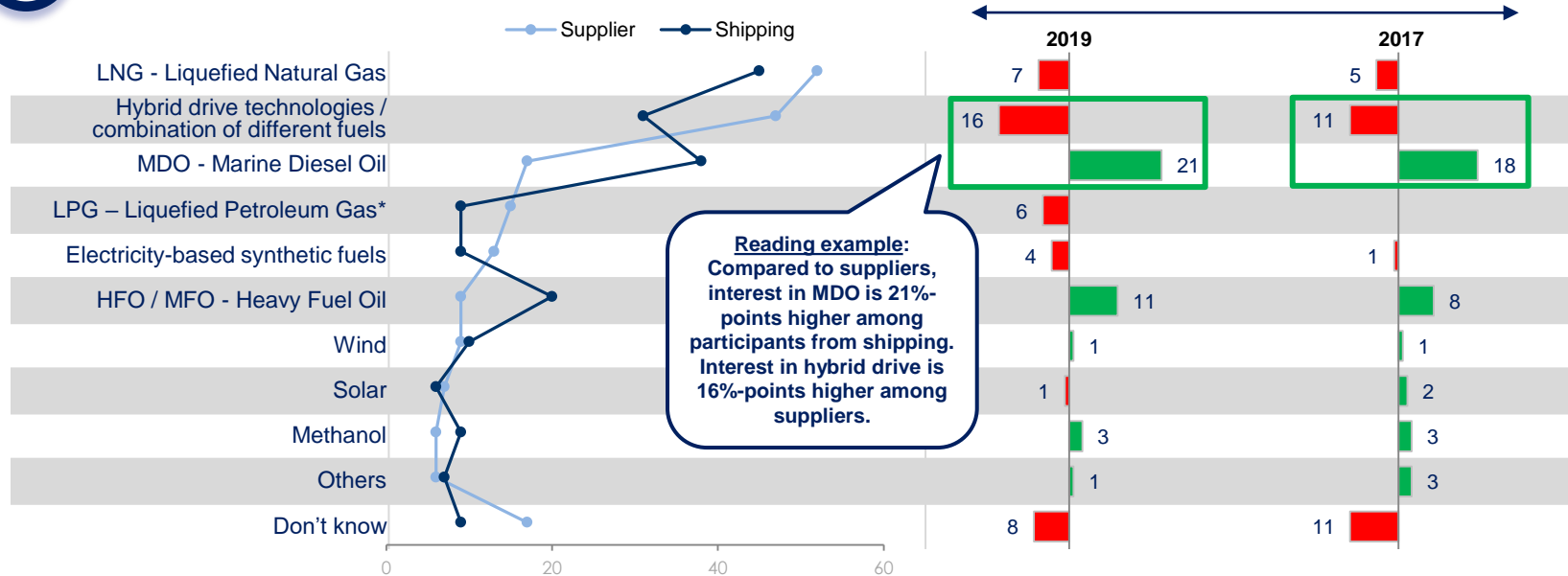
Respective Total (n=932|1673|440|794) | in % | *not asked for in 2017

In your opinion, which fuels will be in greatest demand in future in the shipping industry? | You stated that you expect significant demand for a combination of different fuels/drive technologies in future. Which combination(s) of fuels/drive technologies do you mean?

Suppliers and shipping companies believe in the future importance of LNG, but for shipping companies MDO and HFO / MFO remain highly important.



4 Choice of fuel – Supplier and shipping industry in comparison



Base
R6|Z5:

Respective Total (n=269|466|932|1673) | in % | *not asked for in 2017
In your opinion, which fuels will be in greatest demand in future in the shipping industry?

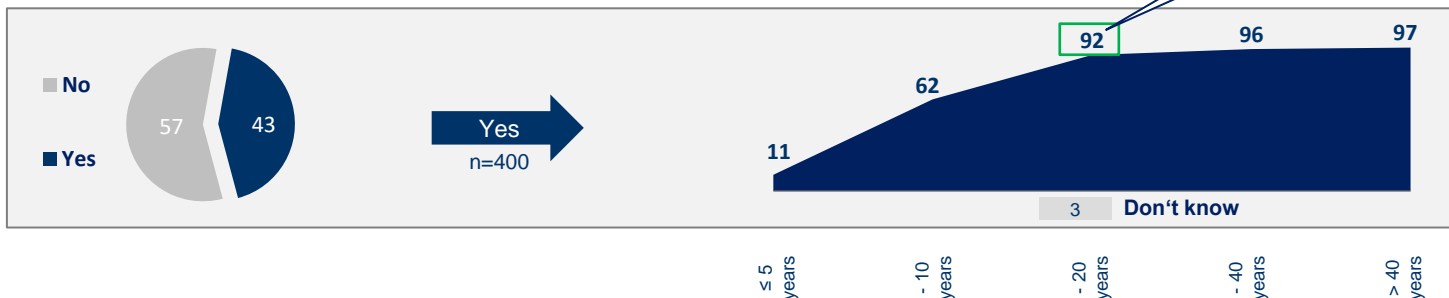
Over 2/5 of the participating suppliers believe that commercially used unmanned shipping becomes a reality within the next 20 years.

5

Can you imagine using unmanned shipping commercially?

How long do you think it will take that to happen?

2019



Base

Z9|Z9a:

Respective Total (n=932|400) | in %

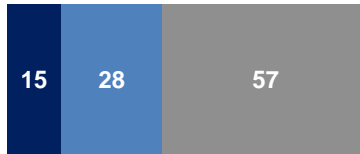
The subject of "unmanned shipping" is currently being talked about a lot, and a number of test ships are currently under development or are in trial already. Can you imagine that this vision can be used commercially? | You stated that the subject of "unmanned shipping" will become reality. How long do you think it will take that to happen?

Most suppliers are sceptical about unmanned shipping for various reasons, including the risk of losses and overcoming technical obstacles.

5

Can you imagine using unmanned shipping commercially?

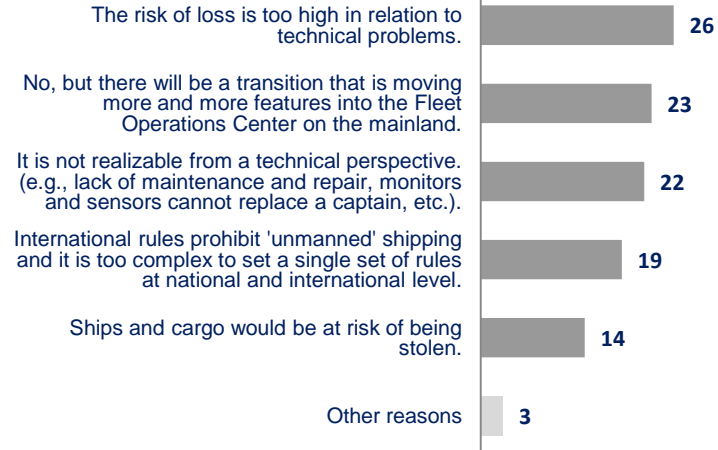
2019



- Yes, autonomous ships
- Yes, remote-controlled ships
- No

No
n=532

If not: For which reasons?



Base
Z9:

Respective Total (n=932|532) | in %

The subject of "unmanned shipping" is currently being talked about a lot, and a number of test ships are currently under development or are in trial already. Can you imagine that this vision can be used commercially?

Summary – Suppliers



- 1** Suppliers are very optimistic with regard to their sales opportunities, well over 1/3 see high potential (22% say the potential is very high).
- 2** Innovations by the suppliers are well regarded by their customers, almost 3/4 sell their innovations at least occasionally.
For the majority, price related aspects (price and OPEX) have become more important within the past five years. After Sales Service became also more crucial from the perspective of slightly over half of the respondents.
- 3**
- 4** The demand for LNG is rising, whether it is as a stand alone fuel choice or within a hybrid drive setup, where LNG / Electric is the most important type.
- 5** Over 2/5 see unmanned shipping as a viable commercial option, potentially within the next 20 years, but most remain skeptical.

Suppliers only (n=932)



MARINE INTERIORS



Hamburg
Messe + Congress

- 1** What is the business outlook and need for new products and services?
- 2** What is the most likely expenditure choosing between newly build ships and refits?
- 3** How is the market balanced between turnkey and third party project control?
- 4** What are the key challenges within the industry?
- 5** Are there market barriers and how to overcome them?

All participants of this special sections only (n=162)

Marine interior specialists are most commonly suppliers of interior equipment and technology or active in designing and outfitting

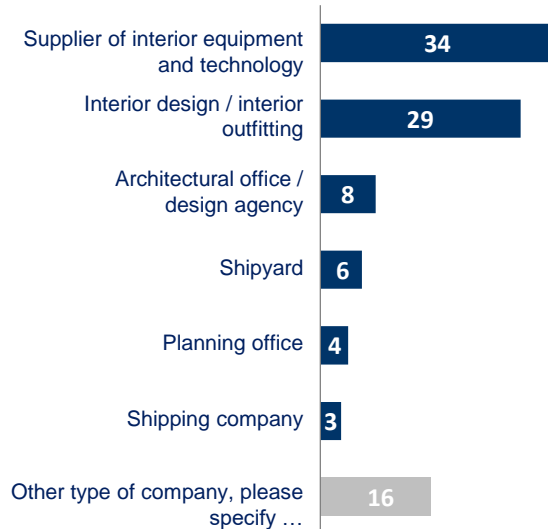


SMM

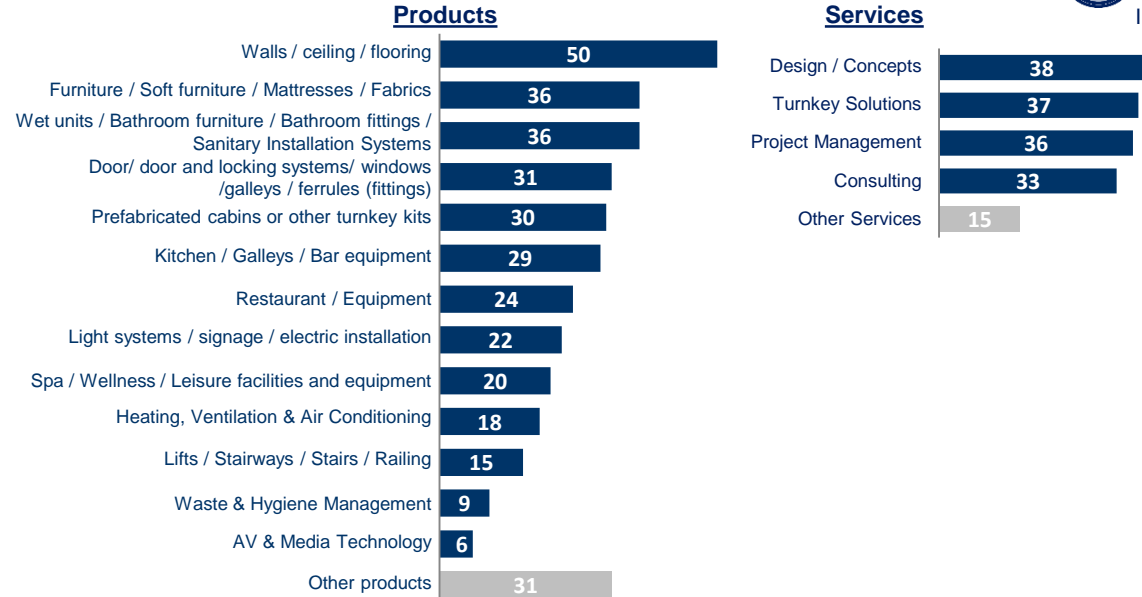


Marine
Interiors

Kind of Company



Product / service area in interior design / technology



Base
CF1|CF2: Respective Total (n=100|100) Respondents of Ship interior outfitting / interior decoration / interior design | in %
What kind of company do you work for? | In which product / service area in interior design / technology are you active?

Well over 1/3 see demand for products and services for ship interiors by 2020. The need is spread across the full range of products and services.



SMM

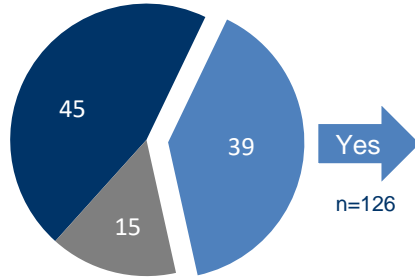


Marine
Interiors

1

Need for products and services only for shipping, shipyard and supplier by 2020

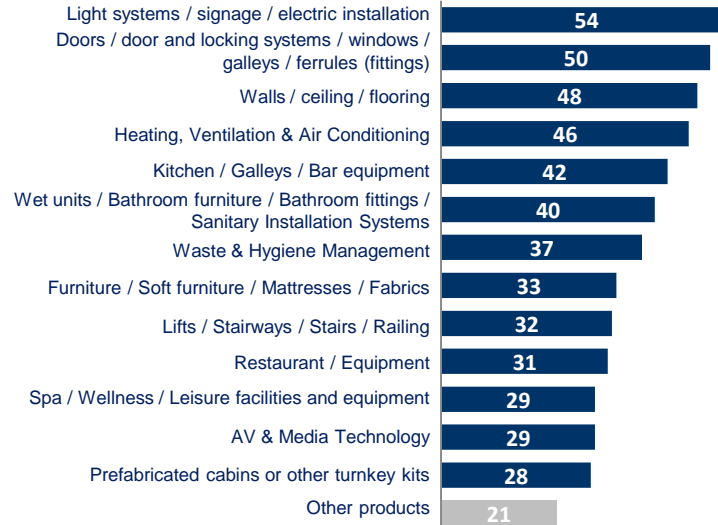
■ No
■ Yes
■ Don't know



Respondents from shipping companies, shipyards and suppliers that continued into the marine interiors survey.

Need of product groups and services

Products



Services



Base
CF3|CF4:

Respective Total (n=321|126) | in %

Do you have any need for products and services for ship interiors by 2020? | Which of the following product groups do you need?

Participants expect demand for interior services in somewhat higher expenditure in the case of new ship building compared with refits.



SMM



Marine
Interiors

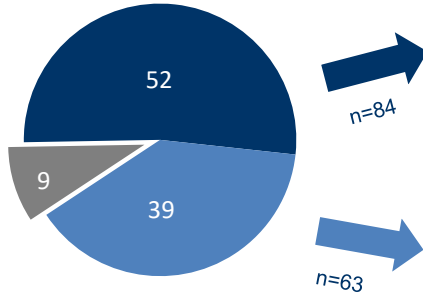
2

For which type of project do you expect a higher expenditure?

■ In a new build ship

■ In a refit

■ Don't know



By what percentage are these costs higher for ...

And what is the reason?

... a newly built ship

33%
on average

Most mentioned were increasing demand, larger than expected scale and time requirements, new materials and certification needs

“ Product re-registrations (certificates, fire tests, sound tests, etc.); travel costs due to the much longer construction time; scheduling delays; last minute changes

... a refit

20%
on average

By far the most frequently cited reasons are higher expenditure through deconstruction and adaptation, followed by lower plannability.

“ Having to take out before you can put in! Plus compromises

“ You have to adapt to an existing design

Base

CF5|5a|b|c|d:

Respective Total (n=162|84|63) | in %

What kind of investment projects regarding the interior design of ships do you expect to incur in higher expenditures? | By how many % are your costs higher in a newly built ship/ in a refit, as compared to a refit/ a newly built ship? What is, in your opinion, the cause?

Turnkey is the preferred type of completion for most participants. Many mention a lack of suppliers, products etc. in the area of HVAC.



SMM

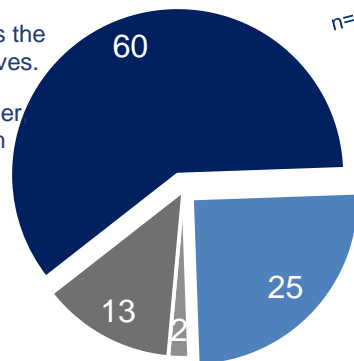


Marine Interiors

3

Type of completion preferred for an interior design

- Turnkey - A company is commissioned to complete entire areas and coordinates the individual suppliers themselves.
- The instructing party will order, coordinate and monitor each supplier directly
- Neither
- Don't know



n=97

Notable difference:
68% of shipyards prefer turnkey, but only 50% of suppliers.

n=40

Turnkey

For which design areas in the ship favored?

Turnkey solutions are interesting for all design areas, both public and crew areas.



All areas in the ship (passenger areas, cabin areas and also technical spaces)

In which areas is a lack of suppliers, products, specialists etc.?

Frequent mention of HVAC and the area of special solutions, less often wet rooms and interior fittings of cabins



HVAC esp. extraction



To find suppliers for special solutions

Instruction party

For which design areas in the ship favored?

This is generally interesting for all design areas, single areas frequently mentioned are HVAC and the interior design of cabins.



Air conditioning/ventilation, MSR, furniture, doors, flooring, interior fittings, sanitary)

In which areas is a lack of suppliers, products, specialists etc.?

No frequent mention of specific areas, some mention HVAC, sustainability and development



Galley, electrical and HVAC engineering



Sustainability of their products, protecting the environment, when you order something you don't know how % affect this the environment, etc.

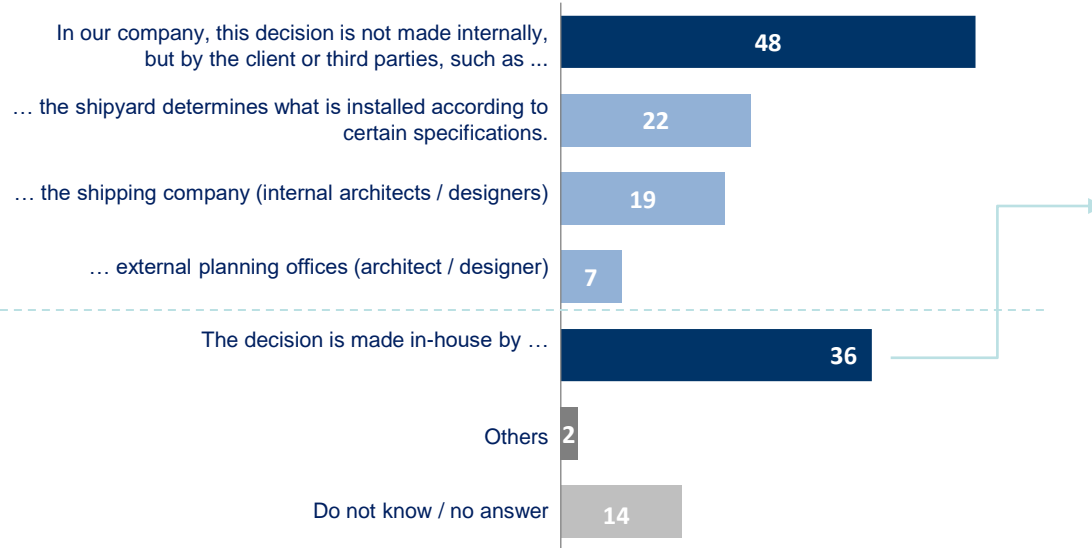
Base

Respective Total (n=162|97|97|40|40) | in %

CF6|CF6a|b|c|d: Which type of completion of an interior design would you prefer? | For which design areas in the ship would this be particularly favoured? | In which product areas are system providers/ suppliers, specialists and products particularly lacking?

The client and / or third parties play a major role when it comes to deciding which suppliers, products and services are commissioned.

Responsibility for commissioning of products and services



Responsibility in-house

In the Supplier, Shipyard and Shipping divisions, the CEO is primarily responsible.

In Interior Design, it is mainly project managers or heads of certain areas who are responsible.

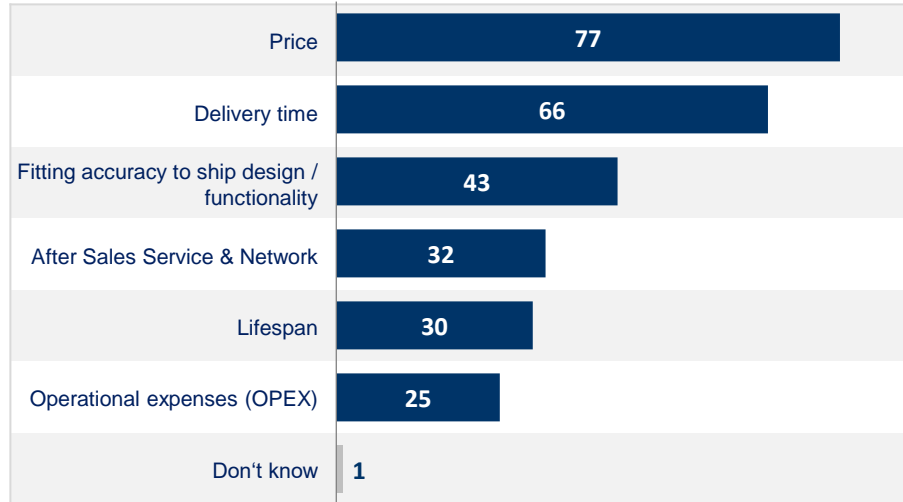
Base
CF7

Respective Total (n=162) | in %
Who decides in your company which suppliers, products and services are commissioned / purchased for the interior outfitting of ships?

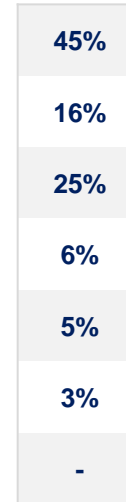
Price is the single most important challenge, followed by fitting accuracy and delivery times. In comparisons, other aspects appear less crucial.

4

Key challenges when choosing suppliers



Importance by occurrence at rank 1



Base
CF8a|b: Respective Total (n=162|130) | in %
What are the biggest challenges in choosing suppliers, products and services? | Please sort the selected challenges according to their importance?

1/3 of the participants are already active in Asia and about 1/5 are planning to follow. However, a considerable share has no such plans.

Business extension into Asia



Base
CF9:

Respective Total (n=162/37/37) | in %
More and more passenger ships (cruise ships, ferries) and yachts are manufactured in Asia (e.g. China / Japan). Do you think about extending your business to this region?



SMM



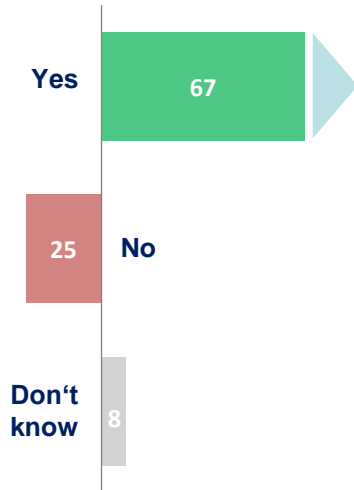
Marine
Interiors

The majority believes that the maritime industry is open to new suppliers. Price sensitivity, certification and specialisation are crucial for new entrants.

5

Market entry barriers

Maritime industry is open to new suppliers / product providers?



Advice

... for the market entry

In addition to good prices, a high level of professional competence and a good network are often mentioned. Certification plays an important role when it comes to products. Specialization in the market is another more frequently mentioned advice.

- “ Certification of materials need to be done
- “ Bringing expertise and knowledge, too many are romping around in the market, which lacks exactly these skills
- “ Competitive prices, High Quality, true responsibility for delivered items, flexibility and fast response to client demands.
- “ Good network, solid background

Base
CF10|a:

Respective Total (n=162|109) | in %
Do you think the maritime industry is open to new suppliers / product providers? | What advice would you give a provider for the market entry?

Various features and trends were mentioned by the participants, of which many take the use of modern technology into account to increase comfort.

Latest trends in cabin and interior design of passenger ships

Apart from voice control in the cabins for light, etc., natural furnishing elements and bright colors as well as floor-to-ceiling windows



SMM



Marine
Interiors

The latest trends ...

... follow very much the suggested and already anticipated pattern and can be summed up as follows:

- Smart cabins and the improvement of the Internet on board
- Better operability of e.g. air conditioning or intelligent illumination
- Innovations that increase passenger comfort overall



Adaptive lighting / Ambilight for the cabin, depending on the weather or user requirements; interactive screen walls showing rainforest, desert or similar.



Better/faster/cheaper broadband connection (internet)



A little more 3D realistic presentations – I mean 3D images on windows about surrounding nature etc., evening visual effects ..



Larger windows/sliding doors with self-tinting smart glass powered by Sun.



On both type river and sea pass. vessels - adjustable interior (of course partly) to let passengers to have some more (at least feeling) freedom to adjust their comfort during journey.



Integrated control with memory features



Blue tooth connectivity in cabins to connect to high quality speakers and control of devices

Well over half the participants heard about the Marine Interiors and plans a visit to see exhibitors, products, get new ideas, network among other things.

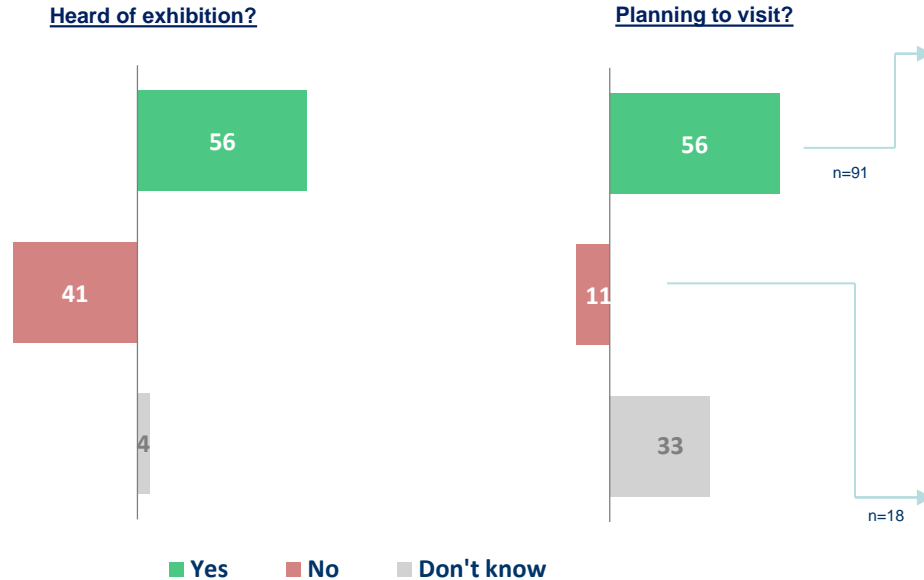


SMM



Marine Interiors

Awareness and participation of exhibition



Interests

Potential visitors are interested to see the range of exhibitors and suppliers, get inspiration and ideas, network and many have specific product areas they want to know more about.

- “ A60 doors / Marine panels / floors / wet space modules ”
- “ Futuristic designs, stands closer to nature ”
- “ Exhibitors, suppliers, contacts, trends ”
- “ For a first time in general, check the available information and try to extend own overview ”

Barriers

No time	56
Topic not relevant	22
Other reasons	17
Unfavorable date	6
Don't know	6

Base

CF12|a|b|c:

Respective Total (n=162|162|91|18) | in %

Which interior design or which special features could you imagine additionally? | Have you heard before about our new exhibition, Marine Interiors, in September 2019? | Are you planning to visit the fair Marine Interiors?



- 1** Well over 1/3 of the participants see demand for products and services for ship interiors by 2020. Needs include the full product and service range.
- 2** The demand for interior products and services requires somewhat higher expenditure in the case of new ship building compared with refits.
- 3** Turnkey is the preferred type of completion for most participants, rather than working under coordination of an instructive third party
- 4** Price is the key challenge when choosing a supplier and is also the most important topic, followed by delivery time and accuracy.
- 5** Most trust that the maritime industry is open to new suppliers, but price sensitivity, certification and specialization are crucial for new entrants.

All participants of this special sections only (n=162)

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