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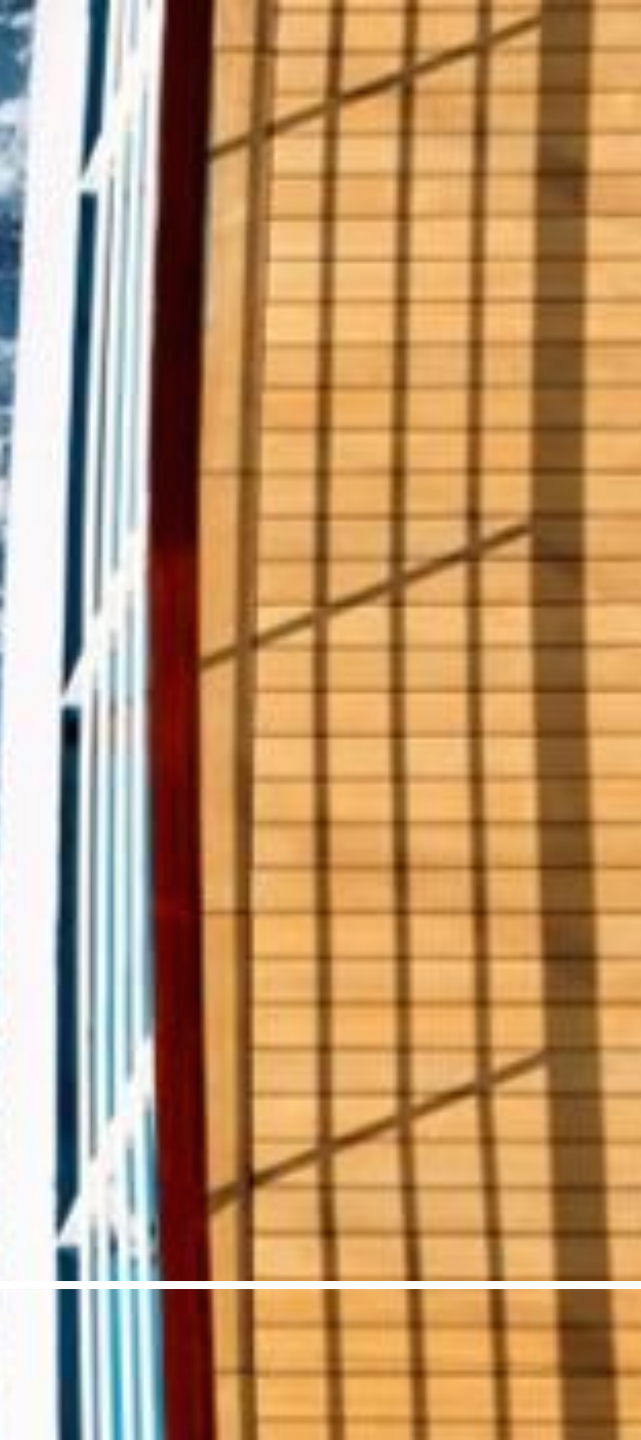
Cruise Denmark

Aarhus

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Objective and Scope

This study uncovers the attitudes and behaviours of cruise guests and crew members relations to visits in Aarhus, with main focus on the cruise guests' and crew members' consumption when ships arrive in Aarhus, i.e. how much is spent in the following categories:

- Food & Beverages at Restaurants & Bars
- Taxis/Ground Transportation
- Shopping
- Attractions
- Other purchases

Methodology and Data collection

Recruitment and interviews:

Recruitment of guests/crew upon arrival to the cruise ship at the port in Aarhus. Interviews are conducted at the harbour – either as face-to-face interviews or by helping the respondents scan a QR code on their phone.

The survey has been available in below languages:

English
German
Spanish
Italian

Weighting:

The data for the passengers has been weighted afterwards, to better approximate the known nationality of passengers. The passengers have been weighted against the total nationality distribution for all cruises that arrived in Aarhus in 2025 (actuals + estimate for rest of year).

Handling of outliers:

To ensure that the reported spending figures reflect realistic passenger behaviour, extreme outliers will be identified and adjusted using the Interquartile Range (IQR) method.*

*Description of the IQR method is provided in the appendix.

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Passengers and crew Aarhus 2025

Estimated transit passengers 2025: 190.000

Estimated crew 2025: 57.000

Survey period

Survey Period:

2025: June-September

FW dates: 29/5, 1/6, 29/6, 4/7, 17/7, 14/8, 19/8, 5/9, 18/9, 22/9

Cruise Lines surveyed:

Emerald Princess

AIDAnova

Hamburg

Norwegian Dawn

Crystal Serenity

AIDAnova_2

Mein Schiff 1

Carnival Miracle

Silver Spirit

Rotterdam

Ambience

Norwegian Dawn

Emerald Princess

Number of Surveys Returned:

Passengers: 738

Crew: 42

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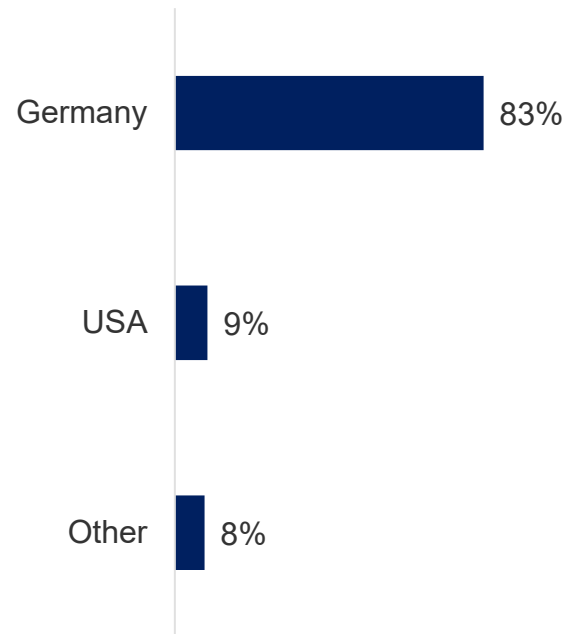
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Transit passengers Overview

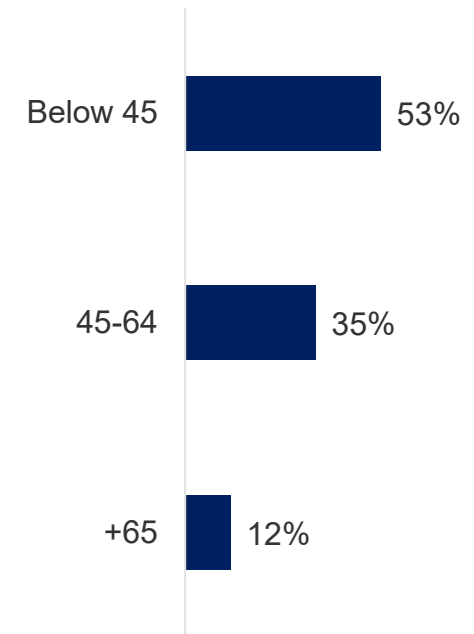
The data has been weighted to better estimate the known nationality of passengers. 83% of the responding transit passengers were from Germany and 9% from the US.

The remaining 8% were from other countries.

Nationality of transit passengers

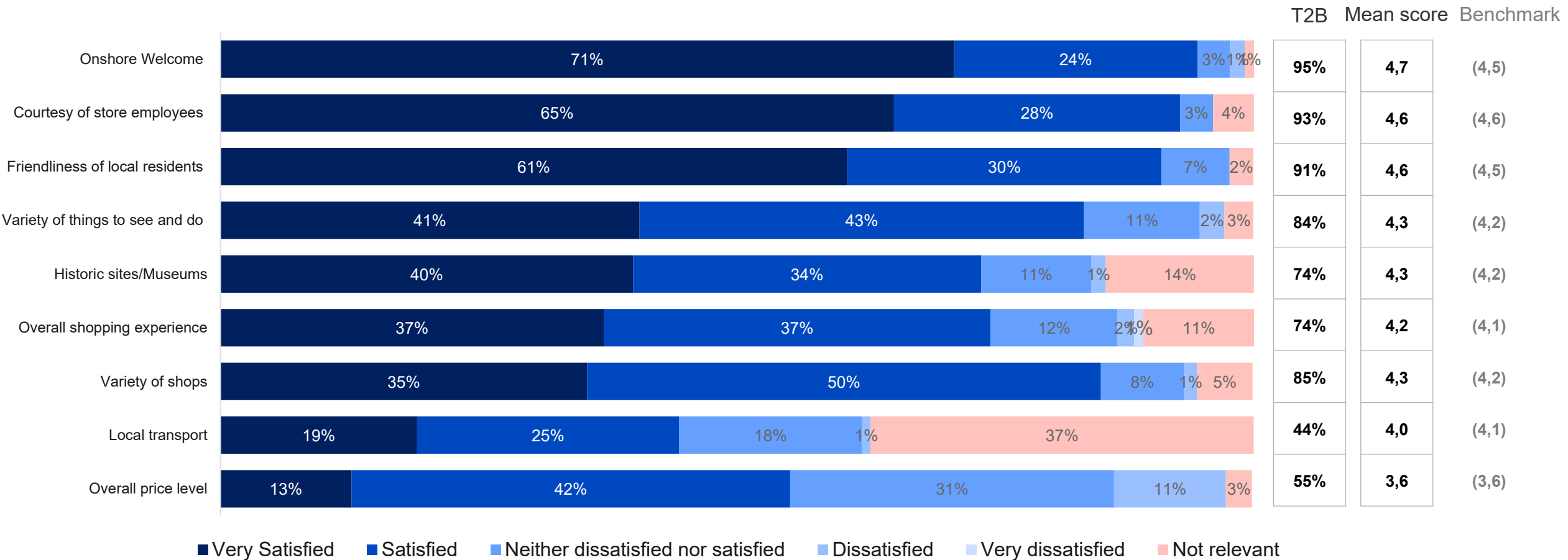


Age



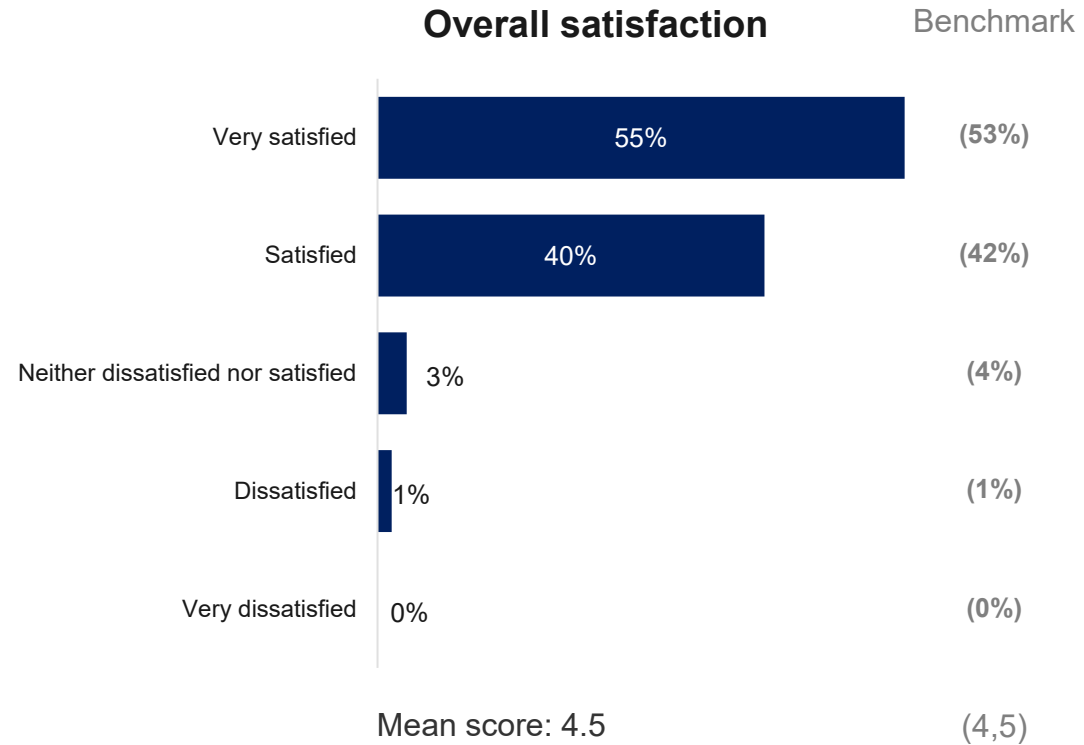
Transit passengers – Satisfaction Attributes

Passengers in Aarhus are satisfied with most aspects of their visit. Especially Onshore Welcome, Courtesy of store employees and Friendliness of local residents – here over 90% are either very satisfied or satisfied. Overall Local transport has the lowest satisfaction, where only 44% are either very satisfied or satisfied, but 37% doesn't find this relevant.



Transit passengers Satisfaction Overall visit

95% are either very satisfied or satisfied with their visit to Aarhus.



Transit passengers Shore tour/excursion

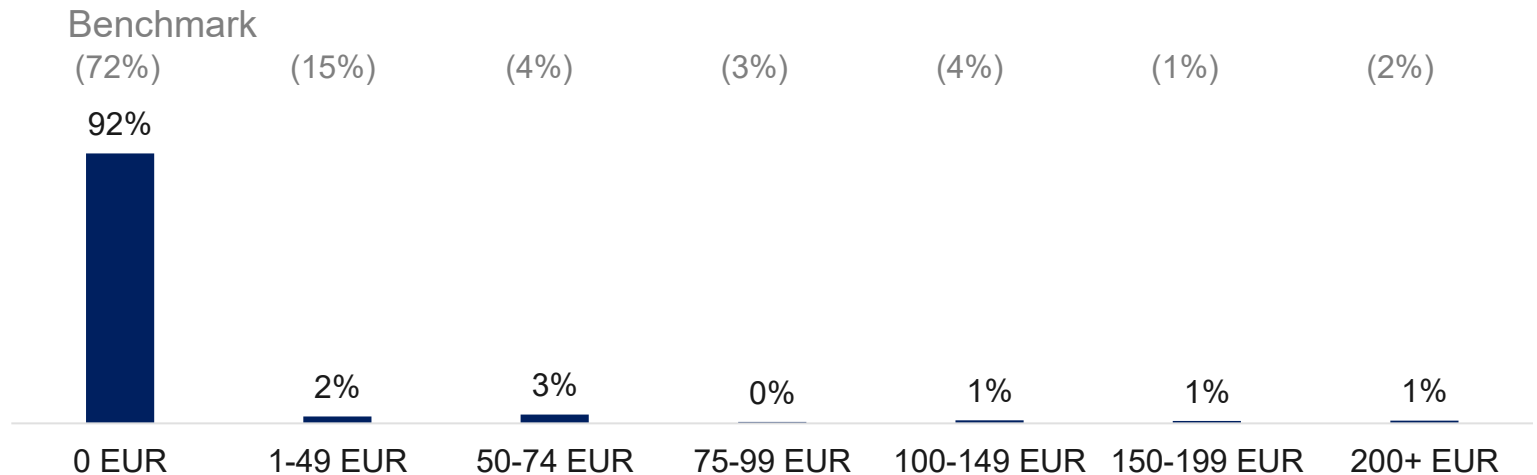
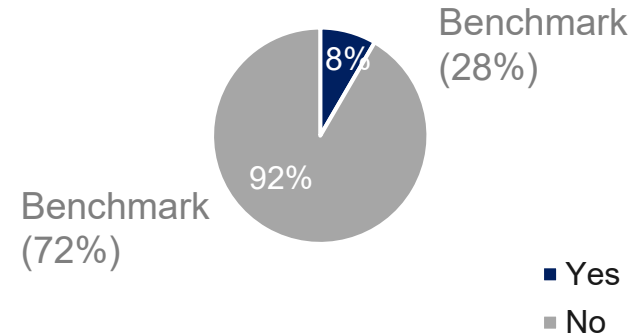
Average spend on tours in Aarhus was €7.19 per transit passenger.*

Average per purchase was €85.57.*

*Average spend per passenger calculated on everyone (including those who have not bought anything in the category).

*Per purchase calculated based on those who has bought something in the category.

Participation in onshore tour(s)/excursion(s)



() Benchmark=Total across all 4 ports

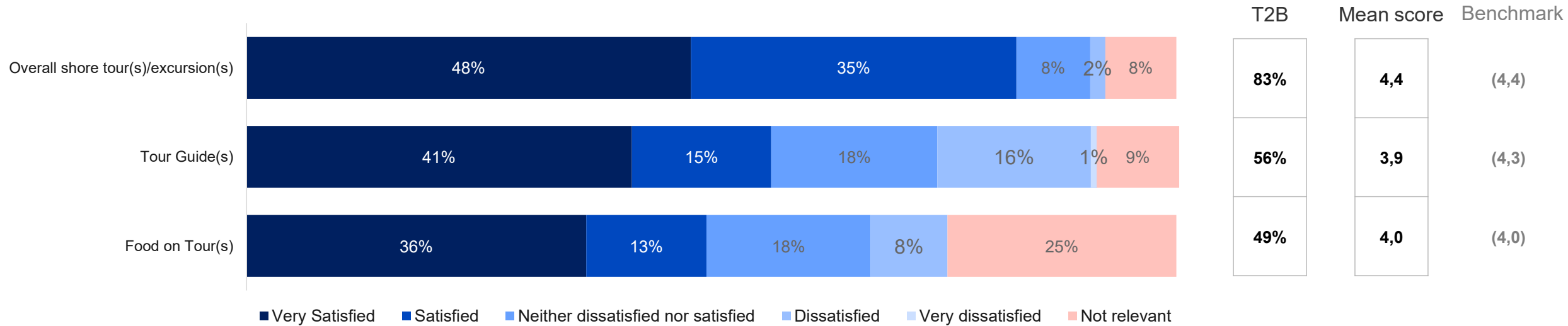
Base: Transit – 738

Q: Did you participate in any onshore tour(s)/excursion(s)?
Q: What was the cost per person for the tour(s)/excursion(s)?

Transit passengers – Satisfaction of Shore tour/excursions

83% are very satisfied/satisfied with the overall shore tour(s)/excursion(s).

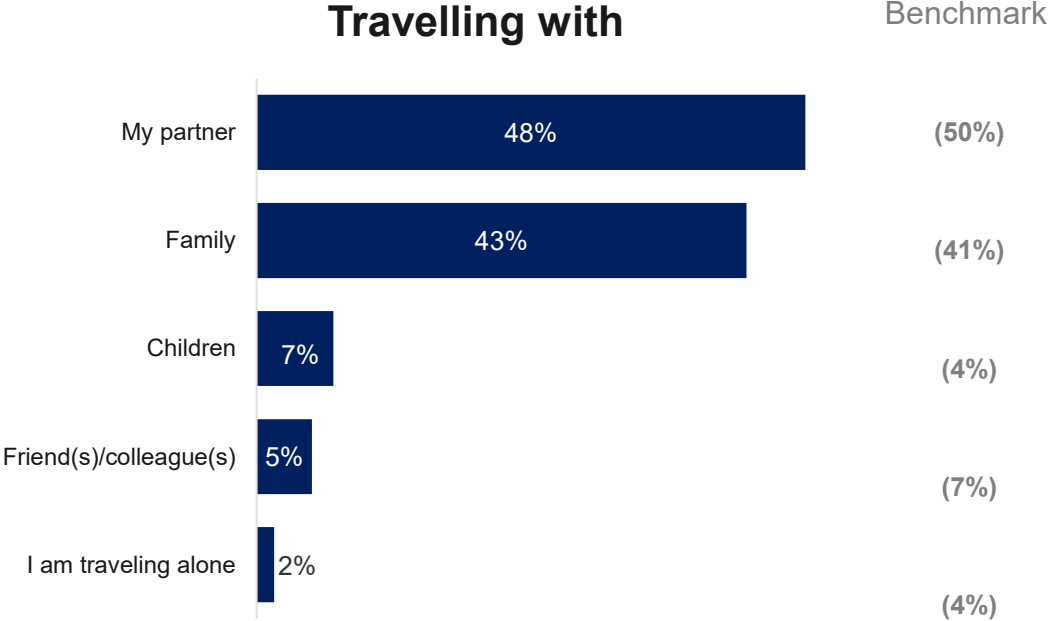
56% are very satisfied/satisfied with the tour guide(s) and 49% are very satisfied/satisfied with the food on tour(s).



Transit passengers

With whom

98% is travelling in group and 2% is travelling alone.



Transit passengers Expenditures

The average cost of a shore excursion per transit passenger in Aarhus was €7.19.

Transit passengers in Aarhus reported spending another €43.78 per passenger while ashore for other goods.

Transit passengers in Aarhus spent an average of €50.97 during their visit, including shore excursions.

Purchases	Share of All Onshore Visitors	Average Spend per Purchase*	Average Spend per Passenger*
Food & Beverages at Restaurants & Bars	66% (62%)	€17.56 (€19.66)	€11.66 (€12.23)
Taxis/Ground Transportation	11% (25%)	€16.14 (€18.54)	€1.84 (€4.58)
Shopping (Watches & Jewellery, Clothing, Local Crafts & Souvenirs)	52% (50%)	€31.83 (€33.70)	€16.40 (€16.87)
Attractions (Museums & Galleries, Entertainment/Night Clubs/Casinos)	38% (26%)	€24.66 (€20.48)	€9.37 (€5.23)
Other purchases	30% (27%)	€14.94 (€17.58)	€4.52 (€4.81)
Total			€43.78 (€43.73)

*Average spend per passenger calculated on everyone (including those who have not bought anything in the category).

() Benchmark=Total across all 4 ports

Base: Transit – 738

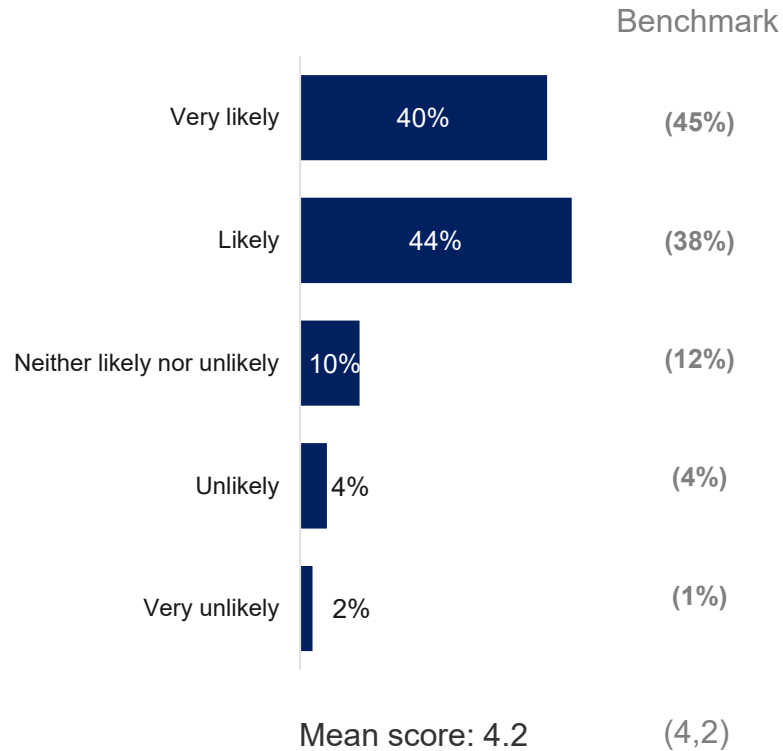
*Per purchase calculated based on those who has bought something in the category.

Transit passengers Likelihood to recommend & Likelihood to return for a land- based vacation

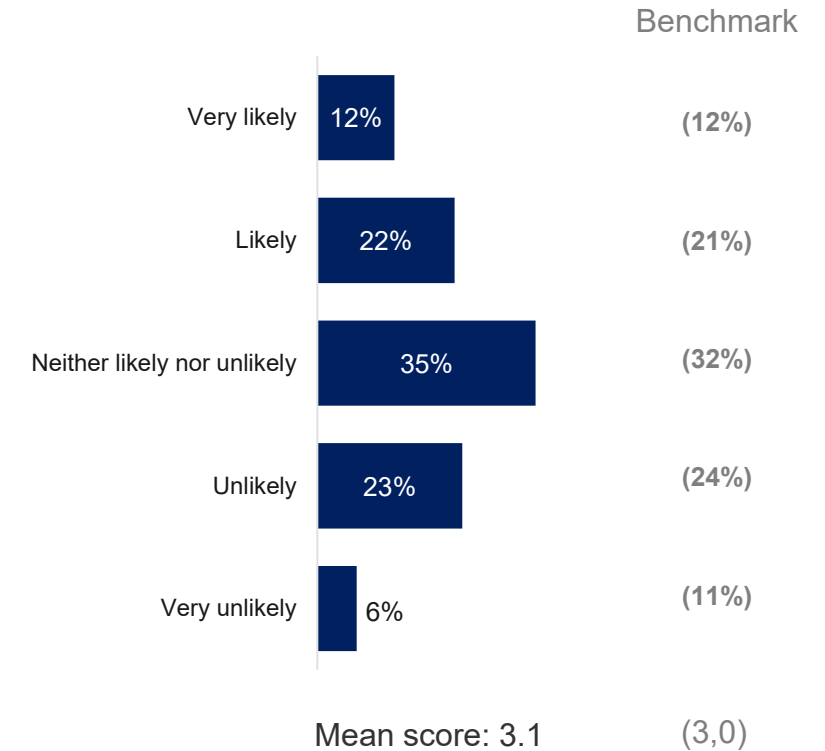
84% are very likely/likely to recommend Aarhus to friends.

35% are very likely/likely to return to Aarhus for a land-based vacation within the next 2-3 years.

Likelihood to recommend



Likelihood to return



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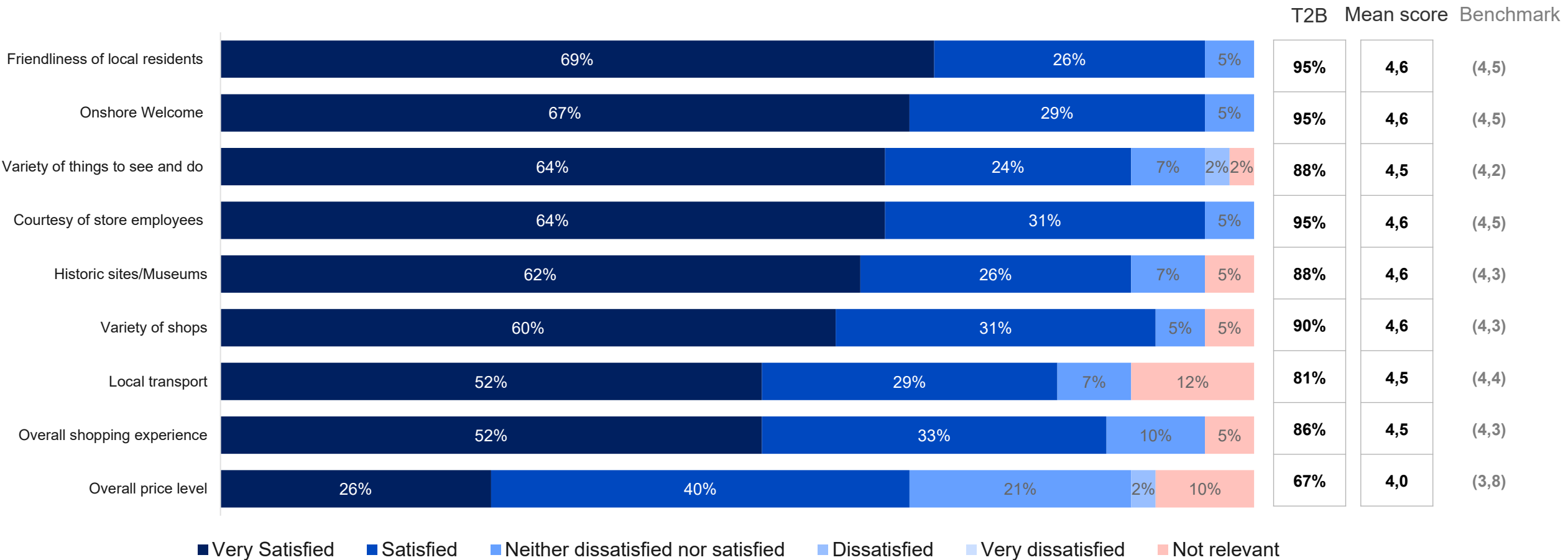
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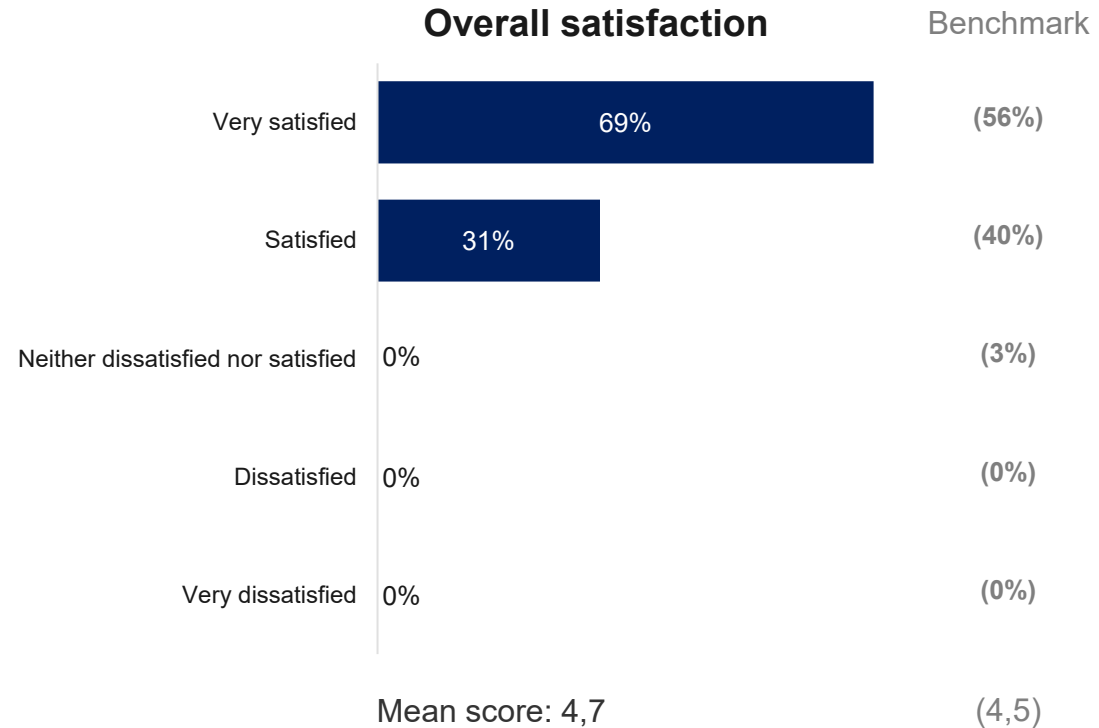
Crew – Satisfaction Attributes

High satisfaction levels among the crew members. Especially with the Friendliness of local residents, Onshore Welcome and Courtesy of store employees – here 95% are either very satisfied or satisfied.



Crew Satisfaction Overall visit

100% are either very satisfied or satisfied with their visit to Aarhus.



Crew Shore tour/excursion

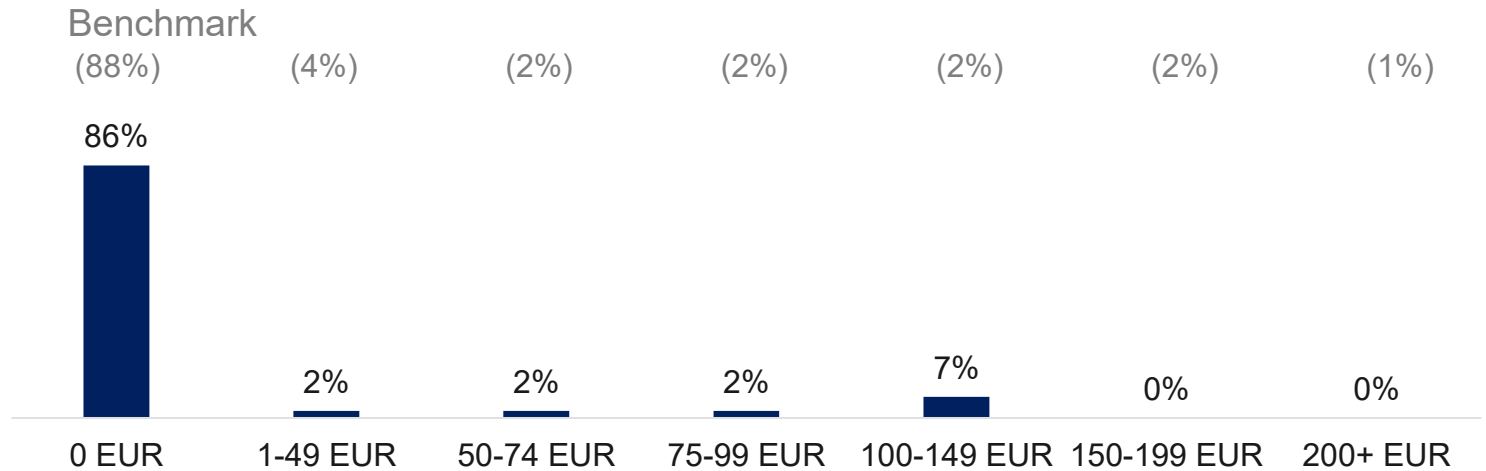
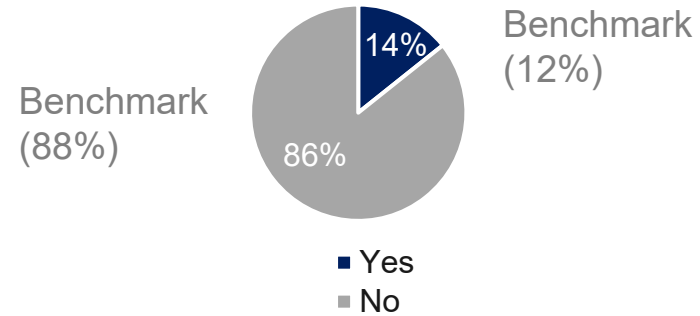
Average spend on tours in Aarhus was €11.66 per crew member.*

Average per purchase was €81.62*

*Average spend per passenger calculated on everyone (including those who have not bought anything in the category).

*Per purchase calculated based on those who has bought something in the category.

Participation in onshore tour(s)/excursion(s)



() Benchmark=Total across all 4 ports Base: Crew – 42 (low base)

Q: Did you participate in any onshore tour(s)/excursion(s)?
Q: What was the cost per person for the tour(s)/excursion(s)?

Crew Expenditures

The average cost of a shore excursion per crew member visit was €11.66.

Crew members reported spending another €98.78 per person while ashore for other goods.

Crew members spent an average of €110.44 during their visit, including shore excursions.

Purchases	Share of All Onshore Visitors	Average Spend per Purchase*	Average Spend per Passenger*
Food & Beverages at Restaurants & Bars	90% (81%)	€32.59 (€33.34)	€29.49 (€26.90)
Taxis/Ground Transportation	31% (27%)	€34.39 (€29.69)	€10.65 (€7.93)
Shopping (Watches & Jewellery, Clothing, Local Crafts & Souvenirs)	62% (62%)	€52.58 (€48.01)	€32.55 (€29.73)
Attractions (Museums & Galleries, Entertainment/Night Clubs/Casinos)	45% (27%)	€32.85 (€32.06)	€14.86 (€8.56)
Other purchases	43% (36%)	€26.22 (€31.14)	€11.24 (€11.33)
Total			€98.78 (€84.45)

*Average spend per passenger calculated on everyone (including those who have not bought anything in the category).

() Benchmark=Total across all 4 ports

Base: Crew – 42 (low base)

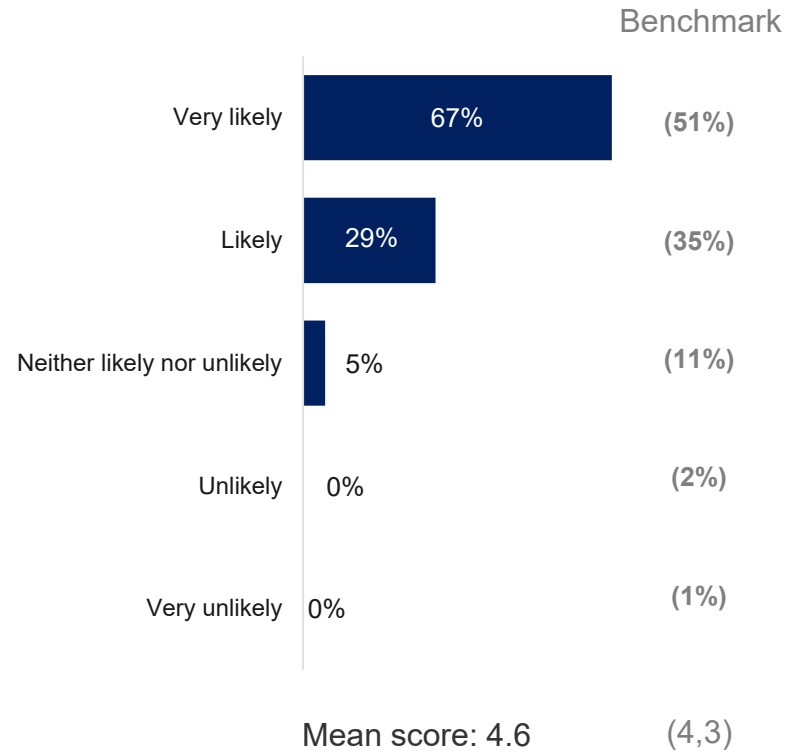
*Per purchase calculated based on those who has bought something in the category.

Crew Likelihood to recommend & Likelihood to return for a land- based vacation

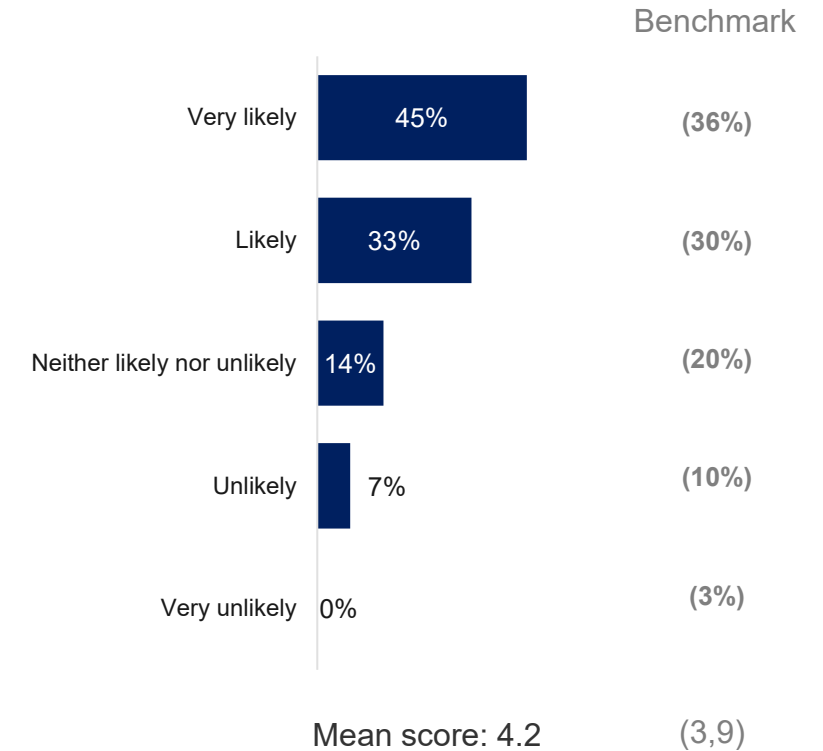
95% are very likely/likely to recommend Aarhus to friends.

79% are very likely/likely to return to Aarhus for a land-based vacation within the next 2-3 years.

Likelihood to recommend



Likelihood to return



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Passenger and Crew Arrivals 2025

During 2025 cruise calls an estimated 190.000 passengers arrived in Århus on transit calls.

- An estimated 95% of these passengers (180.500) disembarked and visited Århus.

Approximately 57.000 crew members arrived in Århus.

- An estimated 40% of these crew members (22.800) disembarked and visited Århus.

Estimated Passenger and Crew spending – average per passenger/crew

Surveys of passengers and crew visiting Aarhus in 2025 showed following weighted average spending:

Transit passengers spent an average of €50.97.

Crew members spent an average of €110.44.

Category	Average Expenditure per Passenger/Crew	
	Transit	Crew
Food & Beverages at Restaurants & Bars	€ 11.66	€ 29.49
Taxis/Ground Transportation	€ 1.84	€ 10.65
Shopping (Watches & Jewellery, Clothing, Local Crafts & Souvenirs)	€ 16.40	€ 32.55
Attractions (Museums & Galleries, Entertainment/Night Clubs/Casinos)	€ 9.37	€ 14.86
On shore tour(s)/excursions	€ 7.19	€ 11.66
Other purchases	€ 4.52	€ 11.24
Total	€ 50.97	€ 110.44

Estimated Passenger spending – average per passenger – Nationality break down

Category	Average Expenditure per Passenger			
	Passengers total	Germany	USA	Other
Food & Beverages at Restaurants & Bars	€ 11.66	€ 10.40	€ 17.60	€ 18.12
Taxis/Ground Transportation	€ 1.84	€ 1.62	€ 3.30	€ 2.52
Shopping (Watches & Jewellery, Clothing, Local Crafts & Souvenirs)	€ 16.40	€ 15.80	€ 20.83	€ 17.66
Attractions (Museums & Galleries, Entertainment/Night Clubs/Casinos)	€ 9.37	€ 9.39	€ 8.95	€ 9.64
On shore tour(s)/excursions	€ 7.19	€ 5.97	€ 16.10	€ 9.98
Other purchases	€ 4.52	€ 4.70	€ 3.39	€ 3.89
Total	€ 50.97	€ 47.88	€ 70.18	€ 61.82

Estimated Passenger and Crew spending – Total Expenditures 2025

Passengers and crew spent an estimated €12 million in Aarhus during 2025.

Passengers accounted for 79% on the total and crew 21%.

Category	Total Expenditures		
	Transit	Crew	Total
Food & Beverages at Restaurants & Bars	€ 2.104.630	€ 672.372	€ 2.777.002
Taxis/Ground Transportation	€ 332.120	€ 242.820	€ 574.940
Shopping (Watches & Jewellery, Clothing, Local Crafts & Souvenirs)	€ 2.960.200	€ 742.140	€ 3.702.340
Attractions (Museums & Galleries, Entertainment/Night Clubs/Casinos)	€ 1.691.285	€ 338.808	€ 2.030.093
On shore tour(s)/excursions	€ 1.297.795	€ 265.848	€ 1.560.033
Other purchases	€ 815.860	€ 256.272	€ 1.072.132
Total	€ 9.200.085	€ 2.518.032	€ 11.718.117

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Outlier Detection and Treatment Method

Overview

To ensure that the reported spending figures reflect realistic passenger behaviour, extreme outliers were identified and adjusted using the **Interquartile Range (IQR) method**. This approach provides a robust way of detecting unusually high values that could distort averages, especially in skewed spending data.

IQR Method

The Interquartile Range (IQR) measures the spread of the middle 50% of the data:

$$IQR = Q3 - Q1$$

where

- Q1** = 25th percentile (the value below which 25% of observations fall)
- Q3** = 75th percentile (the value below which 75% of observations fall)

An upper threshold is then defined as:

$$\text{Threshold} = Q3 + 1.5 \times IQR$$

Any observation exceeding this threshold is considered an **outlier**.

Treatment of Outliers

Instead of removing outliers from the dataset, values exceeding the threshold were **capped (winsorized)** to the threshold level. This approach preserves all records in the data while reducing the undue influence of extremely high values on the mean.

$$x_{adjusted} = \begin{cases} x & \text{if } x \leq \text{Threshold} \\ \text{Threshold} & \text{if } x > \text{Threshold} \end{cases}$$

This ensures that averages remain representative of the majority of respondents without excluding any cases entirely.

Inclusion of Zero Values

Zero values were retained in the calculation of average spending since a zero indicates **no spending** in a given category, which is a valid and meaningful outcome.

Advantages of the IQR Method

- Robust to skewed data:** IQR relies on medians and quartiles rather than means and standard deviations, making it less sensitive to extreme values.
- No assumption of normal distribution:** It is suitable for monetary or behavioural data that often exhibit right-skewed patterns.
- Transparent and reproducible:** The rule ($Q3 + 1.5 \times IQR$) provides a consistent and interpretable cutoff across all categories and harbours.

Summary

All spending variables were screened for outliers using the IQR method on non-zero responses. Outliers above the threshold were capped, and new average values were calculated both **before** and **after** this adjustment, including zero spenders in the mean. This provides a realistic and stable estimate of passenger expenditure across harbours and spending categories.