

Urban Air Mobility Survey Evaluation Report



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Key results

Full length evaluation



Key results

- **Quantitative survey**
 - General perception
 - Concerns
 - Perception towards regulators
- Qualitative survey
- Noise perception assessment

Full length evaluation



Executive summary

General perception

- Overall, **perception of UAM is positive** with 83% of respondents having a very or rather positive attitude and 71% being ready to try out a UAM service
- **No major geographic or demographic differences**
- **Emergency use cases** seen as **most useful** for respondents and society, **followed by delivery drones**

Concerns

- Respondents feel **safer as a pedestrian with a manned air taxi** flying above their head **than with a delivery drone**
- **Main concerns** in both use cases are **safety** and **environmental concerns**
 - **For delivery drones, security** is among top concerns
 - **For air taxis, noise related concerns** are among top ranked
 - **For vertiports, noise** even ranks as the first concern, but safety is highly relevant too
- Among **environmental concerns, negative impact on wild life** is the **greatest** concern; the possibility to have an **eco-label** for UAM aircraft systems is **highly welcome**
- The analysis of replies to the trade-off question, balancing safety, noise and visual pollution levels, confirms that **acceptance for delivery drones is driven principally by safety and noise levels**
- **For air taxis**, the result is less differentiated: **Acceptance is driven by all factors examined**, in the order noise, safety, visual pollution

Perception towards regulators

- Participants see **no clear distinction between local to European regulation authorities**

Key results

- **Quantitative survey**

- **General perception**

- Concerns
- Perception towards regulators

- Qualitative survey

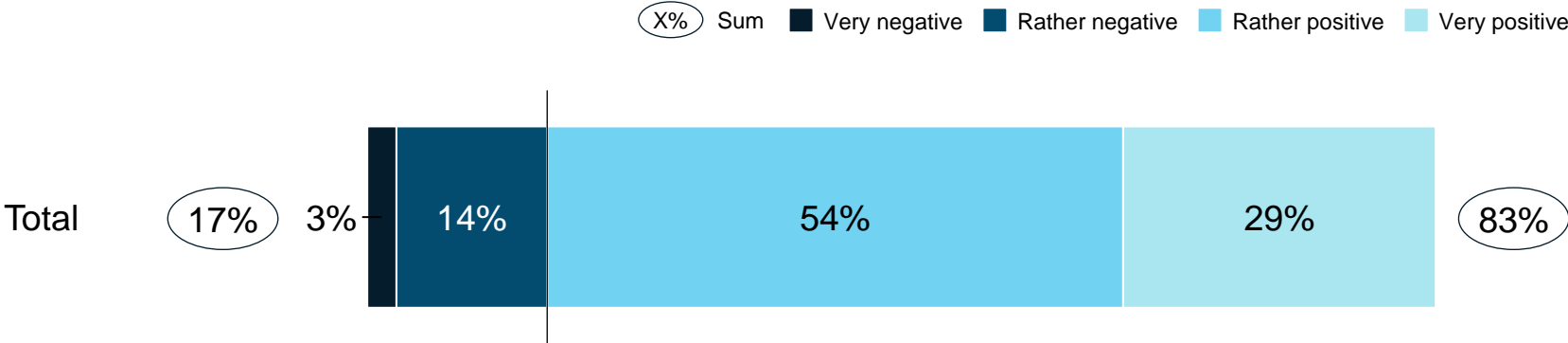
- Noise perception assessment

Full length evaluation



Overall, 83% of respondents have a very positive or rather positive attitude towards UAM...

General attitude towards urban air mobility



Vast majority of 83% feel positive (very positive or rather positive) about introduction of UAM overall

Only 17% with negative perception

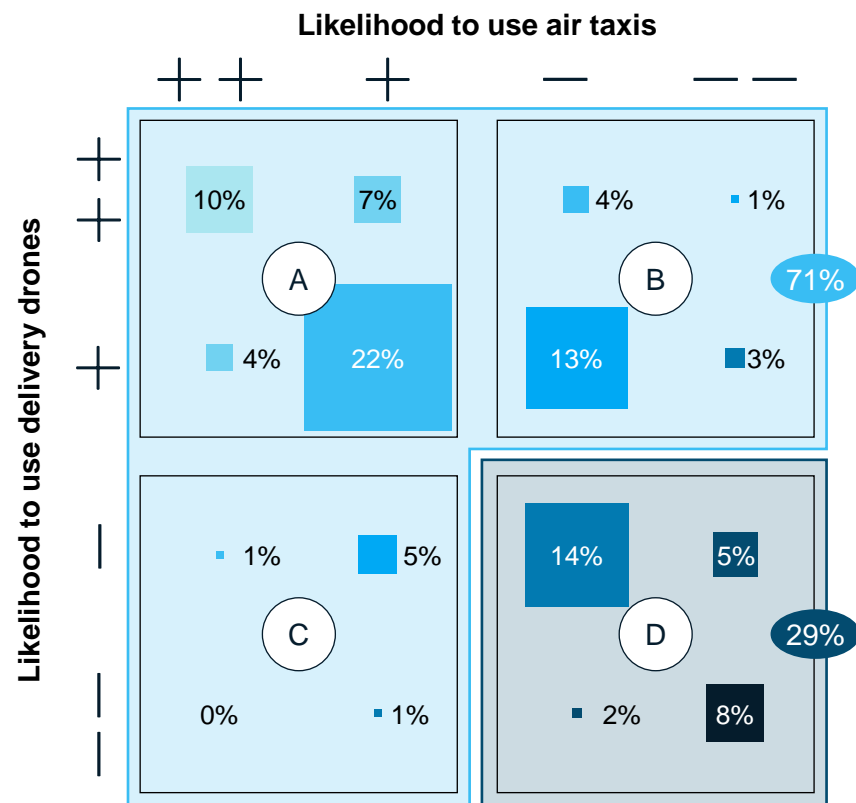
Minoritarian share of 3% are very negative and probably **hard to persuade** of introduction of UAM

Source: EASA UAM social acceptance survey question S5. What would be your overall perception if urban air mobility solutions (such as those shown in the video) were to be introduced in your city? Please select one answer.

... and 71% indicate interest in using one of the presented UAM services

Likelihood to try out UAM services – overall (1/3)

Positive Negative X% Sum potential UAM users X% Sum UAM rejecters



A
Broad users: 43% likely to become users of both services

A + B
Potential drone delivery users: 64% likely to try out delivery of goods by drone (defines subgroup)

A + C
Potential air taxi users: 49% likely to make use of at least one service (defines subgroup)

A + B + C
Potential UAM users: 71% likely to make use of at least one service (defines subgroup)

D
UAM rejecters: 29% not likely to become users of either use case (defines subgroup)

In sum, **71%** of respondents in total sample **likely to try out any UAM service** (either drones or air taxis or both)

Large supporters group of 43% with willingness to try out both use cases, the broad users; more than half in that group (22% of total) only slightly positive, but about one fourth (10% of total) highly interested in both services

Conversely, **29% of respondents lack willingness** to try out at least one UAM service; as they take negative position, UAM rejecters potentially oppose introduction of UAM

However, **only 8%** that **definitely exclude usage of any UAM service appear highly opposed**

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

Larger deviations in demographic groups and defined subgroups follow expectations

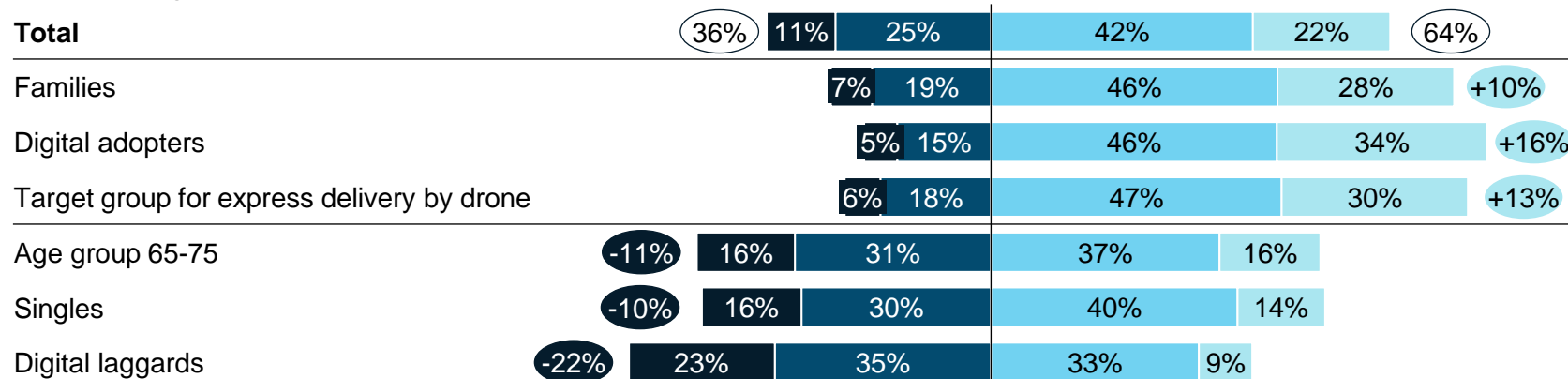
Likelihood to try out UAM services – by subgroup (2/3)

■ Not at all likely ■ Rather unlikely ■ Rather likely ■ Very likely

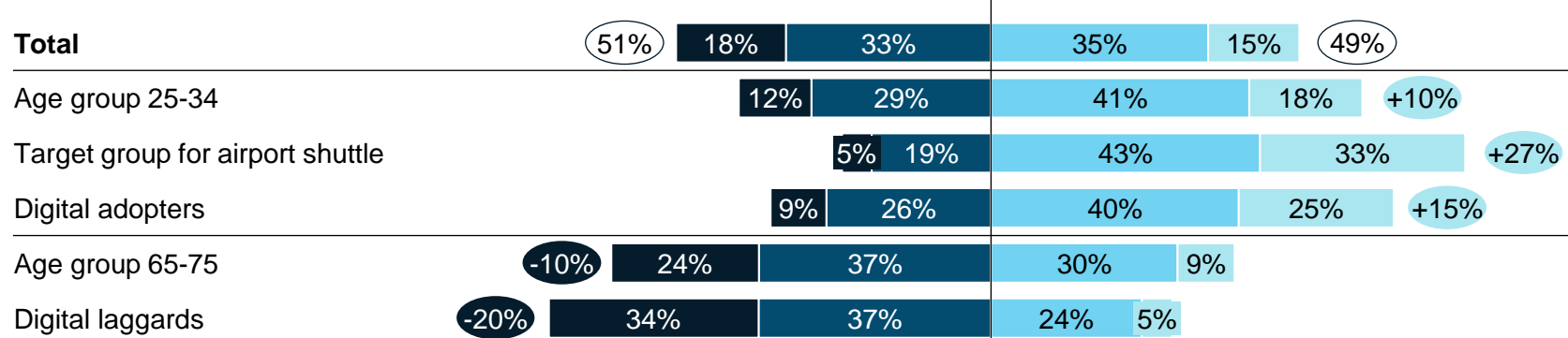
(X%) Sum +X% Positive difference to avg -X% Negative difference to avg

Likelihood to try out...

... delivery drones



... air taxis



Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

Deviations in demographic groups and defined subgroups follow expectations

Demographic groups

- **Likelihood** to try out UAM services **decreases with age**
- **Families more positive than singles**, potentially because advantages of UAM services (e.g., time saving) more critical for families with double burden of work and educational activities

Defined subgroups

- **Digital adopters** (people accustomed to using other innovative services) **more positive than digital laggards** (people not using them at all)
- **Target group for express delivery by drone** (people already using drones or accustomed to express delivery options) and **target group for airport shuttle** (frequent travellers that get to airport with air taxi substitute) with **higher willingness to try out respective use case**

In cities, deviations in interest in using UAM services are below 10%, but Southern cities tend to react slightly more positively

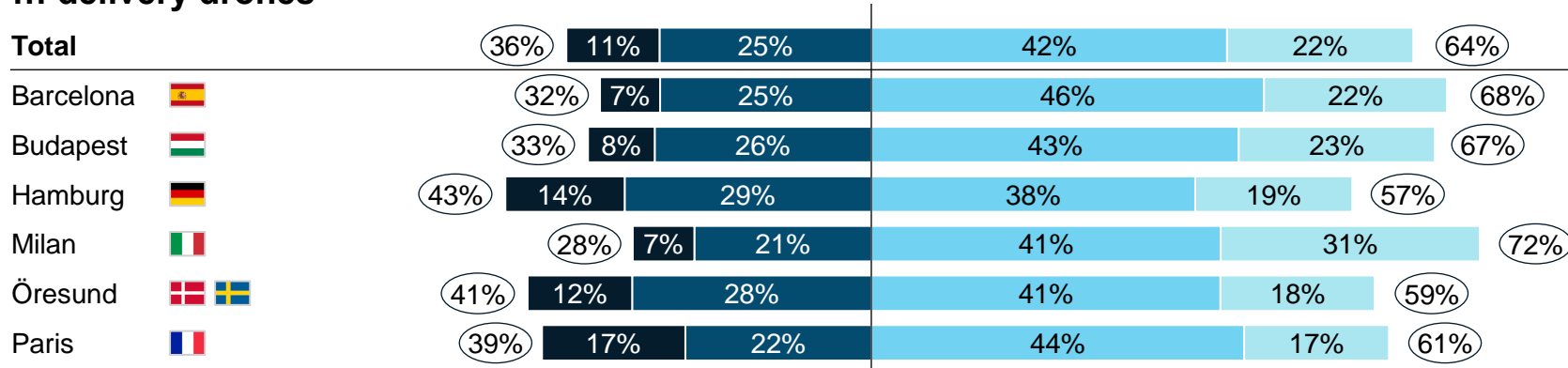
Likelihood to try out UAM services – by city (3/3)

(X%) Sum ■ Not at all likely ■ Rather unlikely ■ Rather likely ■ Very likely

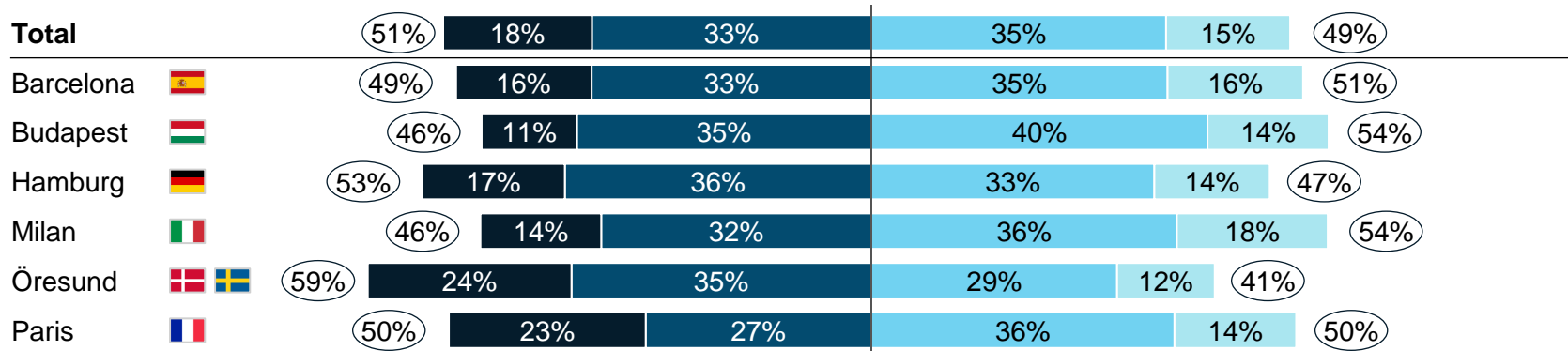
(+/- difference to avg % for drones & +/- difference to avg % for air taxis)

Likelihood to try out...

... delivery drones



... air taxis



Southern cities more open to trying out delivery of goods by drone

- Milan (+8%)
- Barcelona (+4%)

Northern regions more reserved

- Öresund (-5%, -8%)
- Hamburg (-7%, -2%)

Deviations show distinctive accentuation between cities

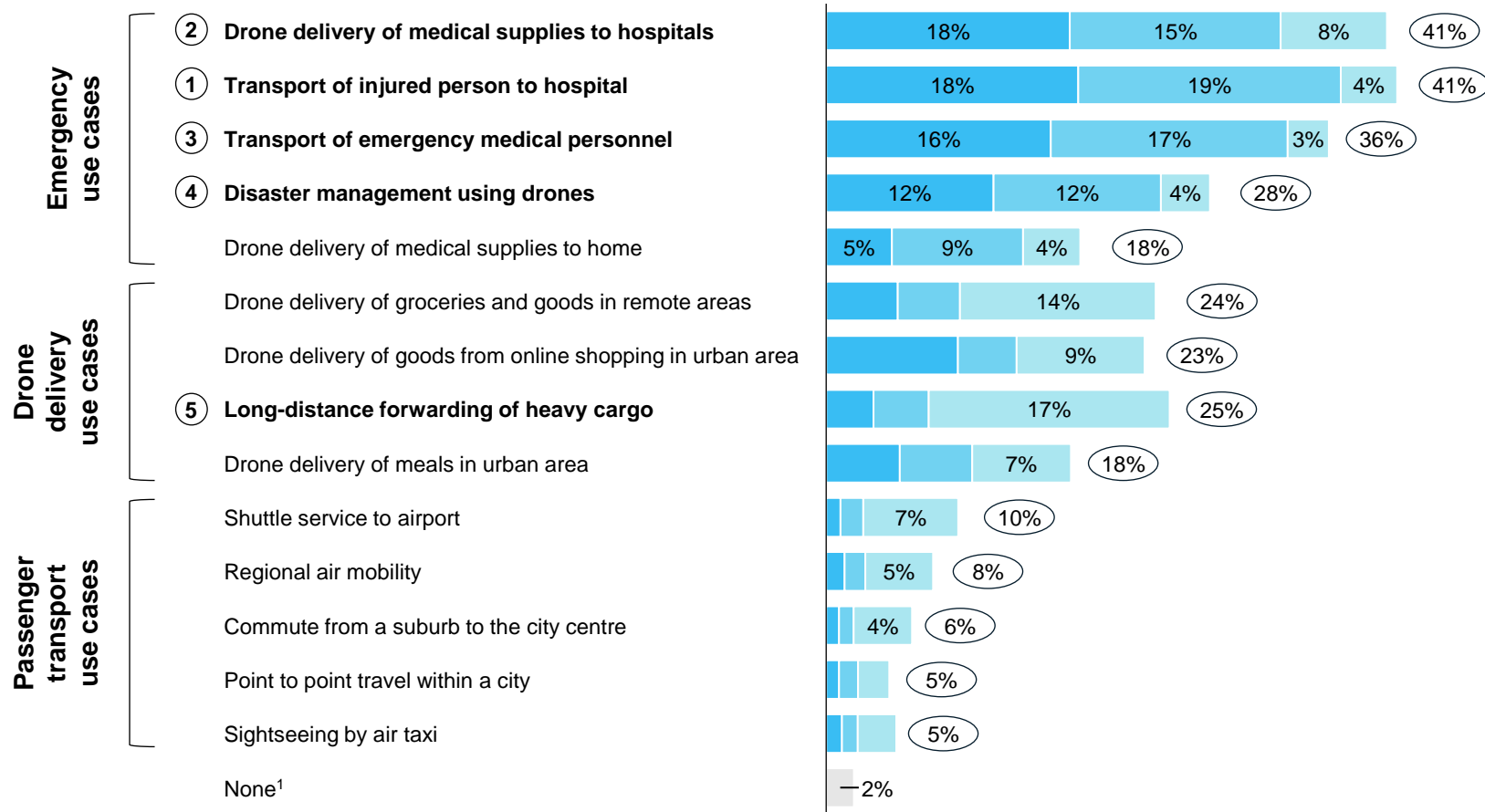
- Span for drones from Hamburg to Milan is 15%
- Span for air taxis between Öresund and Budapest / Milan is 13%

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

Emergency use cases are considered most useful by respondents, followed by use cases in category drone delivery

Perceived usefulness of UAM use cases

① Top 5 use case (X%) Sum Ranked #1 Ranked #2 Ranked #3



In overall ranking **(1) emergency use cases** are perceived as most useful (most beneficial for society) followed by **(2) drone delivery use cases** and **(3) passenger transport use cases**

- In **(1)**, drone delivery of medical supplies and transport of injured persons are leading; only use case that falls back is delivery of medical supplies to home (comparable to other delivery to end consumer use cases)
- Within **(2)**, the top three use cases rank almost the same – drone delivery of meals considered the least useful
- Within category **(3)** airport shuttle and regional air mobility rank highest

1. "None" stands for respondents who answered questions A2.a to A2.c with "None of these are useful"

Key results

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 - **Concerns**
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- Noise perception assessment

Full length evaluation

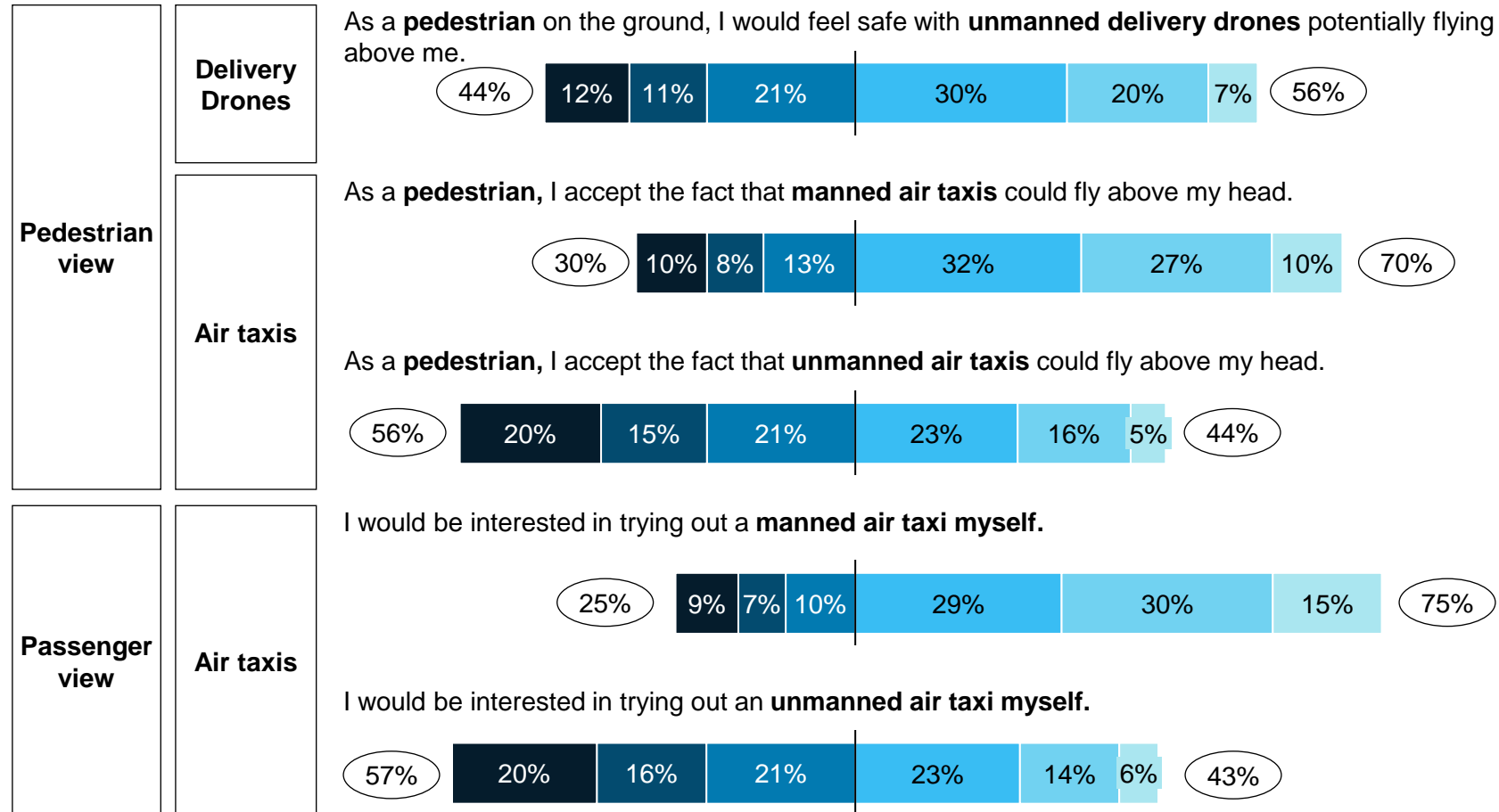


Respondents feel safer as a pedestrian with manned air taxis than with delivery drones

Level of comfort with manned & unmanned aircraft systems

X% Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

(absolute %)



Share of people feeling safe with unmanned delivery drones at 56% overall, but notably **lower** than share of people that **would try out** drone delivery (64%)

Therefore, there exist people willing to try out drone delivery, but not feeling safe with unmanned delivery drones in operation

Share of people feeling safe as pedestrians with manned air taxis (70%) greater than with unmanned delivery drones (56%)

As unmanned drones (in other applications) already in operation today, result suggests that level of comfort with **manned air taxis** fairly high and **introduction would not face strong opposition**

Manned air taxis with higher acceptance from passenger perspective (75%) than from pedestrian perspective (70%)

Spread between manned and unmanned variants higher for passengers (32%) than for pedestrians (26%), potentially because only passengers directly confronted with different levels of automation when onboarding

Source: EASA UAM social acceptance survey questions B3. Drones intended for the delivery of goods are remotely piloted aircraft systems with no pilots on board. Assume that they have an average wingspan of 3 metres, would fly at between 120 and 150 metres altitude, and are certified by competent authorities. Please rate how much you agree or disagree with the following statement. C4. Recent studies extend the prospect of aircraft soon transporting passengers, either with a pilot on board or with a remote pilot. You will now see several statements that people might make about such air taxis. Assuming that all of the aircraft are certified by competent authorities, please rate how much you agree or disagree with each statement for each type of air taxi.

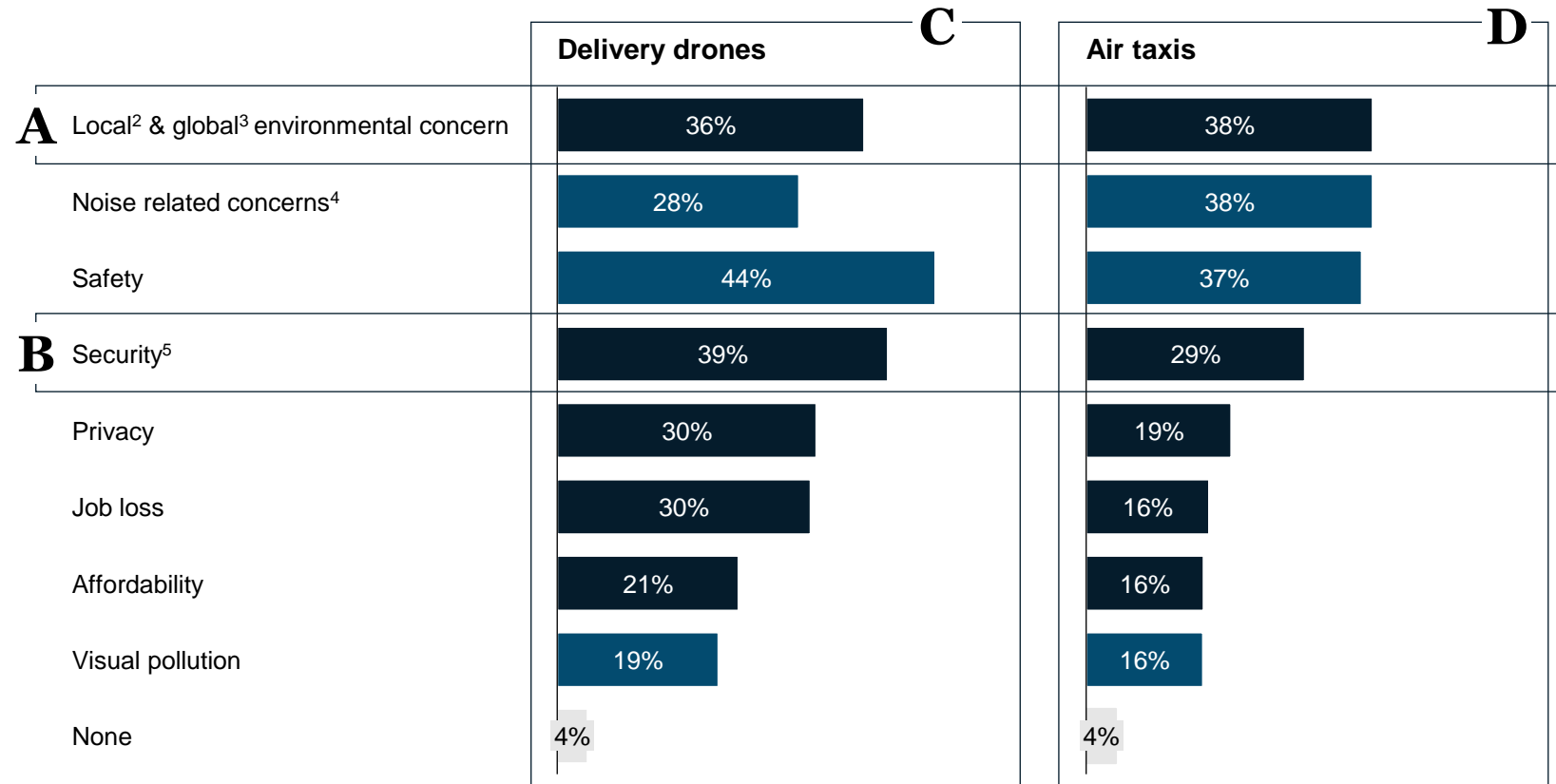
For delivery drones and for air taxis, the overall main concern is safety, followed by environment and noise

Concerns regarding delivery drones and air taxis

A Detailed in the following Part of trade-off analysis (conjoint)

(rank #, absolute % for delivery drones, rank #, absolute % for air taxis)

Concerns ranked by % of respondents under top 3



Local and global **environmental concerns** taken together **highly important in both use cases** (ranked #3 with 36% for delivery drones, #1 with 38% for air taxis)

Noise related concerns (simply noise pollution for delivery drones; noise related to flying aircraft & noise related to vertiports for air taxis) emerge as **much more important with regard to air taxis** (#6, 28% and #1, 38%)

Safety top ranked concern in both use cases (#1, 44% and #3, 37%)

Security more important in drone delivery than in air taxi use case (#2, 39% and #4, 29%)

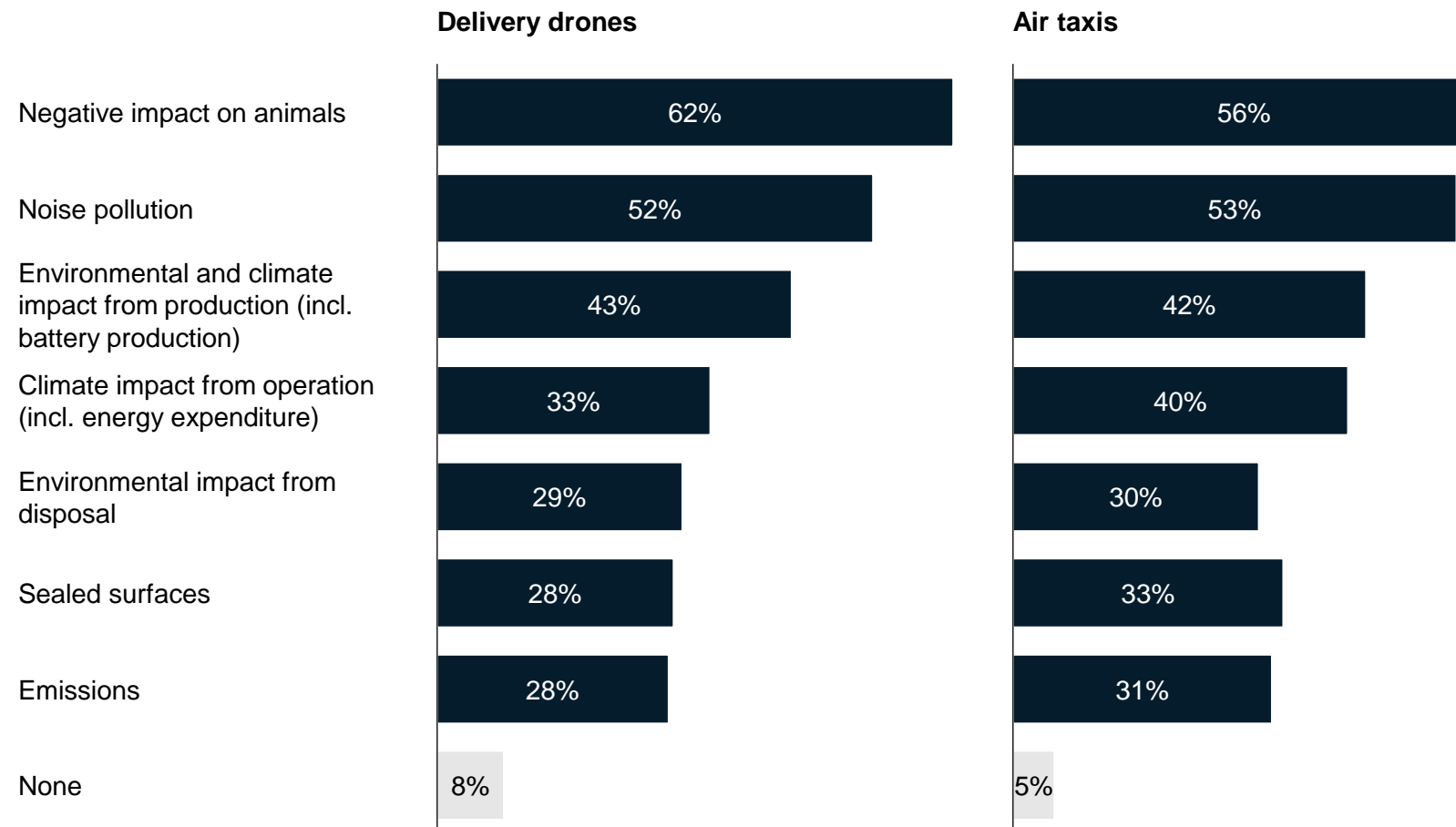
1. Incident due to technical or human failure 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity
 3. Global environmental impact covers climate change 4. Covers noise pollution for delivery drones, and noise related to flying aircraft and noise related to vertiports for air taxis 5. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists
 Source: EASA UAM social acceptance survey questions B4. What are you most concerned about regarding drone delivery, both for the delivery of day-to-day goods as well as medical supplies? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers. B5. Please sort your main concerns (selected in B4.) from 'most concerning' to 'least concerning'. C5. What are you most concerned about with respect to air taxis? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers. C6. Please sort your main concerns from 'most concerning' to 'least concerning'.

A: Among the environmental concerns, negative impact on animals is the greatest concern

Environmental concerns

■ Ranked under top 3

Concerns ranked by % of respondents under top 3



(absolute %, +/- diff to avg % for delivery drones, absolute %, +/- diff to avg % for air taxis)

In both use cases, top 3 concerns are

- (1) **Negative impact on animals** (62%, 56%)
- (2) **Noise pollution** (52%, 53%)
- (3) **Environmental & climate impact from production (incl. batteries)** (43%, 42%)

(1) **Negative impact on animals even more important for old age group 65-75 (+7%, +5%);** quotes in open text field include

- "Technology in the air that disturbs birds and makes noise."
- "The more of them flying around, the more disturbing it becomes... for animals, insects and humans."
- "Leads to reduction of birds in cities"

(2) **Noise pollution less concerning for young age group 18-24 (-6%, -10%)**

(3) **Environmental concern from production (incl. batteries) significantly higher than climate impact from operation (33%) in drone delivery use case, but almost equal (40%) in air taxi use case**

Especially **young age group more concerned** about environmental impact from production (+1%, +7%), disposal (+1%, +7%) and emissions (+12%, +11%)

Source: EASA UAM social acceptance survey questions B9. What are your greatest concerns when it comes to the possible environmental consequences of drone delivery? Please sort the following answers from 1 being 'most concerning' to 7 being 'least concerning' or select 'none of these'. C9. What are your greatest concerns when it comes to the possible environmental consequences of air taxis? Please sort the following answers from 1 being 'most concerning' to 7 being 'least concerning' or select 'none of these'.

A: The introduction of an eco-label for UAM services is welcomed by 74% of survey respondents

Introduction of an eco-label



Vast majority of 74% in favour for introduction of eco-label

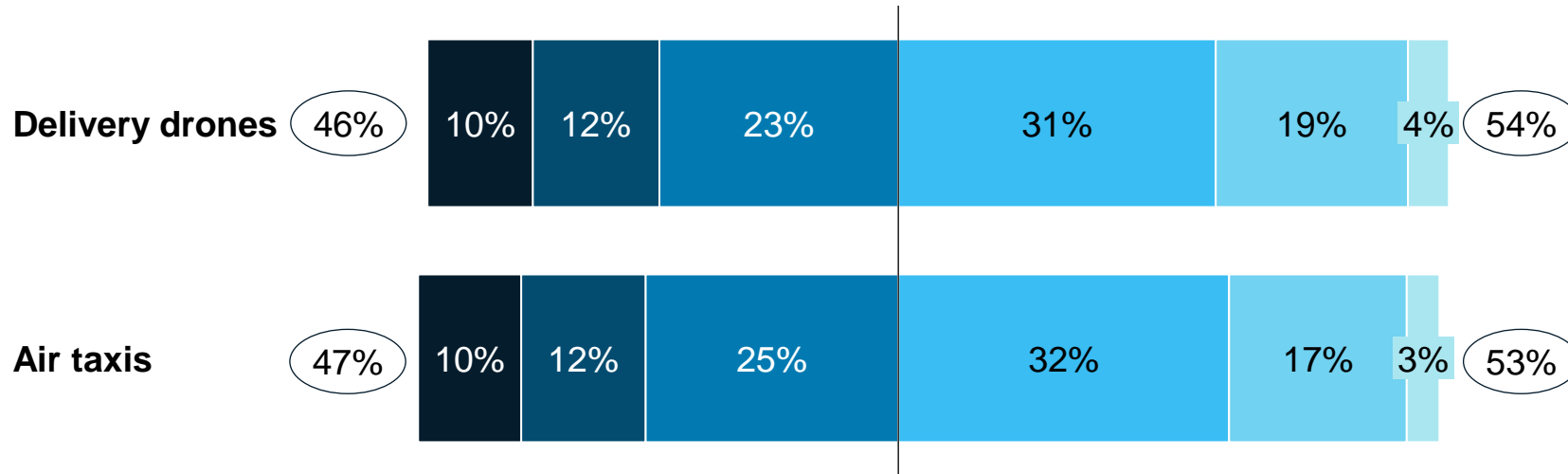
Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

B: Security & cybersecurity of UAM vehicles are trusted by ~53% of respondents

Trust levels in UAM aircraft systems incl. security and cybersecurity

(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

(absolute %, +/- difference to avg % in total)



Only **slightly more than half** of respondents with **trust in UAM aircraft systems**

Very similar results for drones and air taxis (~53%)

Trust levels are higher for men than for women and decrease with age

- More trusted by **men** (~+7%)
- Less trusted by **age group 65-75** (~-8%) and **women** (~-7%)

Defined subgroups against introduction of UAM with very low trust levels

- Delivery drone usage rejecters, air taxi usage rejecters, UAM usage rejecters, digital laggards with -16% to -27% less trust

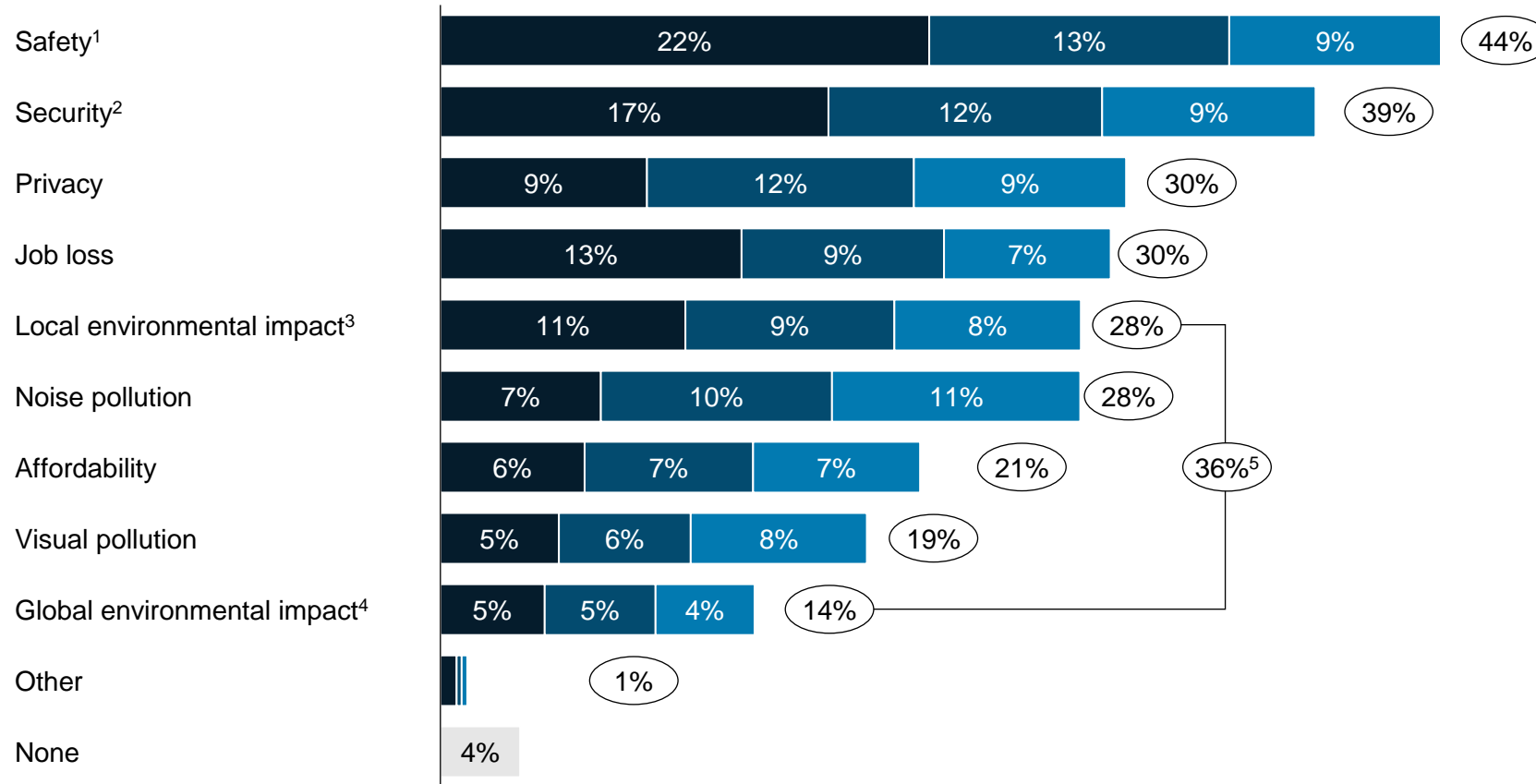
C: Digging into respondents' reservations towards delivery drones, safety and security are on top, clearly ahead of other concerns

Concerns in drone delivery use case

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

(rank #, absolute %)

Concerns ranked by % of respondents under top 3



Top concerns are (1) **safety** (44% of respondents rank it among top 3) and (2) **security** (39%)

4 concerns almost on par on third place, being (3) **privacy**, (4) **job loss**, (5) **local environmental impact** and (6) **noise pollution** (~30% each)

Environmental concerns together (36%) would move to 3rd place, but still less important than safety and security concerns

Minor, but interesting differences discernible between subgroups

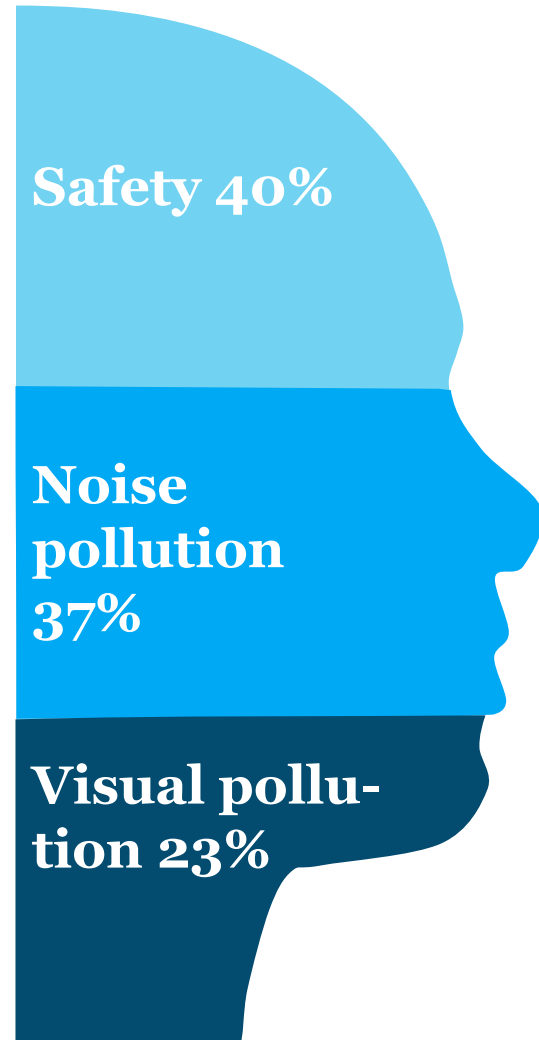
- **Safety (1) & security concerns (2)** increase with age
- **Privacy concern (3)** decreases with age
- **Job loss concern (4)** tied to lower income and education level
- **Local environmental concern (5)** unites young and old age groups
- **Global environmental concern (9)** divides young (more concerned) and old age groups (less concerned)
- **Concern about noise pollution (6)** highly unimportant for young people, and loosely tied to higher education level and income
- **Concern about visual pollution (8)** with similar pattern as noise pollution
- **Affordability concern (7)** less concerning for subgroups that would not try UAM anyways

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change 5. Share of respondents that ranked any environmental concern among top 3 answers

Source: EASA UAM social acceptance survey questions B4. What are you most concerned about regarding drone delivery, both for the delivery of day-to-day goods as well as medical supplies? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers. B5. Please sort your main concerns (selected in B4.) from 'most concerning' to 'least concerning'.

C: Weighing out safety, noise and visual pollution levels for delivery drones confirms that acceptance is driven principally by safety and noise levels

Trade-off analysis via conjoint question for delivery drones (1/2)



How to read the following results

An average survey participant would spend 100 units of efforts or 100 hours of working, or simply € 100 to arrive to the best possible result, weighing out pros and cons in factors safety, noise and visual pollution¹ as such:

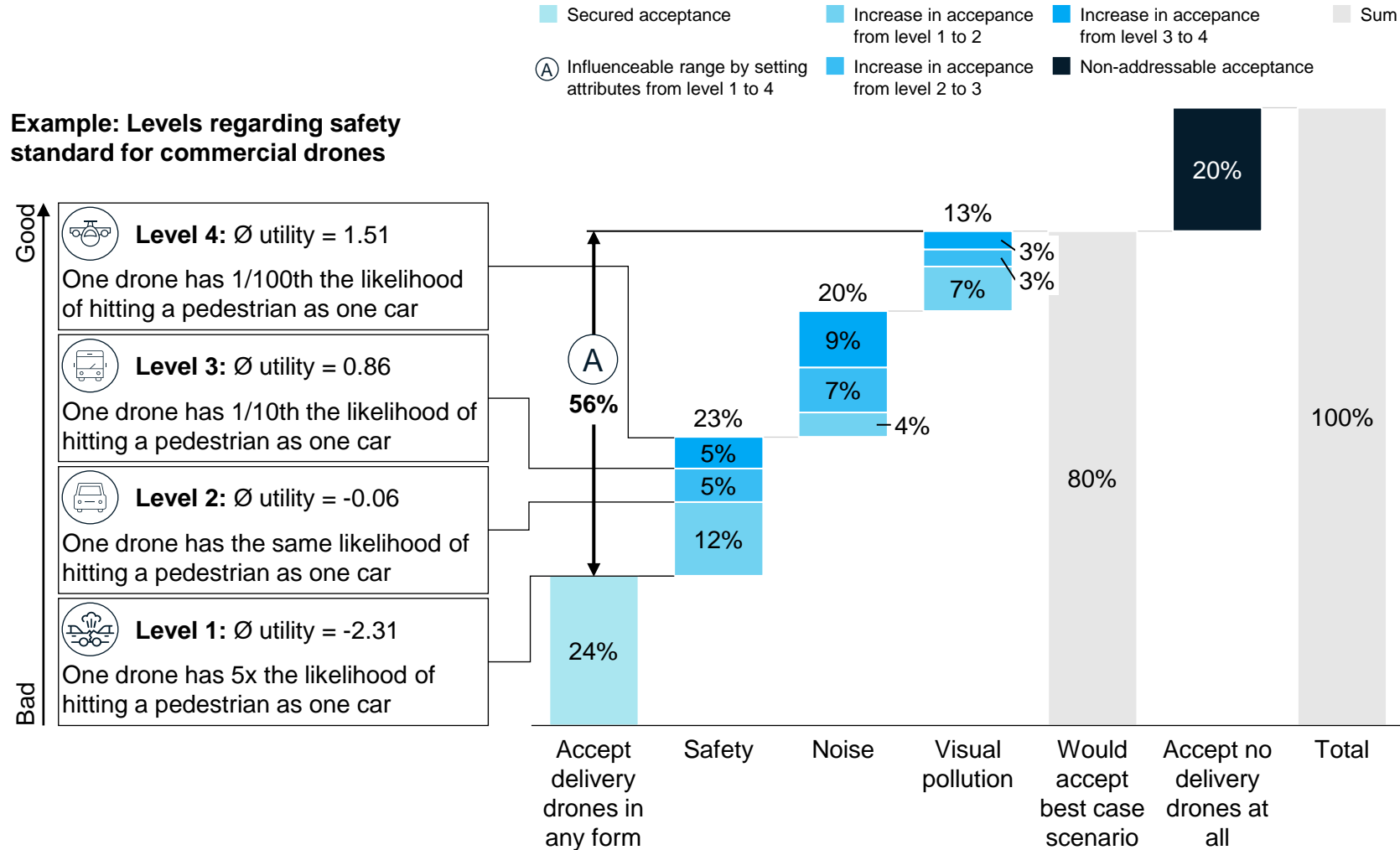
- **40% on better safety**
- **37% on noise reduction**
- **23% on capping visual pollution**

1. Security was not part of the proposed trade-offs

C: Depending on safety, noise and visual pollution levels, different acceptance rates of up to 80% may be achieved

Trade-off analysis via conjoint question for delivery drones (2/2)

Example: Levels regarding safety standard for commercial drones



Conjoint analysis comes with drawback of forcing participants to choose a scenario; for realistic assessment of expected acceptance rate, **results are normed back to influenceable range¹**

In sum, **80%** is **maximally achievable acceptance rate**

- **24% already secured**, as group would accept any scenario
- **56% influenceable range** potentially addressable by regulation

Safety is greatest factor with 23% of absolute importance (40% of relative importance)

- Greatest lever is setting safety standard to that of cars (level 2)
- Higher safety standards further positively influence acceptance

Noise with substantial influence on choice with (20% absolute, 37% relative importance)

- Greatest lever is capping noise volumes at decibels comparable to bicycles (level 4), but hardly realistic
- Volumes comparable to cars (level 3) would suffice to achieve positive nudge

Visual pollution perceived as **less important**, but not negligible neither (13% absolute, 23% relative importance),

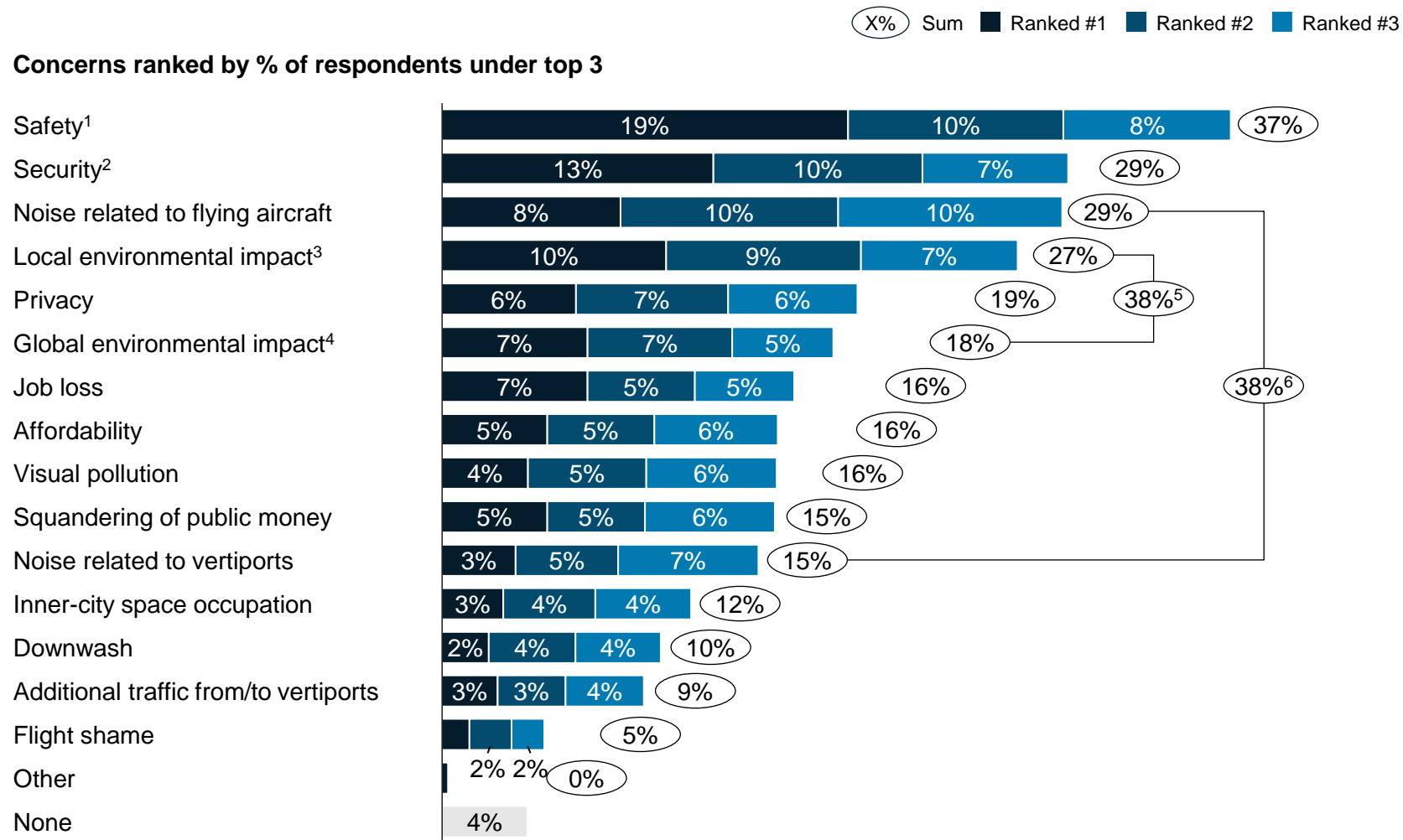
- Greatest lever is restricting number of conceivable commercial drones at moderately high number (~10 per hour within sight)
- Going further only yields marginal gains

1. Figures may be used to assess different scenarios for regulation; however, survey participants are not expert in regulation efforts and may have misleading expectations (too low and too high); answers are always a snapshot

Source: EASA UAM social acceptance survey questions B7. Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. B8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario based on the scale shown below.

D: Turning to concerns regarding air taxis, safety is likewise ranked high, but security less prominent; instead, noise related concerns are very important

Concerns in air taxi use case



Top concern, by far, is **(1) safety** (37% of respondents rank it among top 3)

3 concerns almost on par on **second** place, being **(2) security**, **(3) noise related to flying aircraft** and **(4) local environmental concern**

Noise concerns together, i.e. related either to flying aircraft or to vertiports, would move to **first place** (38%, comparable to top concern safety)

Environmental concerns together, i.e. on local or global impact, would likewise move up to **first place** (38%, comparable to top concern safety)

Minor differences in concerns discernible by subgroups

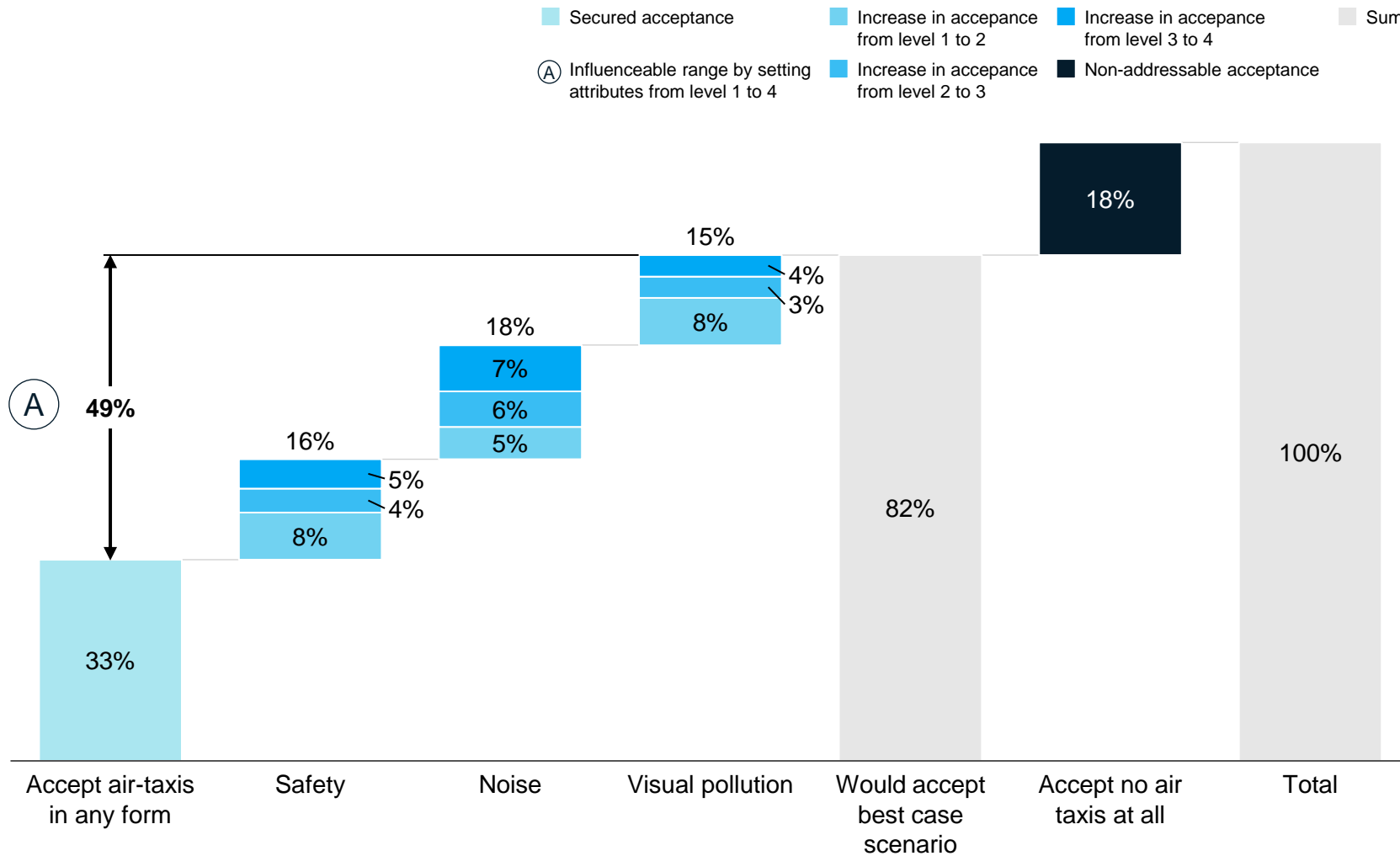
- **Safety (1) & noise related to flying aircraft (3)** slightly increase with age, education and income
- **Security (2) & noise related to vertiports (11)** in same direction, less pronounced
- **Job loss (7)** decreases with age, education and income
- **Affordability (8)** less concerning for subgroups that would not try UAM anyways
- **Squandering of public money (10)** characteristic for UAM opposing groups
- **Environmental concerns (4) & (6)** divide genders (men less, women more concerned); global concern (6) also decreases with age
- More concerning for target group airport shuttle: **downwash (13)**, **additional traffic from / to vertiports (14)**, **flight shame (15)**

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change 5. Share of respondents that ranked any environmental concern among top 3 answers 6. Share of respondents that ranked any noise related concern among top 3 answers

Source: EASA UAM social acceptance survey questions C5. What are you most concerned about with respect to air taxis? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers. C6. Please sort your main concerns from 'most concerning' to 'least concerning'.

D: Depending on safety, noise and visual pollution levels, different acceptance rates of up to 82% may be achieved, but results are less differentiated

Trade-off analysis via conjoint question for air taxis



In sum, **82%** is **maximally achievable acceptance rate**

- **33% already secured**, as group would accept any scenario
- **49% influenceable range** potentially addressable by regulation

Results less differentiated for air taxis than for delivery drones

Noise moves to first place (18% absolute, 37% relative importance), in line with higher importance dedicated to noise in overarching question; **possibly due to unconscious beliefs about noise of air taxis** (similar to helicopters)

- Greatest lever is capping noise volumes at decibels comparable to bicycles (level 4), but hardly realistic
- Volumes comparable to cars (level 3) would suffice to achieve positive nudge

Safety still big, but less important than in drone use case (16% absolute, 33% relative importance); possibly respondents assume sufficiently high safety standard for passenger transport anyway & underestimate chances of boarding one themselves

- Greatest lever is setting safety standard to that of cars (level 2)
- Higher safety standards further positively influence acceptance

Visual pollution draws almost equal with other concerning factors (15% absolute, 30% relative importance),

- Greatest lever is restricting number of conceivable air taxis at moderately high number (~10 per hour within sight)
- Restricting the number would further extend acceptance

Source: EASA UAM social acceptance survey questions C7. Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. C8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

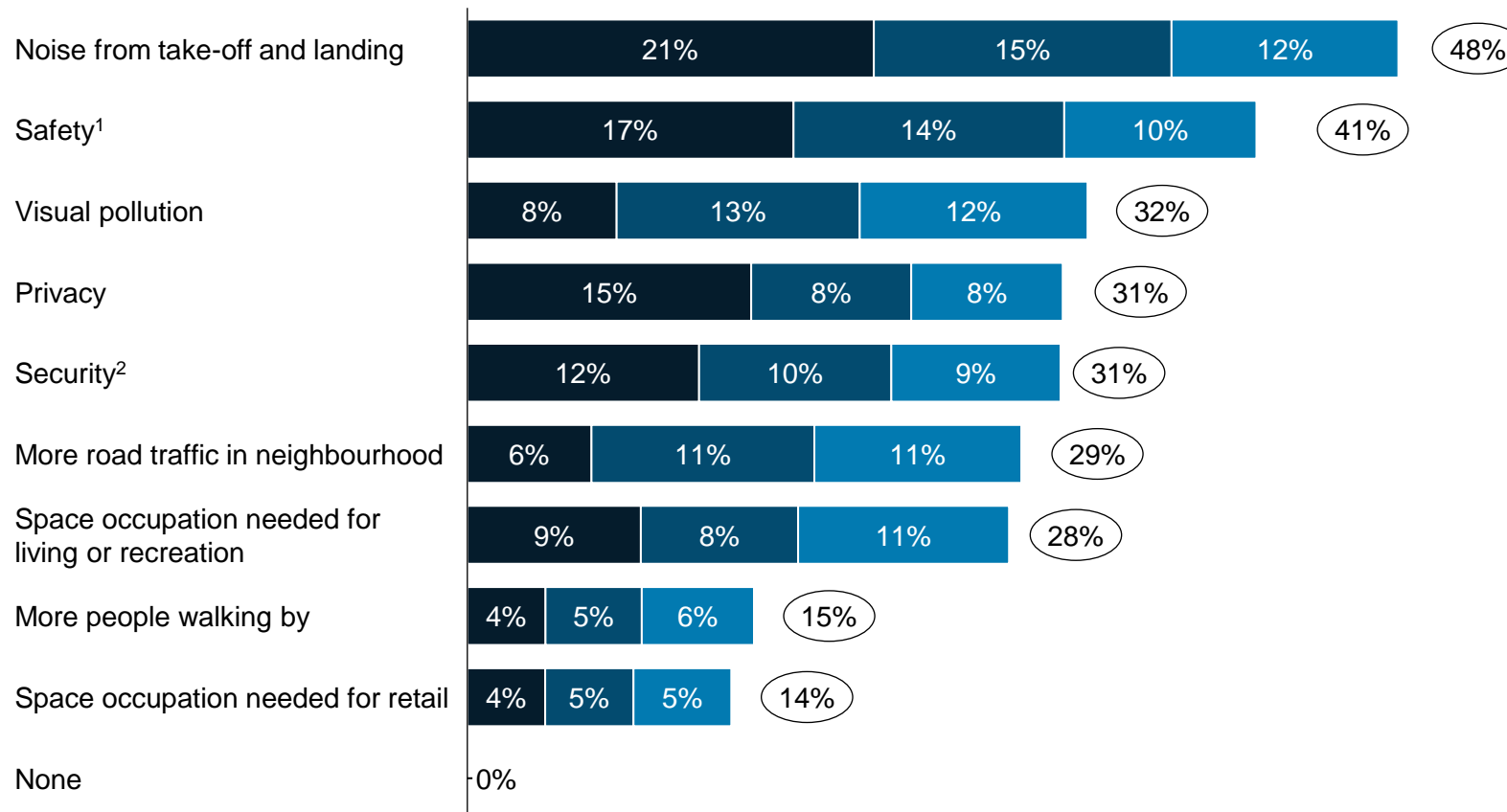
With respect to vertiports, noise related concerns are highest ranked

Concerns regarding vertiports

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

(absolute %, +/- difference to avg % in total)

Concerns ranked by % of respondents under top 3



Safety (48%) and **noise** (41%) related to vertiports again among **top ranked concerns** with **clear separation from other concerns**

Many concerns in midfield, with no clear distinction in importance (~30% each) being visual pollution, privacy, security, more traffic in neighborhood and space occupation needed for living or recreation

Lowest concerns with clear separation are more **people walking by** and **space occupation needed for retail** (~14%)

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists

Source: EASA UAM social acceptance survey questions C11. Assuming that a take-off and landing-station is close by (under 50 metres), what are you most concerned about? Please select up to 6 answers. C12. Please sort your **main concerns** from 'most concerning' to 'least concerning'.

Key results

- **Quantitative survey**
 - General perception
 - Concerns
 - **Perception towards regulators**
- Qualitative survey
- Noise perception assessment

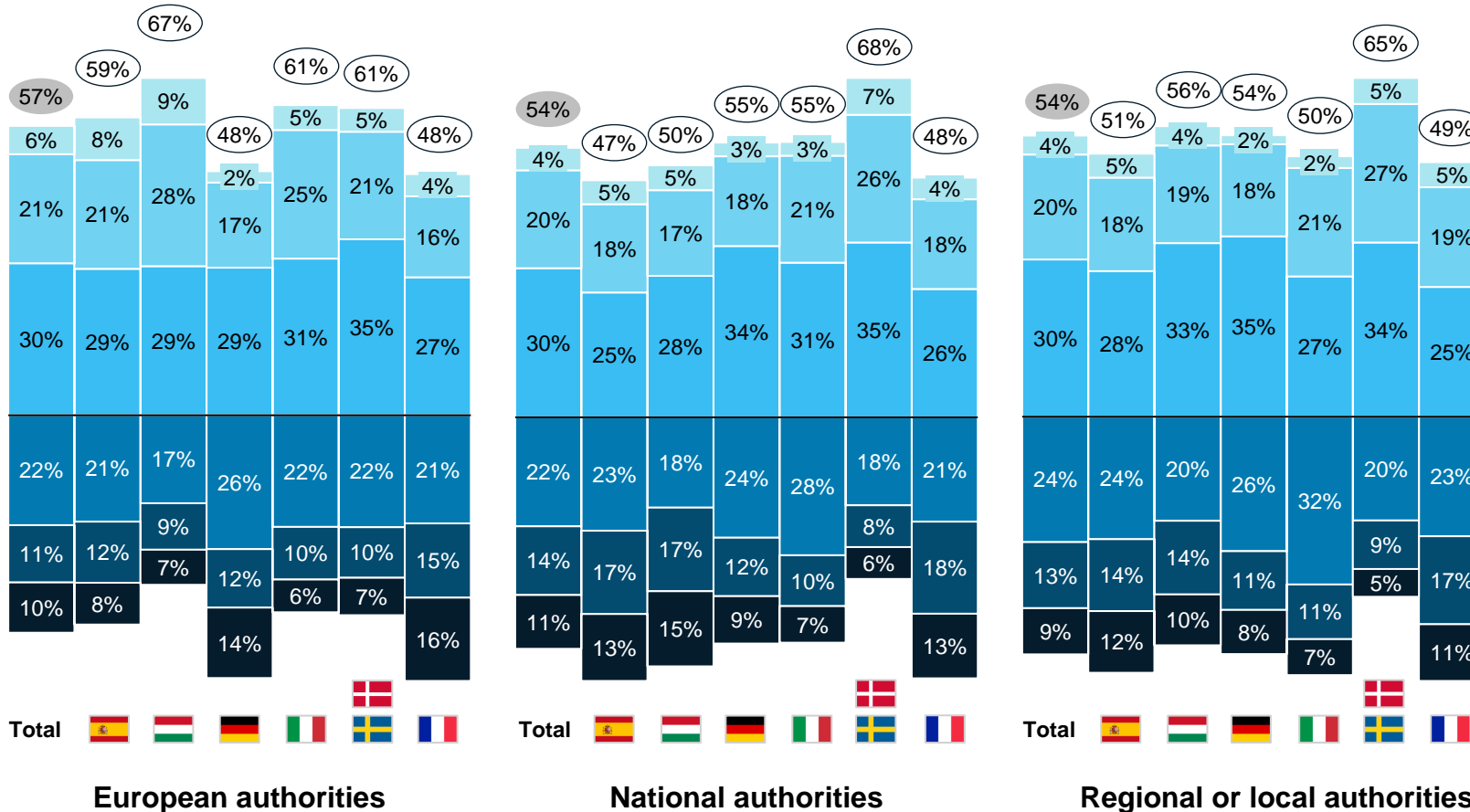
Full length evaluation



Participants see no clear distinction between local to European regulation authorities

X% Sum for total (X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

(+/- difference to avg % in total)



Clear differentiation in trust levels for European regulation authority between cities

- Higher trust levels: Budapest (+10%)
- Lower trust levels: Hamburg (-9%), Paris (-9%)

Trust levels for national and regional / local authorities almost always with similar results

- Öresund significantly higher for national (+14%) and regional / local authorities (+11%)
- Barcelona lower trust level in national authority (-7%), slightly lower for regional / local authority
- Paris lower trust levels for both national and regional / local authorities (~-5%)

Key results

- Quantitative survey
- **Qualitative survey**
- Noise perception assessment

Full length evaluation



We interviewed 23 local stakeholders covering all 6 cities and 8 stakeholder groups


Stakeholder city pairing




















Priority 1
 Priority 2
 Interview declined or no feedback
 Interviews one or multiple stakeholders

Stakeholders	City/Region					
	Barcelona	Budapest	Hamburg	Milan	Öresund	Paris
Mayor and municipalities services						
Local environmental protection associations						
Local traffic and transport authority						
Local Resident associations/Real-estate owners						
Emergency response organisation						
Local airport, local ATC						
Local Urban and city planners						
Local Chambers of commerce						
Local police						

In order to get a differentiated view, we attempted to cover each stakeholder group at least twice, however some invited participants declined the participation

We also interviewed 18 stakeholder on national/European level

 Interviews one or multiple stakeholders
  Interview declined or no feedback

Priority	Stakeholder	
Priority 1	Airports Council International (ACI)	
	A national governmental authority for aviation (e.g., DGCA)	
	A European environmental protection association (e.g., Greenpeace)	
	A European or national transport union	
	Alliance for new mobility Europe (ANME)	
	An insurance provider	
	European Commission	
	The European helicopters association	
	European business aviation association	
	CANSO	
	A national police authority	
	Smart City Initiative	
The European Cockpit Association		
Priority 2	EHAC (European HEMS & Air Ambulance Committee e.V.)	
	A national/European digital rights association	
	National travelers association	
Priority 3	A national taxi association	
	A national/European mayor's association	
	Vertiport infrastructure providers	

Executive summary (1/3)

Category	Summary
General attitude	<p>General attitude mostly positive, even by potentially critical stakeholders such as environmental protection associations</p> <p>Most stakeholders not yet exposed to UAM matters except for cities with pilot projects (e.g., Hamburg w. Medifly, Paris), which are mostly drones for medical or emergency purposes or passenger transport for special events;</p>
Benefits	<p>Benefits overall in line with quantitative survey results</p> <ul style="list-style-type: none">- UAM seen as beneficial when there is a public interest- Medical and emergency use cases seen as most beneficial by all stakeholders unanimously- Higher benefits seen in connecting areas with currently poor/insufficient access- More diverse view whether UAM will really improve congestions, unless it becomes part of a multimodal transport network- Other benefits: Less noise than helicopters or emergency service sirens, gaining back green area due to moving traffic into the air, show-case for innovation and transition to green and smart mobility

Executive summary (2/3)

Category

Summary

Concerns

Concerns: Overall same/similar major concerns as in **quantitative survey**

- **Noise** seen as most common issue, and also the one **issue where people would complain first**
- **Safety** is important for all, however **many take it for granted** thus did initially not explicitly mention it - safety expectancy uttered by participants almost unanimously **at least as safe as today's aviation** (helicopters): “do not fall on people heads”
- Security **mentioned frequently as major concern** especially hacking into the control link and equipping drones with dangerous goods/explosives
- Environment also a frequent concern, however **concerns on animal/birdlife was surprise to most interviewees**
- Privacy, such as potentially taking pictures of private areas

Others concerns added: affordability, electricity demand, moving traffic jam into the air, energy efficiency of transporting through the air, integration with normal air traffic, protection of cultural heritage in old European cities (visual pollution of flights and ground infrastructure); compatibility with the “slow mobility” concepts adopted by more and more European cities; Local authorities concerned by lack of involvement in decision-making on UAM

Executive summary (3/3)

Category	Summary
Perceived roadblocks	<p>Major roadblocks and challenges that are seen:</p> <ul style="list-style-type: none">▪ Public acceptance▪ Integration of airspace between drones and aircraft▪ Space availability for vertiports and integration into cityscape▪ Integration into the transport ecosystem of the city (being affordable and accessible to everyone, as an additional mode not a replacement)
Potential mitigation measures	<p>Potential mitigation measures that were frequently suggested include:</p> <ul style="list-style-type: none">▪ Pilot projects to allow people to experience new solutions▪ Starting with use cases that bring the highest societal benefit (e.g., medical)▪ Integrating local authorities into decisions early▪ Initially dedicated flight and noise corridors▪ Timely and adequate information of citizens and stakeholders▪ Guidance material for local decision-makers▪ Overall assessment of local mobility plans▪ Prior measurement of noise and wild-life impacts
Additional Questions	<p>Difference between safety and security is well understood by stakeholders, individually stated definitions are very close to each other and in line with our understanding and description in the qualitative survey</p> <p>General response was that emergency use cases should not be allowed a lower safety level, higher noise might be tolerable if number of operation remains limited</p>

Key results

- Quantitative survey
- Qualitative survey
- **Noise perception assessment**

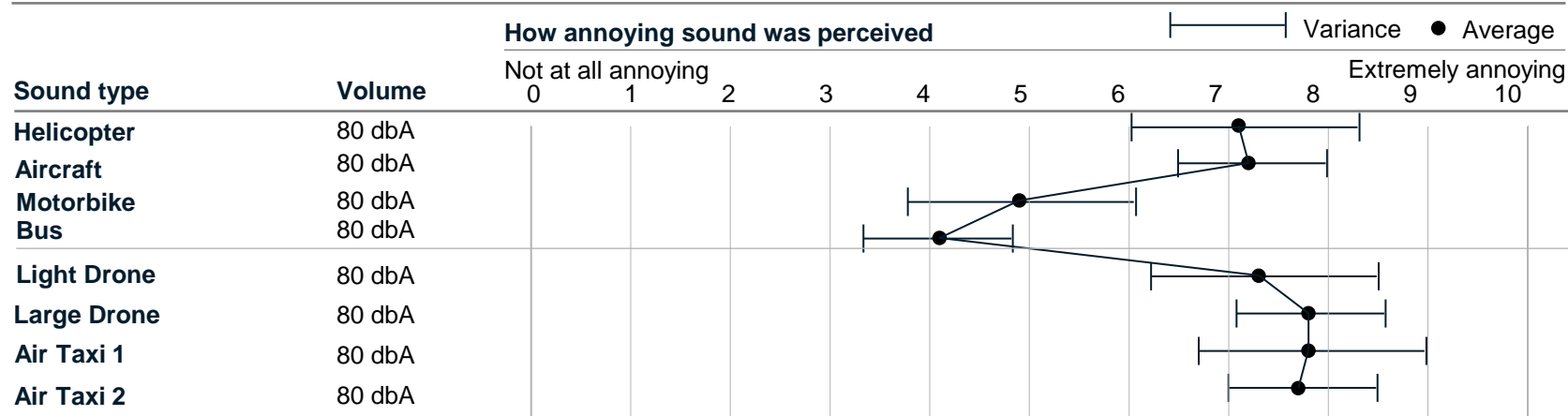
Full length evaluation



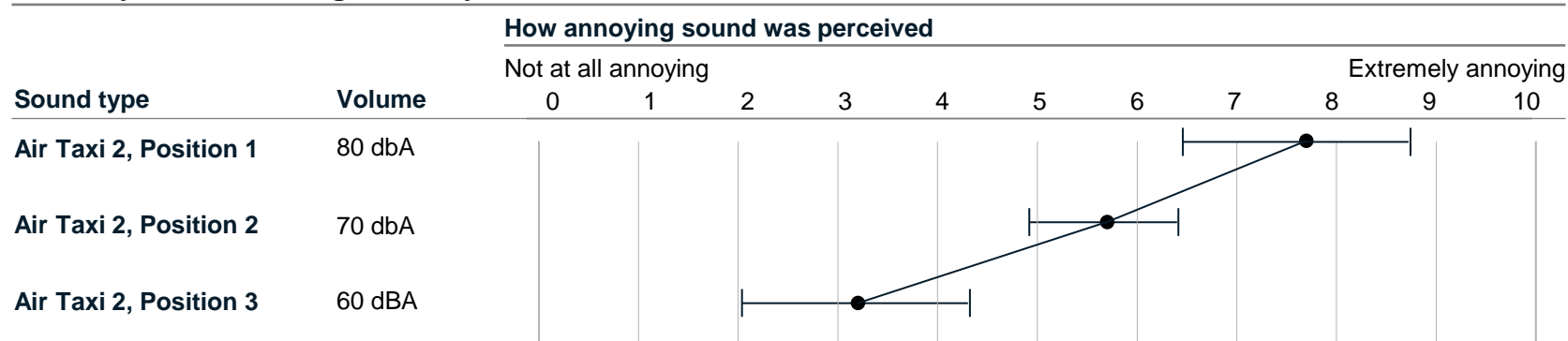
Results of UAM noise assessment

Sample size n=20

1. UAM noise is more annoying at same noise level...



2. Annoyance levels significantly decline with noise levels



It can be seen that **UAMs are ranked more annoying** at the **same noise level** compared to other sounds that participants were exposed to

There could be three possible interpretations for this:

- People **perceive familiar sounds as less annoying** (this was frequently stated in comments)
- The **noise characteristics** could have an **impact on annoyance**
- The **integrated noise level over time** could have an impact (i.e. speed of pass over)

When looking at different distances, realized through different noise pressure levels **from 80dbA to 60dbA**, it can be seen that the **perceived annoyance from UAM sounds** is on average lower to other familiar sounds such as a Motorbike or a bus, and thus it can be concluded that **65dbA would be widely acceptable by the public**

The results of this pilot study give an indication, however would have to be done at a larger scale to confirm and validate these initial findings

Key results

Full length evaluation

- **Quantitative survey**

- **Methodology**

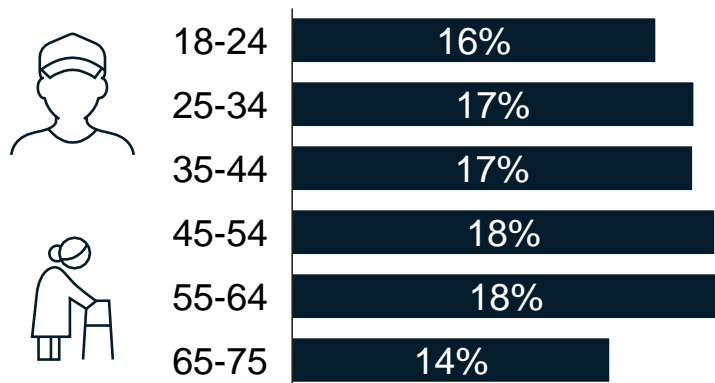
- General perception
 - Use cases
 - Benefits
 - Concerns
 - Perception towards regulators
- Qualitative survey
 - Evaluation of noise acceptance tests



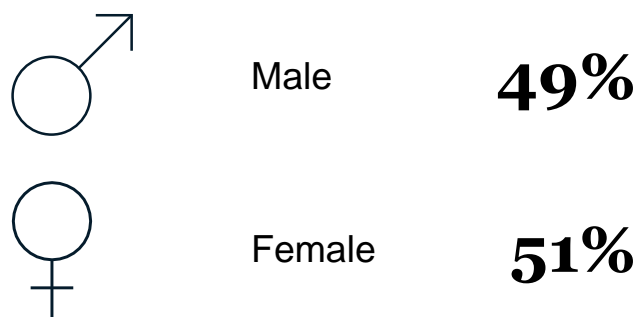
Panel composition shows that representative distribution and quotas are met in total panel

Panel size = 3690 participants

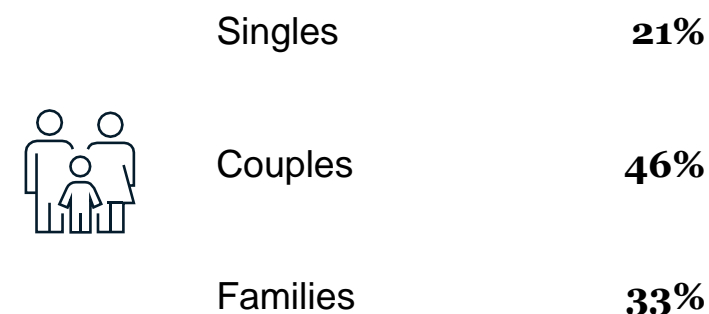
Age



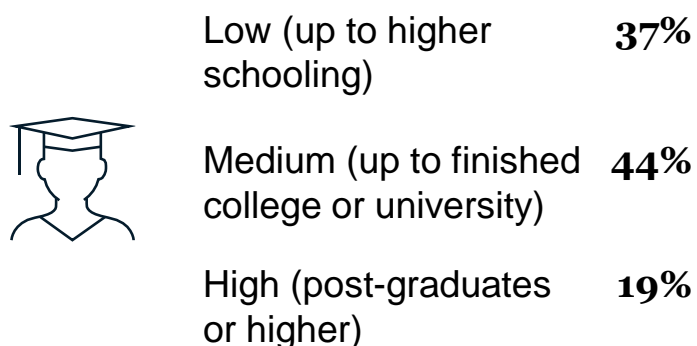
Gender



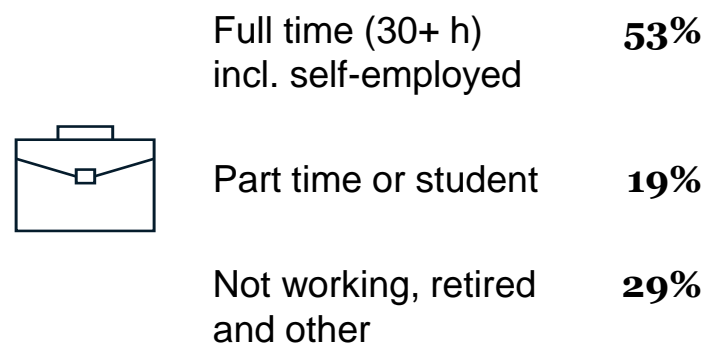
Family type



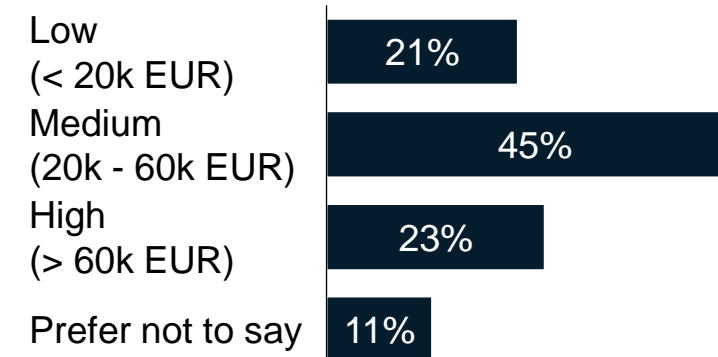
Education



Employment status



Gross household income per year

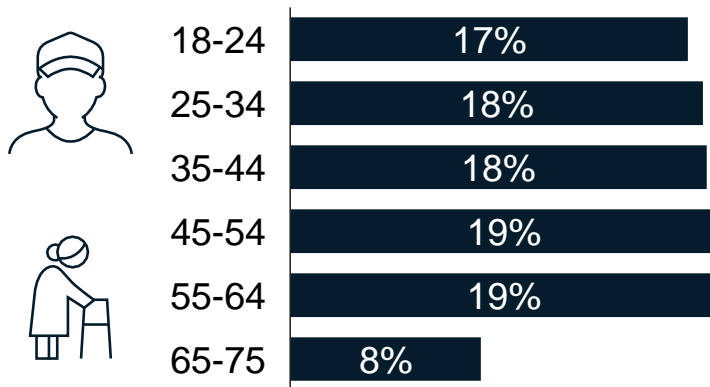


Barcelona's panel composition shows that representative distribution and quotas are met

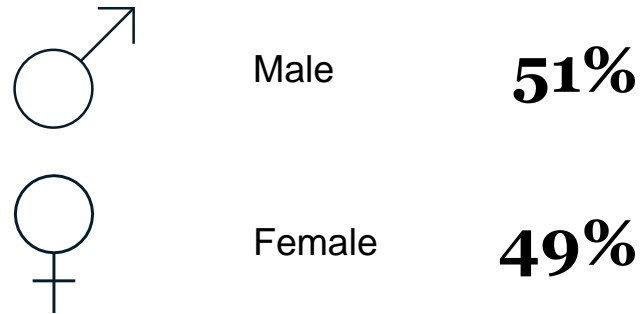
Barcelona, Spain 

Panel size in Barcelona = 606 participants

Age



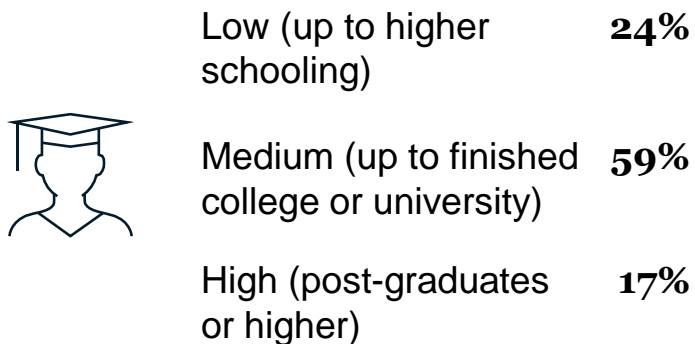
Gender



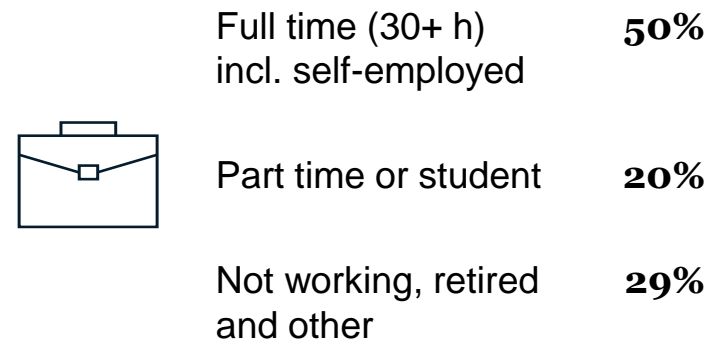
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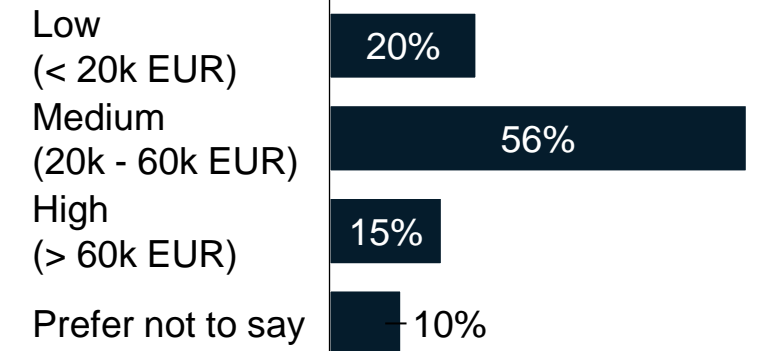
Education



Employment status



Gross household income per year

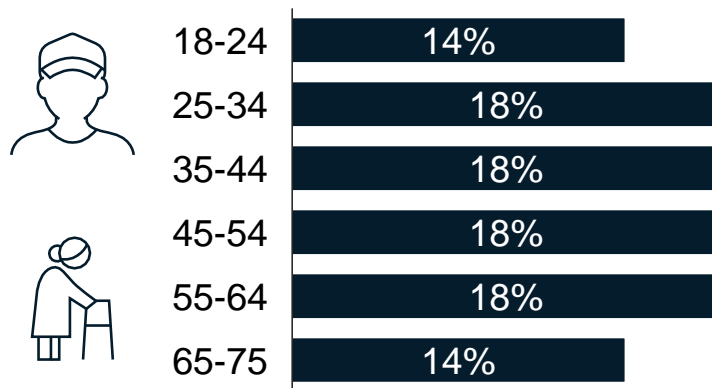


Budapest's panel composition shows that representative distribution and quotas are met

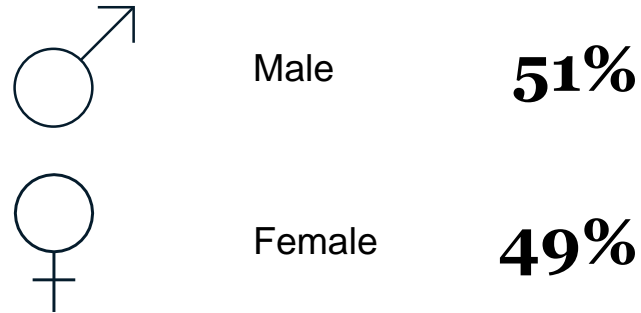
Budapest, Hungary 

Panel size in Budapest = 622 participants

Age



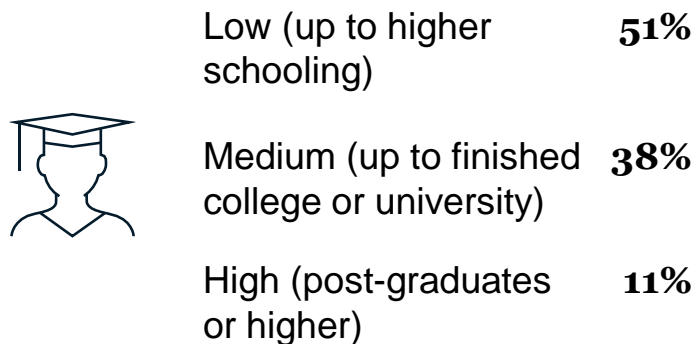
Gender



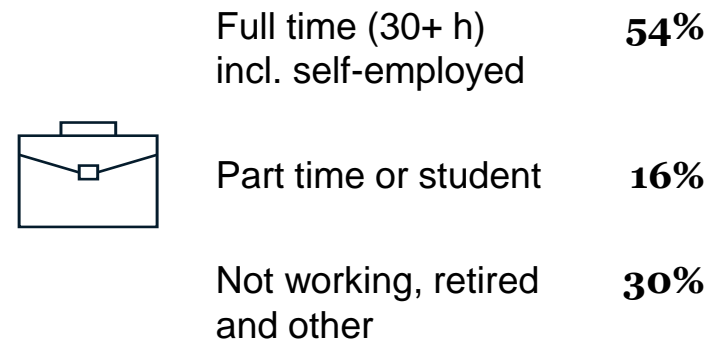
Family type



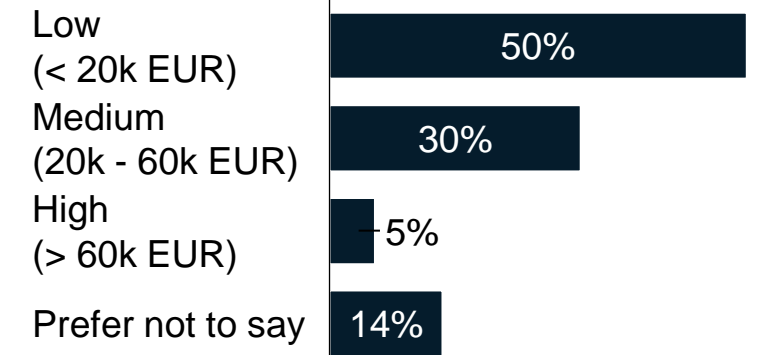
Education



Employment status



Gross household income per year

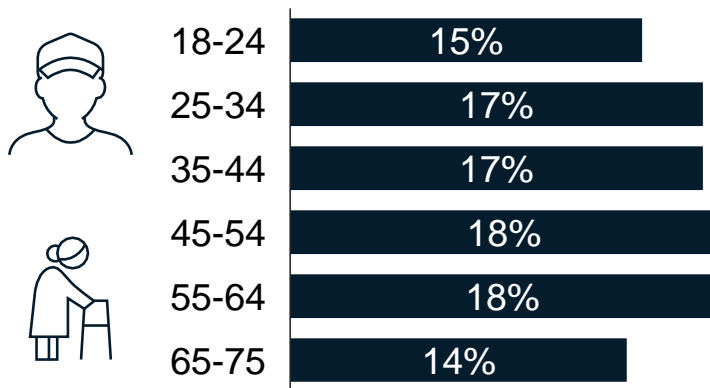


Hamburg's panel composition shows that representative distribution and quotas are met

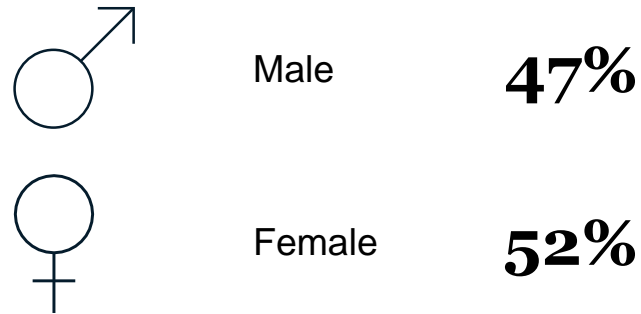
Hamburg, Germany 

Panel size in Hamburg = 625 participants

Age



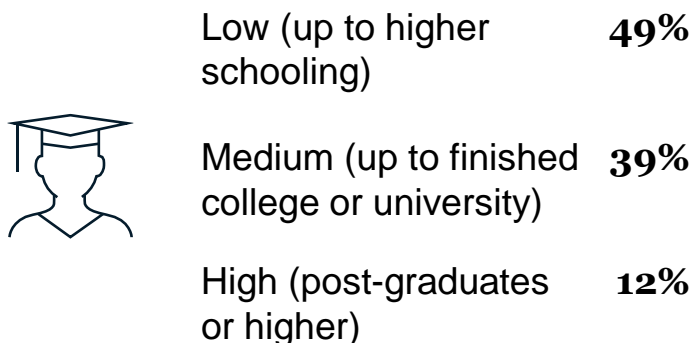
Gender



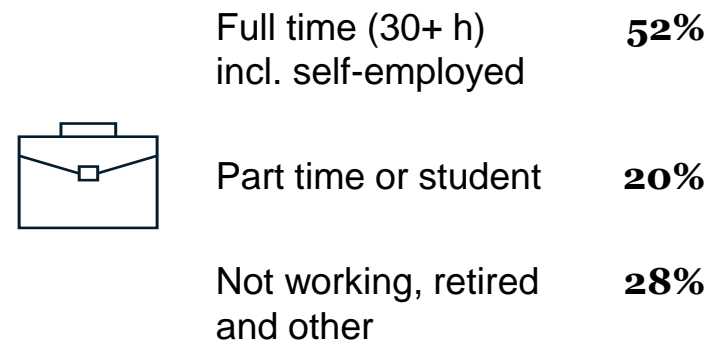
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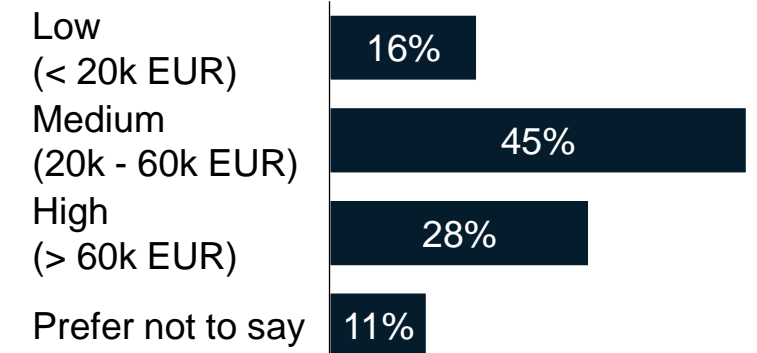
Education



Employment status



Gross household income per year



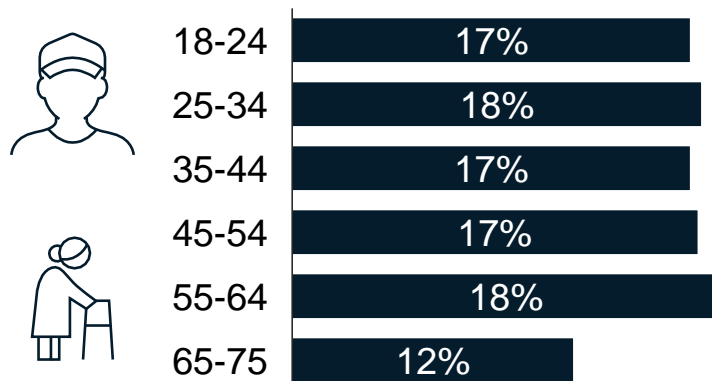
Milan's panel composition shows that representative distribution and quotas are met

Milan, Italy

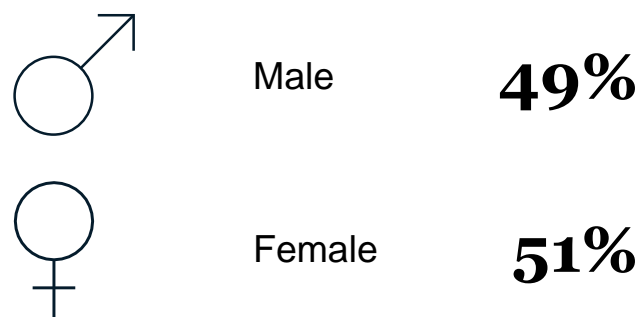


Panel size in Milan = 618 participants

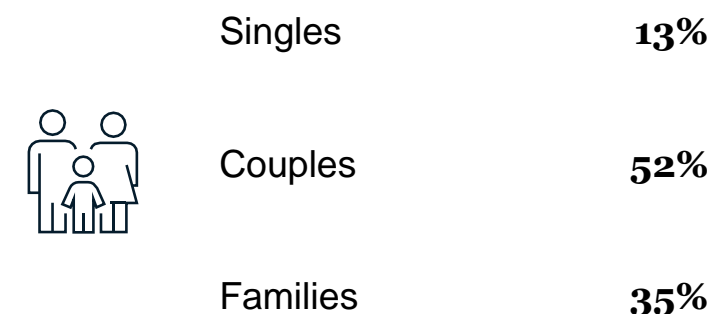
Age



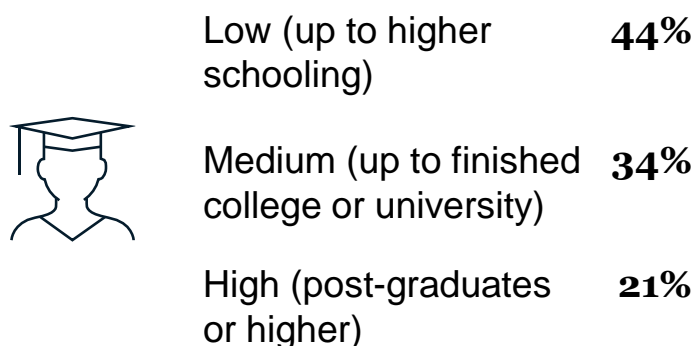
Gender



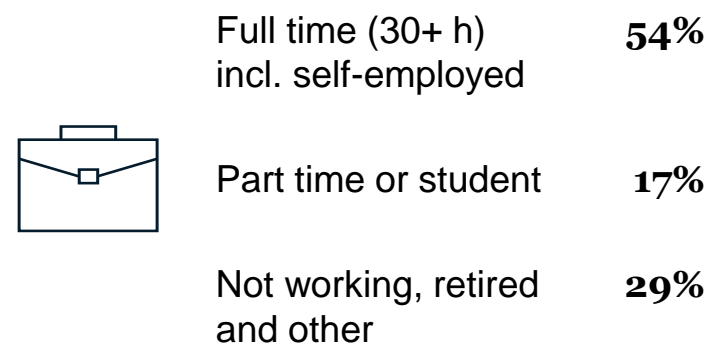
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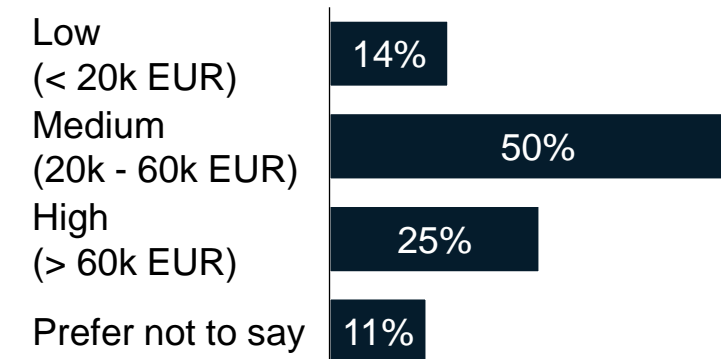
Education



Employment status



Gross household income per year

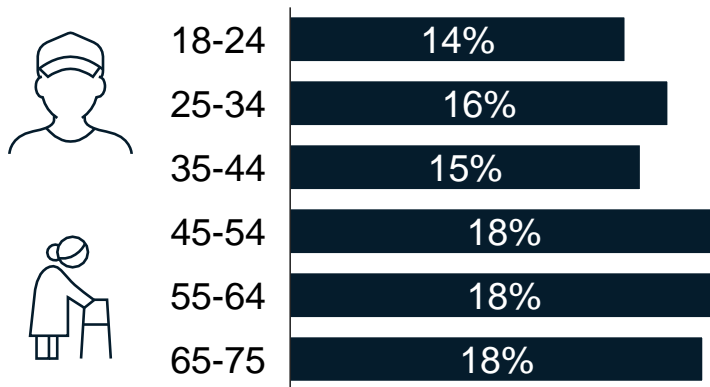


Öresund's panel composition shows that representative distribution and quotas are met

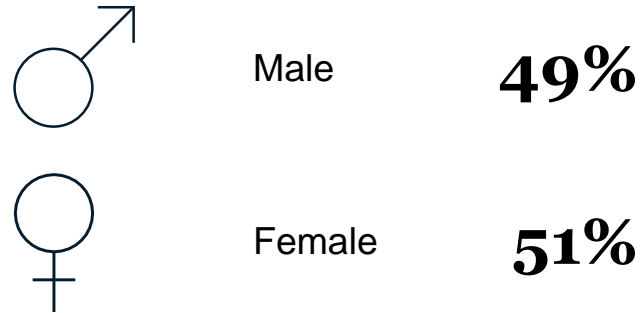
Öresund, Nordics  

Panel size in Öresund = 599 participants

Age



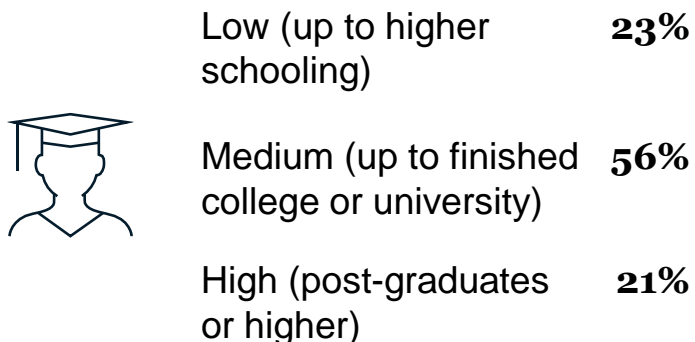
Gender



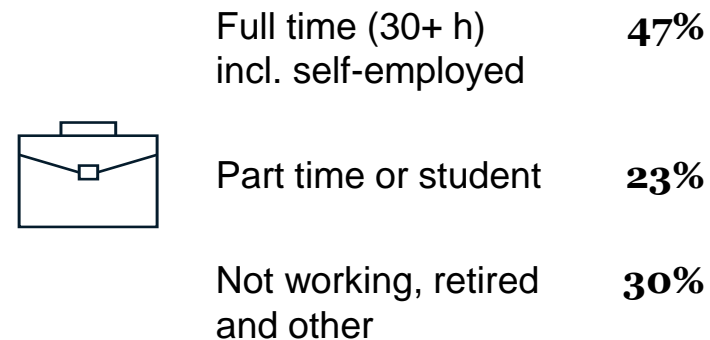
Family type



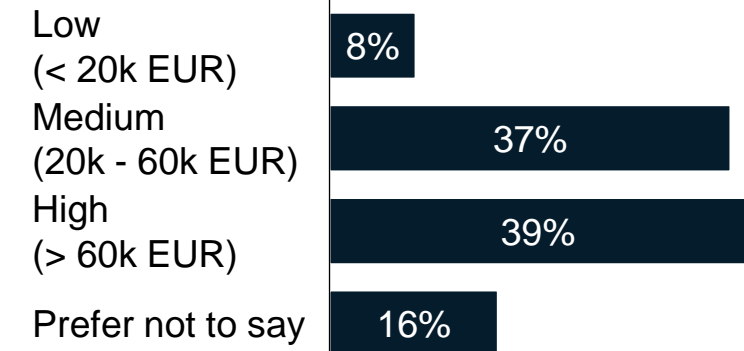
Education



Employment status



Gross household income per year



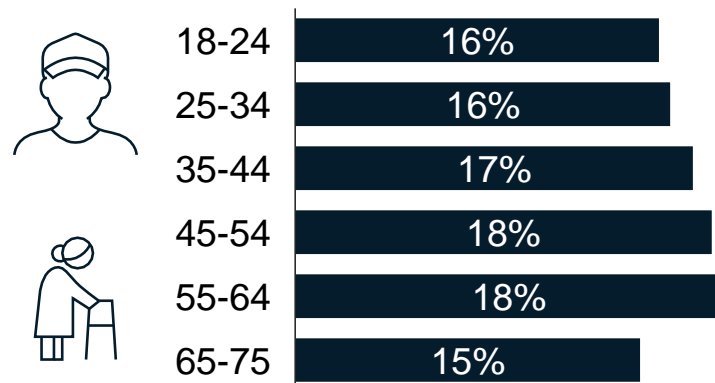
Paris' panel composition shows that representative distribution and quotas are met

Paris, France

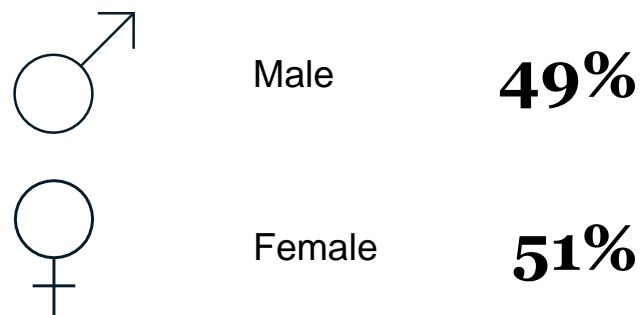


Panel size in Paris = 620 participants

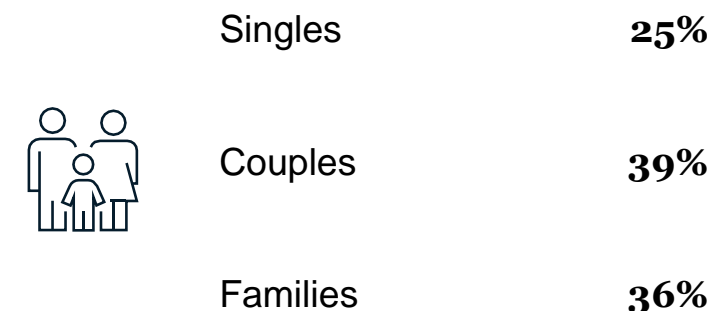
Age



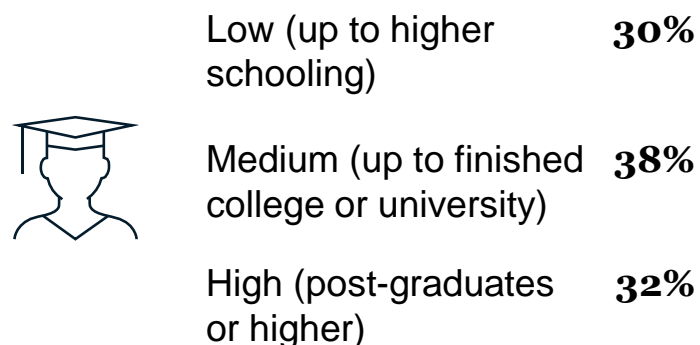
Gender



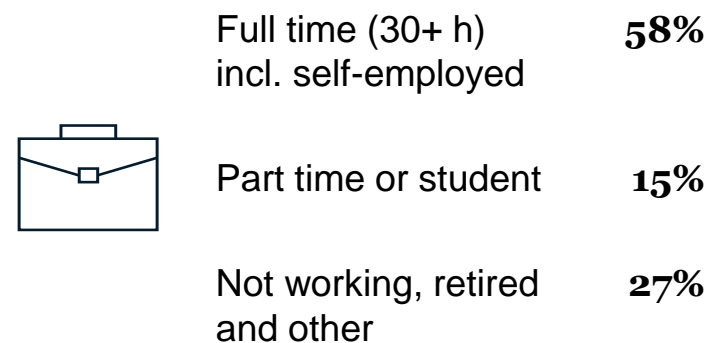
Family type



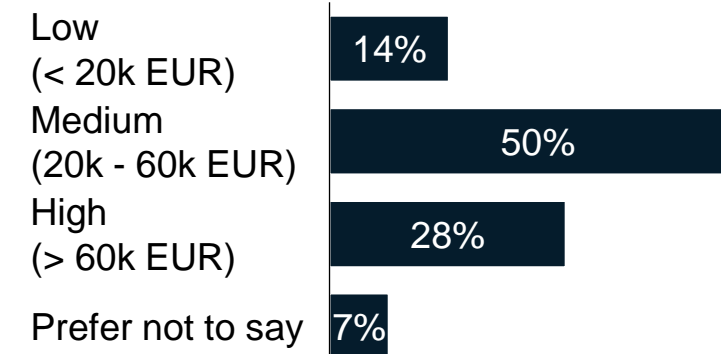
Education



Employment status









Gross household income per year



Answers of survey participants were thoroughly assessed and data was cleaned







①	Sampling	<p>Quotas for gender, age groups, and nationality applied and filled accordingly in each country</p> <p>Monitoring of other profiling (w/o clear targets, but to achieve a good mix, e.g., income, attitude on UAM, etc.)</p>
②	Vendor cleaning	<p>Unique invites to avoid „double entry” (esp. after being screened out)</p> <p>Identifying & removing foreign IP addresses</p> <p>Checking and removing poor verbatims</p> <p>Inconsistent answers (e.g., positive attitude to drones and/or air taxis in the screener, but then answer “none of these use cases are relevant” in all 3 sub-questions)</p>
③	McKinsey additional cleaning	<p>Computing “speeder” and removing anyone below 1/3 of median time</p> <p>Computing “flatliner” (and low variance) on matrix questions (“click-throughs”)</p> <p>Trap question (ask “age” as a number in the screener, and at the end, ask “which year were you born?” and compared if the 2 answers “match”, +/- 1 year at least)</p> <p>Conjoint: added “estimation constraints” to ensure that “best” level gets highest and “worst” level lowest utility (no “kinks”, always $1 \leq 2 \leq 3 \leq 4$, if 1=worst and 4=best)</p>

We defined subgroups to explain and classify results further

Subgroup	Definition	% in total	% 	% 	% 	% 	% 	% 
Potential drone delivery users	Positive answer to make use of delivery of goods by drone, see S6	64%	68%	67%	57%	72%	59%	61%
Drone usage rejecters	Negative answer to make use of delivery of goods by drone, see S6	36%	32%	33%	43%	28%	41%	39%
Potential air taxi users	Positive answer to make use of air taxi services, see S7	49%	51%	54%	47%	54%	41%	50%
Air taxi usage rejecters	Negative answer to make use of air taxi services, see S7	51%	49%	46%	53%	46%	59%	50%
Potential UAM users	Positive answer to make use of at least one out of drone delivery and air taxi use cases, see S6 and S7	71%	72%	74%	66%	79%	64%	70%
UAM usage rejecters	Negative answer to make use of both, drone delivery and air taxi use cases, see S6 and S7	29%	28%	26%	34%	21%	36%	30%
Digital adopters	One digital mobility service ¹ used at least 6 to 10 times per year and video conferencing at least once a month	30%	29%	25%	28%	37%	31%	31%
Conservative users	Neither digital adopter nor digital laggard	52%	54%	60%	45%	49%	52%	53%
Digital laggards	Not used any digital mobility service ¹ or video conferencing yet, except one up to a few times a year	18%	17%	15%	27%	13%	17%	16%
Target group for express delivery by drone	User of drones or flat fee for delivery of online orders or express delivery at least 6 to 10 times per year	53%	62%	55%	40%	78%	41%	44%
Target group for airport shuttle	At least 6 to 10 aeroplane travels per year and route to airport by taxi, carsharing or public transport	5%	4%	3%	4%	6%	4%	7%

1. Ride hailing, car sharing, ride sharing, (e-)bike, (e-)scooter or electric kick scooter from sharing provider, booking online or via app of mobility ticket, e.g., for trains, flights, buses, or public transport

Distinction between safety and security

	Safety	Security
How we define it	Protection against risk of an incident or accident due to technical or human failure	Protection against risk of an incident or an accident due to deliberate harmful action, e.g. by criminal organization or terrorists
How we surveyed it (English version), in order to make it understandable and relatable for survey participants	Safety concerns, such as drones/air taxis crashing	Security threats, for instance, criminal organizations (for ransom), hackers, or terrorists hacking into the control system and hijacking or misdirecting drones/air taxis
Linguistic subtlety in translation, due to lack of differentiation in some languages	 Distinction clear from the subordinate clause (see above)	 Distinction clear from the subordinate clause (see above)
	 Additional specification <i>Sicherheitsbedrohung durch technisches oder menschliches Versagen</i> (safety threat due to technical or human failure)	 Additional specification <i>Sicherheitsbedrohungen durch willentlich schadhaftes Eingreifen</i> (security threat through deliberate harmful action)
	 Survey was held in English, no distinction needed; but also included subordinate clause	 Survey was held in English, no distinction needed; but also included subordinate clause

Key results

Full length evaluation

- **Quantitative survey**

- Methodology

- **General perception**

- » **S5. General perception of UAM**

- » S6.S7. Likelihood to become user of UAM services

- Use cases

- Benefits

- Concerns

- Perception towards regulators

- Qualitative survey

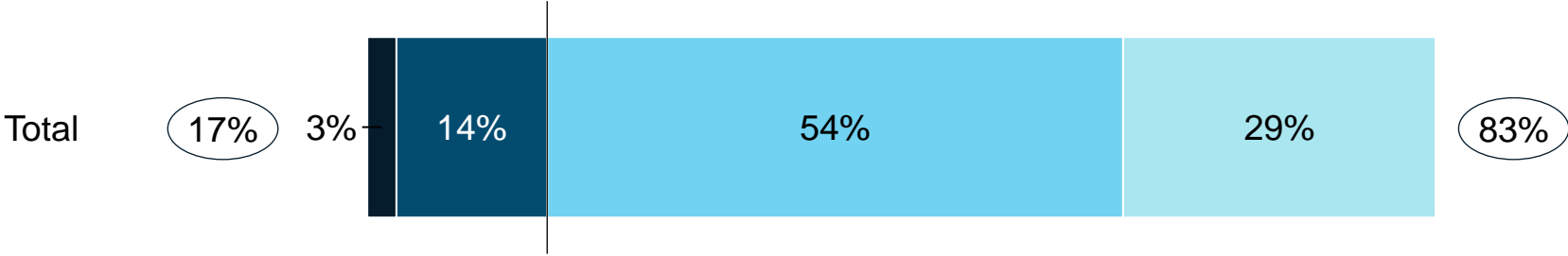
- Evaluation of noise acceptance tests



S5. General attitude towards urban air mobility (1/4)

X% Sum ■ Very negative ■ Rather negative ■ Rather positive ■ Very positive

83% feel positive about the introduction of UAM



Vast majority of 83% feel positive about introduction of UAM overall

Only 17% with negative perception

Minoritarian share of 3% are very negative and probably **hard to persuade** of introduction of UAM

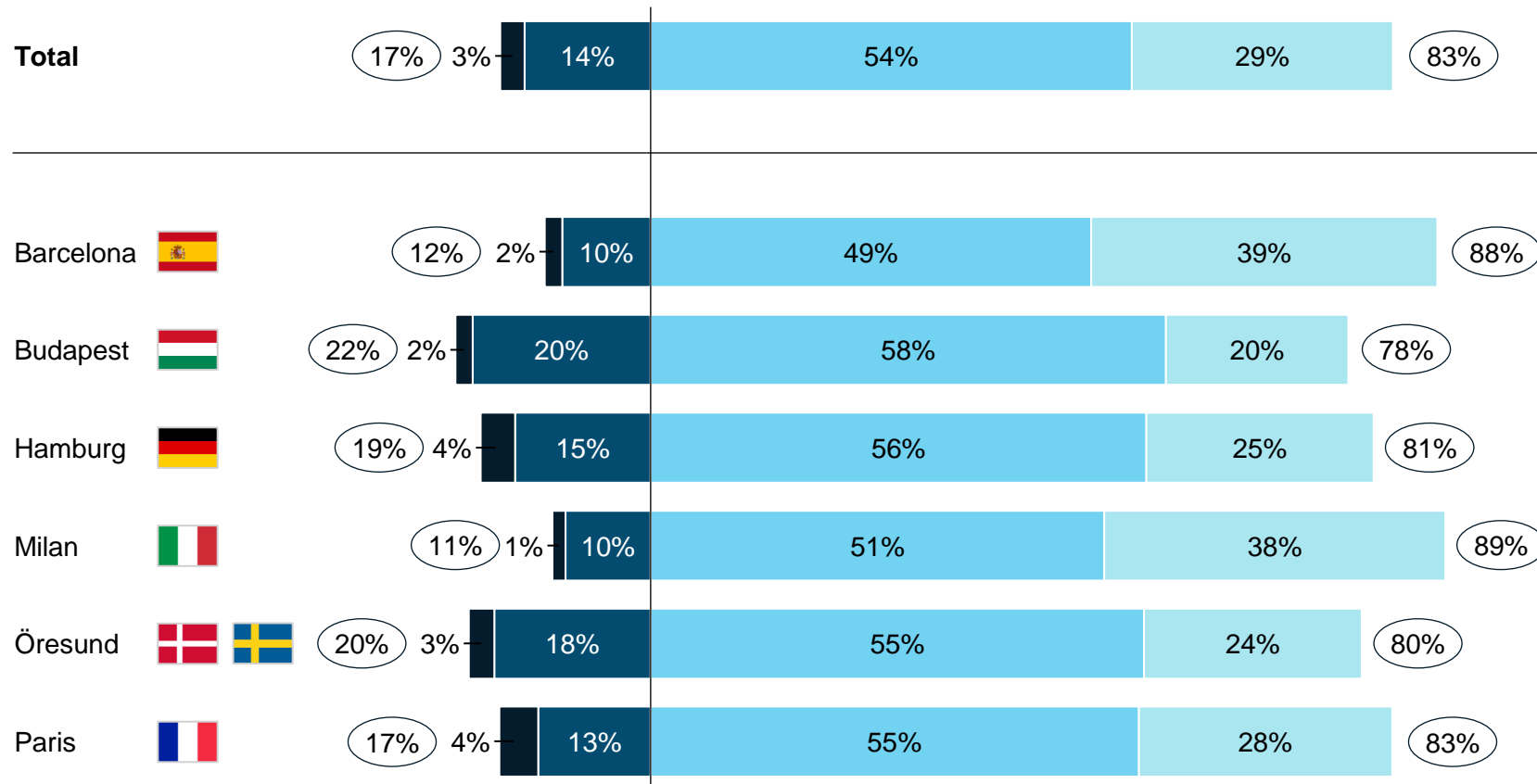
Source: EASA UAM social acceptance survey question S5. What would be your overall perception if urban air mobility solutions (such as those shown in the video) were to be introduced in your city? Please select one answer.

S5. General attitude towards urban air mobility (2/4)

(X%) Sum ■ Very negative ■ Rather negative ■ Rather positive ■ Very positive

(+/- difference to avg % in total)

No major deviations by city level



Southern cities Barcelona and Milan outstandingly positive with almost 90% of supporters (+5% to +6% more positive than average)

Answers in **Hamburg, Öresund and Paris very close to average** (deviations below 3%)

Budapest most pessimistic (-5%), but **still large positive share** with 78% of supporters

S5. General attitude towards urban air mobility (3/4)

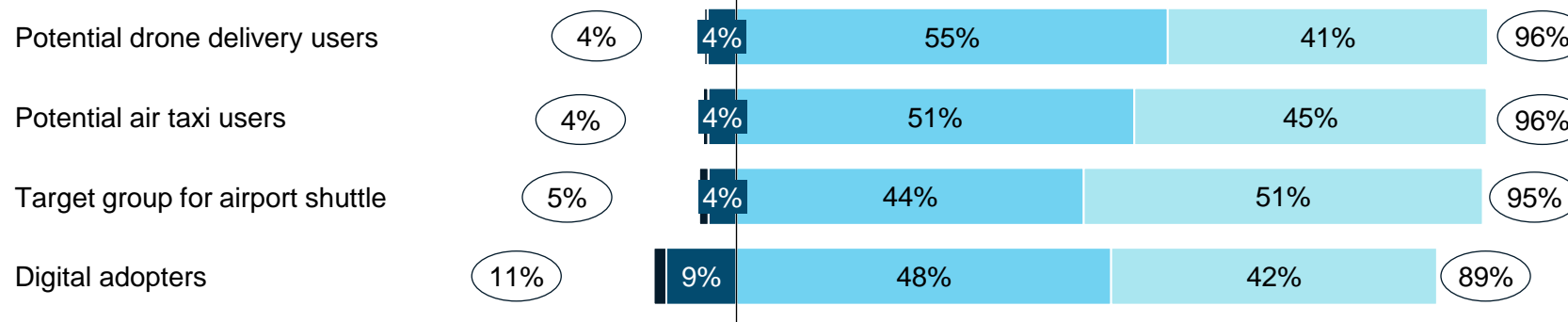
(X%) Sum ■ Very negative ■ Rather negative ■ Rather positive ■ Very positive

(absolute %, +/- difference to avg % in total)

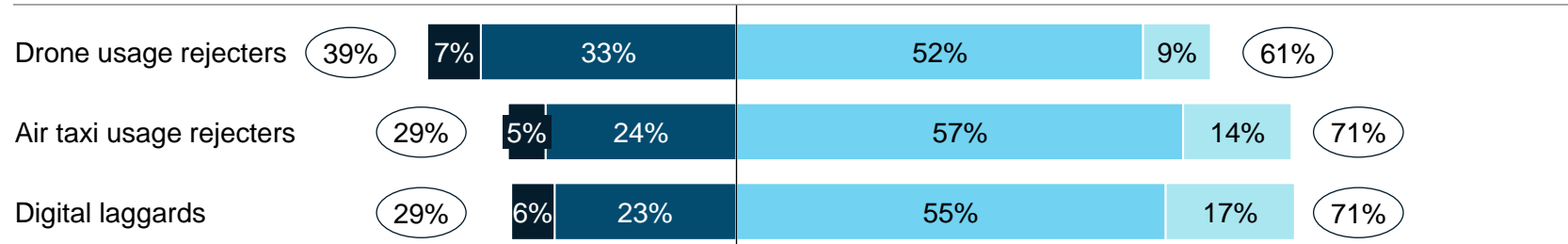
Some expected subgroups in total panel differ significantly from overall positivity about UAM



Panel subgroups with statistically relevant higher agreement



Panel subgroups with statistically relevant lower agreement



Subgroups with significantly higher approval than average

- Potential drone delivery users (+13%)
- Potential air taxi users (+13%)
- Target group for airport shuttle (+12%)
- Digital adopters (+6%)

Subgroups with significantly lower approval than average

- Drone usage rejecters (-22%)
- Air taxi usage rejecters (-12%)
- Digital laggards (-12%)

Demographic groups with no significant deviations (differences below 10%), only slight differences discernible

Slightly higher approval:

- Families (88%, +5%)
- Age group 35-44 (87%, +4%)
- Age groups 18-24, 25-34 (86%, +3%)
- Highest income group (86%, +3%)

Slightly lower approval:

- Singles (78%, -5%)
- 65-75 (79%, -4%)

Source: EASA UAM social acceptance survey question S5. What would be your overall perception if urban air mobility solutions (such as those shown in the video) were to be introduced in your city? Please select one answer.

S5. General attitude towards urban air mobility (4/4)

(absolute %, +/- difference to avg % in total)

Key takeaways

Overall positive perception

Large share of **83% feel positive about introduction of UAM** overall
Conversely, 17% with negative perception
Only 3% with highly adverse reaction who might be **hard to dissuade** from their opinion

Similar positivity across all demographic groups

High acceptance across all demographic groups, only slight differences discernible

- **Families, more positive than couples, more positive than singles** (88%, +5%, down to 78%, -5%)
- **Positivity slightly decreases with age**, from 87% (+4%) in age group 35-44 down to 79% (-4%) in oldest age group 65-75
- **Slightly increasing share of positive answers with household income**, from 82% in lowest (-1%) to 86% in highest income group (+3%)

Small geographic differences

Southern cities **Barcelona and Milan outstandingly positive** with almost 90% of supporters (~+6%)
Budapest most pessimistic (-5%), but **still 78% of positive answers**

Significant differences only by defined user groups

Subgroups with significantly higher or lower approval rates aligned with expectations

- Potential drone delivery and air taxi users, target group for airport shuttle, and digital adopters more positive than average (+6% to +13% compared to total share of positive answers)
- Drone and air taxi rejecters, and digital laggards less positive than average (-12% to -22%)

Key results

Full length evaluation

- **Quantitative survey**
 - Methodology
 - **General perception**
 - » S5. General perception of UAM
 - » **S6.S7. Likelihood to become user of UAM services**
 - Use cases
 - Benefits
 - Concerns
 - Perception towards regulators
- Qualitative survey
- Evaluation of noise acceptance tests



S6.S7. Likelihood to try out UAM services (1/5)

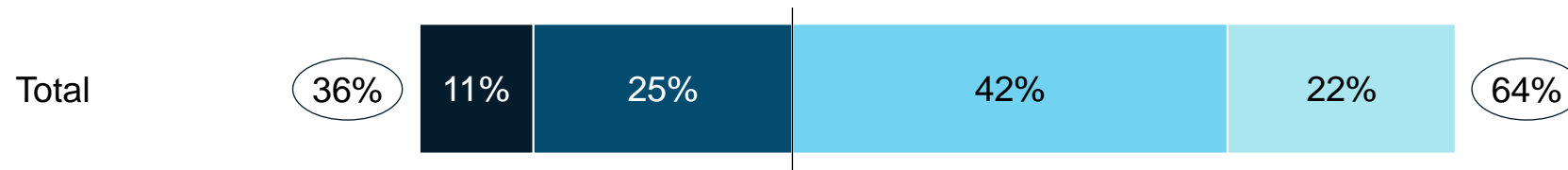
(X%) Sum ■ Not at all likely ■ Rather unlikely ■ Rather likely ■ Very likely

(+/- difference to avg % for drones & +/- difference to avg % for air taxis)

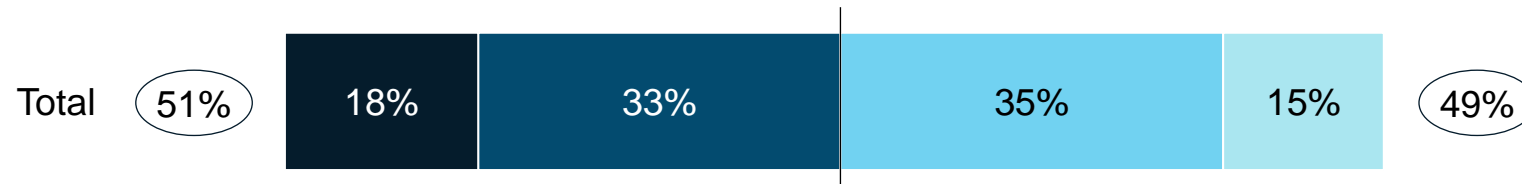
Respondents generally interested in using UAM services, even higher interest for drones

Likelihood to try out...

... delivery drones



... air taxis



Overall fairly high interest in trying out UAM services: Almost two thirds likely to try out drone delivery, and half air taxis

Demographic differences manifest more clearly

Higher approval:

- **Families** (+10% more likely to try out drone delivery compared to total, and +10% more for air taxis)
- **25-34** (+7% for drones, and +11% for air taxis)
- **High income group** (+6% and +7%)
- **Men** (+5% and +7%)

Lower approval:

- **65-75** (-11% and -10%)
- **Singles** (-10% and -8%)
- **Women** (-5% and -6%)

Defined subgroups¹ again with substantial differences along expectations

- **Target group for airport shuttle** (+21% and +27%)
- **Digital adopters subgroup** (+16% and +16%)
- **Target group for express delivery by drone** (+12% and +10%)
- **Digital laggards** (-22% and -20%)

1. Subgroups shown are defined via user behaviour not directly related to UAM, especially not derived from answers to questions S6. and S7.

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

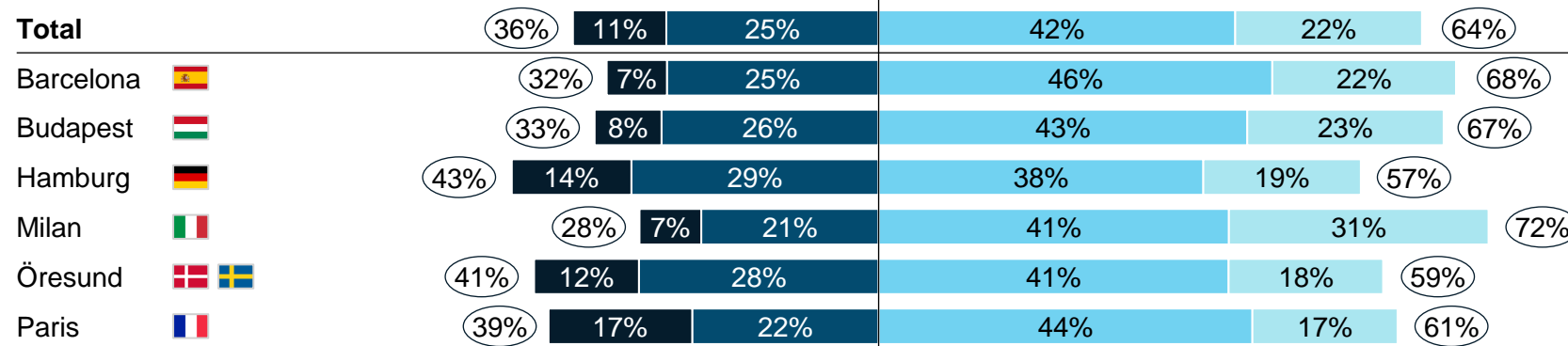
S6.S7. Likelihood to try out UAM services (2/5)

(X%) Sum ■ Not at all likely ■ Rather unlikely ■ Rather likely ■ Very likely

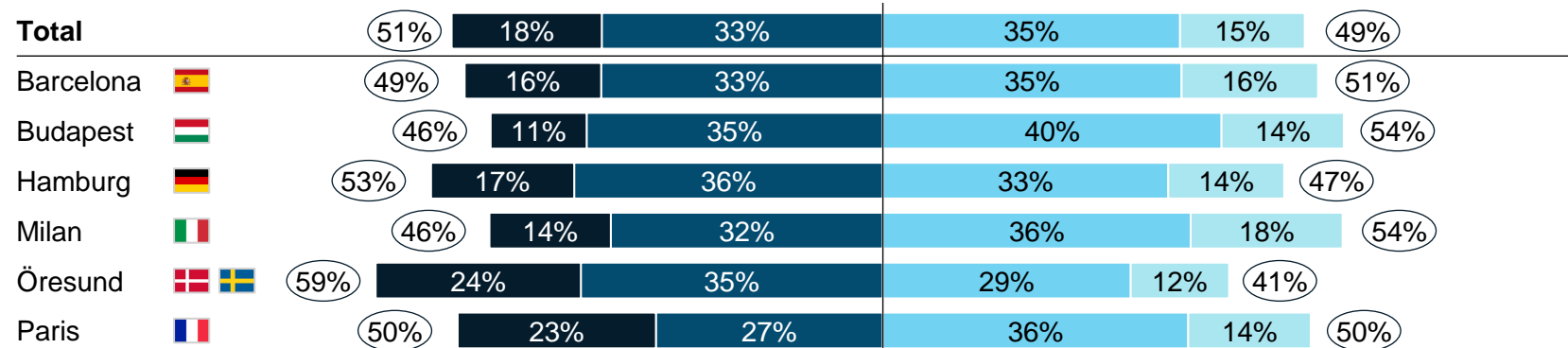
(+/- difference to avg % for drones & +/- difference to avg % for air taxis)

Milan more positive than Northern regions Hamburg and Öresund

Likelihood to try out... ... delivery drones



... air taxis



Southern cities more open to trying out delivery of goods by drone

- Milan (+8%)
- Barcelona (+4%)

Northern regions more reserved

- Öresund (-5%, -8%)
- Hamburg (-7%, -2%)

Deviations show distinctive accentuation between cities

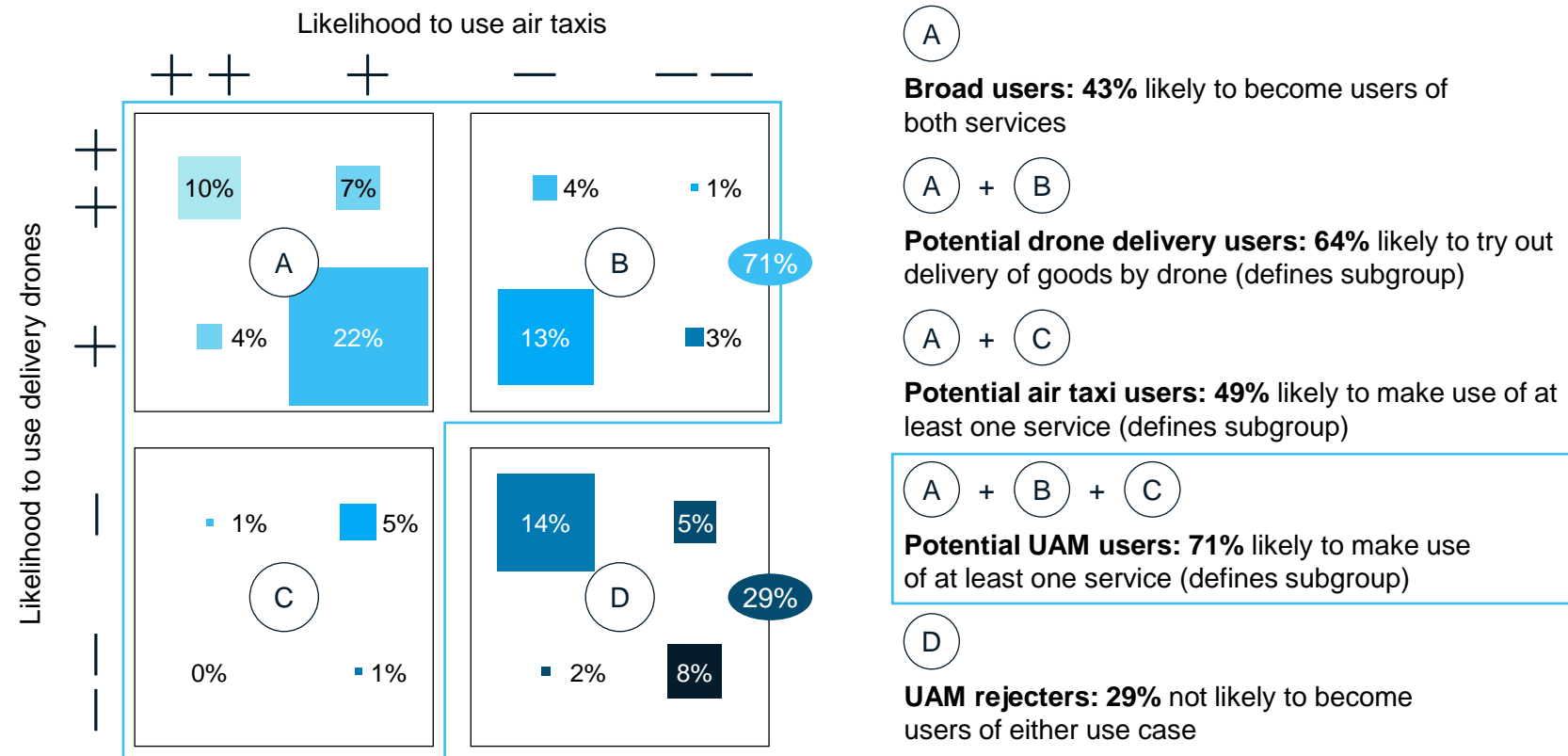
- Span for drones from Hamburg to Milan is 15%
- Span for air taxis between Öresund and Budapest / Milan is 13%

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

S6.S7. Likelihood to try out UAM services (3/5)

Positive Negative Sum potential UAM users Sum UAM rejecters

Survey indicates that population is ready for UAM as 71% with interest in becoming UAM users and only very few deep opponents



In sum, **71% of total likely to try out any UAM service** (either drones or air taxis or both)

Large supporters group of 43% with willingness to try out both use cases, the broad users; more than half in that group (22% of total) only slightly positive, but about one fourth (10% of total) highly interested in both services

Conversely, **29% of respondents lack willingness** to try out at least one UAM service; as they take negative position, UAM rejecters potentially oppose introduction of UAM

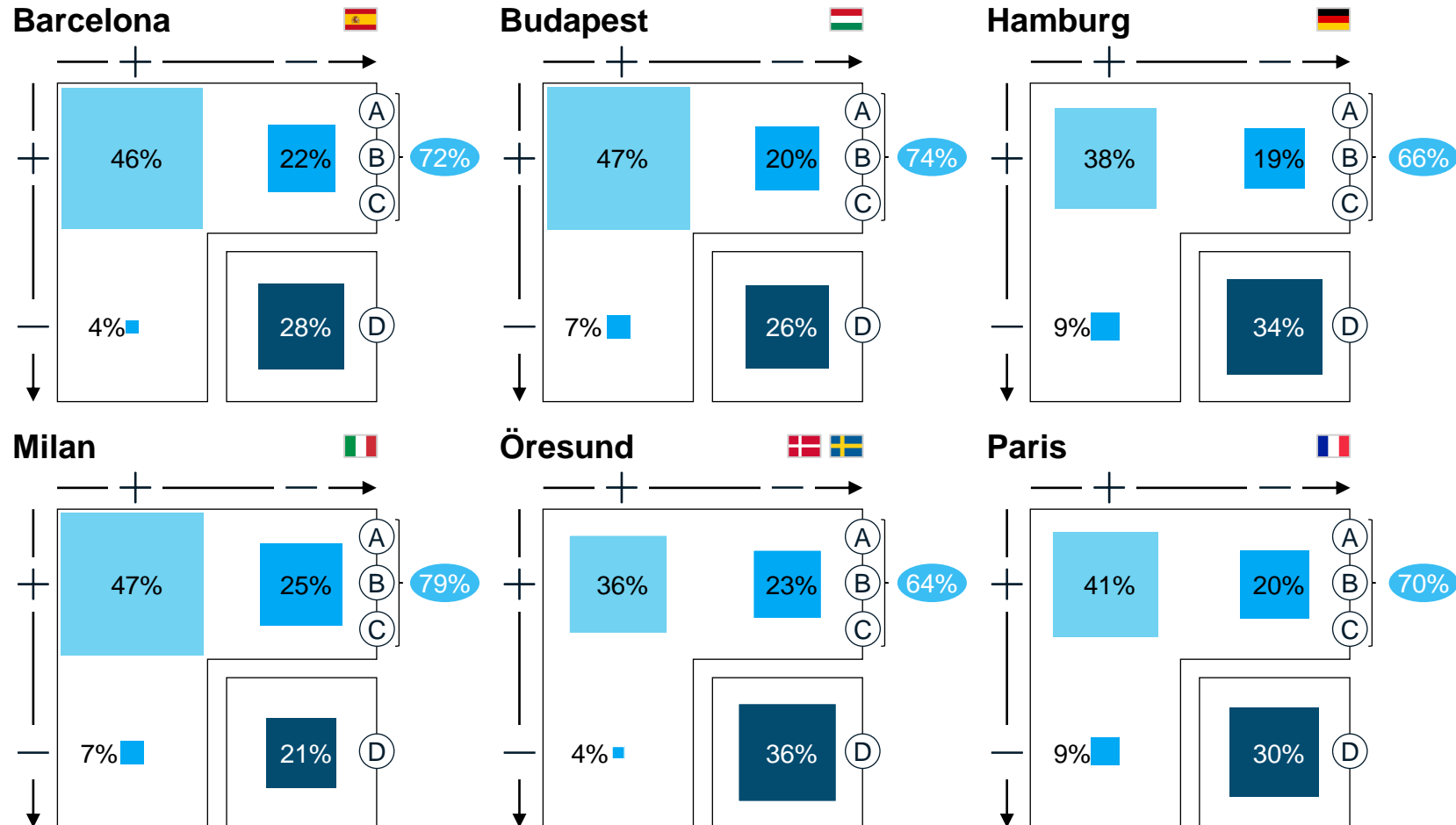
However, **only 8% definitely excluding usage of any UAM service appear highly opposed**

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

S6.S7. Likelihood to try out UAM services (4/5)

↓ Likelihood to use drones → Likelihood to air taxis Positive Negative X% Sum potential UAM users

High shares of supportive groups in Barcelona, Budapest and Milan; but rejecter groups in Hamburg and Öresund not to be neglected



(absolute %, +/- difference to avg % in total)

Potential UAM users well represented in cities

- Milan (79%, +8%)
- Öresund (64%, -7%) on lower end, but still large

Broad user group (willing to try both) almost half of respondents in 3 cities

- Milan (47%, +4%)
- Budapest (47%, +4%)
- Barcelona (46%, +3%)
- Öresund (36%, -7%) on lower end with less of a fan base

UAM rejecters with more presence in Northern regions, in line with reservation indicated in separate question related to general attitude towards UAM

- Öresund (36%, +7%)
- Hamburg (34%, +5%)
- Milan (21%, -8%) on lower end, where group only represents a fifth

Paris generally in midfield

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

S6.S7. Likelihood to try out UAM services (5/5)

(absolute %, +/- difference to avg % for drones and absolute %, +/- difference to avg % for air taxis)

Key take-aways

High interest in trying out UAM services

Overall fairly high willingness to try out UAM services with 71% in total (64% likely to try out drone delivery, 49% air taxis, 71% combined)
Large supporters group of 43% with willingness to try out both use cases
Only 8% definitely exclude usage and **appear highly opposed**

Clear differentiation of positive and negative subgroups

Deviations in demographic and defined subgroups well aligned with expectations

- **Positive demographic groups include families** (+10% more likely to try out drones compared to total, +10% for air taxis), younger people such as **age group 25-34** (+7% for drones, +11% for air taxis), **men** (+5% and +7%) and **high income group** (+6% and +7%); positive defined subgroups are **target group for airport shuttle** (+21% and +27%), **target group for express delivery by drone** (+12% and +10%) and **digital adopters** (+16% and +16%)
- **Negative groups include singles** (-10% and -8%), older people such as **age group 65-75** (-11% and -10%), **women** (-5% and -6%) and **digital laggards** (-22% and -20%)

But still small geographic differences

Respondents in **Southern cities** tend to be **more open towards trying out UAM services**

- Milan shows highest share of potential UAM users (79%, +8%)
- People willing to try out both services almost half of respondents in Barcelona (46%, +3%), Budapest and Milan (both 47%, +4%)

Respondents in **Northern regions (Öresund and Hamburg)** tend to be **more reserved**:

- Supporting group of potential UAM users smallest in Öresund (64%, -7%)
- More than one third of respondents in Öresund (36%, +7%) and Hamburg (34%, +5%) unlikely to try out any UAM service

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- **Use cases**

- » **A3.A2. Perceived usefulness of UAM use cases**

- » B6. Preferred drop-off locations for drone delivery use cases

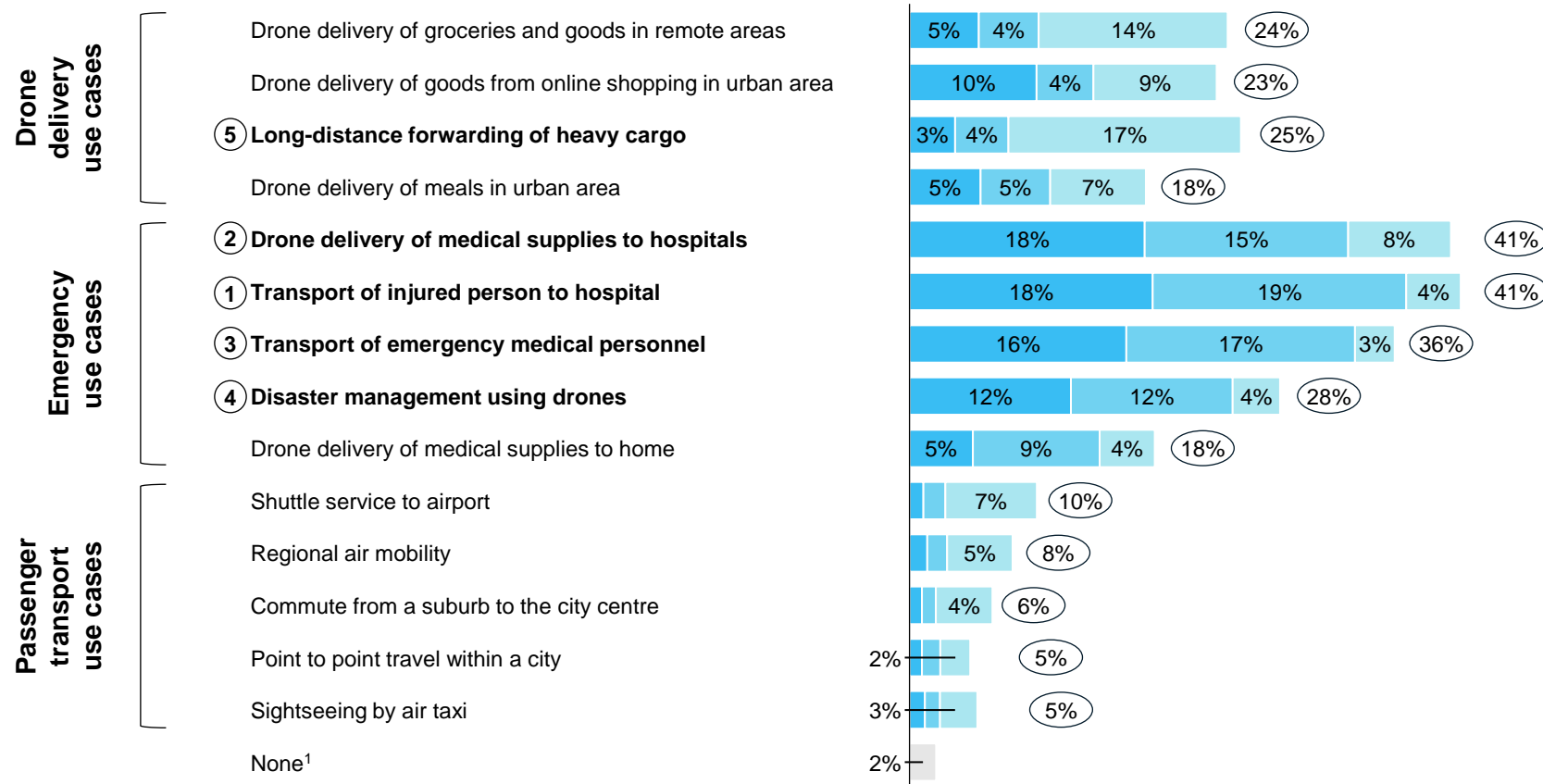
- Benefits
 - Concerns
 - Perception towards regulators
- Qualitative survey
 - Evaluation of noise acceptance tests



A3. Perceived usefulness of UAM use cases – overall (1/9)

① Top 5 use case (X%) Sum Ranked #1 Ranked #2 Ranked #3

Survey participants see highest value in emergency use cases



(rank #, +/- difference to avg % in total)

In overall ranking (1) emergency use cases are perceived as most useful (most beneficial for society) followed by (2) drone delivery use cases and (3) passenger transport use cases

- In (1), drone delivery of medical supplies and transport of injured persons are leading; only use case that falls back is delivery of medical supplies to home (comparable to other delivery to end consumer use cases)
- Within (2), the top three use cases rank almost the same – drone delivery of meals considered the least useful
- Within category (3) airport shuttle and regional air mobility rank highest

Some age groups show slightly different preferences for use-cases

- **Delivery to end users higher** rated (all in category drone delivery except heavy cargo) by **young age groups** 18-34 (+4% to +8%), whereas **old age groups** 55-75 rank it **lower** (-4% to -8%)
- **Transport of injured & medical personnel use cases** favoured by **old age groups** 55-75 (~+10%), whereas **young age groups** 18-34 rank it **lower** (~-7%)

Family status shows slight different use case preferences for some use cases

- **Families** rank **drone delivery from online shopping higher** (+8%)
- **Couples** rank **transport of emergency medical personnel higher** (+6%) whereas **families** rank it **lower** (-9%)

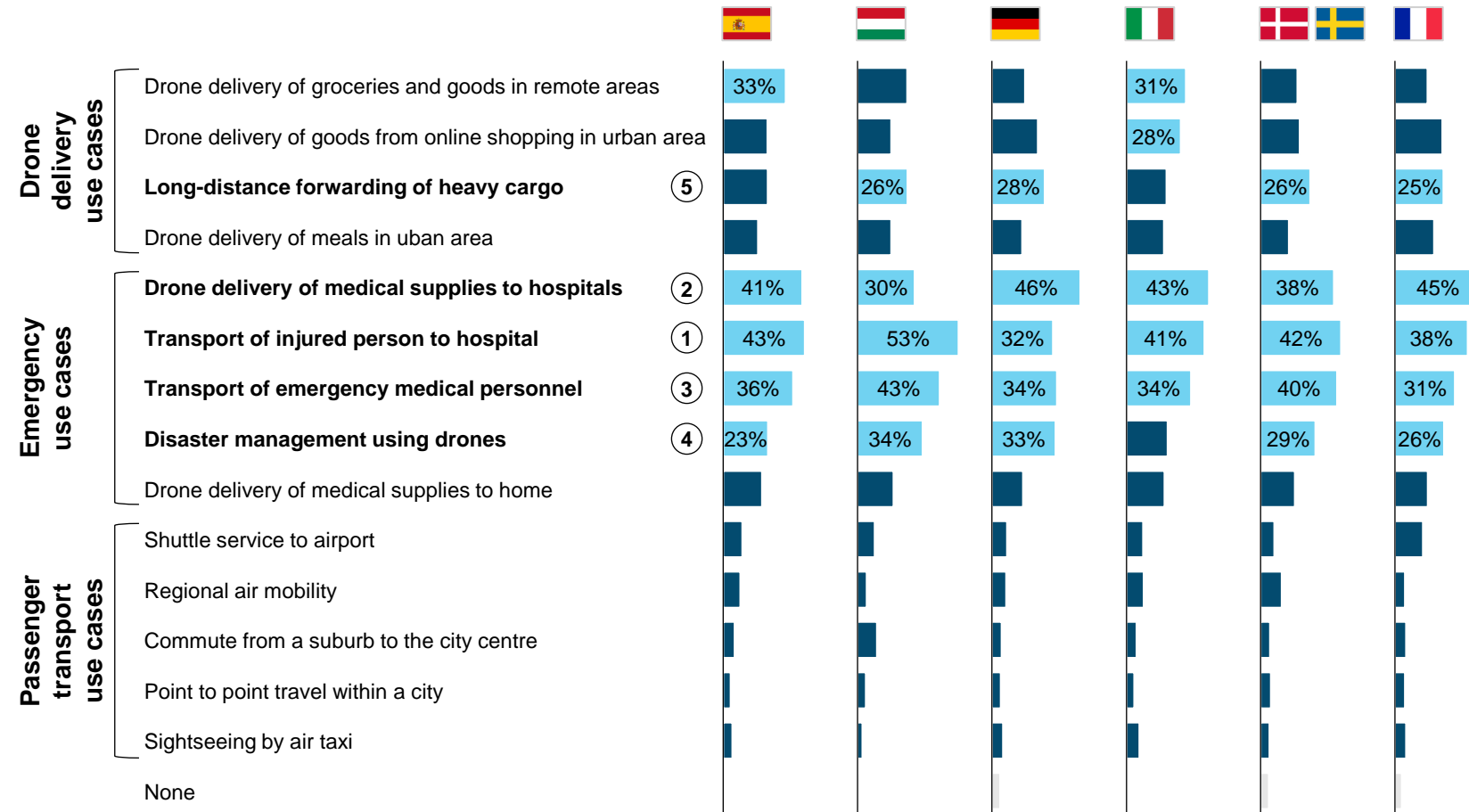
1. "None" stands for respondents who answered questions A2.a to A2.c with "None of these are useful"

Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A3. Perceived usefulness of UAM use cases – by city (2/9)

① Top 5 use case overall ■ % ranked under top 3 ■ Top 5 use case in respective city

Cities set only slightly different accentuation



(absolute %, +/- difference to avg % in total)

Cities broadly aligned – again medical emergency use cases overall on top, followed by drone delivery and passenger transport

Slightly different accentuation in cities, in line with higher readiness for introduction of delivery drones

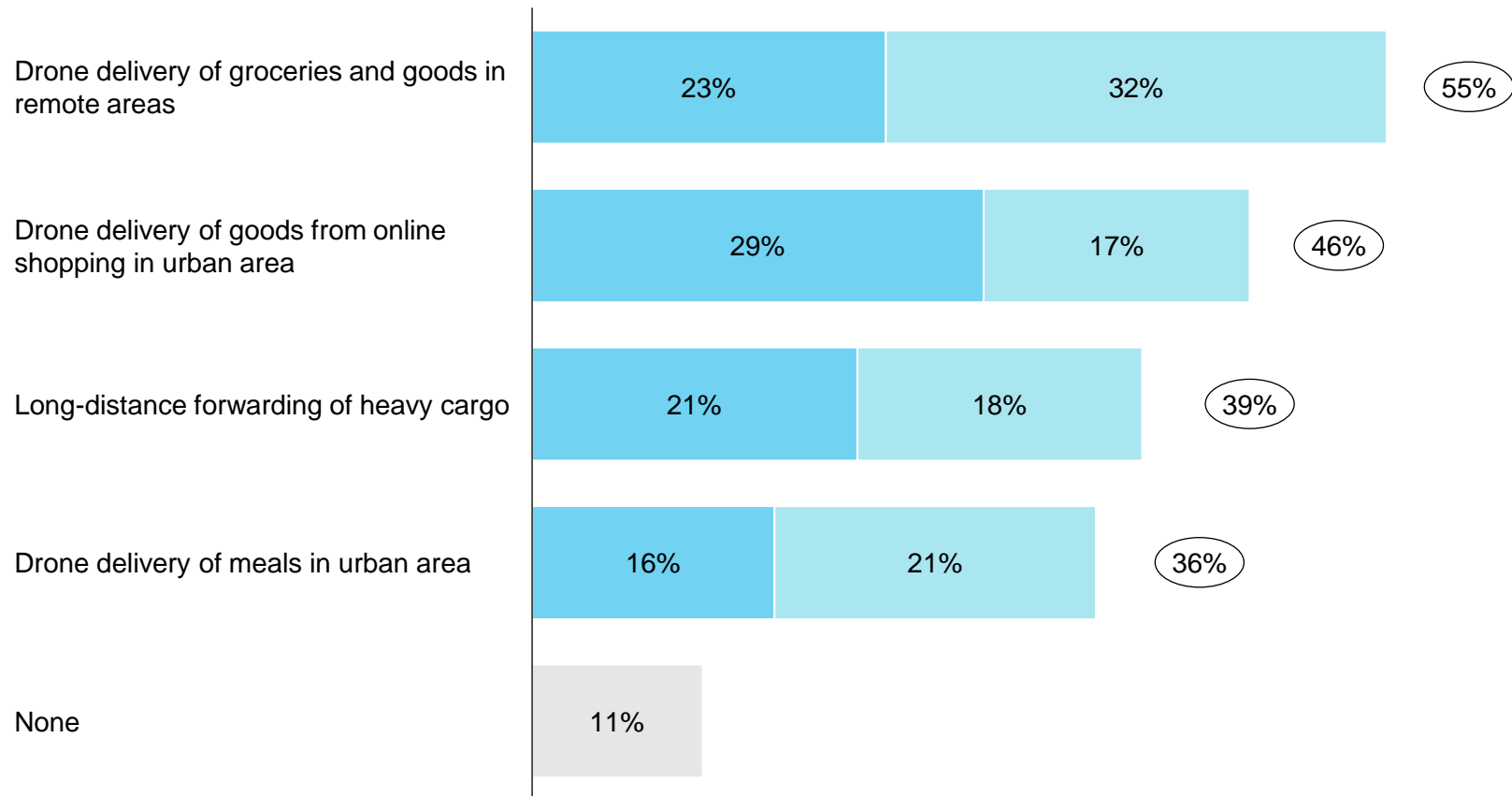
- **Barcelona** with **delivery to remote areas** (33%, +9%) **under top 5**
- **Milan** with **2 delivery to end user use cases under top 5** (delivery to remote areas 31%, +7%, delivery of online shopping 28%, +5%)
- **Budapest** most positive about transport of injured, medical personnel & disaster management (+12%, +7%, +6%), least positive about delivery of medical supplies to hospitals (-11%, but still under top 5)
- **Hamburg** more positive about delivery of medical supplies to hospitals and disaster management (both +5%); less positive about transport of injured (-9%) and delivery to remote areas (-7%)
- **Paris** less positive about delivery to remote areas (-7%) and transport of medical personnel (-5%)
- **Nordics** close to average on all use cases

Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A2.a Perceived usefulness of UAM use cases – drone delivery use cases (3/9)

(X%) Sum ■ Ranked #1 ■ Ranked #2

Drone use cases that involve delivery of shopped goods are perceived most useful among delivery use cases



(+/- difference to avg % in total)

Both use cases involving **delivery of consumer products to end users highest ranked** among drone delivery category

Drone delivery of groceries and goods in remote areas perceived most useful

- **More popular** for women (+4%)
- **Less popular** in high income group (-6%, ranked 2nd), men (-4%), digital laggards (-8%)

Drone delivery of goods from online shopping comes 2nd, but opinions differ

- **More popular** for families (+8%), men (+7%), high income (+6%), younger age groups 18-44 (+4%), potential UAM users (+11%), digital adopters (+11%), target group for express delivery by drone (+7%)
- **Less popular** for old age groups 55-75 (-7%), singles (-7%), women (-6%), UAM rejecters (-27%), digital laggards (-11%)

Similar perceptions for delivery of meals

- **More popular** for young age groups 18-34 (+12%), families (+6%), potential UAM users (+7%), target group for express delivery by drone (+7%)
- **Less popular** among old age groups 55-75 (-11%), singles (-9%), UAM rejecters group (-17%), digital laggards (-10%)

Heavy cargo upvoted by UAM critical groups

- **Age group 65-75** (+6%), UAM rejecters (+10%)

Source: EASA UAM social acceptance survey question A2a. Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.

A2.a Perceived usefulness of UAM use cases – drone delivery use cases by city (4/9)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

(+/- difference to avg % in total)

Similar results in cities with clear winner being delivery of goods to remote areas

Share of respondents that rank use case under top 2

0% 10% 20% 30% 40% 50% 60% 70%

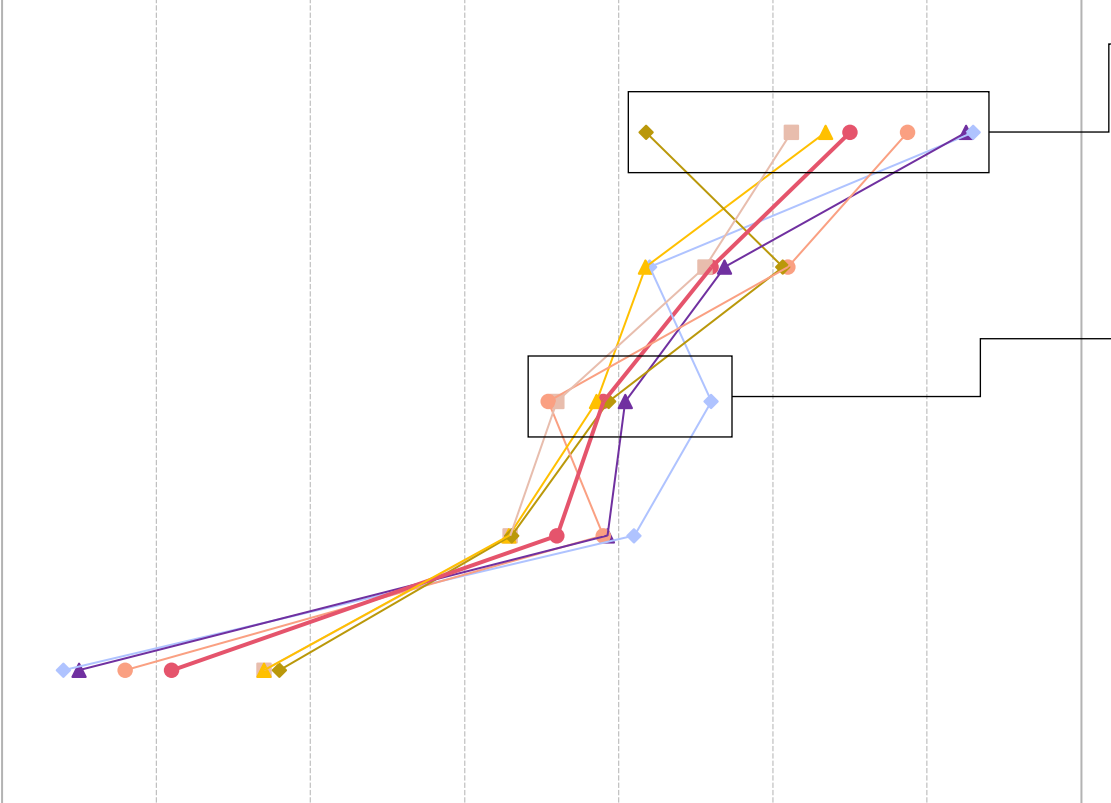
Drone delivery of groceries and goods in remote areas

Drone delivery of goods from online shopping

Long-distance forwarding of heavy cargo

Drone delivery of meals

None



Delivery to remote areas in most cities perceived as most useful, but quite significant span (from 42% to 63%)

- Highest rank in **Budapest** and **Barcelona** (~+8%)
- Lowest rank in **Paris** (-13%) and thus only city with **different** use case drone delivery from online shopping on 1st place

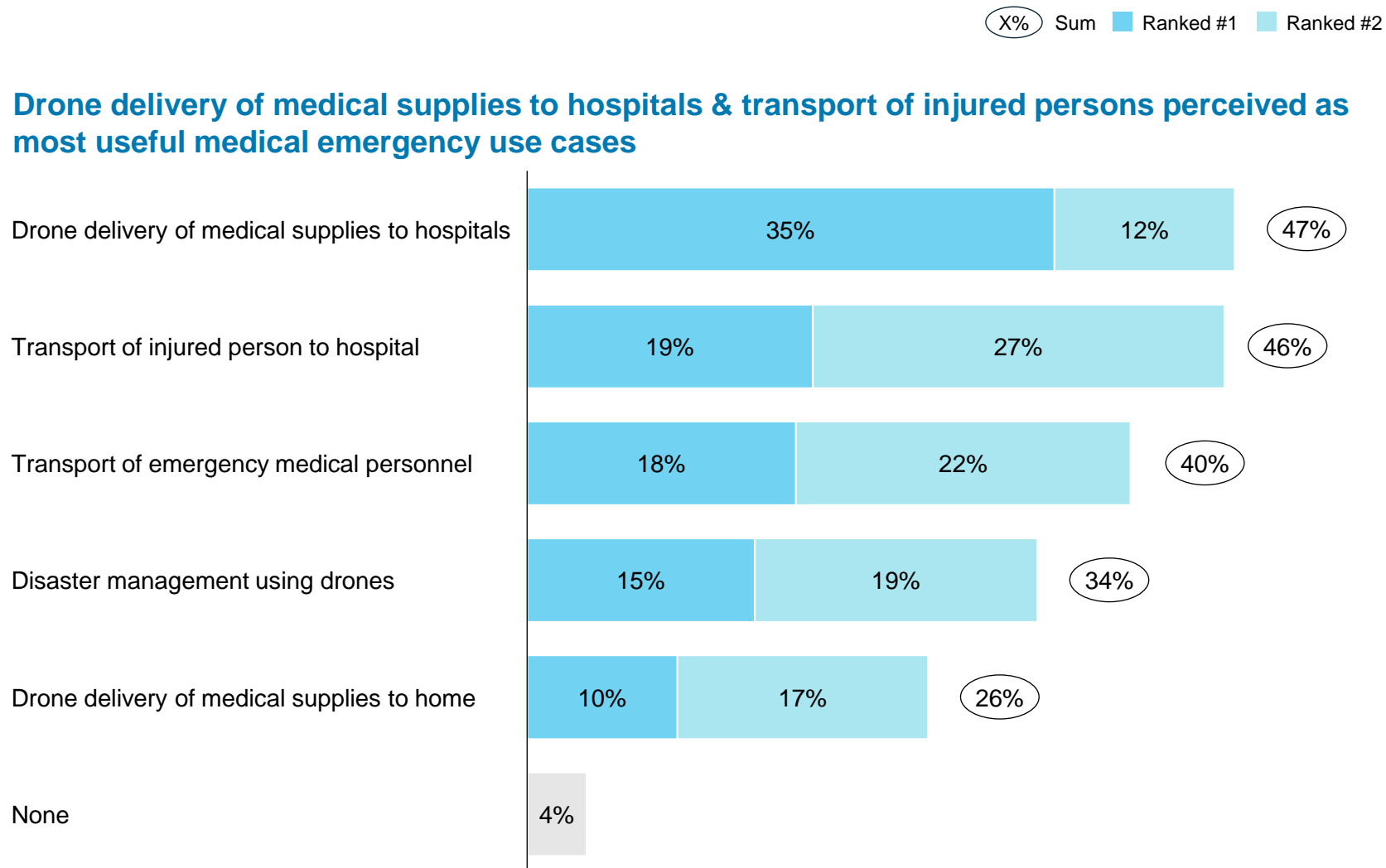
Some spread for forwarding of heavy cargo with Budapest notably higher (+7%) than the rest

Less spread for use cases involving delivery of goods to end users in urban environment

- 42% to 51% (-4% to +5%) for delivery of goods from online shopping
- 33% to 41% (-3% to +5%) for delivery of meals

Source: EASA UAM social acceptance survey question A2a. Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.

A2.b Perceived usefulness of UAM use cases – medical emergency use case (5/9)



(+/- difference to avg % in total)

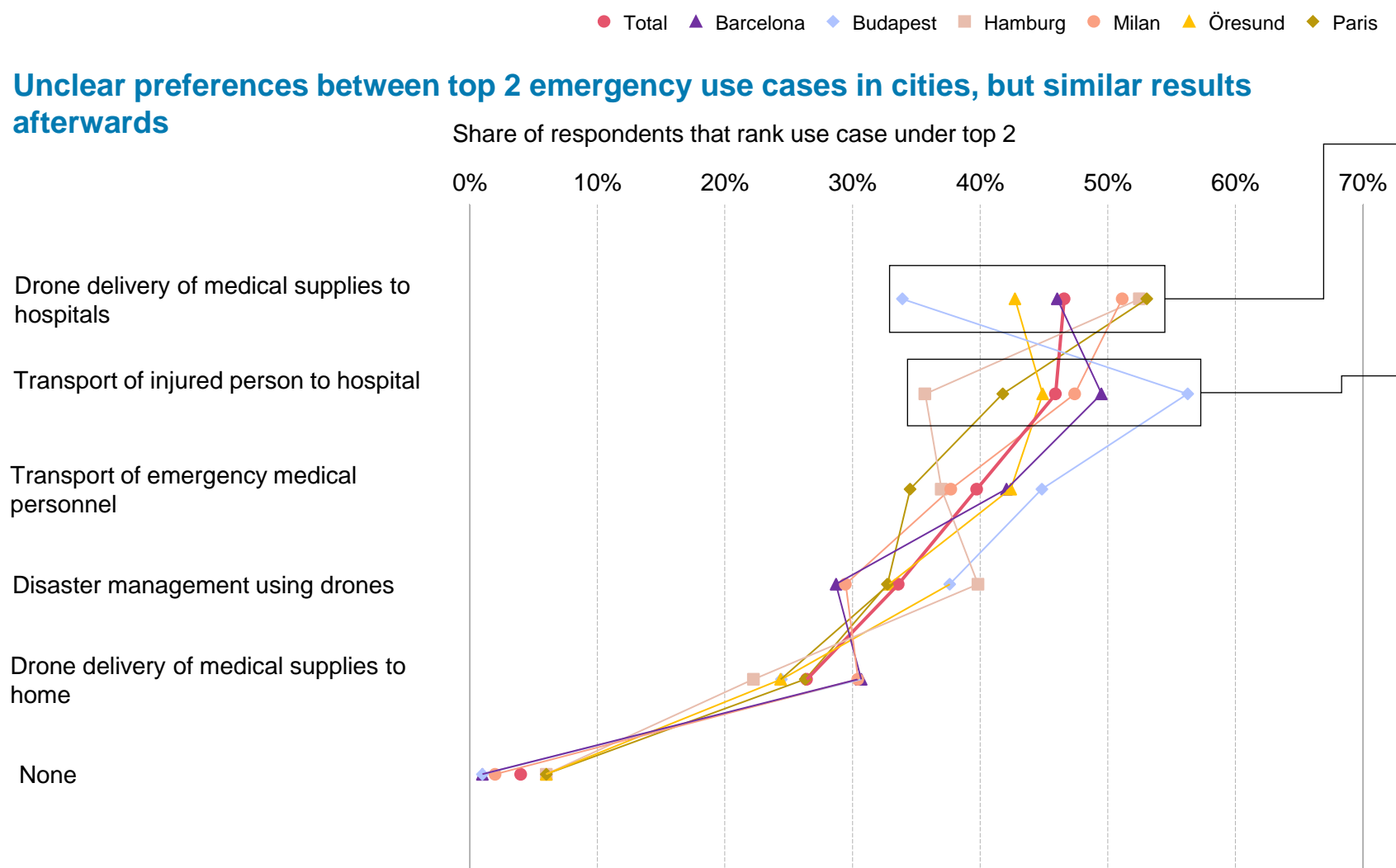
Drone delivery of medical supplies and transport of injured to hospitals rank highest at ~46%

Some groups favour use cases involving people transport (both of injured & of emergency medical personnel) and thus rank the other 3 use cases lower

- **Age groups 55-75** (+6% for injured; +9% for personnel) consequently medical supplies for hospitals ranks lower (-9% for age group 65-75)
- **UAM rejecters** (+9% for personnel)
- **Digital laggards** (+5% for personnel)
- **Families** (+5% for medical supplies to hospital)

Delivery of medical supplies to home perceived least important - only age group 25-34 deviating from average 34% (+8%)

A2.b Perceived usefulness of UAM use cases – emergency use case by city (6/9)



(absolute %, +/- difference to avg % in total)

Unclear preferences between top 2 emergency use cases in cities, but similar results afterwards

Spread of results for drone delivery of medical supplies quite big

- Highest ranked in Paris (53%, +6%), Hamburg (52%, +5%), Milan
- Budapest (34%, -13%) significantly lower

Equally wide spread result for transport of injured person

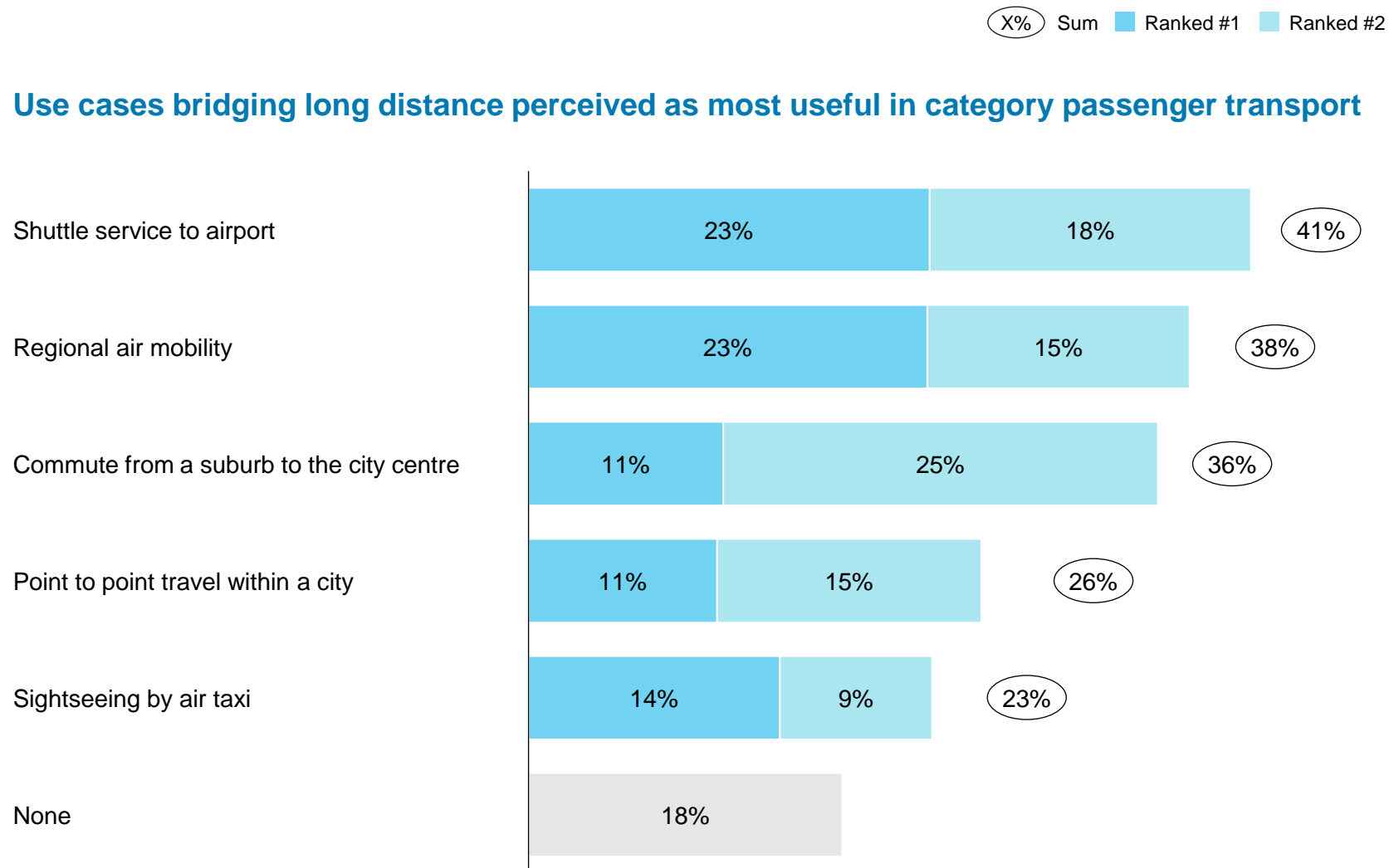
- Highest ranked in Budapest (56%, +10%), Barcelona, Öresund
- Hamburg (36%, -10%) on lower end

Opinions converge in subsequent use cases

- Low span between results suggests similar perception in cities
- Steepness of results suggests clear ordering of options throughout cities
- Transport of medical personnel yields 35% to 45% (-5% to +5%)
- Disaster management yields 29% to 40% (-5% to +6%)
- Delivery of medical supplies to home yields 22% to 31% (-4% to +5%)

Source: EASA UAM social acceptance survey question A2b. Which of the below medical emergency use cases would you consider the most useful in an urban environment? Please sort the following applications from 1 being 'most useful' to 5 being 'least useful' or select 'none of these are useful'.

A2.c Perceived usefulness of UAM use cases – passenger transport use case (7/9)



(absolute %, +/- difference to avg % in total)

Use cases **bridging long distance** compared to **inner-city conditions** come first and are very close in ranking

- **Shuttle service to airport (41%)**
- **Regional air mobility (38%)**
- **Commute from suburb (36%)**

Use cases operating within city centre less often assessed as useful

- Point to point travel within a city (26%)
- Sightseeing (23%)

Quite many respondents do not rate any passenger transport use case as useful

- 18% ("None" response) compared to 11% in category drone delivery and 4% in category medical emergencies

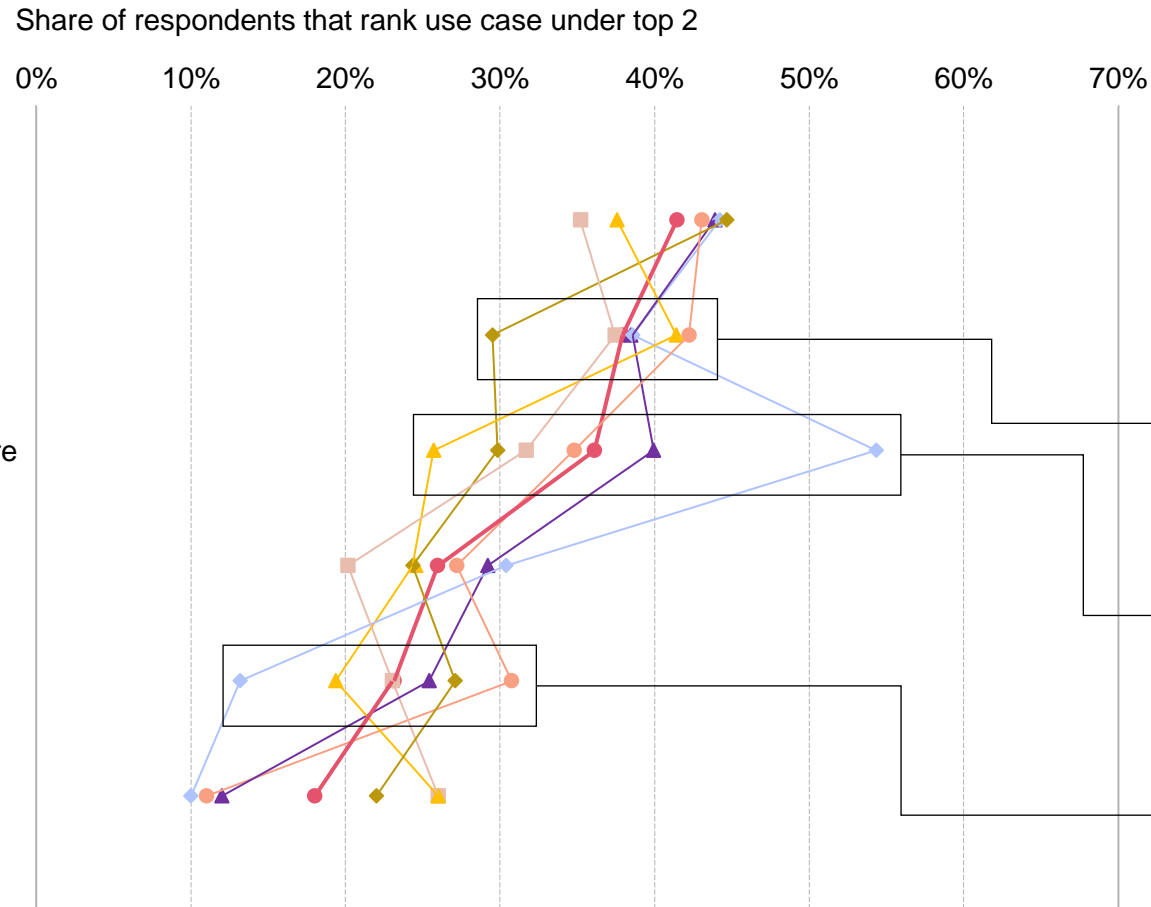
Expected differences in preference by defined user group

- Airport shuttle and inner-city point to point travel ranked higher by potential air taxi users and target group for airport shuttle (+6% to +9%)
- All use cases ranked lower by UAM rejecters and digital laggards (-5% to -14%)

A2.c Perceived usefulness of UAM use cases – passenger transport use case by city (8/9)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Very similar results by city, except Budapest



(absolute %, +/- difference to avg % in total)

Similar results for use case importance across cities however some spread for certain use cases

- **Barcelona and Milan overall less critical** as results tend to be above average
- **Hamburg, Öresund and Paris more critical** as results tend to be below average

Medium spread for regional air mobility yields 30% to 42% (-8% to +4%) with Paris on lower end; highest ranked by Milan and Öresund

Suburb to city-centre shows highest spread among use cases - **Budapest stands out** with 54% (+18%) ranking it as top use case

Sightseeing has **wide spread** result

- Milan (31%, +8%) on upper end
- Budapest (13%, -10%) on lower

A3.A2. Perceived usefulness of UAM use cases – passenger transport use case by city (9/9)

(absolute %, +/- difference to avg % in total)

Key take-aways

Medical emergency use cases perceived highly useful

Medical emergency use cases perceived most useful across categories, as expected since highly beneficial for society

- 4 out of 5 highest ranked use cases fall into that category with 18% to 41% of respondents ranking them under top 2 across categories

Within category, 2 uses cases top ranked, with some anomaly in Budapest

- **Drone delivery of medical supplies** perceived most useful within category (47%); but Budapest (34%, -13%) significantly lower
- **Transport of injured persons to hospitals** closely follows (46%), highest ranked in Budapest (56%, +10%)
- Opinions by city converge in subsequent use cases

Patterns conceivable by subgroups with **UAM supporting subgroups** in favour of **delivery of medical supplies**, **UAM critical subgroups** in favour of **use cases involving transport of people**

Delivery of goods fairly useful

Category delivery of goods by drone comes 2nd

- 18% to 25% across categories

Within category, use cases involving **delivery of consumer products to end users highest ranked, patterns conceivable by subgroups**

- **Delivery of groceries and goods in remote areas** and **delivery of goods from online shopping most useful** (55% and 46% of top 2 answers within category)
- **Highest deviations** in subgroups for **delivery of goods from online shopping and delivery of meals; liked by UAM supporting subgroups, disliked by UAM critical subgroups**
- Heavy cargo use case upvoted by UAM critical subgroups

Passenger transport least useful

Passenger transport by air taxi least useful relative to other categories

- Only 5% to 10% across categories

Within category, use cases bridging long distance compared to inner-city conditions come first

- **Airport shuttle** (41%), **regional air mobility** (38%) and **commute from suburb to city centre** (36%) highest ranked
- Same results in cities, except Budapest standing out with 54% (+18%) for commute from suburb to city centre
- **Higher ranked by UAM supporting subgroups, lower ranked by UAM critical subgroups**

Use cases operating within city centre less often assessed as useful

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- **Use cases**

- » A3.A2. Perceived usefulness of UAM use cases

- » **B6. Preferred drop-off locations for drone delivery use cases**

- Benefits
- Concerns
- Perception towards regulators

- Qualitative survey

- Evaluation of noise acceptance tests



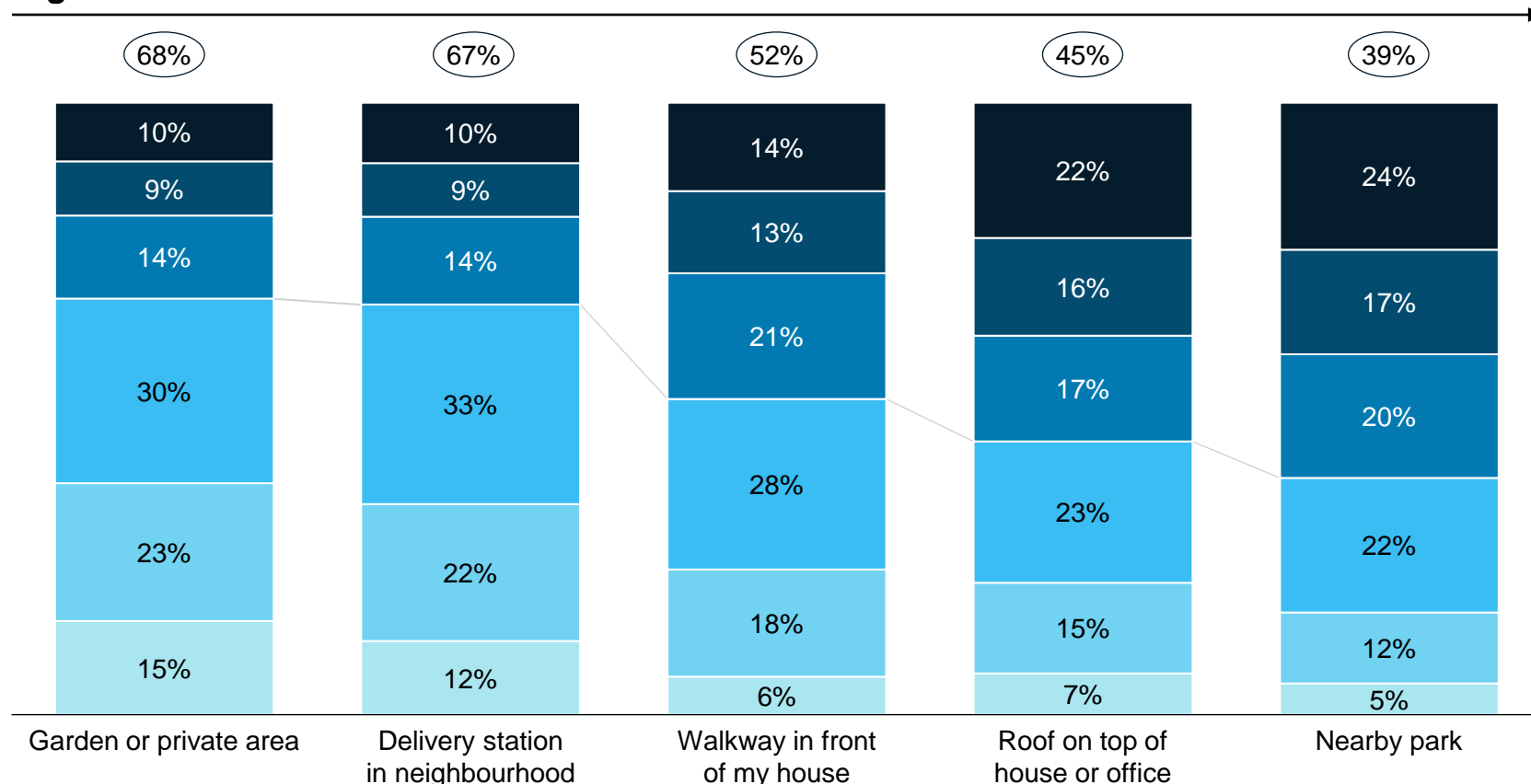
B6. Preferred drop-off locations for drone delivery (1/3)

Very uncomfortable
 Uncomfortable
 Somewhat uncomfortable
 Somewhat comfortable
 Comfortable
 Very comfortable
 (X%) Sum comfortable

Preferred drop-off locations for parcels delivered by drones are garden / private area and delivery station in neighbourhood

High level of comfort

Low level of comfort



(absolute %, +/- difference to avg % in total)

Level of comfort highest for options garden / private area and delivery station in neighbourhood (~68% feeling comfortable); potentially because similar to nowadays delivery locations (mailbox, post office)

Walkway in front of house (52%) and roof on top of house (45%) in midfield, but with highest deviations

Higher approval:

- Age group 25-34 (+2% and +8%)
- Age group 35-44 (+5% and +7%)
- Families (+7% and +6%)

Lower approval:

- Old age groups 55-75 (-6% and -10%)
- Singles (-7% and -4%)

Nearby park on lower end (39%); no specific deviation per subgroup

Defined subgroups with deviations as expected, throughout drop-off locations

Higher approval:

- Potential drone delivery users (+10% on average)
- Digital adopters (+9%)
- Target group for express delivery by drone (+6%)

Lower approval:

- Drone usage rejecters (-17%)
- Digital laggards (-11%)

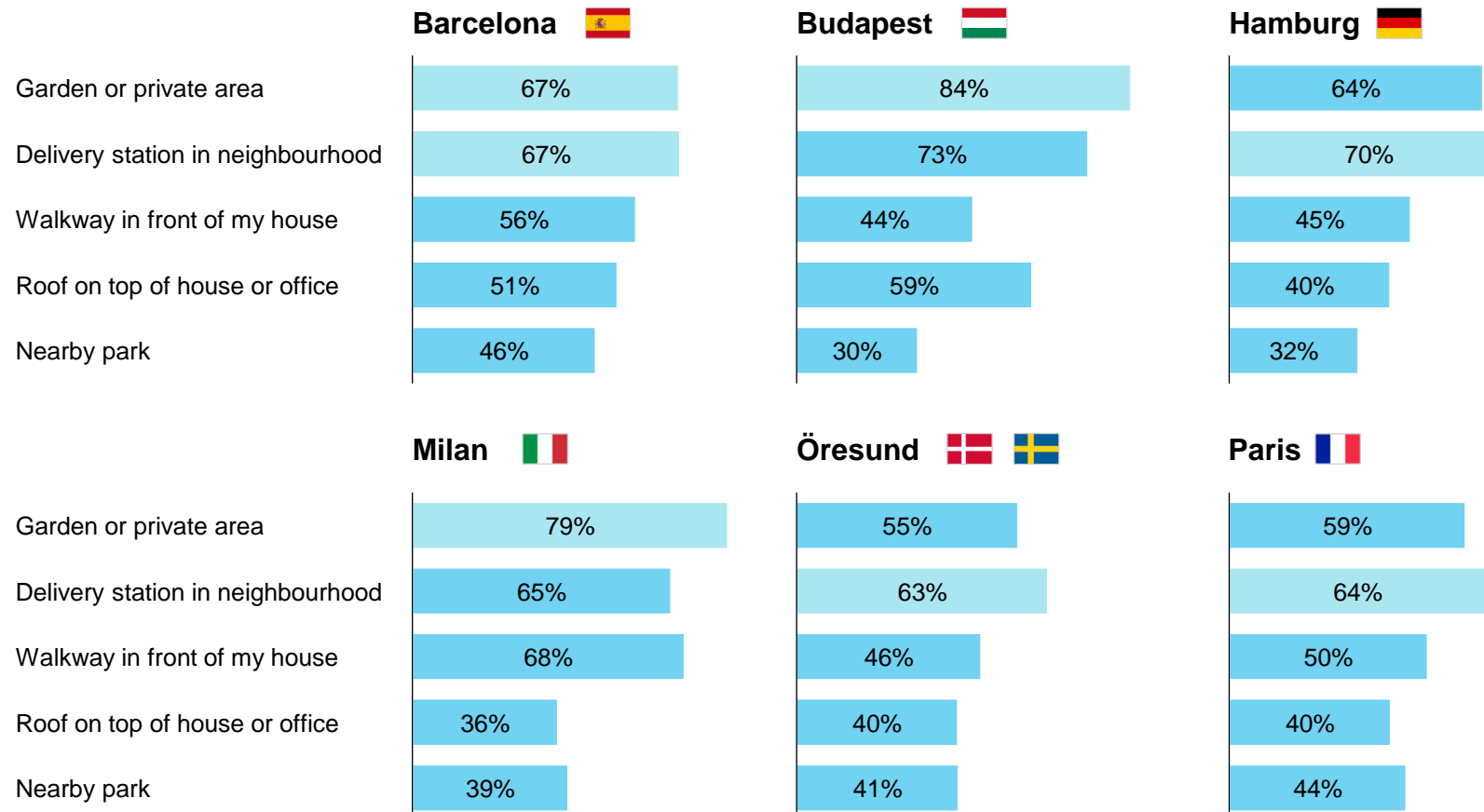
Source: EASA UAM social acceptance survey question B6. How comfortable would you be with the following modes of drone delivery for medium-sized parcels (max. 120 x 60 x 60 cm, up to 5 kg) at places near your home? Please select one answer in each row.

B6. Preferred drop-off locations for drone delivery (2/3)

Comfortable Top drop-off locations

(absolute %, +/- difference to avg % in total)

Results with little variation across cities



Overall similar ordering in cities, but some different accentuation

Either garden / private area or delivery station in neighbourhood on 1st place throughout cities; other one respectively on 2nd place

- Only exception is Milan, where walkway option (+16%) on 2nd place instead of delivery station
- Garden / private area especially popular in Budapest (+16%) and Milan (+11%)
- Less popular in Öresund (-13%)

Walkway in front of house in midfield: 3rd place almost everywhere, except Milan (where it is 2nd.) and Budapest (4th)

Roof on top of house / office 2nd lowest

- Comes last in Milan and Paris
- But higher ranked in Budapest (+14%)

Last place for nearby park in Barcelona, Budapest, Hamburg and Öresund

B6. Preferred drop-off locations for drone delivery (3/3)

(absolute %, +/- difference to avg % in total)

Key take-aways

Garden / private area & delivery station most popular

Level of comfort highest for options **garden / private area** and **delivery station in neighbourhood** (~68% feeling comfortable); potentially because **similar to nowadays delivery locations** (mailbox, post office)

No deviations in demographic groups, deviations as expected in defined subgroups

Garden / private are option especially popular in Budapest (+16%), Milan (+11%); least popular in Öresund (-13%)

Other delivery options less popular, but higher deviations

Walkway in front of house (52%), roof on top of house / office (45%) and nearby park (39%) rank lower, but no option outright rejected

Most notable variations by city:

- **Walkway in front of house in midfield:** 3rd place almost everywhere, except Milan (where it is 2nd,) and Budapest (4th)
- **Roof on top of house / office 2nd lowest**
 - Comes last in Milan and Paris
 - But higher ranked in Budapest (+14%)

Most notable variations by demographic groups

Higher approval: Young age groups 25-44, families (+2% to +8% in options), potential drone delivery users, target group for express delivery by drone, digital adopters (+8% to +13%)

Lower approval: Age group 65-75, singles (-4% to -9%), drone usage rejecters, digital laggards (-8% to -23%)

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- **Benefits**

- » **A4. Perceived benefits of UAM overall**

- » B2. Perceived benefits of drone delivery

- » C3. Perceived benefits of air taxis

- Concerns
- Perception towards regulators

- Qualitative survey

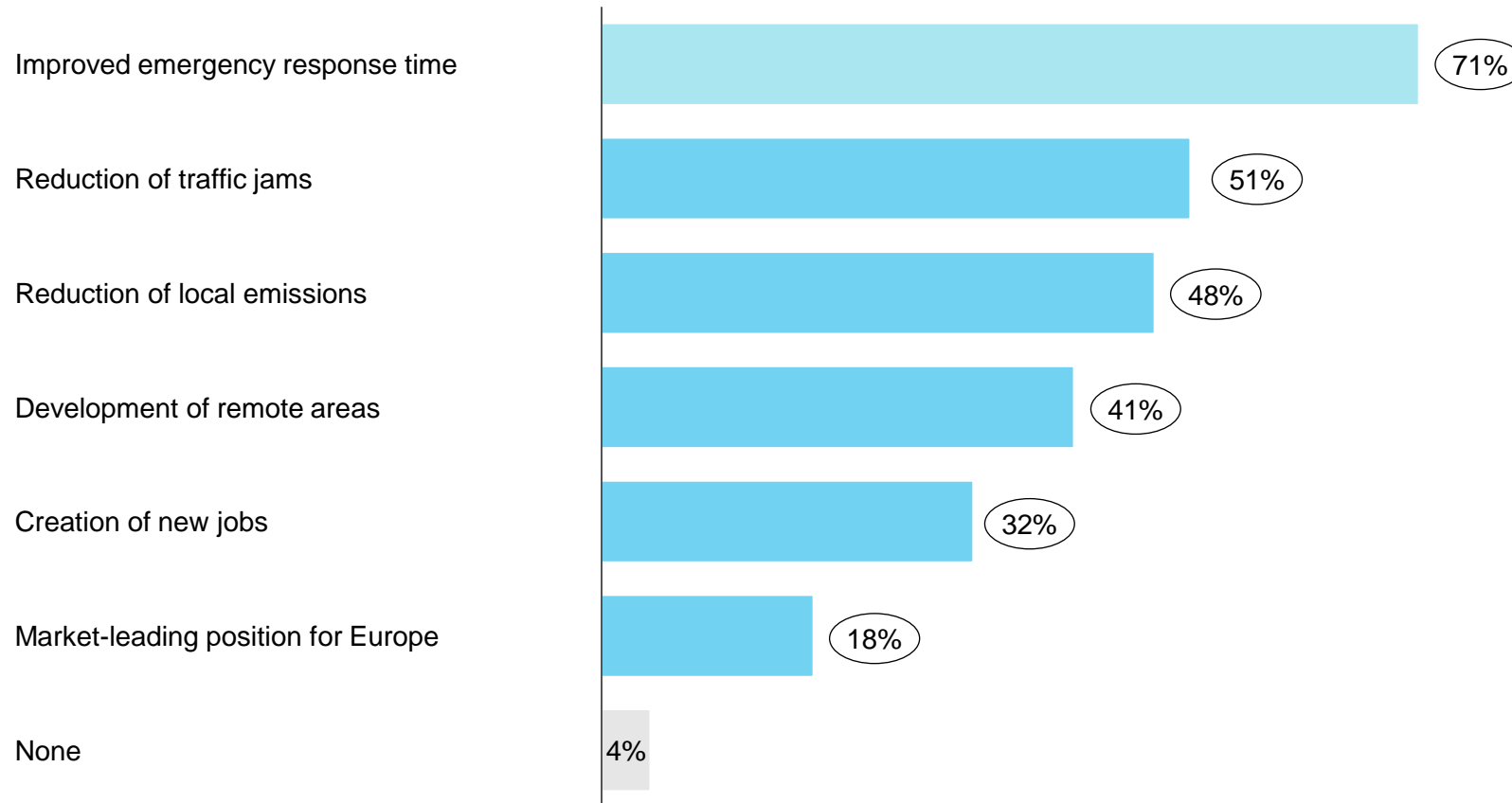
- Evaluation of noise acceptance tests



A4. Perceived UAM benefits – overall (1/3)

X% Sum Selected out of 3 possible Top selected

Improved emergency response time by far the top benefit survey participants see in UAM



(+/- difference to avg % in total)

Improved emergency response time by far top UAM benefit (71% respondents select in under 3 possible answers)

Higher approval:

- **Old age groups 55-75** (+8%)

Reduction of traffic jams, reduction of local emissions and development of remote areas in midfield

Creation of new jobs in lower midfield

Higher approval:

- **Age group 18-24** (+8%)

Lower approval:

- **Age group 65-75** (-8%)

Market-leading position for Europe falls behind

Higher approval:

- **Families** (+7%)
- **Age group 18-24** (+6%)

Lower approval:

- **Old age groups 55-75** (-6%)

UAM rejecters rank every benefit lower by at least 7%, except improved emergency (-2%) and development of remote areas (-2%)

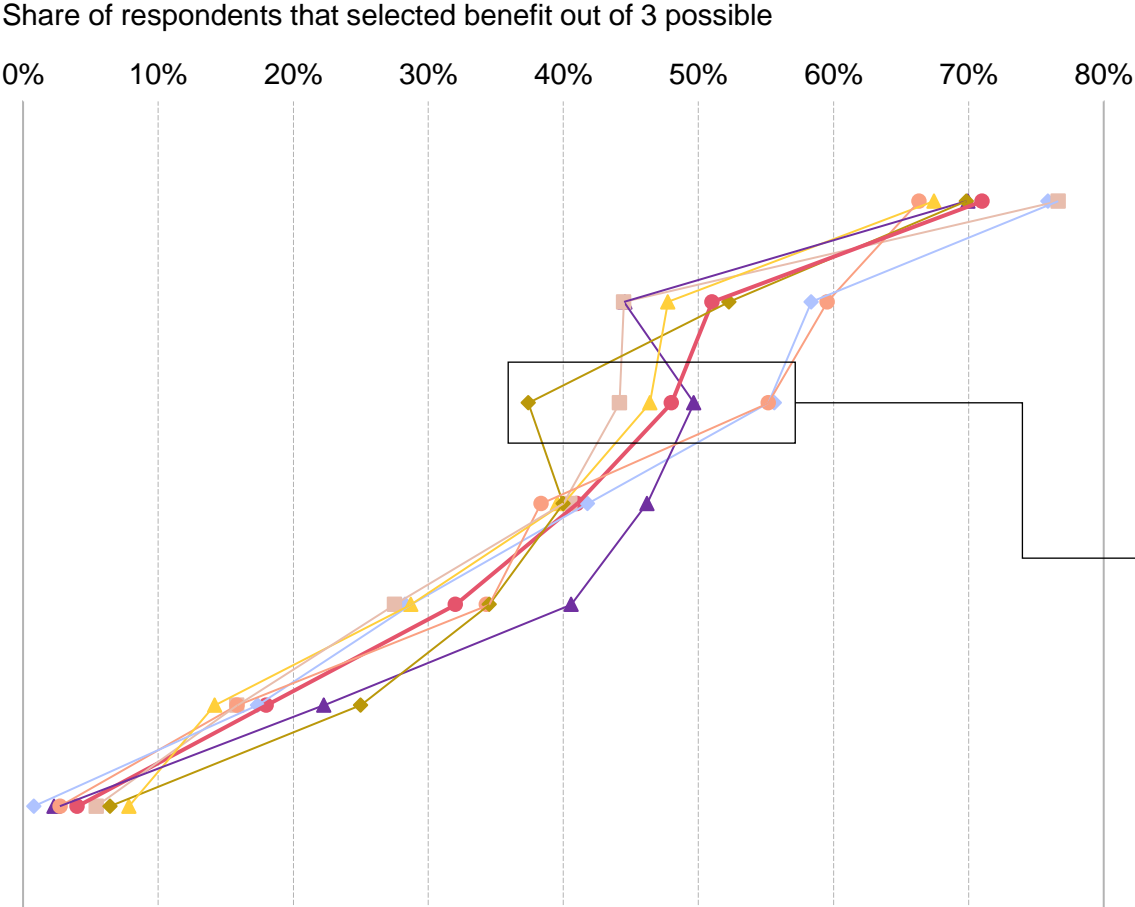
Source: EASA UAM social acceptance survey question A4. What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers. Question A5. "What other benefits and opportunities can the development of urban air mobility bring for EU citizens? Please add up to 3 ideas in the below text boxes." did not result in other significant benefit mentions. An example can be found in respective evaluation for Hamburg.

A4. Perceived UAM benefits – by city (2/3)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

(absolute %, +/- difference to avg % in total)

Improved response time is clearly perceived as top benefit with all cities ranking it first



Similar perception in all cities as suggested by low spread and steepness of trend curve

Hamburg and Öresund with similar opinions

Reduction of local emissions with highest spread between Paris (37%, -11%) on lower and Budapest (56%, +8%) and Milan (55%, +7%) on upper end

Creation of new jobs more important in Barcelona (41%, +9%)

Source: EASA UAM social acceptance survey questions A4. What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

A4. Perceived UAM benefits (3/3)

(+/- difference to avg % in total)

Key take-aways

Improved response time by far top UAM benefit

Improved emergency response time by far top UAM benefit with **71%** of respondents selecting it out of 3 possible

- **Higher approval rate** in rather **UAM critical age groups 55-75 (+8%)**
- Even in potentially opposing group of UAM rejecters, approval rate not significantly lower (-2%) and **could therefore be used as an argument in getting them on board**

No significant difference across cities except for reduction of local emissions

Reduction of local emissions on 2nd place with **51%**

- Induces **no deviations by demographic groups**
- But **substantial deviations by cities** between **Paris (-11%)** on lower and **Budapest (+8%)** and **Milan (+7%)** on upper end

Some noticeable demographic and local differences in creation of new jobs

Creation of new jobs in lower midfield with 32%, but still **insightful due to deviations ...**

... by demographics

- Induces **differences between age groups: higher in 18-24 (+8%)** versus **lower in 65-75 (-8%)**

... by city

- Especially **higher importance in Barcelona (+9%)**

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- **Benefits**

- » A4. Perceived benefits of UAM overall

- » **B2. Perceived benefits of drone delivery**

- » C3. Perceived benefits of air taxis

- Concerns
- Perception towards regulators

- Qualitative survey

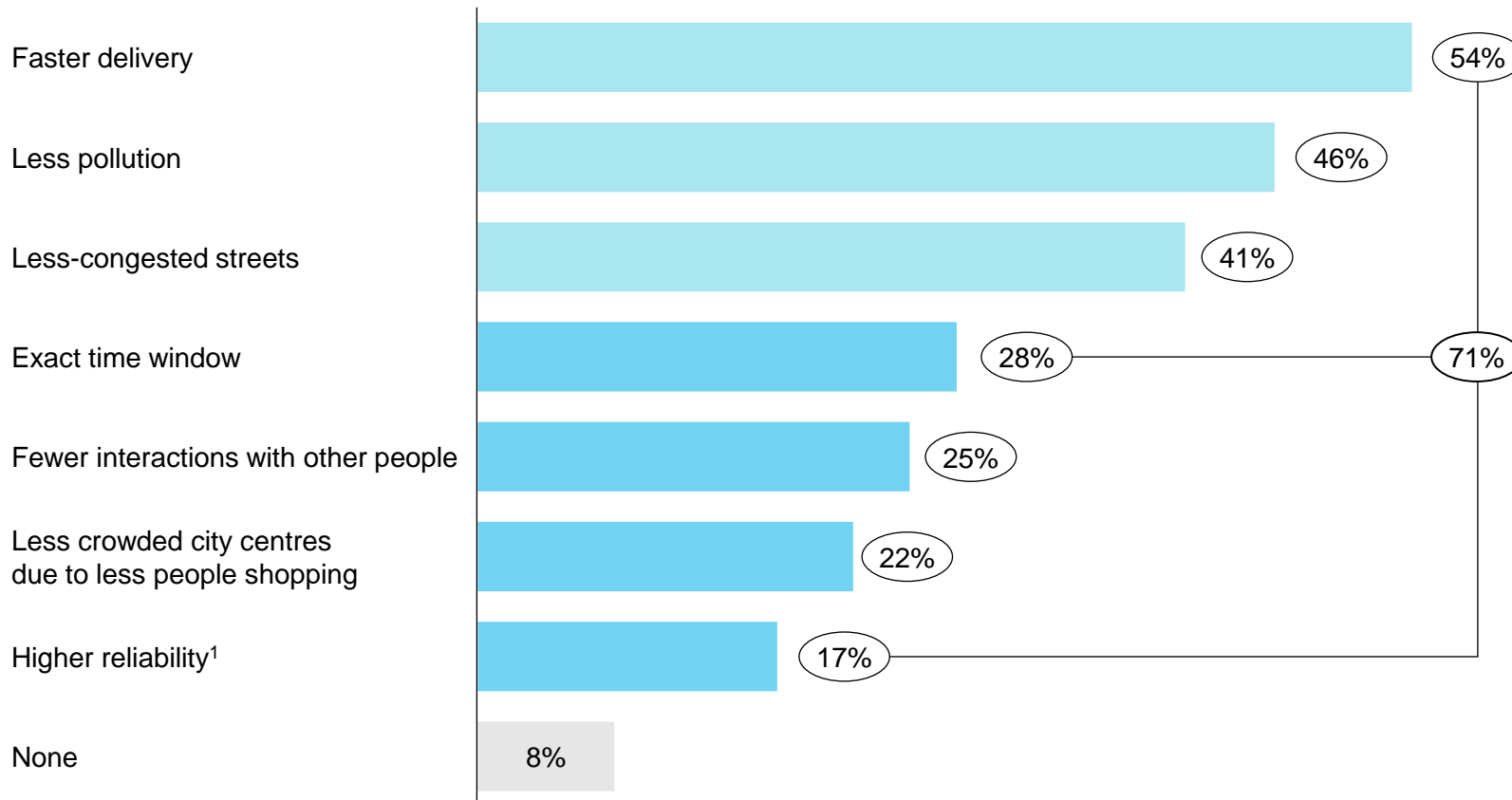
- Evaluation of noise acceptance tests



B2. Perceived benefits of drone delivery – overall (1/3)

X% Sum ■ Selected out of 3 possible ■ Top selected

Faster delivery, less pollution and less-congested streets are the highest perceived benefits of drone delivery



1. Share of successful deliveries

Source: EASA UAM social acceptance survey question B2. In your view, how important are the following advantages of goods delivery by drone? Please select up to 3 answers.

(rank #, absolute %, +/- diff to avg % in total)

Top ranked benefits are

- (1) **Faster delivery (54%)**
- (2) **Less pollution (46%)**
- (3) **Less congested streets (41%)**

Exact time window, fewer interactions with other people, less crowded city centres and higher reliability in lower field

71% select at least 1 of 3 benefits related to **quality of delivery services**, i.e. faster delivery, exact time window and/or higher reliability, with the latter seemingly least concerning in current delivery set-up as lowest ranked

Faster delivery & higher reliability have similar groups with higher or lower approval

Higher approval:

- **Age group 18-25** (+8% and +8%)
- **Families** (+6% and +6%)
- **Digital adopters** (+6% and +6%)
- **Potential drone delivery users** (+7% and +5%)
- **Target group for express delivery by drone** (+5% and +4%)

Lower approval:

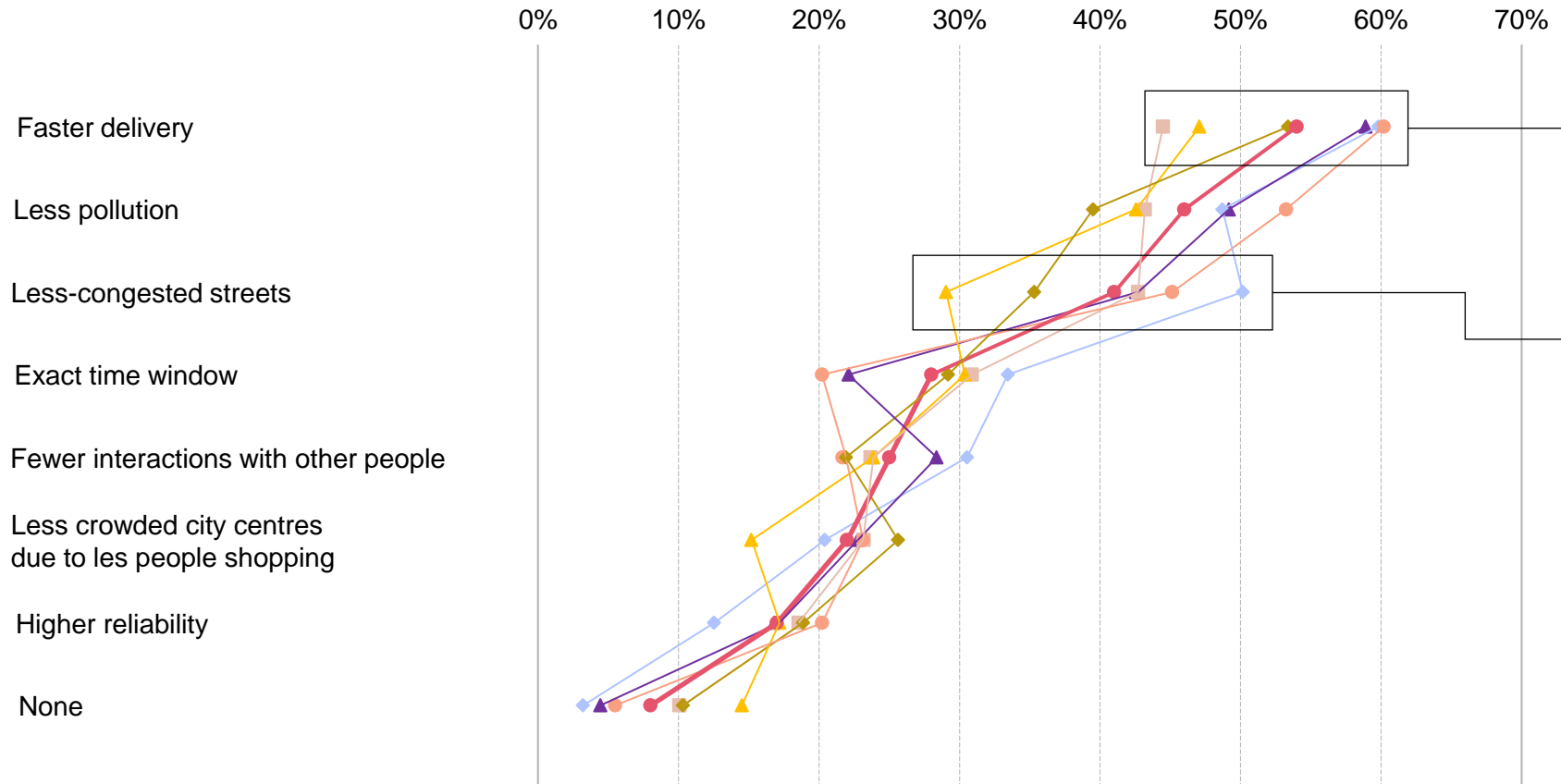
- **Old age groups 55-75** (-7% and -7%)
- **Drone usage rejecters** (-12% and -7%)
- **Digital laggards** (-10% and -5%)

B2. Perceived benefits of drone delivery – per city (2/3)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Very similar results regarding incurred benefits across cities

Share of respondents that selected benefit out of 3 possible



(absolute %, +/- difference to avg % in total)

Very similar perception across cities:

- **Faster delivery top benefit in all cities**, but with spread of 16%
 - **Milan and Budapest** (both 60%, +6%)
 - **Hamburg** (44%, -10%)
- **Less pollution on 2nd place** in almost all cities
 - **Paris with lowest result** (40%, -6%), in line with result in question A4
 - Budapest only ranks it 3rd

Less-congested streets has highest spread of 21%, disclosing fact that benefit closely tied to traffic situation in cities

- **Budapest** (50%, +9%)
- **Öresund** (29%, -12%): least traffic problems expected in Öresund

Also **less-congested city centres least important in Öresund** (15%, -7%), going hand in and with appraisal of less-congested streets

Exact time window less ranked in Milan (20%, -8%) and **Barcelona** (22%, -6%)

B2. Perceived benefits of drone delivery – overall (3/3)

(absolute %, +/- difference to avg % in total)

Key take-aways

Faster delivery top benefit for drone delivery use case

Faster delivery top perceived benefit incurred by drone delivery with 54% selecting it among 3 possible options

- **Applies in all cities**, but with spread of 16% between **Milan** and **Budapest** (both +6%) and **Hamburg** (-10%)
- **Higher approval** by groups that are in **favour of UAM**: age group 18-25, families, digital adopters, potential drone delivery users, target group for express delivery by drone (all +6% to +8%)
- **Lower approval** by groups that are **opposing UAM**: Old age groups 55-75, drone usage rejecters, digital laggards (all -7% to -12%)
- Positive trends in groups **correlate with approval for higher reliability** (selected by 17%), likewise a benefit closely **tied to user perspective**

Less pollution on 2nd place in almost all cities

Less pollution on 2nd place

- Applies to **all cities except Budapest**
- Lowest ranking occurs in **Paris** (-6%), **in line with result for UAM benefits** overall in question A4

Less-congested streets come 3rd, but disclose highest spread

Less-congested streets also quite **important** with 41%

- **Less-congested streets with highest spread** between **Budapest** (+9%) and **Öresund** (-12%), disclosing fact that benefit closely tied to traffic situation in cities
- Along with that: also **less-congested city centres least important in Öresund** (-7%)

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- **Benefits**
 - » A4. Perceived benefits of UAM overall
 - » B2. Perceived benefits of drone delivery

- » **C3. Perceived benefits of air taxis**

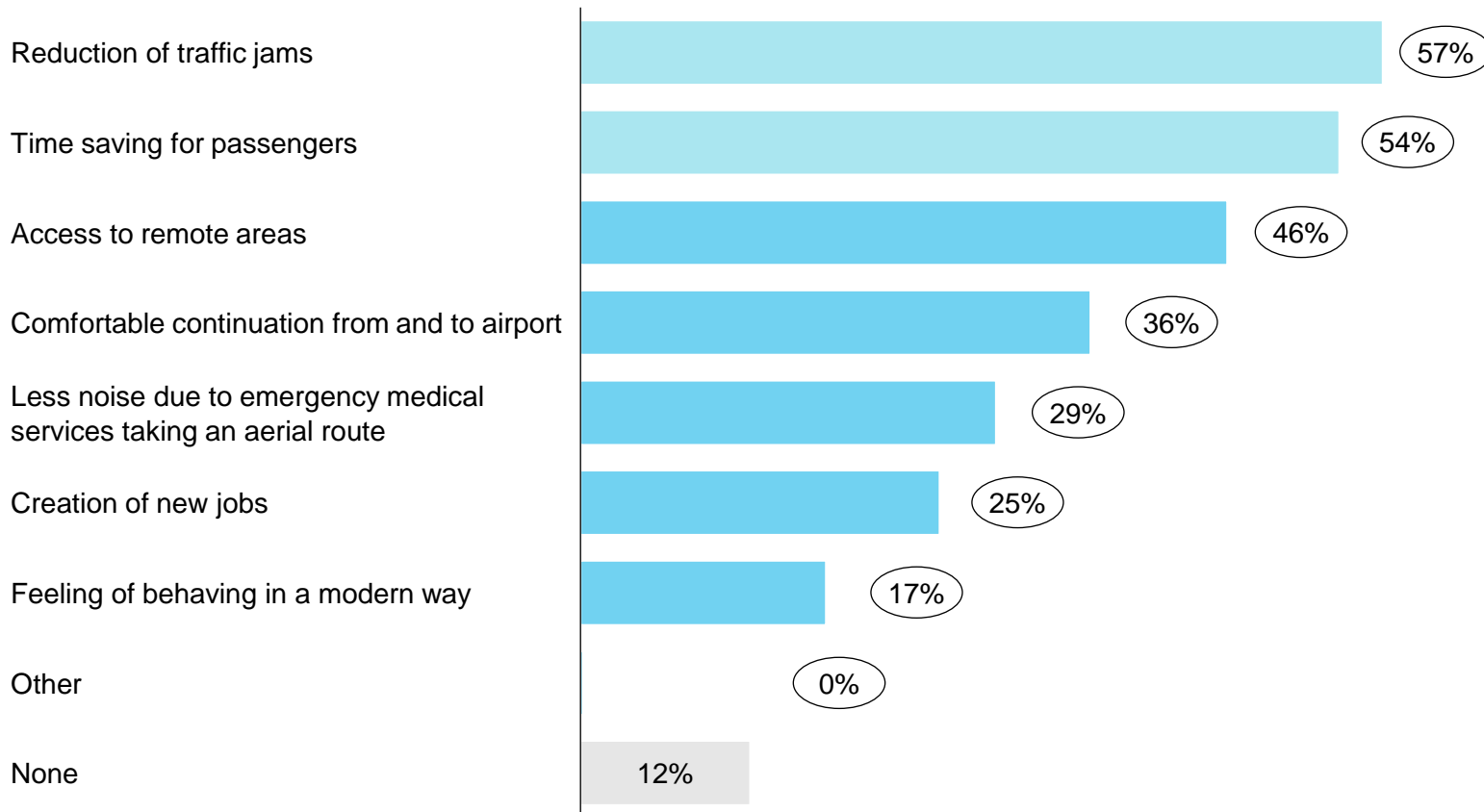
- Concerns
- Perception towards regulators
- Qualitative survey
- Evaluation of noise acceptance tests



C3. Perceived benefits of air taxis –overall (1/3)

(X%) Sum ■ Ranked under top 3 ■ Top ranked

Time savings for passengers and reduction of traffic jams perceived as top benefits incurred by air taxis



(rank #, absolute %, +/- diff to avg % in total)

Top ranked benefits are

- (1) Reduction of traffic jams (57%)
- (2) Time savings for passengers (54%)

Deviating results in top use cases by defined subgroups:

- Potential air taxi users (+6%, +6%)
- Target group for airport shuttle (+5% and +3%)
- Digital laggards (-6% and -8%)
- Air taxi usage rejecters (-6% and -6%)

Also **singles** with lower approval (-8% and -6%)

Access to remote areas (46%) and comfortable continuation from and to airport (36%) also important, but little deviations

Less noise related to emergency medical services (29%), creation of new jobs (25%) and feeling of behaving in modern way (17%) less important

Creation of new jobs and modern behaviour with similar characteristic deviations:

- Age group 18-25 (+12% and +6%)
- Families (+5% and +6%)
- Target group for airport shuttle(+4% and 8%)
- Potential air taxi users (+3% and +7%)
- Age group 65-75 (-8% and -10%)
- Air taxi usage rejecters (-2% and -6%)
- Digital laggards (-3% and -6%)

Source: EASA UAM social acceptance survey question C3. In your view, what are the main benefits of air taxis? Please sort the following benefits from the 1 being the 'most useful' to 7 or 8 being the 'least useful' or select 'none of these are useful'.

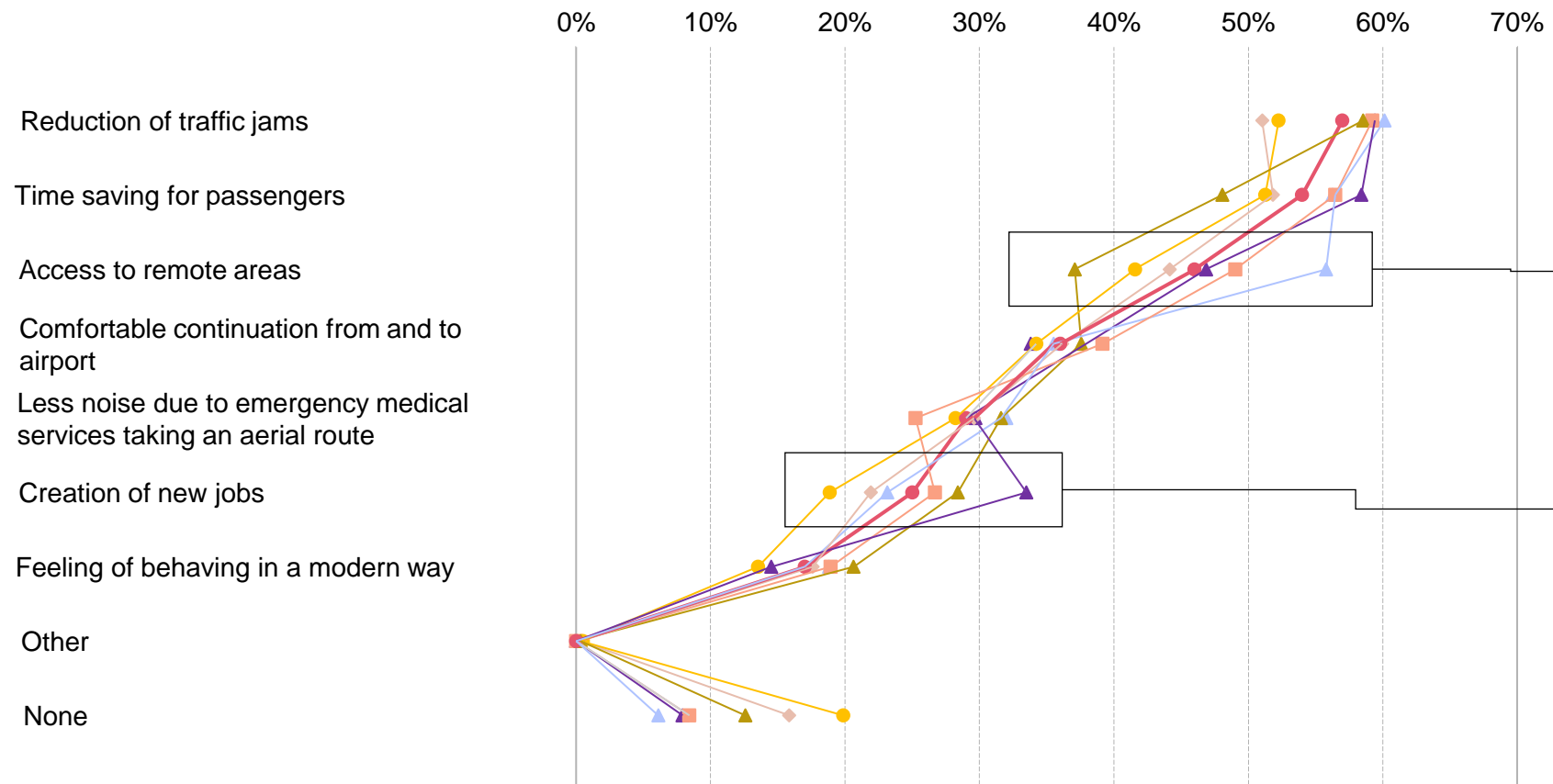
C3. Perceived benefits of air taxis – by city (2/3)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

(absolute %, +/- difference to avg % in total)

Similar results for incurred benefits across cities

Share of respondents that ranked benefit under top 3



Top 2 use cases reduction of traffic jams and time saving for passengers highest ranked in almost all cities, except Budapest; **results very close**

Highest spread occurs in access to remote areas

- Highest in **Budapest** (56%, +10%)
- Lowest in **Paris** (37%, -9%)

2nd highest spread for creation of new jobs

- **Barcelona** (33%, +8%), as also observable in UAM benefits overall (see A4)
- **Öresund** (19%, -6%)

C3. Perceived benefits of air taxis – overall (3/3)

(absolute %, +/- difference to avg % in total)

Key take-aways

Top ranked benefits reduction of traffic jams & time savings for passengers

Reduction of traffic jams (57%) and **time savings for passengers (54%)** top benefits incurred by air taxis
Both benefits perceived even more important for potential air taxi users, target group for airport shuttle
Less important for digital laggards, air taxi usage rejecters, and singles
No significant deviations by city

Largest difference in perceived benefit by city in access to remote areas

Access to remote areas (46%) on **3rd place**
Highest spread across cities, between **Budapest (+10%)** and **Paris (-9%)**
But low spread between demographic groups and defined subgroups

Significant spread in opinion on creation of new jobs

Creation of new jobs (25%) only on **6th place**
But **incurs quite some deviations**

- By demographic groups: age group 18-25 (+12%) and families (+5%) versus age group 65-75 (-8%)
- And in cities with 2nd highest spread between Barcelona (+8%) and Öresund (-6%)

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**

- » **B3.C4. Level of comfort with manned and unmanned vehicles**

- » B4.B5. Concerns in drone delivery use case
- » C5.C6. Concerns in air taxi use case
- » C11.C12. Concerns regarding vertiports
- » B9.C9. Environmental concerns
- » D4. Introduction of an eco-label
- » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
- » B10.C10. Negative assumptions about UAM
- » D2. Trust in UAM security and cybersecurity

- Perception towards regulators

- Qualitative survey

- Evaluation of noise acceptance tests

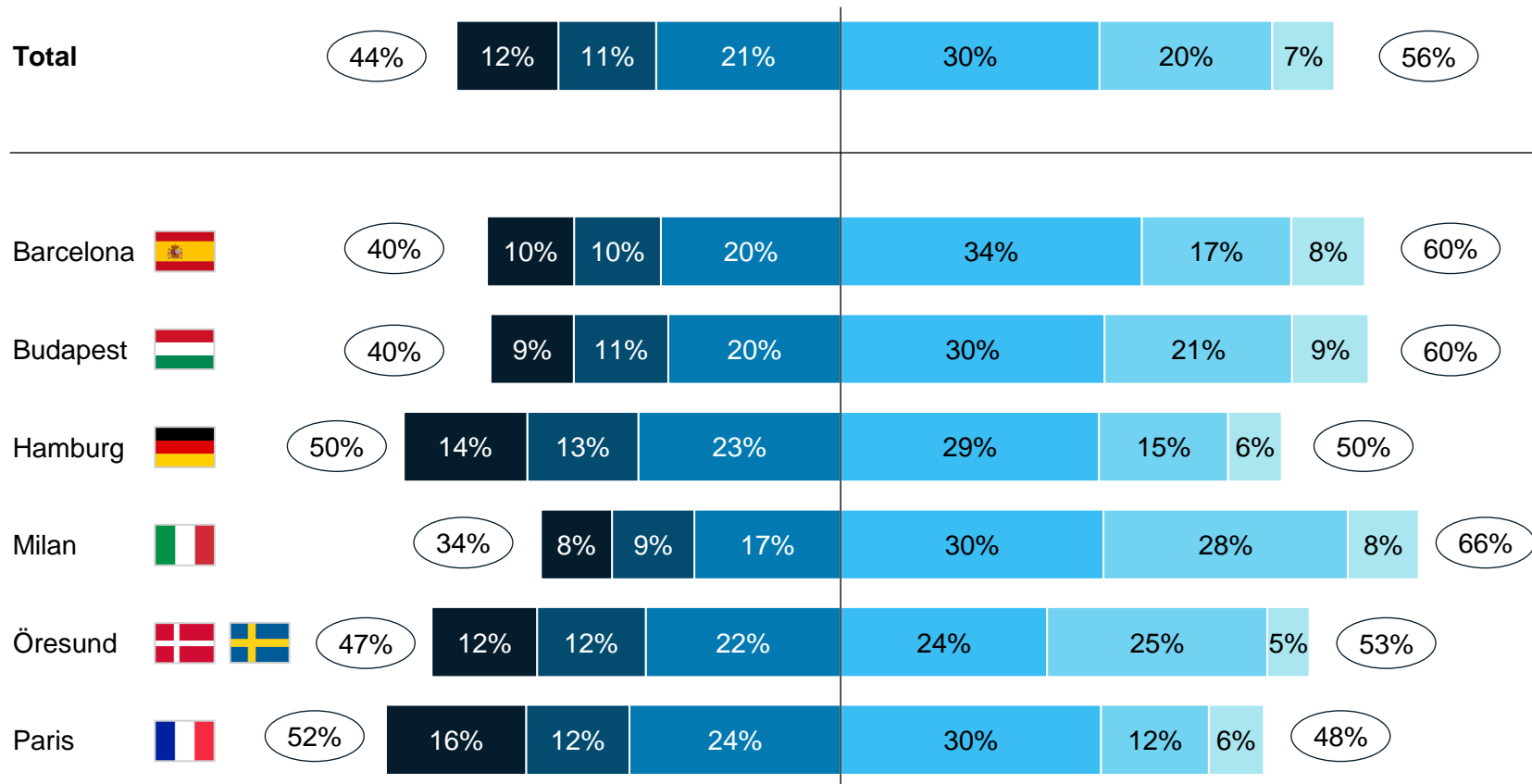


B3. Level of comfort with manned & unmanned vehicles – delivery drones (1/5)

(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

Fair level of comfort by pedestrians for delivery drones with only slight variation by city

As a **pedestrian** on the ground, I would feel safe with **unmanned delivery drones** potentially flying above me.



(absolute %, +/- difference to avg % in total)

Share of people feeling safe with unmanned delivery drones from pedestrian perspective at 56% overall, but notably lower than share of people that would try out drone delivery (64%, see S6)

Therefore, there must be people who are willing to try out drone delivery, but would not feel safe with unmanned delivery drones in operation

No significant deviations by city

- **Highest** acceptance in **Milan (+10%)**, **Barcelona (+4%)** and **Budapest (+4%)**
- **Lowest** acceptance in **Paris (-8%)**, **Hamburg (-6%)** and **Öresund (-4%)**

Deviations by demographic groups

Higher approval:

- **Men (+7%)**
- **High level of education (+7%)**

Lower approval:

- **Women (-7%)**
- **Singles (-5%)**

No deviation by age group

Significant deviations by defined subgroups

Higher approval:

- **Potential drone users (+15%)**
- **Potential UAM users (+12%)**
- **Digital adopters (+12%)**
- **Target group for express delivery by drone (+9%)**

Lower approval:

- **UAM usage rejecters (-29%)**
- **Drone usage rejecters (-24%)**
- **Digital laggards (-14%)**

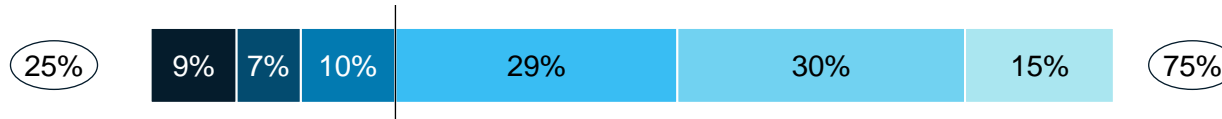
Source: EASA UAM social acceptance survey question B3. Drones intended for the delivery of goods are remotely piloted aircraft systems with no pilots on board. Assume that they have an average wingspan of 3 metres, would fly at between 120 and 150 metres altitude, and are certified by competent authorities. Please rate how much you agree or disagree with the following statement.

C4. Level of comfort with manned & unmanned vehicles – air taxis (2/5)

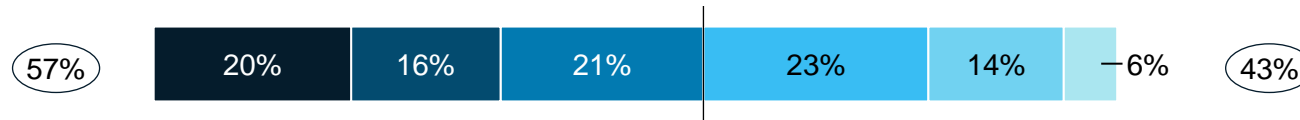
(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

Potential passengers and pedestrians feel significantly safer with manned than with unmanned air taxis

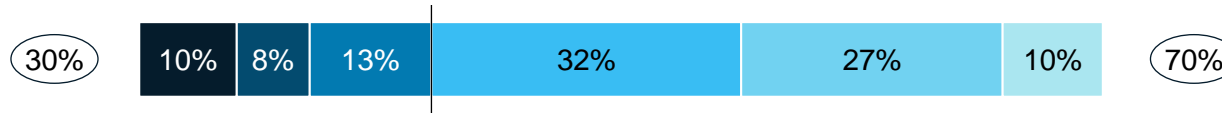
I would be interested in trying out a **manned air taxi myself**.



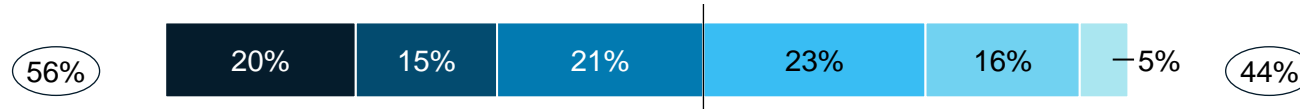
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.



As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



(absolute %, +/- difference to avg % in total)

Manned air taxis with higher acceptance from passenger perspective (75%) than from pedestrian perspective (70%)

Higher level of comfort

- Potential air taxi users (~+13%),
- Potential UAM users, target group for airport shuttle, digital adopters (~+10%)

Lower level of comfort

- **Singles** (~-7%)
- **Old age groups 55-75** (~-5%)
- UAM usage rejecters (~-25%)
- Digital laggards, air taxi usage rejecters (~-14%)

Unmanned air taxis with ~44% of acceptance from passenger and pedestrian perspective, significantly lower than manned (-26% for manned, -32% for unmanned vehicles)

Higher level of comfort

- **Men** (~+10%)
- **Families** (~+7%)
- **Young age groups 18-44** (~+6%)
- **High income group** (~+7%)
- Target group for airport shuttle (~+17%)
- Potential air taxi users (~+10%)
- Digital adopters (~+11%)

Lower level of comfort

- **Women** (~-10%)
- **Old age groups 55-75** (~-8%)
- **Singles** (-6%)
- Air taxi usage rejecters (~-16%)
- Digital laggards (~-15%)

Source: EASA UAM social acceptance survey question C4. Recent studies extend the prospect of aircraft soon transporting passengers, either with a pilot on board or with a remote pilot. You will now see several statements that people might make about such air taxis. Assuming that all of the aircraft are certified by competent authorities, please rate how much you agree or disagree with each statement for each type of air taxi.

C4. Level of comfort with manned & unmanned vehicles – air taxis (3/5)

● Unmanned ● Manned

(+/- difference to avg % in total)

Pedestrians are slightly less concerned about unmanned operations than passengers themselves

Passengers

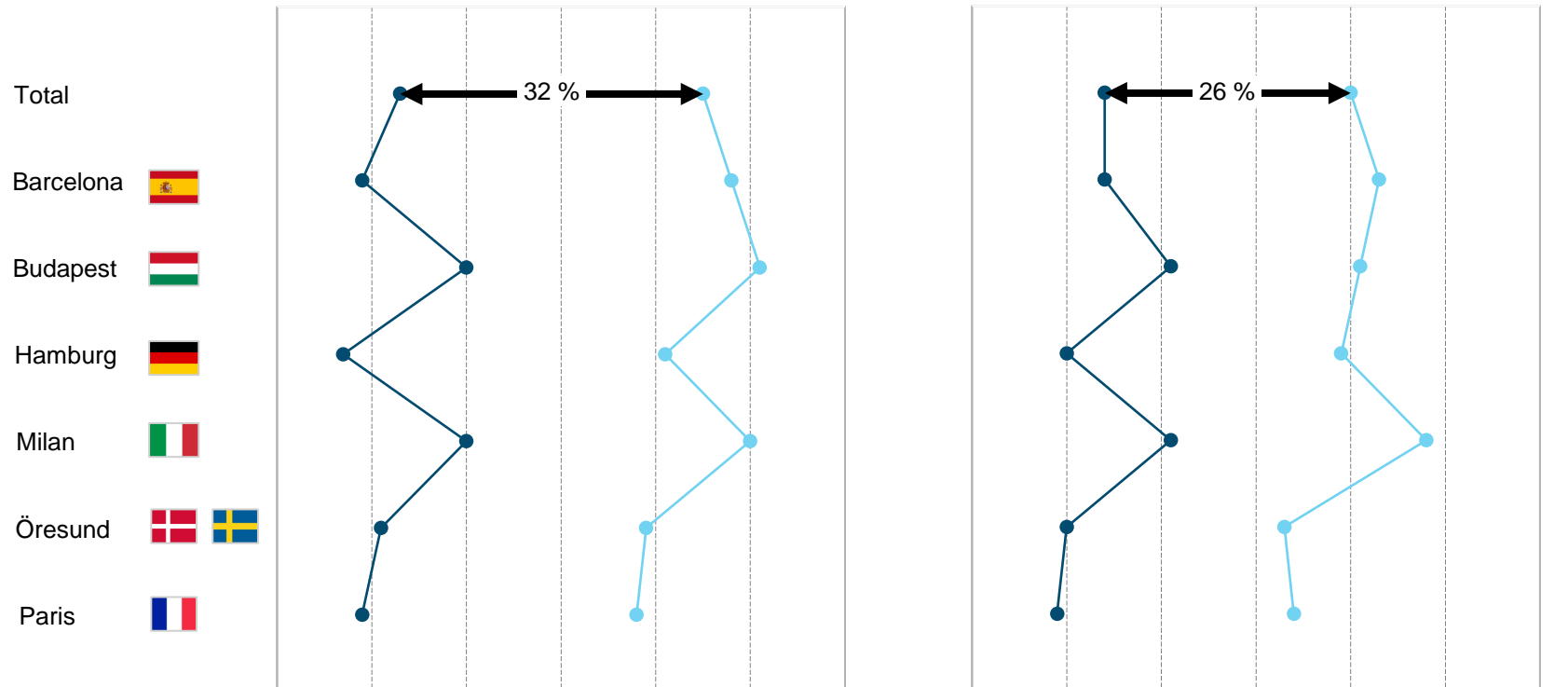
Share of respondents that feel safe

30% 40% 50% 60% 70% 80% 90%

Pedestrians

Share of respondents that feel safe

30% 40% 50% 60% 70% 80% 90%



Notably **pedestrians' relative safety perception of manned air taxis compared to unmanned air taxis less important than passengers' –** however both groups significantly more comfortable with **manned operation**

Only small deviations in cities

- **Budapest and Milan (~+6%) feel safer** on average in all variants
- **Hamburg, Öresund and Paris (~-4%) feel less safe** on average in all variants
- **Barcelona in midfield**

Source: EASA UAM social acceptance survey question C4. Recent studies extend the prospect of aircraft soon transporting passengers, either with a pilot on board or with a remote pilot. You will now see several statements that people might make about such air taxis. Assuming that all of the aircraft are certified by competent authorities, please rate how much you agree or disagree with each statement for each type of air taxi.

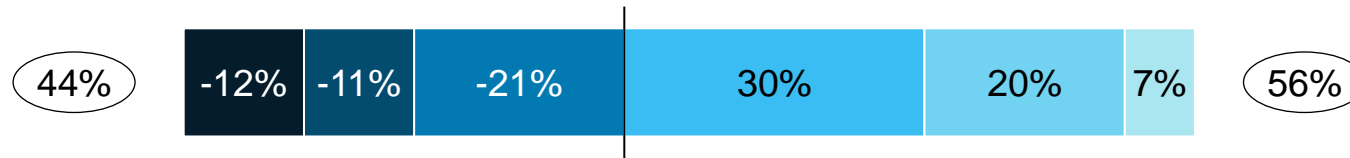
B3. & C4. Level of comfort with manned & unmanned vehicles – overall (4/5)

X% Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

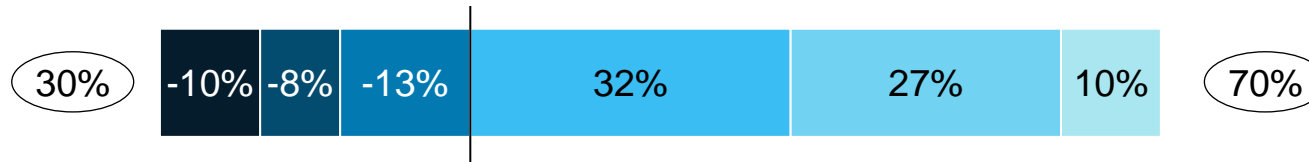
(absolute %)

For pedestrians, level of comfort with manned air taxis is even higher than for drones – relatively high acceptance expected

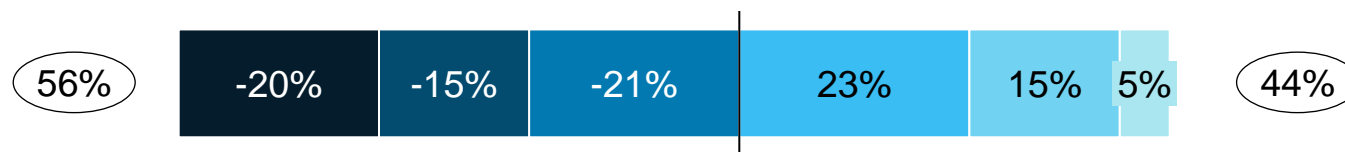
As a **pedestrian** on the ground, I would feel safe with **unmanned delivery drones** potentially flying above me.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.



As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



Share of people feeling safe as pedestrians with manned air taxis (70%) greater than with unmanned delivery drones (56%)

As unmanned drones (in other applications) already in operation today, result suggests that level of comfort with **manned air taxis** fairly high and **introduction would not face strong opposition**

Conversely, **unmanned air taxis achieve less acceptance (44%)** relative to delivery drones, meaning that perceived safety threat from one air taxi higher than from one drone in comparable level of automation

Source: EASA UAM social acceptance survey questions B3. Drones intended for the delivery of goods are remotely piloted aircraft systems with no pilots on board. Assume that they have an average wingspan of 3 metres, would fly at between 120 and 150 metres altitude, and are certified by competent authorities. Please rate how much you agree or disagree with the following statement. C4. Recent studies extend the prospect of aircraft soon transporting passengers, either with a pilot on board or with a remote pilot. You will now see several statements that people might make about such air taxis. Assuming that all of the aircraft are certified by competent authorities, please rate how much you agree or disagree with each statement for each type of air taxi.

B3. & C4. Level of comfort with manned & unmanned vehicles – overall (4/5)

(absolute %, +/- difference to avg % in total)

Key take-aways

Manned air-taxis more accepted than unmanned

Manned air taxis with significantly higher acceptance (70% to 75%) than unmanned air taxis (~44%)

Share of people willing to try out delivery drones higher than share feeling safe with them

56% feel safe with delivery drones above them, but notably **less than** share of people that would try out drone delivery (**potential drone users: 64%**, see S6)

Therefore, there must be people with willingness to try out delivery drones, but would not feel safe with them in operation

More people feeling safe with manned air taxis than with delivery drones

Share of people **feeling safe as pedestrians with manned air taxis higher than with delivery drones (70% vs. 56%)**

As unmanned drones (in other applications) already in operation today, result suggests that level of comfort with **manned air taxis** fairly high and **introduction would not face strong opposition**

Conversely, perceived safety threat from one unmanned air taxi higher than from one drone (i.e. comparable level of automation; 44% vs. 56%)

Minor demographic differences in line with expectations

Deviations in subgroups **consistent throughout variants** and in **line with expectations**

Higher acceptance: Men, families, young age groups 18-44, high income groups (up to +10%), potential UAM users, target groups for express delivery by drone and airport shuttle, digital adopters (+5% to +18%)

Lower acceptance: Women, old age groups 55-75, singles (up to -11%), UAM usage rejecters, digital laggards (-14% to -29%)

Minor deviations across cities

Only small deviations in cities within range of 10%, but consistent throughout variants

- **Budapest, Milan feel safer** on average
- **Hamburg, Öresund and Paris feel less safe** on average
- **Barcelona in midfield**

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**

- » B3.C4. Level of comfort with manned and unmanned vehicles

- » **B4.B5. Concerns in drone delivery use case**

- » C5.C6. Concerns in air taxi use case

- » C11.C12. Concerns regarding vertiports

- » B9.C9. Environmental concerns

- » D4. Introduction of an eco-label

- » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels

- » B10.C10. Negative assumptions about UAM

- » D2. Trust in UAM security and cybersecurity

- Perception towards regulators

- Qualitative survey

- Evaluation of noise acceptance tests

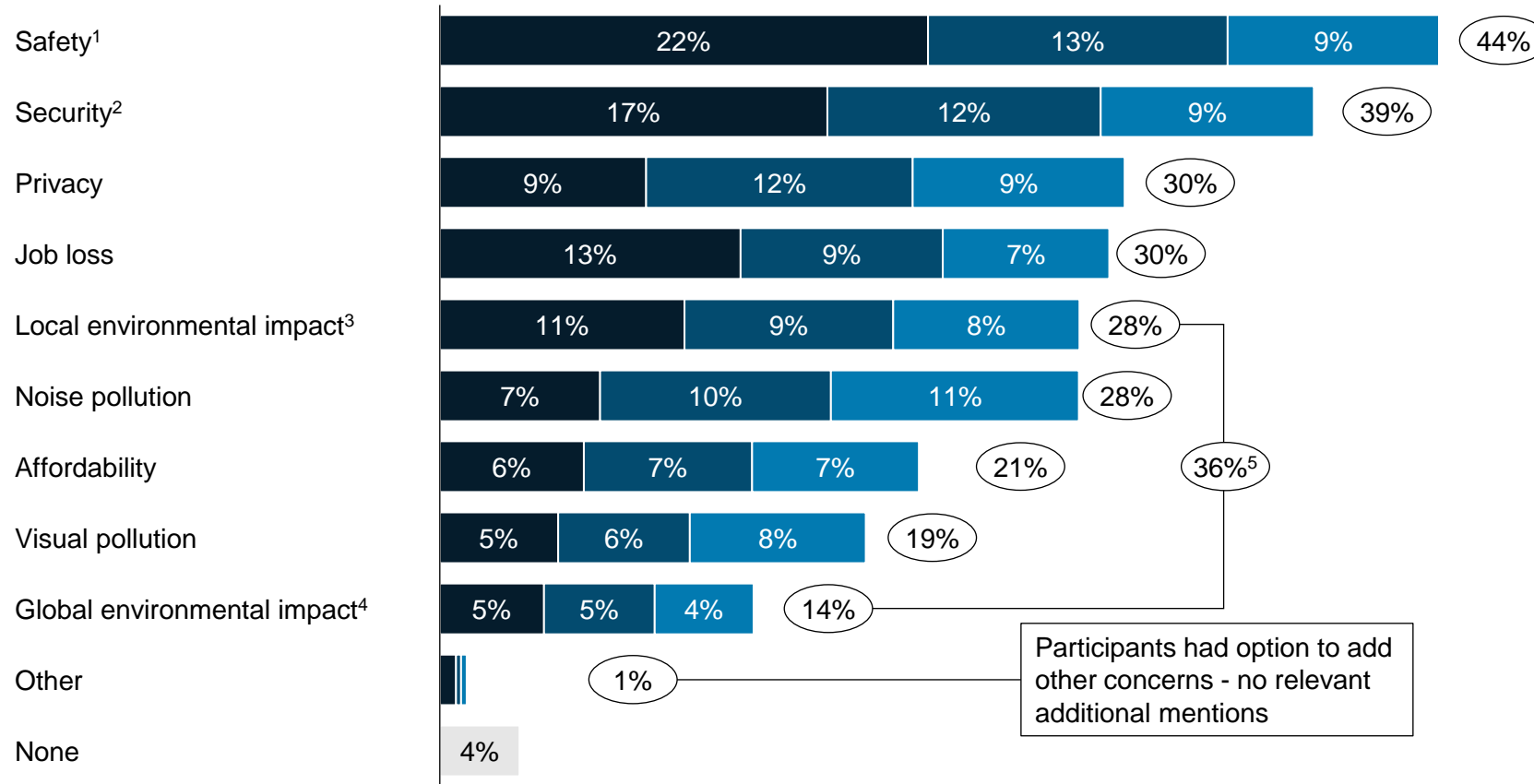


B4.B5. Concerns in drone delivery use case – overall (1/4)

(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

(rank #, absolute %)

Respondents' main concerns in drone delivery use case are safety and security



Top concerns are (1) **safety** (44% of respondents rank it among top 3) and (2) **security** (39%)

4 concerns almost on par on third place, being (3) **privacy**, (4) **job loss**, (5) **local environmental impact** and (6) **noise pollution** (~30% each)

Environmental concerns together (36%) would move to 3rd place, but still less important than safety and security concerns

Minor, but interesting differences discernible between subgroups (details on next slide)

- **Safety (1) & security concerns (2)** increase with age
- **Privacy concern (3)** decreases with age
- **Job loss concern (4)** tied to lower income and education level
- **Local environmental concern (5)** unites young and old age groups
- **Global environmental concern (9)** divides young (more concerned) and old age groups (less concerned)
- **Concern about noise pollution (6)** highly unimportant for young people, and loosely tied to higher education level and income
- **Concern about visual pollution (8)** with similar pattern as noise pollution
- **Affordability concern (7)** less concerning for subgroups that would not try UAM anyways

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change 5. Share of respondents that ranked any environmental concern among top 3 answers

B4.B5. Concerns in drone delivery use case – subgroups (2/4)

(# rank: absolute %, +/- difference to avg % in total)

Slight differences regarding concerns between subgroups disclose some interesting dynamics

Safety¹ concern (1: 44%) & security² concern (2: 39%) increase with age

- Less concerning for age group 25-34 (-8% and -4%), expected due to higher risk appetite
- More concerning for age group 65-75 (+6% and +5%)

Privacy concern (3: 30%) decreases with age

- Less concerning for age group 65-75 (-4%) and digital laggards (-3%)
- More concerning for age group 25-34 (+4%)

Job loss concern (4: 30%) tied to income and education

- When only looking at ranked as #1's, job losses come third
- Less concerning for high level of education (-10%), high income group (-7%), age group 65-75 (-7%), expected due to retirement
- Slightly more concerning for low income group (+5%), low level of education (+4%), age group 18-24 (+4%)

Local environmental concern³ (5: 28%) unites young and old age groups

- Less concerning for men (-4%), age group 45-54 (-4%)
- More concerning for women (+4%), age group 25-34 (+5%), singles (+5%), age group 65-75 (+3%), drone usage rejecters (+4%)

Global environmental concern⁴ (9: 14%) divides young and old age groups

- Less concerning for age group 65-75 (-6%)
- More concerning for age group 18-24 (+6%)

Concern about noise pollution (6: 28%) highly unimportant for young people, and loosely tied to education and income

- Less concerning for age group 18-24 (-7%), low income group (-4%), low level of education (-3%)
- More concerning for high level of education (+5%), high income group (+3%)

Concern about visual pollution (8: 19%) with similar pattern as noise pollution

- Less concerning for low income group (-5%), age group 25-34 (-3%)
- More concerning for high level of education (+5%), high income group (+3%)

Affordability concern (7: 21%) less concerning for subgroups that would not try UAM anyways

- Less concerning for UAM rejecters (-7%), drone usage rejecters (-6%), digital laggards (-4%)
- More concerning for potential drone delivery users (+4%)

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change

B4.B5. Concerns in drone delivery use case – by city (3/4)

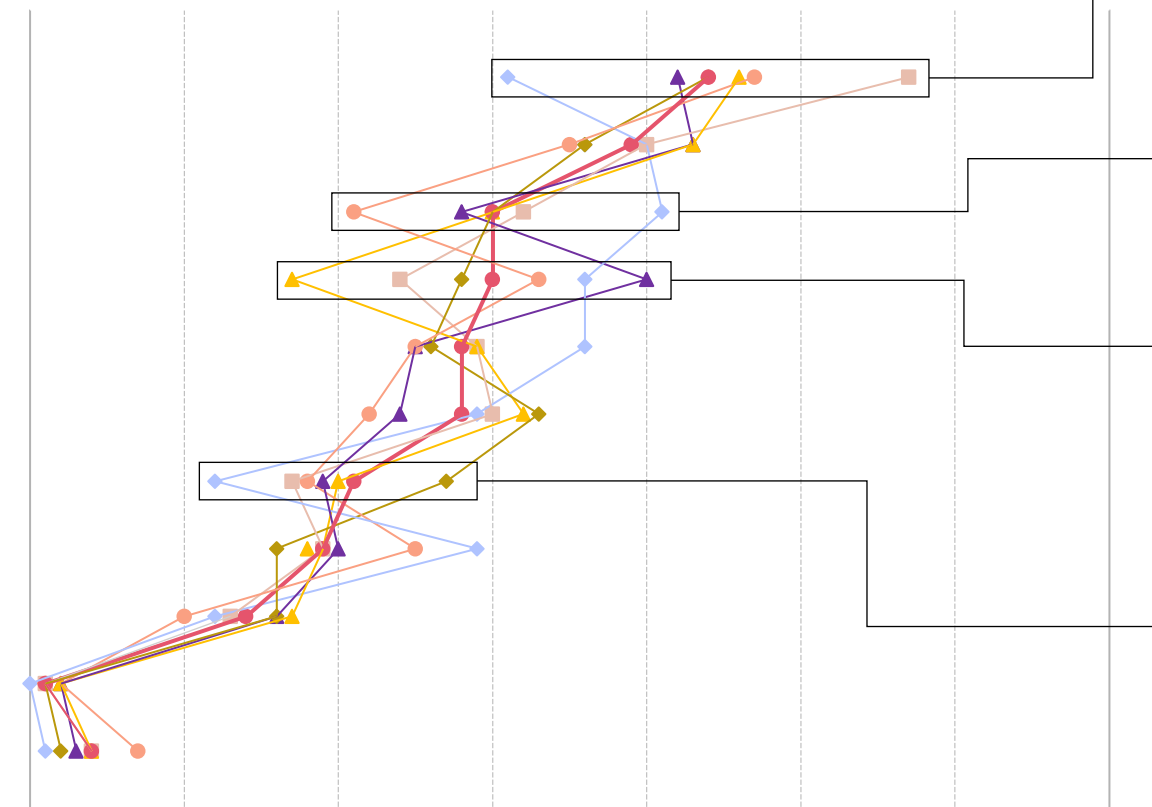
● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Respondents' main concerns in drone delivery use case are safety and security

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70%

- Safety¹
- Security²
- Privacy
- Job loss
- Local environmental impact³
- Noise pollution
- Visual pollution
- Affordability
- Global environmental impact⁴
- Other
- None



(absolute %, +/- difference to avg % in total)

Safety and security concerns on first and second place in almost all cities, except Budapest

Safety concern

- **Significant spread** between Budapest (31%, -13%) and Hamburg (57%, +13%)

Privacy concern

- **High spread** between Milan (21%, -9%) and Budapest (41%, +11%)
- Privacy highest ranked in Budapest, where safety hence lower ranked; security, job loss and local environmental impact almost on par on 2nd position

Job loss concern

- **High spread** between Öresund (17%, -13%), Hamburg (24%, -6%) on lower end and Barcelona (40%, +10%), Budapest (36%, +6%) on upper end

Local environmental concern

- More concerning for Budapest

Noise pollution concern

- Milan less concerned (22%, -6%)

Visual pollution concern

- **Some spread** between Budapest (12%, -7%) and Paris (27%, +8%)

Affordability concern

- Budapest more concerned (29%, +8%)

Security and global environmental concerns with no deviations in cities

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change

Source: EASA UAM social acceptance survey questions B4. What are you most concerned about regarding drone delivery, both for the delivery of day-to-day goods as well as medical supplies? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbors), which may affect you as well. Please select up to 6 answers. B5. Please sort your main concerns (selected in B4.) from 'most concerning' to 'least concerning'.

B4.B5. Concerns in drone delivery use case – overall (4/4)

(rank #, absolute %, +/- difference to avg % in total)

Key take-aways

Top concerns are safety & security

Top concerns are **safety** (44% of respondents rank it among top 3) and **security** (39%) concerns
Same pattern in all cities, except Budapest: **significant spread for safety concern** between **Budapest** (31%, -13%) and **Hamburg** (57%, +13%)

Environmental concerns taken together on third place

36% of respondents rank an **environmental concern** among top 3 (local and/or global environmental concern ranked among top 3), yielding 3rd place
Separately assessed, **4 concerns** almost **on par** on third place, being concerns about **privacy, job loss, local environmental impact** and **noise pollution** (~30% each)

Deviations in subgroups illustrate opinions

- **Safety (1) & security concerns (2)** increase with age
 - **Privacy concern (3)** decreases with age
 - **Job loss concern (4)** tied to lower income and education level
 - **Local environmental concern (5)** unites young and old age groups, vs. **global environmental impact (9)** dividing young (more concerned) and old age groups (less concerned)
 - **Concern about noise pollution (6)** highly unimportant for young people, and loosely tied to higher education level and income, hand in hand with **visual pollution (8)** with similar pattern as noise pollution
 - **Affordability concern (7)** less concerning for subgroups that would not try UAM anyways
-

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**

- » B3.C4. Level of comfort with manned and unmanned vehicles
- » B4.B5. Concerns in drone delivery use case

- » **C5.C6. Concerns in air taxi use case**

- » C11.C12. Concerns regarding vertiports
- » B9.C9. Environmental concerns
- » D4. Introduction of an eco-label
- » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
- » B10.C10. Negative assumptions about UAM
- » D2. Trust in UAM security and cybersecurity

- Perception towards regulators

- Qualitative survey
- Evaluation of noise acceptance tests

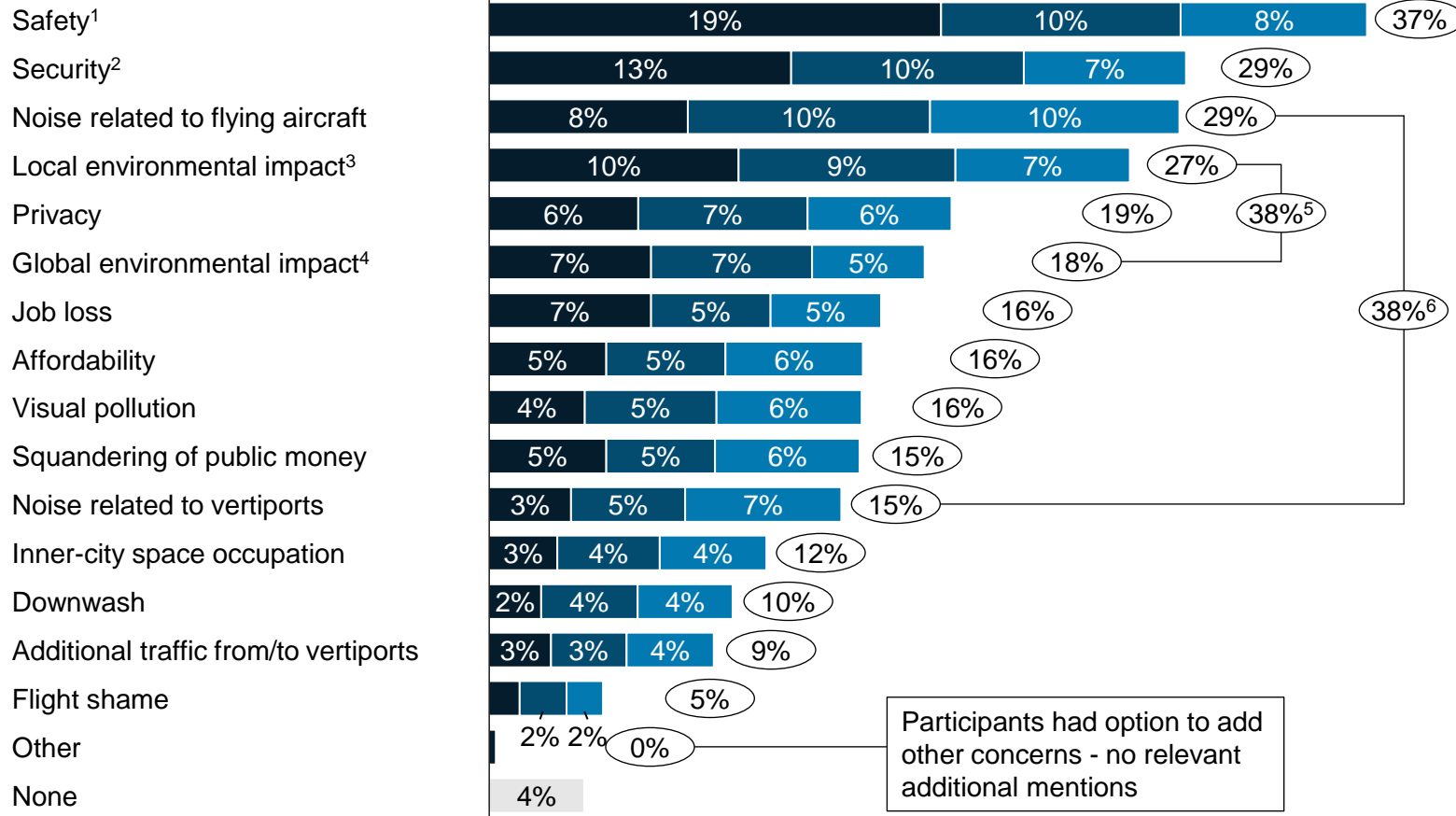


C5.C6. Concerns in air taxi use case – overall (1/5)

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

(# rank, absolute %)

Noise related concerns together are most important concern in air taxi use case



Top concern, by far, is **(1) safety** (37% of respondents rank it among top 3)

3 concerns almost on par on **second** place, being **(2) security**, **(3) noise related to flying aircraft** and **(4) local environmental concern**

Noise concerns together, i.e. related either to flying aircraft or to vertiports, would move to **first place** (38%, comparable to top concern safety)

Environmental concerns together, i.e. on local or global impact, would likewise move up to **first place** (38%, comparable to top concern safety)

Minor differences in concerns discernible by subgroups⁷

- **Safety (1) & noise related to flying aircraft (3)** slightly increase with age, education and income
- **Security (2) & noise related to vertiports (11)** in same direction, less pronounced
- **Job loss (7)** decreases with age, education and income
- **Affordability (8)** less concerning for subgroups that would not try UAM anyways
- **Squandering of public money (10)** characteristic for UAM opposing groups
- **Environmental concerns (4) & (6)** divide genders (men less, women more concerned); global concern (6) also decreases with age
- More concerning for target group airport shuttle: **downwash (13)**, **additional traffic from / to vertiports (14)**, **flight shame (15)**

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change 5. Share of respondents that ranked any environmental concern among top 3 answers 6. Share of respondents that ranked any noise related concern among top 3 answers 7. Details on next slides

Source: EASA UAM social acceptance survey questions C5. What are you most concerned about with respect to air taxis? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers. C6. Please sort your main concerns from 'most concerning' to 'least concerning'.

C5.C6. Concerns in air taxi use case – subgroups (2/5)

(# rank: absolute %, +/- difference to avg % in total)

Slight differences between subgroups disclose some interesting dynamics (1/2)

Safety¹ concern (1: 37%) slightly increases with age, income and education level

- Less concerning for low income group (-7%), age group 25-34 (-4%), low education level (-3%)
- More concerning for old age groups 55-75 (~+4%), high education level (+3%), high income group (+2%, minor)

Security² concern (2: 29%) increases with age

- Less concerning for young age groups 25-44 (-4%)
- More concerning for older age group 55-64 (+4%)

Concern about noise related to flying aircraft (3: 29%) slightly increases with age and education level

- Less concerning for age group 18-24 (-6%), low education level (-3%)
- More concerning for age group 65-75 (+4%), high education level (+4%)

Local environmental concerns³ (4: 27%) divides genders (men less, women more concerned)

- Less concerning for men (-5%), target group for airport shuttle (-5%)
- More concerning for women (+4%)

Privacy concern (5: 19%) with no significant deviations (all below 3%)

Global environmental concerns⁴ (6: 18%) slightly increases with age, divides genders (men less, women more concerned)

- Less concerning for men (-5%), age group 65-75 (-5%)
- More concerning for women (+5%), age group 18-25 (+6%)

Job loss concern (7: 16%) decreases with level of education, income and age

- Less concerning for high education level (-5%), high income (-5%), age group 65-75 (-4%), expected due to retirement
- More concerning for low education level (+4%), low income (+4%), age group 35-44 (+4%)

Affordability (8: 16%) less concerning for subgroups that would not try UAM anyways

- Less concerning for UAM usage rejecters (-5%)

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case – subgroups (3/5)

(# rank: absolute %, +/- difference to avg % in total)

Slight differences between subgroups disclose some interesting dynamics (2/2)

Visual pollution (9: 16%) with no significant deviations (all below 4%)

Squandering of public money (10: 15%) characteristic concern for UAM opposing groups

- More concerning for age group 65-75 (+5%), UAM usage rejecters (+4%)

Noise related to vertiports (11: 15%) only slightly less concerning for youngest age group

- Less concerning for age group 18-24 (-4%)

Inner-city space occupation (12: 12%) with no significant deviations (all below 3%)

Downwash (13: 10%) only more concerning for target group for airport shuttle

- More concerning for target group for airport shuttle (+7%)

Additional traffic from / to vertiports (14: 9%) only more concerning for target group for airport shuttle

- More concerning for target group for airport shuttle (+6%)

Flight shame (15: 5%) only more concerning for target group for airport shuttle

- More concerning for target group for airport shuttle (+8%)

C5.C6. Concerns in air taxi use case – by city (4/5)

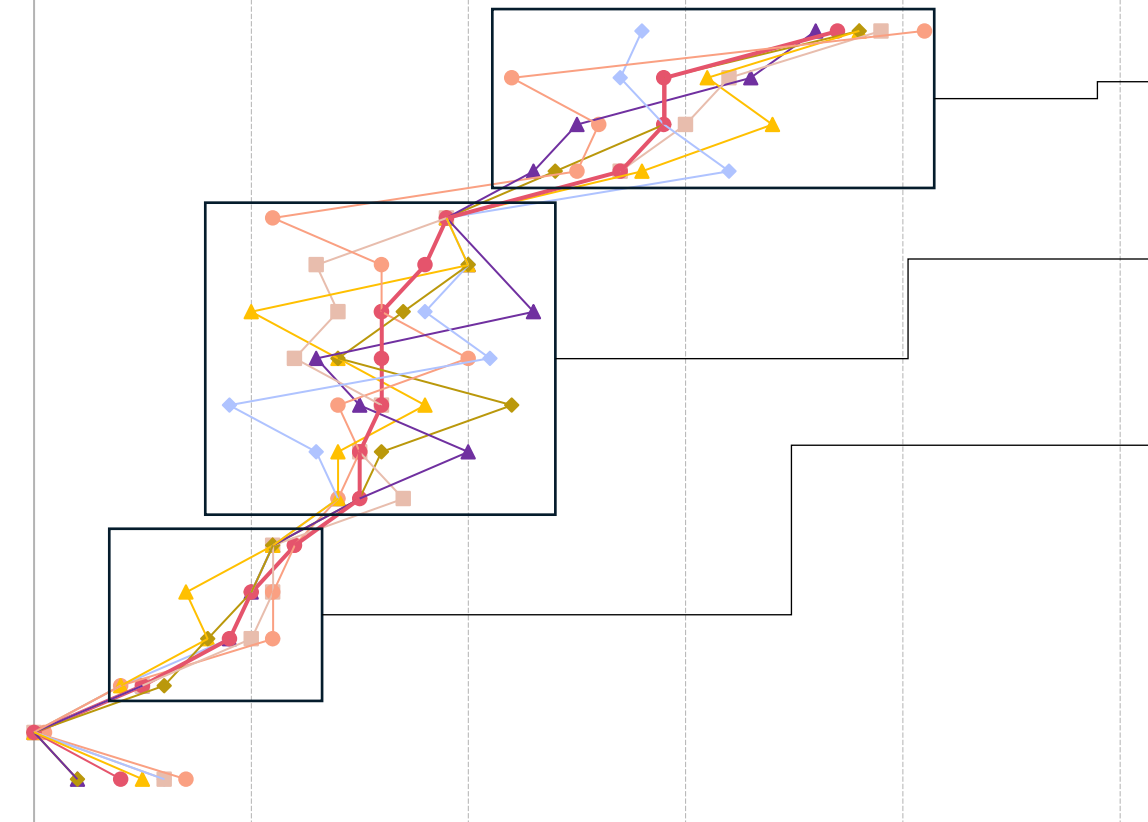
● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

The top three concerns clearly separate from a group of midfield concerns with similar relevance

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50%

- Safety¹
- Security²
- Noise related to flying aircraft
- Local environmental impact³
- Privacy
- Global environmental impact⁴
- Job loss
- Affordability
- Visual pollution
- Squandering of public money
- Noise related to vertiports
- Inner-city space occupation
- Downwash
- Additional traffic from/to vertiports
- Flight shame
- Other
- None



(rank #, absolute %, +/- diff to avg % in total)

3 groups of concerns emerge

In front position, safety (1), security (2), noise related to flying aircraft (3) & local environmental concern (4) with **sharply declining trend; spreads between 9% and 13%**

In midfield, privacy concern (5), global environmental concern (6), job loss concern (7), affordability (8), visual pollution (9) & squandering of public money (10) also with **high spreads between 7% and 17%, but almost not decreasing**; noise related to vertiports (11) on lowest position with low divergence

On lower ranks, inner-city space occupation (12), downwash (13), additional traffic from / to vertiports (14) & flight shame (15) again **sharply declining with only very small deviations of 2% to 4%**

Deviations greater than 7% seldomly occur

- **Budapest less concerned about safety** (28%, -9%), instead **more about privacy** (28%, +9%)
- **Milan less concerned about privacy** (11%, -8%)

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change

Source: EASA UAM social acceptance survey questions C5. What are you most concerned about with respect to air taxis? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers. C6. Please sort your main concerns from 'most concerning' to 'least concerning'.

C5.C6. Concerns in air taxi use case – overall (5/5)

(# rank: absolute %, +/- difference to avg % in total)

Key take-aways

Top concern again safety

Top concern, by far, is **safety** (37% of respondents rank it among top 3)

Slightly **increases with age, education and income**

Safety top ranked in most cities, except Budapest (28%, -9%), which instead more concerned about privacy (28%, +9)

But noise concerns together emerge as most important

Noise concerns together, i.e. related either to flying aircraft (4: 29% taken alone) or to vertiports (11: 15% taken alone), would move to **first place** (38%, comparable to top concern safety)

Both noise concerns slightly increase with age, education and income

Security comes 3rd

Security (3: 29%) again high up, but less distinct as in drone delivery use case

Concern slightly **increases with age, education and income**, but **not very pronounced**

Environmental concerns also in forefront

Local environmental concern (4: 27%) & **global environmental concern** (6: 18%) **with high importance**, would move to **first place** (38%, comparable to top concern safety); global environmental impact relatively more important compared to drone delivery use case

Both concerns divide genders (men less, women more concerned); **global concern** also **decreases with age**

Some additional insights in lower ranked concerns

Job loss concern (7: 16%) decreases with age, education and income

Affordability (8: 16%) less concerning for subgroups that would not try UAM anyways

Squandering of public money (10: 15%) characteristic concern for UAM opposing groups

Key results

Full length evaluation

- **Quantitative survey**

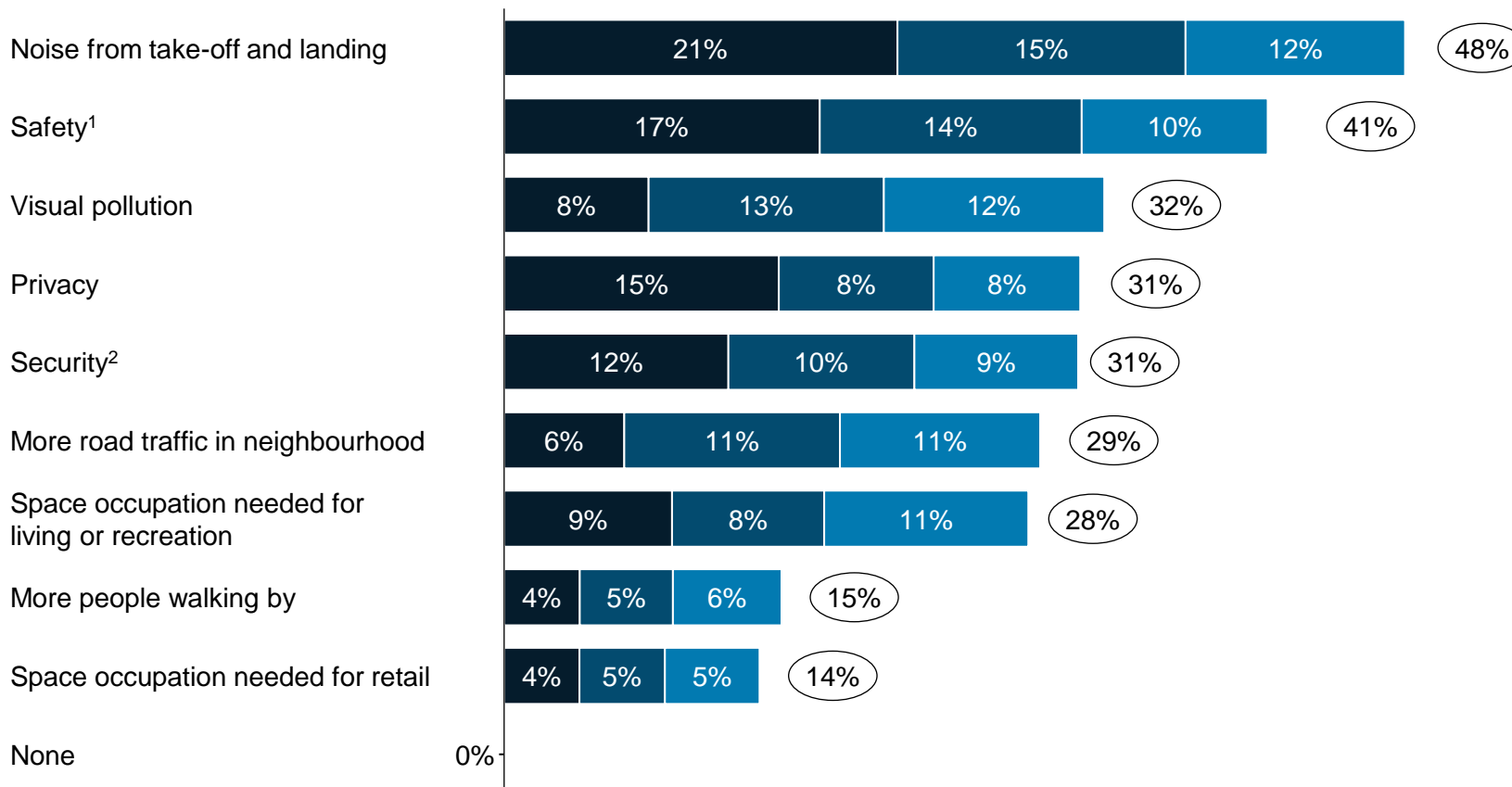
- Methodology
 - General perception
 - Use cases
 - Benefits
 - **Concerns**
 - » B3.C4. Level of comfort with manned and unmanned vehicles
 - » B4.B5. Concerns in drone delivery use case
 - » C5.C6. Concerns in air taxi use case
 - » **C11.C12. Concerns regarding vertiports**
 - » B9.C9. Environmental concerns
 - » D4. Introduction of an eco-label
 - » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
 - » B10.C10. Negative assumptions about UAM
 - » D2. Trust in UAM security and cybersecurity
 - Perception towards regulators
- Qualitative survey
 - Evaluation of noise acceptance tests



C11.C12. Concerns regarding vertiports– overall (1/3)

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

Safety and noise related to vertiports again among top ranked concerns with more than 41% mentions in top 3



(absolute %, +/- difference to avg % in total)

Noise (48%) and safety (41%) related to vertiports again among **top ranked concerns** with **clear separation from other concerns**

Many concerns in midfield, with no clear distinction in importance (~30% each) being visual pollution, privacy, security, more traffic in neighborhood and space occupation needed for living or recreation

Lowest concerns with clear separation are more **people walking by** and **space occupation needed for retail** (~14%)

Only slight differences between subgroups, broadly in line with concerns regarding drone delivery and air taxis

Noise increasing with age, education and income, in line with insights on concerns regarding drone delivery and air taxis

- Less concerning for age group 18-24 (-11%), families (-6%), low income group (-4%), low education (-3%)
- More concerning for age group 65-75 (+10%), high education level (+8%), high income group (+2%, minor)

Privacy concern decreasing with age, in line with insights on concerns regarding drone delivery

- Less concerning for old age groups 55-75 (-9%)
- More concerning for age group 18-24 (+11%)

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists

Source: EASA UAM social acceptance survey questions C11. Assuming that a take-off and landing-station is close by (under 50 metres), what are you most concerned about? Please select up to 6 answers. C12. Please sort your **main concerns** from 'most concerning' to 'least concerning'.

C11.C12. Concerns regarding vertiports– overall (2/3)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Similar results across cities observable, confirming most and least relevant concerns

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60%

Noise from take-off and landing

Safety¹

Visual pollution

Privacy

Security²

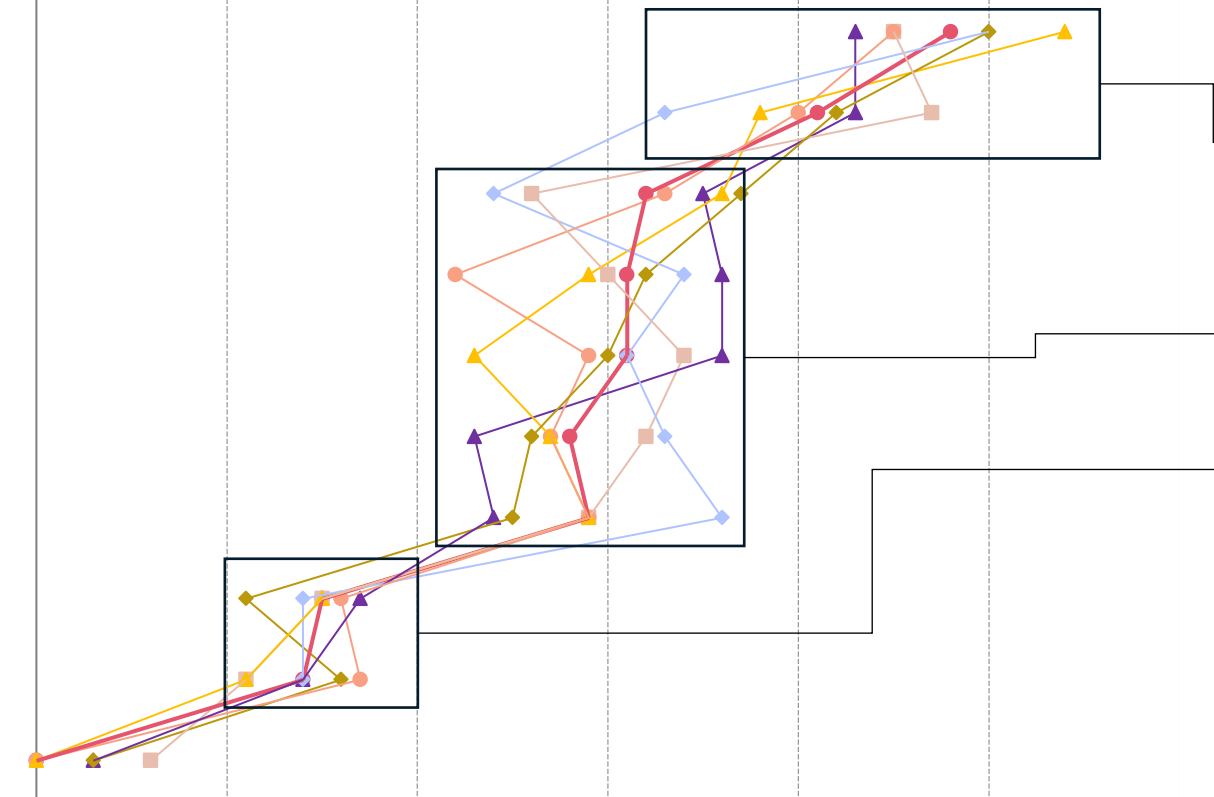
Space occupation needed for living or recreation

More road traffic in neighborhood

More people walking by

Space occupation needed for retail

None



Generally similar results across cities observable

Good agreement across cities on most **important concerns noise** and **safety** (except for Budapest which is only city ranking safety concern significantly lower)

Midfield concerns show **highest spread** in **opinion** across cities

Good agreement on **least important concerns** across cities

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists

Source: EASA UAM social acceptance survey questions C11. Assuming that a take-off and landing-station is close by (under 50 metres), what are you most concerned about? Please select up to 6 answers. C12. Please sort your **main concerns** from 'most concerning' to 'least concerning'.

C11.C12. Concerns regarding vertiports– overall (3/3)

(absolute %)

Key take-aways

Noise and safety are leading concerns related to vertiports

Concerns about **noise** (48%) and **safety** (41%) **related to vertiports** again among **top ranked** concerns with clear separation from other concerns

Good agreement across cities on most important concerns noise and safety, **except Budapest** which is only city ranking safety concern significantly lower

Large group of midfield concerns with similar importance

Many concerns in midfield, with **no clear distinction** in importance (~30% each) being **visual pollution, privacy, security, more traffic in neighborhood** and **space occupation needed for living or recreation**

More people on walkways and lost retail space have limited relevance as concerns

Lowest concerns with clear separation are **more people walking by** and **space occupation needed for retail** (~14%)

Good agreement across cities on least important concerns

B4.B5. & C5.C6. & C11.C12. Comparison of concerns regarding drone delivery, air taxis and vertiports

(# rank in drone delivery question, # rank in air taxi question, # rank in vertiport question)

Key take-aways

Safety overall most concerning factor

Safety¹ concern (ranked #1 for drone delivery, #1 for air taxis and #2 for vertiports) **highest ranked overall**

Security is highly important for delivery drones

Drone delivery: Security² concern (#2) comes second

Air taxis: Security concern (#2) important, but loses relative relevance due to environmental and noise concerns assessed together

Vertiports: Security concern only in midfield (#5), potentially because vertiports are immobile / not kidnappable and security threat from aircraft systems less important

Noise related concerns emerge as more important related to air taxis and vertiports

Vertiports: Noise pollution concern top ranked (#1)

Air taxis: Noise related concerns together, i.e. noise related to flying aircraft & noise related to vertiports, would move to #1 in air taxi question (#3 and #11 if assessed separately), significantly more important regarding air taxis than in drone delivery

Drone delivery: Noise pollution less concerning (#6)

Local and global environmental concerns taken together among top concerns

Air taxis: Environmental concerns together, i.e. local³ & global environmental⁴ concerns, close to #1 in air taxi question, very high up already when assessed separately (local: #4, global: #6)

Drone delivery: Environmental concerns together would move to #3 in drone delivery question (#5 and #9 assessed separately)

1. Incident due to technical or human failure 2. Incident due to deliberate harmful action, e.g. by criminal organization or terrorists 3. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 4. Global environmental impact covers climate change

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**
 - » B3.C4. Level of comfort with manned and unmanned vehicles
 - » B4.B5. Concerns in drone delivery use case
 - » C5.C6. Concerns in air taxi use case
 - » C11.C12. Concerns regarding vertiports

- » **B9.C9. Environmental concerns**

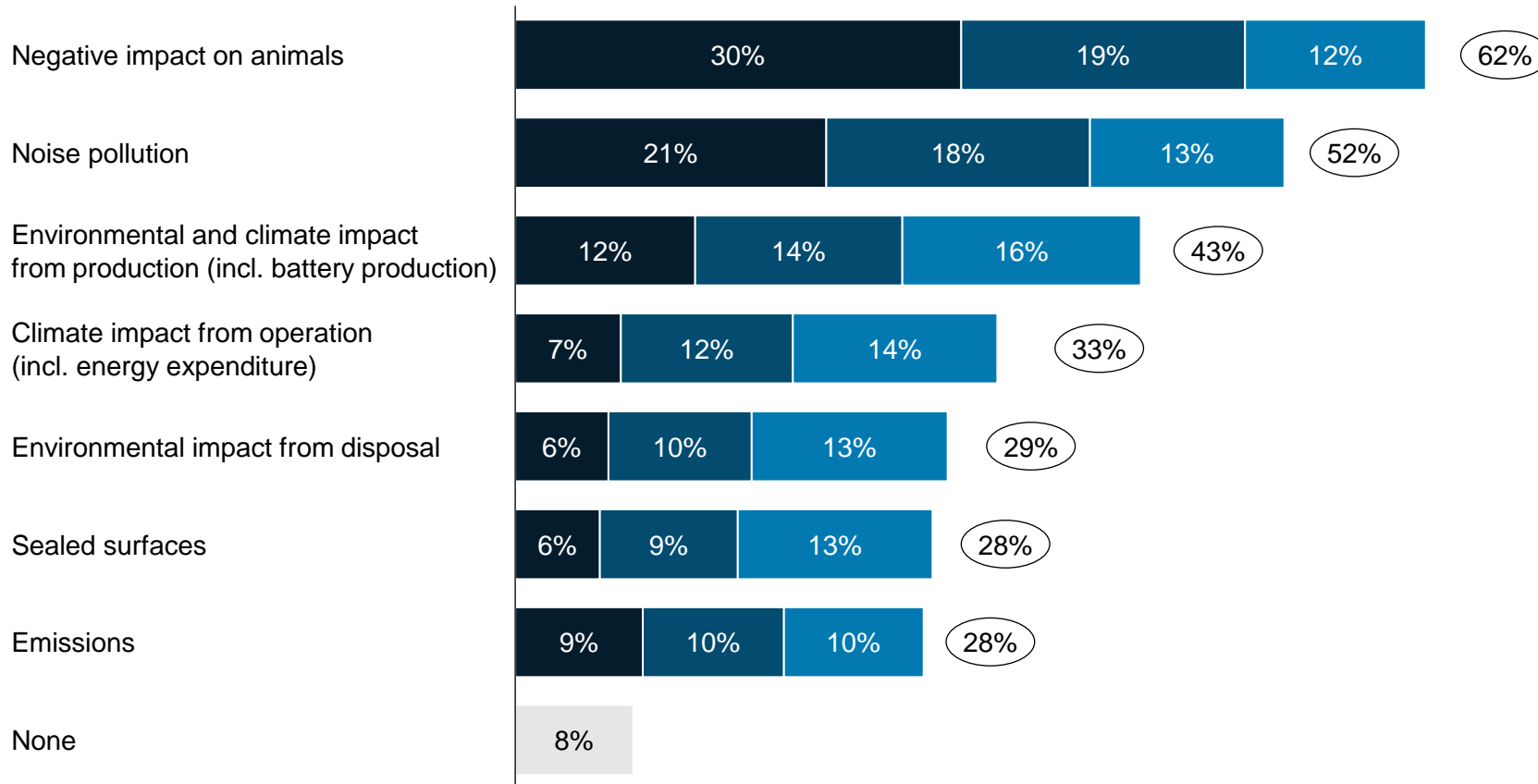
- » D4. Introduction of an eco-label
- » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
- » B10.C10. Negative assumptions about UAM
- » D2. Trust in UAM security and cybersecurity
- Perception towards regulators
- Qualitative survey
- Evaluation of noise acceptance tests



B9. Environmental concerns – drone delivery (1/5)

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

Impact on animals and noise are perceived as most concerning environmental impacts of drone delivery



(absolute %, +/- difference to avg % in total)

Clear separation of top 3 concerns from the rest

Population mostly concerned about **negative impact on animals** (62%) followed by **noise pollution** (52%), and **climate impact from production** (43%)

- Negative impact on animals even more important for age group 65-75 (+7%)

Environmental impact **concerns from production** (incl. batteries) significantly **higher than climate impact from operation** (33%)

Lowest ranking concerns with similar importance are environmental impact from disposal, sealed surfaces and emissions (~28%)

- Concern about emissions decreases with age: Less concerning for old age groups 55-65 (-8%), more concerning for youngest age group 18-25 (+12%)

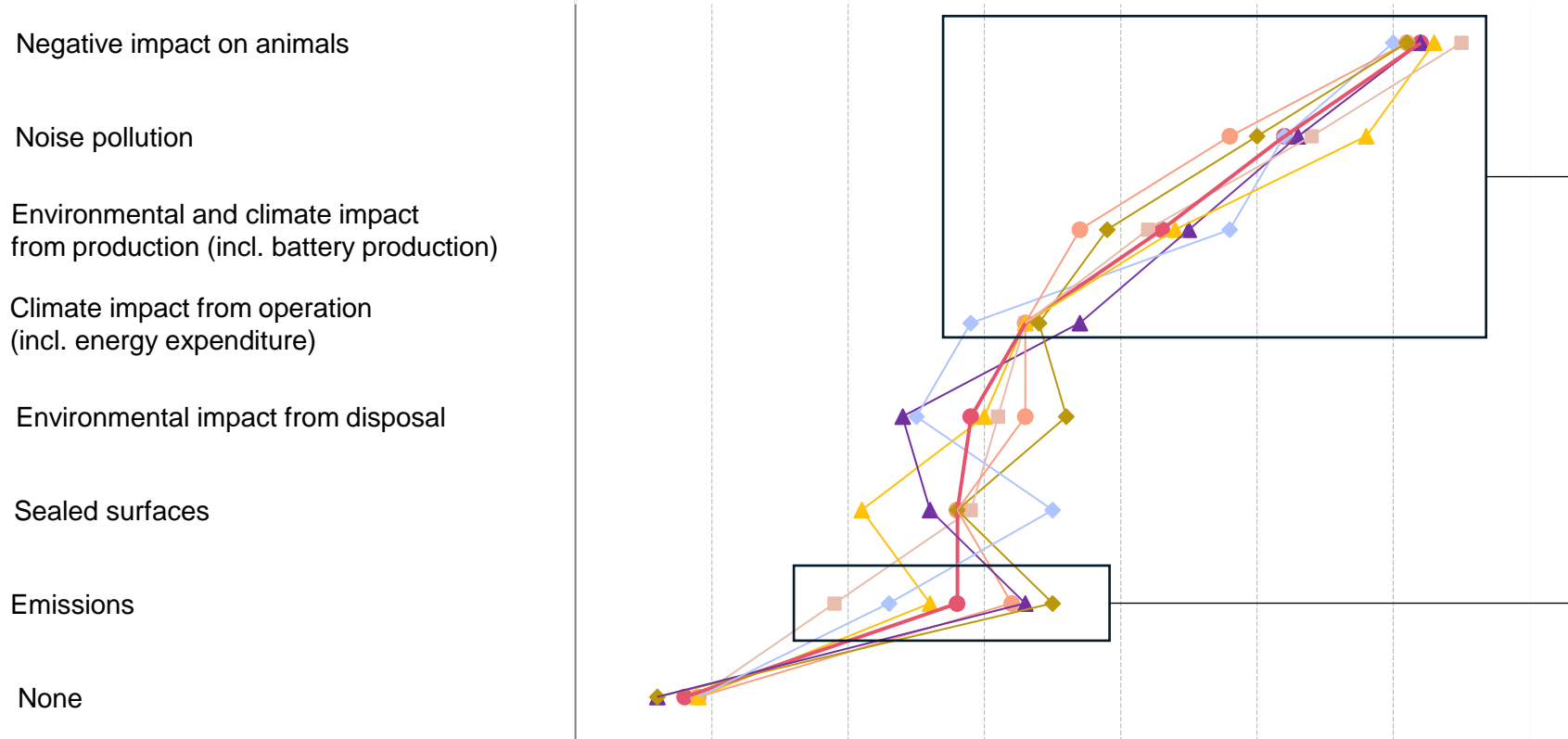
B9. Environmental concerns – drone delivery (2/5)

● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Cities very aligned in opinion, especially for highly ranked environmental concerns

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70%



Cities very **closely aligned** on most **important concerns** (animals and noise)

Clear separation of top 4 concerns from the rest

Largest spread in concerns for emissions, likely driven by differences in **perceived current air quality** in respective cities

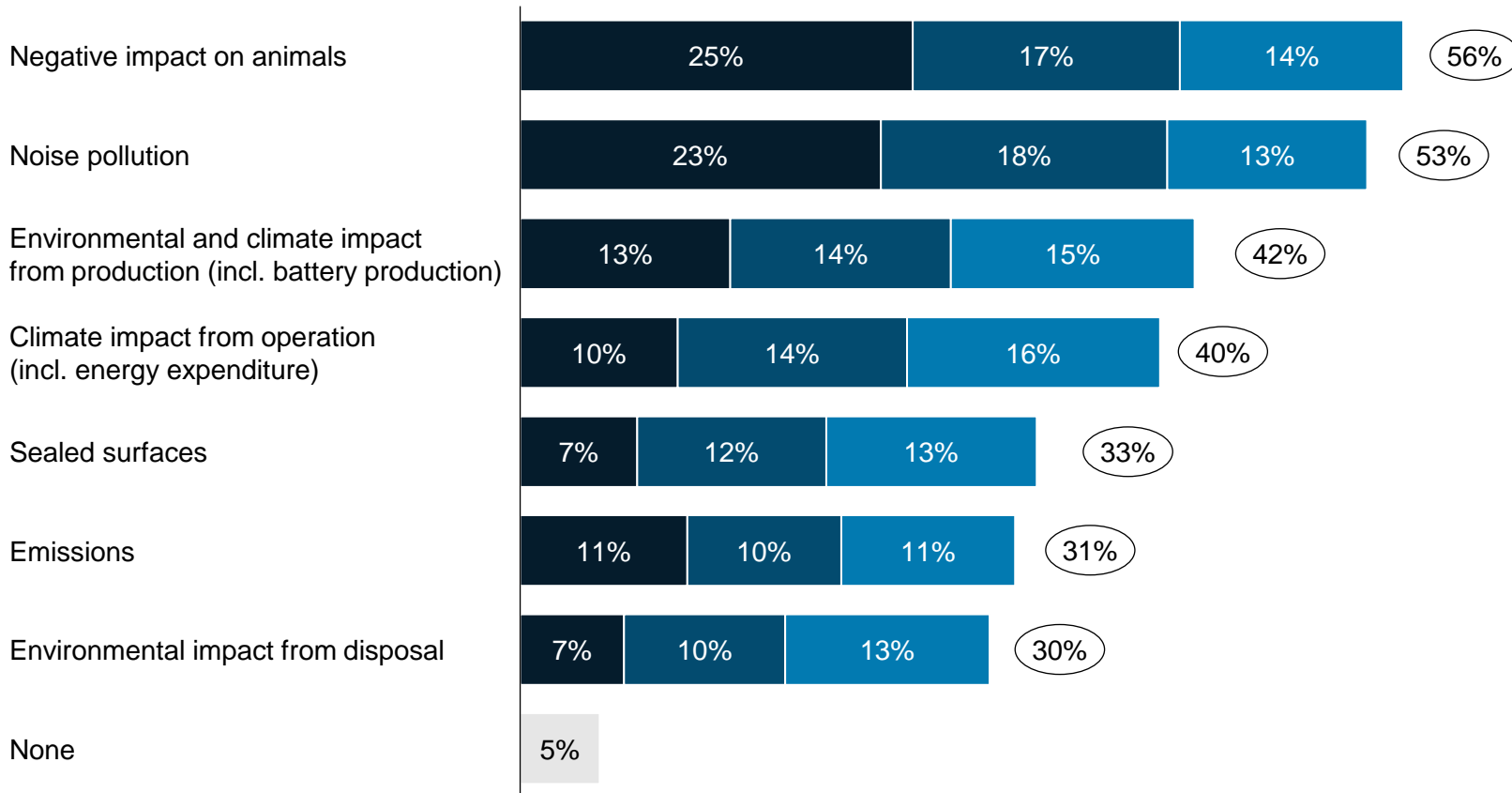
Source: EASA UAM social acceptance survey questions B4. What are you most concerned about regarding drone delivery, both for the delivery of day-to-day goods as well as medical supplies? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbors), which may affect you as well. Please select up to 6 answers. B5. Please sort your main concerns (selected in B4.) from 'most concerning' to 'least concerning'.

C9. Environmental concerns – air taxis (3/5)

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

(absolute %, +/- difference to avg % in total)

Impact on animals and noise are highest ranked environmental concerns regarding air taxi use case



Clear separation of top 2 concerns

Population **mostly concerned** about **negative impact on animals** (56%) followed by **noise pollution** (53%)

Environmental/climate impact **concerns** similar **for production** (incl. batteries) and **operation** (~41%)

Lowest ranking concerns with similar importance are sealed surfaces, emissions and environmental impact from disposal (~31%)

Young people more concerned about some climate change related concerns

Young age group less concerned about noise (-10%) and more about environmental impact from disposal (+7%) and emissions (+11%)

C9. Environmental concerns – air taxis (4/5)

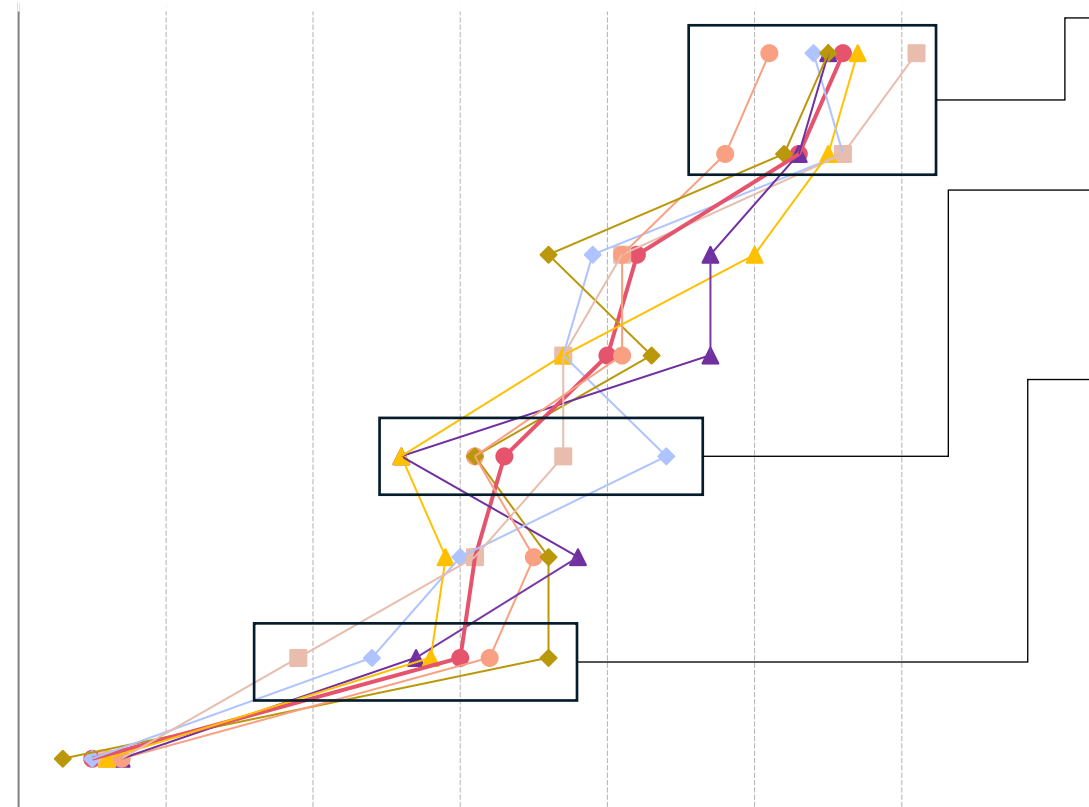
● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Impact on animals and noise are highest ranked environmental concerns regarding air taxi use case

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70%

- Negative impact on animals
- Noise pollution
- Environmental and climate impact from production (incl. battery production)
- Climate impact from operation (incl. energy expenditure)
- Environmental impact from disposal
- Sealed surfaces
- Emissions
- None



Cities very **closely aligned** on **most important concerns** (animals and noise)

Large spread in opinion of **environmental impact of disposal** of air taxis across cities

Largest spread in concerns for emissions, likely driven by differences in **perceived current air quality** in respective cities

B9.C9. Environmental concerns – overall (5/5)

(absolute %, +/- difference to avg % in total for drone delivery and absolute %, +/- difference to avg % in total for air taxis)

Key take-aways

Negative impact on animals and noise pollution greatest concerns throughout use cases

Clear separation of top 2 concern across all cities and in both use cases

Negative impact on animals (62% regarding drone delivery, 56% regarding air taxis) top ranked in both use cases

- Even more important for age group 65-75 (+7%, +5%)

Noise pollution (52% and 53%) **gaining in relative importance in air taxi use case**, but does not make it to top position

- Less concerning for young age group 18-24 (-6%, -10%)

Climate impact from production & operation in upper midfield

Climate impact from production (incl. batteries) (43% and 42%) and **climate impact from operation** (33% and 40%) in both use cases **on ranks 3 and 4**

- Climate impact from **production** with significantly **higher relative importance in drone delivery use case** (difference is 10%) compared to operation
- **Concerns almost on par in air taxi use case** (difference is 2%)

Less differentiated results for other concerns

Lowest ranking concerns **environmental impact from disposal, sealed surfaces and emissions** (~28% and ~30%) with similar importances in both use cases

- **Environmental impact of disposal** with large spread across cities in air taxi use case
- **Emission concern** decreases with age; largest spread in concerns in cities regarding both use cases, likely driven by differences in **perceived current air quality** in respective cities

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**
 - » B3.C4. Level of comfort with manned and unmanned vehicles
 - » B4.B5. Concerns in drone delivery use case
 - » C5.C6. Concerns in air taxi use case
 - » C11.C12. Concerns regarding vertiports
 - » B9.C9. Environmental concerns

- » **D4. Introduction of an eco-label**

- » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
- » B10.C10. Negative assumptions about UAM
- » D2. Trust in UAM security and cybersecurity
- Perception towards regulators
- Qualitative survey
- Evaluation of noise acceptance tests

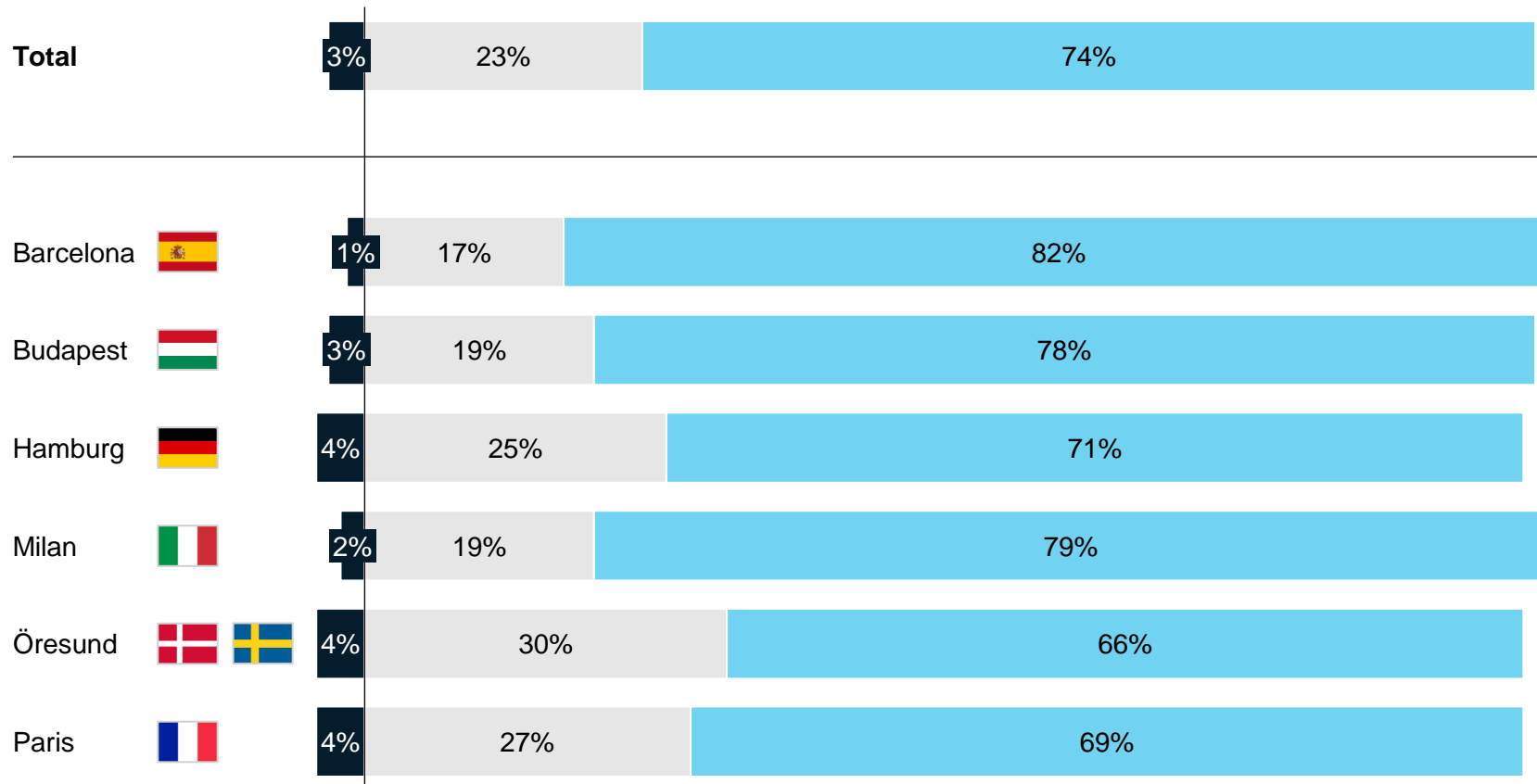


D4. Introduction of an eco-label

No
 Maybe, don't know
 Yes, certainly

(+/- difference to avg % in total)

A vast majority of 74% in favor for introducing an eco-label for commercial VTOL



Vast majority of 74% in favour for introduction of eco-label

No significant deviations in cities, but **Öresund (-8%) on lower end** and **Barcelona (+8%) on upper end**

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**
 - » B3.C4. Level of comfort with manned and unmanned vehicles
 - » B4.B5. Concerns in drone delivery use case
 - » C5.C6. Concerns in air taxi use case
 - » C11.C12. Concerns regarding vertiports
 - » B9.C9. Environmental concerns
 - » D4. Introduction of an eco-label
 - » **B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels**
 - » B10.C10. Negative assumptions about UAM
 - » D2. Trust in UAM security and cybersecurity
- Perception towards regulators

- Qualitative survey

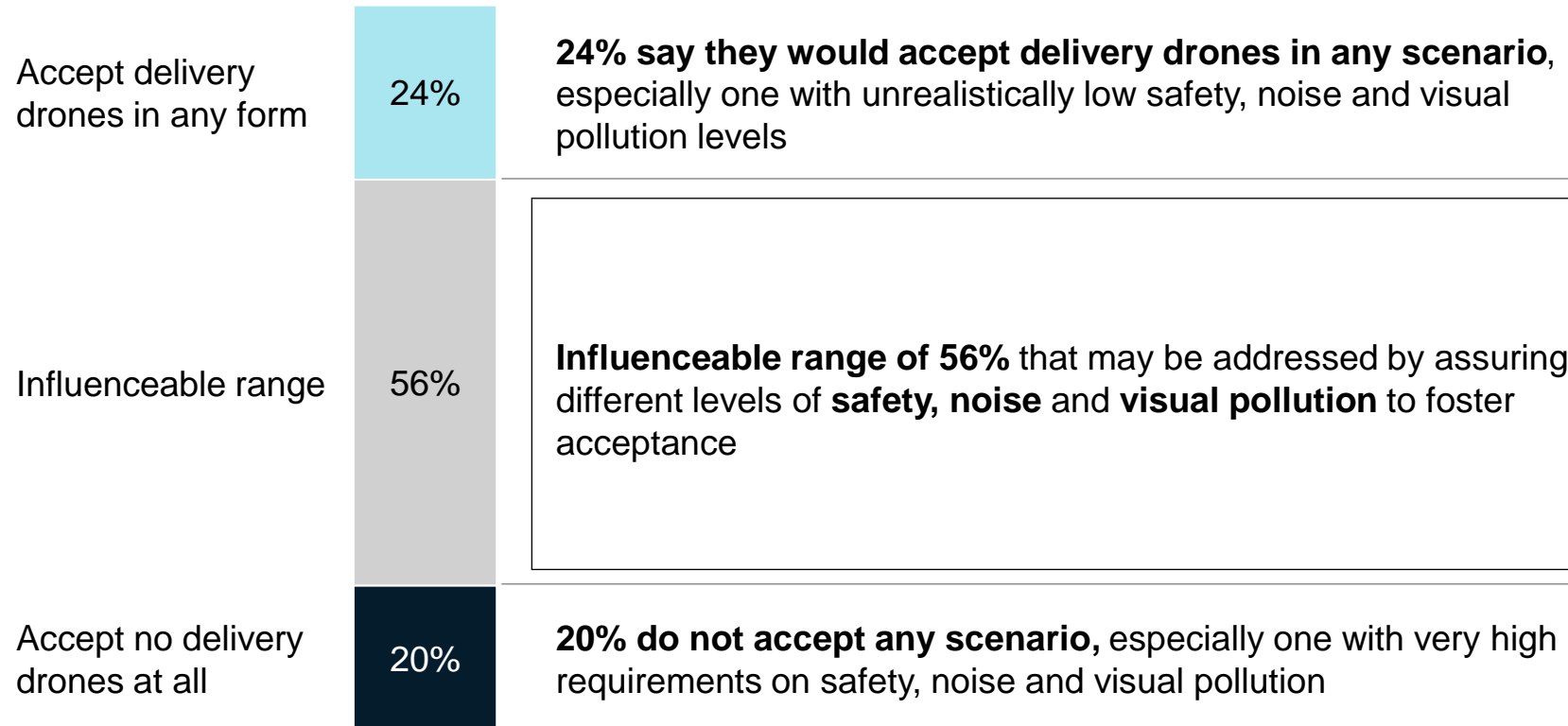
- Evaluation of noise acceptance tests



B7.B8. Trade-off analysis between safety, noise and visual pollution for delivery drones (1/9)

Detailed next

The maximum achievable acceptance rate for delivery drones is 80%, according to survey results



In sum, **80%** is maximally achievable acceptance rate

- **24% already secured**, as group would accept any scenario
- **56% influenceable range** potentially addressable by regulation

To influence acceptance between the extremes, we assessed relative importance for choosing delivery drone scenario of several levels in safety, noise, and visual pollution

Source: EASA UAM social acceptance survey questions B7. Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. B8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario based on the scale shown below.

B7.B8. Trade-off analysis between safety, noise and visual pollution for delivery drones (2/9)

To assess how to catch the largest possible share of addressable acceptance rate, we defined 3 factors influenceable by EASA via regulation: safety, noise & visual pollution

Why we decided for conjoint

Conjoint analysis is statistical technique that **models behavior of survey participants in choice situations**

Helps i.a. to **explain and forecast level of readiness for new technologies** where **trade-offs** between objectives need to be made

We defined 3 factors

- **Safety standard**
- **Noise volumes**
- **Number of flying vehicles in sight of pedestrians**

Here is why

- **Candidates to influence public acceptance:** among concerning factors in literature review; survey confirms that factors not negligible, range in top- or midfield
- **Influenceable by EASA** via regulation
- **Allow setting of different degrees** (unlike e.g. cybersecurity: either system is protected, or not; always best case or worst case)
- **3 factors maximum:** Conjoint analysis restricts number of attributes to be weighed out against each other; 4+ too complex for humans to oversee, thus informed decision and unreliable results

Why levels may seem unrealistically low or high

We set “very low” and “very high” levels on lower and upper bound, such that realistically influenceable range is covered

B7. Trade-off analysis between safety, noise and visual pollution for delivery drones (3/9)

■ Relative importance for conjoint decision per attribute ■ Sum □ Deep dive on next slide

Conjoint analysis suggests that safety is, relatively, most important for accepting scenarios, closely followed by noise; visual pollution has minor impact

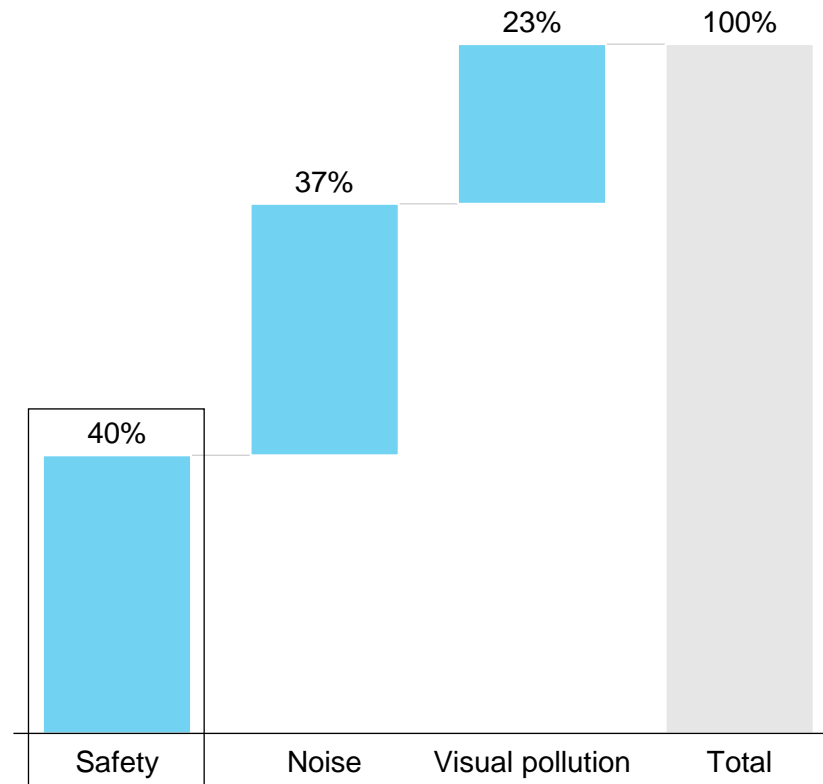
In **conjoint question B7**, participants are asked to make **trade-offs** between **concerning factors safety, noise and visual pollution**

In each round, a participant is shown 3 different scenarios, each characterised by a safety level, a noise level and a visual pollution level

Each participant goes through 8 trade-off rounds

The preference per participant is captured and **relative importances**¹ per concerning factor are calculated

Importances of concerning factors for whole sample correspond to average of importances on participant level



Safety is greatest factor for trade-off decisions with 40% of importance

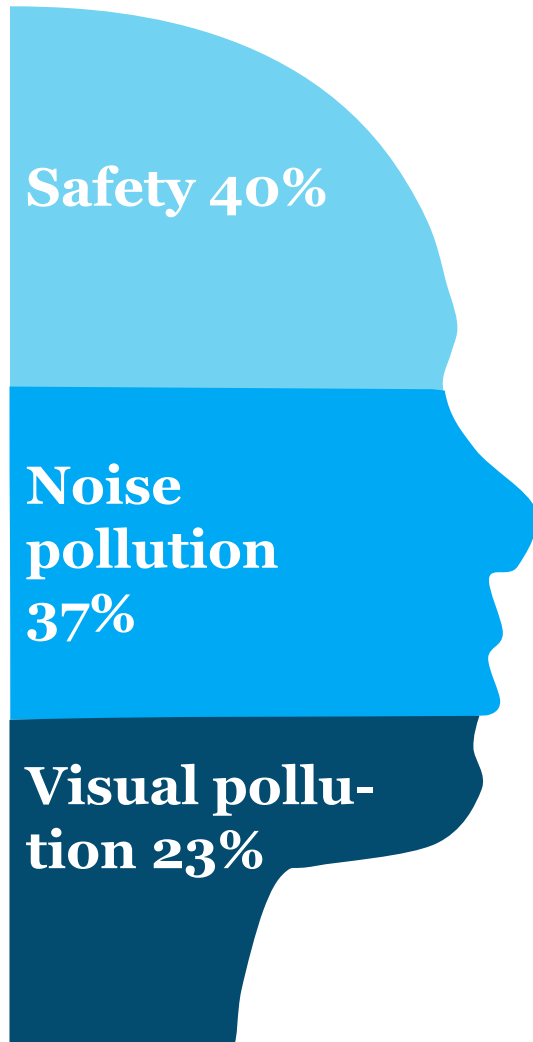
Noise with 37% importance also has **substantial influence** on choice of preferred scenario

Visual pollution with 23% perceived as **less important**, but not a negligible factor neither

This means: Relative acceptance for delivery drones is mostly driven by safety, closely followed by noise and less by visual pollution

1. Entity to measure a factor's influence on the decision of a participant

B7.B8. Trade-off analysis between safety, noise and visual pollution for delivery drones (4/9)



How to read the results

An average survey participant would spend 100 units of efforts or 100 hours of working, or simply € 100 to arrive to the best possible result, weighing out pros and cons in factors safety, noise and visual pollution as such:

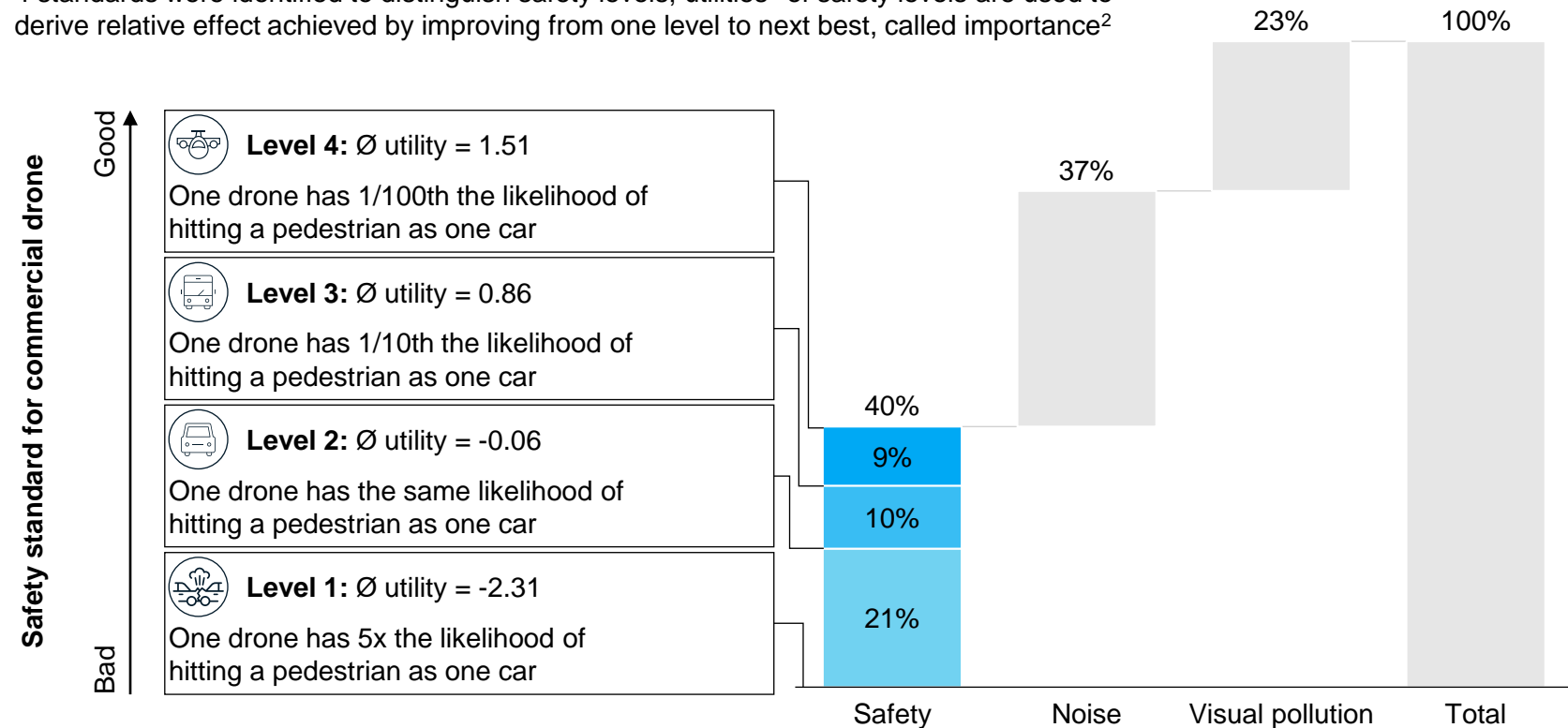
- **40% on better safety**
- **37% on noise reduction**
- **23% on capping visual pollution**

B7. Trade-off analysis between safety, noise and visual pollution for delivery drones – deep dive on safety (5/9)

■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

Looking at safety, easiest lever to catch share of addressable acceptance is to set level to „as safe as car“, but higher levels with further positive influence

4 standards were identified to distinguish safety levels; utilities¹ of safety levels are used to derive relative effect achieved by improving from one level to next best, called importance²



Safety level 1 (5x higher threat for pedestrians than car) has **very adverse influence** on participants' decision

Level 2 (similar threat as car) has **near no influence on decisions**, as -0.06 very close to 0.00

Levels 3 and 4 (10x better and 100x better than car) have **positive influence** on decisions

Greatest lever to positively influence decisions, with 21% of relative importance, attributable to **improving safety from level 1 to level 2** (achieving safety level of car), hence **easiest to increase share of addressable acceptance**

Two subsequent jumps are less pronounced, but not negligible neither; **setting safety to level 4** (100x better safety than car) **would further positively influence acceptance rate** by 19%

1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance
 2. Entity to measure a factor's influence on the decision of a participant; as calculated on participant level and then taken to the average, spans between utilities and respective importances do not match

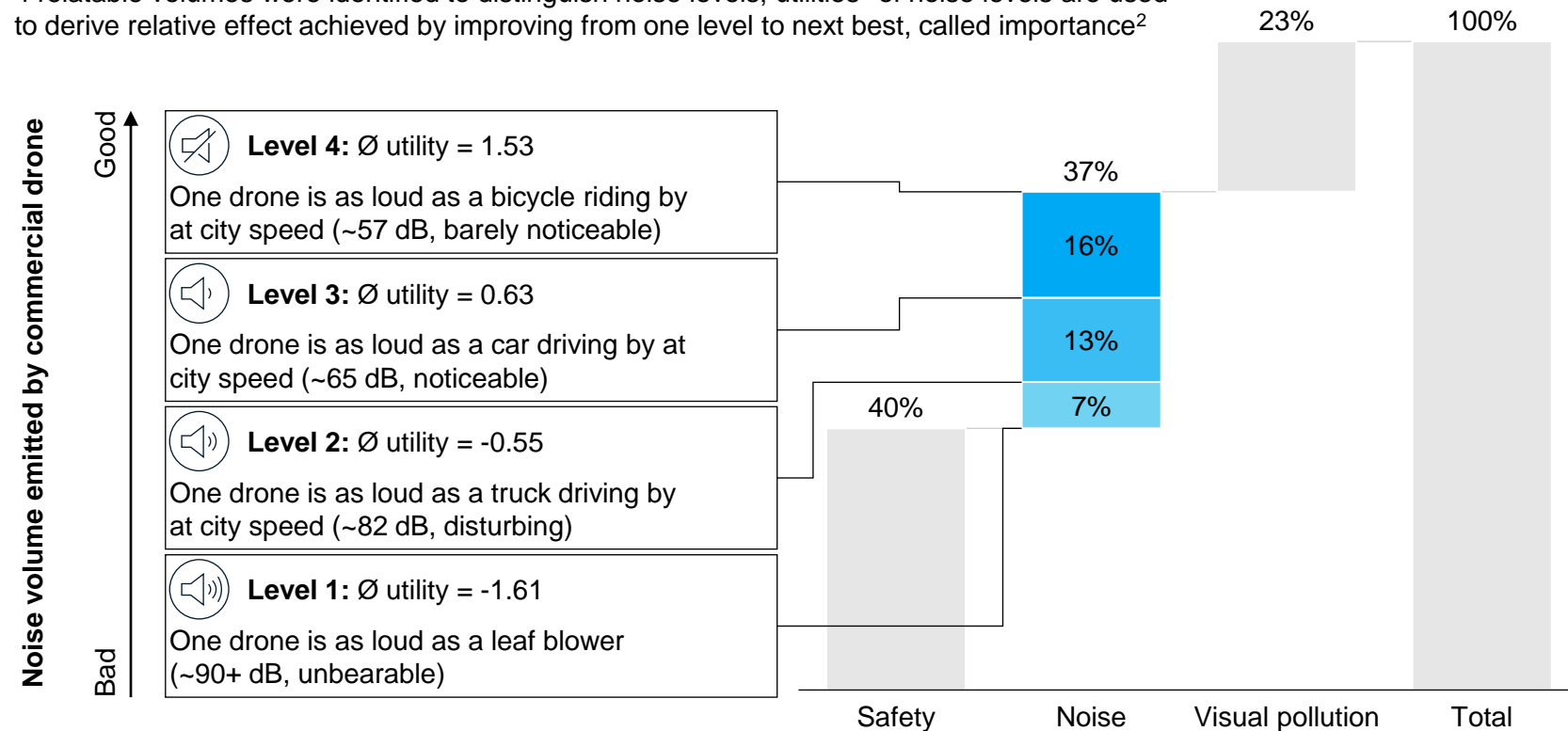
Source: EASA UAM social acceptance survey questions B7. Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown.

B7. Trade-off analysis between safety, noise and visual pollution for delivery drones – deep dive on noise (6/9)

■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

Looking at noise, share of addressable acceptance harder to catch due to ascending relative importances; but noise level comparable to cars potentially suffices

4 relatable volumes were identified to distinguish noise levels; utilities¹ of noise levels are used to derive relative effect achieved by improving from one level to next best, called importance²



Noise level 1 (similar to leaf blower) has **highly adverse influence** on participants' decisions

Level 2 (similar to truck) still has **some adverse effect**

Level 3 (similar to car) is first level to have **positive, but limited, influence**

Level 4 (similar to bicycle) has **strong positive influence**

Greatest lever to positively influence decisions, with 16% of relative importance, attributable to **improving noise from level 3 to 4** (achieving volumes similar to bicycles), i.e. quite late in the sequence

Whether volumes comparable to bicycles are actually realistic for drones or not, thus optimal from a cost-benefit perspective, is questionable; **level 3** (noise volume similar to car) **would suffice to achieve positive nudge**

1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance
 2. Entity to measure a factor's influence on the decision of a participant; as calculated on participant level and then taken to the average, spans between utilities and respective importances do not match

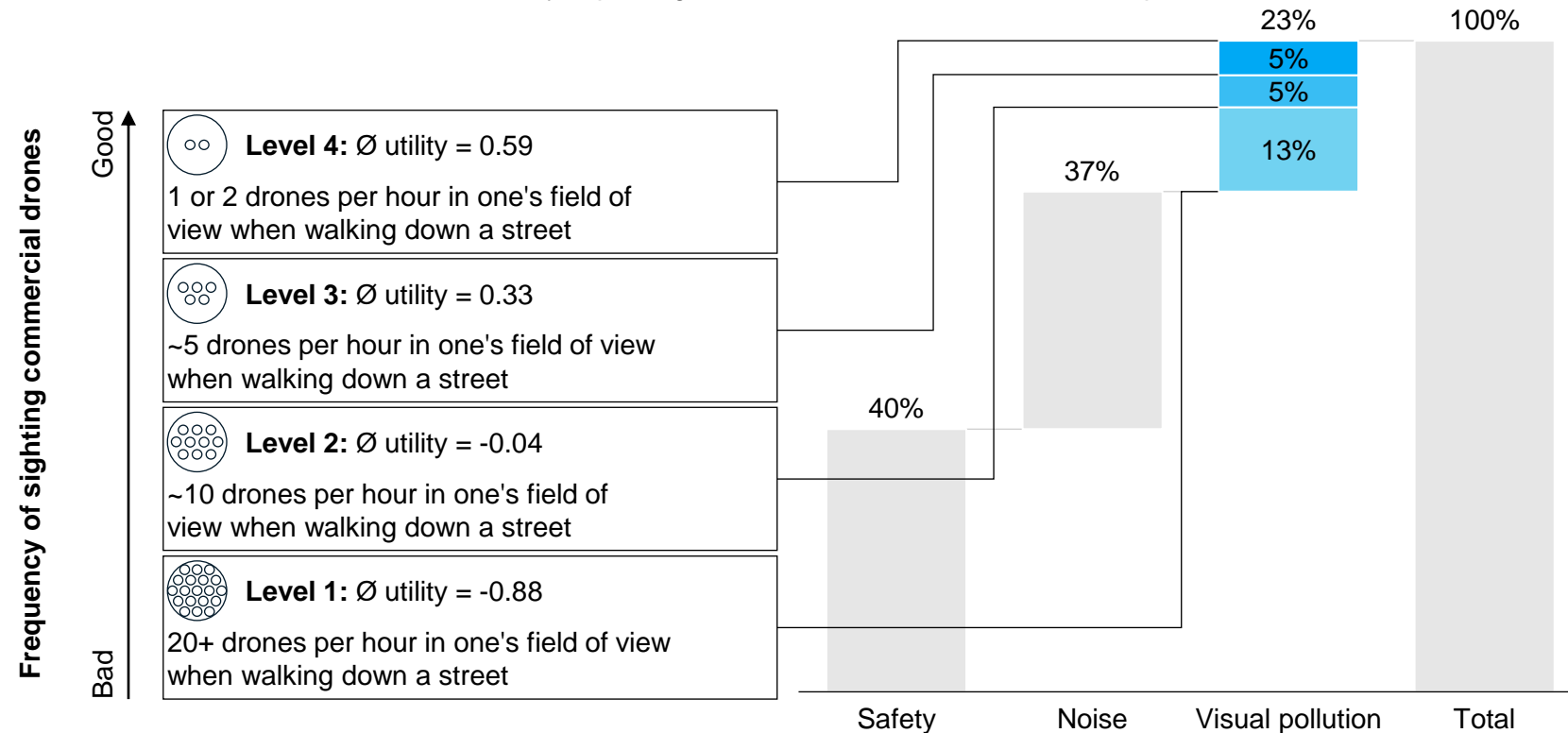
Source: EASA UAM social acceptance survey questions B7. Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown.

B7. Trade-off analysis between safety, noise and visual pollution for delivery drones – deep dive on visual pollution (7/9)

■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

Looking at visual pollution, easiest increase in acceptance achievable by moderately high number of drones in sight

4 frequencies for drone sightings were identified to distinguish levels of visual pollution; utilities¹ of visual levels are used to derive relative effect achieved by improving from one level to next best, called importance²



Visual pollution level 1 (20+ drones per hour in sight) has **adverse, but limited influence** on participant's decisions

Level 2 (~10 drones) has **near no influence**, as -0.04 very close to 0.00

Levels 3 and 4 (~5 drones and 1 or 2 drones) have **positive, but again limited influence**

Greatest lever to positively influence decisions, with 13% of relative importance, attributable to **improving visual pollution from level 1 to 2** (10 drones in sight), hence **easiest increase in acceptance**

Further improving to level 3 or even 4 (down to 1 or 2 drones in sight) **only yields marginal gain**

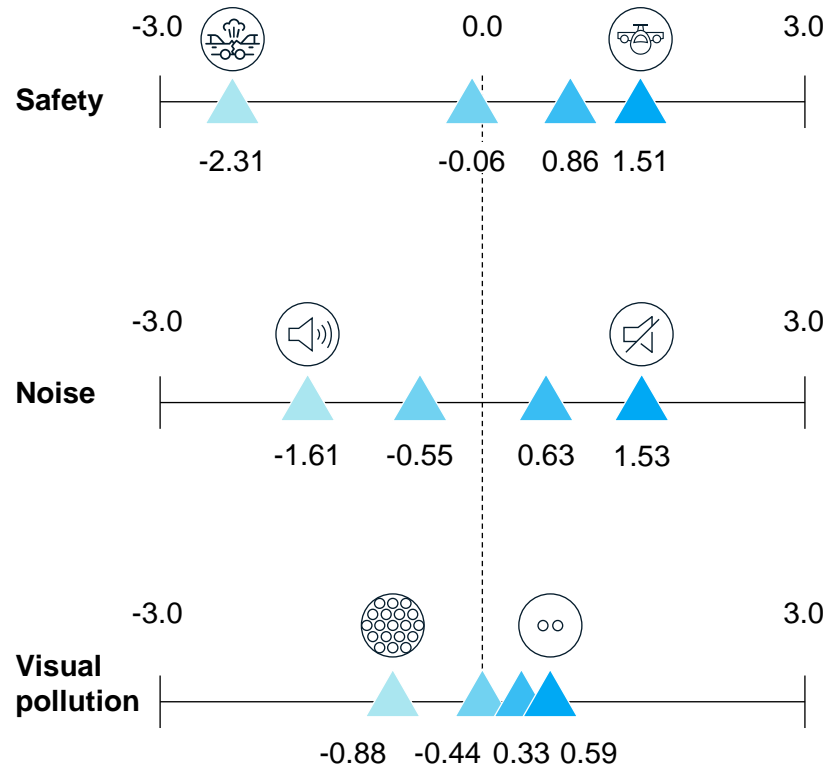
1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance
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B7. Trade-off analysis between safety, noise and visual pollution for delivery drones (8/9)

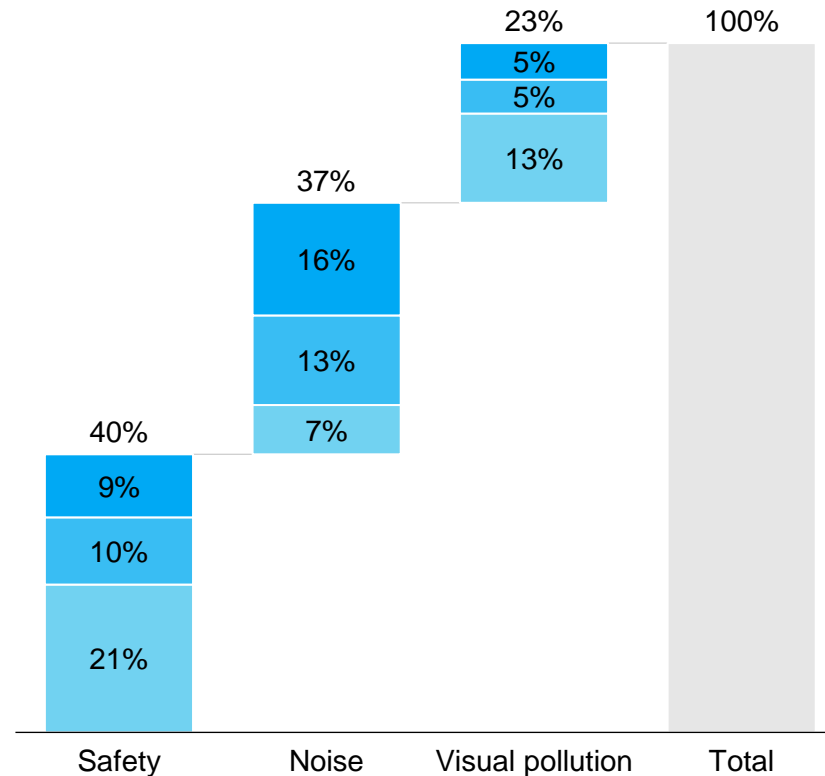
▲ Level 1 ▲ Level 2 ▲ Level 3 ▲ Level 4 ■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

In sum, fairly high relative acceptance catchable by realistic safety and visual pollution levels, but greatest increase in noise level hard to implement

Mean utilities¹ for safety, noise and visual pollution



Mean relative importances² of improving from lower level to next higher



Safety

- Greatest lever to positively influence acceptance is setting safety standard to that of cars (level 2)
- Higher safety standards further positively influence acceptance

Noise

- Greatest lever is capping noise volumes at decibels comparable to bicycles (level 4), but hardly realistic
- Volumes comparable to cars (level 3) would suffice to achieve positive nudge

Visual pollution

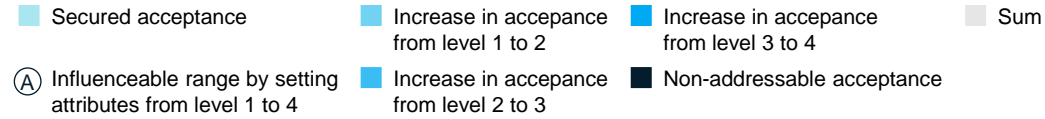
- Greatest lever is restricting number of conceivable commercial drones at moderately high number (~10 per hour within sight)
- Going further only yields marginal gains

1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance

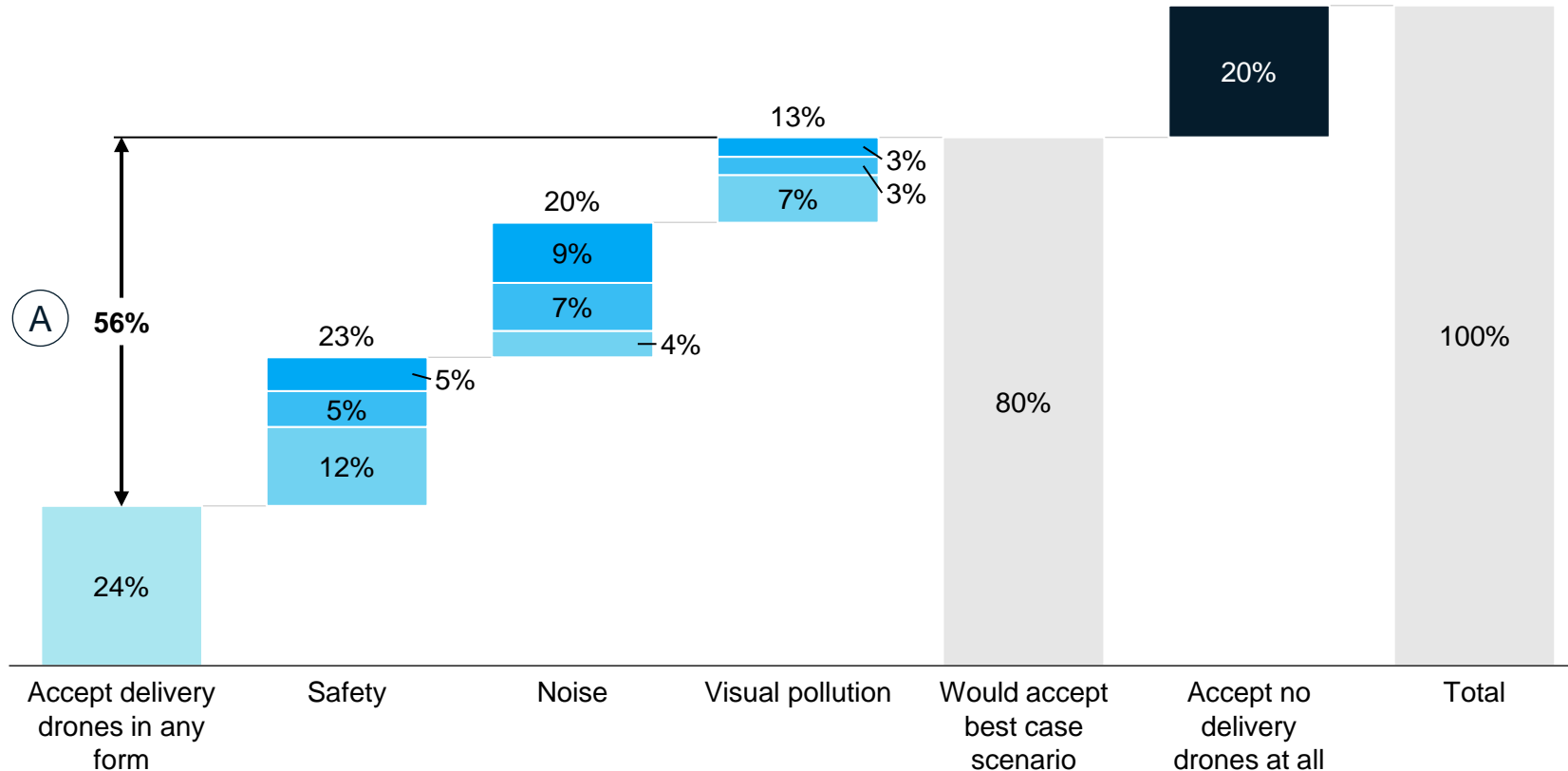
2. Entity to measure a factor's influence on the decision of a participant; as calculated on participant level and then taken to the average, spans between utilities and respective importances do not match

Source: EASA UAM social acceptance survey questions B7. Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown.

B7.B8. Trade-off analysis between safety, noise and visual pollution for delivery drones (9/9)



Results were normed to the influenceable range between “all accepters” and “all rejecters” to extrapolate realistic acceptance rates



Conjoint analysis comes with drawback of forcing participants to choose a scenario

In order to ensure a realistic assessment of expected acceptance rates, **results are normed back to influenceable range**

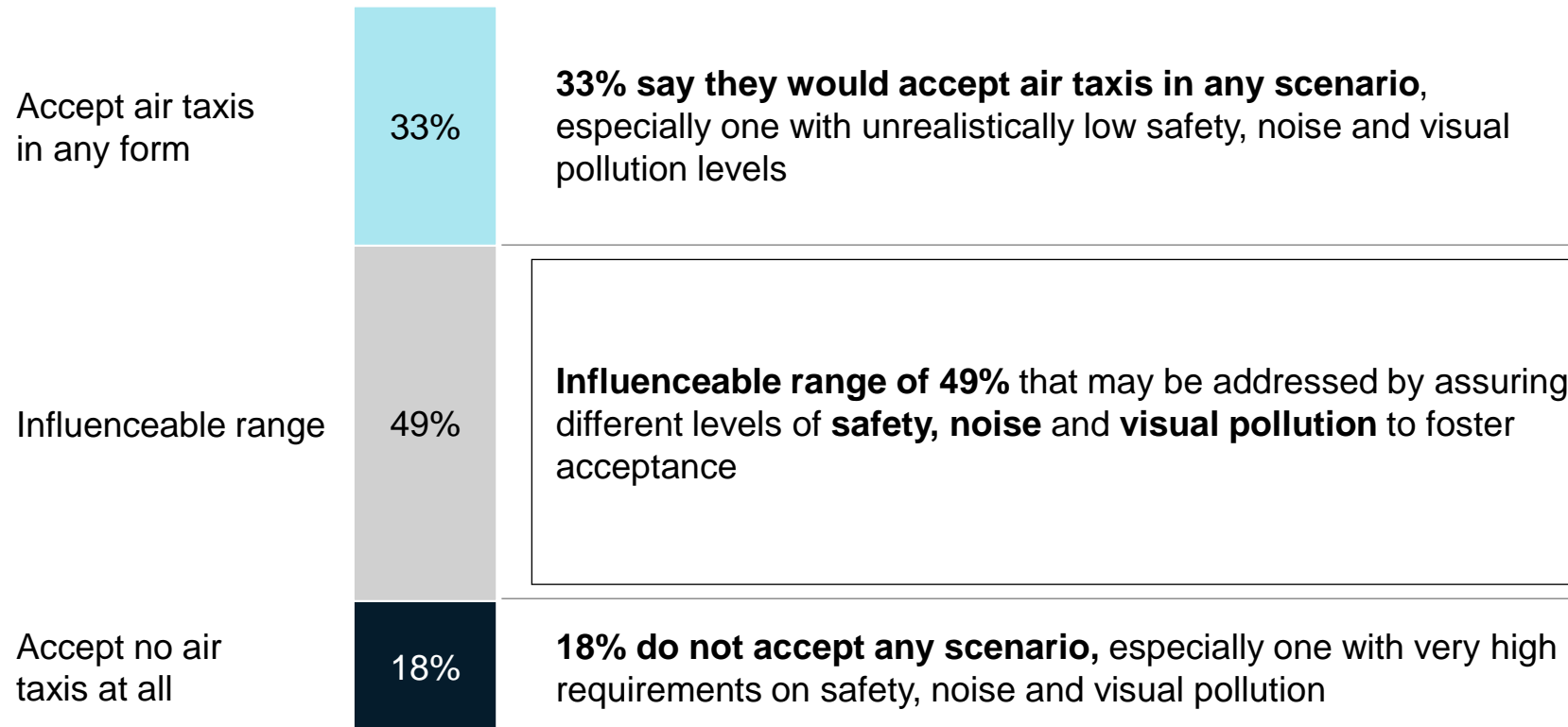
Figures may be used to assess different scenarios for regulation; however, survey participants are not expert in regulation efforts and may have misleading expectations (too low and too high); answers are always a snapshot

Source: EASA UAM social acceptance survey questions B7. Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. B8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario based on the scale shown below.

C7.C8. Trade-off analysis between safety, noise and visual pollution for air taxis (1/9)

Detailed next

The maximum achievable acceptance rate for air taxis is 82%, according to survey results



In sum, **82%** is **maximally achievable acceptance rate**

- **33% already secured**, as group would accept any scenario
- **49% influenceable range** potentially addressable by regulation

Share of people **accepting air taxis** in any case is **greater than for delivery drones**; potentially because scenario even more abstract to imagine

To influence acceptance, relative importance for choosing air taxi scenario of several levels in safety, noise, and visual pollution were assessed

Source: EASA UAM social acceptance survey questions C7. Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. C8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

C7.C8. Trade-off analysis between safety, noise and visual pollution for air taxis (2/9)

To assess how to catch the largest possible share of addressable acceptance rate, we defined 3 factors influenceable by EASA via regulation: safety, noise & visual pollution

Why we decided for conjoint

Conjoint analysis is statistical technique that **models behavior of survey participants in choice situations**

Helps i.a. to **explain and forecast level of readiness for new technologies** where **trade-offs** between objectives need to be made

We defined 3 factors

- **Safety standard**
- **Noise volumes**
- **Number of flying vehicles in sight of pedestrians**

Here is why

- **Candidates to influence public acceptance:** among concerning factors in literature review; survey confirms that factors not negligible, range in top- or midfield
- **Influenceable by EASA** via regulation
- **Allow setting of different degrees** (unlike e.g. cybersecurity: either system is protected, or not; always best case or worst case)
- **3 factors maximum:** Conjoint analysis restricts number of attributes to be weighed out against each other; 4+ too complex for humans to oversee, thus informed decision and unreliable results

Why levels may seem unrealistically low or high

We set “very low” and “very high” levels on lower and upper bound, such that realistically influenceable range is covered

C7. Trade-off analysis between safety, noise and visual pollution for air taxis (3/9)

■ Relative importance for conjoint decision per attribute ■ Sum □ Deep dive on next slide

In air taxi use case, results are less differentiated as for delivery drones, with relative importances per attribute of around one third each

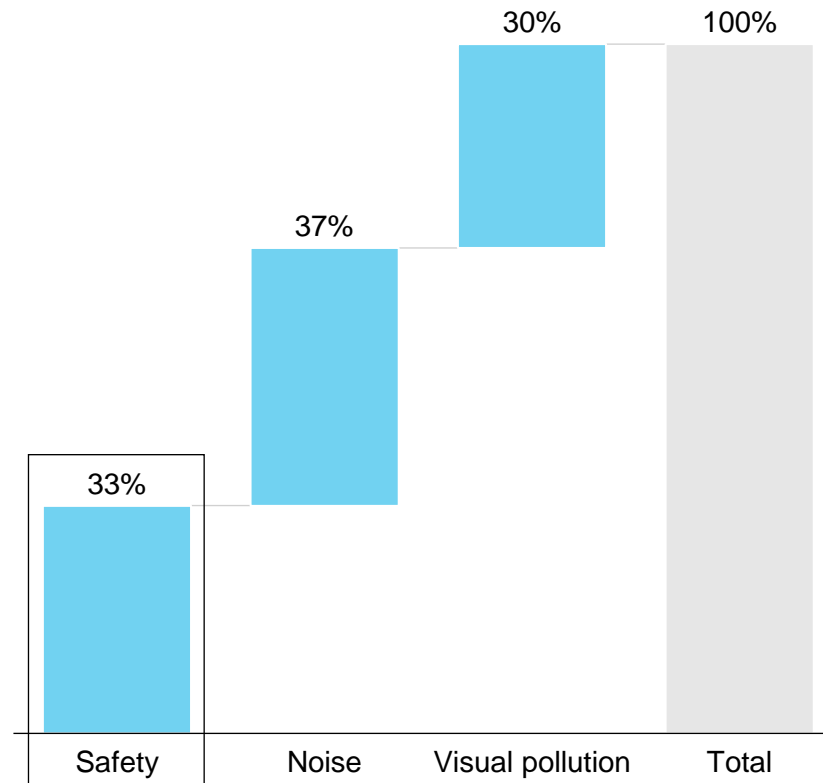
In **conjoint question C7**, participants are asked to make **trade-offs** between **concerning factors safety, noise and visual pollution**

In each round, a participant is shown 3 different scenarios, each characterised by a safety level, a noise level and a visual pollution level

Each participant goes through 8 trade-off rounds

The preference per participant is captured and **relative importances¹** per concerning factor are calculated

Importances of concerning factors for whole sample correspond to average of importances on participant level



Safety has less influence as before with only 33% of importance (versus 40% in drone delivery use case)

Possibly because, on the one hand, respondents assume sufficiently high safety standard for passenger transport anyway, and, on the other hand, underestimate the chances of ever boarding one as a passenger themselves

Noise therefore moves to first place, but has same importance as in drone delivery use case of 37%

Potentially, people have unconscious beliefs about the noise of air taxis

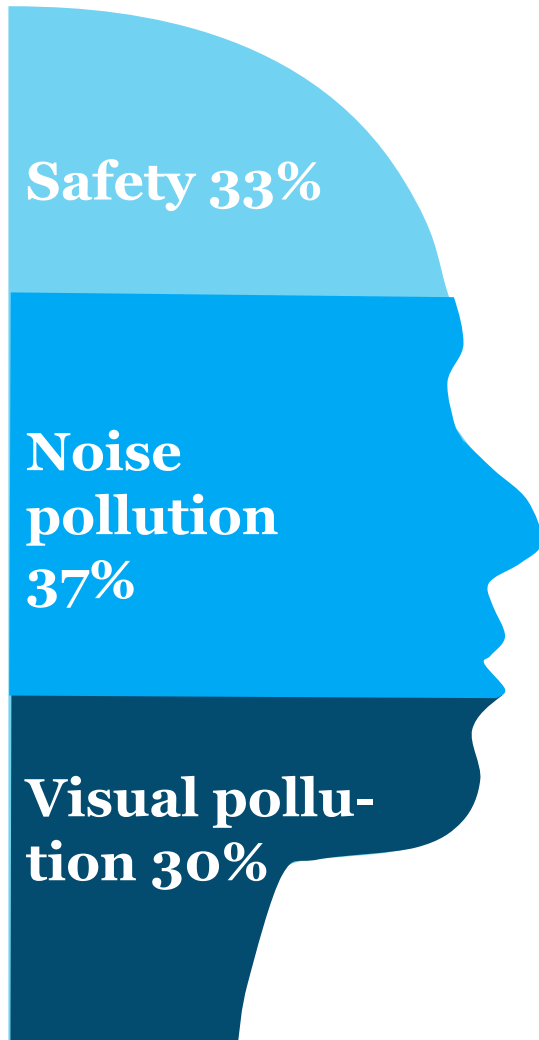
Visual pollution has significantly **higher importance** with 30% (versus 23% in drone delivery use case), hence draws almost equal with the other concerning factors

In sum, all factors rated as similarly important, giving a **less differentiated result**

1. Entity to measure a factor's influence on the decision of a participant

Source: EASA UAM social acceptance survey questions C7. Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. C8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

C7.C8. Trade-off analysis between safety, noise and visual pollution for air taxis (4/9)



How to read the results

An average survey participant would spend 100 units of efforts or 100 hours of working, or simply € 100 to arrive to the best possible result, weighing out pros and cons in factors safety, noise and visual pollution as such:

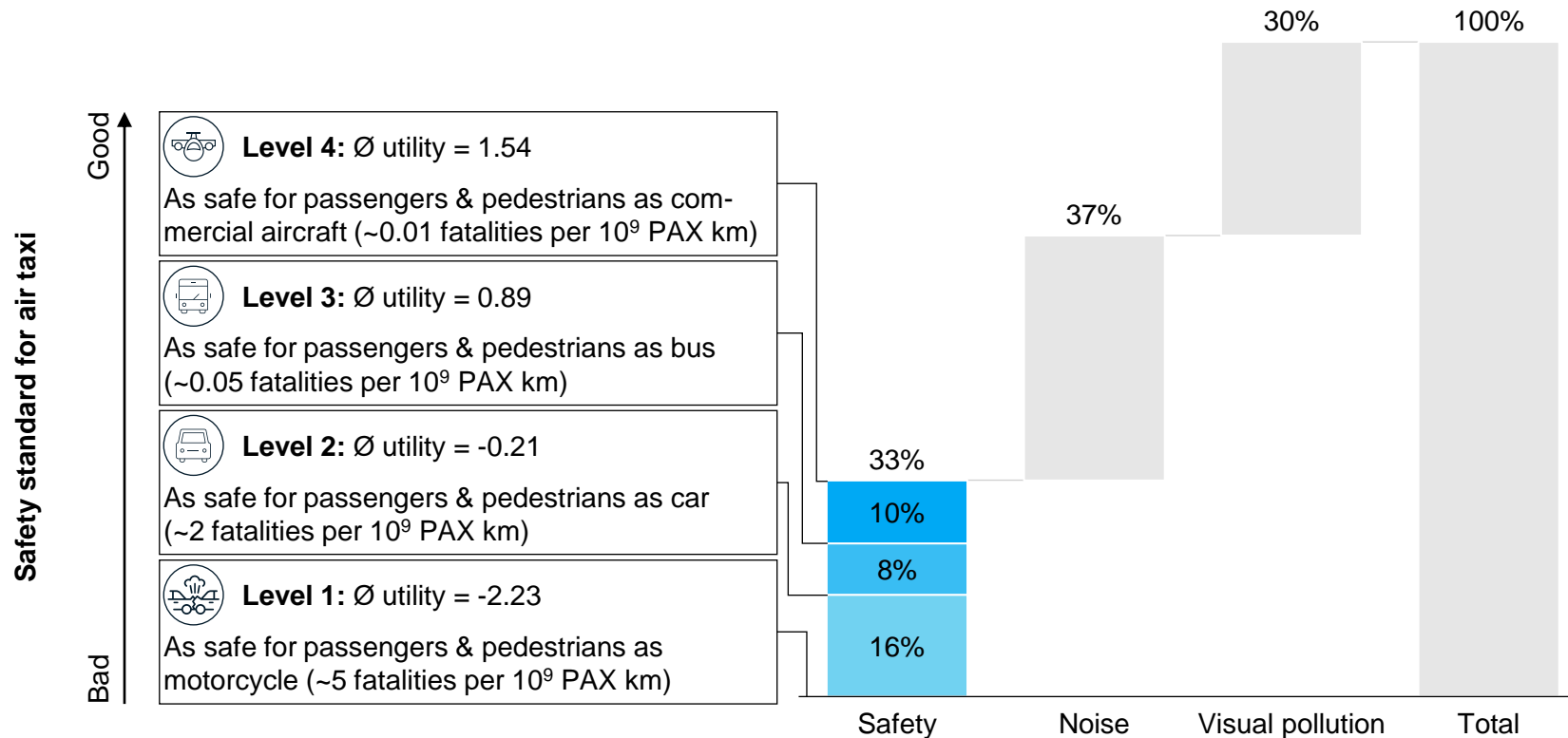
- **33% on better safety**
- **37% on noise reduction**
- **30% on capping visual pollution**

C7. Trade-off analysis between safety, noise and visual pollution for air taxis – deep dive on safety (5/9)

■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

Looking at safety, greatest share caught by setting safety for air taxis to standard of cars, but truly positive influence only achieved by higher levels

4 standards were identified to distinguish safety levels; utilities¹ of safety levels are used to derive relative effect achieved by improving from one level to next best, called importance²



Distribution of relative importances between levels similar to drone delivery use case

Safety level 1 (safety standard similar to motorcycle) has **very adverse influence** on participants' decisions

Level 2 (similar to car) has **slightly negative influence**

Level 3 (similar to bus) first level with **positive influence**

Level 4 (similar to commercial aircraft) has strongly **positive influence**

Easiest lever to catch biggest share of total importance, with 16% of relative importance, is **improving safety from level 1 to level 2** (similar safety standard as car)

Two subsequent jumps are less pronounced, but not negligible at all; **setting safety to level 3 or 4** (achieving safety standard similar to aircraft) **would further positively influence acceptance rate**

1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance
 2. Entity to measure a factor's influence on the decision of a participant; as calculated on participant level and then taken to the average, spans between utilities and respective importances do not match

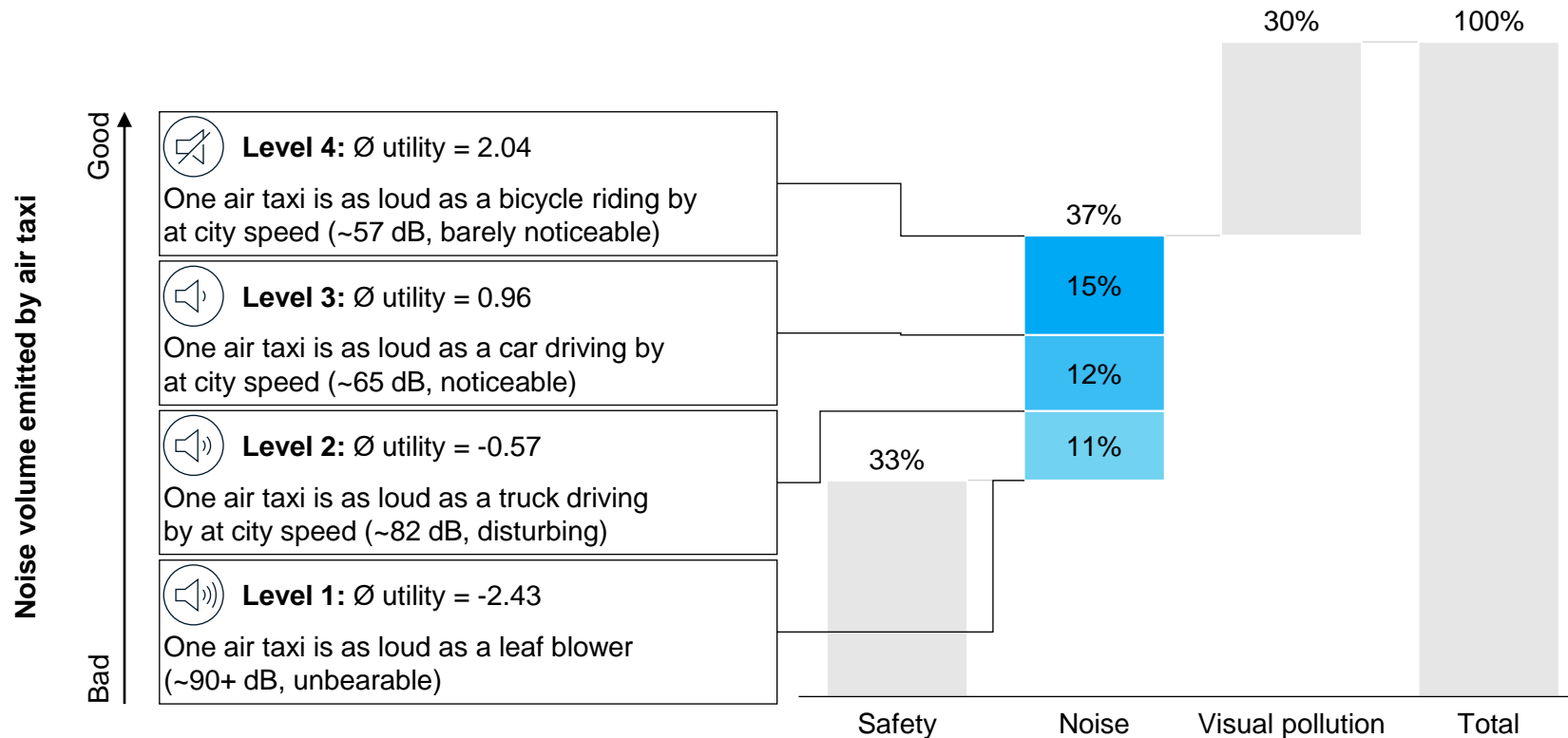
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C7. Trade-off analysis between safety, noise and visual pollution for air taxis – deep dive on noise (6/9)

■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

Looking at noise, again acceptance harder to catch due to ascending relative importances; but noise levels for air taxis comparable to cars potentially suffice

4 relatable volumes were identified to distinguish noise levels; utilities¹ of noise levels are used to derive relative effect achieved by improving from one level to next best, called importance²



Distribution of relative importances between levels similar to drone delivery use case

Noise level 1 (similar to leaf blower) has **highly adverse influence** on participants' decisions

Level 2 (similar to truck) still has **some adverse effect**

Level 3 (similar to car) is first level to have **positive, quite high influence**

Level 4 (similar to bicycle) has **strong positive influence**

Greatest lever to positively influence decisions, with 15% of relative importance, attributable to **improving noise from level 3 to 4** (achieving volumes similar to bicycles), i.e. quite late in the sequence

Whether volumes comparable to bicycles are actually realistic for air taxis, thus optimal from a cost-benefit perspective, is questionable; **level 3** (noise volumes comparable to cars) **would suffice to achieve positive nudge**

1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance
 2. Entity to measure a factor's influence on the decision of a participant; as calculated on participant level and then taken to the average, spans between utilities and respective importances do not match

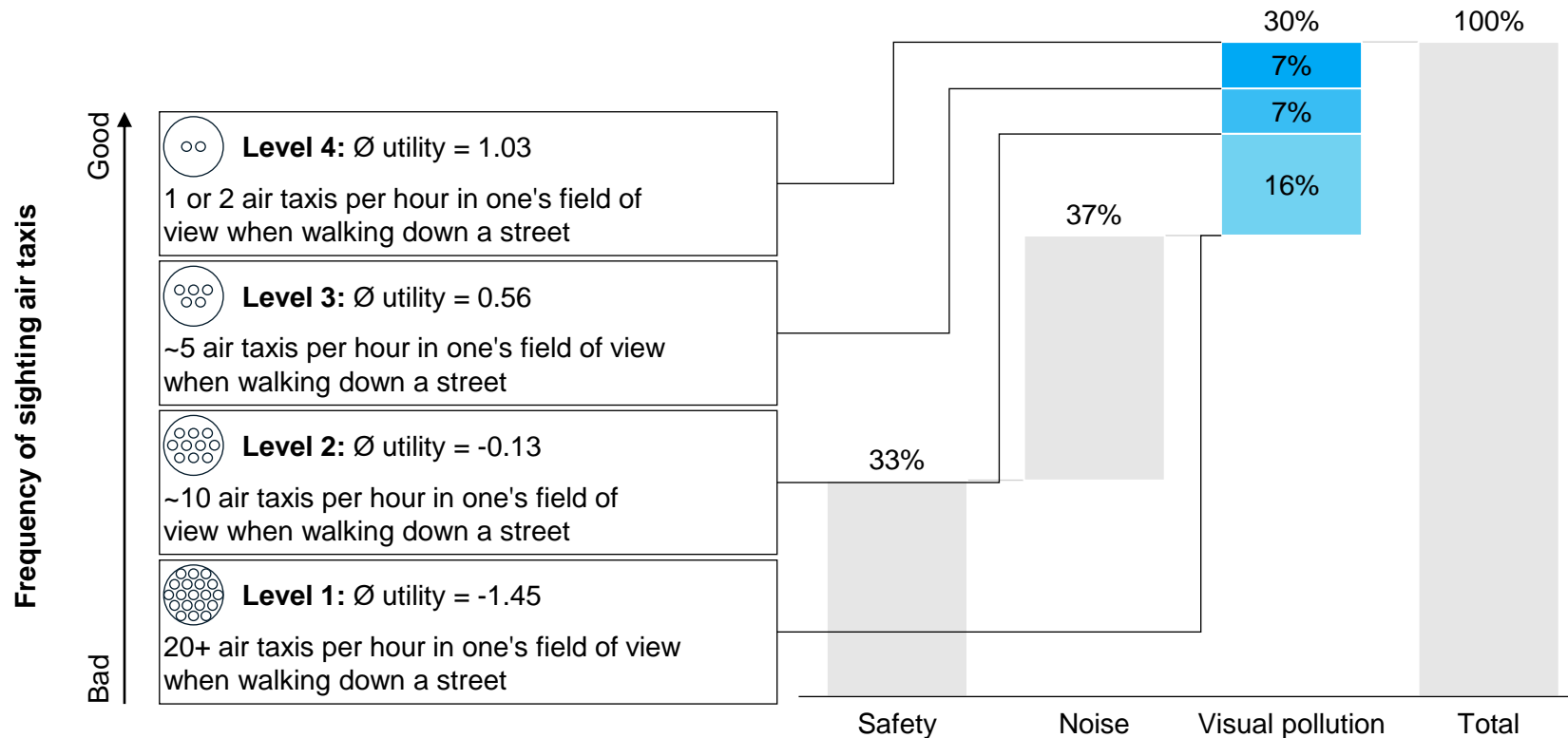
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C7. Trade-off analysis between safety, noise and visual pollution for air taxis – deep dive on visual pollution (7/9)

■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

Looking at visual pollution, easiest increase in acceptance achievable by moderately high number of air taxis in sight

4 frequencies for drone sightings were identified to distinguish levels of visual pollution; utilities¹ of visual levels are used to derive relative effect achieved by improving from one level to next best, called importance²



Distribution of relative importances between levels similar to drone delivery use case, but absolute numbers wider dispersed

Visual pollution level 1 (20+ drones per hour in sight) has **adverse influence** on participants' decisions

Level 2 (~10 drones) has **near no influence**

Levels 3 and 4 (~5 drones and 1 or 2 drones) have **positive influence**

Greatest lever to positively influence decisions, with 16% of relative importance, attributable to **improving visual pollution from level 1 to 2** (capping at 10 air taxis in sight), hence **easiest increase in acceptance**

Two subsequent jumps are less pronounced; but **setting safety to level 3 or 4** (as few as 1 or 2 air taxis in sight) **would still positively influence acceptance rate**

1. Number in [-3; 3], evaluated at participant level; positive means positive influence on decision, and vice versa; degree of influence is absolute value; proxy for acceptance
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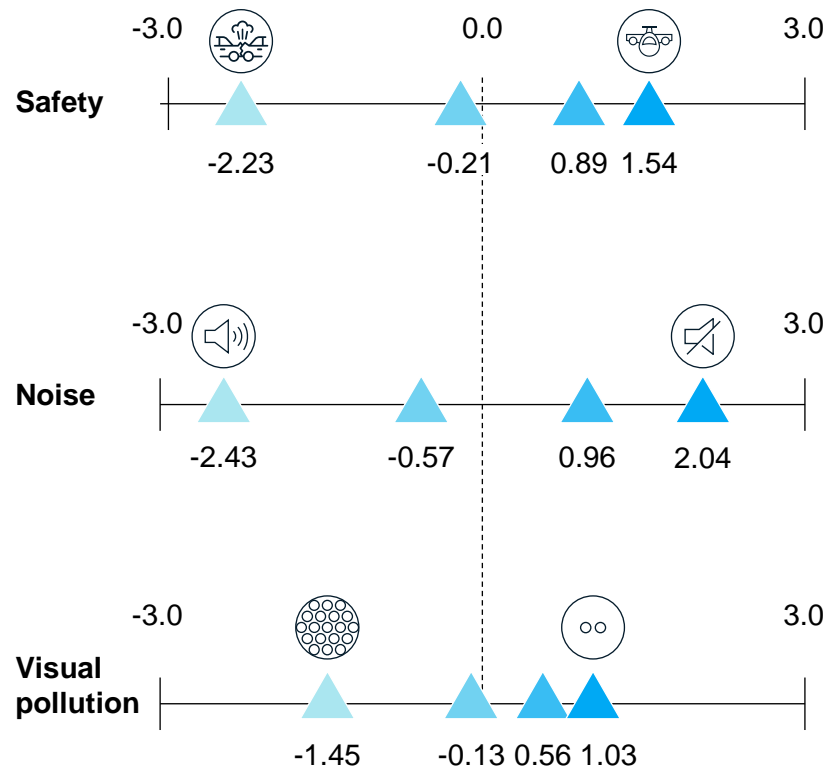
Source: EASA UAM social acceptance survey questions C7. Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. C8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

C7. Trade-off analysis between safety, noise and visual pollution for air taxis (8/9)

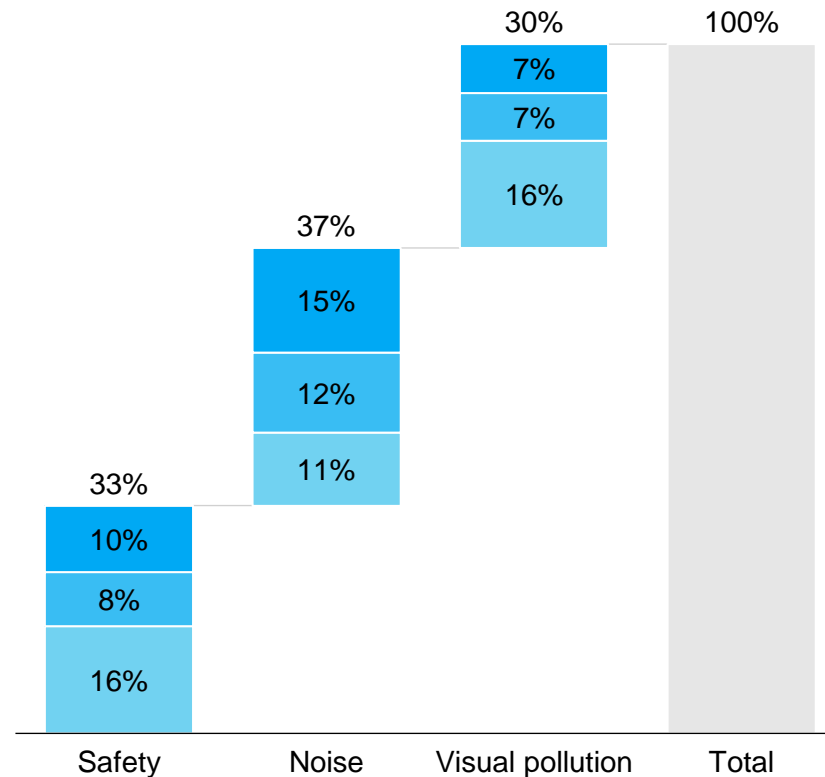
▲ Level 1 ▲ Level 2 ▲ Level 3 ▲ Level 4 ■ Importance of difference between level 1 and 2 ■ Importance of difference between level 2 and 3 ■ Importance of difference between level 3 and 4 ■ Sum

In sum, again fairly high relative acceptance catchable by realistic safety and visual pollution levels, but greatest increase in noise level hard to implement

Mean utilities¹ for safety, noise and visual pollution



Mean importances² of improving from lower level to next higher



Safety

- Greatest lever to positively influence acceptance is setting safety standard to that of cars (level 2)
- Higher safety standards further positively influence acceptance

Noise

- Greatest lever is capping noise volumes at decibels comparable to bicycles (level 4), but hardly realistic
- Volumes comparable to cars (level 3) would suffice to achieve positive nudge

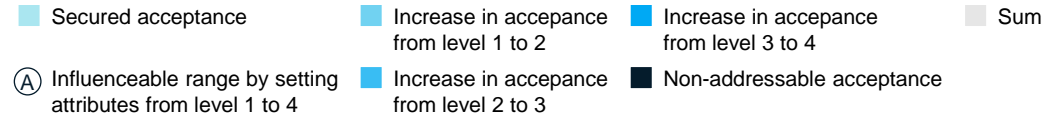
Visual pollution

- Greatest lever is restricting number of conceivable air taxis at moderately high number (~10 per hour within sight)
- Restricting the number further would extend acceptance

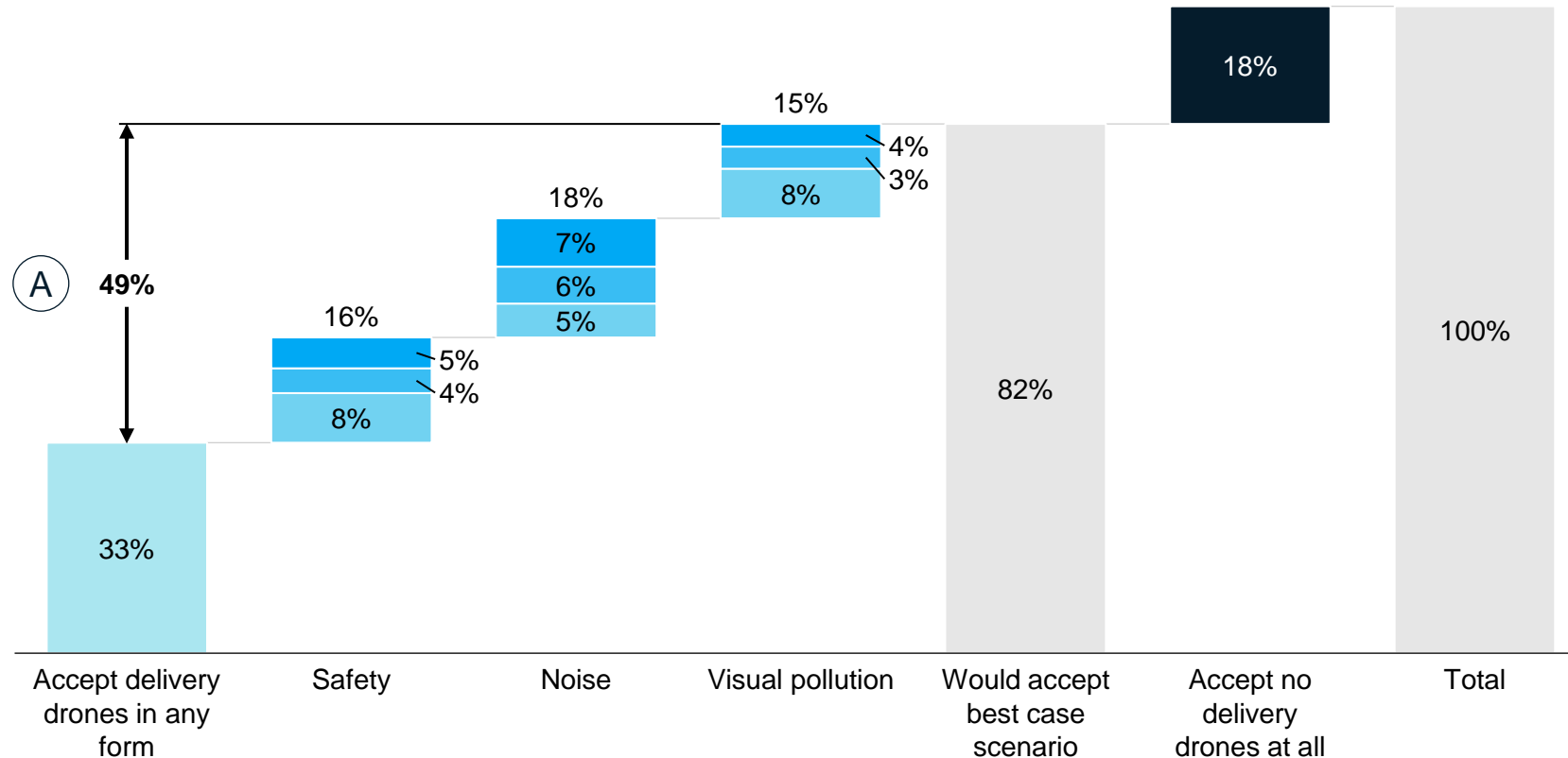
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Source: EASA UAM social acceptance survey questions C7. Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. C8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

C7.C8. Trade-off analysis between safety, noise and visual pollution for air taxis (9/9)



Results were normed to the influenceable range between “all accepters” and “all rejecters” to extrapolate realistic acceptance rates



Conjoint analysis comes with drawback of forcing participants to choose a scenario

In order to ensure a realistic assessment of expected acceptance rates, **results** are **normed back to influenceable range**

Figures may be used to assess different scenarios for regulation; however, survey participants are not expert in regulation efforts and may have misleading expectations (too low and too high); answers are always a snapshot

Source: EASA UAM social acceptance survey questions C7. Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown. C8. Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

Key results

Full length evaluation

- **Quantitative survey**

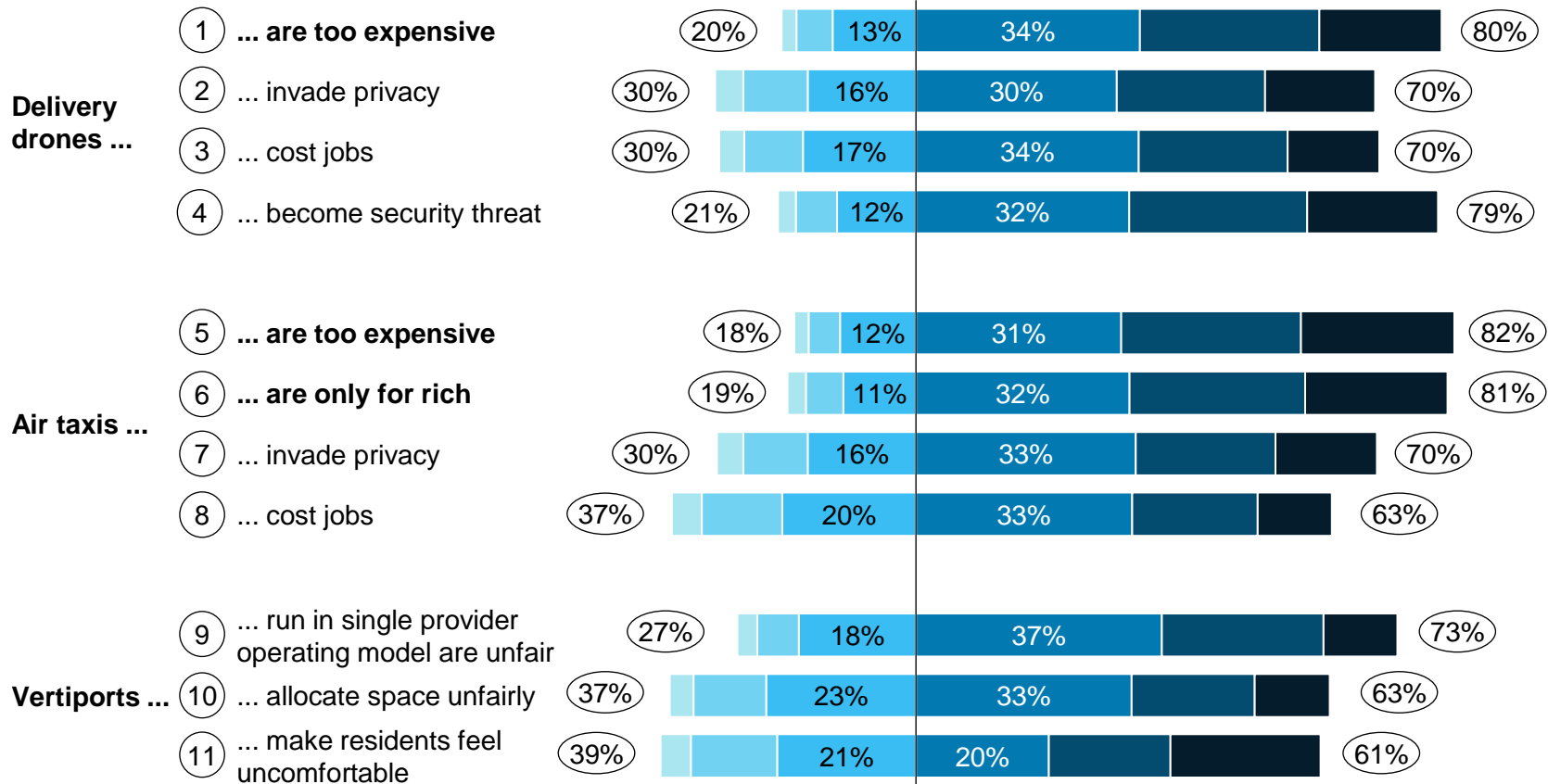
- Methodology
 - General perception
 - Use cases
 - Benefits
 - **Concerns**
 - » B3.C4. Level of comfort with manned and unmanned vehicles
 - » B4.B5. Concerns in drone delivery use case
 - » C5.C6. Concerns in air taxi use case
 - » C11.C12. Concerns regarding vertiports
 - » B9.C9. Environmental concerns
 - » D4. Introduction of an eco-label
 - » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
 - » **B10.C10. Negative assumptions about UAM**
 - » D2. Trust in UAM security and cybersecurity
 - Perception towards regulators
- Qualitative survey
 - Evaluation of noise acceptance tests



B10.C10. Response rates for negative statements related to UAM – overall (1/3)

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

Affordability is seen as the largest concern among the selected concerns presented to participants



Approval rates for different statements related to different concerns are high

However **results** should be **interpreted carefully**: type of question creates agreement bias, since **no trade-off has to be made** (e.g., no ranking) leading participants to be more conservative in answers

Price is seen as a **major concern** both for **delivery drones** and **air taxis**

Security threats and **privacy** is perceived **similarly high**

Participants are **more concerned** that **drone delivery** will cause job loss than air taxis

Concerns related to **vertiports** are **seen as slightly less critical**

Source: EASA UAM social acceptance survey questions B10. To what extent do you agree with the following statements about drone delivery? Please rate how much you agree or disagree with each of the following statements. C10. To what extent do you agree with the following statements about aerial vehicles? Please rate how much you agree or disagree with each of the following statements.

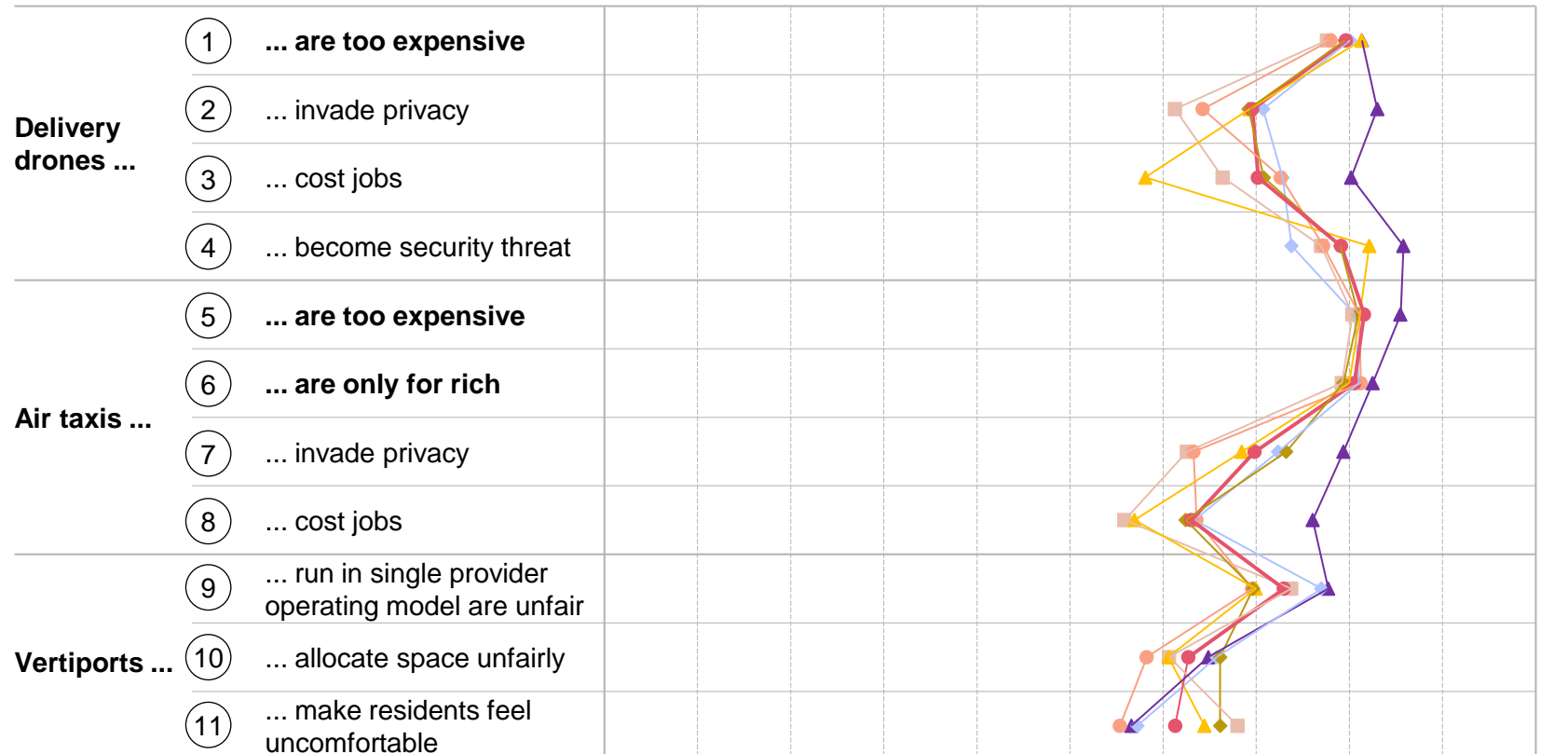
B10.C10. Response rates for negative statements related to UAM – by city (2/3)

① Sequence number ● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Affordability is seen as the largest concern among the selected concerns presented to participants

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Overall, cities aligned on statements

But **Barcelona with higher approval rates throughout statements**, except regarding allocation of inner-city space to vertiports and level of comfort for residents living close to vertiports

On the other hand, but **less pronounced, Öresund and Hamburg with lower approval rates** for negative statements

B10.C10. Response rates for negative statements related to UAM – overall (1/3)

Key take-aways

All statements with quite high approval rates due to agreement bias of question type

Agreement with different **negative statements** related to different concerns are **high**

However results should be **interpreted carefully**: this type of question creates **agreement bias**, since no trade-off has to be made (e.g., no ranking) leading participants to be more conservative in answers

This is why conjoint was chosen foresightedly, as respondents required to make trade-offs between concerns

Statements addressing affordability of services with highest approval rates

Price is seen as a **major concern both for delivery drones and air taxis**

Cities aligned, but Barcelona consistently with higher approval

Cities well aligned overall

Barcelona with higher approval rates throughout statements, except regarding allocation of inner-city space to vertiports and level of comfort for residents living close to vertiports

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- **Concerns**
 - » B3.C4. Level of comfort with manned and unmanned vehicles
 - » B4.B5. Concerns in drone delivery use case
 - » C5.C6. Concerns in air taxi use case
 - » C11.C12. Concerns regarding vertiports
 - » B9.C9. Environmental concerns
 - » D4. Introduction of an eco-label
 - » B7.B8.C7.C8. Trade-off analysis between safety, noise and visual pollution levels
 - » B10.C10. Negative assumptions about UAM

- » **D2. Trust in UAM security and cybersecurity**

- Perception towards regulators

- Qualitative survey
- Evaluation of noise acceptance tests

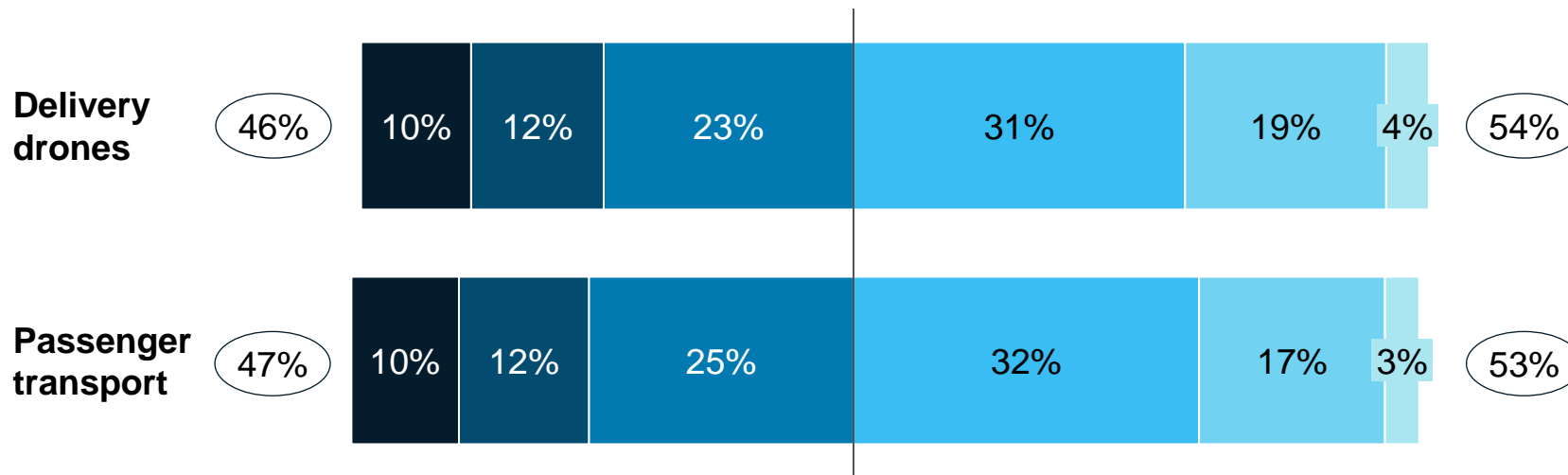


D2. Trust levels in VTOL technology incl. security and cybersecurity – overall (1/3)

(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

(absolute %, +/- difference to avg % in total)

Trust levels show similar trends for drones and passenger transport



Only **slightly more than half** of respondents with **trust in UAM aircraft systems**

Very similar results for drones and air taxis (~53%)

Trust levels decrease with age and are higher for men than for women

- More trusted by **men** (~+7%)
- Less trusted by **age group 65-75** (~-8%) and **women** (~-7%)

Defined subgroups against introduction of UAM with very low trust levels

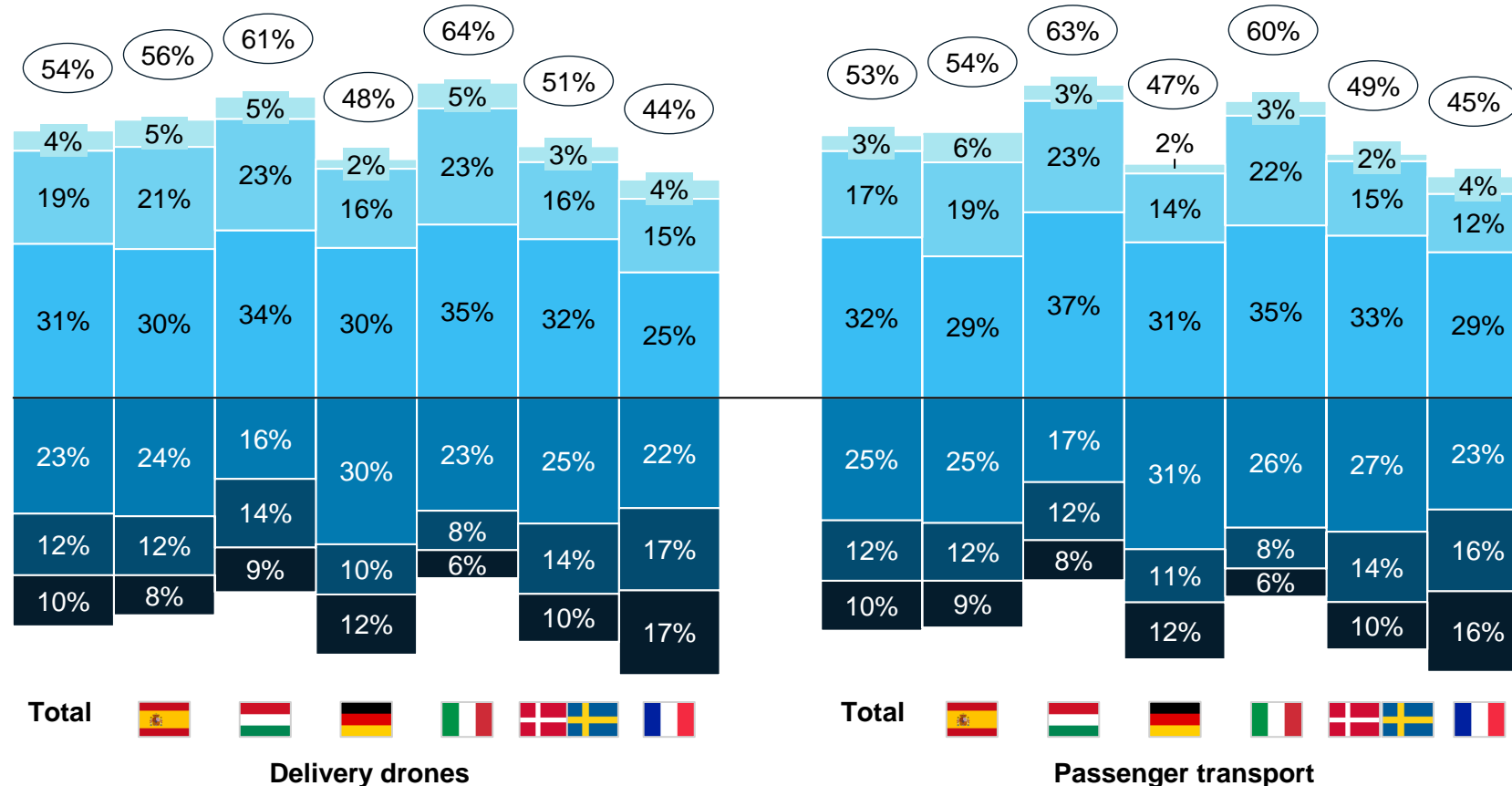
- Delivery drone usage rejecters, air taxi usage rejecters, UAM usage rejecters, digital laggards with **-16% to -27% less trust**

D2. Trust levels in VTOL technology incl. security and cybersecurity – by city (2/3)

(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

(absolute %, +/- difference to avg % in total)

Overall Budapest and Milan show higher trust whereas Germany and France indicate lower trust



Results per city always close for drones and air taxis

Highest trust levels in Milan (+10% for drones, +7% for air taxis) and Budapest (+7%, +10%)

Lowest trust levels to be found in Paris (-10% for delivery drones, -8% for air taxis)

D2. Trust levels in VTOL technology incl. security and cybersecurity (3/3)

(+/- difference to avg % in total for delivery drones, +/- difference to avg % in total for air taxis)

Key take-aways

Trust levels in delivery drones and air taxis just above 50%

Only slightly more than half of respondents indicate **trust in UAM aircraft systems**

Trust levels **increase with age** and are **higher for men than for women**

- More trusted by men (~+7%)
- Less trusted by women (~-7%), age group 65-75 (~-8%)

Defined **subgroups against introduction of UAM** with **very low trust levels**

Trust levels do not differ between drones and air taxis

Very similar results for drones and air taxis

Some small local differences in trust observable

Results per city always close for drones and air taxis

Highest trust levels in **Milan** (+10% for drones, +7% for air taxis) and **Budapest** (+7%, +10%)

Lowest trust level in **Paris** (-10%, -8%)

Key results

Full length evaluation

- **Quantitative survey**

- Methodology
- General perception
- Use cases
- Benefits
- Concerns

- **Perception towards regulators**

- » **D1. Trust levels in regulation authorities**

- » D3. Impact of regulation on trust levels

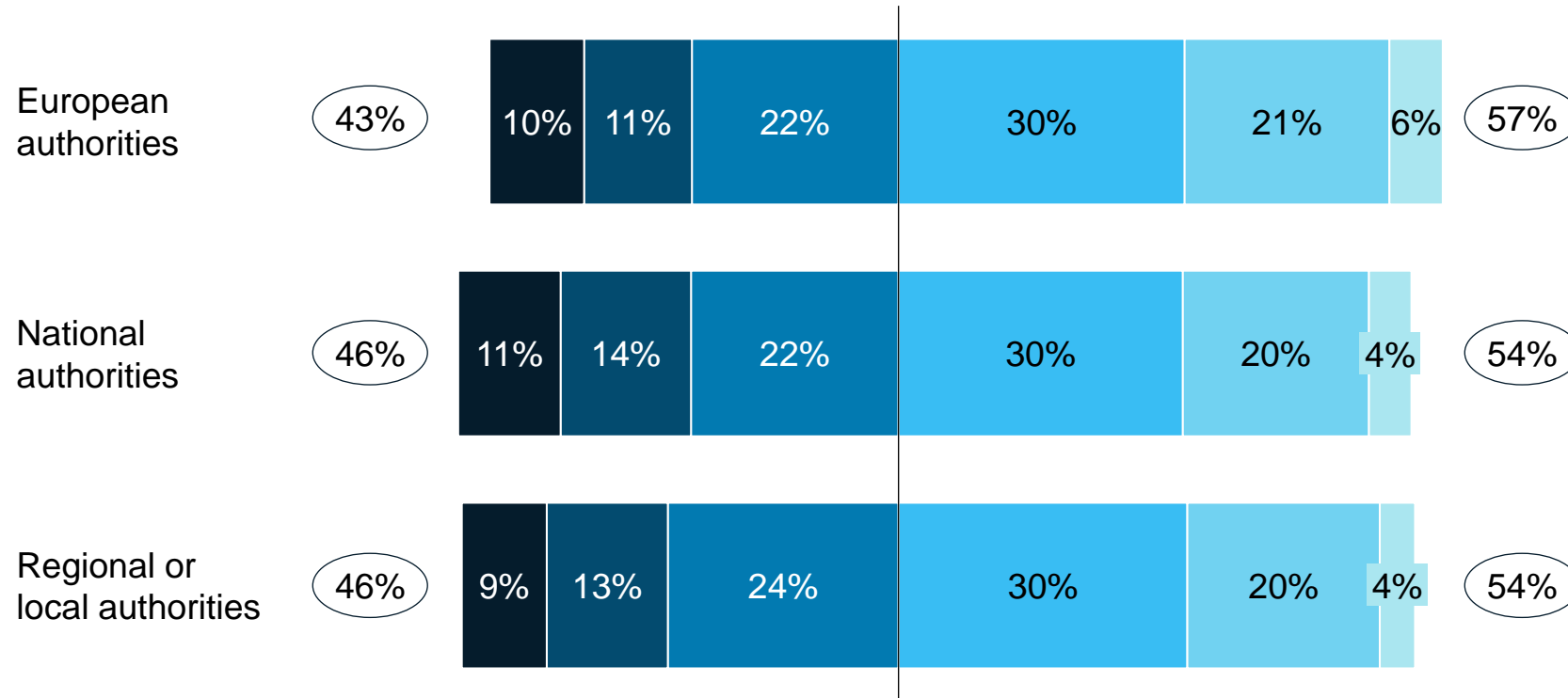
- Qualitative survey
- Evaluation of noise acceptance tests



D1. Trust levels in regulation authorities – overall (1/3)

(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

With ~55% trust levels in authorities are overall good, but could be better



(absolute %, +/- difference to avg % in total)

Positive trust levels in authorities on all levels

- **European authorities most trusted** (57%)
- **National and regional / local authorities slightly less** (54% both)

Higher (and lower) trust correlates with higher (or lower) acceptance of UAM

Minor deviations in demographic groups

Higher approval:

- **Age group 18-25** (+7% for European authorities)
- **High income group** (~+7% for national and regional / local authorities)

Lower approval:

- **Old age groups 55-75** (-7% for European authorities)
- **Age group 65-75** (~-6% national and regional / local authorities)
- **Singles** (-5% for European authorities)

Defined subgroups as expected

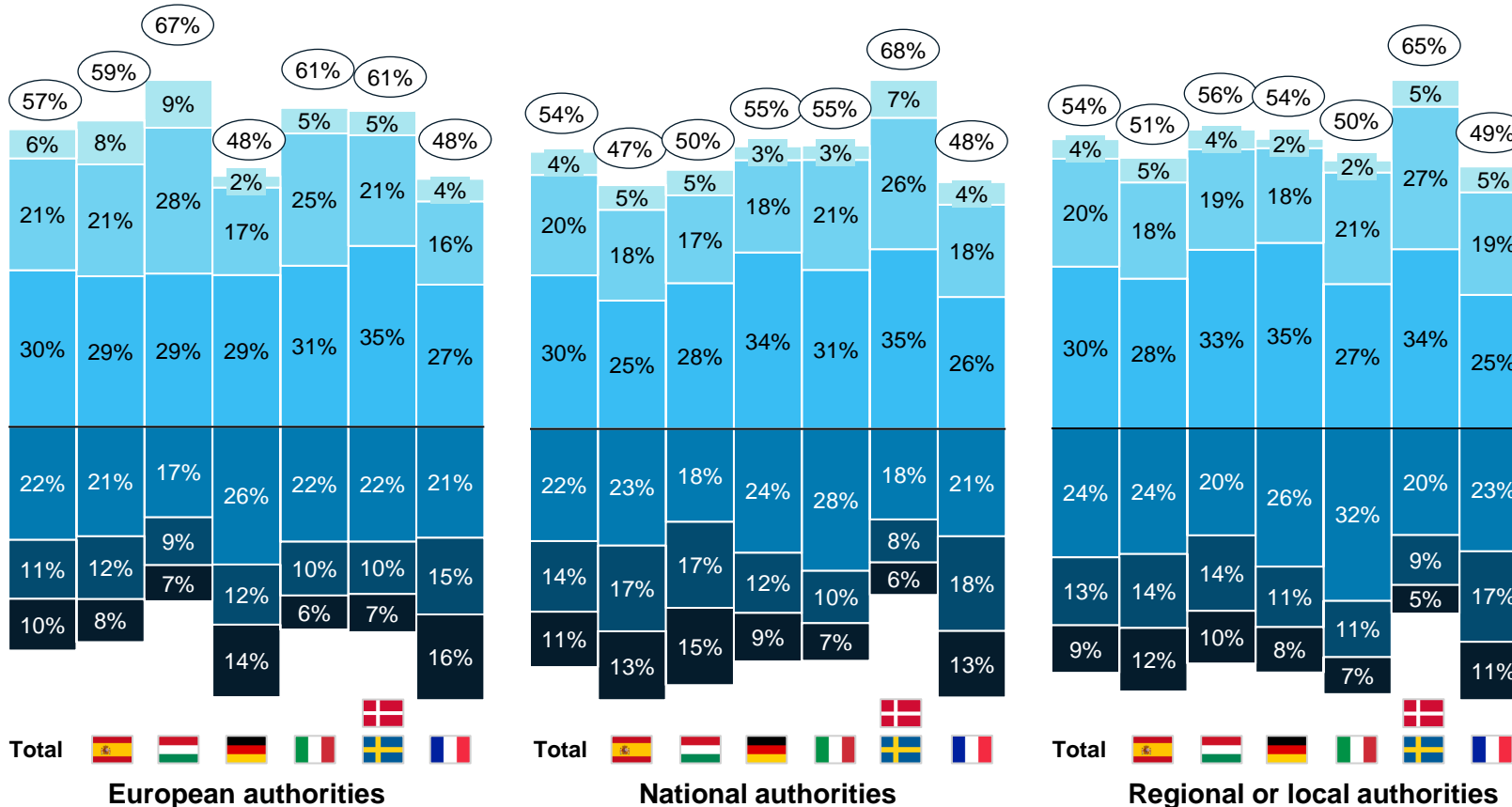
- **Pro UAM with higher trust levels** (+5% to +11%): Potential drone delivery users, potential air taxi users, potential UAM users, digital adopters, target groups for express delivery by drone and for airport shuttle
- **Counter UAM with lower trust levels** (-8% to -15%): Drone usage rejecters, air taxi usage rejecters, UAM usage rejecters, digital laggards

D1. Trust levels in regulation authorities – per city (2/3)

(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

(+/- difference to avg % in total)

Budapest with highest trust in European authorities, Öresund with higher trust in local and national authorities



Deviations more prominent on city level

Clear differentiation in trust levels for European regulation authority between cities

- Higher trust levels: Budapest (+10%)
- Lower trust levels: Hamburg (-9%), Paris (-9%)
- Close to average: Barcelona, Milan, Öresund

Trust levels for national and regional / local authorities almost always with similar results

- Öresund significantly higher for national (+14%) and regional / local authorities (+11%)
- Barcelona lower trust level in national authority (-7%), slightly lower for regional / local authority
- Paris lower trust levels for both national and regional / local authorities (~-5%)
- Close to average: Budapest, Hamburg, Milan

D1. Trust levels in regulation authorities – overall (3/3)

Key take-aways

Trust levels just above 50% for regulation authorities

Overall trust levels tend to be close

European regulation authority (57%) just on **first place**

National and regional / local regulation authorities (54%) share **second place**; the two tend to yield similar results across groups

UAM supporters with higher, opponents with lower trust levels, but no great deviations

Higher (and lower) trust correlates with higher (or lower) acceptance of UAM

- **Higher approval: age group 18-25** (+7% for European authorities), **high income group** (~+7% for national and regional / local authorities), and **defined pro UAM subgroups** potential drone delivery users, potential air taxi users, potential UAM users, digital adopters, target group for express delivery by drone, target group for airport shuttle (+5% to +11%)
 - **Lower approval: old age groups 55-75** (-7% for European authorities), **65-75** (~-6% national and regional / local authorities), **singles** (-5% for European authorities), and **defined counter UAM subgroups** drone usage rejecters, air taxi usage rejecters, UAM usage rejecters, digital laggards (-8% to -15%)
-

Some prominent deviations by city

Deviations more prominent on city level

Noteworthy positive deviations in Budapest (+10% for European authority), **Öresund** (+14% national authorities, +11% regional / local authorities)

Noteworthy negative deviations in Hamburg (-9% for European authority), **Paris** (-9% for European authority), **Barcelona** (-7% for national authority), **Paris** (-5% for both national and regional / local authorities)

Key results

Full length evaluation

- **Quantitative survey**
 - Methodology
 - General perception
 - Use cases
 - Benefits
 - Concerns
 - **Perception towards regulators**
 - » D1. Trust levels in regulation authorities
 - » **D3. Impact of regulation on trust levels**
- Qualitative survey
- Evaluation of noise acceptance tests

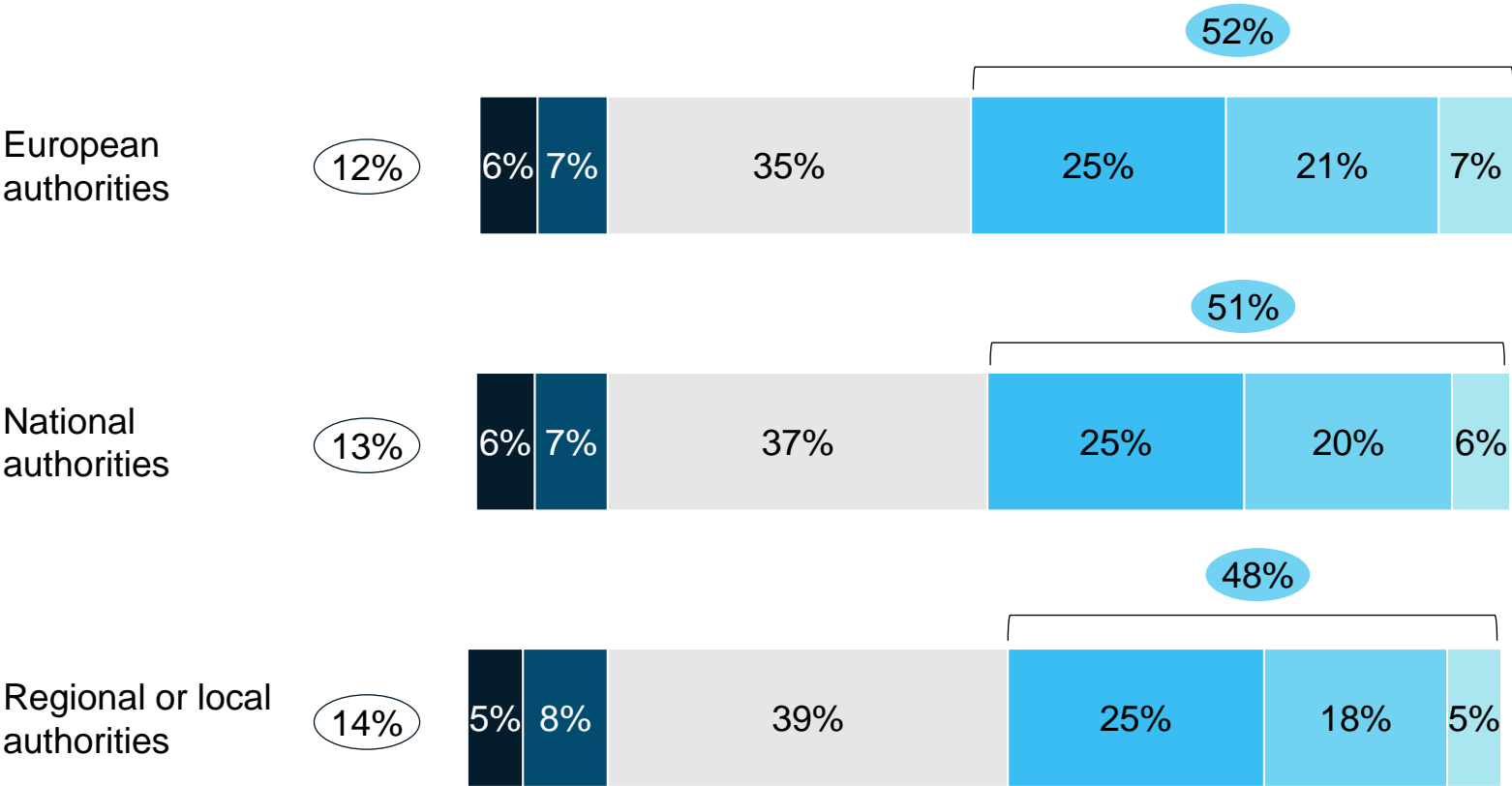


D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed (1/3)

X% Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot

(absolute %)

On average, 37% indicate cybersecurity regulations by authorities would not influence their trust



Similar results across authorities, from **European to local level**

Highest shares throughout authorities expect **trust levels to increase with regulation** (~50%)

Significant share of people think their **trust level will not change** due to regulation (~37%)

Trust levels to decrease expected by very few people (~13%)

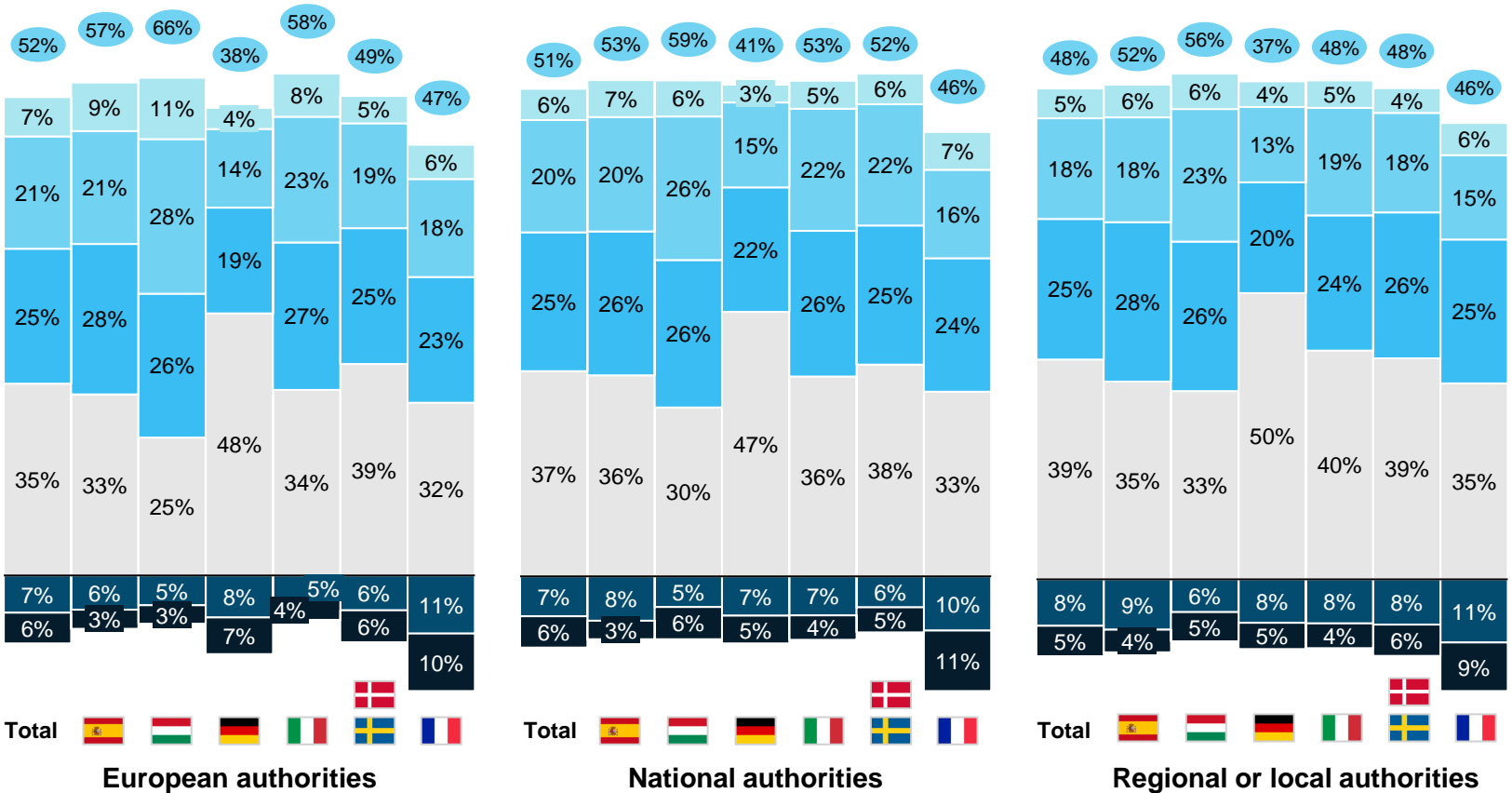
Source: EASA UAM social acceptance survey question D3. Would your trust increase if the following regulators were to develop regulations to manage cybersecurity risks (certification and operation of aerial vehicles)? Please select one answer per row.

D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed (2/3)

X% Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot

(+/- difference to avg % in total)

Paris with significantly lower impact on trust levels



Results very similar across cities

Paris with more people thinking their trust levels will decrease with regulation (~+8% throughout authorities)

Hamburg with higher share of respondents with trust levels expected to be unaffected by regulation (~+12% throughout authorities)

Source: EASA UAM social acceptance survey question D3. Would your trust increase if the following regulators were to develop regulations to manage cybersecurity risks (certification and operation of aerial vehicles)? Please select one answer per row.

D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed (3/3)

(+/- difference to avg % in total)

Key take-aways

No significant difference in impact on trust between local, national or European authorities

Share of **~50%** indicate **trust levels would increase** by regulation addressing cybersecurity
Similar results across authorities, from European to local level

Significant share of ~37% expect trust levels to be unaffected by regulation

Significant share of ~37% expect trust levels to be **unaffected by regulation**
Hamburg with higher share of respondents with trust levels expected to be unaffected by regulation (~+12% throughout authorities)

Results very close throughout authorities and cities

No significant difference in trust between local, national and European authorities

Participants seem to engage with the topic of the survey and express some interesting thoughts

Barcelona, Spain 



“**Jules Verne** was called a dreamer because of his futuristic books, but he was right.”

-- Participant (Barcelona)



“I would like to see these ideas **implemented in a proper and coherent way** and would fully support this project in that case.”

-- Participant (Barcelona)



“It is a very interesting survey, but it will need a lot of research and analysis to **ensure that the population is aware of it.**”

-- Participant (Barcelona)



“I agree with all the advancements, **as long as regulations are created for their use** and they are not used against the **health of the planet.**”

-- Participant (Barcelona)



“**Drones for medical security and forest protection**, that would be a quite reasonable thing, everything else is a whim. Passenger drones, I think, are only a thing for the rich and entrepreneurs, not for ordinary people.”

-- Participant (Barcelona)



Participants seem to engage with the topic of the survey and express some interesting thoughts

Budapest, Hungary 



“I think it would be a good idea to work **with the police** and make the right arrangements to set up a service so that if a crime is committed, the drone would get there sooner than the police. Also, the police could have immediate **access to the recordings**. I am in favour to spend public money on this.”

-- Participant (Budapest)



“I think it’s a very big idea: there’s a future in this. I am in favour of all innovation, **with proper regulation**. I believe that it would solve a lot of issues in Budapest and **create new jobs**. It may be a good **alternative to regional rail transport**, too.”

-- Participant (Budapest)



“I would like to envision drones for parcel delivery, although it would lead to a **significant reduction in jobs**.”

-- Participant (Budapest)



“In the case of air taxis, operation should be restricted to **robotic pilots** with the ability to **communicate** with each other in a **similar way to humans**, see <http://hal.elte.hu/drones/> ”

-- Participant (Budapest)



Participants seem to engage with the topic of the survey and express some interesting thoughts

Hamburg, Germany 



“Thank you very much! **The first interesting survey on new technologies.** I will keep myself informed on this topic.”

-- Participant (Hamburg)



“If, in the course of the next decade, most people start using the air as a means of transport, **city and local governments may save substantial money for repairing roads**, probably involving many hundreds of billions of euros; anything but peanuts.”

-- Participant (Hamburg)



“I would be **much more interested in owning my own** air vehicle than using it as a customer of an air taxi service.”

-- Participant (Hamburg)



“The question is **whether drones can offer a higher benefit at a lower cost of use compared to existing infrastructure** - or not. For me personally, there can't be much improvement: Delivery services and parcel services hand over all my purchases from online shopping at the front door. Car sharing in combination with ground-based public transport is perfectly sufficient for me in terms of cost and time - living in the city. Medicopters are also available for medical emergencies. All in all, I see it as **a luxury problem**, and I conclusively deem it **irrelevant**.”

-- Participant (Hamburg)



Participants seem to engage with the topic of the survey and express some interesting thoughts

Milan, Italy



“It was an exciting survey. I loved it. **I really felt transported to the year 2030.** I hope I'm still alive because I would like to see a sky full of aircrafts and drones. Beautiful!”

-- Participant (Milan)



“For me the greatest danger is the **lack of overhead 'rails'**: This makes **accidents between urban aircraft, but also crashes into buildings, very likely.**”

-- Participant (Milan)



“This is an interesting prospect; however, it does not take into account the fact that, **especially in large cities, there are many stretched cables** that would make it difficult for the vehicles to land, especially if it is remote-controlled.”

-- Participant (Milan)



“This prospect is worthy of the best **dystopias**, a real **nightmare!** I sincerely hope it meets with as much opposition as possible! Instead of solving the existing problems in an intelligent way, we are going to infest one of the few free and clean spaces! Inacceptable! **To be boycotted** by all means!”

-- Participant (Milan)



Participants seem to engage with the topic of the survey and express some interesting thoughts

Öresund, Nordics  



“Please make it possible to fly within your rules soon. And re-evaluate which **drone schools / teachers** are qualified for teaching.”

-- Participant (Öresund)



“If it is to be implemented, there should be a **network connecting all landing / docking stations** to provide additional coordination, maybe even human control if something goes wrong.”

-- Participant (Öresund)



“Not sure this is the best option to solve urban mobility issues. I am extremely concerned with **supply chain upstream activities**, i.e. sourcing of minerals which inevitably lead to

- Further exploitation of southern hemisphere
- Modern slavery
- Child labour
- Extremely high environmental impact at source

and **downstream activities**, i.e. reversed logistics for recovery of batteries, processing, recycling, reuse and rehabilitation of equipment).

I am doubtful that these solutions will benefit a large share of the population in order to have a positive environmental impact. I think that **dedicated and improved public transportation**, with improved vehicles and dedicated lanes for instance, would be best on a medium long run, whereas the solutions proposed only have a short-medium positive impact. What is needed is concerted transport management. See **ARAMIS project** designed for Paris, an EDF modular transport designed for Paris; but unfortunately, it never came to fruition.

-- Participant (Öresund)



Participants seem to engage with the topic of the survey and express some interesting thoughts

Paris, France



“I found this **survey very relevant**: I learned things I didn't know before I did this one. I highly recommend this survey to anyone interested in new technologies.”

-- Participant (Paris)



“It made me think of the movie **The 5th Element**.”

-- Participant (Paris)



“Whether we like it or not, the drones and flying taxis will arrive. But please make sure of the **security: reliable hardware (redundancy) and very difficult to hack (cybersecurity)**.”

-- Participant (Paris)



“Everything that is airborne is **useless**. Electric vehicles are **even more polluting** and emit **greenhouse gases**. We are already fighting against the extension of the airport of Roissy and the construction of new airports. We should **ameliorate the ground traffic** first. It's a huge mess. Only then we might think of urban air mobility. I suggest that manufacturers of flying vehicles develop their **batteries** a lot until they consume less material.”

-- Participant (Paris)



Key results

Full length evaluation

- Quantitative survey
- **Qualitative survey**
- Evaluation of noise acceptance tests



Qualitative survey – Summary of questions related to general attitude towards UAM

Stakeholders		
General attitude	Overall	The interviews confirmed that the level of information and engagement with the topic vary according to the existence of local pilot and demonstrator projects. Where there is no such project, the respondents shared a mostly positive attitude vis-à-vis the subject but had actually more questions than replies to the questionnaire
	Mayor and municipalities services	Municipalities appeared to have little information on UAM and had actually more questions than responses. They are however interested and ready to engage and prepare.
	Emergency response organisation	Local Emergency organisations are already involved in UAS, as part of their first response activities (fire-fighting on high buildings, transport of equipment, or to reach remote locations) and consider that drones improve emergency response. But emergency response organisations are also preparing for possible UAS/UAM accidents and need to update their protocols for intervention to take this risk into account. Finally, some emergency response organisations will have the responsibility to certify (eg. fire) the UAM ground infrastructure.
	Local airport, local ATC	The local aviation stakeholders (airport/ATC) are aware of UAM, generally support it and are involved in various pilot projects to increase their level of knowledge on smarter and greener mobility. They want to facilitate this new mobility. Airports see in UAM a business opportunity, e.g. in granting a concession for a vertiport on the airport area. They could play the role of integrators of all aspects of UAM (services to passengers, services to operators, ATC, infrastructure development, etc.)
	Local Urban and city planners	The local economic/urban planning authorities are interested in UAM from two perspectives: as local authorities, they may have a role in the future in the decision-making/authorisation related to the deployment of UAM, and because the UAM has the potential to foster the local ecosystem and bring new industrial perspectives.
	Local Chambers of commerce	The local Chambers of Commerce consulted are not involved in UAM so far and seem to have little information on this subject. They however see potential opportunities in this new form of mobility, for instance for delivery services or to complement their local industrial ecosystem or to provide easier access to/from airport. However, in general they see that it could trigger numerous questions, notably on impacts for the citizens, urban transport priorities and use of public space on the ground.
	Local environmental protection associations	Consulted stakeholders see positive aspects in UAM and emphasize that usage should be focused on use cases that matter to society. They all
	Local traffic and transport authority	Transport authorities are generally supportive and believe that UAM solutions could be used soon although it still feels like a futuristic topic. Some stakeholders were doubtful if these solutions will be suitable for mass transport
	Local Resident associations/ Real-estate owners	Resident associations were interested and positive – they see the value that UAM can bring to a certain neighborhood, such as better connectivity and improved delivery options

Qualitative survey – Summary of questions related to perceived benefits

Stakeholders		
Benefits	Mayor and municipalities services	Municipalities have a positive general attitude towards UAM, balanced however by questions and concerns. They see that it is appealing from an individual end-user point of view and that it could be useful for some specific categories of users and for some transport cases (inter-city, medical/emergency, or cargo where other solutions are costly or insufficient).
	Emergency response organisation	Emergency response organisations consider that UAM will be useful for the transport of heavy cargo or of first aiders to a disaster place
	Local airport, local ATC	Local aviation stakeholders (ATC/airports) see in UAM some benefits for the reduction of local emissions, the creation of jobs, new industrial developments, faster connection to some specific destinations (e.g., city centre-airport and city to sub-urban areas), time saving for passenger in highly congested cities. UAM will help the aviation sector fight the ‘flight bashing’ and is a chance for Europe to show its capacity to innovate and lead transition to future energy and mobility. They underline the fact that the Covid crisis may be changing the way people will live, work and move, this evolution should be monitored. For instance the sharp increase of the e-commerce deliveries may require new mobility plans in the cities.
	Local Urban and city planners	The local Chambers of Commerce see some benefits in the deployment of UAM in their cities, with regard to transport effectiveness, emergency intervention, or to solve specific ad hoc transport issues (e.g., for events). They could see also an opportunity to become leaders in this sector.
	Local Chambers of commerce	The local urban planning authorities consider that the “public interest” should be the driver for the deployment of UAM and lead to the prioritization of use cases (medical coming first).
	Local environmental protection associations	Local environmental protection NGOs see in UAM an opportunity to alleviate congestion on the ground and to provide fast transportation with lower noise levels than helicopters, in cases of public interest, such as medical/emergency response. The noise of road ambulances could thus also be partly suppressed.
	Local traffic and transport authority	Local transport authorities see some benefits in UAM to address congestion on the ground, improve business travel, offer faster point to point travel (e.g. even faster than a motorbike), useful for instance for medical emergency cases. They also see UAM as an opportunity to foster and showcase regional/local innovation and to support and offer new perspective to the aviation industry. UAM could replace some transport currently provided by helicopters, but in a less noisy manner.
	Local Resident associations/ Real-estate owners	Local residents associations have a positive attitude vis-à-vis UAM and appear to try and test. They see in UAM the opportunity to complement multimodality projects, in particular e-mobility projects (e.g., synergies with charging stations for e-cars ?), for the benefit of citizens and residents. UAM would provide faster and more comfortable transport from A to B, allowing to save time on highly congested journeys, notably from city centre to airport and to sub-urban areas, for commuters. Medical/emergency use cases would also be welcome.

Qualitative survey – Summary of questions related to perceived concerns (1/2)

Category	Summary
Concerns	<p>Mayor and municipalities services</p> <p>Municipalities are concerned by the lack of public space, particularly in European cities, which have old historic centres. There is a strong competition for public space. In this regard, the conditions for the deployment of UAM in European cities may differ from that of other countries (eg USA). They are also concerned by safety aspects (how to avoid that the aircraft 'falls down' on the citizens), and by noise aspects, wondering if some 'noise corridors' would have to be defined.</p>
	<p>Emergency response organisation</p> <p>Local Emergency response organisations are usually not subject to complaints or criticism by citizens. Most probably the initial deployment of UAM medical/emergency use cases would facilitate citizens' acceptance. However, they fear that this mode of transport may be subject to market driven prices and not be affordable to the mass citizens. The other main concerns relate to safety and security, as well as the ban on overfly over large parts of the cities. This last point raises the question of whether there is actually a possibility to deploy UAM in all cities and whether there is a sufficient market in smaller cities.</p>
	<p>Local airport, local ATC</p> <p>Local aviation stakeholders (ATC/airports) see safety as the main concern, even though UAS are safer than manned aviation (less human errors). An interesting benchmark could be done with helicopters. No trade-off should be allowed between concerns, safety is paramount. Security is another key concern as it impacts safety. Local aviation stakeholders (ATC/airports) see the coordination between UTM and ATM as a major challenge, notably the integration/segregation aspects, as helicopters, for instance can fly at very different altitudes. Currently, the drones will fly only in segregated areas, but if their traffic increases, they may hamper the normal traffic. It is not yet clear for local ATC which services it will have to provide to drones and to future UAM traffic. For this reason, an automatic communication between drone and services (on the model of ADSB) would be useful. Another challenge for them is the already existing air and ground congestion at international airports which will make it difficult to accommodate newcomers. The development of vertiports in inner cities will require a lot of space and investments and may be criticised as diverting public money from other infrastructures of public interest (hospitals, public transport, etc.). The link with other modes of transport (multi-modality) and connectivity will also be a challenge. The impact on wild life is already mitigated today with specific systems onboard of drones.</p>
	<p>Local Urban and city planners</p> <p>The greatest concerns of local urban planning authorities relate to the use of public space as a scarce common resource, with competition from other modes of transport and the risks of transposing congestion in the air. They also see security as a concern. They fear that they would not be properly associated to the decisions related to the introduction of UAM at local level: this is a strong concern and expectation. Indeed, regulations need to integrate local conditions, and municipalities are best placed to know and decide on implementation. Finally, they have doubts on public acceptance for use cases that do benefit only certain categories of users and are not in the general public interest. People can be happy with the advantages, until they are negatively impacted by noise or privacy intrusion.</p>

Qualitative survey – Summary of questions related to perceived concerns (2/2)

Category	Summary
Concerns	<p>Local Chambers of commerce</p> <p>Local Chambers of Commerce are however concerned by safety, security/cyber-security, noise. The costs of the future service also trigger questions on their affordability for the majority of the citizens, which therefore would make it a niche solution just adding complexity to the system, instead of a service in the public interest. In particular, the use of scarce public space on the ground may create competition with public transport services which serve a higher number of citizens. Many European cities are looking at the “15 min walking approach” and respondents were wondering whether UAM would at all bring some added value in this context. As the Uber case demonstrated, resistance may be expected from current competitors (e.g., last-mile delivery companies by vans, bike or scooters). A progressive deployment of UAM, starting with use cases offering the best interest for the public, such as medical/emergency use cases, may help gaining acceptance. The notion of ‘public interest’ versus ‘interest of small groups’ appears to be a key element to consider for the acceptance and deployment of UAM.</p> <p>The regulatory requirements on safety, noise, environmental impact, etc.; should not be lowered depending on the use case.</p>
	<p>Local environmental protection associations</p> <p>Local Environmental protection NGOs refer to noise and protection of wild-life (birds, bats, insects) as main potential concerns for citizens, together with safety/security. The precedent of the installation of wind-turbines highlights people concerns. The light of the vehicles at night may cause annoyance to the humans and to the animals, particularly if there is a large number of operations. The NGOs also wonder whether there would be sufficient space on the ground and in the airspace for these new operations and whether they would replace or add up to the existing transport and congestion. In some cities, the overfly zones are already extremely limited: since UAM vehicles could not fly anywhere, would there still be a business case ? They also query the compatibility of UAM with the current development in many European cities of the “slow mobility” concept and with the ‘flight shame’ attitude. They underlined the ‘dilemma’ that they are sometimes facing with their members having opposite environmental concerns (e.g., producing clean energy through wind turbines, but thus impacting wild life). They finally asked whether the effects of electronic transmission (cyber-link) have been considered from the point of view of the potential impact on human and animal health.</p>
	<p>Local traffic and transport authority</p> <p>Local transport authorities are concerned by citizens’ possible negative reactions to UAM, in view of recent protests related for instance to e-scooters or even electrical buses (deemed too noisy by residents), reflecting the ‘not-in-my-backyard’ attitude. They see the main issues as being the noise, the infrastructure and accessibility (how to get enough vertiports), the affordability (comparable to the price of a moto-taxi, i.e. 80-100€). Safety does not come on top of the concerns’ list, because it is assumed that national and European authorities look at that and authorise only safe aircraft and operations.</p>
	<p>Local Resident associations/ Real-estate owners</p> <p>Local residents’ associations fear some resistance by residents (‘not in my backyard’) if they become too much impacted by the UAM traffic. They are concerned also by the slow adoption and adaptation by administrations in a domain with a fast technology development. Noise, safety, security and visual pollution are the main concerns.</p>

Qualitative survey – Summary of questions related expectations towards UAM deployments

Expectations	Mayor and municipalities services	Municipalities believe that prior analysis would be needed on how UAM fits in the city's transport needs and network. They would probably need to re-define all the city's mobility policy and assess exactly which infrastructure would be needed (eg vertiports, high rise buildings, etc.)). They also consider that a mapping of interested local stakeholders would be required an that demonstration/test case would be a pre-requisite, as well as transparent and accessible information for the citizens to re-assure them on the level of safety of these operations. They expect to be associated to the decision-making (see Manifesto).
	Emergency response organisation	Expectations were not detailed during interview
	Local airport, local ATC	For local airports/ATC, a full re-assessment of connectivity and mobility needs in the city would be a pre-requisite, as well as local demos and pilot cases to test acceptance in real situations and generate positive acceptance. Manifesto on the Multilevel Governance of the Urban Sky by the UAM Initiative Cities Community – UIC2 of 1.12.2020
	Local Urban and city planners	Local urban planning authorities would like to get explanations on how to deal with UAM/ U-Space locally. They also consider that authorities should be able (should be helped?) to respond to citizens' questions that would come on safety, security (what is a drone loses control)
	Local Chambers of commerce	Local Chambers of Commerce see the development of an appropriate regulatory framework, a phased introduction and an approach based on lessons learned from experience on automated driving as important pre-conditions for UAM.
	Local environmental protection associations	Local Environmental protection NGOs consider a prior assessment of local noise exposure and damage to wild-life as a pre-requisite. A system to collect and maintain data on trajectories and noise measurements of the UAM aircraft would be useful in order to ensure transparency for citizens and help mitigating impact. An adequate airspace organisation would have to be adopted, using corridors and trajectories with the least impact on people on the ground.
	Local traffic and transport authority	Expectations were not detailed during interview
	Local Resident associations/ Real-estate owners	Expectations were not detailed during interview

Qualitative survey – Summary of questions related expectations towards UAM deployments

Information on UAM	Mayor and municipalities services	Municipalities don't feel sufficiently informed and are interested in obtaining base-knowledge, such as access to market studies on UAM, guidance/familiarisation material for local authorities (incl. consequences on ground infrastructure) to assess the potential of this new mode of transport. The residents/citizens would need also to be informed about the technology and have their questions answered. They expect EASA to support in this work.
	Emergency response organisation	Local emergency response organisations would like to receive more information (technical) on UAM to assess its possible use.
	Local airport, local ATC	Local aviation stakeholders (ATC/airports) consider that it will be necessary to communicate on the good safety levels of UAM. They believe that EASA should communicate on its activities and role. The politicians need to be convinced, and the general public needs to get informed. Great showcases (such as the Paris Olympics project) will help raise awareness and foster adoption. For the aviation professionals , specific technical info is essential (U-Space, vertiports, corridors, etc.)
	Local Urban and city planners	Urban planning authorities who participated to the interview felt sufficiently informed (project ongoing in their city since 3 years).
	Local Chambers of commerce	Local Chambers of Commerce do not feel sufficiently informed and believe that the general public is not either. EASA is seen as a neutral/objective authority and has a role in disseminating appropriate information and guidance to aviation professionals but also to cities and local Chambers of Commerce, for instance through exhibitions and show cases.
	Local environmental protection associations	Local Environmental protection NGOs have a different level of information, depending on whether pilot projects are ongoing in their city or not. They consider that civil society interests have to be represented in the debate on the deployment of UAM. To this effect, the general public should also be better informed.
	Local traffic and transport authority	Local transport authorities' level of information is dependent upon existing projects. When such projects exist, large 'ordinary' media coverage helped in informing and the general public and foster acceptance.
	Local Resident associations/ Real-estate owners	Local residents associations would like EASA to provide information on its activities and on UAM in general to politicians and to the general public. This information should notably relate to the costs and affordability, the sustainability and the safety of UAM.

Key results

Full length evaluation

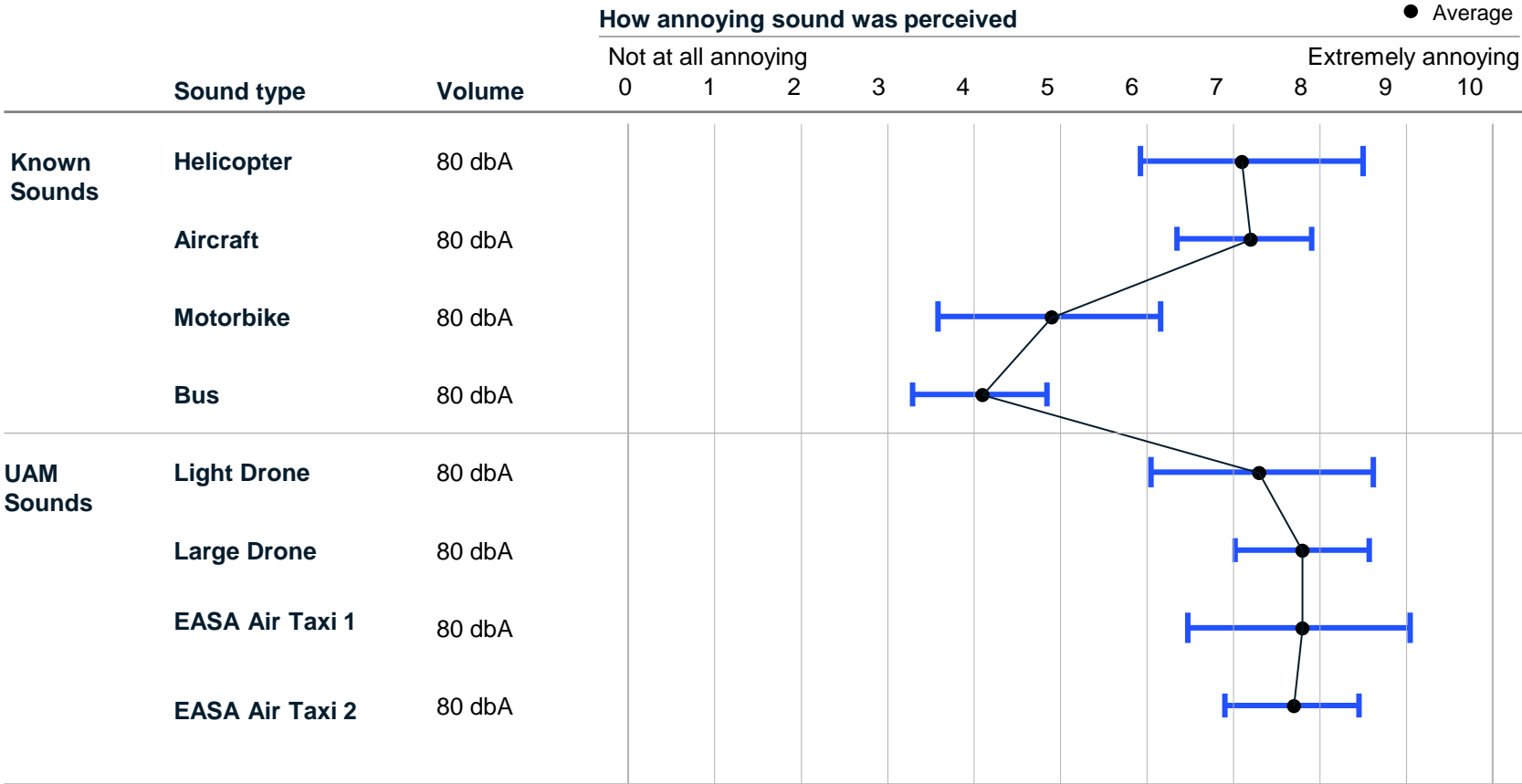
- Quantitative survey
- Qualitative survey
- **Evaluation of noise acceptance tests**



Noise evaluation for different sounds at equal noise level

Sample size n=20

1. UAM noise is more annoying at same noise level...



It can be seen that **UAMs are ranked more annoying** at the same noise level compared to other sounds that participants were exposed to

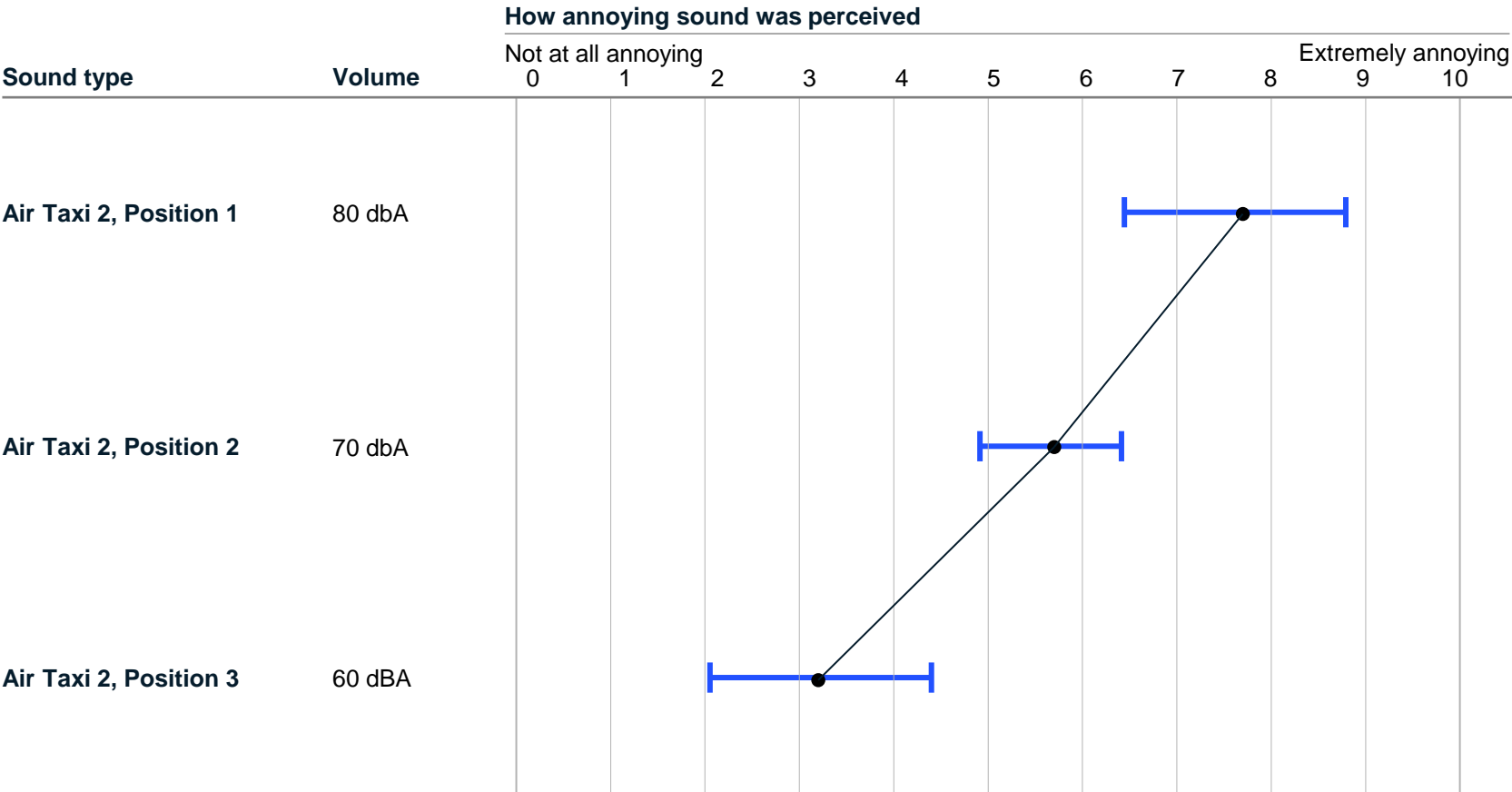
There could be three possible interpretations for this:

- People **perceive familiar sounds as less annoying** (this was frequently stated in comments)
- The **noise characteristics** could have an **impact on annoyance**
- The **integrated noise level over time** could have an impact (i.e. speed of pass over)

Noise evaluation for different distances / dBA levels

Sample size n=20

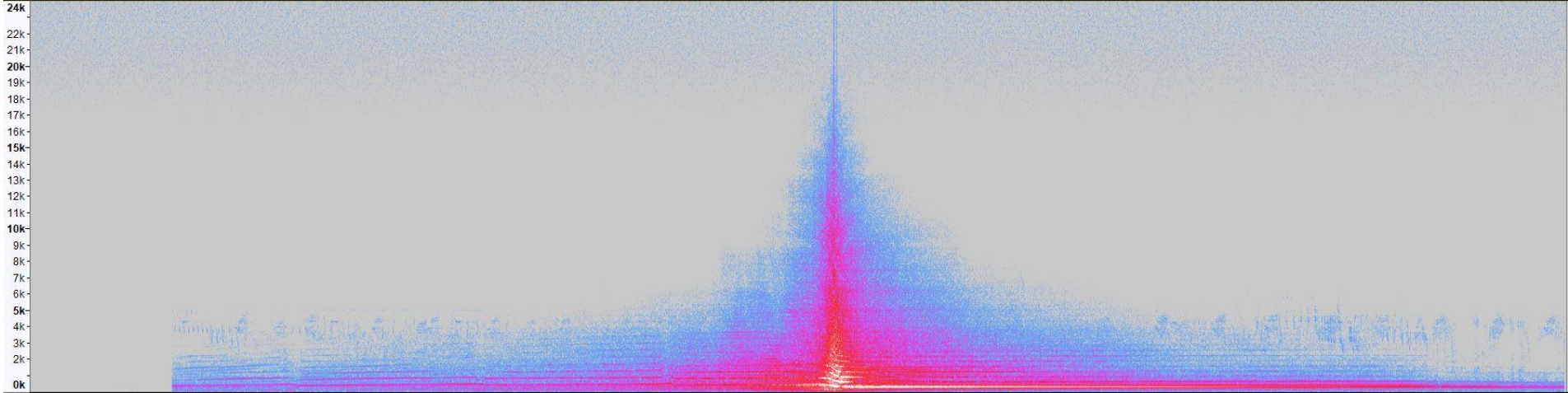
2. Annoyance levels significantly decline with noise levels



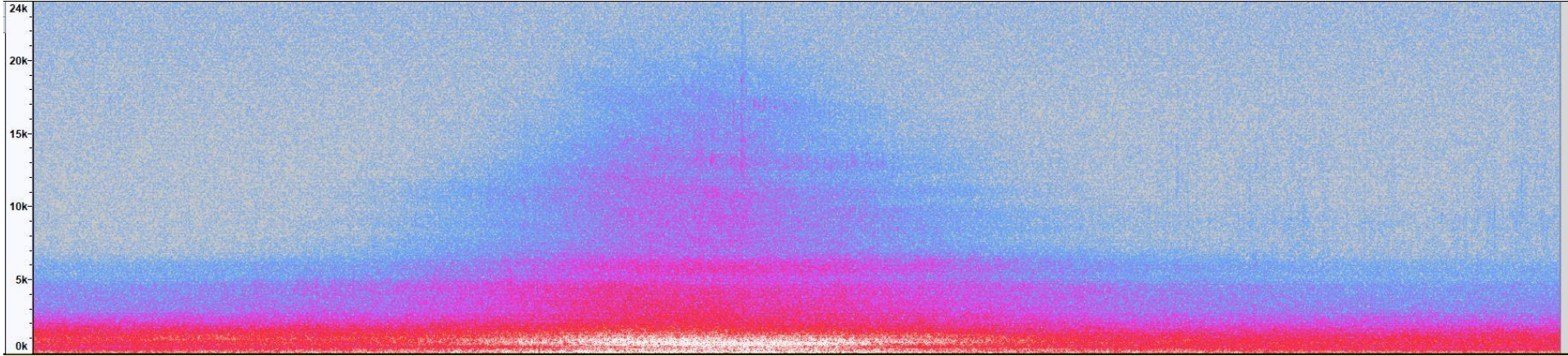
When looking at different distances, realized through different noise pressure levels **from 80dBA to 60dbA**, it can be seen that the **perceived annoyance from UAM sounds** is on average lower to other familiar sounds such as a Motorbike or a bus, and thus it can be concluded that **60dBA would be widely acceptable by the public**

Spectrograms for different sounds (1/4)

Motorbike

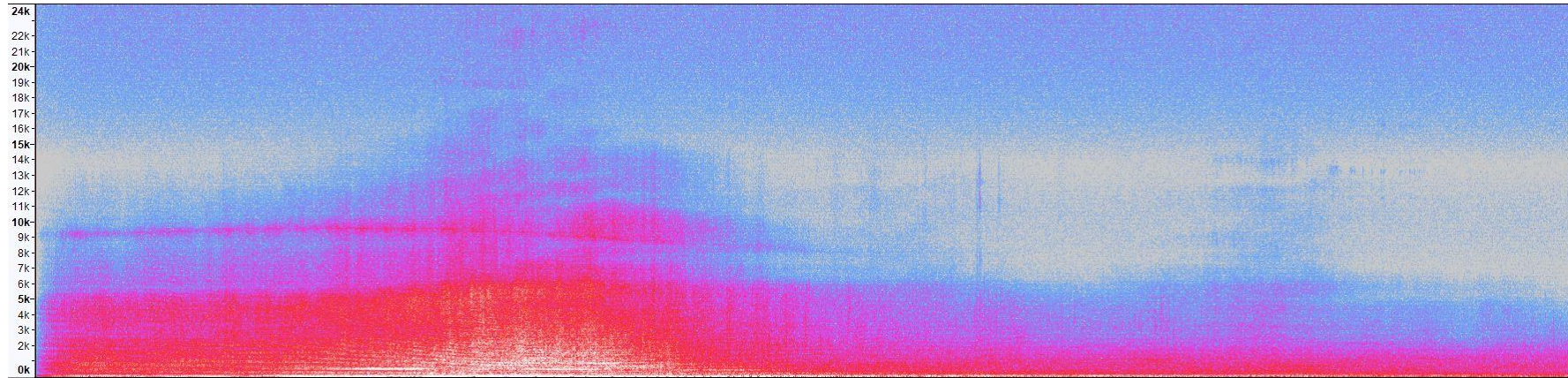


Bus

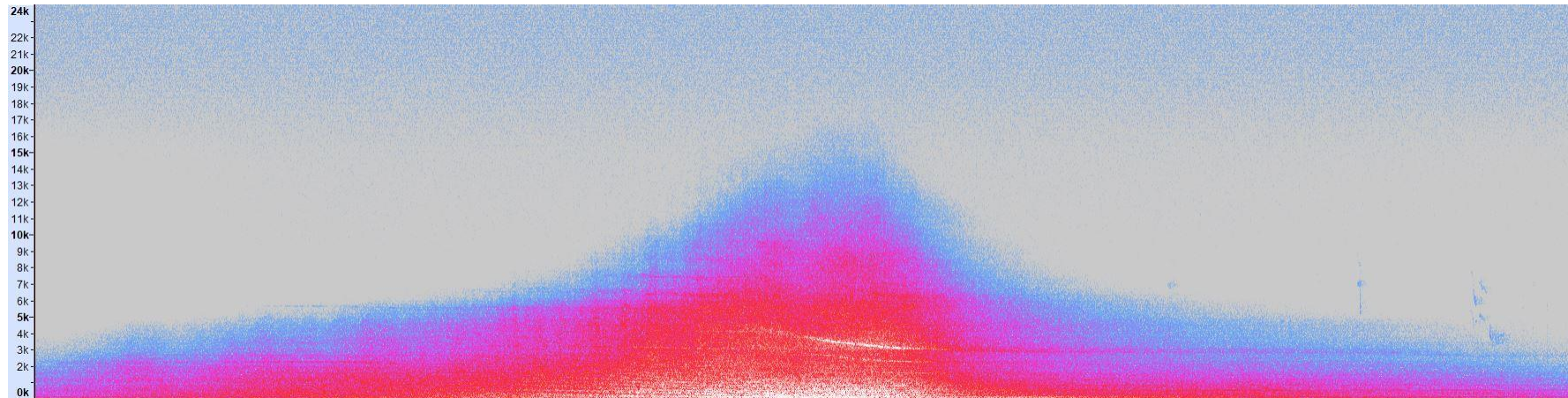


Spectrograms for different sounds (2/4)

Helicopter

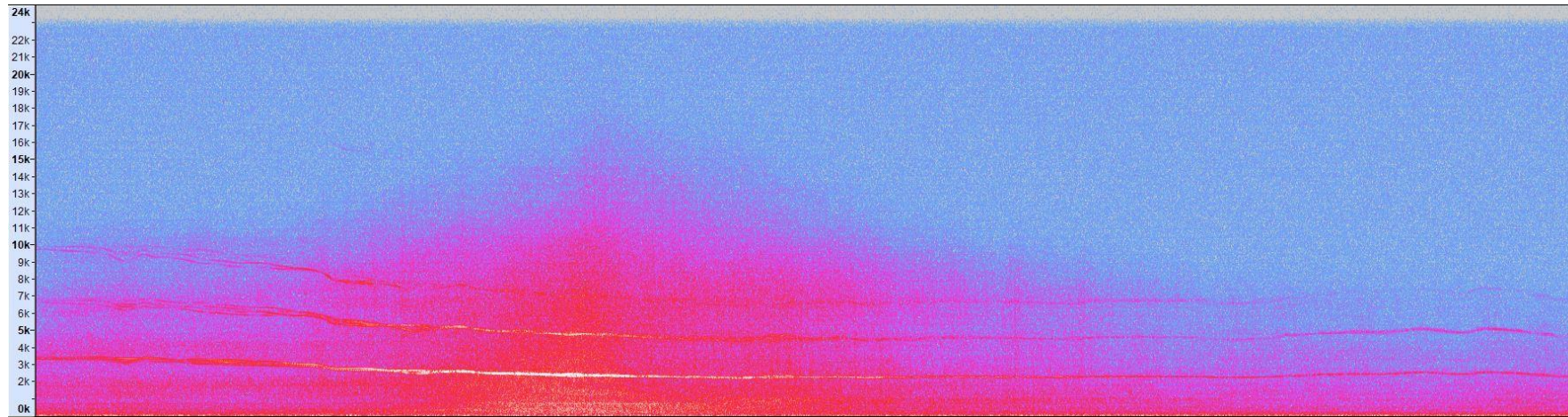


Aircraft

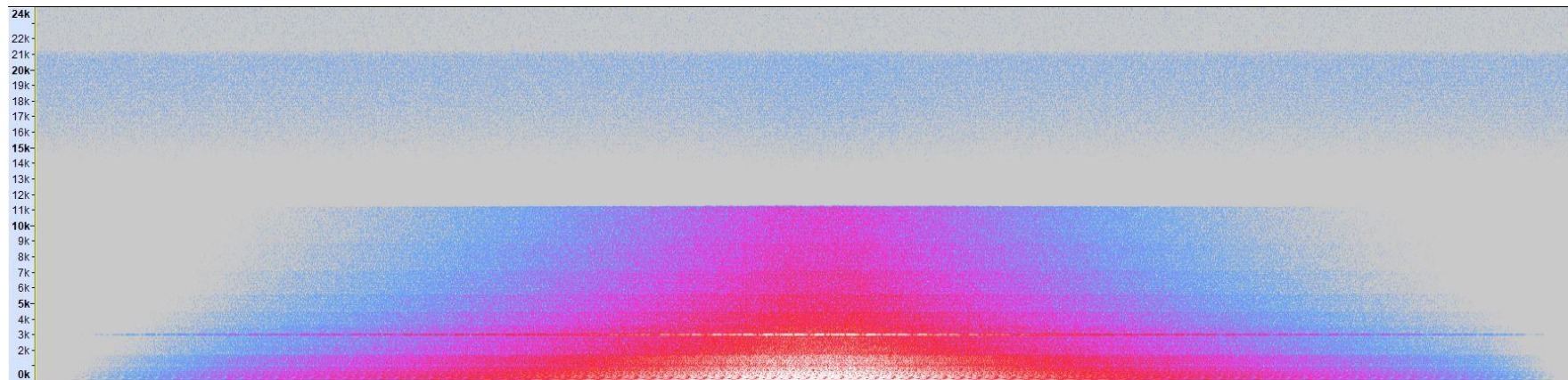


Spectrograms for different sounds (3/4)

Air taxi 1

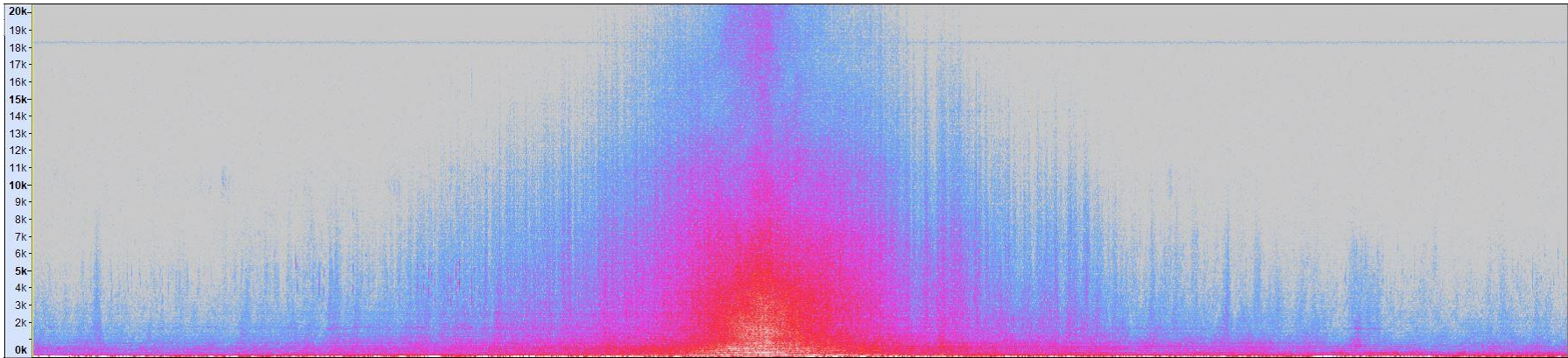


Air taxi 2 (synthesized)

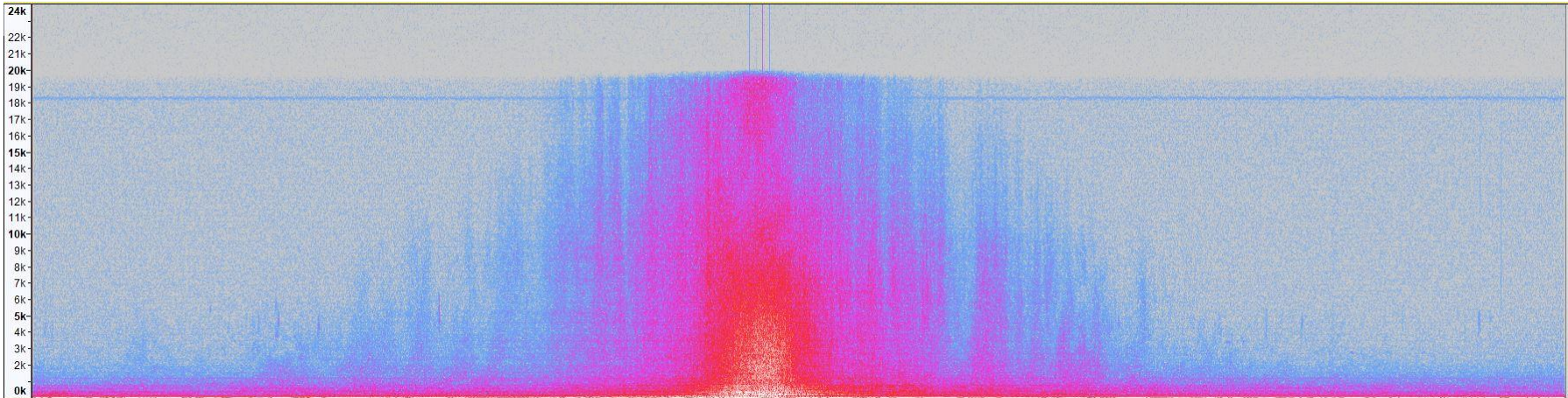


Spectrograms for different sounds (4/4)

Large UAV



Light UAV



Back-Up

- **Additional evaluations**
- Survey questions
- Detailed city evaluations



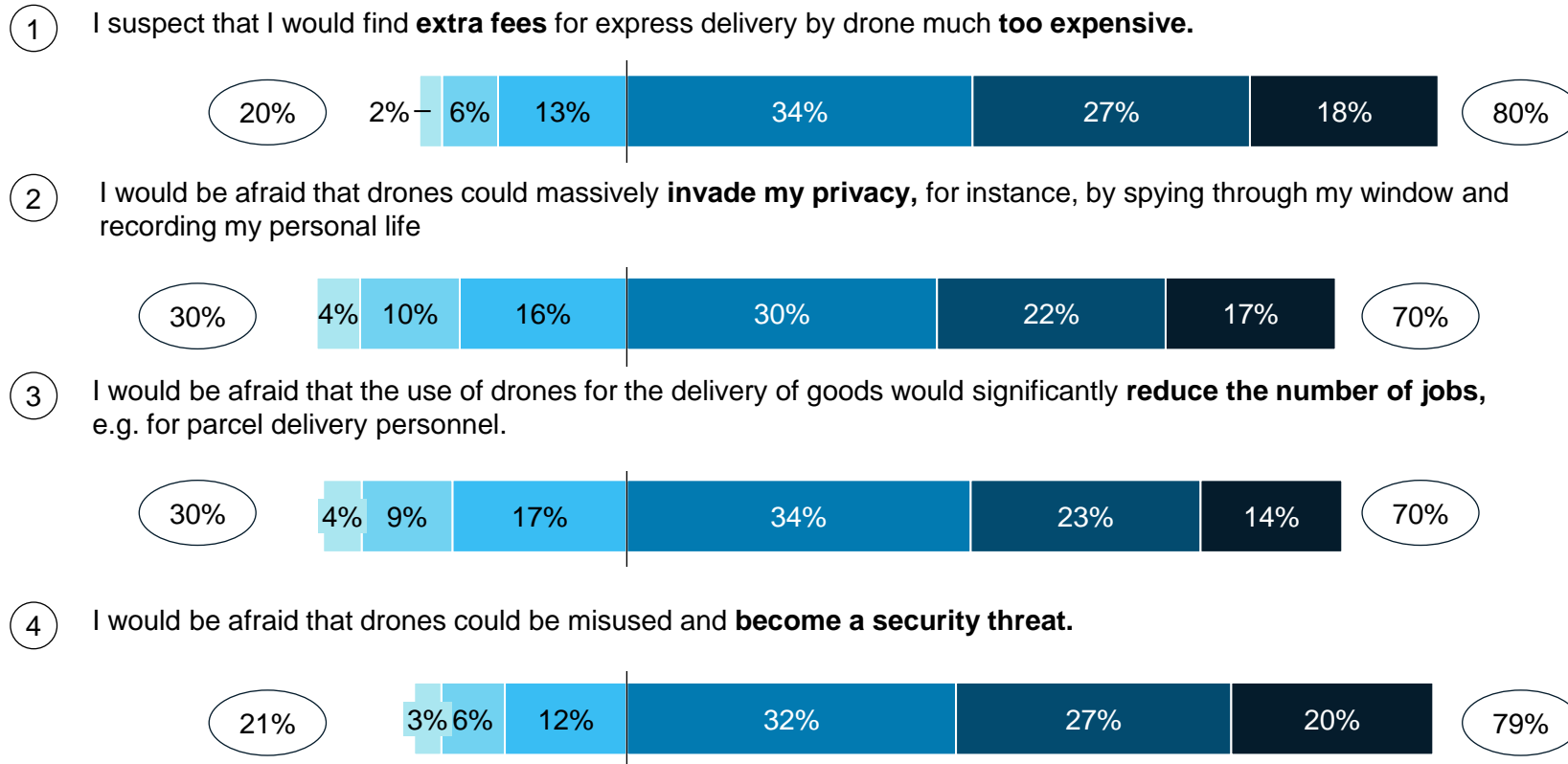
B10. Response rates for negative statements related to drone delivery – overall (1/2)

Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

① Sequence number (X%) Sum

(absolute %, +/- difference to avg % in total)

Concerns that drones might be too expensive or become a security threat are highest



Approval rates for different statements related to different concerns are **high**

However **results should be interpreted carefully**, as this type of question creates **agreement bias** since **no trade-off has to be made** (e.g., no ranking) leading participants to be **more conservative in answers**

High approval rates for negative statements regarding **affordability of service** and **perceived security threat by delivery drones** (~80%)

Both concerns with **even higher approval rates** within age group **65-75** (+7%, +6%) and **UAM usage rejecters** (+7%, +7%)

- Higher security concern in line with results in drone delivery concern question B5 (increasing with age)
- Higher affordability concern not in line with results in concern question B5 (affordability less concerning for groups unwilling to try out UAM anyways)

Less, but still high approval rates for negative statements regarding **violation of privacy** and **reduction of number of jobs** (~70%)

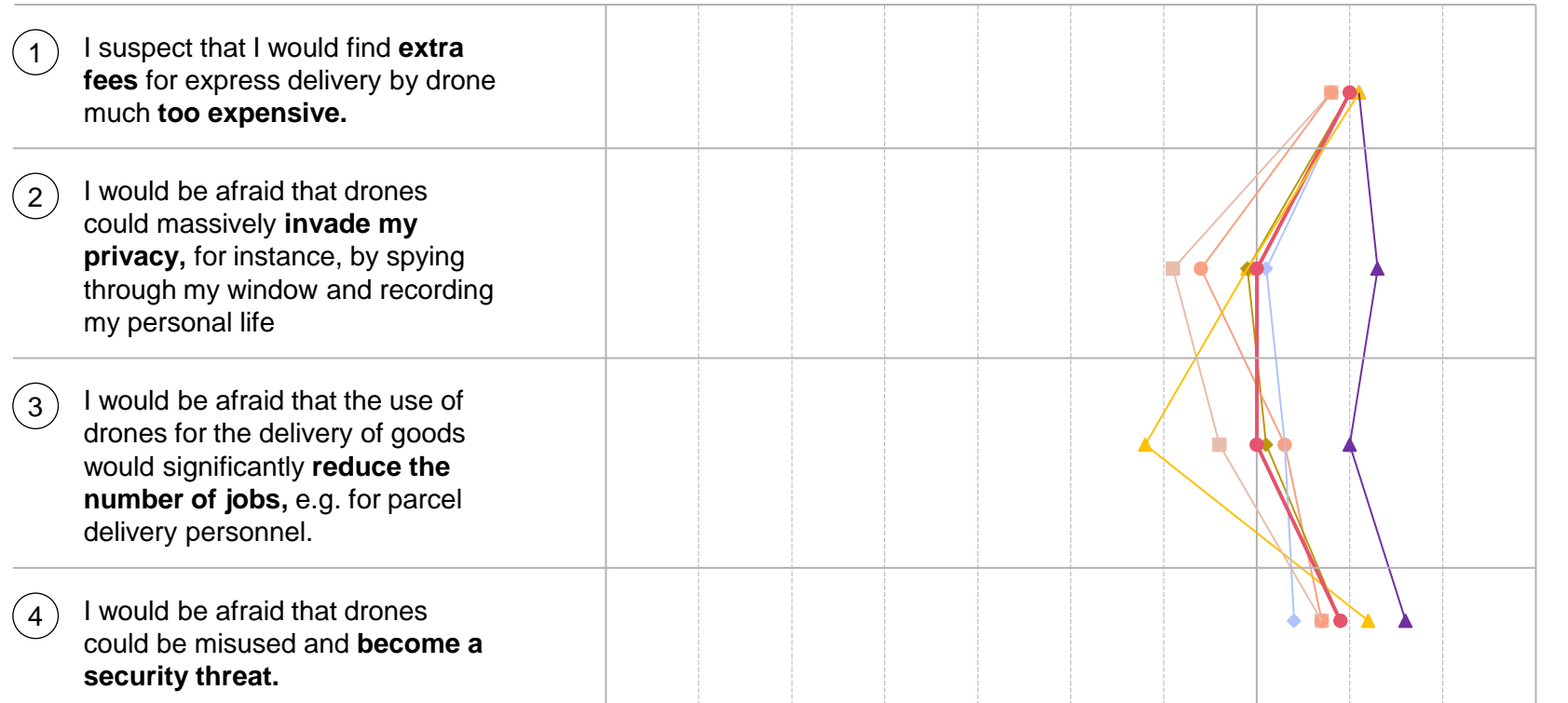
B10. Response rates for negative statements related to drone delivery – per city (2/2)

① Sequence number ● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

All cities show similar trend and reveal cost as leading concern

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Similar opinions on extra fees and security threat in cities (spread of 2% and 12%)

Highest spread in opinions on privacy and reduction of jobs (spread of 22% and 22%)

Barcelona stands out as all statements with equally high approval rates and **always on upper bound**; fear of reduction of jobs in line with results in question B5

C10.a Response rates for negative statements related to air taxis – overall (1/2)

Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

① Sequence number (X%) Sum

80%+ agree to statement that only rich people will be able to afford air taxi services

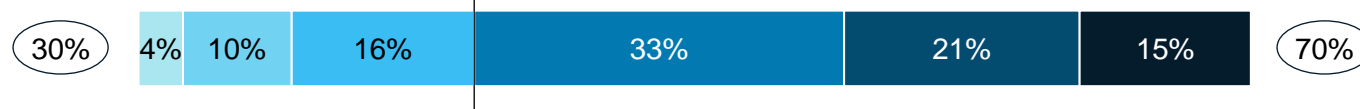
⑤ I suspect that taking an air taxi is much **too expensive** for me personally.



⑥ I suspect that **only rich people** will be able to **afford** taking air taxis.



⑦ As a resident of the city, I would be afraid that air taxis or their passengers could massively **invade my privacy** when flying over my house or flat, for instance, **by spying through my window** and **recording my personal life**.



⑧ I am afraid that the introduction of air taxis significantly **reduces the number of jobs**, affecting, for instance, taxi drivers.



(absolute %, +/- difference to avg % in total)

Approval rates for different statements related to different concerns are **high**

However **results should be interpreted carefully**, as this type of question creates **agreement bias since no trade-off has to be made** (e.g., no ranking) leading participants to be **more conservative in answers**

Both **statements addressing price for air taxi rides with highest approval** (~81%), similar to results in drone delivery statements

- Lower approval for statement 5 in target group for airport shuttle (-10%)
- Higher approval in statement 6 by age group 65-75 (+7%)

Statement about **violation of privacy with less, but still high approval** (70%); similar to result in drone delivery statements

Statement about **reduction of jobs with least approval** (63%), somewhat lower than respective in drone delivery statement

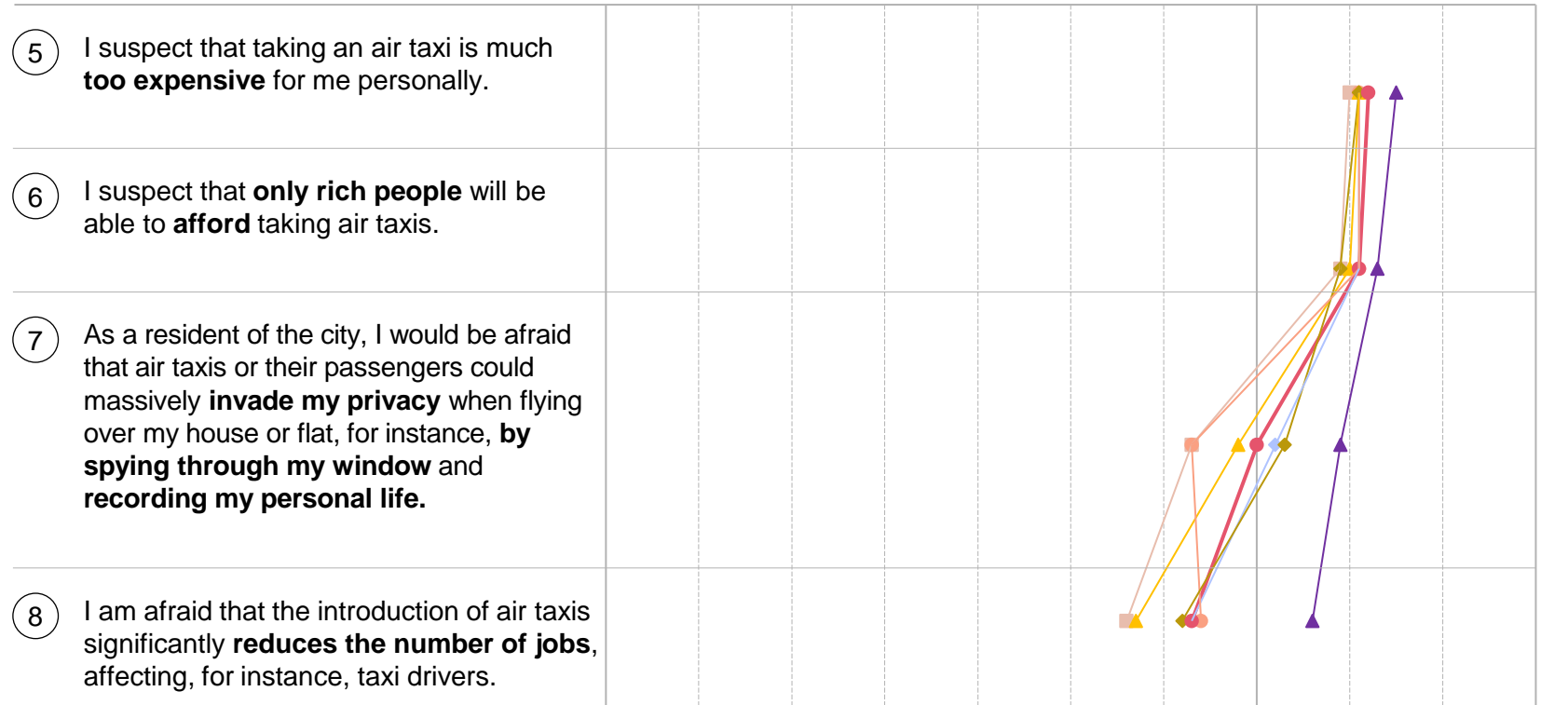
C10.a Response rates for negative statements related to air taxis – per city (1/2)

① Sequence number ● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

Rather small deviations between cities for different statements

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Similar opinions in all cities, except Barcelona: Maximum spread in all questions without Barcelona is 13%, with Barcelona 20%

Spread in both calculations **highest for statement about reduction of jobs**

Milan on lower end in statement about privacy, in line with results in air taxi concerns question C10

But Budapest only in midfield regarding approval for privacy statement, lower than expected vis-à-vis result in C10

High approval of Barcelona for statement about job reduction in line with C10

C10.b Response rates for negative statements related to vertiports – overall (1/2)

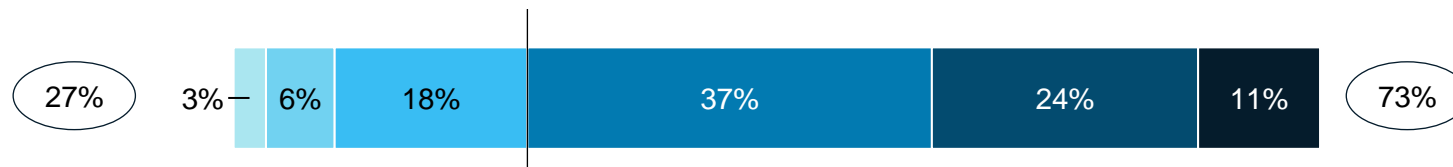
Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

① Sequence number (X%) Sum

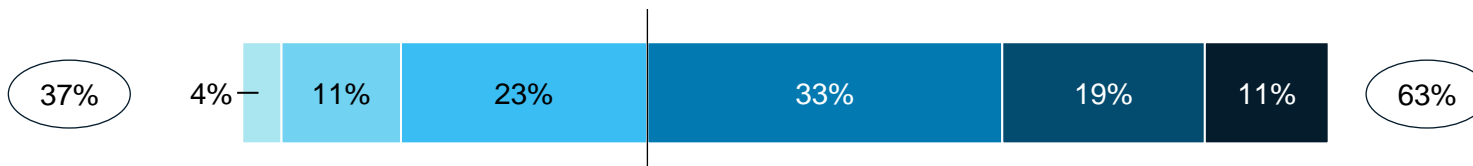
(absolute %)

61% agree to statement that they would not feel comfortable living close to a vertiport

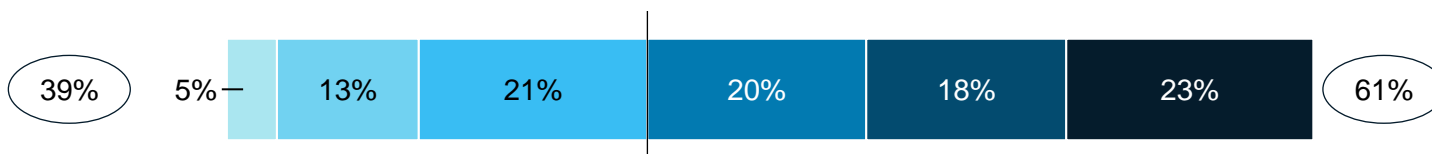
- 9) **Take-off and landing stations** for air taxis **operated by only one provider** (comparable to airports for a single airline or docks for a single ferry line) would **hamper competition** and are therefore extremely **unfair** from a societal perspective.



- 10) I consider the **allocation of inner-city** space for take-off and landing stations of aerial vehicles as completely **unfair or unnecessary**.



- 11) I would **feel uncomfortable living close to a take-off station** for aerial vehicles, for instance, within a range of 50 metres.¹



Approval rates for different statements related to different concerns are **high**

However **results should be interpreted carefully**, as this type of question creates **agreement bias since no trade-off has to be made** (e.g., no ranking) leading participants to be **more conservative in answers**

Least high approval for negative statements about vertiports, compared to drone delivery and air taxi statements

Statement about **fairness of single provider model** still with **high approval (73%)**

Statements about **inner-city space allocation** and **level of comfort for residents** living close by **on lower end** across all statements (~62%)

C10.b Response rates for negative statements related to vertiports – per city (2/2)

① Sequence number ● Total ▲ Barcelona ◆ Budapest ■ Hamburg ● Milan ▲ Öresund ◆ Paris

(+/- difference to avg % in total)

Approval rates for negatively clouded assumptions regarding vertiports

Share of respondents that rank concern under top 3

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Cities aligned on statement about **single provider model** and **allocation of inner-city space**: Spread of 8% for both

But quite **some spread** in approval with statement about **level of comfort for residents** living close to vertiports, with Milan feeling less uncomfortable (-6%) and Hamburg feeling more uncomfortable (+7%)

Back-Up

- Additional evaluations
- **Survey questions**
- Detailed city evaluations



A1. Affinity to new technologies

A1. Frequency of usage of new technologies, such as mobility services

In a typical year, how often do you use the following technologies and services? Please consider a typical year, for instance 2019, before the Covid-19 pandemic started. Please select one answer in each row.

Technology or service	Never used and not interested	Have not used yet, but would consider it	A few times a year	6 to 10 times a year	Once a month	Every 2 weeks	Every week or more often
1. Car rental, e.g. Sixt, Europcar, Avis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Ride hailing, i.e. ordering a car similar to a cab via a mobile app, such as Free Now, Uber, Bolt, it Taxi, Uber, Cabify, Moove, Viggo ¹	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Car sharing, e.g. Share Now, Miles, Cambio, getaround, Ubeeqo, enjoy, letsgo, GreenMobility, GreenGo, MOL Limo ¹	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Ride sharing (i.e. sharing a taxi or similar with other people taking a similar route), e.g. UberPool, Moia ¹	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. (E-)bikes, (e-)scooters or electric kick scooters from sharing providers, such as Lime, Tier, emmy, Cityscoot, Dott, GoVolt, Bird, Vaimoo, MOL bubu, ogre&co ¹	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Online booking or booking via app of mobility tickets, e.g. for trains, flights, buses, other public transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Video conferencing, e.g. Zoom, Microsoft Teams, Skype	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Drones, e.g. for photos, videos or recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Flat fee or subscription model for the delivery of online orders (of groceries, consumer electronics, apparel, etc.), such as Amazon Prime, OTTO UP, Zalando Plus, Cdiscount à volonté, Fnac+, PcComponentes Premium ¹	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. Only relevant providers in respective cities are shown

B1. Express delivery

B1. Frequency of usage of express delivery services

In a typical year, how often do you shop online for yourself or your family (such as for food, beverages, daily supplies, consumer electronics, fashion and apparel) and use express delivery for your purchases? Please consider a typical year, for instance, 2019, before the Covid-19 pandemic started.

Never used and not interested <input type="radio"/>	Have not used yet, but would consider it <input type="radio"/>	A few times a year <input type="radio"/>	6 to 10 times a year <input type="radio"/>	Once a month <input type="radio"/>	Every 2 weeks <input type="radio"/>	Every week or more often <input type="radio"/>
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C1 & C2. Flight habits

C1. Frequency of travelling by aeroplane

In a typical year, how often do you travel by aeroplane for personal or business reasons? Please consider a typical year, for instance 2019, before the Covid-19 pandemic started. Please select one answer.

<input type="radio"/> Not at all	<input type="radio"/> 1-2 times a year	<input type="radio"/> 3-5 times a year	<input type="radio"/> 6-10 times a year	<input type="radio"/> Every month or more often
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C2. Mode of transport to airport

When travelling by aeroplane, how do you typically get to and from the airport from your home and vice versa? Please select all that apply.

- By foot, own (e-)bike, or own (e-)scooter
- By (e-)bike or (e-)scooter from a sharing provider, such as Lime, Tier, emmy, CityScoot, Dott, GoVolt, Bird, Vaimoo, MOL bubu, ogre&co¹
- Private vehicle, such as a car or motorbike
- Taxi or equivalent provider, such as Free Now, Uber, Bolt, it Taxi, Cabify, Moove, Viggo¹
- Carsharing, such as Share Now, Miles, Cambio, getaround, Ubeeqo, enjoy, letsgo, GreenMobility, MOL Limo, GreenGo¹
- Ridesharing, such as Uber Pool or Moia or other local rideshare option¹
- Public transport, such as bus, metro, or train
- Other, please specify: _____

1. Only relevant providers in respective cities are shown

S5. General attitude towards urban air mobility

S5. Rating of perception from very negative to very positive

What would be your overall perception if urban air mobility solutions (such as those shown in the video¹) were to be introduced in your city? Please select one answer.

negative

rather negative

rather positive

very positive

1. To inform participants about urban air mobility, a video of length 1:34 minutes was shown prior to this question, showcasing the use cases passenger transport by air taxi (pointing out to the existence of manned and unmanned VTOLs), parcel delivery via drone (more precisely, instant food delivery), transport of emergency medical personnel to site of an accident, and delivery of medical supply to a hospital

S6.S7. Likelihood to try out urban air mobility services

S6. Likelihood to try out drone delivery

How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order.

negative

rather negative

rather positive

very positive

S7. Likelihood to try out air taxis

How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

negative

rather negative

rather positive

very positive

A3.A2. Perceived usefulness of urban air mobility use cases, among and across categories

A2.a Ranking of use cases in category drone delivery

Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.¹

- Drone delivery of goods in an urban area, for instance, from my preferred online shopping portal or site
- Drone delivery of meals in an urban area, for instance, from my preferred restaurant or food delivery site
- Grocery and goods delivery to my home or workplace in areas with long travel times to the next shop (i.e., in the countryside or not well connected with public transport)
- Long-distance forwarding of heavy cargo, for instance, to places with little infrastructure such as islands or drilling rigs
- None of these are useful

A2.b Ranking of use cases in category medical emergency

Which of the below medical emergency use cases would you consider the most useful in an urban environment? Please sort the following applications from 1 being 'most useful' to 5 being 'least useful' or select 'none of these are useful'.¹

- Drone delivery of medical supplies (such as blood donations, organs, medical equipment) to a hospital
- Drone delivery of medical supplies for personal need (such as pens for auto-injection of a vital substance, defibrillators and medications) from a central hub to a place not far from your home such as your own garden or a nearby park
- Disaster management using drones (such as drones with thermal cameras to evaluate fire incidents, drones equipped with firefighting foams and extinguisher bombs)
- Emergency medical service to transfer an injured person to a nearby hospital
- Emergency medical service to bring doctors or first aid personnel to the scene of an accident
- None of these are useful

A2.c Ranking of use cases in category passenger transport

Which of the below passenger transport use cases for urban air mobility would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 5 being 'least useful' or select 'none of these are useful'.¹

- Sightseeing by air in a city or region
- Air taxi, for instance, to get from the city centre to the local airport and vice versa
- Air taxi, for instance, to commute from a suburban area to the city centre
- Air taxi to travel from one point in the city to another
- Regional air mobility, for instance, from one city to another small city in the same region (like from Copenhagen to Malmö²)
- None of these are useful

A3. Cross-category ranking of top 2 use cases from categories³

And which of the below use cases (that you previously selected as the most useful in their categories) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful' or select 'none of these are useful'.¹

- <If not none, #1 ranked option from A2.a is displayed>
- <If not none, #2 ranked option from A2.a is displayed>
- <If not none, #1 ranked option from A2.b is displayed>
- <If not none, #2 ranked option from A2.b is displayed>
- <If not none, #1 ranked option from A2.c is displayed>
- <If not none, #2 ranked option from A2.c is displayed>

4

1. Example of regional air mobility only shown in Öresund, as only supra-urban area where survey was conducted 2. Answers were shuffled to avoid biases towards options with higher position 3. If "None of these are useful" was selected in all three A2 questions, A3 is skipped 4. No "None" option in A3, as participant must have selected an option he conceived as useful in some A2 question, otherwise see 3.

B6. Level of comfort with drop-off locations for drone delivery

B6. Selection of level of comfort with drop-off locations for drone delivery

How comfortable would you be with the following modes of drone delivery for medium-sized parcels (max. 120 x 60 x 60 cm, up to 5 kg) at places near your home? Please select one answer in each row

	very uncomfortable	uncomfortable	somewhat uncomfortable	somewhat comfortable	comfortable	very comfortable
A. Over the walkway in front of my house or main door of my block of flats (publicly accessible)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. In my garden or other private area (not publicly accessible)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. On the roof of my house/block of flats or office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. In a nearby park	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Central delivery station in my neighbourhood, such as a petrol station, supermarket or a postal service station	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A4 & A5. Benefits incurred by UAM

A4. Selection of up to 3 benefits incurred by UAM

What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

- Improved development of and access to remote areas (for instance, the countryside, regions outside of a metropolitan area)
- Creation of new jobs and growth opportunities for people in my country (for instance, manufacturing, research and development, pilot projects)
- Market-leading position of Europe in urban air mobility technology (such as drones, air taxis)
- Reduction of traffic jams
- Reduction of local emissions and pollution (most of the vehicles will have battery electric propulsion)
- Reduced response time for emergencies
- None of these are useful

A5. Further positive benefits mentioned by survey participants

What other benefits and opportunities can the development of urban air mobility bring for EU citizens? Please add up to 3 ideas in the below text boxes.^{1,2}

- _____
- _____
- _____

1. Three free text fields were shown to survey participants

2. The evaluation of free text boxes in question A5. did not show other significant benefits; an example can be found in respective evaluation for Hamburg

B2. Benefits of drone delivery

B2. Selection of up to 3 benefits incurred by drone delivery

What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

- Faster delivery
- Exact time window for delivery
- Higher reliability
- Fewer interactions with other people (i.e. for better hygiene standards, especially during/after the pandemic)
- Less-congested streets (i.e. due to fewer delivery vehicles parked on the street)
- Less-congested city centres due to fewer people out shopping
- Less pollution due to electric propulsion
- None of these are useful

C3. Benefits of air taxis

C3. Ranking of benefits incurred by passenger transport with air taxis

In your view, what are the main benefits of air taxis? Please sort the following benefits from the 1 being the 'most useful' to 7 or 8¹ being the 'least useful' or select 'none of these are useful'.

- Significant time saving for passengers
- Comfortable continuation of travel after arrival at an airport station to my personal accommodation
- Reduction of traffic jams
- Less noise for inner-city residents due to emergency medical services taking an aerial route
- Ability to connect and access remote areas (areas with current poor access to city centres)
- The feeling of behaving in a modern way, being an early adopter
- Creation of new jobs in running air taxi services
- Other, please specify: _____²

None of these are useful

1. Number of options is 8 if participants opts for filling the free text field
2. The evaluation of free text boxes did not show other significant benefits

B3. Level of comfort with unmanned delivery drones

B3. Perception of safety with unmanned delivery drones

Drones intended for the delivery of goods are remotely piloted aircraft systems with no pilots on board. Assume that they have an average wingspan of 3 metres, would fly at between 120 and 150 metres altitude, and are certified by competent authorities. Please rate how much you agree or disagree with the following statement.

As a pedestrian on the ground, I would feel safe with unmanned delivery drones potentially flying above me.

strongly disagree	disagree	somewhat disagree	somewhat agree	agree	strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C4. Level of comfort with manned & unmanned air taxis for passengers & pedestrians

C4. Level of comfort with air taxis by level of autonomy (present versus absent) and degree of interaction (active versus passive)

Recent studies extend the prospect of aircraft soon transporting passengers, either with a pilot on board or with a remote pilot. You will now see several statements that people might make about such air taxis. Assuming that all of the aircraft are certified by competent authorities, please rate how much you agree or disagree with each statement for each type of air taxi.

	strongly disagree	disagree	somewhat disagree	somewhat agree	agree	strongly agree
I would be interested in trying out the following vehicles myself:						
A. Manned air taxi (meaning with a human pilot on board steering the aircraft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Unmanned air taxi (meaning no human pilot is on board to steer the aircraft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a pedestrian (not as a passenger), I am okay with accept the fact that the following vehicles could fly above my head						
C. Manned air taxi (meaning with a human pilot on board steering the aircraft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Unmanned air taxi (meaning no human pilot is on board to steer the aircraft)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B4.B5. Absolute and relative importance of general concerns in drone delivery use case

B4. Selection of up to 6 concerns

What are you most concerned about regarding drone delivery, both for the delivery of day-to-day goods as well as medical supplies? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers.¹

- Noise pollution, such as loud and/or annoying sounds
- Visual pollution, such as annoying air traffic
- Safety concerns, such as drones crashing
- Concerns regarding local environment, such as air pollution, negative impact on bird life and insects, or decreasing biodiversity in general
- Global environmental concerns, such as negative impact on climate change
- Job losses, for instance within local delivery companies
- Security threats, for instance, criminal organizations (for ransom), hackers, or terrorists hacking into the control system and hijacking or misdirecting drones
- Privacy concerns, for instance, a drone flying close to my window or over my property
- Affordability, i.e. the service being affordable only for rich or privileged people
- Other, please specify: _____²
- None of these

B5. Ranking of previously selected concerns

Please sort your main concerns from 'most concerning' to 'least concerning'.³

- ◇ <Concern chosen in B4 is displayed, if at least 1 was chosen>
- ◇ <Concern chosen in B4 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in B4 is displayed, if at least 3 were chosen>
- ◇ <Concern chosen in B4 is displayed, if at least 4 were chosen>
- ◇ <Concern chosen in B4 is displayed, if at least 5 were chosen>
- ◇ <Concern chosen in B4 is displayed, if 6 were chosen>

1. Answers were shuffled to eliminate bias related to positioning

2. Evaluation did not lead to significant other concern.

3. Only options chosen in B4 prompted in B5; if "None of these" was chosen in B4, question B5 is skipped

C5.C6. Absolute and relative importance of general concerns in air taxi use case

C5. Selection of up to 6 concerns

What are you most concerned about with respect to air taxis? Please consider your own usage of such a service as well as other people using it (e.g. your family or neighbours), which may affect you as well. Please select up to 6 answers.¹

- | | |
|---|---|
| <input type="checkbox"/> Noise pollution, such as loud and/or annoying sounds of flying aircraft | <input type="checkbox"/> Inner-city space occupation due to infrastructure requirements (take-off and landing stations) |
| <input type="checkbox"/> Visual pollution, such as annoying air traffic | <input type="checkbox"/> Additional traffic from/to take-off stations |
| <input type="checkbox"/> Safety concerns, such as flying vehicles possibly crashing | <input type="checkbox"/> Noise related to the operation of take-off stations |
| <input type="checkbox"/> Concerns regarding the local environment, such as air pollution, negative impact on bird life and insects, or decreasing biodiversity in general | <input type="checkbox"/> Downwash, i.e. downward wind generated by the rotors of air taxis when flying or in hover mode |
| <input type="checkbox"/> Global environmental concerns, such as negative impact on climate change | <input type="checkbox"/> Squandering of public money to finance new infrastructure and air taxi technology, instead of improving existing public transport and infrastructure like roads and rail |
| <input type="checkbox"/> Job loss, for instance affecting taxi drivers | <input type="checkbox"/> Flight shame (i.e. my social reputation would suffer as a result of using air taxis) |
| <input type="checkbox"/> Security threats, for instance, criminal organizations (for ransom), hackers, or terrorists hacking into the control system and hijacking or misdirecting the air taxi | <input type="checkbox"/> Other, please specify: _____ ² |
| <input type="checkbox"/> Privacy concerns, for instance, an air taxi flying close to my window or over my property | <input type="checkbox"/> None of these |
| <input type="checkbox"/> Affordability, i.e. the service being affordable only for rich or privileged people | |

C6. Ranking of previously selected concerns

Please sort your main concerns from 'most concerning' to 'least concerning'.^{3,4}

- ◇ <Concern chosen in C5 is displayed, if at least 1 was chosen>
- ◇ <Concern chosen in C5 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in C5 is displayed, if at least 3 were chosen>
- ◇ <Concern chosen in C5 is displayed, if at least 4 were chosen>
- ◇ <Concern chosen in C5 is displayed, if at least 5 were chosen>
- ◇ <Concern chosen in C5 is displayed, if at least 6 were chosen>

1. Answers were shuffled to eliminate bias related to positioning 2. Evaluation did not lead to significant other concern 3. Only options chosen in B4 prompted in B5; if "None of these" was chosen in B4, question B5 is skipped
4. "Other" option in B5 contains text input from B4, if filled by participant

C11.C12. Concerns regarding take-off and landing stations

C11. Selection of up to 6 concerns

Assuming that a take-off and landing-station is close by (under 50 metres), what are you most concerned about? Please select up to 6 answers.¹

- Noise originating from the take-off and landing manoeuvres of air taxis
- Increased number of people walking by
- Increased road traffic to and from the take-off and landing station
- Visual pollution, i.e. too many aerial vehicles in my field of view, for instance, when I look out of my window
- Breach of my privacy
- Increased security threats (such as terrorists hijacking an air taxi and letting it crash on purpose)
- Safety issues (fear of an increased number of air taxis crashing)
- Take-off stations taking up space needed for retail
- Take-off stations taking up space otherwise available for living or recreation, such as parks
- Other, please specify: _____²
- None of these

C12. Ranking of previously selected concerns

Please sort your **main concerns** from 'most concerning' to 'least concerning'.^{3,4}

- ◇ <Concern chosen in C11 is displayed, if at least 1 was chosen>
- ◇ <Concern chosen in C11 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in C11 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in C11 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in C11 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in C11 is displayed, if at least 2 were chosen>
- ◇ <Concern chosen in C11 is displayed, if 6 were chosen>

1. Answers were shuffled to eliminate bias related to positioning 2. Evaluation did not lead to significant other concern 3. Only options chosen in C11 prompted in C12; if "None of these" was chosen in B4, question B5 is skipped
4. "Other" option in C12 contains text input from B4, if filled by participant

B9. Environmental concerns regarding delivery drones

B9. Ranking of 7 environmental concerns potentially incurred by delivery drones

What are your greatest concerns when it comes to the possible environmental consequences of drone delivery? Please sort the following answers from 1 being 'most concerning' to 7 being 'least concerning' or select 'none of these'.

- Air pollution
- Noise pollution, for example, regular exposure to elevated sound levels that potentially have adverse effects on humans or other living organisms
- Negative impact on bird life, insects and other flying animals
- High environmental and climate impact from drone operation, including power generation (e.g. electricity)
- High environmental and climate impact from the manufacturing of drones, including battery production
- High environmental impact from the disposal of drones
- Sealed surfaces, for example, covering soil with materials like concrete and stone, e.g. for take-off and landing pads, potentially reducing natural soil and ecosystem function in the area concerned
- None of these

C9. Environmental concerns regarding air taxis

C9. Ranking of 7 environmental concerns potentially incurred by air taxis

What are your greatest **concerns** when it comes to the possible **environmental consequences** of air taxis? Please sort the following answers from 1 being 'most concerning' to 7 being 'least concerning' or select 'none of these'.

- Air pollution
- Noise pollution, for example, regular exposure to elevated sound levels that potentially have adverse effects on humans or other living organisms
- Negative impact on bird life, insects and other flying animals
- High environmental and climate impact from air taxi operation, including power generation (e.g. electricity)
- High environmental and climate impact from the manufacturing of air taxis, including battery production
- High environmental impact from the disposal of air taxis
- Sealed surfaces, for example, covering soil with materials like concrete and stone, e.g. for take-off and landing pads, potentially reducing natural soil and ecosystem function in the area concerned
- None of these

D4. Introduction of an eco-label

D4. Opinion on certification of environmental impact of UAM

Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below? Please select one answer.

A+++	<input type="radio"/>	Yes, certainly	<input type="radio"/>	May, not sure	<input type="radio"/>	No
A++						
A+						
A						
B						
C						
D						

B7.B8. Trading off concerns safety, noise and visual pollution regarding drone delivery

B7. Relative importance of attributes safety, noise and visual pollution in conjoint style question

Put yourself in the year 2030: drones with about 3-metre wingspans, certified by competent authorities, are flying at altitudes of up to 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown.¹

Example choice card ²	Alternative 1	Alternative 2	Alternative 3
Safety	One drone has the same likelihood of hitting a pedestrian as one car	One drone has 1/100th the likelihood of hitting a pedestrian as one car	One drone has 1/100th the likelihood of hitting a pedestrian as one car
Noise	One drone is as loud as a truck driving by at city speed (~82 dB, disturbing)	One drone is as loud as a bicycle riding by at city speed (~57 dB, barely noticeable)	One drone is as loud as a car driving by at city speed (~65 dB, noticeable)
Visual pollution	~10 drones per hour in one's field of view when walking down a street <input type="radio"/>	20+ drones per hour in one's field of view when walking down a street <input type="radio"/>	~5 drones per hour in one's field of view when walking down a street <input type="radio"/>

B8. Absolute acceptance of best case and worst case alternatives for delivery drone

Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario based on the scale shown below.

	Very unacceptable	Unacceptable	Somewhat unacceptable	Somewhat unacceptable	Acceptable	Very acceptable
A. Urban air mobility where 1) the chance of a delivery drone crashing onto a pedestrian is 1/100th that of a car hitting a pedestrian, 2) drones flying by have a similar noise level as bicycles passing by at city speed, and 3) one or two drones pass by per hour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Urban air mobility where 1) the chance of a delivery drone crashing onto a pedestrian is 5 times higher than that of a car hitting a pedestrian, 2) drones flying by have a similar noise level as a leaf blower, and 3) more than 20 drones pass by per hour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. 8 trade-offs per participant to be made
 2. Other possible levels for safety, noise and visual pollution on following slides

C7.C8. Trading off concerns safety, noise and visual pollution regarding air taxis

C7. Relative importance of attributes safety, noise and visual pollution in conjoint style question

Put yourself in the year 2030: air taxis with wingspans of up to 12 metres, certified by competent authorities, are flying at altitudes of about 150 metres. In the following section, you will be asked which scenario out of three alternatives is most acceptable from your perspective. Please choose your most preferred option out of the three alternatives shown.¹

Example choice card ²	Alternative 1	Alternative 2	Alternative 3
Safety	An air taxi is as safe for passengers and pedestrians as a car (i.e., ~2 fatalities per billion passenger km)	An air taxi is as safe for passengers and pedestrians as a commercial aircraft (i.e., ~0.01 fatalities per billion passenger km)	An air taxi is as safe for passengers and pedestrians as a bus (i.e., ~0.05 fatalities per billion passenger km)
Noise	An air taxi is as loud as a car driving by at city speed (~65 dB, noticeable)	An air taxi is as loud as a bicycle driving by at city speed (~57 dB, barely noticeable)	An air taxi is as loud as a truck driving by at city speed (~82 dB, disturbing)
Visual pollution	~10 air taxis per hour in one's field of view when walking down a street <input type="radio"/>	20+ air taxis per hour in one's field of view when walking down a street <input type="radio"/>	~5 air taxis per hour in one's field of view when walking down a street <input type="radio"/>

C8. Absolute acceptance of best case and worst case alternatives for delivery drone

Again, put yourself in the year 2030. How acceptable would you find the following scenarios for the future? Please rate each scenario, based on the scale shown below.

	Very unacceptable	Unacceptable	Somewhat unacceptable	Somewhat unacceptable	Acceptable	Very acceptable
A. Urban air mobility where 1) the safety standard for air taxis is similar to the safety standard of commercial aircraft for passengers and pedestrians (highest safety standard), 2) air taxis flying by have a similar noise level as bicycles passing by at city speeds, and 3) one or two air taxis pass by per hour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Urban air mobility where 1) the risk posed by air taxis for passengers and pedestrians is comparable to that of motorcycles, 2) air taxis flying by have a similar noise level as leaf blowers, and 3) more than 20 air taxis pass by per hour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. 8 trade-offs per participant to be made
 2. Other possible levels for safety, noise and visual pollution on following slides

B10. Negative assumptions about drone delivery

B10. Agreement with statements about drone delivery potentially leading to poor acceptance

To what extent do you agree with the following statements about drone delivery? Please rate how much you agree or disagree with each of the following statements

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
A. I suspect that I would find extra fees for express delivery by drone much too expensive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. I would be afraid that drones could massively invade my privacy, for instance, by spying through my window and recording my personal life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. I would be afraid that the use of drones for the delivery of goods would significantly reduce the number of jobs, e.g. for parcel delivery personnel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. I would be afraid that the drones could be misused and become a security threat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C10. Negative assumptions about air taxis & vertiports

C10. Agreement with statements about air taxis potentially leading to poor acceptance

To what extent do you agree with the following statements about aerial vehicles? Please rate how much you agree or disagree with each of the following statements.

	strongly disagree	disagree	somewhat disagree	somewhat agree	agree	strongly agree
A. I suspect that taking an air taxi is much too expensive for me personally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. I suspect that only rich people will be able to afford taking air taxis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. As a resident of the city, I would be afraid that air taxis or their passengers could massively invade my privacy when flying over my house/flat, for instance, by spying through my window and recording my personal life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. I am afraid that the introduction of air taxis significantly reduces the number of jobs, affecting, for instance, taxi drivers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C10. Negative assumptions about air taxis & vertiports

C10. Agreement with statements about vertiports potentially leading to poor acceptance

To what extent do you agree with the following statements about aerial vehicles? Please rate how much you agree or disagree with each of the following statements.

	strongly disagree	disagree	somewhat disagree	somewhat agree	agree	strongly agree
E. Take-off and landing stations for air taxis operated by only one provider (comparable to airports for a single airline or docks for a single ferry line) would hamper competition and are therefore extremely unfair from a societal perspective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. I consider the allocation of inner-city space for take-off and landing stations of aerial vehicles as completely unfair or unnecessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D2. Trust in VTOL security

D2. Level of trust in security systems of drones and air taxis

To what extent do you trust that advanced aircraft flying in an urban environment will be technologically secure and armed against threats from hackers (such as criminal organisations, hacktivists or terrorists) in the following cases? Please select one answer per row.

Security	Fully mistrust	Mistrust	Somewhat mistrust	Somewhat trust	Trust	Fully trust
A. Drones (such as delivery drones)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Air taxis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D1. Trust in regulatory authorities

D1. Level of trust in regulatory authorities by level by area of influence

To what extent do you trust the following authorities to handle the risks and adopt regulations needed to manage urban air mobility (including safety, noise control, environmental protection, security, cybersecurity, etc.)? Please select one answer per row.

	Fully mistrust	Mistrust	Somewhat mistrust	Somewhat trust	Trust	Fully trust
Security						
A. European authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. National authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Regional or local authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D3. Impact of regulation on trust

D3. Direction and dimension of impact from regulatory measures on trust levels

Would your trust increase if the following regulators were to develop regulations to manage cybersecurity risks (certification and operation of aerial vehicles)? Please select one answer per row.

Trust	Decrease a lot	Decrease slightly	Stay the same	Increase slightly	Increase	Increase a lot
A. European authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. National authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Regional or local authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Back-Up

- Additional evaluations
- Survey questions
- **Detailed city evaluations**



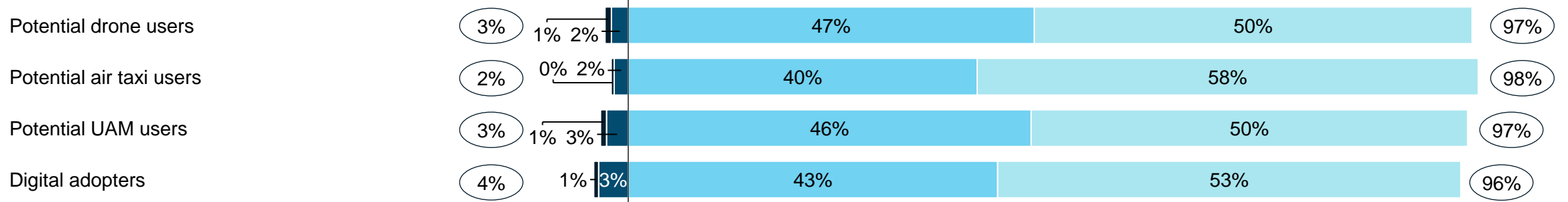
S5. General attitude towards urban air mobility

Barcelona, Spain 

(X%) Sum ■ Very negative ■ Rather negative ■ Rather positive ■ Very positive



Panel subgroups with statistically relevant higher agreement



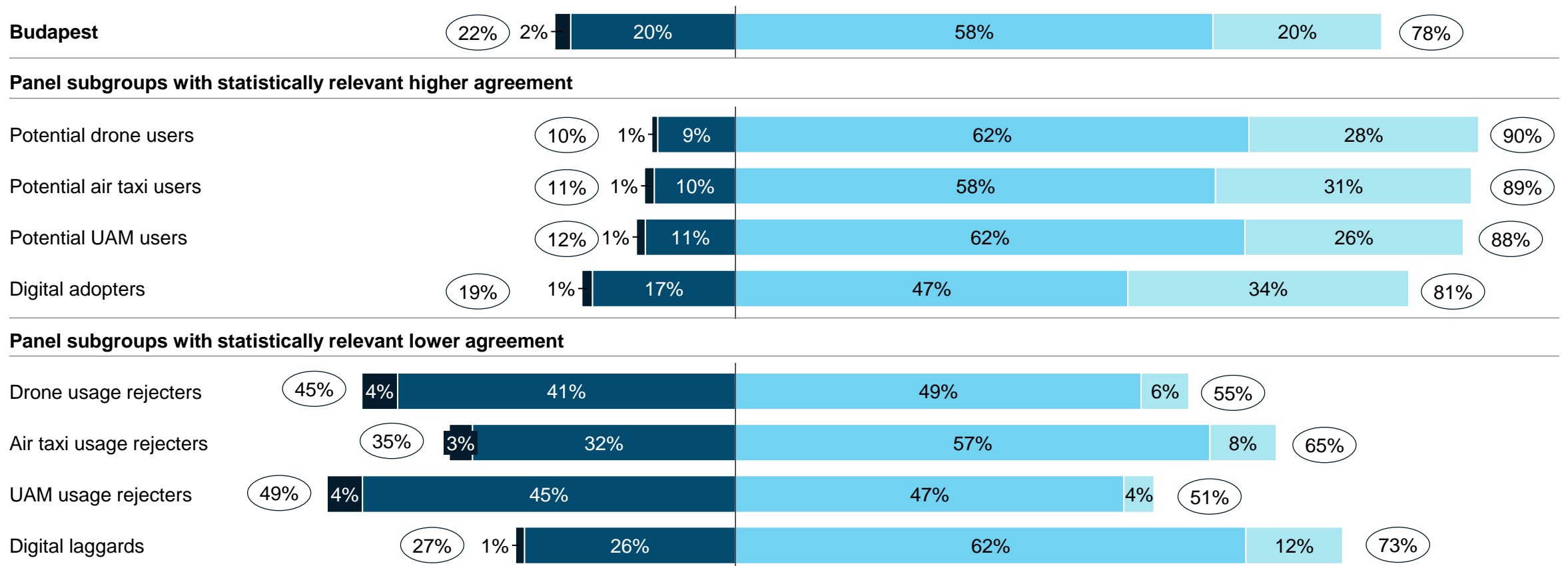
Panel subgroups with statistically relevant lower agreement



S5. General attitude towards urban air mobility

Budapest, Hungary 

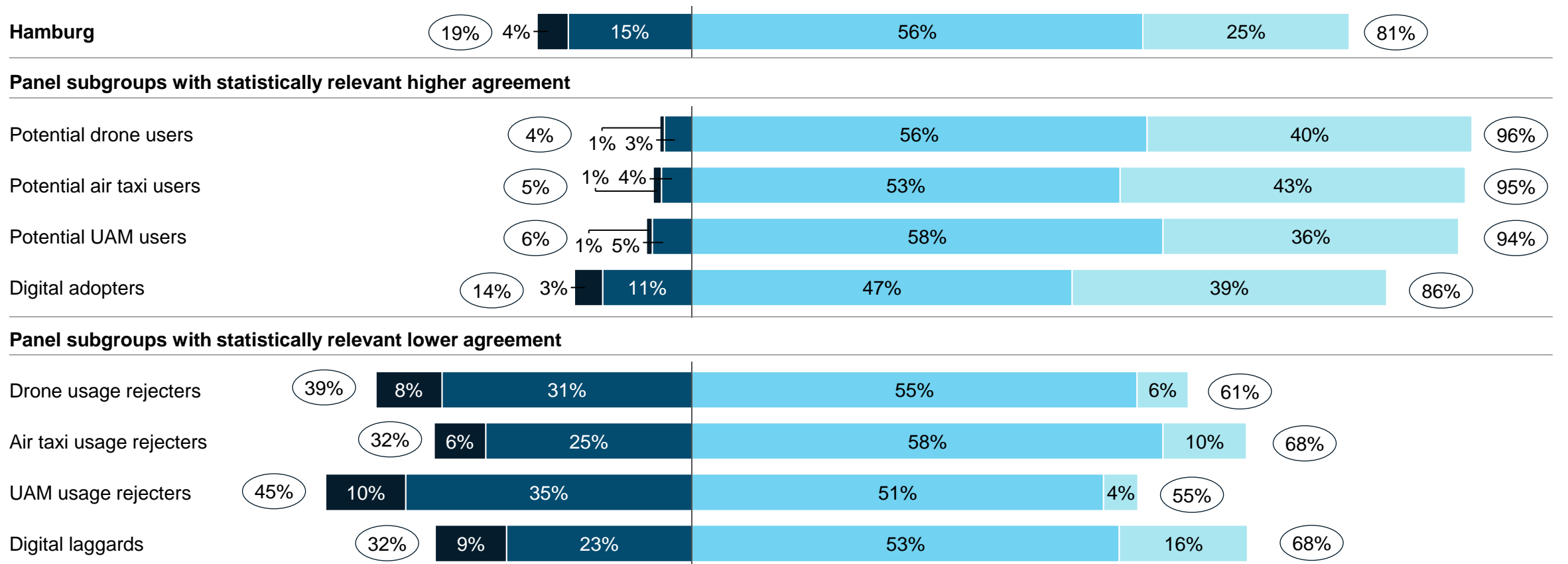
(X%) Sum Very negative Rather negative Rather positive Very positive



S5. General attitude towards urban air mobility

Hamburg, Germany 

(X%) Sum Very negative Rather negative Rather positive Very positive

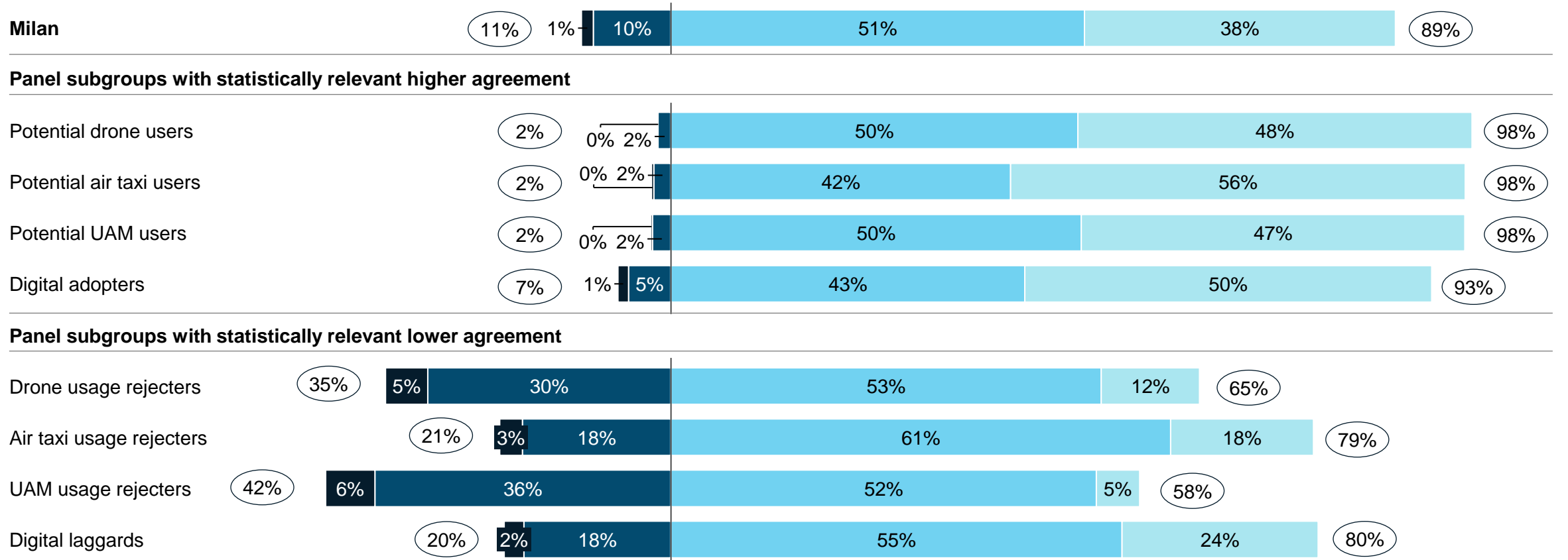


S5. General attitude towards urban air mobility

Milan, Italy







(X%) Sum ■ Very negative ■ Rather negative ■ Rather positive ■ Very positive



S5. General attitude towards urban air mobility

Öresund, Nordics  

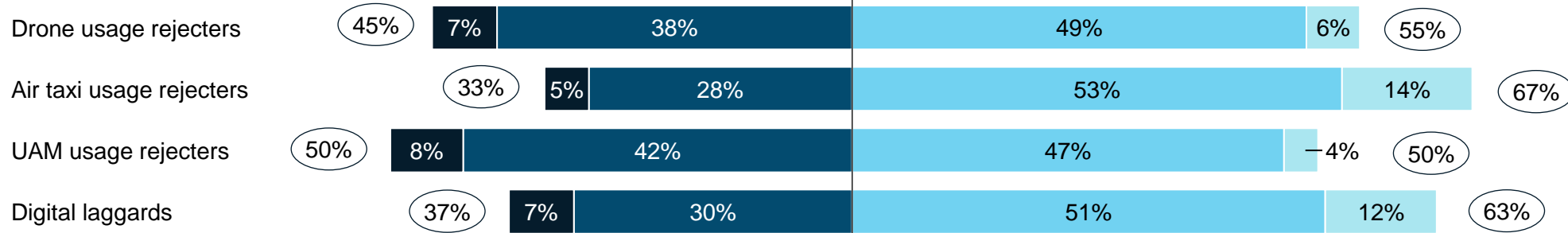
(X%) Sum  Very negative  Rather negative  Rather positive  Very positive



Panel subgroups with statistically relevant higher agreement



Panel subgroups with statistically relevant lower agreement

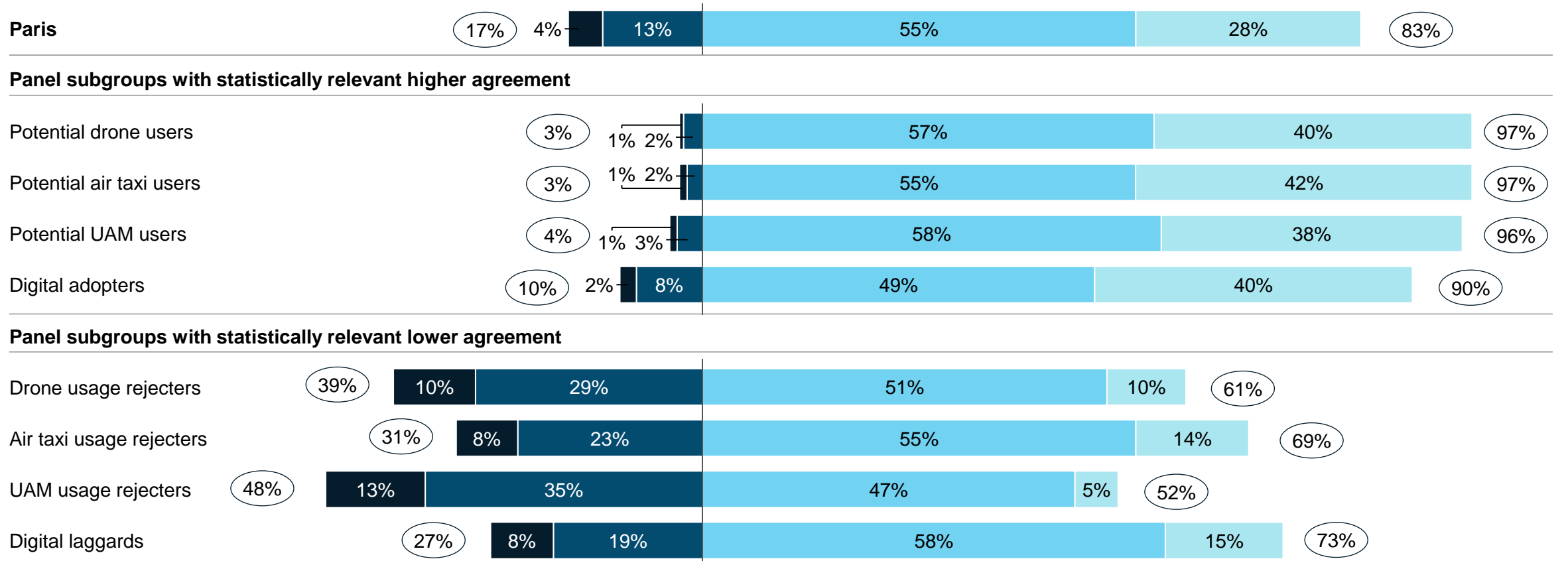


S5. General attitude towards urban air mobility

Paris, France



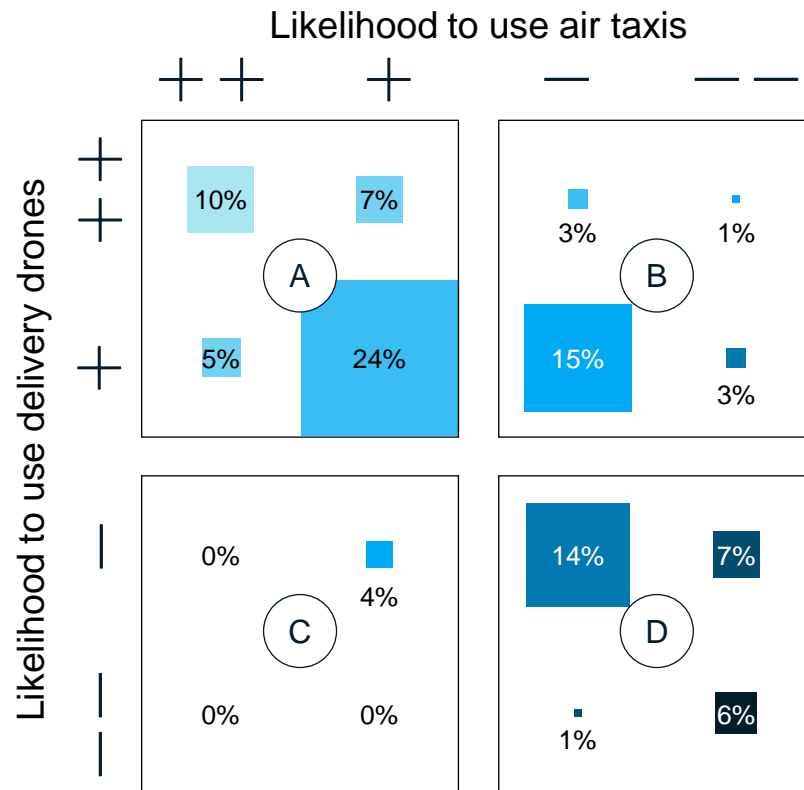
(X%) Sum Very negative Rather negative Rather positive Very positive



S6.S7. Likelihood to try out UAM services

Barcelona, Spain 

Positive  Negative



A
Broad users: 46% likely to become users of both services

A + **B** + **C**
Potential UAM users: 72% likely to make use of at least one service

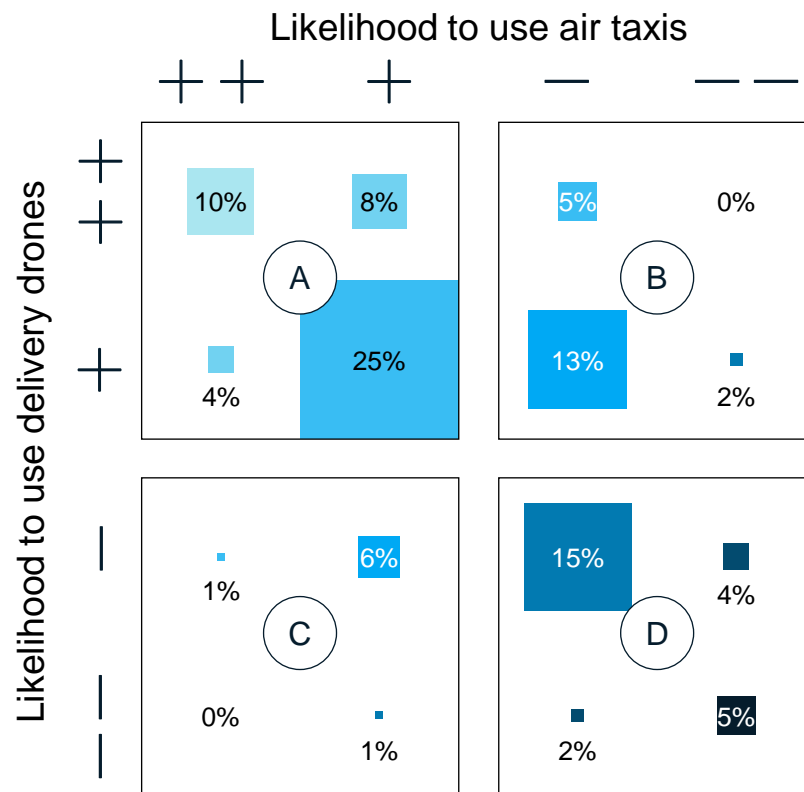
D
UAM rejecters: 28% not likely to become users of either use case

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

S6.S7. Likelihood to try out UAM services

Budapest, Hungary 

Positive  Negative



(A)
Broad users: 47% likely to become users of both services

(A) + (B) + (C)
Potential UAM users: 74% likely to make use of at least one service

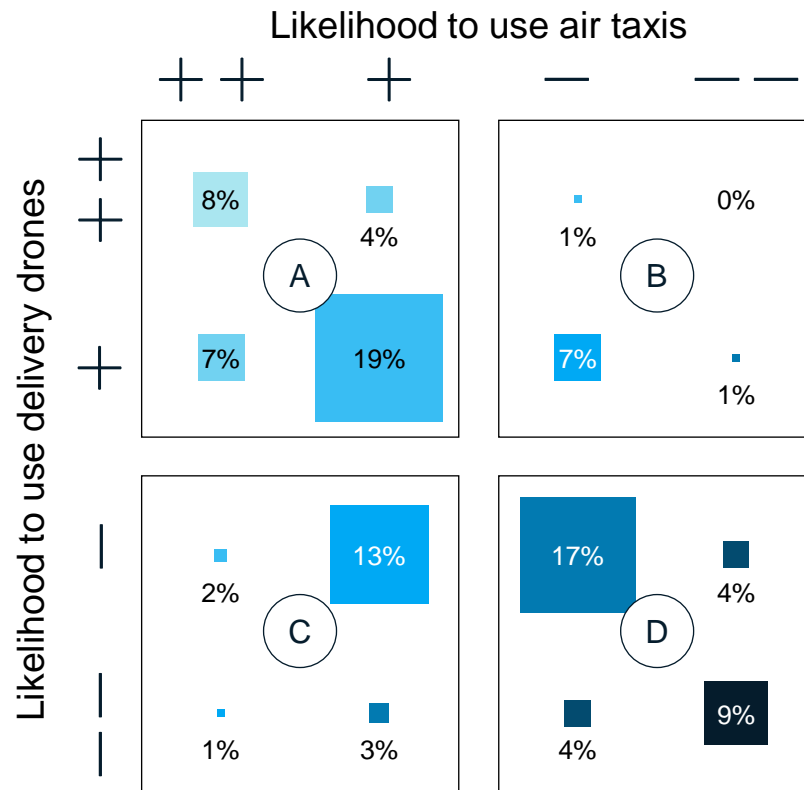
(D)
UAM rejecters: 26% not likely to become users of either use case

Source: EASA UAM social acceptance survey questions S6. How likely are you to make use of delivery of goods by drone (i.e., delivery of parcels from an online shopping platform to a nearby delivery hub, your garden or private property or a publicly accessible area), if it were offered in your city? Please assume that delivery by drone would cost about double today's standard shipping fees and ensured guaranteed delivery within 2 hours from the time you place your order. S7. How likely would you be to use an air taxi (i.e., a flying vehicle that transports passengers from A to B) for a 25-50% higher price than current road passenger transport options like conventional (road) taxis or Uber-like offerings, if you assume the trip could be made in half the time in the air taxi?

S6.S7. Likelihood to try out UAM services

Hamburg, Germany 

Positive  Negative



(A)

Broad users: 38% likely to become users of both services

(A) + (B) + (C)

Potential UAM users: 66% likely to make use of at least one service

(D)

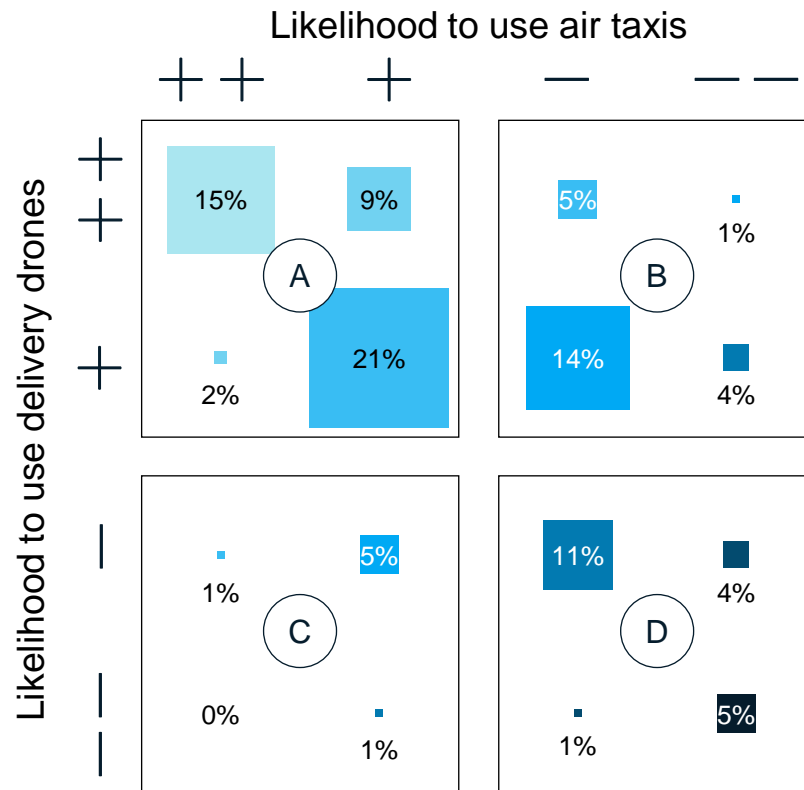
UAM rejecters: 34% not likely to become users of either use case

S6.S7. Likelihood to try out UAM services

Milan, Italy



Positive Negative



(A)

Broad users: 47% likely to become users of both services

(A) + (B) + (C)

Potential UAM users: 79% likely to make use of at least one service

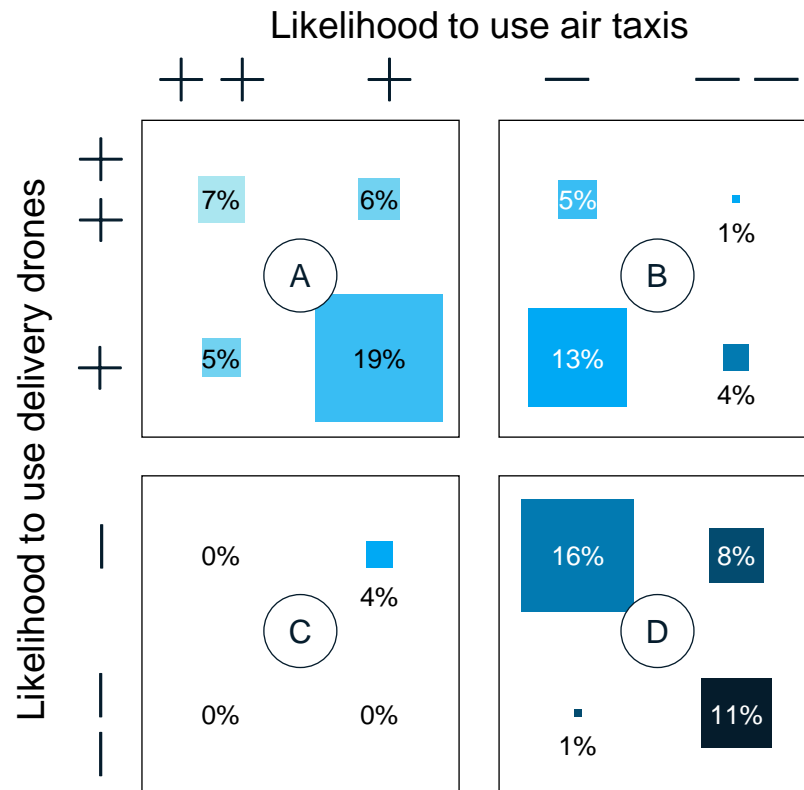
(D)

UAM rejecters: 21% not likely to become users of either use case

S6.S7. Likelihood to try out UAM services

Öresund, Nordics  

Positive  Negative



(A)

Broad users: 36% likely to become users of both services

(A) + (B) + (C)

Potential UAM users: 64% likely to make use of at least one service

(D)

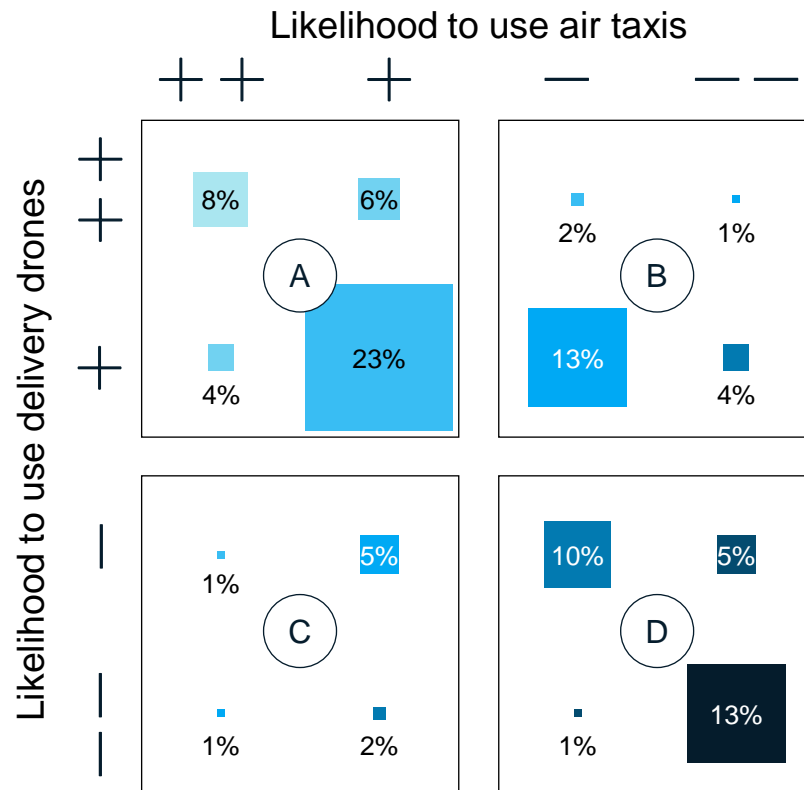
UAM rejecters: 36% not likely to become users of either use case

S6.S7. Likelihood to try out UAM services

Paris, France



Positive Negative



A

Broad users: 41% likely to become users of both services

A + **B** + **C**

Potential UAM users: 70% likely to make use of at least one service

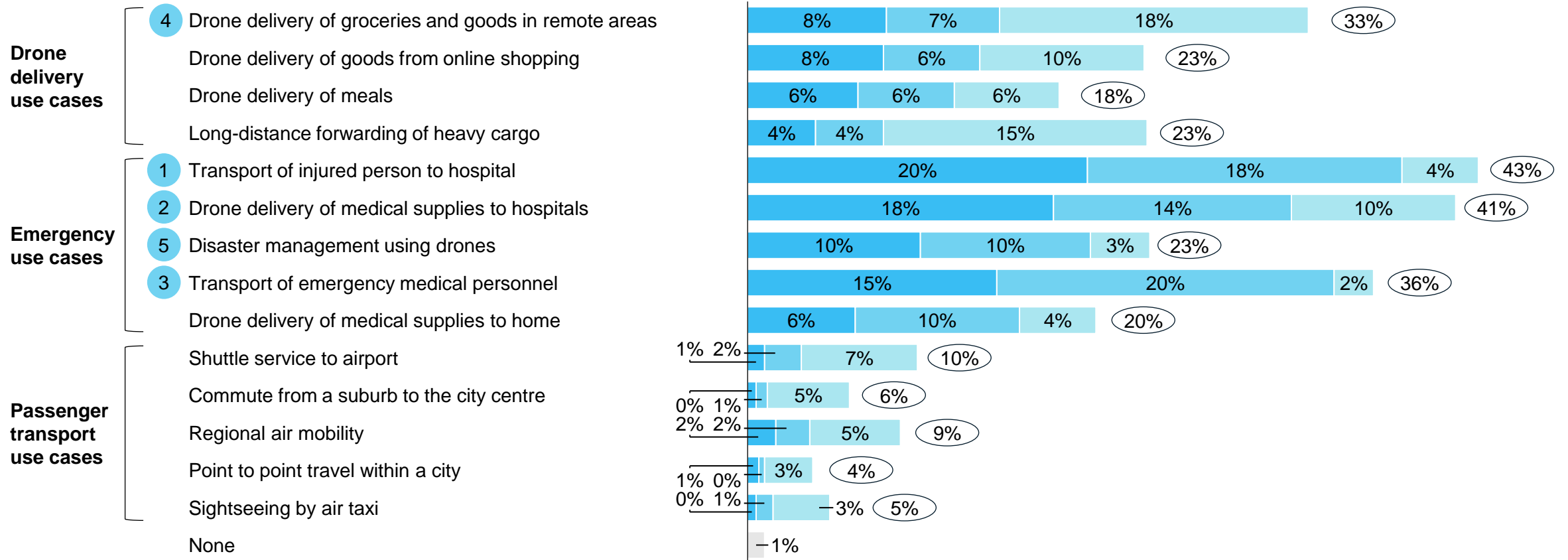
D

UAM rejecters: 30% not likely to become users of either use case

A3. Perceived usefulness of UAM use cases

Barcelona, Spain 

1 Top 5 use case (X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

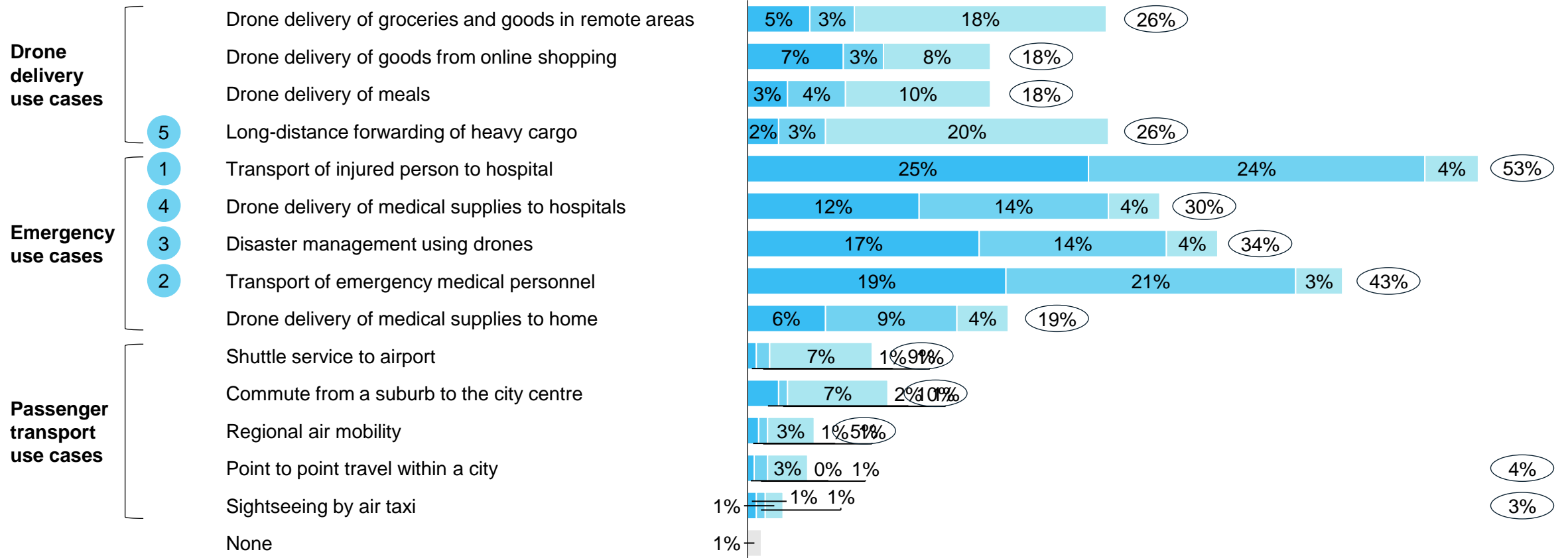


Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A3. Perceived usefulness of UAM use cases

Budapest, Hungary 

1 Top 5 use case (X%) Sum Ranked #1 Ranked #2 Ranked #3

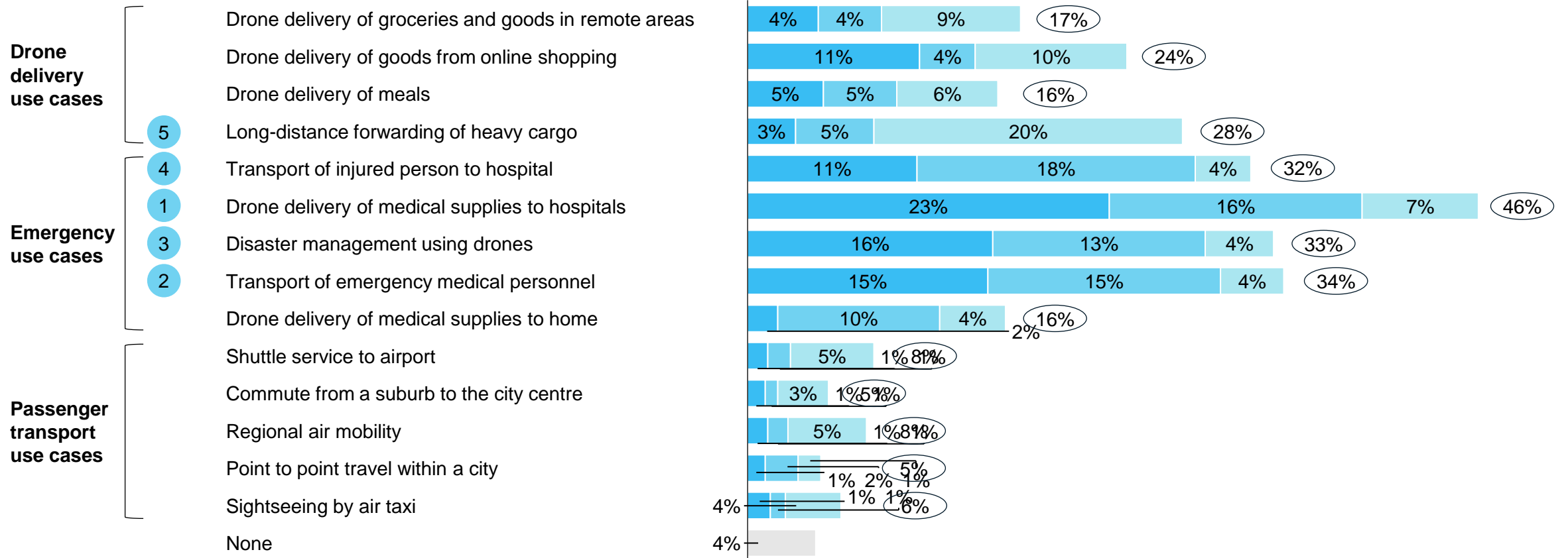


Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A3. Perceived usefulness of UAM use cases

Hamburg, Germany 

1 Top 5 use case (X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



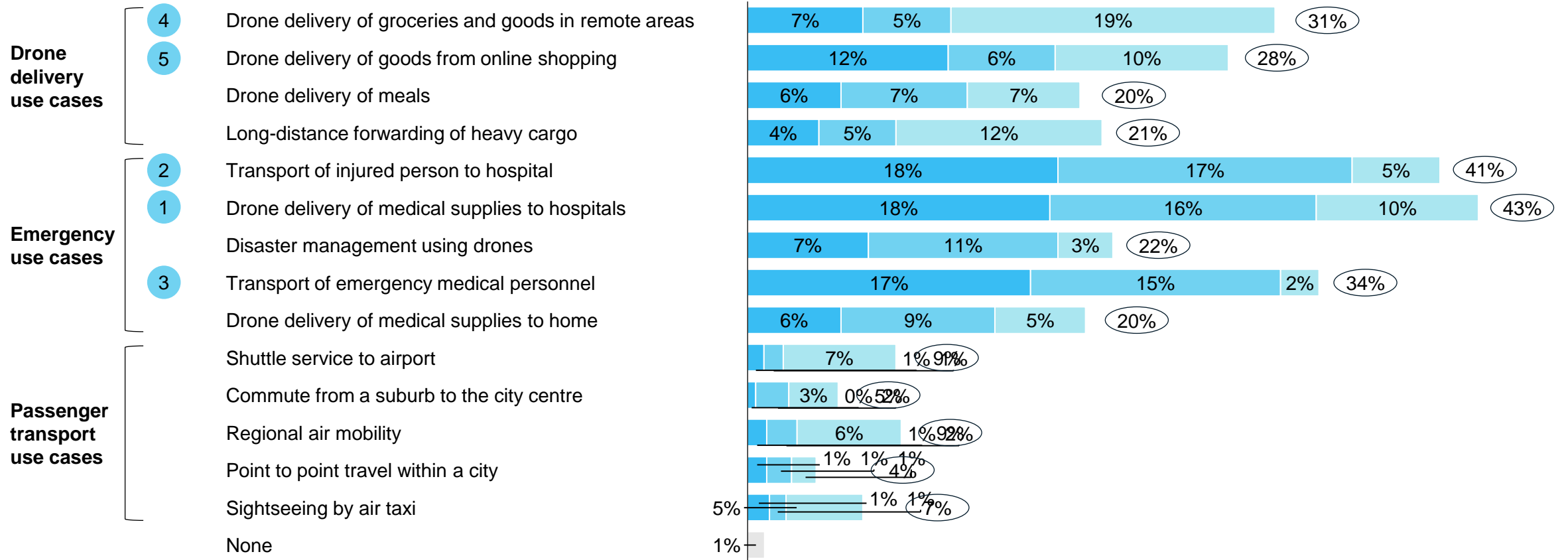
Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A3. Perceived usefulness of UAM use cases

Milan, Italy



1 Top 5 use case (X%) Sum Ranked #1 Ranked #2 Ranked #3

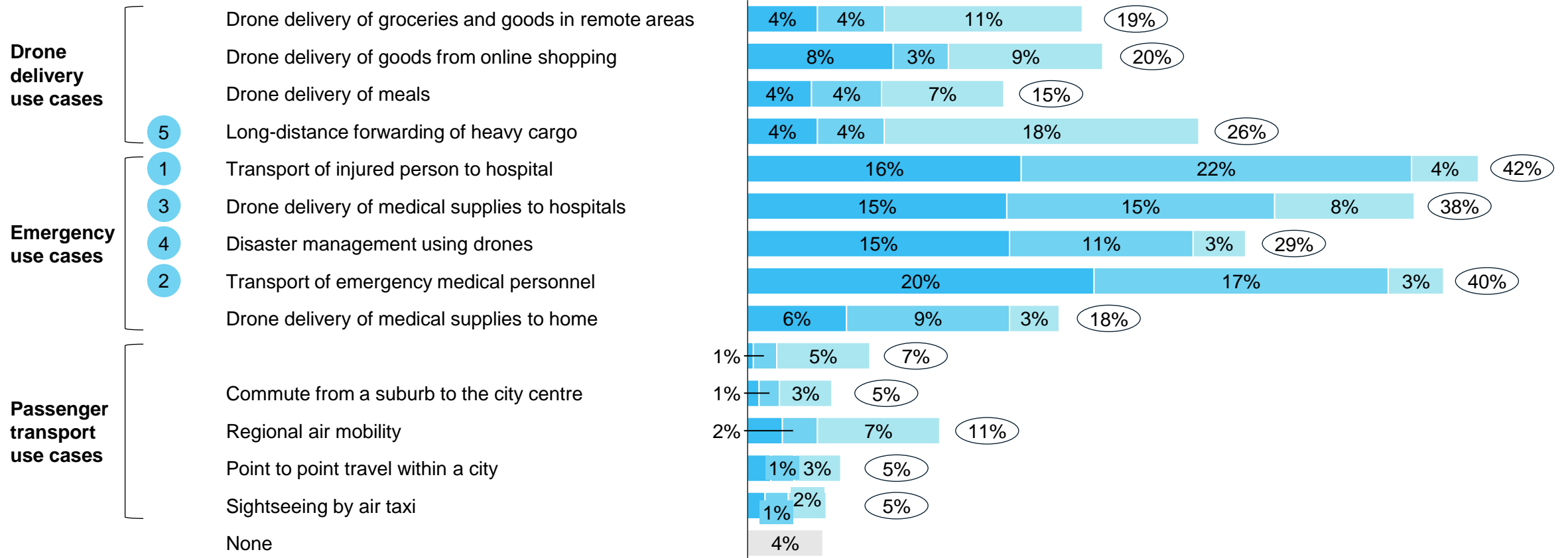


Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A3. Perceived usefulness of UAM use cases

Öresund, Nordics  

1 Top 5 use case (X%) Sum  Ranked #1  Ranked #2  Ranked #3



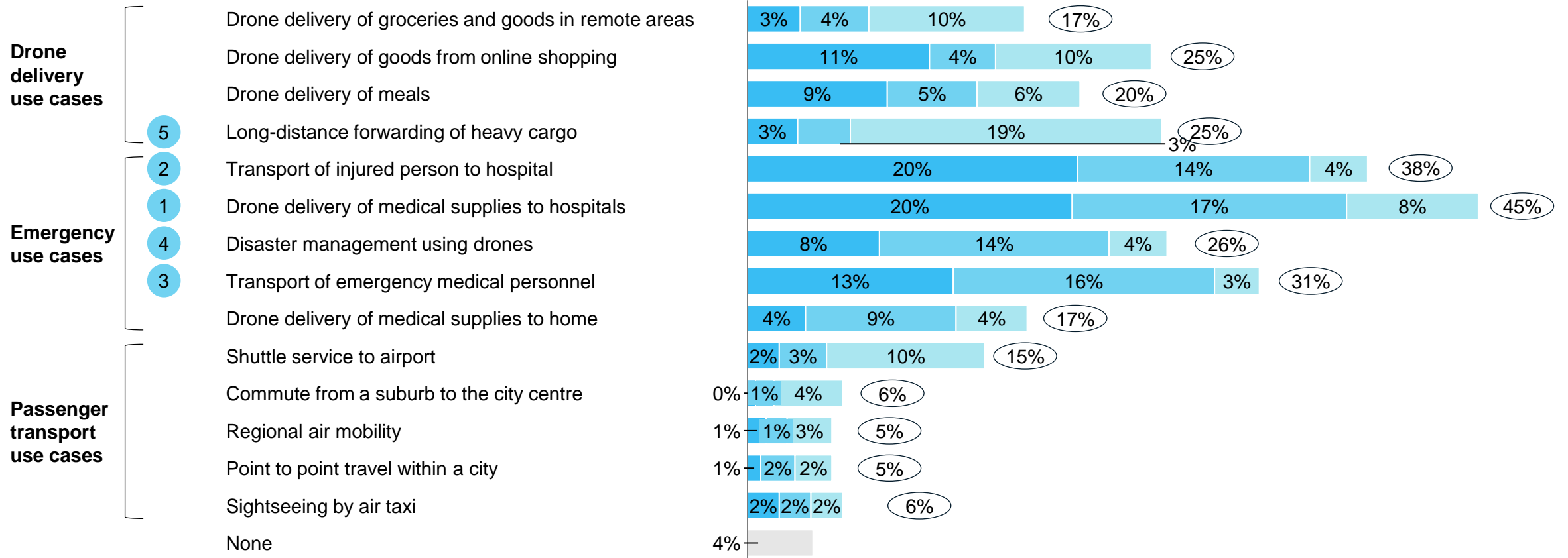
Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A3. Perceived usefulness of UAM use cases

Paris, France



1 Top 5 use case (X%) Sum Ranked #1 Ranked #2 Ranked #3

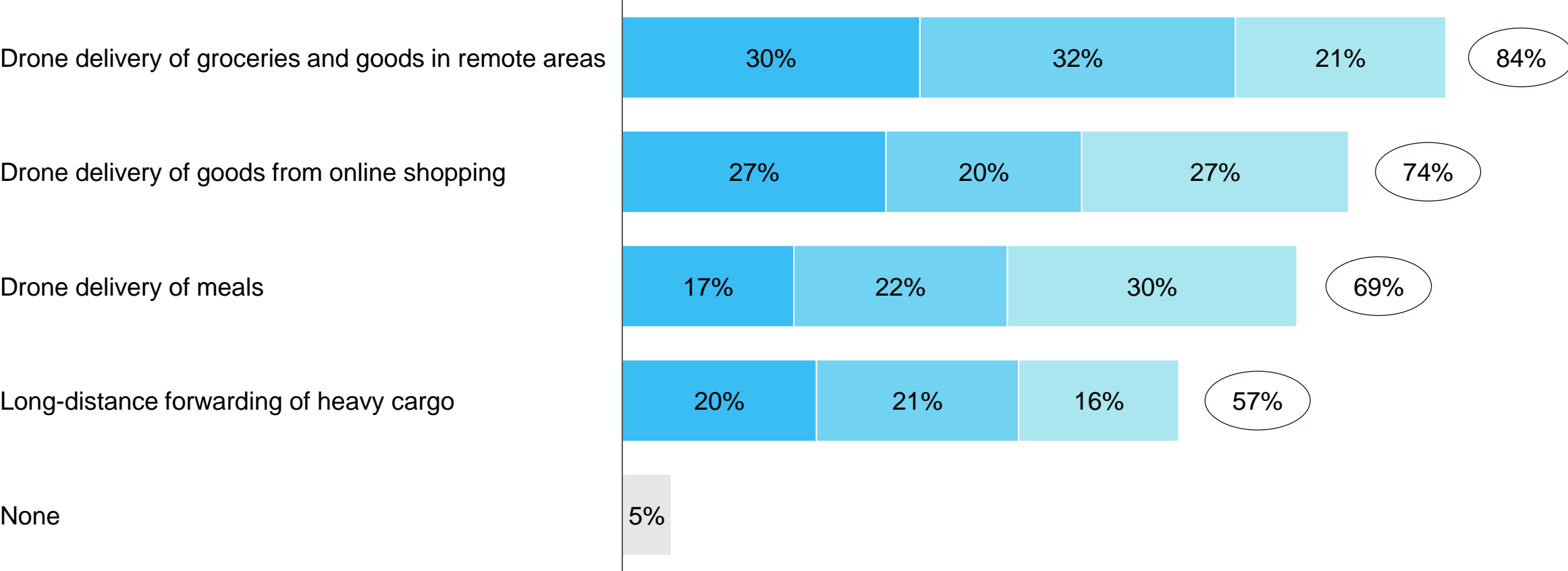


Source: EASA UAM social acceptance survey question A3. Which of the below use cases (that were previously selected as the most useful in their categories, see A2.a, A2.b and A2.c) are the most useful overall? Please sort the following applications from 'most useful' to 'least useful'.

A2.a. Perceived usefulness of UAM use cases – drone delivery use case

Barcelona, Spain 

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

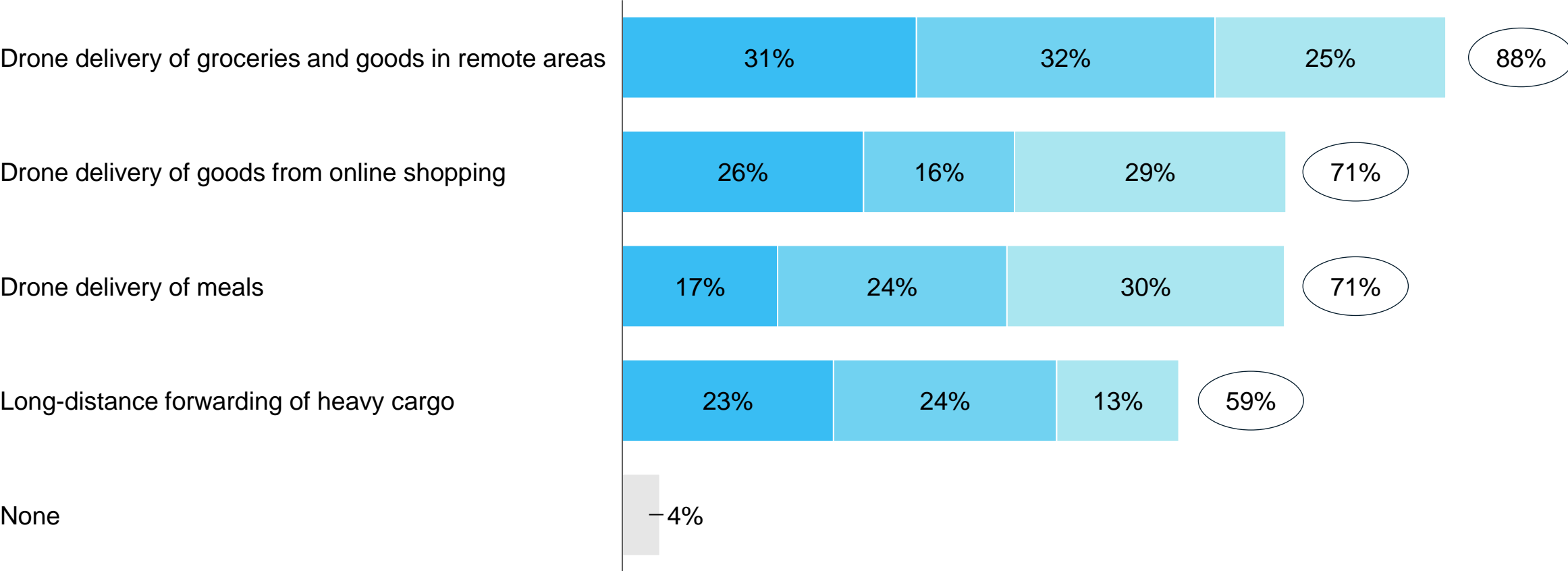


Source: EASA UAM social acceptance survey question A2a. Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.

A2.a. Perceived usefulness of UAM use cases – drone delivery use case

Budapest, Hungary 

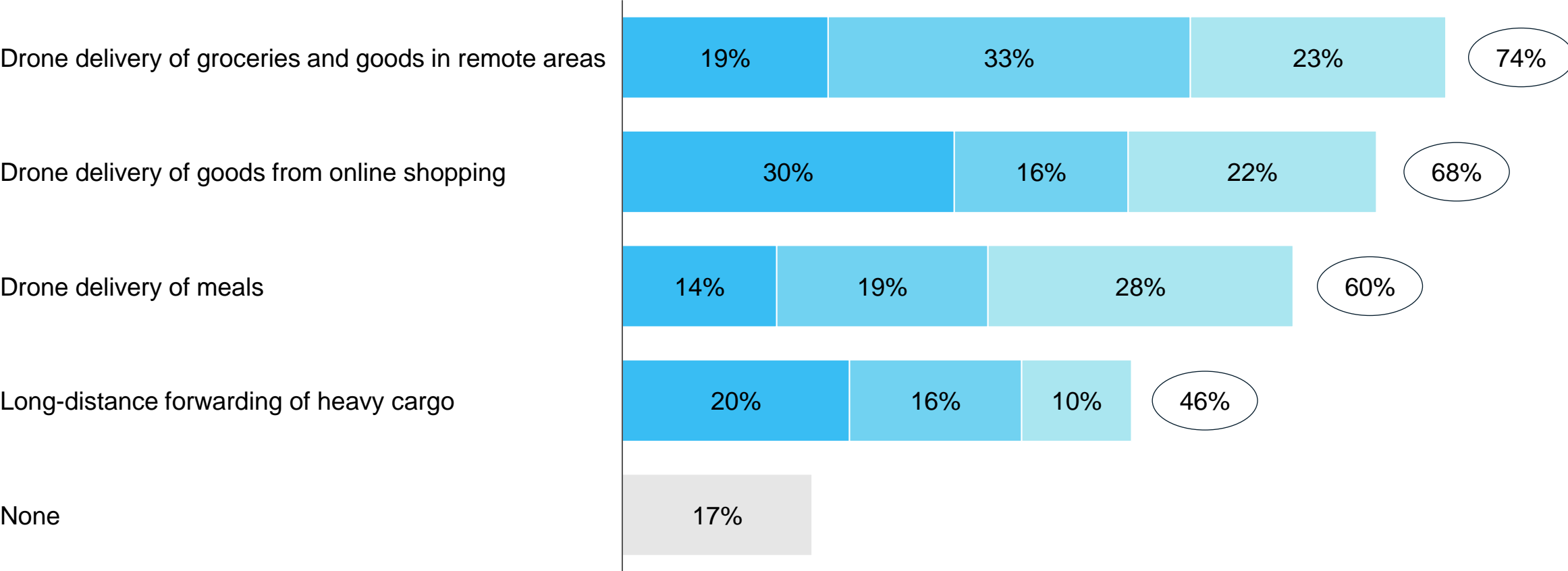
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.a. Perceived usefulness of UAM use cases – drone delivery use case

Hamburg, Germany 

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



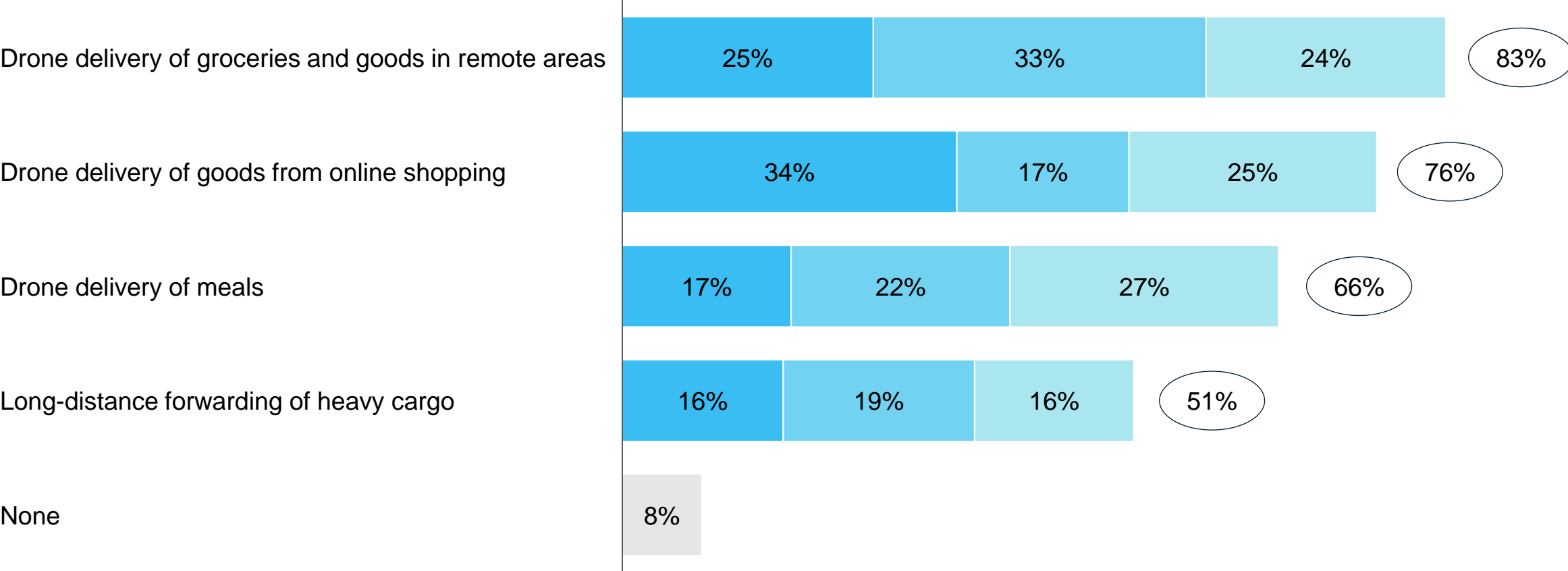
Source: EASA UAM social acceptance survey question A2a. Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.

A2.a. Perceived usefulness of UAM use cases – drone delivery use case

Milan, Italy



X% Sum Ranked #1 Ranked #2 Ranked #3

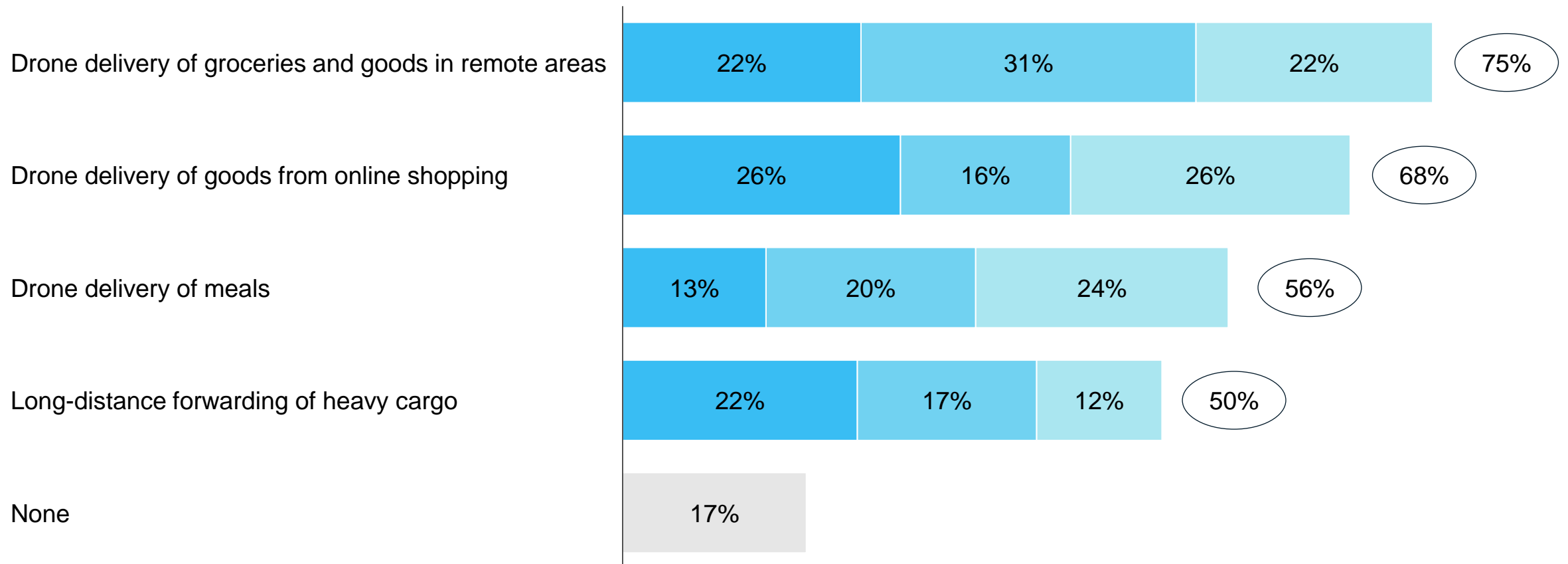


Source: EASA UAM social acceptance survey question A2a. Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.

A2.a. Perceived usefulness of UAM use cases – drone delivery use case

Öresund, Nordics  

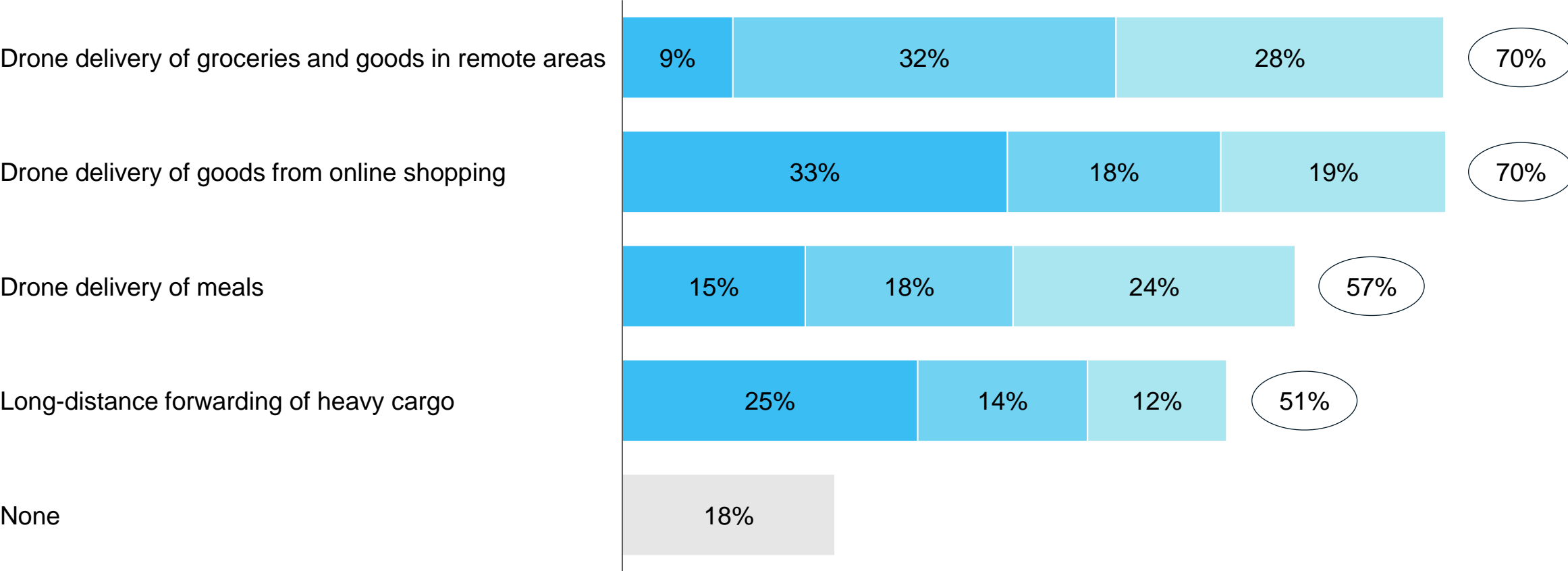
X% Sum  Ranked #1  Ranked #2  Ranked #3



A2.a. Perceived usefulness of UAM use cases – drone delivery use case

Paris, France 

(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

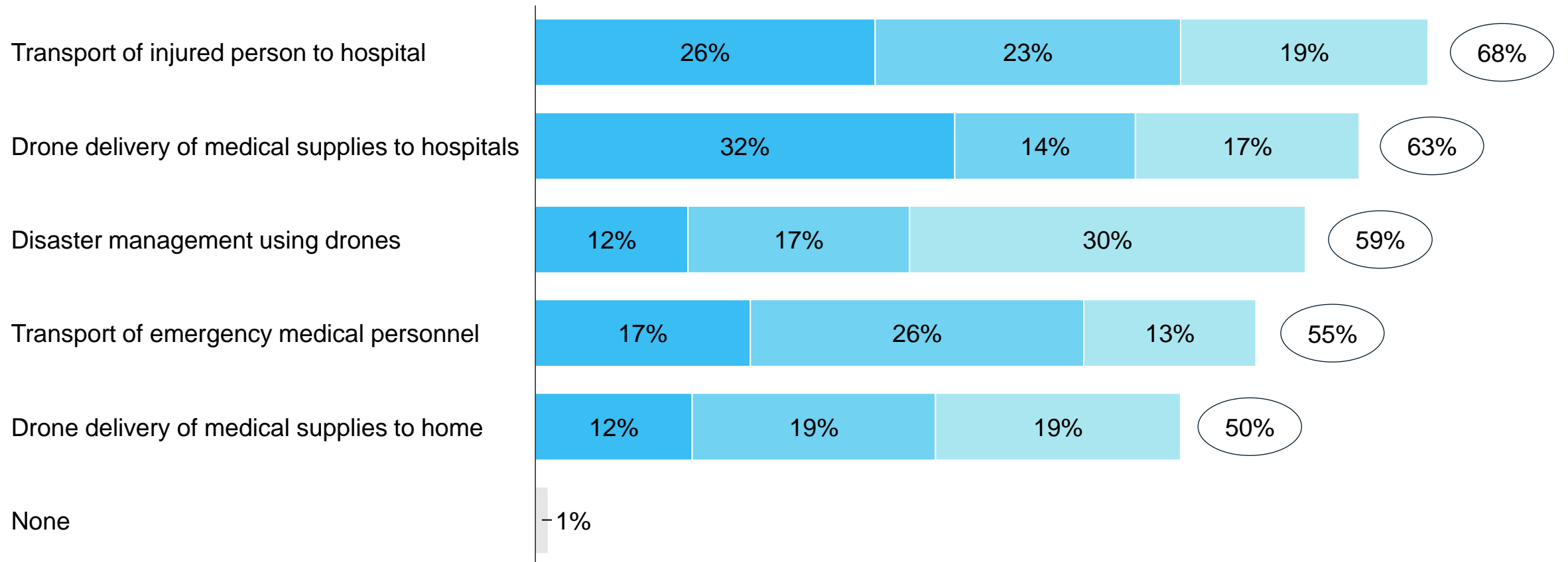


Source: EASA UAM social acceptance survey question A2a. Which of the below delivery use cases would you consider the most useful? Please sort the following applications from 1 being 'most useful' to 4 being 'least useful' or select 'none of these are useful'.

A2.b. Perceived usefulness of UAM use cases – medical emergency use case

Barcelona, Spain 

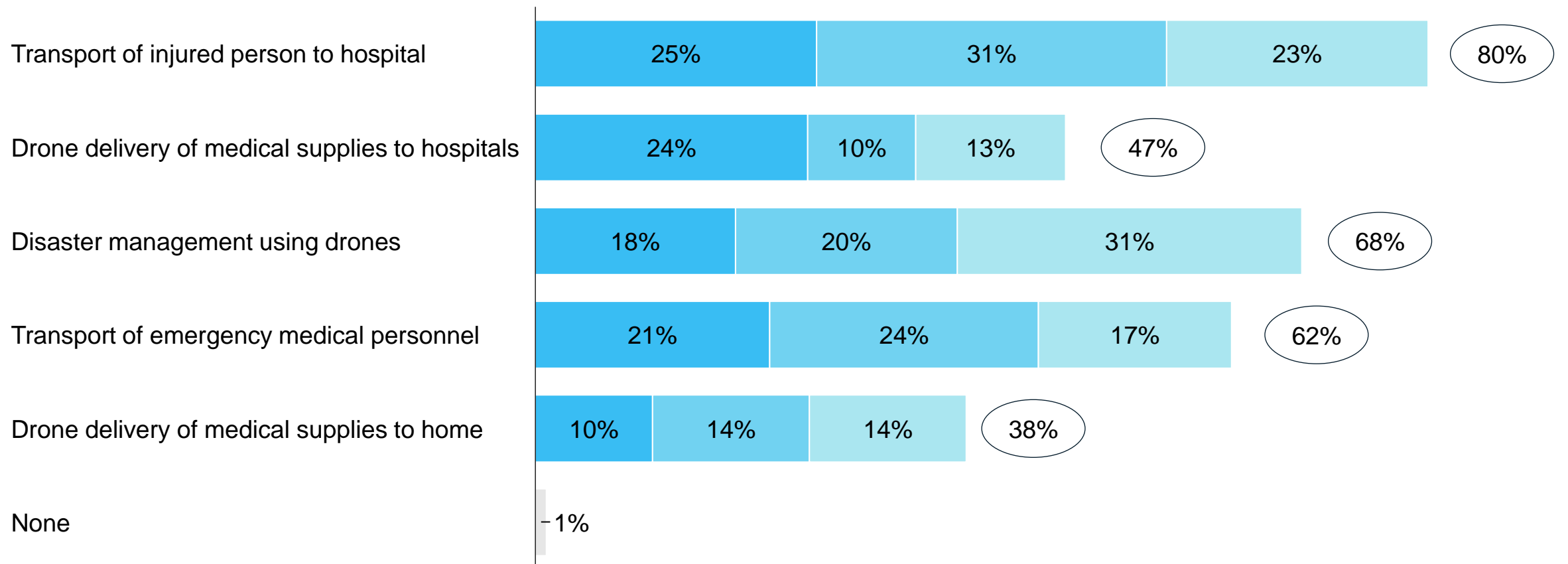
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.b. Perceived usefulness of UAM use cases – medical emergency use case

Budapest, Hungary 

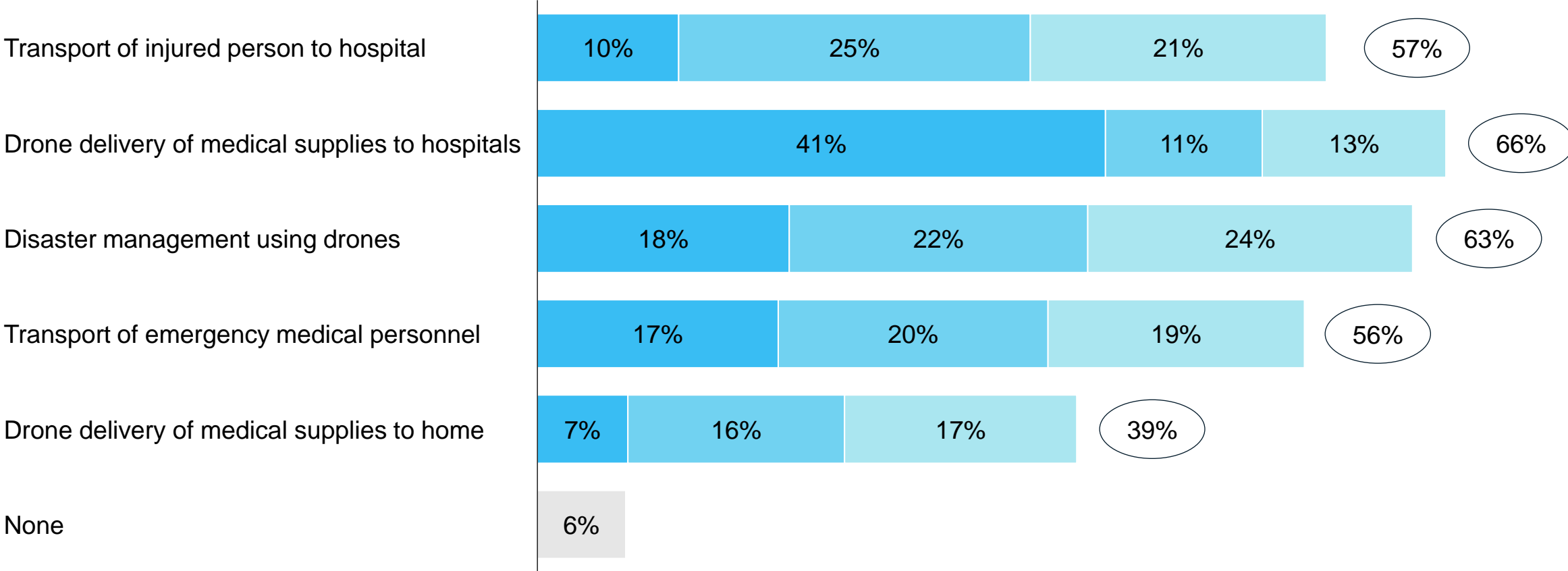
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.b. Perceived usefulness of UAM use cases – medical emergency use case

Hamburg, Germany 

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



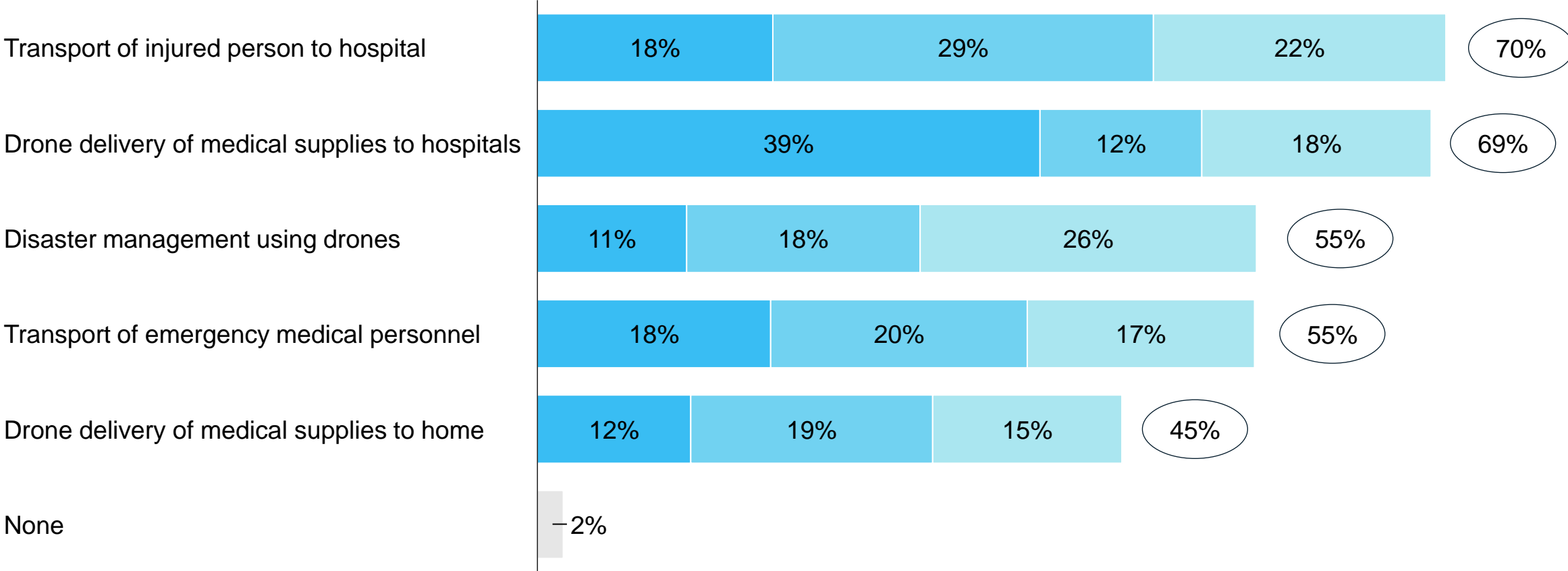
Source: EASA UAM social acceptance survey question A2b. Which of the below medical emergency use cases would you consider the most useful in an urban environment? Please sort the following applications from 1 being 'most useful' to 5 being 'least useful' or select 'none of these are useful'.

A2.b. Perceived usefulness of UAM use cases – medical emergency use case

Milan, Italy



X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

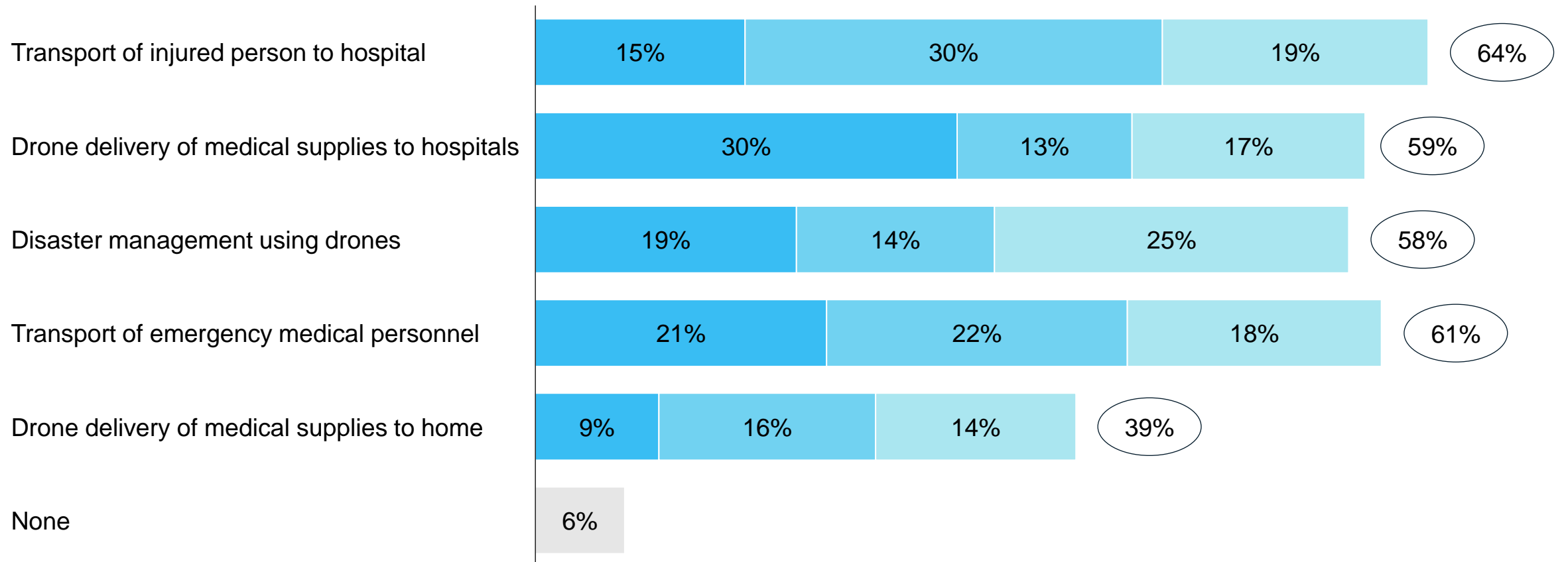


Source: EASA UAM social acceptance survey question A2b. Which of the below medical emergency use cases would you consider the most useful in an urban environment? Please sort the following applications from 1 being 'most useful' to 5 being 'least useful' or select 'none of these are useful'.

A2.b. Perceived usefulness of UAM use cases – medical emergency use case

Öresund, Nordics  

X% Sum  Ranked #1  Ranked #2  Ranked #3

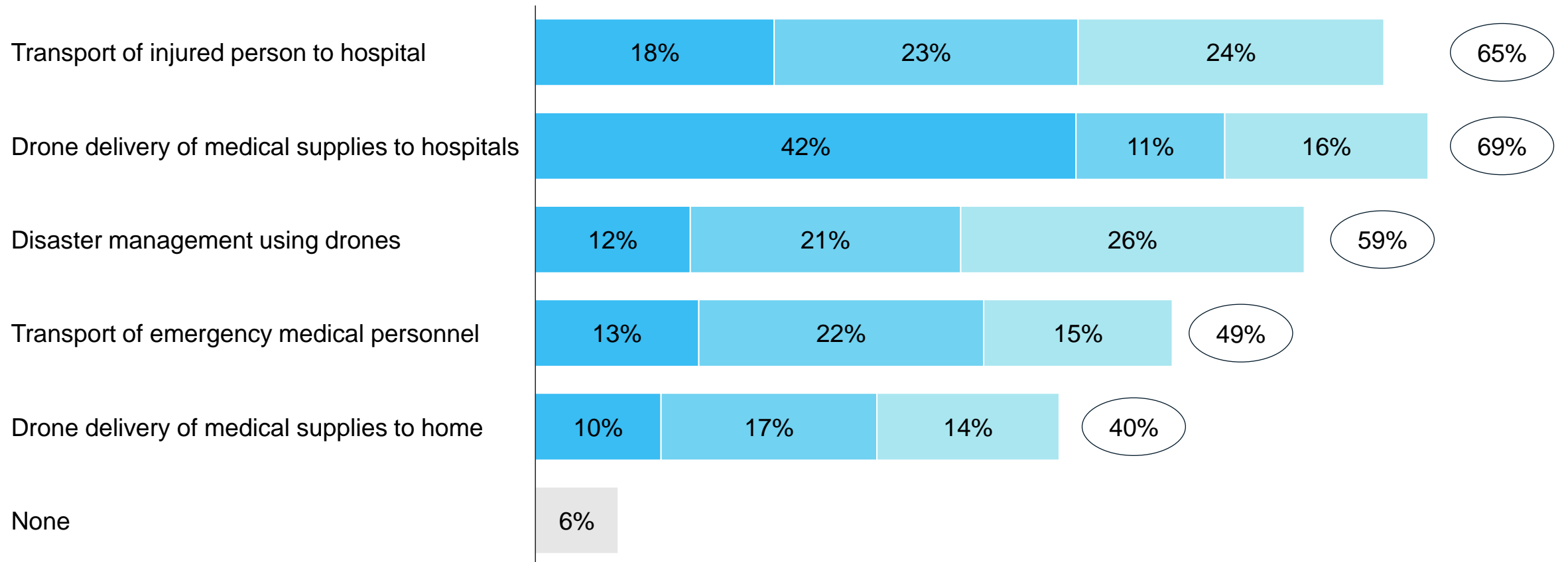


A2.b. Perceived usefulness of UAM use cases – medical emergency use case

Paris, France



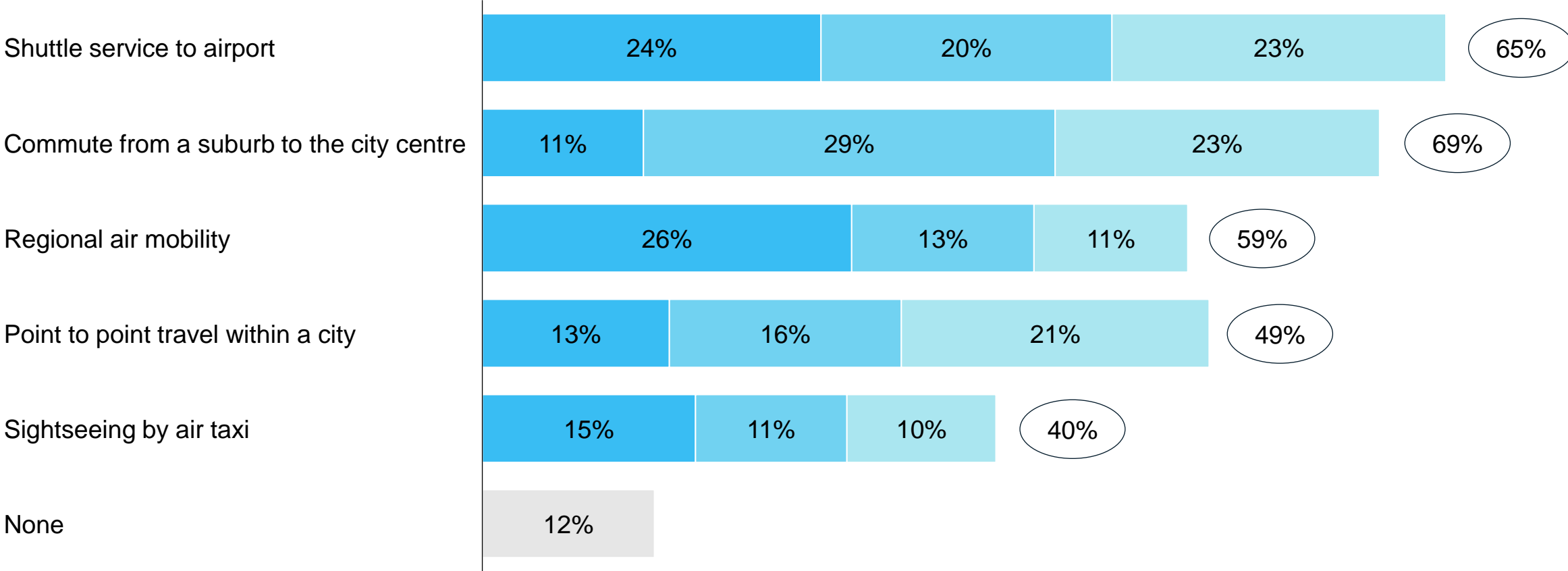
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.c. Perceived usefulness of UAM use cases – passenger transport use case

Barcelona, Spain 

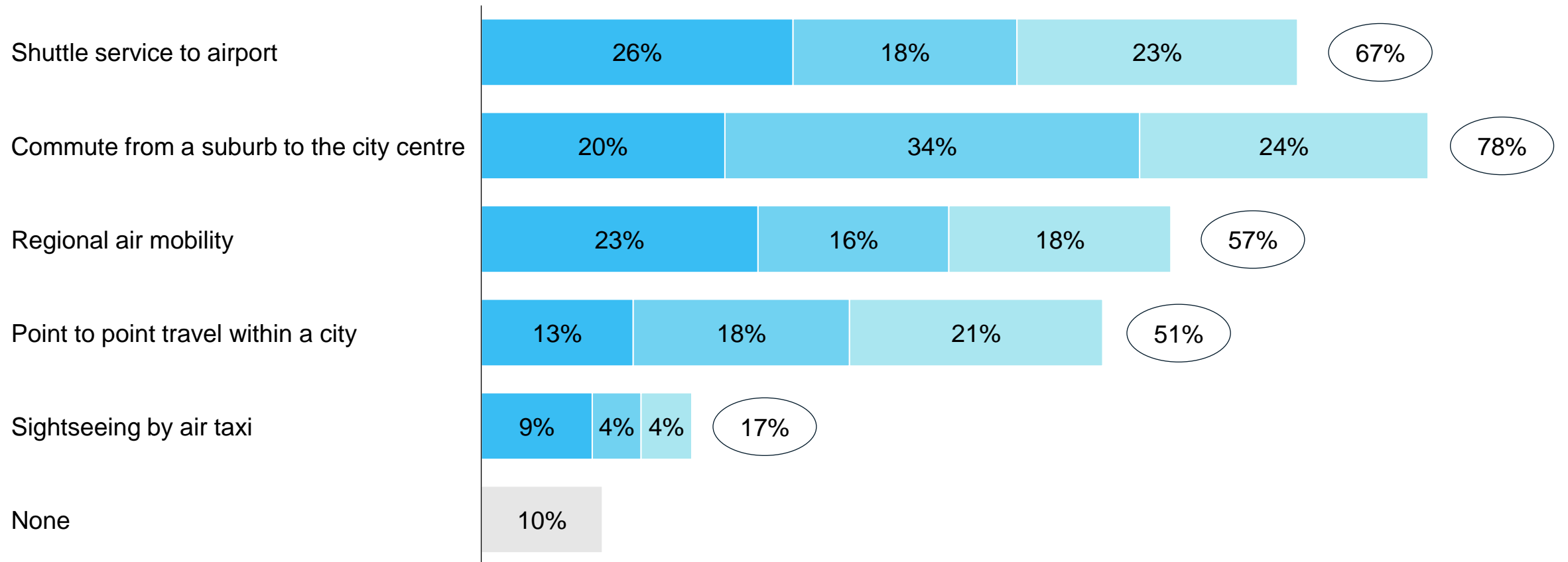
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.c. Perceived usefulness of UAM use cases – passenger transport use case

Budapest, Hungary 

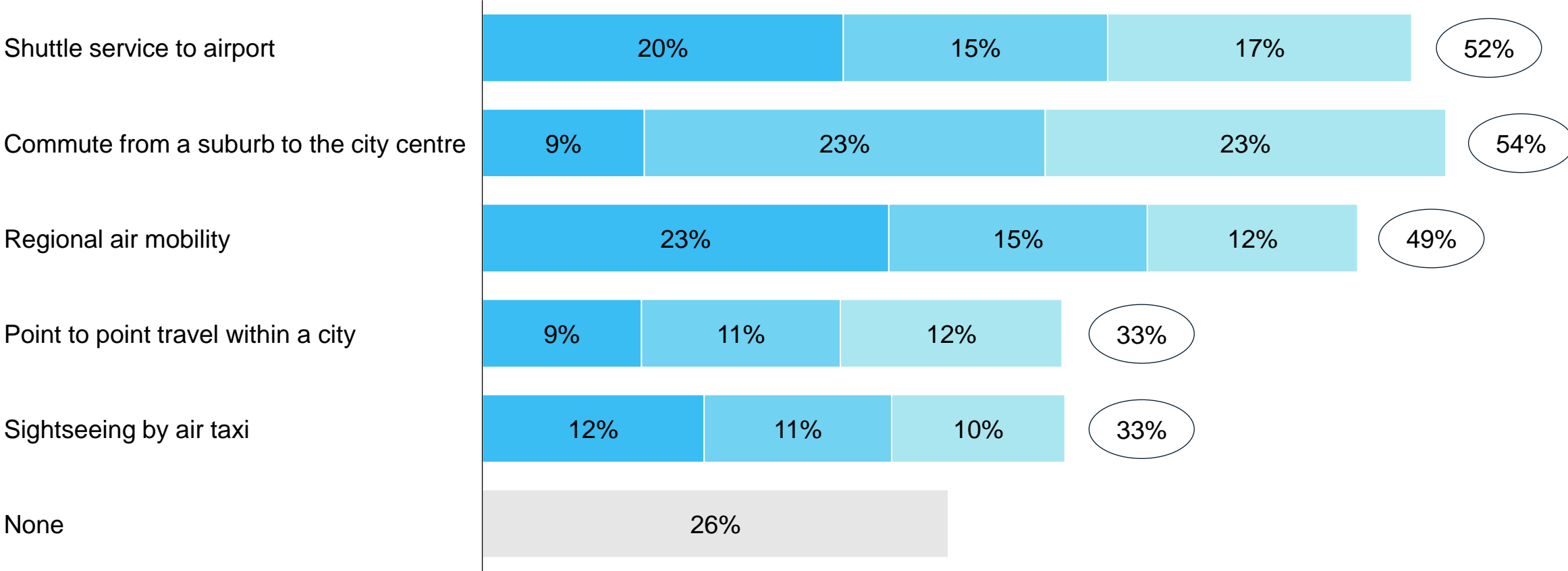
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.c. Perceived usefulness of UAM use cases – passenger transport use case

Hamburg, Germany 

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

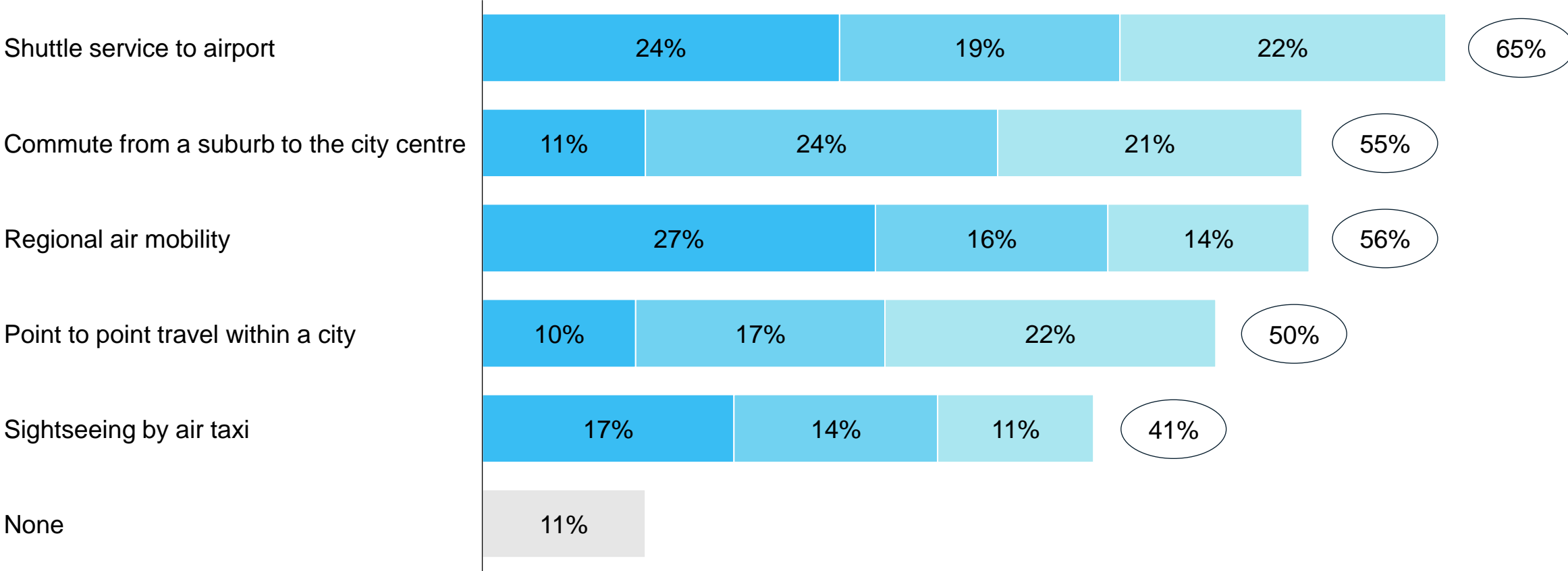


A2.c. Perceived usefulness of UAM use cases – passenger transport use case

Milan, Italy



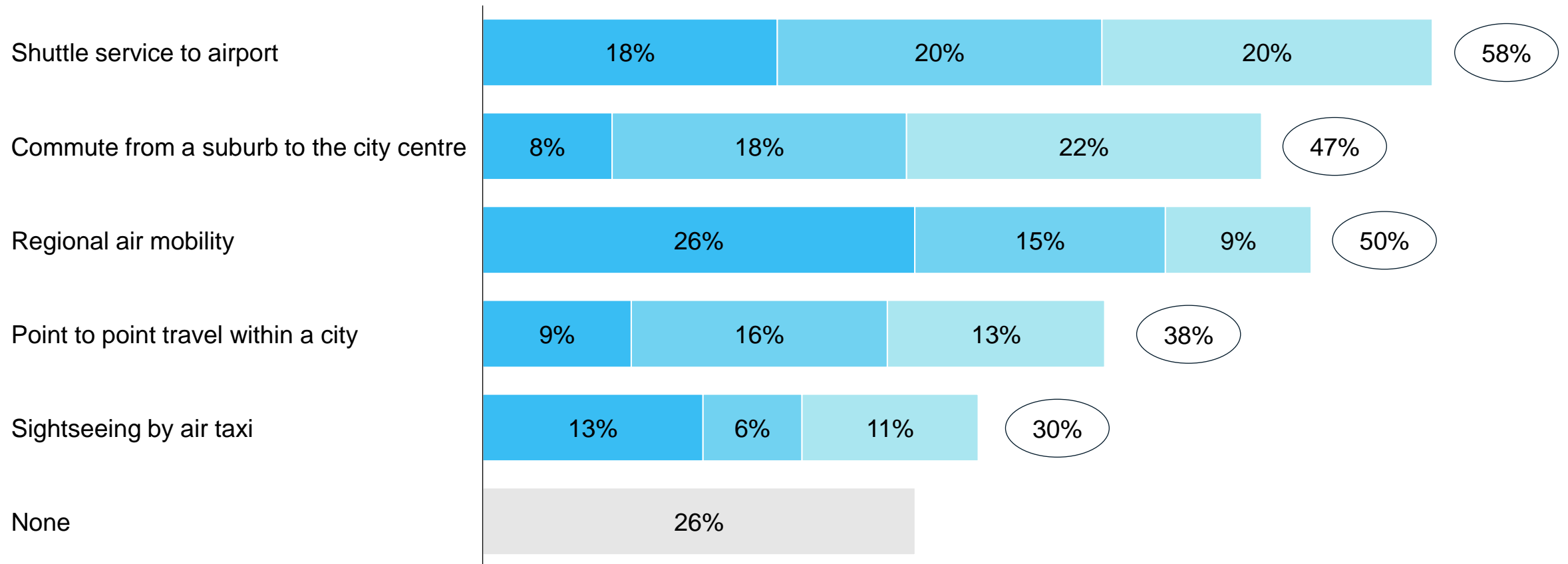
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



A2.c. Perceived usefulness of UAM use cases – passenger transport use case

Öresund, Nordics  

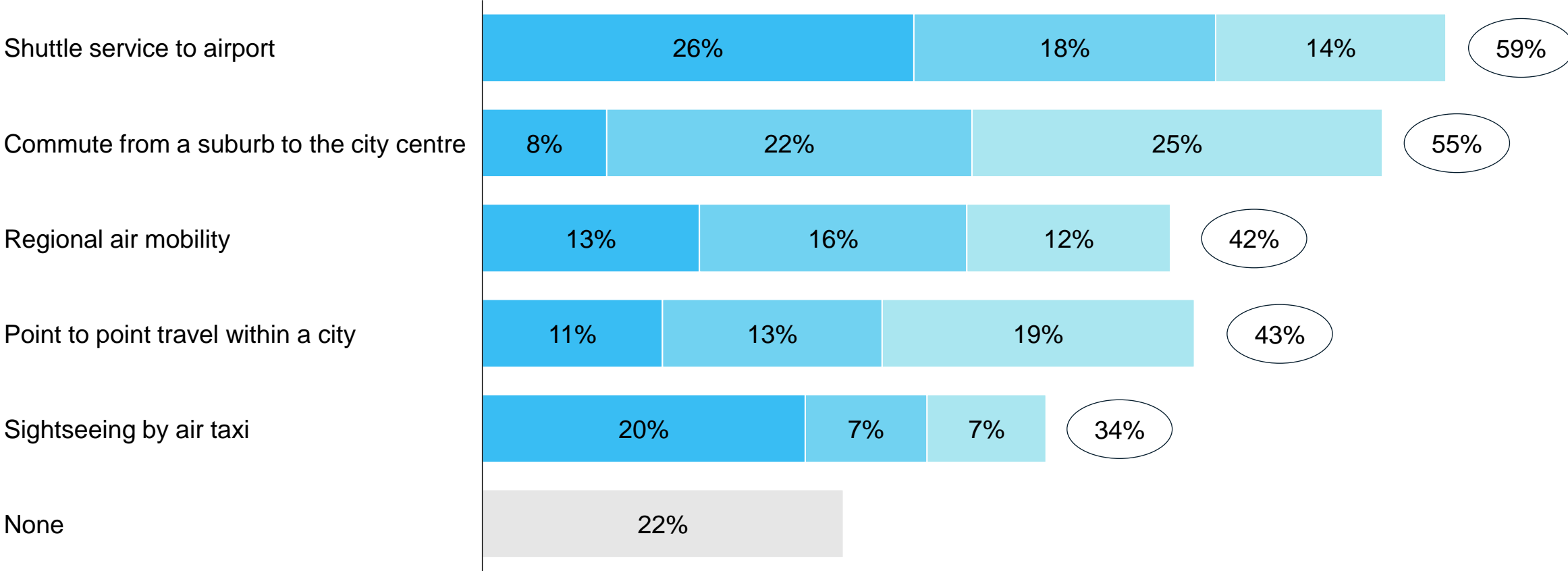
X% Sum  Ranked #1  Ranked #2  Ranked #3



A2.c. Perceived usefulness of UAM use cases – passenger transport use case

Paris, France 

X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



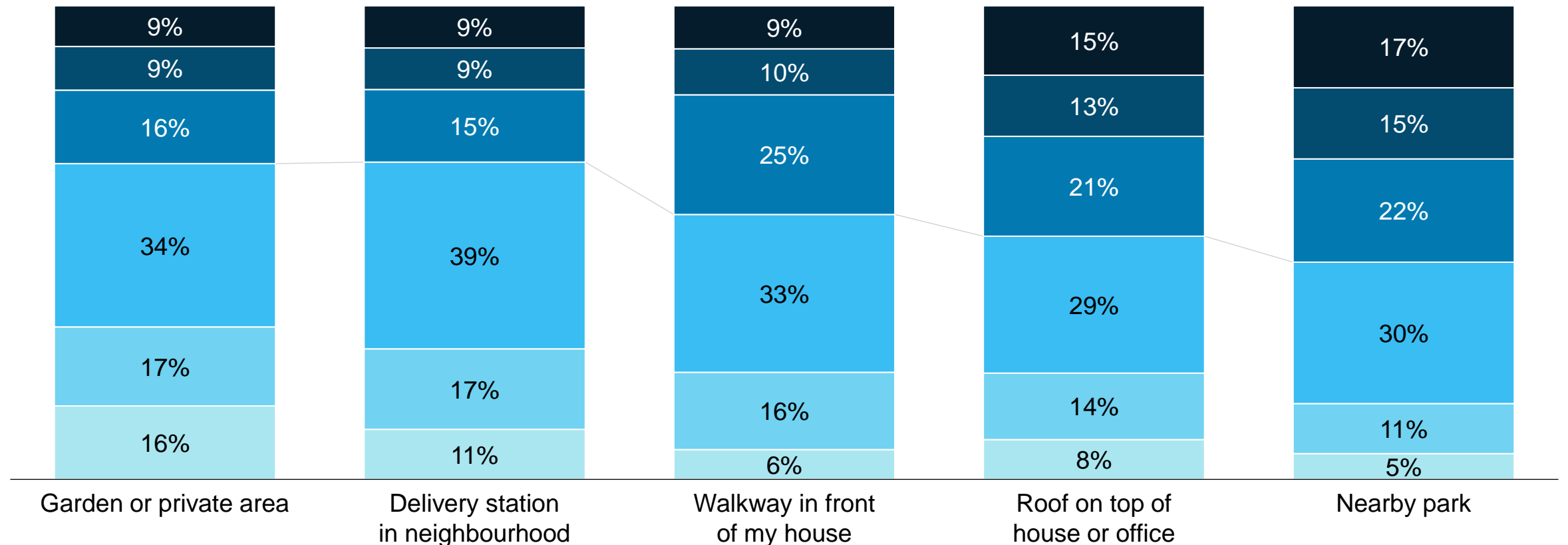
B6. Preferred drop-off locations for drone delivery

Barcelona, Spain 

Very uncomfortable
 Uncomfortable
 Somewhat uncomfortable
 Somewhat comfortable
 Comfortable
 Very comfortable

High level of comfort

Low level of comfort



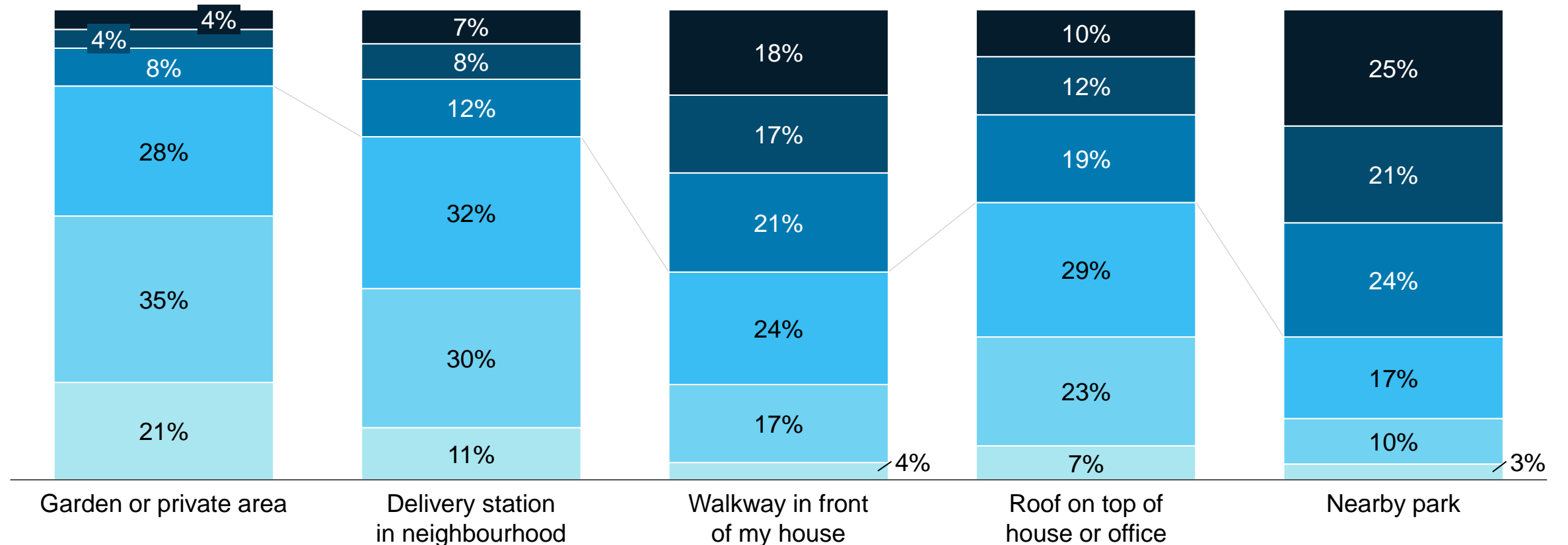
B6. Preferred drop-off locations for drone delivery

Budapest, Hungary 

■ Very uncomfortable
 ■ Uncomfortable
 ■ Somewhat uncomfortable
 ■ Somewhat comfortable
 ■ Comfortable
 ■ Very comfortable

High level of comfort

Low level of comfort



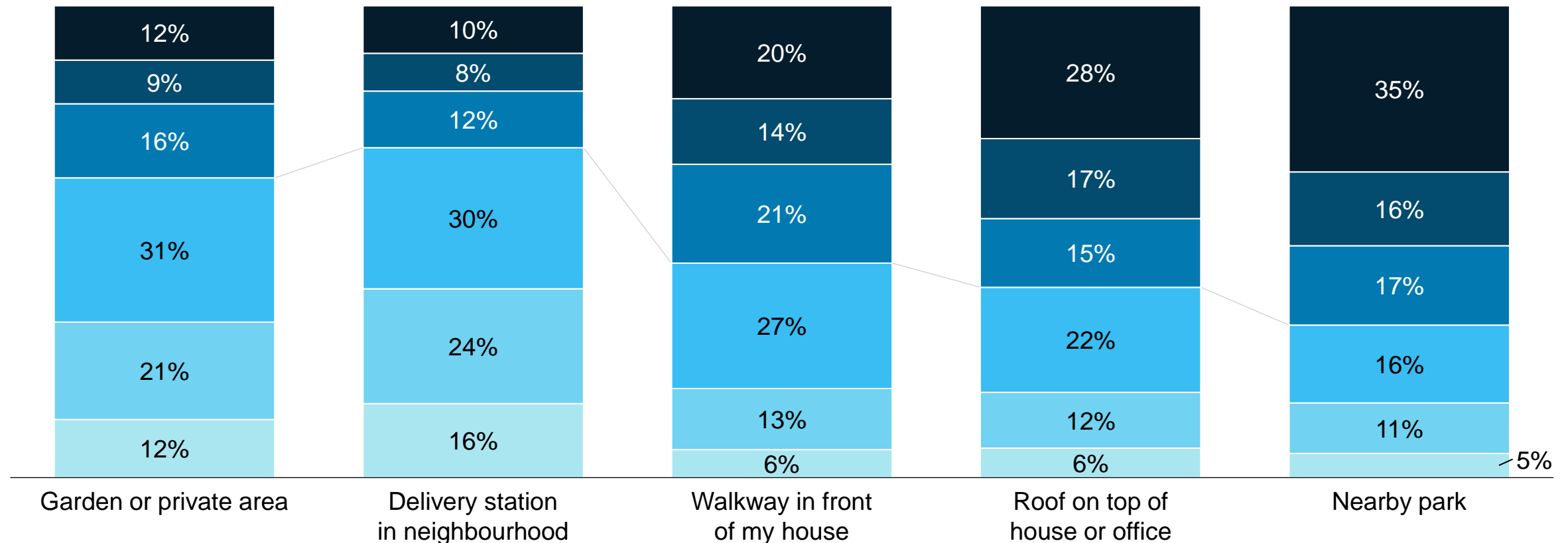
B6. Preferred drop-off locations for drone delivery

Hamburg, Germany 

Very uncomfortable
 Uncomfortable
 Somewhat uncomfortable
 Somewhat comfortable
 Comfortable
 Very comfortable

High level of comfort

Low level of comfort



B6. Preferred drop-off locations for drone delivery

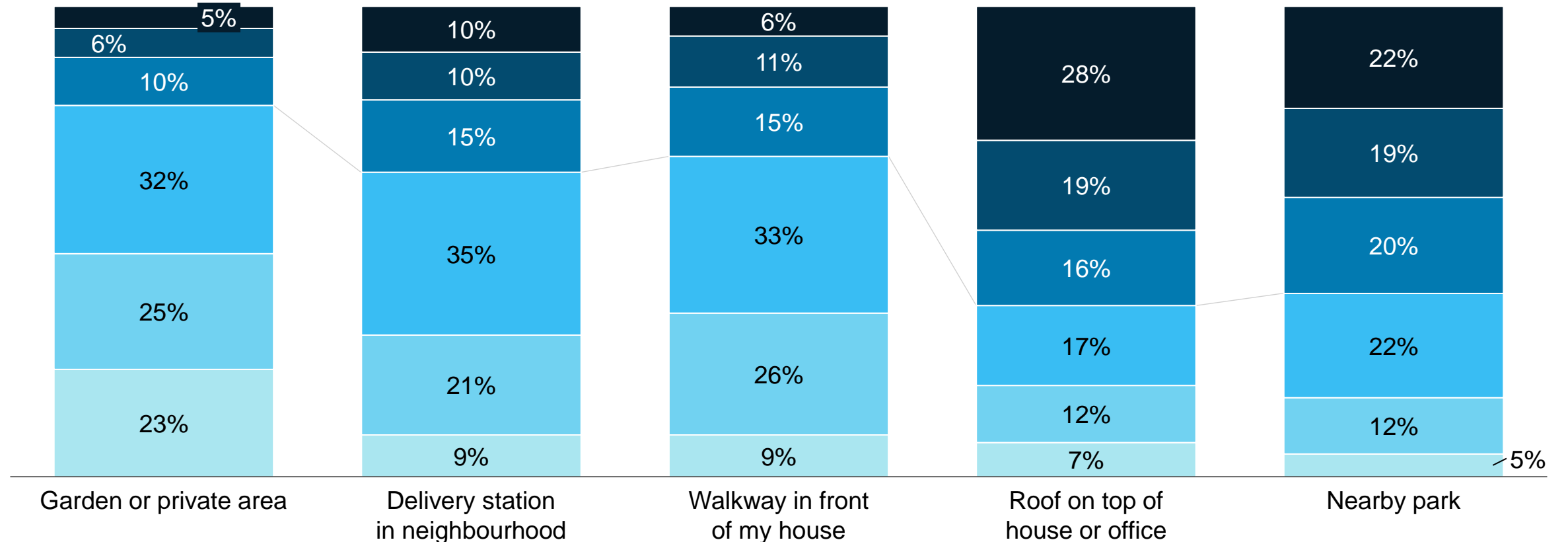
Milan, Italy



Very uncomfortable
 Uncomfortable
 Somewhat uncomfortable
 Somewhat comfortable
 Comfortable
 Very comfortable

High level of comfort

Low level of comfort



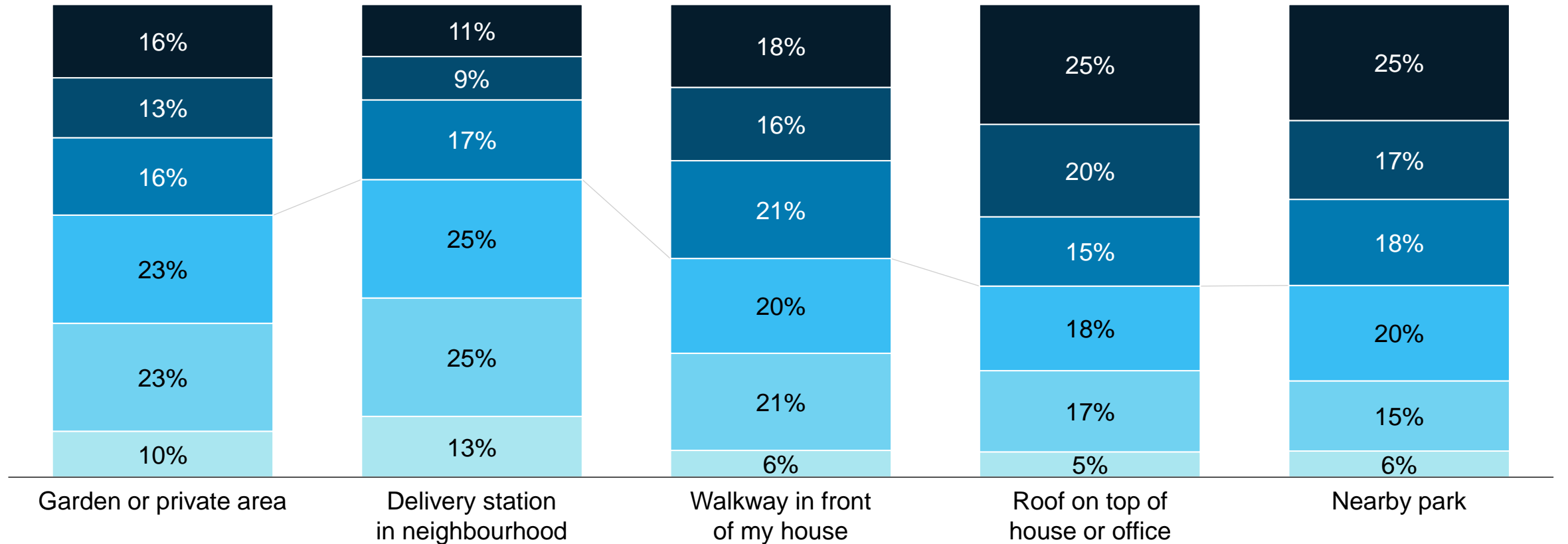
B6. Preferred drop-off locations for drone delivery

Öresund, Nordics  

Very uncomfortable
 Uncomfortable
 Somewhat uncomfortable
 Somewhat comfortable
 Comfortable
 Very comfortable

High level of comfort

Low level of comfort



B6. Preferred drop-off locations for drone delivery

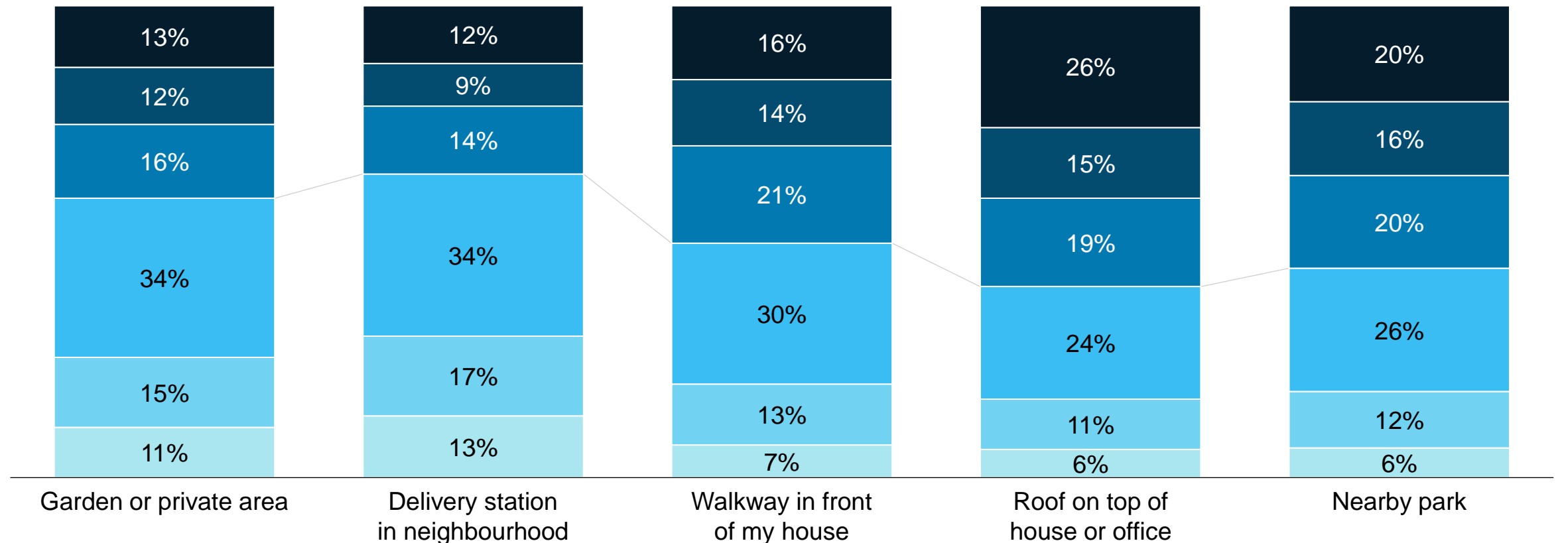
Paris, France



Very uncomfortable
 Uncomfortable
 Somewhat uncomfortable
 Somewhat comfortable
 Comfortable
 Very comfortable


High level of comfort

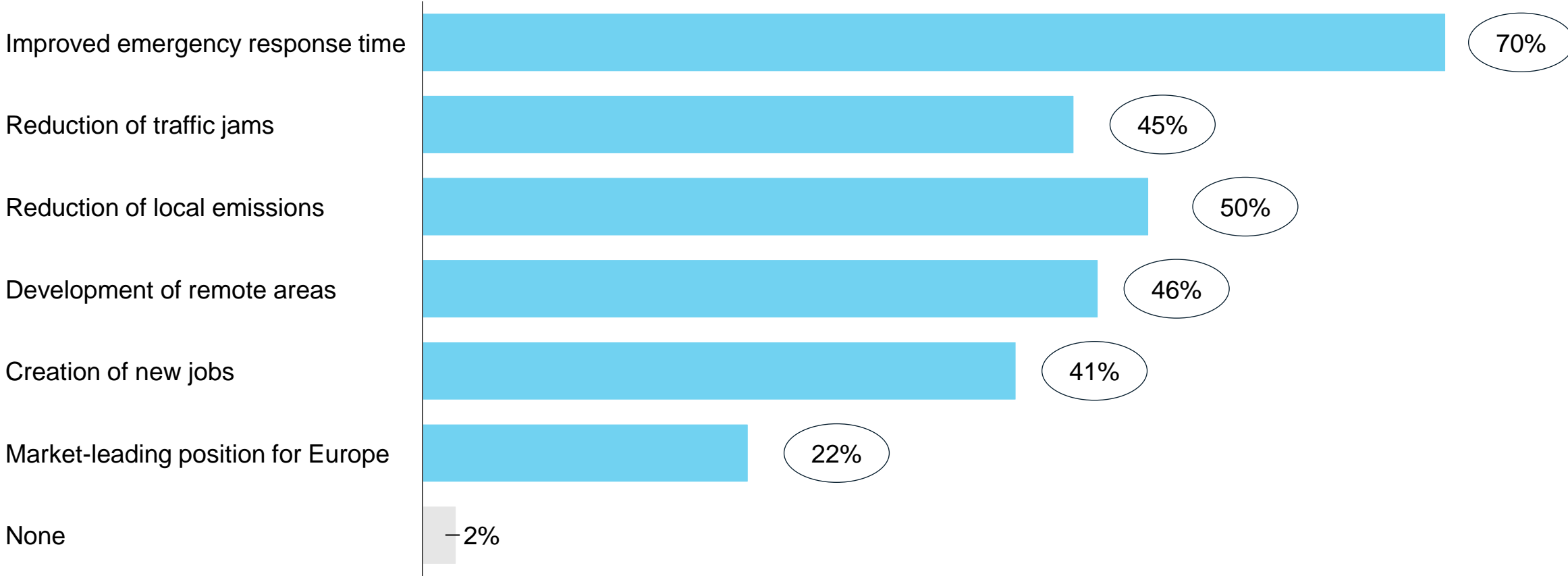
Low level of comfort



A4. Perceived UAM benefits

Barcelona, Spain 


X% Sum  Selected out of 3 possible

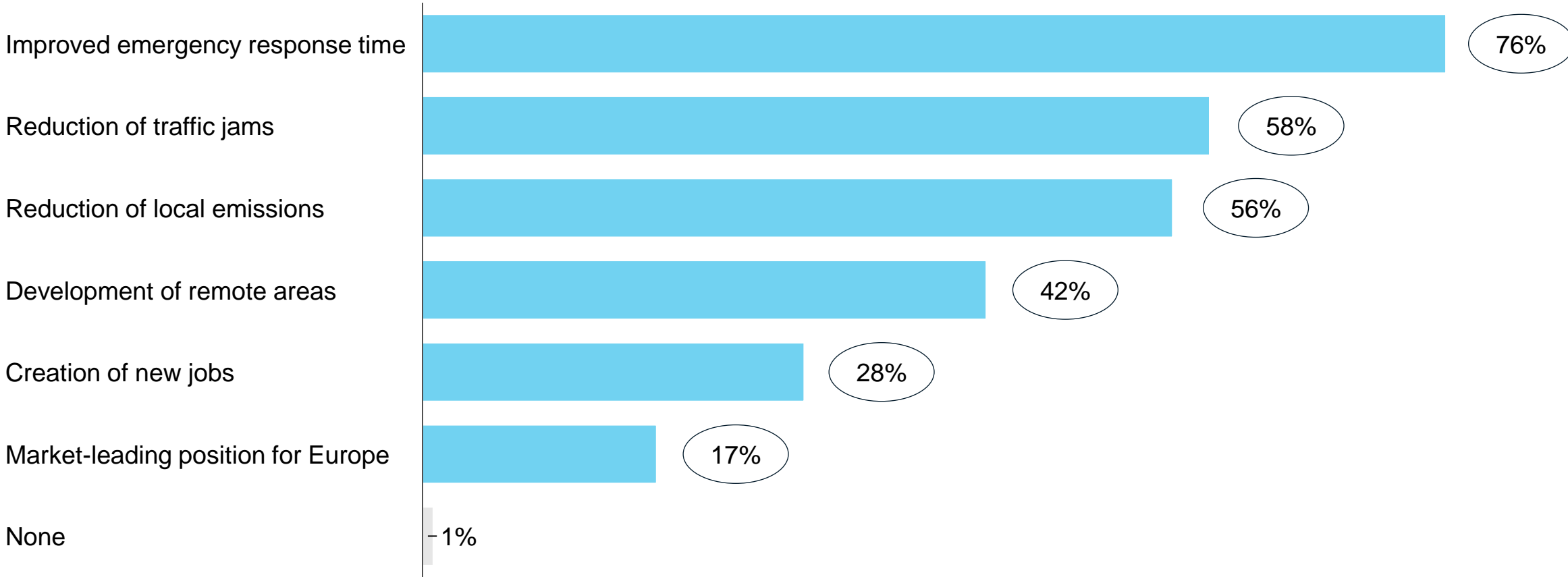


Source: EASA UAM social acceptance survey questions A4. What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

A4. Perceived UAM benefits

Budapest, Hungary 


X% Sum  Selected out of 3 possible

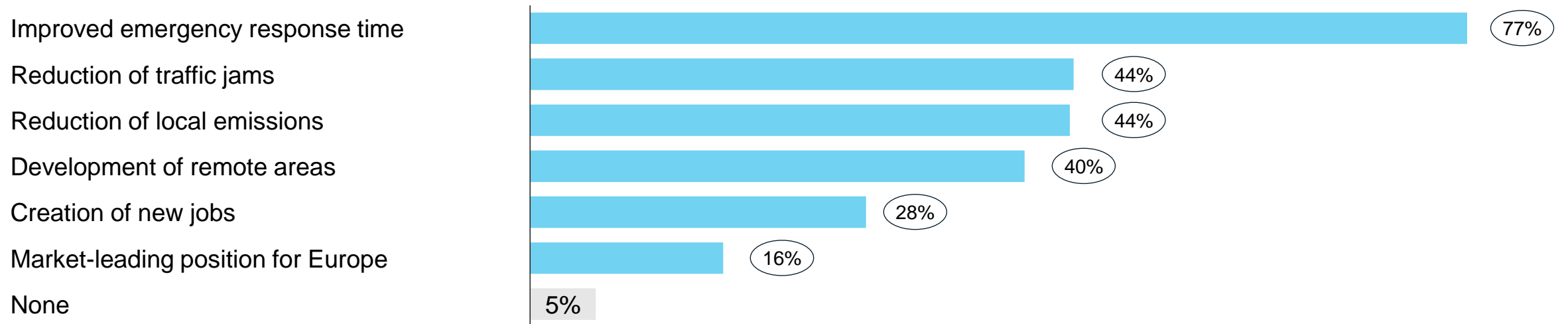


Source: EASA UAM social acceptance survey questions A4. What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

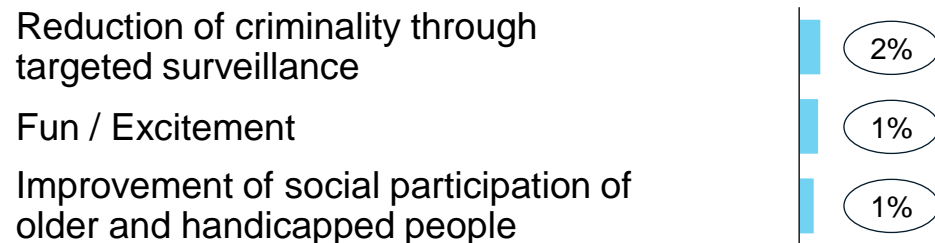
A4. A5. Perceived UAM benefits

Hamburg, Germany 

X% Sum  Selected out of 3 possible



Other benefits mentioned in free text field with more than 6 mentions

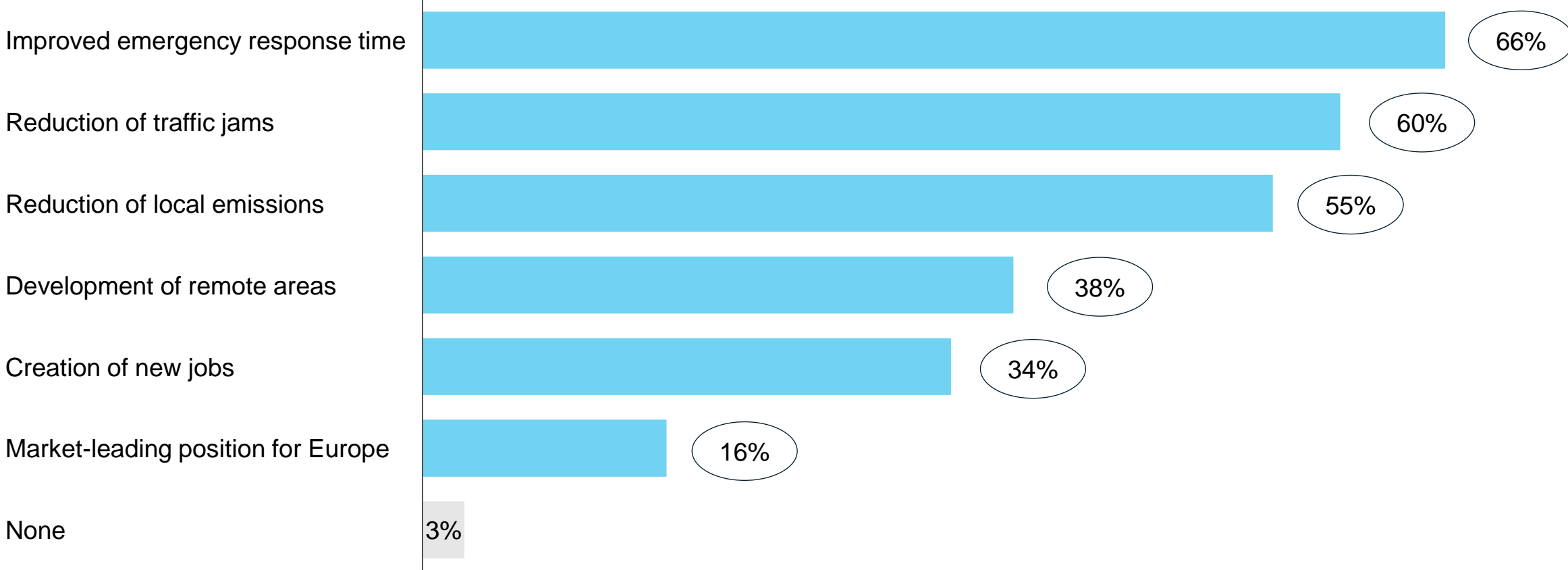


A4. Perceived UAM benefits

Milan, Italy




X% Sum Selected out of 3 possible

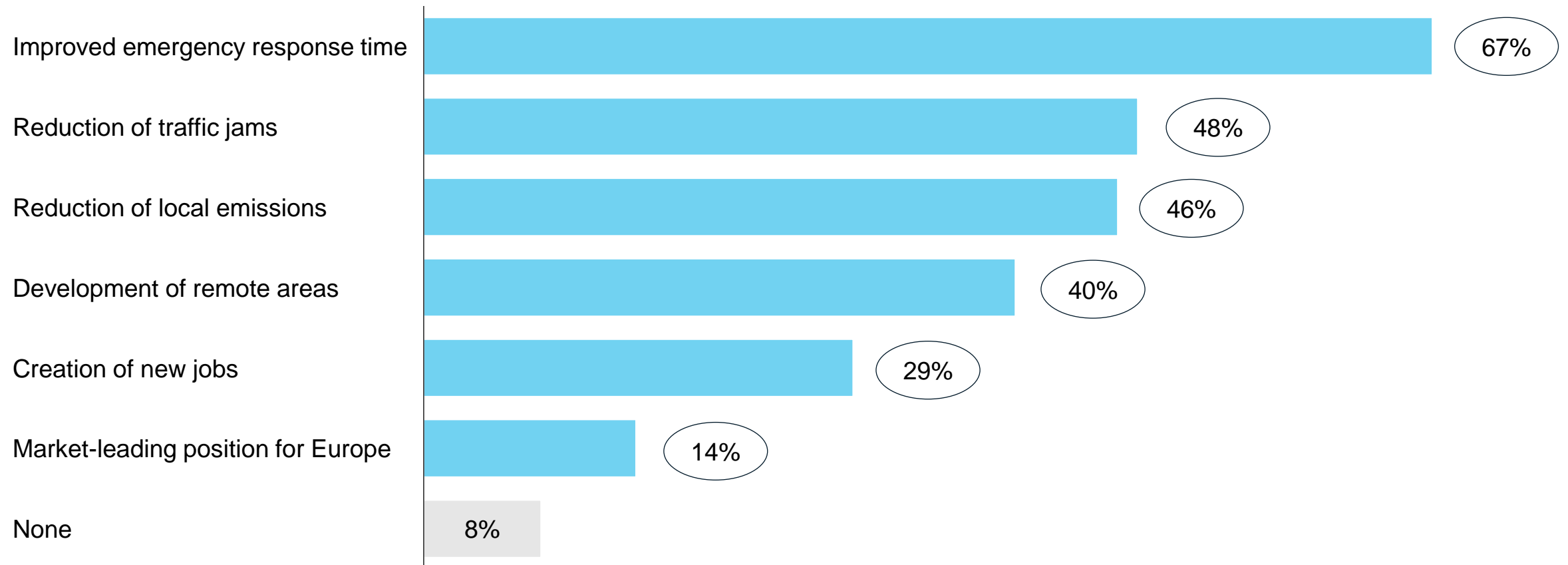


Source: EASA UAM social acceptance survey questions A4. What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

A4. Perceived UAM benefits

Öresund, Nordics  

X% Sum  Selected out of 3 possible

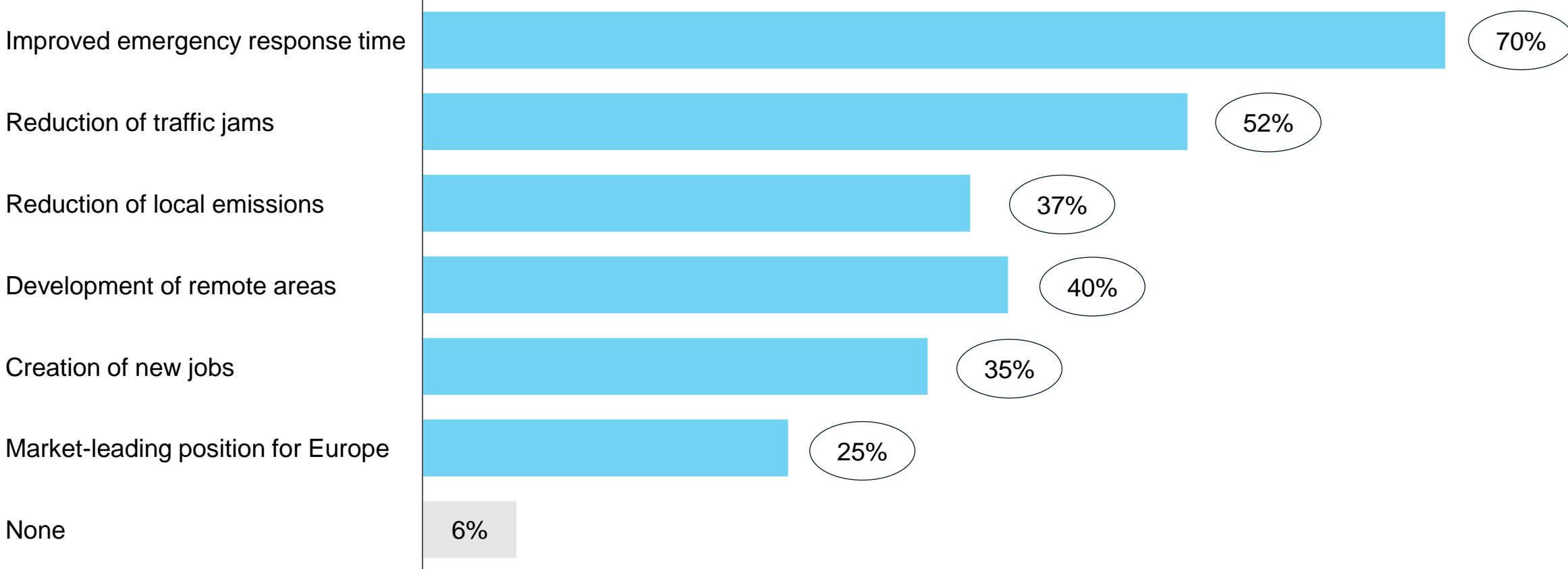


A4. Perceived UAM benefits

Paris, France




X% Sum Selected out of 3 possible

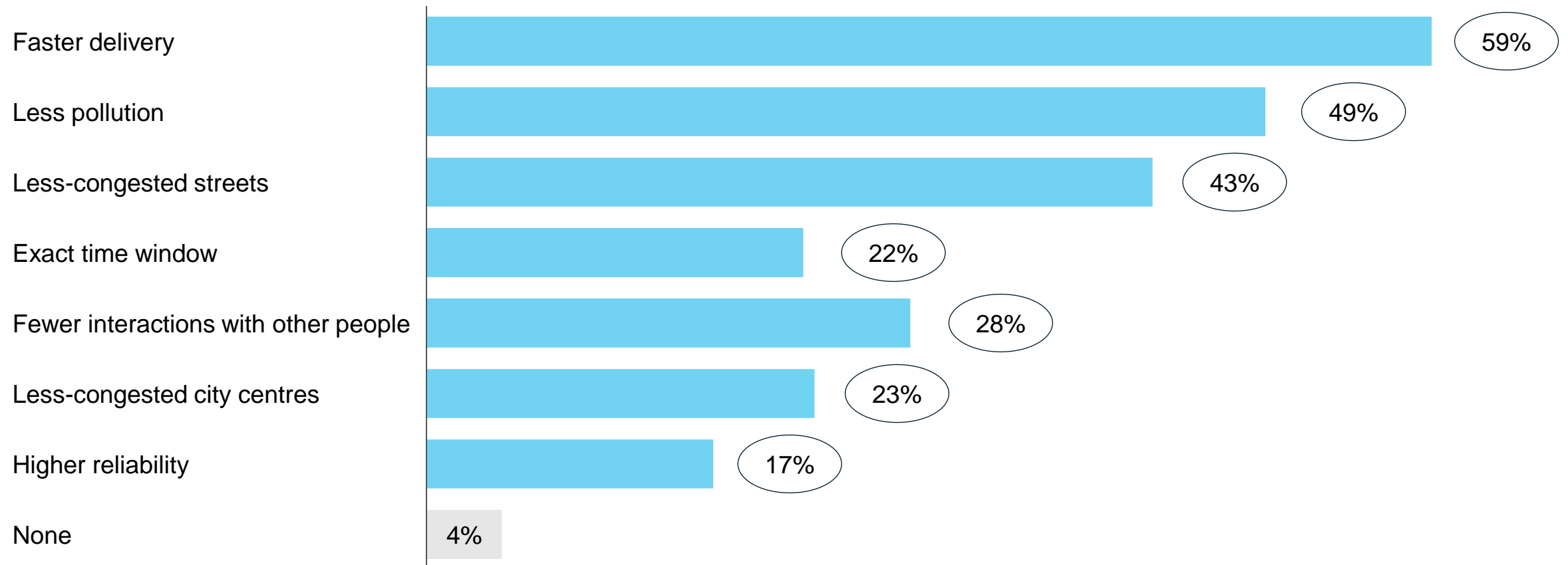


Source: EASA UAM social acceptance survey questions A4. What benefits and opportunities can the development of urban air mobility bring for the EU and EU citizens? Please select up to 3 answers.

B2. Perceived benefits of drone delivery


Barcelona, Spain 

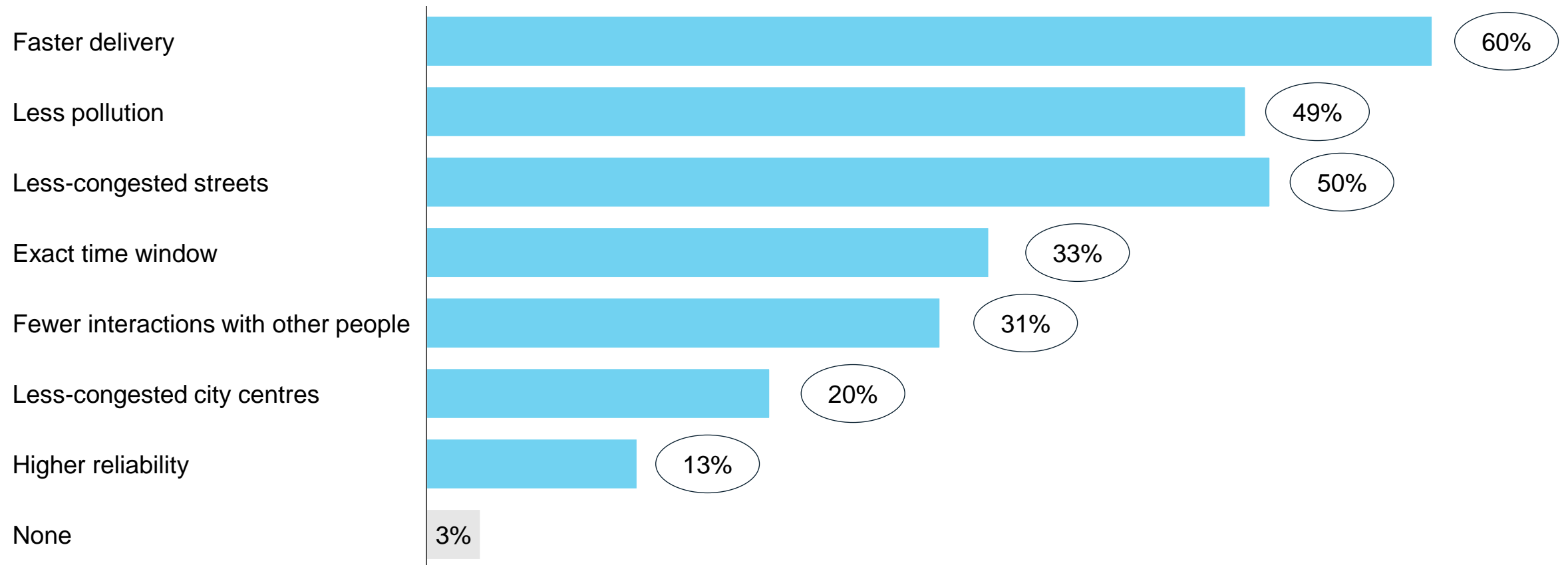
X% Sum  Selected out of 3 possible



B2. Perceived benefits of drone delivery


Budapest, Hungary 

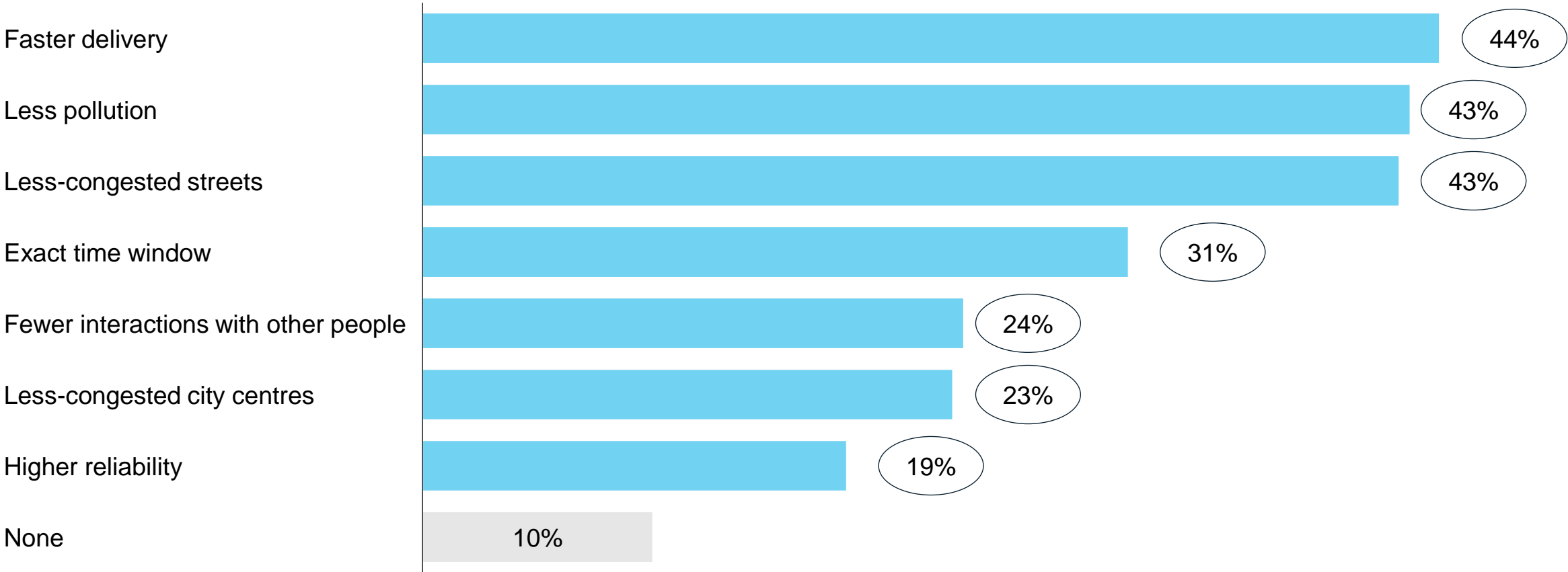
X% Sum  Selected out of 3 possible



B2. Perceived benefits of drone delivery

Hamburg, Germany 

X% Sum  Selected out of 3 possible



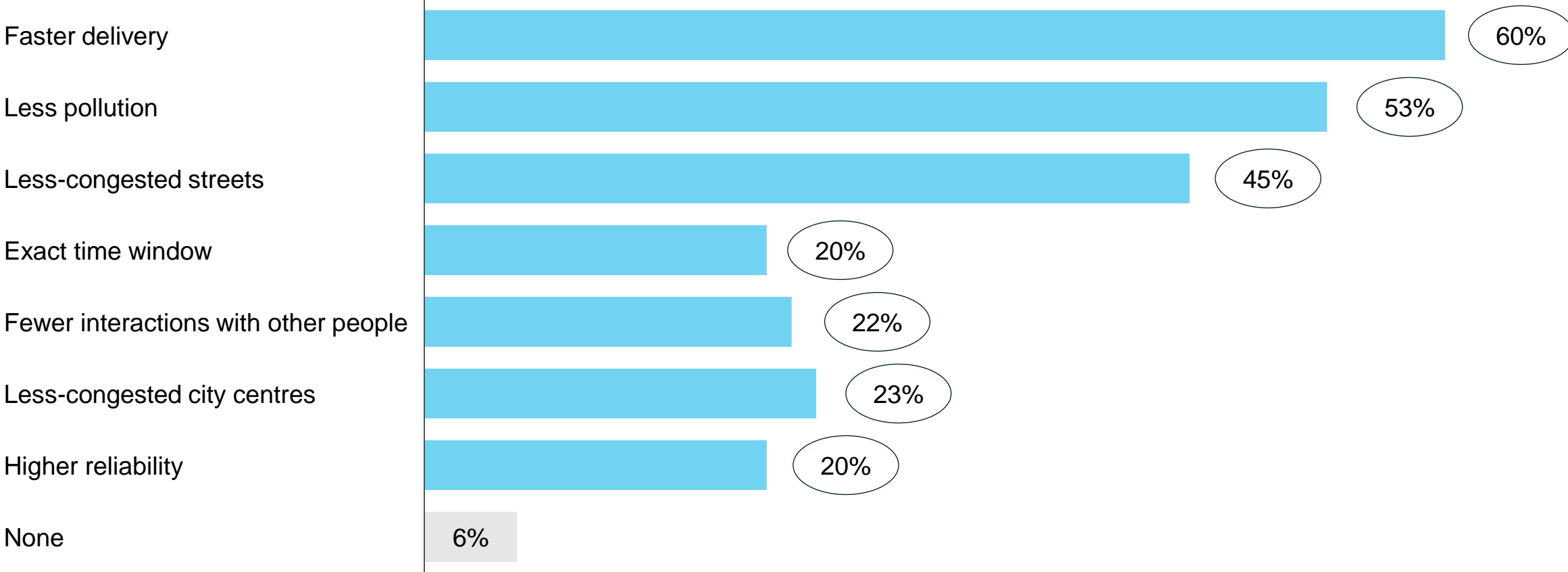
Source: EASA UAM social acceptance survey question B2. In your view, how important are the following advantages of goods delivery by drone? Please select up to 3 answers.

B2. Perceived benefits of drone delivery

Milan, Italy




X% Sum Selected out of 3 possible

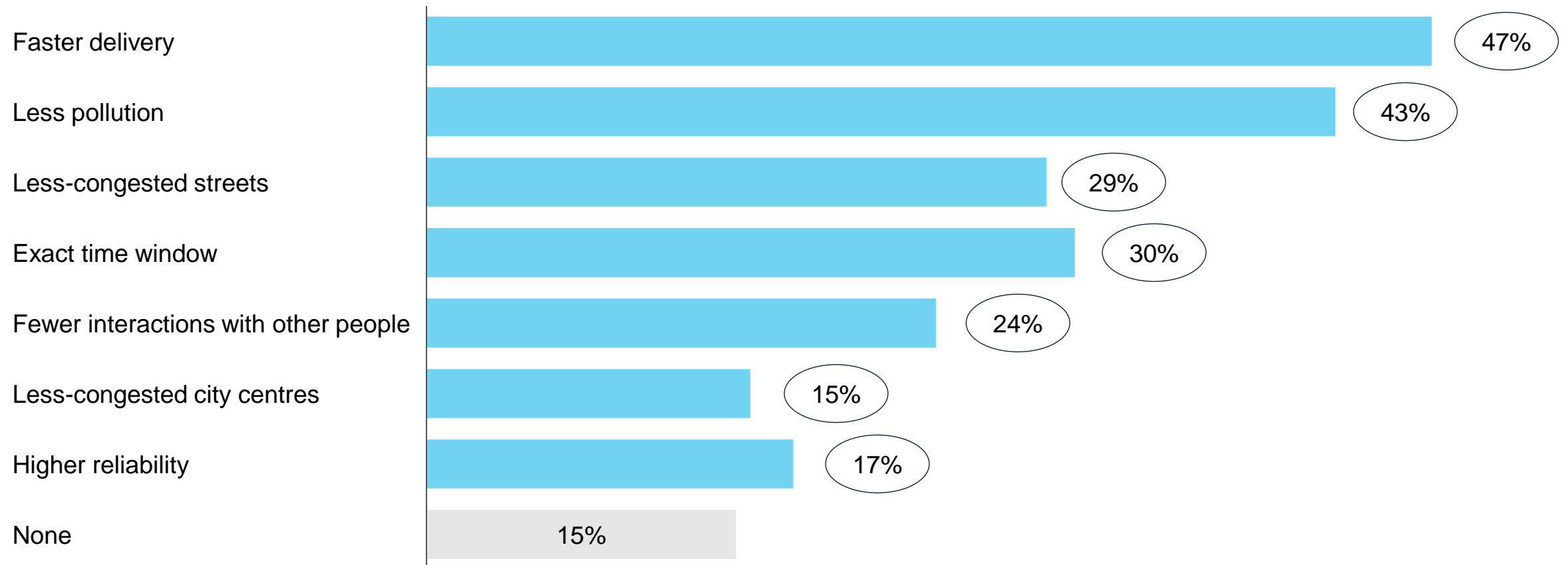


Source: EASA UAM social acceptance survey question B2. In your view, how important are the following advantages of goods delivery by drone? Please select up to 3 answers.

B2. Perceived benefits of drone delivery

Öresund, Nordics  

X% Sum  Selected out of 3 possible

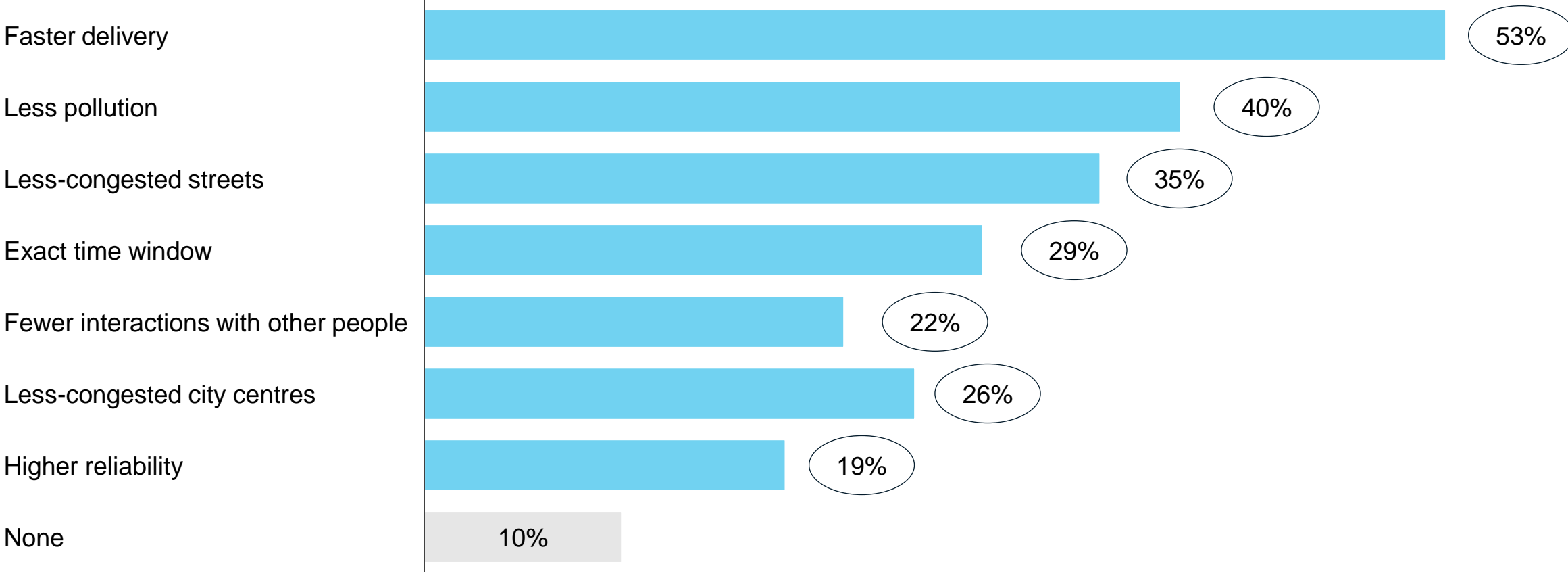


B2. Perceived benefits of drone delivery

Paris, France



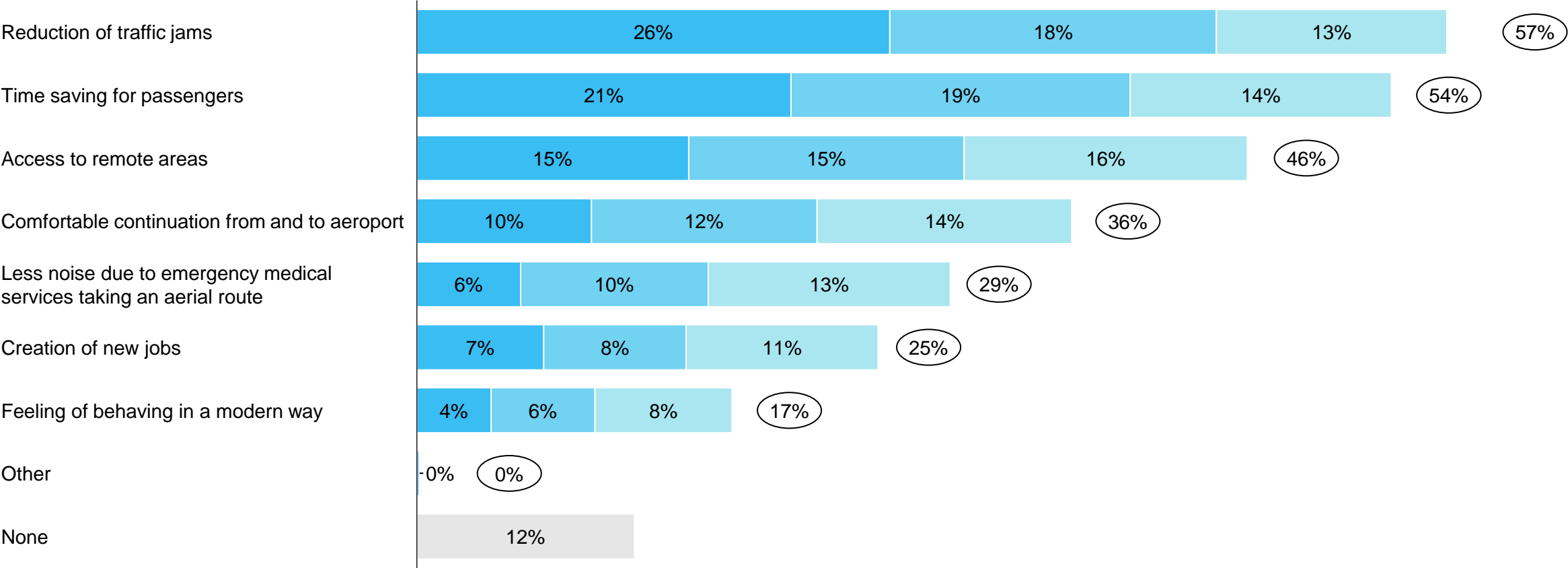
X% Sum Selected out of 3 possible



Source: EASA UAM social acceptance survey question B2. In your view, how important are the following advantages of goods delivery by drone? Please select up to 3 answers.

C3. Perceived benefits of air taxis

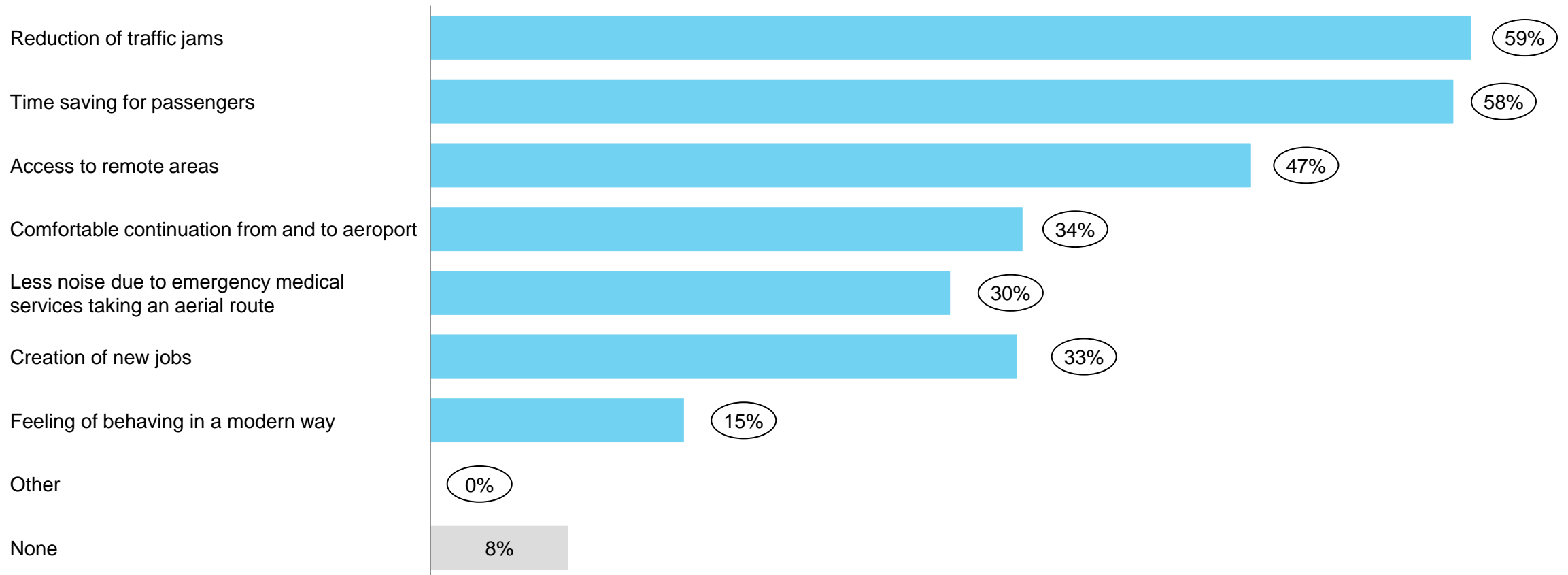
X% Sum Ranked #1 Ranked #2 Ranked #3



C3. Perceived benefits of air taxis

Barcelona, Spain 

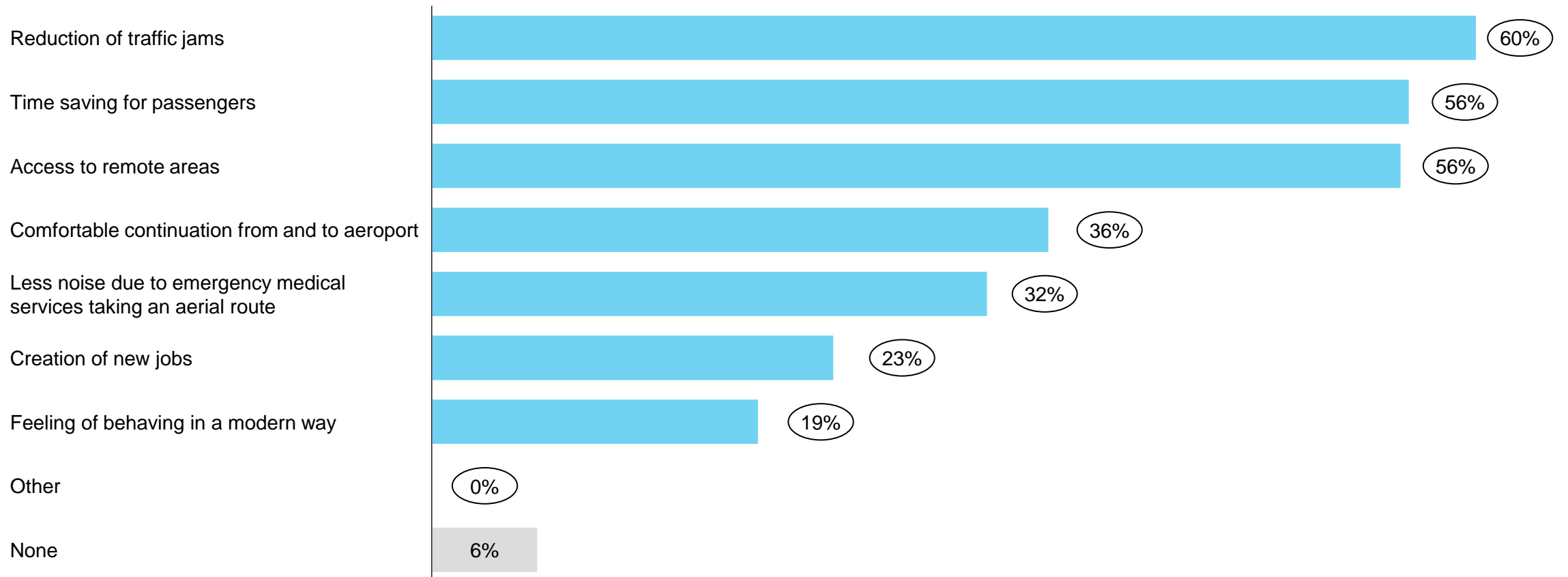
X% Sum  Ranked under top 3



C3. Perceived benefits of air taxis

Budapest, Hungary 

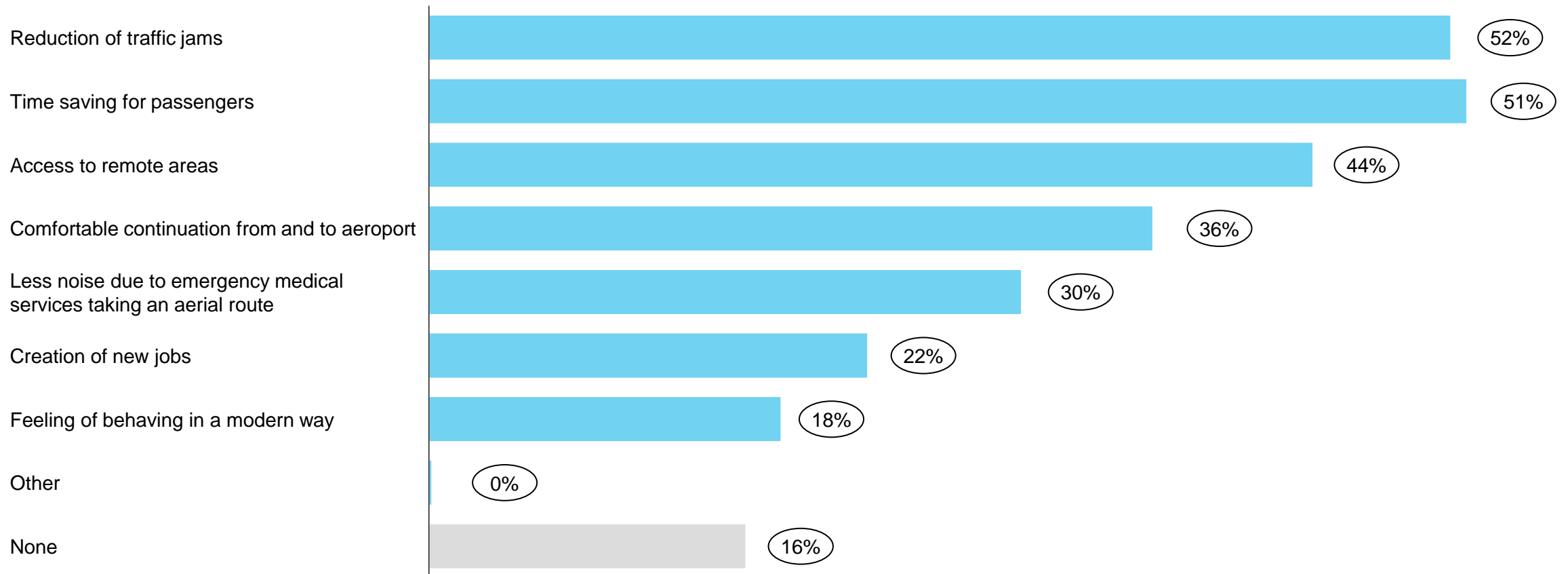
X% Sum  Ranked under top 3



C3. Perceived benefits of air taxis

Hamburg, Germany 

X% Sum  Ranked under top 3

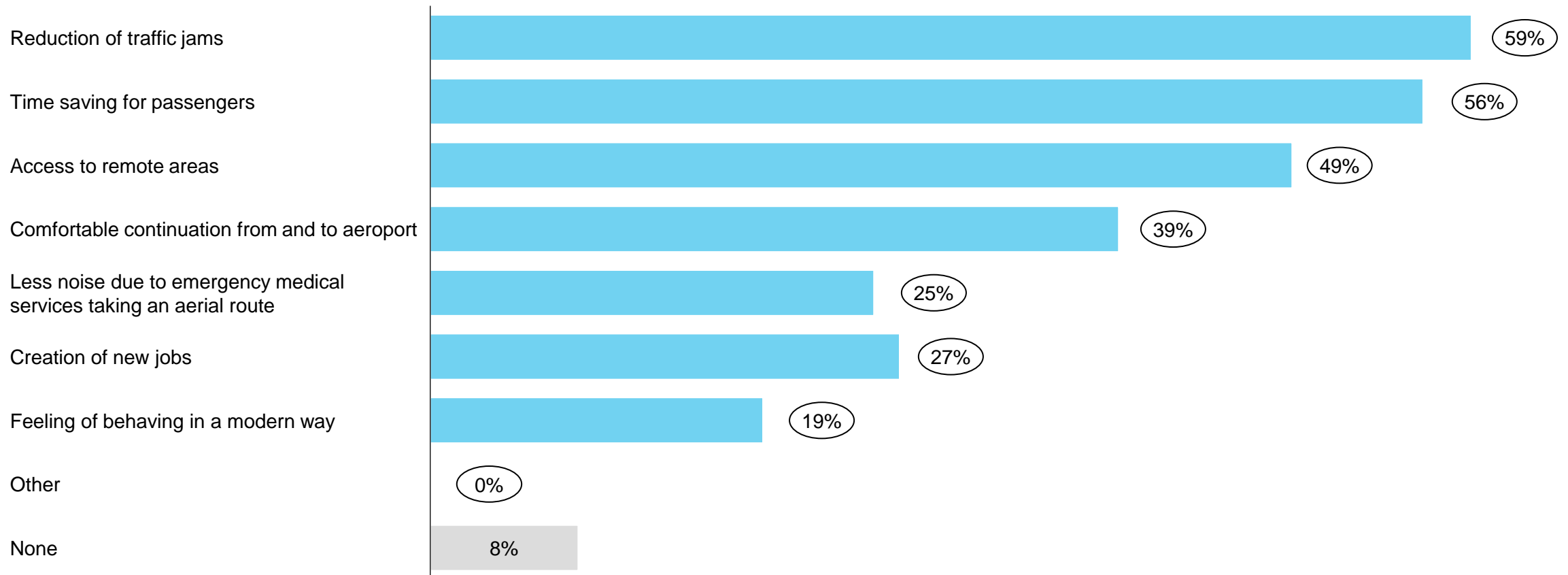


C3. Perceived benefits of air taxis

Milan, Italy



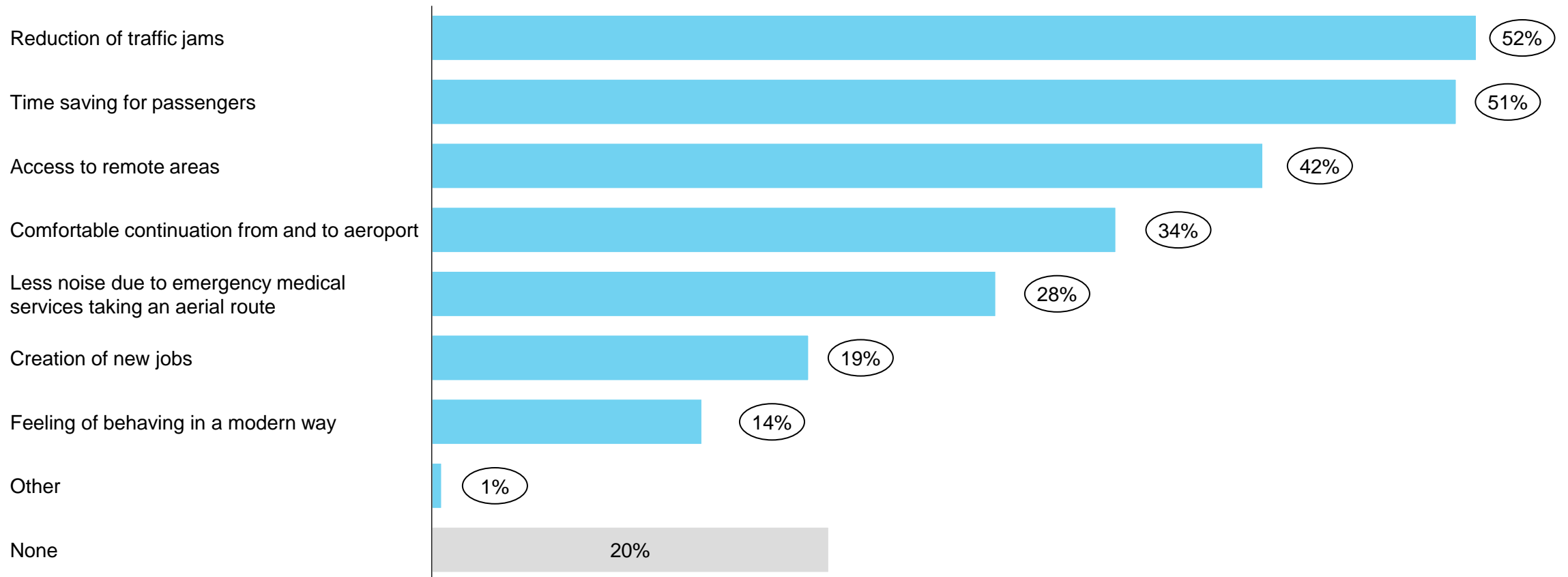
X% Sum ■ Ranked under top 3



C3. Perceived benefits of air taxis

Öresund, Nordics  

X% Sum  Ranked under top 3

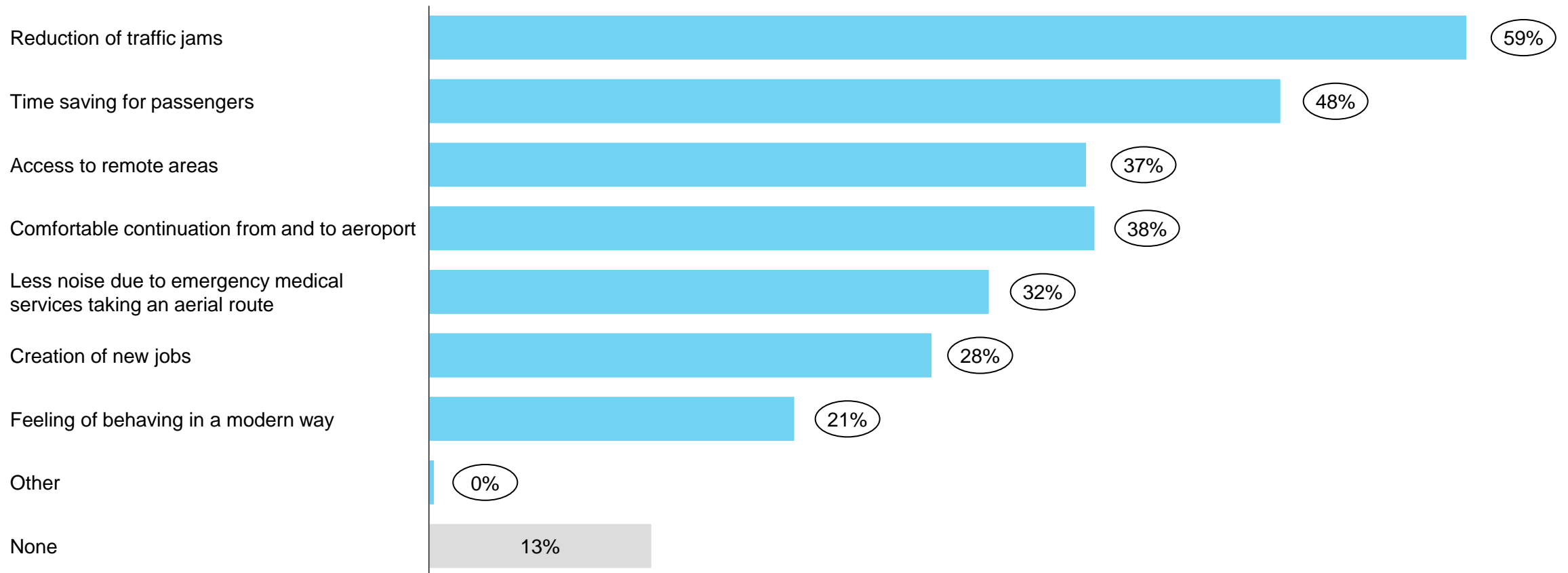


C3. Perceived benefits of air taxis

Paris, France



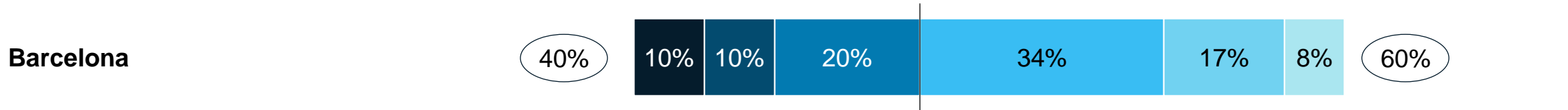
X% Sum ■ Ranked under top 3



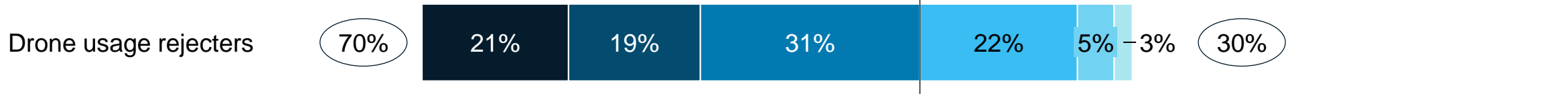
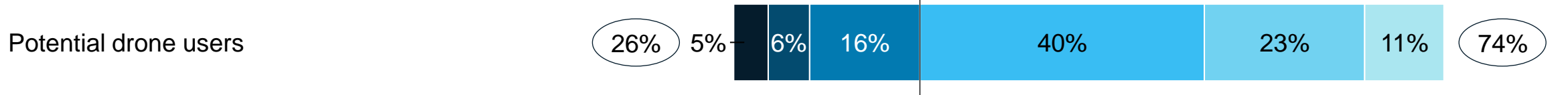
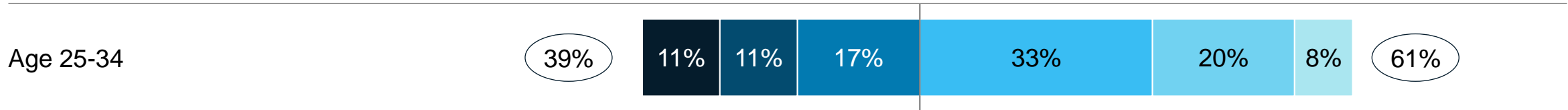
B3. Level of comfort with manned & unmanned vehicles – delivery drones

Barcelona, Spain 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree



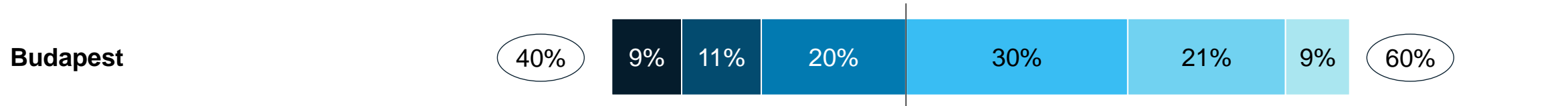
Panel subgroups with statistically relevant higher or lower agreement



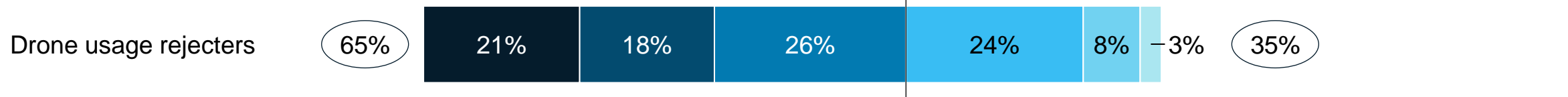
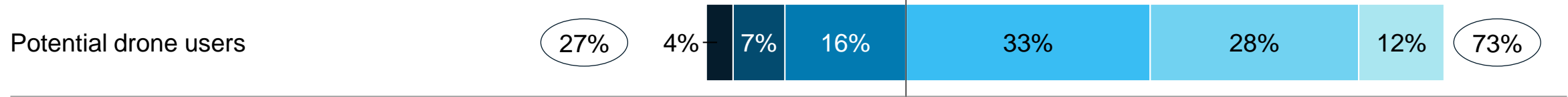
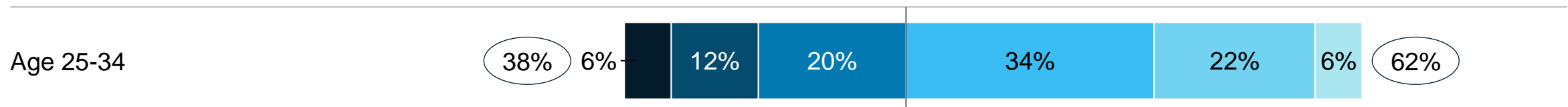
B3. Level of comfort with manned & unmanned vehicles – delivery drones

Budapest, Hungary 

(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree



Panel subgroups with statistically relevant higher or lower agreement

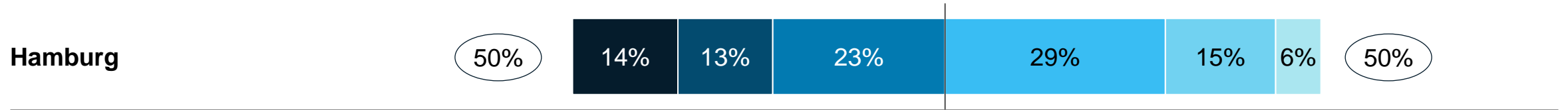


Source: EASA UAM social acceptance survey question B3. Drones intended for the delivery of goods are remotely piloted aircraft systems with no pilots on board. Assume that they have an average wingspan of 3 metres, would fly at between 120 and 150 metres altitude, and are certified by competent authorities. Please rate how much you agree or disagree with the following statement.

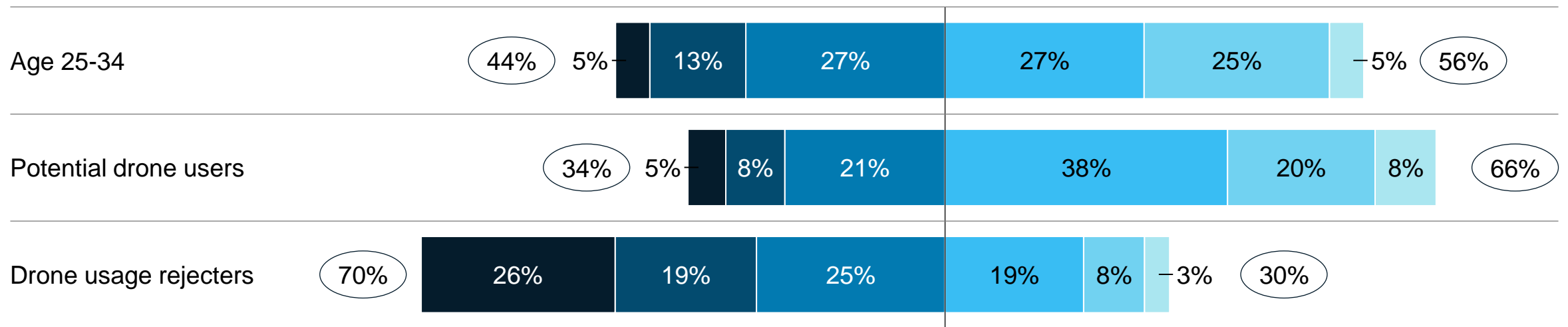
B3. Level of comfort with manned & unmanned vehicles – delivery drones

Hamburg, Germany 

(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree



Panel subgroups with statistically relevant higher or lower agreement

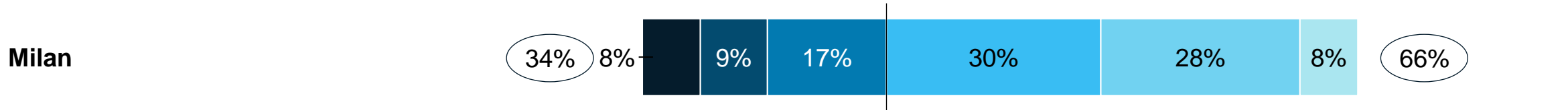


B3. Level of comfort with manned & unmanned vehicles – delivery drones

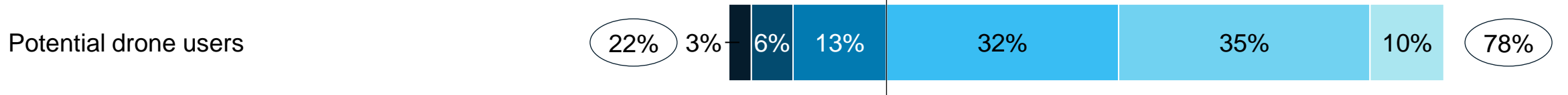
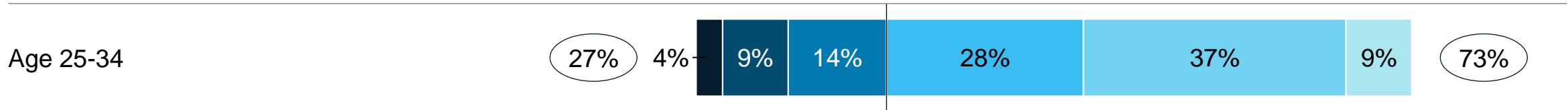
Milan, Italy



(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree









Panel subgroups with statistically relevant higher or lower agreement

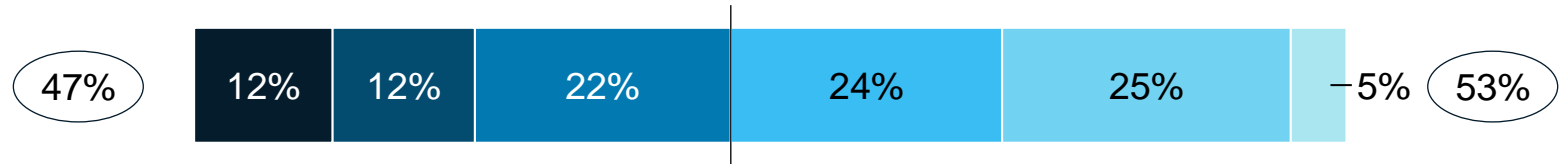


B3. Level of comfort with manned & unmanned vehicles – delivery drones

Öresund, Nordics  

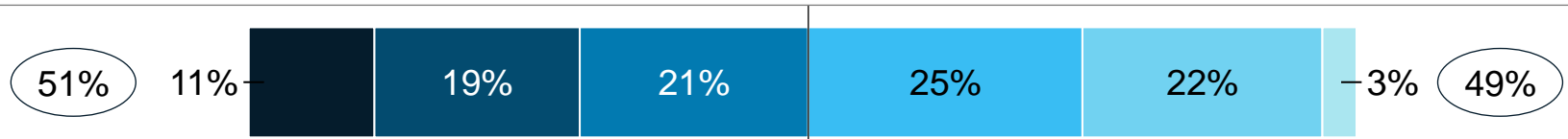
(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

Öresund

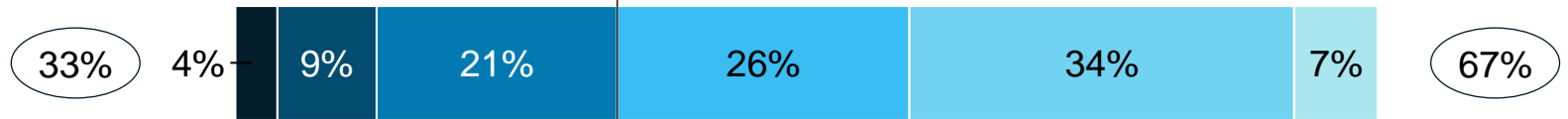


Panel subgroups with statistically relevant higher or lower agreement

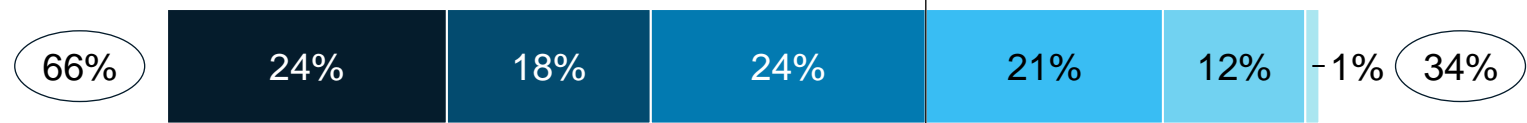
Age 25-34



Potential drone users



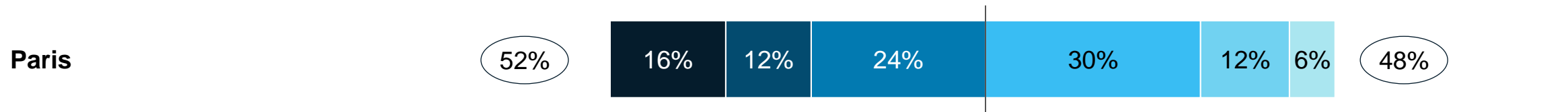
Drone usage rejecters



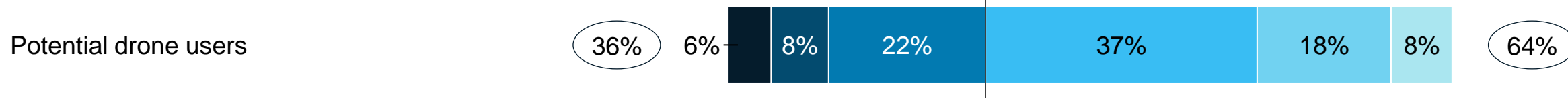
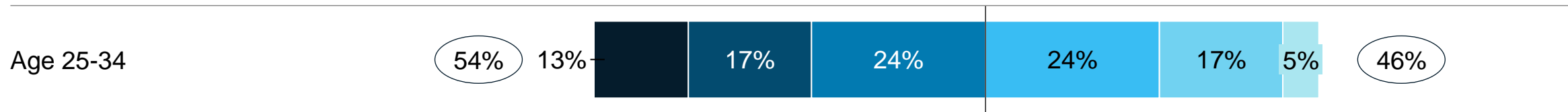
B3. Level of comfort with manned & unmanned vehicles – delivery drones

Paris, France 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree









Panel subgroups with statistically relevant higher or lower agreement



C4. Level of comfort with manned & unmanned vehicles – air taxis

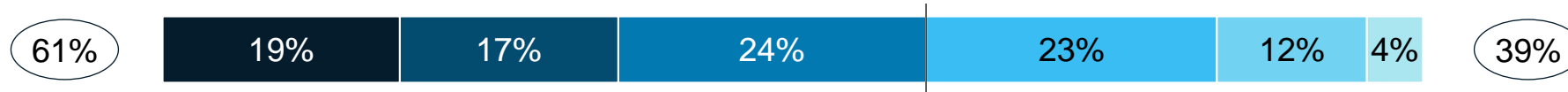
Barcelona, Spain 

X% Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

I would be interested in trying out a **manned air taxi myself**.



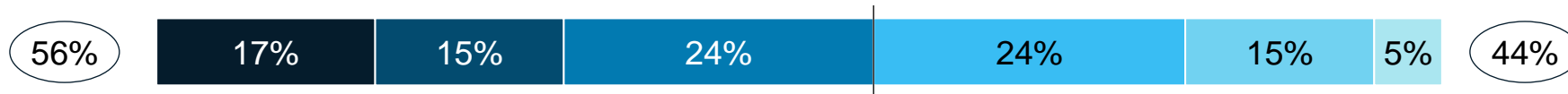
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.









As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



C4. Level of comfort with manned & unmanned vehicles – air taxis

Budapest, Hungary 

X% Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

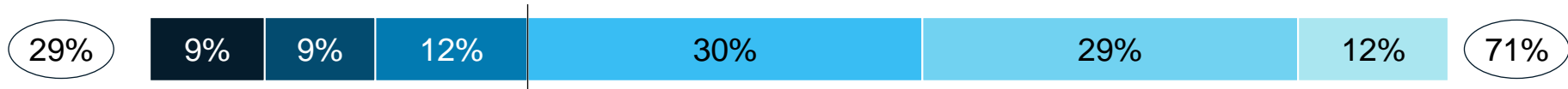
I would be interested in trying out a **manned air taxi myself**.



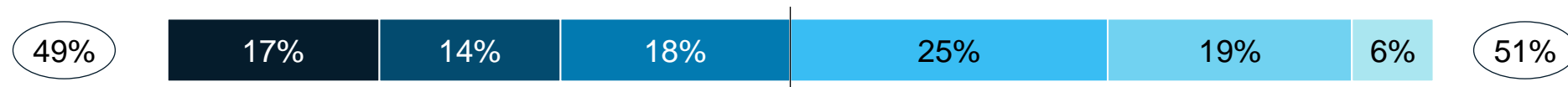
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.



As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



C4. Level of comfort with manned & unmanned vehicles – air taxis

Hamburg, Germany 

(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

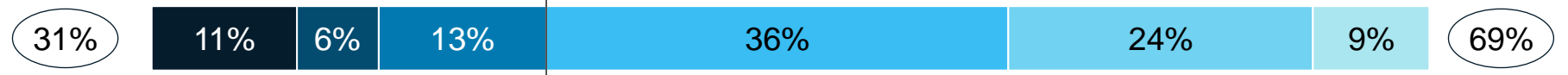
I would be interested in trying out a **manned air taxi myself**.



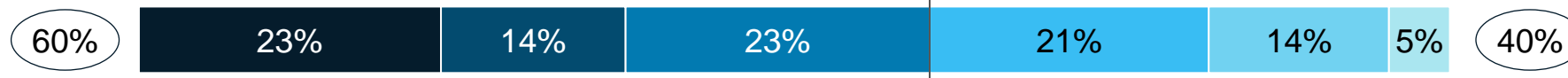
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.



As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



C4. Level of comfort with manned & unmanned vehicles – air taxis

Milan, Italy



X% Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

I would be interested in trying out a **manned air taxi myself**.



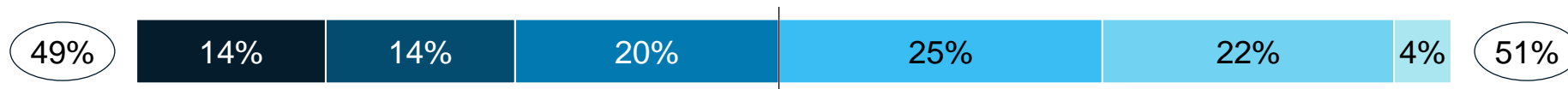
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.









As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



C4. Level of comfort with manned & unmanned vehicles – air taxis

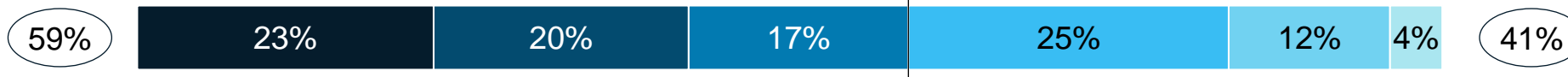
Öresund, Nordics  

(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

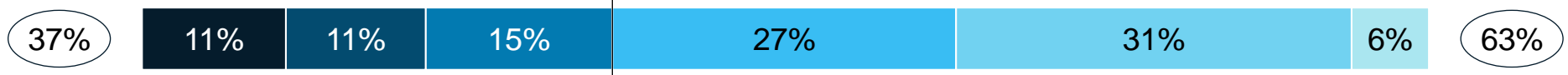
I would be interested in trying out a **manned air taxi myself**.



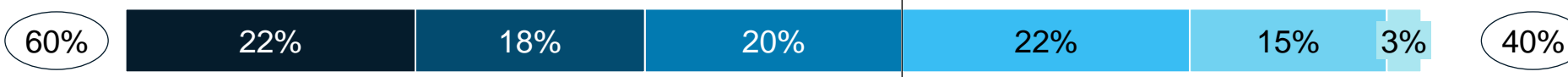
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.



As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



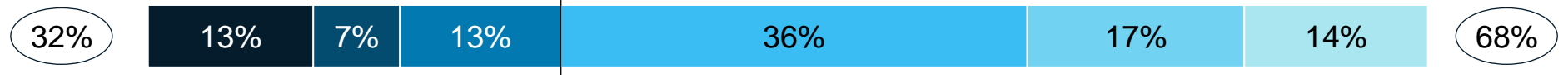
C4. Level of comfort with manned & unmanned vehicles – air taxis

Paris, France

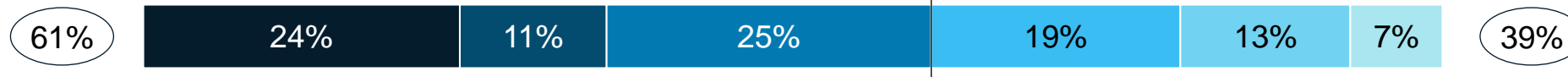


(X%) Sum ■ Strongly disagree ■ Disagree ■ Somewhat disagree ■ Somewhat agree ■ Agree ■ Strongly agree

I would be interested in trying out a **manned air taxi myself**.



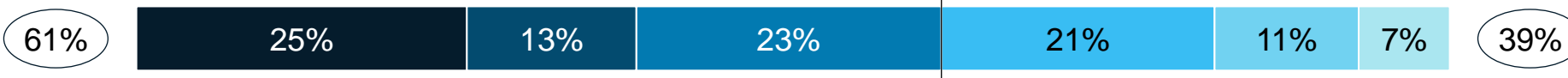
I would be interested in trying out an **unmanned air taxi myself**.



As a **pedestrian**, I accept the fact that **manned air taxis** could fly above my head.



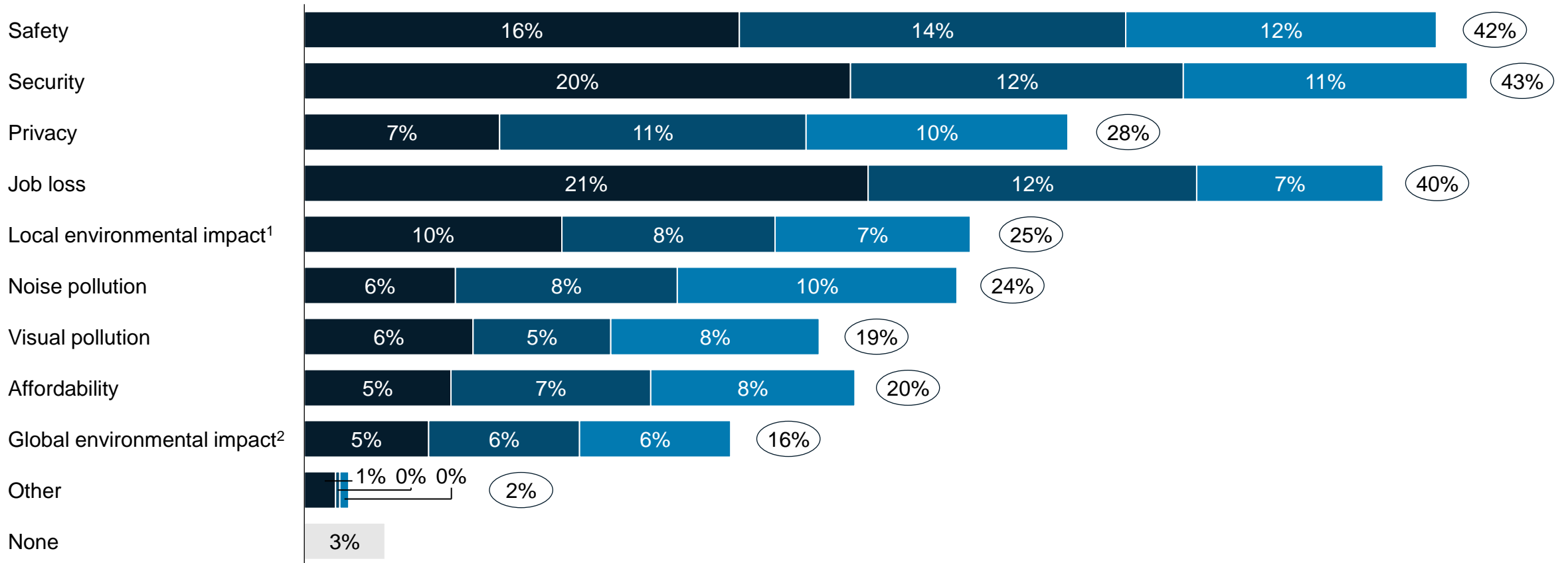
As a **pedestrian**, I accept the fact that **unmanned air taxis** could fly above my head.



B4.B5. Concerns in drone delivery use case

Barcelona, Spain 

X% Sum Ranked #1 Ranked #2 Ranked #3



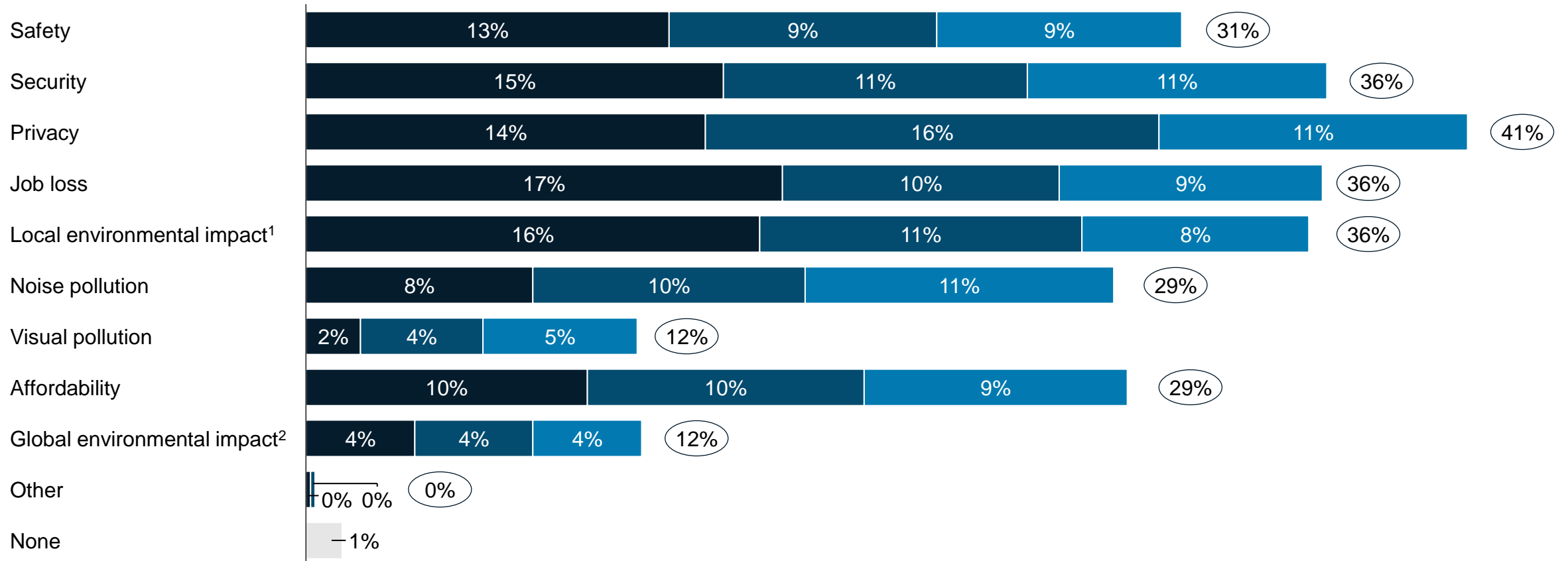
1. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity

2. Global environmental impact covers climate change

B4.B5. Concerns in drone delivery use case

Budapest, Hungary 

X% Sum Ranked #1 Ranked #2 Ranked #3



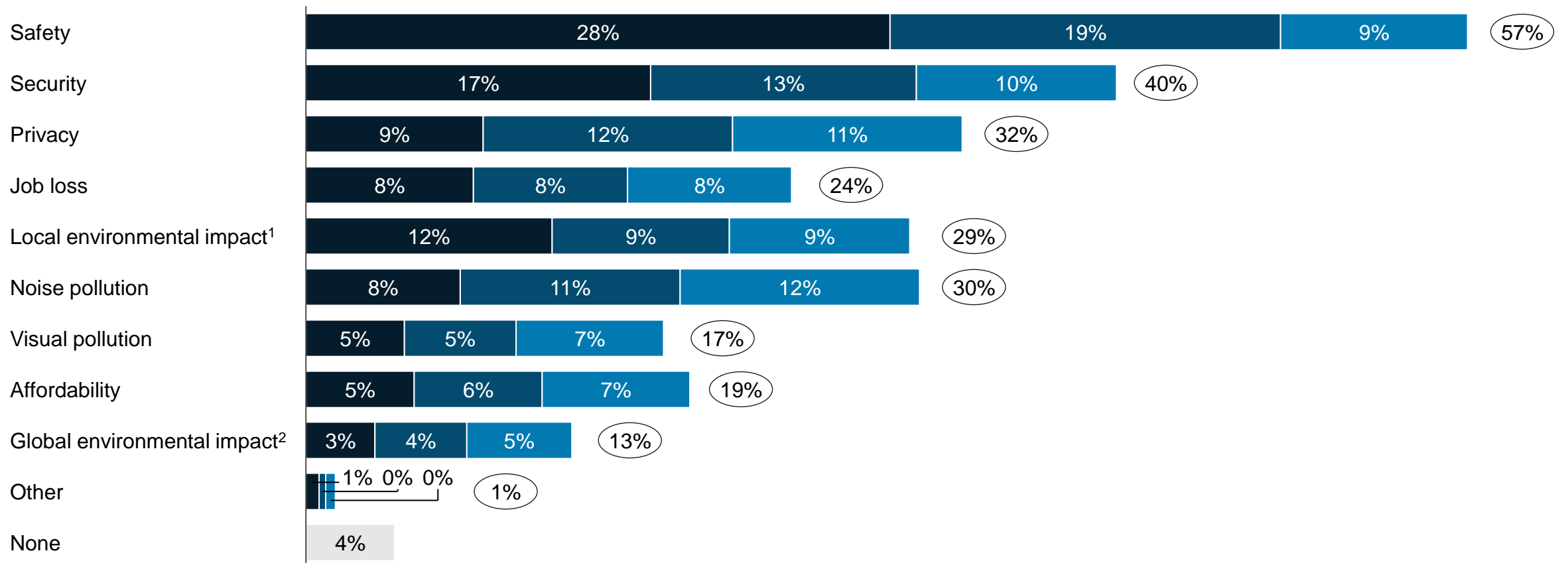
1. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity

2. Global environmental impact covers climate change

B4.B5. Concerns in drone delivery use case

Hamburg, Germany 

X% Sum Ranked #1 Ranked #2 Ranked #3



1. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity

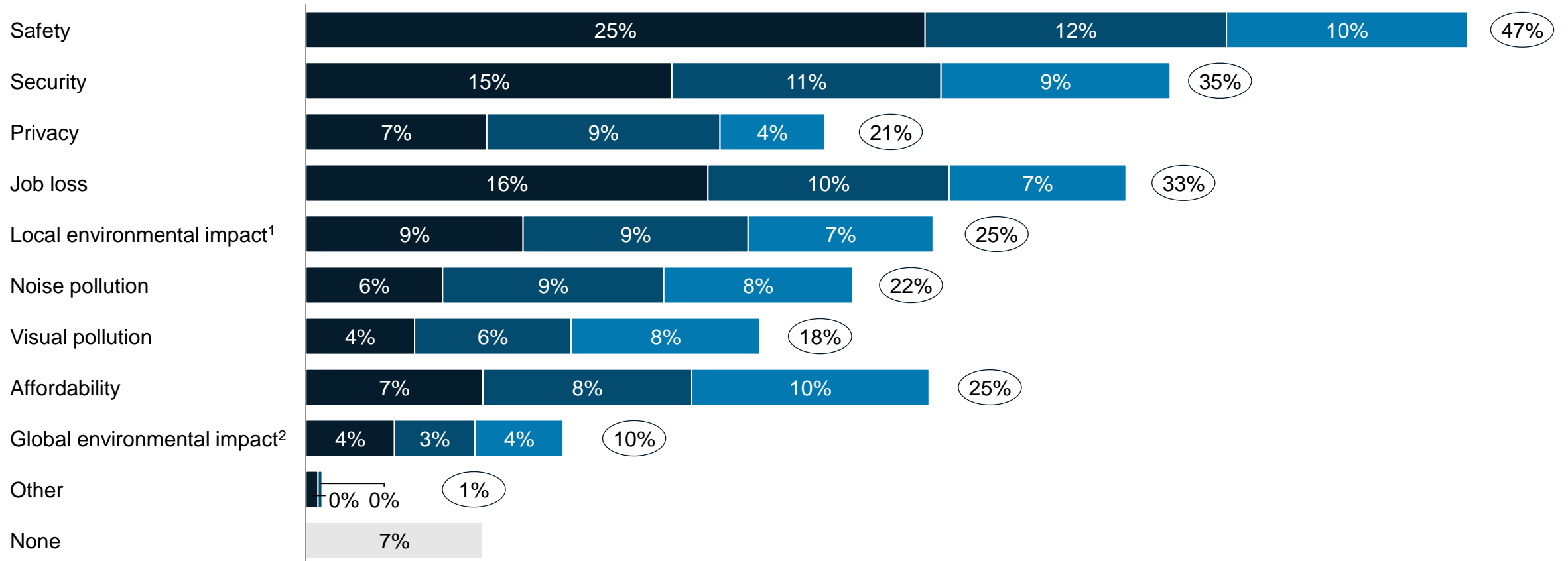
2. Global environmental impact covers climate change

B4.B5. Concerns in drone delivery use case

Milan, Italy



X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



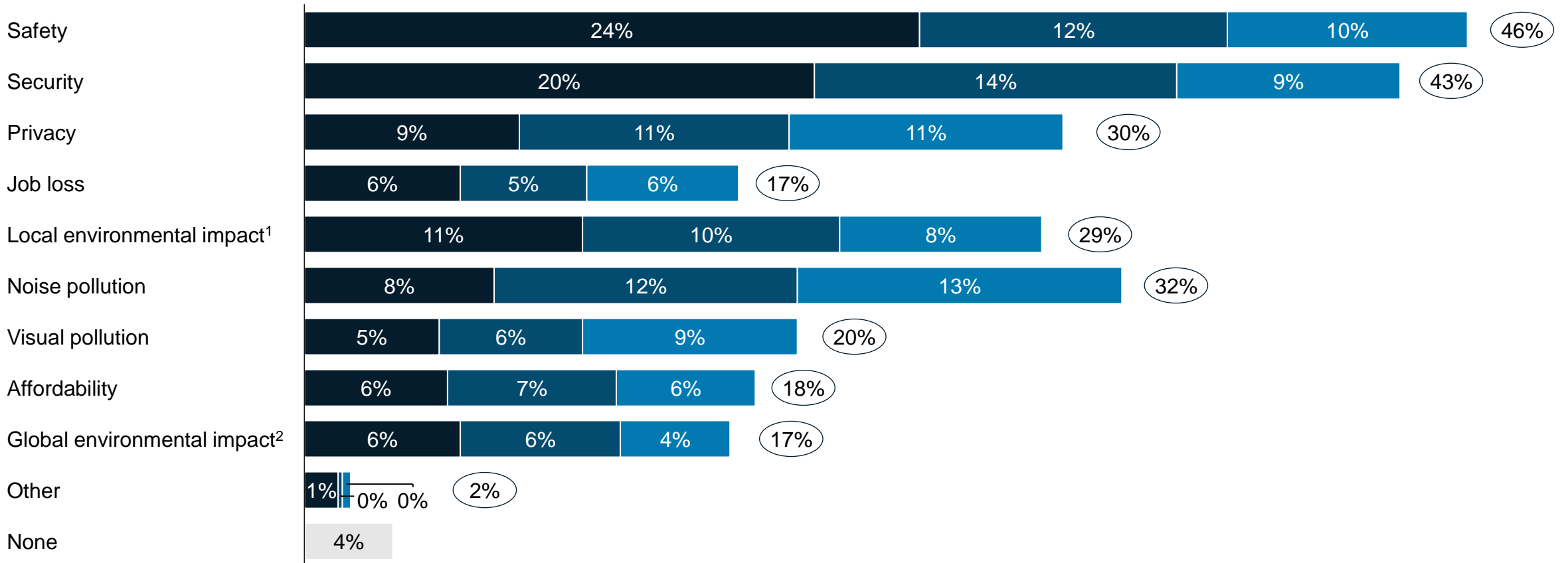
1. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity

2. Global environmental impact covers climate change

B4.B5. Concerns in drone delivery use case

Öresund, Nordics  

X% Sum  Ranked #1  Ranked #2  Ranked #3



1. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity

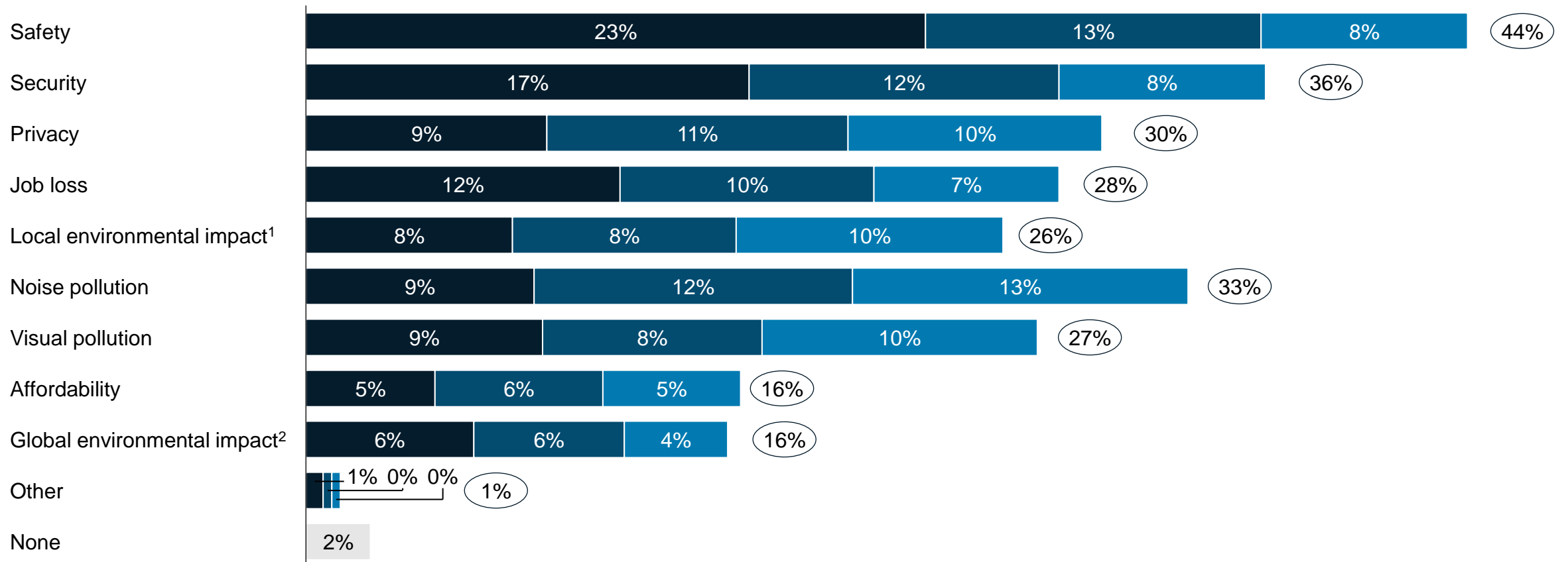
2. Global environmental impact covers climate change

B4.B5. Concerns in drone delivery use case

Paris, France



X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



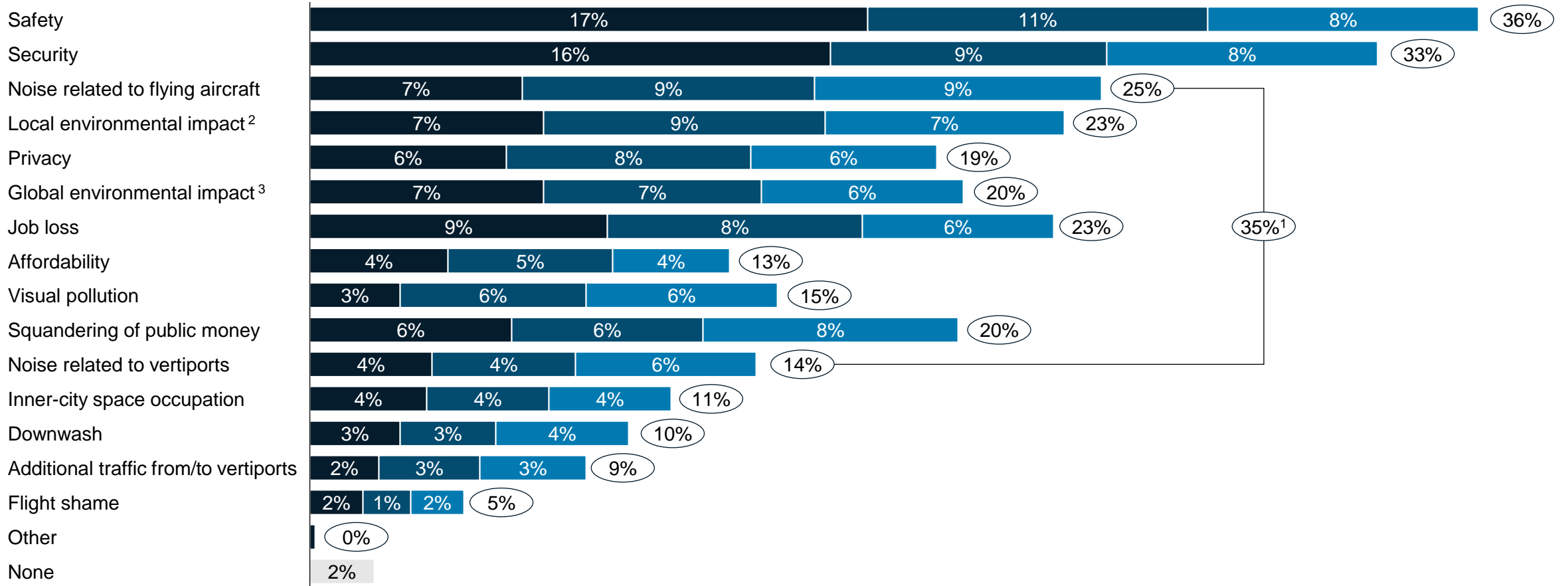
1. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity

2. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case

Barcelona, Spain 

(X%) Sum Ranked #1 Ranked #2 Ranked #3

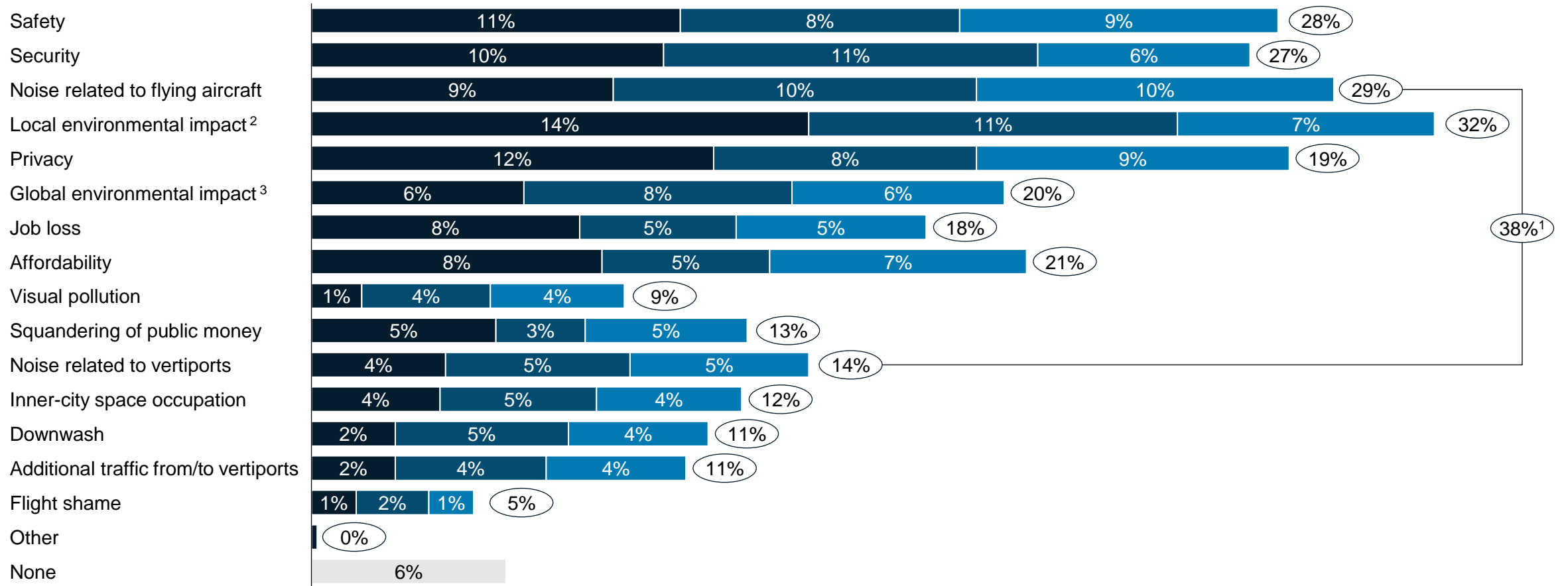


1. Share of respondents that ranked any noise related concern among top 3 answers 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 3. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case

Budapest, Hungary 

(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

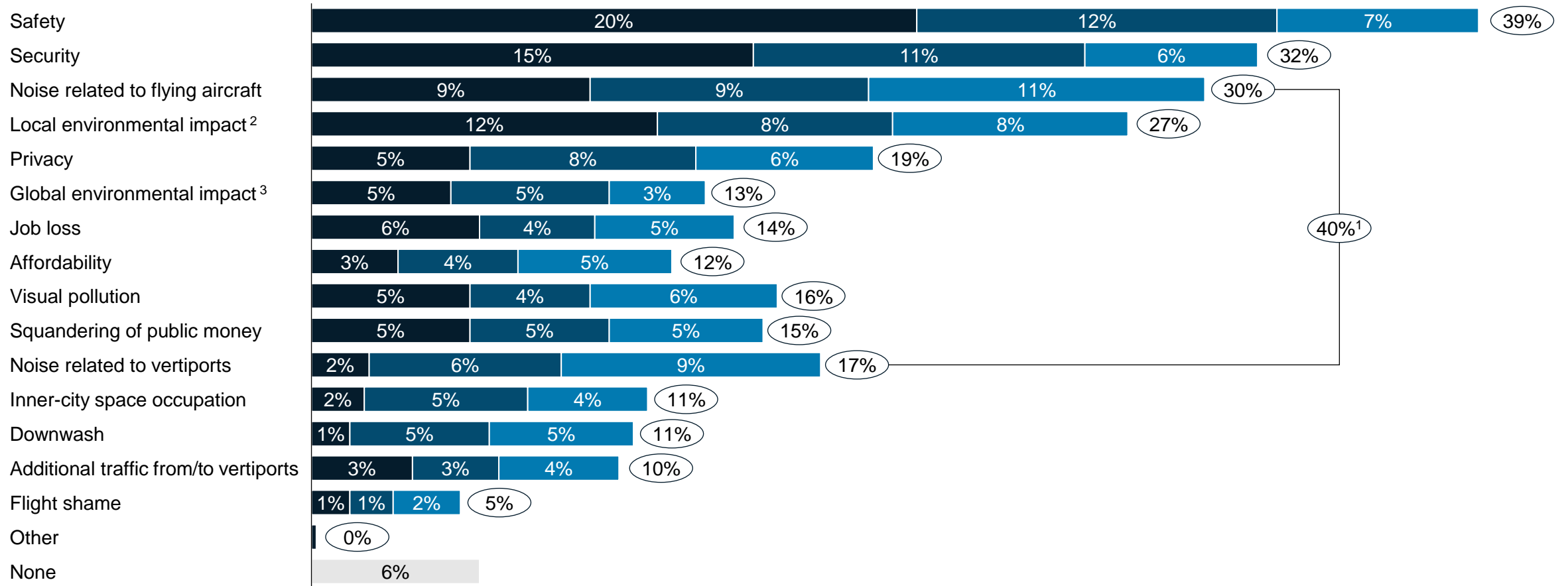


1. Share of respondents that ranked any noise related concern among top 3 answers 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 3. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case

Hamburg, Germany 

(X%) Sum  Ranked #1  Ranked #2  Ranked #3



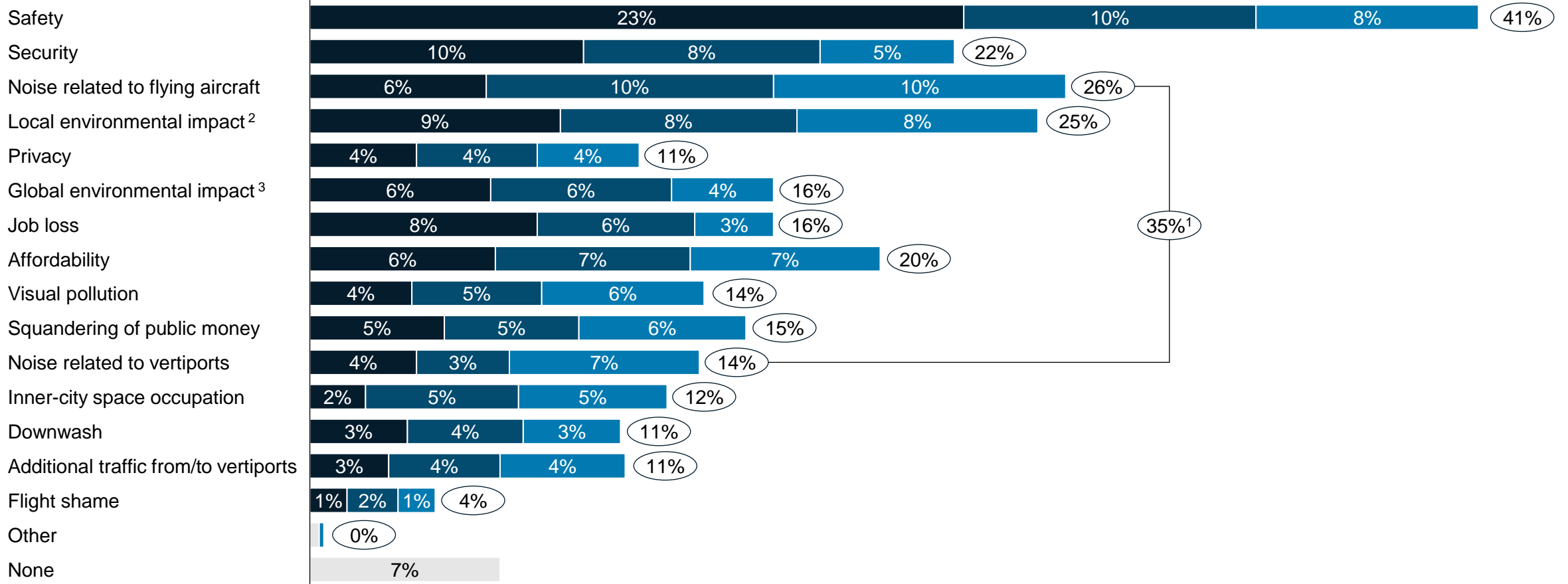
1. Share of respondents that ranked any noise related concern among top 3 answers 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 3. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case

Milan, Italy



X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

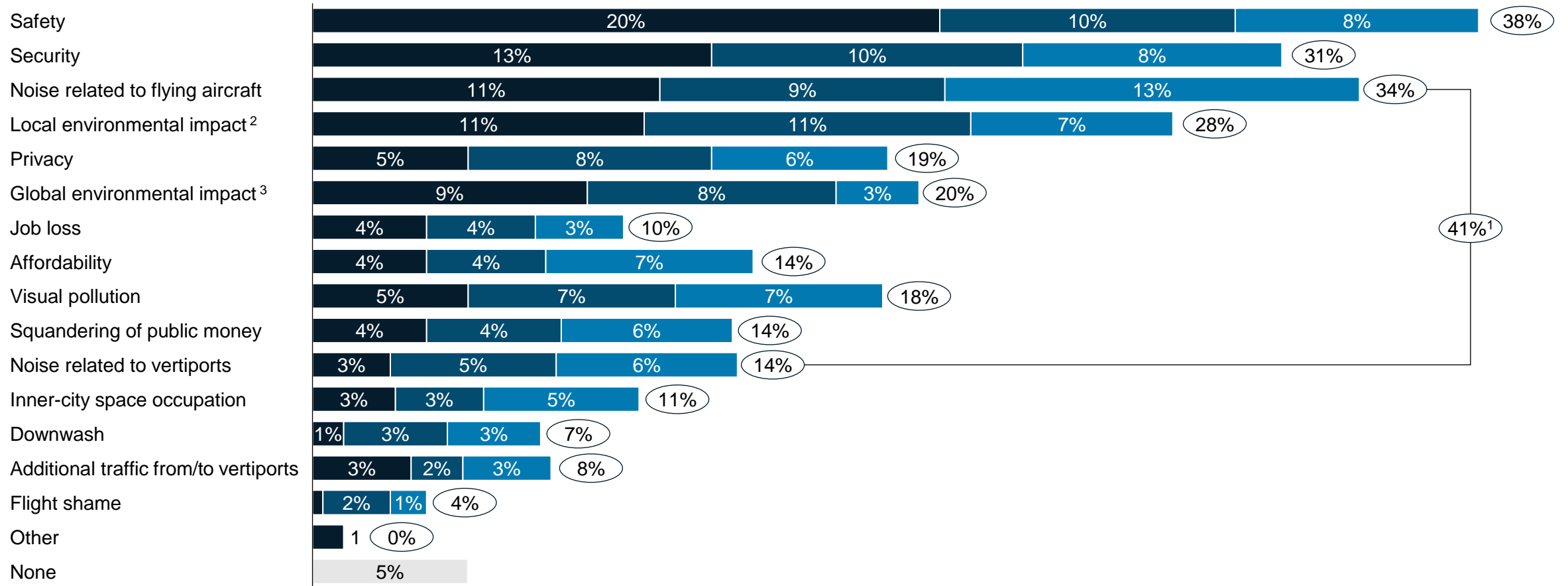


1. Share of respondents that ranked any noise related concern among top 3 answers 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 3. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case

Öresund, Nordics  

(X%) Sum  Ranked #1  Ranked #2  Ranked #3



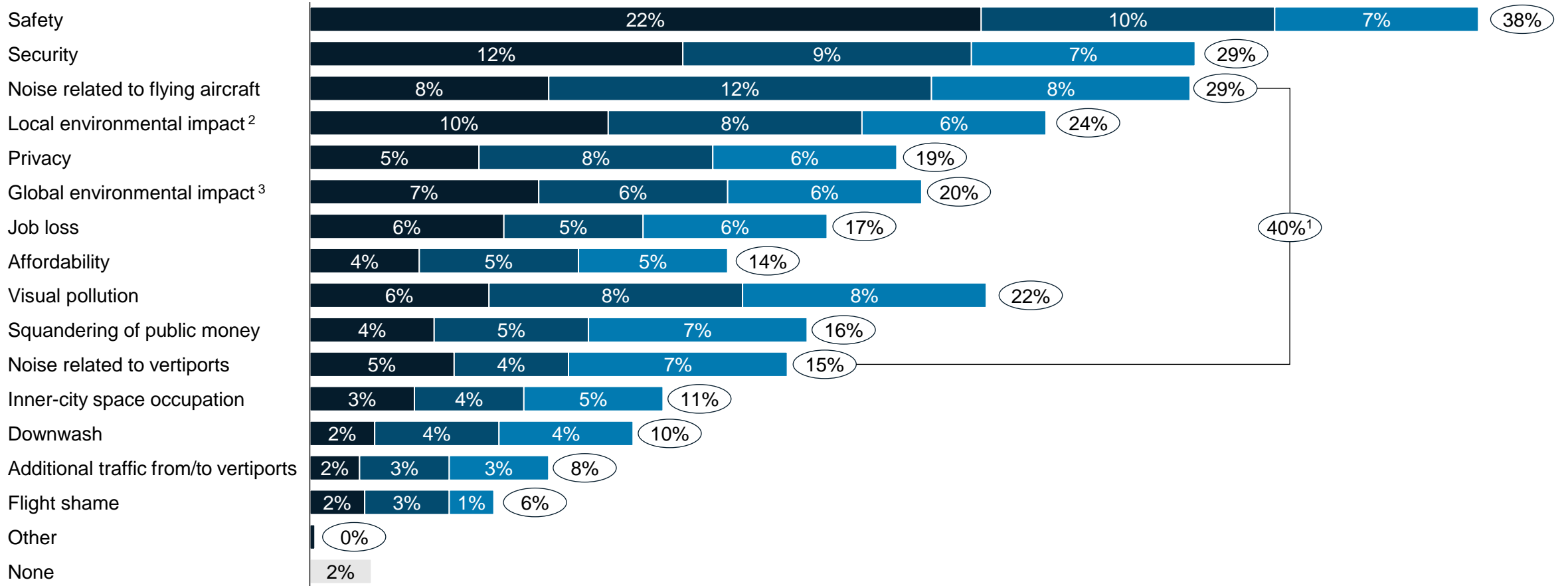
1. Share of respondents that ranked any noise related concern among top 3 answers 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 3. Global environmental impact covers climate change

C5.C6. Concerns in air taxi use case

Paris, France



(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3

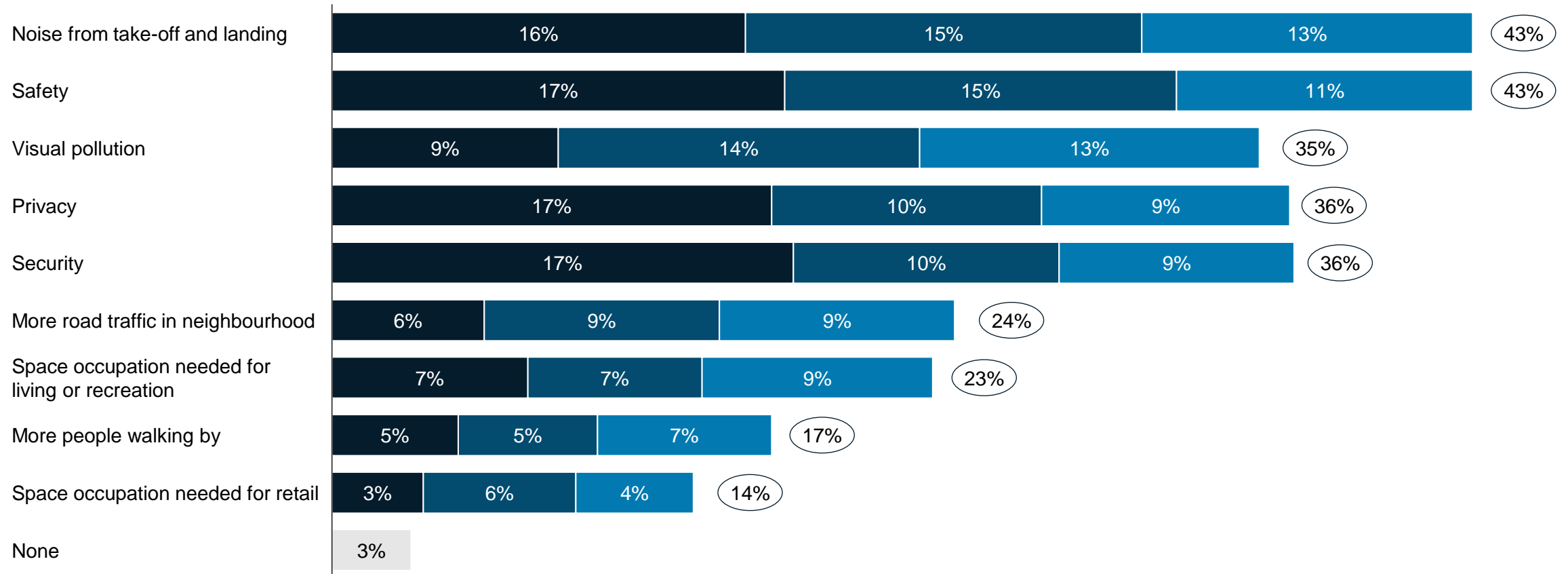


1. Share of respondents that ranked any noise related concern among top 3 answers 2. Local environmental impact includes air pollution, negative impact on bird life and insects, decreasing biodiversity 3. Global environmental impact covers climate change

C11.C12. Concerns regarding vertiports

Barcelona, Spain 

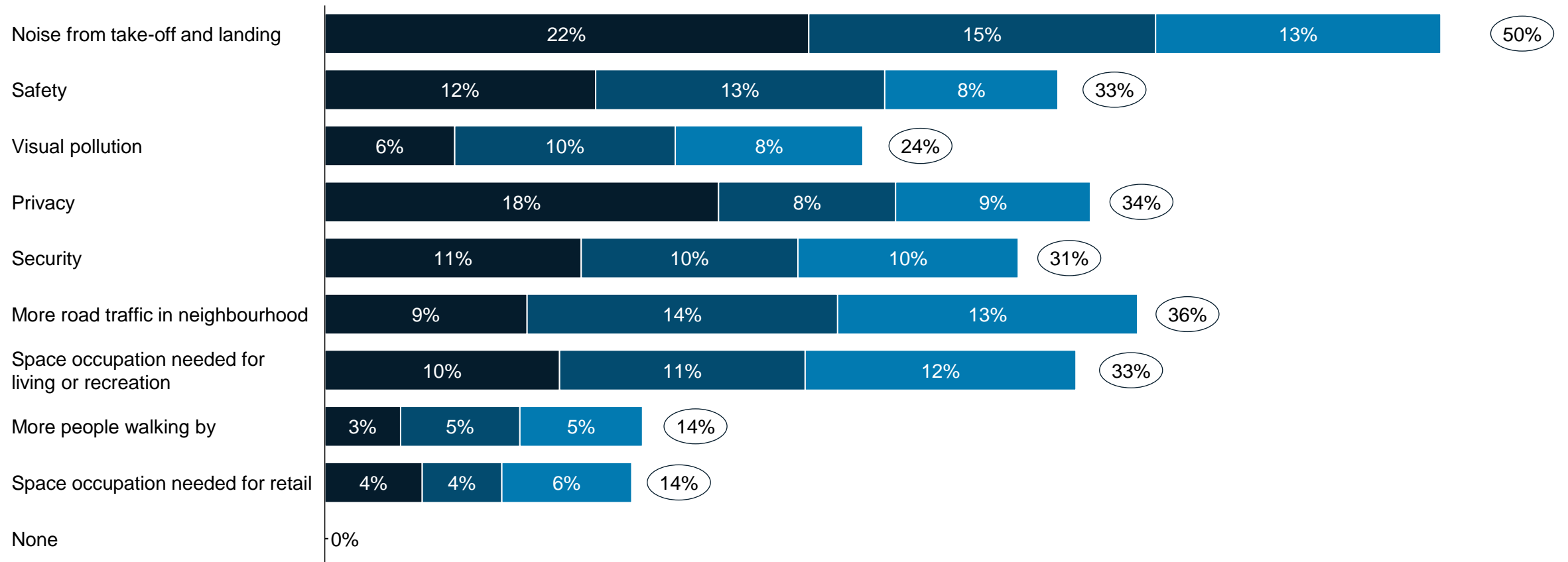
(X%) Sum Ranked #1 Ranked #2 Ranked #3



C11.C12. Concerns regarding vertiports

Budapest, Hungary 

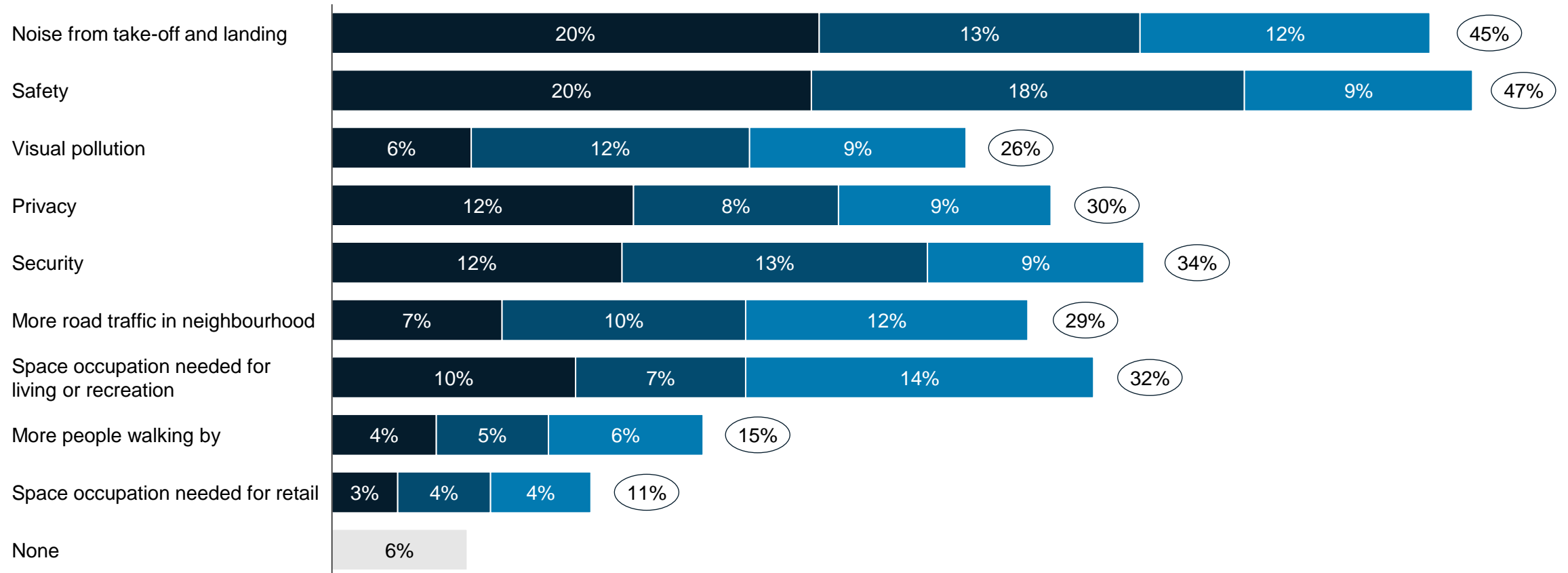
(X%) Sum Ranked #1 Ranked #2 Ranked #3



C11.C12. Concerns regarding vertiports

Hamburg, Germany

(X%) Sum Ranked #1 Ranked #2 Ranked #3

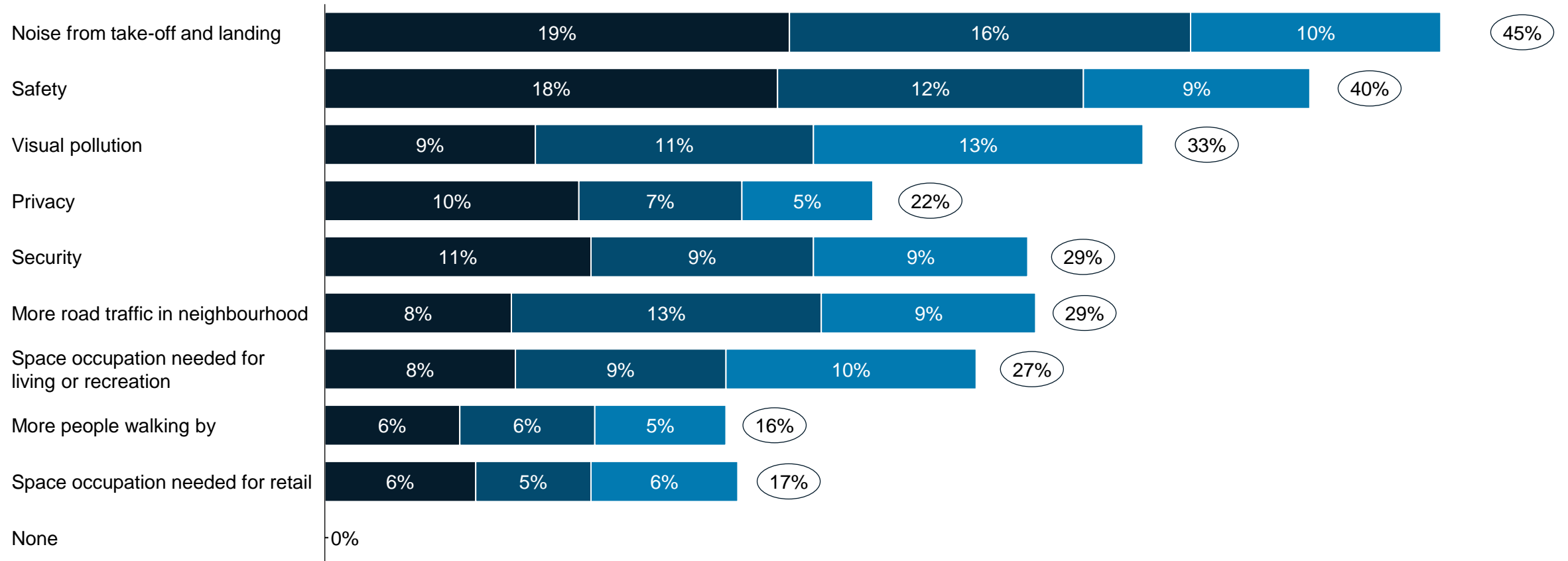


C11.C12. Concerns regarding vertiports

Milan, Italy



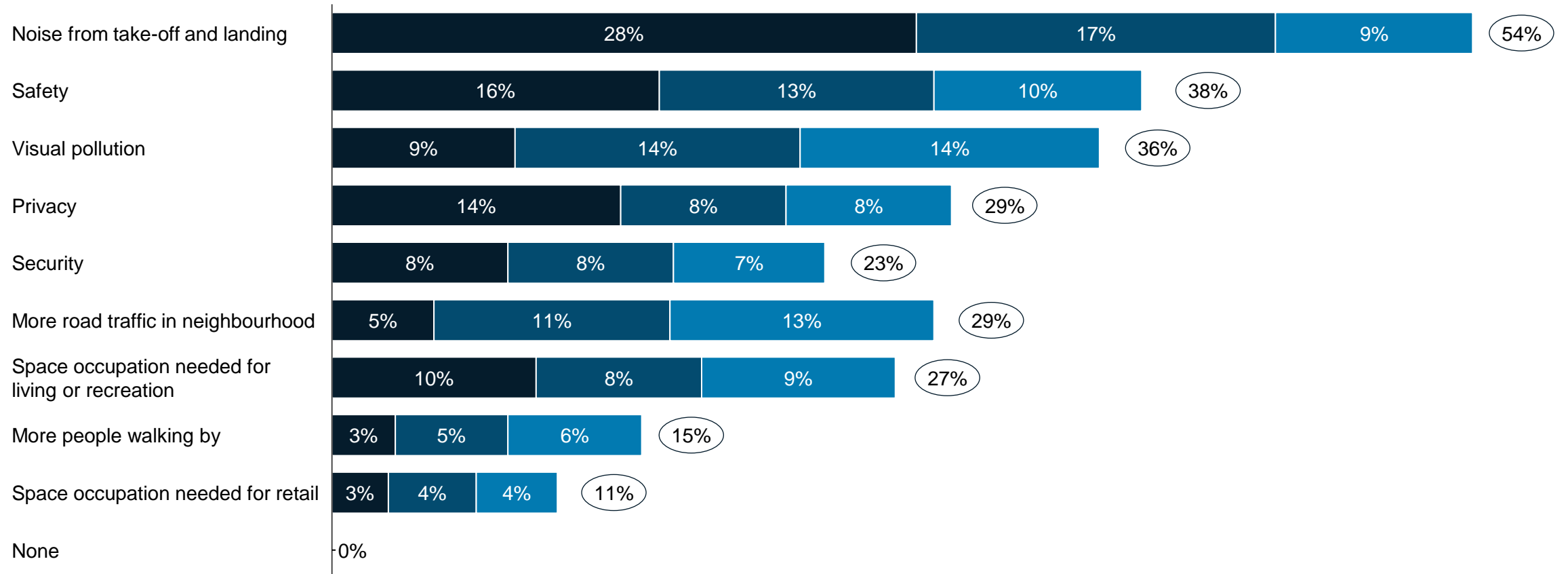
(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



C11.C12. Concerns regarding vertiports

Öresund, Nordics  

X% Sum  Ranked #1  Ranked #2  Ranked #3

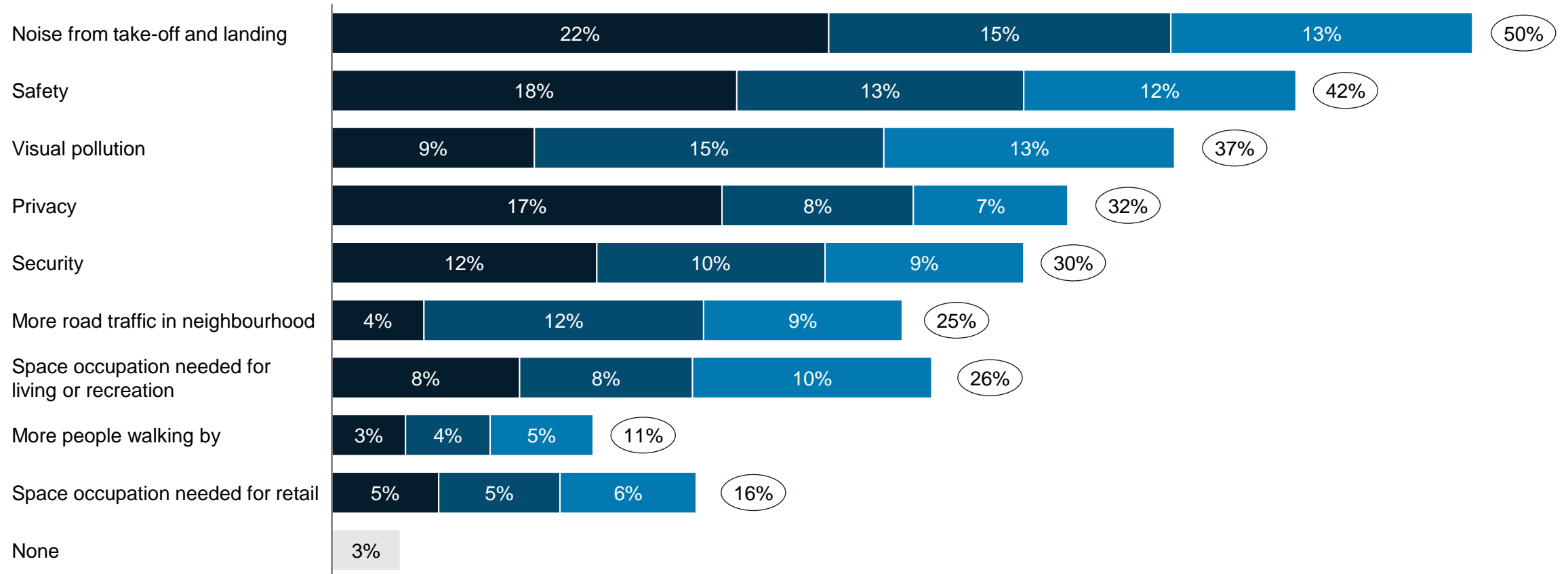


C11.C12. Concerns regarding vertiports

Paris, France



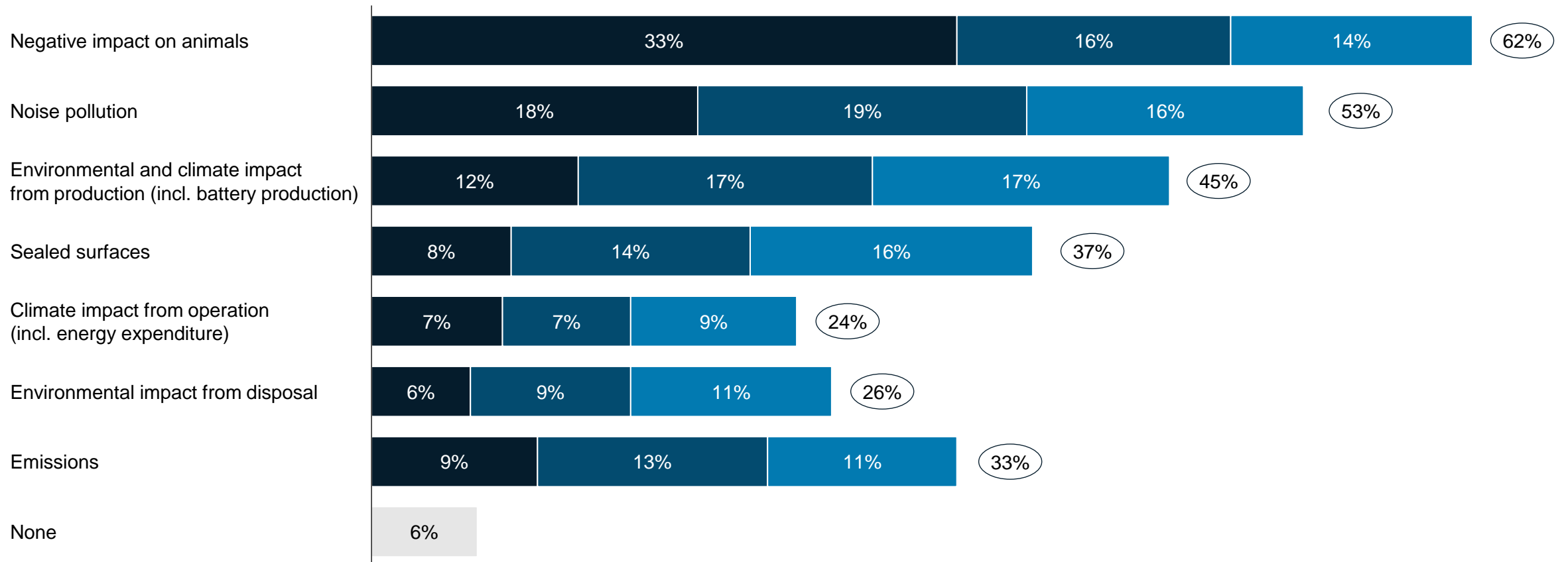
X% Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



B9. Environmental concerns – drone delivery

Barcelona, Spain 

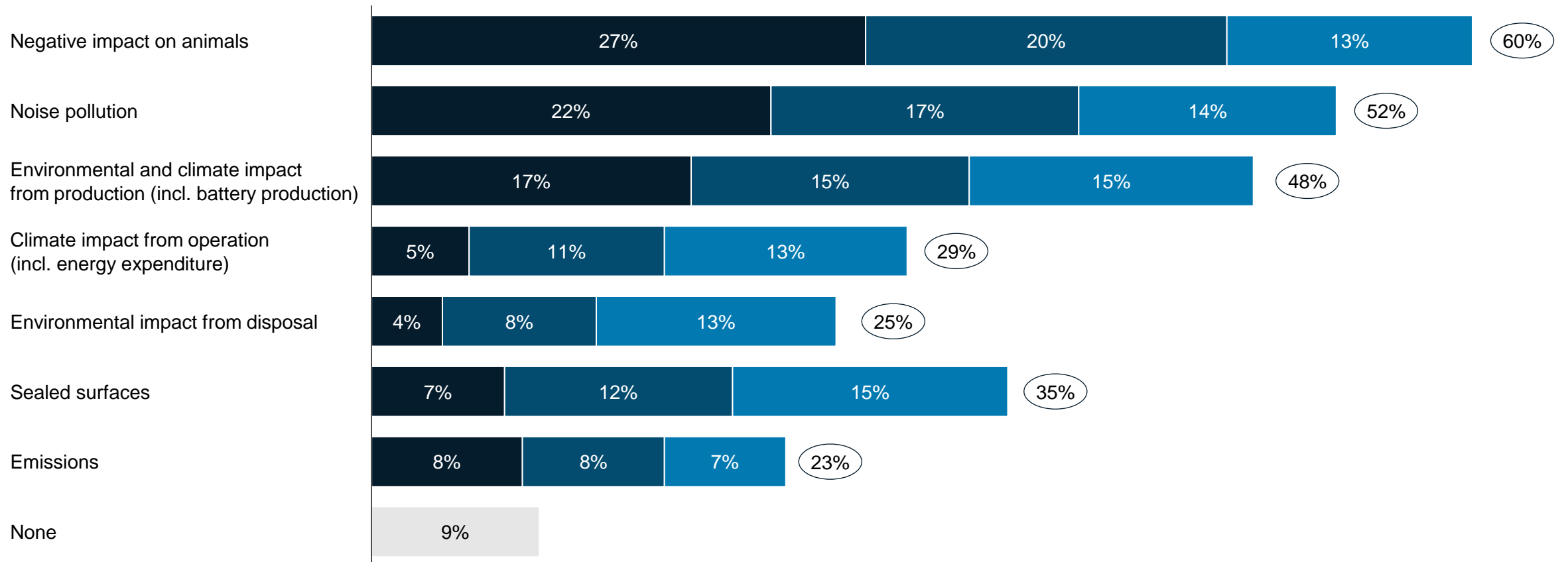
(X%) Sum Ranked #1 Ranked #2 Ranked #3



B9. Environmental concerns – drone delivery

Budapest, Hungary 

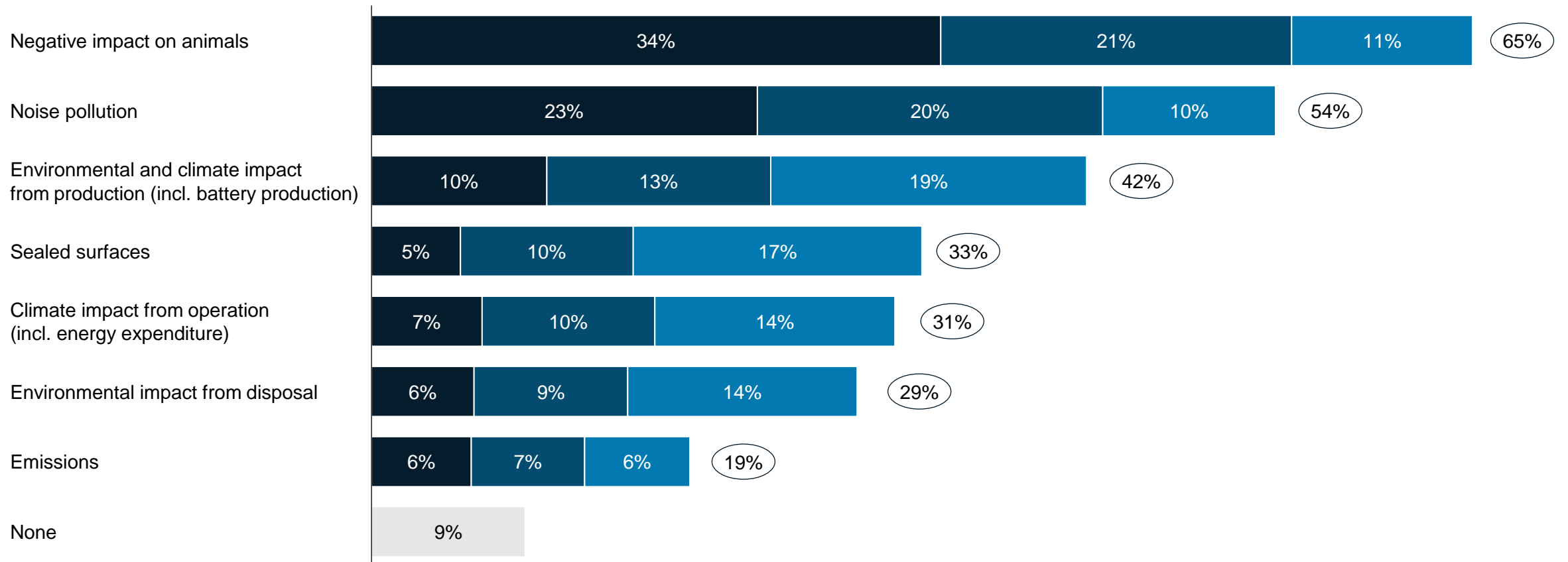
(X%) Sum Ranked #1 Ranked #2 Ranked #3



B9. Environmental concerns – drone delivery

Hamburg, Germany 

(X%) Sum Ranked #1 Ranked #2 Ranked #3

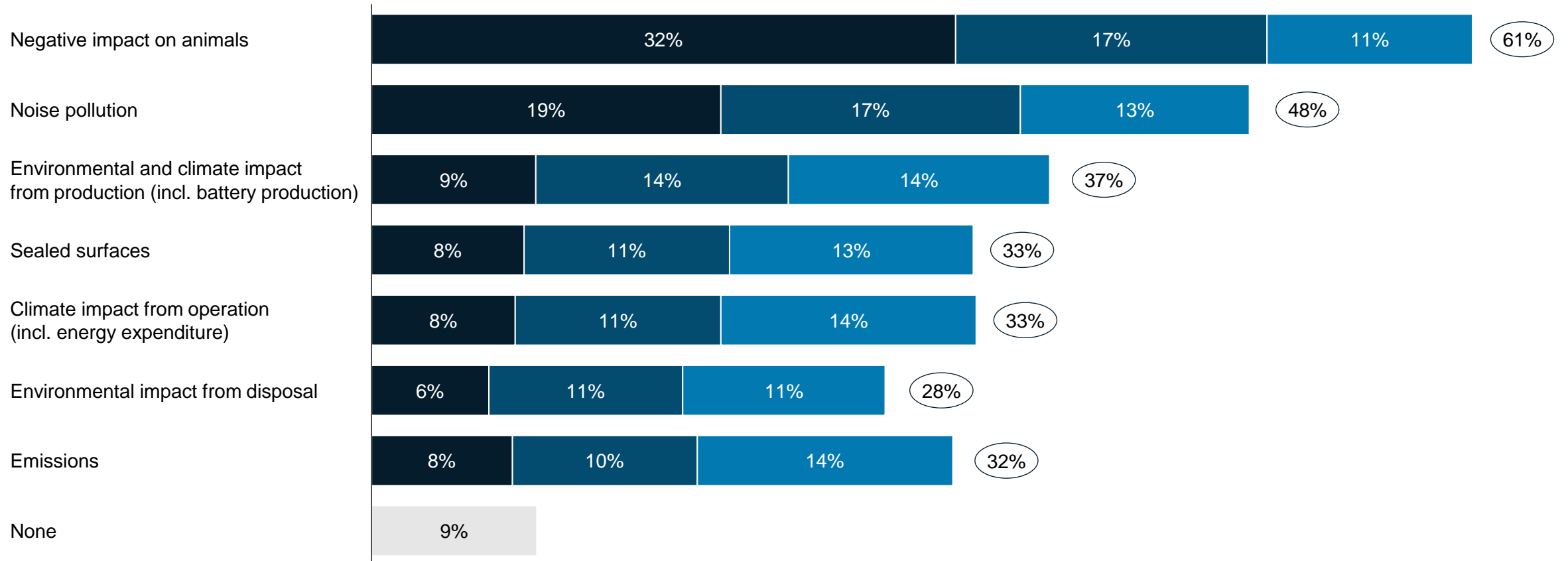


B9. Environmental concerns – drone delivery

Milan, Italy



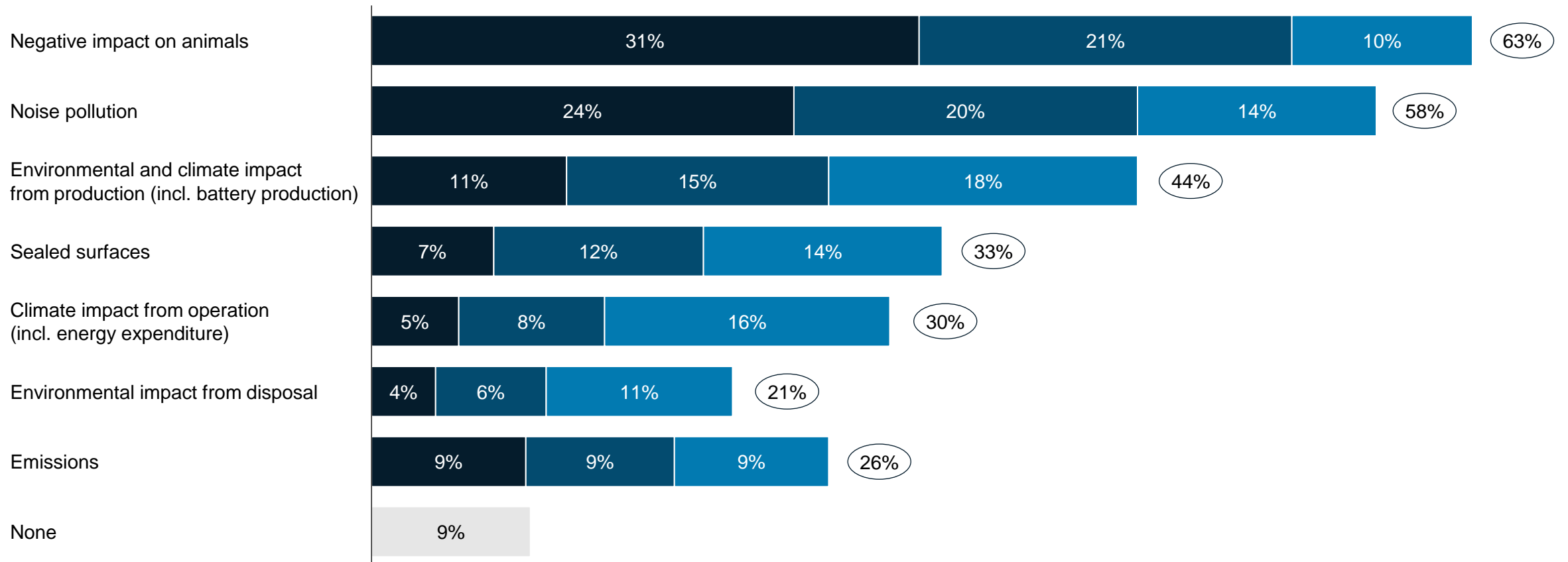
(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



B9. Environmental concerns – drone delivery

Öresund, Nordics  

(X%) Sum  Ranked #1  Ranked #2  Ranked #3

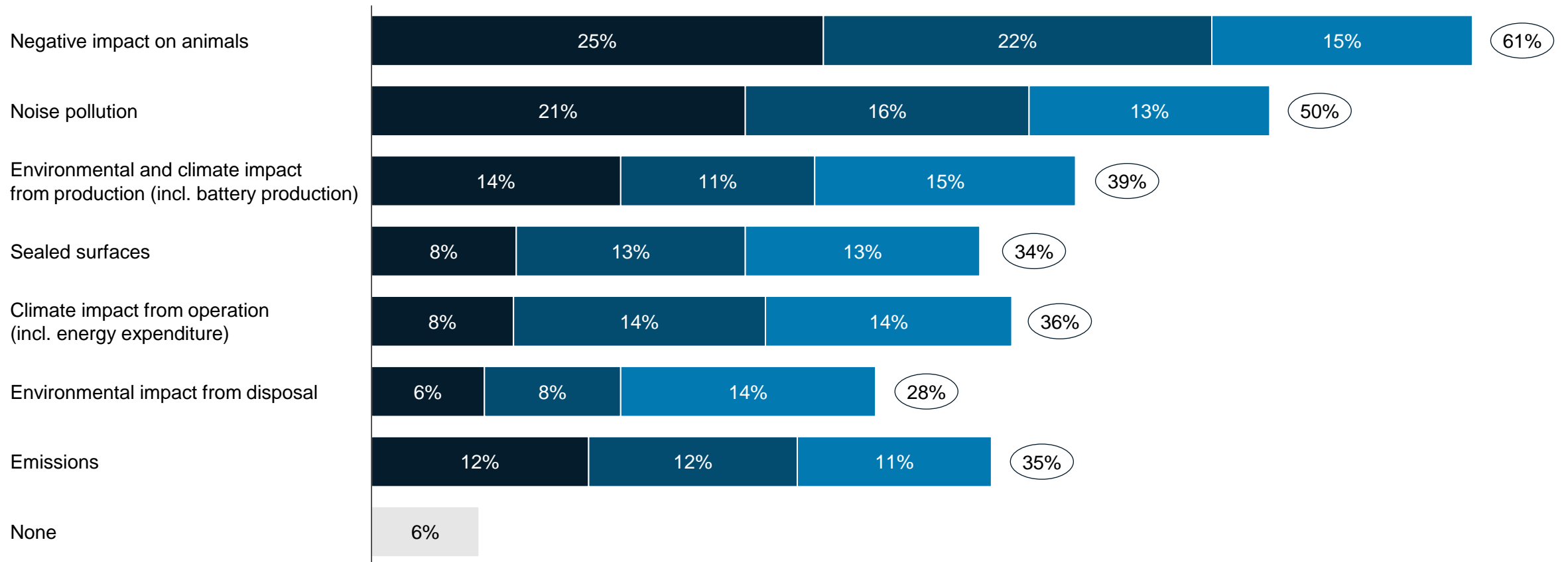


B9. Environmental concerns – drone delivery

Paris, France



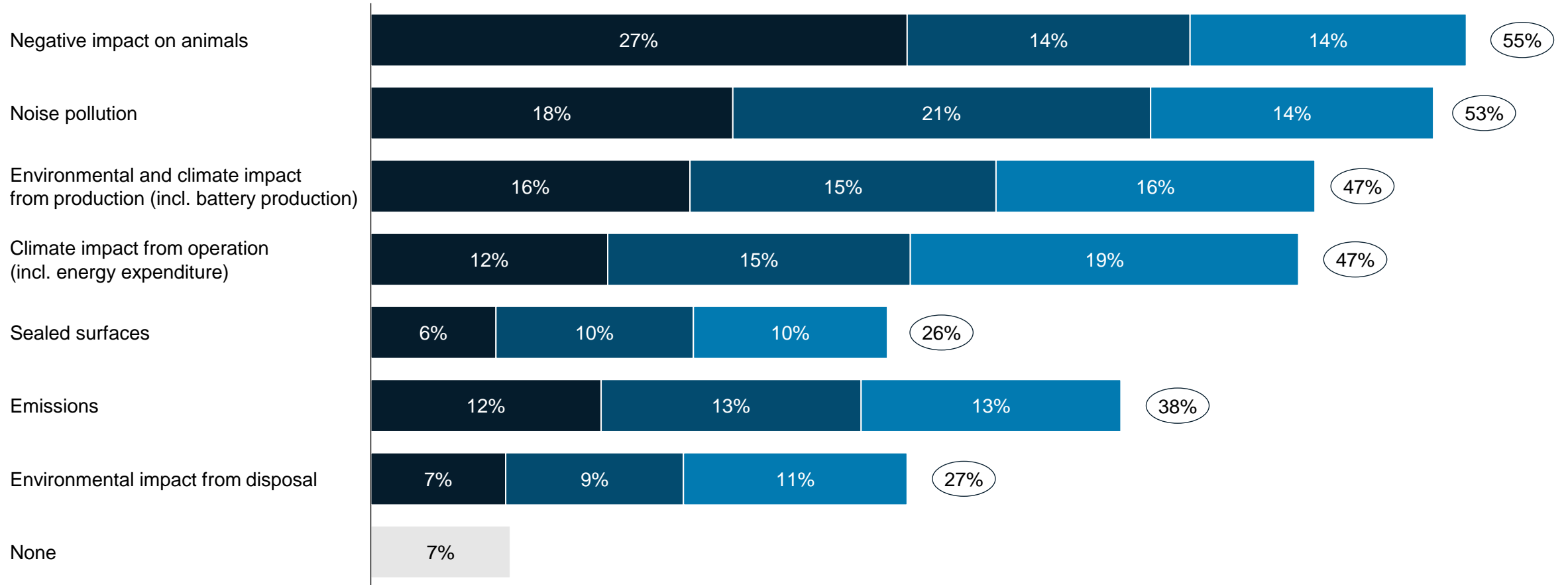
(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



C9. Environmental concerns – air taxis

Barcelona, Spain 

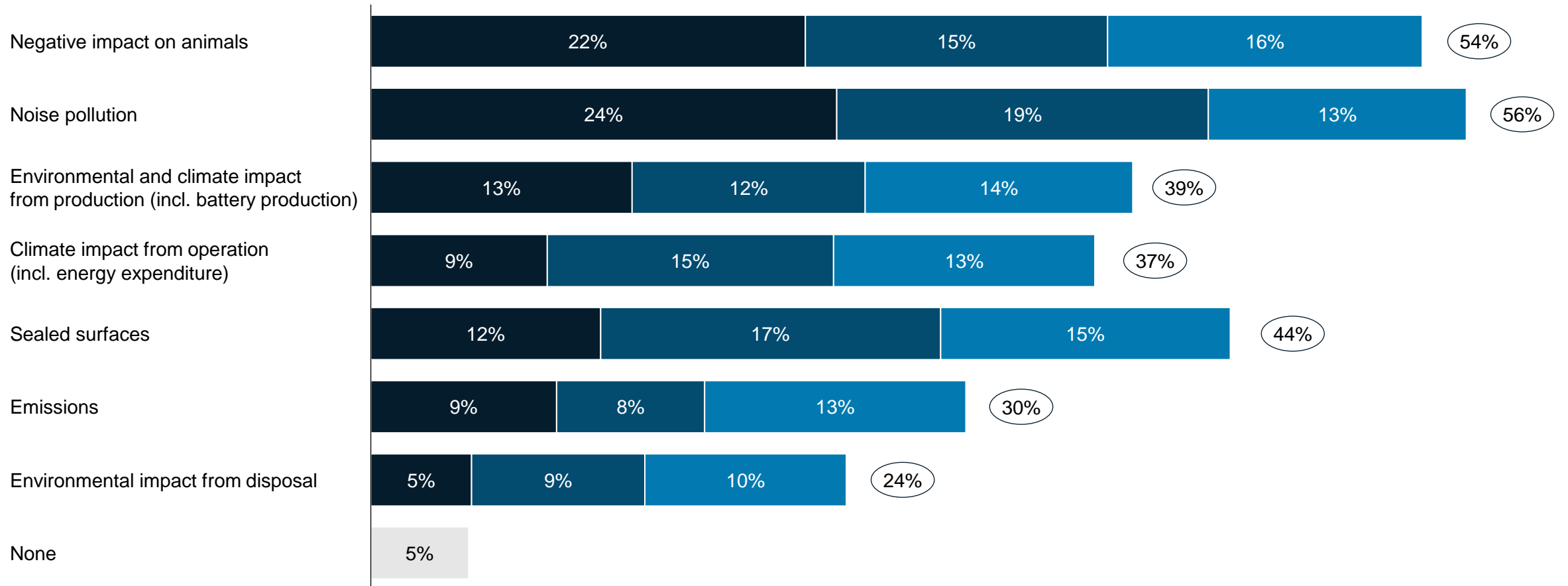
(X%) Sum Ranked #1 Ranked #2 Ranked #3



C9. Environmental concerns – air taxis

Budapest, Hungary 

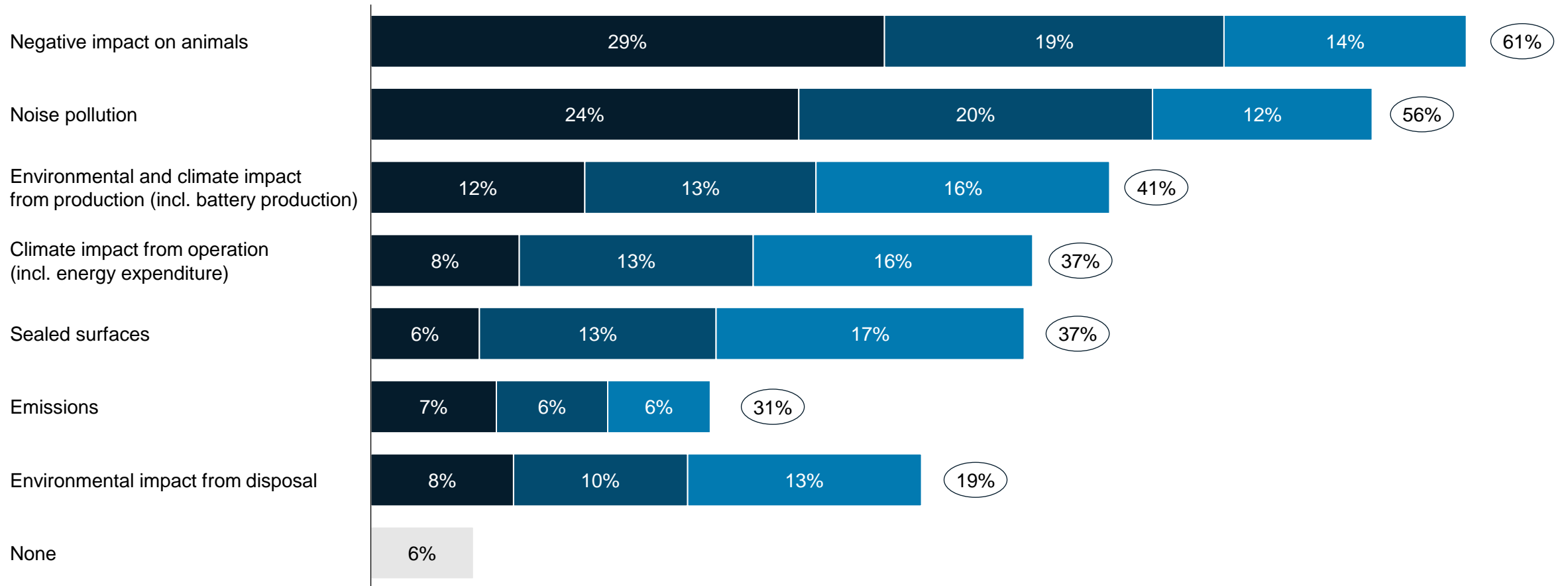
(X%) Sum Ranked #1 Ranked #2 Ranked #3



C9. Environmental concerns – air taxis

Hamburg, Germany 

(X%) Sum  Ranked #1  Ranked #2  Ranked #3

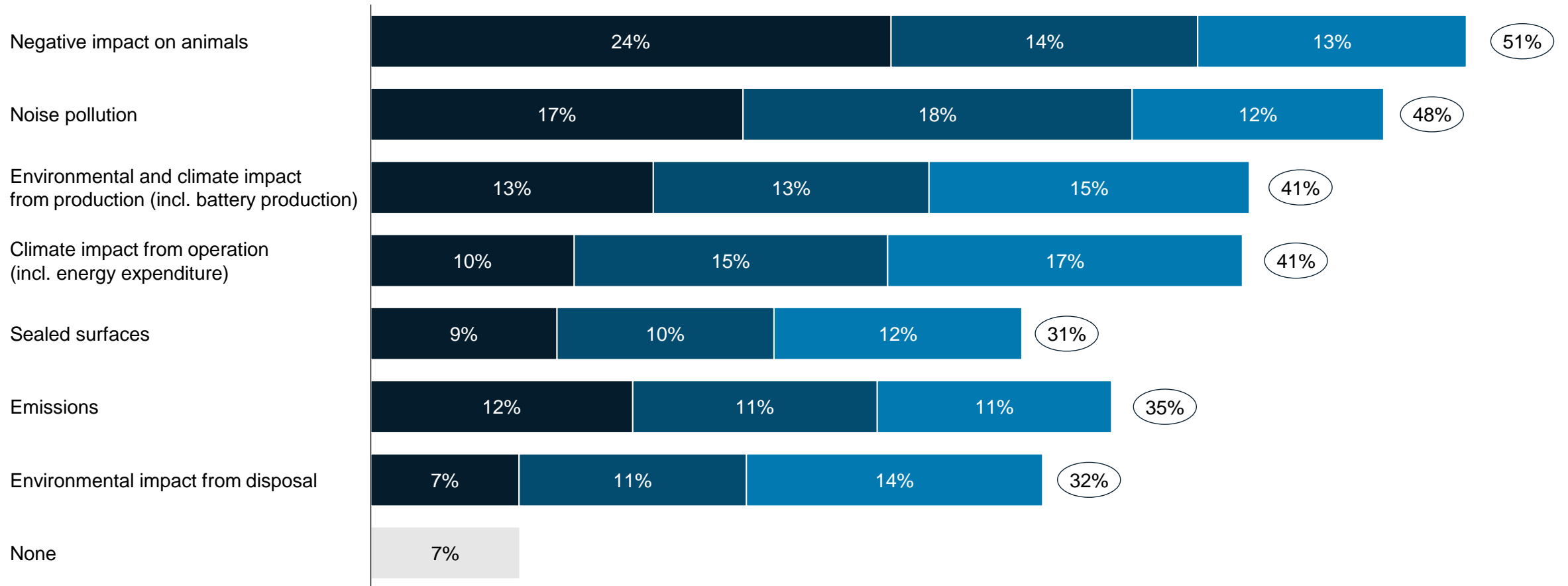


C9. Environmental concerns – air taxis

Milan, Italy



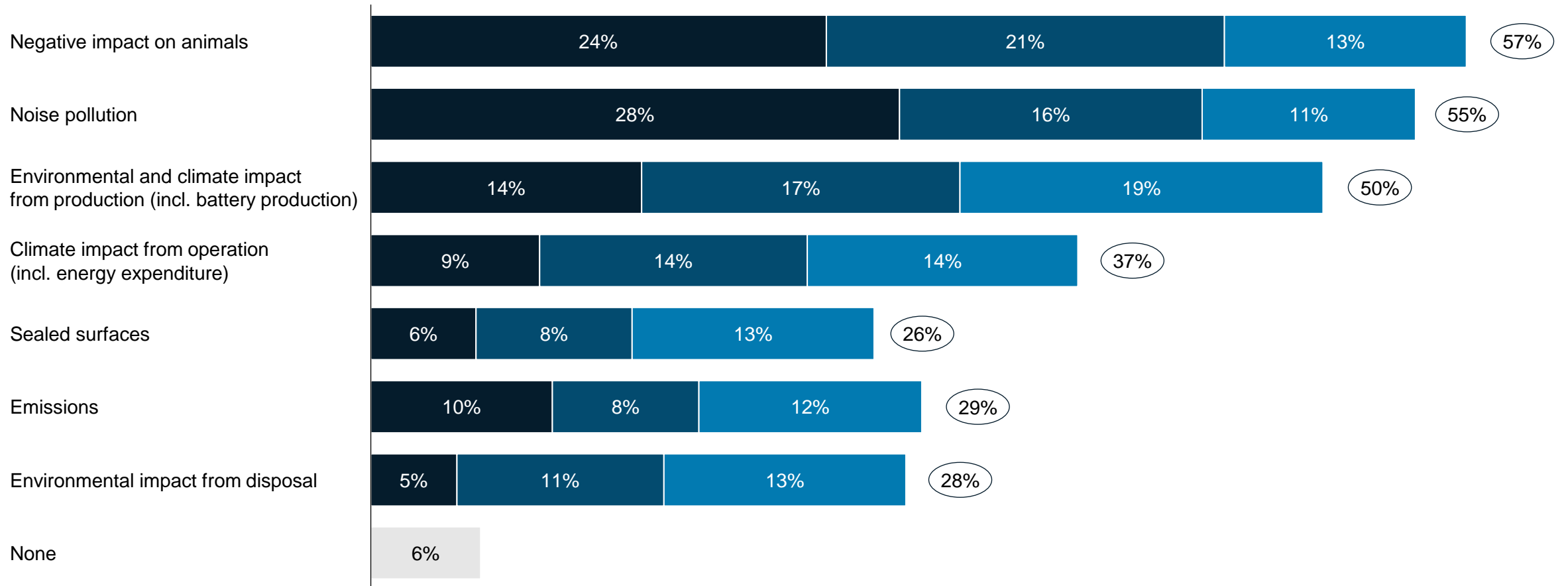
(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



C9. Environmental concerns – air taxis

Öresund, Nordics  

(X%) Sum  Ranked #1  Ranked #2  Ranked #3

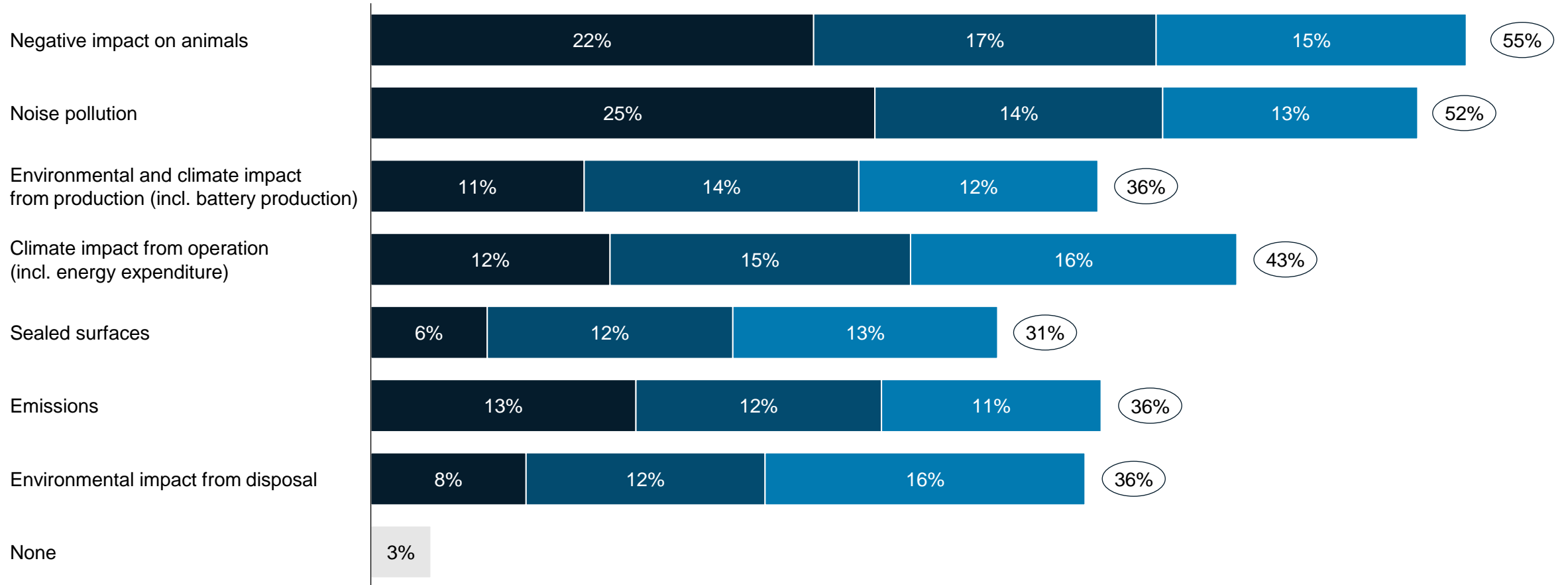


C9. Environmental concerns – air taxis

Paris, France



(X%) Sum ■ Ranked #1 ■ Ranked #2 ■ Ranked #3



D4. Introduction of an eco-label

Barcelona, Spain 




X% Sum No Maybe, don't know Yes, certainly



Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

D4. Introduction of an eco-label

Budapest, Hungary 



(X%) Sum  No  Maybe, don't know  Yes, certainly



Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

D4. Introduction of an eco-label

Hamburg, Germany 

(X%) Sum  No  Maybe, don't know  Yes, certainly



Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

D4. Introduction of an eco-label

Milan, Italy



X% Sum No Maybe, don't know Yes, certainly




Milan



Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

D4. Introduction of an eco-label

Öresund, Nordics  

(X%) Sum  No  Maybe, don't know  Yes, certainly



Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

D4. Introduction of an eco-label

Paris, France



X% Sum No Maybe, don't know Yes, certainly



Paris

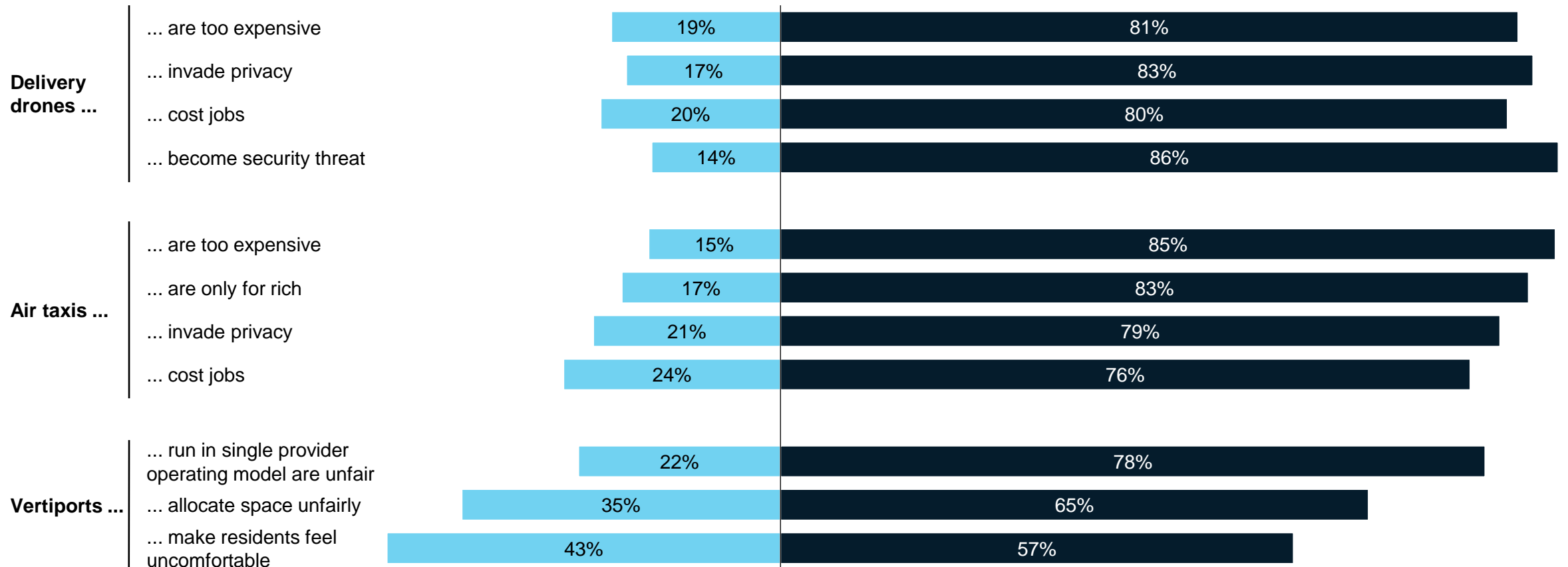


Source: EASA UAM social acceptance survey question D4. Should the environmental impact of urban air mobility operations be evaluated by the authorities and made public, e.g., via an eco-label such as the one shown below (picture included in back-up)? Please select one answer.

B10.C10. Response rates for negative statements related to UAM



Barcelona, Spain 

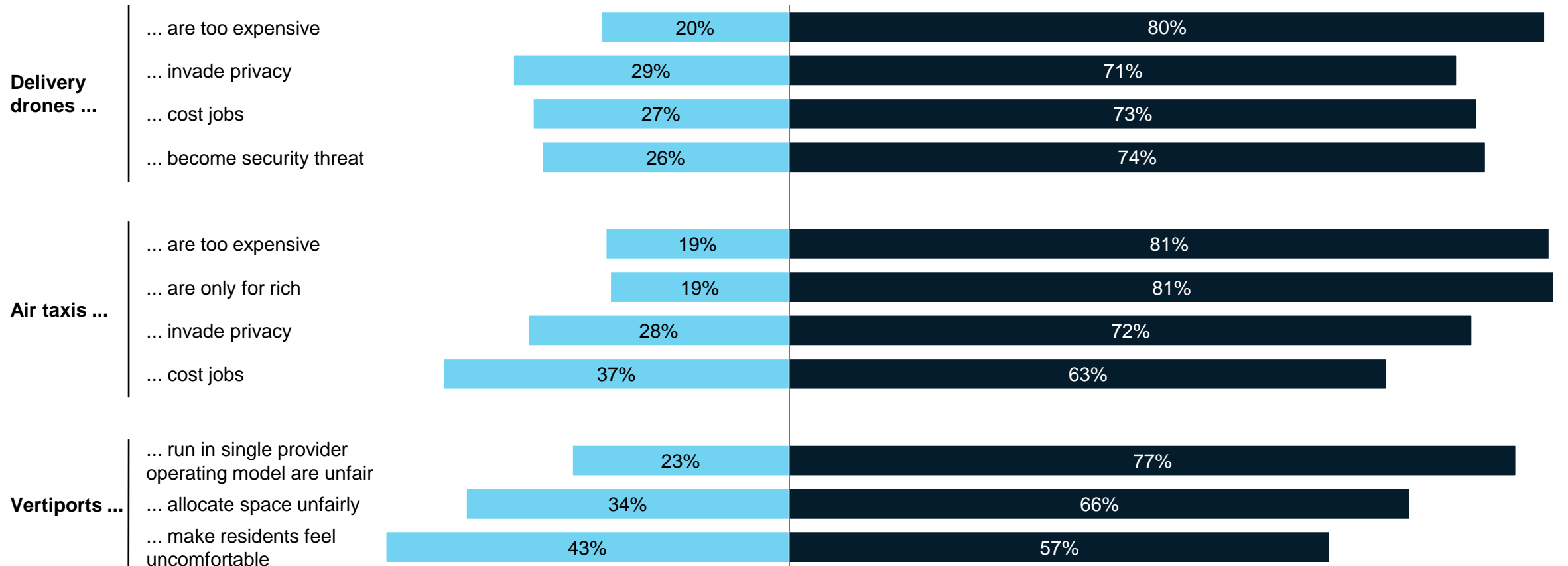
 Disagree  Agree



B10.C10. Response rates for negative statements related to UAM



Budapest, Hungary 

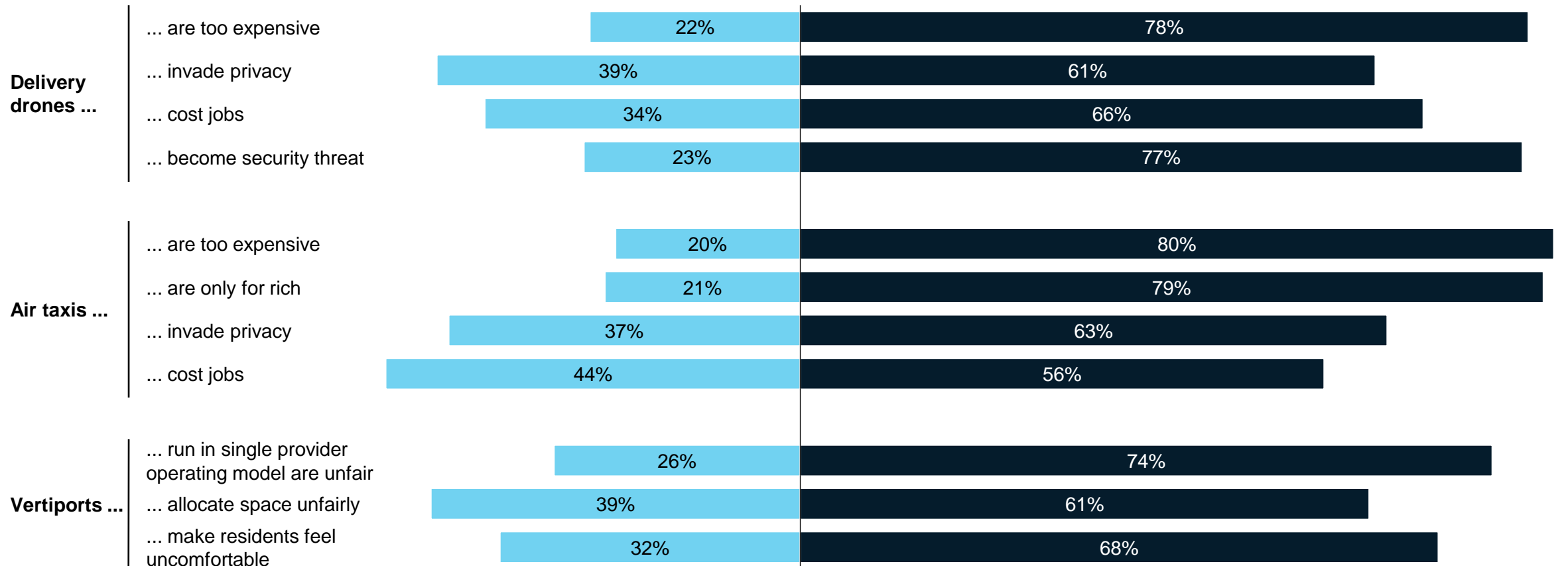
 Disagree  Agree



B10.C10. Response rates for negative statements related to UAM

Hamburg, Germany 

 Disagree  Agree

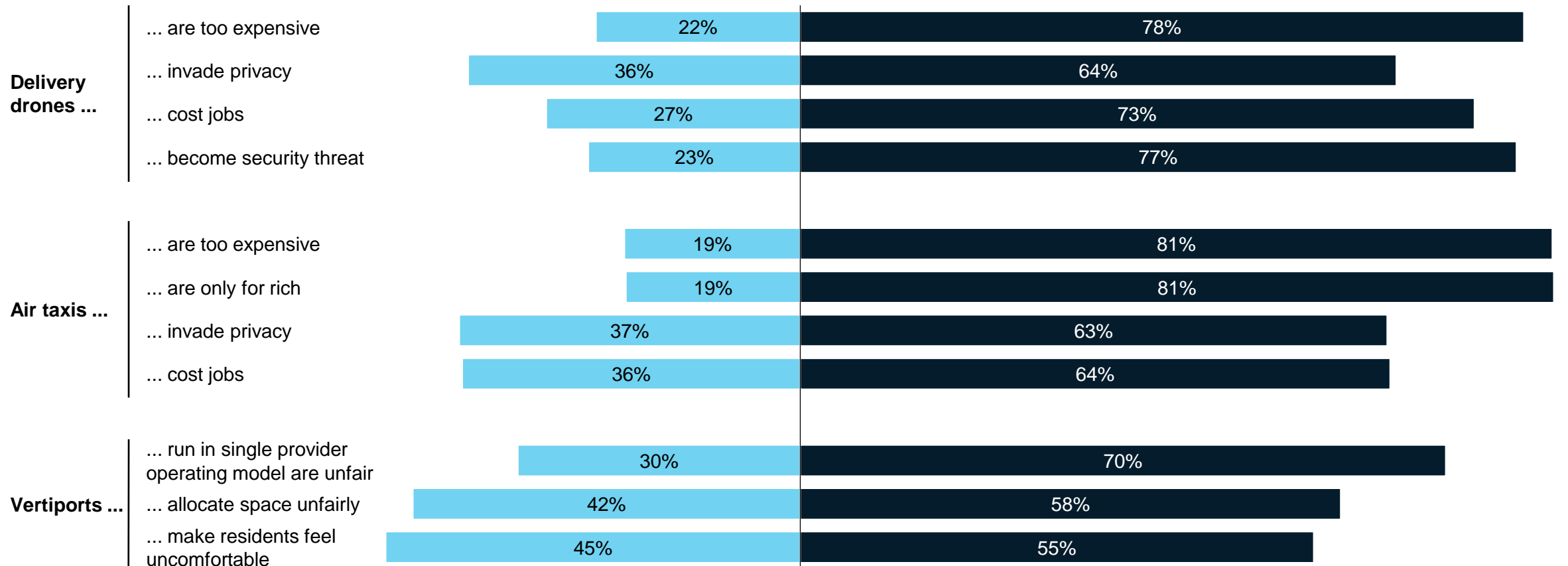


B10.C10. Response rates for negative statements related to UAM

Milan, Italy





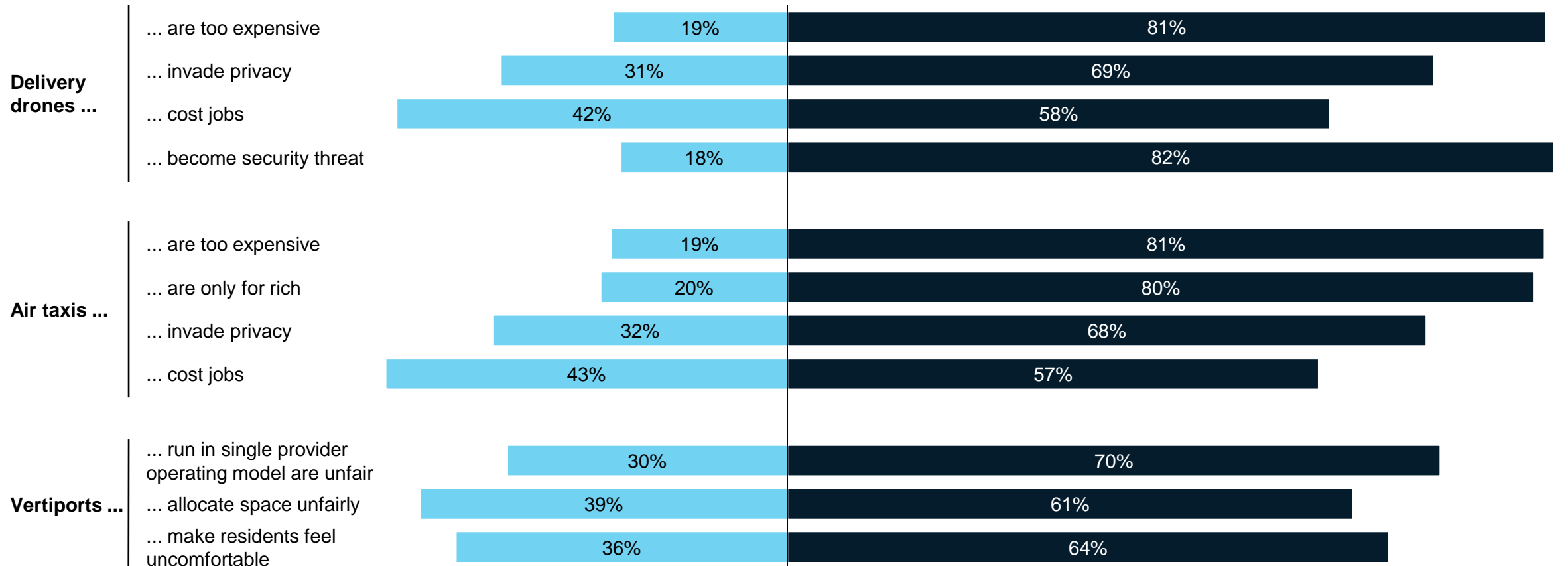
Disagree Agree



B10.C10. Response rates for negative statements related to UAM



Öresund, Nordics  

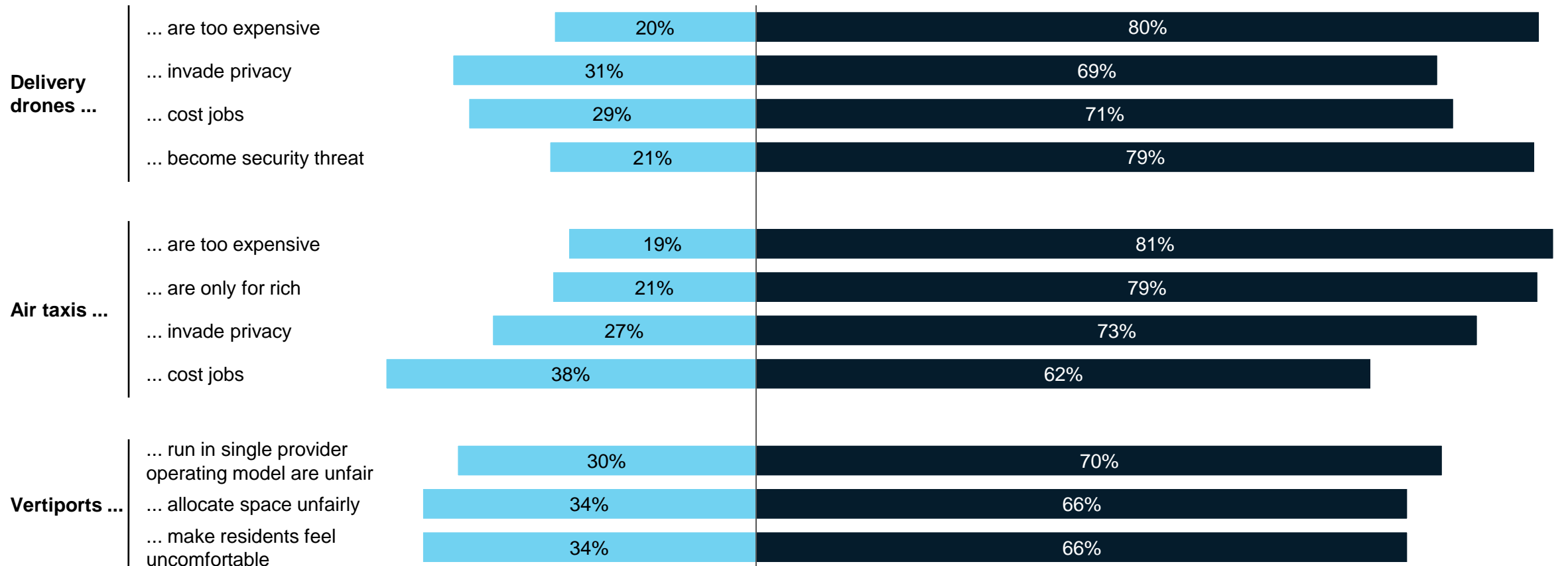
 Disagree  Agree



B10.C10. Response rates for negative statements related to UAM

Paris, France 

 Disagree  Agree



B10. Response rates for negative statements related to drone delivery

Barcelona, Spain 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

I suspect that I would find **extra fees** for express delivery by drone much **too expensive**.



I would be afraid that drones could massively **invade my privacy**, for instance, by spying through my window and recording my personal life



I would be afraid that the use of drones for the delivery of goods would significantly **reduce the number of jobs**, e.g. for parcel delivery personnel.



I would be afraid that drones could be misused and **become a security threat**.



B10. Response rates for negative statements related to drone delivery

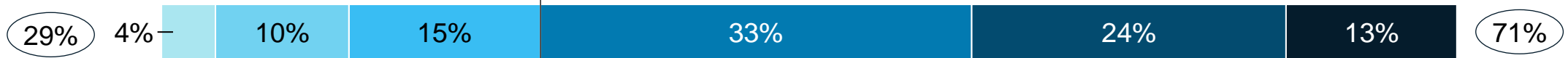
Budapest, Hungary 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

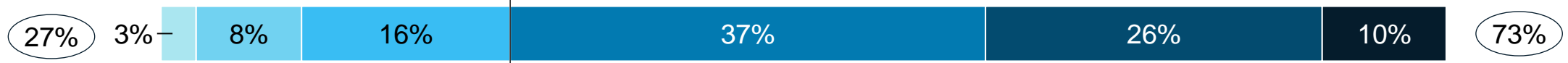
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I would be afraid that drones could be misused and **become a security threat**.



B10. Response rates for negative statements related to drone delivery

Hamburg, Germany 

(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

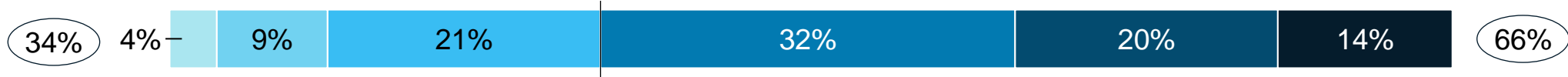
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B10. Response rates for negative statements related to drone delivery

Milan, Italy 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

I suspect that I would find **extra fees** for express delivery by drone much **too expensive**.



I would be afraid that drones could massively **invade my privacy**, for instance, by spying through my window and recording my personal life



I would be afraid that the use of drones for the delivery of goods would significantly **reduce the number of jobs**, e.g. for parcel delivery personnel.









I would be afraid that drones could be misused and **become a security threat**.



B10. Response rates for negative statements related to drone delivery

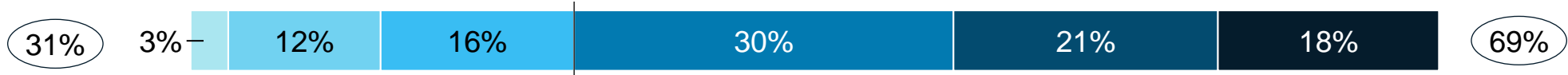
Öresund, Nordics  

(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

I suspect that I would find **extra fees** for express delivery by drone much **too expensive**.



I would be afraid that drones could massively **invade my privacy**, for instance, by spying through my window and recording my personal life



I would be afraid that the use of drones for the delivery of goods would significantly **reduce the number of jobs**, e.g. for parcel delivery personnel.



I would be afraid that drones could be misused and **become a security threat**.



B10. Response rates for negative statements related to drone delivery

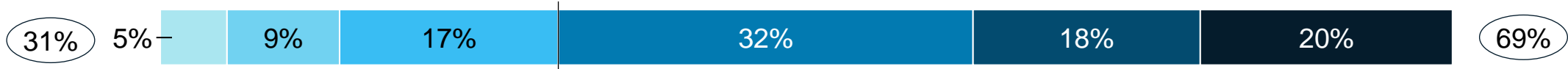
Paris, France 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

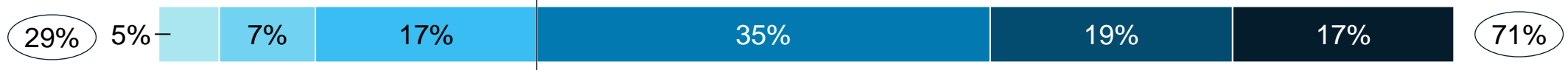
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I would be afraid that drones could be misused and **become a security threat**.



C10.a Response rates for negative statements related to air taxis

Barcelona, Spain 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

I suspect that taking an air taxi is much **too expensive** for me personally.



I suspect that **only rich people** will be able to **afford** taking air taxis.



As a resident of the city, I would be afraid that air taxis or their passengers could massively **invade my privacy** when flying over my house or flat, for instance, **by spying through my window and recording my personal life**.



I am afraid that the introduction of air taxis significantly **reduces the number of jobs**, affecting, for instance, taxi drivers.



C10.b Response rates for negative statements related to vertiports

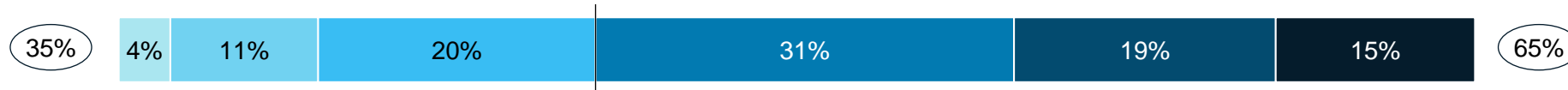
Barcelona, Spain 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

Take-off and landing stations for air taxis operated by only one provider (comparable to airports for a single airline or docks for a single ferry line) would **hamper competition** and are therefore extremely **unfair** from a societal perspective.



I consider the **allocation of inner-city** space for take-off and landing stations of aerial vehicles as completely **unfair or unnecessary**.



I would **feel uncomfortable living close to a take-off station** for aerial vehicles, for instance, within a range of 50 metres.¹



1. Original question was "I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres.".

C10.a Response rates for negative statements related to air taxis

Budapest, Hungary 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

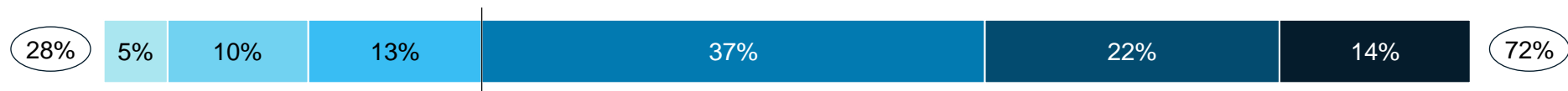
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I suspect that **only rich people** will be able to **afford** taking air taxis.



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C10.b Response rates for negative statements related to vertiports

Budapest, Hungary 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

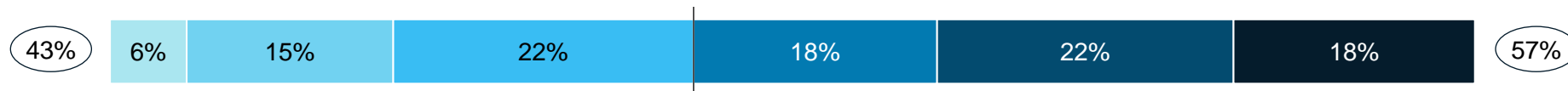
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1. Original question was "I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres.".

C10.a Response rates for negative statements related to air taxis

Hamburg, Germany 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

I suspect that taking an air taxi is much **too expensive** for me personally.



I suspect that **only rich people** will be able to **afford** taking air taxis.



As a resident of the city, I would be afraid that air taxis or their passengers could massively **invade my privacy** when flying over my house or flat, for instance, **by spying through my window and recording my personal life.**



I am afraid that the introduction of air taxis significantly **reduces the number of jobs**, affecting, for instance, taxi drivers.



Source: EASA UAM social acceptance survey question C10. To what extent do you agree with the following statements about aerial vehicles? Please rate how much you agree or disagree with each of the following statements.

C10.b Response rates for negative statements related to vertiports

Hamburg, Germany 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

Take-off and landing stations for air taxis operated by only one provider (comparable to airports for a single airline or docks for a single ferry line) would **hamper competition** and are therefore extremely **unfair** from a societal perspective.



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1. Original question was "I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres."

C10.a Response rates for negative statements related to air taxis

Milan, Italy



(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

I suspect that taking an air taxi is much **too expensive** for me personally.



I suspect that **only rich people** will be able to **afford** taking air taxis.



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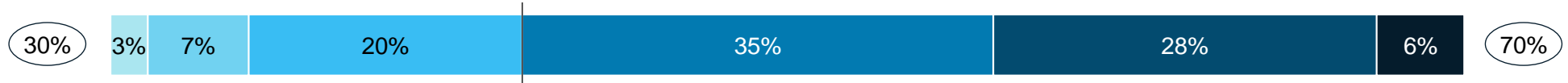
C10.b Response rates for negative statements related to vertiports

Milan, Italy



(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

Take-off and landing stations for air taxis operated by only one provider (comparable to airports for a single airline or docks for a single ferry line) would **hamper competition** and are therefore extremely **unfair** from a societal perspective.



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1. Original question was "I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres.".

C10.a Response rates for negative statements related to air taxis

Öresund, Nordics  

(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

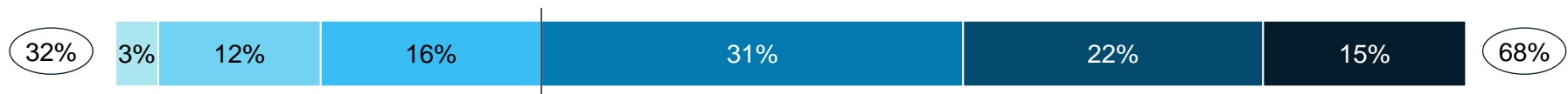
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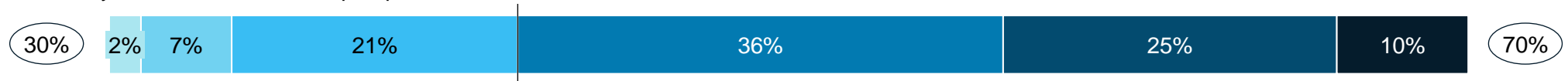


C10.b Response rates for negative statements related to vertiports

Öresund, Nordics  

(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

Take-off and landing stations for air taxis operated by only one provider (comparable to airports for a single airline or docks for a single ferry line) would **hamper competition** and are therefore extremely **unfair** from a societal perspective.



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1. Original question was "I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres.".

C10.a Response rates for negative statements related to air taxis

Paris, France 

(X%) Sum  Strongly disagree  Disagree  Somewhat disagree  Somewhat agree  Agree  Strongly agree

I suspect that taking an air taxi is much **too expensive** for me personally.



I suspect that **only rich people** will be able to **afford** taking air taxis.



As a resident of the city, I would be afraid that air taxis or their passengers could massively **invade my privacy** when flying over my house or flat, for instance, **by spying through my window and recording my personal life**.



I am afraid that the introduction of air taxis significantly **reduces the number of jobs**, affecting, for instance, taxi drivers.

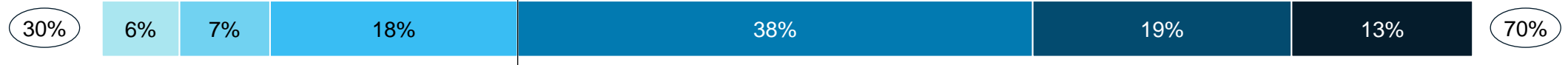


C10.b Response rates for negative statements related to vertiports

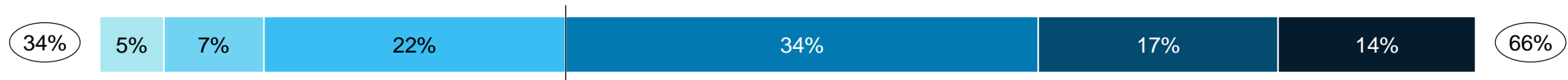
Paris, France 

(X%) Sum Strongly disagree Disagree Somewhat disagree Somewhat agree Agree Strongly agree

Take-off and landing stations for air taxis operated by only one provider (comparable to airports for a single airline or docks for a single ferry line) would **hamper competition** and are therefore extremely **unfair** from a societal perspective.



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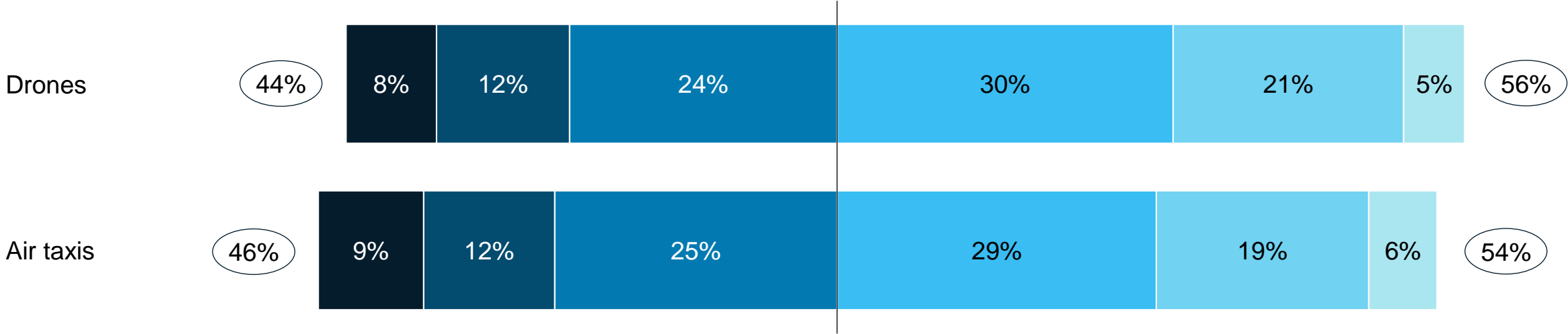


1. Original question was "I would feel comfortable living close to a take-off station for aerial vehicles, for instance, within a range of 50 metres."

D2. Trust levels in VTOL technology incl. security and cybersecurity

Barcelona, Spain 

X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

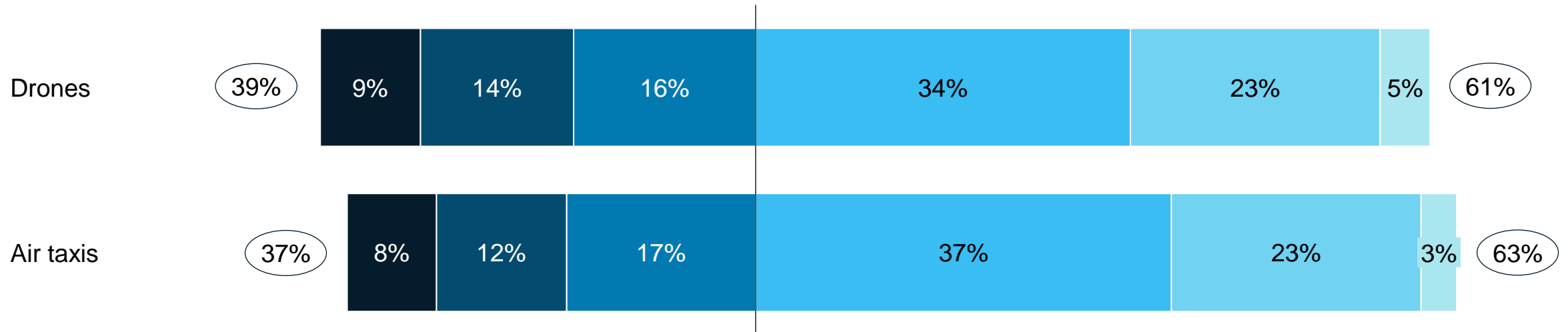


Source: EASA UAM social acceptance survey question D2. To what extent do you trust that advanced aircraft flying in an urban environment will be technologically secure and armed against threats from hackers (such as criminal organisations, hacktivists or terrorists) in the following cases? Please select one answer per row.

D2. Trust levels in VTOL technology incl. security and cybersecurity

Budapest, Hungary 

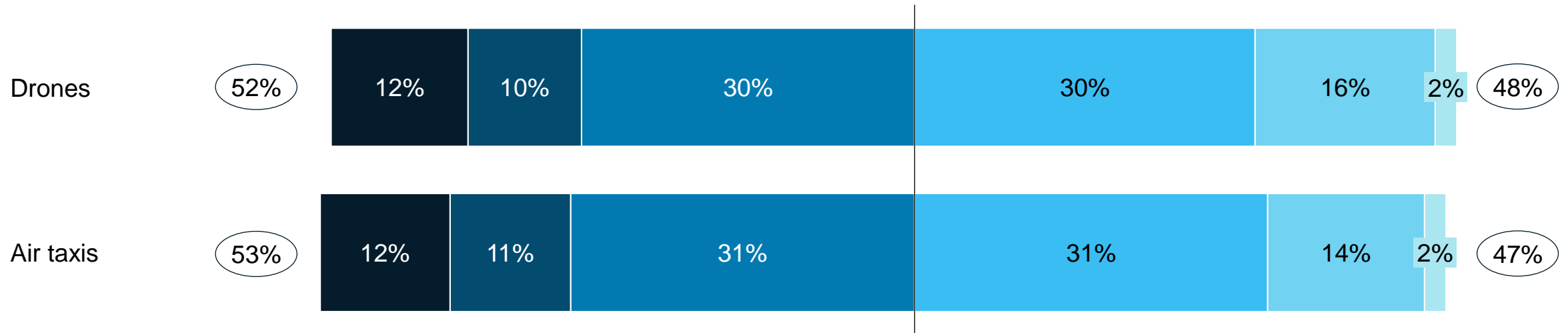
X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D2. Trust levels in VTOL technology incl. security and cybersecurity

Hamburg, Germany 

X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

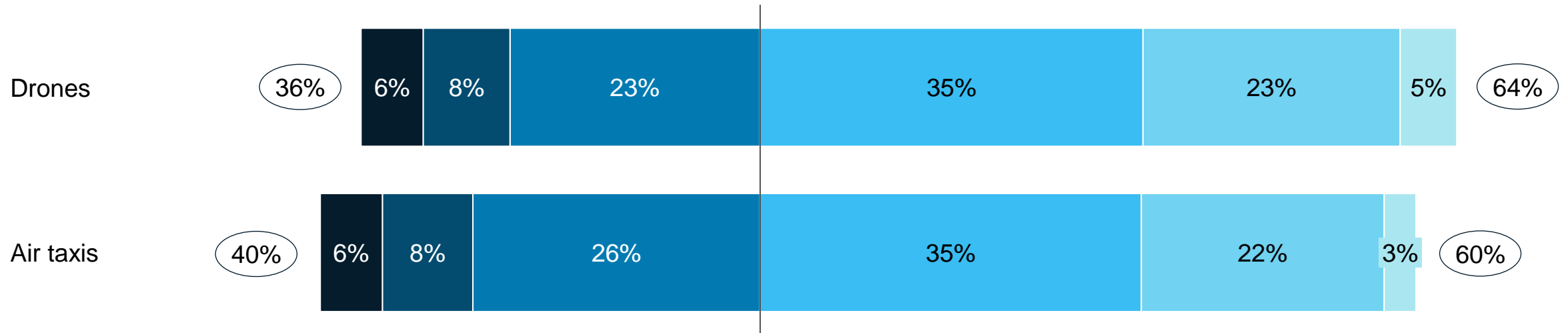


D2. Trust levels in VTOL technology incl. security and cybersecurity

Milan, Italy









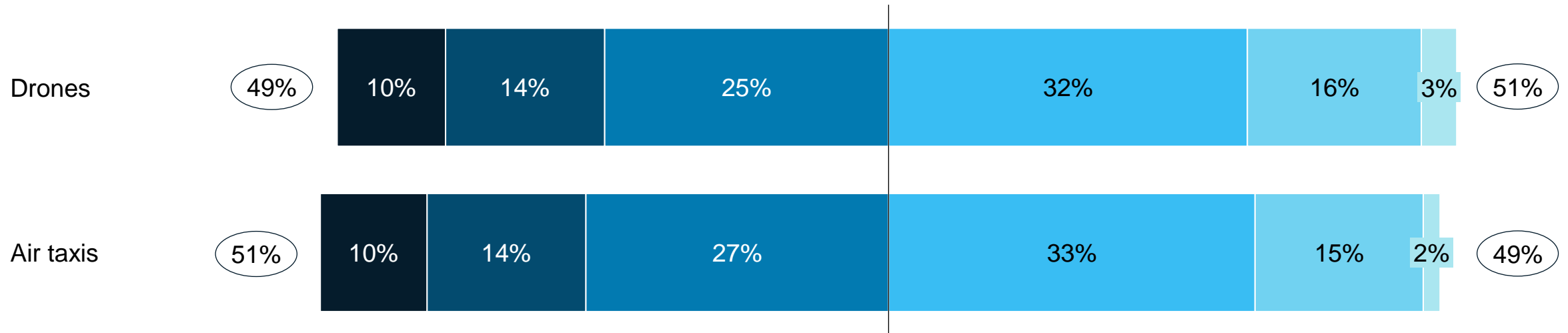
X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D2. Trust levels in VTOL technology incl. security and cybersecurity

Öresund, Nordics  

X% Sum  Fully mistrust  Mistrust  Somewhat mistrust  Somewhat trust  Trust  Fully trust

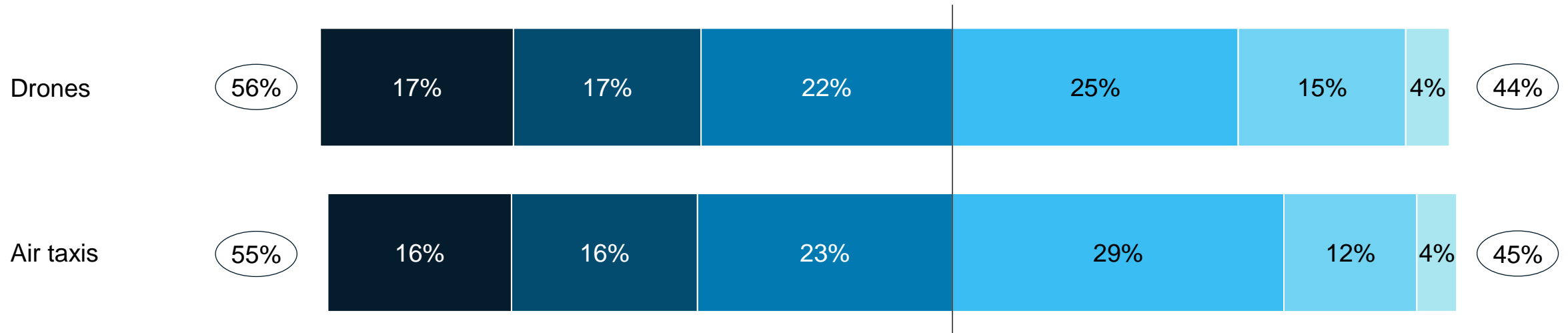


D2. Trust levels in VTOL technology incl. security and cybersecurity

Paris, France



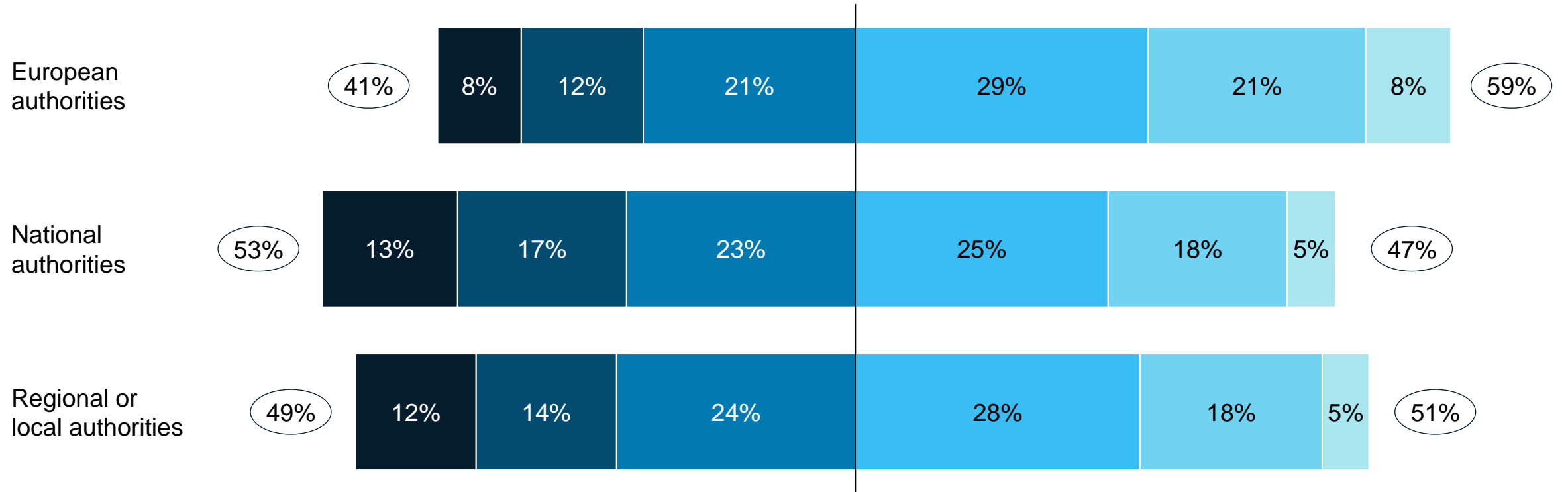
(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D1. Trust levels in regulation authorities

Barcelona, Spain 

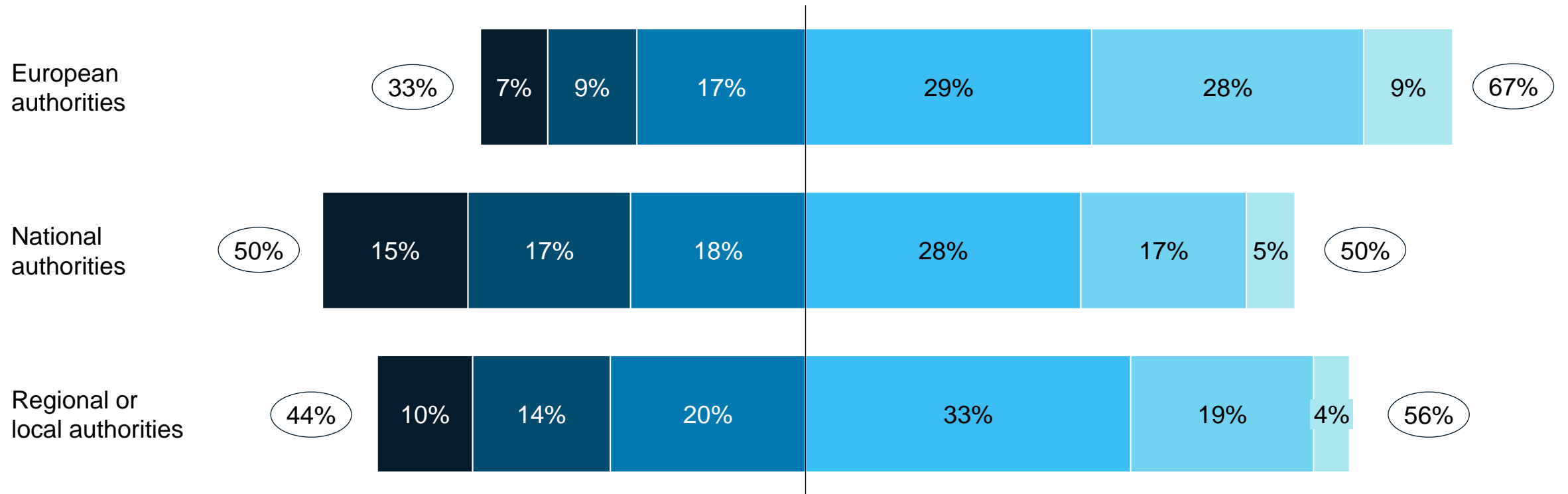
X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D1. Trust levels in regulation authorities

Budapest, Hungary 

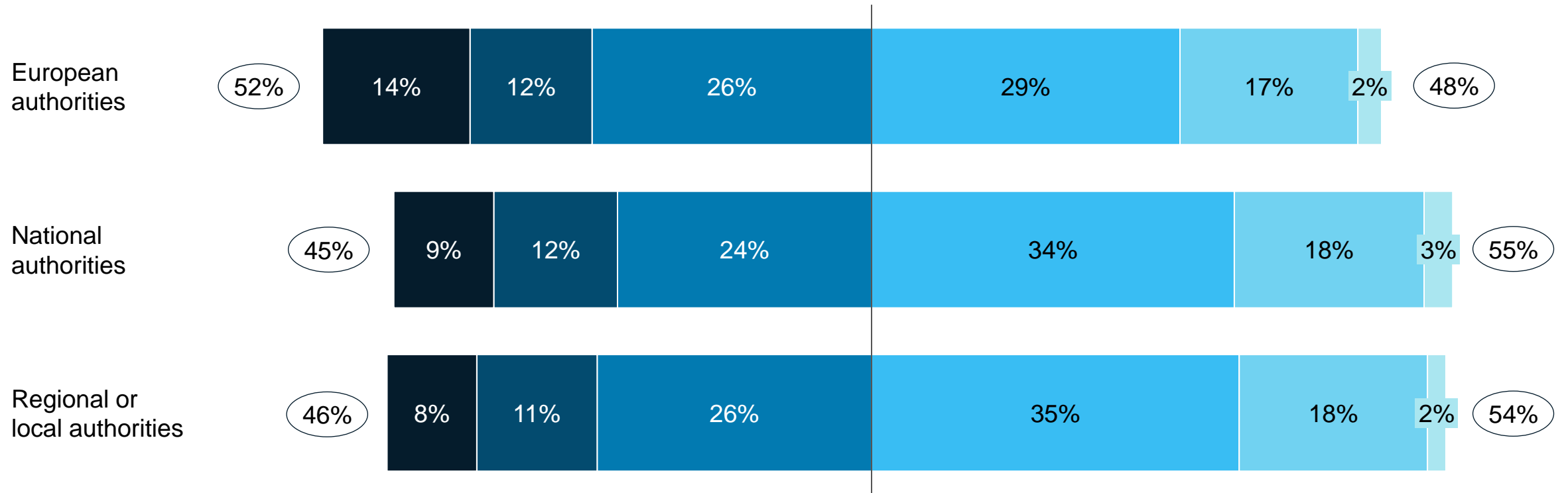
X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D1. Trust levels in regulation authorities

Hamburg, Germany 

X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust

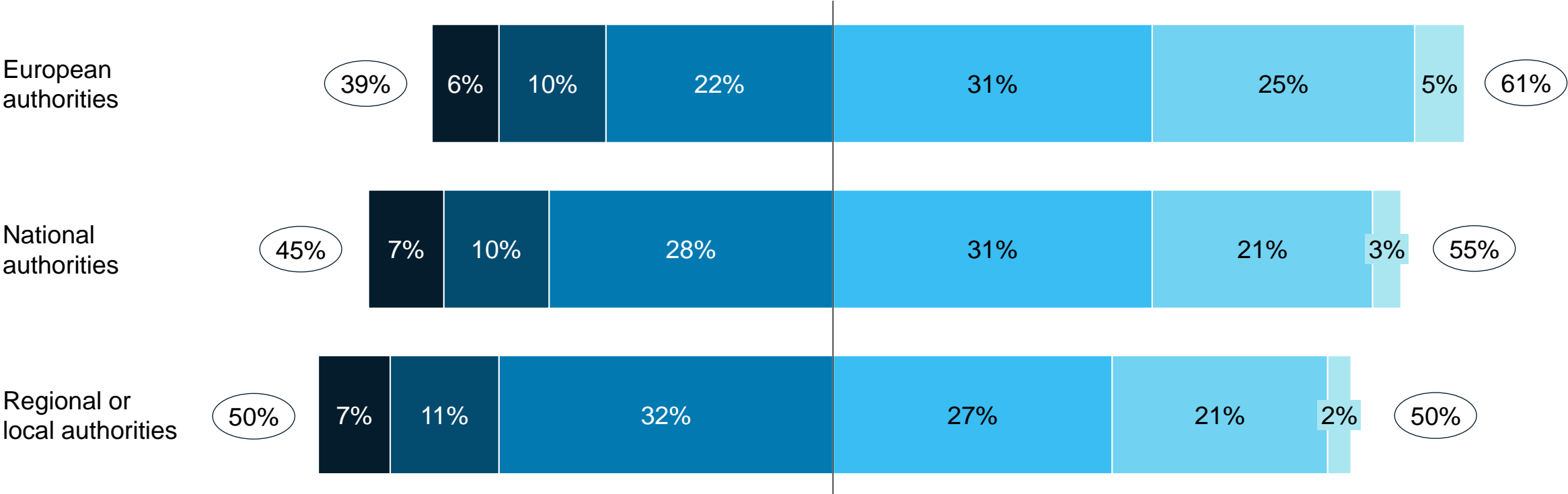


D1. Trust levels in regulation authorities

Milan, Italy









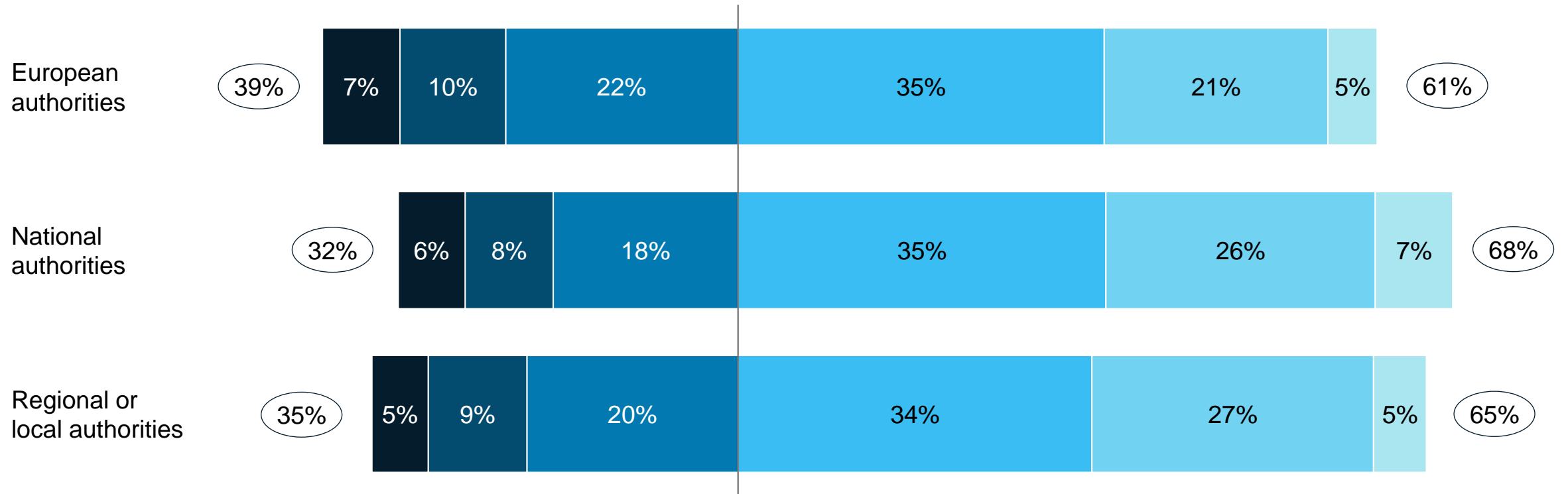
(X%) Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D1. Trust levels in regulation authorities

Öresund, Nordics  

(X%) Sum  Fully mistrust  Mistrust  Somewhat mistrust  Somewhat trust  Trust  Fully trust

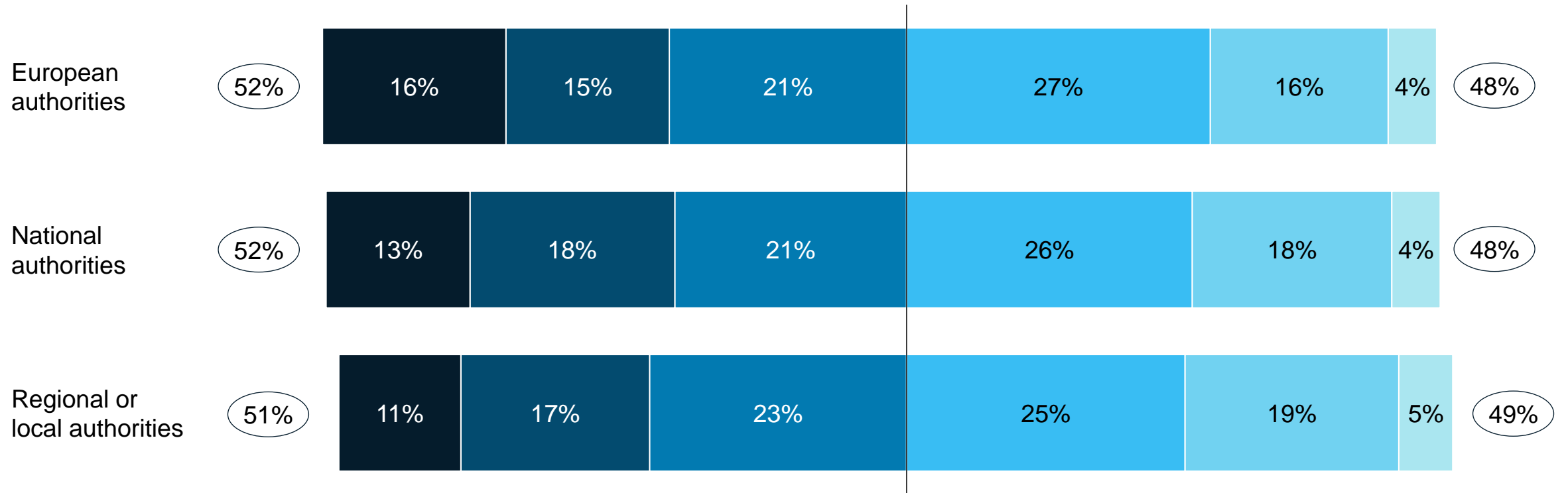


D1. Trust levels in regulation authorities

Paris, France



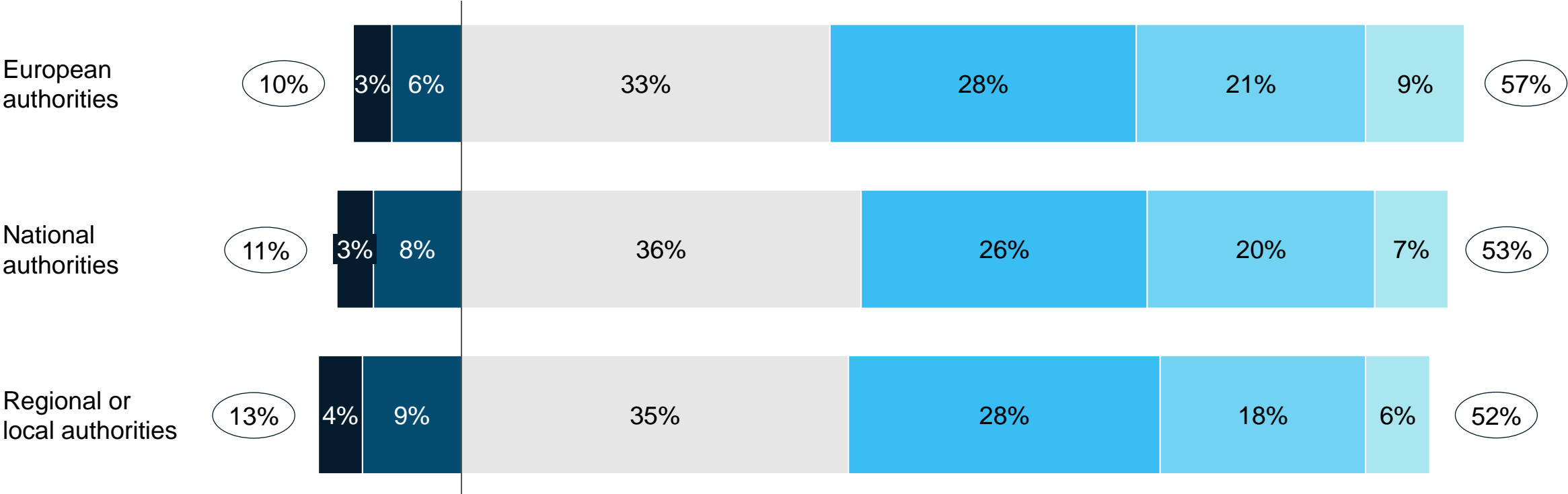
X% Sum ■ Fully mistrust ■ Mistrust ■ Somewhat mistrust ■ Somewhat trust ■ Trust ■ Fully trust



D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed

Barcelona, Spain 

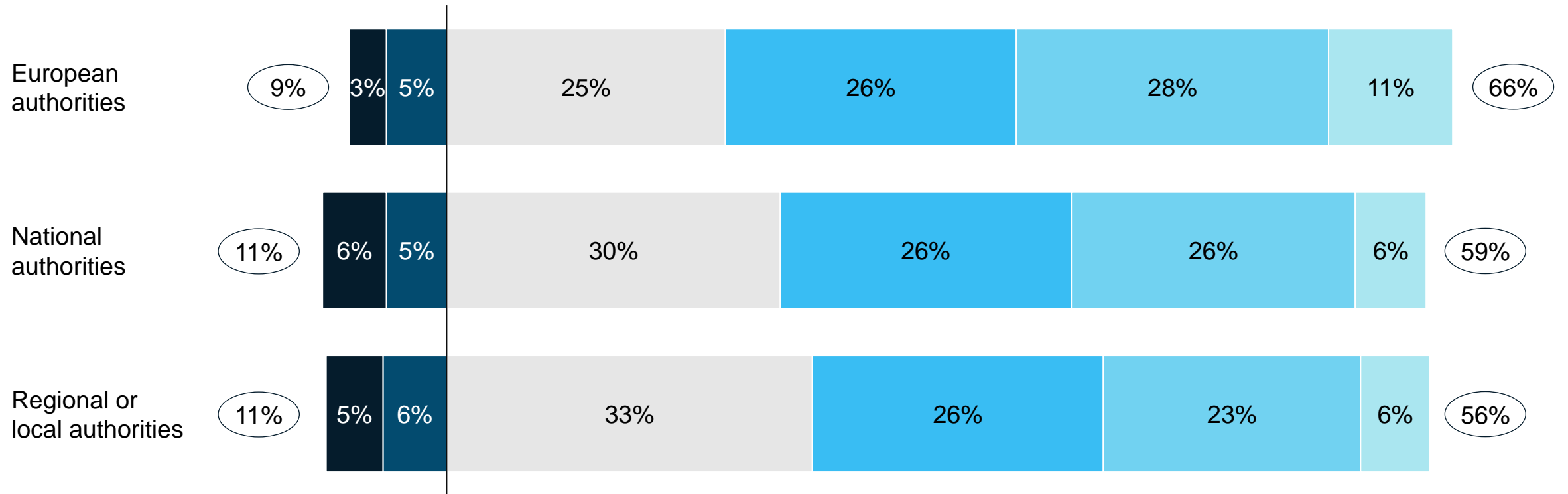
(X%) Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot



D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed

Budapest, Hungary 

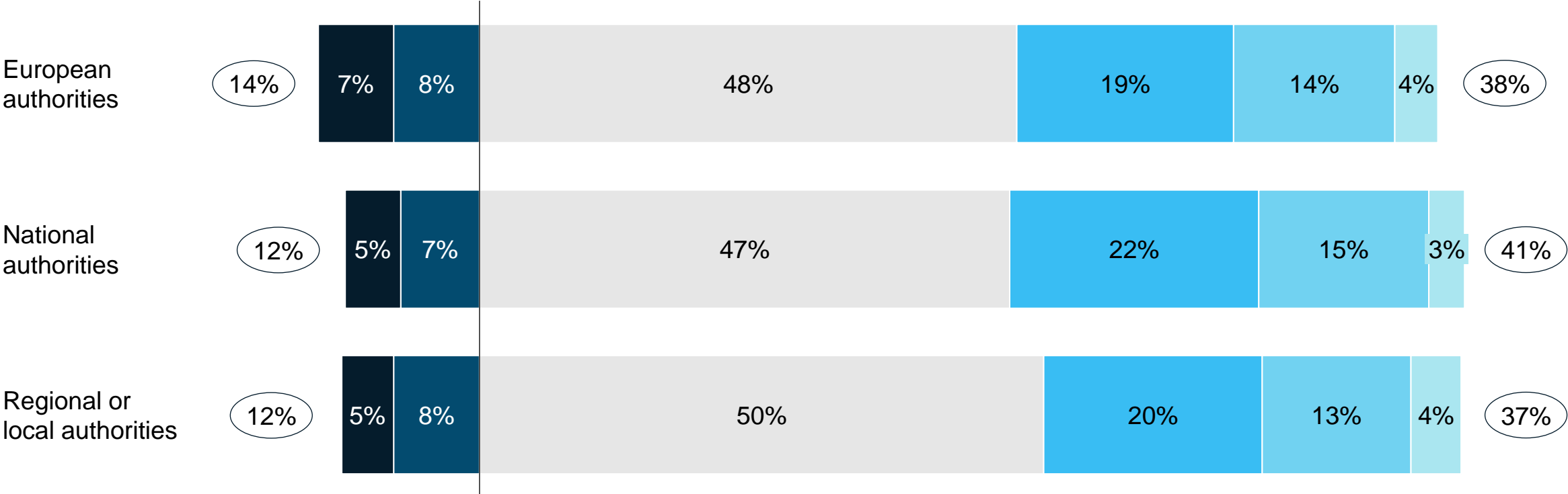
(X%) Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot



D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed

Hamburg, Germany 

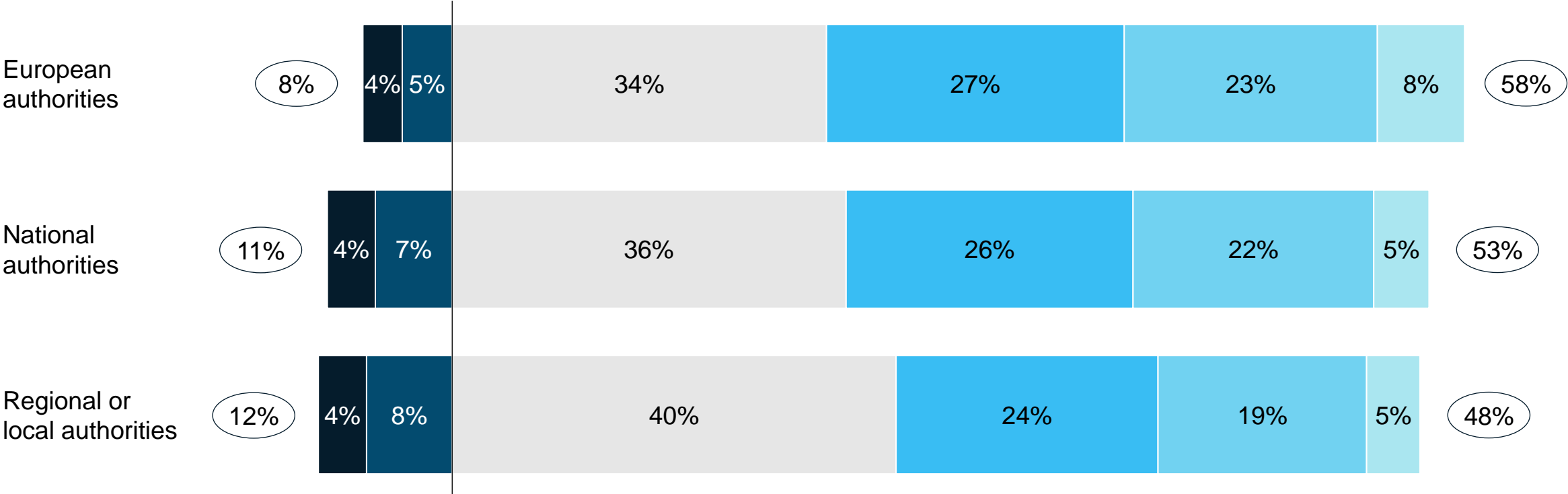
(X%) Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot



D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed







Milan, Italy 

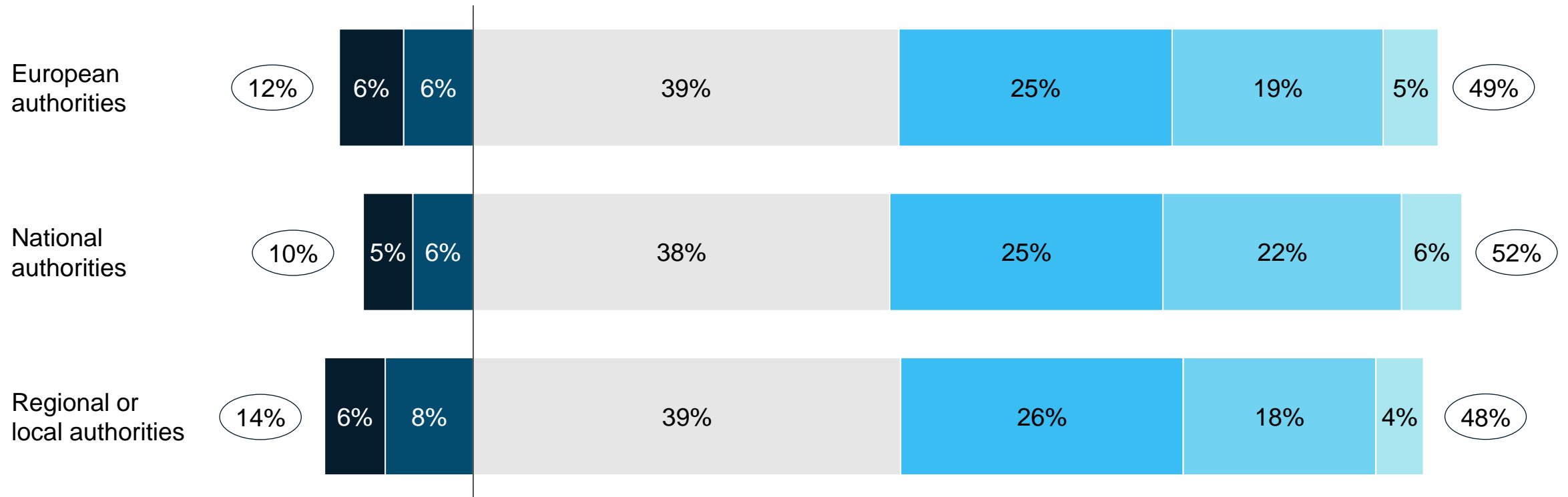
(X%) Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot



D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed

Öresund, Nordics  

(X%) Sum  Decrease a lot  Decrease slightly  Stay the same  Increase slightly  Increase  Increase a lot



D3. Impact on trust levels if regulations addressing cybersecurity (certification and operation) were to be developed

Paris, France 

(X%) Sum ■ Decrease a lot ■ Decrease slightly ■ Stay the same ■ Increase slightly ■ Increase ■ Increase a lot

